



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.
- 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

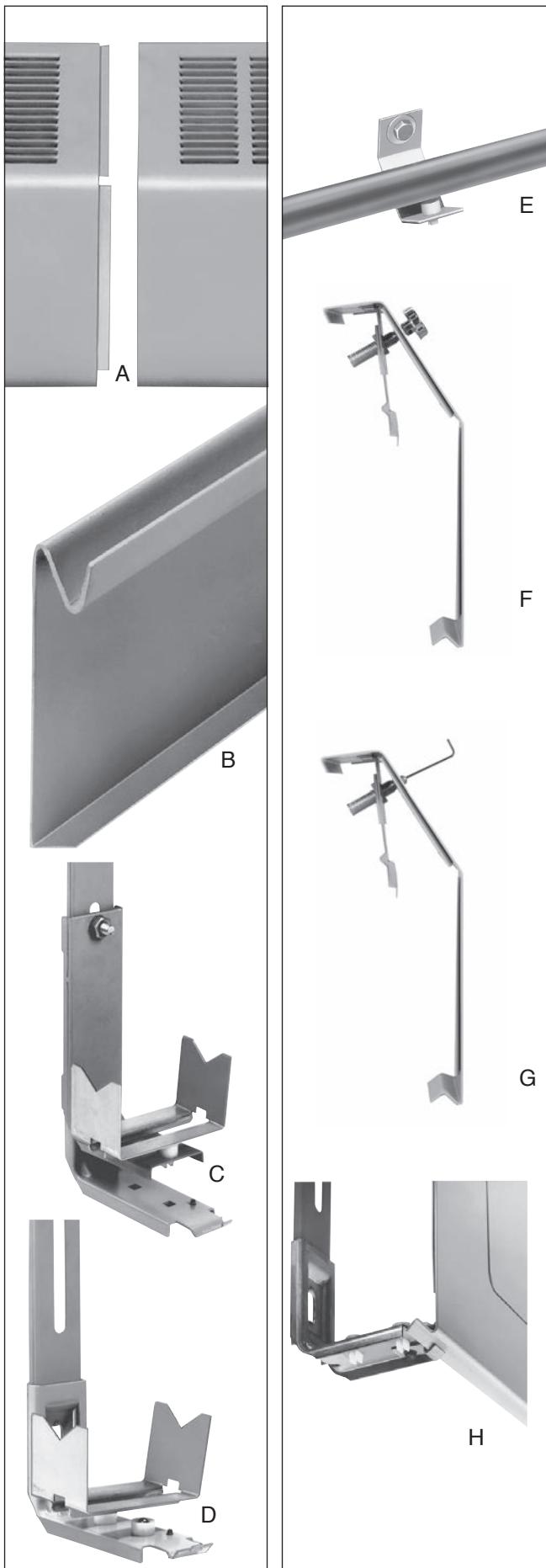
Interlocking slip joints provide for a positive snap together fit between adjoining covers. The male and female slip joints, at the same time, provide vertical stiffness for these enclosures. They are the most rugged and desirable enclosures for today's quality-conscious market. (See photos A.)

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 $2\frac{1}{2}$ 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 posilock 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 posilock makes sure it stays there, no matter what. The posilock 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. Approved AHRI ratings must be submitted as required.

ENCLOSURE AND ACCESSORIES

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

ACCESS DOORS

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

DAMPERS

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

BACKPLATE

All full backplates will be one piece construction, 20 gauge galvannealed 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 galvannealed 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 galvannealed 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, galvannealed steel.
Gauges	18, 16, 14 Gauge C.R.S.
Finish	18, 16 Gauge SS. 16, 14, 12 Gauge Aluminum 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 galvannealed, 18 gauge C.R.S. optional.

BRACKETS/ HANGERS

BRACKETS/ HANGERS	Ball bearing with slide cradle adjustable for pitch or fixed for water systems. Die-formed channel type galvannealed steel construction with enclosure securing posi-lock clips.
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ELEMENTS

Type	Mechanically expanded. 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

DAMPERS	Fully modulating damper blades with stiffening roll bend. Operated by hand knob or hex head security type driver.
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ACCESSORIES

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.
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AIR SEAL

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.
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KS

Style "KS" Slimline Slope Top

Versa-Line

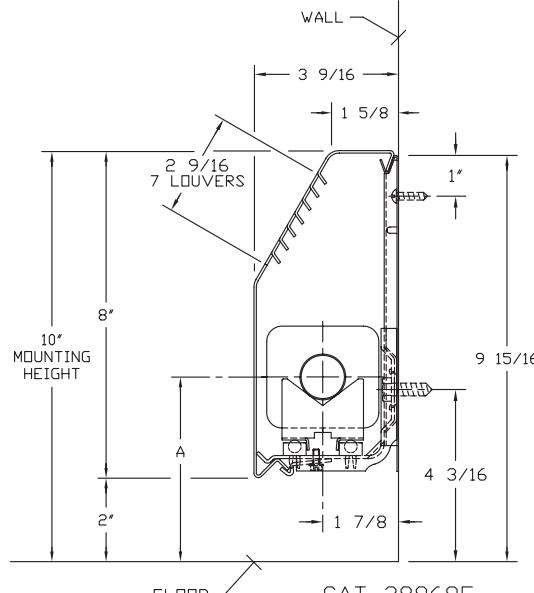
by Sterling

**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	
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

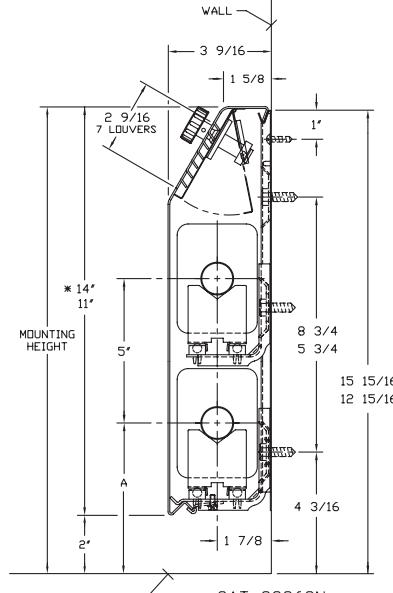
* Damper available with these elements only.

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	
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
3/4"	R01	2-1/2" x 2-1/4"	50	.011	8K*	1	10	820	710	640	570	500	430	370	330	270	210	
					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	1300	1120	1010	900	790	690	590	520	430	340	
3/4"	R02	2-1/2" x 2-3/4"	60	.010	8K*	1	10	950	820	740	660	580	500	430	380	310	250	
					11K	1	13	1080	930	840	750	660	570	490	430	360	280	
					14K	1	16	1150	990	900	790	700	610	520	460	380	300	
					14K*	2-5 CL	16	1650	1420	1290	1140	1010	870	740	660	540	430	
1"	R03	2-1/2" x 2-3/4"	55	.011	8K*	1	10	980	840	760	680	600	520	440	390	320	250	
					11K	1	13	1050	900	820	720	640	560	470	420	350	270	
					14K	1	16	1180	1010	920	810	720	630	530	470	390	310	
					14K*	2-5 CL	16	1660	1430	1290	1150	1010	880	750	660	550	430	
3/4"	R04	3-3/4" x 2-3/4"	50	.014	8K*	1	10	1010	870	790	700	620	540	450	400	330	260	
					11K	1	13	1110	950	870	770	680	590	500	440	370	290	
					14K	1	16	1200	1030	940	830	730	640	540	480	400	310	
					14K*	2-5 CL	16	1680	1440	1310	1160	1020	890	760	670	550	440	
1"	R05	3-3/4" x 2-3/4"	50	.011	8K*	1	10	1020	880	800	700	620	540	460	410	340	270	
					11K	1	13	1120	960	870	770	680	590	500	450	370	290	
					14K	1	16	1220	1050	950	840	740	650	550	490	400	320	
					14K*	2-5 CL	16	1670	1440	1300	1150	1020	890	750	670	550	430	
1-1/4"	R08	3-3/4" x 2-3/4"	50	.020	8K*	1	10	1040	890	810	720	630	550	470	420	340	270	
					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	1600	1380	1250	1100	980	850	720	640	530	420	
1"	R07	5" x 2-3/4"	50	.020	11K	1	13	1220	1050	950	840	740	650	550	490	400	320	
					14K	1	16	1290	1110	1010	890	790	680	580	520	430	340	
1-1/4"	R10	5" x 2-3/4"	50	.020	11K	1	13	1190	1020	930	820	730	630	540	480	390	310	
					14K	1	16	1260	1080	980	870	770	670	570	500	420	330	

*Not recommended for steam applications, consult factory.

Note: Copper tube furnished flared one end standard.

STEEL ELEMENTS

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

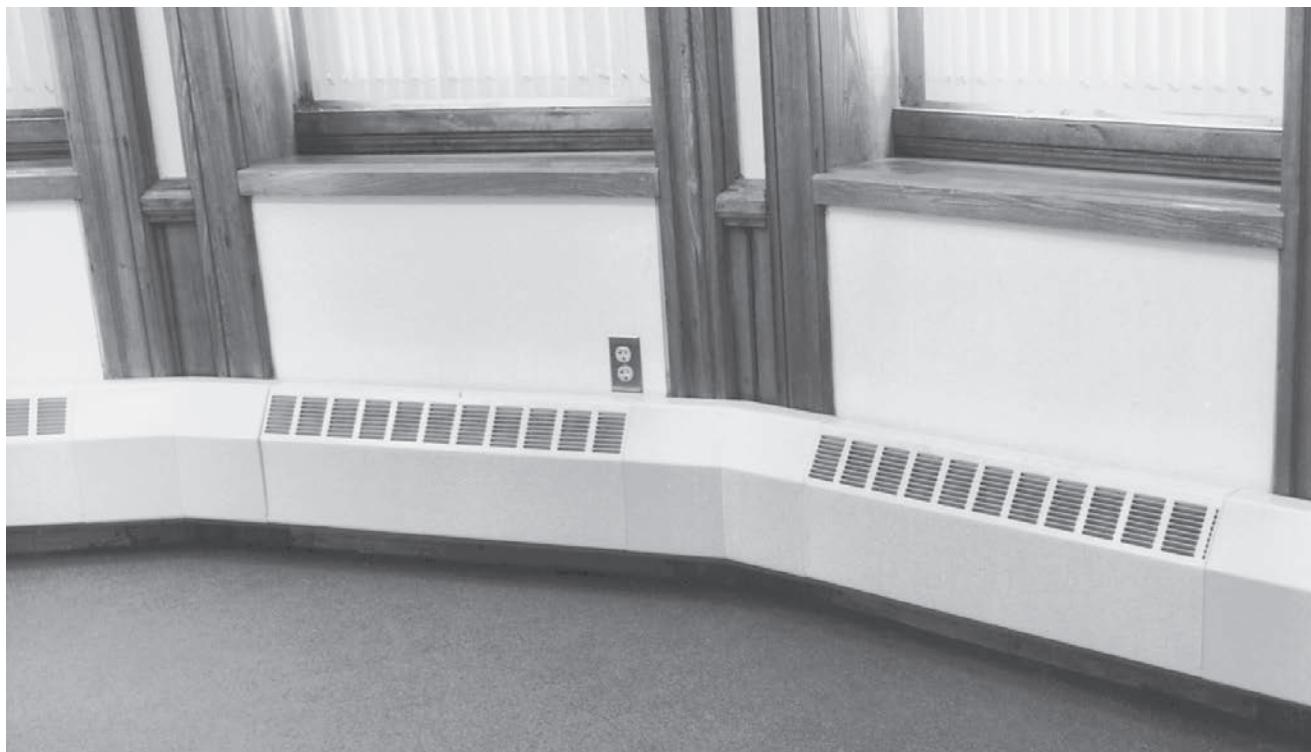
TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FINS PER FT.	FIN THICKNESS IN INCHES	ENCL DEPTH AND HEIGHT IN INCHES	TIERS AND CENTERS IN INCHES	MOUNTING HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
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	1020	880	800	700	620	540	460	410	340	270	
					14K	1	16	1100	950	860	760	670	580	500	440	360	290	
					14K*	2-5 CL	16	1520	1310	1190	1050	930	810	680	610	500	400	
1"	R15	5" x 2-3/4"	50	.024	11K	1	13	1170	1010	910	810	710	620	530	470	390	300	
					14K	1	16	1170	1010	910	810	710	620	530	470	390	300	
1-1/4"	R16	5" x 2-3/4"	50	.024	11K	1	13	1190	1020	930	820	730	630	540	480	390	310	
					14K	1	16	1190	1020	930	820	730	630	540	480	390	310	

*Not recommended for steam applications, consult factory.

