

# LINOVECTOR-II



COMMERCIAL FINNED TUBE  
RADIATION FOR ENERGY-EFFICIENT  
HYDRONIC HEATING SYSTEMS

**Vulcan**  
RADIATOR

# LINOVECTOR-II

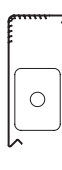
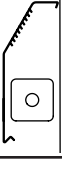
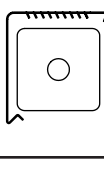
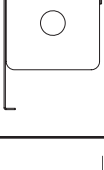
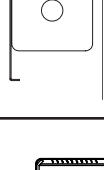
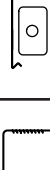
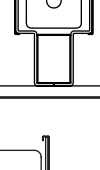
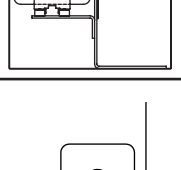
LINOVECTOR-II Finned Tube Radiation is Vulcan's most versatile and flexible, multi-purpose commercial hydronic heating enclosure line. LINOVECTOR-II offers architects, engineers and contractors a full range of enclosure styles, heights, depths, lengths and element selections. Known in the trade as a reliable workhorse, LINOVECTOR-II features include small tube sizes and low water temperature ratings.

LINOVECTOR-II is used in commercial heating installations — structures that demand good looks, durability and low price. Ideally suited for schools, general office buildings, common walkways and high traffic areas. LINOVECTOR-II is especially suited for high heat loss areas, yet is attractive enough to be used in areas with subtle lines and perimeter heating.

LINOVECTOR-II enclosures are available in 18, 16 and 14 gauge CRS; stainless steel and aluminum are available options. The enclosures are reinforced with full height vertical slip joint stiffeners making them one of the most rugged enclosures on the market today. All enclosures are press brake formed with hard tool dies to ensure consistent styles, shapes and sizes.

- Widest range of heights, depths and element selections.
- 14 basic different enclosure configurations to choose from.
- Overlapping accessories.
- Easy installation.
- Rugged and durable construction.
- Durable baked powder prime finish.
- 9 standard baked powder colors, plus 3 metallic colors.
- Special color capability.
- Ball bearing element hangers.
- Full or partial backplates on all styles.
- Two different damper styles available.
- Available in stainless steel and aluminum.
- 58 standard elements.
- All water ratings are based on 3 feet per second velocity of water.

# CONTENTS

| STYLE                                                                                                                                                                                           | DESIGN                                                                              | PAGE | STYLE                                              | DESIGN                                                                                | PAGE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|----------------------------------------------------|---------------------------------------------------------------------------------------|------|
| LV2-S<br>Slimline<br>Slope Top<br>Enclosure                                                                                                                                                     |    | 6    | LV3-R/LV4-R<br>Flat Top<br>Enclosure               |    | 35   |
| LV3-S<br>Slope Top<br>Enclosure                                                                                                                                                                 |    | 8    | LV3-E/LV4-E<br>Top Outlet<br>Enclosure             |    | 40   |
| LV4-S<br>Slope Top<br>Enclosure                                                                                                                                                                 |    | 10   | LV3-X/LV4-X<br>Square Perforation<br>Enclosure     |    | 43   |
| LV4-DS<br>Double Slope<br>Enclosure                                                                                                                                                             |   | 15   | LV3-C/LV4-C<br>Element Supported<br>Enclosure      |   | 48   |
| LV2-T<br>Slimline<br>Top Outlet<br>Enclosure                                                                                                                                                    |  | 19   | LV4-PM/LV4-PM2<br>Pedestal<br>Mounted<br>Enclosure |  | 52   |
| LV3-T/LV4-T<br>Top Outlet<br>Enclosure                                                                                                                                                          |  | 21   | TR<br>Trough                                       |  | 56   |
| LV3-F/LV4-F<br>Front Outlet<br>Enclosure                                                                                                                                                        |  | 25   | Bare<br>Elements                                   |  | 57   |
| LV3-FT/LV4-FT<br>Front and<br>Top Outlet<br>Enclosure                                                                                                                                           |  | 29   | Alternatives                                       | Return<br>To Wall                                                                     | 65   |
| LV2-R<br>Slimline<br>Flat Top<br>Enclosure                                                                                                                                                      |  | 33   | Accessories                                        | Typical                                                                               | 67   |
| <b>Notes:</b><br>1. See element ordering information on page 57.<br>2. For non-standard enclosure mounting heights, see correction factor chart on page 74.<br>3. See specifications on page 5. |                                                                                     |      |                                                    |                                                                                       |      |

# DESIGN FEATURES

## ENCLOSURES

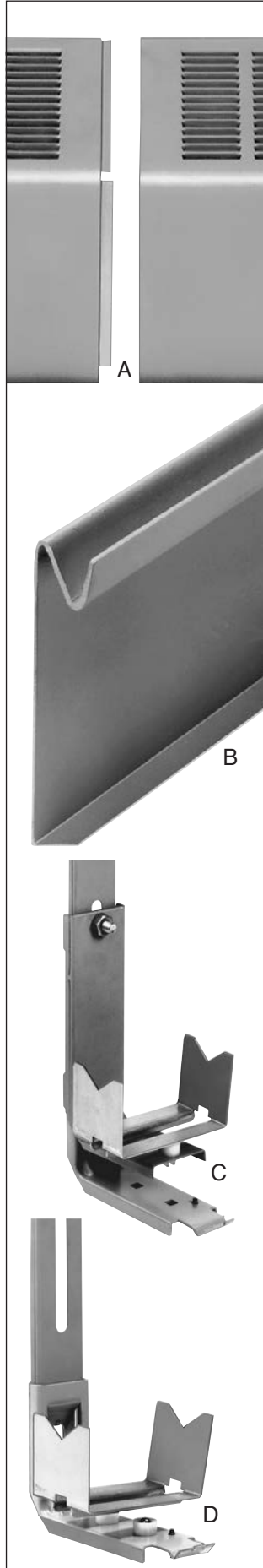
Interlocking slip joints provide for a positive snap together fit between adjoining covers. The male and female slip joints, at the same time, provide vertical stiffness for these enclosures. They are the most rugged and desirable enclosures for today's quality-conscious market. (See photos A.)

## BRACKETS AND ELEMENT SUPPORT HANGERS WALL OR BRACKET MOUNTED.

All brackets and element support hangers are die-formed, wiped edge channel type construction which provides the strongest and most rigid support for either the enclosure or element available anywhere. The standard bracket is used with an adjustable bracket mounted hanger. This will provide vertical movement of the element up to 2½ inches for steam pitch requirements simply by loosening a nut. Silent glide action is provided by the nickel chromium plated ball bearings encased in a rugged nylon insert. The isolation effect of the nylon material creates an optimum noise deadening condition and therefore, element expansion noise is virtually eliminated. (See photo C.)

The water brackets are available with the silent glide ball bearing assembly directly mounted to a standard bracket so that the element support hanger is eliminated when pitch is not required. These "water brackets" allow an even faster installation. (See photo D.)

All elements are nested onto a die-formed 18 gauge galvanized slide cradle which rests on the silent glide ball bearings. These slide cradles are designed to support the element tube or pipe only, so that fin drag will not create undesirable noise. (See photos C and D.)



Water and standard brackets are formed at the top to engage the top inside bend of either the partial or full backplate. This automatic locating design simplifies installation and helps keep costs down. (See photos B, C and D.)

All enclosure brackets (standard or water type) are provided with posi-lock enclosure locks. These provide a quick and sure method of securing the enclosure to the bracket and deters vandalism. The bracket is designed to positively snap and secure the enclosure bottom. The posi-lock makes sure it stays there, no matter what. The posi-lock also provides the additional holding force for those installations that require the enclosure assembly to be mounted in an inverted position. (See photo H.)

## ROLL PIPE HANGERS

These are designed to support the supply or return pipes within the enclosures. The nylon insert acts as an isolator so that pipe noise is not transmitted as readily through the enclosure. Smooth lateral movement is a definite plus. (See photo E.)

## DAMPERS (OPTIONAL)

Knob operated dampers are available in S, T, FT, and F styles. All damper blades are factory installed. The blade is quickly activated by a rugged triple lead screw turned by the die-cast brushed chrome finished knob. (See photo F.)

## TAMPER RESISTANT DAMPERS (OPTIONAL)

This optional damper design allows only designated persons to control the desired adjustment with a standard hex key. (See photo G.)

## ELEMENTS

All elements are manufactured by means of mechanical expansion. This creates a permanent bond between the fin and tube.

# SPECIFICATIONS

Furnish and install where shown on all plans/drawings, Vulcan Linovector-II Finned Tube Assemblies as described in the specifications below or approved equal quality and capacity. Approved AHRI ratings must be submitted as required.

## ENCLOSURE AND ACCESSORIES

Finned tube enclosures are to be of style and size as shown on plans. Material will be 18, 16, 14 gauge cold rolled steel with baked primer suitable for field painting. Air discharge and/or inlet louvers are to be "pencil proof." Welded male and female slip joints are to be provided at each end to allow for positive engagement and alignment of adjoining enclosures. All bends (lateral) on enclosure are to be formed on bottoming dies to ensure continuity of all adjoining enclosures and accessories.

## ACCESS DOORS

When indicated, access doors will be provided at mixer, shut-off or flow control valves. Doors will be 6" x 9" (or 5" x 6") and hinged at top. Access doors will be located in accessories or enclosure as noted on plans. Door latch head shall require tool for opening.

## DAMPERS

Dampers will be provided when indicated on plans. Damper blades will have formed edges for rigidity. Damper blades will be factory installed. Damper actuation will be controlled by knob or tamper resistant operator.

## BACKPLATE

All full backplates will be one piece construction, 20 gauge galvanized steel (18 gauge optional) with a die-formed mounting channel into which the enclosure shall self-locate and secure. Self-adhesive sponge air seal gasket to be provided when noted.

All partial backplates are to be machine roll formed, pre-painted, 20 gauge steel with formed mounting channel into which the enclosure shall self-locate and secure. 18 gauge partial backplates will be provided with baked primer finish. Sponge air seal gasket to be provided when noted.

## BRACKETS/HANGERS

All brackets and hangers are to be die-formed 14 gauge galvanized steel with channel type wiped edge construction for rigidity. Nickel-chromium plated ball bearings inserted into a nylon isolator insert are to be used in conjunction with an 18 gauge galvanized die-formed element support cradle to provide friction free lateral movement during expansion and contraction. Brackets are to have pre-formed contour at the top allowing the bracket to interlock with the backplate channel. Brackets are to be self-locating in the vertical (height) position. Hangers are to provide for vertical element adjustment when pitch is required (steam). Water jobs will not require adjustable hangers. Full engagement enclosure locks are to be supplied with each bracket.

Accessories will be die-formed 18 gauge cold rolled steel with a baked prime finish suitable for field painting. All vertical edges are to be beaded (180°) edges when overlapping enclosure so that no exposed raw edge will extend outward. Overlapping accessories will provide for make-up required in runs where partitions and/or walls may vary from bay to bay. Accessories shall fit between wall and backplate at top and extend back to wall at bottom for securing with fastener by others.

## HEATING ELEMENTS

All copper/aluminum heating elements shall be manufactured with seamless copper tubing mechanically expanded into the diameter of the equally spaced aluminum fins. The ends of the copper tube shall be of finished O.D. (male) and finished I.D. (female, swaged) as to allow the use of standard domestic copper fittings.

All steel heating elements shall be manufactured with steel pressure tubing mechanically expanded into the diameter of the equally spaced steel (.024, .032) fins. The ends of the steel tube shall be threaded to accept all domestic NPT threaded fittings or cut square and chamfered for welding in field. All steel element fins shall be painted black enamel finish.

|                                               |                                                                                                                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ENCLOSURES</b> LINOVECTOR-II SLIP JOINTED. |                                                                                                                                                                                                                              |
| <b>Styles</b>                                 | Slope Top. Flat Top — Top Outlet, Front Outlet, Front and Top Outlet.                                                                                                                                                        |
| <b>Lengths</b>                                | 2' thru 8' in 6" increments.                                                                                                                                                                                                 |
| <b>Materials</b>                              | Cold rolled steel, stainless steel, aluminum, galvanized steel.                                                                                                                                                              |
| <b>Gauges</b>                                 | 18, 16, 14 Gauge C.R.S.<br>18, 16 Gauge SS.<br>16, 14, 12 Gauge Aluminum                                                                                                                                                     |
| <b>Finish</b>                                 | Baked powder prime standard, baked powder colors optional.                                                                                                                                                                   |
| <b>BACKPLATES</b>                             |                                                                                                                                                                                                                              |
| <b>Type</b>                                   | Partial standard, full height optional.                                                                                                                                                                                      |
| <b>Lengths</b>                                | Partial 8'. Full 2' thru 8' in 6" increments.                                                                                                                                                                                |
| <b>Material</b>                               | Partial 20 gauge, pre-painted standard.<br>18 gauge baked powder finish optional.<br>Full 20 gauge galvanized, 18 gauge C.R.S. optional.                                                                                     |
| <b>BRACKETS/HANGERS</b>                       |                                                                                                                                                                                                                              |
|                                               | Ball bearing with slide cradle adjustable for pitch or fixed for water systems. Die-formed channel type galvanized steel construction with enclosure securing posi-lock clips.                                               |
| <b>ELEMENTS</b>                               |                                                                                                                                                                                                                              |
| <b>Type</b>                                   | Mechanically expanded.<br>Copper tube aluminum fin,<br>Steel tube steel fin.                                                                                                                                                 |
| <b>Lengths</b>                                | 1", 1 1/4" CU, 1", 1 1/4" & 2" Steel<br>2' Thru 12'6" in 1" increments<br>3/4" CU 2' thru 8' in 1" increments.                                                                                                               |
| <b>End Conditions</b>                         | CU/AL — Swaged one end. Swaged both ends optional.<br>Steel — NPT threads standard.<br>Chamfered for field welding optional.                                                                                                 |
| <b>DAMPERS</b>                                |                                                                                                                                                                                                                              |
|                                               | Fully modulating damper blades with stiffening roll bend. Operated by hand knob or hex head security type driver.                                                                                                            |
| <b>ACCESSORIES</b>                            |                                                                                                                                                                                                                              |
|                                               | All die-formed with flange at top to engage behind backplate. Bottom return bend provides vertical flange with mounting holes for securing to wall after overlapping the enclosure. Vertical edges to have rolled bead form. |
| <b>AIR SEAL</b>                               |                                                                                                                                                                                                                              |
|                                               | Optional air seal, factory or field installed, on back of backplate. Material is 1/8" x 3/8" closed cell with adhesive back.                                                                                                 |

# STYLE "LV2S" SLIMLINE SLOPE TOP

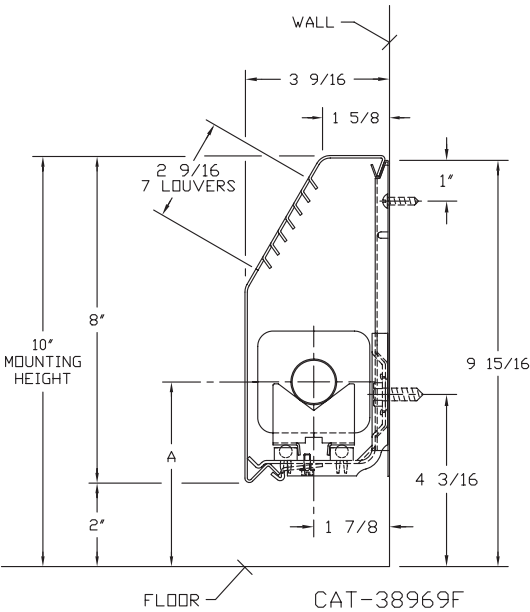


## LV2-S8 (Water Brackets only)

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A      |
|---|----------------------|----------------------------|------------------|--------|
| * | 3/4 COPPER           | 2 1/2 x 2 1/4              | 1                | 4 5/16 |
| * | 3/4 COPPER           | 2 1/2 x 2 3/4              | 1                |        |
|   | 3/4 COPPER           | 3 3/4 x 2 3/4              | 2                | 5"     |
| * | 1" COPPER            | 2 1/2 x 2 3/4              | 1                | 4 1/2  |
|   | 1" COPPER            | 3 3/4 x 2 3/4              | 2                | 5 3/16 |
|   | 1 1/4 COPPER         | 3 3/4 x 2 3/4              | 2                | 5 5/16 |
|   | 1" STEEL             | 3 3/4 x 2 3/4              | 2                | 5 5/16 |

\* Damper available with these elements only.

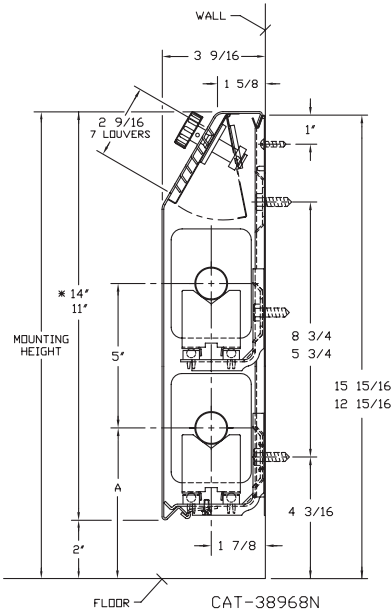
Not recommended for steam applications. Consult factory.



## LV2-S11 14 (Water Brackets only)

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|---|----------------------|----------------------------|------------------|---------|
| * | 3/4 COPPER           | 2 1/2 x 2 1/4              | 1                | 4 5/16  |
| * | 3/4 COPPER           | 2 1/2 x 2 3/4              | 1                |         |
|   | 3/4 COPPER           | 3 3/4 x 2 3/4              | 2                | 5"      |
| * | 1" COPPER            | 2 1/2 x 2 3/4              | 1                | 4 1/2   |
|   | 1" COPPER            | 3 3/4 x 2 3/4              | 2                | 5 3/16  |
|   | 1" COPPER            | 5" x 2 3/4                 | 3A               | 5 1/2   |
|   | 1 1/4 COPPER         | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1 1/4 COPPER         | 5" x 2 3/4                 | 3A               | 5 11/16 |
|   | 1" STEEL             | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1" STEEL             | 5" x 2 3/4                 | 3A               | 5 11/16 |
|   | 1 1/4 STEEL          | 3 3/4 x 2 3/4              | 2                | 5 1/2   |
|   | 1 1/4 STEEL          | 5" x 2 3/4                 | 3A               | 5 15/16 |

\* 2 tier with damper available in 14" height with these elements only.



# STYLE "LV2S" SLIMLINE SLOPE TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VR01                | 2-1/2" x 2-3/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 820               | 710                                               | 640  | 570  | 500  | 430  | 370  | 330  | 270  | 210  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 890               | 770                                               | 690  | 610  | 540  | 470  | 400  | 360  | 290  | 230  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 960               | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1300              | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
| 3/4"      | VR02                | 2-1/2" x 2-3/4"         | 60           | .010                    | 8*                    | 1                           | 10                        | 950               | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1150              | 990                                               | 900  | 790  | 700  | 610  | 520  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1650              | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
| 1"        | VR03                | 2-1/2" x 2-3/4"         | 55           | .011                    | 8*                    | 1                           | 10                        | 980               | 840                                               | 760  | 680  | 600  | 520  | 440  | 390  | 320  | 250  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1050              | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1660              | 1430                                              | 1290 | 1150 | 1010 | 880  | 750  | 660  | 550  | 430  |
| 3/4"      | VR04                | 3-3/4" x 2-3/4"         | 50           | .014                    | 8*                    | 1                           | 10                        | 1010              | 870                                               | 790  | 700  | 620  | 540  | 450  | 400  | 330  | 260  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1110              | 950                                               | 870  | 770  | 680  | 590  | 500  | 440  | 370  | 290  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1200              | 1030                                              | 940  | 830  | 730  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1680              | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
| 1"        | VR05                | 3-3/4" x 2-3/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 1020              | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1220              | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1670              | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
| 1-1/4"    | VR08                | 3-3/4" x 2-3/4"         | 50           | .020                    | 8*                    | 1                           | 10                        | 1040              | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1200              | 1030                                              | 940  | 830  | 730  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1600              | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
| 1"        | VR07                | 5" x 2-3/4"             | 50           | .020                    | 11                    | 1                           | 13                        | 1220              | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
| 1-1/4"    | VR10                | 5" x 2-3/4"             | 50           | .020                    | 11                    | 1                           | 13                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |

\*Not recommended for steam applications, consult factory.

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VR11                | 3-3/4" x 2-3/4"         | 40           | .024                    | 8*                    | 1                           | 10                        | 920               | 790                                               | 720  | 630  | 560  | 490  | 410  | 370  | 300  | 240  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1020              | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1100              | 950                                               | 860  | 760  | 670  | 580  | 500  | 440  | 360  | 290  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1520              | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
| 1"        | VR15                | 5" x 2-3/4"             | 50           | .024                    | 11                    | 1                           | 13                        | 1170              | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1170              | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
| 1-1/4"    | VR16                | 5" x 2-3/4"             | 50           | .024                    | 11                    | 1                           | 13                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |

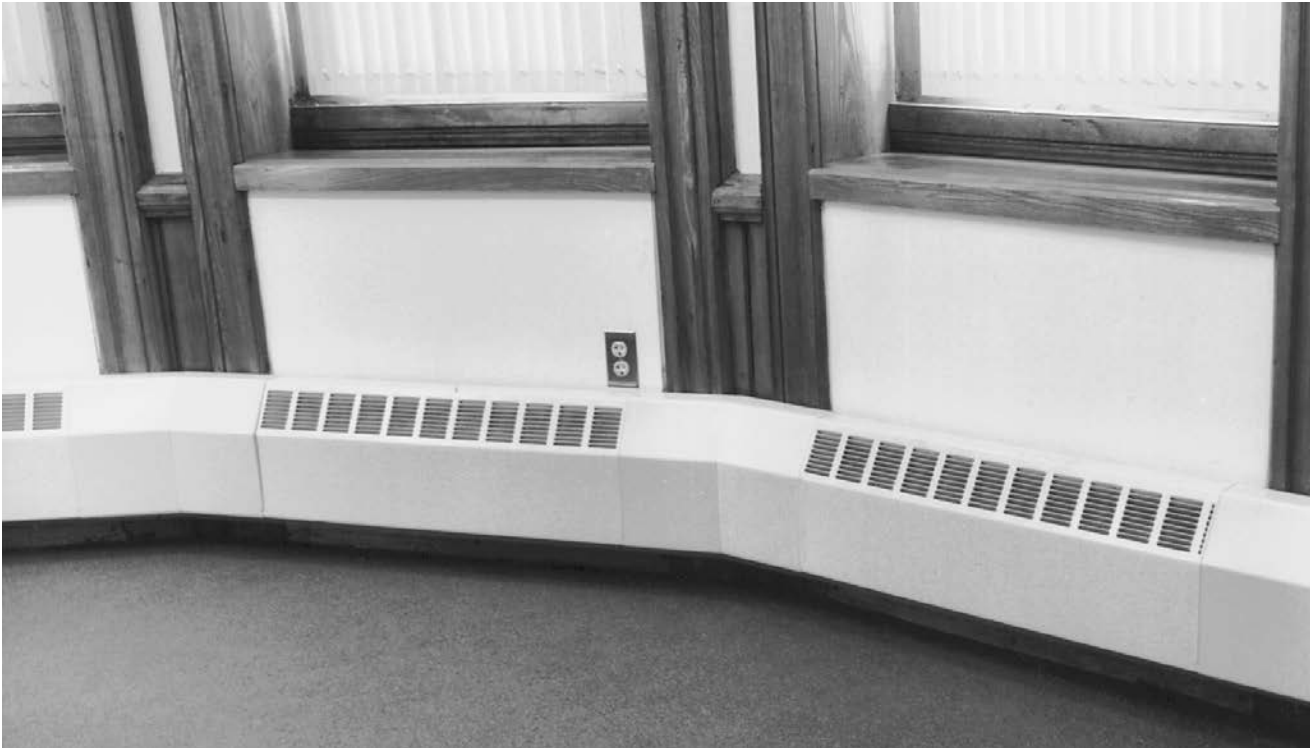
\*Not recommended for steam applications, consult factory.

Notes: 1) Steel fin furnished as .024 thick, painted black.

2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

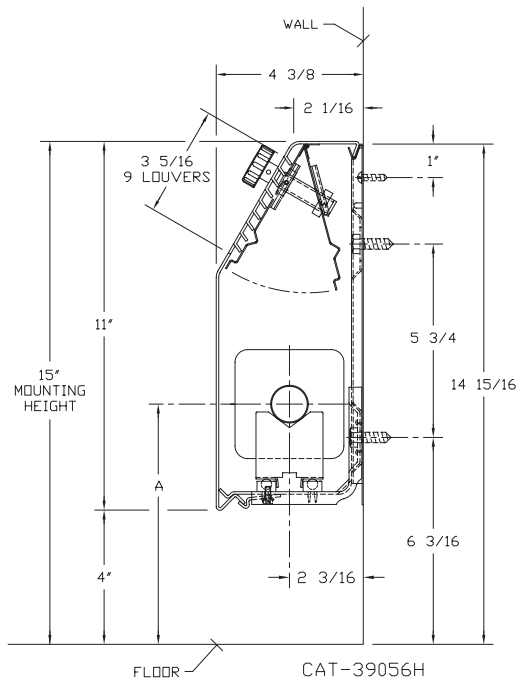
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVS" SLOPE TOP ENCLOSURES/LOW PROFILE



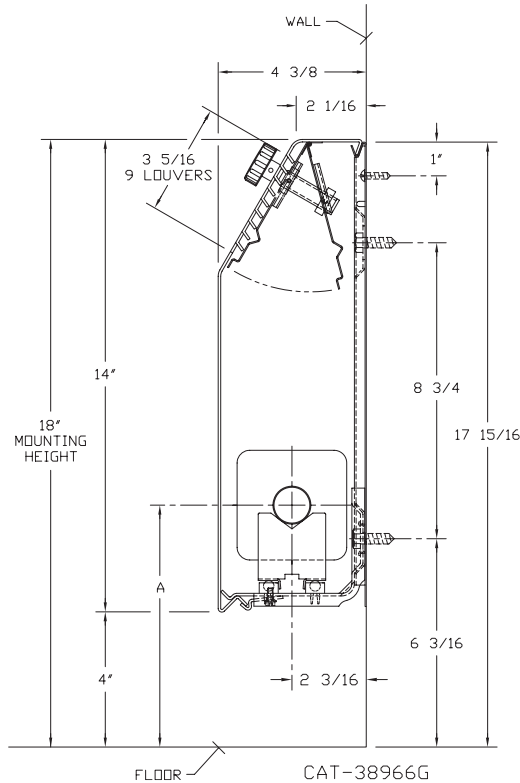
## LV3-S11

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4 x 3 1/4              | 2                | 7"       |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4 x 3 1/4              | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4 x 3 1/4              | 1                | 6 13/16" |



## LV3-S14

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4 x 3 1/4              | 2                | 7"       |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4 x 3 1/4              | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4 x 3 1/4              | 1                | 6 13/16" |



# STYLE "LVS" SLOPE TOP LOW PROFILE

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 11*                   | 1                           | 15                        | 1000              | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 11*                   | 1                           | 14                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 11*                   | 1                           | 15                        | 1320              | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 11*                   | 1                           | 15                        | 980               | 840                                               | 760  | 680  | 600  | 520  | 440  | 390  | 320  | 250  |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 11*                   | 1                           | 15                        | 1150              | 990                                               | 900  | 790  | 700  | 610  | 520  | 460  | 380  | 300  |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 11*                   | 1                           | 15                        | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |
| 1 1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 11*                   | 1                           | 15                        | 920               | 790                                               | 720  | 630  | 560  | 490  | 410  | 370  | 300  | 240  |
| 1 1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 11*                   | 1                           | 15                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
| 1 1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 11*                   | 1                           | 15                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1440              | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1060              | 910                                               | 830  | 730  | 650  | 560  | 480  | 420  | 350  | 280  |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1370              | 1180                                              | 1070 | 950  | 840  | 730  | 620  | 550  | 450  | 360  |
| 1 1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1020              | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
| 1 1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
| 1 1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1330              | 1140                                              | 1040 | 920  | 810  | 700  | 600  | 530  | 440  | 350  |

\*Not recommended for steam applications consult factory.

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 11*                   | 1                           | 15                        | 930               | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 11*                   | 1                           | 15                        | 990               | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 11*                   | 1                           | 15                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 11*                   | 1                           | 15                        | 920               | 790                                               | 720  | 630  | 560  | 490  | 410  | 370  | 300  | 240  |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 11*                   | 1                           | 15                        | 1000              | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 11*                   | 1                           | 15                        | 1050              | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 970               | 830                                               | 760  | 670  | 590  | 510  | 440  | 390  | 320  | 250  |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1110              | 950                                               | 870  | 770  | 680  | 590  | 500  | 440  | 370  | 290  |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 960               | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1150              | 990                                               | 900  | 790  | 700  | 610  | 520  | 460  | 380  | 300  |

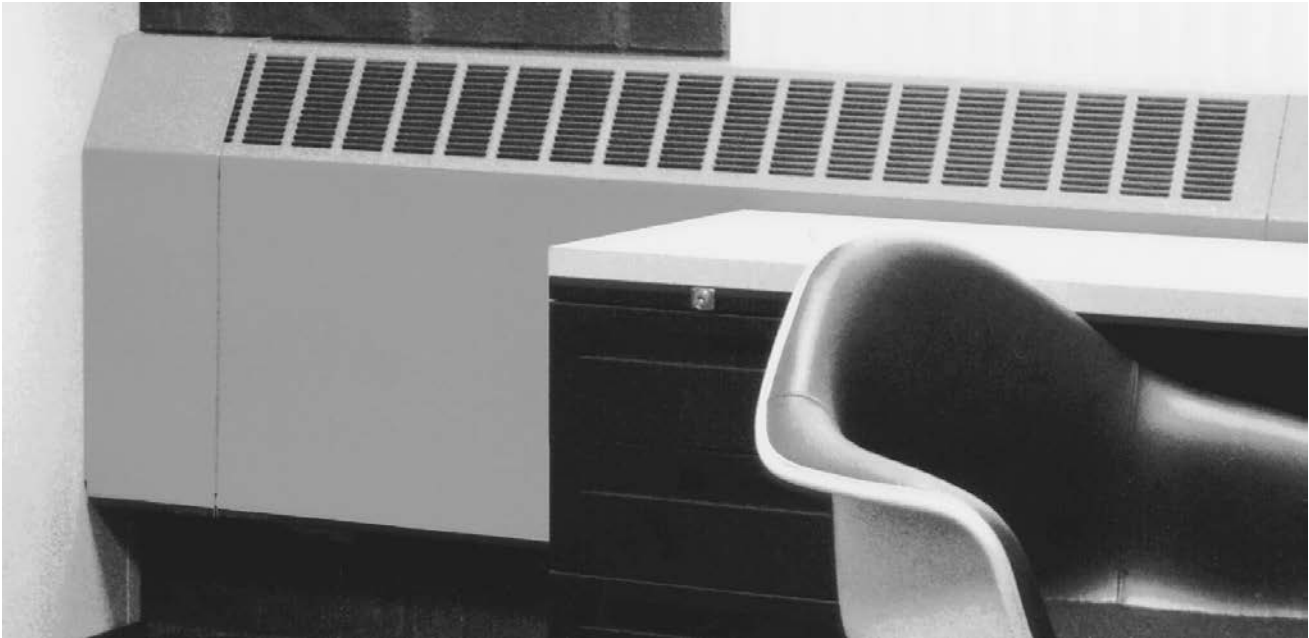
\*Not recommended for steam applications consult factory.

Notes: 1) Steel fins furnished as .032 thick, painted black.

2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

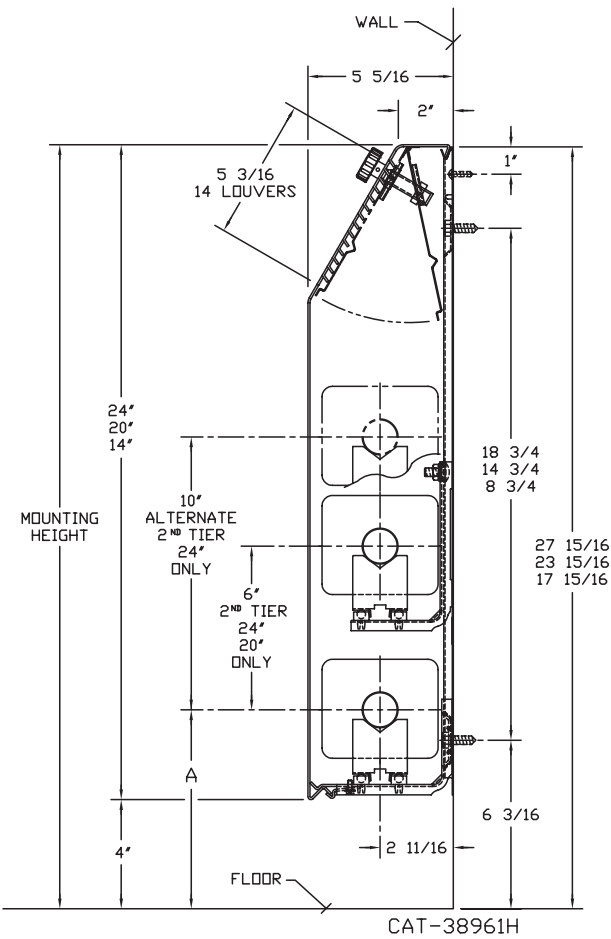
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVS" SLOPE TOP ENCLOSURES



## LV4-S14 20 24

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8 x 4 1/4              | 2                | 7"      |
| 3/4" COPPER          | 4 1/4 x 4 1/4              | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 7 3/16" |
| 1 1/4" COPPER        | 3 5/8 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" COPPER        | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" STEEL         | 4 1/4 x 4 1/4              | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 7 1/4"  |



See page 39 for element center line dimensions with steam bracket install

# STYLE "LVS" SLOPE TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"            | 32                 | .020                          | 14                          | 1                                    | 18                              | 1520                    | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1600                    | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1670                    | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2570                    | 2210                                              | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2960                    | 2550                                              | 2310 | 2040 | 1810 | 1570 | 1330 | 1180 | 980  | 770  |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"            | 40                 | .020                          | 14                          | 1                                    | 18                              | 1700                    | 1460                                              | 1330 | 1170 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1820                    | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2580                    | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1910                    | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2700                    | 2320                                              | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890  | 700  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3080                    | 2650                                              | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"            | 50                 | .020                          | 14                          | 1                                    | 18                              | 1840                    | 1580                                              | 1440 | 1270 | 1120 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2090                    | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2820                    | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2260                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3110                    | 2670                                              | 2430 | 2150 | 1900 | 1650 | 1400 | 1240 | 1030 | 810  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3510                    | 3020                                              | 2740 | 2420 | 2140 | 1860 | 1580 | 1400 | 1160 | 910  |
| 1"        | VC433               | 3-5/8" x 4-1/4"            | 32                 | .020                          | 14                          | 1                                    | 18                              | 1540                    | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1620                    | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2500                    | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1690                    | 1450                                              | 1320 | 1170 | 1030 | 900  | 760  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2980                    | 2560                                              | 2320 | 2060 | 1820 | 1580 | 1340 | 1190 | 980  | 770  |
| 1"        | VC434               | 3-5/8" x 4-1/4"            | 40                 | .020                          | 14                          | 1                                    | 18                              | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1900                    | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2660                    | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1990                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2770                    | 2380                                              | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910  | 720  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3160                    | 2720                                              | 2460 | 2180 | 1930 | 1670 | 1420 | 1260 | 1040 | 820  |
| 1"        | VC435               | 3-5/8" x 4-1/4"            | 50                 | .020                          | 14                          | 1                                    | 18                              | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2180                    | 1870                                              | 1700 | 1500 | 1330 | 1160 | 980  | 870  | 720  | 570  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2640                    | 2270                                              | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870  | 690  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2360                    | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2910                    | 2500                                              | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960  | 760  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3290                    | 2830                                              | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860  |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 14                          | 1                                    | 18                              | 1450                    | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1530                    | 1320                                              | 1190 | 1060 | 930  | 810  | 690  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2360                    | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1590                    | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |
|           |                     |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2450                    | 2110                                              | 1910 | 1690 | 1490 | 1300 | 1100 | 980  | 810  | 640  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 2820                    | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"            | 40                 | .020                          | 14                          | 1                                    | 18                              | 1740                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1880                    | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |
|           |                     |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2610                    | 2240                                              | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2710                    | 2330                                              | 2110 | 1870 | 1650 | 1440 | 1220 | 1080 | 890  | 700  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 3090                    | 2660                                              | 2410 | 2130 | 1880 | 1640 | 1390 | 1240 | 1020 | 800  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 14                          | 1                                    | 18                              | 1860                    | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2130                    | 1830                                              | 1660 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 550  |
|           |                     |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2510                    | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2270                    | 1950                                              | 1770 | 1570 | 1380 | 1200 | 1020 | 910  | 750  | 590  |
|           |                     |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 3180                    | 2730                                              | 2480 | 2190 | 1940 | 1690 | 1430 | 1270 | 1050 | 830  |

# STYLE "LVS" SLOPE TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|----------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                            |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                            |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                            |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                       | 14                          | 1                                    | 18                              | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2630                    | 2260                                              | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870  | 680  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 1790                    | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3230                    | 2780                                              | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840  |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                       | 14                          | 1                                    | 18                              | 2030                    | 1750                                              | 1580 | 1400 | 1240 | 1080 | 910  | 810  | 670  | 530  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2930                    | 2520                                              | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970  | 760  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 3210                    | 2760                                              | 2500 | 2210 | 1960 | 1700 | 1440 | 1280 | 1060 | 830  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3660                    | 3150                                              | 2850 | 2530 | 2230 | 1940 | 1650 | 1460 | 1210 | 950  |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                       | 14                          | 1                                    | 18                              | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2320                    | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1040 | 930  | 770  | 600  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 3070                    | 2640                                              | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2470                    | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 3270                    | 2810                                              | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3700                    | 3180                                              | 2890 | 2550 | 2260 | 1960 | 1670 | 1480 | 1220 | 960  |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                       | 14                          | 1                                    | 18                              | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 1740                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 1810                    | 1560                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2830                    | 2430                                              | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930  | 740  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3250                    | 2800                                              | 2540 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 850  |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                       | 14                          | 1                                    | 18                              | 1880                    | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2690                    | 2310                                              | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890  | 700  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2140                    | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2920                    | 2510                                              | 2280 | 2010 | 1780 | 1550 | 1310 | 1170 | 960  | 760  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3330                    | 2860                                              | 2600 | 2300 | 2030 | 1760 | 1500 | 1330 | 1100 | 870  |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                       | 14                          | 1                                    | 18                              | 2060                    | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2340                    | 2010                                              | 1830 | 1610 | 1430 | 1240 | 1050 | 940  | 770  | 610  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2680                    | 2300                                              | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880  | 700  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2510                    | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 3000                    | 2580                                              | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990  | 780  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3390                    | 2920                                              | 2640 | 2340 | 2070 | 1800 | 1530 | 1360 | 1120 | 880  |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                       | 14                          | 1                                    | 18                              | 1620                    | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 1710                    | 1470                                              | 1330 | 1180 | 1040 | 910  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2540                    | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 1770                    | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2780                    | 2390                                              | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920  | 720  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3200                    | 2750                                              | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830  |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                       | 14                          | 1                                    | 18                              | 1850                    | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2000                    | 1720                                              | 1560 | 1380 | 1220 | 1060 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2640                    | 2270                                              | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870  | 690  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2870                    | 2470                                              | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950  | 750  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3270                    | 2810                                              | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850  |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                       | 14                          | 1                                    | 18                              | 2020                    | 1740                                              | 1580 | 1390 | 1230 | 1070 | 910  | 810  | 670  | 530  |
|           |                     |                            |                    |                            | 20                          | 1                                    | 24                              | 2300                    | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |
|           |                     |                            |                    |                            | 20                          | 2-6 CL                               | 24                              | 2630                    | 2260                                              | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870  | 680  |
|           |                     |                            |                    |                            | 24                          | 1                                    | 28                              | 2470                    | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                            |                    |                            | 24                          | 2-6 CL                               | 28                              | 2950                    | 2540                                              | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970  | 770  |
|           |                     |                            |                    |                            | 24                          | 3-6 CL                               | 28                              | 3330                    | 2860                                              | 2600 | 2300 | 2030 | 1760 | 1500 | 1330 | 1100 | 870  |

Note: Copper tube furnished flared one end standard.

