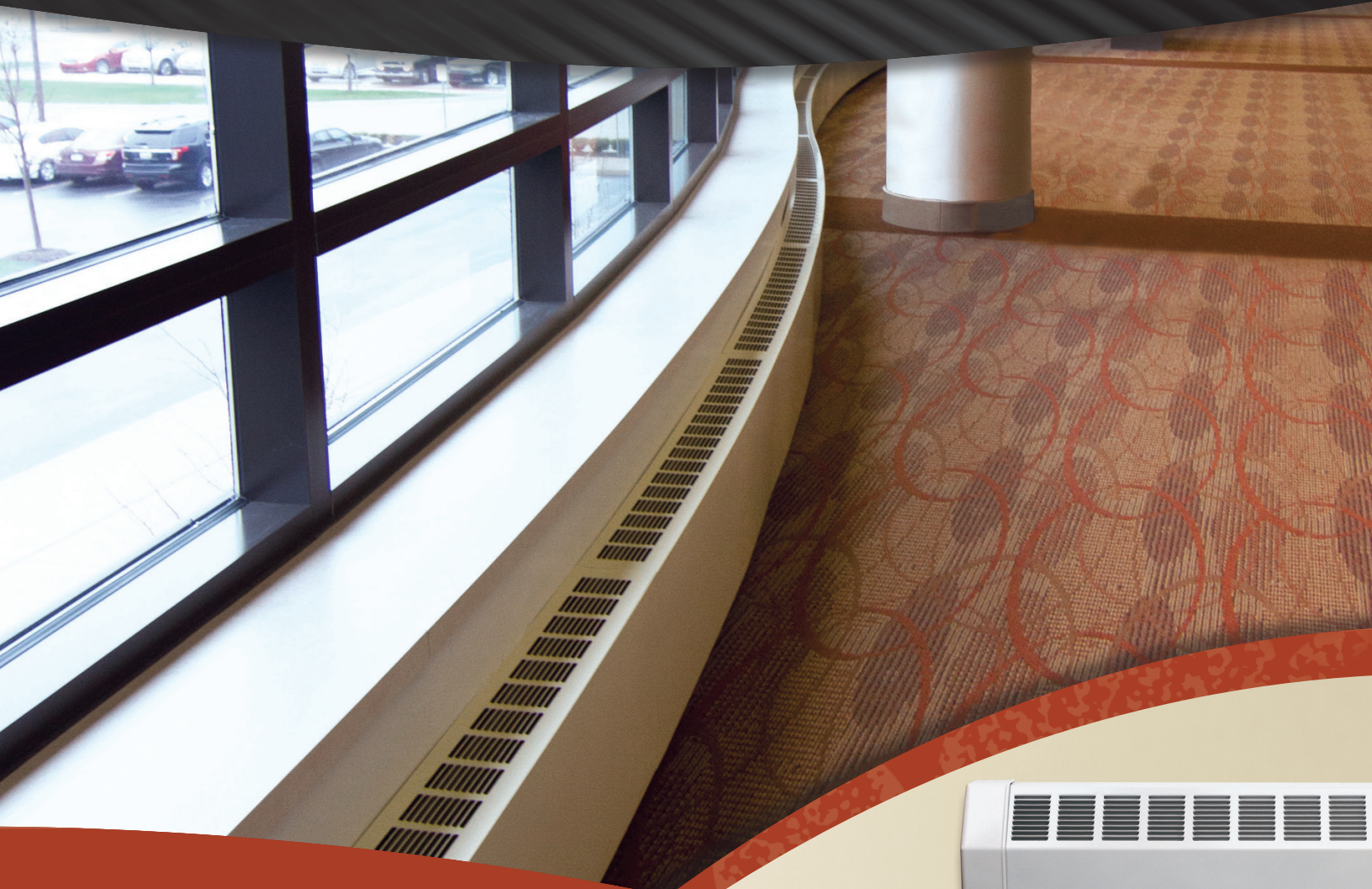




 A MESTEK COMPANY



Versa-Line

**Commercial Finned Tube Radiation For
Energy-Efficient Hydronic Heating Systems**



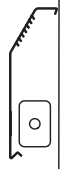
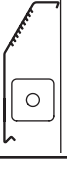
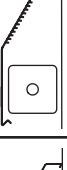


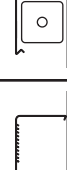
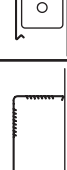


Versa-Line Finned Tube Radiation is Sterling's most versatile and flexible, multi-purpose commercial hydronic heating enclosure line. Versa-Line offers architects, engineers and contractors a full range of enclosure styles, heights, depths, lengths and element selections. Known in the trade as a reliable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

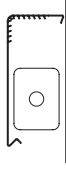
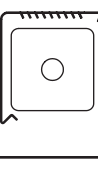
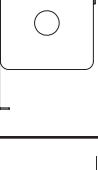

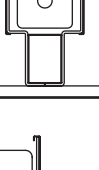
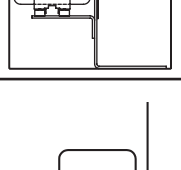

Versa-Line is used in commercial heating installations — structures that demand good looks, durability and low price. Ideally suited for schools, general office buildings, common walkways and high traffic areas. Versa-Line is especially suited for high heat loss areas, yet is attractive enough to be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

Versa-Line 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.

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Notes:

1. See element ordering information on page 57.
2. For non-standard enclosure mounting heights, see correction factor chart on page 74.
3. See specifications on page 5.

ENCLOSURES

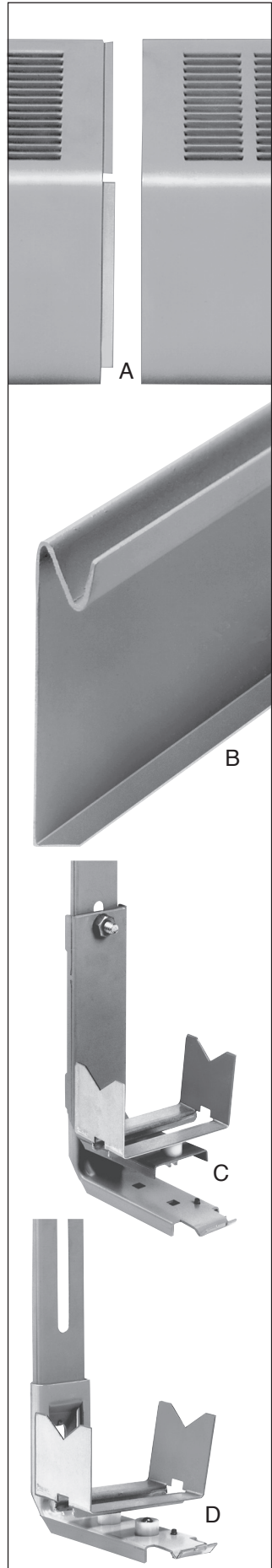
Interlocking slip joints provide for a positive snap together fit between adjoining covers. The male and female slip joints, at the same time, provide vertical stiffness for these enclosures. They are the most rugged and desirable enclosures for today's quality-conscious market. (See photos A.)

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 2 1/2 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.

Furnish and install where shown on all plans/drawings, Sterling Versa-Line Finned Tube Assemblies as described in the specifications below or approved equal quality and capacity.

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.

| | |
|--|--|
| ENCLOSURES VERSA-LINE SLIP JOINTED. | |
| Styles | Slope Top. Flat Top — Top Outlet, Front Outlet, Front and Top Outlet. |
| Lengths | 2' thru 8' in 6" increments. |
| Materials | Cold rolled steel, stainless steel, aluminum, galvanized steel. |
| Gauges | 18, 16, 14 Gauge C.R.S. 18, 16 Gauge SS. 16, 14, 12 Gauge Aluminum |
| Finish | Baked powder prime standard, baked powder colors optional. |
| BACKPLATES | |
| Type | Partial standard, full height optional. |
| Lengths | Partial 8'. Full 2' thru 8' in 6" increments. |
| Material | Partial 20 gauge, pre-painted standard. 18 gauge baked powder finish optional. Full 20 gauge galvanized, 18 gauge C.R.S. optional. |
| BRACKETS/HANGERS | 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. |
| ELEMENTS | Mechanically expanded. |
| Type | Copper tube aluminum fin, Steel tube steel fin. |
| Lengths | 1", 1 1/4" CU, 1", 1 1/4" & 2" Steel 2' Thru 12'6" in 1" increments 3/4" CU 2' thru 8' in 1" increments. |
| End Conditions | CU/AL — Swaged one end. Swaged both ends optional. Steel — NPT threads standard. Chamfered for field welding optional. |
| DAMPERS | Fully modulating damper blades with stiffening roll bend. Operated by hand knob or hex head security type driver. |
| ACCESSORIES | 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. |
| AIR SEAL | Optional air seal, factory or field installed, on back of backplate. Material is 1/8" x 3/8" closed cell with adhesive back. |

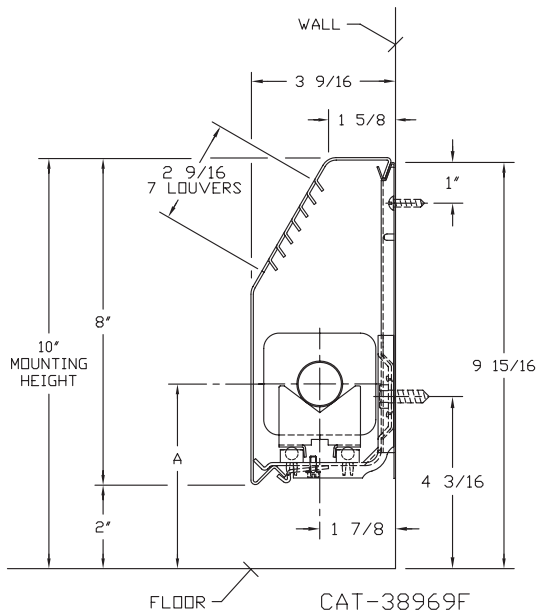


JVK-S8 (Water Brackets only)

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 | 4 5/16 |
| 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.

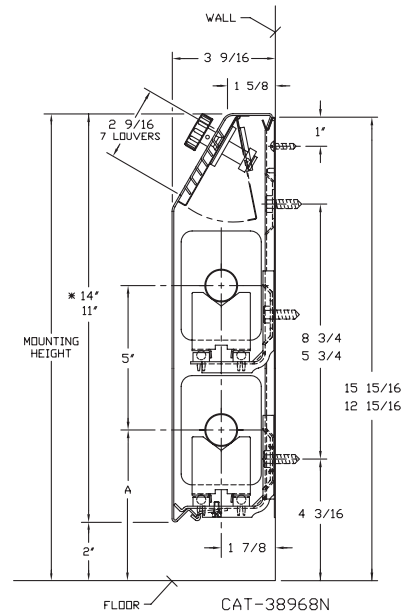
Not recommended for steam applications. Consult factory.



JVK-S11 14 (Water Brackets only)

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 | 4 5/16 |
| 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 "KS" 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 DEPTH AND 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" | R01 | 2-1/2" x 2-1/4" | 50 | .011 | 8K* | 1 | 10 | 820 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 890 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 960 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1300 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 3/4" | R02 | 2-1/2" x 2-3/4" | 60 | .010 | 8K* | 1 | 10 | 950 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1080 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1150 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1650 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | R03 | 2-1/2" x 2-3/4" | 55 | .011 | 8K* | 1 | 10 | 980 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1050 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1180 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1660 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 3/4" | R04 | 3-3/4" x 2-3/4" | 50 | .014 | 8K* | 1 | 10 | 1010 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1110 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1200 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1680 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | R05 | 3-3/4" x 2-3/4" | 50 | .011 | 8K* | 1 | 10 | 1020 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1120 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1220 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1670 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1-1/4" | R08 | 3-3/4" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1040 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1140 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1200 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1600 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | R07 | 5" x 2-3/4" | 50 | .020 | 11K | 1 | 13 | 1220 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1290 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1-1/4" | R10 | 5" x 2-3/4" | 50 | .020 | 11K | 1 | 13 | 1190 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1260 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |

*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

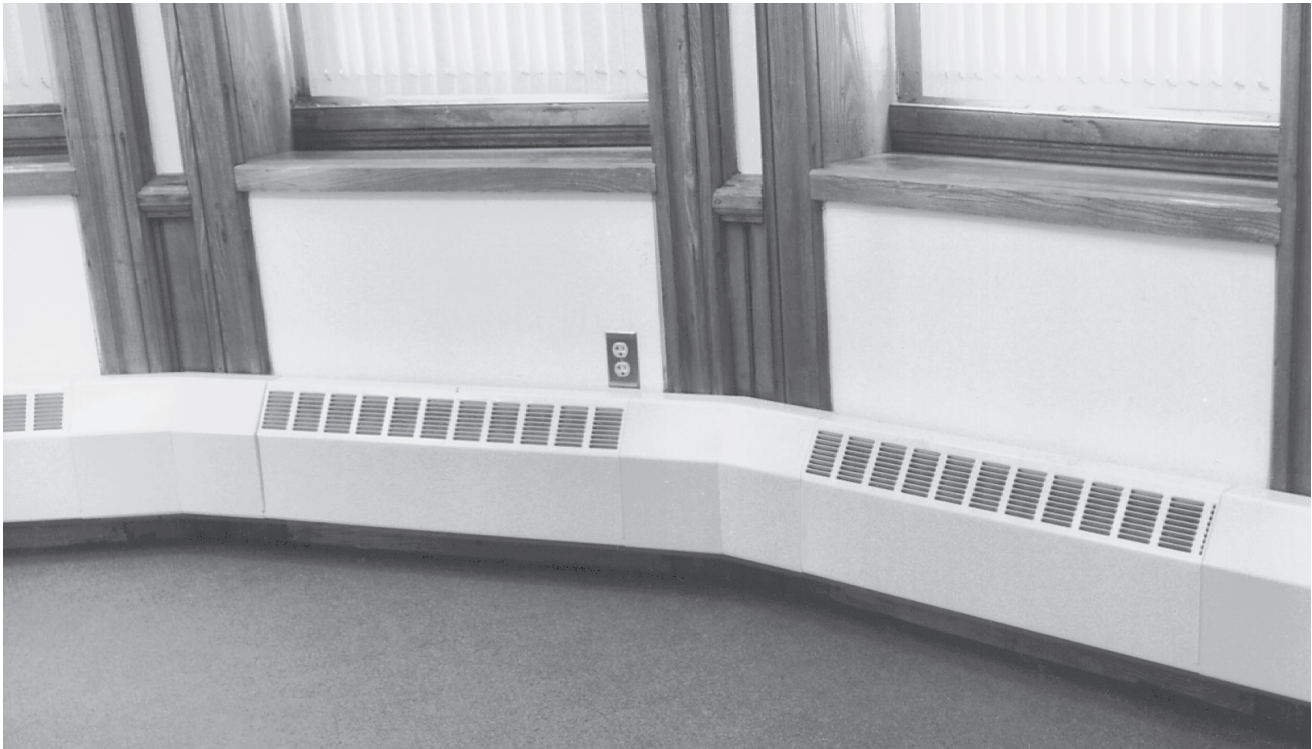
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | R11 | 3-3/4" x 2-3/4" | 40 | .024 | 8K* | 1 | 10 | 920 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11K | 1 | 13 | 1020 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1100 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K* | 2-5 CL | 16 | 1520 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | R15 | 5" x 2-3/4" | 50 | .024 | 11K | 1 | 13 | 1170 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1170 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1-1/4" | R16 | 5" x 2-3/4" | 50 | .024 | 11K | 1 | 13 | 1190 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 14K | 1 | 16 | 1190 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |

*Not recommended for steam applications, consult factory.

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

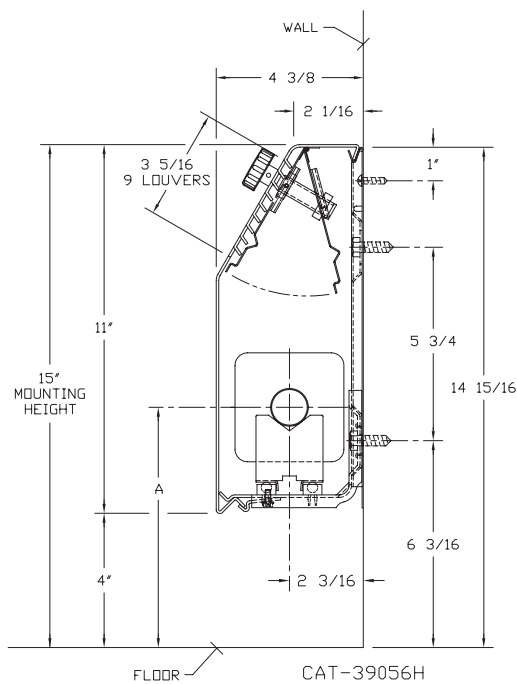
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



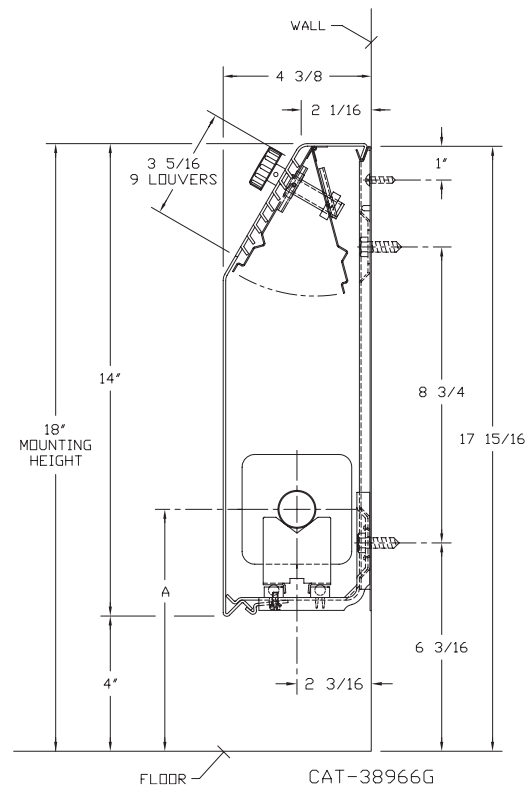
JVA-S11

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 |



JVA-S14

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "S" 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 DEPTH AND 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" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 11A* | 1 | 15 | 1000 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 11A* | 1 | 14 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 11A* | 1 | 15 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 11A* | 1 | 15 | 980 | 840 | 760 | 680 | 600 | 520 | 440 | 390 | 320 | 250 |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 11A* | 1 | 15 | 1150 | 990 | 900 | 790 | 700 | 610 | 520 | 460 | 380 | 300 |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 11A* | 1 | 15 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 11A* | 1 | 15 | 920 | 790 | 720 | 630 | 560 | 490 | 410 | 370 | 300 | 240 |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 11A* | 1 | 15 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 11A* | 1 | 15 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1370 | 1180 | 1070 | 950 | 840 | 730 | 620 | 550 | 450 | 360 |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1020 | 880 | 800 | 700 | 620 | 540 | 460 | 410 | 340 | 270 |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 14A | 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

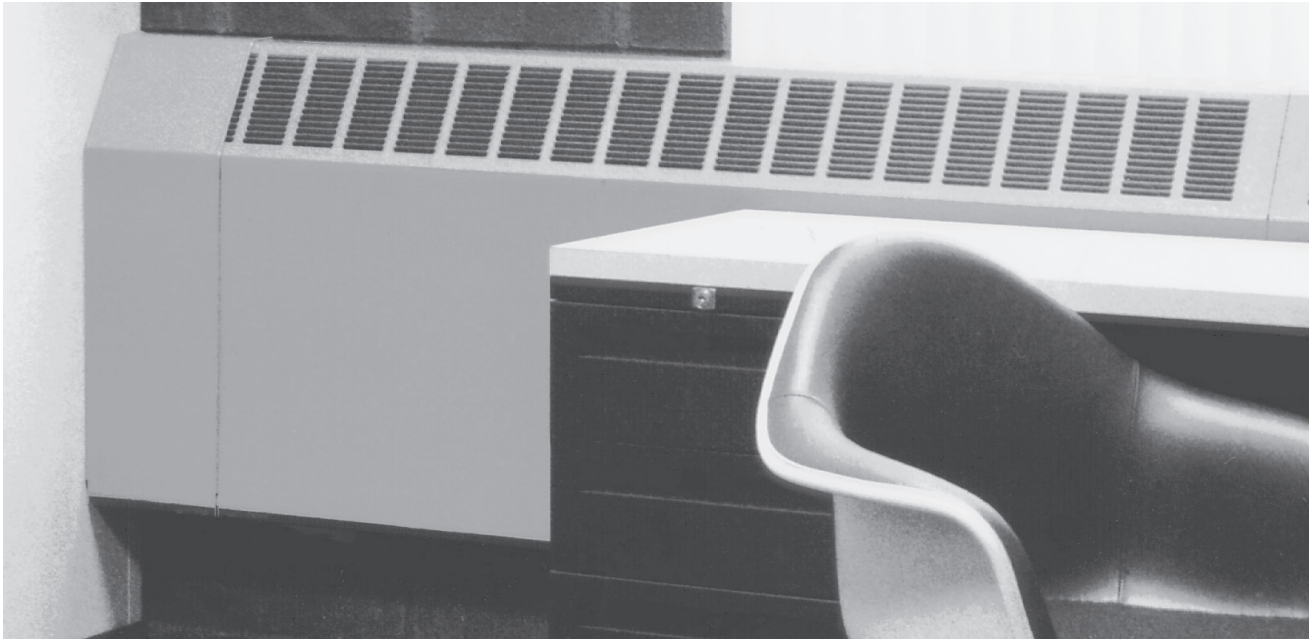
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 11A* | 1 | 15 | 930 | 800 | 730 | 640 | 570 | 490 | 420 | 370 | 310 | 240 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 11A* | 1 | 15 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 11A* | 1 | 15 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 11A* | 1 | 15 | 920 | 790 | 720 | 630 | 560 | 490 | 410 | 370 | 300 | 240 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 11A* | 1 | 15 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 11A* | 1 | 15 | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1110 | 950 | 870 | 770 | 680 | 590 | 500 | 440 | 370 | 290 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 14A | 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.

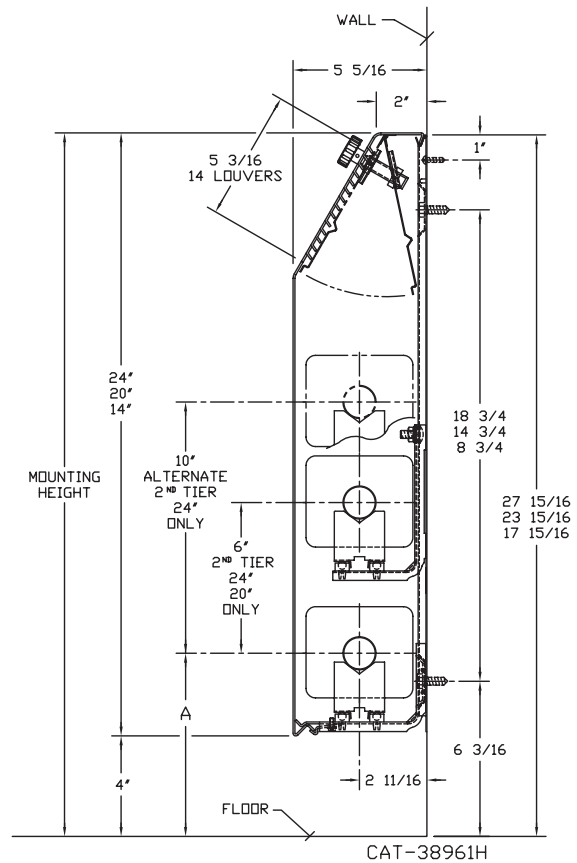
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



JVB-S14 20 24

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "S" 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 DEPTH AND 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 |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 | |
| | | | | | 20B | 1 | 24 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | 20B | 2-6 CL | 24 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 | |
| | | | | | 24B | 1 | 28 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 | |
| | | | | | 24B | 2-6 CL | 28 | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 | |
| 24B | 3-6 CL | 28 | 2960 | 2550 | 2310 | 2040 | 1810 | 1570 | 1330 | 1180 | 980 | 770 | | | | | | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 | |
| | | | | | 20B | 1 | 24 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 | |
| | | | | | 20B | 2-6 CL | 24 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 | |
| | | | | | 24B | 1 | 28 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 | |
| | | | | | 24B | 2-6 CL | 28 | 2700 | 2320 | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890 | 700 | |
| 24B | 3-6 CL | 28 | 3080 | 2650 | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800 | | | | | | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1840 | 1580 | 1440 | 1270 | 1120 | 980 | 830 | 740 | 610 | 480 | |
| | | | | | 20B | 1 | 24 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 | |
| | | | | | 20B | 2-6 CL | 24 | 2820 | 2430 | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930 | 730 | |
| | | | | | 24B | 1 | 28 | 2260 | 1940 | 1760 | 1560 | 1380 | 1200 | 1020 | 900 | 750 | 590 | |
| | | | | | 24B | 2-6 CL | 28 | 3110 | 2670 | 2430 | 2150 | 1900 | 1650 | 1400 | 1240 | 1030 | 810 | |
| 24B | 3-6 CL | 28 | 3510 | 3020 | 2740 | 2420 | 2140 | 1860 | 1580 | 1400 | 1160 | 910 | | | | | | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 20B | 1 | 24 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 20B | 2-6 CL | 24 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| | | | | | 24B | 1 | 28 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 | |
| | | | | | 24B | 2-6 CL | 28 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 | |
| 24B | 3-6 CL | 28 | 2980 | 2560 | 2320 | 2060 | 1820 | 1580 | 1340 | 1190 | 980 | 770 | | | | | | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 20B | 1 | 24 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 | |
| | | | | | 20B | 2-6 CL | 24 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 | |
| | | | | | 24B | 1 | 28 | 1990 | 1710 | 1550 | 1370 | 1210 | 1050 | 900 | 800 | 660 | 520 | |
| | | | | | 24B | 2-6 CL | 28 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 | |
| 24B | 3-6 CL | 28 | 3160 | 2720 | 2460 | 2180 | 1930 | 1670 | 1420 | 1260 | 1040 | 820 | | | | | | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 | |
| | | | | | 20B | 1 | 24 | 2180 | 1870 | 1700 | 1500 | 1330 | 1160 | 980 | 870 | 720 | 570 | |
| | | | | | 20B | 2-6 CL | 24 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 | |
| | | | | | 24B | 1 | 28 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 | |
| | | | | | 24B | 2-6 CL | 28 | 2910 | 2500 | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960 | 760 | |
| 24B | 3-6 CL | 28 | 3290 | 2830 | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860 | | | | | | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| | | | | | 20B | 1 | 24 | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 | |
| | | | | | 24B | 1 | 28 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2450 | 2110 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 | |
| 24B | 3 @ 6 CL | 28 | 2820 | 2430 | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930 | 730 | | | | | | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 20B | 1 | 24 | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2610 | 2240 | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860 | 680 | |
| | | | | | 24B | 1 | 28 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2710 | 2330 | 2110 | 1870 | 1650 | 1440 | 1220 | 1080 | 890 | 700 | |
| 24B | 3 @ 6 CL | 28 | 3090 | 2660 | 2410 | 2130 | 1880 | 1640 | 1390 | 1240 | 1020 | 800 | | | | | | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 | |
| | | | | | 20B | 1 | 24 | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| | | | | | 24B | 1 | 28 | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 | |
| 24B | 3 @ 6 CL | 28 | 3180 | 2730 | 2480 | 2190 | 1940 | 1690 | 1430 | 1270 | 1050 | 830 | | | | | | |

STYLE "S" 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 DEPTH AND 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" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 20B | 1 | 24 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 20B | 2-6 CL | 24 | 2630 | 2260 | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870 | 680 |
| | | | | | 24B | 1 | 28 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 24B | 2-6 CL | 28 | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 |
| | | | | | 24B | 3-6 CL | 28 | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 20B | 1 | 24 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 20B | 2-6 CL | 24 | 2930 | 2520 | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970 | 760 |
| | | | | | 24B | 1 | 28 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 24B | 2-6 CL | 28 | 3210 | 2760 | 2500 | 2210 | 1960 | 1700 | 1440 | 1280 | 1060 | 830 |
| | | | | | 24B | 3-6 CL | 28 | 3660 | 3150 | 2850 | 2530 | 2230 | 1940 | 1650 | 1460 | 1210 | 950 |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 20B | 1 | 24 | 2320 | 2000 | 1810 | 1600 | 1420 | 1230 | 1040 | 930 | 770 | 600 |
| | | | | | 20B | 2-6 CL | 24 | 3070 | 2640 | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800 |
| | | | | | 24B | 1 | 28 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| | | | | | 24B | 2-6 CL | 28 | 3270 | 2810 | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850 |
| | | | | | 24B | 3-6 CL | 28 | 3700 | 3180 | 2890 | 2550 | 2260 | 1960 | 1670 | 1480 | 1220 | 960 |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 20B | 1 | 24 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 |
| | | | | | 20B | 2-6 CL | 24 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 |
| | | | | | 24B | 2-6 CL | 28 | 2830 | 2430 | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930 | 740 |
| | | | | | 24B | 3-6 CL | 28 | 3250 | 2800 | 2540 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 850 |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| | | | | | 20B | 1 | 24 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 20B | 2-6 CL | 24 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 |
| | | | | | 24B | 1 | 28 | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 |
| | | | | | 24B | 2-6 CL | 28 | 2920 | 2510 | 2280 | 2010 | 1780 | 1550 | 1310 | 1170 | 960 | 760 |
| | | | | | 24B | 3-6 CL | 28 | 3330 | 2860 | 2600 | 2300 | 2030 | 1760 | 1500 | 1330 | 1100 | 870 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 |
| | | | | | 20B | 1 | 24 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 |
| | | | | | 20B | 2-6 CL | 24 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| | | | | | 24B | 1 | 28 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 2-6 CL | 28 | 3000 | 2580 | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990 | 780 |
| | | | | | 24B | 3-6 CL | 28 | 3390 | 2920 | 2640 | 2340 | 2070 | 1800 | 1530 | 1360 | 1120 | 880 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 20B | 1 | 24 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 |
| | | | | | 20B | 2-6 CL | 24 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| | | | | | 24B | 1 | 28 | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 |
| | | | | | 24B | 2-6 CL | 28 | 2780 | 2390 | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920 | 720 |
| | | | | | 24B | 3-6 CL | 28 | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2000 | 1720 | 1560 | 1380 | 1220 | 1060 | 900 | 800 | 660 | 520 |
| | | | | | 20B | 2-6 CL | 24 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 |
| | | | | | 24B | 1 | 28 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 |
| | | | | | 24B | 2-6 CL | 28 | 2870 | 2470 | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950 | 750 |
| | | | | | 24B | 3-6 CL | 28 | 3270 | 2810 | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 2020 | 1740 | 1580 | 1390 | 1230 | 1070 | 910 | 810 | 670 | 530 |
| | | | | | 20B | 1 | 24 | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 |
| | | | | | 20B | 2-6 CL | 24 | 2630 | 2260 | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870 | 680 |
| | | | | | 24B | 1 | 28 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| | | | | | 24B | 2-6 CL | 28 | 2950 | 2540 | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970 | 770 |
| | | | | | 24B | 3-6 CL | 28 | 3330 | 2860 | 2600 | 2300 | 2030 | 1760 | 1500 | 1330 | 1100 | 870 |

Note: Copper tube furnished flared one end standard.