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

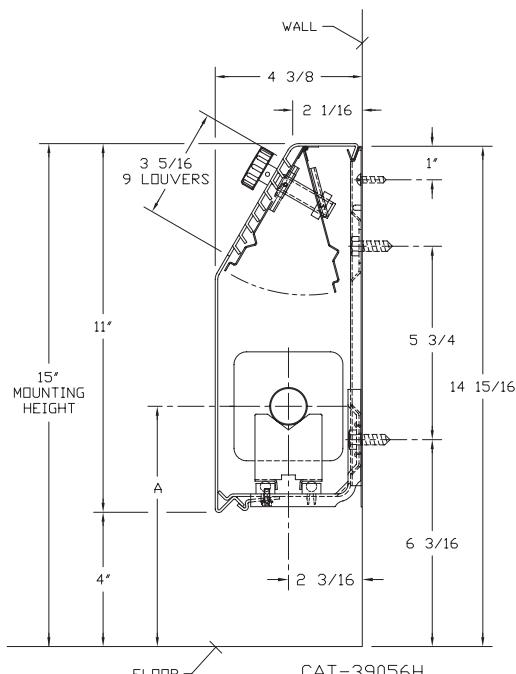
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



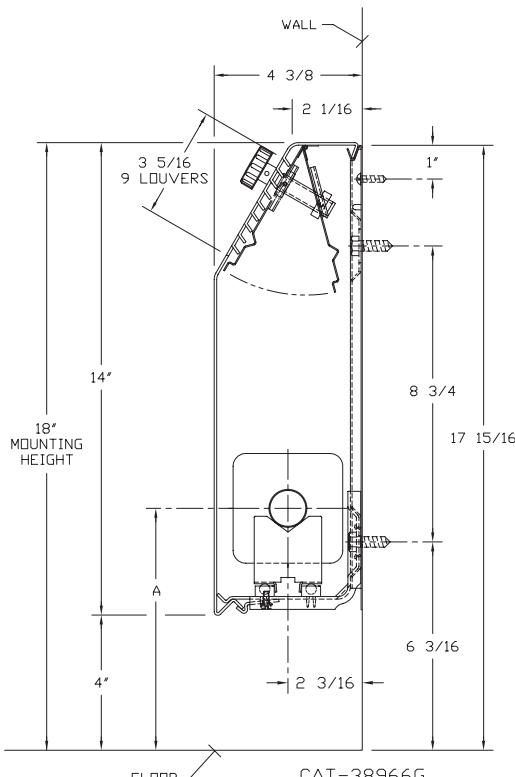
JVA-S11

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									200°	190°	180°	170°	160°	150°	140°	130°	120°	
3/4"	C3/4-33	3-1/4" SQ.	32	.020	11A*	1	15	1.00	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	1000	860	780	690	610	530	450	400	330	260	
3/4"	C3/4-35	3-1/4" SQ.	50	.020	11A*	1	15	1180	1010	920	810	720	630	530	470	390	310	
1"	C33	3-1/4" SQ.	32	.020	11A*	1	15	1320	1140	1030	910	810	700	590	530	440	340	
1"	C34	3-1/4" SQ.	40	.020	11A*	1	15	1260	1080	980	870	770	670	570	500	420	330	
1"	C35	3-1/4" SQ.	50	.020	11A*	1	15	980	840	760	680	600	520	440	390	320	250	
1 1/4"	C133	3-1/4" SQ.	32	.020	11A*	1	15	1190	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	1290	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	1440	1290	1110	1010	890	790	680	580	520	430	340
3/4"	C3/4-35	3-1/4" SQ.	50	.020	14A	1	18	1240	1120	990	880	760	650	580	480	370	280	
1"	C33	3-1/4" SQ.	32	.020	14A	1	18	1370	1060	910	830	730	650	560	480	420	350	280
1"	C34	3-1/4" SQ.	40	.020	14A	1	18	1320	1080	980	860	760	660	560	500	410	330	280
1"	C35	3-1/4" SQ.	50	.020	14A	1	18	1190	1020	930	820	730	630	540	480	390	310	270
1 1/4"	C133	3-1/4" SQ.	32	.020	14A	1	18	1330	1140	1040	920	810	700	600	530	440	350	270

*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

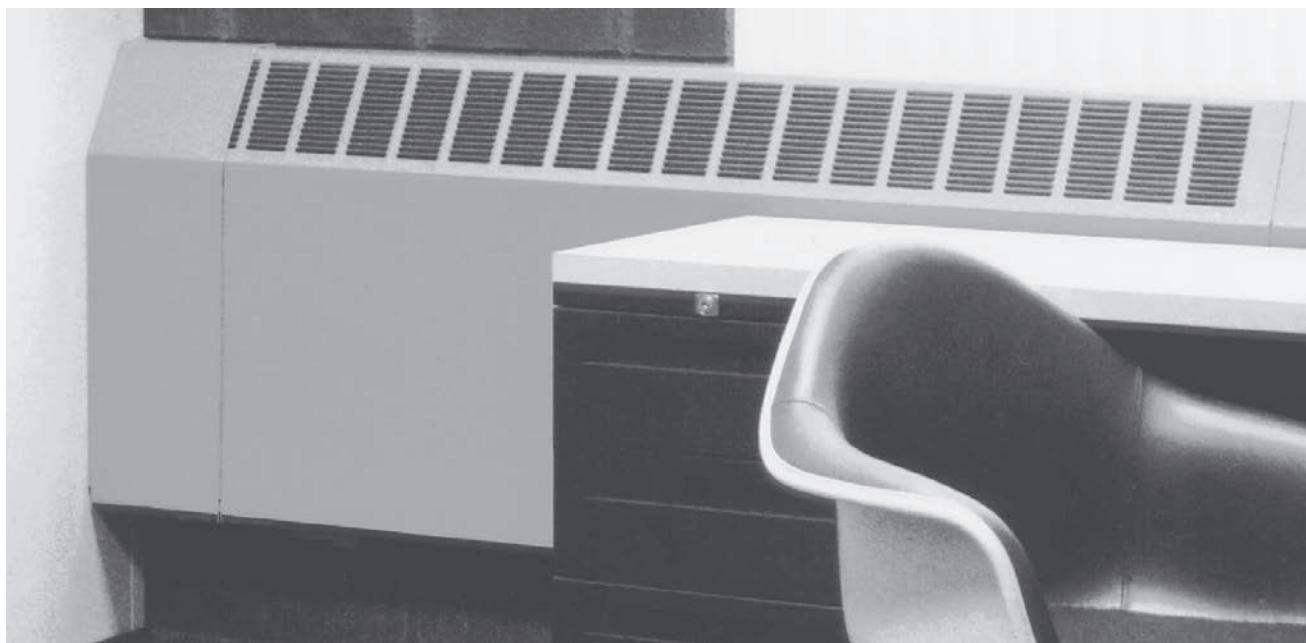
TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FINS PER FT.	FIN THICKNESS IN INCHES	ENCL DEPTH AND HEIGHT IN INCHES	TIERS AND CENTERS IN INCHES	MOUNTING HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)								
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES								
									200°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

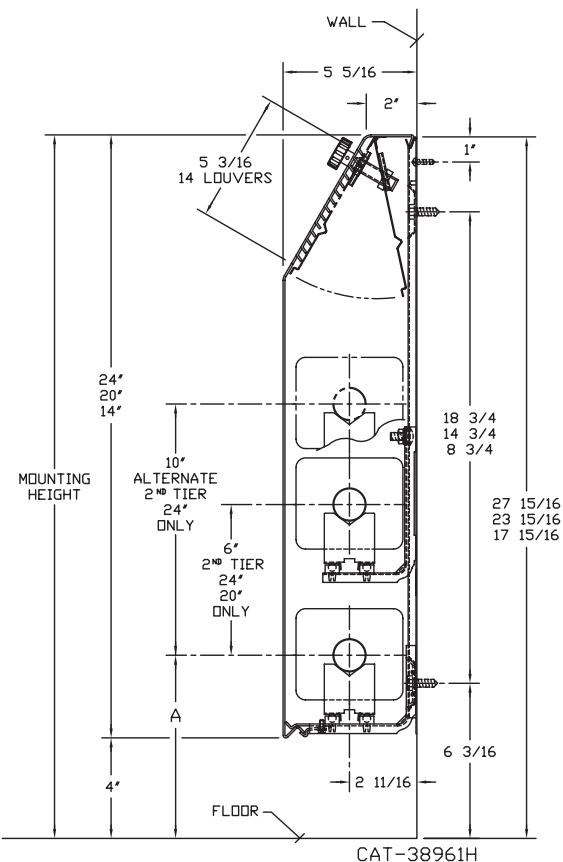
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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

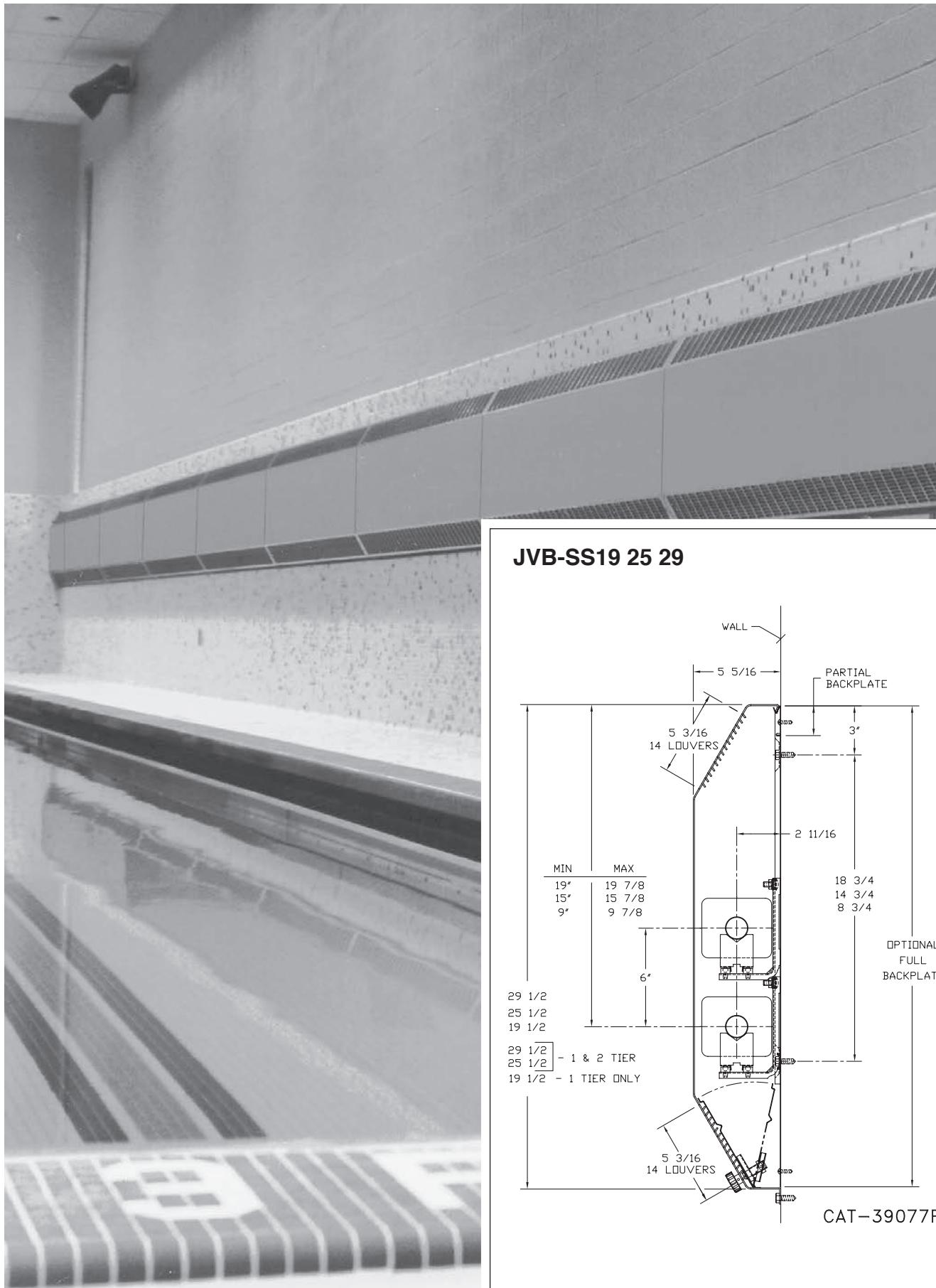
INVERTED ENCLOSURE APPLICATION



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.



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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	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.

KT

Style "KT" Slimline Top Outlet

Versa-Line

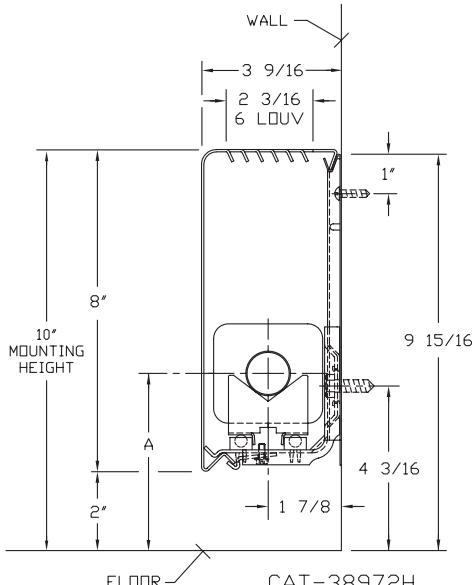
by Sterling

**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	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

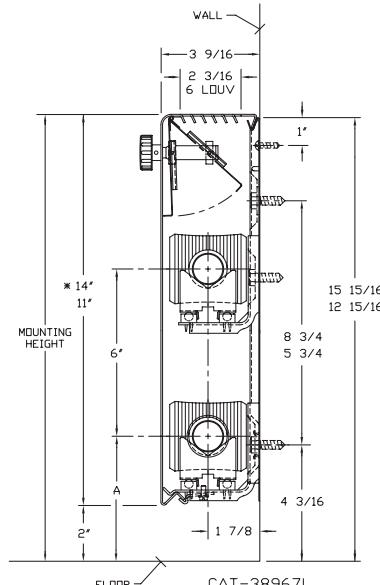
* Damper available with these elements only.

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	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 "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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	230	
					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	970	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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.