# STYLE "LVS" SLOPE TOP

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1410              | 1210                                              | 1100 | 970  | 860  | 750  | 630  | 560  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2200              | 1890                                              | 1720 | 1520 | 1340 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1500              | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2270              | 1950                                              | 1770 | 1570 | 1380 | 1200 | 1020 | 910  | 750  | 590  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2610              | 2240                                              | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1580              | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1680              | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2380              | 2050                                              | 1860 | 1640 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1740              | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2490              | 2140                                              | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2840              | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1655              | 1420                                              | 1290 | 1140 | 1010 | 880  | 740  | 660  | 550  | 430  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1760              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2435              | 2090                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 970  | 800  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1825              | 1570                                              | 1420 | 1260 | 1110 | 970  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2550              | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2880              | 2480                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950  | 750  |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1300              | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2020              | 1740                                              | 1580 | 1390 | 1230 | 1070 | 910  | 810  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2390              | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1670              | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2370              | 2040                                              | 1850 | 1640 | 1450 | 1260 | 1070 | 950  | 780  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1730              | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2480              | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2830              | 2430                                              | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930  | 740  |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1645              | 1410                                              | 1280 | 1140 | 1000 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1750              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2390              | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1810              | 1560                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2820              | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 14                    | 1                           | 18                        | 1200              | 1030                                              | 940  | 830  | 730  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1230              | 1060                                              | 960  | 850  | 750  | 650  | 550  | 490  | 410  | 320  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1930              | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 1940              | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2230              | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1400              | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2110              | 1810                                              | 1650 | 1460 | 1290 | 1120 | 950  | 840  | 700  | 550  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1490              | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2180              | 1870                                              | 1700 | 1500 | 1330 | 1160 | 980  | 870  | 720  | 570  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |

Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVS" SLOPE TOP

## INVERTED ENCLOSURE APPLICATION

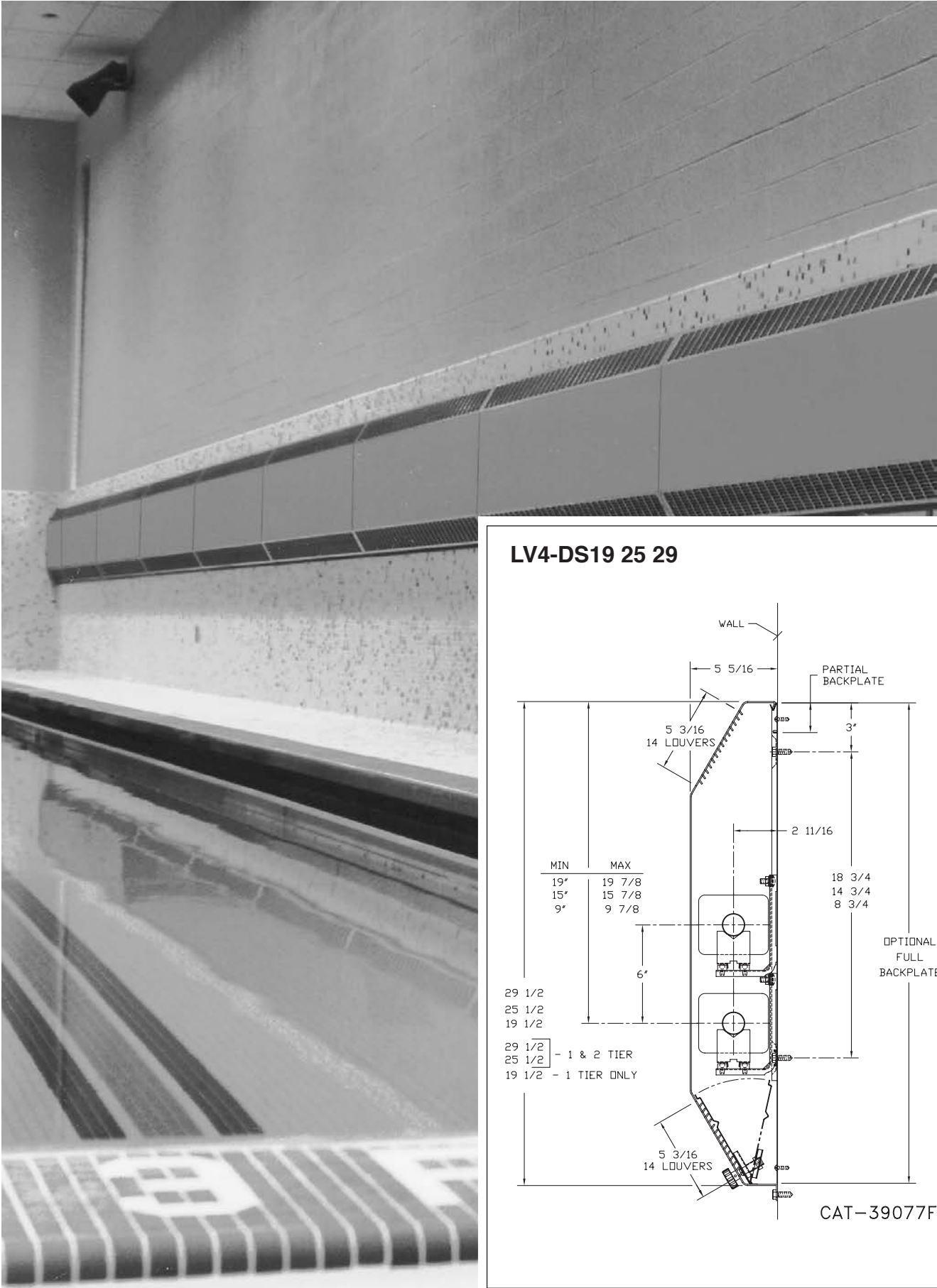


8", 11", 14", 20" and 24" high Linovector-II enclosures can be inverted using standard brackets and ball bearing hangers.

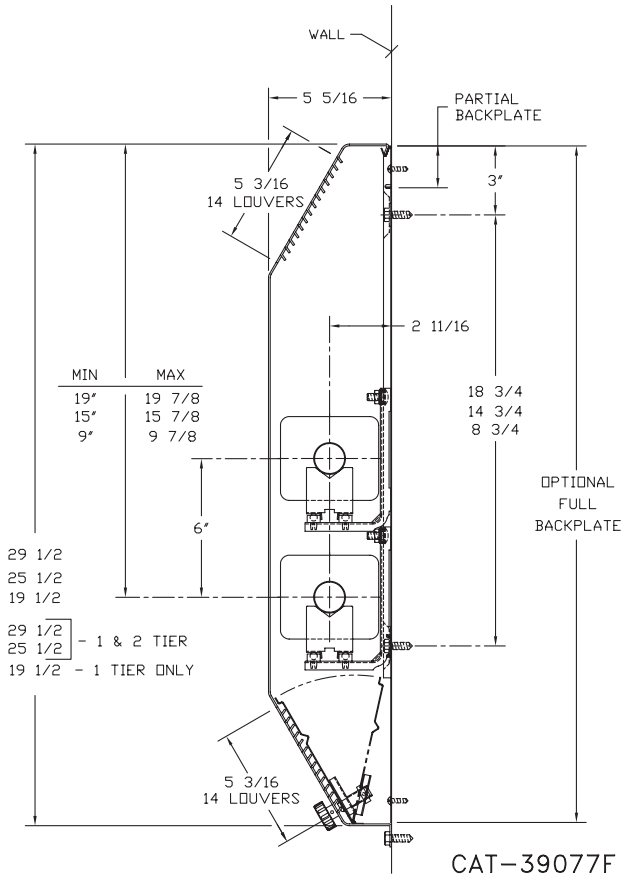
Consult factory for hanger & bracket mounting.

**Note: The optional safety latch is available for all inverted enclosures for added security and safety.**

# STYLE "LVDS" DOUBLE SLOPE TOP



LV4-DS19 25 29



# STYLE "LVDS" DOUBLE SLOPE TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |  |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|--|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |  |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |  |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |  |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"            | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1305                    | 1120                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 1985                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 890  | 790  | 660  | 520  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1370                    | 1180                                              | 1070 | 950  | 840  | 730  | 620  | 550  | 450  | 360  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2080                    | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2390                    | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |  |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"            | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1470                    | 1260                                              | 1150 | 1010 | 900  | 780  | 660  | 590  | 490  | 380  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1570                    | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2230                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2330                    | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2660                    | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"            | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1590                    | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1805                    | 1550                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2435                    | 2090                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 970  | 800  | 630  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2685                    | 2310                                              | 2090 | 1850 | 1640 | 1420 | 1210 | 1070 | 890  | 700  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 3030                    | 2610                                              | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790  |  |
| 1"        | VC433               | 3-5/8" x 4-1/4"            | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1330                    | 1140                                              | 1040 | 920  | 810  | 700  | 600  | 530  | 440  | 350  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1400                    | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2235                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1010 | 890  | 740  | 580  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2570                    | 2210                                              | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850  | 670  |  |
| 1"        | VC434               | 3-5/8" x 4-1/4"            | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1535                    | 1320                                              | 1200 | 1060 | 940  | 810  | 690  | 610  | 510  | 400  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1640                    | 1410                                              | 1280 | 1130 | 1000 | 870  | 740  | 660  | 540  | 430  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2300                    | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2390                    | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2720                    | 2340                                              | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900  | 710  |  |
| 1"        | VC435               | 3-5/8" x 4-1/4"            | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1665                    | 1430                                              | 1300 | 1150 | 1020 | 880  | 750  | 670  | 550  | 430  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1880                    | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2280                    | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2510                    | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2840                    | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |  |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1250                    | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1320                    | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1375                    | 1180                                              | 1070 | 950  | 840  | 730  | 620  | 550  | 450  | 360  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2115                    | 1820                                              | 1650 | 1460 | 1290 | 1120 | 950  | 850  | 700  | 550  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2430                    | 2090                                              | 1900 | 1680 | 1480 | 1290 | 1090 | 970  | 800  | 630  |  |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"            | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1500                    | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1625                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2255                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1010 | 900  | 740  | 590  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1685                    | 1450                                              | 1310 | 1160 | 1030 | 890  | 760  | 670  | 560  | 440  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2340                    | 2010                                              | 1830 | 1610 | 1430 | 1240 | 1050 | 940  | 770  | 610  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2670                    | 2300                                              | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880  | 690  |  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1840                    | 1580                                              | 1440 | 1270 | 1120 | 980  | 830  | 740  | 610  | 480  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2165                    | 1860                                              | 1690 | 1490 | 1320 | 1150 | 970  | 870  | 710  | 560  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1960                    | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2425                    | 2090                                              | 1890 | 1670 | 1480 | 1290 | 1090 | 970  | 800  | 630  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2740                    | 2360                                              | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900  | 710  |  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1320                    | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1415                    | 1220                                              | 1100 | 980  | 860  | 750  | 640  | 570  | 470  | 370  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2180                    | 1870                                              | 1700 | 1500 | 1330 | 1160 | 980  | 870  | 720  | 570  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1480                    | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2280                    | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2620                    | 2250                                              | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860  | 680  |  |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1730                    | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2440                    | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1800                    | 1550                                              | 1400 | 1240 | 1100 | 950  | 810  | 720  | 590  | 470  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2910                    | 2500                                              | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960  | 760  |  |

# STYLE "LVDS" DOUBLE SLOPE TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1770                    | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2440                    | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1990                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2880                    | 2480                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950  | 750  |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1425                    | 1230                                              | 1110 | 980  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1500                    | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2235                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1010 | 890  | 740  | 580  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1565                    | 1350                                              | 1220 | 1080 | 950  | 830  | 700  | 630  | 520  | 410  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2445                    | 2100                                              | 1910 | 1690 | 1490 | 1300 | 1100 | 980  | 810  | 640  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1625                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1760                    | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2325                    | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1050 | 930  | 770  | 600  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1850                    | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2520                    | 2170                                              | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830  | 660  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2870                    | 2470                                              | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950  | 750  |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 2020                    | 1740                                              | 1580 | 1390 | 1230 | 1070 | 910  | 810  | 670  | 530  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2315                    | 1990                                              | 1810 | 1600 | 1410 | 1230 | 1040 | 930  | 760  | 600  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 2165                    | 1860                                              | 1690 | 1490 | 1320 | 1150 | 970  | 870  | 710  | 560  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2930                    | 2520                                              | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970  | 760  |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 19-1/2                      | 1                                    | -                               | 1400                    | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1475                    | 1270                                              | 1150 | 1020 | 900  | 780  | 660  | 590  | 490  | 380  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2195                    | 1890                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1530                    | 1320                                              | 1190 | 1060 | 930  | 810  | 690  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2400                    | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2760                    | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 19-1/2                      | 1                                    | -                               | 1600                    | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1725                    | 1480                                              | 1350 | 1190 | 1050 | 910  | 780  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2280                    | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 1815                    | 1560                                              | 1420 | 1250 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2830                    | 2430                                              | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930  | 740  |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 19-1/2                      | 1                                    | -                               | 1745                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 790  | 700  | 580  | 450  |
|           |                     |                            |                    |                               | 25-1/2                      | 1                                    | -                               | 1985                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 890  | 790  | 660  | 520  |
|           |                     |                            |                    |                               | 25-1/2                      | 2-6 CL                               | -                               | 2270                    | 1950                                              | 1770 | 1570 | 1380 | 1200 | 1020 | 910  | 750  | 590  |
|           |                     |                            |                    |                               | 29-1/2                      | 1                                    | -                               | 2135                    | 1840                                              | 1670 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 560  |
|           |                     |                            |                    |                               | 29-1/2                      | 2-6 CL                               | -                               | 2545                    | 2190                                              | 1990 | 1760 | 1550 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 29-1/2                      | 3-6 CL                               | -                               | 2880                    | 2480                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950  | 750  |

Note: Copper tube furnished flared one end standard.

# STYLE "LVDS" DOUBLE SLOPE TOP

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|----------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                            |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                            |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                            |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS43                | 4-1/4" SQ.                 | 32                 | .032                       | 19-1/2                      | 1                                    | -                               | 1215                    | 1040                                              | 950  | 840  | 740  | 640  | 550  | 490  | 400  | 320  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1255                    | 1080                                              | 980  | 870  | 770  | 670  | 560  | 500  | 410  | 330  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 1980                    | 1700                                              | 1540 | 1370 | 1210 | 1050 | 890  | 790  | 650  | 510  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1290                    | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2045                    | 1760                                              | 1600 | 1410 | 1250 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
| 1"        | VS44                | 4-1/4" SQ.                 | 40                 | .032                       | 19-1/2                      | 1                                    | -                               | 1360                    | 1170                                              | 1060 | 940  | 830  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1445                    | 1240                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 2140                    | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1495                    | 1290                                              | 1170 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2240                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
| 1"        | VS45                | 4-1/4" SQ.                 | 50                 | .032                       | 19-1/2                      | 1                                    | -                               | 1425                    | 1230                                              | 1110 | 980  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1515                    | 1300                                              | 1180 | 1050 | 920  | 800  | 680  | 610  | 500  | 390  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 2190                    | 1880                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1570                    | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2295                    | 1970                                              | 1790 | 1580 | 1400 | 1220 | 1030 | 920  | 760  | 600  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
| 1-1/4"    | VS143               | 4-1/4" SQ.                 | 32                 | .032                       | 19-1/2                      | 1                                    | -                               | 1120                    | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1185                    | 1020                                              | 920  | 820  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1250                    | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 1880                    | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
| 1-1/4"    | VS144               | 4-1/4" SQ.                 | 40                 | .032                       | 19-1/2                      | 1                                    | -                               | 1360                    | 1170                                              | 1060 | 940  | 830  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1470                    | 1260                                              | 1150 | 1010 | 900  | 780  | 660  | 590  | 490  | 380  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 2090                    | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1560                    | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2240                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
| 1-1/4"    | VS145               | 4-1/4" SQ.                 | 50                 | .032                       | 19-1/2                      | 1                                    | -                               | 1415                    | 1220                                              | 1100 | 980  | 860  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1505                    | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 2150                    | 1850                                              | 1680 | 1480 | 1310 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1555                    | 1340                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2250                    | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2540                    | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
| 2"        | VS242               | 4-1/4" SQ.                 | 25                 | .032                       | 19-1/2                      | 1                                    | -                               | 1050                    | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1110                    | 950                                               | 870  | 770  | 680  | 590  | 500  | 440  | 370  | 290  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 1670                    | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1170                    | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 1770                    | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
| 2"        | VS243               | 4-1/4" SQ.                 | 32                 | .032                       | 19-1/2                      | 1                                    | -                               | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|           |                     |                            |                    |                            | 25-1/2                      | 1                                    | -                               | 1290                    | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
|           |                     |                            |                    |                            | 25-1/2                      | 2-6 CL                               | -                               | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                            |                    |                            | 29-1/2                      | 1                                    | -                               | 1360                    | 1170                                              | 1060 | 940  | 830  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                            |                    |                            | 29-1/2                      | 2-6 CL                               | -                               | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                            | 29-1/2                      | 3-6 CL                               | -                               | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |

Notes: 1) Steel fins furnished as .032 thick, painted black.  
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
 3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LV2-T" SLIMLINE TOP OUTLET

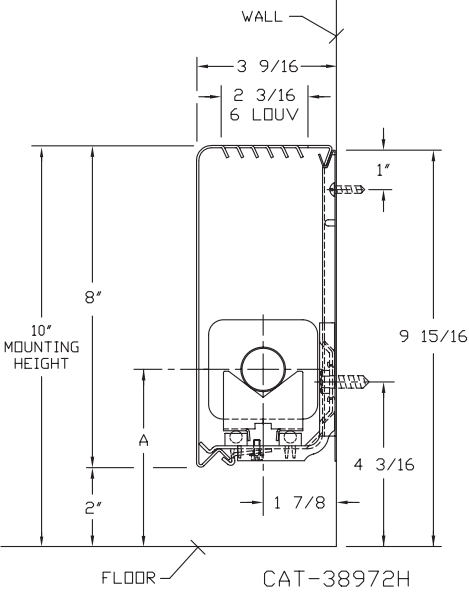


## LV2-T8

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|---|----------------------|----------------------------|------------------|----------|
| ✱ | 3/4" COPPER          | 2 1/2" x 2 1/4"            | 1                | 4 5/16   |
| ✱ | 3/4" COPPER          | 2 1/2" x 2 3/4"            | 1                |          |
|   | 3/4" COPPER          | 3 3/4" x 2 3/4"            | 2                | 5"       |
| ✱ | 1" COPPER            | 2 1/2" x 2 3/4"            | 1                | 4 1/2"   |
|   | 1" COPPER            | 3 3/4" x 2 3/4"            | 2                | 5 3/16"  |
|   | 1" COPPER            | 5" x 2 3/4"                | 3A               | 5 1/2"   |
|   | 1 1/4" COPPER        | 3 3/4" x 2 3/4"            | 2                | 5 5/16"  |
|   | 1 1/4" COPPER        | 5" x 2 3/4"                | 3A               | 5 11/16" |
|   | 1" STEEL             | 3 3/4" x 2 3/4"            | 2                | 5 5/16"  |
|   | 1" STEEL             | 5" x 2 3/4"                | 3A               | 5 11/16" |
|   | 1 1/4" STEEL         | 3 3/4" x 2 3/4"            | 2                | 5 1/2"   |
|   | 1 1/4" STEEL         | 5" x 2 3/4"                | 3A               | 5 15/16" |

✱ Damper available with these elements only.

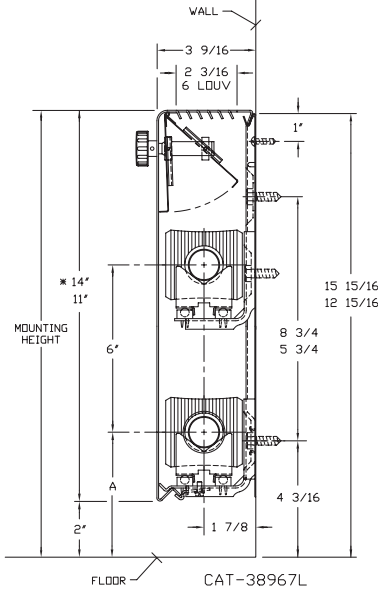
Not recommended for steam applications, consult factory.



## LV2-T11 14

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|---|----------------------|----------------------------|------------------|----------|
| ✱ | 3/4" COPPER          | 2 1/2" x 2 1/4"            | 1                | 4 5/16   |
| ✱ | 3/4" COPPER          | 2 1/2" x 2 3/4"            | 1                |          |
|   | 3/4" COPPER          | 3 3/4" x 2 3/4"            | 2                | 5"       |
| ✱ | 1" COPPER            | 2 1/2" x 2 3/4"            | 1                | 4 1/2"   |
|   | 1" COPPER            | 3 3/4" x 2 3/4"            | 2                | 5 3/16"  |
|   | 1" COPPER            | 5" x 2 3/4"                | 3A               | 5 1/2"   |
|   | 1 1/4" COPPER        | 3 3/4" x 2 3/4"            | 2                | 5 5/16"  |
|   | 1 1/4" COPPER        | 5" x 2 3/4"                | 3A               | 5 11/16" |
|   | 1" STEEL             | 3 3/4" x 2 3/4"            | 2                | 5 5/16"  |
|   | 1" STEEL             | 5" x 2 3/4"                | 3A               | 5 11/16" |
|   | 1 1/4" STEEL         | 3 3/4" x 2 3/4"            | 2                | 5 1/2"   |
|   | 1 1/4" STEEL         | 5" x 2 3/4"                | 3A               | 5 15/16" |

✱ 2 tier with damper available in 14" height with these elements only.



# STYLE "LV2-T" SLIMLINE TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VR01                | 2-1/2" x 2-3/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 750               | 650                                               | 590  | 520  | 460  | 400  | 340  | 300  | 250  | 200  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 810               | 700                                               | 630  | 560  | 490  | 430  | 360  | 320  | 270  | 210  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 870               | 750                                               | 680  | 600  | 530  | 460  | 390  | 350  | 290  | 230  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1240              | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
| 3/4"      | VR02                | 2-1/2" x 2-3/4"         | 60           | .010                    | 8*                    | 1                           | 10                        | 900               | 770                                               | 700  | 620  | 550  | 480  | 410  | 360  | 300  | 230  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 960               | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
| 1"        | VR03                | 2-1/2" x 2-3/4"         | 55           | .011                    | 8*                    | 1                           | 10                        | 880               | 760                                               | 690  | 610  | 540  | 470  | 400  | 350  | 290  | 230  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 940               | 810                                               | 730  | 650  | 570  | 500  | 420  | 380  | 310  | 240  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1000              | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1440              | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
| 3/4"      | VR04                | 3-3/4" x 2-3/4"         | 50           | .014                    | 8*                    | 1                           | 10                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1200              | 1030                                              | 940  | 830  | 730  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1590              | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |
| 1"        | VR05                | 3-3/4" x 2-3/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 1070              | 920                                               | 830  | 740  | 650  | 570  | 480  | 430  | 350  | 280  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1130              | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1580              | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |
| 1-1/4"    | VR08                | 3-3/4" x 2-3/4"         | 50           | .020                    | 8*                    | 1                           | 10                        | 1020              | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1600              | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
| 1"        | VR07                | 5" x 2-3/4"             | 50           | .020                    | 8*                    | 1                           | 10                        | 1210              | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1270              | 1090                                              | 990  | 880  | 770  | 670  | 570  | 510  | 420  | 330  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1320              | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1650              | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
| 1-1/4"    | VR10                | 5" x 2-3/4"             | 50           | .020                    | 8*                    | 1                           | 10                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1240              | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1610              | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |

\*Not recommended for steam applications consult, factory.  
Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VR11                | 3-3/4" x 2-3/4"         | 40           | .024                    | 8*                    | 1                           | 10                        | 830               | 710                                               | 650  | 570  | 510  | 440  | 370  | 330  | 270  | 220  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 890               | 770                                               | 690  | 610  | 540  | 470  | 400  | 360  | 290  | 230  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 980               | 840                                               | 760  | 680  | 600  | 520  | 440  | 390  | 320  | 250  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1410              | 1210                                              | 1100 | 970  | 860  | 750  | 630  | 560  | 470  | 370  |
| 1"        | VR15                | 5" x 2-3/4"             | 50           | .024                    | 8*                    | 1                           | 10                        | 890               | 770                                               | 690  | 610  | 540  | 470  | 400  | 360  | 290  | 230  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 950               | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1040              | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
| 1-1/4"    | VR16                | 5" x 2-3/4"             | 50           | .024                    | 8*                    | 1                           | 10                        | 910               | 780                                               | 710  | 630  | 560  | 480  | 410  | 360  | 300  | 240  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 970               | 830                                               | 760  | 670  | 590  | 510  | 440  | 390  | 320  | 250  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1060              | 910                                               | 830  | 730  | 650  | 560  | 480  | 420  | 350  | 280  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |

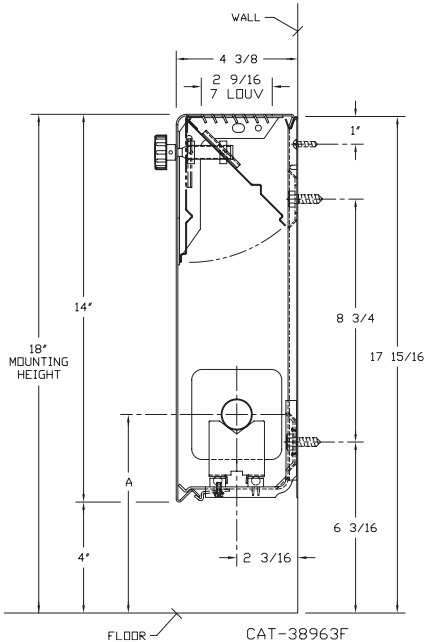
\*Not recommended for steam application, consult factory.  
Notes: 1) Steel fin furnished as .024 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVT" TOP OUTLET



## LV3-T14

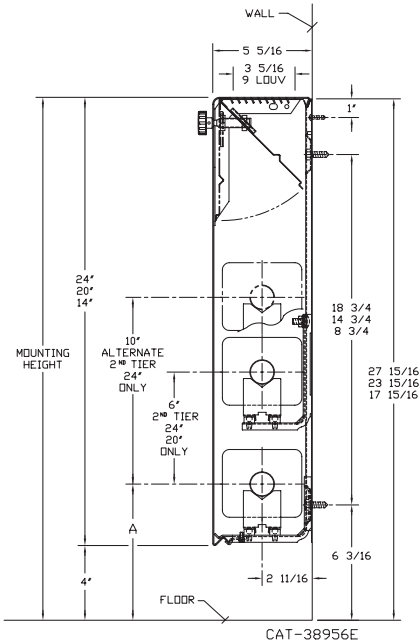
| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4" x 3 1/4"            | 2                | 7"       |
| 1" COPPER            | 3 1/4" x 3 1/4"            | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4" x 3 1/4"            | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4" x 3 1/4"            | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4" x 3 1/4"            | 1                | 6 13/16" |



See page 39 for element center line dimensions with steam bracket installation.

## LV4-T14 20 24

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8" x 4 1/4"            | 2                | 7"      |
| 3/4" COPPER          | 4 1/4" x 4 1/4"            | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8" x 4 1/4"            | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4" x 4 1/4"            | 2                | 7 3/16" |
| 1 1/4" COPPER        | 3 5/8" x 4 1/4"            | 2                | 7 5/16" |
| 1 1/4" COPPER        | 4 1/4" x 4 1/4"            | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4" x 4 1/4"            | 2                | 7 5/16" |
| 1 1/4" STEEL         | 4 1/4" x 4 1/4"            | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4" x 4 1/4"            | 1                | 7 1/4"  |



See page 39 for element center line dimensions with steam bracket installation.

# STYLE "LVT" TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE<br>SIZE | CATALOG<br>DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|--------------|------------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|              |                        |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|              |                        |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
| 1.00         | 0.86                   | 0.78                       | 0.69               | 0.61                          | 0.53                        | 0.45                                 | .40                             | .33                     | .26                                               |      |      |      |      |      |      |      |      |
| 3/4"         | VC3/4-33               | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 960                     | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
| 3/4"         | VC3/4-34               | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1130                    | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
| 3/4"         | VC3/4-35               | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1280                    | 1100                                              | 1000 | 880  | 780  | 680  | 580  | 510  | 420  | 330  |
| 1"           | VC33                   | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 940                     | 810                                               | 730  | 650  | 570  | 500  | 420  | 380  | 310  | 240  |
| 1"           | VC34                   | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1080                    | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
| 1"           | VC35                   | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
| 1 1/4"       | VC133                  | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 900                     | 770                                               | 700  | 620  | 550  | 480  | 410  | 360  | 300  | 230  |
| 1 1/4"       | VC134                  | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1040                    | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
| 1 1/4"       | VC135                  | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1190                    | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
| 3/4"         | VC3/4-433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 14                          | 1                                    | 18                              | 1300                    | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1380                    | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|              |                        |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2015                    | 1730                                              | 1570 | 1390 | 1230 | 1070 | 910  | 810  | 660  | 520  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 1420                    | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|              |                        |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
| 3/4"         | VC3/4-434              | 3-5/8" x 4-1/4"            | 40                 | .020                          | 24                          | 3-6 CL                               | 28                              | 2420                    | 2080                                              | 1890 | 1670 | 1480 | 1280 | 1090 | 970  | 800  | 630  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1550                    | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|              |                        |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2360                    | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 1700                    | 1460                                              | 1330 | 1170 | 1040 | 900  | 770  | 680  | 560  | 440  |
| 3/4"         | VC3/4-435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 2-6 CL                               | 28                              | 2460                    | 2120                                              | 1920 | 1700 | 1500 | 1300 | 1110 | 980  | 810  | 640  |
|              |                        |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2800                    | 2410                                              | 2180 | 1930 | 1710 | 1480 | 1260 | 1120 | 920  | 730  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1740                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1870                    | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
|              |                        |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2690                    | 2310                                              | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890  | 700  |
| 3/4"         | VC3/4-435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 1                                    | 28                              | 1960                    | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |
|              |                        |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2910                    | 2500                                              | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960  | 760  |
|              |                        |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3290                    | 2830                                              | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1380                    | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1450                    | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
| 1"           | VC433                  | 3-5/8" x 4-1/4"            | 32                 | .020                          | 20                          | 2-6 CL                               | 24                              | 2260                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 1490                    | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|              |                        |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2340                    | 2010                                              | 1830 | 1610 | 1430 | 1240 | 1050 | 940  | 770  | 610  |
|              |                        |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2690                    | 2310                                              | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890  | 700  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
| 1"           | VC434                  | 3-5/8" x 4-1/4"            | 40                 | .020                          | 20                          | 1                                    | 24                              | 1710                    | 1470                                              | 1330 | 1180 | 1040 | 910  | 770  | 680  | 560  | 440  |
|              |                        |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2440                    | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|              |                        |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2530                    | 2180                                              | 1970 | 1750 | 1540 | 1340 | 1140 | 1010 | 830  | 660  |
|              |                        |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2880                    | 2480                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950  | 750  |
| 1"           | VC435                  | 3-5/8" x 4-1/4"            | 50                 | .020                          | 14                          | 1                                    | 18                              | 1810                    | 1560                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1960                    | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |
|              |                        |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2520                    | 2170                                              | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830  | 660  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 2050                    | 1760                                              | 1600 | 1410 | 1250 | 1090 | 920  | 820  | 680  | 530  |
|              |                        |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2730                    | 2350                                              | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900  | 710  |
| 1"           | VC435                  | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 3-6 CL                               | 28                              | 3080                    | 2650                                              | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1350                    | 1160                                              | 1050 | 930  | 820  | 720  | 610  | 540  | 450  | 350  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1420                    | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|              |                        |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2220                    | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
| 1-1/4"       | VC1433                 | 3-5/8" x 4-1/4"            | 32                 | .020                          | 24                          | 2 @ 6 CL                             | 28                              | 2300                    | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |
|              |                        |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 2650                    | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1580                    | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1680                    | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|              |                        |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2380                    | 2050                                              | 1860 | 1640 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
| 1-1/4"       | VC1434                 | 3-5/8" x 4-1/4"            | 40                 | .020                          | 24                          | 1                                    | 28                              | 1740                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|              |                        |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|              |                        |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 2830                    | 2430                                              | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930  | 740  |
|              |                        |                            |                    |                               | 14                          | 1                                    | 18                              | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|              |                        |                            |                    |                               | 20                          | 1                                    | 24                              | 1920                    | 1650                                              | 1500 | 1320 | 1170 | 1020 | 860  | 770  | 630  | 500  |
| 1-1/4"       | VC1435                 | 3-5/8" x 4-1/4"            | 50                 | .020                          | 20                          | 2 @ 6 CL                             | 24                              | 2460                    | 2120                                              | 1920 | 1700 | 1500 | 1300 | 1110 | 980  | 810  | 640  |
|              |                        |                            |                    |                               | 24                          | 1                                    | 28                              | 2010                    | 1730                                              | 1570 | 1390 | 1230 | 1070 | 900  | 800  | 660  | 520  |
|              |                        |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2650                    | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
|              |                        |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 2990                    | 2570                                              | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990  | 780  |

# STYLE "LVT" TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1400                    | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1595                    | 1370                                              | 1240 | 1100 | 970  | 850  | 720  | 640  | 530  | 410  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2215                    | 1900                                              | 1730 | 1530 | 1350 | 1170 | 1000 | 890  | 730  | 580  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1530                    | 1320                                              | 1190 | 1060 | 930  | 810  | 690  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2305                    | 1980                                              | 1800 | 1590 | 1410 | 1220 | 1040 | 920  | 760  | 600  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2650                    | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1700                    | 1460                                              | 1330 | 1170 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1870                    | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2580                    | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2940                    | 2530                                              | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970  | 760  |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1745                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 790  | 700  | 580  | 450  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2000                    | 1720                                              | 1560 | 1380 | 1220 | 1060 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2465                    | 2120                                              | 1920 | 1700 | 1500 | 1310 | 1110 | 990  | 810  | 640  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2060                    | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2800                    | 2410                                              | 2180 | 1930 | 1710 | 1480 | 1260 | 1120 | 920  | 730  |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1490                    | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1550                    | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2390                    | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1600                    | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2470                    | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2840                    | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1820                    | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2570                    | 2210                                              | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1890                    | 1630                                              | 1470 | 1300 | 1150 | 1000 | 850  | 760  | 620  | 490  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2670                    | 2300                                              | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880  | 690  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3040                    | 2610                                              | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790  |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2540                    | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2200                    | 1890                                              | 1720 | 1520 | 1340 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2840                    | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3210                    | 2760                                              | 2500 | 2210 | 1960 | 1700 | 1440 | 1280 | 1060 | 830  |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1520                    | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1570                    | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2430                    | 2090                                              | 1900 | 1680 | 1480 | 1290 | 1090 | 970  | 800  | 630  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2790                    | 2400                                              | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920  | 730  |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1690                    | 1450                                              | 1320 | 1170 | 1030 | 900  | 760  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1790                    | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2520                    | 2170                                              | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830  | 660  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1860                    | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2620                    | 2250                                              | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860  | 680  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2990                    | 2570                                              | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990  | 780  |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1900                    | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2060                    | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2500                    | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2780                    | 2390                                              | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920  | 720  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3140                    | 2700                                              | 2450 | 2170 | 1920 | 1660 | 1410 | 1260 | 1040 | 820  |

Note: Copper tube furnished flared one end standard.

# STYLE "LVT" TOP OUTLET

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

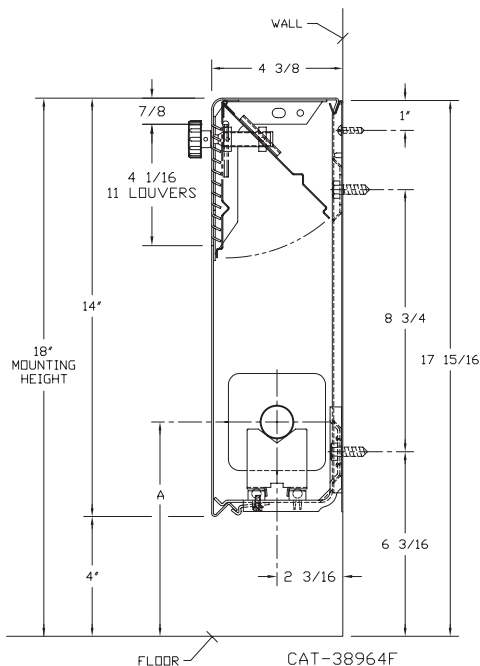
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 840               | 720                                               | 660  | 580  | 510  | 450  | 380  | 340  | 280  | 220  |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 965               | 830                                               | 750  | 670  | 590  | 510  | 430  | 390  | 320  | 250  |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1035              | 890                                               | 810  | 710  | 630  | 550  | 470  | 410  | 340  | 270  |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 850               | 730                                               | 660  | 590  | 520  | 450  | 380  | 340  | 280  | 220  |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 960               | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1000              | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1200              | 1030                                              | 940  | 830  | 730  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2030              | 1750                                              | 1580 | 1400 | 1240 | 1080 | 910  | 810  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1280              | 1100                                              | 1000 | 880  | 780  | 680  | 580  | 510  | 420  | 330  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1420              | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1500              | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2200              | 1890                                              | 1720 | 1520 | 1340 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1560              | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2270              | 1950                                              | 1770 | 1570 | 1380 | 1200 | 1020 | 910  | 750  | 590  |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1485              | 1280                                              | 1160 | 1020 | 910  | 790  | 670  | 590  | 490  | 390  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2255              | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1010 | 900  | 740  | 590  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1635              | 1410                                              | 1280 | 1130 | 1000 | 870  | 740  | 650  | 540  | 430  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2325              | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1050 | 930  | 770  | 600  |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1100              | 950                                               | 860  | 760  | 670  | 580  | 500  | 440  | 360  | 290  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1150              | 990                                               | 900  | 790  | 700  | 610  | 520  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1860              | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 1910              | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1410              | 1210                                              | 1100 | 970  | 860  | 750  | 630  | 560  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1490              | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2190              | 1880                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1550              | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2260              | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1475              | 1270                                              | 1150 | 1020 | 900  | 780  | 660  | 590  | 490  | 380  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1560              | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2210              | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1625              | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2280              | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 14                    | 1                           | 18                        | 1080              | 930                                               | 840  | 750  | 660  | 570  | 490  | 430  | 360  | 280  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1790              | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 2090              | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1310              | 1130                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1980              | 1700                                              | 1540 | 1370 | 1210 | 1050 | 890  | 790  | 650  | 510  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 24                    | 2-6 CL                      | 28                        | 2020              | 1740                                              | 1580 | 1390 | 1230 | 1070 | 910  | 810  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2320              | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1040 | 930  | 770  | 600  |

- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

## STYLE "LVF" FRONT OUTLET

**LV3-F14**

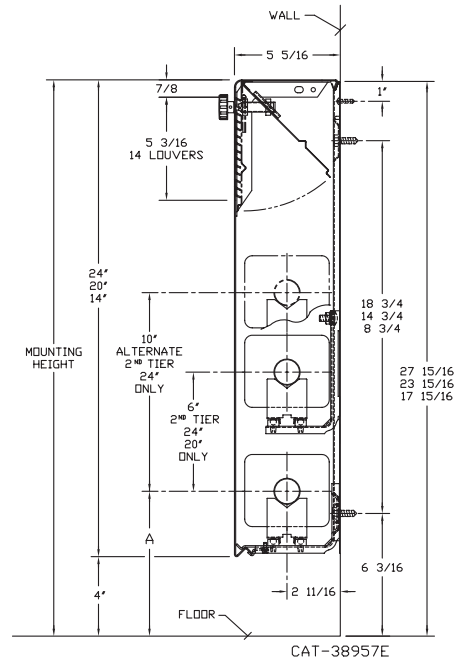
| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4 COPPER           | 3 1/4 x 3 1/4              | 2                | 7'      |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16  |
| 1 1/4 COPPER         | 3 1/4 x 3 1/4              | 1                | 6 5/8   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16  |
| 1 1/4 STEEL          | 3 1/4 x 3 1/4              | 1                | 6 13/16 |



See page 39 for element center line dimensions with steam bracket installation.

**LV4-F14 20 24**

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4 COPPER           | 3 5/8 x 4 1/4              | 2                | 7"      |
| 3/4 COPPER           | 4 1/4 x 4 1/4              | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 7 3/16" |
| 1 1/4 COPPER         | 3 5/8 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4 COPPER         | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4 STEEL          | 4 1/4 x 4 1/4              | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 7 1/4"  |



See page 39 for element center line dimensions with steam bracket installation.

# STYLE "LVF" FRONT OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1170              | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1480              | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1300              | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1430              | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
| 1 1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1090              | 940                                               | 850  | 750  | 660  | 580  | 490  | 440  | 360  | 280  |
| 1 1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1240              | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
| 1 1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"         | 32           | .020                    | 14                    | 1                           | 18                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2390              | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2410              | 2070                                              | 1880 | 1660 | 1470 | 1280 | 1080 | 960  | 800  | 630  |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"         | 40           | .020                    | 14                    | 1                           | 18                        | 1680              | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1790              | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1870              | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2670              | 2300                                              | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880  | 690  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"         | 50           | .020                    | 14                    | 1                           | 18                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2780              | 2390                                              | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920  | 720  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2230              | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2940              | 2530                                              | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970  | 760  |
| 1"        | VC433               | 3-5/8" x 4-1/4"         | 32           | .020                    | 14                    | 1                           | 18                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2470              | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1640              | 1410                                              | 1280 | 1130 | 1000 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2540              | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
| 1"        | VC434               | 3-5/8" x 4-1/4"         | 40           | .020                    | 14                    | 1                           | 18                        | 1920              | 1660                                              | 1510 | 1350 | 1190 | 1030 | 870  | 770  | 640  | 510  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2160              | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2600              | 2240                                              | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2330              | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2760              | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1"        | VC435               | 3-5/8" x 4-1/4"         | 50           | .020                    | 14                    | 1                           | 18                        | 1900              | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2160              | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2600              | 2240                                              | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2330              | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2760              | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"         | 32           | .020                    | 14                    | 1                           | 18                        | 1500              | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1560              | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                         |              |                         | 20                    | 2 @ 6 CL                    | 24                        | 2430              | 2090                                              | 1900 | 1680 | 1480 | 1290 | 1090 | 970  | 800  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1600              | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                         |              |                         | 24                    | 2 @ 6 CL                    | 28                        | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"         | 40           | .020                    | 14                    | 1                           | 18                        | 1730              | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1850              | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 20                    | 2 @ 6 CL                    | 24                        | 2590              | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1910              | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
|           |                     |                         |              |                         | 24                    | 2 @ 6 CL                    | 28                        | 2700              | 2320                                              | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890  | 700  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"         | 50           | .020                    | 14                    | 1                           | 18                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2070              | 1780                                              | 1610 | 1430 | 1260 | 1100 | 930  | 830  | 680  | 540  |
|           |                     |                         |              |                         | 20                    | 2 @ 6 CL                    | 24                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2230              | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
|           |                     |                         |              |                         | 24                    | 2 @ 6 CL                    | 28                        | 2650              | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"         | 50           | .020                    | 14                    | 3 @ 6 CL                    | 28                        | 2990              | 2570                                              | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990  | 780  |

# STYLE "LVF" FRONT OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1680                    | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2650                    | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3050                    | 2620                                              | 2380 | 2100 | 1860 | 1620 | 1370 | 1220 | 1010 | 790  |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1900                    | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2190                    | 1880                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2950                    | 2540                                              | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970  | 770  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2290                    | 1970                                              | 1790 | 1580 | 1400 | 1210 | 1030 | 920  | 760  | 600  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3000                    | 2580                                              | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990  | 780  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3420                    | 2940                                              | 2670 | 2360 | 2090 | 1810 | 1540 | 1370 | 1130 | 890  |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2230                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 3012                    | 2590                                              | 2350 | 2080 | 1840 | 1600 | 1360 | 1200 | 990  | 780  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2400                    | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3185                    | 2740                                              | 2480 | 2200 | 1940 | 1690 | 1430 | 1270 | 1050 | 830  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3600                    | 3100                                              | 2810 | 2480 | 2200 | 1910 | 1620 | 1440 | 1190 | 940  |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1670                    | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2630                    | 2260                                              | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870  | 680  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1760                    | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2690                    | 2310                                              | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890  | 700  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3090                    | 2660                                              | 2410 | 2130 | 1880 | 1640 | 1390 | 1240 | 1020 | 800  |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1890                    | 1630                                              | 1470 | 1300 | 1150 | 1000 | 850  | 760  | 620  | 490  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2730                    | 2350                                              | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900  | 710  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2130                    | 1830                                              | 1660 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 550  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2860                    | 2460                                              | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940  | 740  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3260                    | 2800                                              | 2540 | 2250 | 1990 | 1730 | 1470 | 1300 | 1080 | 850  |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1980                    | 1700                                              | 1540 | 1370 | 1210 | 1050 | 890  | 790  | 650  | 510  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2260                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2660                    | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2430                    | 2090                                              | 1900 | 1680 | 1480 | 1290 | 1090 | 970  | 800  | 630  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2930                    | 2520                                              | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970  | 760  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3310                    | 2850                                              | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860  |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1640                    | 1410                                              | 1280 | 1130 | 1000 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1690                    | 1450                                              | 1320 | 1170 | 1030 | 900  | 760  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2580                    | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1730                    | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2640                    | 2270                                              | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870  | 690  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3040                    | 2610                                              | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790  |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1860                    | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2000                    | 1720                                              | 1560 | 1380 | 1220 | 1060 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2680                    | 2300                                              | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880  | 700  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3200                    | 2750                                              | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830  |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2220                    | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2610                    | 2240                                              | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2400                    | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2870                    | 2470                                              | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950  | 750  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3240                    | 2790                                              | 2530 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 840  |

Note: Copper tube furnished flared one end standard.