STYLE "S" 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 DEPTH AND 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 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 | |
| | | | | | 20B | 1 | 24 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| | | | | | 20B | 2-6 CL | 24 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 24B | 1 | 28 | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 | |
| | | | | | 24B | 2-6 CL | 28 | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 | |
| 24B | 3-6 CL | 28 | 2610 | 2240 | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860 | 680 | | | | | | |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |
| | | | | | 20B | 1 | 24 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 | |
| | | | | | 20B | 2-6 CL | 24 | 2380 | 2050 | 1860 | 1640 | 1450 | 1260 | 1070 | 950 | 790 | 620 | |
| | | | | | 24B | 1 | 28 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 24B | 2-6 CL | 28 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 | |
| 24B | 3-6 CL | 28 | 2840 | 2440 | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940 | 740 | | | | | | |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1655 | 1420 | 1290 | 1140 | 1010 | 880 | 740 | 660 | 550 | 430 | |
| | | | | | 20B | 1 | 24 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 | |
| | | | | | 20B | 2-6 CL | 24 | 2435 | 2090 | 1900 | 1680 | 1490 | 1290 | 1100 | 970 | 800 | 630 | |
| | | | | | 24B | 1 | 28 | 1825 | 1570 | 1420 | 1260 | 1110 | 970 | 820 | 730 | 600 | 470 | |
| | | | | | 24B | 2-6 CL | 28 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | |
| 24B | 3-6 CL | 28 | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 | | | | | | |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 | |
| | | | | | 20B | 1 | 24 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 | |
| | | | | | 20B | 2-6 CL | 24 | 2020 | 1740 | 1580 | 1390 | 1230 | 1070 | 910 | 810 | 670 | 530 | |
| | | | | | 24B | 1 | 28 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 24B | 2-6 CL | 28 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 | |
| 24B | 3-6 CL | 28 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 | | | | | | |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 | |
| | | | | | 20B | 1 | 24 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 | |
| | | | | | 20B | 2-6 CL | 24 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 | |
| | | | | | 24B | 1 | 28 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 | |
| | | | | | 24B | 2-6 CL | 28 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 | |
| 24B | 3-6 CL | 28 | 2830 | 2430 | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930 | 740 | | | | | | |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1645 | 1410 | 1280 | 1140 | 1000 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 20B | 1 | 24 | 1750 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 | |
| | | | | | 20B | 2-6 CL | 24 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| | | | | | 24B | 1 | 28 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 | |
| | | | | | 24B | 2-6 CL | 28 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| 24B | 3-6 CL | 28 | 2820 | 2430 | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930 | 730 | | | | | | |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14B | 1 | 18 | 1200 | 1030 | 940 | 830 | 730 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 20B | 1 | 24 | 1230 | 1060 | 960 | 850 | 750 | 650 | 550 | 490 | 410 | 320 | |
| | | | | | 20B | 2-6 CL | 24 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 | |
| | | | | | 24B | 1 | 28 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 | |
| | | | | | 24B | 2-6 CL | 28 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 | |
| 24B | 3-6 CL | 28 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 | | | | | | |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 | |
| | | | | | 20B | 1 | 24 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| | | | | | 20B | 2-6 CL | 24 | 2110 | 1810 | 1650 | 1460 | 1290 | 1120 | 950 | 840 | 700 | 550 | |
| | | | | | 24B | 1 | 28 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 | |
| | | | | | 24B | 2-6 CL | 28 | 2180 | 1870 | 1700 | 1500 | 1330 | 1160 | 980 | 870 | 720 | 570 | |
| 24B | 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 "S" SLOPE TOP

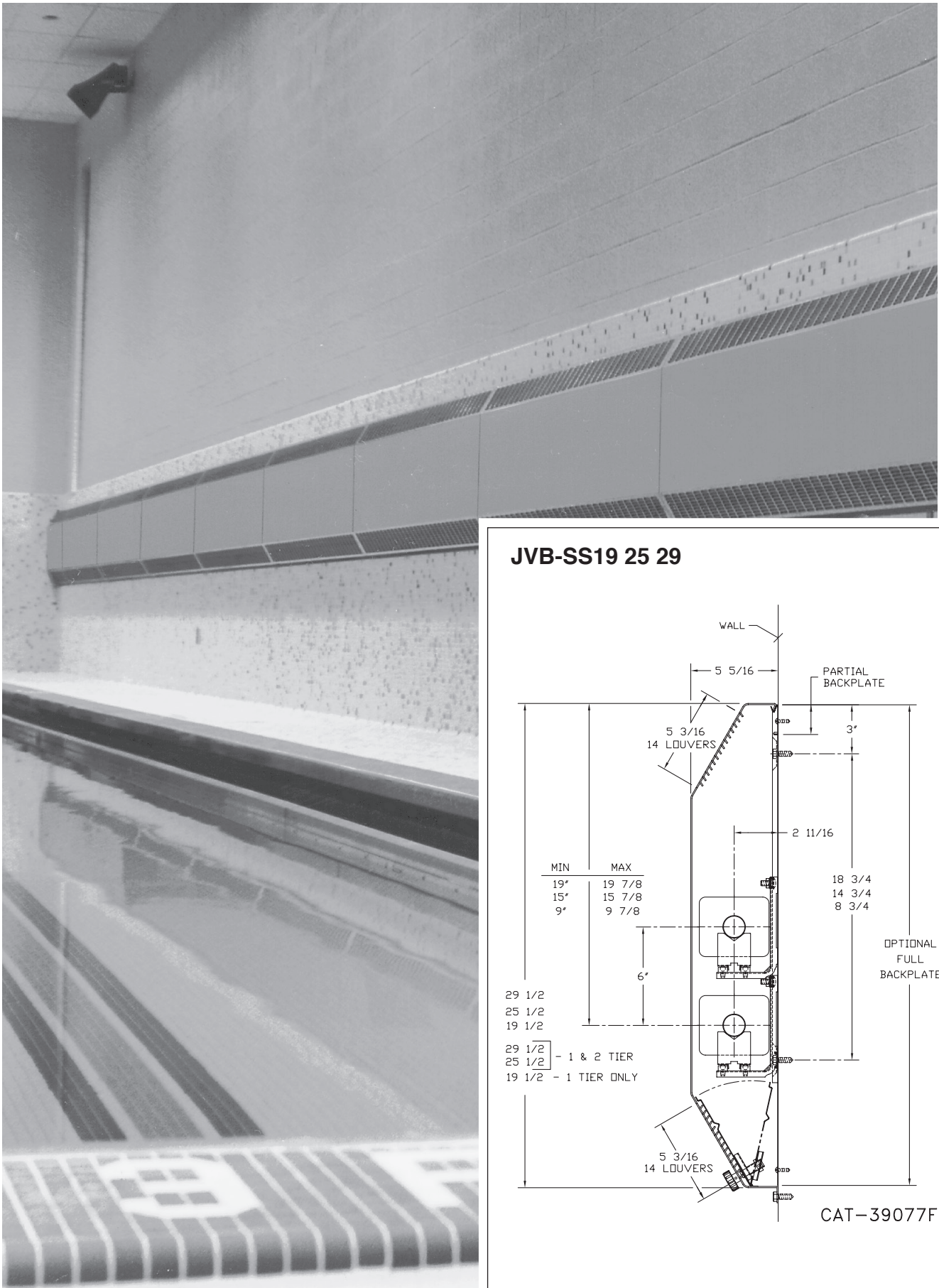
INVERTED ENCLOSURE APPLICATION



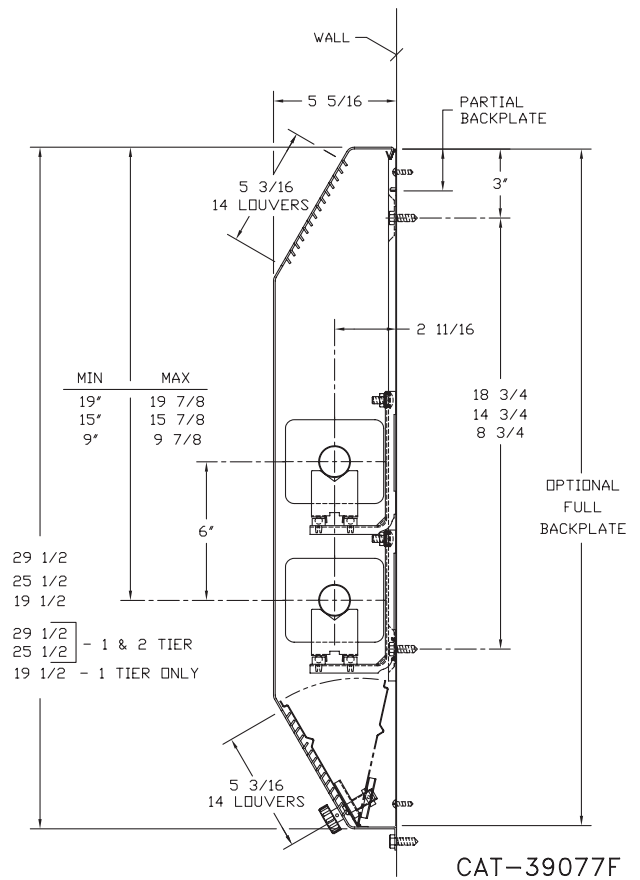
8", 11", 14", 20" and 24" high Versa-Line enclosures can be inverted using standard brackets and ball bearing hangers.

Consult factory for hanger & bracket mounting.

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



JVB-SS19 25 29



STYLE "SS" 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 HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 19-1/2B | 1 | - | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 |
| | | | | | 25-1/2B | 1 | - | 1305 | 1120 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 25-1/2B | 2-6 CL | - | 1985 | 1710 | 1550 | 1370 | 1210 | 1050 | 890 | 790 | 660 | 520 |
| | | | | | 29-1/2B | 1 | - | 1370 | 1180 | 1070 | 950 | 840 | 730 | 620 | 550 | 450 | 360 |
| | | | | | 29-1/2B | 2-6 CL | - | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 29-1/2B | 3-6 CL | - | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 19-1/2B | 1 | - | 1470 | 1260 | 1150 | 1010 | 900 | 780 | 660 | 590 | 490 | 380 |
| | | | | | 25-1/2B | 1 | - | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 25-1/2B | 2-6 CL | - | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 |
| | | | | | 29-1/2B | 1 | - | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 29-1/2B | 2-6 CL | - | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |
| | | | | | 29-1/2B | 3-6 CL | - | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 19-1/2B | 1 | - | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 25-1/2B | 1 | - | 1805 | 1550 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 |
| | | | | | 25-1/2B | 2-6 CL | - | 2435 | 2090 | 1900 | 1680 | 1490 | 1290 | 1100 | 970 | 800 | 630 |
| | | | | | 29-1/2B | 1 | - | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 29-1/2B | 2-6 CL | - | 2685 | 2310 | 2090 | 1850 | 1640 | 1420 | 1210 | 1070 | 890 | 700 |
| | | | | | 29-1/2B | 3-6 CL | - | 3030 | 2610 | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790 |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 19-1/2B | 1 | - | 1330 | 1140 | 1040 | 920 | 810 | 700 | 600 | 530 | 440 | 350 |
| | | | | | 25-1/2B | 1 | - | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 25-1/2B | 2-6 CL | - | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| | | | | | 29-1/2B | 1 | - | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 29-1/2B | 2-6 CL | - | 2235 | 1920 | 1740 | 1540 | 1360 | 1180 | 1010 | 890 | 740 | 580 |
| | | | | | 29-1/2B | 3-6 CL | - | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 19-1/2B | 1 | - | 1535 | 1320 | 1200 | 1060 | 940 | 810 | 690 | 610 | 510 | 400 |
| | | | | | 25-1/2B | 1 | - | 1640 | 1410 | 1280 | 1130 | 1000 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 25-1/2B | 2-6 CL | - | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 |
| | | | | | 29-1/2B | 1 | - | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 29-1/2B | 2-6 CL | - | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 29-1/2B | 3-6 CL | - | 2720 | 2340 | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900 | 710 |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 19-1/2B | 1 | - | 1665 | 1430 | 1300 | 1150 | 1020 | 880 | 750 | 670 | 550 | 430 |
| | | | | | 25-1/2B | 1 | - | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| | | | | | 25-1/2B | 2-6 CL | - | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 29-1/2B | 1 | - | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 29-1/2B | 2-6 CL | - | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 29-1/2B | 3-6 CL | - | 2840 | 2440 | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940 | 740 |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 19-1/2B | 1 | - | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| | | | | | 25-1/2B | 1 | - | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 25-1/2B | 2-6 CL | - | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 29-1/2B | 1 | - | 1375 | 1180 | 1070 | 950 | 840 | 730 | 620 | 550 | 450 | 360 |
| | | | | | 29-1/2B | 2-6 CL | - | 2115 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 |
| | | | | | 29-1/2B | 3-6 CL | - | 2430 | 2090 | 1900 | 1680 | 1480 | 1290 | 1090 | 970 | 800 | 630 |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 19-1/2B | 1 | - | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 25-1/2B | 1 | - | 1625 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 25-1/2B | 2-6 CL | - | 2255 | 1940 | 1760 | 1560 | 1380 | 1200 | 1010 | 900 | 740 | 590 |
| | | | | | 29-1/2B | 1 | - | 1685 | 1450 | 1310 | 1160 | 1030 | 890 | 760 | 670 | 560 | 440 |
| | | | | | 29-1/2B | 2-6 CL | - | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 |
| | | | | | 29-1/2B | 3-6 CL | - | 2670 | 2300 | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880 | 690 |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 19-1/2B | 1 | - | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 25-1/2B | 1 | - | 1840 | 1580 | 1440 | 1270 | 1120 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 25-1/2B | 2-6 CL | - | 2165 | 1860 | 1690 | 1490 | 1320 | 1150 | 970 | 870 | 710 | 560 |
| | | | | | 29-1/2B | 1 | - | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 |
| | | | | | 29-1/2B | 2-6 CL | - | 2425 | 2090 | 1890 | 1670 | 1480 | 1290 | 1090 | 970 | 800 | 630 |
| | | | | | 29-1/2B | 3-6 CL | - | 2740 | 2360 | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900 | 710 |
| 3/4" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 19-1/2B | 1 | - | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 25-1/2B | 1 | - | 1415 | 1220 | 1100 | 980 | 860 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 25-1/2B | 2-6 CL | - | 2180 | 1870 | 1700 | 1500 | 1330 | 1160 | 980 | 870 | 720 | 570 |
| | | | | | 29-1/2B | 1 | - | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| | | | | | 29-1/2B | 2-6 CL | - | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 29-1/2B | 3-6 CL | - | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 19-1/2B | 1 | - | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 25-1/2B | 1 | - | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| | | | | | 25-1/2B | 2-6 CL | - | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 |
| | | | | | 29-1/2B | 1 | - | 1800 | 1550 | 1400 | 1240 | 1100 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 29-1/2B | 2-6 CL | - | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 |
| | | | | | 29-1/2B | 3-6 CL | - | 2910 | 2500 | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960 | 760 |

STYLE "SS" 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 HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 19-1/2B | 1 | - | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 25-1/2B | 1 | - | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 |
| | | | | | 25-1/2B | 2-6 CL | - | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 |
| | | | | | 29-1/2B | 1 | - | 1990 | 1710 | 1550 | 1370 | 1210 | 1050 | 900 | 800 | 660 | 520 |
| | | | | | 29-1/2B | 2-6 CL | - | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 |
| | | | | | 29-1/2B | 3-6 CL | - | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 19-1/2B | 1 | - | 1425 | 1230 | 1110 | 980 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 25-1/2B | 1 | - | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 25-1/2B | 2-6 CL | - | 2235 | 1920 | 1740 | 1540 | 1360 | 1180 | 1010 | 890 | 740 | 580 |
| | | | | | 29-1/2B | 1 | - | 1565 | 1350 | 1220 | 1080 | 950 | 830 | 700 | 630 | 520 | 410 |
| | | | | | 29-1/2B | 2-6 CL | - | 2445 | 2100 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 |
| | | | | | 29-1/2B | 3-6 CL | - | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 19-1/2B | 1 | - | 1625 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 25-1/2B | 1 | - | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 25-1/2B | 2-6 CL | - | 2325 | 2000 | 1810 | 1600 | 1420 | 1230 | 1050 | 930 | 770 | 600 |
| | | | | | 29-1/2B | 1 | - | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 29-1/2B | 2-6 CL | - | 2520 | 2170 | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830 | 660 |
| | | | | | 29-1/2B | 3-6 CL | - | 2870 | 2470 | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950 | 750 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 19-1/2B | 1 | - | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 |
| | | | | | 25-1/2B | 1 | - | 2020 | 1740 | 1580 | 1390 | 1230 | 1070 | 910 | 810 | 670 | 530 |
| | | | | | 25-1/2B | 2-6 CL | - | 2315 | 1990 | 1810 | 1600 | 1410 | 1230 | 1040 | 930 | 760 | 600 |
| | | | | | 29-1/2B | 1 | - | 2165 | 1860 | 1690 | 1490 | 1320 | 1150 | 970 | 870 | 710 | 560 |
| | | | | | 29-1/2B | 2-6 CL | - | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| | | | | | 29-1/2B | 3-6 CL | - | 2930 | 2520 | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970 | 760 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 19-1/2B | 1 | - | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 25-1/2B | 1 | - | 1475 | 1270 | 1150 | 1020 | 900 | 780 | 660 | 590 | 490 | 380 |
| | | | | | 25-1/2B | 2-6 CL | - | 2195 | 1890 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 29-1/2B | 1 | - | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 29-1/2B | 2-6 CL | - | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 29-1/2B | 3-6 CL | - | 2760 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 19-1/2B | 1 | - | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 25-1/2B | 1 | - | 1725 | 1480 | 1350 | 1190 | 1050 | 910 | 780 | 690 | 570 | 450 |
| | | | | | 25-1/2B | 2-6 CL | - | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 29-1/2B | 1 | - | 1815 | 1560 | 1420 | 1250 | 1110 | 960 | 820 | 730 | 600 | 470 |
| | | | | | 29-1/2B | 2-6 CL | - | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 |
| | | | | | 29-1/2B | 3-6 CL | - | 2830 | 2430 | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930 | 740 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 19-1/2B | 1 | - | 1745 | 1500 | 1360 | 1200 | 1060 | 920 | 790 | 700 | 580 | 450 |
| | | | | | 25-1/2B | 1 | - | 1985 | 1710 | 1550 | 1370 | 1210 | 1050 | 890 | 790 | 660 | 520 |
| | | | | | 25-1/2B | 2-6 CL | - | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 |
| | | | | | 29-1/2B | 1 | - | 2135 | 1840 | 1670 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 560 |
| | | | | | 29-1/2B | 2-6 CL | - | 2545 | 2190 | 1990 | 1760 | 1550 | 1350 | 1150 | 1020 | 840 | 660 |
| | | | | | 29-1/2B | 3-6 CL | - | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 |

Note: Copper tube furnished flared one end standard.

STYLE "SS" 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 HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | S43 | 4-1/4" SQ. | 32 | .032 | 19-1/2B | 1 | - | 1215 | 1040 | 950 | 840 | 740 | 640 | 550 | 490 | 400 | 320 |
| | | | | | 25-1/2B | 1 | - | 1255 | 1080 | 980 | 870 | 770 | 670 | 560 | 500 | 410 | 330 |
| | | | | | 25-1/2B | 2-6 CL | - | 1980 | 1700 | 1540 | 1370 | 1210 | 1050 | 890 | 790 | 650 | 510 |
| | | | | | 29-1/2B | 1 | - | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 |
| | | | | | 29-1/2B | 2-6 CL | - | 2045 | 1760 | 1600 | 1410 | 1250 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 29-1/2B | 3-6 CL | - | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 19-1/2B | 1 | - | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 25-1/2B | 1 | - | 1445 | 1240 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 25-1/2B | 2-6 CL | - | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 |
| | | | | | 29-1/2B | 1 | - | 1495 | 1290 | 1170 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 29-1/2B | 2-6 CL | - | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 29-1/2B | 3-6 CL | - | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 19-1/2B | 1 | - | 1425 | 1230 | 1110 | 980 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 25-1/2B | 1 | - | 1515 | 1300 | 1180 | 1050 | 920 | 800 | 680 | 610 | 500 | 390 |
| | | | | | 25-1/2B | 2-6 CL | - | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 29-1/2B | 1 | - | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 29-1/2B | 2-6 CL | - | 2295 | 1970 | 1790 | 1580 | 1400 | 1220 | 1030 | 920 | 760 | 600 |
| | | | | | 29-1/2B | 3-6 CL | - | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 19-1/2B | 1 | - | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| | | | | | 25-1/2B | 1 | - | 1185 | 1020 | 920 | 820 | 720 | 630 | 530 | 470 | 390 | 310 |
| | | | | | 25-1/2B | 2-6 CL | - | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 |
| | | | | | 29-1/2B | 1 | - | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| | | | | | 29-1/2B | 2-6 CL | - | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| | | | | | 29-1/2B | 3-6 CL | - | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 19-1/2B | 1 | - | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 25-1/2B | 1 | - | 1470 | 1260 | 1150 | 1010 | 900 | 780 | 660 | 590 | 490 | 380 |
| | | | | | 25-1/2B | 2-6 CL | - | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 |
| | | | | | 29-1/2B | 1 | - | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 29-1/2B | 2-6 CL | - | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 29-1/2B | 3-6 CL | - | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 19-1/2B | 1 | - | 1415 | 1220 | 1100 | 980 | 860 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 25-1/2B | 1 | - | 1505 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 25-1/2B | 2-6 CL | - | 2150 | 1850 | 1680 | 1480 | 1310 | 1140 | 970 | 860 | 710 | 560 |
| | | | | | 29-1/2B | 1 | - | 1555 | 1340 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 |
| | | | | | 29-1/2B | 2-6 CL | - | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 |
| | | | | | 29-1/2B | 3-6 CL | - | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 19-1/2B | 1 | - | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 |
| | | | | | 25-1/2B | 1 | - | 1110 | 950 | 870 | 770 | 680 | 590 | 500 | 440 | 370 | 290 |
| | | | | | 25-1/2B | 2-6 CL | - | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 |
| | | | | | 29-1/2B | 1 | - | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| | | | | | 29-1/2B | 2-6 CL | - | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 |
| | | | | | 29-1/2B | 3-6 CL | - | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 19-1/2B | 1 | - | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 |
| | | | | | 25-1/2B | 1 | - | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 |
| | | | | | 25-1/2B | 2-6 CL | - | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 |
| | | | | | 29-1/2B | 1 | - | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 29-1/2B | 2-6 CL | - | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 29-1/2B | 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.

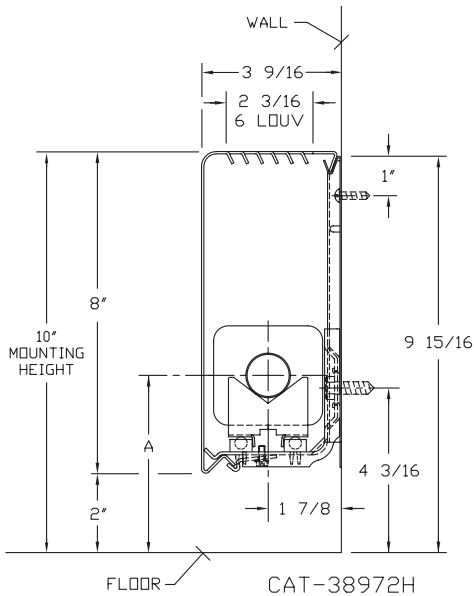


JVK-T8

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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.

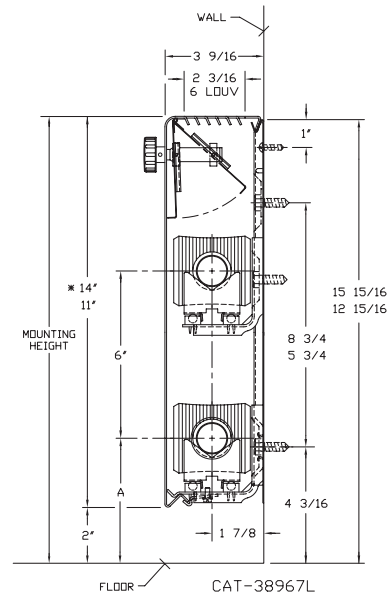
Not recommended for steam applications, consult factory.



JVK-T11 14

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "KT" 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 DEPTH AND 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" | R01 | 2-1/2" x 2-1/4" | 50 | .011 | 8K* | 1 | 10 | 750 | 650 | 590 | 520 | 460 | 400 | 340 | 300 | 250 | 200 | |
| | | | | | 11K | 1 | 13 | 810 | 700 | 630 | 560 | 490 | 430 | 360 | 320 | 270 | 210 | |
| | | | | | 14K | 1 | 16 | 870 | 750 | 680 | 600 | 530 | 460 | 390 | 350 | 290 | 230 | |
| | | | | | 14K* | 2-5 CL | 16 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 | |
| 3/4" | R02 | 2-1/2" x 2-3/4" | 60 | .010 | 8K* | 1 | 10 | 900 | 770 | 700 | 620 | 550 | 480 | 410 | 360 | 300 | 250 | |
| | | | | | 11K | 1 | 13 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 | |
| | | | | | 14K | 1 | 16 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 | |
| | | | | | 14K* | 2-5 CL | 16 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 | |
| 1" | R03 | 2-1/2" x 2-3/4" | 55 | .011 | 8K* | 1 | 10 | 880 | 760 | 690 | 610 | 540 | 470 | 400 | 350 | 290 | 230 | |
| | | | | | 11K | 1 | 13 | 940 | 810 | 730 | 650 | 570 | 500 | 420 | 380 | 310 | 240 | |
| | | | | | 14K | 1 | 16 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 | |
| | | | | | 14K* | 2-5 CL | 16 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| 3/4" | R04 | 3-3/4" x 2-3/4" | 50 | .014 | 8K* | 1 | 10 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 | |
| | | | | | 11K | 1 | 13 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 | |
| | | | | | 14K | 1 | 16 | 1200 | 1030 | 940 | 830 | 730 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 14K* | 2-5 CL | 16 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 | |
| 1" | R05 | 3-3/4" x 2-3/4" | 50 | .011 | 8K* | 1 | 10 | 1070 | 920 | 830 | 740 | 650 | 570 | 480 | 430 | 350 | 280 | |
| | | | | | 11K | 1 | 13 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| | | | | | 14K | 1 | 16 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 | |
| | | | | | 14K* | 2-5 CL | 16 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |
| 1-1/4" | R08 | 3-3/4" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1020 | 880 | 800 | 700 | 620 | 540 | 460 | 410 | 340 | 270 | |
| | | | | | 11K | 1 | 13 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 | |
| | | | | | 14K | 1 | 16 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 | |
| | | | | | 14K* | 2-5 CL | 16 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| 1" | R07 | 5" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 11K | 1 | 13 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 | |
| | | | | | 14K | 1 | 16 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 | |
| | | | | | 14K* | 2-5 CL | 16 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| 1-1/4" | R10 | 5" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 | |
| | | | | | 11K | 1 | 13 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 | |
| | | | | | 14K | 1 | 16 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 | |
| | | | | | 14K* | 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 DEPTH AND 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" | R11 | 3-3/4" x 2-3/4" | 40 | .024 | 8K* | 1 | 10 | 830 | 710 | 650 | 570 | 510 | 440 | 370 | 330 | 270 | 220 | |
| | | | | | 11K | 1 | 13 | 890 | 770 | 690 | 610 | 540 | 470 | 400 | 360 | 290 | 230 | |
| | | | | | 14K | 1 | 16 | 980 | 840 | 760 | 680 | 600 | 520 | 440 | 390 | 320 | 250 | |
| | | | | | 14K* | 2-5 CL | 16 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 | |
| 1" | R15 | 5" x 2-3/4" | 50 | .024 | 8K* | 1 | 10 | 890 | 770 | 690 | 610 | 540 | 470 | 400 | 360 | 290 | 230 | |
| | | | | | 11K | 1 | 13 | 950 | 820 | 740 | 660 | 580 | 500 | 430 | 380 | 310 | 250 | |
| | | | | | 14K | 1 | 16 | 1040 | 890 | 810 | 720 | 630 | 550 | 470 | 420 | 340 | 270 | |
| | | | | | 14K* | 2-5 CL | 16 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| 1-1/4" | R16 | 5" x 2-3/4" | 50 | .024 | 8K* | 1 | 10 | 910 | 780 | 710 | 630 | 560 | 480 | 410 | 360 | 300 | 240 | |
| | | | | | 11K | 1 | 13 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 | |
| | | | | | 14K | 1 | 16 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 | |
| | | | | | 14K* | 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.

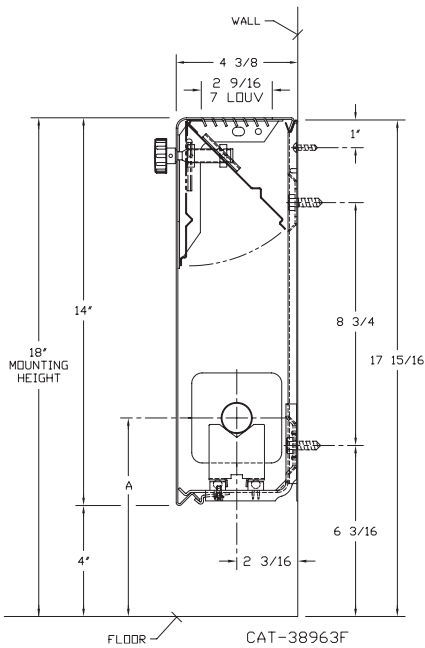
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



JVA-T

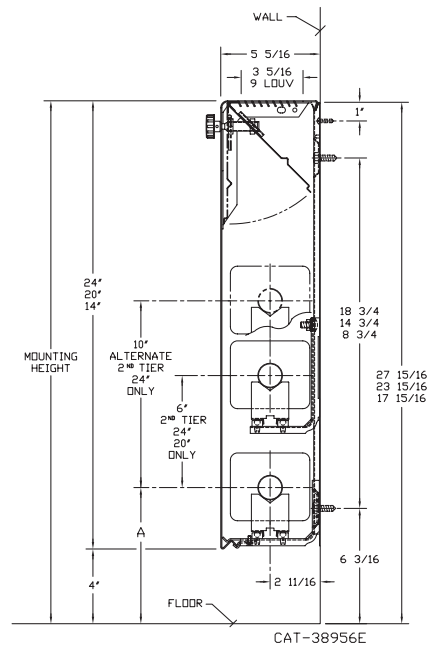
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A |
|-------------------|-------------------------|---------------|----------|
| 3/4" COPPER | 3 1/4 x 3 1/4 | 2 | 7" |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 7 3/16" |
| 1 1/4" COPPER | 3 1/4 x 3 1/4 | 1 | 6 5/8" |
| 1" STEEL | 3 1/4 x 3 1/4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

JVB-T

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "T" 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 DEPTH AND 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 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 | |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1280 | 1100 | 1000 | 880 | 780 | 680 | 580 | 510 | 420 | 330 | |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 940 | 810 | 730 | 650 | 570 | 500 | 420 | 380 | 310 | 240 | |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 | |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 | |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 900 | 770 | 700 | 620 | 550 | 480 | 410 | 360 | 300 | 230 | |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1040 | 890 | 810 | 720 | 630 | 550 | 470 | 420 | 340 | 270 | |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 | |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 | |
| | | | | | 20B | 1 | 24 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 20B | 2-6 CL | 24 | 2015 | 1730 | 1570 | 1390 | 1230 | 1070 | 910 | 810 | 660 | 520 | |
| | | | | | 24B | 1 | 28 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 | |
| | | | | | 24B | 2-6 CL | 28 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 | |
| 24B | 3-6 CL | 28 | 2420 | 2080 | 1890 | 1670 | 1480 | 1280 | 1090 | 970 | 800 | 630 | | | | | | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 | |
| | | | | | 20B | 1 | 24 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 20B | 2-6 CL | 24 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 | |
| | | | | | 24B | 1 | 28 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 | |
| | | | | | 24B | 2-6 CL | 28 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| 24B | 3-6 CL | 28 | 2800 | 2410 | 2180 | 1930 | 1710 | 1480 | 1260 | 1120 | 920 | 730 | | | | | | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 20B | 1 | 24 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 | |
| | | | | | 20B | 2-6 CL | 24 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 | |
| | | | | | 24B | 1 | 28 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 | |
| | | | | | 24B | 2-6 CL | 28 | 2910 | 2500 | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960 | 760 | |
| 24B | 3-6 CL | 28 | 3290 | 2830 | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860 | | | | | | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 20B | 1 | 24 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| | | | | | 20B | 2-6 CL | 24 | 2260 | 1940 | 1760 | 1560 | 1380 | 1200 | 1020 | 900 | 750 | 590 | |
| | | | | | 24B | 1 | 28 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 | |
| | | | | | 24B | 2-6 CL | 28 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 | |
| 24B | 3-6 CL | 28 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 | | | | | | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 20B | 1 | 24 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 | |
| | | | | | 20B | 2-6 CL | 24 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 | |
| | | | | | 24B | 1 | 28 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 24B | 2-6 CL | 28 | 2530 | 2180 | 1970 | 1750 | 1540 | 1340 | 1140 | 1010 | 830 | 660 | |
| 24B | 3-6 CL | 28 | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 | | | | | | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 | |
| | | | | | 20B | 1 | 24 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 | |
| | | | | | 20B | 2-6 CL | 24 | 2520 | 2170 | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830 | 660 | |
| | | | | | 24B | 1 | 28 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 | |
| | | | | | 24B | 2-6 CL | 28 | 2730 | 2350 | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900 | 710 | |
| 24B | 3-6 CL | 28 | 3080 | 2650 | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800 | | | | | | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1350 | 1160 | 1050 | 930 | 820 | 720 | 610 | 540 | 450 | 350 | |
| | | | | | 20B | 1 | 24 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 | |
| | | | | | 24B | 1 | 28 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 | |
| 24B | 3 @ 6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | | | | | | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |
| | | | | | 20B | 1 | 24 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2380 | 2050 | 1860 | 1640 | 1450 | 1260 | 1070 | 950 | 790 | 620 | |
| | | | | | 24B | 1 | 28 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 | |
| 24B | 3 @ 6 CL | 28 | 2830 | 2430 | 2210 | 1950 | 1730 | 1500 | 1270 | 1130 | 930 | 740 | | | | | | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 20B | 1 | 24 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24B | 1 | 28 | 2010 | 1730 | 1570 | 1390 | 1230 | 1070 | 900 | 800 | 660 | 520 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| 24B | 3 @ 6 CL | 28 | 2990 | 2570 | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990 | 780 | | | | | | |

STYLE "T" 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 DEPTH AND 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" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 20B | 1 | 24 | 1595 | 1370 | 1240 | 1100 | 970 | 850 | 720 | 640 | 530 | 410 |
| | | | | | 20B | 2-6 CL | 24 | 2215 | 1900 | 1730 | 1530 | 1350 | 1170 | 1000 | 890 | 730 | 580 |
| | | | | | 24B | 1 | 28 | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 24B | 2-6 CL | 28 | 2305 | 1980 | 1800 | 1590 | 1410 | 1220 | 1040 | 920 | 760 | 600 |
| | | | | | 24B | 3-6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 |
| | | | | | 20B | 1 | 24 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 20B | 2-6 CL | 24 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 |
| | | | | | 24B | 1 | 28 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 |
| | | | | | 24B | 2-6 CL | 28 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 |
| | | | | | 24B | 3-6 CL | 28 | 2940 | 2530 | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970 | 760 |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1745 | 1500 | 1360 | 1200 | 1060 | 920 | 790 | 700 | 580 | 450 |
| | | | | | 20B | 1 | 24 | 2000 | 1720 | 1560 | 1380 | 1220 | 1060 | 900 | 800 | 660 | 520 |
| | | | | | 20B | 2-6 CL | 24 | 2465 | 2120 | 1920 | 1700 | 1500 | 1310 | 1110 | 990 | 810 | 640 |
| | | | | | 24B | 1 | 28 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 |
| | | | | | 24B | 2-6 CL | 28 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 |
| | | | | | 24B | 3-6 CL | 28 | 2800 | 2410 | 2180 | 1930 | 1710 | 1480 | 1260 | 1120 | 920 | 730 |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 20B | 1 | 24 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 |
| | | | | | 20B | 2-6 CL | 24 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 1 | 28 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 24B | 2-6 CL | 28 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| | | | | | 24B | 3-6 CL | 28 | 2840 | 2440 | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940 | 740 |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 20B | 1 | 24 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| | | | | | 20B | 2-6 CL | 24 | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 |
| | | | | | 24B | 2-6 CL | 28 | 2670 | 2300 | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880 | 690 |
| | | | | | 24B | 3-6 CL | 28 | 3040 | 2610 | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 |
| | | | | | 20B | 1 | 24 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 |
| | | | | | 20B | 2-6 CL | 24 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| | | | | | 24B | 1 | 28 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2840 | 2440 | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940 | 740 |
| | | | | | 24B | 3-6 CL | 28 | 3210 | 2760 | 2500 | 2210 | 1960 | 1700 | 1440 | 1280 | 1060 | 830 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 20B | 1 | 24 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 20B | 2-6 CL | 24 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 24B | 1 | 28 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 24B | 2-6 CL | 28 | 2430 | 2090 | 1900 | 1680 | 1480 | 1290 | 1090 | 970 | 800 | 630 |
| | | | | | 24B | 3-6 CL | 28 | 2790 | 2400 | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920 | 730 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 |
| | | | | | 20B | 1 | 24 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 20B | 2-6 CL | 24 | 2520 | 2170 | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830 | 660 |
| | | | | | 24B | 1 | 28 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 24B | 2-6 CL | 28 | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 |
| | | | | | 24B | 3-6 CL | 28 | 2990 | 2570 | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990 | 780 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 20B | 1 | 24 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| | | | | | 24B | 2-6 CL | 28 | 2780 | 2390 | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920 | 720 |
| | | | | | 24B | 3-6 CL | 28 | 3140 | 2700 | 2450 | 2170 | 1920 | 1660 | 1410 | 1260 | 1040 | 820 |

Notes: Copper tube furnished flared one end standard.