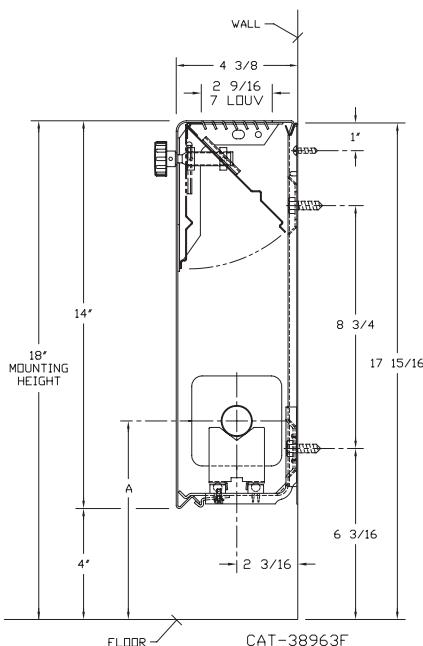
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



JVA-T

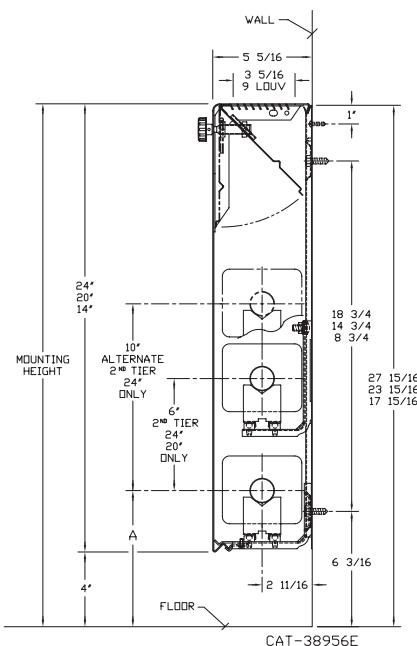
ELEMENT TUBE SIZE	FIN SIZE HEIGHT X WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 1/4 x 3 1/4	2	7"
1" COPPER	3 1/4 x 3 1/4	2	7 3/16
1 1/4 COPPER	3 1/4 x 3 1/4	1	6 5/8
1" STEEL	3 1/4 x 3 1/4	2	7 5/16
1 1/4 STEEL	3 1/4 x 3 1/4	1	6 13/16



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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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</							

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
1"	S33	3-1/4" SQ.	32	.032	14A	1	18	840	720	660	580	510	450	380	340	280	220	
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	
					24B	3-6 CL	28	2390	2060	1860	1650	1460	1270	1080	960	790	620	
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	
					24B	3-6 CL	28	2590	2230	2020	1790	1580	1370	1170	1040	850	670	
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	
					24B	3-6 CL	28	2630	2260	2050	1810	1600	1390	1180	1050	870	680	
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	
					24B	3-6 CL	28	2200	1890	1720	1520	1340	1170	990	880	730	570	
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	
					24B	3-6 CL	28	2580	2220	2010	1780	1570	1370	1160	1030	850	670	
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	
					24B	3-6 CL	28	2580	2220	2010	1780	1570	1370	1160	1030	850	670	
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	
					24B	3-6 CL	28	2090	1800	1630	1440	1270	1110	940	840	690	540	
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.

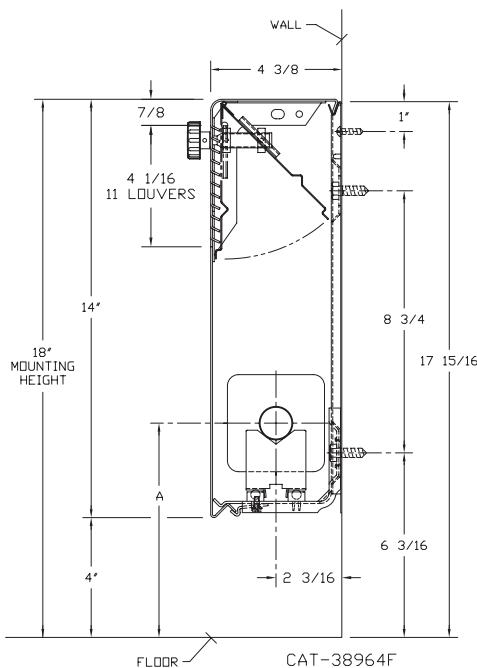
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



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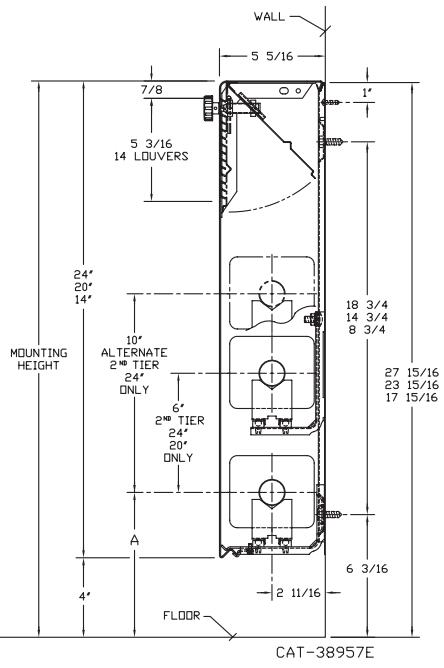
ELEMENT TUBE SIZE	FIN SIZE HEIGHT X WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 1/4 x 3 1/4	2	7"
1" COPPER	3 1/4 x 3 1/4	2	7 3/16
1 1/4 COPPER	3 1/4 x 3 1/4	1	6 5/8
1" STEEL	3 1/4 x 3 1/4	2	7 5/16
1 1/4 STEEL	3 1/4 x 3 1/4	1	6 13/16



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

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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.)									
									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	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		

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	
					24B	3-6 CL	28	2560	2200	2000	1770	1560	1360	1150	1020	840	670	
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	
					24B	3-6 CL	28	2780	2390	2170	1920	1700	1470	1250	1110	920	720	
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	
					24B	3-6 CL	28	2820	2430	2200	1950	1720	1490	1270	1130	930	730	
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	
					24B	3-6 CL	28	2370	2040	1850	1640	1450	1260	1070	950	780	620	
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	
					24B	3-6 CL	28	2740	2360	2140	1890	1670	1450	1230	1100	900	710	
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	
					24B	3-6 CL	28	2770	2380	2160	1910	1690	1470	1250	1110	910	720	
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	
					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	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.

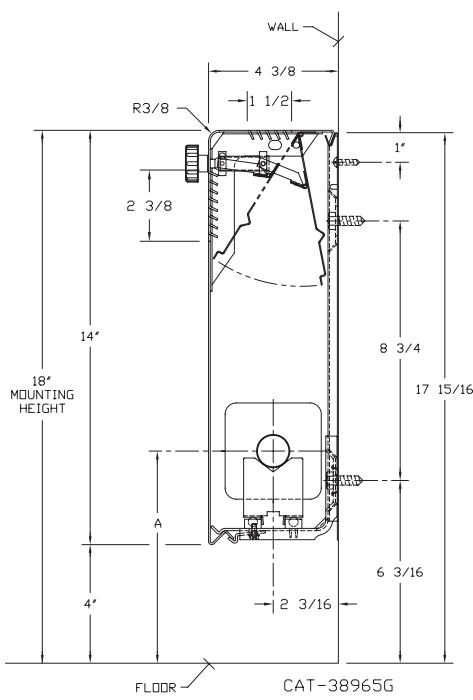
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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



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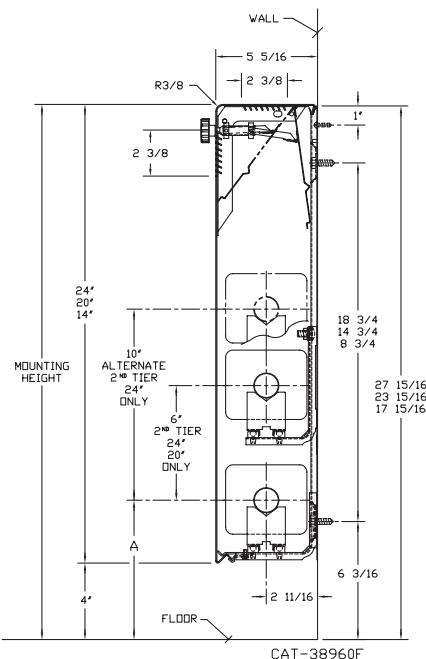
ELEMENT TUBE SIZE	FIN SIZE HEIGHT X WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 1/4 x 3 1/4	2	7"
1" COPPER	3 1/4 x 3 1/4	2	7 3/16
1 1/4 COPPER	3 1/4 x 3 1/4	1	6 5/8
1" STEEL	3 1/4 x 3 1/4	2	7 5/16
1 1/4 STEEL	3 1/4 x 3 1/4	1	6 13/16



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

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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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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									

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	
					24B	3-6 CL	28	2810	2420	2190	1940	1710	1490	1260	1120	930	730	
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	
					24B	3-6 CL	28	3020	2600	2360	2080	1840	1600	1360	1210	1000	790	
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	
					24B	3-6 CL	28	3160	2720	2460	2180	1930	1670	1420	1260	1040	820	
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	
					24B	3-6 CL	28	2890	2490	2250	1990	1760	1530	1300	1160	950	750	
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	
					24B	3-6 CL	28	3080	2650	2400	2130	1880	1630	1390	1230	1020	800	
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	
					24B	3-6 CL	28	3080	2650	2400	2130	1880	1630	1390	1230	1020	800	
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	
					24B	3-6 CL	28	2840	2440	2220	1960	1730	1510	1280	1140	940	740	
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	
					24B	3-6 CL	28	3030	2610	2360	2090	1850	1610	1360	1210	1000	790	
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	
					24B	3-6 CL	28	3030	2610	2360	2090	1850	1610	1360	1210	1000	790	

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	
					24B	3-6 CL	28	2410	2070	1880	1660	1470	1280	1080	960	800	630	
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	
					24B	3-6 CL	28	2620	2250	2040	1810	1600	1390	1180	1050	860	680	
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	
					24B	3-6 CL	28	2660	2290	2070	1840	1620	1410	1200	1060	880	690	
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	
					24B	3-6 CL	28	2230	1920	1740	1540	1360	1180	1000	890	740	580	
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	
					24B	3-6 CL	28	2750	2370	2150	1900	1680	1460	1240	1100	910	720	
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	
					24B	3-6 CL	28	2600	2240	2030	1790	1590	1380	1170	1040	860	680	
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	
					24B	3-6 CL	28	2210	1900	1720	1520	1350	1170	990	880	730	570	
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.

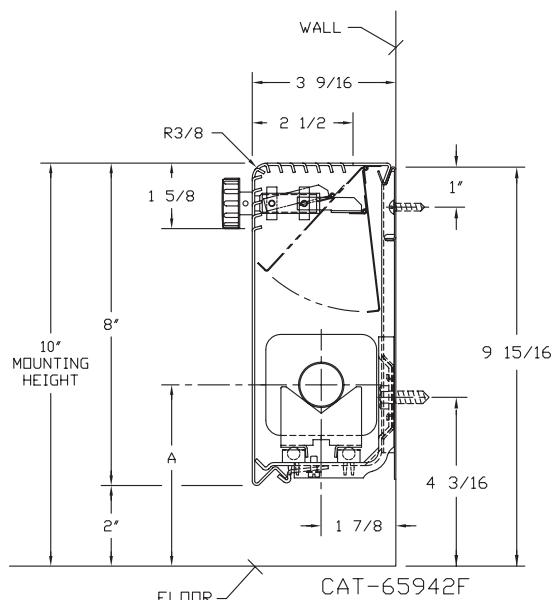
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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	
* 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

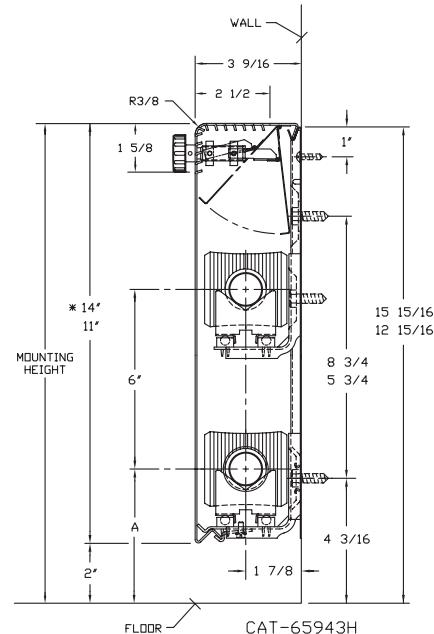
* Damper available with these elements only.



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	
* 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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									200°	190°	180°	170°	160°	150°	140°	130°	120°	.86
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.