# STYLE "LVF" FRONT OUTLET

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 990               | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1105              | 950                                               | 860  | 760  | 670  | 590  | 500  | 440  | 360  | 290  |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 980               | 840                                               | 760  | 680  | 600  | 520  | 440  | 390  | 320  | 250  |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1110              | 950                                               | 870  | 770  | 680  | 590  | 500  | 440  | 370  | 290  |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1430              | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2155              | 1850                                              | 1680 | 1490 | 1310 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1470              | 1260                                              | 1150 | 1010 | 900  | 780  | 660  | 590  | 490  | 380  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2225              | 1910                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1550              | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1645              | 1410                                              | 1280 | 1140 | 1000 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2330              | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1705              | 1470                                              | 1330 | 1180 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2780              | 2390                                              | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920  | 720  |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1725              | 1480                                              | 1350 | 1190 | 1050 | 910  | 780  | 690  | 570  | 450  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2385              | 2050                                              | 1860 | 1650 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1790              | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2820              | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1270              | 1090                                              | 990  | 880  | 770  | 670  | 570  | 510  | 420  | 330  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2030              | 1750                                              | 1580 | 1400 | 1240 | 1080 | 910  | 810  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1280              | 1100                                              | 1000 | 880  | 780  | 680  | 580  | 510  | 420  | 330  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2060              | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2370              | 2040                                              | 1850 | 1640 | 1450 | 1260 | 1070 | 950  | 780  | 620  |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1560              | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2350              | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1660              | 1430                                              | 1290 | 1150 | 1010 | 880  | 750  | 660  | 550  | 430  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2400              | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2740              | 2360                                              | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900  | 710  |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1610              | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1715              | 1470                                              | 1340 | 1180 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2340              | 2010                                              | 1830 | 1610 | 1430 | 1240 | 1050 | 940  | 770  | 610  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1775              | 1530                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2450              | 2110                                              | 1910 | 1690 | 1490 | 1300 | 1100 | 980  | 810  | 640  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2770              | 2380                                              | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910  | 720  |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 14                    | 1                           | 18                        | 1210              | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1220              | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1910              | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1230              | 1060                                              | 960  | 850  | 750  | 650  | 550  | 490  | 410  | 320  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 1940              | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2230              | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1420              | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2130              | 1830                                              | 1660 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 550  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2170              | 1870                                              | 1690 | 1500 | 1320 | 1150 | 980  | 870  | 720  | 560  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |

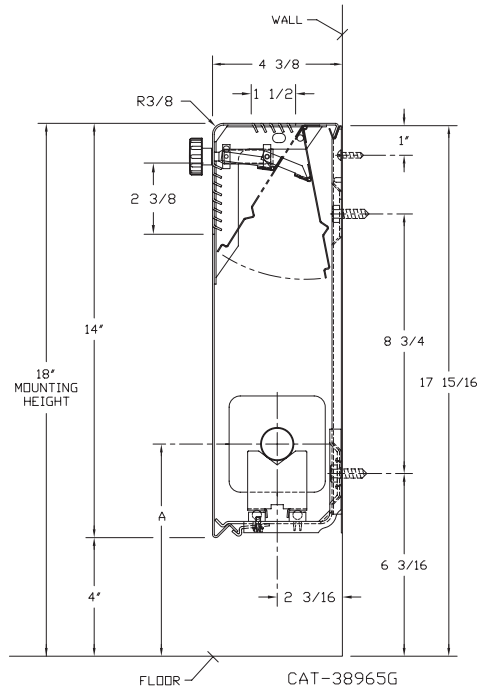
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
 3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVFT" FRONT & TOP OUTLET



## LV3-FT14

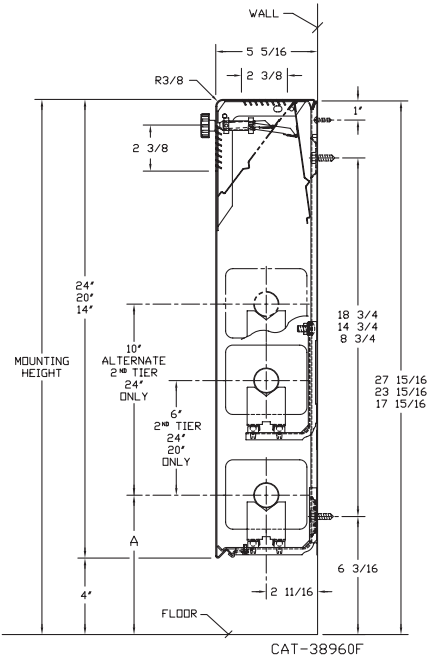
| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4 x 3 1/4              | 2                | 7"       |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4 x 3 1/4              | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4 x 3 1/4              | 1                | 6 13/16" |



See page 39 for element center line dimensions with steam bracket installation.

## LV4-FT14 20 24

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8 x 4 1/4              | 2                | 7"      |
| 3/4" COPPER          | 4 1/4 x 4 1/4              | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 7 3/16" |
| 1 1/4" COPPER        | 3 5/8 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" COPPER        | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" STEEL         | 4 1/4 x 4 1/4              | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 7 1/4"  |



See page 39 for element center line dimensions with steam bracket installation.

# STYLE "LVFT" FRONT & TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1040              | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1210              | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1010              | 870                                               | 790  | 700  | 620  | 540  | 450  | 400  | 330  | 260  |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
| 1 1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 970               | 830                                               | 760  | 670  | 590  | 510  | 440  | 390  | 320  | 250  |
| 1 1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1130              | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
| 1 1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"         | 32           | .020                    | 14                    | 1                           | 18                        | 1440              | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1520              | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2150              | 1850                                              | 1680 | 1480 | 1310 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1560              | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2230              | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"         | 40           | .020                    | 14                    | 1                           | 18                        | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1380 | 1150 | 1020 | 840  | 670  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1700              | 1460                                              | 1330 | 1170 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2410              | 2070                                              | 1880 | 1660 | 1470 | 1280 | 1080 | 960  | 800  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1740              | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"         | 50           | .020                    | 14                    | 1                           | 18                        | 2490              | 2140                                              | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820  | 650  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2840              | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1770              | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1920              | 1650                                              | 1500 | 1320 | 1170 | 1020 | 860  | 770  | 630  | 500  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2680              | 2300                                              | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880  | 700  |
| 1"        | VC433               | 3-5/8" x 4-1/4"         | 32           | .020                    | 24                    | 1                           | 28                        | 1990              | 1710                                              | 1550 | 1370 | 1210 | 1050 | 900  | 800  | 660  | 520  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2860              | 2460                                              | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940  | 740  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3230              | 2780                                              | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1520              | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
| 1"        | VC434               | 3-5/8" x 4-1/4"         | 40           | .020                    | 20                    | 2-6 CL                      | 24                        | 2320              | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1040 | 930  | 770  | 600  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2380              | 2050                                              | 1860 | 1640 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2740              | 2360                                              | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900  | 710  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1670              | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
| 1"        | VC435               | 3-5/8" x 4-1/4"         | 50           | .020                    | 20                    | 1                           | 24                        | 1780              | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2490              | 2140                                              | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2570              | 2210                                              | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850  | 670  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2930              | 2520                                              | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970  | 760  |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"         | 32           | .020                    | 14                    | 1                           | 18                        | 1860              | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2010              | 1730                                              | 1570 | 1390 | 1230 | 1070 | 900  | 800  | 660  | 520  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2680              | 2300                                              | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880  | 700  |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"         | 40           | .020                    | 24                    | 3-6 CL                      | 28                        | 3030              | 2610                                              | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1630              | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1740              | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|           |                     |                         |              |                         | 20                    | 2 @ 6 CL                    | 24                        | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1780              | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"         | 50           | .020                    | 24                    | 2 @ 6 CL                    | 28                        | 2520              | 2170                                              | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830  | 660  |
|           |                     |                         |              |                         | 24                    | 3 @ 6 CL                    | 28                        | 2870              | 2470                                              | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950  | 750  |
|           |                     |                         |              |                         | 14                    | 1                           | 18                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1970              | 1690                                              | 1540 | 1360 | 1200 | 1040 | 890  | 790  | 650  | 510  |
|           |                     |                         |              |                         | 20                    | 2 @ 6 CL                    | 24                        | 2460              | 2120                                              | 1920 | 1700 | 1500 | 1300 | 1110 | 980  | 810  | 640  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"         | 50           | .020                    | 24                    | 1                           | 28                        | 2040              | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 2 @ 6 CL                    | 28                        | 2620              | 2250                                              | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860  | 680  |
|           |                     |                         |              |                         | 24                    | 3 @ 6 CL                    | 28                        | 2960              | 2550                                              | 2310 | 2040 | 1810 | 1570 | 1330 | 1180 | 980  | 770  |

# STYLE "LVFT" FRONT & TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2360              | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1570              | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2810              | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1850              | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2120              | 1820                                              | 1650 | 1460 | 1290 | 1120 | 950  | 850  | 700  | 550  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2650              | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3020              | 2600                                              | 2360 | 2080 | 1840 | 1600 | 1360 | 1210 | 1000 | 790  |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1815              | 1560                                              | 1420 | 1250 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1970              | 1690                                              | 1540 | 1360 | 1200 | 1040 | 890  | 790  | 650  | 510  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2565              | 2210                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1030 | 850  | 670  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2040              | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2795              | 2400                                              | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920  | 730  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3160              | 2720                                              | 2460 | 2180 | 1930 | 1670 | 1420 | 1260 | 1040 | 820  |
| 1"        | VC43                | 4-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1660              | 1430                                              | 1290 | 1150 | 1010 | 880  | 750  | 660  | 550  | 430  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2460              | 2120                                              | 1920 | 1700 | 1500 | 1300 | 1110 | 980  | 810  | 640  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1690              | 1450                                              | 1320 | 1170 | 1030 | 900  | 760  | 680  | 560  | 440  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2890              | 2490                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1160 | 950  | 750  |
| 1"        | VC44                | 4-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1760              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1940              | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2010              | 1730                                              | 1570 | 1390 | 1230 | 1070 | 900  | 800  | 660  | 520  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2700              | 2320                                              | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890  | 700  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3080              | 2650                                              | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800  |
| 1"        | VC45                | 4-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1900              | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2120              | 1820                                              | 1650 | 1460 | 1290 | 1120 | 950  | 850  | 700  | 550  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2550              | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2220              | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2730              | 2350                                              | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900  | 710  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3080              | 2650                                              | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800  |
| 1-1/4"    | VC143               | 4-1/4" SQ.              | 32           | .020                    | 14                    | 1                           | 18                        | 1590              | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1630              | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2420              | 2080                                              | 1890 | 1670 | 1480 | 1280 | 1090 | 970  | 800  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1660              | 1430                                              | 1290 | 1150 | 1010 | 880  | 750  | 660  | 550  | 430  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2470              | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2840              | 2440                                              | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940  | 740  |
| 1-1/4"    | VC144               | 4-1/4" SQ.              | 40           | .020                    | 14                    | 1                           | 18                        | 1730              | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1900              | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1970              | 1690                                              | 1540 | 1360 | 1200 | 1040 | 890  | 790  | 650  | 510  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2660              | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3030              | 2610                                              | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790  |
| 1-1/4"    | VC145               | 4-1/4" SQ.              | 50           | .020                    | 14                    | 1                           | 18                        | 1860              | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 2190              | 1880                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2680              | 2300                                              | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880  | 700  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 3030              | 2610                                              | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790  |

Note: Copper tube furnished flared one end standard.

# STYLE "LVFT" FRONT & TOP OUTLET

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.                 | 32                 | .032                          | 14                          | 1                                    | 18                              | 920                     | 790                                               | 720  | 630  | 560  | 490  | 410  | 370  | 300  | 240  |
| 1"        | VS34                | 3-1/4" SQ.                 | 40                 | .032                          | 14                          | 1                                    | 18                              | 1000                    | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
| 1"        | VS35                | 3-1/4" SQ.                 | 50                 | .032                          | 14                          | 1                                    | 18                              | 1070                    | 920                                               | 830  | 740  | 650  | 570  | 480  | 430  | 350  | 280  |
| 1-1/4"    | VS133               | 3-1/4" SQ.                 | 32                 | .032                          | 14                          | 1                                    | 18                              | 910                     | 780                                               | 710  | 630  | 560  | 480  | 410  | 360  | 300  | 240  |
| 1-1/4"    | VS134               | 3-1/4" SQ.                 | 40                 | .032                          | 14                          | 1                                    | 18                              | 1030                    | 890                                               | 800  | 710  | 630  | 550  | 460  | 410  | 340  | 270  |
| 1-1/4"    | VS135               | 3-1/4" SQ.                 | 50                 | .032                          | 14                          | 1                                    | 18                              | 1060                    | 910                                               | 830  | 730  | 650  | 560  | 480  | 420  | 350  | 280  |
| 1"        | VS43                | 4-1/4" SQ.                 | 32                 | .032                          | 14                          | 1                                    | 18                              | 1300                    | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1355                    | 1170                                              | 1060 | 930  | 830  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2030                    | 1750                                              | 1580 | 1400 | 1240 | 1080 | 910  | 810  | 670  | 530  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2095                    | 1800                                              | 1630 | 1450 | 1280 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2410                    | 2070                                              | 1880 | 1660 | 1470 | 1280 | 1080 | 960  | 800  | 630  |
| 1"        | VS44                | 4-1/4" SQ.                 | 40                 | .032                          | 14                          | 1                                    | 18                              | 1455                    | 1250                                              | 1130 | 1000 | 890  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1550                    | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2195                    | 1890                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1605                    | 1380                                              | 1250 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2295                    | 1970                                              | 1790 | 1580 | 1400 | 1220 | 1030 | 920  | 760  | 600  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2620                    | 2250                                              | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860  | 680  |
| 1"        | VS45                | 4-1/4" SQ.                 | 50                 | .032                          | 14                          | 1                                    | 18                              | 1525                    | 1310                                              | 1190 | 1050 | 930  | 810  | 690  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1620                    | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2245                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1680                    | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2660                    | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |
| 1-1/4"    | VS143               | 4-1/4" SQ.                 | 32                 | .032                          | 14                          | 1                                    | 18                              | 1190                    | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 1910                    | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1240                    | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 1940                    | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2230                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
| 1-1/4"    | VS144               | 4-1/4" SQ.                 | 40                 | .032                          | 14                          | 1                                    | 18                              | 1510                    | 1300                                              | 1180 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1600                    | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2330                    | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1660                    | 1430                                              | 1290 | 1150 | 1010 | 880  | 750  | 660  | 550  | 430  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2410                    | 2070                                              | 1880 | 1660 | 1470 | 1280 | 1080 | 960  | 800  | 630  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2750                    | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1-1/4"    | VS145               | 4-1/4" SQ.                 | 50                 | .032                          | 14                          | 1                                    | 18                              | 1515                    | 1300                                              | 1180 | 1050 | 920  | 800  | 680  | 610  | 500  | 390  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2200                    | 1890                                              | 1720 | 1520 | 1340 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1670                    | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2305                    | 1980                                              | 1800 | 1590 | 1410 | 1220 | 1040 | 920  | 760  | 600  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2600                    | 2240                                              | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
| 2"        | VS242               | 4-1/4" SQ.                 | 25                 | .032                          | 14                          | 1                                    | 18                              | 1160                    | 1000                                              | 900  | 800  | 710  | 610  | 520  | 460  | 380  | 300  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1190                    | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 1870                    | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1210                    | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 1920                    | 1650                                              | 1500 | 1320 | 1170 | 1020 | 860  | 770  | 630  | 500  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
| 2"        | VS243               | 4-1/4" SQ.                 | 32                 | .032                          | 14                          | 1                                    | 18                              | 1350                    | 1160                                              | 1050 | 930  | 820  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1400                    | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2090                    | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |

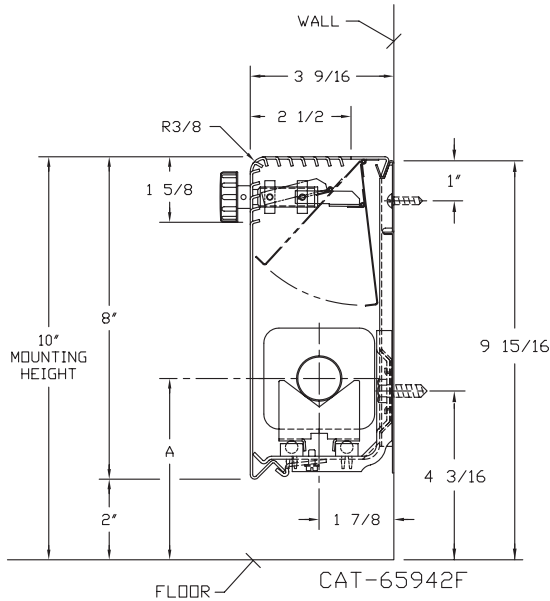
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LV2R" SLIMLINE

## LV2-R8

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|---|----------------------|----------------------------|------------------|---------|
| * | 3/4 COPPER           | 2 1/2 x 2 1/4              | 1                | 4 5/16  |
| * | 3/4 COPPER           | 2 1/2 x 2 3/4              | 1                |         |
|   | 3/4 COPPER           | 3 3/4 x 2 3/4              | 2                | 5'      |
| * | 1" COPPER            | 2 1/2 x 2 3/4              | 1                | 4 1/2   |
|   | 1" COPPER            | 3 3/4 x 2 3/4              | 2                | 5 3/16  |
|   | 1" COPPER            | 5' x 2 3/4                 | 3A               | 5 1/2   |
|   | 1 1/4 COPPER         | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1 1/4 COPPER         | 5' x 2 3/4                 | 3A               | 5 11/16 |
|   | 1" STEEL             | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1" STEEL             | 5' x 2 3/4                 | 3A               | 5 11/16 |
|   | 1 1/4 STEEL          | 3 3/4 x 2 3/4              | 2                | 5 1/2   |
|   | 1 1/4 STEEL          | 5' x 2 3/4                 | 3A               | 5 15/16 |

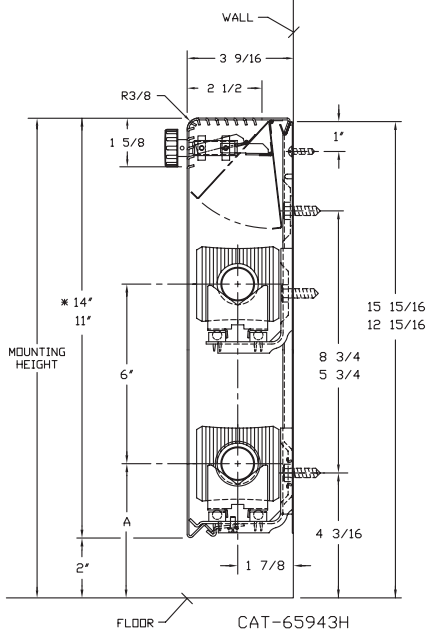
\* Damper available with these elements only.



## LV2-R11 14

|   | ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|---|----------------------|----------------------------|------------------|---------|
| * | 3/4 COPPER           | 2 1/2 x 2 1/4              | 1                | 4 5/16  |
| * | 3/4 COPPER           | 2 1/2 x 2 3/4              | 1                |         |
|   | 3/4 COPPER           | 3 3/4 x 2 3/4              | 2                | 5'      |
| * | 1" COPPER            | 2 1/2 x 2 3/4              | 1                | 4 1/2   |
|   | 1" COPPER            | 3 3/4 x 2 3/4              | 2                | 5 3/16  |
|   | 1" COPPER            | 5' x 2 3/4                 | 3A               | 5 1/2   |
|   | 1 1/4 COPPER         | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1 1/4 COPPER         | 5' x 2 3/4                 | 3A               | 5 11/16 |
|   | 1" STEEL             | 3 3/4 x 2 3/4              | 2                | 5 5/16  |
|   | 1" STEEL             | 5' x 2 3/4                 | 3A               | 5 11/16 |
|   | 1 1/4 STEEL          | 3 3/4 x 2 3/4              | 2                | 5 1/2   |
|   | 1 1/4 STEEL          | 5' x 2 3/4                 | 3A               | 5 15/16 |

\* 2 tier with damper available in 14' height with these elements only.



# STYLE "LV2R" SLIMLINE

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VR01                | 2-1/2" x 2-1/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 830               | 710                                               | 650  | 570  | 510  | 440  | 370  | 330  | 270  | 220  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 890               | 770                                               | 690  | 610  | 540  | 470  | 400  | 360  | 290  | 230  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 960               | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1360              | 1170                                              | 1060 | 940  | 830  | 720  | 610  | 540  | 450  | 350  |
| 3/4"      | VR02                | 2-1/2" x 2-3/4"         | 60           | .010                    | 8*                    | 1                           | 10                        | 990               | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1060              | 910                                               | 830  | 730  | 650  | 560  | 480  | 420  | 350  | 280  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1230              | 1060                                              | 960  | 850  | 750  | 650  | 550  | 490  | 410  | 320  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1730              | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |
| 1"        | VR03                | 2-1/2" x 2-3/4"         | 55           | .011                    | 8*                    | 1                           | 10                        | 970               | 830                                               | 760  | 670  | 590  | 510  | 440  | 390  | 320  | 250  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1030              | 890                                               | 800  | 710  | 630  | 550  | 460  | 410  | 340  | 270  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1100              | 950                                               | 860  | 760  | 670  | 580  | 500  | 440  | 360  | 290  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1580              | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |
| 3/4"      | VR04                | 3-3/4" x 2-3/4"         | 50           | .014                    | 8*                    | 1                           | 10                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1320              | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1750              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
| 1"        | VR05                | 3-3/4" x 2-3/4"         | 50           | .011                    | 8*                    | 1                           | 10                        | 1180              | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1240              | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1310              | 1130                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1740              | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
| 1-1/4"    | VR08                | 3-3/4" x 2-3/4"         | 50           | .020                    | 8*                    | 1                           | 10                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1310              | 1130                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1760              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
| 1"        | VR07                | 5" x 2-3/4"             | 50           | .020                    | 8*                    | 1                           | 10                        | 1330              | 1140                                              | 1040 | 920  | 810  | 700  | 600  | 530  | 440  | 350  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1400              | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
| 1-1/4"    | VR10                | 5" x 2-3/4"             | 50           | .020                    | 8*                    | 1                           | 10                        | 1300              | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1360              | 1170                                              | 1060 | 940  | 830  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1420              | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1770              | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |

\*Not recommended for steam applications, consult factory.

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VR11                | 3-3/4" x 2-3/4"         | 40           | .024                    | 8*                    | 1                           | 10                        | 920               | 790                                               | 720  | 630  | 560  | 490  | 410  | 370  | 300  | 240  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 980               | 840                                               | 760  | 680  | 600  | 520  | 440  | 390  | 320  | 250  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1050              | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1500              | 1290                                              | 1170 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |
| 1"        | VR15                | 5" x 2-3/4"             | 50           | .024                    | 8*                    | 1                           | 10                        | 990               | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1040              | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1410              | 1210                                              | 1100 | 970  | 860  | 750  | 630  | 560  | 470  | 370  |
| 1-1/4"    | VR16                | 5" x 2-3/4"             | 50           | .024                    | 8*                    | 1                           | 10                        | 1010              | 870                                               | 790  | 700  | 620  | 540  | 450  | 400  | 330  | 260  |
|           |                     |                         |              |                         | 11                    | 1                           | 13                        | 1070              | 920                                               | 830  | 740  | 650  | 570  | 480  | 430  | 350  | 280  |
|           |                     |                         |              |                         | 14                    | 1                           | 16                        | 1140              | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 14*                   | 2-5 CL                      | 16                        | 1590              | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |

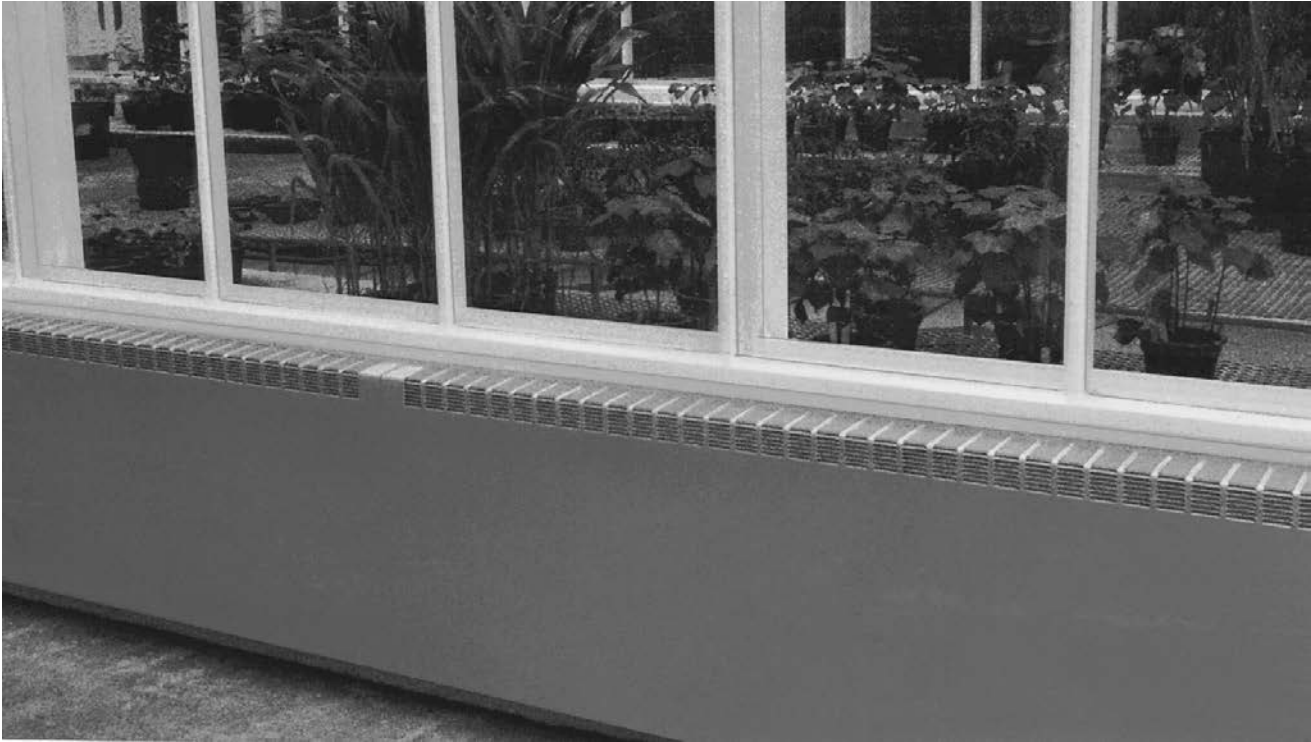
\*Not recommended for steam applications, consult factory.

Notes: 1) Steel fin furnished as .024 thick. Painted black.

2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

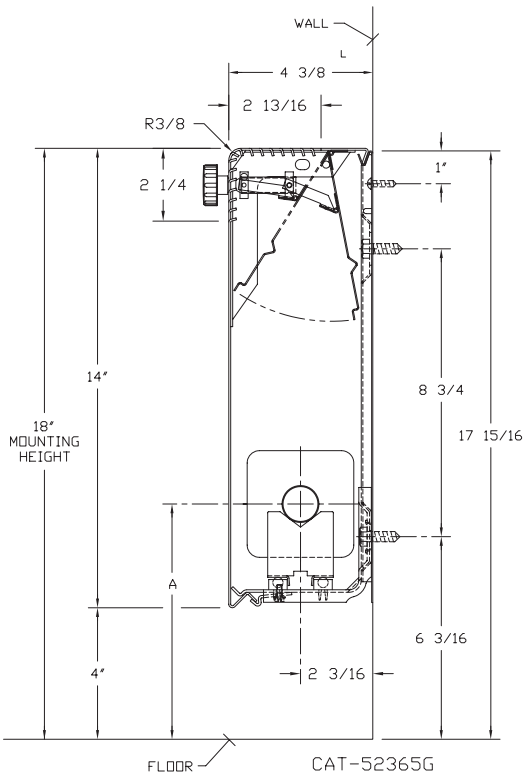
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVR" FLAT TOP



## LV3-R14

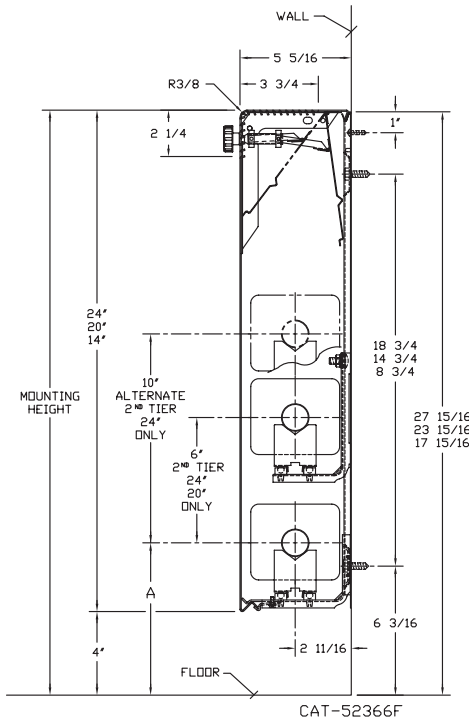
| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4 x 3 1/4              | 2                | 7"       |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4 x 3 1/4              | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4 x 3 1/4              | 1                | 6 13/16" |



See page 39 for element center line dimensions with steam bracket installation.

## LV4-R14 20 24

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8 x 4 1/4              | 2                | 7"      |
| 3/4" COPPER          | 4 1/4 x 4 1/4              | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 7 3/16" |
| 1 1/4" COPPER        | 3 5/8 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" COPPER        | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" STEEL         | 4 1/4 x 4 1/4              | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 7 1/4"  |



See page 39 for element center line dimensions with steam bracket installation.

# STYLE "LVR" FLAT TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1070                    | 920                                               | 830  | 740  | 650  | 570  | 480  | 430  | 350  | 280  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1240                    | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1420                    | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
| 1"        | VC33                | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1050                    | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
| 1"        | VC34                | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1190                    | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |
| 1"        | VC35                | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
| 1 1/4"    | VC133               | 3-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1010                    | 870                                               | 790  | 700  | 620  | 540  | 450  | 400  | 330  | 260  |
| 1 1/4"    | VC134               | 3-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1120                    | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
| 1 1/4"    | VC135               | 3-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 1340                    | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"            | 32                 | .020                          | 14                          | 1                                    | 18                              | 1405                    | 1210                                              | 1100 | 970  | 860  | 740  | 630  | 560  | 460  | 370  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1490                    | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2140                    | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1565                    | 1350                                              | 1220 | 1080 | 950  | 830  | 700  | 630  | 520  | 410  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2215                    | 1900                                              | 1730 | 1530 | 1350 | 1170 | 1000 | 890  | 730  | 580  |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"            | 40                 | .020                          | 24                          | 3-6 CL                               | 28                              | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1690                    | 1450                                              | 1320 | 1170 | 1030 | 900  | 760  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1790                    | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2490                    | 2140                                              | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820  | 650  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1870                    | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 2-6 CL                               | 28                              | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2950                    | 2540                                              | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970  | 770  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2110                    | 1810                                              | 1650 | 1460 | 1290 | 1120 | 950  | 840  | 700  | 550  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2640                    | 2270                                              | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870  | 690  |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 1                                    | 28                              | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2820                    | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3190                    | 2740                                              | 2490 | 2200 | 1950 | 1690 | 1440 | 1280 | 1050 | 830  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1560                    | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
| 1"        | VC433               | 3-5/8" x 4-1/4"            | 32                 | .020                          | 20                          | 2-6 CL                               | 24                              | 2480                    | 2130                                              | 1930 | 1710 | 1510 | 1310 | 1120 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2560                    | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 2940                    | 2530                                              | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970  | 760  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1770                    | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
| 1"        | VC434               | 3-5/8" x 4-1/4"            | 40                 | .020                          | 20                          | 1                                    | 24                              | 1880                    | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2600                    | 2240                                              | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2720                    | 2340                                              | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900  | 710  |
|           |                     |                            |                    |                               | 24                          | 3-6 CL                               | 28                              | 3100                    | 2670                                              | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810  |
| 1"        | VC435               | 3-5/8" x 4-1/4"            | 50                 | .020                          | 14                          | 1                                    | 18                              | 2030                    | 1750                                              | 1580 | 1400 | 1240 | 1080 | 910  | 810  | 670  | 530  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2220                    | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2770                    | 2380                                              | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910  | 720  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2330                    | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2970                    | 2550                                              | 2320 | 2050 | 1810 | 1570 | 1340 | 1190 | 980  | 770  |
| 1"        | VC435               | 3-5/8" x 4-1/4"            | 50                 | .020                          | 24                          | 3-6 CL                               | 28                              | 3360                    | 2890                                              | 2620 | 2320 | 2050 | 1780 | 1510 | 1340 | 1110 | 870  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1530                    | 1320                                              | 1190 | 1060 | 930  | 810  | 690  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1590                    | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |
|           |                     |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2470                    | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 24                          | 2 @ 6 CL                             | 28                              | 2580                    | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 2970                    | 2550                                              | 2320 | 2050 | 1810 | 1570 | 1340 | 1190 | 980  | 770  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 1750                    | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1850                    | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                            |                    |                               | 20                          | 2 @ 6 CL                             | 24                              | 2620                    | 2250                                              | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860  | 680  |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"            | 40                 | .020                          | 24                          | 1                                    | 28                              | 1920                    | 1650                                              | 1500 | 1320 | 1170 | 1020 | 860  | 770  | 630  | 500  |
|           |                     |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 2750                    | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 3130                    | 2690                                              | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810  |
|           |                     |                            |                    |                               | 14                          | 1                                    | 18                              | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2240                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 20                          | 2 @ 6 CL                             | 24                              | 2730                    | 2350                                              | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900  | 710  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2380                    | 2050                                              | 1860 | 1640 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
|           |                     |                            |                    |                               | 24                          | 2 @ 6 CL                             | 28                              | 3000                    | 2580                                              | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990  | 780  |
|           |                     |                            |                    |                               | 24                          | 3 @ 6 CL                             | 28                              | 3390                    | 2920                                              | 2640 | 2340 | 2070 | 1800 | 1530 | 1360 | 1120 | 880  |

# STYLE "LVR" FLAT TOP

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1520                    | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1615                    | 1390                                              | 1260 | 1110 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2345                    | 2020                                              | 1830 | 1620 | 1430 | 1240 | 1060 | 940  | 770  | 610  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1685                    | 1450                                              | 1310 | 1160 | 1030 | 890  | 760  | 670  | 560  | 440  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2435                    | 2090                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 970  | 800  | 630  |
| 24        | 3-6 CL              | 28                         | 2800               | 2410                          | 2180                        | 1930                                 | 1710                            | 1480                    | 1260                                              | 1120 | 920  | 730  |      |      |      |      |      |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2250                    | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 3180                    | 2730                                              | 2480 | 2190 | 1940 | 1690 | 1430 | 1270 | 1050 | 830  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3270                    | 2810                                              | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850  |
| 24        | 3-6 CL              | 28                         | 3730               | 3210                          | 2910                        | 2570                                 | 2280                            | 1980                    | 1680                                              | 1490 | 1230 | 970  |      |      |      |      |      |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2420                    | 2080                                              | 1890 | 1670 | 1480 | 1280 | 1090 | 970  | 800  | 630  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 3200                    | 2750                                              | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3380                    | 2910                                              | 2640 | 2330 | 2060 | 1790 | 1520 | 1350 | 1120 | 880  |
| 24        | 3-6 CL              | 28                         | 3820               | 3290                          | 2980                        | 2640                                 | 2330                            | 2020                    | 1720                                              | 1530 | 1260 | 990  |      |      |      |      |      |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1710                    | 1470                                              | 1330 | 1180 | 1040 | 910  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1760                    | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2720                    | 2340                                              | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900  | 710  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1810                    | 1560                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
| 24        | 3-6 CL              | 28                         | 3230               | 2780                          | 2520                        | 2230                                 | 1970                            | 1710                    | 1450                                              | 1290 | 1070 | 840  |      |      |      |      |      |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1940                    | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2070                    | 1780                                              | 1610 | 1430 | 1260 | 1100 | 930  | 830  | 680  | 540  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2850                    | 2450                                              | 2220 | 1970 | 1740 | 1510 | 1280 | 1140 | 940  | 740  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2140                    | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2990                    | 2570                                              | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990  | 780  |
| 24        | 3-6 CL              | 28                         | 3410               | 2930                          | 2660                        | 2350                                 | 2080                            | 1810                    | 1530                                              | 1360 | 1130 | 890  |      |      |      |      |      |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 2220                    | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2430                    | 2090                                              | 1900 | 1680 | 1480 | 1290 | 1090 | 970  | 800  | 630  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 3030                    | 2610                                              | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2550                    | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3250                    | 2800                                              | 2540 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 850  |
| 24        | 3-6 CL              | 28                         | 3670               | 3160                          | 2860                        | 2530                                 | 2240                            | 1950                    | 1650                                              | 1470 | 1210 | 950  |      |      |      |      |      |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 14                          | 1                                    | 18                              | 1700                    | 1460                                              | 1330 | 1170 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 1740                    | 1500                                              | 1360 | 1200 | 1060 | 920  | 780  | 700  | 570  | 450  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2670                    | 2300                                              | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880  | 690  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 1780                    | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2720                    | 2340                                              | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900  | 710  |
| 24        | 3-6 CL              | 28                         | 3130               | 2690                          | 2440                        | 2160                                 | 1910                            | 1660                    | 1410                                              | 1250 | 1030 | 810  |      |      |      |      |      |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 14                          | 1                                    | 18                              | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2090                    | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 2940                    | 2530                                              | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970  | 760  |
| 24        | 3-6 CL              | 28                         | 3350               | 2880                          | 2610                        | 2310                                 | 2040                            | 1780                    | 1510                                              | 1340 | 1110 | 870  |      |      |      |      |      |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 14                          | 1                                    | 18                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                               | 20                          | 1                                    | 24                              | 2300                    | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |
|           |                     |                            |                    |                               | 20                          | 2-6 CL                               | 24                              | 2940                    | 2530                                              | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970  | 760  |
|           |                     |                            |                    |                               | 24                          | 1                                    | 28                              | 2380                    | 2050                                              | 1860 | 1640 | 1450 | 1260 | 1070 | 950  | 790  | 620  |
|           |                     |                            |                    |                               | 24                          | 2-6 CL                               | 28                              | 3060                    | 2630                                              | 2390 | 2110 | 1870 | 1620 | 1380 | 1220 | 1010 | 800  |
| 24        | 3-6 CL              | 28                         | 3460               | 2980                          | 2700                        | 2390                                 | 2110                            | 1830                    | 1560                                              | 1380 | 1140 | 900  |      |      |      |      |      |

Note: Copper tube furnished flared one end standard.