STYLE "T" TOP OUTLET

STEEL ELEMENTS

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

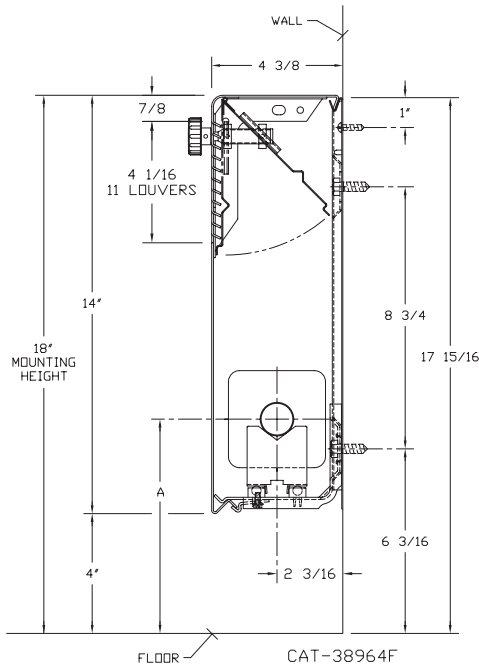
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 840 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 965 | 830 | 750 | 670 | 590 | 510 | 430 | 390 | 320 | 250 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1035 | 890 | 810 | 710 | 630 | 550 | 470 | 410 | 340 | 270 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 850 | 730 | 660 | 590 | 520 | 450 | 380 | 340 | 280 | 220 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1200 | 1030 | 940 | 830 | 730 | 640 | 540 | 480 | 400 | 310 |
| | | | | | 20B | 1 | 24 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| | | | | | 20B | 2-6 CL | 24 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 24B | 1 | 28 | 1280 | 1100 | 1000 | 880 | 780 | 680 | 580 | 510 | 420 | 330 |
| | | | | | 24B | 2-6 CL | 28 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 20B | 1 | 24 | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 20B | 2-6 CL | 24 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 24B | 1 | 28 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 24B | 2-6 CL | 28 | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1485 | 1280 | 1160 | 1020 | 910 | 790 | 670 | 590 | 490 | 390 |
| | | | | | 20B | 1 | 24 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 20B | 2-6 CL | 24 | 2255 | 1940 | 1760 | 1560 | 1380 | 1200 | 1010 | 900 | 740 | 590 |
| | | | | | 24B | 1 | 28 | 1635 | 1410 | 1280 | 1130 | 1000 | 870 | 740 | 650 | 540 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2325 | 2000 | 1810 | 1600 | 1420 | 1230 | 1050 | 930 | 770 | 600 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1100 | 950 | 860 | 760 | 670 | 580 | 500 | 440 | 360 | 290 |
| | | | | | 20B | 1 | 24 | 1150 | 990 | 900 | 790 | 700 | 610 | 520 | 460 | 380 | 300 |
| | | | | | 20B | 2-6 CL | 24 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 24B | 1 | 28 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 |
| | | | | | 24B | 2-6 CL | 28 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 |
| | | | | | 20B | 1 | 24 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 20B | 2-6 CL | 24 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 1 | 28 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 |
| | | | | | 24B | 2-6 CL | 28 | 2260 | 1940 | 1760 | 1560 | 1380 | 1200 | 1020 | 900 | 750 | 590 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1475 | 1270 | 1150 | 1020 | 900 | 780 | 660 | 590 | 490 | 380 |
| | | | | | 20B | 1 | 24 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 20B | 2-6 CL | 24 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 24B | 1 | 28 | 1625 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 24B | 2-6 CL | 28 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14B | 1 | 18 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 |
| | | | | | 20B | 1 | 24 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| | | | | | 20B | 2-6 CL | 24 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 24B | 1 | 28 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 |
| | | | | | 24B | 2-6 CL | 28 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 |
| | | | | | 20B | 1 | 24 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 20B | 2-6 CL | 24 | 1980 | 1700 | 1540 | 1370 | 1210 | 1050 | 890 | 790 | 650 | 510 |
| | | | | | 24B | 1 | 28 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| | | | | | 24B | 2-6 CL | 28 | 2020 | 1740 | 1580 | 1390 | 1230 | 1070 | 910 | 810 | 670 | 530 |
| 24B | 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.



JVA-F14

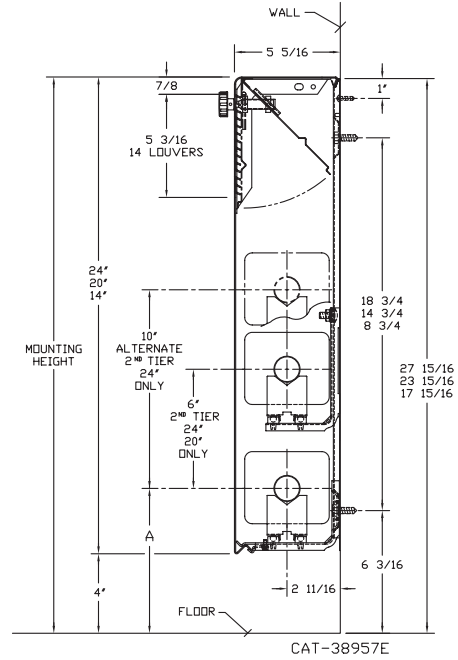
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A |
|-------------------|-------------------------|---------------|----------|
| 3/4 COPPER | 3 1/4 x 3 1/4 | 2 | 7" |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 7 3/16" |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 | 1 | 6 5/8" |
| 1" STEEL | 3 1/4 x 3 1/4 |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

JVB-F14 20 24

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "F" 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 DEPTH AND 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 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 20B | 1 | 24 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 20B | 2-6 CL | 24 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 1 | 28 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 24B | 2-6 CL | 28 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| 24B | 3-6 CL | 28 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 | | | | | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 20B | 1 | 24 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 20B | 2-6 CL | 24 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 |
| | | | | | 24B | 1 | 28 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 |
| | | | | | 24B | 2-6 CL | 28 | 2670 | 2300 | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880 | 690 |
| 24B | 3-6 CL | 28 | 3040 | 2610 | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790 | | | | | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2780 | 2390 | 2170 | 1920 | 1700 | 1470 | 1250 | 1110 | 920 | 720 |
| | | | | | 24B | 1 | 28 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 |
| | | | | | 24B | 2-6 CL | 28 | 2940 | 2530 | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970 | 760 |
| 24B | 3-6 CL | 28 | 3320 | 2860 | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860 | | | | | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 20B | 1 | 24 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 20B | 2-6 CL | 24 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| | | | | | 24B | 1 | 28 | 1640 | 1410 | 1280 | 1130 | 1000 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| 24B | 3-6 CL | 28 | 2920 | 2510 | 2280 | 2010 | 1780 | 1550 | 1310 | 1170 | 960 | 760 | | | | | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 20B | 1 | 24 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 |
| | | | | | 20B | 2-6 CL | 24 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 |
| | | | | | 24B | 1 | 28 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 24B | 2-6 CL | 28 | 2750 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 |
| 24B | 3-6 CL | 28 | 3130 | 2690 | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810 | | | | | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 20B | 1 | 24 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| | | | | | 20B | 2-6 CL | 24 | 2600 | 2240 | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860 | 680 |
| | | | | | 24B | 1 | 28 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |
| | | | | | 24B | 2-6 CL | 28 | 2760 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 |
| 24B | 3-6 CL | 28 | 3120 | 2680 | 2430 | 2150 | 1900 | 1650 | 1400 | 1250 | 1030 | 810 | | | | | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 20B | 1 | 24 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2430 | 2090 | 1900 | 1680 | 1480 | 1290 | 1090 | 970 | 800 | 630 |
| | | | | | 24B | 1 | 28 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 24B | 2 @ 6 CL | 28 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| 24B | 3 @ 6 CL | 28 | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 | | | | | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| | | | | | 20B | 1 | 24 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 |
| | | | | | 24B | 2 @ 6 CL | 28 | 2700 | 2320 | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890 | 700 |
| 24B | 3 @ 6 CL | 28 | 3080 | 2650 | 2400 | 2130 | 1880 | 1630 | 1390 | 1230 | 1020 | 800 | | | | | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| | | | | | 20B | 1 | 24 | 2070 | 1780 | 1610 | 1430 | 1260 | 1100 | 930 | 830 | 680 | 540 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 |
| | | | | | 24B | 2 @ 6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 |
| 24B | 3 @ 6 CL | 28 | 2990 | 2570 | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990 | 780 | | | | | |

STYLE "F" 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 DEPTH AND 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" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 20B | 1 | 24 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 20B | 2-6 CL | 24 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 24B | 2-6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 |
| 24B | 3-6 CL | 28 | 3050 | 2620 | 2380 | 2100 | 1860 | 1620 | 1370 | 1220 | 1010 | 790 | | | | | |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 20B | 1 | 24 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 20B | 2-6 CL | 24 | 2950 | 2540 | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970 | 770 |
| | | | | | 24B | 1 | 28 | 2290 | 1970 | 1790 | 1580 | 1400 | 1210 | 1030 | 920 | 760 | 600 |
| | | | | | 24B | 2-6 CL | 28 | 3000 | 2580 | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990 | 780 |
| 24B | 3-6 CL | 28 | 3420 | 2940 | 2670 | 2360 | 2090 | 1810 | 1540 | 1370 | 1130 | 890 | | | | | |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 20B | 1 | 24 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 |
| | | | | | 20B | 2-6 CL | 24 | 3012 | 2590 | 2350 | 2080 | 1840 | 1600 | 1360 | 1200 | 990 | 780 |
| | | | | | 24B | 1 | 28 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 2-6 CL | 28 | 3185 | 2740 | 2480 | 2200 | 1940 | 1690 | 1430 | 1270 | 1050 | 830 |
| 24B | 3-6 CL | 28 | 3600 | 3100 | 2810 | 2480 | 2200 | 1910 | 1620 | 1440 | 1190 | 940 | | | | | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 |
| | | | | | 20B | 1 | 24 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 20B | 2-6 CL | 24 | 2630 | 2260 | 2050 | 1810 | 1600 | 1390 | 1180 | 1050 | 870 | 680 |
| | | | | | 24B | 1 | 28 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 24B | 2-6 CL | 28 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 |
| 24B | 3-6 CL | 28 | 3090 | 2660 | 2410 | 2130 | 1880 | 1640 | 1390 | 1240 | 1020 | 800 | | | | | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 |
| | | | | | 20B | 1 | 24 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 20B | 2-6 CL | 24 | 2730 | 2350 | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900 | 710 |
| | | | | | 24B | 1 | 28 | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 |
| | | | | | 24B | 2-6 CL | 28 | 2860 | 2460 | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940 | 740 |
| 24B | 3-6 CL | 28 | 3260 | 2800 | 2540 | 2250 | 1990 | 1730 | 1470 | 1300 | 1080 | 850 | | | | | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1980 | 1700 | 1540 | 1370 | 1210 | 1050 | 890 | 790 | 650 | 510 |
| | | | | | 20B | 1 | 24 | 2260 | 1940 | 1760 | 1560 | 1380 | 1200 | 1020 | 900 | 750 | 590 |
| | | | | | 20B | 2-6 CL | 24 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| | | | | | 24B | 1 | 28 | 2430 | 2090 | 1900 | 1680 | 1480 | 1290 | 1090 | 970 | 800 | 630 |
| | | | | | 24B | 2-6 CL | 28 | 2930 | 2520 | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970 | 760 |
| 24B | 3-6 CL | 28 | 3310 | 2850 | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860 | | | | | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1640 | 1410 | 1280 | 1130 | 1000 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 20B | 1 | 24 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 |
| | | | | | 20B | 2-6 CL | 24 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| | | | | | 24B | 2-6 CL | 28 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 |
| 24B | 3-6 CL | 28 | 3040 | 2610 | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790 | | | | | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2000 | 1720 | 1560 | 1380 | 1220 | 1060 | 900 | 800 | 660 | 520 |
| | | | | | 20B | 2-6 CL | 24 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| | | | | | 24B | 1 | 28 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 |
| | | | | | 24B | 2-6 CL | 28 | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 |
| 24B | 3-6 CL | 28 | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | | | | | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 20B | 1 | 24 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 |
| | | | | | 20B | 2-6 CL | 24 | 2610 | 2240 | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860 | 680 |
| | | | | | 24B | 1 | 28 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 2-6 CL | 28 | 2870 | 2470 | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950 | 750 |
| 24B | 3-6 CL | 28 | 3240 | 2790 | 2530 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 840 | | | | | |

Note: Copper tube furnished flared one end standard.

STYLE "F" FRONT OUTLET

STEEL ELEMENTS

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

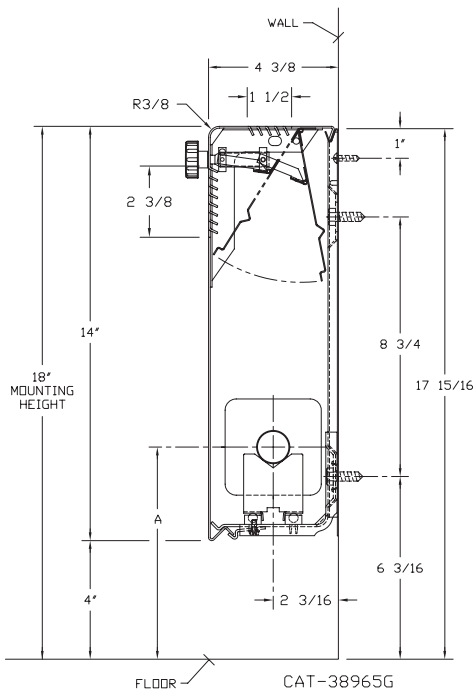
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° | |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | | 1.00 |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 | |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1105 | 950 | 860 | 760 | 670 | 590 | 500 | 440 | 360 | 290 | |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 | |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 980 | 840 | 760 | 680 | 600 | 520 | 440 | 390 | 320 | 250 | |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1110 | 950 | 870 | 770 | 680 | 590 | 500 | 440 | 370 | 290 | |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 | |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 20B | 1 | 24 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 | |
| | | | | | 20B | 2-6 CL | 24 | 2155 | 1850 | 1680 | 1490 | 1310 | 1140 | 970 | 860 | 710 | 560 | |
| | | | | | 24B | 1 | 28 | 1470 | 1260 | 1150 | 1010 | 900 | 780 | 660 | 590 | 490 | 380 | |
| | | | | | 24B | 2-6 CL | 28 | 2225 | 1910 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 730 | 580 | |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 | |
| | | | | | 20B | 1 | 24 | 1645 | 1410 | 1280 | 1140 | 1000 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 20B | 2-6 CL | 24 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 | |
| | | | | | 24B | 1 | 28 | 1705 | 1470 | 1330 | 1180 | 1040 | 900 | 770 | 680 | 560 | 440 | |
| | | | | | 24B | 2-6 CL | 28 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 | |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 20B | 1 | 24 | 1725 | 1480 | 1350 | 1190 | 1050 | 910 | 780 | 690 | 570 | 450 | |
| | | | | | 20B | 2-6 CL | 24 | 2385 | 2050 | 1860 | 1650 | 1450 | 1260 | 1070 | 950 | 790 | 620 | |
| | | | | | 24B | 1 | 28 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 | |
| | | | | | 24B | 2-6 CL | 28 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 | |
| | | | | | 20B | 1 | 24 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 | |
| | | | | | 20B | 2-6 CL | 24 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 | |
| | | | | | 24B | 1 | 28 | 1280 | 1100 | 1000 | 880 | 780 | 680 | 580 | 510 | 420 | 330 | |
| | | | | | 24B | 2-6 CL | 28 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 | |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 | |
| | | | | | 20B | 1 | 24 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 20B | 2-6 CL | 24 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 | |
| | | | | | 24B | 1 | 28 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 | |
| | | | | | 24B | 2-6 CL | 28 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | 20B | 1 | 24 | 1715 | 1470 | 1340 | 1180 | 1050 | 910 | 770 | 690 | 570 | 450 | |
| | | | | | 20B | 2-6 CL | 24 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 | |
| | | | | | 24B | 1 | 28 | 1775 | 1530 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 24B | 2-6 CL | 28 | 2450 | 2110 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 | |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14B | 1 | 18 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 20B | 1 | 24 | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 | |
| | | | | | 20B | 2-6 CL | 24 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 | |
| | | | | | 24B | 1 | 28 | 1230 | 1060 | 960 | 850 | 750 | 650 | 550 | 490 | 410 | 320 | |
| | | | | | 24B | 2-6 CL | 28 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 | |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 20B | 1 | 24 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 | |
| | | | | | 20B | 2-6 CL | 24 | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 | |
| | | | | | 24B | 1 | 28 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| | | | | | 24B | 2-6 CL | 28 | 2170 | 1870 | 1690 | 1500 | 1320 | 1150 | 980 | 870 | 720 | 560 | |
| | | | | | 24B | 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.



JVA-FT14

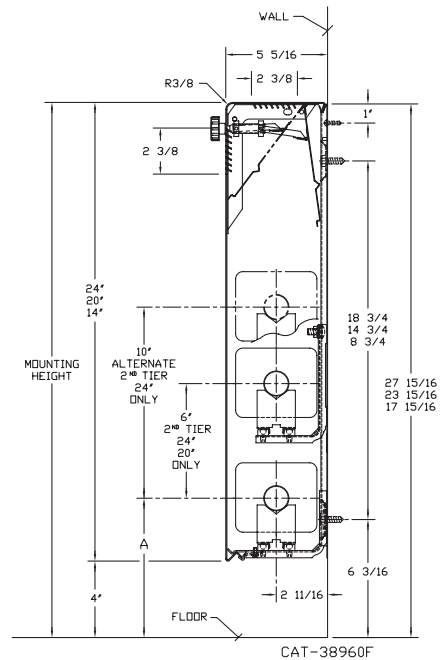
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A |
|-------------------|-------------------------|---------------|---------|
| 3/4 COPPER | 3 1/4 x 3 1/4 | 2 | 7" |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 7 3/16 |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 | 1 | 6 5/8 |
| 1" STEEL | 3 1/4 x 3 1/4 | 2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

JVB-FT14 20 24

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "FT" 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 DEPTH AND 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 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1040 | 890 | 810 | 720 | 630 | 550 | 470 | 420 | 340 | 270 | |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 | |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1010 | 870 | 790 | 700 | 620 | 540 | 450 | 400 | 330 | 260 | |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 | |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 | |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 | |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 | |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 20B | 1 | 24 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 | |
| | | | | | 20B | 2-6 CL | 24 | 2150 | 1850 | 1680 | 1480 | 1310 | 1140 | 970 | 860 | 710 | 560 | |
| | | | | | 24B | 1 | 28 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 | |
| | | | | | 24B | 2-6 CL | 28 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 | |
| | | | | | 24B | 3-6 CL | 28 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 20B | 1 | 24 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 | |
| | | | | | 20B | 2-6 CL | 24 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 | |
| | | | | | 24B | 1 | 28 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 24B | 2-6 CL | 28 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 | |
| | | | | | 24B | 3-6 CL | 28 | 2840 | 2440 | 2220 | 1960 | 1730 | 1510 | 1280 | 1140 | 940 | 740 | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 | |
| | | | | | 20B | 1 | 24 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 | |
| | | | | | 20B | 2-6 CL | 24 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 | |
| | | | | | 24B | 1 | 28 | 1990 | 1710 | 1550 | 1370 | 1210 | 1050 | 900 | 800 | 660 | 520 | |
| | | | | | 24B | 2-6 CL | 28 | 2860 | 2460 | 2230 | 1970 | 1740 | 1520 | 1290 | 1140 | 940 | 740 | |
| | | | | | 24B | 3-6 CL | 28 | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| | | | | | 20B | 1 | 24 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 | |
| | | | | | 20B | 2-6 CL | 24 | 2320 | 2000 | 1810 | 1600 | 1420 | 1230 | 1040 | 930 | 770 | 600 | |
| | | | | | 24B | 1 | 28 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 | |
| | | | | | 24B | 2-6 CL | 28 | 2380 | 2050 | 1860 | 1640 | 1450 | 1260 | 1070 | 950 | 790 | 620 | |
| | | | | | 24B | 3-6 CL | 28 | 2740 | 2360 | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900 | 710 | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 | |
| | | | | | 20B | 1 | 24 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 20B | 2-6 CL | 24 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 | |
| | | | | | 24B | 1 | 28 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 | |
| | | | | | 24B | 2-6 CL | 28 | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 | |
| | | | | | 24B | 3-6 CL | 28 | 2930 | 2520 | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970 | 760 | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 | |
| | | | | | 20B | 1 | 24 | 2010 | 1730 | 1570 | 1390 | 1230 | 1070 | 900 | 800 | 660 | 520 | |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| | | | | | 24B | 1 | 28 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 | |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 | |
| | | | | | 24B | 3-6 CL | 28 | 3030 | 2610 | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790 | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 | |
| | | | | | 20B | 1 | 24 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 | |
| | | | | | 24B | 1 | 28 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 | |
| | | | | | 24B | 3 @ 6 CL | 28 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 | |
| | | | | | 20B | 1 | 24 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 | |
| | | | | | 24B | 1 | 28 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2520 | 2170 | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830 | 660 | |
| | | | | | 24B | 3 @ 6 CL | 28 | 2870 | 2470 | 2240 | 1980 | 1750 | 1520 | 1290 | 1150 | 950 | 750 | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 | |
| | | | | | 20B | 1 | 24 | 1970 | 1690 | 1540 | 1360 | 1200 | 1040 | 890 | 790 | 650 | 510 | |
| | | | | | 20B | 2 @ 6 CL | 24 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24B | 1 | 28 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 | |
| | | | | | 24B | 2 @ 6 CL | 28 | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 | |
| | | | | | 24B | 3 @ 6 CL | 28 | 2960 | 2550 | 2310 | 2040 | 1810 | 1570 | 1330 | 1180 | 980 | 770 | |

STYLE "FT" 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 DEPTH AND 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" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 20B | 1 | 24 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 |
| | | | | | 20B | 2-6 CL | 24 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 24B | 1 | 28 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 24B | 2-6 CL | 28 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2120 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 |
| | | | | | 24B | 2-6 CL | 28 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1815 | 1560 | 1420 | 1250 | 1110 | 960 | 820 | 730 | 600 | 470 |
| | | | | | 20B | 1 | 24 | 1970 | 1690 | 1540 | 1360 | 1200 | 1040 | 890 | 790 | 650 | 510 |
| | | | | | 20B | 2-6 CL | 24 | 2565 | 2210 | 2000 | 1770 | 1560 | 1360 | 1150 | 1030 | 850 | 670 |
| | | | | | 24B | 1 | 28 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 24B | 2-6 CL | 28 | 2795 | 2400 | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920 | 730 |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 20B | 1 | 24 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 |
| | | | | | 20B | 2-6 CL | 24 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 |
| | | | | | 24B | 1 | 28 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 |
| | | | | | 24B | 2-6 CL | 28 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 20B | 1 | 24 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| | | | | | 20B | 2-6 CL | 24 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 |
| | | | | | 24B | 1 | 28 | 2010 | 1730 | 1570 | 1390 | 1230 | 1070 | 900 | 800 | 660 | 520 |
| | | | | | 24B | 2-6 CL | 28 | 2700 | 2320 | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890 | 700 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 20B | 1 | 24 | 2120 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 |
| | | | | | 20B | 2-6 CL | 24 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 |
| | | | | | 24B | 1 | 28 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 |
| | | | | | 24B | 2-6 CL | 28 | 2730 | 2350 | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900 | 710 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 20B | 1 | 24 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2420 | 2080 | 1890 | 1670 | 1480 | 1280 | 1090 | 970 | 800 | 630 |
| | | | | | 24B | 1 | 28 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| | | | | | 20B | 1 | 24 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 1970 | 1690 | 1540 | 1360 | 1200 | 1040 | 890 | 790 | 650 | 510 |
| | | | | | 24B | 2-6 CL | 28 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 |
| | | | | | 20B | 1 | 24 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 20B | 2-6 CL | 24 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24B | 1 | 28 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 |

Note: Copper tube furnished flared one end standard.

STYLE "FT" FRONT & TOP OUTLET

STEEL ELEMENTS

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

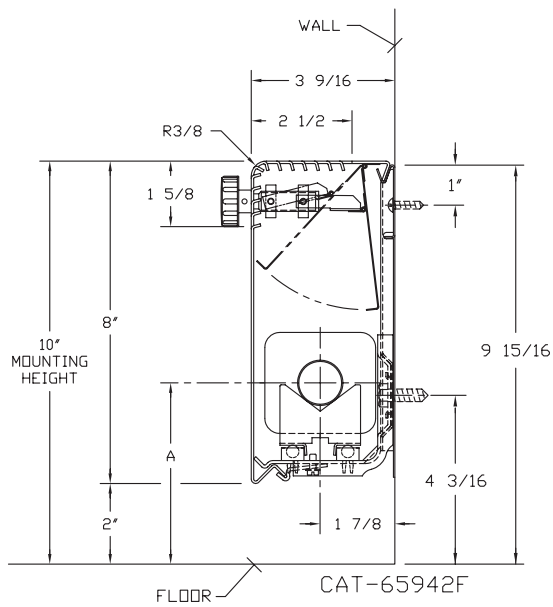
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 920 | 790 | 720 | 630 | 560 | 490 | 410 | 370 | 300 | 240 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1070 | 920 | 830 | 740 | 650 | 570 | 480 | 430 | 350 | 280 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 910 | 780 | 710 | 630 | 560 | 480 | 410 | 360 | 300 | 240 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1030 | 890 | 800 | 710 | 630 | 550 | 460 | 410 | 340 | 270 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 20B | 1 | 24 | 1355 | 1170 | 1060 | 930 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 20B | 2-6 CL | 24 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 24B | 1 | 28 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 24B | 2-6 CL | 28 | 2095 | 1800 | 1630 | 1450 | 1280 | 1110 | 940 | 840 | 690 | 540 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1455 | 1250 | 1130 | 1000 | 890 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 20B | 1 | 24 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 |
| | | | | | 20B | 2-6 CL | 24 | 2195 | 1890 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| | | | | | 24B | 1 | 28 | 1605 | 1380 | 1250 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 24B | 2-6 CL | 28 | 2295 | 1970 | 1790 | 1580 | 1400 | 1220 | 1030 | 920 | 760 | 600 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1525 | 1310 | 1190 | 1050 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 20B | 1 | 24 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2245 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 24B | 1 | 28 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 24B | 2-6 CL | 28 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 20B | 1 | 24 | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 |
| | | | | | 20B | 2-6 CL | 24 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 |
| | | | | | 24B | 1 | 28 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 |
| | | | | | 24B | 2-6 CL | 28 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1510 | 1300 | 1180 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 20B | 1 | 24 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |
| | | | | | 24B | 1 | 28 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1515 | 1300 | 1180 | 1050 | 920 | 800 | 680 | 610 | 500 | 390 |
| | | | | | 20B | 1 | 24 | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 24B | 1 | 28 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2305 | 1980 | 1800 | 1590 | 1410 | 1220 | 1040 | 920 | 760 | 600 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14B | 1 | 18 | 1160 | 1000 | 900 | 800 | 710 | 610 | 520 | 460 | 380 | 300 |
| | | | | | 20B | 1 | 24 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 20B | 2-6 CL | 24 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 |
| | | | | | 24B | 1 | 28 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 |
| | | | | | 24B | 2-6 CL | 28 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1350 | 1160 | 1050 | 930 | 820 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 20B | 1 | 24 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 20B | 2-6 CL | 24 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 |
| | | | | | 24B | 1 | 28 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 24B | 2-6 CL | 28 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| | | | | | 24B | 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.