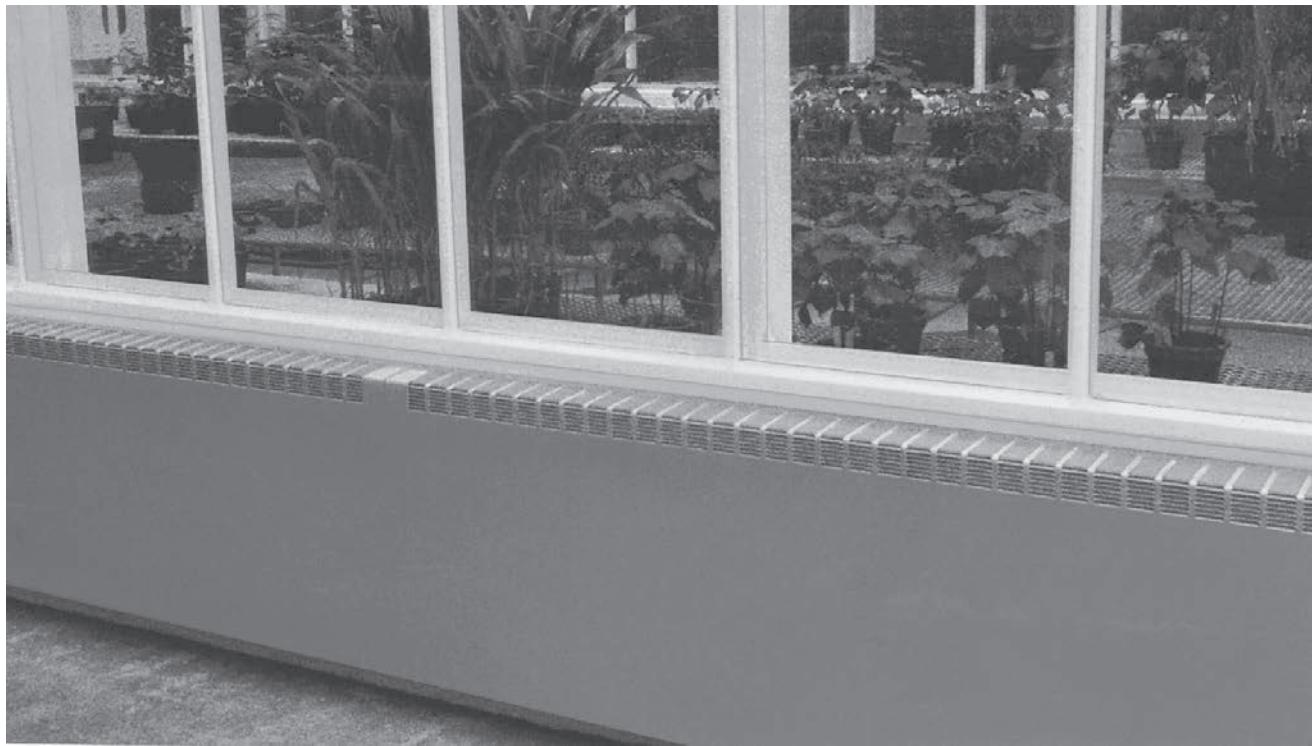
3) The ends can be provided chamfered for field welded fittings when specified.

RD

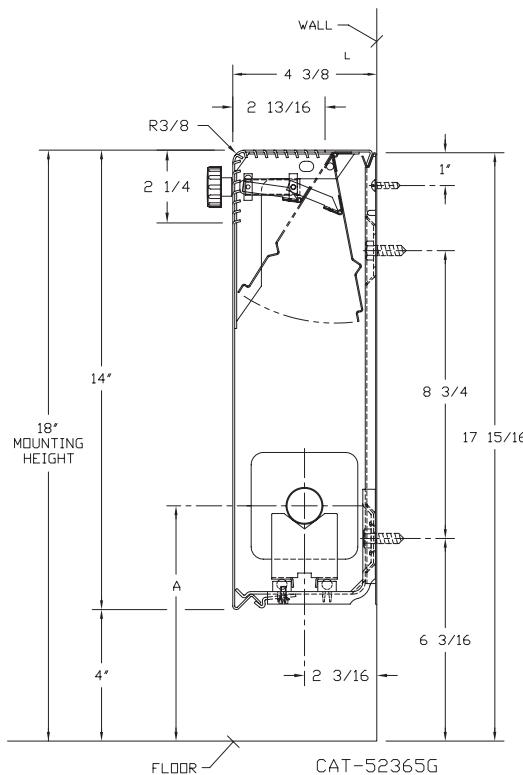
Style "RD" Flat Top Enclosures

Versa-Line

by Sterling

**JVA-RD**

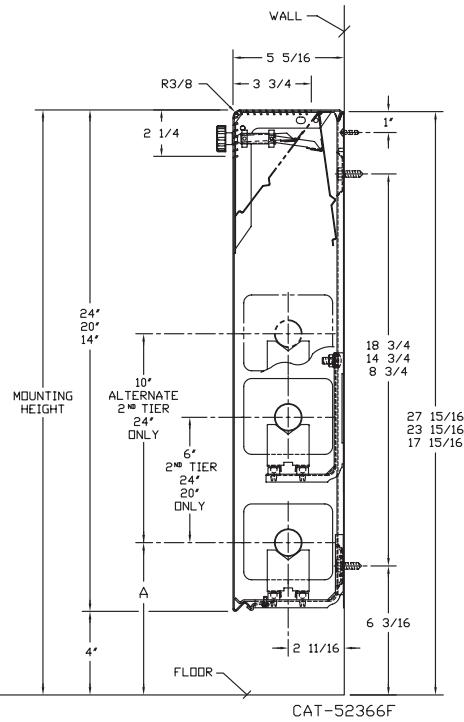
ELEMENT TUBE SIZE	FIN SIZE HEIGHT X WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 1/4 x 3 1/4	2	7"
1" COPPER	3 1/4 x 3 1/4	2	7 3/16
1 1/4 COPPER	3 1/4 x 3 1/4	1	6 5/8
1" STEEL	3 1/4 x 3 1/4	2	7 5/16
1 1/4 STEEL	3 1/4 x 3 1/4	1	6 13/16



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

JVB-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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
3/4"	C3/4-33	3-1/4" SQ.	32	.020	14A	1	18	1070	920	830	740	650	570	480	430	350	280	
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	2											

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	
					24B	3-6 CL	28	2800	2410	2180	1930	1710	1480	1260	1120	920	730	
3/4"	C3/4-44	4-1/4" SQ.	40	.020	14B	1	18	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	
					24B	2-6 CL	28	3270	2810	2550	2260	1990	1730	1470	1310	1080	850	
					24B	3-6 CL	28	3730	3210	2910	2570	2280	1980	1680	1490	1230	970	
3/4"	C3/4-45	4-1/4" SQ.	50	.020	14B	1	18	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	
					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	
1"	C43	4-1/4" SQ.	32	.020	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	
					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	
1"	C44	4-1/4" SQ.	40	.020	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	
					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	
1"	C45	4-1/4" SQ.	50	.020	14B	1	18	2220	1910	1730	1530	1350	1180	1000	890	730	580	
					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"	C143	4-1/4" SQ.	32	.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	
					24B	3-6 CL	28	3130	2690	2440	2160	1910	1660	1410	1250	1030	810	
1-1/4"	C144	4-1/4" SQ.	40	.020	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	
					24B	2-6 CL	28	2940	2530	2290	2030	1790	1560	1320	1180	970	760	
					24B	3-6 CL	28	3350	2880	2610	2310	2040	1780	1510	1340	1110	870	
1-1/4"	C145	4-1/4" SQ.	50	.020	14B	1	18	2100	1810	1640	1450	1280	1110	950	840	690	550	
					20B	1	24	2300	1980	1790	1590	1400	1220	1040	920	760	600	
					20B	2-6 CL	24	2940	2530	2290	2030	1790	1560	1320	1180	970	760	
					24B	1	28	2380	2050	1860	1640	1450	1260	1070	950	790	620	
					24B	2-6 CL	28	3060	2630	2390	2110	1870	1620	1380	1220	1010	800	
					24B	3-6 CL	28	3460	2980	2700	2390	2110	1830	1560	1380	1140	900	

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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	
					24B	3-6 CL	28	2590	2230	2020	1790	1580	1370	1170	1040	850	670	
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	
					24B	3-6 CL	28	2820	2430	2200	1950	1720	1490	1270	1130	930	730	
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	
					24B	3-6 CL	28	2860	2460	2230	1970	1740	1520	1290	1140	940	740	
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	
					24B	3-6 CL	28	2440	2100	1900	1680	1490	1290	1100	980	810	630	
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	
					24B	3-6 CL	28	2860	2460	2230	1970	1740	1520	1290	1140	940	740	
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	
					24B	3-6 CL	28	2810	2420	2190	1940	1710	1490	1260	1120	930	730	
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	
					24B	3-6 CL	28	2300	1980	1790	1590	1400	1220	1040	920	760	600	
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	

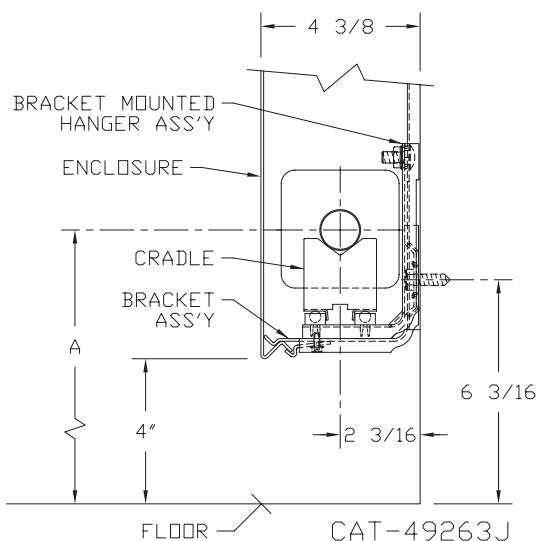
Notes: 1) Steel fins furnished as .032 thick, painted black.

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

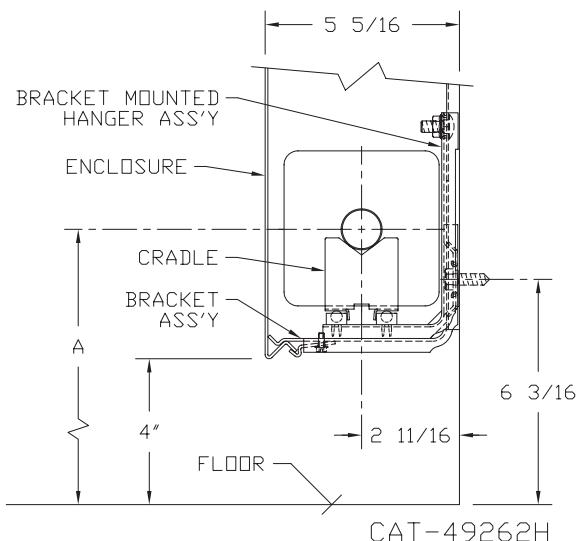
3) The ends can be provided chamfered for field welded fittings when specified.

VERTICAL ELEMENT CENTERLINE DIMENSIONS FOR INSTALLATIONS USING STEAM BRACKETS WITH HANGERS

"A" OFFSET



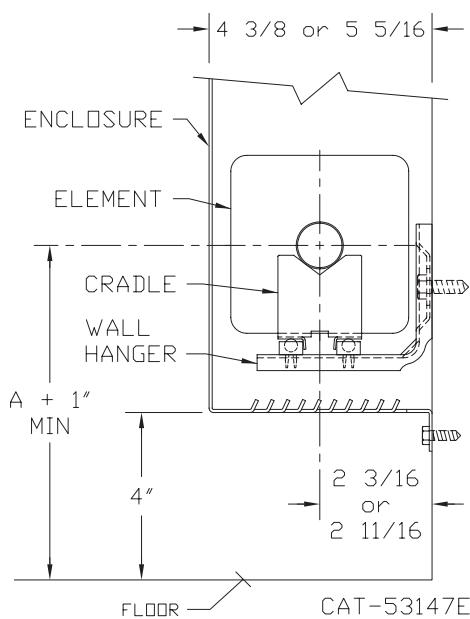
"B" OFFSET

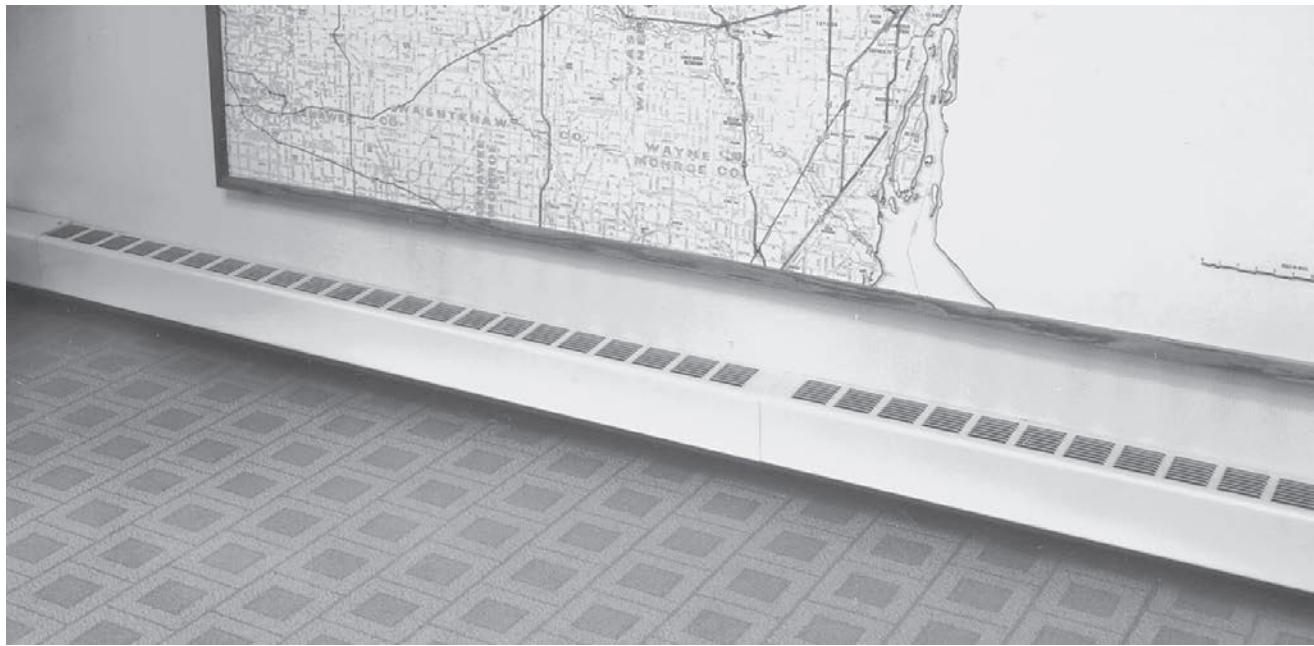


ELEMENT TUBE SIZE	FIN SIZE HEIGHT × WIDTH	CRADLE NUMBER	A MIN	A MAX
3/4 COPPER	3 1/4 × 3 1/4	2	7 3/8	9 5/8
1" COPPER	3 1/4 × 3 1/4	2	7 1/2	9 3/4
1 1/4 COPPER	3 1/4 × 3 1/4	2	7 5/8	9 7/8
1" STEEL	3 1/4 × 3 1/4	2	7 5/8	9 3/4
1 1/4 STEEL	3 1/4 × 3 1/4	1	7 3/16	9 3/8