# STYLE "LVR" FLAT TOP

## STEEL ELEMENTS

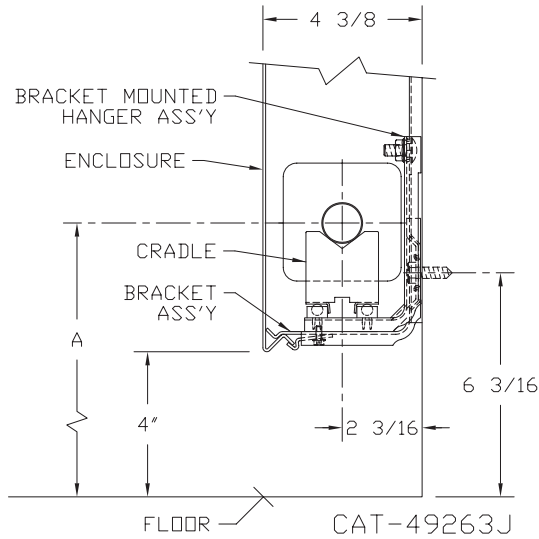
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1000              | 860                                               | 780  | 690  | 610  | 530  | 450  | 400  | 330  | 260  |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1100              | 950                                               | 860  | 760  | 670  | 580  | 500  | 440  | 360  | 290  |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1170              | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 990               | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1150              | 990                                               | 900  | 790  | 700  | 610  | 520  | 460  | 380  | 300  |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1430              | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1480              | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2215              | 1900                                              | 1730 | 1530 | 1350 | 1170 | 1000 | 890  | 730  | 580  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1520              | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2255              | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1010 | 900  | 740  | 590  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2590              | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1605              | 1380                                              | 1250 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1705              | 1470                                              | 1330 | 1180 | 1040 | 900  | 770  | 680  | 560  | 440  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2395              | 2060                                              | 1870 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1765              | 1520                                              | 1380 | 1220 | 1080 | 940  | 790  | 710  | 580  | 460  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2470              | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2820              | 2430                                              | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930  | 730  |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1680              | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1785              | 1540                                              | 1390 | 1230 | 1090 | 950  | 800  | 710  | 590  | 460  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2455              | 2110                                              | 1910 | 1690 | 1500 | 1300 | 1100 | 980  | 810  | 640  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1850              | 1590                                              | 1440 | 1280 | 1130 | 980  | 830  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2535              | 2180                                              | 1980 | 1750 | 1550 | 1340 | 1140 | 1010 | 840  | 660  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2860              | 2460                                              | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940  | 740  |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1300              | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1310              | 1130                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2070              | 1780                                              | 1610 | 1430 | 1260 | 1100 | 930  | 830  | 680  | 540  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1320              | 1140                                              | 1030 | 910  | 810  | 700  | 590  | 530  | 440  | 340  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2120              | 1820                                              | 1650 | 1460 | 1290 | 1120 | 950  | 850  | 700  | 550  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 14                    | 1                           | 18                        | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1620              | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2400              | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1680              | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2510              | 2160                                              | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2860              | 2460                                              | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940  | 740  |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 14                    | 1                           | 18                        | 1670              | 1440                                              | 1300 | 1150 | 1020 | 890  | 750  | 670  | 550  | 430  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1775              | 1530                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2405              | 2070                                              | 1880 | 1660 | 1470 | 1270 | 1080 | 960  | 790  | 630  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1835              | 1580                                              | 1430 | 1270 | 1120 | 970  | 830  | 730  | 610  | 480  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2485              | 2140                                              | 1940 | 1710 | 1520 | 1320 | 1120 | 990  | 820  | 650  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2810              | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 14                    | 1                           | 18                        | 1230              | 1060                                              | 960  | 850  | 750  | 650  | 550  | 490  | 410  | 320  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1240              | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 1940              | 1670                                              | 1510 | 1340 | 1180 | 1030 | 870  | 780  | 640  | 500  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1250              | 1080                                              | 980  | 860  | 760  | 660  | 560  | 500  | 410  | 330  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2000              | 1720                                              | 1560 | 1380 | 1220 | 1060 | 900  | 800  | 660  | 520  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2300              | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 14                    | 1                           | 18                        | 1420              | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                         |              |                         | 20                    | 1                           | 24                        | 1460              | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                         |              |                         | 20                    | 2-6 CL                      | 24                        | 2140              | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                         |              |                         | 24                    | 1                           | 28                        | 1480              | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
|           |                     |                         |              |                         | 24                    | 2-6 CL                      | 28                        | 2220              | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                         |              |                         | 24                    | 3-6 CL                      | 28                        | 2550              | 2190                                              | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840  | 660  |

- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

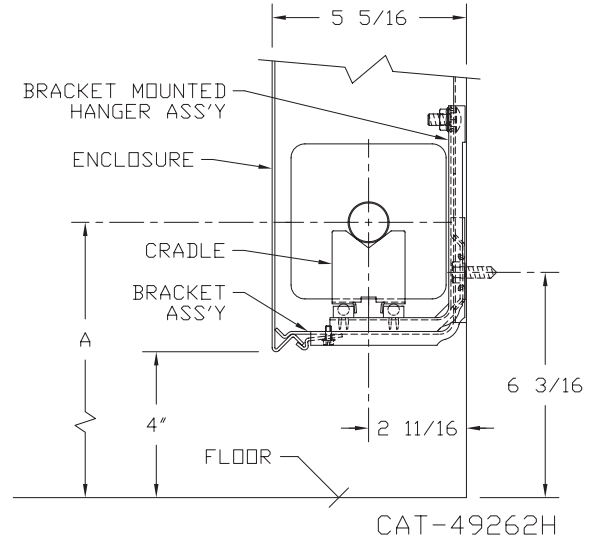
## VERTICAL ELEMENT CENTERLINE DIMENSIONS FOR INSTALLATIONS USING STEAM BRACKETS WITH HANGERS

### “3” OFFSET



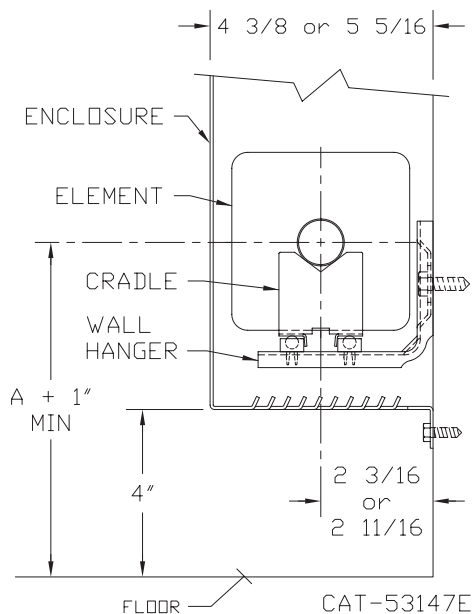
| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A MIN  | A MAX |
|----------------------|----------------------------|------------------|--------|-------|
| 3/4" COPPER          | 3 1/4 × 3 1/4              | 2                | 7 3/8  | 9 5/8 |
| 1" COPPER            | 3 1/4 × 3 1/4              | 2                | 7 1/2  | 9 3/4 |
| 1 1/4" COPPER        | 3 1/4 × 3 1/4              | 2                | 7 5/8  | 9 7/8 |
| 1" STEEL             | 3 1/4 × 3 1/4              | 2                | 7 5/8  | 9 3/4 |
| 1 1/4" STEEL         | 3 1/4 × 3 1/4              | 1                | 7 3/16 | 9 3/8 |

### “4” OFFSET

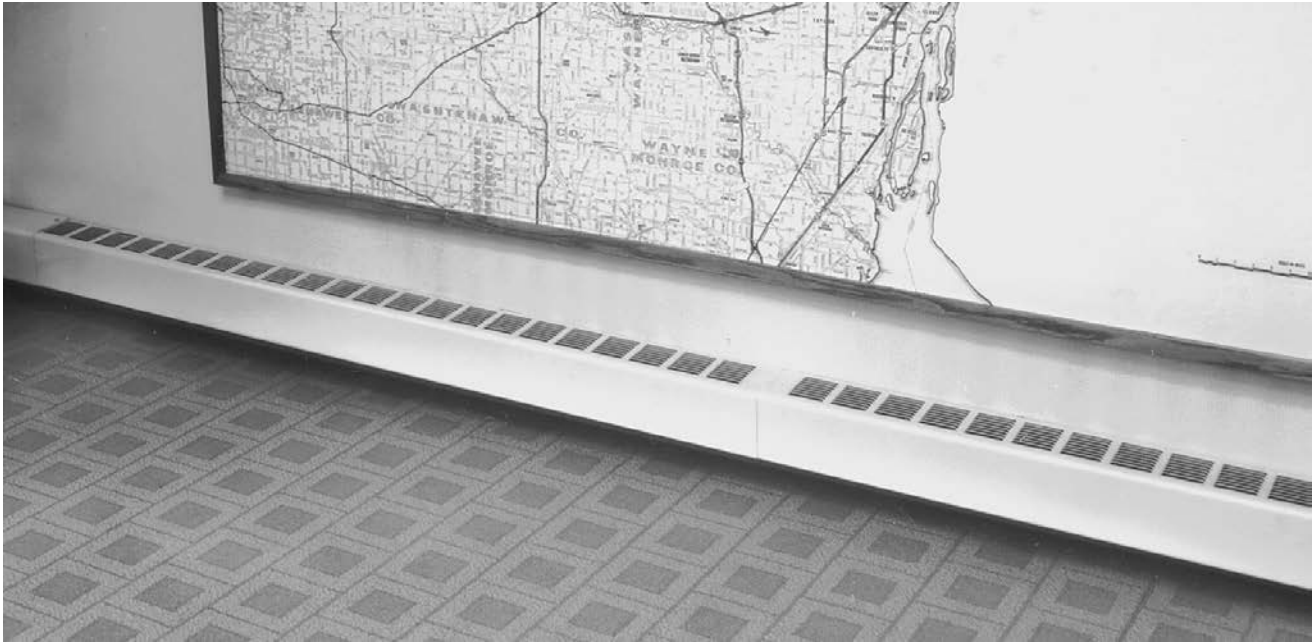


| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A MIN   | A MAX  |
|----------------------|----------------------------|------------------|---------|--------|
| 3/4" COPPER          | 3 5/8 × 4 1/4              | 2                | 7 3/8   | 8 3/4  |
|                      | 4 1/4 × 4 1/4              | 3A               | 7 11/16 | 9 1/16 |
| 1" COPPER            | 3 5/8 × 4 1/4              | 2                | 7 1/2   | 8 7/8  |
|                      | 4 1/4 × 4 1/4              |                  |         |        |
| 1 1/4" COPPER        | 3 5/8 × 4 1/4              | 2                | 7 5/8   | 9"     |
|                      | 4 1/4 × 4 1/4              |                  |         |        |
| 1" STEEL             | 4 1/4 × 4 1/4              | 2                | 7 5/8   | 9"     |
| 1 1/4" STEEL         | 4 1/4 × 4 1/4              | 2                | 7 7/8   | 9 1/4  |
| 2" STEEL             | 4 1/4 × 4 1/4              | 1                | 7 5/8   | 9"     |

### LOUVERED INLET RETURN TO WALL

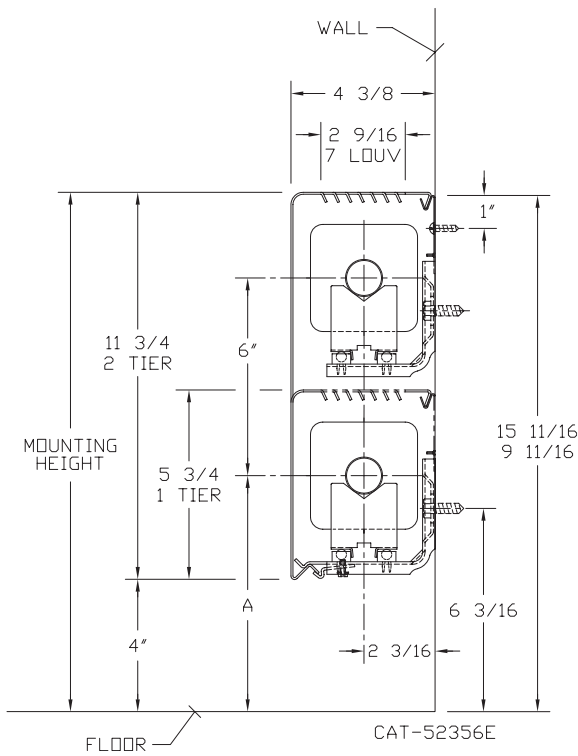


# STYLE "LVE" TOP OUTLET



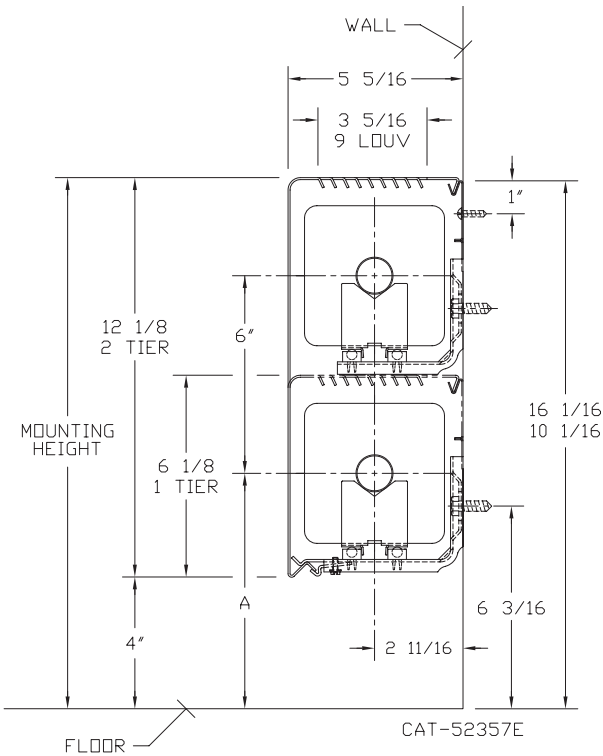
## LV3-E5 11

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A        |
|----------------------|----------------------------|------------------|----------|
| 3/4" COPPER          | 3 1/4 x 3 1/4              | 2                | 7"       |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 7 3/16"  |
| 1 1/4" COPPER        | 3 1/4 x 3 1/4              | 1                | 6 5/8"   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 7 5/16"  |
| 1 1/4" STEEL         | 3 1/4 x 3 1/4              | 1                | 6 13/16" |



## LV4-E6 12

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8 x 4 1/4              | 2                | 7"      |
| 3/4" COPPER          | 4 1/4 x 4 1/4              | 3A               | 7 3/8"  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 3/16" |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 7 3/16" |
| 1 1/4" COPPER        | 3 5/8 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" COPPER        | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 7 5/16" |
| 1 1/4" STEEL         | 4 1/4 x 4 1/4              | 2                | 7 1/2"  |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 7 1/4"  |



# STYLE "LVE" TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |              |             |             |             |            |            |            |            |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|--------------|-------------|-------------|-------------|------------|------------|------------|------------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190°         | 180°        | 170°        | 160°        | 150°       | 140°       | 130°       | 120°       |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |              |             |             |             |            |            |            |            |
|           |                     |                            |                    |                               | 5                           | 1                                    | 9-3/4                           | 1.00                    | 0.86                                              | 0.78         | 0.69        | 0.61        | 0.53        | 0.45       | .40        | .33        | .26        |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.                 | 32                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 840<br>1380             | 720<br>1190                                       | 660<br>1080  | 580<br>950  | 510<br>840  | 450<br>730  | 380<br>620 | 340<br>550 | 280<br>460 | 220<br>360 |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.                 | 40                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 970<br>1490             | 830<br>1280                                       | 760<br>1160  | 670<br>1030 | 590<br>910  | 510<br>790  | 440<br>670 | 390<br>600 | 320<br>490 | 250<br>390 |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.                 | 50                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 980<br>1440             | 840<br>1240                                       | 760<br>1120  | 680<br>990  | 600<br>880  | 520<br>760  | 440<br>650 | 390<br>580 | 320<br>480 | 250<br>370 |
| 1"        | VC33                | 3-1/4" SQ.                 | 32                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 820<br>1360             | 710<br>1170                                       | 640<br>1060  | 570<br>940  | 500<br>830  | 430<br>720  | 370<br>610 | 330<br>540 | 270<br>450 | 210<br>350 |
| 1"        | VC34                | 3-1/4" SQ.                 | 40                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 950<br>1470             | 820<br>1260                                       | 740<br>1150  | 660<br>1010 | 580<br>900  | 500<br>780  | 430<br>660 | 380<br>590 | 310<br>490 | 250<br>380 |
| 1"        | VC35                | 3-1/4" SQ.                 | 50                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 960<br>1470             | 830<br>1260                                       | 750<br>1150  | 660<br>1010 | 590<br>900  | 510<br>780  | 430<br>660 | 380<br>590 | 320<br>490 | 250<br>380 |
| 1-1/4"    | VC133               | 3-1/4" SQ.                 | 32                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 780<br>1320             | 670<br>1140                                       | 610<br>1030  | 540<br>910  | 480<br>810  | 410<br>700  | 350<br>590 | 310<br>530 | 260<br>440 | 200<br>340 |
| 1-1/4"    | VC134               | 3-1/4" SQ.                 | 40                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 910<br>1400             | 780<br>1200                                       | 710<br>1090  | 630<br>970  | 560<br>850  | 480<br>740  | 410<br>630 | 360<br>560 | 300<br>460 | 240<br>360 |
| 1-1/4"    | VC135               | 3-1/4" SQ.                 | 50                 | .020                          | 5<br>11                     | 1<br>2-6 CL                          | 9-3/4<br>15-3/4                 | 920<br>1380             | 790<br>1190                                       | 720<br>1080  | 630<br>950  | 560<br>840  | 490<br>730  | 410<br>620 | 370<br>550 | 300<br>460 | 240<br>360 |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"            | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1080<br>1900            | 930<br>1630                                       | 840<br>1480  | 750<br>1310 | 660<br>1160 | 570<br>1010 | 490<br>860 | 430<br>760 | 360<br>630 | 280<br>490 |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"            | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1190<br>2040            | 1020<br>1750                                      | 930<br>1590  | 820<br>1410 | 730<br>1240 | 630<br>1080 | 540<br>920 | 480<br>820 | 390<br>670 | 310<br>530 |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"            | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1270<br>2060            | 1090<br>1770                                      | 990<br>1610  | 880<br>1420 | 770<br>1260 | 670<br>1090 | 570<br>930 | 510<br>820 | 420<br>680 | 330<br>540 |
| 1"        | VC433               | 3-5/8" x 4-1/4"            | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1110<br>1690            | 950<br>1450                                       | 870<br>1320  | 770<br>1170 | 680<br>1030 | 590<br>900  | 500<br>760 | 440<br>680 | 370<br>560 | 290<br>440 |
| 1"        | VC434               | 3-5/8" x 4-1/4"            | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1230<br>1960            | 1060<br>1690                                      | 960<br>1530  | 850<br>1350 | 750<br>1200 | 650<br>1040 | 550<br>880 | 490<br>780 | 410<br>650 | 320<br>510 |
| 1"        | VC435               | 3-5/8" x 4-1/4"            | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1320<br>1930            | 1140<br>1660                                      | 1030<br>1510 | 910<br>1330 | 810<br>1180 | 700<br>1020 | 590<br>870 | 530<br>770 | 440<br>740 | 340<br>500 |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1090<br>1660            | 940<br>1430                                       | 850<br>1290  | 750<br>1150 | 660<br>1010 | 580<br>880  | 490<br>750 | 440<br>660 | 360<br>550 | 280<br>430 |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"            | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1210<br>1920            | 1040<br>1650                                      | 940<br>1500  | 830<br>1320 | 740<br>1170 | 640<br>1020 | 540<br>860 | 480<br>770 | 400<br>630 | 310<br>500 |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"            | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1300<br>1890            | 1120<br>1630                                      | 1010<br>1470 | 900<br>1300 | 790<br>1150 | 690<br>1000 | 590<br>850 | 520<br>760 | 430<br>620 | 340<br>490 |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.                 | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1200<br>2090            | 1030<br>1800                                      | 940<br>1630  | 830<br>1440 | 730<br>1270 | 640<br>1110 | 540<br>940 | 480<br>840 | 400<br>690 | 310<br>540 |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.                 | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1310<br>2100            | 1130<br>1810                                      | 1020<br>1640 | 900<br>1450 | 800<br>1280 | 690<br>1110 | 590<br>950 | 520<br>840 | 430<br>690 | 340<br>550 |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.                 | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1330<br>2110            | 1140<br>1810                                      | 1040<br>1650 | 920<br>1460 | 810<br>1290 | 700<br>1120 | 600<br>950 | 530<br>840 | 440<br>700 | 350<br>550 |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1220<br>1920            | 1050<br>1650                                      | 950<br>1500  | 840<br>1320 | 740<br>1170 | 650<br>1020 | 550<br>860 | 490<br>770 | 400<br>630 | 320<br>500 |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1220<br>2040            | 1050<br>1750                                      | 950<br>1590  | 840<br>1410 | 740<br>1240 | 650<br>1080 | 550<br>920 | 490<br>820 | 400<br>670 | 320<br>530 |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1370<br>1930            | 1180<br>1660                                      | 1070<br>1510 | 950<br>1330 | 840<br>1180 | 730<br>1020 | 620<br>870 | 550<br>770 | 450<br>640 | 360<br>500 |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1200<br>1880            | 1030<br>1620                                      | 940<br>1470  | 830<br>1300 | 730<br>1150 | 640<br>1000 | 540<br>850 | 480<br>750 | 400<br>620 | 310<br>490 |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1330<br>1970            | 1140<br>1690                                      | 1040<br>1540 | 920<br>1360 | 810<br>1200 | 700<br>1040 | 600<br>890 | 530<br>790 | 440<br>650 | 350<br>510 |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 6<br>12                     | 1<br>2-6 CL                          | 10-1/8<br>16-1/8                | 1350<br>1890            | 1160<br>1630                                      | 1050<br>1470 | 930<br>1300 | 820<br>1150 | 720<br>1000 | 610<br>850 | 540<br>760 | 450<br>620 | 350<br>490 |

Note: Copper tube furnished flared one end standard.

# STYLE "LVE" TOP OUTLET

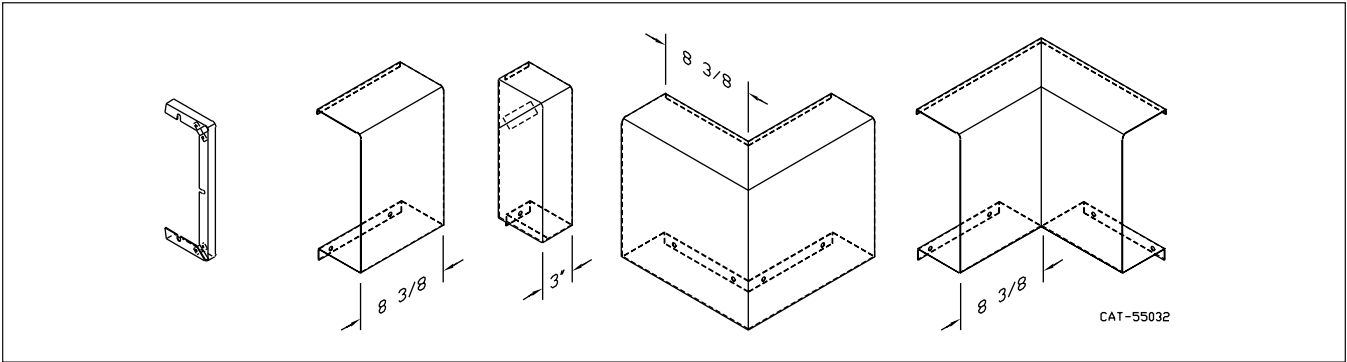
## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |              |             |             |             |            |            |            |            |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|--------------|-------------|-------------|-------------|------------|------------|------------|------------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190°         | 180°        | 170°        | 160°        | 150°       | 140°       | 130°       | 120°       |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |              |             |             |             |            |            |            |            |
|           |                     |                         |              |                         |                       |                             |                           | 1.00              | 0.86                                              | 0.78         | 0.69        | 0.61        | 0.53        | 0.45       | .40        | .33        | .26        |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 780<br>1330       | 670<br>1140                                       | 610<br>1040  | 540<br>920  | 480<br>810  | 410<br>700  | 350<br>600 | 310<br>530 | 260<br>440 | 200<br>350 |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 860<br>1475       | 740<br>1270                                       | 670<br>1150  | 590<br>1020 | 520<br>900  | 460<br>780  | 390<br>660 | 340<br>590 | 280<br>490 | 220<br>380 |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 910<br>1550       | 780<br>1330                                       | 710<br>1210  | 630<br>1070 | 560<br>950  | 480<br>820  | 410<br>700 | 360<br>620 | 300<br>510 | 240<br>400 |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 770<br>1320       | 660<br>1140                                       | 600<br>1030  | 530<br>910  | 470<br>810  | 410<br>700  | 350<br>590 | 310<br>530 | 250<br>440 | 200<br>340 |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 870<br>1490       | 750<br>1280                                       | 680<br>1160  | 600<br>1030 | 530<br>910  | 460<br>790  | 390<br>670 | 350<br>600 | 290<br>490 | 230<br>390 |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 5<br>11               | 1<br>2-6 CL                 | 9-3/4<br>15-3/4           | 880<br>1510       | 760<br>1300                                       | 690<br>1180  | 610<br>1040 | 540<br>920  | 470<br>800  | 400<br>680 | 350<br>600 | 290<br>500 | 230<br>390 |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1095<br>1850      | 940<br>1590                                       | 850<br>1440  | 760<br>1280 | 670<br>1130 | 580<br>980  | 490<br>830 | 440<br>740 | 360<br>610 | 280<br>480 |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1215<br>1910      | 1040<br>1640                                      | 950<br>1490  | 840<br>1320 | 740<br>1170 | 640<br>1010 | 550<br>860 | 490<br>760 | 400<br>630 | 320<br>500 |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1300<br>2150      | 1120<br>1850                                      | 1010<br>1680 | 900<br>1480 | 790<br>1310 | 690<br>1140 | 590<br>970 | 520<br>860 | 430<br>710 | 340<br>560 |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1010<br>1700      | 870<br>1460                                       | 790<br>1330  | 700<br>1170 | 620<br>1040 | 540<br>900  | 450<br>770 | 400<br>680 | 330<br>560 | 260<br>440 |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1210<br>1900      | 1040<br>1630                                      | 940<br>1480  | 830<br>1310 | 740<br>1160 | 640<br>1010 | 540<br>860 | 480<br>760 | 400<br>630 | 310<br>490 |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1280<br>2135      | 1100<br>1840                                      | 1000<br>1670 | 880<br>1470 | 780<br>1300 | 680<br>1130 | 580<br>960 | 510<br>850 | 420<br>700 | 330<br>560 |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 950<br>1620       | 820<br>1390                                       | 740<br>1260  | 660<br>1120 | 580<br>990  | 500<br>860  | 430<br>730 | 380<br>650 | 310<br>530 | 250<br>420 |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 6<br>12               | 1<br>2-6 CL                 | 10-1/8<br>16-1/8          | 1130<br>1770      | 970<br>1520                                       | 880<br>1380  | 780<br>1220 | 690<br>1080 | 600<br>940  | 510<br>800 | 450<br>710 | 370<br>580 | 290<br>460 |

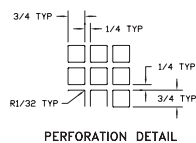
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

## STYLE LVE ACCESSORIES

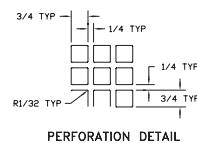


## A long, white, rectangular ventilation grille with a grid of small square openings, mounted on a light-colored wall. The grille is shown from a perspective view, highlighting its depth and the uniform pattern of the ventilation holes.

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A       | B       |
|----------------------|----------------------------|------------------|---------|---------|
| 3/4" COPPER          | 3 1/4" × 3 1/4"            | 2                | 7 3/16" | 6 3/8"  |
| 1" COPPER            | 3 1/4" × 3 1/4"            | 2                | 7 3/16" | 6 3/16" |
| 1 1/4" COPPER        | 3 1/4" × 3 1/4"            | 1                | 7 3/16" | 6 3/4"  |
| 1" STEEL             | 3 1/4" × 3 1/4"            | 2                | 7 3/16" | 6 1/16" |
| 1 1/4" STEEL         | 3 1/4" × 3 1/4"            | 1                | 7 3/16" | 6 9/16" |



| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A      | B       |
|----------------------|----------------------------|------------------|--------|---------|
| 3/4" COPPER          | 3 5/8 × 4 1/4              | 2                | 7 1/2  | 6 11/16 |
|                      | 4 1/4 × 4 1/4              | 3A               | 7 3/16 | 5 15/16 |
| 1" COPPER            | 3 5/8 × 4 1/4              | 2                | 7 1/2  | 6 1/2   |
|                      | 4 1/4 × 4 1/4              |                  | 7 3/16 | 6 3/16  |
| 1 1/4" COPPER        | 3 5/8 × 4 1/4              | 2                | 7 1/2  | 6 3/8   |
|                      | 4 1/4 × 4 1/4              |                  | 7 3/16 | 6 1/16  |
| 1" STEEL             | 4 1/4 × 4 1/4              | 2                | 7 3/16 | 6 1/16  |
| 1 1/4" STEEL         | 4 1/4 × 4 1/4              | 2                | 7 3/16 | 5 7/8   |
| 2" STEEL             | 4 1/4 × 4 1/4              | 1                | 7 3/16 | 6 1/8   |



# STYLE "LVX" SQUARE PERFORATION

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 5                     | 1                           | 8-7/8                     | 930               | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1650              | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2310              | 1990                                              | 1800 | 1590 | 1410 | 1220 | 1040 | 920  | 760  | 600  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 5                     | 1                           | 8-7/8                     | 1090              | 940                                               | 850  | 750  | 660  | 580  | 490  | 440  | 360  | 280  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1800              | 1550                                              | 1400 | 1240 | 1100 | 950  | 810  | 720  | 590  | 470  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2470              | 2120                                              | 1930 | 1700 | 1510 | 1310 | 1110 | 990  | 820  | 640  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 5                     | 1                           | 8-7/8                     | 1210              | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1930              | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2580              | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 5                     | 1                           | 8-7/8                     | 930               | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1650              | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2280              | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 5                     | 1                           | 8-7/8                     | 1040              | 890                                               | 810  | 720  | 630  | 550  | 470  | 420  | 340  | 270  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1780              | 1530                                              | 1390 | 1230 | 1090 | 940  | 800  | 710  | 590  | 460  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2390              | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 5                     | 1                           | 8-7/8                     | 1160              | 1000                                              | 900  | 800  | 710  | 610  | 520  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1860              | 1600                                              | 1450 | 1280 | 1130 | 990  | 840  | 740  | 610  | 480  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2500              | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
| 1-1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 5                     | 1                           | 8-7/8                     | 930               | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1610              | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2270              | 1950                                              | 1770 | 1570 | 1380 | 1200 | 1020 | 910  | 750  | 590  |
| 1-1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 5                     | 1                           | 8-7/8                     | 1020              | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1770              | 1520                                              | 1380 | 1220 | 1080 | 940  | 800  | 710  | 580  | 460  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2350              | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
| 1-1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 5                     | 1                           | 8-7/8                     | 1120              | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 2450              | 2110                                              | 1910 | 1690 | 1490 | 1300 | 1100 | 980  | 810  | 640  |
| 3/4"      | VC3/4-433           | 3-5/8" X 4-1/4"         | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1160              | 1000                                              | 900  | 800  | 710  | 610  | 520  | 460  | 380  | 300  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2040              | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2760              | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 3/4"      | VC3/4-434           | 3-5/8" X 4-1/4"         | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1390              | 1200                                              | 1080 | 960  | 850  | 740  | 630  | 560  | 460  | 360  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2390              | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3170              | 2730                                              | 2470 | 2190 | 1930 | 1680 | 1430 | 1270 | 1050 | 820  |
| 3/4"      | VC3/4-435           | 3-5/8" X 4-1/4"         | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2540              | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3310              | 2850                                              | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860  |
| 1"        | VC433               | 3-5/8" X 4-1/4"         | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1210              | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2130              | 1830                                              | 1660 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 550  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2880              | 2480                                              | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950  | 750  |
| 1"        | VC434               | 3-5/8" X 4-1/4"         | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1350              | 1160                                              | 1050 | 930  | 820  | 720  | 610  | 540  | 450  | 350  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2320              | 2000                                              | 1810 | 1600 | 1420 | 1230 | 1040 | 930  | 770  | 600  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3070              | 2640                                              | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800  |
| 1"        | VC435               | 3-5/8" X 4-1/4"         | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2530              | 2180                                              | 1970 | 1750 | 1540 | 1340 | 1140 | 1010 | 830  | 660  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3310              | 2850                                              | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860  |
| 1-1/4"    | VC1433              | 3-5/8" X 4-1/4"         | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2220              | 1910                                              | 1730 | 1530 | 1350 | 1180 | 1000 | 890  | 730  | 580  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3000              | 2580                                              | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990  | 780  |
| 1-1/4"    | VC1434              | 3-5/8" X 4-1/4"         | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2370              | 2040                                              | 1850 | 1640 | 1450 | 1260 | 1070 | 950  | 780  | 620  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3130              | 2690                                              | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810  |
| 1-1/4"    | VC1435              | 3-5/8" X 4-1/4"         | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2540              | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3320              | 2860                                              | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860  |
| 3/4"      | VC3/4 43            | 4-1/4" SQ.              | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2250              | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3070              | 2640                                              | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800  |
| 3/4"      | VC3/4 44            | 4-1/4" SQ.              | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3200              | 2750                                              | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830  |
| 3/4"      | VC3/4 45            | 4-1/4" SQ.              | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1580              | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2520              | 2170                                              | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830  | 660  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3290              | 2830                                              | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860  |
| 1"        | VC43                | 4-1/4" SQ.              | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1290              | 1110                                              | 1010 | 890  | 790  | 680  | 580  | 520  | 430  | 340  |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2280              | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 3100              | 2670                                              | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810  |

# STYLE "LVX" SQUARE PERFORATION

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VC44                | 4-1/4" SQ.                 | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2390                    | 2060                                              | 1860 | 1650 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3190                    | 2740                                              | 2490 | 2200 | 1950 | 1690 | 1440 | 1280 | 1050 | 830  |
| 1"        | VC45                | 4-1/4" SQ.                 | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2540                    | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3320                    | 2860                                              | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860  |
| 1-1/4"    | VC143               | 4-1/4" SQ.                 | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1340                    | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2370                    | 2040                                              | 1850 | 1640 | 1450 | 1260 | 1070 | 950  | 780  | 620  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3230                    | 2780                                              | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840  |
| 1-1/4"    | VC144               | 4-1/4" SQ.                 | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1590                    | 1370                                              | 1240 | 1100 | 970  | 840  | 720  | 640  | 520  | 410  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2570                    | 2210                                              | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850  | 670  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3350                    | 2880                                              | 2610 | 2310 | 2040 | 1780 | 1510 | 1340 | 1110 | 870  |
| 1-1/4"    | VC145               | 4-1/4" SQ.                 | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1640                    | 1410                                              | 1280 | 1130 | 1000 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2360                    | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3070                    | 2640                                              | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800  |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

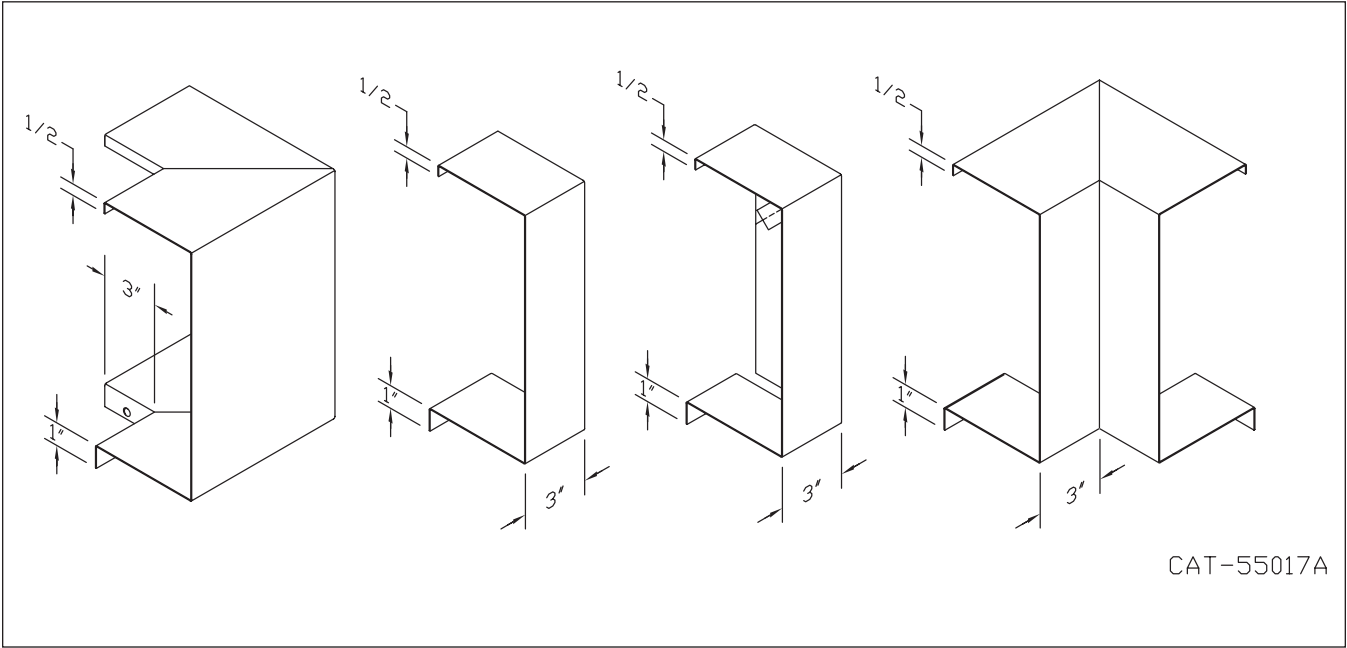
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                             |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VS33                | 3-1/4" SQ.                 | 32                 | .032                          | 5                           | 1                                    | 8-7/8                           | 870                     | 750                                               | 680  | 600  | 530  | 460  | 390  | 350  | 290  | 230  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1520                    | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2110                    | 1810                                              | 1650 | 1460 | 1290 | 1120 | 950  | 840  | 700  | 550  |
| 1"        | VS34                | 3-1/4" SQ.                 | 40                 | .032                          | 5                           | 1                                    | 8-7/8                           | 950                     | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2260                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
| 1"        | VS35                | 3-1/4" SQ.                 | 50                 | .032                          | 5                           | 1                                    | 8-7/8                           | 1020                    | 880                                               | 800  | 700  | 620  | 540  | 460  | 410  | 340  | 270  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1720                    | 1480                                              | 1340 | 1190 | 1050 | 910  | 770  | 690  | 570  | 450  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
| 1-1/4"    | VS133               | 3-1/4" SQ.                 | 32                 | .032                          | 5                           | 1                                    | 8-7/8                           | 860                     | 740                                               | 670  | 590  | 520  | 460  | 390  | 340  | 280  | 220  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1560                    | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2150                    | 1850                                              | 1680 | 1480 | 1310 | 1140 | 970  | 860  | 710  | 560  |
| 1-1/4"    | VS134               | 3-1/4" SQ.                 | 40                 | .032                          | 5                           | 1                                    | 8-7/8                           | 960                     | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
| 1-1/4"    | VS135               | 3-1/4" SQ.                 | 50                 | .032                          | 5                           | 1                                    | 8-7/8                           | 990                     | 850                                               | 770  | 680  | 600  | 520  | 450  | 400  | 330  | 260  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1680                    | 1440                                              | 1310 | 1160 | 1020 | 890  | 760  | 670  | 550  | 440  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2190                    | 1880                                              | 1710 | 1510 | 1340 | 1160 | 990  | 880  | 720  | 570  |
| 1"        | VS43                | 4-1/4" SQ.                 | 32                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1270                    | 1090                                              | 990  | 880  | 770  | 670  | 570  | 510  | 420  | 330  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2230                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2930                    | 2520                                              | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970  | 760  |
| 1"        | VS44                | 4-1/4" SQ.                 | 40                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2350                    | 2020                                              | 1830 | 1620 | 1430 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3050                    | 2620                                              | 2380 | 2100 | 1860 | 1620 | 1370 | 1220 | 1010 | 790  |
| 1"        | VS45                | 4-1/4" SQ.                 | 50                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1520                    | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2410                    | 2070                                              | 1880 | 1660 | 1470 | 1280 | 1080 | 960  | 800  | 630  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3100                    | 2670                                              | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810  |
| 1-1/4"    | VS143               | 4-1/4" SQ.                 | 32                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1170                    | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2910                    | 2500                                              | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960  | 760  |
| 1-1/4"    | VS144               | 4-1/4" SQ.                 | 40                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1420                    | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2340                    | 2010                                              | 1830 | 1610 | 1430 | 1240 | 1050 | 940  | 770  | 610  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3040                    | 2610                                              | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790  |
| 1-1/4"    | VS145               | 4-1/4" SQ.                 | 50                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1490                    | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2360                    | 2030                                              | 1840 | 1630 | 1440 | 1250 | 1060 | 940  | 780  | 610  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 3070                    | 2640                                              | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800  |
| 2"        | VS242               | 4-1/4" SQ.                 | 25                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1090                    | 940                                               | 850  | 750  | 660  | 580  | 490  | 440  | 360  | 280  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 1950                    | 1680                                              | 1520 | 1350 | 1190 | 1030 | 880  | 780  | 640  | 510  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2590                    | 2230                                              | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850  | 670  |
| 2"        | VS243               | 4-1/4" SQ.                 | 32                 | .032                          | 6                           | 1                                    | 9-3/8                           | 1270                    | 1090                                              | 990  | 880  | 770  | 670  | 570  | 510  | 420  | 330  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2140                    | 1840                                              | 1670 | 1480 | 1310 | 1130 | 960  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2790                    | 2400                                              | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920  | 730  |

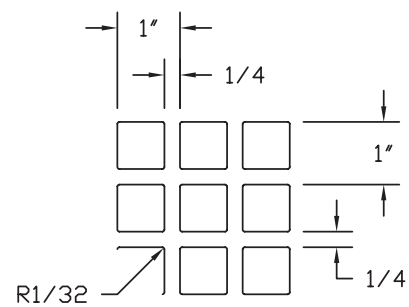
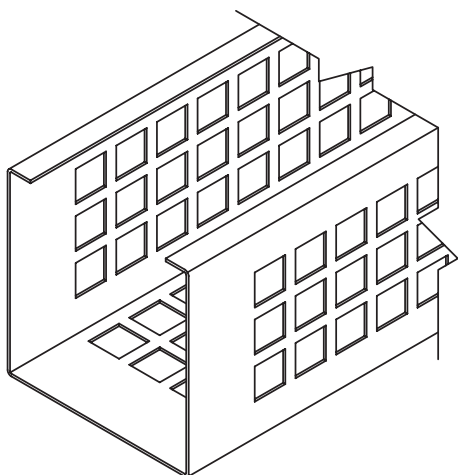
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVX" SQUARE PERFORATION

## STYLE LVX ACCESSORIES



# STYLE "LVX" SQUARE PERFORATION - CEILING



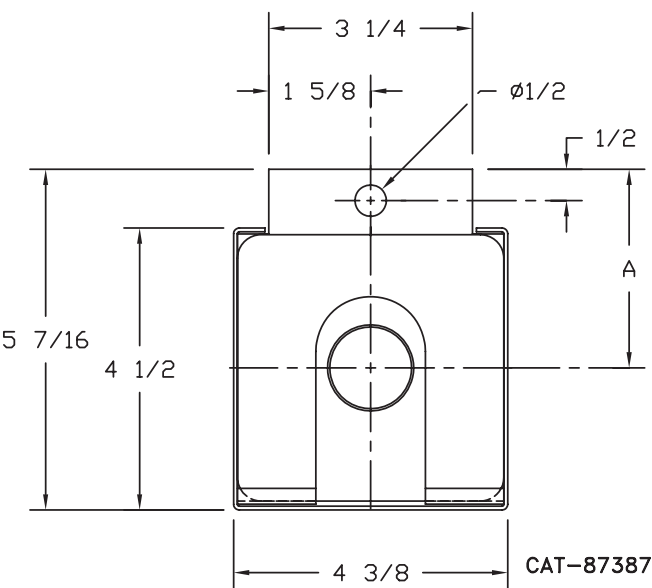
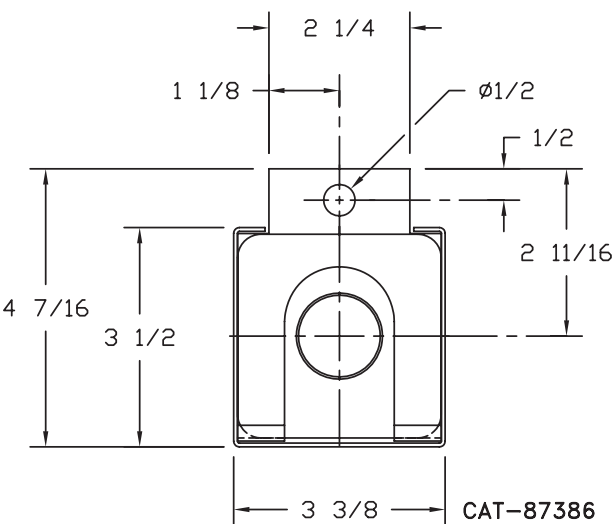
ENCLOSURE  
PERFORATION DETAIL

LV3-XC

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH |
|----------------------|----------------------------|
| 3/4" COPPER          | 3 1/4 × 3 1/4              |
| 1" COPPER            | 3 1/4 × 3 1/4              |
| 1 1/4" COPPER        | 3 1/4 × 3 1/4              |
| 1" STEEL             | 3 1/4 × 3 1/4              |
| 1 1/4" STEEL         | 3 1/4 × 3 1/4              |

LV4-XC

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | A      |
|----------------------|----------------------------|--------|
| 3/4" COPPER          | 3 5/8 × 4 1/4              | 3 1/2  |
| 3/4" COPPER          | 4 1/4 × 4 1/4              | 3 3/16 |
| 1" COPPER            | 3 5/8 × 4 1/4              | 3 1/2  |
| 1" COPPER            | 4 1/4 × 4 1/4              | 3 3/16 |
| 1 1/4" COPPER        | 3 5/8 × 4 1/4              | 3 1/2  |
| 1 1/4" COPPER        | 4 1/4 × 4 1/4              | 3 3/16 |
| 1" STEEL             | 4 1/4 × 4 1/4              | 3 3/16 |
| 1 1/4" STEEL         | 4 1/4 × 4 1/4              | 3 3/16 |



METHOD OF SUPPORT  
TO BE DETERMINED BY  
ENGINEER OR CONTRACTOR.  
MATERIALS USED WILL  
BE BY OTHERS.