JVK-RD8

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 | 5" |
| * 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 |

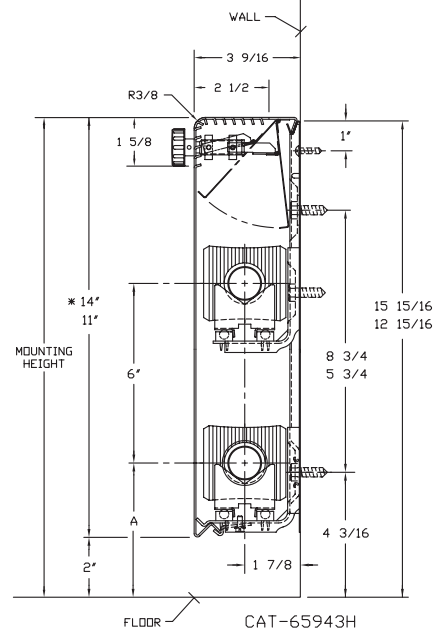
* Damper available with these elements only.



JVK-RD11 14

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 | 5" |
| * 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 "KRD" 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 DEPTH AND 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" | R01 | 2-1/2" x 2-1/4" | 50 | .011 | 8K* | 1 | 10 | 830 | 710 | 650 | 570 | 510 | 440 | 370 | 330 | 270 | 220 |
| | | | | | 11K | 1 | 13 | 890 | 770 | 690 | 610 | 540 | 470 | 400 | 360 | 290 | 230 |
| | | | | | 14K | 1 | 16 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 |
| | | | | | 14K* | 2-5 CL | 16 | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| 3/4" | R02 | 2-1/2" x 2-3/4" | 60 | .010 | 8K* | 1 | 10 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| | | | | | 11K | 1 | 13 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 |
| | | | | | 14K | 1 | 16 | 1230 | 1060 | 960 | 850 | 750 | 650 | 550 | 490 | 410 | 320 |
| | | | | | 14K* | 2-5 CL | 16 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| 1" | R03 | 2-1/2" x 2-3/4" | 55 | .011 | 8K* | 1 | 10 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 |
| | | | | | 11K | 1 | 13 | 1030 | 890 | 800 | 710 | 630 | 550 | 460 | 410 | 340 | 270 |
| | | | | | 14K | 1 | 16 | 1100 | 950 | 860 | 760 | 670 | 580 | 500 | 440 | 360 | 290 |
| | | | | | 14K* | 2-5 CL | 16 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 |
| 3/4" | R04 | 3-3/4" x 2-3/4" | 50 | .014 | 8K* | 1 | 10 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 11K | 1 | 13 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| | | | | | 14K | 1 | 16 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 14K* | 2-5 CL | 16 | 1750 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| 1" | R05 | 3-3/4" x 2-3/4" | 50 | .011 | 8K* | 1 | 10 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 |
| | | | | | 11K | 1 | 13 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 |
| | | | | | 14K | 1 | 16 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 14K* | 2-5 CL | 16 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 |
| 1-1/4" | R08 | 3-3/4" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| | | | | | 11K | 1 | 13 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 14K | 1 | 16 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 14K* | 2-5 CL | 16 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| 1" | R07 | 5" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1330 | 1140 | 1040 | 920 | 810 | 700 | 600 | 530 | 440 | 350 |
| | | | | | 11K | 1 | 13 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 14K | 1 | 16 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 14K* | 2-5 CL | 16 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| 1-1/4" | R10 | 5" x 2-3/4" | 50 | .020 | 8K* | 1 | 10 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 11K | 1 | 13 | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 14K | 1 | 16 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 14K* | 2-5 CL | 16 | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 |

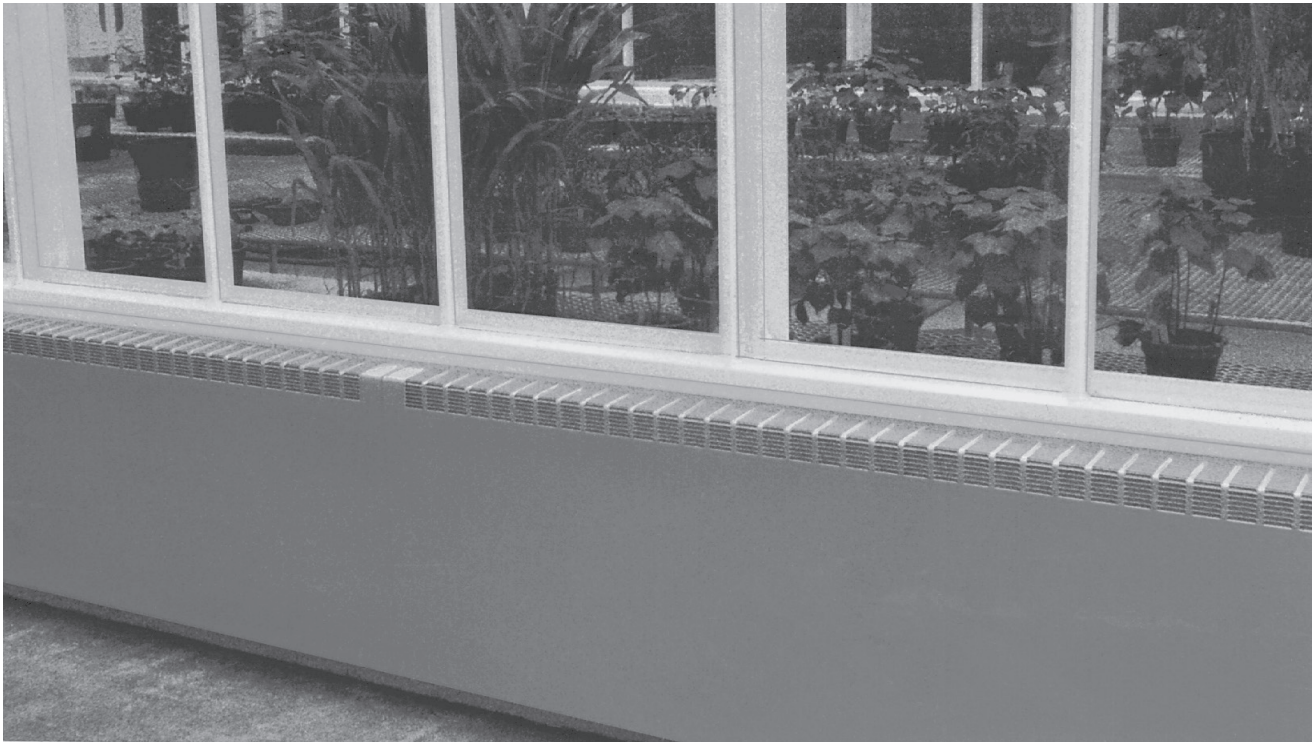
*Not recommended for steam applications, consult factory.
Note: Copper tube furnished flared one end standard.

STEEL ELEMENTS

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

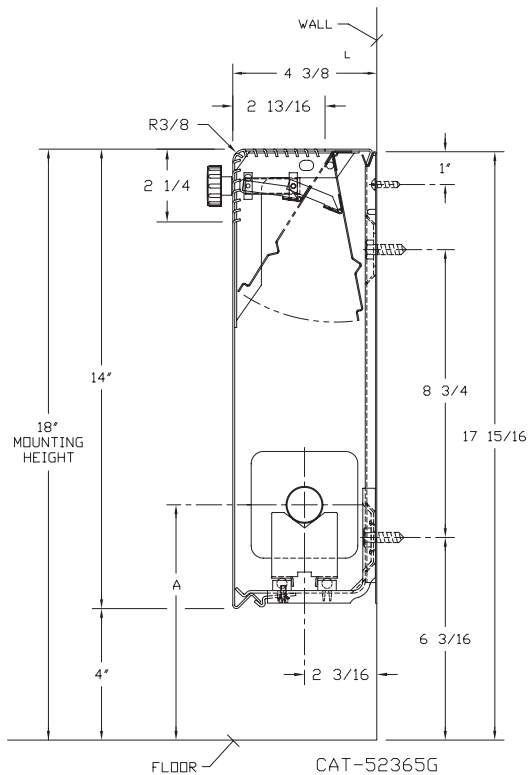
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|---------------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | R11 | 3-3/4" x 2-3/4" | 40 | .024 | 8K* | 1 | 10 | 920 | 790 | 720 | 630 | 560 | 490 | 410 | 370 | 300 | 240 |
| | | | | | 11K | 1 | 13 | 980 | 840 | 760 | 680 | 600 | 520 | 440 | 390 | 320 | 250 |
| | | | | | 14K | 1 | 16 | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 |
| | | | | | 14K* | 2-5 CL | 16 | 1500 | 1290 | 1170 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| 1" | R15 | 5" x 2-3/4" | 50 | .024 | 8K* | 1 | 10 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| | | | | | 11K | 1 | 13 | 1040 | 890 | 810 | 720 | 630 | 550 | 470 | 420 | 340 | 270 |
| | | | | | 14K | 1 | 16 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| | | | | | 14K* | 2-5 CL | 16 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 |
| 1-1/4" | R16 | 5" x 2-3/4" | 50 | .024 | 8K* | 1 | 10 | 1010 | 870 | 790 | 700 | 620 | 540 | 450 | 400 | 330 | 260 |
| | | | | | 11K | 1 | 13 | 1070 | 920 | 830 | 740 | 650 | 570 | 480 | 430 | 350 | 280 |
| | | | | | 14K | 1 | 16 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 |
| | | | | | 14K* | 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.



JVA-RD

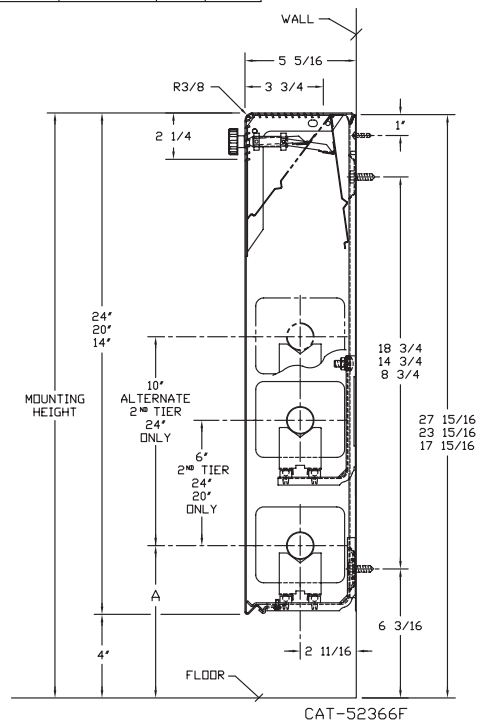
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A |
|-------------------|-------------------------|---------------|----------|
| 3/4 COPPER | 3 1/4 x 3 1/4 | 2 | 7" |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 7 3/16" |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 | 1 | 6 5/8" |
| 1" STEE | 3 1/4 x 3 1/4 | 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.

JVB-RD

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "RD" 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 HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1070 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| 1 1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 14A | 1 | 18 | 1010 | 870 | 790 | 700 | 620 | 540 | 450 | 400 | 330 | 260 |
| 1 1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 14A | 1 | 18 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| 1 1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 14A | 1 | 18 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1405 | 1210 | 1100 | 970 | 860 | 740 | 630 | 560 | 460 | 370 |
| | | | | | 20B | 1 | 24 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 20B | 2-6 CL | 24 | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 |
| | | | | | 24B | 1 | 28 | 1565 | 1350 | 1220 | 1080 | 950 | 830 | 700 | 630 | 520 | 410 |
| | | | | | 24B | 2-6 CL | 28 | 2215 | 1900 | 1730 | 1530 | 1350 | 1170 | 1000 | 890 | 730 | 580 |
| 24B | 3-6 CL | 28 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | | | | | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 |
| | | | | | 20B | 1 | 24 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 20B | 2-6 CL | 24 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 |
| | | | | | 24B | 1 | 28 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 |
| | | | | | 24B | 2-6 CL | 28 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| 24B | 3-6 CL | 28 | 2950 | 2540 | 2300 | 2040 | 1800 | 1560 | 1330 | 1180 | 970 | 770 | | | | | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 |
| | | | | | 20B | 1 | 24 | 2110 | 1810 | 1650 | 1460 | 1290 | 1120 | 950 | 840 | 700 | 550 |
| | | | | | 20B | 2-6 CL | 24 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 |
| | | | | | 24B | 1 | 28 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 24B | 2-6 CL | 28 | 2820 | 2430 | 2200 | 1950 | 1720 | 1490 | 1270 | 1130 | 930 | 730 |
| 24B | 3-6 CL | 28 | 3190 | 2740 | 2490 | 2200 | 1950 | 1690 | 1440 | 1280 | 1050 | 830 | | | | | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 20B | 1 | 24 | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 |
| | | | | | 24B | 1 | 28 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 24B | 2-6 CL | 28 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 |
| 24B | 3-6 CL | 28 | 2940 | 2530 | 2290 | 2030 | 1790 | 1560 | 1320 | 1180 | 970 | 760 | | | | | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 |
| | | | | | 20B | 1 | 24 | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| | | | | | 20B | 2-6 CL | 24 | 2600 | 2240 | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860 | 680 |
| | | | | | 24B | 1 | 28 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 24B | 2-6 CL | 28 | 2720 | 2340 | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900 | 710 |
| 24B | 3-6 CL | 28 | 3100 | 2670 | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810 | | | | | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 20B | 1 | 24 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 |
| | | | | | 20B | 2-6 CL | 24 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 |
| | | | | | 24B | 1 | 28 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |
| | | | | | 24B | 2-6 CL | 28 | 2970 | 2550 | 2320 | 2050 | 1810 | 1570 | 1340 | 1190 | 980 | 770 |
| 24B | 3-6 CL | 28 | 3360 | 2890 | 2620 | 2320 | 2050 | 1780 | 1510 | 1340 | 1110 | 870 | | | | | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14B | 1 | 18 | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 20B | 1 | 24 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| | | | | | 24B | 1 | 28 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 24B | 2 @ 6 CL | 28 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 |
| 24B | 3 @ 6 CL | 28 | 2970 | 2550 | 2320 | 2050 | 1810 | 1570 | 1340 | 1190 | 980 | 770 | | | | | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14B | 1 | 18 | 1750 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 20B | 1 | 24 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 |
| | | | | | 24B | 1 | 28 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 |
| | | | | | 24B | 2 @ 6 CL | 28 | 2750 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 |
| 24B | 3 @ 6 CL | 28 | 3130 | 2690 | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810 | | | | | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14B | 1 | 18 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 |
| | | | | | 20B | 1 | 24 | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 20B | 2 @ 6 CL | 24 | 2730 | 2350 | 2130 | 1880 | 1670 | 1450 | 1230 | 1090 | 900 | 710 |
| | | | | | 24B | 1 | 28 | 2380 | 2050 | 1860 | 1640 | 1450 | 1260 | 1070 | 950 | 790 | 620 |
| | | | | | 24B | 2 @ 6 CL | 28 | 3000 | 2580 | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990 | 780 |
| 24B | 3 @ 6 CL | 28 | 3390 | 2920 | 2640 | 2340 | 2070 | 1800 | 1530 | 1360 | 1120 | 880 | | | | | |

STYLE "RD" 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 HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14B | 1 | 18 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 | |
| | | | | | 20B | 1 | 24 | 1615 | 1390 | 1260 | 1110 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 20B | 2-6 CL | 24 | 2345 | 2020 | 1830 | 1620 | 1430 | 1240 | 1060 | 940 | 770 | 610 | |
| | | | | | 24B | 1 | 28 | 1685 | 1450 | 1310 | 1160 | 1030 | 890 | 760 | 670 | 560 | 440 | |
| | | | | | 24B | 2-6 CL | 28 | 2435 | 2090 | 1900 | 1680 | 1490 | 1290 | 1100 | 970 | 800 | 630 | |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 2800 | 2410 | 2180 | 1930 | 1710 | 1480 | 1260 | 1120 | 920 | 730 | |
| | | | | | 20B | 1 | 24 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 | |
| | | | | | 20B | 1 | 24 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 | |
| | | | | | 20B | 2-6 CL | 24 | 3180 | 2730 | 2480 | 2190 | 1940 | 1690 | 1430 | 1270 | 1050 | 830 | |
| | | | | | 24B | 1 | 28 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 | |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14B | 1 | 18 | 3270 | 2810 | 2550 | 2260 | 1990 | 1730 | 1470 | 1310 | 1080 | 850 | |
| | | | | | 20B | 1 | 24 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 20B | 1 | 24 | 2420 | 2080 | 1890 | 1670 | 1480 | 1280 | 1090 | 970 | 800 | 630 | |
| | | | | | 20B | 2-6 CL | 24 | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | |
| | | | | | 24B | 1 | 28 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 24B | 2-6 CL | 28 | 3380 | 2910 | 2640 | 2330 | 2060 | 1790 | 1520 | 1350 | 1120 | 880 | |
| | | | | | 24B | 3-6 CL | 28 | 3820 | 3290 | 2980 | 2640 | 2330 | 2020 | 1720 | 1530 | 1260 | 990 | |
| | | | | | 14B | 1 | 18 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 | |
| | | | | | 20B | 1 | 24 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 | |
| | | | | | 20B | 2-6 CL | 24 | 2720 | 2340 | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900 | 710 | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 24B | 1 | 28 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 | |
| | | | | | 24B | 2-6 CL | 28 | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 | |
| | | | | | 24B | 3-6 CL | 28 | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 | |
| | | | | | 14B | 1 | 18 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 | |
| | | | | | 20B | 1 | 24 | 2070 | 1780 | 1610 | 1430 | 1260 | 1100 | 930 | 830 | 680 | 540 | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 20B | 2-6 CL | 24 | 2850 | 2450 | 2220 | 1970 | 1740 | 1510 | 1280 | 1140 | 940 | 740 | |
| | | | | | 24B | 1 | 28 | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 | |
| | | | | | 24B | 2-6 CL | 28 | 2990 | 2570 | 2330 | 2060 | 1820 | 1580 | 1350 | 1200 | 990 | 780 | |
| | | | | | 24B | 3-6 CL | 28 | 3410 | 2930 | 2660 | 2350 | 2080 | 1810 | 1530 | 1360 | 1130 | 890 | |
| | | | | | 14B | 1 | 18 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 20B | 1 | 24 | 2430 | 2090 | 1900 | 1680 | 1480 | 1290 | 1090 | 970 | 800 | 630 | |
| | | | | | 20B | 2-6 CL | 24 | 3030 | 2610 | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790 | |
| | | | | | 24B | 1 | 28 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | |
| | | | | | 24B | 2-6 CL | 28 | 3250 | 2800 | 2540 | 2240 | 1980 | 1720 | 1460 | 1300 | 1070 | 850 | |
| | | | | | 24B | 3-6 CL | 28 | 3670 | 3160 | 2860 | 2530 | 2240 | 1950 | 1650 | 1470 | 1210 | 950 | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14B | 1 | 18 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 | |
| | | | | | 20B | 1 | 24 | 1740 | 1500 | 1360 | 1200 | 1060 | 920 | 780 | 700 | 570 | 450 | |
| | | | | | 20B | 2-6 CL | 24 | 2670 | 2300 | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880 | 690 | |
| | | | | | 24B | 1 | 28 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 24B | 2-6 CL | 28 | 2720 | 2340 | 2120 | 1880 | 1660 | 1440 | 1220 | 1090 | 900 | 710 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 24B | 3-6 CL | 28 | 3130 | 2690 | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810 | |
| | | | | | 14B | 1 | 18 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 | |
| | | | | | 20B | 1 | 24 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 | |
| | | | | | 20B | 2-6 CL | 24 | 2810 | 2420 | 2190 | 1940 | 1710 | 1490 | 1260 | 1120 | 930 | 730 | |
| | | | | | 24B | 1 | 28 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 | |

Note: Copper tube furnished flared one end standard.

STYLE "RD" FLAT TOP

STEEL ELEMENTS

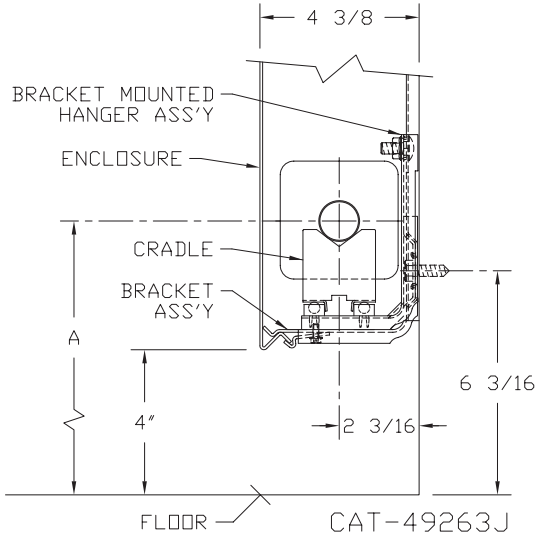
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | S33 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1100 | 950 | 860 | 760 | 670 | 580 | 500 | 440 | 360 | 290 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 14A | 1 | 18 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 14A | 1 | 18 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 14A | 1 | 18 | 1150 | 990 | 900 | 790 | 700 | 610 | 520 | 460 | 380 | 300 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 20B | 1 | 24 | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| | | | | | 20B | 2-6 CL | 24 | 2215 | 1900 | 1730 | 1530 | 1350 | 1170 | 1000 | 890 | 730 | 580 |
| | | | | | 24B | 1 | 28 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 24B | 2-6 CL | 28 | 2255 | 1940 | 1760 | 1560 | 1380 | 1200 | 1010 | 900 | 740 | 590 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1605 | 1380 | 1250 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 20B | 1 | 24 | 1705 | 1470 | 1330 | 1180 | 1040 | 900 | 770 | 680 | 560 | 440 |
| | | | | | 20B | 2-6 CL | 24 | 2395 | 2060 | 1870 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 1 | 28 | 1765 | 1520 | 1380 | 1220 | 1080 | 940 | 790 | 710 | 580 | 460 |
| | | | | | 24B | 2-6 CL | 28 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 20B | 1 | 24 | 1785 | 1540 | 1390 | 1230 | 1090 | 950 | 800 | 710 | 590 | 460 |
| | | | | | 20B | 2-6 CL | 24 | 2455 | 2110 | 1910 | 1690 | 1500 | 1300 | 1100 | 980 | 810 | 640 |
| | | | | | 24B | 1 | 28 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 24B | 2-6 CL | 28 | 2535 | 2180 | 1980 | 1750 | 1550 | 1340 | 1140 | 1010 | 840 | 660 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 20B | 1 | 24 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 20B | 2-6 CL | 24 | 2070 | 1780 | 1610 | 1430 | 1260 | 1100 | 930 | 830 | 680 | 540 |
| | | | | | 24B | 1 | 28 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 24B | 2-6 CL | 28 | 2120 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14B | 1 | 18 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 |
| | | | | | 20B | 1 | 24 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 20B | 2-6 CL | 24 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24B | 1 | 28 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 24B | 2-6 CL | 28 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14B | 1 | 18 | 1670 | 1440 | 1300 | 1150 | 1020 | 890 | 750 | 670 | 550 | 430 |
| | | | | | 20B | 1 | 24 | 1775 | 1530 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 590 | 460 |
| | | | | | 20B | 2-6 CL | 24 | 2405 | 2070 | 1880 | 1660 | 1470 | 1270 | 1080 | 960 | 790 | 630 |
| | | | | | 24B | 1 | 28 | 1835 | 1580 | 1430 | 1270 | 1120 | 970 | 830 | 730 | 610 | 480 |
| | | | | | 24B | 2-6 CL | 28 | 2485 | 2140 | 1940 | 1710 | 1520 | 1320 | 1120 | 990 | 820 | 650 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14B | 1 | 18 | 1230 | 1060 | 960 | 850 | 750 | 650 | 550 | 490 | 410 | 320 |
| | | | | | 20B | 1 | 24 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 |
| | | | | | 20B | 2-6 CL | 24 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| | | | | | 24B | 1 | 28 | 1250 | 1080 | 980 | 860 | 760 | 660 | 560 | 500 | 410 | 330 |
| | | | | | 24B | 2-6 CL | 28 | 2000 | 1720 | 1560 | 1380 | 1220 | 1060 | 900 | 800 | 660 | 520 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14B | 1 | 18 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 20B | 1 | 24 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 20B | 2-6 CL | 24 | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 |
| | | | | | 24B | 1 | 28 | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| | | | | | 24B | 2-6 CL | 28 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 |
| 24B | 3-6 CL | 28 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | | | | | |

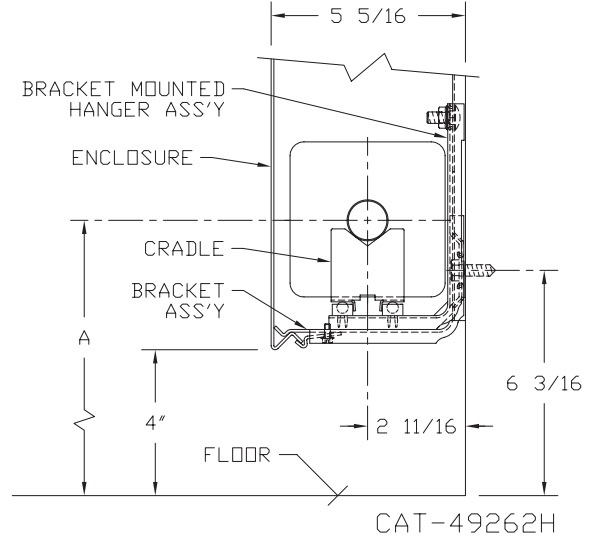
- Notes: 1) Steel fins furnished as .032 thick, painted black.
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.
 3) The ends can be provided chamfered for field welded fittings when specified.

VERTICAL ELEMENT CENTERLINE DIMENSIONS FOR INSTALLATIONS USING STEAM BRACKETS WITH HANGERS

“A” OFFSET



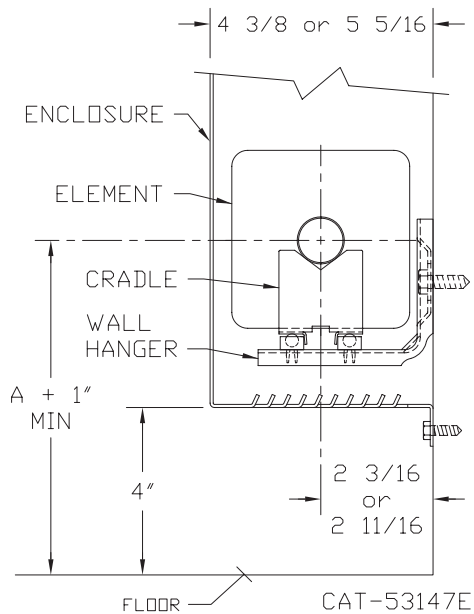
“B” OFFSET

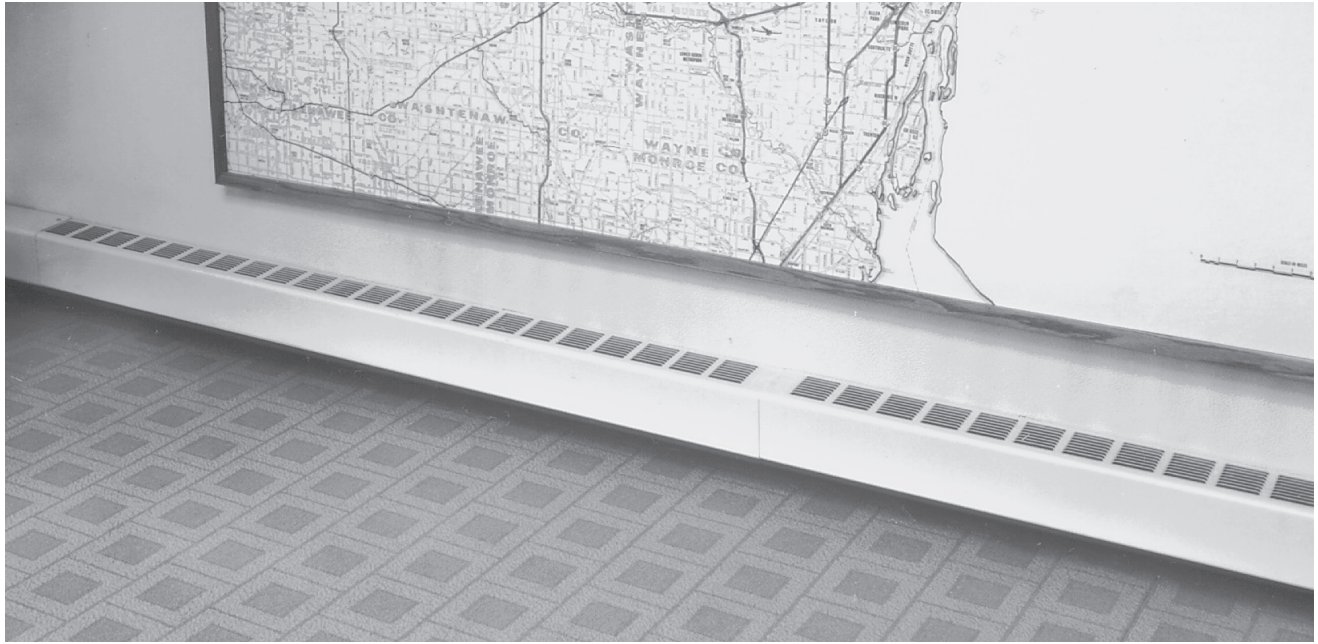


| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A MIN | A MAX |
|-------------------|-------------------------|---------------|--------|-------|
| 3/4 COPPER | 3 1/4 x 3 1/4 | 2 | 7 3/8 | 9 5/8 |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 7 1/2 | 9 3/4 |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 | 2 | 7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

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

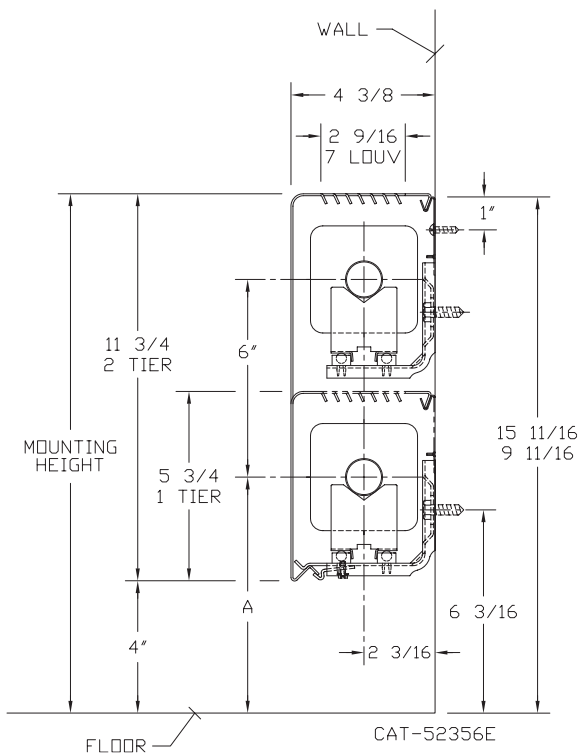
LOUVERED INLET RETURN TO WALL





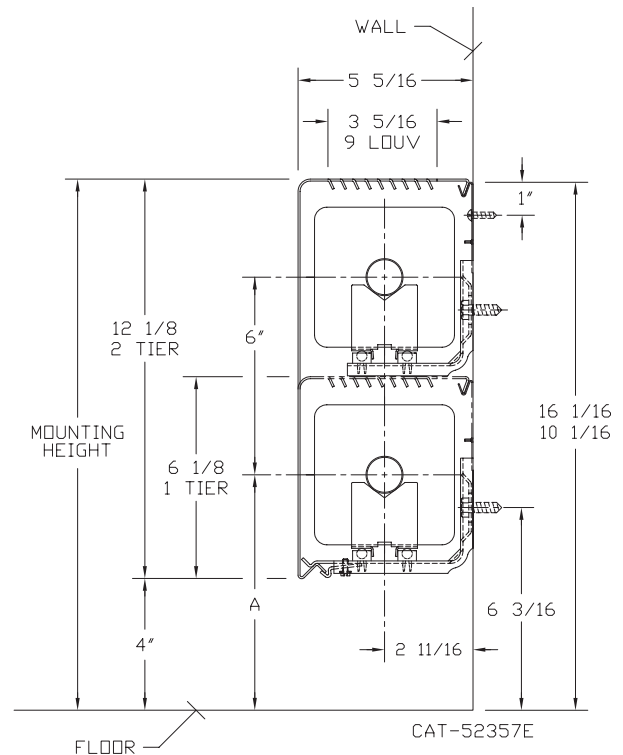
JVA-E5 11

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 |



JVB-E6 12

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 "E" 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 DEPTH AND 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" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 840 1380 | 720 1190 | 660 1080 | 580 950 | 510 840 | 450 730 | 380 620 | 340 550 | 280 460 | 220 360 | |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 970 1490 | 830 1280 | 760 1160 | 670 1030 | 590 910 | 510 790 | 440 670 | 390 600 | 320 490 | 250 390 | |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 980 1440 | 840 1240 | 760 1120 | 680 990 | 600 880 | 520 760 | 440 650 | 390 580 | 320 480 | 250 370 | |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 820 1360 | 710 1170 | 640 1060 | 570 940 | 500 830 | 430 720 | 370 610 | 330 540 | 270 450 | 210 350 | |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 950 1470 | 820 1260 | 740 1150 | 660 1010 | 580 900 | 500 780 | 430 660 | 380 590 | 310 490 | 250 380 | |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 960 1470 | 830 1260 | 750 1150 | 660 1010 | 590 900 | 510 780 | 430 660 | 380 590 | 320 490 | 250 380 | |
| 1-1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 780 1320 | 670 1140 | 610 1030 | 540 910 | 480 810 | 410 700 | 350 590 | 310 530 | 260 440 | 200 340 | |
| 1-1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 910 1400 | 780 1200 | 710 1090 | 630 970 | 560 850 | 480 740 | 410 630 | 360 560 | 300 460 | 240 360 | |
| 1-1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 920 1380 | 790 1190 | 720 1080 | 630 950 | 560 840 | 490 730 | 410 620 | 370 550 | 300 460 | 240 360 | |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1080 1900 | 930 1630 | 840 1480 | 750 1310 | 660 1160 | 570 1010 | 490 860 | 430 760 | 360 630 | 280 490 | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1190 2040 | 1020 1750 | 930 1590 | 820 1410 | 730 1240 | 630 1080 | 540 920 | 480 820 | 390 670 | 310 530 | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1270 2060 | 1090 1770 | 990 1710 | 880 1420 | 770 1260 | 670 1090 | 570 930 | 510 820 | 420 680 | 330 540 | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1110 1690 | 950 1450 | 870 1320 | 770 1170 | 680 1030 | 590 900 | 500 760 | 440 680 | 370 560 | 290 440 | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1230 1960 | 1060 1690 | 960 1530 | 850 1350 | 750 1200 | 650 1040 | 550 880 | 490 780 | 410 650 | 320 510 | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1320 1930 | 1140 1660 | 1030 1510 | 910 1330 | 810 1180 | 700 1020 | 590 870 | 530 770 | 440 640 | 340 500 | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1090 1660 | 940 1430 | 850 1290 | 750 1150 | 660 1010 | 580 880 | 490 750 | 440 660 | 360 550 | 280 430 | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1210 1920 | 1040 1650 | 940 1500 | 830 1320 | 740 1170 | 640 1020 | 540 860 | 480 770 | 400 630 | 310 500 | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1300 1890 | 1120 1630 | 1010 1470 | 900 1300 | 790 1150 | 690 1000 | 590 850 | 520 760 | 430 620 | 340 490 | |
| 3/4" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1200 2090 | 1030 1800 | 940 1630 | 830 1440 | 730 1270 | 640 1110 | 540 940 | 480 840 | 400 690 | 310 540 | |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1310 2100 | 1130 1810 | 1020 1640 | 900 1450 | 800 1280 | 690 1110 | 590 950 | 520 840 | 430 690 | 340 550 | |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1330 2110 | 1140 1810 | 1040 1650 | 920 1460 | 810 1290 | 700 1120 | 600 950 | 530 840 | 440 700 | 350 550 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1220 1920 | 1050 1650 | 950 1500 | 840 1320 | 740 1170 | 650 1020 | 550 860 | 490 770 | 400 630 | 320 500 | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1220 2040 | 1050 1750 | 950 1590 | 840 1410 | 740 1240 | 650 1080 | 550 920 | 490 820 | 400 670 | 320 530 | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1370 1930 | 1180 1660 | 1070 1510 | 950 1330 | 840 1180 | 730 1020 | 620 870 | 550 770 | 450 640 | 360 500 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1200 1880 | 1030 1620 | 940 1470 | 830 1300 | 730 1150 | 640 1000 | 540 850 | 480 750 | 400 620 | 310 490 | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1330 1970 | 1140 1690 | 1040 1540 | 920 1360 | 810 1200 | 700 1040 | 600 890 | 530 790 | 440 650 | 350 510 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1350 1890 | 1160 1630 | 1050 1470 | 930 1300 | 820 1150 | 720 1000 | 610 850 | 540 760 | 450 620 | 350 490 | |

Note: Copper tube furnished flared one end standard.