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

LOUVERED INLET RETURN TO WALL



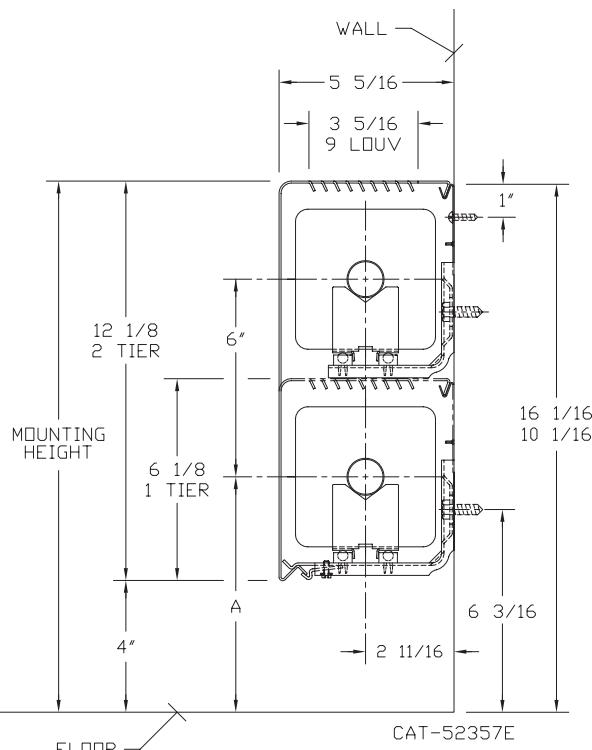
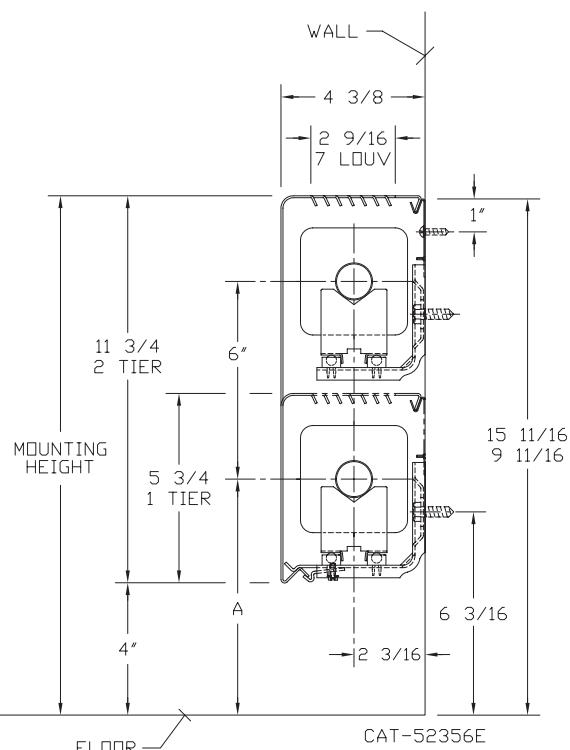


JVA-E5 11

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

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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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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 1610	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	550 870	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	1040 1470	930 1300	830 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	540 850	450 760	400 620	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

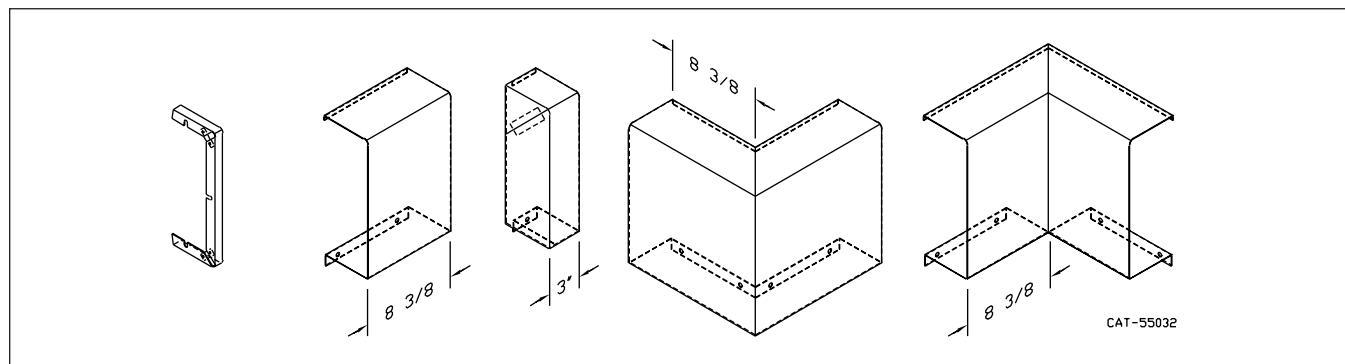
TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FINS PER FT.	FIN THICKNESS IN INCHES	ENCL DEPTH AND HEIGHT IN INCHES	TIERS AND CENTERS IN INCHES	MOUNTING HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
1"	S33	3-1/4" SQ.	32	.032	5A	1	9-3/4	780	670	610	540	480	410	350	310	260	200	
					11A	2-6 CL	15-3/4	1330	1140	1040	920	810	700	600	530	440	350	
1"	S34	3-1/4" SQ.	40	.032	5A	1	9-3/4	860	740	670	590	520	460	390	340	280	220	
1"	S35	3-1/4" SQ.	50	.032	5A	1	9-3/4	910	780	710	630	560	480	410	360	300	240	
11/4"	S133	3-1/4" SQ.	32	.032	5A	1	9-3/4	770	660	600	530	470	410	350	310	250	200	
11/4"	S134	3-1/4" SQ.	40	.032	5A	1	9-3/4	870	750	680	600	530	460	390	350	290	230	
11/4"	S135	3-1/4" SQ.	50	.032	5A	1	9-3/4	880	760	690	610	540	470	400	350	290	230	
1"	S43	4-1/4" SQ.	32	.032	6B	1	10-1/8	1095	940	850	760	670	580	490	440	360	280	
1"	S44	4-1/4" SQ.	40	.032	6B	1	10-1/8	1215	1040	950	840	740	640	550	490	400	320	
1"	S45	4-1/4" SQ.	50	.032	6B	1	10-1/8	1300	1120	1010	900	790	690	590	520	430	340	
11/4"	S143	4-1/4" SQ.	32	.032	6B	1	10-1/8	1010	870	790	700	620	540	450	400	330	260	
11/4"	S144	4-1/4" SQ.	40	.032	6B	1	10-1/8	1210	1040	940	830	740	640	540	480	400	310	
11/4"	S145	4-1/4" SQ.	50	.032	6B	1	10-1/8	1280	1100	1000	880	780	680	580	510	420	330	
2"	S242	4-1/4" SQ.	25	.032	6B	1	10-1/8	950	820	740	660	580	500	430	380	310	250	
2"	S243	4-1/4" SQ.	32	.032	6B	1	10-1/8	1130	970	880	780	690	600	510	450	370	290	
2"			12B	2-6 CL	12B	2-6 CL	16-1/8	1620	1390	1260	1120	990	860	730	650	530	420	
2"			12B	2-6 CL	12B	2-6 CL	16-1/8	1770	1520	1380	1220	1080	940	800	710	580	460	

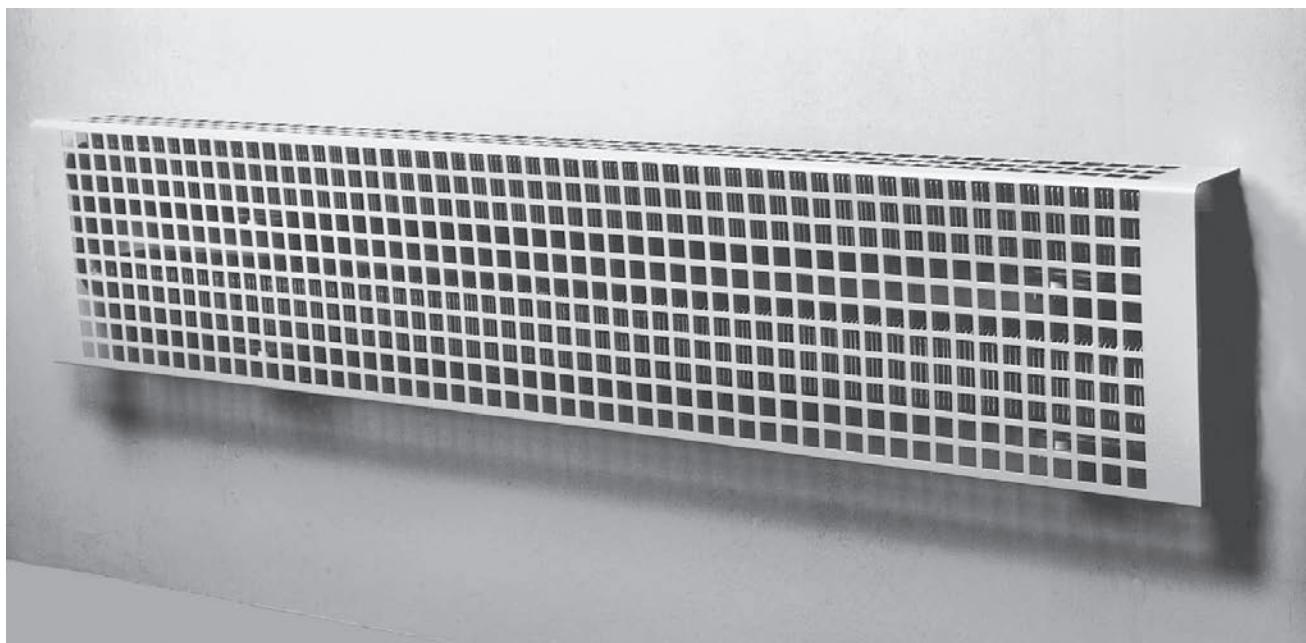
Notes: 1) Steel fins furnished as .032 thick, painted black.

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



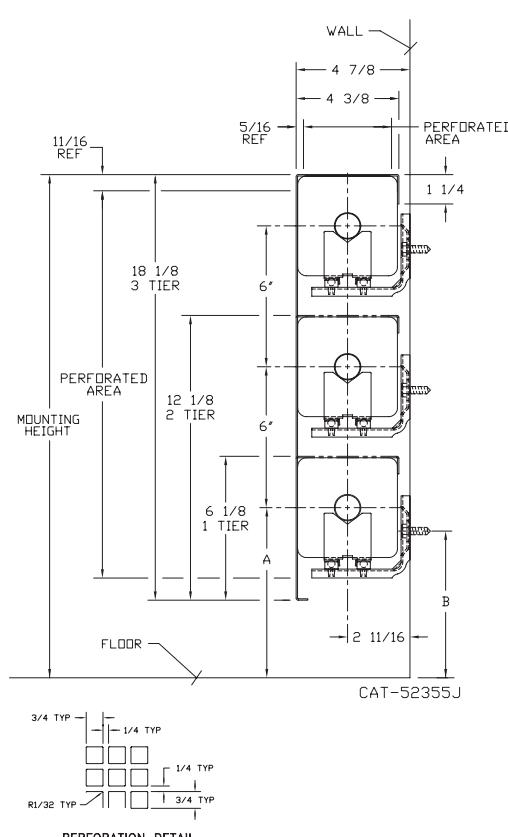
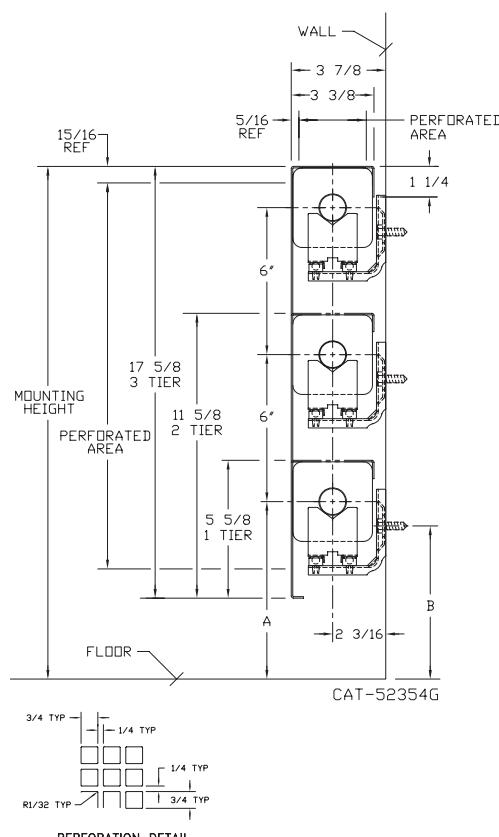


VA-X (Element Supported)

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	2	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	2	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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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.																