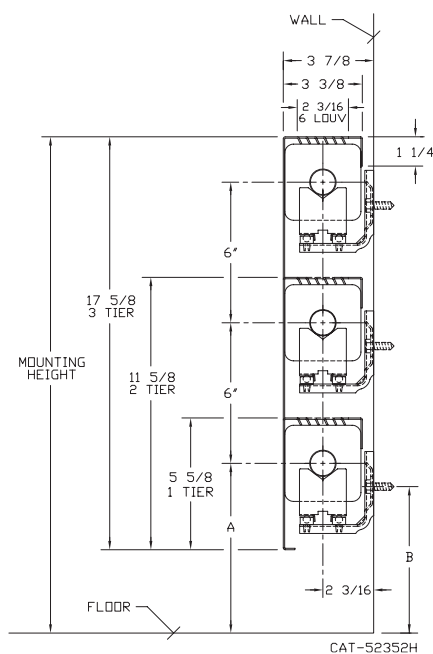
Apply .85 derate factor to "X" style ratings.

## STYLE "LVC" TOP OUTLET



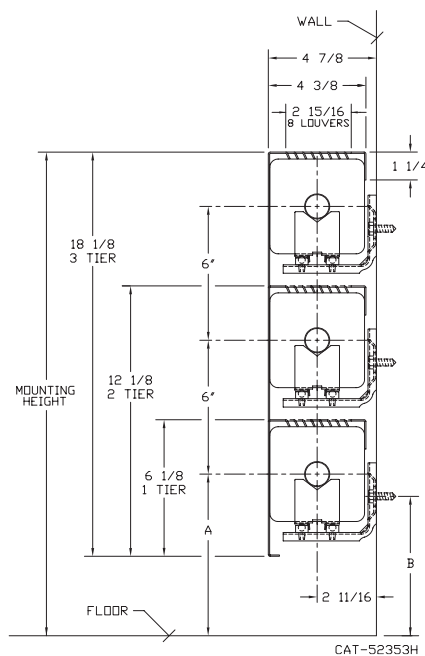
### LV3-C (Element Supported)

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       | B       |
|----------------------|----------------------------|------------------|---------|---------|
| 3/4 COPPER           | 3 1/4 x 3 1/4              | 2                | 6 15/16 | 6 1/8   |
| 1" COPPER            | 3 1/4 x 3 1/4              | 2                | 6 15/16 | 5 15/16 |
| 1 1/4 COPPER         | 3 1/4 x 3 1/4              | 1                | 6 15/16 | 6 1/2   |
| 1" STEEL             | 3 1/4 x 3 1/4              | 2                | 6 15/16 | 5 13/16 |
| 1 1/4 STEEL          | 3 1/4 x 3 1/4              | 1                | 6 15/16 | 6 5/16  |



### LV4-C (Element Supported)

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       | B       |
|----------------------|----------------------------|------------------|---------|---------|
| 3/4 COPPER           | 3 5/8 x 4 1/4              | 2                | 7 1/4   | 6 7/16  |
|                      | 4 1/4 x 4 1/4              | 3A               | 6 15/16 | 5 11/16 |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 7 1/4   | 6 1/4   |
|                      | 4 1/4 x 4 1/4              |                  | 6 15/16 | 5 15/16 |
| 1 1/4 COPPER         | 3 5/8 x 4 1/4              | 2                | 7 1/4   | 6 1/8   |
|                      | 4 1/4 x 4 1/4              |                  | 6 15/16 | 5 13/16 |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 6 15/16 | 5 13/16 |
| 1 1/4 STEEL          | 4 1/4 x 4 1/4              | 2                | 6 15/16 | 5 5/8   |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 6 15/16 | 5 7/8   |



# STYLE "LVC" TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | ENCL<br>HEIGHT<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|-----------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                             |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.                 | 32                 | .020                          | 5                           | 1                                    | 8-7/8                           | 870                     | 750                                               | 680  | 600  | 530  | 460  | 390  | 350  | 290  | 230  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.                 | 40                 | .020                          | 5                           | 1                                    | 8-7/8                           | 1030                    | 890                                               | 800  | 710  | 630  | 550  | 460  | 410  | 340  | 270  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1600                    | 1380                                              | 1250 | 1100 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2060                    | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.                 | 50                 | .020                          | 5                           | 1                                    | 8-7/8                           | 1130                    | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1710                    | 1470                                              | 1330 | 1180 | 1040 | 910  | 770  | 680  | 560  | 440  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2150                    | 1850                                              | 1680 | 1480 | 1310 | 1140 | 970  | 860  | 710  | 560  |
| 1"        | VC33                | 3-1/4" SQ.                 | 32                 | .020                          | 5                           | 1                                    | 8-7/8                           | 870                     | 750                                               | 680  | 600  | 530  | 460  | 390  | 350  | 290  | 230  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 1900                    | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |
| 1"        | VC34                | 3-1/4" SQ.                 | 40                 | .020                          | 5                           | 1                                    | 8-7/8                           | 970                     | 830                                               | 760  | 670  | 590  | 510  | 440  | 390  | 320  | 250  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1570                    | 1350                                              | 1220 | 1080 | 960  | 830  | 710  | 630  | 520  | 410  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 1990                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 900  | 800  | 660  | 520  |
| 1"        | VC35                | 3-1/4" SQ.                 | 50                 | .020                          | 5                           | 1                                    | 8-7/8                           | 1090                    | 940                                               | 850  | 750  | 660  | 580  | 490  | 440  | 360  | 280  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2080                    | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |
| 1-1/4"    | VC133               | 3-1/4" SQ.                 | 32                 | .020                          | 5                           | 1                                    | 8-7/8                           | 870                     | 750                                               | 680  | 600  | 530  | 460  | 390  | 350  | 290  | 230  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 1890                    | 1630                                              | 1470 | 1300 | 1150 | 1000 | 850  | 760  | 620  | 490  |
| 1-1/4"    | VC134               | 3-1/4" SQ.                 | 40                 | .020                          | 5                           | 1                                    | 8-7/8                           | 950                     | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1560                    | 1340                                              | 1220 | 1080 | 950  | 830  | 700  | 620  | 510  | 410  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 1960                    | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |
| 1-1/4"    | VC135               | 3-1/4" SQ.                 | 50                 | .020                          | 5                           | 1                                    | 8-7/8                           | 1050                    | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
|           |                     |                            |                    |                               | 11                          | 2 @ 6 CL                             | 14-7/8                          | 1620                    | 1390                                              | 1260 | 1120 | 990  | 860  | 730  | 650  | 530  | 420  |
|           |                     |                            |                    |                               | 17                          | 3 @ 6 CL                             | 20-7/8                          | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
| 3/4"      | VC3/4-433           | 3-5/8" X 4-1/4"            | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1090                    | 940                                               | 850  | 750  | 660  | 580  | 490  | 440  | 360  | 280  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 1810                    | 1560                                              | 1410 | 1250 | 1100 | 960  | 810  | 720  | 600  | 470  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2300                    | 1980                                              | 1790 | 1590 | 1400 | 1220 | 1040 | 920  | 760  | 600  |
| 3/4"      | VC3/4-434           | 3-5/8" X 4-1/4"            | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1310                    | 1130                                              | 1020 | 900  | 800  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2120                    | 1820                                              | 1650 | 1460 | 1290 | 1120 | 950  | 850  | 700  | 550  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2640                    | 2270                                              | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870  | 690  |
| 3/4"      | VC3/4-435           | 3-5/8" X 4-1/4"            | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1440                    | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2250                    | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2760                    | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1"        | VC433               | 3-5/8" X 4-1/4"            | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1130                    | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 1890                    | 1630                                              | 1470 | 1300 | 1150 | 1000 | 850  | 760  | 620  | 490  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2400                    | 2060                                              | 1870 | 1660 | 1460 | 1270 | 1080 | 960  | 790  | 620  |
| 1"        | VC434               | 3-5/8" X 4-1/4"            | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1270                    | 1090                                              | 990  | 880  | 770  | 670  | 570  | 510  | 420  | 330  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2060                    | 1770                                              | 1610 | 1420 | 1260 | 1090 | 930  | 820  | 680  | 540  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2560                    | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
| 1"        | VC435               | 3-5/8" X 4-1/4"            | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1440                    | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2240                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2760                    | 2370                                              | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910  | 720  |
| 1-1/4"    | VC1433              | 3-5/8" X 4-1/4"            | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1180                    | 1010                                              | 920  | 810  | 720  | 630  | 530  | 470  | 390  | 310  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 1960                    | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2500                    | 2150                                              | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830  | 650  |
| 1-1/4"    | VC1434              | 3-5/8" X 4-1/4"            | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1300                    | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2610                    | 2240                                              | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860  | 680  |
| 1-1/4"    | VC1435              | 3-5/8" X 4-1/4"            | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1440                    | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2250                    | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2770                    | 2380                                              | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910  | 720  |
| 3/4"      | VC3/4 43            | 4-1/4" SQ.                 | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1210                    | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 1990                    | 1710                                              | 1550 | 1370 | 1210 | 1050 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2560                    | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
| 3/4"      | VC3/4 44            | 4-1/4" SQ.                 | 40                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1440                    | 1240                                              | 1120 | 990  | 880  | 760  | 650  | 580  | 480  | 370  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2160                    | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2660                    | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |
| 3/4"      | VC3/4 45            | 4-1/4" SQ.                 | 50                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1490                    | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2230                    | 1920                                              | 1740 | 1540 | 1360 | 1180 | 1000 | 890  | 740  | 580  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2740                    | 2360                                              | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900  | 710  |
| 1"        | VC43                | 4-1/4" SQ.                 | 32                 | .020                          | 6                           | 1                                    | 9-3/8                           | 1210                    | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|           |                     |                            |                    |                               | 12                          | 2 @ 6 CL                             | 15-3/8                          | 2010                    | 1730                                              | 1570 | 1390 | 1230 | 1070 | 900  | 800  | 660  | 520  |
|           |                     |                            |                    |                               | 18                          | 3 @ 6 CL                             | 21-3/8                          | 2580                    | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |

# STYLE "LVC" TOP OUTLET

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |     |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|-----|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |     |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |     |
| 1"        | VC44                | 4-1/4" SQ.              | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1340              | 1.00                                              | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26 |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2120              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2660              | 2290                                              | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880  | 690  |     |
| 1"        | VC45                | 4-1/4" SQ.              | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1510              | 1300                                              | 1180 | 1040 | 920  | 800  | 680  | 600  | 500  | 390  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2250              | 1940                                              | 1760 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 590  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2770              | 2380                                              | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910  | 720  |     |
| 1-1/4"    | VC143               | 4-1/4" SQ.              | 32           | .020                    | 6                     | 1                           | 9-3/8                     | 1260              | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2100              | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2690              | 2310                                              | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890  | 700  |     |
| 1-1/4"    | VC144               | 4-1/4" SQ.              | 40           | .020                    | 6                     | 1                           | 9-3/8                     | 1490              | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2280              | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2790              | 2400                                              | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920  | 730  |     |
| 1-1/4"    | VC145               | 4-1/4" SQ.              | 50           | .020                    | 6                     | 1                           | 9-3/8                     | 1540              | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2090              | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |     |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

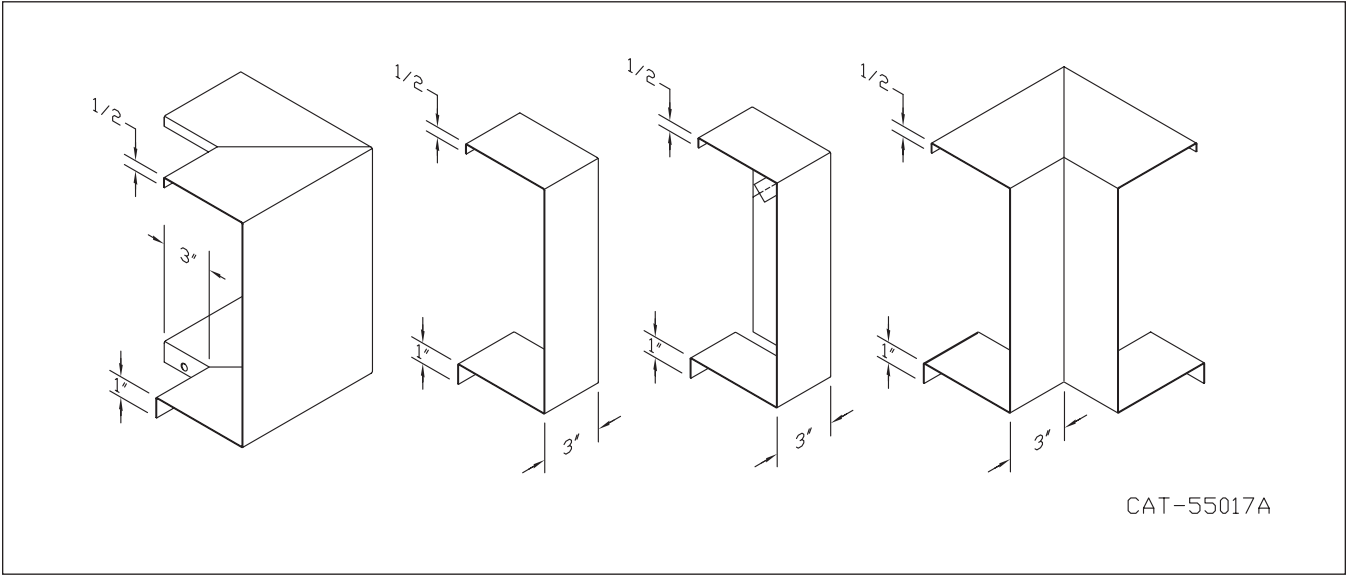
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |     |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|---------------------------|-------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|-----|
|           |                     |                         |              |                         |                       |                             |                           |                   | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |     |
|           |                     |                         |              |                         |                       |                             |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |     |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 5                     | 1                           | 8-7/8                     | 820               | 1.00                                              | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26 |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1760              | 1510                                              | 1370 | 1210 | 1070 | 930  | 790  | 700  | 580  | 460  |     |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 5                     | 1                           | 8-7/8                     | 890               | 770                                               | 690  | 610  | 540  | 470  | 400  | 360  | 290  | 230  |     |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1880              | 1620                                              | 1470 | 1300 | 1150 | 1000 | 850  | 750  | 620  | 490  |     |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 5                     | 1                           | 8-7/8                     | 950               | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |     |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1520              | 1310                                              | 1190 | 1050 | 930  | 810  | 680  | 610  | 500  | 400  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1960              | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |     |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 5                     | 1                           | 8-7/8                     | 810               | 700                                               | 630  | 560  | 490  | 430  | 360  | 320  | 270  | 210  |     |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1380              | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1790              | 1540                                              | 1400 | 1240 | 1090 | 950  | 810  | 720  | 590  | 470  |     |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 5                     | 1                           | 8-7/8                     | 900               | 770                                               | 700  | 620  | 550  | 480  | 410  | 360  | 300  | 230  |     |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1450              | 1250                                              | 1130 | 1000 | 880  | 770  | 650  | 580  | 480  | 380  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1800              | 1550                                              | 1400 | 1240 | 1100 | 950  | 810  | 720  | 590  | 470  |     |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 5                     | 1                           | 8-7/8                     | 930               | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |     |
|           |                     |                         |              |                         | 11                    | 2 @ 6 CL                    | 14-7/8                    | 1490              | 1280                                              | 1160 | 1030 | 910  | 790  | 670  | 600  | 490  | 390  |     |
|           |                     |                         |              |                         | 17                    | 3 @ 6 CL                    | 20-7/8                    | 1820              | 1570                                              | 1420 | 1260 | 1110 | 960  | 820  | 730  | 600  | 470  |     |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 6                     | 1                           | 9-3/8                     | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 1970              | 1690                                              | 1540 | 1360 | 1200 | 1040 | 890  | 790  | 650  | 510  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2440              | 2100                                              | 1900 | 1680 | 1490 | 1290 | 1100 | 980  | 810  | 630  |     |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 6                     | 1                           | 9-3/8                     | 1340              | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2080              | 1790                                              | 1620 | 1440 | 1270 | 1100 | 940  | 830  | 690  | 540  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2540              | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |     |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 6                     | 1                           | 9-3/8                     | 1420              | 1220                                              | 1110 | 980  | 870  | 750  | 640  | 570  | 470  | 370  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2130              | 1830                                              | 1660 | 1470 | 1300 | 1130 | 960  | 850  | 700  | 550  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2580              | 2220                                              | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850  | 670  |     |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 6                     | 1                           | 9-3/8                     | 1100              | 950                                               | 860  | 760  | 670  | 580  | 500  | 440  | 360  | 290  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 1960              | 1690                                              | 1530 | 1350 | 1200 | 1040 | 880  | 780  | 650  | 510  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2420              | 2080                                              | 1890 | 1670 | 1480 | 1280 | 1090 | 970  | 800  | 630  |     |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 6                     | 1                           | 9-3/8                     | 1330              | 1140                                              | 1040 | 920  | 810  | 700  | 600  | 530  | 440  | 350  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2070              | 1780                                              | 1610 | 1430 | 1260 | 1100 | 930  | 830  | 680  | 540  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2540              | 2180                                              | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840  | 660  |     |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 6                     | 1                           | 9-3/8                     | 1400              | 1200                                              | 1090 | 970  | 850  | 740  | 630  | 560  | 460  | 360  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 2090              | 1800                                              | 1630 | 1440 | 1270 | 1110 | 940  | 840  | 690  | 540  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2560              | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |     |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 6                     | 1                           | 9-3/8                     | 1030              | 890                                               | 800  | 710  | 630  | 550  | 460  | 410  | 340  | 270  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 1730              | 1490                                              | 1350 | 1190 | 1060 | 920  | 780  | 690  | 570  | 450  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2160              | 1860                                              | 1680 | 1490 | 1320 | 1140 | 970  | 860  | 710  | 560  |     |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 6                     | 1                           | 9-3/8                     | 1190              | 1020                                              | 930  | 820  | 730  | 630  | 540  | 480  | 390  | 310  |     |
|           |                     |                         |              |                         | 12                    | 2 @ 6 CL                    | 15-3/8                    | 1900              | 1630                                              | 1480 | 1310 | 1160 | 1010 | 860  | 760  | 630  | 490  |     |
|           |                     |                         |              |                         | 18                    | 3 @ 6 CL                    | 21-3/8                    | 2330              | 2000                                              | 1820 | 1610 | 1420 | 1230 | 1050 | 930  | 770  | 610  |     |

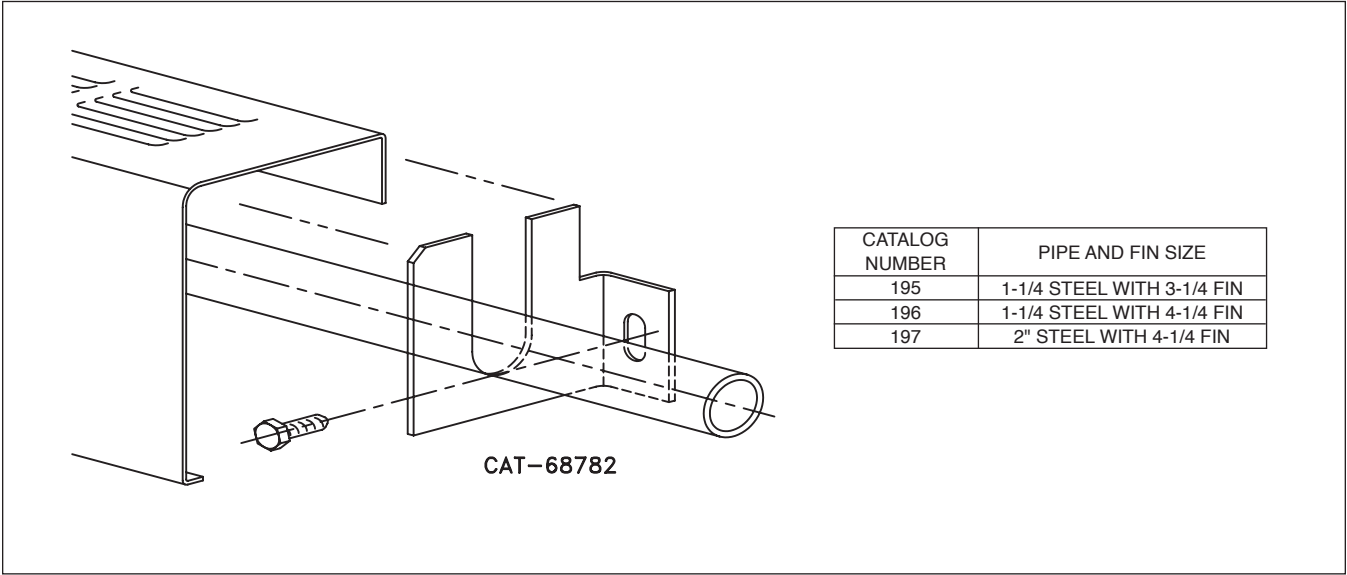
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVC" TOP OUTLET

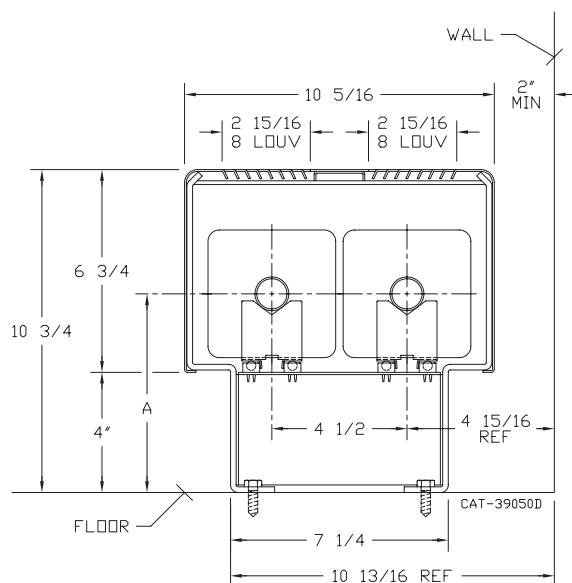
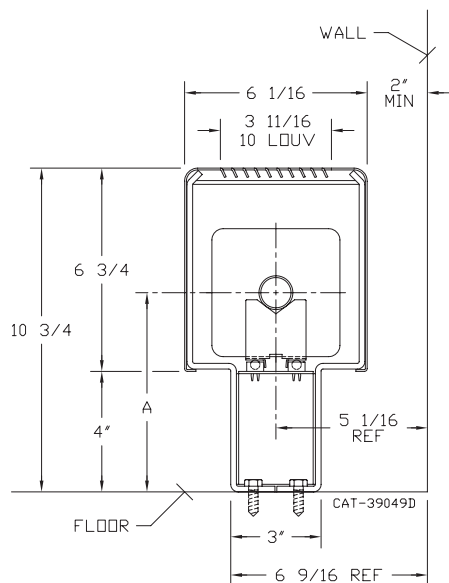
## STYLE LVC ACCESSORIES



## PIPE AND COVER SUPPORT BRACKET



## A long, low, dark-colored radiator with a series of small, square vents along its length, positioned against a light-colored wall. A small, round, dark-colored table with two legs is placed next to it, holding a book. The floor is covered with a dark, textured carpet.



# STYLE "LVPM" PEDESTAL MOUNTED

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH IN INCHES | ROWS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |              |              |             |             |             |             |            |            |
|-----------|---------------------|-------------------------|--------------|-------------------------|----------------------|----------------------------|---------------------------|-------------------|---------------------------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|------------|
|           |                     |                         |              |                         |                      |                            |                           |                   | 200°                                              | 190°         | 180°         | 170°        | 160°        | 150°        | 140°        | 130°       | 120°       |
|           |                     |                         |              |                         |                      |                            |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |              |              |             |             |             |             |            |            |
|           |                     |                         |              |                         |                      |                            |                           | 1.00              | 0.86                                              | 0.78         | 0.69         | 0.61        | 0.53        | 0.45        | .40         | .33        | .26        |
| 3/4"      | VC3/4-433           | 3-5/8" x 4-1/4"         | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1040<br>2080      | 890<br>1790                                       | 810<br>1620  | 720<br>1440  | 630<br>1270 | 550<br>1100 | 470<br>940  | 420<br>830  | 340<br>690 | 270<br>540 |
| 3/4"      | VC3/4-434           | 3-5/8" x 4-1/4"         | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1250<br>2490      | 1080<br>2140                                      | 980<br>1940  | 860<br>1720  | 760<br>1520 | 660<br>1320 | 560<br>1120 | 500<br>1000 | 410<br>820 | 330<br>650 |
| 3/4"      | VC3/4-435           | 3-5/8" x 4-1/4"         | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1380<br>2750      | 1190<br>2370                                      | 1080<br>2150 | 950<br>1900  | 840<br>1680 | 730<br>1460 | 620<br>1240 | 550<br>1100 | 460<br>910 | 360<br>720 |
| 1"        | VC433               | 3-5/8" x 4-1/4"         | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1080<br>2170      | 930<br>1870                                       | 840<br>1690  | 750<br>1500  | 660<br>1320 | 570<br>1150 | 490<br>980  | 430<br>870  | 360<br>720 | 280<br>560 |
| 1"        | VC434               | 3-5/8" x 4-1/4"         | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1210<br>2430      | 1040<br>2090                                      | 940<br>1900  | 830<br>1680  | 740<br>1480 | 640<br>1290 | 540<br>1090 | 480<br>970  | 400<br>800 | 310<br>630 |
| 1"        | VC435               | 3-5/8" x 4-1/4"         | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1380<br>2750      | 1190<br>2370                                      | 1080<br>2150 | 950<br>1900  | 840<br>1680 | 730<br>1460 | 620<br>1240 | 550<br>1100 | 460<br>910 | 360<br>720 |
| 1-1/4"    | VC1433              | 3-5/8" x 4-1/4"         | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1130<br>2250      | 970<br>1940                                       | 880<br>1760  | 780<br>1550  | 690<br>1370 | 600<br>1190 | 510<br>1010 | 450<br>900  | 370<br>740 | 290<br>590 |
| 1-1/4"    | VC1434              | 3-5/8" x 4-1/4"         | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1240<br>2480      | 1070<br>2130                                      | 970<br>1930  | 860<br>1710  | 760<br>1510 | 660<br>1310 | 560<br>1120 | 500<br>990  | 410<br>820 | 320<br>640 |
| 1-1/4"    | VC1435              | 3-5/8" x 4-1/4"         | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1380<br>2750      | 1190<br>2370                                      | 1080<br>2150 | 950<br>1900  | 840<br>1680 | 730<br>1460 | 620<br>1240 | 550<br>1100 | 460<br>910 | 360<br>720 |
| 3/4"      | VC3/4-43            | 4-1/4" SQ.              | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1150<br>2300      | 990<br>1980                                       | 900<br>1790  | 790<br>1590  | 700<br>1400 | 610<br>1220 | 520<br>1040 | 460<br>920  | 380<br>760 | 300<br>600 |
| 3/4"      | VC3/4-44            | 4-1/4" SQ.              | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1380<br>2750      | 1190<br>2370                                      | 1080<br>2150 | 950<br>1900  | 840<br>1680 | 730<br>1460 | 620<br>1240 | 550<br>1100 | 460<br>910 | 360<br>720 |
| 3/4"      | VC3/4-45            | 4-1/4" SQ.              | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1420<br>2840      | 1220<br>2440                                      | 1110<br>2220 | 980<br>1960  | 870<br>1730 | 750<br>1510 | 640<br>1280 | 570<br>1140 | 470<br>940 | 370<br>740 |
| 1"        | VC43                | 4-1/4" SQ.              | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1150<br>2300      | 990<br>1980                                       | 900<br>1790  | 790<br>1590  | 700<br>1400 | 610<br>1220 | 520<br>1040 | 460<br>920  | 380<br>760 | 300<br>600 |
| 1"        | VC44                | 4-1/4" SQ.              | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1280<br>2560      | 1100<br>2200                                      | 1000<br>2000 | 880<br>1770  | 780<br>1560 | 680<br>1360 | 580<br>1150 | 510<br>1020 | 420<br>840 | 330<br>670 |
| 1"        | VC45                | 4-1/4" SQ.              | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1440<br>2890      | 1240<br>2490                                      | 1120<br>2250 | 990<br>1990  | 880<br>1760 | 760<br>1530 | 650<br>1300 | 580<br>1160 | 480<br>950 | 370<br>750 |
| 1-1/4"    | VC143               | 4-1/4" SQ.              | 32           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1200<br>2410      | 1030<br>2070                                      | 940<br>1880  | 830<br>1660  | 730<br>1470 | 640<br>1280 | 540<br>1080 | 480<br>960  | 400<br>800 | 310<br>630 |
| 1-1/4"    | VC144               | 4-1/4" SQ.              | 40           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1430<br>2860      | 1230<br>2460                                      | 1120<br>2230 | 990<br>1970  | 870<br>1740 | 760<br>1520 | 640<br>1290 | 570<br>1140 | 470<br>940 | 370<br>740 |
| 1-1/4"    | VC145               | 4-1/4" SQ.              | 50           | .020                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1470<br>2940      | 1260<br>2530                                      | 1150<br>2290 | 1010<br>2030 | 900<br>1790 | 780<br>1560 | 660<br>1320 | 590<br>1180 | 490<br>970 | 380<br>760 |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH IN INCHES | ROWS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.)                                  |              |             |             |             |             |             |            |            |
|-----------|---------------------|-------------------------|--------------|-------------------------|----------------------|----------------------------|---------------------------|-------------------|---------------------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|------------|------------|
|           |                     |                         |              |                         |                      |                            |                           |                   | 200°                                              | 190°         | 180°        | 170°        | 160°        | 150°        | 140°        | 130°       | 120°       |
|           |                     |                         |              |                         |                      |                            |                           |                   | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |              |             |             |             |             |             |            |            |
|           |                     |                         |              |                         |                      |                            |                           | 1.00              | 0.86                                              | 0.78         | 0.69        | 0.61        | 0.53        | 0.45        | .40         | .33        | .26        |
| 1"        | VS43                | 4-1/4" SQ.              | 32           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1140<br>2270      | 980<br>1950                                       | 890<br>1770  | 790<br>1570 | 700<br>1380 | 600<br>1200 | 510<br>1020 | 460<br>910  | 380<br>750 | 300<br>590 |
| 1"        | VS44                | 4-1/4" SQ.              | 40           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1280<br>2560      | 1100<br>2200                                      | 1000<br>2000 | 880<br>1770 | 780<br>1560 | 680<br>1360 | 580<br>1150 | 510<br>1020 | 420<br>840 | 330<br>670 |
| 1"        | VS45                | 4-1/4" SQ.              | 50           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1360<br>2720      | 1170<br>2340                                      | 1060<br>2120 | 940<br>1880 | 830<br>1660 | 720<br>1440 | 610<br>1220 | 540<br>1090 | 450<br>900 | 350<br>710 |
| 1-1/4"    | VS143               | 4-1/4" SQ.              | 32           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1050<br>2100      | 900<br>1810                                       | 820<br>1640  | 720<br>1450 | 640<br>1280 | 560<br>1110 | 470<br>950  | 420<br>840  | 350<br>690 | 270<br>550 |
| 1-1/4"    | VS144               | 4-1/4" SQ.              | 40           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1270<br>2550      | 1090<br>2190                                      | 990<br>1990  | 880<br>1760 | 770<br>1560 | 670<br>1350 | 570<br>1150 | 510<br>1020 | 420<br>840 | 330<br>660 |
| 1-1/4"    | VS145               | 4-1/4" SQ.              | 50           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1330<br>2670      | 1140<br>2300                                      | 1040<br>2080 | 920<br>1840 | 810<br>1630 | 700<br>1420 | 600<br>1200 | 530<br>1070 | 440<br>880 | 350<br>690 |
| 2"        | VS242               | 4-1/4" SQ.              | 25           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 980<br>1960       | 840<br>1690                                       | 760<br>1530  | 680<br>1350 | 600<br>1200 | 520<br>1040 | 440<br>880  | 390<br>780  | 320<br>650 | 250<br>510 |
| 2"        | VS243               | 4-1/4" SQ.              | 32           | .032                    | 6 3/4<br>10 5/16     | 1<br>2 - 4 1/2             | 10 3/4<br>10 3/4          | 1140<br>2270      | 980<br>1950                                       | 890<br>1770  | 790<br>1570 | 700<br>1380 | 600<br>1200 | 510<br>1020 | 460<br>910  | 380<br>750 | 300<br>590 |

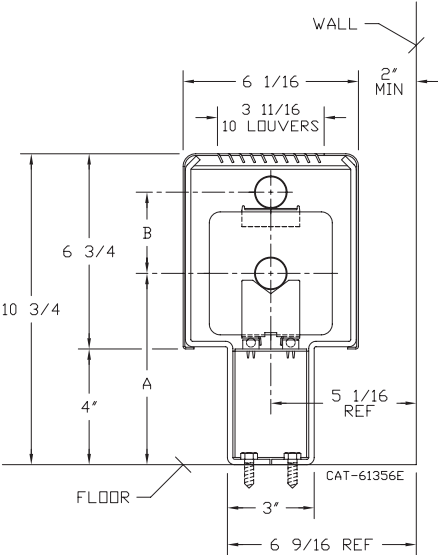
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) Ratings based on typical window wall installation.  
4) The ends can be provided chamfered for field welded fittings when specified.