STYLE "E" TOP OUTLET

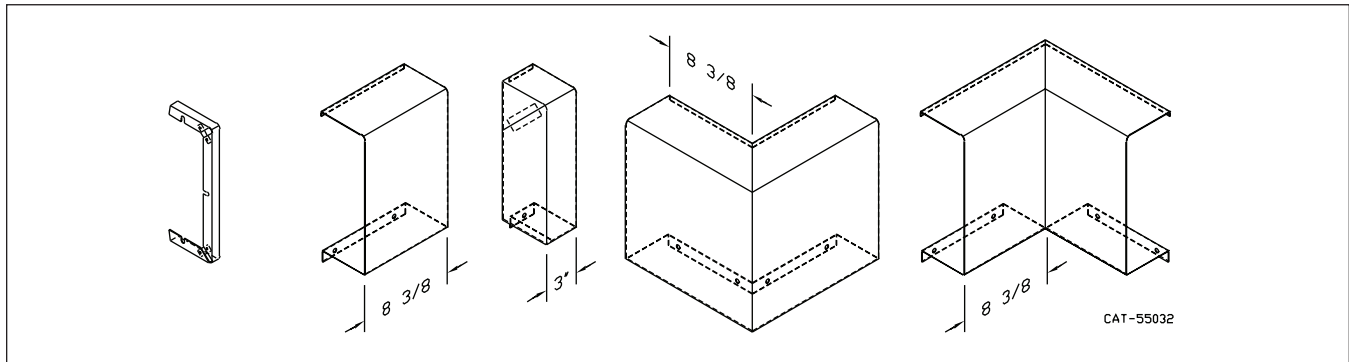
STEEL ELEMENTS

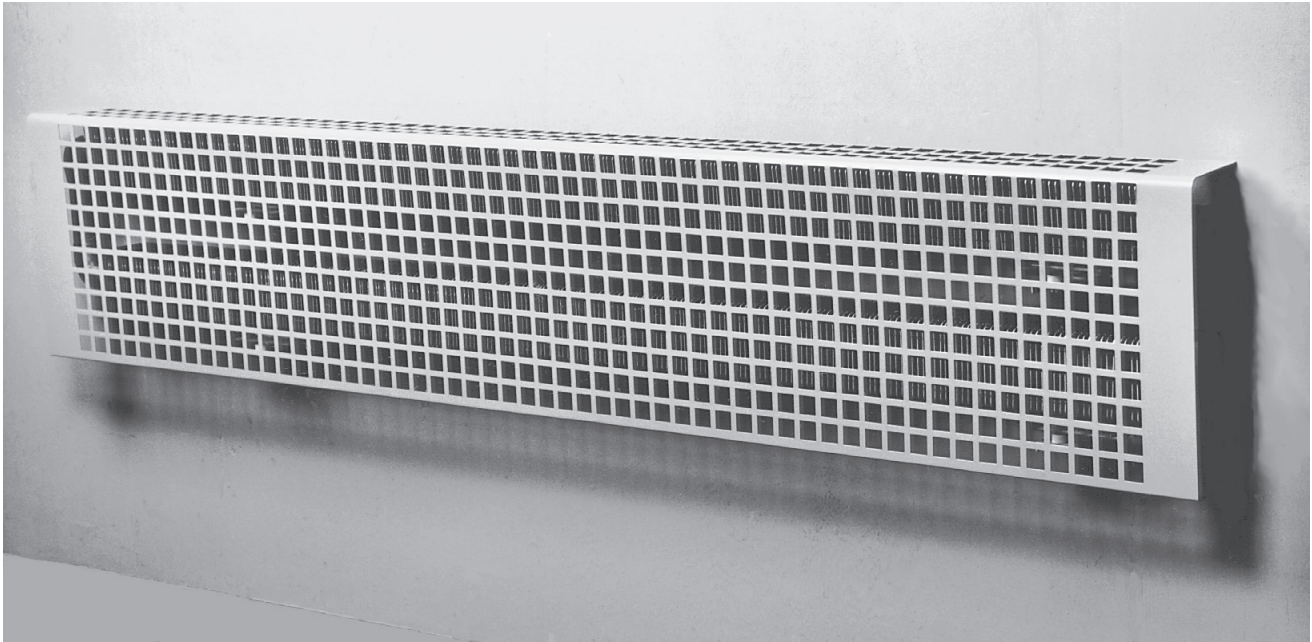
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | S33 | 3-1/4" SQ. | 32 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 780 1330 | 670 1140 | 610 1040 | 540 920 | 480 810 | 410 700 | 350 600 | 310 530 | 260 440 | 200 350 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 860 1475 | 740 1270 | 670 1150 | 590 1020 | 520 900 | 460 780 | 390 660 | 340 590 | 280 490 | 220 380 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 910 1550 | 780 1330 | 710 1210 | 630 1070 | 560 950 | 480 820 | 410 700 | 360 620 | 300 510 | 240 400 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 770 1320 | 660 1140 | 600 1030 | 530 910 | 470 810 | 410 700 | 350 590 | 310 530 | 250 440 | 200 340 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 870 1490 | 750 1280 | 680 1160 | 600 1030 | 530 910 | 460 790 | 390 670 | 350 600 | 290 490 | 230 390 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 5A 11A | 1 2-6 CL | 9-3/4 15-3/4 | 880 1510 | 760 1300 | 690 1180 | 610 1040 | 540 920 | 470 800 | 400 680 | 350 600 | 290 500 | 230 390 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1095 1850 | 940 1590 | 850 1440 | 760 1280 | 670 1130 | 580 980 | 490 830 | 440 740 | 360 610 | 280 480 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1215 1910 | 1040 1640 | 950 1490 | 840 1320 | 740 1170 | 640 1010 | 550 860 | 490 760 | 400 630 | 320 500 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1300 2150 | 1120 1850 | 1010 1680 | 900 1480 | 790 1310 | 690 1140 | 590 970 | 520 860 | 430 710 | 340 560 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1010 1700 | 870 1460 | 790 1330 | 700 1170 | 620 1040 | 540 900 | 450 770 | 400 680 | 330 560 | 260 440 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1210 1900 | 1040 1630 | 940 1480 | 830 1310 | 740 1160 | 640 1010 | 540 860 | 480 760 | 400 630 | 310 490 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1280 2135 | 1100 1840 | 1000 1670 | 880 1470 | 780 1300 | 680 1130 | 580 960 | 510 850 | 420 700 | 330 560 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 950 1620 | 820 1390 | 740 1260 | 660 1120 | 580 990 | 500 860 | 430 730 | 380 650 | 310 530 | 250 420 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 6B 12B | 1 2-6 CL | 10-1/8 16-1/8 | 1130 1770 | 970 1520 | 880 1380 | 780 1220 | 690 1080 | 600 940 | 510 800 | 450 710 | 370 580 | 290 460 |

- 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.

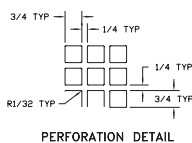
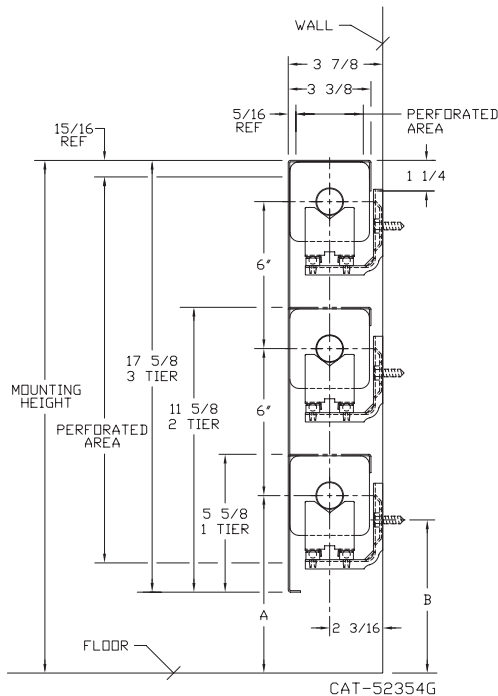
STYLE E ACCESSORIES





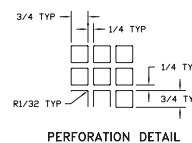
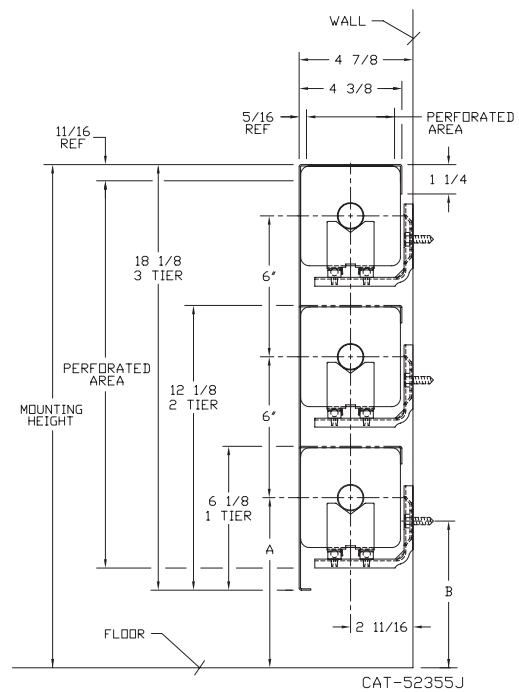
VA-X (Element Supported)

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



VB-X (Element Supported)

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



STYLE "X" 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 DEPTH AND 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 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 930 | 800 | 730 | 640 | 570 | 490 | 420 | 370 | 310 | 240 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2310 | 1990 | 1800 | 1590 | 1410 | 1220 | 1040 | 920 | 760 | 600 | |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1800 | 1550 | 1400 | 1240 | 1100 | 950 | 810 | 720 | 590 | 470 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 | |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 | |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 930 | 800 | 730 | 640 | 570 | 490 | 420 | 370 | 310 | 240 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 | |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 1040 | 890 | 810 | 720 | 630 | 550 | 470 | 420 | 340 | 270 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1160 | 1000 | 900 | 800 | 710 | 610 | 520 | 460 | 380 | 300 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1860 | 1600 | 1450 | 1280 | 1130 | 990 | 840 | 740 | 610 | 480 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| 1-1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 930 | 800 | 730 | 640 | 570 | 490 | 420 | 370 | 310 | 240 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 | |
| 1-1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 1020 | 880 | 800 | 700 | 620 | 540 | 460 | 410 | 340 | 270 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1770 | 1520 | 1380 | 1220 | 1080 | 940 | 800 | 710 | 580 | 460 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 | |
| 1-1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2450 | 2110 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 | |
| 3/4" | C3/4-433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1160 | 1000 | 900 | 800 | 710 | 610 | 520 | 460 | 380 | 300 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2760 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 | |
| 3/4" | C3/4-434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1390 | 1200 | 1080 | 960 | 850 | 740 | 630 | 560 | 460 | 360 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3170 | 2730 | 2470 | 2190 | 1930 | 1680 | 1430 | 1270 | 1050 | 820 | |
| 3/4" | C3/4-435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3310 | 2850 | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860 | |
| 1" | C433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 | |
| 1" | C434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1350 | 1160 | 1050 | 930 | 820 | 720 | 610 | 540 | 450 | 350 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2320 | 2000 | 1810 | 1600 | 1420 | 1230 | 1040 | 930 | 770 | 600 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3070 | 2640 | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800 | |
| 1" | C435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2530 | 2180 | 1970 | 1750 | 1540 | 1340 | 1140 | 1010 | 830 | 660 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3310 | 2850 | 2580 | 2280 | 2020 | 1750 | 1490 | 1320 | 1090 | 860 | |
| 1-1/4" | C1433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3000 | 2580 | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990 | 780 | |
| 1-1/4" | C1434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3130 | 2690 | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810 | |
| 1-1/4" | C1435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3320 | 2860 | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860 | |
| 3/4" | C3/4 43 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3070 | 2640 | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800 | |
| 3/4" | C3/4 44 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | |
| 3/4" | C3/4 45 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2520 | 2170 | 1970 | 1740 | 1540 | 1340 | 1130 | 1010 | 830 | 660 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3290 | 2830 | 2570 | 2270 | 2010 | 1740 | 1480 | 1320 | 1090 | 860 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3100 | 2670 | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810 | |

STYLE "X" 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 DEPTH AND 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" | C44 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3190 | 2740 | 2490 | 2200 | 1950 | 1690 | 1440 | 1280 | 1050 | 830 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1610 | 1380 | 1260 | 1110 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3320 | 2860 | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3350 | 2880 | 2610 | 2310 | 2040 | 1780 | 1510 | 1340 | 1110 | 870 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1640 | 1410 | 1280 | 1130 | 1000 | 870 | 740 | 660 | 540 | 430 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 18B | 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

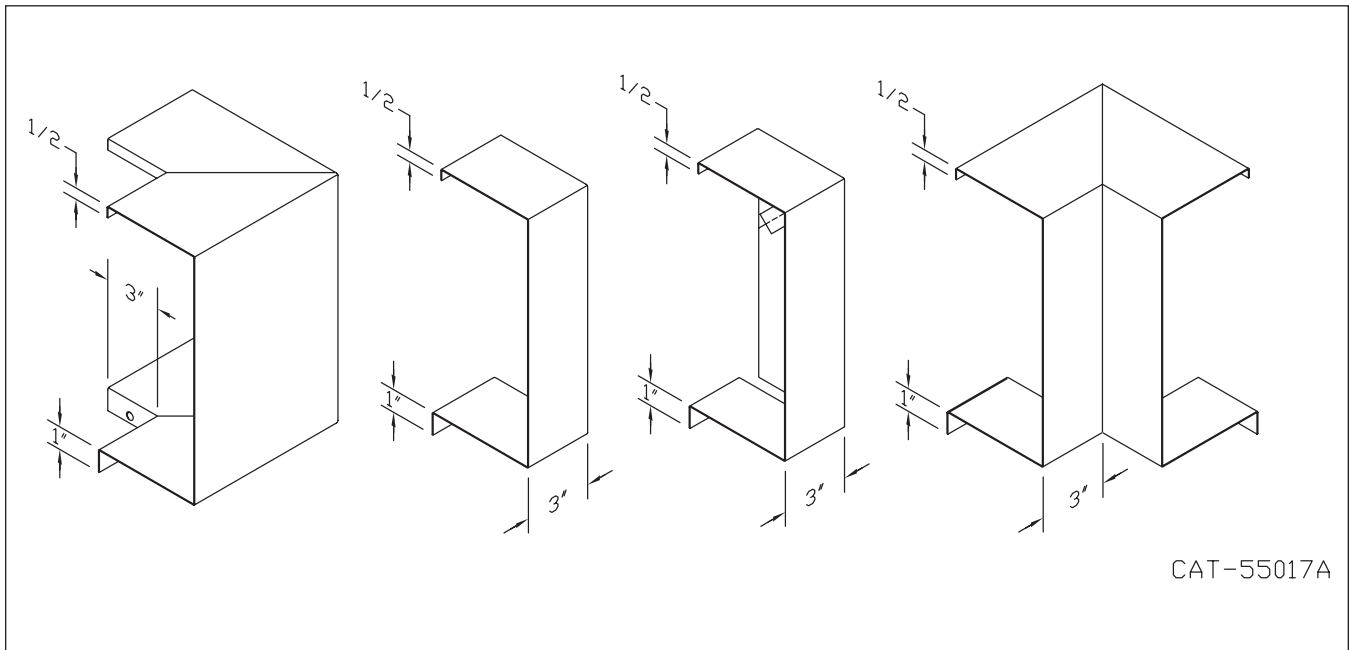
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | S33 | 3-1/4" SQ. | 32 | .032 | 5A | 1 | 8-7/8 | 870 | 750 | 680 | 600 | 530 | 460 | 390 | 350 | 290 | 230 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2110 | 1810 | 1650 | 1460 | 1290 | 1120 | 950 | 840 | 700 | 550 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 5A | 1 | 8-7/8 | 950 | 820 | 740 | 660 | 580 | 500 | 430 | 380 | 310 | 250 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2260 | 1940 | 1760 | 1560 | 1380 | 1200 | 1020 | 900 | 750 | 590 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 5A | 1 | 8-7/8 | 1020 | 880 | 800 | 700 | 620 | 540 | 460 | 410 | 340 | 270 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 5A | 1 | 8-7/8 | 860 | 740 | 670 | 590 | 520 | 460 | 390 | 340 | 280 | 220 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2150 | 1850 | 1680 | 1480 | 1310 | 1140 | 970 | 860 | 710 | 560 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 5A | 1 | 8-7/8 | 960 | 830 | 750 | 660 | 590 | 510 | 430 | 380 | 320 | 250 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1630 | 1400 | 1270 | 1120 | 990 | 860 | 730 | 650 | 540 | 420 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 5A | 1 | 8-7/8 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2190 | 1880 | 1710 | 1510 | 1340 | 1160 | 990 | 880 | 720 | 570 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2930 | 2520 | 2290 | 2020 | 1790 | 1550 | 1320 | 1170 | 970 | 760 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 6B | 1 | 9-3/8 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3050 | 2620 | 2380 | 2100 | 1860 | 1620 | 1370 | 1220 | 1010 | 790 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 6B | 1 | 9-3/8 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3100 | 2670 | 2420 | 2140 | 1890 | 1640 | 1400 | 1240 | 1020 | 810 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2910 | 2500 | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960 | 760 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 6B | 1 | 9-3/8 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3040 | 2610 | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 790 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 6B | 1 | 9-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 3070 | 2640 | 2390 | 2120 | 1870 | 1630 | 1380 | 1230 | 1010 | 800 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 6B | 1 | 9-3/8 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2590 | 2230 | 2020 | 1790 | 1580 | 1370 | 1170 | 1040 | 850 | 670 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2140 | 1840 | 1670 | 1480 | 1310 | 1130 | 960 | 860 | 710 | 560 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2790 | 2400 | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920 | 730 |

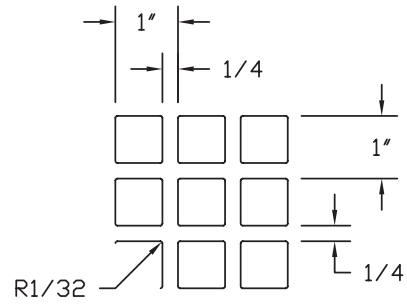
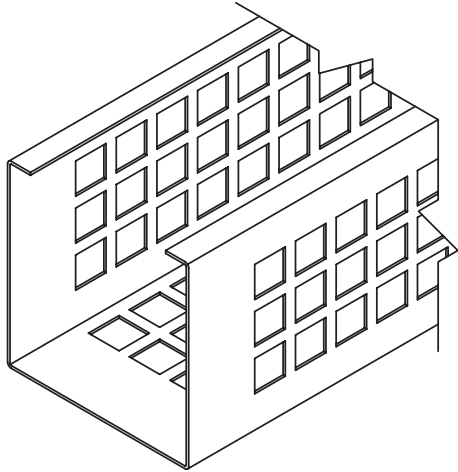
Notes: 1) Steel fins furnished as .032 thick, painted black.
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.
 3) The ends can be provided chamfered for field welded fittings when specified.

STYLE "X" SQUARE PERFORATION

STYLE X ACCESSORIES



STYLE "X-C" SQUARE PERFORATION - CEILING



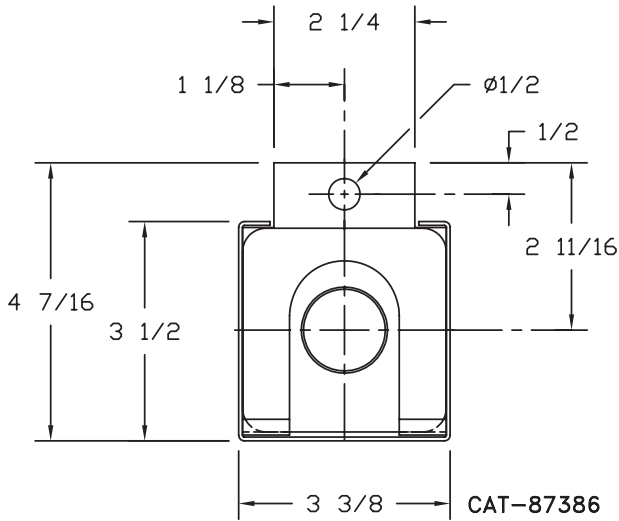
ENCLOSURE PERFORATION DETAIL

VA-X3C

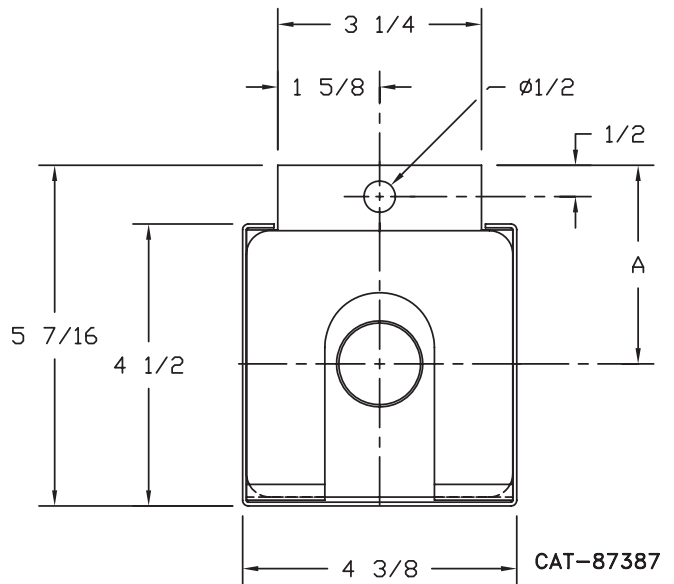
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH |
|-------------------|-------------------------|
| 3/4 COPPER | 3 1/4 x 3 1/4 |
| 1" COPPER | 3 1/4 x 3 1/4 |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 |
| 1" STEEL | 3 1/4 x 3 1/4 |
| 1 1/4 STEEL | 3 1/4 x 3 1/4 |

VB-X4C

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



CAT-87386



CAT-87387

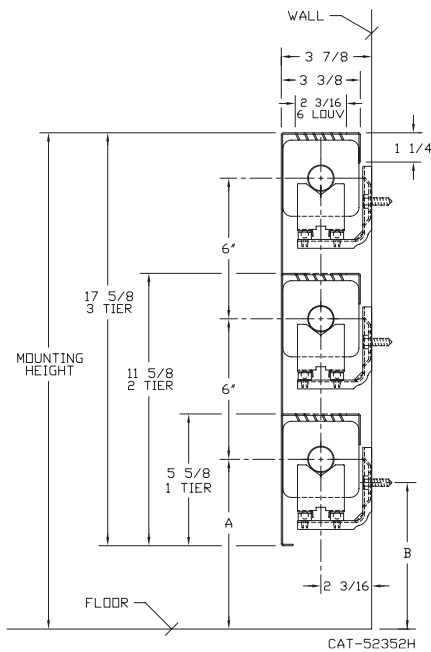
METHOD OF SUPPORT TO BE DETERMINED BY ENGINEER OR CONTRACTOR. MATERIALS USED WILL BE BY OTHERS.