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
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.

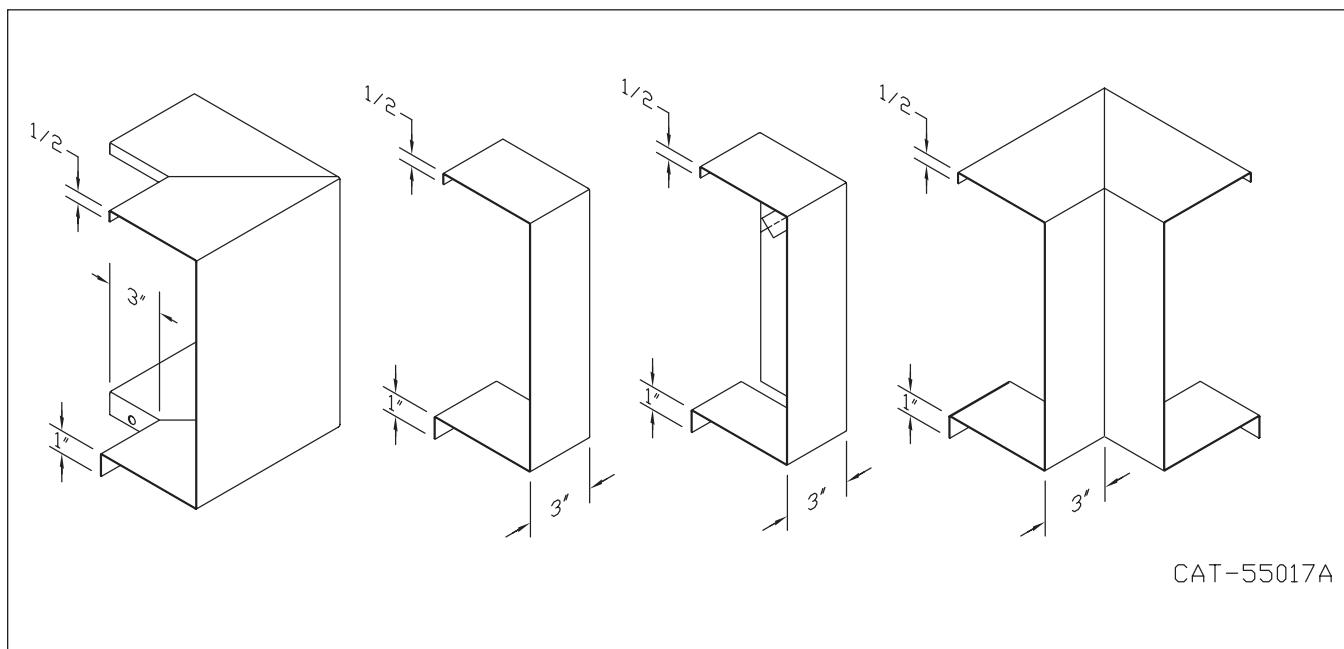
STEEL ELEMENTS

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

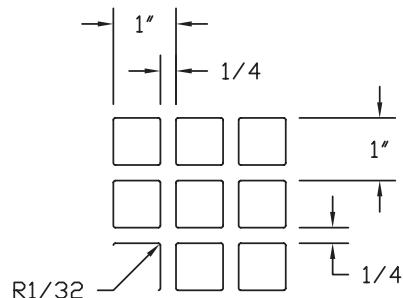
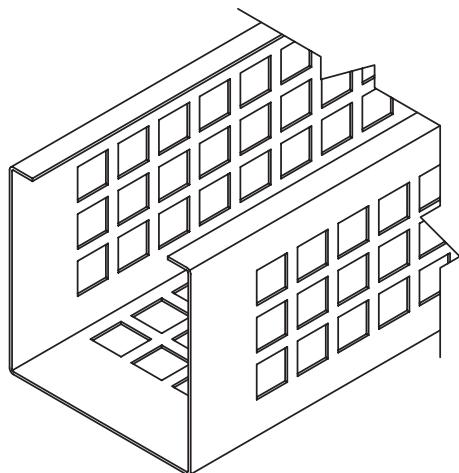
TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FINS PER FT.	FIN THICKNESS IN INCHES	ENCL DEPTH AND HEIGHT IN INCHES	TIERS AND CENTERS IN INCHES	MOUNTING HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
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	

STYLE "X" SQUARE PERFORATION

STYLE X ACCESSORIES



STYLE "X-C" SQUARE PERFORATION - CEILING



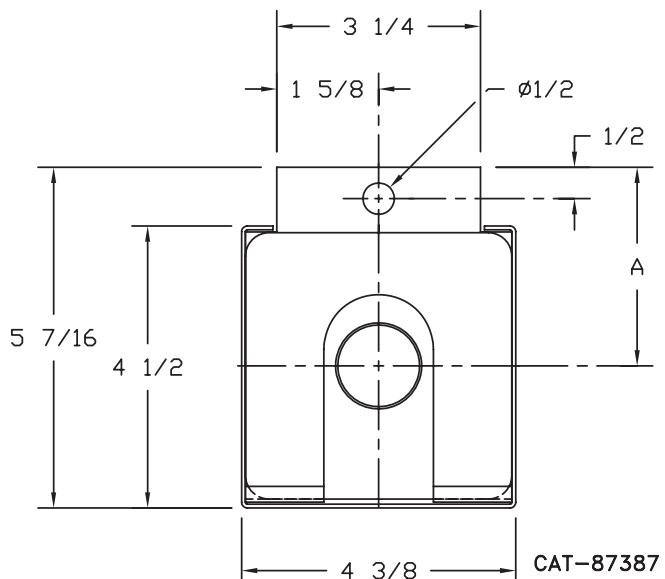
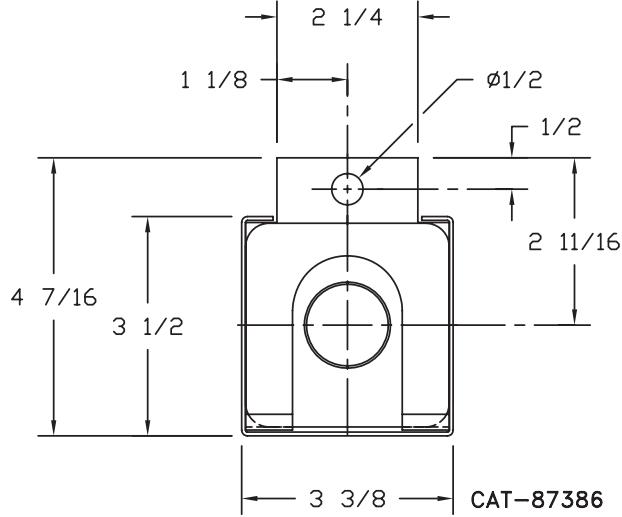
ENCLOSURE
PERFORATION DETAIL

VA-X3C

ELEMENT TUBE SIZE	FIN SIZE HEIGHT × WIDTH
3/4 COPPER	3 1/4 × 3 1/4
1" COPPER	3 1/4 × 3 1/4
1 1/4 COPPER	3 1/4 × 3 1/4
1" STEEL	3 1/4 × 3 1/4
1 1/4 STEEL	3 1/4 × 3 1/4

VB-X4C

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



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

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

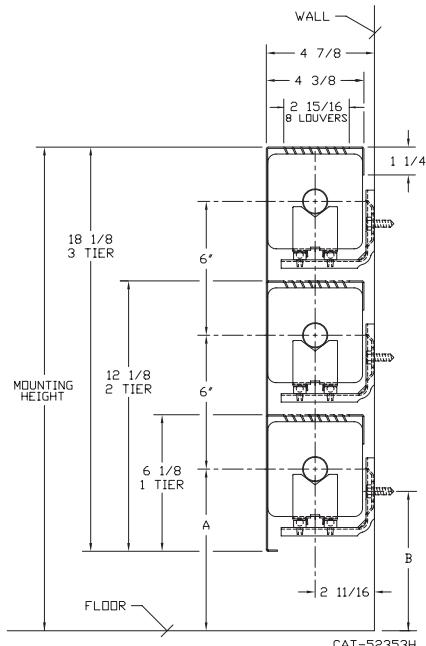
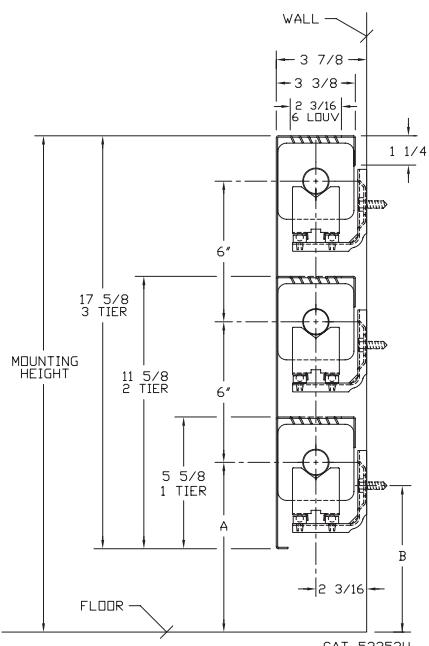


VA-C (Element Supported)

ELEMENT TUBE SIZE	FIN SIZE HEIGHT × 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

VB-C (Element Supported)

ELEMENT TUBE SIZE	FIN SIZE HEIGHT × 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



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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26
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												

STYLE "C" TOP OUTLET

COPPER/ALUMINUM ELEMENTS

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

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	1150	1050	920	820	710	600	540	440	350	
					12B	2 @ 6 CL	15-3/8	2120	1820	1650	1460	1290	1120	950	850	700	550	
					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/HB/I IN FT AND BASED ON 3 EPS VELOCITY 65° EAST

		HOT WATER (AVG.)																		
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	CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES											
									200°		190°		180°		170°		160°		150°	
									1.00	0.86	0.78	0.69	0.61	0.53	0.45	0.40	0.33	0.26		
1"	S33	3-1/4" SQ.	32	.032	5A	1	8-7/8	820	710	640	570	500	430	370	330	270	210			
					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			

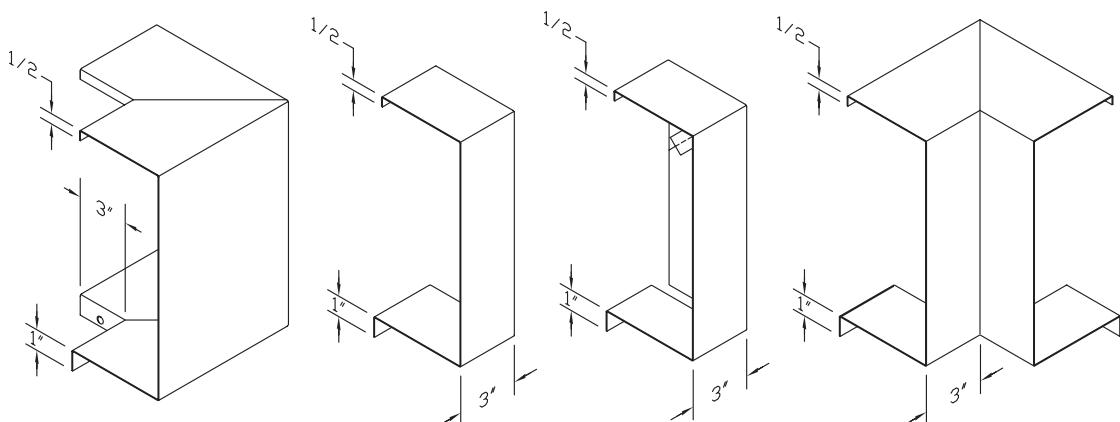
Notes: 1) Steel fins furnished as .032 thick, painted black.

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.