# STYLE "LVPM" PEDESTAL MOUNTED

## ALTERNATE PIPING CAPABILITY WITH 3/4" AND 1" COPPER TUBE ELEMENTS

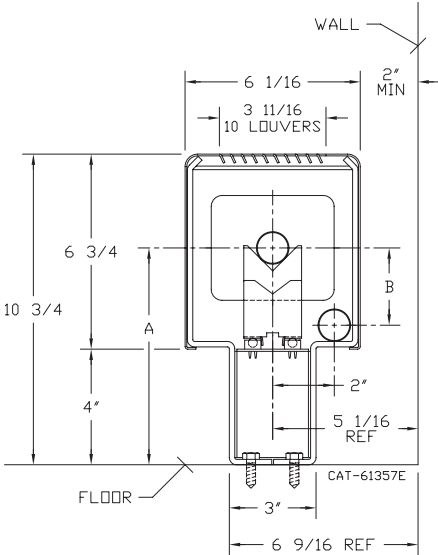
### LV4-PM WITH RETURN ABOVE ELEMENT

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A       | B WITH 3/4 RETURN |
|-------------------|-------------------------|---------------|---------|-------------------|
| 3/4 COPPER        | 3 5/8 x 4 1/4           | 2             | 6 7/16  | 2 3/8             |
| 3/4 COPPER        | 4 1/4 x 4 1/4           | 3A            | 6 13/16 | 2 11/16           |
| 1" COPPER         | 3 5/8 x 4 1/4           | 2             | 6 5/8   | 2 1/2             |
| 1" COPPER         | 4 1/4 x 4 1/4           | 2             | 6 5/8   | 2 7/8             |



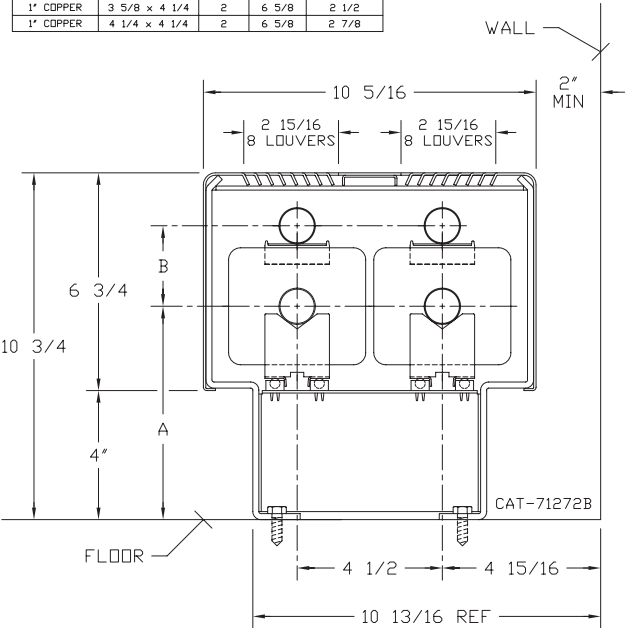
### LV4-PM WITH RETURN BELOW ELEMENT

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A      | B WITH 3/4 RETURN | B WITH 1" RETURN |
|-------------------|-------------------------|---------------|--------|-------------------|------------------|
| 3/4 COPPER        | 3 5/8 x 4 1/4           | 6             | 7 3/16 | 2 1/2             | 2 3/8            |
| 3/4 COPPER        | 4 1/4 x 4 1/4           | 10            | 7 3/8  | 2 11/16           | N/A              |
| 1" COPPER         | 3 5/8 x 4 1/4           | 6             | 7 3/8  | 2 11/16           | 2 9/16           |
| 1" COPPER         | 4 1/4 x 4 1/4           | 10            | 7 9/16 | 2 7/8             | 2 3/4            |



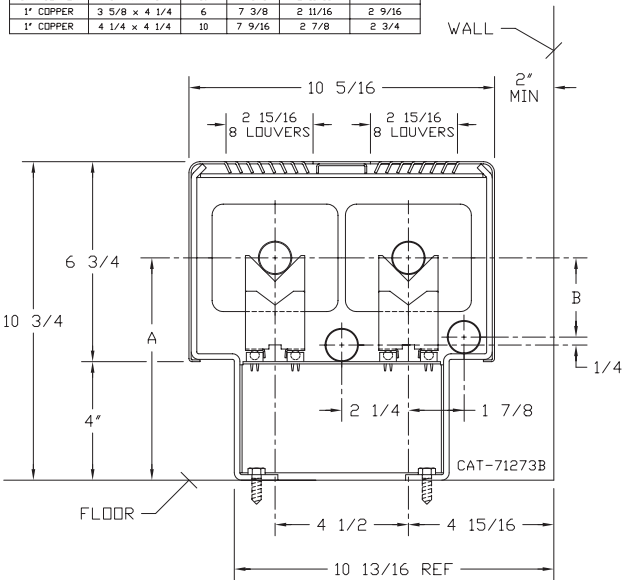
### LV4-PM2 WITH RETURN ABOVE ELEMENT

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A       | B WITH 3/4 RETURN |
|-------------------|-------------------------|---------------|---------|-------------------|
| 3/4 COPPER        | 3 5/8 x 4 1/4           | 2             | 6 7/16  | 2 3/8             |
| 3/4 COPPER        | 4 1/4 x 4 1/4           | 3A            | 6 13/16 | 2 11/16           |
| 1" COPPER         | 3 5/8 x 4 1/4           | 2             | 6 5/8   | 2 1/2             |
| 1" COPPER         | 4 1/4 x 4 1/4           | 2             | 6 5/8   | 2 7/8             |



### LV4-PM2 WITH RETURN BELOW ELEMENT

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A      | B WITH 3/4 RETURN | B WITH 1" RETURN |
|-------------------|-------------------------|---------------|--------|-------------------|------------------|
| 3/4 COPPER        | 3 5/8 x 4 1/4           | 6             | 7 3/16 | 2 1/2             | 2 3/8            |
| 3/4 COPPER        | 4 1/4 x 4 1/4           | 10            | 7 3/8  | 2 11/16           | N/A              |
| 1" COPPER         | 3 5/8 x 4 1/4           | 6             | 7 3/8  | 2 11/16           | 2 9/16           |
| 1" COPPER         | 4 1/4 x 4 1/4           | 10            | 7 9/16 | 2 7/8             | 2 3/4            |

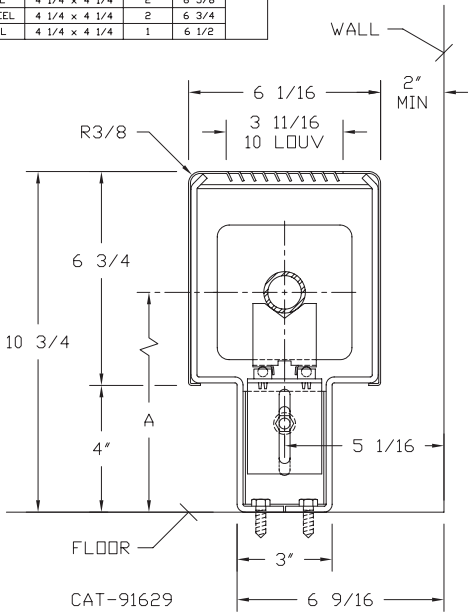


# STYLE "LVPM" PEDESTAL MOUNTED

## OPTIONAL ADJUSTABLE PEDESTAL BRACKET ASSEMBLIES FOR 2-PIPE STEAM

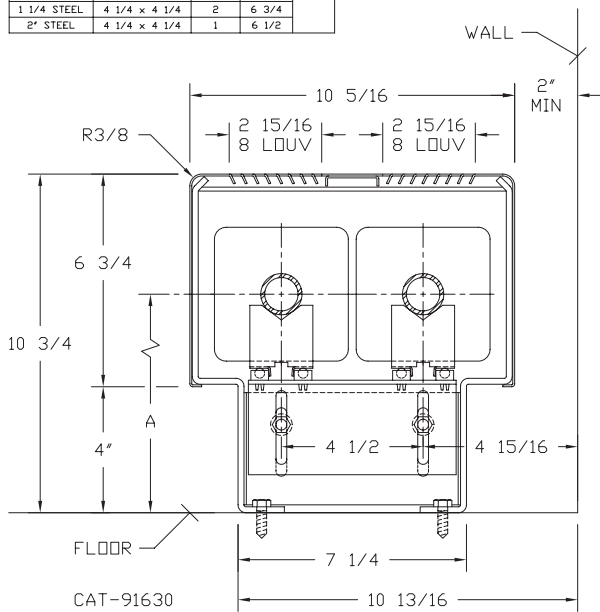
### LV4-PM

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A<br>MIN | A<br>MAX |
|----------------------|----------------------------|------------------|----------|----------|
| 3/4 COPPER           | 3 5/8 x 4 1/4              | 2                | 6 1/2    | 8"       |
| 3/4 COPPER           | 4 1/4 x 4 1/4              | 3A               | 6 11/16  |          |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 6 1/2    |          |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                |          |          |
| 1 1/4 COPPER         | 3 5/8 x 4 1/4              | 2                | 6 5/8    |          |
| 1 1/4 COPPER         | 4 1/4 x 4 1/4              | 2                |          |          |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 6 5/8    |          |
| 1 1/4 STEEL          | 4 1/4 x 4 1/4              | 2                | 6 3/4    |          |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 6 1/2    |          |



### LV4-PM2

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A<br>MIN | A<br>MAX |
|----------------------|----------------------------|------------------|----------|----------|
| 3/4" COPPER          | 3 5/8 × 4 1/4              | 2                | 6 1/2    | 8"       |
| 3/4" COPPER          | 4 1/4 × 4 1/4              | 3A               | 6 11/16  |          |
| 1" COPPER            | 3 5/8 × 4 1/4              | 2                | 6 1/2    |          |
| 1" COPPER            | 4 1/4 × 4 1/4              | 2                |          |          |
| 1 1/4" COPPER        | 3 5/8 × 4 1/4              | 2                | 6 5/8    |          |
| 1 1/4" COPPER        | 4 1/4 × 4 1/4              | 2                |          |          |
| 1" STEEL             | 4 1/4 × 4 1/4              | 2                | 6 5/8    |          |
| 1 1/4" STEEL         | 4 1/4 × 4 1/4              | 2                | 6 3/4    |          |
| 2" STEEL             | 4 1/4 × 4 1/4              | 1                | 6 1/2    |          |



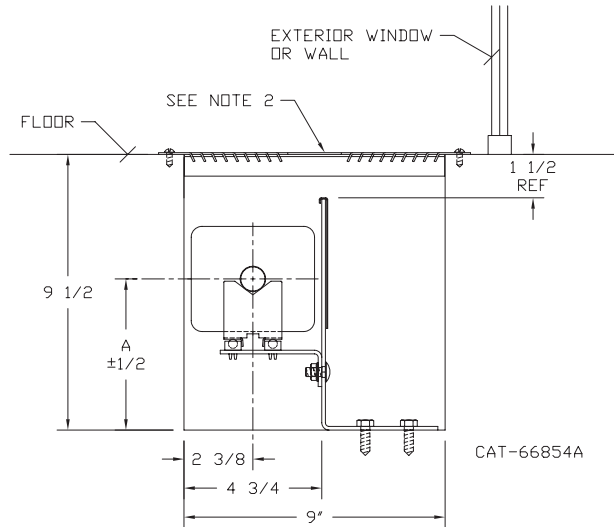
# STYLE "TR" TROUGH

## TR

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A       |
|----------------------|----------------------------|------------------|---------|
| 3/4" COPPER          | 3 5/8 x 4 1/4              | 2                | 5 3/16  |
| 3/4" COPPER          | 4 1/4 x 4 1/4              | 3A               | 5 9/16  |
| 1" COPPER            | 3 5/8 x 4 1/4              | 2                | 5 3/8   |
| 1" COPPER            | 4 1/4 x 4 1/4              | 2                | 5 3/8   |
| 1 1/4" COPPER        | 3 5/8 x 4 1/4              | 2                | 5 1/2   |
| 1 1/4" COPPER        | 4 1/4 x 4 1/4              | 2                | 5 1/2   |
| 1" STEEL             | 4 1/4 x 4 1/4              | 2                | 5 1/2   |
| 1 1/4" STEEL         | 4 1/4 x 4 1/4              | 2                | 5 11/16 |
| 2" STEEL             | 4 1/4 x 4 1/4              | 1                | 5 7/16  |

### NOTES:

1. Trough Liner Optional (Not Shown).
2. Floor Grille is by Other or Consult Factory for Availability.



## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE<br>SIZE | CATALOG<br>DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TROUGH<br>DEPTH<br>AND<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|--------------|------------------------|----------------------------|--------------------|-------------------------------|-----------------------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|              |                        |                            |                    |                               |                                               |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|              |                        |                            |                    |                               |                                               |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|              |                        |                            |                    |                               |                                               | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"         | VC3/4-433              | 3-5/8" x 4-1/4"            | 32                 | .020                          | 9 1/2 x 9                                     | 1120                    | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|              | VC3/4-434              |                            | 40                 |                               | 9 1/2 x 9                                     | 1340                    | 1150                                              | 1050 | 920  | 820  | 710  | 600  | 540  | 440  | 350  |
|              | VC3/4-435              |                            | 50                 |                               | 9 1/2 x 9                                     | 1480                    | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
| 1"           | VC433                  | 3-5/8" x 4-1/4"            | 32                 | .020                          | 9 1/2 x 9                                     | 1170                    | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
|              | VC434                  |                            | 40                 |                               | 9 1/2 x 9                                     | 1300                    | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|              | VC435                  |                            | 50                 |                               | 9 1/2 x 9                                     | 1480                    | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
| 1-1/4"       | VC1433                 | 3-5/8" x 4-1/4"            | 32                 | .020                          | 9 1/2 x 9                                     | 1210                    | 1040                                              | 940  | 830  | 740  | 640  | 540  | 480  | 400  | 310  |
|              | VC1434                 |                            | 40                 |                               | 9 1/2 x 9                                     | 1330                    | 1140                                              | 1040 | 920  | 810  | 700  | 600  | 530  | 440  | 350  |
|              | VC1435                 |                            | 50                 |                               | 9 1/2 x 9                                     | 1480                    | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
| 3/4"         | VC3/4-43               | 4-1/4" SQ.                 | 32                 | .020                          | 9 1/2 x 9                                     | 1240                    | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|              | VC3/4-44               |                            | 40                 |                               | 9 1/2 x 9                                     | 1480                    | 1270                                              | 1150 | 1020 | 900  | 780  | 670  | 590  | 490  | 380  |
|              | VC3/4-45               |                            | 50                 |                               | 9 1/2 x 9                                     | 1530                    | 1320                                              | 1190 | 1060 | 930  | 810  | 690  | 610  | 500  | 400  |
| 1"           | VC43                   | 4-1/4" SQ.                 | 32                 | .020                          | 9 1/2 x 9                                     | 1240                    | 1070                                              | 970  | 860  | 760  | 660  | 560  | 500  | 410  | 320  |
|              | VC44                   |                            | 40                 |                               | 9 1/2 x 9                                     | 1380                    | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|              | VC45                   |                            | 50                 |                               | 9 1/2 x 9                                     | 1550                    | 1330                                              | 1210 | 1070 | 950  | 820  | 700  | 620  | 510  | 400  |
| 1-1/4"       | VC143                  | 4-1/4" SQ.                 | 32                 | .020                          | 9 1/2 x 9                                     | 1300                    | 1120                                              | 1010 | 900  | 790  | 690  | 590  | 520  | 430  | 340  |
|              | VC144                  |                            | 40                 |                               | 9 1/2 x 9                                     | 1540                    | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|              | VC145                  |                            | 50                 |                               | 9 1/2 x 9                                     | 1580                    | 1360                                              | 1230 | 1090 | 960  | 840  | 710  | 630  | 520  | 410  |

- Notes: 1. Ratings are based on 24 sq. in. of free area per linear foot of air inlet and outlet each.  
2. For systems using steam, consult factory.

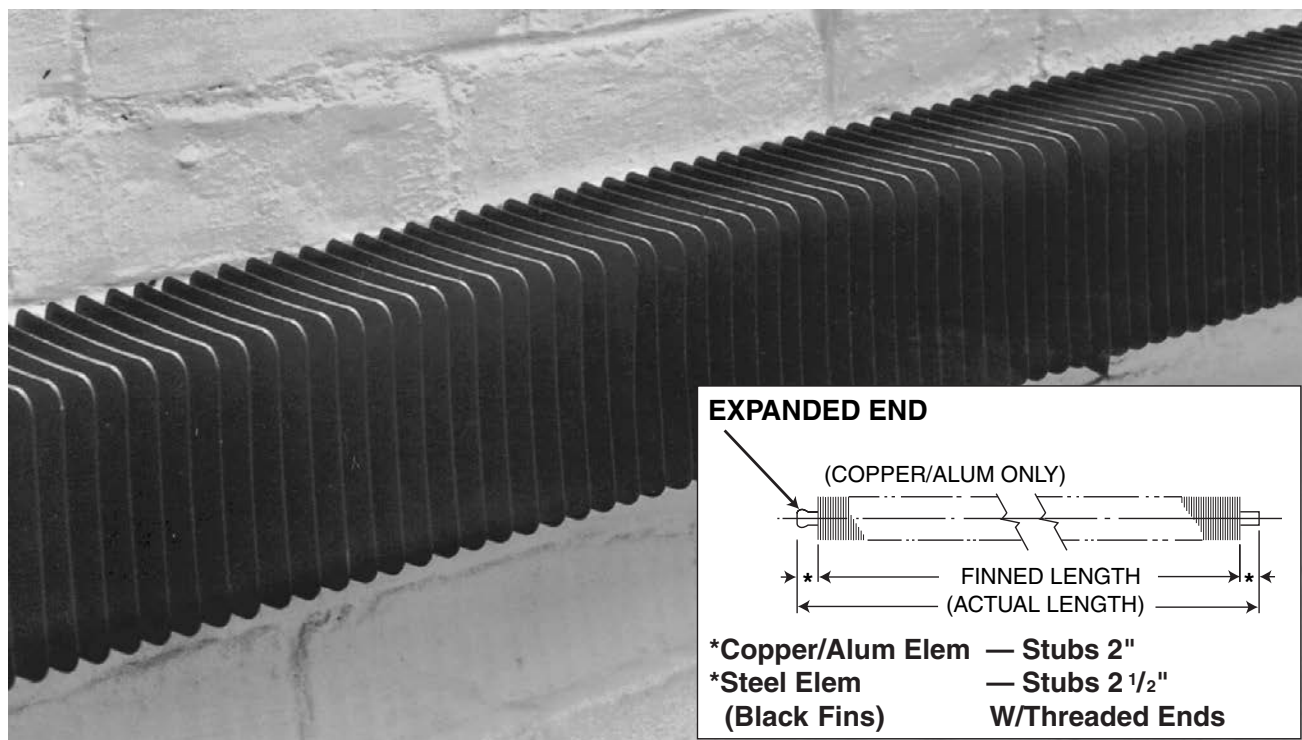
## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE<br>SIZE | CATALOG<br>DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TROUGH<br>DEPTH<br>AND<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|--------------|------------------------|----------------------------|--------------------|-------------------------------|-----------------------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|              |                        |                            |                    |                               |                                               |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|              |                        |                            |                    |                               |                                               |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|              |                        |                            |                    |                               |                                               | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"           | VS43                   | 4-1/4" SQ.                 | 32                 | .032                          | 9 1/2 x 9                                     | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |
|              | VS44                   |                            | 40                 |                               | 9 1/2 x 9                                     | 1380                    | 1190                                              | 1080 | 950  | 840  | 730  | 620  | 550  | 460  | 360  |
|              | VS45                   |                            | 50                 |                               | 9 1/2 x 9                                     | 1460                    | 1260                                              | 1140 | 1010 | 890  | 770  | 660  | 580  | 480  | 380  |
| 1-1/4"       | VS143                  | 4-1/4" SQ.                 | 32                 | .032                          | 9 1/2 x 9                                     | 1130                    | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
|              | VS144                  |                            | 40                 |                               | 9 1/2 x 9                                     | 1370                    | 1180                                              | 1070 | 950  | 840  | 730  | 620  | 550  | 450  | 360  |
|              | VS145                  |                            | 50                 |                               | 9 1/2 x 9                                     | 1430                    | 1230                                              | 1120 | 990  | 870  | 760  | 640  | 570  | 470  | 370  |
| 2"           | VS242                  | 4-1/4" SQ.                 | 25                 | .032                          | 9 1/2 x 9                                     | 1050                    | 900                                               | 820  | 720  | 640  | 560  | 470  | 420  | 350  | 270  |
|              | VS243                  |                            | 32                 |                               | 9 1/2 x 9                                     | 1220                    | 1050                                              | 950  | 840  | 740  | 650  | 550  | 490  | 400  | 320  |

- Notes: 1. Ratings are based on 24 sq. in. of free area per linear foot of air inlet and outlet each.  
2. For systems using steam, consult factory.

# BARE ELEMENTS



## ELEMENT ORDERING INFORMATION

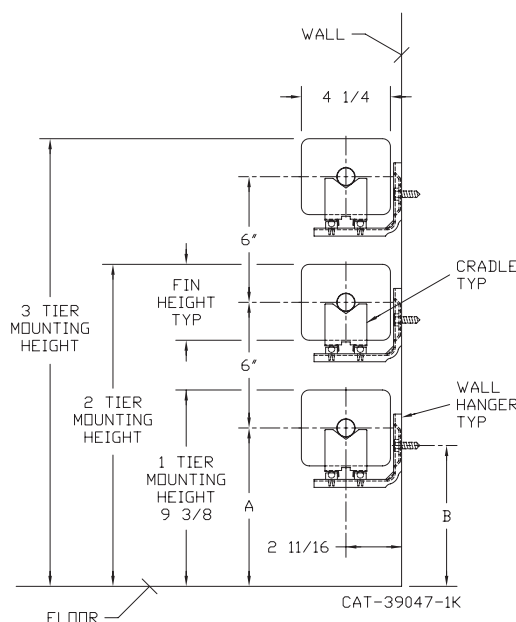
When ordering element specify fin thickness: steel = .024, .032; copper = .020, .011 as shown on Selection Pages.

For standard and special lengths refer to price sheets.

The ratings shown in this catalog are in BTU per hour per linear foot of active fin length. Active fin length is catalog ordering length less 4" on copper/aluminum element and less 5" on steel elements. The water ratings shown are based on a water velocity flow rate of three feet per second as determined by AHRI and applying factors to the steam rating.

### Bare Element "4" Offset

| TUBE SIZE       | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A      | B       |
|-----------------|----------------------------|------------------|--------|---------|
| 3/4<br>COPPER   | 3 5/8 x 4 1/4              | 2                | 7 9/16 | 6 3/4   |
|                 | 4 1/4 x 4 1/4              | 3A               | 7 1/4  | 6'      |
| 1"<br>COPPER    | 3 5/8 x 4 1/4              | 2                | 7 9/16 | 6 9/16  |
|                 | 4 1/4 x 4 1/4              | 2                | 7 1/4  | 6 1/4   |
| 1 1/4<br>COPPER | 3 5/8 x 4 1/4              | 2                | 7 9/16 | 6 7/16  |
|                 | 4 1/4 x 4 1/4              | 2                | 7 1/4  | 6 1/8   |
| 1"<br>STEEL     | 4 1/4 x 4 1/4              | 2                | 7 1/4  | 6 1/8   |
| 1 1/4<br>STEEL  | 4 1/4 x 4 1/4              | 2                | 7 1/4  | 5 15/16 |
| 2"<br>STEEL     | 4 1/4 x 4 1/4              | 1                | 7 1/4  | 6 3/16  |



# BARE ELEMENT STYLE "4"

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR                                 | HOT WATER (AVG.)     |                      |                      |                      |                     |                     |                     |                    |                   |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|---------------------------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|--------------------|-------------------|
|           |                     |                         |              |                         |                             |                           |                                                   | 200°                 | 190°                 | 180°                 | 170°                 | 160°                | 150°                | 140°                | 130°               | 120°              |
|           |                     |                         |              |                         |                             |                           | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |                      |                      |                      |                      |                     |                     |                     |                    |                   |
|           |                     |                         |              |                         | <b>1</b>                    | <b>9-3/8</b>              | <b>1.00</b>                                       | <b>0.86</b>          | <b>0.78</b>          | <b>0.69</b>          | <b>0.61</b>          | <b>0.53</b>         | <b>0.45</b>         | <b>.40</b>          | <b>.33</b>         | <b>.26</b>        |
| 3/4"      | VC3/4-433           | 3-5/8" X 4-1/4"         | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1210<br>2130<br>2880                              | 1040<br>1830<br>2480 | 940<br>1660<br>2250  | 830<br>1470<br>1990  | 740<br>1300<br>1760  | 640<br>1130<br>1530 | 540<br>960<br>1300  | 480<br>850<br>1150  | 400<br>700<br>950  | 310<br>550<br>750 |
| 3/4"      | VC3/4-434           | 3-5/8" X 4-1/4"         | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1450<br>2490<br>3300                              | 1250<br>2140<br>2840 | 1130<br>1940<br>2570 | 1000<br>1720<br>2280 | 880<br>1520<br>2010  | 770<br>1320<br>1750 | 650<br>1120<br>1490 | 580<br>1000<br>1320 | 480<br>820<br>1090 | 380<br>650<br>860 |
| 3/4"      | VC3/4-435           | 3-5/8" X 4-1/4"         | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1600<br>2650<br>3450                              | 1380<br>2280<br>2970 | 1250<br>2070<br>2690 | 1100<br>1830<br>2380 | 980<br>1620<br>2100  | 850<br>1400<br>1830 | 720<br>1190<br>1550 | 640<br>1060<br>1380 | 530<br>870<br>1140 | 420<br>690<br>900 |
| 1"        | VC433               | 3-5/8" X 4-1/4"         | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1260<br>2220<br>3000                              | 1080<br>1910<br>2580 | 980<br>1730<br>2340  | 870<br>1530<br>2070  | 770<br>1350<br>1830  | 670<br>1180<br>1590 | 570<br>1000<br>1350 | 500<br>890<br>1200  | 420<br>730<br>990  | 330<br>580<br>780 |
| 1"        | VC434               | 3-5/8" X 4-1/4"         | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1410<br>2420<br>3200                              | 1210<br>2080<br>2750 | 1100<br>1890<br>2500 | 970<br>1670<br>2210  | 860<br>1480<br>1950  | 750<br>1280<br>1700 | 630<br>1090<br>1440 | 560<br>970<br>1280  | 470<br>800<br>1060 | 370<br>630<br>830 |
| 1"        | VC435               | 3-5/8" X 4-1/4"         | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1600<br>2640<br>3450                              | 1380<br>2270<br>2970 | 1250<br>2060<br>2690 | 1100<br>1820<br>2380 | 980<br>1610<br>2100  | 850<br>1400<br>1830 | 720<br>1190<br>1550 | 640<br>1060<br>1380 | 530<br>870<br>1140 | 420<br>690<br>900 |
| 1-1/4"    | VC1433              | 3-5/8" X 4-1/4"         | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1310<br>2310<br>3130                              | 1130<br>1990<br>2690 | 1020<br>1800<br>2440 | 900<br>1590<br>2160  | 800<br>1410<br>1910  | 690<br>1220<br>1660 | 590<br>1040<br>1410 | 520<br>920<br>1250  | 430<br>760<br>1030 | 340<br>600<br>810 |
| 1-1/4"    | VC1434              | 3-5/8" X 4-1/4"         | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1440<br>2470<br>3260                              | 1240<br>2120<br>2800 | 1120<br>1930<br>2540 | 990<br>1700<br>2250  | 880<br>1510<br>1990  | 760<br>1310<br>1730 | 650<br>1110<br>1470 | 580<br>990<br>1300  | 480<br>820<br>1080 | 370<br>640<br>850 |
| 1-1/4"    | VC1435              | 3-5/8" X 4-1/4"         | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1600<br>2650<br>3460                              | 1380<br>2280<br>2980 | 1250<br>2070<br>2700 | 1100<br>1830<br>2390 | 980<br>1620<br>2110  | 850<br>1400<br>1830 | 720<br>1190<br>1560 | 640<br>1060<br>1380 | 530<br>870<br>1140 | 420<br>690<br>900 |
| 3/4"      | VC3/4 43            | 4-1/4" SQ.              | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1340<br>2340<br>3200                              | 1150<br>2010<br>2750 | 1050<br>1830<br>2500 | 920<br>1610<br>2210  | 820<br>1430<br>1950  | 710<br>1240<br>1700 | 600<br>1050<br>1440 | 540<br>940<br>1280  | 440<br>770<br>1060 | 350<br>610<br>830 |
| 3/4"      | VC3/4 44            | 4-1/4" SQ.              | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1600<br>2540<br>3330                              | 1380<br>2180<br>2860 | 1250<br>1980<br>2600 | 1100<br>1750<br>2300 | 980<br>1550<br>2030  | 850<br>1350<br>1760 | 720<br>1140<br>1500 | 640<br>1020<br>1330 | 530<br>840<br>1100 | 420<br>660<br>870 |
| 3/4"      | VC3/4 45            | 4-1/4" SQ.              | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1650<br>2620<br>3430                              | 1420<br>2250<br>2950 | 1290<br>2040<br>2680 | 1140<br>1810<br>2370 | 1010<br>1600<br>2090 | 870<br>1390<br>1820 | 740<br>1180<br>1540 | 660<br>1050<br>1370 | 540<br>860<br>1130 | 430<br>680<br>890 |
| 1"        | VC43                | 4-1/4" SQ.              | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1340<br>2370<br>3230                              | 1150<br>2040<br>2780 | 1050<br>1850<br>2520 | 920<br>1640<br>2230  | 820<br>1450<br>1970  | 710<br>1260<br>1710 | 600<br>1070<br>1450 | 540<br>950<br>1290  | 440<br>780<br>1070 | 350<br>620<br>840 |
| 1"        | VC44                | 4-1/4" SQ.              | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1490<br>2490<br>3320                              | 1280<br>2140<br>2860 | 1160<br>1940<br>2590 | 1030<br>1720<br>2290 | 910<br>1520<br>2030  | 790<br>1320<br>1760 | 670<br>1120<br>1490 | 600<br>1000<br>1330 | 490<br>820<br>1100 | 390<br>650<br>860 |
| 1"        | VC45                | 4-1/4" SQ.              | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1680<br>2650<br>3460                              | 1440<br>2280<br>2980 | 1310<br>2070<br>2700 | 1160<br>1830<br>2390 | 1020<br>1620<br>2110 | 890<br>1400<br>1830 | 760<br>1190<br>1560 | 670<br>1060<br>1380 | 550<br>870<br>1140 | 440<br>690<br>900 |
| 1-1/4"    | VC143               | 4-1/4" SQ.              | 32           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1400<br>2470<br>3360                              | 1200<br>2120<br>2890 | 1090<br>1930<br>2620 | 970<br>1700<br>2320  | 850<br>1510<br>2050  | 740<br>1310<br>1780 | 630<br>1110<br>1510 | 560<br>990<br>1340  | 460<br>820<br>1110 | 360<br>640<br>870 |
| 1-1/4"    | VC144               | 4-1/4" SQ.              | 40           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1660<br>2680<br>3490                              | 1430<br>2300<br>3000 | 1290<br>2090<br>2720 | 1150<br>1850<br>2410 | 1010<br>1630<br>2130 | 880<br>1420<br>1850 | 750<br>1210<br>1570 | 660<br>1070<br>1400 | 550<br>880<br>1150 | 430<br>700<br>910 |
| 1-1/4"    | VC145               | 4-1/4" SQ.              | 50           | .020                    | 2-6 CL<br>3-6 CL            | 15-3/8<br>21-3/8          | 1710<br>2460<br>3200                              | 1470<br>2120<br>2750 | 1330<br>1920<br>2500 | 1180<br>1700<br>2210 | 1040<br>1500<br>1950 | 910<br>1300<br>1700 | 770<br>1110<br>1440 | 680<br>980<br>1280  | 560<br>810<br>1060 | 440<br>640<br>830 |

Note: Copper tube furnished flared one end standard.

# BARE ELEMENT STYLE "4"

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

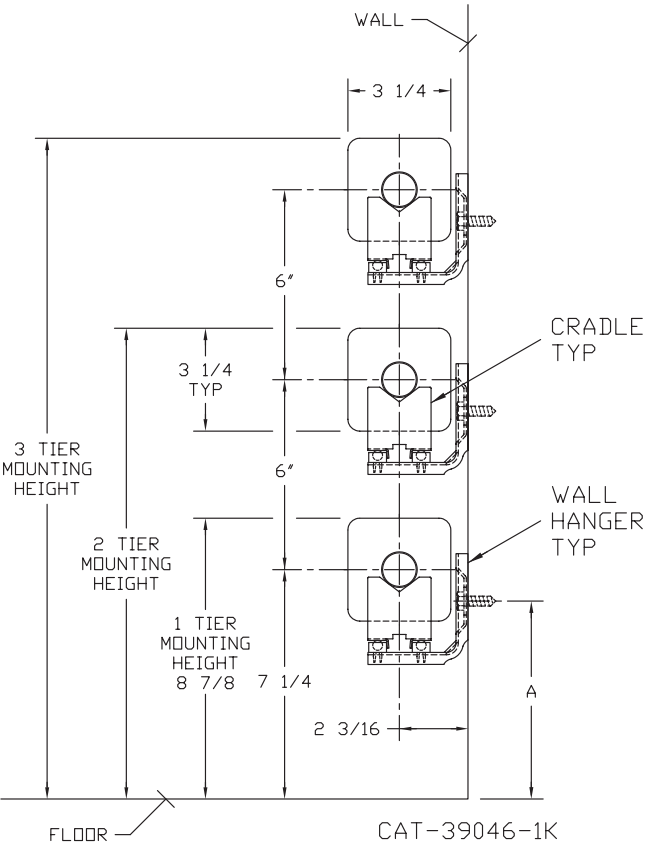
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |                      |                      |                     |                     |                     |                     |                    |                   |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------|
|           |                     |                            |                    |                               |                                      |                                 |                         | 200°                                              | 190°                 | 180°                 | 170°                | 160°                | 150°                | 140°                | 130°               | 120°              |
|           |                     |                            |                    |                               |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |                      |                      |                     |                     |                     |                     |                    |                   |
|           |                     |                            |                    |                               |                                      |                                 | 1.00                    | 0.86                                              | 0.78                 | 0.69                 | 0.61                | 0.53                | 0.45                | .40                 | .33                | .26               |
| 1"        | VS43                | 4-1/4" SQ.                 | 32                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1320<br>2320<br>3050    | 1140<br>2000<br>2620                              | 1030<br>1810<br>2380 | 910<br>1600<br>2100  | 810<br>1420<br>1860 | 700<br>1230<br>1620 | 590<br>1040<br>1370 | 530<br>930<br>1220  | 440<br>770<br>1010 | 340<br>600<br>790 |
| 1"        | VS44                | 4-1/4" SQ.                 | 40                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1490<br>2450<br>3180    | 1280<br>2110<br>2730                              | 1160<br>1910<br>2480 | 1030<br>1690<br>2190 | 910<br>1490<br>1940 | 790<br>1300<br>1690 | 670<br>1100<br>1430 | 600<br>980<br>1270  | 490<br>810<br>1050 | 390<br>640<br>830 |
| 1"        | VS45                | 4-1/4" SQ.                 | 50                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1580<br>2510<br>3230    | 1360<br>2160<br>2780                              | 1230<br>1960<br>2520 | 1090<br>1730<br>2230 | 960<br>1530<br>1970 | 840<br>1330<br>1710 | 710<br>1130<br>1450 | 630<br>1000<br>1290 | 520<br>830<br>1070 | 410<br>650<br>840 |
| 1-1/4"    | VS143               | 4-1/4" SQ.                 | 32                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1220<br>2300<br>3030    | 1050<br>1980<br>2610                              | 950<br>1790<br>2360  | 840<br>1590<br>2090  | 740<br>1400<br>1850 | 650<br>1220<br>1610 | 550<br>1040<br>1360 | 490<br>920<br>1210  | 400<br>760<br>1000 | 320<br>600<br>790 |
| 1-1/4"    | VS144               | 4-1/4" SQ.                 | 40                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1480<br>2440<br>3170    | 1270<br>2100<br>2730                              | 1150<br>1900<br>2470 | 1020<br>1680<br>2190 | 900<br>1490<br>1930 | 780<br>1290<br>1680 | 670<br>1100<br>1430 | 590<br>980<br>1270  | 490<br>810<br>1050 | 380<br>630<br>820 |
| 1-1/4"    | VS145               | 4-1/4" SQ.                 | 50                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1550<br>2460<br>3200    | 1330<br>2120<br>2750                              | 1210<br>1920<br>2500 | 1070<br>1700<br>2210 | 950<br>1500<br>1950 | 820<br>1300<br>1700 | 700<br>1110<br>1440 | 620<br>980<br>1280  | 510<br>810<br>1060 | 400<br>640<br>830 |
| 2"        | VS242               | 4-1/4" SQ.                 | 25                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1140<br>2030<br>2700    | 980<br>1750<br>2320                               | 890<br>1580<br>2110  | 790<br>1400<br>1860  | 700<br>1240<br>1650 | 600<br>1080<br>1430 | 510<br>910<br>1220  | 460<br>810<br>1080  | 380<br>670<br>890  | 300<br>530<br>700 |
| 2"        | VS243               | 4-1/4" SQ.                 | 32                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1320<br>2230<br>2910    | 1140<br>1920<br>2500                              | 1030<br>1740<br>2270 | 910<br>1540<br>2010  | 810<br>1360<br>1780 | 700<br>1180<br>1540 | 590<br>1000<br>1310 | 530<br>890<br>1160  | 440<br>740<br>960  | 340<br>580<br>760 |
| 2"        | VS244               | 4-1/4" SQ.                 | 40                 | .032                          | 1<br>2-6 CL<br>3-6 CL                | 9-3/8<br>15-3/8<br>21-3/8       | 1490<br>2360<br>3040    | 1280<br>2030<br>2610                              | 1160<br>1840<br>2370 | 1030<br>1630<br>2100 | 910<br>1440<br>1850 | 790<br>1250<br>1610 | 670<br>1060<br>1370 | 600<br>940<br>1220  | 490<br>780<br>1000 | 390<br>610<br>790 |

Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# BARE ELEMENT STYLE "3"

Bare Element "3" Offset

| ELEMENT<br>TUBE SIZE | FIN SIZE<br>HEIGHT × WIDTH | CRADLE<br>NUMBER | A     |
|----------------------|----------------------------|------------------|-------|
| 3/4" COPPER          | 3 1/4 × 3 1/4              | 2                | 6 3/8 |
| 1" COPPER            | 3 1/4 × 3 1/4              | 2                | 6 1/4 |
| 1 1/4" COPPER        | 3 1/4 × 3 1/4              | 1                | 6 3/4 |
| 1" STEEL             | 3 1/4 × 3 1/4              | 2                | 6 1/8 |
| 1 1/4" STEEL         | 3 1/4 × 3 1/4              | 1                | 6 5/8 |



# BARE ELEMENT STYLE "3"

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR    | HOT WATER (AVG.)                                  |                     |                     |                     |                     |                    |                    |                   |                   |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|----------------------|---------------------------------------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|-------------------|-------------------|
|           |                     |                         |              |                         |                             |                           |                      | 200°                                              | 190°                | 180°                | 170°                | 160°                | 150°               | 140°               | 130°              | 120°              |
|           |                     |                         |              |                         |                             |                           |                      | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |                     |                     |                     |                     |                    |                    |                   |                   |
|           |                     |                         |              |                         |                             |                           | 1.00                 | 0.86                                              | 0.78                | 0.69                | 0.61                | 0.53                | 0.45               | .40                | .33               | .26               |
| 3/4"      | VC3/4-33            | 3-1/4" SQ.              | 32           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 970<br>1720<br>2410  | 830<br>1480<br>2070                               | 760<br>1340<br>1880 | 670<br>1190<br>1660 | 590<br>1050<br>1470 | 510<br>910<br>1280  | 440<br>770<br>1080 | 390<br>690<br>960  | 320<br>570<br>800 | 250<br>450<br>630 |
| 3/4"      | VC3/4-34            | 3-1/4" SQ.              | 40           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1140<br>1880<br>2570 | 980<br>1620<br>2210                               | 890<br>1470<br>2000 | 790<br>1300<br>1770 | 700<br>1150<br>1570 | 600<br>1000<br>1360 | 510<br>850<br>1160 | 460<br>750<br>1030 | 380<br>620<br>850 | 300<br>490<br>670 |
| 3/4"      | VC3/4-35            | 3-1/4" SQ.              | 50           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1260<br>2010<br>2690 | 1080<br>1730<br>2310                              | 980<br>1570<br>2100 | 870<br>1390<br>1860 | 770<br>1230<br>1640 | 670<br>1070<br>1430 | 570<br>900<br>1210 | 500<br>800<br>1080 | 420<br>660<br>890 | 330<br>520<br>700 |
| 1"        | VC33                | 3-1/4" SQ.              | 32           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 970<br>1720<br>2370  | 830<br>1480<br>2040                               | 760<br>1340<br>1850 | 670<br>1190<br>1640 | 590<br>1050<br>1450 | 510<br>910<br>1260  | 440<br>770<br>1070 | 390<br>690<br>950  | 320<br>570<br>780 | 250<br>450<br>620 |
| 1"        | VC34                | 3-1/4" SQ.              | 40           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1080<br>1850<br>2490 | 930<br>1590<br>2140                               | 840<br>1440<br>1940 | 750<br>1280<br>1720 | 660<br>1130<br>1520 | 570<br>980<br>1320  | 490<br>830<br>1120 | 430<br>740<br>1000 | 360<br>610<br>820 | 280<br>480<br>650 |
| 1"        | VC35                | 3-1/4" SQ.              | 50           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1210<br>1940<br>2600 | 1040<br>1670<br>2240                              | 940<br>1510<br>2030 | 830<br>1340<br>1790 | 740<br>1180<br>1590 | 640<br>1030<br>1380 | 540<br>870<br>1170 | 480<br>780<br>1040 | 400<br>640<br>860 | 310<br>500<br>680 |
| 1-1/4"    | VC133               | 3-1/4" SQ.              | 32           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 970<br>1680<br>2360  | 830<br>1440<br>2030                               | 760<br>1310<br>1840 | 670<br>1160<br>1630 | 590<br>1020<br>1440 | 510<br>890<br>1250  | 440<br>760<br>1060 | 390<br>670<br>940  | 320<br>550<br>780 | 250<br>440<br>610 |
| 1-1/4"    | VC134               | 3-1/4" SQ.              | 40           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1060<br>1840<br>2450 | 910<br>1580<br>2110                               | 830<br>1440<br>1910 | 730<br>1270<br>1690 | 650<br>1120<br>1490 | 560<br>980<br>1300  | 480<br>830<br>1100 | 420<br>740<br>980  | 350<br>610<br>810 | 280<br>480<br>640 |
| 1-1/4"    | VC135               | 3-1/4" SQ.              | 50           | .020                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1170<br>1900<br>2550 | 1010<br>1630<br>2190                              | 910<br>1480<br>1990 | 810<br>1310<br>1760 | 710<br>1160<br>1560 | 620<br>1010<br>1350 | 530<br>860<br>1150 | 470<br>760<br>1020 | 390<br>630<br>840 | 300<br>490<br>660 |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

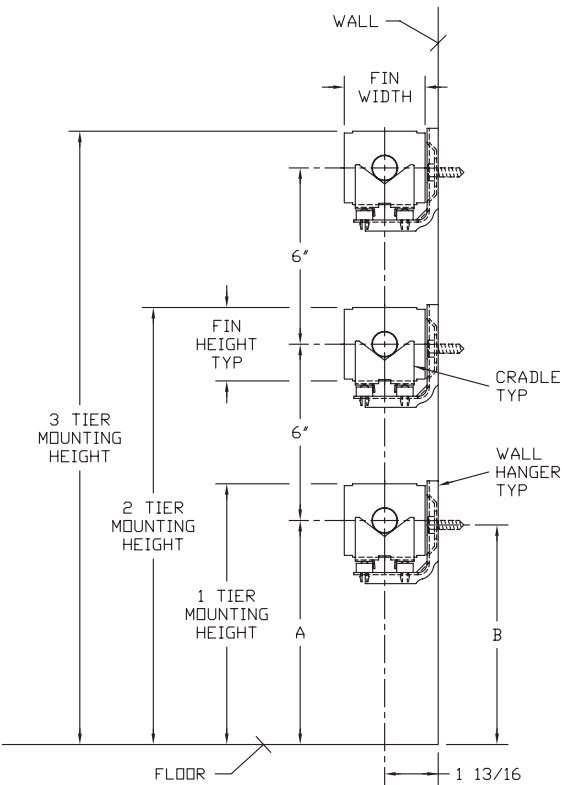
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR    | HOT WATER (AVG.)                                  |                     |                     |                     |                    |                    |                   |                   |                   |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|----------------------|---------------------------------------------------|---------------------|---------------------|---------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
|           |                     |                         |              |                         |                             |                           |                      | 200°                                              | 190°                | 180°                | 170°                | 160°               | 150°               | 140°              | 130°              | 120°              |
|           |                     |                         |              |                         |                             |                           |                      | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |                     |                     |                     |                    |                    |                   |                   |                   |
|           |                     |                         |              |                         |                             |                           | 1.00                 | 0.86                                              | 0.78                | 0.69                | 0.61                | 0.53               | 0.45               | .40               | .33               | .26               |
| 1"        | VS33                | 3-1/4" SQ.              | 32           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 910<br>1580<br>2200  | 780<br>1360<br>1890                               | 710<br>1230<br>1720 | 630<br>1090<br>1520 | 560<br>960<br>1340  | 480<br>840<br>1170 | 410<br>710<br>990  | 360<br>630<br>880 | 300<br>520<br>730 | 240<br>410<br>570 |
| 1"        | VS34                | 3-1/4" SQ.              | 40           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 990<br>1700<br>2350  | 850<br>1460<br>2020                               | 770<br>1330<br>1830 | 680<br>1170<br>1620 | 600<br>1040<br>1430 | 520<br>900<br>1250 | 450<br>770<br>1060 | 400<br>680<br>940 | 330<br>560<br>780 | 260<br>440<br>610 |
| 1"        | VS35                | 3-1/4" SQ.              | 50           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1060<br>1790<br>2450 | 910<br>1540<br>2110                               | 830<br>1400<br>1910 | 730<br>1240<br>1690 | 650<br>1090<br>1490 | 560<br>950<br>1300 | 480<br>810<br>1100 | 420<br>720<br>980 | 350<br>590<br>810 | 280<br>470<br>640 |
| 1-1/4"    | VS133               | 3-1/4" SQ.              | 32           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 900<br>1620<br>2240  | 770<br>1390<br>1930                               | 700<br>1260<br>1750 | 620<br>1120<br>1550 | 550<br>990<br>1370  | 480<br>860<br>1190 | 410<br>730<br>1010 | 360<br>650<br>900 | 300<br>530<br>740 | 230<br>420<br>580 |
| 1-1/4"    | VS134               | 3-1/4" SQ.              | 40           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1000<br>1700<br>2250 | 860<br>1460<br>1940                               | 780<br>1330<br>1760 | 690<br>1170<br>1550 | 610<br>1040<br>1370 | 530<br>900<br>1190 | 450<br>770<br>1010 | 400<br>680<br>900 | 330<br>560<br>740 | 260<br>440<br>590 |
| 1-1/4"    | VS135               | 3-1/4" SQ.              | 50           | .032                    | 1<br>2-6 CL<br>3-6 CL       | 8-7/8<br>14-7/8<br>20-7/8 | 1030<br>1750<br>2280 | 890<br>1510<br>1960                               | 800<br>1370<br>1780 | 710<br>1210<br>1570 | 630<br>1070<br>1390 | 550<br>930<br>1210 | 460<br>790<br>1030 | 410<br>700<br>910 | 340<br>580<br>750 | 270<br>460<br>590 |

Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# BARE ELEMENT STYLE "2"

Bare Element "2" Offset

| TUBE SIZE       | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A     | B       | 1 TIER<br>MOUNTING<br>HEIGHT |
|-----------------|----------------------------|------------------|-------|---------|------------------------------|
| 3/4<br>COPPER   | 2 1/2 x 2 1/4              | 1                | 7 5/8 | 7 1/2   | 8 7/8                        |
|                 | 2 1/2 x 2 3/4              | 1                |       |         |                              |
|                 | 3 3/4 x 2 3/4              | 2                |       | 6 3/16  |                              |
| 1"<br>COPPER    | 2 1/2 x 2 3/4              | 1                | 7 5/8 | 7 5/16  | 10"                          |
|                 | 3 3/4 x 2 3/4              | 2                | 7"    | 6"      |                              |
|                 | 5" x 2 3/4                 | 3A               | 7 1/2 | 6 1/8   |                              |
| 1 1/4<br>COPPER | 3 3/4 x 2 3/4              | 2                | 7"    | 5 7/8   | 8 7/8                        |
|                 | 5" x 2 3/4                 | 3A               | 7 1/2 | 5 15/16 | 10"                          |
| 1"<br>STEEL     | 3 3/4 x 2 3/4              | 2                | 7"    | 5 7/8   | 8 7/8                        |
|                 | 5" x 2 3/4                 | 3A               | 7 1/2 | 6"      | 10"                          |
| 1 1/4<br>STEEL  | 3 3/4 x 2 3/4              | 2                | 7"    | 5 11/16 | 8 7/8                        |
|                 | 5" x 2 3/4                 | 3A               | 7 1/2 | 5 3/4   | 10"                          |

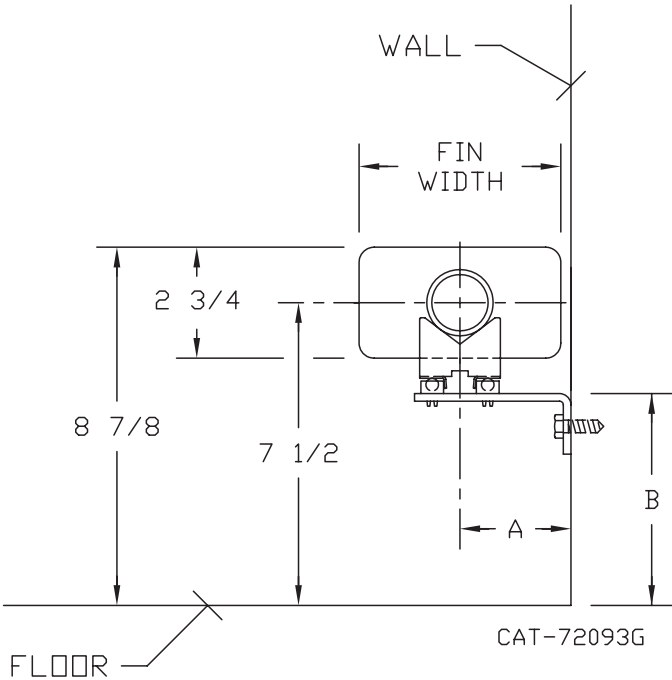


CAT-69647-1B

# BARE ELEMENT STYLE "SP"

Bare Element "SP" Offset

| TUBE SIZE       | FIN SIZE<br>HEIGHT x WIDTH | CRADLE<br>NUMBER | A     | B      |
|-----------------|----------------------------|------------------|-------|--------|
| 3/4<br>COPPER   | 2 3/4 x 3 3/4              | 2                | 2 1/8 | 5 1/16 |
| 1"<br>COPPER    | 2 3/4 x 3 3/4              | 1                | 2 1/8 | 5 9/16 |
|                 | 2 3/4 x 5"                 | 1                | 2 3/4 |        |
| 1 1/4<br>COPPER | 2 3/4 x 3 3/4              | 1                | 2 1/8 | 5 7/16 |
|                 | 2 3/4 x 5"                 | 1                | 2 3/4 |        |
| 1"<br>STEEL     | 2 3/4 x 3 3/4              | 1                | 2 1/8 | 5 7/16 |
|                 | 2 3/4 x 5"                 | 1                | 2 3/4 |        |
| 1 1/4<br>STEEL  | 2 3/4 x 5"                 | 1                | 2 3/4 | 5 1/4  |



CAT-72093G

# BARE ELEMENT STYLE "2"

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER FT. | FIN THICKNESS<br>IN INCHES | TIERS AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|-----------------|----------------------------|-----------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                 |                            |                                   |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                 |                            |                                   |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                 |                            |                                   |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 3/4"      | VR01                | 2-1/2" x 2-1/4"            | 50              | .011                       | 1                                 | 8-7/8                           | 800                     | 690                                               | 620  | 550  | 490  | 420  | 360  | 320  | 260  | 210  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1370                    | 1180                                              | 1070 | 950  | 840  | 730  | 620  | 550  | 450  | 360  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 1870                    | 1610                                              | 1460 | 1290 | 1140 | 990  | 840  | 750  | 620  | 490  |
| 3/4"      | VR02                | 2-1/2" x 2-3/4"            | 60              | .010                       | 1                                 | 8-7/8                           | 950                     | 820                                               | 740  | 660  | 580  | 500  | 430  | 380  | 310  | 250  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 2240                    | 1930                                              | 1750 | 1550 | 1370 | 1190 | 1010 | 900  | 740  | 580  |
| 1"        | VR03                | 2-1/2" x 2-3/4"            | 55              | .011                       | 1                                 | 8-7/8                           | 930                     | 800                                               | 730  | 640  | 570  | 490  | 420  | 370  | 310  | 240  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1610                    | 1380                                              | 1260 | 1110 | 980  | 850  | 720  | 640  | 530  | 420  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 2210                    | 1900                                              | 1720 | 1520 | 1350 | 1170 | 990  | 880  | 730  | 570  |
| 3/4"      | VR04                | 3-3/4" x 2-3/4"            | 50              | .014                       | 1                                 | 8-7/8                           | 1130                    | 970                                               | 880  | 780  | 690  | 600  | 510  | 450  | 370  | 290  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1930                    | 1660                                              | 1510 | 1330 | 1180 | 1020 | 870  | 770  | 640  | 500  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 2650                    | 2280                                              | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870  | 690  |
| 1"        | VR05                | 3-3/4" x 2-3/4"            | 50              | .014                       | 1                                 | 8-7/8                           | 1120                    | 960                                               | 870  | 770  | 680  | 590  | 500  | 450  | 370  | 290  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1910                    | 1640                                              | 1490 | 1320 | 1170 | 1010 | 860  | 760  | 630  | 500  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 2630                    | 2260                                              | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870  | 680  |
| 1"        | VR07                | 5" x 2-3/4"                | 50              | .020                       | 1                                 | 10                              | 1260                    | 1080                                              | 980  | 870  | 770  | 670  | 570  | 500  | 420  | 330  |
|           |                     |                            |                 |                            | 2-6CL                             | 16                              | 2100                    | 1810                                              | 1640 | 1450 | 1280 | 1110 | 950  | 840  | 690  | 550  |
|           |                     |                            |                 |                            | 3-6CL                             | 22                              | 2870                    | 2470                                              | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950  | 750  |
| 1-1/4"    | VR08                | 3-3/4" x 2-3/4"            | 50              | .020                       | 1                                 | 8-7/8                           | 1070                    | 920                                               | 830  | 740  | 650  | 570  | 480  | 430  | 350  | 280  |
|           |                     |                            |                 |                            | 2-6CL                             | 14-7/8                          | 1830                    | 1570                                              | 1430 | 1260 | 1120 | 970  | 820  | 730  | 600  | 480  |
|           |                     |                            |                 |                            | 3-6CL                             | 20-7/8                          | 2560                    | 2200                                              | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840  | 670  |
| 1-1/4"    | VR10                | 5" x 2-3/4"                | 50              | .020                       | 1                                 | 10                              | 1230                    | 1060                                              | 960  | 850  | 750  | 650  | 550  | 490  | 410  | 320  |
|           |                     |                            |                 |                            | 2-6CL                             | 16                              | 2070                    | 1780                                              | 1610 | 1430 | 1260 | 1100 | 930  | 830  | 680  | 540  |
|           |                     |                            |                 |                            | 3-6CL                             | 22                              | 2850                    | 2450                                              | 2220 | 1970 | 1740 | 1510 | 1280 | 1140 | 940  | 740  |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|           |                     |                            |                    |                               |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|           |                     |                            |                    |                               |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|           |                     |                            |                    |                               |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"        | VR11                | 3-3/4" x 2-3/4"            | 40                 | .024                          | 1                                    | 8-7/8                           | 880                     | 760                                               | 690  | 610  | 540  | 470  | 400  | 350  | 290  | 230  |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 1540                    | 1320                                              | 1200 | 1060 | 940  | 820  | 690  | 620  | 510  | 400  |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 2150                    | 1850                                              | 1680 | 1480 | 1310 | 1140 | 970  | 860  | 710  | 560  |
| 1"        | VR15                | 5" x 2-3/4"                | 50                 | .024                          | 1                                    | 10                              | 940                     | 810                                               | 730  | 650  | 570  | 500  | 420  | 380  | 310  | 240  |
|           |                     |                            |                    |                               | 2-6CL                                | 16                              | 1630                    | 1400                                              | 1270 | 1120 | 990  | 860  | 730  | 650  | 540  | 420  |
|           |                     |                            |                    |                               | 3-6CL                                | 22                              | 2260                    | 1940                                              | 1760 | 1560 | 1380 | 1200 | 1020 | 900  | 750  | 590  |
| 1-1/4"    | VR16                | 5" x 2-3/4"                | 50                 | .024                          | 1                                    | 10                              | 960                     | 830                                               | 750  | 660  | 590  | 510  | 430  | 380  | 320  | 250  |
|           |                     |                            |                    |                               | 2-6CL                                | 16                              | 1650                    | 1420                                              | 1290 | 1140 | 1010 | 870  | 740  | 660  | 540  | 430  |
|           |                     |                            |                    |                               | 3-6CL                                | 22                              | 2280                    | 1960                                              | 1780 | 1570 | 1390 | 1210 | 1030 | 910  | 750  | 590  |

- Notes: 1) Steel fins furnished as .032 thick, painted black.  
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
3) The ends can be provided chamfered for field welded fittings when specified.

# BARE ELEMENT STYLE "SP"

## COPPER/ALUMINUM ELEMENTS

ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |             |             |             |             |             |            |            |            |
|-----------|---------------------|----------------------------|--------------------|-------------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|
|           |                     |                            |                    |                               |                                      |                                 |                         | 200°                                              | 190°        | 180°        | 170°        | 160°        | 150°        | 140°       | 130°       | 120°       |
|           |                     |                            |                    |                               |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |             |             |             |             |             |            |            |            |
|           |                     |                            |                    |                               | <b>1</b>                             | <b>8-7/8</b>                    | <b>1.00</b>             | <b>0.86</b>                                       | <b>0.78</b> | <b>0.69</b> | <b>0.61</b> | <b>0.53</b> | <b>0.45</b> | <b>.40</b> | <b>.33</b> | <b>.26</b> |
| 3/4"      | VR04R               | 2-3/4" x 3-3/4"            | 50                 | .014                          | 1                                    | 8-7/8                           | 1280                    | 1100                                              | 1000        | 880         | 780         | 680         | 580         | 510        | 420        | 330        |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2190                    | 1880                                              | 1710        | 1510        | 1340        | 1160        | 990         | 880        | 720        | 570        |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 3000                    | 2580                                              | 2340        | 2070        | 1830        | 1590        | 1350        | 1200       | 990        | 780        |
| 1"        | VR05R               | 2-3/4" x 3-3/4"            | 50                 | .014                          | 1                                    | 8-7/8                           | 1270                    | 1090                                              | 990         | 880         | 770         | 670         | 570         | 510        | 420        | 330        |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2180                    | 1870                                              | 1700        | 1500        | 1330        | 1160        | 980         | 870        | 720        | 570        |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 2980                    | 2560                                              | 2320        | 2060        | 1820        | 1580        | 1340        | 1190       | 980        | 770        |
| 1"        | VR07R               | 2-3/4" x 5"                | 50                 | .020                          | 1                                    | 8-7/8                           | 1610                    | 1380                                              | 1260        | 1110        | 980         | 850         | 720         | 640        | 530        | 420        |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2510                    | 2160                                              | 1960        | 1730        | 1530        | 1330        | 1130        | 1000       | 830        | 650        |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 3310                    | 2850                                              | 2580        | 2280        | 2020        | 1750        | 1490        | 1320       | 1090       | 860        |
| 1-1/4"    | VR08R               | 2-3/4" x 3-3/4"            | 50                 | .020                          | 1                                    | 8-7/8                           | 1250                    | 1080                                              | 980         | 860         | 760         | 660         | 560         | 500        | 410        | 330        |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 1980                    | 1700                                              | 1540        | 1370        | 1210        | 1050        | 890         | 790        | 650        | 510        |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 2620                    | 2250                                              | 2040        | 1810        | 1600        | 1390        | 1180        | 1050       | 860        | 680        |
| 1-1/4"    | VR10R               | 2-3/4" x 5"                | 50                 | .020                          | 1                                    | 8-7/8                           | 1600                    | 1380                                              | 1250        | 1100        | 980         | 850         | 720         | 640        | 530        | 420        |
|           |                     |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2530                    | 2180                                              | 1970        | 1750        | 1540        | 1340        | 1140        | 1010       | 830        | 660        |
|           |                     |                            |                    |                               | 3-6CL                                | 20-7/8                          | 3310                    | 2850                                              | 2580        | 2280        | 2020        | 1750        | 1490        | 1320       | 1090       | 860        |

Note: Copper tube furnished flared one end standard.

## STEEL ELEMENTS

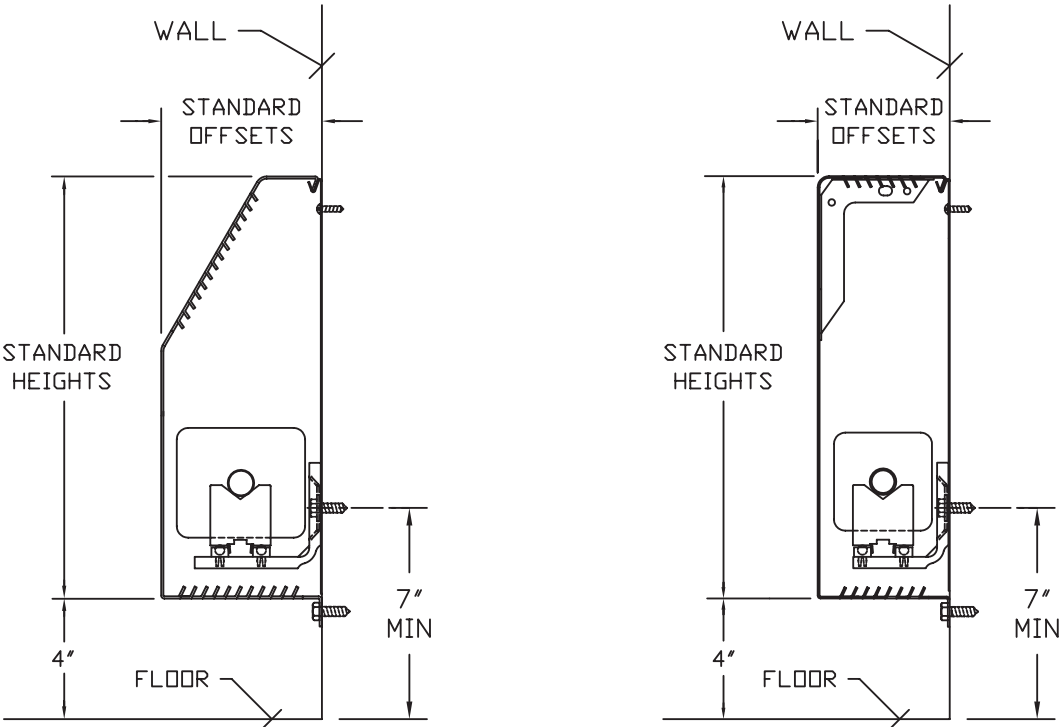
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE<br>SIZE | CATALOG<br>DESIGNATION | FIN SIZE<br>HEIGHT X WIDTH | FINS<br>PER<br>FT. | FIN<br>THICKNESS<br>IN INCHES | TIERS<br>AND<br>CENTERS<br>IN INCHES | MOUNTING<br>HEIGHT<br>IN INCHES | STEAM<br>215°<br>FACTOR | HOT WATER (AVG.)                                  |      |      |      |      |      |      |      |      |
|--------------|------------------------|----------------------------|--------------------|-------------------------------|--------------------------------------|---------------------------------|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|
|              |                        |                            |                    |                               |                                      |                                 |                         | 200°                                              | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
|              |                        |                            |                    |                               |                                      |                                 |                         | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES |      |      |      |      |      |      |      |      |
|              |                        |                            |                    |                               |                                      |                                 | 1.00                    | 0.86                                              | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40  | .33  | .26  |
| 1"           | VR15R                  | 2-3/4" x 5"                | 50                 | .024                          | 1                                    | 8-7/8                           | 1140                    | 980                                               | 890  | 790  | 700  | 600  | 510  | 460  | 380  | 300  |
|              |                        |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2010                    | 1730                                              | 1570 | 1390 | 1230 | 1070 | 900  | 800  | 660  | 520  |
|              |                        |                            |                    |                               | 3-6CL                                | 20-7/8                          | 2810                    | 2420                                              | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930  | 730  |
| 1-1/4"       | VR16R                  | 2-3/4" x 5"                | 50                 | .024                          | 1                                    | 8-7/8                           | 1170                    | 1010                                              | 910  | 810  | 710  | 620  | 530  | 470  | 390  | 300  |
|              |                        |                            |                    |                               | 2-6CL                                | 14-7/8                          | 2040                    | 1750                                              | 1590 | 1410 | 1240 | 1080 | 920  | 820  | 670  | 530  |
|              |                        |                            |                    |                               | 3-6CL                                | 20-7/8                          | 2830                    | 2430                                              | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930  | 740  |

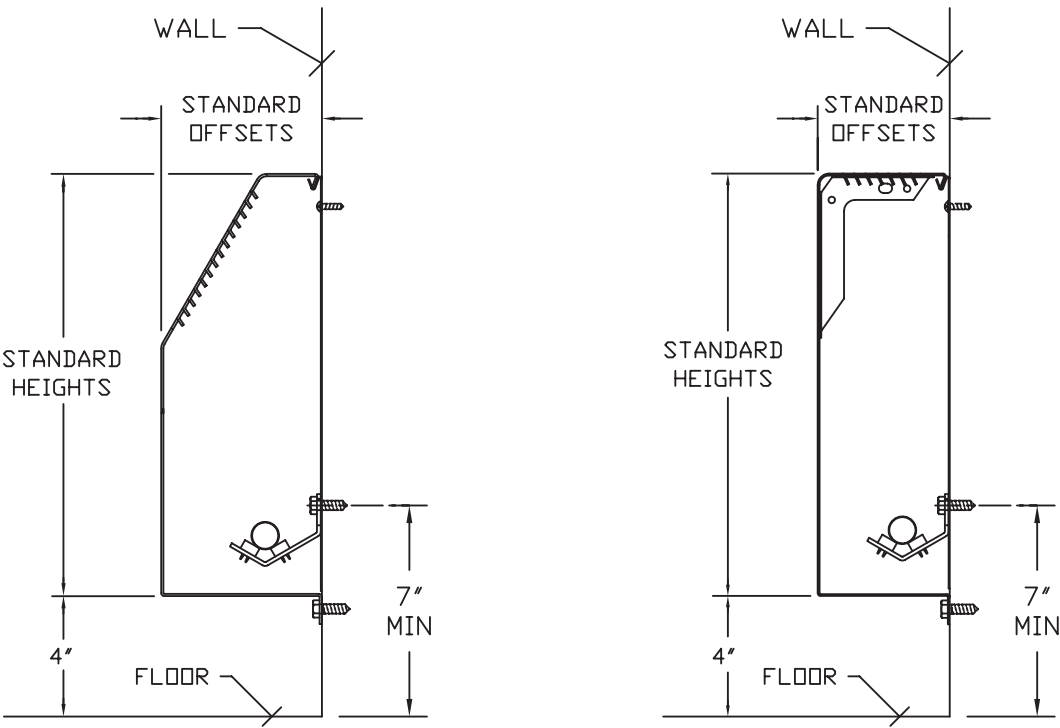
- Notes: 1) Steel fins furnished as .032 thick, painted black.  
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.  
 3) The ends can be provided chamfered for field welded fittings when specified.

# ENCLOSURE ALTERNATIVES

## DRAFT BARRIER, RETURN TO WALL AND LOUVERED INLET STYLES



RETURN TO WALL, LOUVERED INLET  
RWLI

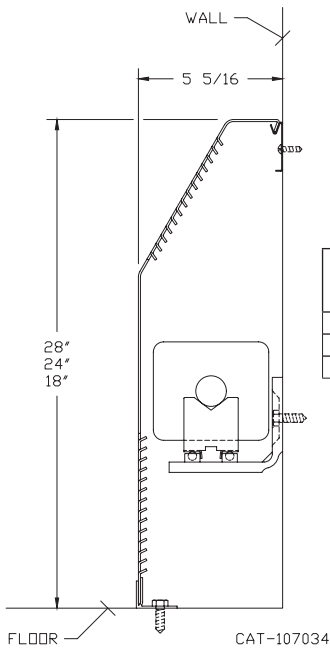


RETURN TO WALL, NO INLET LOUVERS  
DRAFT BARRIER STYLE  
RWDB

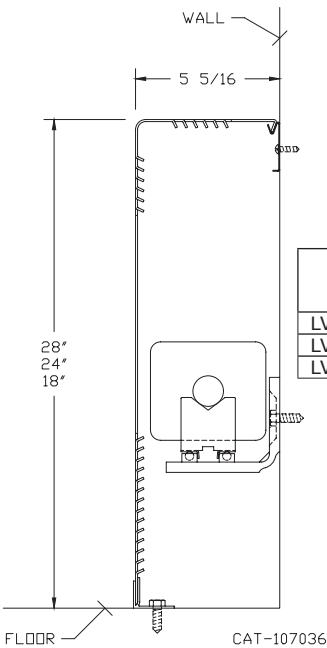
CAT-53178C

# ENCLOSURE ALTERNATIVES

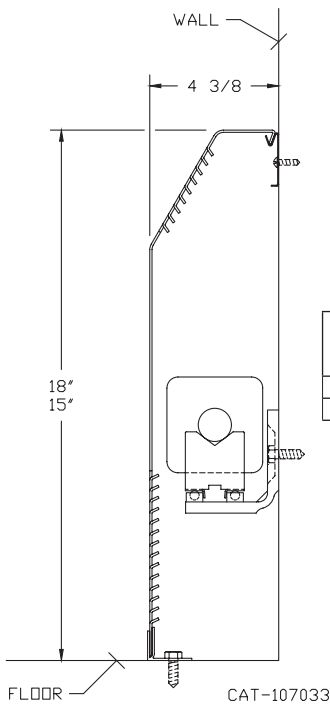
## TO-FLOOR LOUVERED INLET STYLES



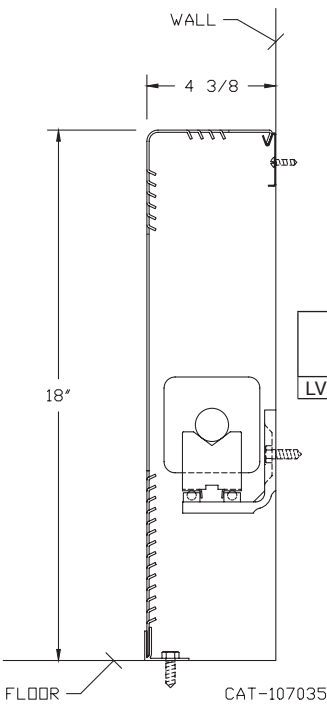
| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|----------------------|---------------------------------------|
| LV4-S18 LI           | LV4-S14                               |
| LV4-S24 LI           | LV4-S20                               |
| LV4-S28 LI           | LV4-S24                               |



| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|----------------------|---------------------------------------|
| LV4-T, F, FT, R18 LI | LV4-T, F, FT, R14                     |
| LV4-T, F, FT, R24 LI | LV4-T, F, FT, R20                     |
| LV4-T, F, FT, R28 LI | LV4-T, F, FT, R24                     |

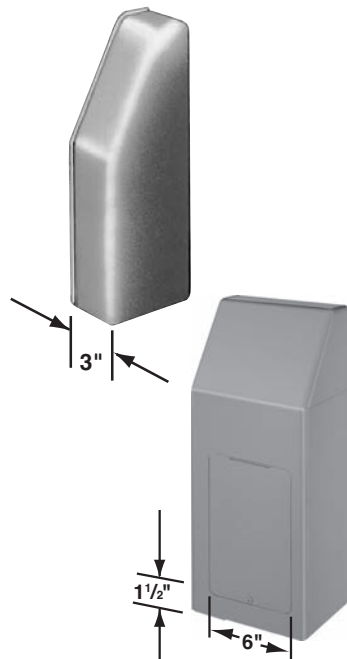


| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|----------------------|---------------------------------------|
| LV3-S15 LI           | LV3-S11                               |
| LV3-S18 LI           | LV3-S14                               |



| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|----------------------|---------------------------------------|
| LV3-T, F, FT, R15 LI | LV3-T, F, FT, R11                     |

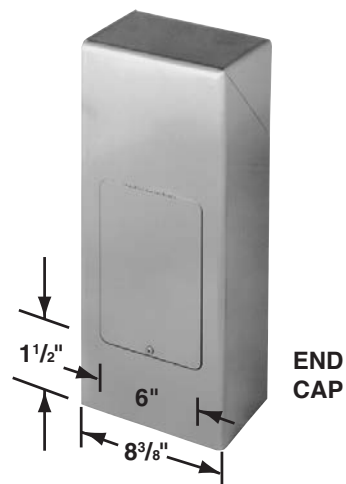
# ACCESSORIES



| ACCESS DOOR LOCATIONS<br>SLOPE TOP END CAP<br>& WALL SLEEVE |                     |                     |
|-------------------------------------------------------------|---------------------|---------------------|
| ENCLOSURE<br>OFFSET                                         | ENCLOSURE<br>HEIGHT | ACCESS<br>DOOR SIZE |
| 3 9/16                                                      | 8", 11", 14"        | 6" x 5"             |
| 4 3/8                                                       | 11", 14"            | 6" x 5"             |
| 5 5/16                                                      | 14"                 | 6" x 5"             |
| 5 5/16                                                      | 20", 24"            | 6" x 9"             |

CAT-68521-2E

ALTERNATE ACCESS DOOR LOCATIONS  
ARE AVAILABLE, CONSULT FACTORY.



| ACCESS DOOR LOCATIONS<br>FLAT TOP END CAP<br>& WALL SLEEVE |                     |                     |
|------------------------------------------------------------|---------------------|---------------------|
| ENCLOSURE<br>OFFSET                                        | ENCLOSURE<br>HEIGHT | ACCESS<br>DOOR SIZE |
| 3 9/16                                                     | 8", 11"             | 6" x 5"             |
| 3 9/16                                                     | 14"                 | 6" x 9"             |
| 4 3/8                                                      | 14"                 | 6" x 9"             |
| 5 5/16                                                     | 14", 20", 24"       | 6" x 9"             |

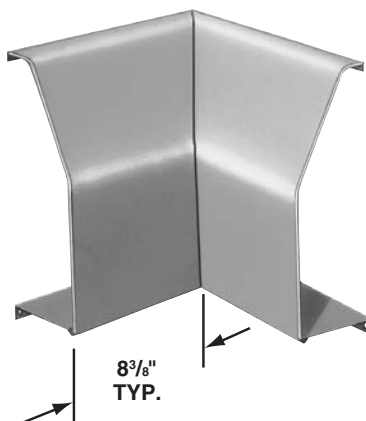
CAT-68521-1E

ALTERNATE ACCESS DOOR LOCATIONS  
ARE AVAILABLE, CONSULT FACTORY.

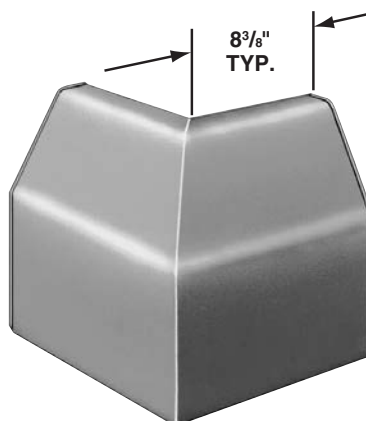


WALL  
SLEEVE  
SUPPORT  
RH. OR LH.

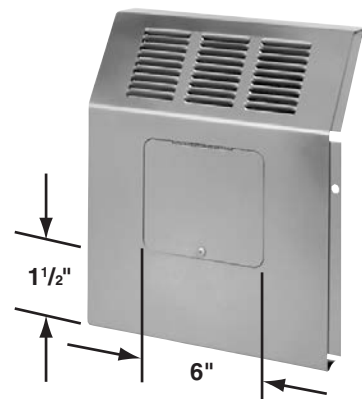
WALL SLEEVE  
ALSO AVAILABLE  
WITH ACCESS DOOR



INSIDE CORNER

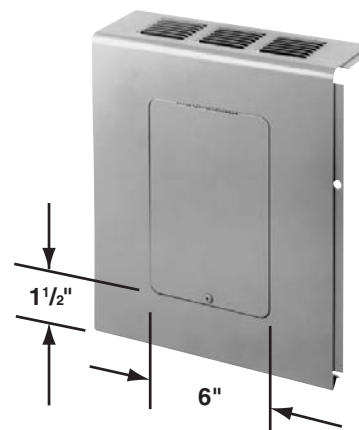


OUTSIDE CORNER



| ACCESS DOOR LOCATIONS<br>SLOPE TOP VALVE COMPARTMENT |                     |                     |
|------------------------------------------------------|---------------------|---------------------|
| ENCLOSURE<br>OFFSET                                  | ENCLOSURE<br>HEIGHT | ACCESS<br>DOOR SIZE |
| 3 9/16                                               | 8", 11", 14"        | 6" x 5"             |
| 4 3/8                                                | 11", 14"            | 6" x 5"             |
| 5 5/16                                               | 14"                 | 6" x 5"             |
| 5 5/16                                               | 20", 24"            | 6" x 9"             |

CAT-68521-4E

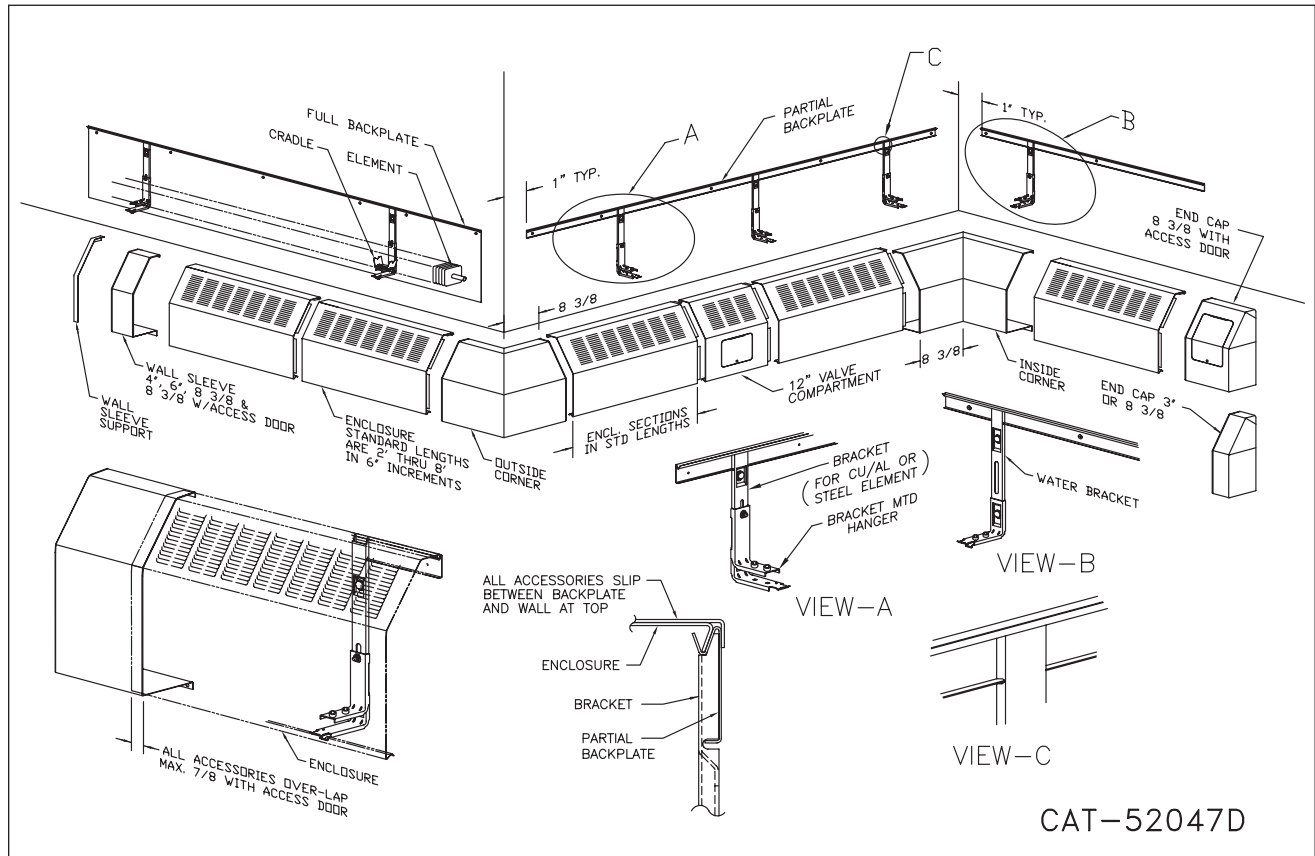


| ACCESS DOOR LOCATIONS<br>FLAT TOP VALVE COMPARTMENT |                     |                     |
|-----------------------------------------------------|---------------------|---------------------|
| ENCLOSURE<br>OFFSET                                 | ENCLOSURE<br>HEIGHT | ACCESS<br>DOOR SIZE |
| 3 9/16                                              | 8", 11"             | 6" x 5"             |
| 3 9/16                                              | 14"                 | 6" x 9"             |
| 4 3/8                                               | 14"                 | 6" x 9"             |
| 5 5/16                                              | 14", 20", 24"       | 6" x 9"             |