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



VA-C (Element Supported)

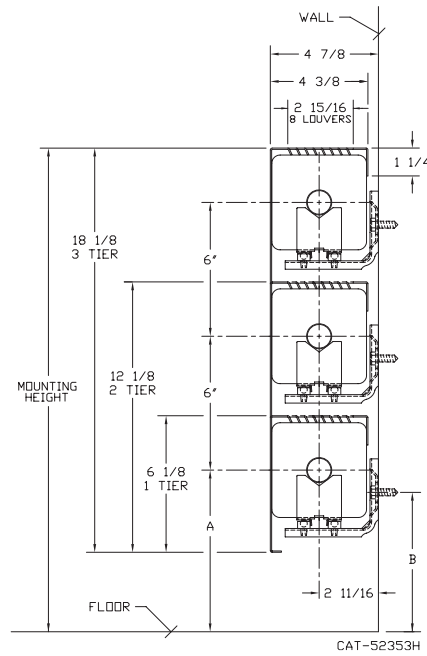
| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A | B |
|-------------------|-------------------------|---------------|---------|---------|
| 3/4 COPPER | 3 1/4 x 3 1/4 | 2 | 6 15/16 | 6 1/8 |
| 1" COPPER | 3 1/4 x 3 1/4 | 2 | 6 15/16 | 5 15/16 |
| 1 1/4 COPPER | 3 1/4 x 3 1/4 | 1 | 6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



CAT-52352H

VB-C (Element Supported)

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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 |



CAT-52353H

STYLE "C" 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 DEPTH AND 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 |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 870 | 750 | 680 | 600 | 530 | 460 | 390 | 350 | 290 | 230 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1930 | 1660 | 1510 | 1330 | 1180 | 1020 | 870 | 770 | 640 | 500 | |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 1030 | 890 | 800 | 710 | 630 | 550 | 460 | 410 | 340 | 270 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 | |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2150 | 1850 | 1680 | 1480 | 1310 | 1140 | 970 | 860 | 710 | 560 | |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 870 | 750 | 680 | 600 | 530 | 460 | 390 | 350 | 290 | 230 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 | |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1990 | 1710 | 1550 | 1370 | 1210 | 1050 | 900 | 800 | 660 | 520 | |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 | |
| 1-1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 5A | 1 | 8-7/8 | 870 | 750 | 680 | 600 | 530 | 460 | 390 | 350 | 290 | 230 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 | |
| 1-1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 5A | 1 | 8-7/8 | 950 | 820 | 740 | 660 | 580 | 500 | 430 | 380 | 310 | 250 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1560 | 1340 | 1220 | 1080 | 950 | 830 | 700 | 620 | 510 | 410 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 | |
| 1-1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 5A | 1 | 8-7/8 | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 | |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 | |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 2040 | 1750 | 1590 | 1410 | 1240 | 1080 | 920 | 820 | 670 | 530 | |
| 3/4" | C3/4-433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 | |
| 3/4" | C3/4-434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2120 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 | |
| 3/4" | C3/4-435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2760 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 | |
| 1" | C433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| 1" | C434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 | |
| 1" | C435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2760 | 2370 | 2150 | 1900 | 1680 | 1460 | 1240 | 1100 | 910 | 720 | |
| 1-1/4" | C1433 | 3-5/8" X 4-1/4" | 32 | .020 | 6B | 1 | 9-3/8 | 1180 | 1010 | 920 | 810 | 720 | 630 | 530 | 470 | 390 | 310 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| 1-1/4" | C1434 | 3-5/8" X 4-1/4" | 40 | .020 | 6B | 1 | 9-3/8 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2610 | 2240 | 2040 | 1800 | 1590 | 1380 | 1170 | 1040 | 860 | 680 | |
| 1-1/4" | C1435 | 3-5/8" X 4-1/4" | 50 | .020 | 6B | 1 | 9-3/8 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 | |
| 3/4" | C3/4 43 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1990 | 1710 | 1550 | 1370 | 1210 | 1050 | 900 | 800 | 660 | 520 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 | |
| 3/4" | C3/4 44 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 | |
| 3/4" | C3/4 45 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2230 | 1920 | 1740 | 1540 | 1360 | 1180 | 1000 | 890 | 740 | 580 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2740 | 2360 | 2140 | 1890 | 1670 | 1450 | 1230 | 1100 | 900 | 710 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2010 | 1730 | 1570 | 1390 | 1230 | 1070 | 900 | 800 | 660 | 520 | |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 | |

STYLE "C" 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 DEPTH AND 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" | C44 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1340 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2120 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1510 | 1300 | 1180 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 6B | 1 | 9-3/8 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2100 | 1810 | 1640 | 1450 | 1280 | 1110 | 950 | 840 | 690 | 550 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 6B | 1 | 9-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2790 | 2400 | 2180 | 1930 | 1700 | 1480 | 1260 | 1120 | 920 | 730 |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 6B | 1 | 9-3/8 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 |
| | | | | | 18B | 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

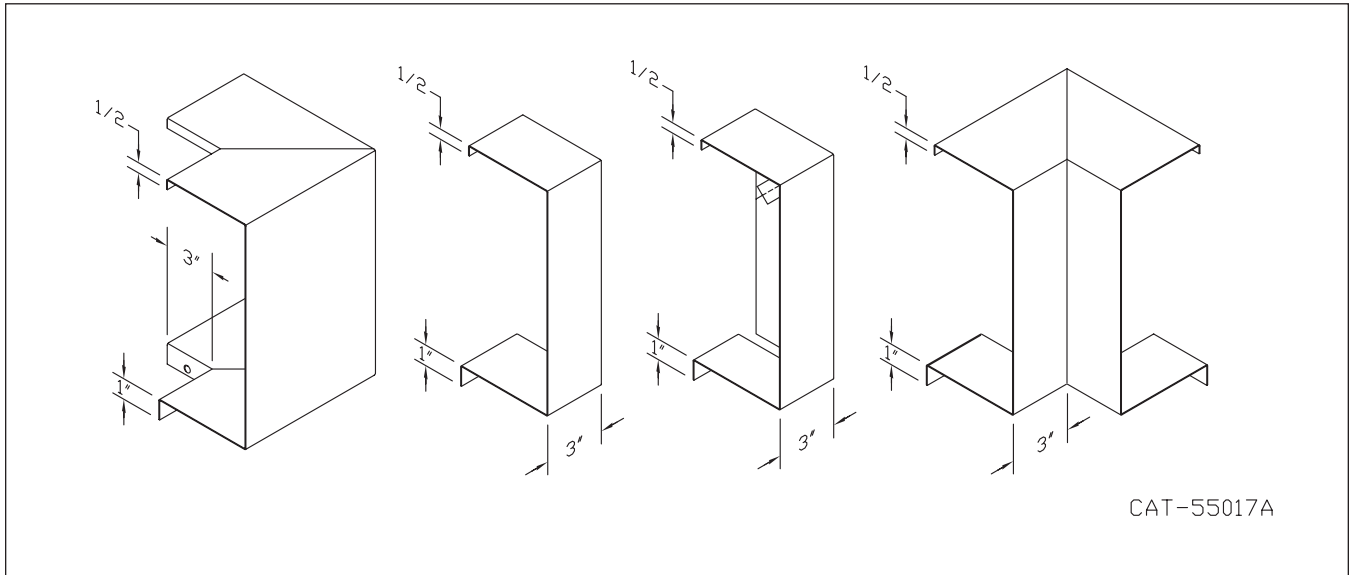
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL DEPTH AND 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" | S33 | 3-1/4" SQ. | 32 | .032 | 5A | 1 | 8-7/8 | 820 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 5A | 1 | 8-7/8 | 890 | 770 | 690 | 610 | 540 | 470 | 400 | 360 | 290 | 230 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 5A | 1 | 8-7/8 | 950 | 820 | 740 | 660 | 580 | 500 | 430 | 380 | 310 | 250 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 5A | 1 | 8-7/8 | 810 | 700 | 630 | 560 | 490 | 430 | 360 | 320 | 270 | 210 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 5A | 1 | 8-7/8 | 900 | 770 | 700 | 620 | 550 | 480 | 410 | 360 | 300 | 230 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1800 | 1550 | 1400 | 1240 | 1100 | 950 | 810 | 720 | 590 | 470 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 5A | 1 | 8-7/8 | 930 | 800 | 730 | 640 | 570 | 490 | 420 | 370 | 310 | 240 |
| | | | | | 11A | 2 @ 6 CL | 14-7/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 17A | 3 @ 6 CL | 20-7/8 | 1820 | 1570 | 1420 | 1260 | 1110 | 960 | 820 | 730 | 600 | 470 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1970 | 1690 | 1540 | 1360 | 1200 | 1040 | 890 | 790 | 650 | 510 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 6B | 1 | 9-3/8 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 6B | 1 | 9-3/8 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2580 | 2220 | 2010 | 1780 | 1570 | 1370 | 1160 | 1030 | 850 | 670 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1100 | 950 | 860 | 760 | 670 | 580 | 500 | 440 | 360 | 290 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1960 | 1690 | 1530 | 1350 | 1200 | 1040 | 880 | 780 | 650 | 510 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2420 | 2080 | 1890 | 1670 | 1480 | 1280 | 1090 | 970 | 800 | 630 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 6B | 1 | 9-3/8 | 1330 | 1140 | 1040 | 920 | 810 | 700 | 600 | 530 | 440 | 350 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2070 | 1780 | 1610 | 1430 | 1260 | 1100 | 930 | 830 | 680 | 540 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 6B | 1 | 9-3/8 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2560 | 2200 | 2000 | 1770 | 1560 | 1360 | 1150 | 1020 | 840 | 670 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 6B | 1 | 9-3/8 | 1030 | 890 | 800 | 710 | 630 | 550 | 460 | 410 | 340 | 270 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1730 | 1490 | 1350 | 1190 | 1060 | 920 | 780 | 690 | 570 | 450 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2160 | 1860 | 1680 | 1490 | 1320 | 1140 | 970 | 860 | 710 | 560 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 6B | 1 | 9-3/8 | 1190 | 1020 | 930 | 820 | 730 | 630 | 540 | 480 | 390 | 310 |
| | | | | | 12B | 2 @ 6 CL | 15-3/8 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 18B | 3 @ 6 CL | 21-3/8 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |

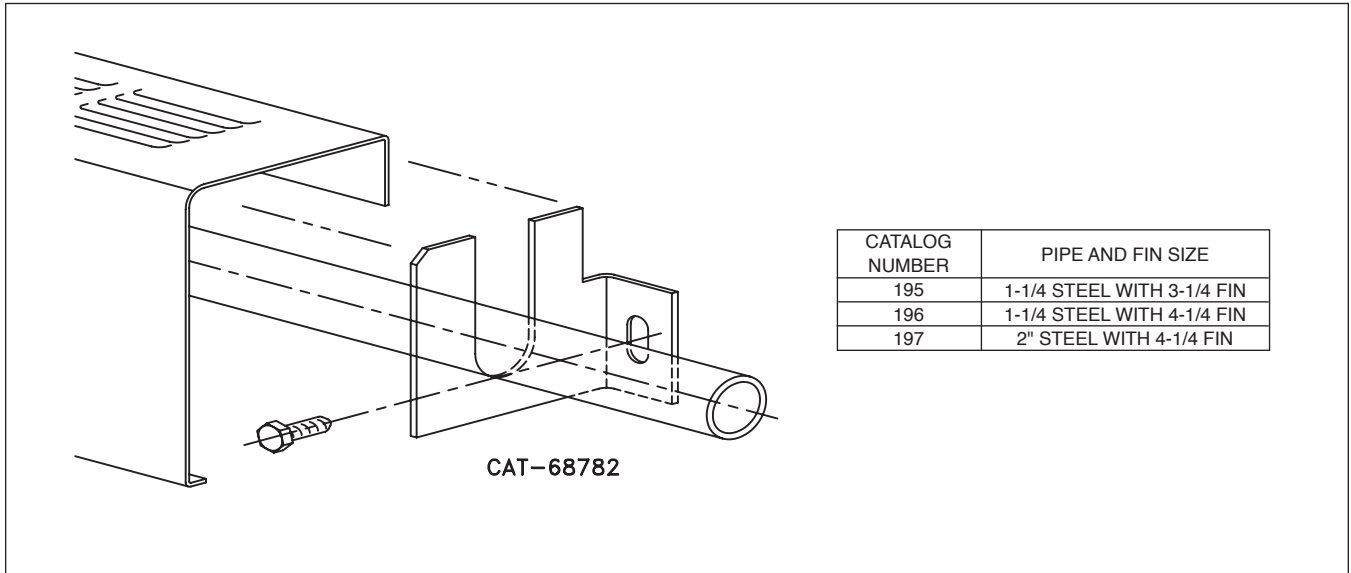
Notes: 1) Steel fins furnished as .032 thick, painted black.
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.
 3) The ends can be provided chamfered for field welded fittings when specified.

STYLE "C" TOP OUTLET

STYLE C ACCESSORIES



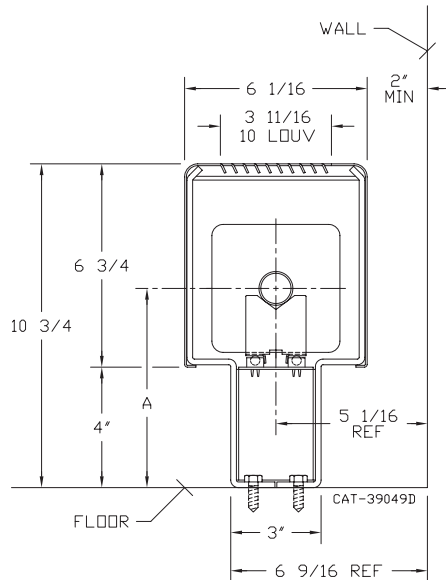
PIPE AND COVER SUPPORT BRACKET





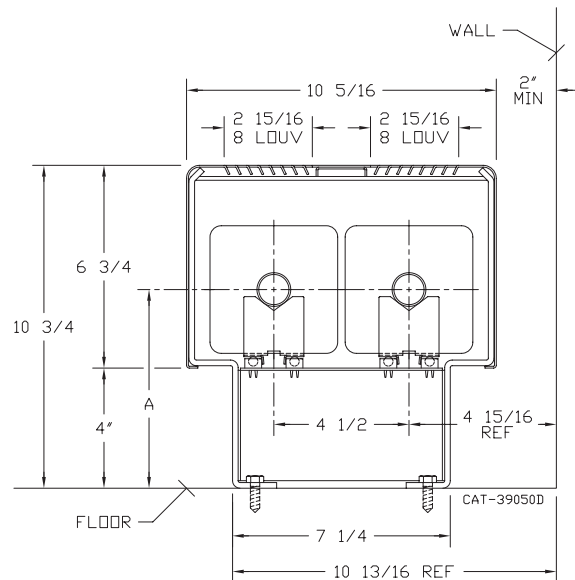
JVB-PM

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



JVB-2PM

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



STYLE "PM" 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 | | | | | | | | | |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1.00 2080 | 0.86 1790 | 0.78 1620 | 0.69 1440 | 0.61 1270 | 0.53 1100 | 0.45 940 | .40 830 | .33 690 | .26 540 | |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1250 2490 | 1080 2140 | 980 1940 | 860 1720 | 760 1520 | 660 1320 | 560 1120 | 420 1000 | 340 820 | 270 650 | |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1380 2750 | 1190 2370 | 1080 2150 | 950 1900 | 840 1680 | 730 1460 | 620 1240 | 550 1100 | 460 910 | 360 720 | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1080 2170 | 930 1870 | 840 1690 | 750 1500 | 660 1320 | 570 1150 | 490 980 | 430 870 | 360 720 | 280 560 | |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1210 2430 | 1040 2090 | 940 1900 | 830 1680 | 740 1480 | 640 1290 | 540 1090 | 480 970 | 400 800 | 310 630 | |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1380 2750 | 1190 2370 | 1080 2150 | 950 1900 | 840 1680 | 730 1460 | 620 1240 | 550 1100 | 460 910 | 360 720 | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1130 2250 | 970 1940 | 880 1760 | 780 1550 | 690 1370 | 600 1190 | 510 1010 | 450 900 | 370 740 | 290 590 | |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1240 2480 | 1070 2130 | 970 1930 | 860 1710 | 760 1510 | 660 1310 | 560 1120 | 500 990 | 410 820 | 320 640 | |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1380 2750 | 1190 2370 | 1080 2150 | 950 1900 | 840 1680 | 730 1460 | 620 1240 | 550 1100 | 460 910 | 360 720 | |
| 3/4" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1150 2300 | 990 1980 | 900 1790 | 790 1590 | 700 1400 | 610 1220 | 520 1040 | 460 920 | 380 760 | 300 600 | |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1380 2750 | 1190 2370 | 1080 2150 | 950 1900 | 840 1680 | 730 1460 | 620 1240 | 550 1100 | 460 910 | 360 720 | |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1420 2840 | 1220 2440 | 1110 2220 | 980 1960 | 870 1730 | 750 1510 | 640 1280 | 570 1140 | 470 940 | 370 740 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1150 2300 | 990 1980 | 900 1790 | 790 1590 | 700 1400 | 610 1220 | 520 1040 | 460 920 | 380 760 | 300 600 | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1280 2560 | 1100 2200 | 1000 2000 | 880 1770 | 780 1560 | 680 1360 | 580 1150 | 510 1020 | 420 840 | 330 670 | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1440 2890 | 1240 2490 | 1120 2250 | 990 1990 | 880 1760 | 760 1530 | 650 1300 | 580 1160 | 480 950 | 370 750 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1200 2410 | 1030 2070 | 940 1880 | 830 1660 | 730 1470 | 640 1280 | 540 1080 | 480 960 | 400 800 | 310 630 | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1430 2860 | 1230 2460 | 1120 2230 | 990 1970 | 870 1740 | 760 1520 | 640 1290 | 570 1140 | 470 940 | 370 740 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1470 2940 | 1260 2530 | 1150 2290 | 1010 2030 | 900 1790 | 780 1560 | 660 1320 | 590 1180 | 490 970 | 380 760 | |

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" | S43 | 4-1/4" SQ. | 32 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1140 2270 | 980 1950 | 890 1770 | 790 1570 | 700 1380 | 600 1200 | 510 1020 | 460 910 | 380 750 | 300 590 | |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1280 2560 | 1100 2200 | 1000 2000 | 880 1770 | 780 1560 | 680 1360 | 580 1150 | 510 1020 | 420 840 | 330 670 | |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1360 2720 | 1170 2340 | 1060 2120 | 940 1880 | 830 1660 | 720 1440 | 610 1220 | 540 1090 | 450 900 | 350 710 | |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1050 2100 | 900 1810 | 820 1640 | 720 1450 | 640 1280 | 560 1110 | 470 950 | 420 840 | 350 690 | 270 550 | |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1270 2550 | 1090 2190 | 990 1990 | 880 1760 | 770 1560 | 670 1350 | 570 1150 | 510 1020 | 420 840 | 330 660 | |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1330 2670 | 1140 2300 | 1040 2080 | 920 1840 | 810 1630 | 700 1420 | 600 1200 | 530 1070 | 440 880 | 350 690 | |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 980 1960 | 840 1690 | 760 1530 | 680 1350 | 600 1200 | 520 1040 | 440 880 | 390 780 | 320 650 | 250 510 | |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 6 3/4 10 5/16 | 1 2 - 4 1/2 | 10 3/4 " | 1140 2270 | 980 1950 | 890 1770 | 790 1570 | 700 1380 | 600 1200 | 510 1020 | 460 910 | 380 750 | 300 590 | |

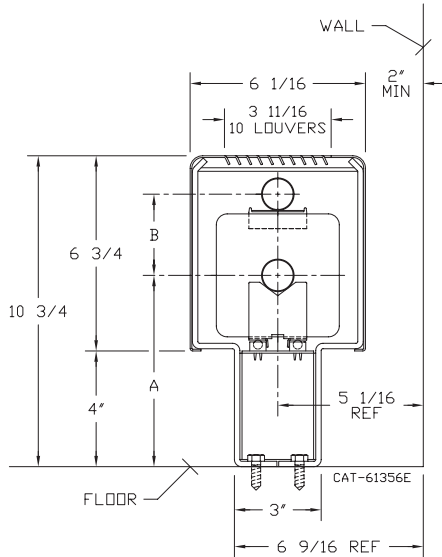
- Notes: 1) Steel fins furnished as .032 thick, painted black.
 2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.
 3) Ratings based on typical window wall installation.
 4) The ends can be provided chamfered for field welded fittings when specified.

STYLE "PM" PEDESTAL MOUNTED

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

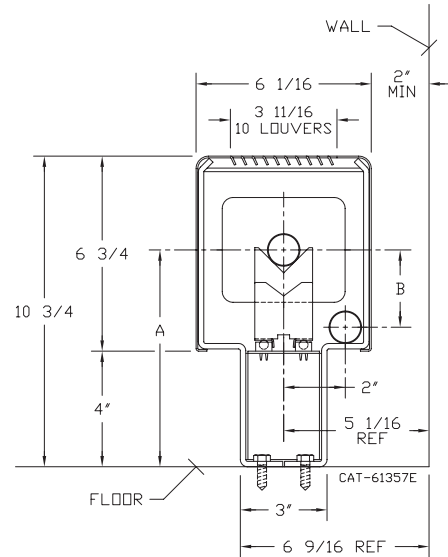
JVB-PM WITH RETURN ABOVE ELEMENT

| 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 |



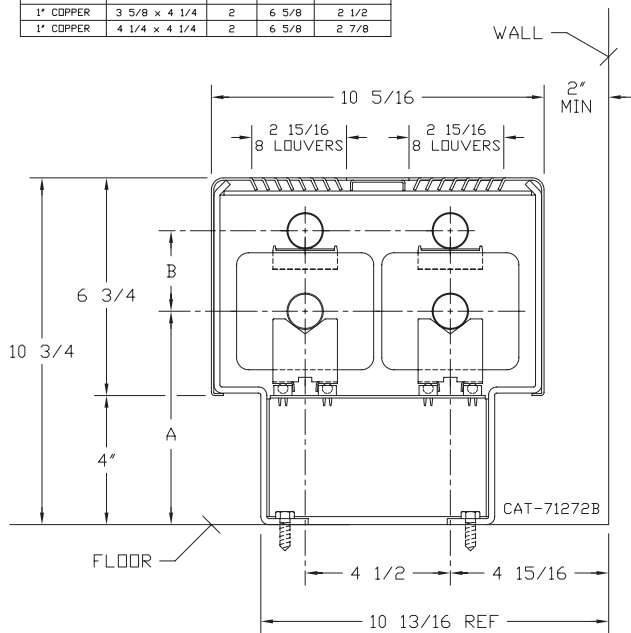
JVB-PM WITH RETURN BELOW ELEMENT

| 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 |



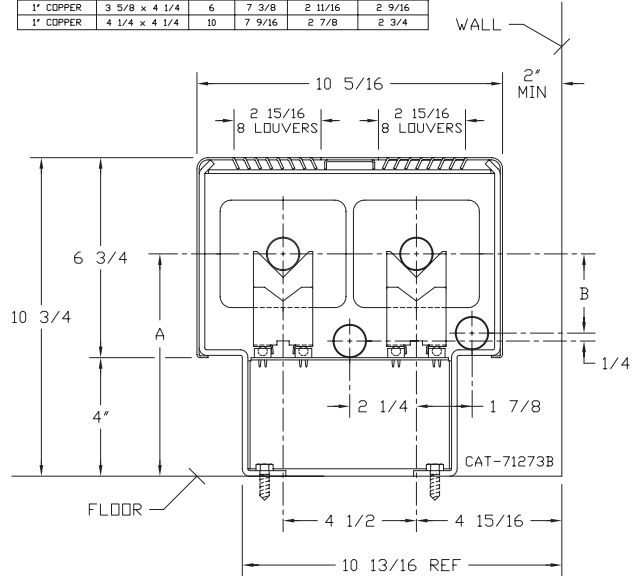
JVB-2PM WITH RETURN ABOVE ELEMENT

| 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 |



JVB-2PM 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 |

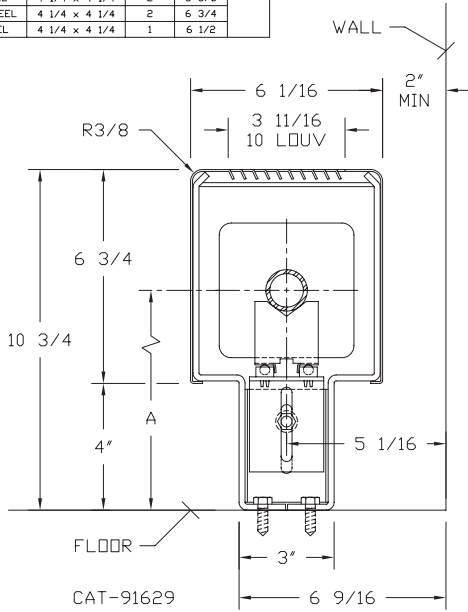


STYLE "PM" PEDESTAL MOUNTED

OPTIONAL ADJUSTABLE PEDESTAL BRACKET ASSEMBLIES FOR 2-PIPE STEAM

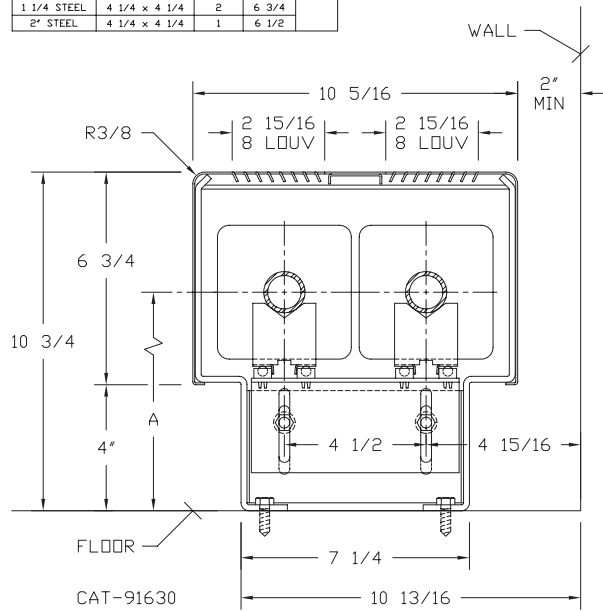
JVB-PM

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A MIN | A 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 | 6 1/2 | |
| 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 | 6 5/8 | |
| 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 | |



JVB-2PM

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A MIN | A 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 | 6 1/2 | |
| 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 | 6 5/8 | |
| 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 | |

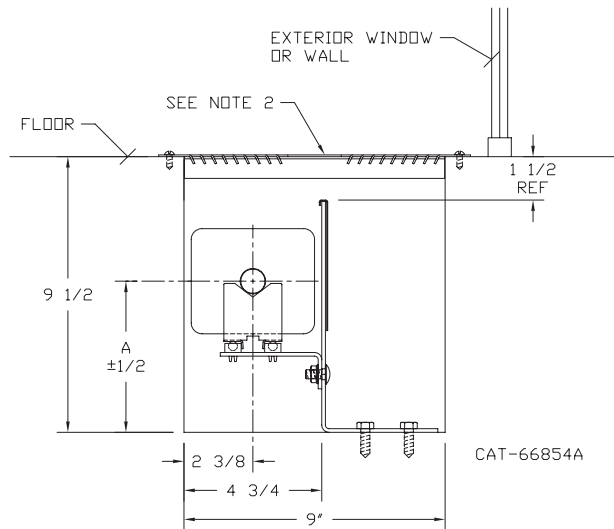


TRV

| ELEMENT TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE 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:

- Trough Liner Optional (Not Shown).
- 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 SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TROUGH DEPTH AND 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" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 9 1/2 x 9 | 1120 | 960 | 870 | 770 | 680 | 590 | 500 | 450 | 370 | 290 | |
| | C3/4-434 | | 40 | " | " | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 | |
| | C3/4-435 | | 50 | " | " | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 | |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 9 1/2 x 9 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 | |
| | C434 | | 40 | " | " | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 | |
| | C435 | | 50 | " | " | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 | |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 9 1/2 x 9 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | C1434 | | 40 | " | " | 1330 | 1140 | 1040 | 920 | 810 | 700 | 600 | 530 | 440 | 350 | |
| | C1435 | | 50 | " | " | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 | |
| 3/4" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 9 1/2 x 9 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 | |
| | C3/4-44 | | 40 | " | " | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 | |
| | C3/4-45 | | 50 | " | " | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 9 1/2 x 9 | 1240 | 1070 | 970 | 860 | 760 | 660 | 560 | 500 | 410 | 320 | |
| | C44 | | 40 | " | " | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | C45 | | 50 | " | " | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 9 1/2 x 9 | 1300 | 1120 | 1010 | 900 | 790 | 690 | 590 | 520 | 430 | 340 | |
| | C144 | | 40 | " | " | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | C145 | | 50 | " | " | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |

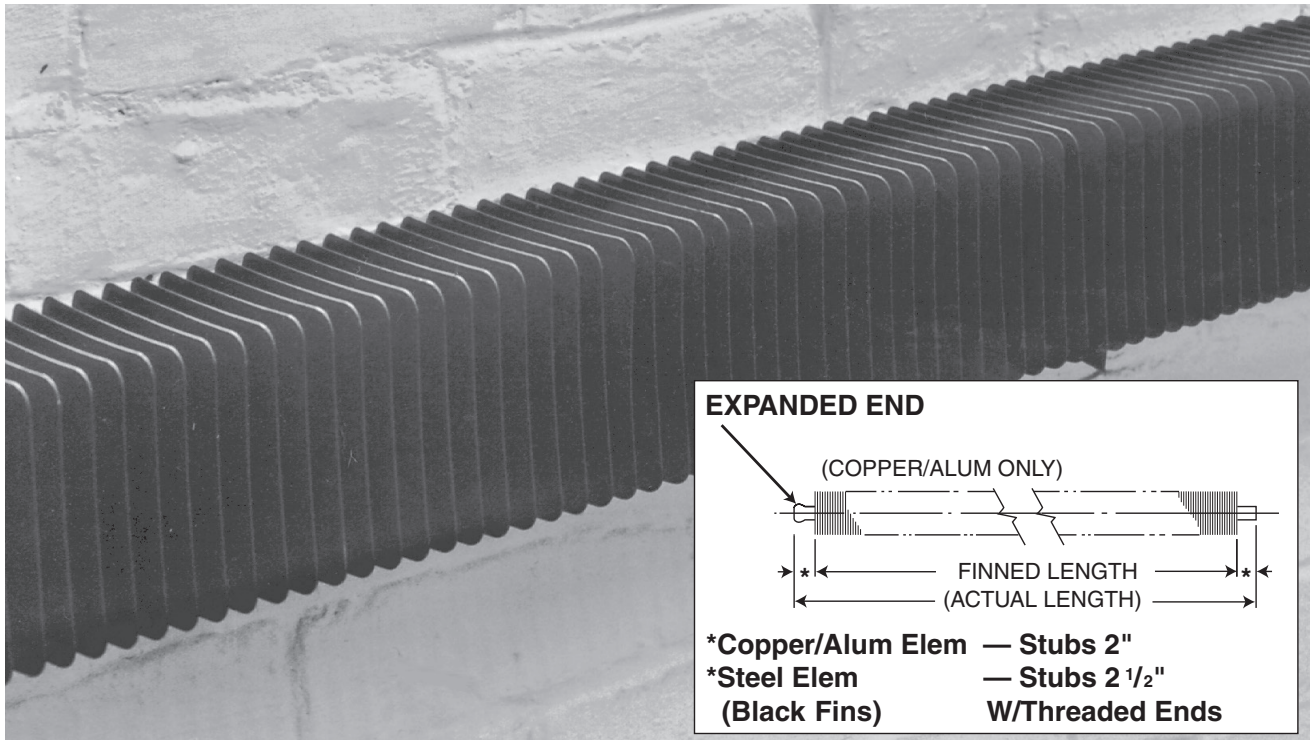
- Notes: 1. Ratings are based on 24 sq. in. of free area per linear foot of air inlet and outlet each.
2. For systems using steam, consult factory.

STEEL ELEMENTS

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

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TROUGH DEPTH AND 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" | S43 | 4-1/4" SQ. | 32 | .032 | 9 1/2 x 9 | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 | |
| | S44 | | 40 | " | " | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 | |
| | S45 | | 50 | " | " | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 | |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 9 1/2 x 9 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 | |
| | S144 | | 40 | " | " | 1370 | 1180 | 1070 | 950 | 840 | 730 | 620 | 550 | 450 | 360 | |
| | S145 | | 50 | " | " | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 | |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 9 1/2 x 9 | 1050 | 900 | 820 | 720 | 640 | 560 | 470 | 420 | 350 | 270 | |
| | S243 | | 32 | " | " | 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.



ELEMENT ORDERING INFORMATION

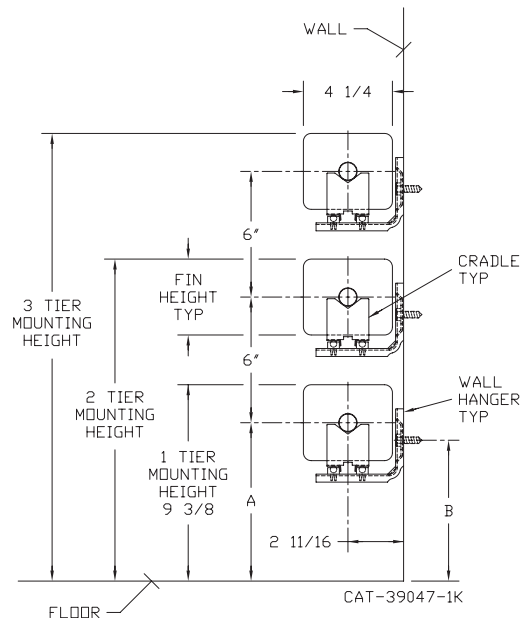
When ordering element specify fin thickness: steel = .024, .032; copper = .020, .011 as shown on Selection Pages.

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 "B" Offset

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



BARE ELEMENT STYLE "B"

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" | C3/4-433 | 3-5/8" X 4-1/4" | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 | |
| | | | | | | | 2130 | 1830 | 1660 | 1470 | 1300 | 1130 | 960 | 850 | 700 | 550 | |
| | | | | | | | 2880 | 2480 | 2250 | 1990 | 1760 | 1530 | 1300 | 1150 | 950 | 750 | |
| 3/4" | C3/4-434 | 3-5/8" X 4-1/4" | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 | |
| | | | | | | | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 | |
| | | | | | | | 3300 | 2840 | 2570 | 2280 | 2010 | 1750 | 1490 | 1320 | 1090 | 860 | |
| 3/4" | C3/4-435 | 3-5/8" X 4-1/4" | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | | | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| | | | | | | | 3450 | 2970 | 2690 | 2380 | 2100 | 1830 | 1550 | 1380 | 1140 | 900 | |
| 1" | C433 | 3-5/8" X 4-1/4" | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 | |
| | | | | | | | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 | |
| | | | | | | | 3000 | 2580 | 2340 | 2070 | 1830 | 1590 | 1350 | 1200 | 990 | 780 | |
| 1" | C434 | 3-5/8" X 4-1/4" | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 | |
| | | | | | | | 2420 | 2080 | 1890 | 1670 | 1480 | 1280 | 1090 | 970 | 800 | 630 | |
| | | | | | | | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | |
| 1" | C435 | 3-5/8" X 4-1/4" | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | | | 2640 | 2270 | 2060 | 1820 | 1610 | 1400 | 1190 | 1060 | 870 | 690 | |
| | | | | | | | 3450 | 2970 | 2690 | 2380 | 2100 | 1830 | 1550 | 1380 | 1140 | 900 | |
| 1-1/4" | C1433 | 3-5/8" X 4-1/4" | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 | |
| | | | | | | | 2310 | 1990 | 1800 | 1590 | 1410 | 1220 | 1040 | 920 | 760 | 600 | |
| | | | | | | | 3130 | 2690 | 2440 | 2160 | 1910 | 1660 | 1410 | 1250 | 1030 | 810 | |
| 1-1/4" | C1434 | 3-5/8" X 4-1/4" | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | | | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 | |
| | | | | | | | 3260 | 2800 | 2540 | 2250 | 1990 | 1730 | 1470 | 1300 | 1080 | 850 | |
| 1-1/4" | C1435 | 3-5/8" X 4-1/4" | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | | | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| | | | | | | | 3460 | 2980 | 2700 | 2390 | 2110 | 1830 | 1560 | 1380 | 1140 | 900 | |
| 3/4" | C3/4 43 | 4-1/4" SQ. | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 | |
| | | | | | | | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 | |
| | | | | | | | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | |
| 3/4" | C3/4 44 | 4-1/4" SQ. | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 | |
| | | | | | | | 2540 | 2180 | 1980 | 1750 | 1550 | 1350 | 1140 | 1020 | 840 | 660 | |
| | | | | | | | 3330 | 2860 | 2600 | 2300 | 2030 | 1760 | 1500 | 1330 | 1100 | 870 | |
| 3/4" | C3/4 45 | 4-1/4" SQ. | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1650 | 1420 | 1290 | 1140 | 1010 | 870 | 740 | 660 | 540 | 430 | |
| | | | | | | | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 | |
| | | | | | | | 3430 | 2950 | 2680 | 2370 | 2090 | 1820 | 1540 | 1370 | 1130 | 890 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1340 | 1150 | 1050 | 920 | 820 | 710 | 600 | 540 | 440 | 350 | |
| | | | | | | | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 | |
| | | | | | | | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 | |
| | | | | | | | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 | |
| | | | | | | | 3320 | 2860 | 2590 | 2290 | 2030 | 1760 | 1490 | 1330 | 1100 | 860 | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 | |
| | | | | | | | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| | | | | | | | 3460 | 2980 | 2700 | 2390 | 2110 | 1830 | 1560 | 1380 | 1140 | 900 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 | |
| | | | | | | | 2470 | 2120 | 1930 | 1700 | 1510 | 1310 | 1110 | 990 | 820 | 640 | |
| | | | | | | | 3360 | 2890 | 2620 | 2320 | 2050 | 1780 | 1510 | 1340 | 1110 | 870 | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 | |
| | | | | | | | 2680 | 2300 | 2090 | 1850 | 1630 | 1420 | 1210 | 1070 | 880 | 700 | |
| | | | | | | | 3490 | 3000 | 2720 | 2410 | 2130 | 1850 | 1570 | 1400 | 1150 | 910 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 1 2-6 CL 3-6 CL | 9-3/8 15-3/8 21-3/8 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 | |
| | | | | | | | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | | | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 | |

Note: Copper tube furnished flared one end standard.