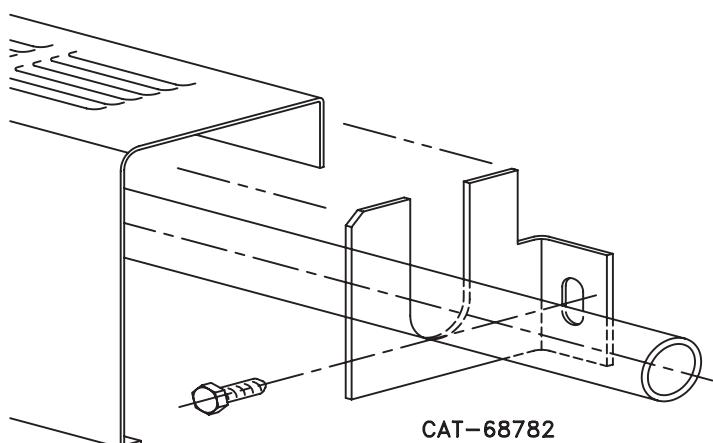
STYLE "C" TOP OUTLET

STYLE C ACCESSORIES



CAT-55017A

PIPE AND COVER SUPPORT BRACKET



CATALOG NUMBER	PIPE AND FIN SIZE
195	1-1/4 STEEL WITH 3-1/4 FIN
196	1-1/4 STEEL WITH 4-1/4 FIN
197	2" STEEL WITH 4-1/4 FIN

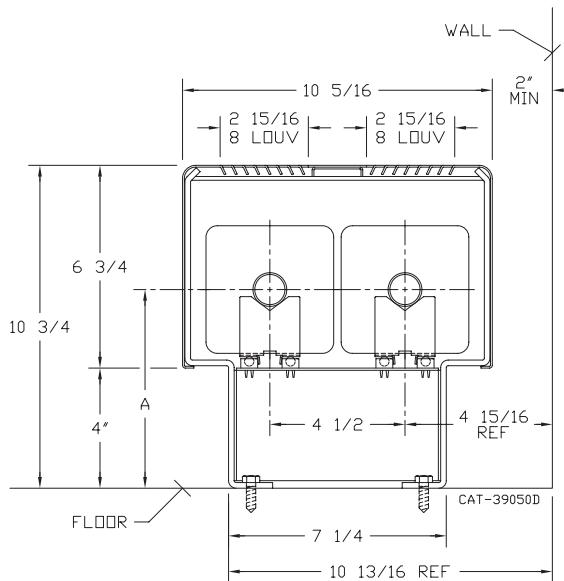
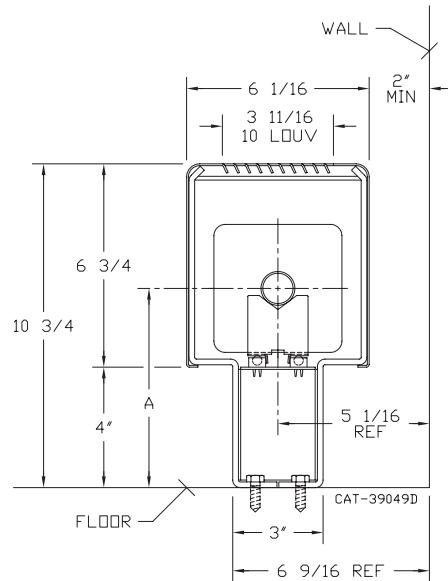


JVB-PM

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.)									
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES									
									.86	.78	.69	.61	.53	.45	.40	.33	.26	
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 "	1040 2080	890	810	720	630	550	470	420	340	270	
									1790	1620	1440	1270	1100	940	830	690	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	980	860	760	660	560	500	410	330	
									2140	1940	1720	1520	1320	1120	1000	820	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	1080	950	840	730	620	550	460	360	
									2370	2150	1900	1680	1460	1240	1100	910	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	840	750	660	570	490	430	360	280	
									1870	1690	1500	1320	1150	980	870	720	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	940	830	740	640	540	480	400	310	
									2090	1900	1680	1480	1290	1090	970	800	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	1080	950	840	730	620	550	460	360	
									2370	2150	1900	1680	1460	1240	1100	910	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	880	780	690	600	510	450	370	290	
									1940	1760	1550	1370	1190	1010	900	740	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	970	860	760	660	560	500	410	320	
									2130	1930	1710	1510	1310	1120	990	820	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	1080	950	840	730	620	550	460	360	
									2370	2150	1900	1680	1460	1240	1100	910	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	900	790	700	610	520	460	380	300	
									1980	1790	1590	1400	1220	1040	920	760	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	1080	950	840	730	620	550	460	360	
									2370	2150	1900	1680	1460	1240	1100	910	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	1110	980	870	750	640	570	470	370	
									2440	2220	1960	1730	1510	1280	1140	940	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	900	790	700	610	520	460	380	300	
									1980	1790	1590	1400	1220	1040	920	760	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	1000	880	780	680	580	510	420	330	
									2200	2000	1770	1560	1360	1150	1020	840	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	1120	990	880	760	650	580	480	370	
									2490	2250	1990	1760	1530	1300	1160	950	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	940	830	730	640	540	480	400	310	
									2070	1880	1660	1470	1280	1080	960	800	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	1120	990	870	760	640	570	470	370	
									2230	2070	1740	1520	1290	1140	940	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	1150	1010	900	780	660	590	490	380	
									2530	2290	2030	1790	1560	1320	1180	970	760	

Note: Copper tube furnished flared one end standard.

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

3) Ratings based on typical window wall installation.

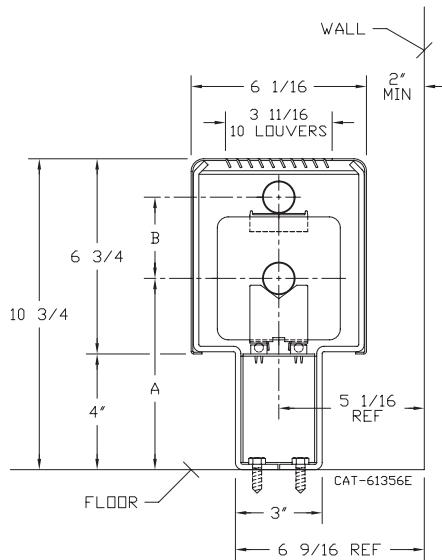
4) The ends can be provided chamfered for field welded fittings when specified.

STYLE "PM" PEDESTAL MOUNTED

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

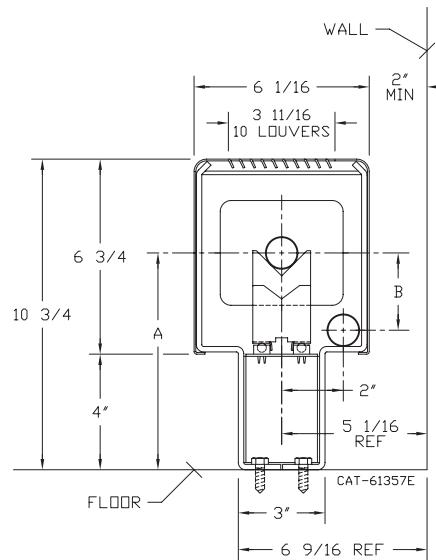
JVB-PM WITH RETURN ABOVE ELEMENT

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



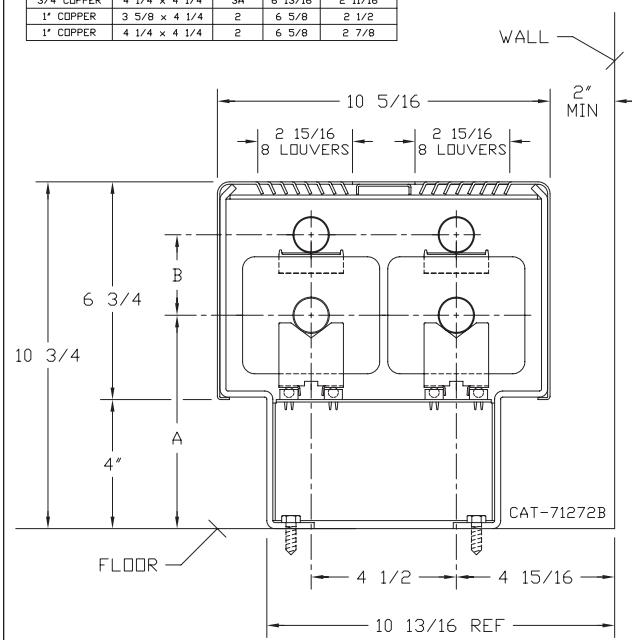
JVB-PM WITH RETURN BELOW ELEMENT

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



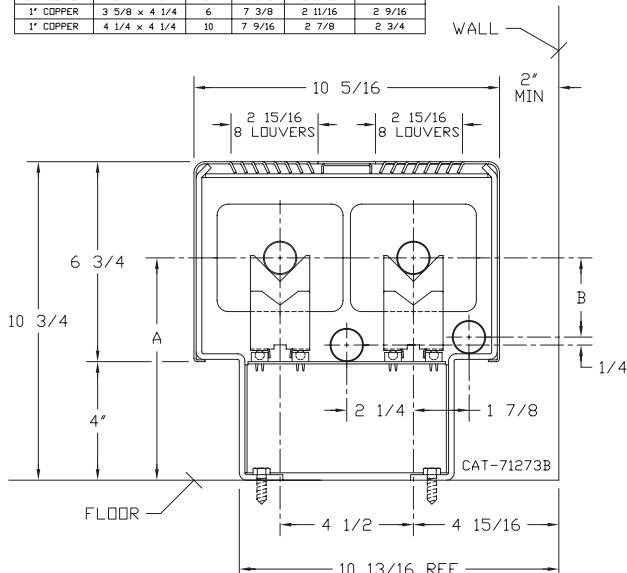
JVB-2PM WITH RETURN ABOVE ELEMENT

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

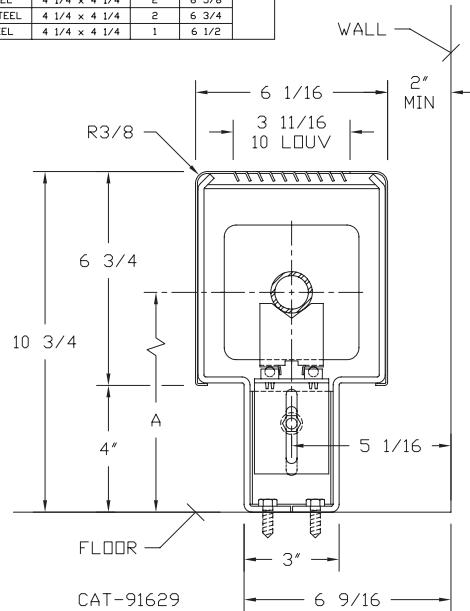


STYLE "PM" PEDESTAL MOUNTED

OPTIONAL ADJUSTABLE PEDESTAL BRACKET ASSEMBLIES FOR 2-PIPE STEAM

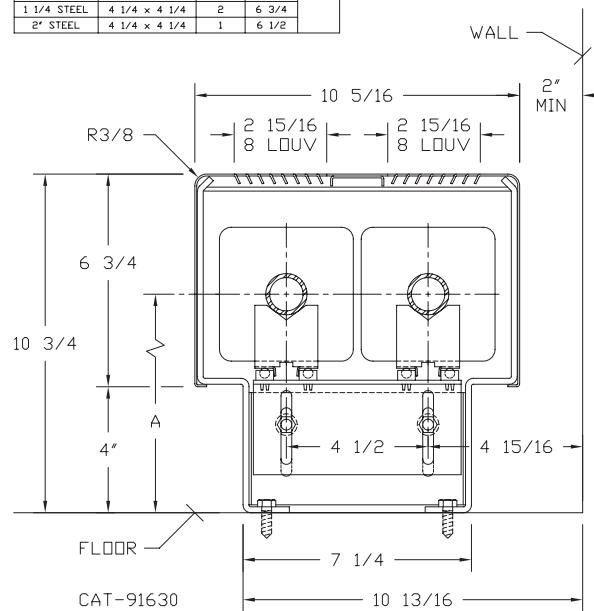
JVB-PM

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	
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	
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	

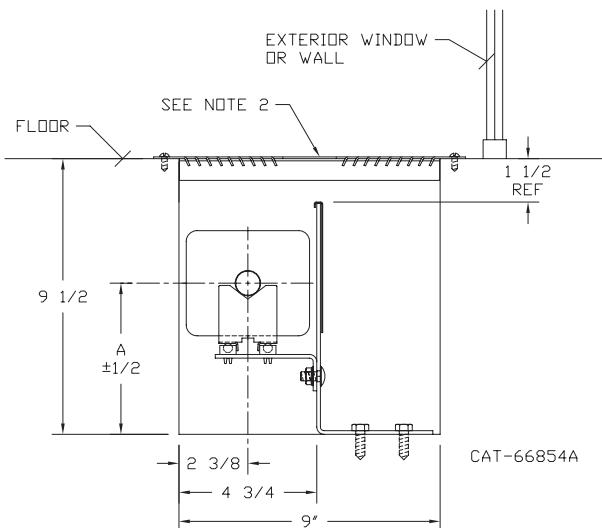


TRV

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:

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



COPPER/ALUMINUM ELEMENTS

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

TUBE 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									
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	"			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.

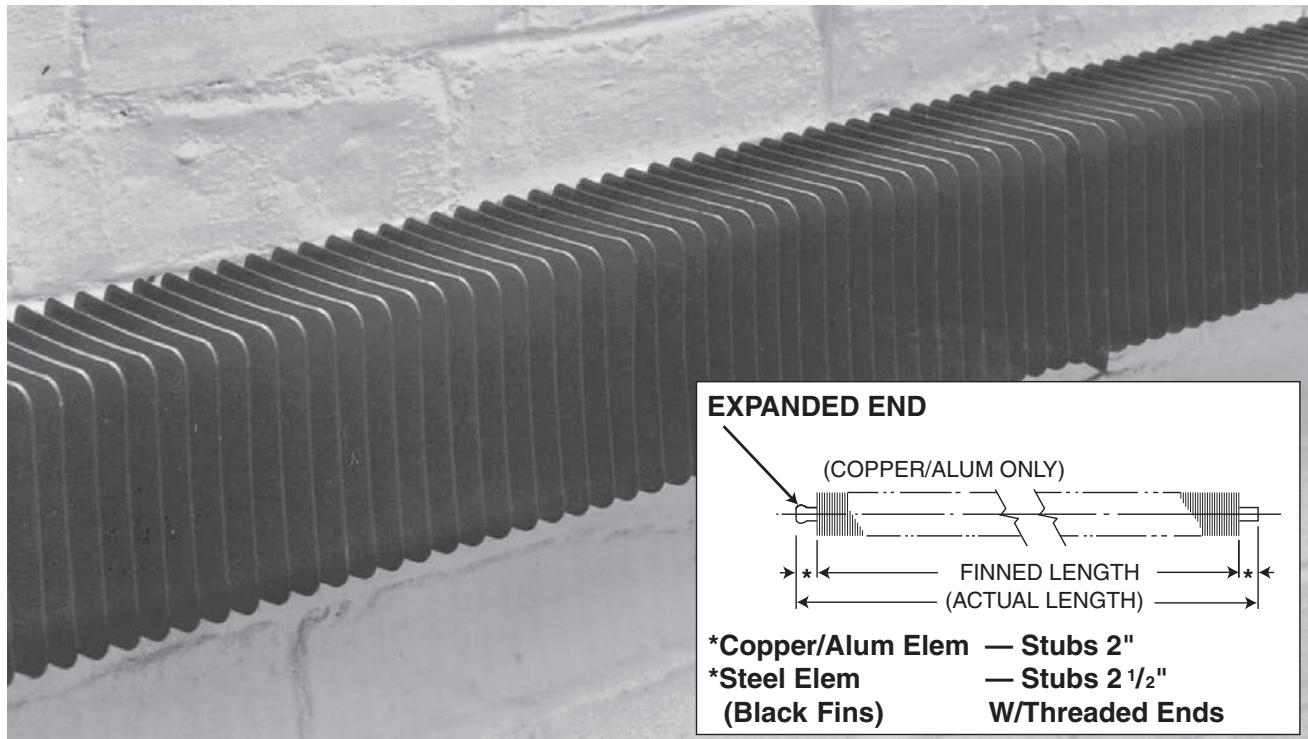
STEEL ELEMENTS

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"	S43	4-1/4" SQ.	32	.032	9 1/2 x 9	1220	1050	950	840	740	650	550	490	400	320	
	S44		40	.032			1380	1190	1080	950	840	730	620	550	460	360
	S45		50	.032			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	.032			1370	1180	1070	950	840	730	620	550	450	360
	S145		50	.032			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	.032			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