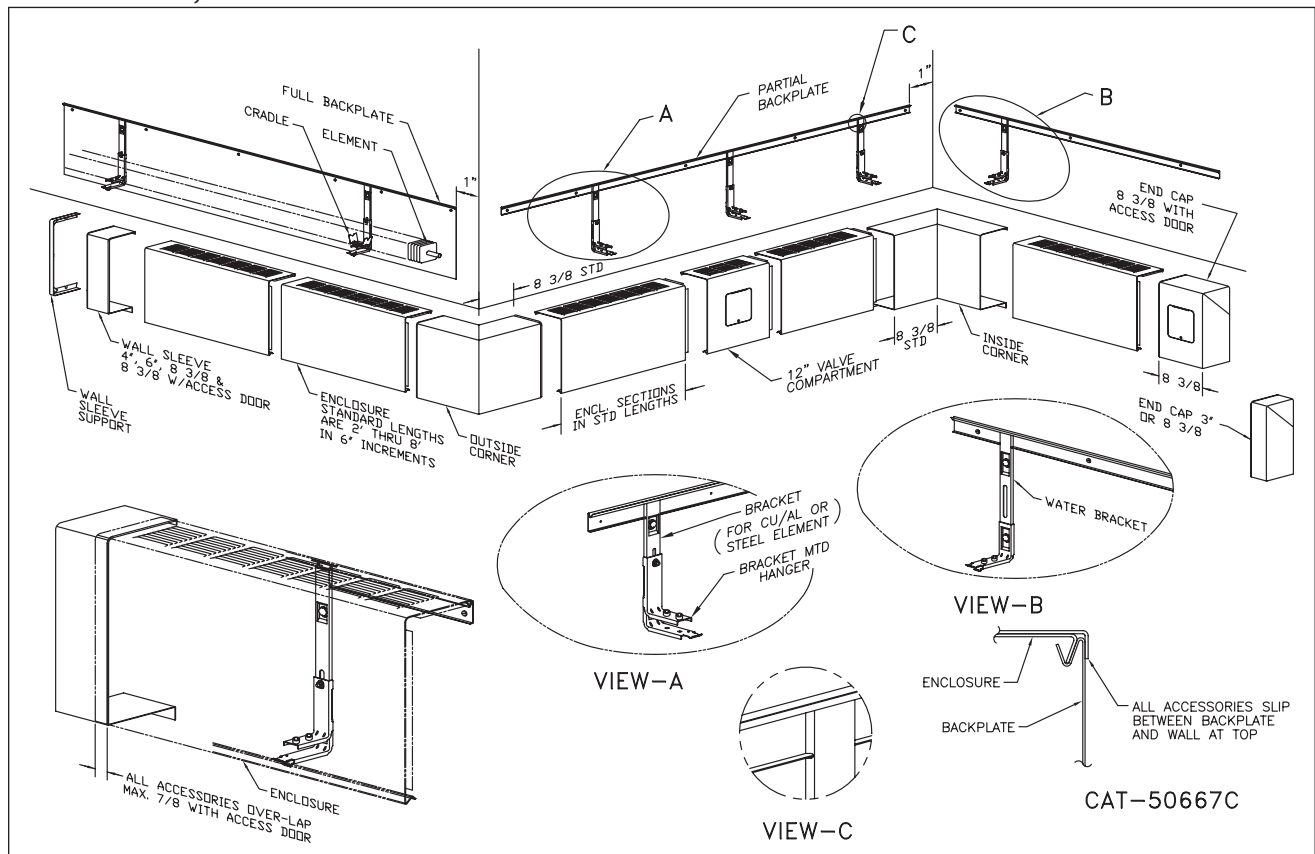
CAT-68521-3E

# INSTALLATION

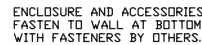
## STYLES "S" SLOPE TOP INSTALLATION AND ACCESSORY DETAILS



## STYLES "F", "T" AND "FT" INSTALLATION AND ACCESSORY DETAILS

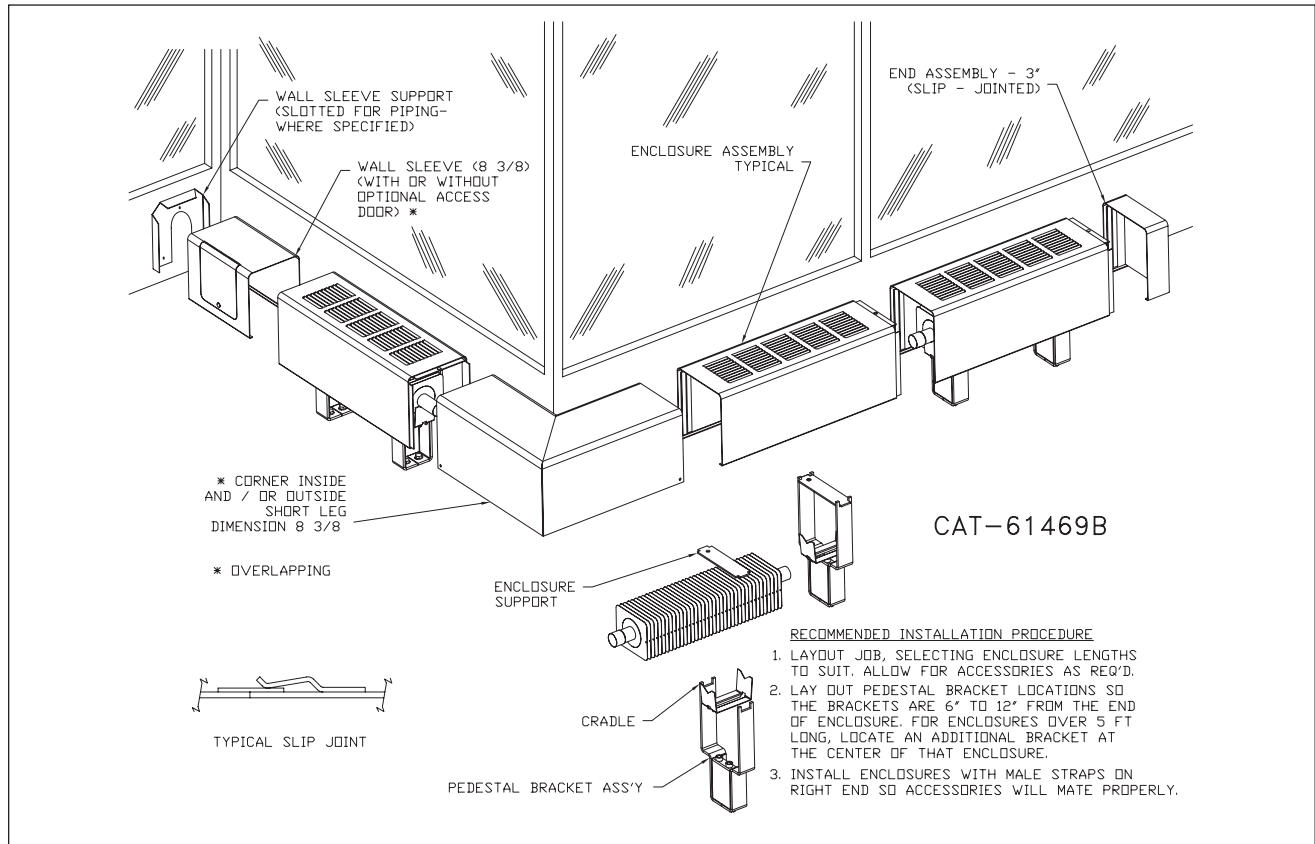


## STYLE “DS” DOUBLE SLOPE TOP INSTALLATION AND ACCESSORY DETAILS

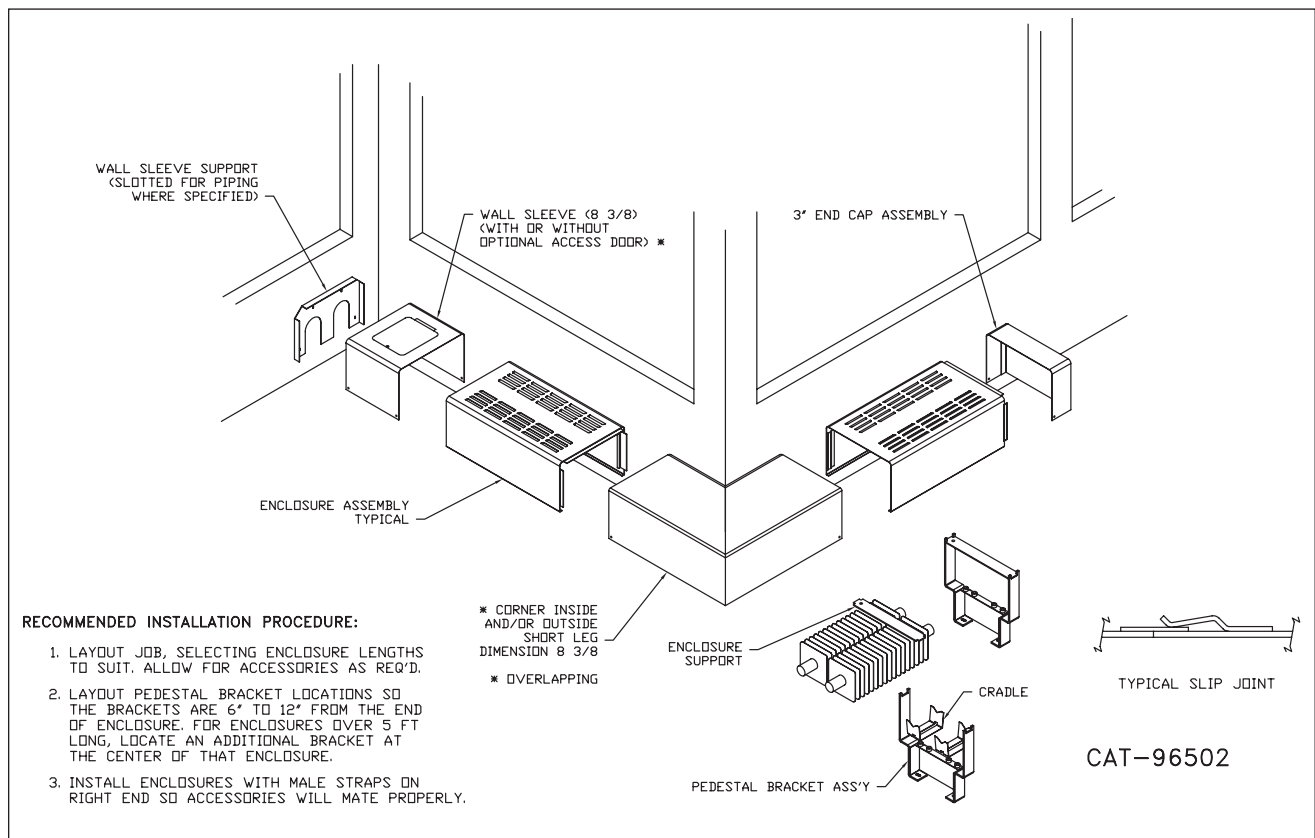


# INSTALLATION

## STYLE "PM" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS

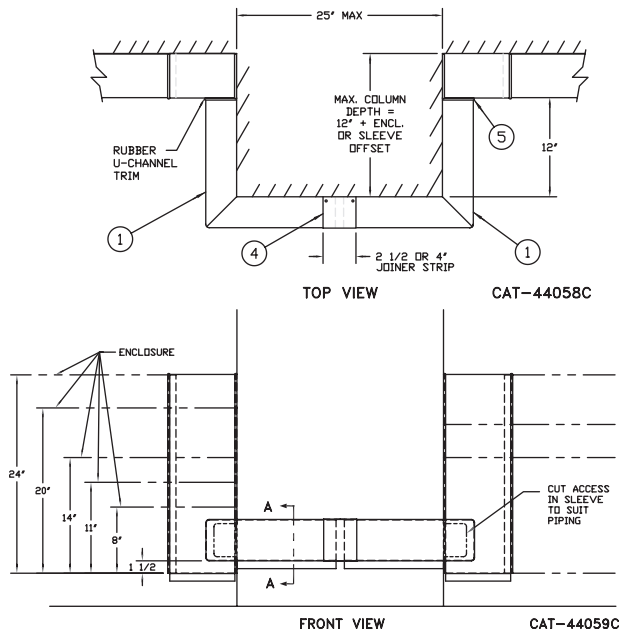


## STYLE "PM2" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS



# ENCLOSURES

## COLUMN ENCLOSURES

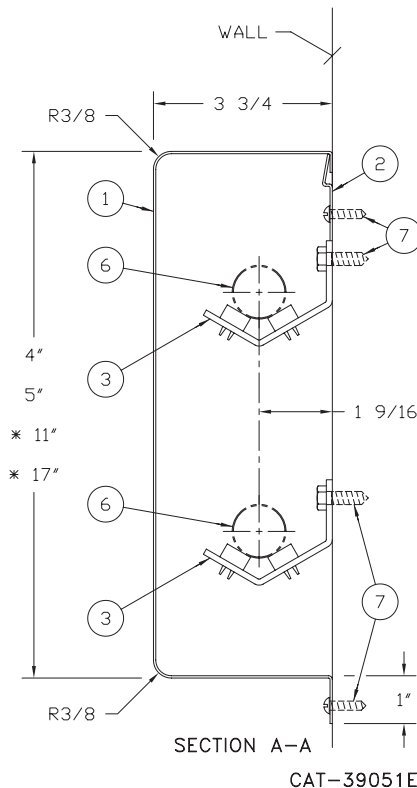


NOTE –  
ALL PARTS SUPPLIED TO  
MAXIMUM DIMENSIONS,  
AS SHOWN TO BE CUT  
ON THE JOB TO SUIT  
INDIVIDUAL COLUMN SIZES.

\*PIPING MAY BE  
1 OR 2 TIERS AS  
REQUIRED. INSTALL  
HANGERS TO SUIT  
ENCLOSURE PIPING.

FOR LV2-S8 CALL FOR 4" HIGH

SEE PAGE 71 FOR STRAIGHT  
PIECES 4", 5", 11" OR 17"



## VULCAN COLUMN ENCLOSURES

Column Enclosures give installations that  
finished, custom-made look.

It is designed to blend into the installation, both  
in color and in form. It installs easily without a  
single bolt showing, yet is highly practical in use.

This picture shows the smooth contours and  
precision fabrication. The drawing at left gives  
full details and dimensions.



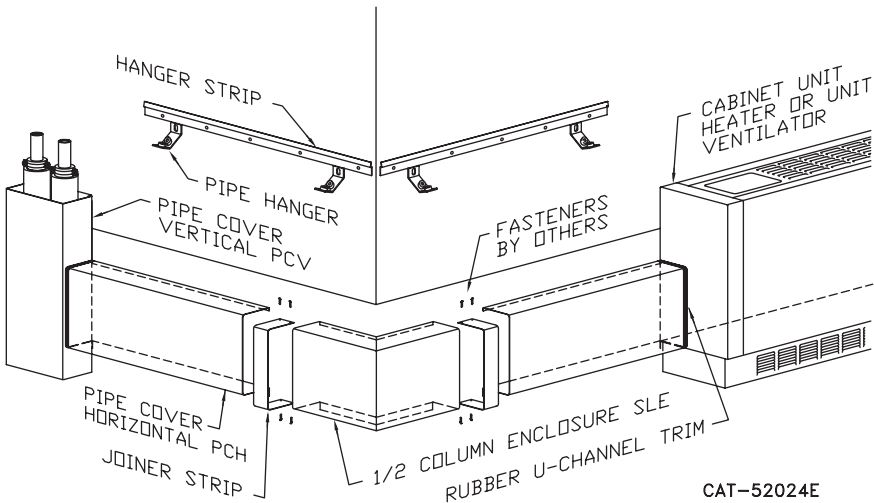
## DETAILS AND DIMENSIONS

1. Column Enclosure — 18 Gauge CRS (SRP-15820)
2. Hanger Strip — 18 Gauge CRS
3. Roll Pipe Hanger
4. Joiner Strip — 2 1/2" or 4" wide (SRP-15821) with #8 x 1/2 Truss Head Screws
5. Rubber U-Channel Trim 1/16 x 3/16 x 5/16
6. Pipe By Others
7. Fasteners By Others Unless Specified

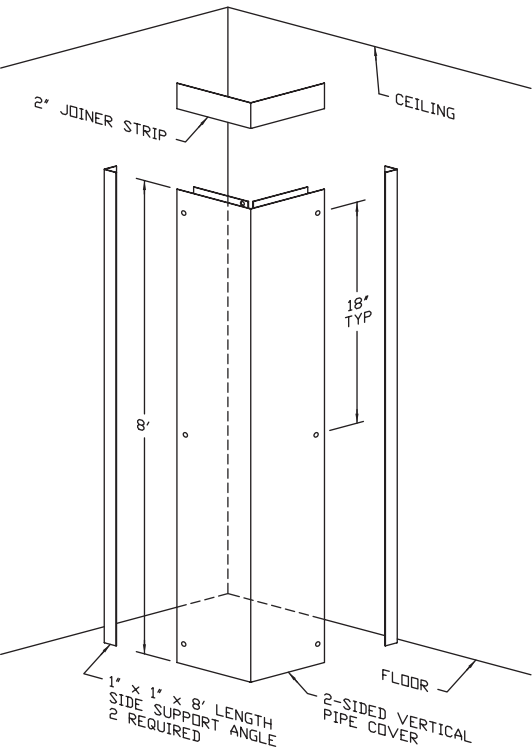
# ENCLOSURES

## PIPE ENCLOSURES

| Catalog Number    | Description                                                               |
|-------------------|---------------------------------------------------------------------------|
| <b>Horizontal</b> |                                                                           |
| HPC-4             | 4" High 18 GA - 8' Lengths                                                |
| HPC-5             | 5" High 18 GA - 8' Lengths                                                |
| HPC-11            | 11" High 18 GA - 8' Lengths                                               |
| HPC-17            | 17" High 18 GA - 8' Lengths                                               |
| V610              | Mounting Strip                                                            |
| RPH               | Roll Pipe Hanger                                                          |
| <b>Vertical</b>   |                                                                           |
| VPC-52            | 5 x 5 Two Side 18 GA - 8' Lengths                                         |
| VPC-82            | 8 x 8 Two Side 18 GA - 8' Lengths                                         |
| VPC-53            | 5 x 5 Three Side 18 GA - 8' Lengths                                       |
| VPC-83            | 8 x 8 Three Side 18 GA - 8' Lengths                                       |
| 1 x 1             | 1 x 1 Side Support Angle - 8' Lengths<br>(2 per Vertical Pipe Enclosure ) |



CAT-52024E

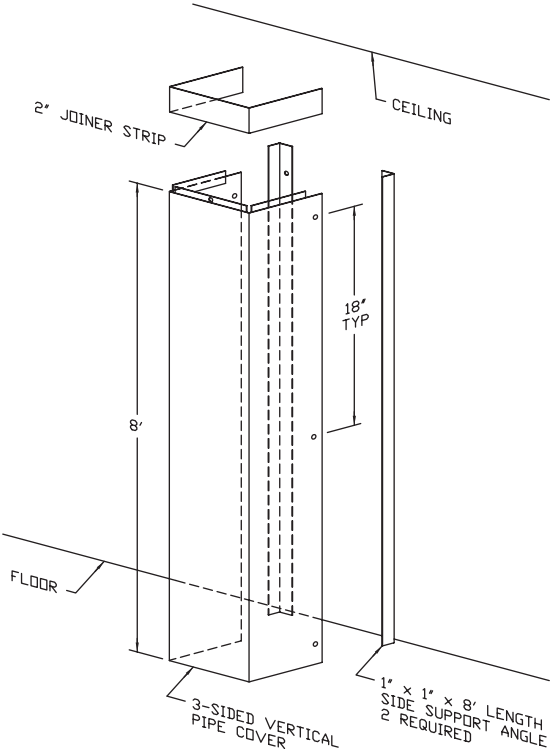


FASTENERS ARE BY OTHERS.

FOR CEILING HEIGHTS GREATER THAN 8',  
MULTIPLE PIECES WILL BE REQUIRED.

PCV-52 5' x 5' x 8' LENGTHS  
PCV-82 8' x 8' x 8' LENGTHS

CAT-68234



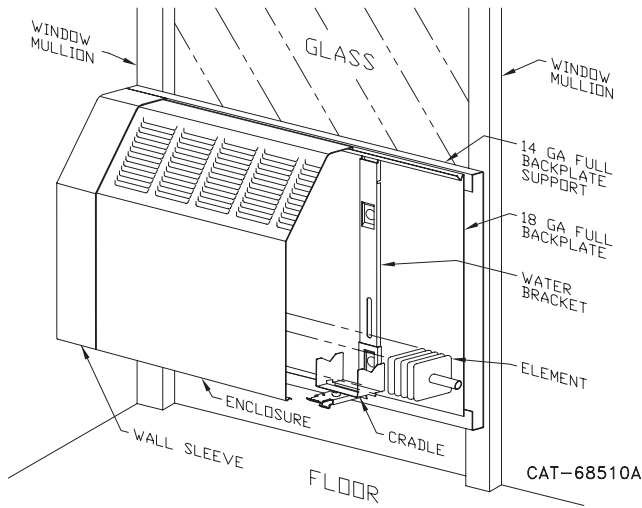
FASTENERS ARE BY OTHERS.

FOR CEILING HEIGHTS GREATER THAN 8',  
MULTIPLE PIECES WILL BE REQUIRED.

PCV-53 5' x 5' x 8' LENGTHS  
PCV-83 8' x 8' x 8' LENGTHS

CAT-68235

# BACKPLATE SUPPORTS FOR WINDOW MULLIONS



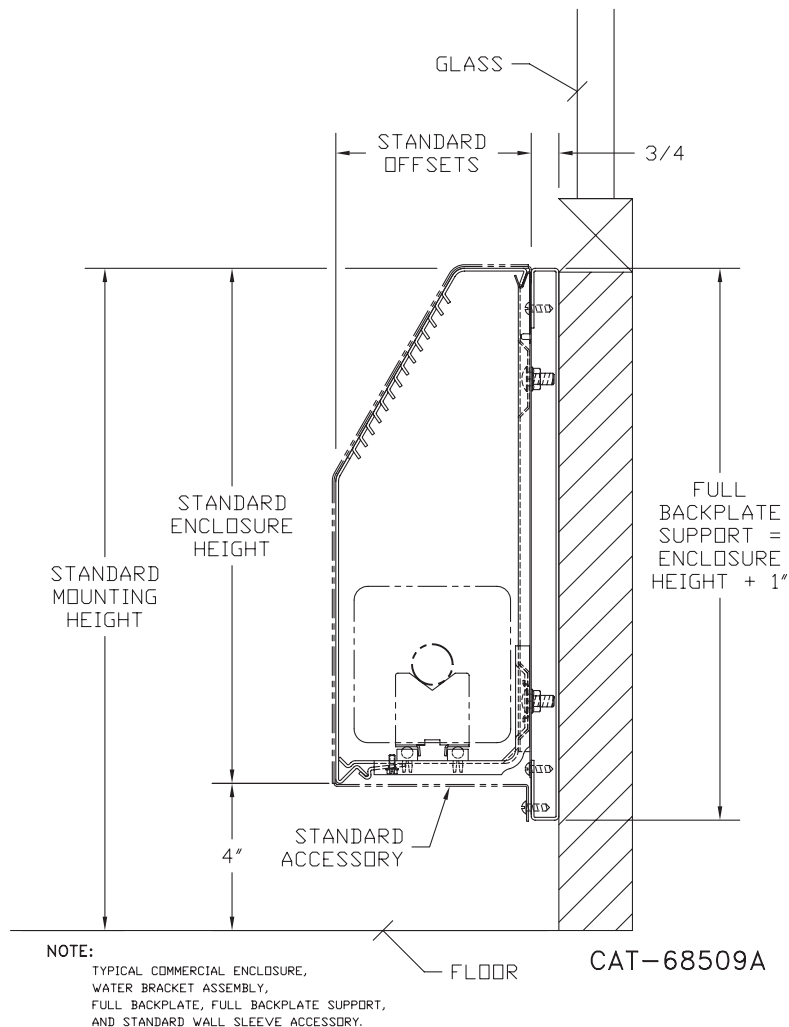
LINOVECTOR-II Radiation is easily adaptable to panel wall, curtain wall, and window wall construction.

All that is necessary for the full support of the LINOVECTOR-II assemblies are the mullions used in this type of construction.

The assemblies are just as easily installed as in any other type of construction.

LINOVECTOR-II is versatile. Consult us for unusual dimensional applications. ( $7\frac{1}{2}$ " minimum height)

Typical panel wall installation using the Vulcan bracket with ball-bearing cradle, and full backplate. Note how the backplate support lag to the mullions and the backplate to the backplate support. Then the brackets attach to the backplate. Consult us for variations.



# DESIGN DATA

## COMMERCIAL FINNED TUBE CHARTS FOR RATING CORRECTIONS

For assistance with ratings and selection, please use our online Specifier.

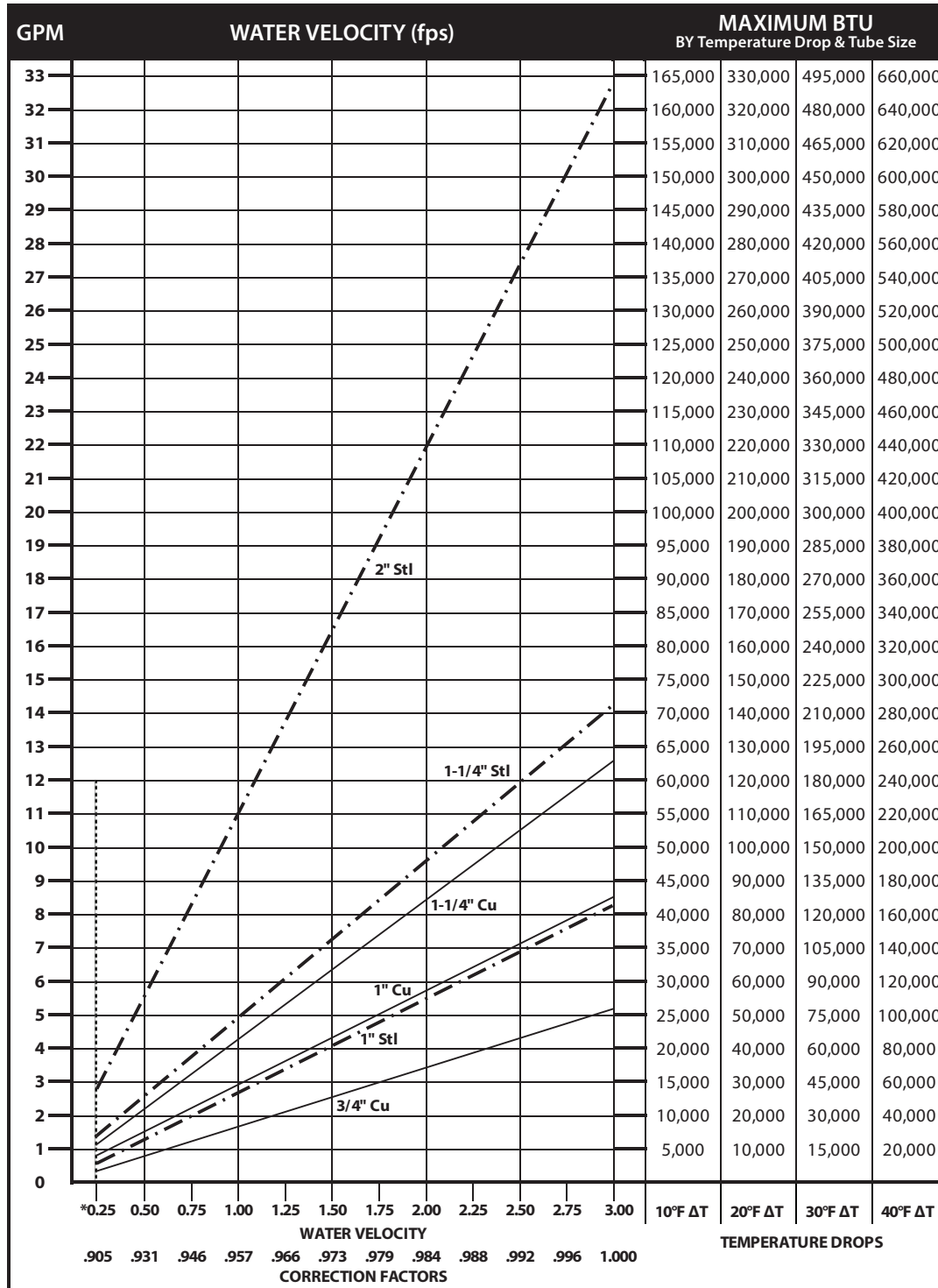
| CORRECTION FACTORS FOR WATER TEMPERATURES AND AIR TEMPERATURES OTHER THAN STANDARD |                             |      |           |      |      |      |      |      |      |      |      |      |      |      |      |
|------------------------------------------------------------------------------------|-----------------------------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| AVERAGE WATER<br>TEMP. °F                                                          | ENTERING AIR TEMPERATURE °F |      |           |      |      |      |      |      |      |      |      |      |      |      |      |
|                                                                                    | 45                          | 55   | STD<br>65 | 70   | 75   | 80   | 85   | 90   | 95   | 100  | 110  | 120  | 130  | 140  | 150  |
| 90                                                                                 | .19                         | .13  | .11       | .06  |      |      |      |      |      |      |      |      |      |      |      |
| 100                                                                                | .25                         | .19  | .15       | .11  | .08  | .06  |      |      |      |      |      |      |      |      |      |
| 110                                                                                | .31                         | .25  | .20       | .16  | .13  | .11  | .08  | .06  |      |      |      |      |      |      |      |
| 120                                                                                | .38                         | .31  | .26       | .21  | .19  | .16  | .13  | .11  | .08  | .06  |      |      |      |      |      |
| 130                                                                                | .45                         | .38  | .33       | .28  | .25  | .21  | .19  | .16  | .13  | .11  | .06  |      |      |      |      |
| 140                                                                                | .53                         | .45  | .40       | .34  | .31  | .28  | .25  | .21  | .19  | .16  | .11  | .06  |      |      |      |
| 150                                                                                | .61                         | .53  | .45       | .41  | .38  | .34  | .31  | .28  | .25  | .21  | .16  | .11  | .06  |      |      |
| 160                                                                                | .69                         | .61  | .53       | .49  | .45  | .41  | .38  | .34  | .31  | .28  | .21  | .16  | .11  | .06  |      |
| 170                                                                                | .77                         | .69  | .61       | .57  | .53  | .49  | .45  | .41  | .38  | .34  | .28  | .21  | .16  | .11  | .06  |
| 180                                                                                | .86                         | .77  | .69       | .65  | .61  | .57  | .53  | .49  | .45  | .41  | .34  | .28  | .21  | .16  | .11  |
| 190                                                                                | .95                         | .86  | .78       | .73  | .69  | .65  | .61  | .57  | .53  | .49  | .41  | .34  | .28  | .21  | .16  |
| 200                                                                                | 1.05                        | .95  | .86       | .82  | .77  | .73  | .69  | .65  | .61  | .57  | .49  | .41  | .34  | .28  | .21  |
| 210                                                                                | 1.14                        | 1.05 | .95       | .91  | .86  | .82  | .77  | .73  | .69  | .65  | .57  | .49  | .41  | .34  | .28  |
| ▶ 215 (STD.)                                                                       | 1.19                        | 1.09 | 1.00      | .95  | .91  | .86  | .82  | .77  | .73  | .69  | .61  | .53  | .45  | .38  | .31  |
| 220                                                                                | 1.24                        | 1.14 | 1.05      | 1.00 | .95  | .91  | .86  | .82  | .77  | .73  | .65  | .57  | .49  | .41  | .34  |
| 230                                                                                | 1.34                        | 1.24 | 1.14      | 1.09 | 1.05 | 1.00 | .95  | .91  | .86  | .82  | .73  | .65  | .57  | .49  | .41  |
| 240                                                                                | 1.44                        | 1.34 | 1.25      | 1.19 | 1.14 | 1.09 | 1.05 | 1.00 | .95  | .91  | .82  | .73  | .65  | .57  | .49  |
| 250                                                                                | 1.55                        | 1.44 | 1.34      | 1.29 | 1.24 | 1.19 | 1.14 | 1.09 | 1.05 | 1.00 | .91  | .82  | .73  | .65  | .57  |
| 260                                                                                | 1.66                        | 1.55 | 1.44      | 1.39 | 1.34 | 1.29 | 1.24 | 1.19 | 1.14 | 1.09 | 1.00 | .91  | .82  | .73  | .65  |
| 270                                                                                | 1.76                        | 1.66 | 1.55      | 1.50 | 1.44 | 1.39 | 1.34 | 1.29 | 1.24 | 1.19 | 1.09 | 1.00 | .91  | .82  | .73  |
| 280                                                                                | 1.87                        | 1.76 | 1.66      | 1.60 | 1.55 | 1.50 | 1.44 | 1.39 | 1.34 | 1.29 | 1.19 | 1.09 | 1.00 | .91  | .82  |
| 290                                                                                | 1.99                        | 1.87 | 1.76      | 1.71 | 1.66 | 1.60 | 1.55 | 1.50 | 1.44 | 1.39 | 1.29 | 1.19 | 1.09 | 1.00 | .91  |
| 300                                                                                | 2.10                        | 1.99 | 1.87      | 1.82 | 1.76 | 1.71 | 1.66 | 1.60 | 1.55 | 1.50 | 1.39 | 1.29 | 1.19 | 1.09 | 1.00 |

| CORRECTION FACTORS FOR STEAM PRESSURES AND AIR TEMPERATURES OTHER THAN STANDARD |          |                             |      |      |           |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------------------------------------------------------------|----------|-----------------------------|------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|
| STEAM                                                                           |          | ENTERING AIR TEMPERATURE °F |      |      |           |      |      |      |      |      |      |      |      |      |      |      |
| PRESSURE                                                                        |          | TEMP.<br>°F                 | 45   | 55   | STD<br>65 | 70   | 75   | 80   | 85   | 90   | 100  | 110  | 120  | 130  | 140  | 150  |
| GAUGE                                                                           | ABS. PSI |                             |      |      |           |      |      |      |      |      |      |      |      |      |      |      |
| (VAC) 15" HG                                                                    | 7.32     | 178.9                       | 0.90 | 0.80 | 0.70      | 0.65 | 0.60 | 0.56 | 0.51 | 0.45 | 0.39 | 0.32 | 0.25 | 0.18 | 0.13 | 0.08 |
| (VAC) 10"                                                                       | 9.78     | 192.2                       | 1.02 | 0.91 | 0.81      | 0.76 | 0.71 | 0.66 | 0.62 | 0.55 | 0.48 | 0.40 | 0.33 | 0.26 | 0.20 | 0.14 |
| (VAC) 5"                                                                        | 12.25    | 202.9                       | 1.11 | 1.00 | 0.90      | 0.85 | 0.79 | 0.75 | 0.70 | 0.63 | 0.56 | 0.48 | 0.40 | 0.33 | 0.27 | 0.20 |
| 0 PSI<br>▶ .899<br>5                                                            | 14.696   | 212.0                       | 1.19 | 1.09 | 0.97      | 0.92 | 0.87 | 0.82 | 0.77 | 0.70 | 0.63 | 0.54 | 0.46 | 0.38 | 0.31 | 0.25 |
|                                                                                 | 15.595   | 215.0                       | 1.22 | 1.11 | 1.00      | 0.95 | 0.90 | 0.84 | 0.80 | 0.75 | 0.65 | 0.57 | 0.48 | 0.40 | 0.33 | 0.26 |
|                                                                                 | 19.70    | 227.1                       | 1.34 | 1.22 | 1.11      | 1.05 | 1.00 | 0.95 | 0.90 | 0.81 | 0.75 | 0.66 | 0.57 | 0.49 | 0.41 | 0.34 |
| 10<br>15<br>20                                                                  | 24.70    | 239.4                       | 1.45 | 1.33 | 1.22      | 1.17 | 1.11 | 1.05 | 1.00 | 0.91 | 0.85 | 0.75 | 0.66 | 0.58 | 0.50 | 0.42 |
|                                                                                 | 29.70    | 249.8                       | 1.55 | 1.43 | 1.31      | 1.26 | 1.20 | 1.14 | 1.09 | 1.00 | 0.94 | 0.84 | 0.75 | 0.66 | 0.57 | 0.49 |
|                                                                                 | 34.70    | 258.5                       | 1.63 | 1.52 | 1.40      | 1.33 | 1.28 | 1.23 | 1.17 | 1.07 | 1.02 | 0.92 | 0.82 | 0.73 | 0.64 | 0.55 |
| 25<br>30<br>40                                                                  | 39.70    | 266.8                       | 1.71 | 1.59 | 1.47      | 1.41 | 1.36 | 1.30 | 1.25 | 1.15 | 1.09 | 0.98 | 0.89 | 0.80 | 0.71 | 0.62 |
|                                                                                 | 44.70    | 274.0                       | 1.78 | 1.66 | 1.54      | 1.48 | 1.42 | 1.37 | 1.31 | 1.21 | 1.15 | 1.05 | 0.95 | 0.85 | 0.76 | 0.68 |
|                                                                                 | 54.70    | 286.7                       | 1.91 | 1.79 | 1.66      | 1.61 | 1.54 | 1.49 | 1.43 | 1.32 | 1.27 | 1.16 | 1.06 | 0.97 | 0.87 | 0.78 |
| 50<br>60<br>70                                                                  | 64.70    | 297.7                       | 2.02 | 1.90 | 1.77      | 1.71 | 1.65 | 1.60 | 1.54 | 1.42 | 1.37 | 1.26 | 1.16 | 1.06 | 0.96 | 0.87 |
|                                                                                 | 74.70    | 307.3                       | 2.10 | 2.00 | 1.87      | 1.81 | 1.75 | 1.69 | 1.63 | 1.51 | 1.47 | 1.35 | 1.25 | 1.15 | 1.05 | 0.95 |
|                                                                                 | 84.70    | 316.0                       | 2.20 | 2.09 | 1.95      | 1.89 | 1.83 | 1.77 | 1.71 | 1.59 | 1.55 | 1.44 | 1.33 | 1.23 | 1.12 | 1.03 |
| 80<br>90<br>100                                                                 | 94.70    | 323.9                       | 2.27 | 2.17 | 2.03      | 1.97 | 1.91 | 1.85 | 1.80 | 1.69 | 1.63 | 1.52 | 1.41 | 1.31 | 1.20 | 1.10 |
|                                                                                 | 104.70   | 331.2                       | 2.36 | 2.24 | 2.11      | 2.05 | 1.98 | 1.93 | 1.87 | 1.74 | 1.70 | 1.59 | 1.48 | 1.38 | 1.28 | 1.17 |
|                                                                                 | 114.70   | 337.9                       | 2.43 | 2.31 | 2.18      | 2.11 | 2.05 | 2.00 | 1.94 | 1.81 | 1.77 | 1.65 | 1.54 | 1.44 | 1.33 | 1.23 |
| 125<br>150<br>175<br>200                                                        | 139.70   | 352.9                       | 2.59 | 2.47 | 2.33      | 2.27 | 2.21 | 2.16 | 2.10 | 1.96 | 1.92 | 1.80 | 1.69 | 1.59 | 1.48 | 1.38 |
|                                                                                 | 164.70   | 365.9                       | 2.73 | 2.62 | 2.47      | 2.43 | 2.35 | 2.29 | 2.23 | 2.08 | 2.05 | 1.94 | 1.82 | 1.72 | 1.61 | 1.51 |
|                                                                                 | 189.70   | 377.4                       | 2.86 | 2.74 | 2.60      | 2.54 | 2.47 | 2.41 | 2.35 | 2.21 | 2.17 | 2.05 | 1.95 | 1.85 | 1.73 | 1.63 |
|                                                                                 | 214.70   | 387.8                       | 2.95 | 2.85 | 2.71      | 2.63 | 2.58 | 2.52 | 2.47 | 2.31 | 2.29 | 2.17 | 2.06 | 1.96 | 1.84 | 1.75 |

From Keenan and Keyes — Linear Interpolation. NOTE: Gauge pressure should be corrected for altitude.

Rate of pitch for steam ½" drop over 20-foot run.

# DESIGN DATA



\*Do not design below .25 fps.

## DYNAMIC FORMULAS

$$\text{BTU} = \text{GPM} \times 500 \times \text{TD}$$

$$\text{GPM} = \left( \frac{\text{BTU}}{500} \right) \div \text{TD}$$

$$\text{TD} = \left( \frac{\text{BTU}}{500} \right) \div \text{GPM}$$

# DESIGN DATA

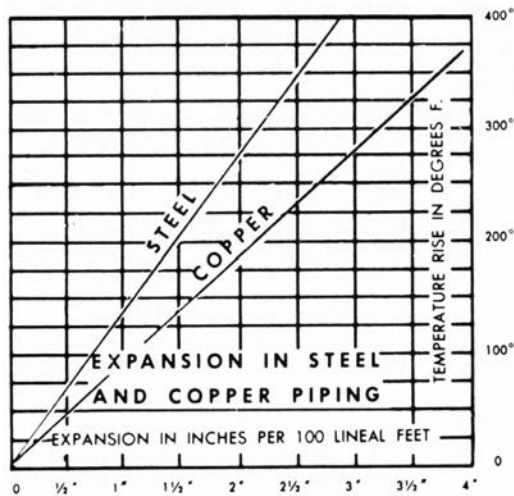
## GUARANTEED WORKING PRESSURES

- 1" IPS — 780 at Temperatures up to 650°F.  
 1-1/4" IPS — 660 at Temperatures up to 650°F.  
 2" IPS — 405 at Temperatures up to 650°F.  
 1-1/4" CU — 194 at Temperatures up to 300°F.  
 1" CU 204 at Temperatures up to 300°F.  
 3/4" CU 218 PSI at Temperatures up to 300°F.

MAXIMUM PRESSURES AT OTHER TEMPERATURES  
 ARE AVAILABLE UPON REQUEST.

### Pipe Water Capacities and Quantities Circulated at Velocity of 3 Feet Per Second

| Nominal Pipe Size | Pipe I.D. (inches) | Gals Per Lin. Ft. | GPM @ 3' per sec Velocity |
|-------------------|--------------------|-------------------|---------------------------|
| 3/4" Copper       | 0.835              | 0.028             | 5.12                      |
| 1" Copper         | 1.077              | 0.047             | 8.52                      |
| 1 1/4" Copper     | 1.315              | 0.071             | 12.70                     |
| 1" Steel          | 1.075              | 0.047             | 8.49                      |
| 1 1/4" Steel      | 1.395              | 0.079             | 14.29                     |
| 2" Steel          | 2.115              | 0.183             | 32.85                     |



### Glycol Correction Factors

Fluid Temperature 200°F

| % Solution | Ethylene Glycol | Propylene Glycol |
|------------|-----------------|------------------|
| 20         | .952            | .988             |
| 30         | .921            | .968             |
| 40         | .888            | .943             |
| 50         | .852            | .912             |

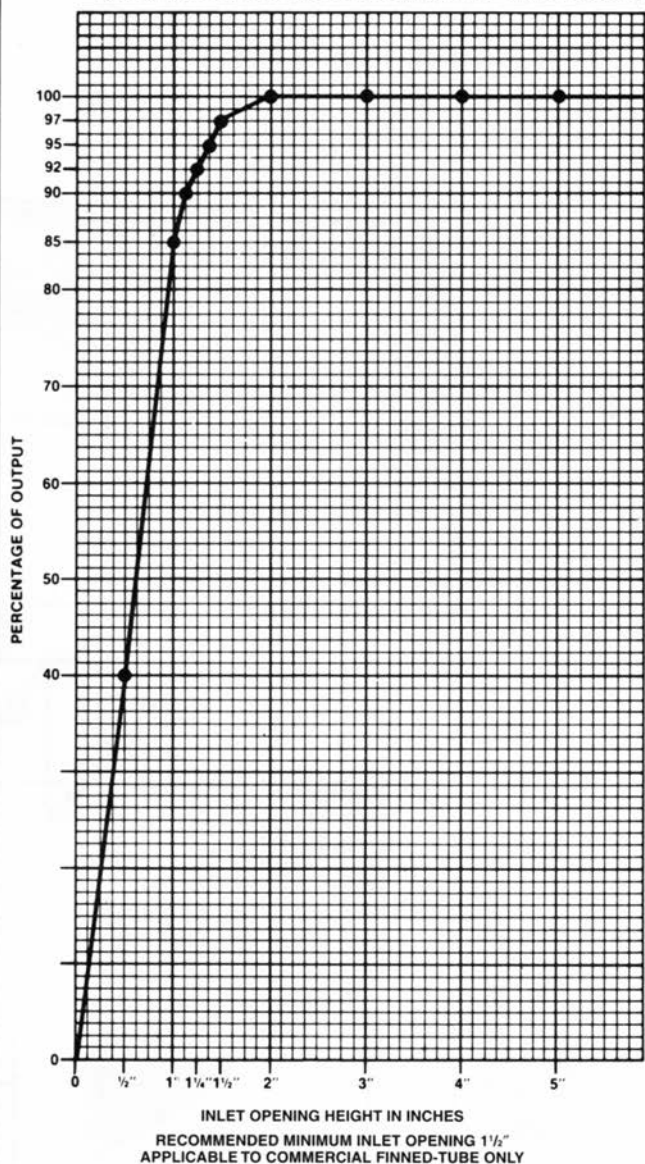
Fluid Temperature 180°F

| % Solution | Ethylene Glycol | Propylene Glycol |
|------------|-----------------|------------------|
| 20         | .946            | .982             |
| 30         | .913            | .961             |
| 40         | .879            | .934             |
| 50         | .842            | .902             |

Fluid Temperature 140°F

| % Solution | Ethylene Glycol | Propylene Glycol |
|------------|-----------------|------------------|
| 20         | .934            | .97              |
| 30         | .898            | .946             |
| 40         | .861            | .916             |
| 50         | .821            | .881             |

### INLET VS. OUTPUT/BTUH CAPACITY REDUCTION



### ALTITUDE FACTORS

Approximate factors for convective heat value at varying altitudes

| Altitude   | Ferrous Units | Copper Alum. Units |
|------------|---------------|--------------------|
| Sea Level  | 1.000         | 1.000              |
| 1,000 ft.  | .984          | .969               |
| 2,000 ft.  | .968          | .938               |
| 3,000 ft.  | .952          | .908               |
| 4,000 ft.  | .936          | .878               |
| 5,000 ft.  | .920          | .850               |
| 6,000 ft.  | .904          | .822               |
| 7,000 ft.  | .889          | .795               |
| 8,000 ft.  | .874          | .768               |
| 9,000 ft.  | .859          | .743               |
| 10,000 ft. | .844          | .718               |
| 15,000 ft. | .771          | .603               |
| 20,000 ft. | .703          | .502               |

# NOTES



# LIMITED WARRANTY

## Commercial Finned Tube Radiation

The Manufacturer warrants to the original owner at the original installation site that the Commercial Finned Tube (the "Product") will be free from defects in material or workmanship for a period not to exceed (1) year from date of shipment from the factory. If upon examination by the Manufacturer the Product is shown to have a defect in material or workmanship during the warranty period, the Manufacturer will repair or replace, at its option, that part of the Product which is shown to be defective.

This limited warranty does not apply:

- (a) if the Product has been subjected to misuse or neglect, has been accidentally or intentionally damaged, has not been installed, maintained or operated in accordance with the furnished written instructions, or has been altered or modified in any way by any unauthorized person.
- (b) to any expenses, including labor or material, incurred during removal or reinstallation of the defective Product or part thereof.
- (c) to any workmanship of any installer of the Product.

This limited warranty is conditional upon:

- (a) shipment, to the Manufacturer, of that part of the Product thought to be defective. Goods may only be returned with the prior written approval of the Manufacturer. All returns must be freight prepaid.
- (b) determination in the reasonable opinion of the Manufacturer that there exists a defect in material or workmanship.

Repair or replacement of any part under this Limited Warranty shall not extend the duration of the warranty with respect to such repaired or replaced part beyond the stated warranty period.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ALL SUCH OTHER WARRANTIES, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS LIMITED WARRANTY. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE IN ANY WAY FOR ANY CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES OF ANY NATURE WHATSOEVER, OR FOR ANY AMOUNTS IN EXCESS OF THE SELLING PRICE OF THE PRODUCT OR ANY PARTS THEREOF FOUND TO BE DEFECTIVE. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY BY EACH JURISDICTION.**



260 North Elm Street, Westfield, MA 01085  
Tel: 413-568-9571 • Fax: 413-564-5661  
[www.vulcanrad.com](http://www.vulcanrad.com)