BARE ELEMENT STYLE "B"

STEEL ELEMENTS

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

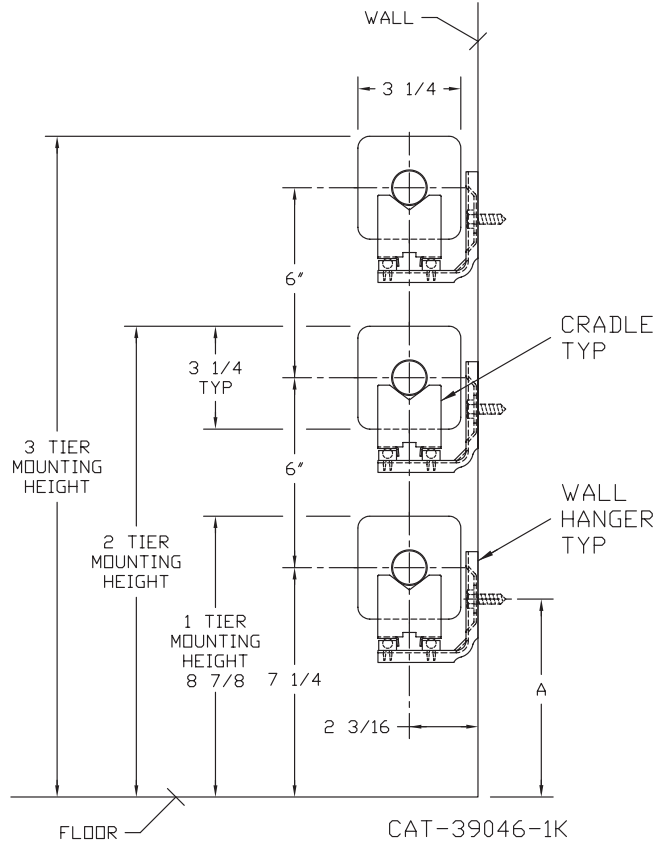
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| | | | | | 1 | 9-3/8 | 1.00 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 2-6 CL | 15-3/8 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 3-6 CL | 21-3/8 | 3050 | 2620 | 2380 | 2100 | 1860 | 1620 | 1370 | 1220 | 1010 | 790 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 2-6 CL | 15-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 3-6 CL | 21-3/8 | 3180 | 2730 | 2480 | 2190 | 1940 | 1690 | 1430 | 1270 | 1050 | 830 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 2-6 CL | 15-3/8 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 |
| | | | | | 3-6 CL | 21-3/8 | 3230 | 2780 | 2520 | 2230 | 1970 | 1710 | 1450 | 1290 | 1070 | 840 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 2-6 CL | 15-3/8 | 1220 | 1050 | 950 | 840 | 740 | 650 | 550 | 490 | 400 | 320 |
| | | | | | 3-6 CL | 21-3/8 | 3030 | 2610 | 2360 | 2090 | 1850 | 1610 | 1360 | 1210 | 1000 | 790 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 2-6 CL | 15-3/8 | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| | | | | | 3-6 CL | 21-3/8 | 3170 | 2730 | 2470 | 2190 | 1930 | 1680 | 1430 | 1270 | 1050 | 820 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 2-6 CL | 15-3/8 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 |
| | | | | | 3-6 CL | 21-3/8 | 3200 | 2750 | 2500 | 2210 | 1950 | 1700 | 1440 | 1280 | 1060 | 830 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 2-6 CL | 15-3/8 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 |
| | | | | | 3-6 CL | 21-3/8 | 2700 | 2320 | 2110 | 1860 | 1650 | 1430 | 1220 | 1080 | 890 | 700 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 2-6 CL | 15-3/8 | 1320 | 1140 | 1030 | 910 | 810 | 700 | 590 | 530 | 440 | 340 |
| | | | | | 3-6 CL | 21-3/8 | 2910 | 2500 | 2270 | 2010 | 1780 | 1540 | 1310 | 1160 | 960 | 760 |
| 2" | S244 | 4-1/4" SQ. | 40 | .032 | 2-6 CL | 15-3/8 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 3-6 CL | 21-3/8 | 3040 | 2610 | 2370 | 2100 | 1850 | 1610 | 1370 | 1220 | 1000 | 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 "A"

Bare Element "A" Offset

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



BARE ELEMENT STYLE "A"

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 | | | | | | | | |
| 3/4" | C3/4-33 | 3-1/4" SQ. | 32 | .020 | 1 | 8-7/8 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 |
| | | | | | 2-6 CL | 14-7/8 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 3-6 CL | 20-7/8 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| 3/4" | C3/4-34 | 3-1/4" SQ. | 40 | .020 | 1 | 8-7/8 | 1140 | 980 | 890 | 790 | 700 | 600 | 510 | 460 | 380 | 300 |
| | | | | | 2-6 CL | 14-7/8 | 1880 | 1620 | 1470 | 1300 | 1150 | 1000 | 850 | 750 | 620 | 490 |
| | | | | | 3-6 CL | 20-7/8 | 2570 | 2210 | 2000 | 1770 | 1570 | 1360 | 1160 | 1030 | 850 | 670 |
| 3/4" | C3/4-35 | 3-1/4" SQ. | 50 | .020 | 1 | 8-7/8 | 1260 | 1080 | 980 | 870 | 770 | 670 | 570 | 500 | 420 | 330 |
| | | | | | 2-6 CL | 14-7/8 | 2010 | 1730 | 1570 | 1390 | 1230 | 1070 | 900 | 800 | 660 | 520 |
| | | | | | 3-6 CL | 20-7/8 | 2690 | 2310 | 2100 | 1860 | 1640 | 1430 | 1210 | 1080 | 890 | 700 |
| 1" | C33 | 3-1/4" SQ. | 32 | .020 | 1 | 8-7/8 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 |
| | | | | | 2-6 CL | 14-7/8 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 |
| | | | | | 3-6 CL | 20-7/8 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 |
| 1" | C34 | 3-1/4" SQ. | 40 | .020 | 1 | 8-7/8 | 1080 | 930 | 840 | 750 | 660 | 570 | 490 | 430 | 360 | 280 |
| | | | | | 2-6 CL | 14-7/8 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 3-6 CL | 20-7/8 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 |
| 1" | C35 | 3-1/4" SQ. | 50 | .020 | 1 | 8-7/8 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 |
| | | | | | 2-6 CL | 14-7/8 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| | | | | | 3-6 CL | 20-7/8 | 2600 | 2240 | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860 | 680 |
| 1-1/4" | C133 | 3-1/4" SQ. | 32 | .020 | 1 | 8-7/8 | 970 | 830 | 760 | 670 | 590 | 510 | 440 | 390 | 320 | 250 |
| | | | | | 2-6 CL | 14-7/8 | 1680 | 1440 | 1310 | 1160 | 1020 | 890 | 760 | 670 | 550 | 440 |
| | | | | | 3-6 CL | 20-7/8 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 |
| 1-1/4" | C134 | 3-1/4" SQ. | 40 | .020 | 1 | 8-7/8 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 |
| | | | | | 2-6 CL | 14-7/8 | 1840 | 1580 | 1440 | 1270 | 1120 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 3-6 CL | 20-7/8 | 2450 | 2110 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 |
| 1-1/4" | C135 | 3-1/4" SQ. | 50 | .020 | 1 | 8-7/8 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| | | | | | 2-6 CL | 14-7/8 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 |
| | | | | | 3-6 CL | 20-7/8 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 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

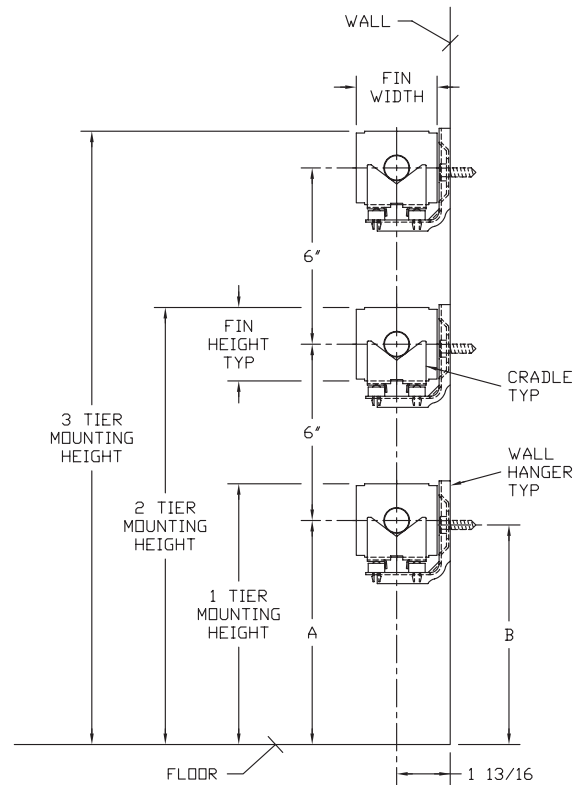
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | S33 | 3-1/4" SQ. | 32 | .032 | 1 | 8-7/8 | 910 | 780 | 710 | 630 | 560 | 480 | 410 | 360 | 300 | 240 |
| | | | | | 2-6 CL | 14-7/8 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 |
| | | | | | 3-6 CL | 20-7/8 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 |
| 1" | S34 | 3-1/4" SQ. | 40 | .032 | 1 | 8-7/8 | 990 | 850 | 770 | 680 | 600 | 520 | 450 | 400 | 330 | 260 |
| | | | | | 2-6 CL | 14-7/8 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 |
| | | | | | 3-6 CL | 20-7/8 | 2350 | 2020 | 1830 | 1620 | 1430 | 1250 | 1060 | 940 | 780 | 610 |
| 1" | S35 | 3-1/4" SQ. | 50 | .032 | 1 | 8-7/8 | 1060 | 910 | 830 | 730 | 650 | 560 | 480 | 420 | 350 | 280 |
| | | | | | 2-6 CL | 14-7/8 | 1790 | 1540 | 1400 | 1240 | 1090 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 3-6 CL | 20-7/8 | 2450 | 2110 | 1910 | 1690 | 1490 | 1300 | 1100 | 980 | 810 | 640 |
| 1-1/4" | S133 | 3-1/4" SQ. | 32 | .032 | 1 | 8-7/8 | 900 | 770 | 700 | 620 | 550 | 480 | 410 | 360 | 300 | 230 |
| | | | | | 2-6 CL | 14-7/8 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 3-6 CL | 20-7/8 | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| 1-1/4" | S134 | 3-1/4" SQ. | 40 | .032 | 1 | 8-7/8 | 1000 | 860 | 780 | 690 | 610 | 530 | 450 | 400 | 330 | 260 |
| | | | | | 2-6 CL | 14-7/8 | 1700 | 1460 | 1330 | 1170 | 1040 | 900 | 770 | 680 | 560 | 440 |
| | | | | | 3-6 CL | 20-7/8 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 |
| 1-1/4" | S135 | 3-1/4" SQ. | 50 | .032 | 1 | 8-7/8 | 1030 | 890 | 800 | 710 | 630 | 550 | 460 | 410 | 340 | 270 |
| | | | | | 2-6 CL | 14-7/8 | 1750 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 3-6 CL | 20-7/8 | 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 "K"

Bare Element "K" Offset

| TUBE SIZE | FIN SIZE HEIGHT x WIDTH | CRADLE NUMBER | A | B | 1 TIER MOUNTING HEIGHT |
|--------------|-------------------------|---------------|-------|---------|------------------------|
| 3/4 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 | | | |
| 1" 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 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" 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 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" |

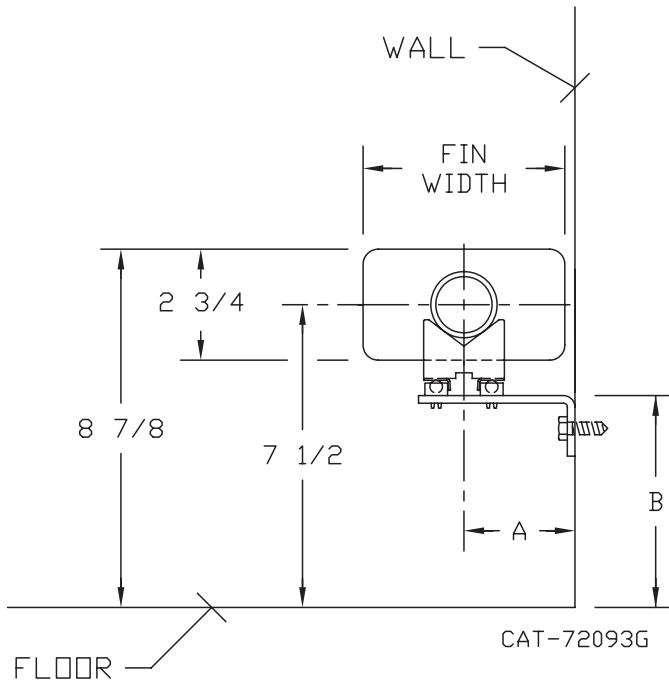


CAT-69647-1B

BARE ELEMENT STYLE "SP"

Bare Element "SP" Offset

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



CAT-72093G

BARE ELEMENT STYLE "K"

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" | R01 | 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" | R02 | 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" | R03 | 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" | R04 | 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" | R05 | 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" | R07 | 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" | R08 | 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" | R10 | 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 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" | R11 | 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" | R15 | 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" | R16 | 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 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 | | | | | | | | |
| 3/4" | R04R | 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" | R05R | 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" | R07R | 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" | R08R | 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" | R10R | 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.

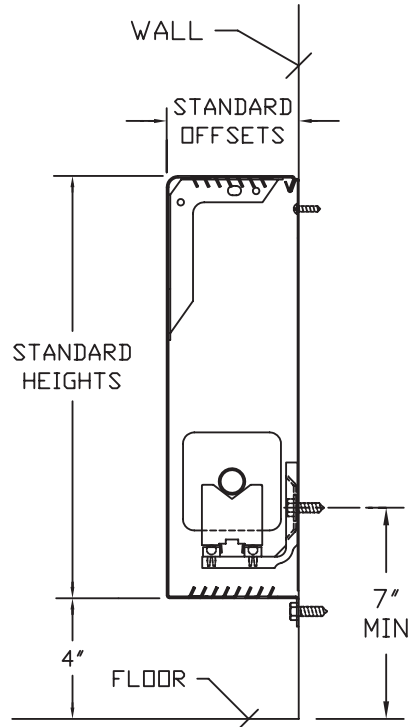
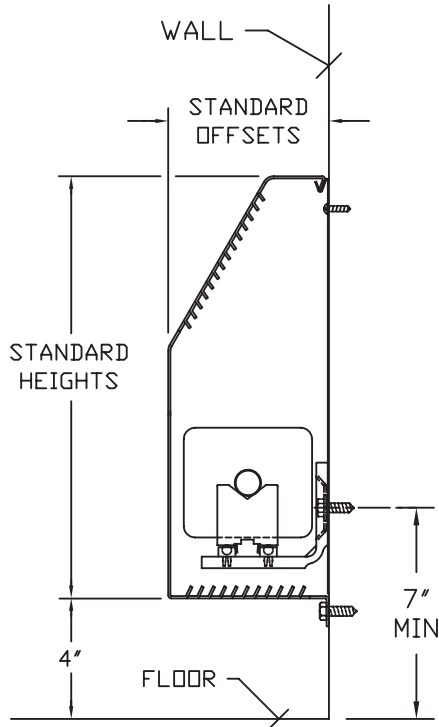
STEEL ELEMENTS

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

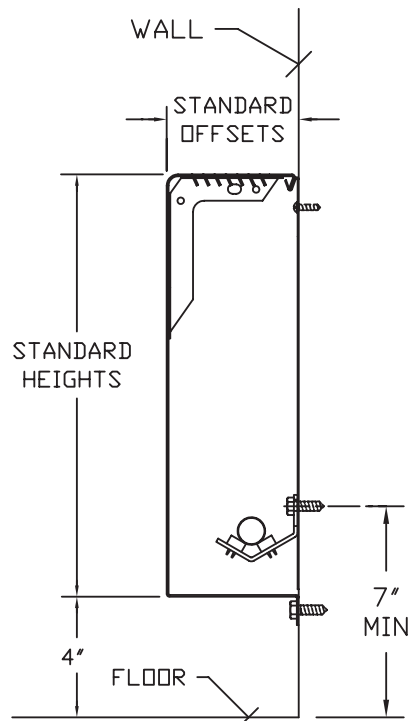
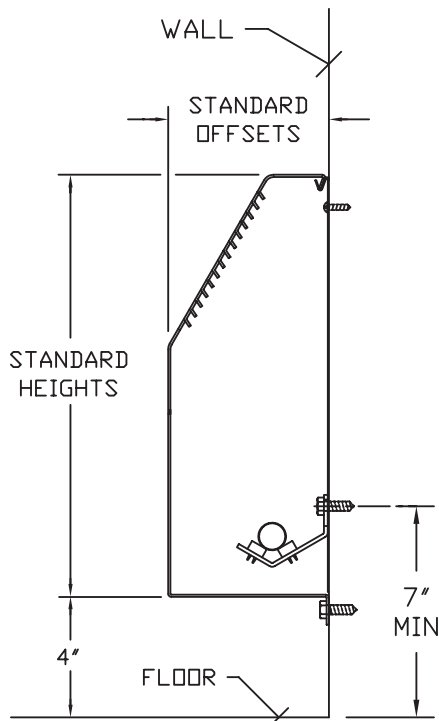
| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | TIERS AND CENTERS IN INCHES | MOUNTING HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------------|---------------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1" | R15R | 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" | R16R | 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.

DRAFT BARRIER, RETURN TO WALL AND LOUVERED INLET STYLES



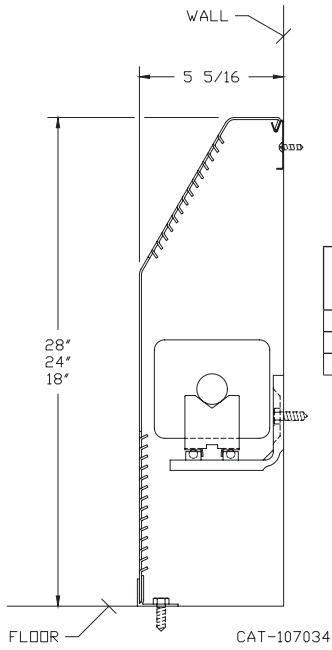
**RETURN TO WALL, LOUVERED INLET
RWLI**



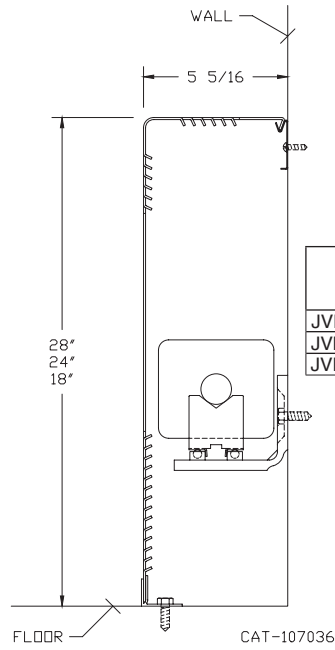
**RETURN TO WALL, NO INLET LOUVERS
DRAFT BARRIER STYLE
RWDB**

CAT-53178C

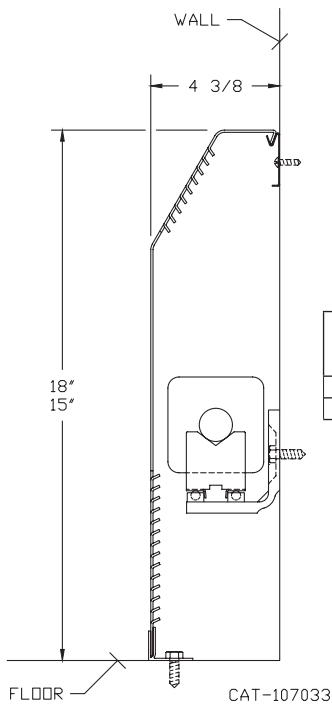
TO-FLOOR LOUVERED INLET STYLES



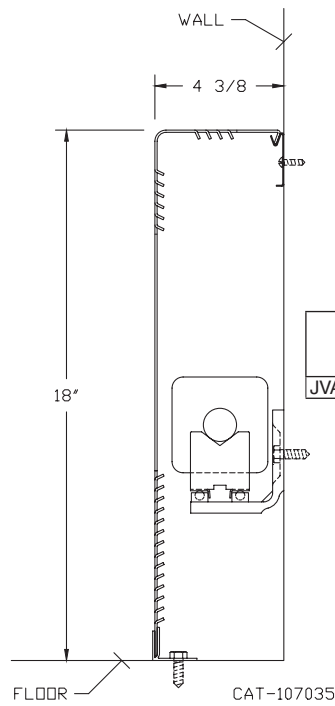
| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|----------------------|---------------------------------------|
| JVB-S18 LI | JVB-S14 |
| JVB-S24 LI | JVB-S20 |
| JVB-S28 LI | JVB-S24 |



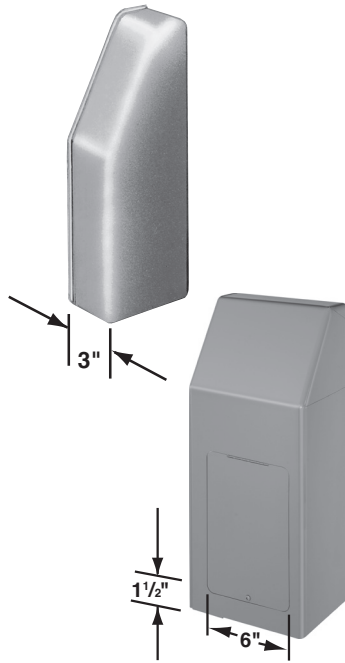
| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|-----------------------|---------------------------------------|
| JVB-T, F, FT, RD18 LI | JVB-T, F, FT, RD14 |
| JVB-T, F, FT, RD24 LI | JVB-T, F, FT, RD20 |
| JVB-T, F, FT, RD28 LI | JVB-T, F, FT, RD24 |



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



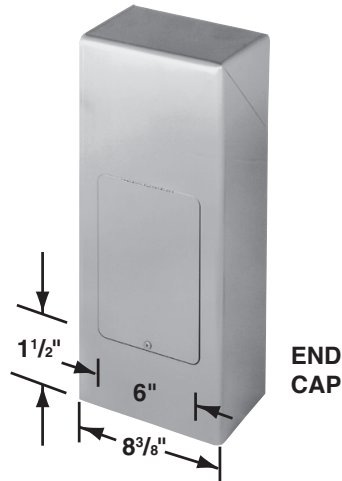
| Louvered Inlet Model | For Ratings, Refer to Standard Model: |
|-----------------------|---------------------------------------|
| JVA-T, F, FT, RD15 LI | JVA-T, F, FT, RD11 |



| ACCESS DOOR LOCATIONS SLOPE TOP END CAP & WALL SLEEVE | | |
|---|---------------------|---------------------|
| ENCLOSURE OFFSET | ENCLOSURE HEIGHT | ACCESS 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

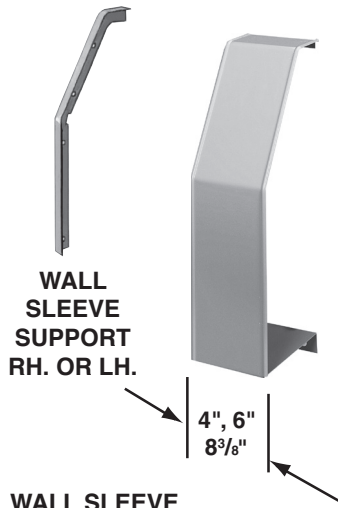
ALTERNATE ACCESS DOOR LOCATIONS
ARE AVAILABLE, CONSULT FACTORY.



| ACCESS DOOR LOCATIONS FLAT TOP END CAP & WALL SLEEVE | | |
|--|---------------------|---------------------|
| ENCLOSURE OFFSET | ENCLOSURE HEIGHT | ACCESS 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' |

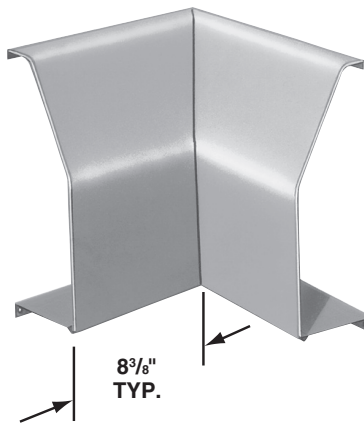
CAT-68521-1E

ALTERNATE ACCESS DOOR LOCATIONS
ARE AVAILABLE, CONSULT FACTORY.

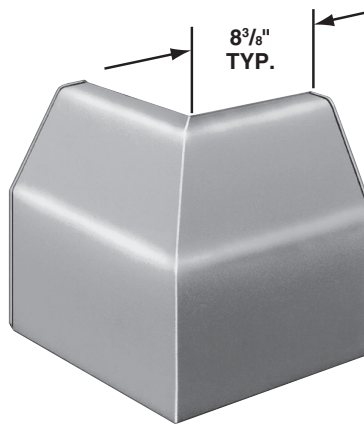


WALL
SLEEVE
SUPPORT
RH. OR LH.

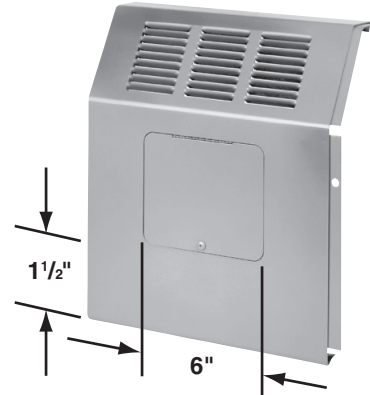
WALL SLEEVE
ALSO AVAILABLE
WITH ACCESS DOOR



INSIDE CORNER

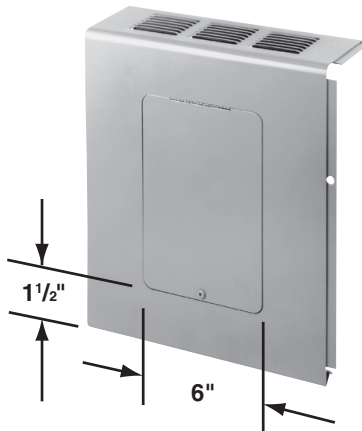


OUTSIDE CORNER



| ACCESS DOOR LOCATIONS SLOPE TOP VALVE COMPARTMENT | | |
|--|---------------------|---------------------|
| ENCLOSURE OFFSET | ENCLOSURE HEIGHT | ACCESS 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' |

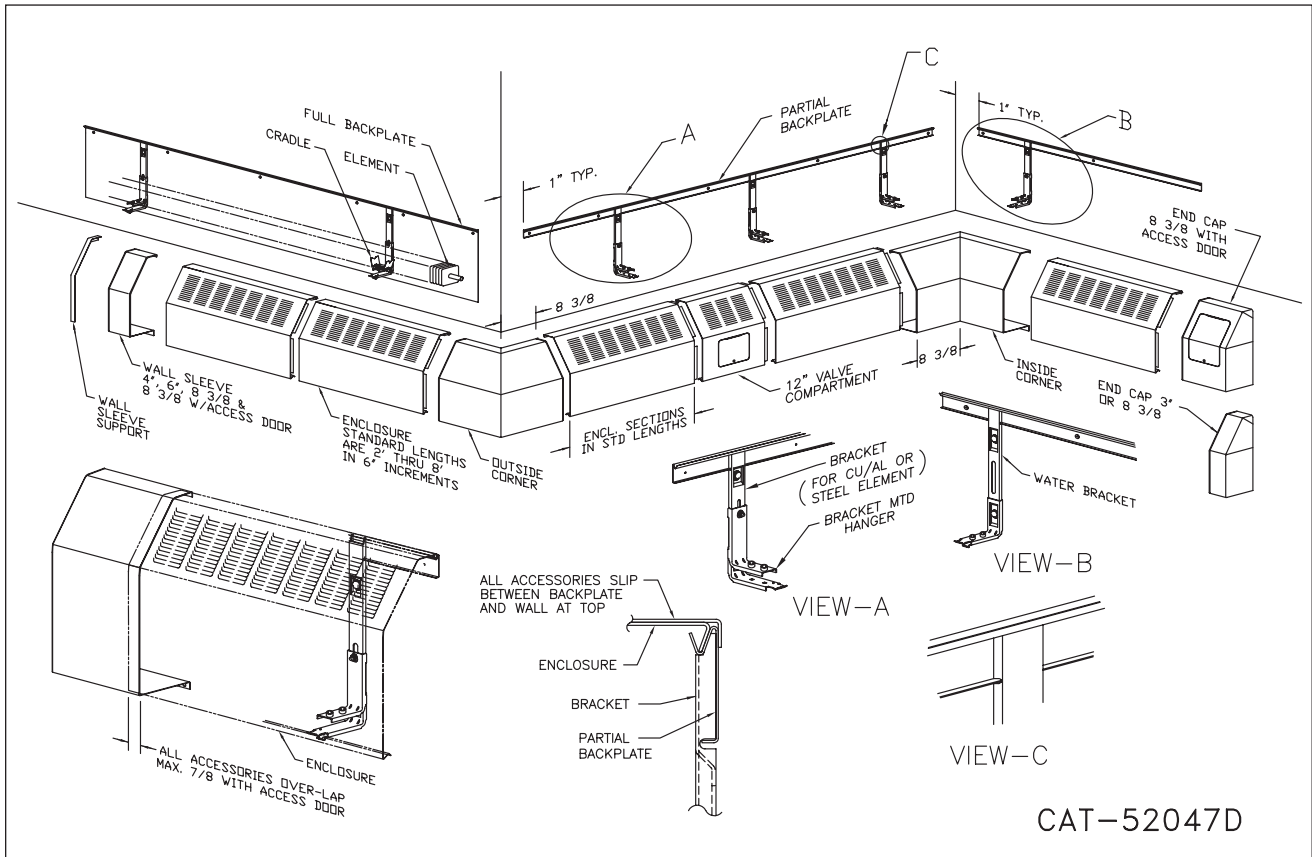
CAT-68521-4E



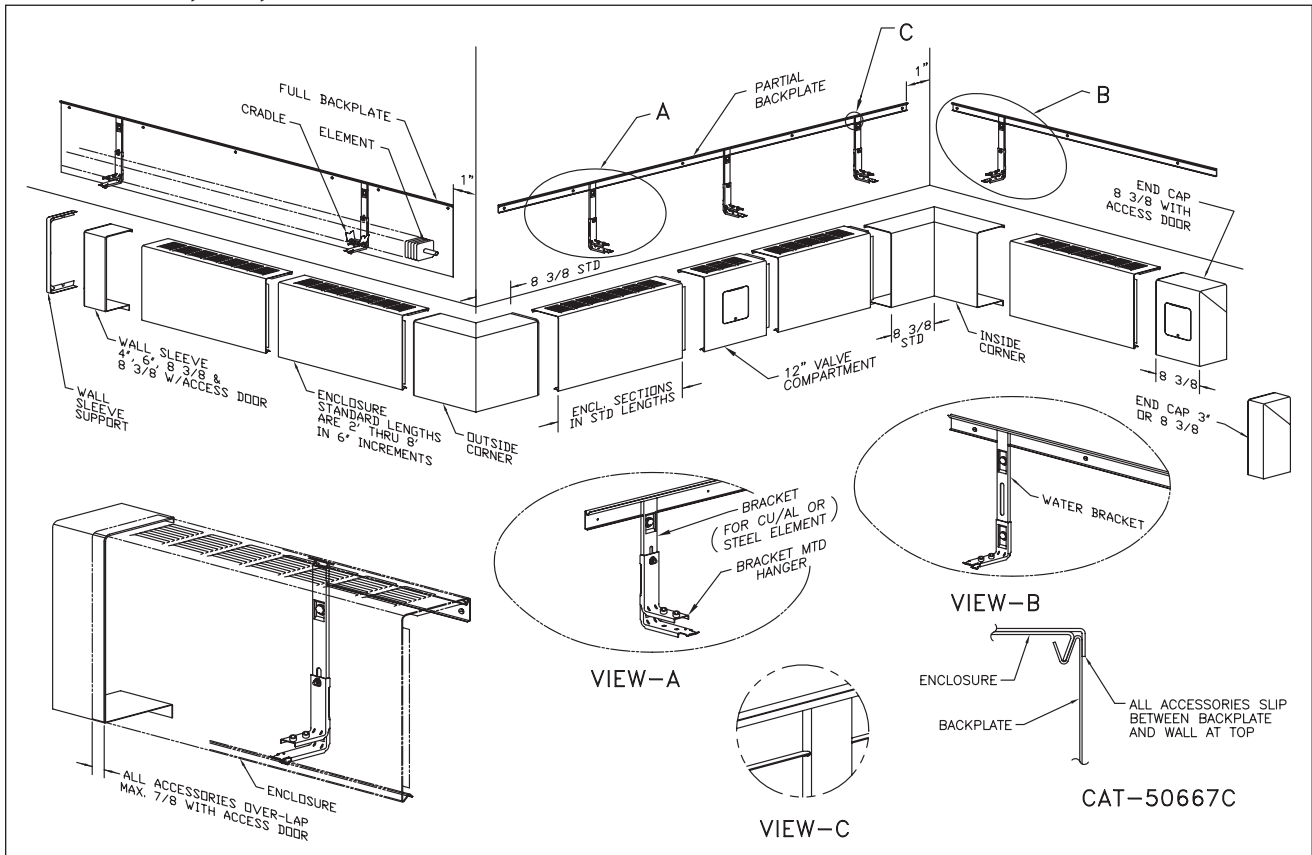
| ACCESS DOOR LOCATIONS FLAT TOP VALVE COMPARTMENT | | |
|---|---------------------|---------------------|
| ENCLOSURE OFFSET | ENCLOSURE HEIGHT | ACCESS DOOR SIZE |
| 3 9/16 | 8", 11" | 6' x 5' |
| 3 9/16 | 14" | 6' x 9' |
| 4 3/8 | 14" | 6' x 9' |
| 5 5/16 | 14", 20", 24" | 6' x 9' |

CAT-68521-3E

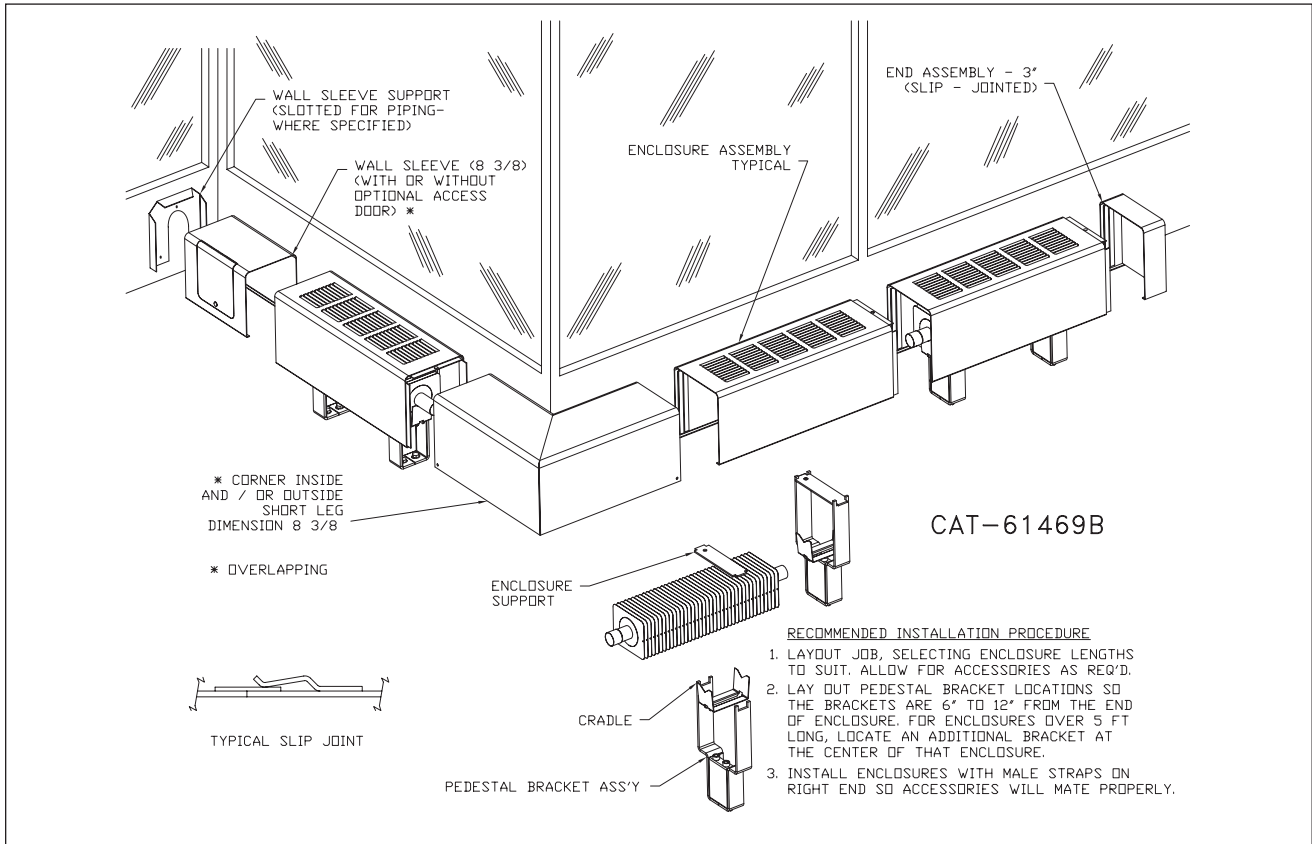
STYLES "S" AND "KS" SLOPE TOP INSTALLATION AND ACCESSORY DETAILS



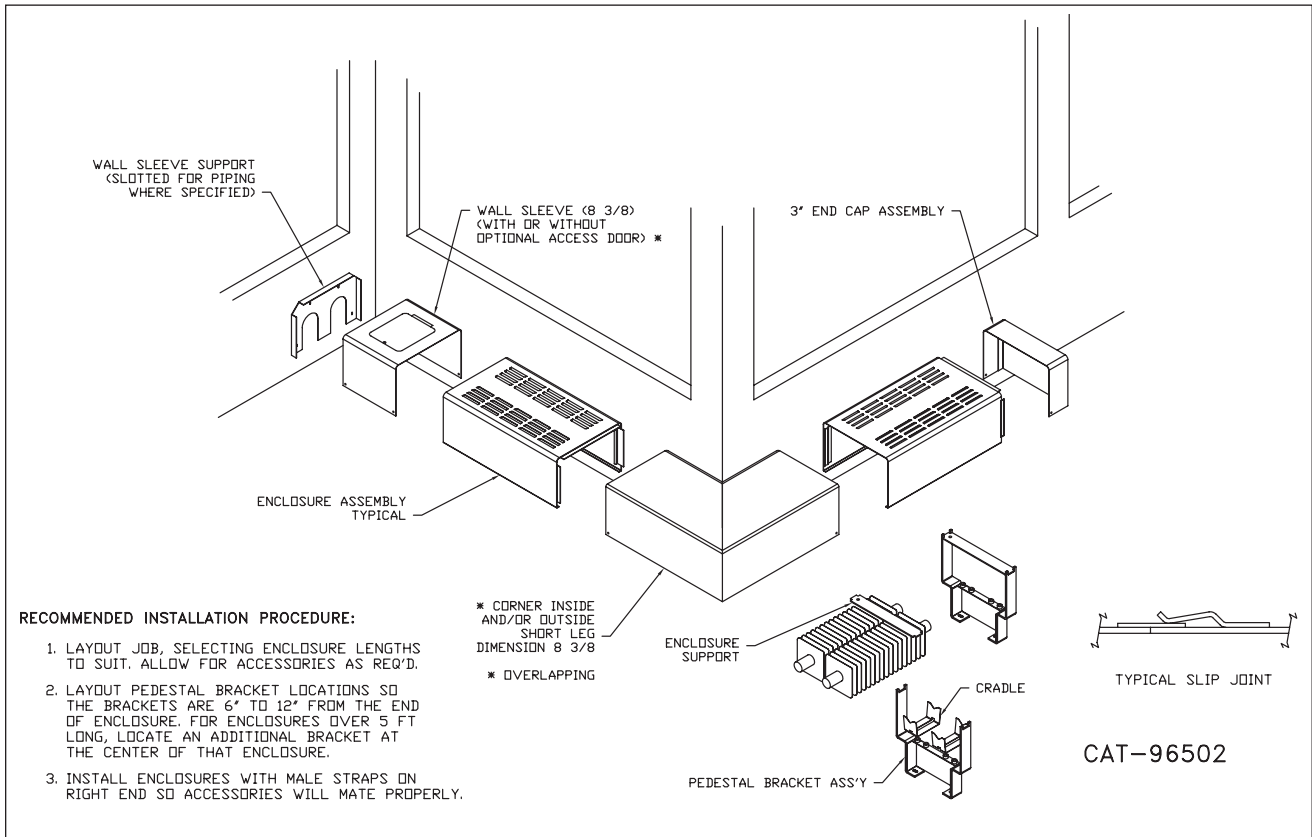
STYLES "F", "T", "FT" AND "KT" INSTALLATION AND ACCESSORY DETAILS



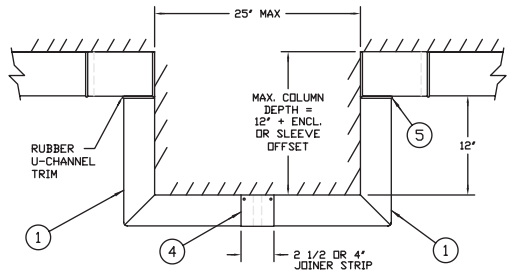
STYLE "PM" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS



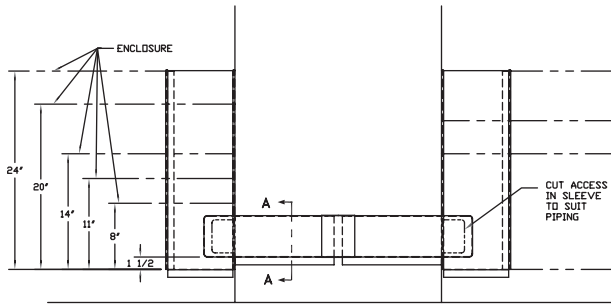
STYLE "2PM" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS



COLUMN ENCLOSURES



TOP VIEW CAT-44058C



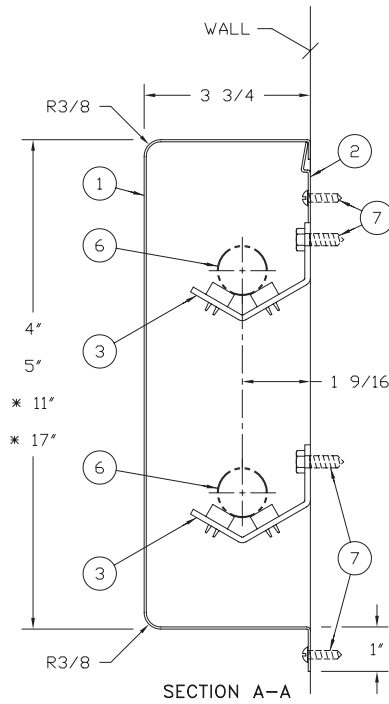
FRONT VIEW CAT-44059C

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 JVK-S8 CALL FOR 4" HIGH

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



SECTION A-A
CAT-39051E

STERLING 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.

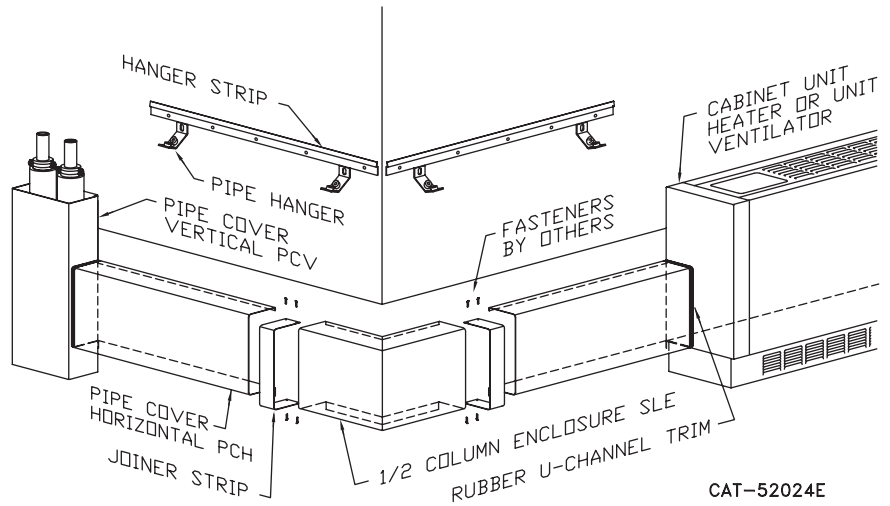


DETAILS AND DIMENSIONS

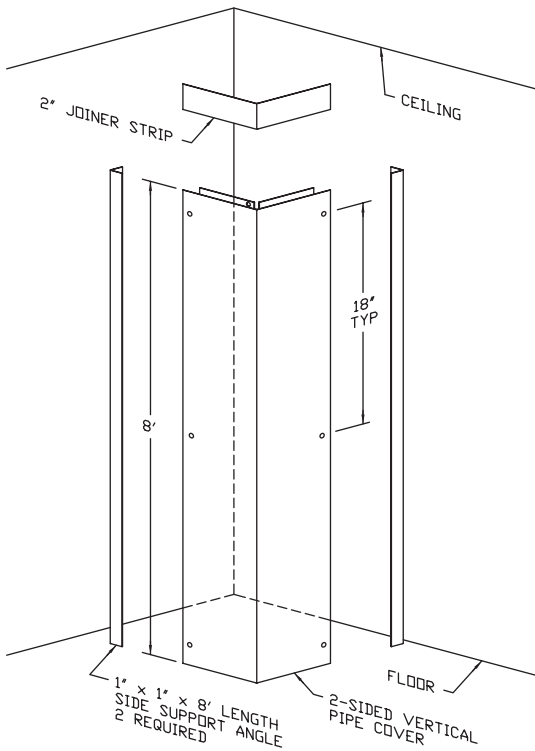
1. Column Enclosure — 18 Gauge CRS (SRP-15820)
2. Hanger Strip — 18 Gauge CRS
3. Roll Pipe Hanger
4. Joiner Strip — 2 1/2" or 4" wide (SRP-15821) with #8 x 1 1/2 Truss Head Screws
5. Rubber U-Channel Trim 1/16 x 3/16 x 5/16
6. Pipe By Others
7. Fasteners By Others Unless Specified

PIPE ENCLOSURES

| Catalog Number | Description |
|-------------------|---|
| Horizontal | |
| PCH-4 | 4" High 18 GA - 8' Lengths |
| PCH-5 | 5" High 18 GA - 8' Lengths |
| PCH-11 | 11" High 18 GA - 8' Lengths |
| PCH-17 | 17" High 18 GA - 8' Lengths |
| B610 | Mounting Strip |
| RPH | Roll Pipe Hanger |
| Vertical | |
| PCV-52 | 5 x 5 Two Side 18 GA - 8' Lengths |
| PCV-82 | 8 x 8 Two Side 18 GA - 8' Lengths |
| PCV-53 | 5 x 5 Three Side 18 GA - 8' Lengths |
| PCV-83 | 8 x 8 Three Side 18 GA - 8' Lengths |
| 1 x 1 | 1 x 1 Side Support Angle - 8' Lengths (2 per Vertical Pipe Enclosure) |



CAT-52024E

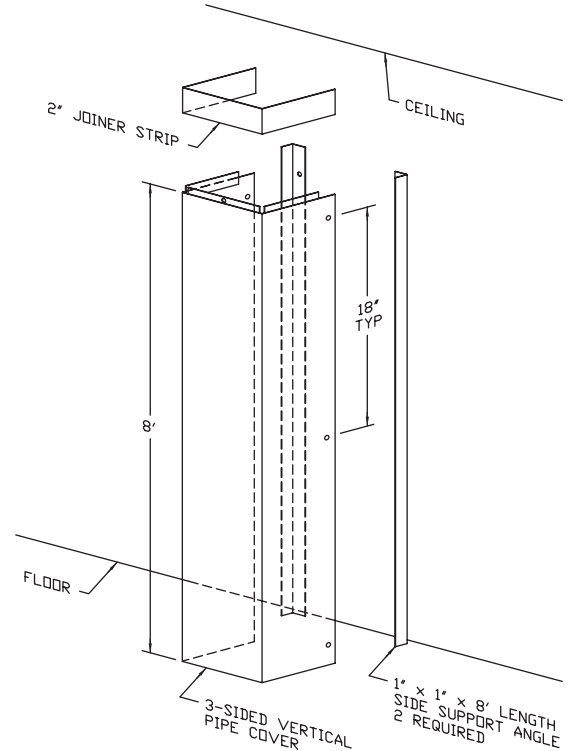


FASTENERS ARE BY OTHERS.

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

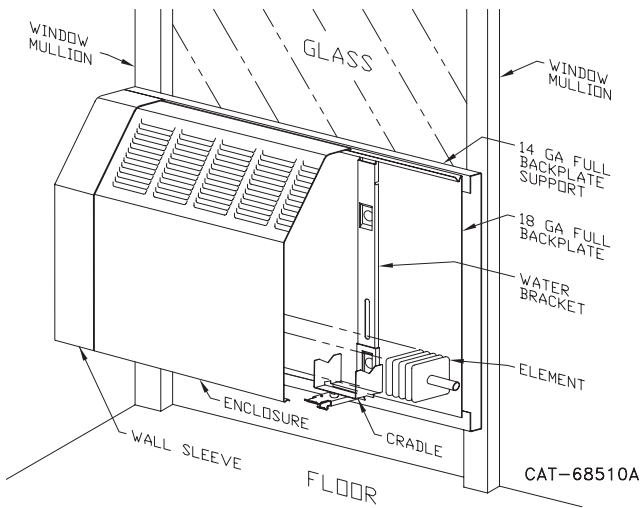


FASTENERS ARE BY OTHERS.

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

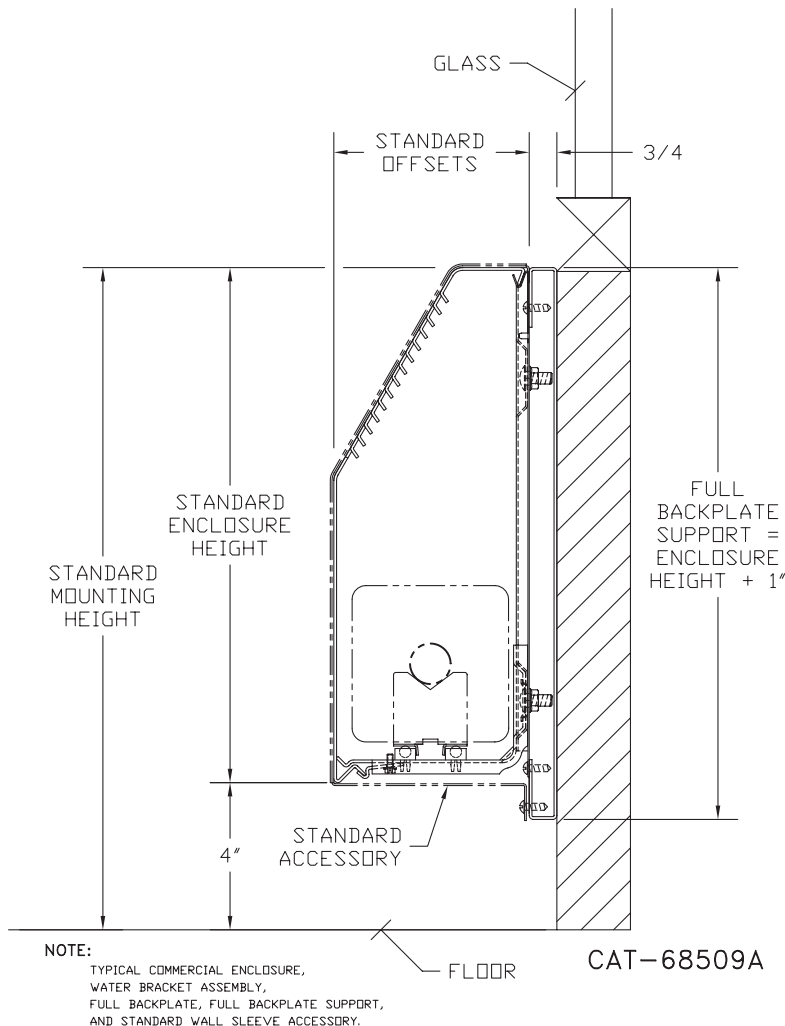


Versa-Line Radiation is easily adaptable to panel wall, curtain wall, and window wall construction.

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

The assemblies are just as easily installed as in any other type of construction. Versa-Line is versatile. Consult us for unusual dimensional applications. (7 1/2" minimum height)

Typical panel wall installation using the Sterling 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.



COMMERCIAL FINNED TUBE CHARTS FOR RATING CORRECTIONS

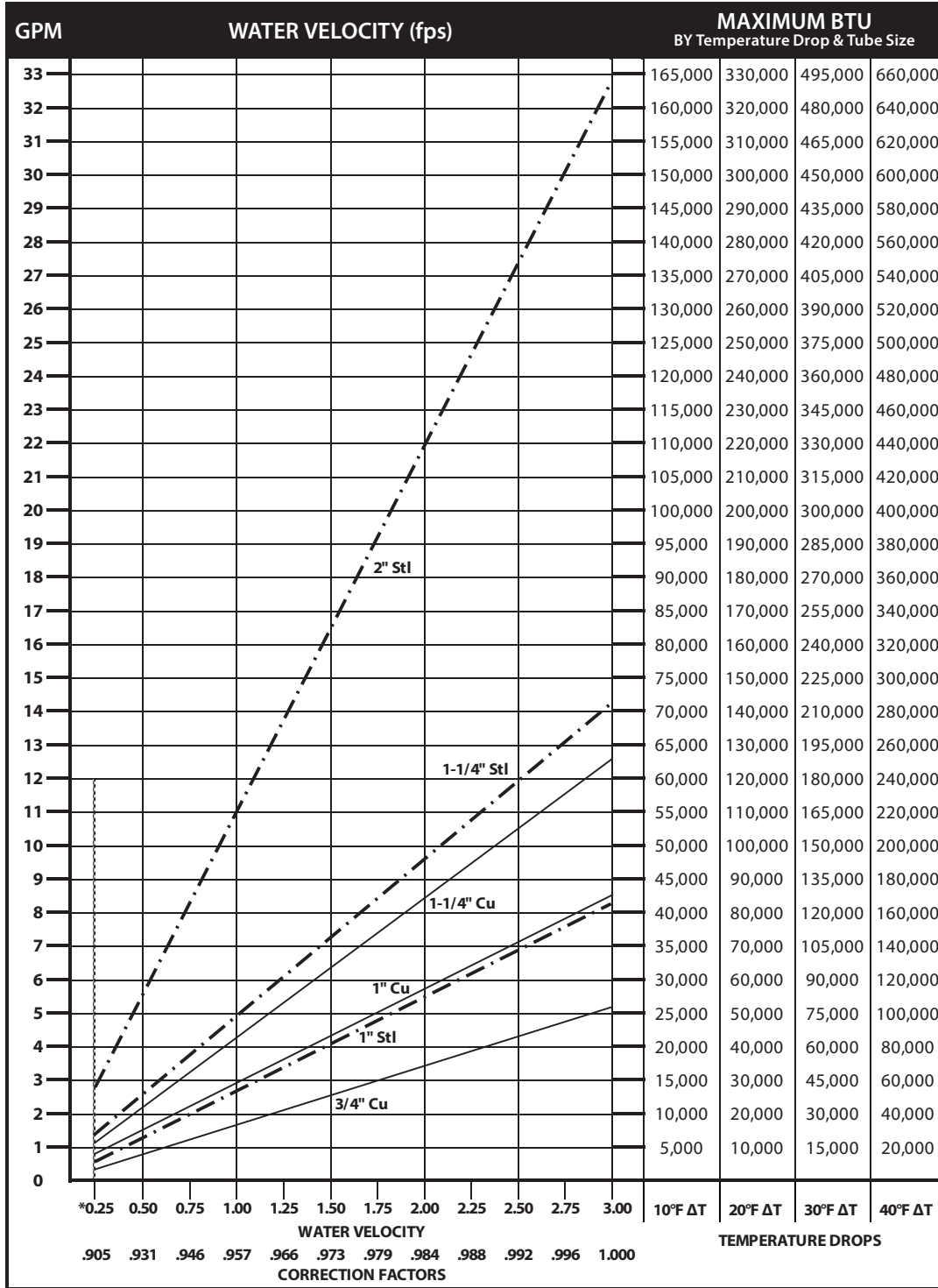
For assistance with ratings and selection, please use our online Specifier.

| CORRECTION FACTORS FOR WATER TEMPERATURES AND AIR TEMPERATURES OTHER THAN STANDARD | | | | | | | | | | | | | | | |
|--|-----------------------------|------|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| AVERAGE WATER TEMP. °F | ENTERING AIR TEMPERATURE °F | | | | | | | | | | | | | | |
| | 45 | 55 | STD 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 PRESSURE | | TEMP. °F | ENTERING AIR TEMPERATURE °F | | | | | | | | | | | | | |
| GAUGE | ABS. PSI | | 45 | 55 | STD 65 | 70 | 75 | 80 | 85 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |
| (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 | 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 |
| .899 | 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 |
| 5 | 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 | 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 |
| 15 | 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 |
| 20 | 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 | 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 |
| 30 | 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 |
| 40 | 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 | 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 |
| 60 | 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 |
| 70 | 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 | 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 |
| 90 | 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 |
| 100 | 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 | 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 |
| 150 | 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 |
| 175 | 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 |
| 200 | 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 1/2" drop over 20-foot run.



DYNAMIC FORMULAS

BTU = GPM x 500 x TD

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

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

*Do not design below .25 fps.

Pressure Drop at Given Water Velocities (Feet of Water per 100 ft. of pipe) based on Hazen - Williams calculation

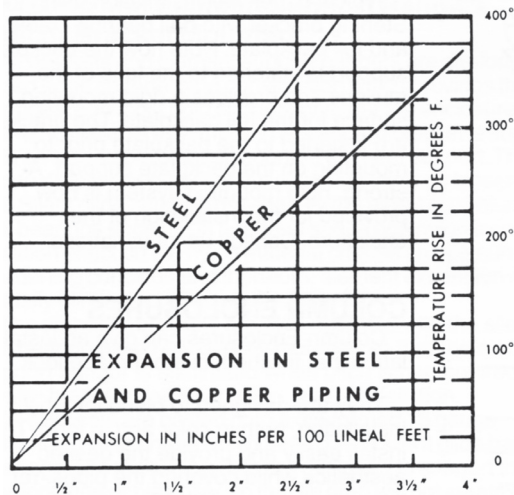
| Nominal Pipe Size | Water Velocity (ft/sec) | | | | | | | | | | | |
|-------------------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | 0.25 | 0.50 | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |
| 3/4" Copper | 0.06 | 0.20 | 0.42 | 0.72 | 1.09 | 1.53 | 2.04 | 2.61 | 3.25 | 3.95 | 4.71 | 5.53 |
| 1" Copper | 0.04 | 0.15 | 0.32 | 0.54 | 0.81 | 1.14 | 1.52 | 1.94 | 2.42 | 2.94 | 3.50 | 4.11 |
| 1 1/4" Copper | 0.03 | 0.12 | 0.25 | 0.43 | 0.64 | 0.90 | 1.20 | 1.54 | 1.92 | 2.33 | 2.78 | 3.26 |
| 1" Steel | 0.04 | 0.15 | 0.32 | 0.54 | 0.81 | 1.14 | 1.52 | 1.95 | 2.42 | 2.94 | 3.51 | 4.12 |
| 1 1/4" Steel | 0.03 | 0.11 | 0.23 | 0.40 | 0.60 | 0.84 | 1.12 | 1.44 | 1.79 | 2.17 | 2.59 | 3.05 |
| 2" Steel | 0.02 | 0.07 | 0.14 | 0.25 | 0.37 | 0.52 | 0.69 | 0.89 | 1.10 | 1.34 | 1.60 | 1.88 |

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 |

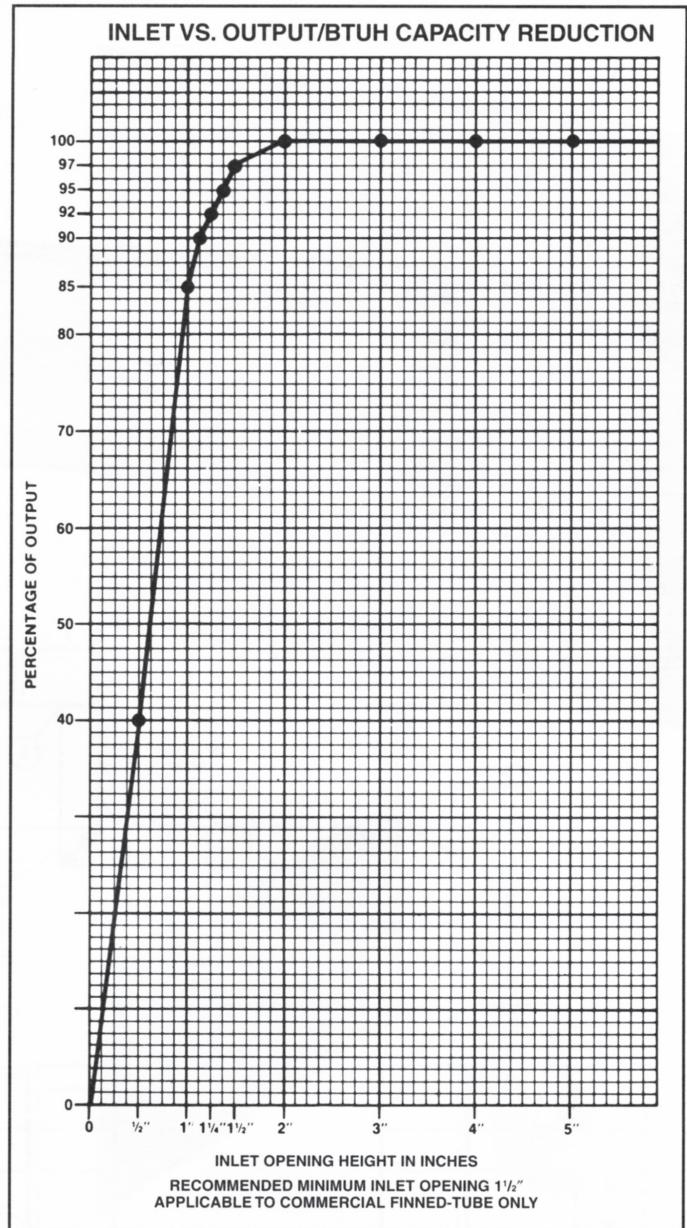


Glycol Correction Factors

| 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 |



| 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 |

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.



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