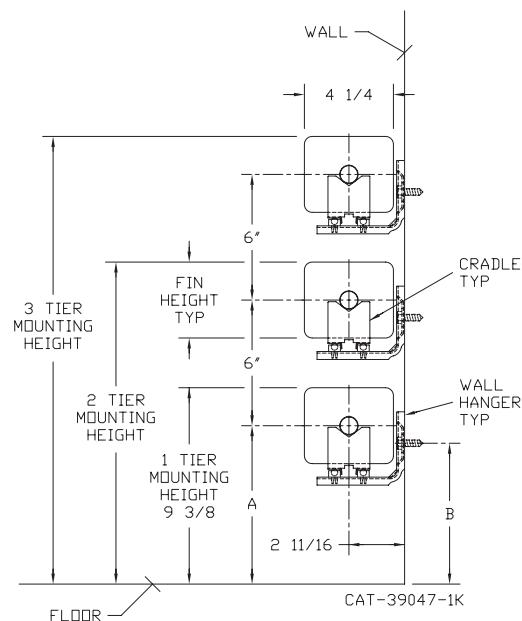
When ordering element specify fin thickness: steel = .024, .032; copper = .020, .011 as shown on Selection Pages.

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.)																		
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																		
								200°	190°	180°	170°	160°	150°	140°	130°	120°	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	1250	1130	1000	880	770	650	580	480	380	
								1830	1660	1470	1300	1130	960	850	700	550	2140	1940	1720	1520	1320	1120	1000	820	650	
								2480	2250	1990	1760	1530	1300	1150	950	750	2840	2570	2280	2010	1750	1490	1320	1090	860	
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	1380	1250	1100	980	850	720	640	530	420	
								2280	2070	1830	1620	1400	1190	1060	870	690	2650	2450	2280	2010	1750	1550	1380	1140	900	
								2970	2690	2380	2100	1830	1550	1380	1140	900	3450	3200	2970	2690	2380	2100	1830	1550	1380	1140
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	1260	1100	970	830	700	580	480	380		
								2220	1910	1730	1530	1350	1180	1000	890	730	3000	2580	2340	2070	1830	1590	1350	1200	990	780
								2420	2080	1890	1670	1480	1280	1090	970	800	3200	2750	2500	2210	1950	1700	1440	1280	1060	830
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	1380	1250	1100	980	850	720	640	530	420	
								2310	1990	1800	1590	1410	1220	1040	920	760	3450	3200	2970	2690	2380	2100	1830	1550	1380	1140
								3130	2690	2440	2160	1910	1660	1410	1250	1000	810	2970	2690	2380	2100	1830	1550	1380	1140	
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	1240	1120	990	880	760	600	520	430		
								1990	1800	1590	1410	1220	1040	920	760	600	3260	2800	2540	2250	1990	1730	1470	1300	1080	
								3130	2690	2440	2160	1910	1660	1410	1250	1000	810	3460	2980	2700	2390	2110	1830	1560	1380	1140
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	1380	1250	1100	990	820	700	640	530	420	
								2120	1930	1700	1510	1310	1110	990	820	640	3260	2800	2540	2250	1990	1730	1470	1300	1080	
								2860	2500	2210	1950	1700	1440	1280	1060	830	3460	2950	2680	2370	2090	1820	1540	1370	1130	890
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	1340	1150	1050	920	820	710	600	540	440	
								2340	2010	1830	1610	1430	1240	1050	940	770	3200	2750	2500	2210	1950	1700	1440	1280	1060	830
								3200	2750	2500	2210	1950	1700	1440	1280	1060	830	3430	3000	2720	2410	2130	1850	1570	1330	1100
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	340	1380	1250	1100	990	820	700	600	520	420
								2180	1980	1750	1550	1350	1140	1020	870	760	3330	2860	2600	2300	2030	1760	1500	1330	1100	870
								3330	2860	2600	2300	2030	1760	1500	1330	1100	870	3430	2980	2700	2390	2110	1830	1560	1380	1140
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	1600	1420	1290	1140	1010	870	740	660	540	430	340	1380	1250	1100	990	820	700	600	520	420
								2250	2040	1810	1600	1390	1180	1050	860	780	3430	2950	2680	2370	2090	1820	1540	1370	1130	890
								2500	2230	2020	1730	1510	1260	1070	950	820	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	1380	1250	1100	990	820	700	600	520	420	
								2140	1940	1720	1520	1320	1120	1000	820	650	3320	2860	2590	2290	2030	1760	1490	1330	1100	860
								3320	2860	2590	2290	2030	1760	1490	1330	1100	860	3460	2980	2700	2390	2110	1830	1560	1380	1140
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	340	1380	1250	1100	990	820	700	600	520	420
								2280	2070	1830	1620	1400	1190	1060	870	780	3430	2980	2700	2390	2110	1830	1560	1380	1140	
								2980	2700	2390	2110	1830	1560	1380	1140	900	3460	2980	2700	2390	2110	1830	1560	1380	1140	
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	1380	1250	1100	990	820	700	600	520	420	
								2470	2120	1930	1700	1510	1310	1110	990	820	3360	2890	2620	2320	2050	1780	1510	1340	1110	870
								3360	2890	2620	2320	2050	1780	1510	1340	1110	870	3430	2980	2700	2390	2110	1830	1560	1380	1140
1-1/4"	C144	4-1/4" SQ.	40	.020	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	1380	1250	1100	990	820	700	600	520	420	

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									
							1.00	0.86	0.78	0.69	0.61	0.53	0.45	.40	.33	.26	
1"	S43	4-1/4" SQ.	32	.032	1	9-3/8	1320	1140	1030	910	810	700	590	530	440	340	
					2-6 CL	15-3/8	2320	2000	1810	1600	1420	1230	1040	930	770	600	
					3-6 CL	21-3/8	3050	2620	2380	2100	1860	1620	1370	1220	1010	790	
1"	S44	4-1/4" SQ.	40	.032	1	9-3/8	1490	1280	1160	1030	910	790	670	600	490	390	
					2-6 CL	15-3/8	2450	2110	1910	1690	1490	1300	1100	980	810	640	
					3-6 CL	21-3/8	3180	2730	2480	2190	1940	1690	1430	1270	1050	830	
1"	S45	4-1/4" SQ.	50	.032	1	9-3/8	1580	1360	1230	1090	960	840	710	630	520	410	
					2-6 CL	15-3/8	2510	2160	1960	1730	1530	1330	1130	1000	830	650	
					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	1	9-3/8	1220	1050	950	840	740	650	550	490	400	320	
					2-6 CL	15-3/8	2300	1980	1790	1590	1400	1220	1040	920	760	600	
					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	1	9-3/8	1480	1270	1150	1020	900	780	670	590	490	380	
					2-6 CL	15-3/8	2440	2100	1900	1680	1490	1290	1100	980	810	630	
					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	1	9-3/8	1550	1330	1210	1070	950	820	700	620	510	400	
					2-6 CL	15-3/8	2460	2120	1920	1700	1500	1300	1110	980	810	640	
					3-6 CL	21-3/8	3200	2750	2500	2210	1950	1700	1440	1280	1060	830	
2"	S242	4-1/4" SQ.	25	.032	1	9-3/8	1140	980	890	790	700	600	510	460	380	300	
					2-6 CL	15-3/8	2030	1750	1580	1400	1240	1080	910	810	670	530	
					3-6 CL	21-3/8	2700	2320	2110	1860	1650	1430	1220	1080	890	700	
2"	S243	4-1/4" SQ.	32	.032	1	9-3/8	1320	1140	1030	910	810	700	590	530	440	340	
					2-6 CL	15-3/8	2230	1920	1740	1540	1360	1180	1000	890	740	580	
					3-6 CL	21-3/8	2910	2500	2270	2010	1780	1540	1310	1160	960	760	
2"	S244	4-1/4" SQ.	40	.032	1	9-3/8	1490	1280	1160	1030	910	790	670	600	490	390	
					2-6 CL	15-3/8	2360	2030	1840	1630	1440	1250	1060	940	780	610	
					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.

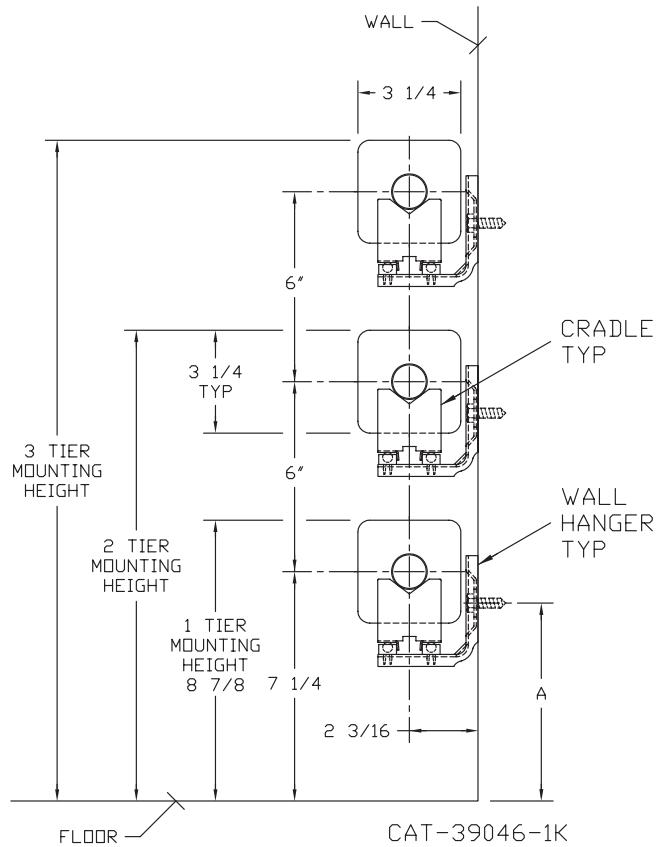
2) NPT threads furnished on steel elements. Please use domestic fittings for proper installation.

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.)																		
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																		
								200°	190°	180°	170°	160°	150°	140°	130°	120°	.86	.78	.69	.61	.53	.45	.40	.33	.26	
3/4"	C3/4-33	3-1/4" SQ.	32	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	970	830	760	670	590	510	440	390	320	250	830	760	670	590	510	440	390	320	250	
								1480	1340	1190	1050	910	770	690	570	450	880	760	660	590	560	480	400	350	280	
								2070	1880	1660	1470	1280	1080	960	800	630	960	800	720	630	570	450	400	350	280	
3/4"	C3/4-34	3-1/4" SQ.	40	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1140	980	890	790	700	600	510	460	380	300	980	890	790	700	600	510	460	380	300	
								1620	1470	1300	1150	1000	850	750	620	490	2210	2000	1770	1570	1360	1160	1030	850	670	
								2570	2310	2100	1860	1640	1430	1210	1080	900	800	660	520	500	420	330	280	200		
3/4"	C3/4-35	3-1/4" SQ.	50	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1260	1080	980	870	770	670	570	500	420	330	2310	2010	1730	1570	1390	1230	1070	900	800	
								1720	1480	1340	1190	1050	910	770	690	570	450	2370	2040	1850	1640	1430	1210	1080	900	800
								2690	2310	2100	1860	1640	1430	1210	1080	900	800	660	520	500	420	330	280	200		
1"	C33	3-1/4" SQ.	32	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	970	830	760	670	590	510	440	390	320	250	830	760	670	590	510	440	390	320	250	
								1480	1340	1190	1050	910	770	690	570	450	2370	2040	1850	1640	1430	1210	1080	900	800	
								2040	1850	1640	1430	1210	1080	900	800	660	520	500	420	330	280	200	160			
1"	C34	3-1/4" SQ.	40	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1080	930	840	750	660	570	490	430	360	280	2490	2140	1940	1720	1520	1320	1120	1000	820	650
								1590	1440	1280	1130	980	830	740	610	480	2140	1940	1720	1520	1320	1120	1000	820	650	
								2240	2030	1840	1630	1440	1250	1060	940	780	610	550	440	400	310	280	200	160		
1-1/4"	C133	3-1/4" SQ.	32	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	970	830	760	670	590	510	440	390	320	250	2360	2030	1840	1630	1440	1250	1060	940	780	610
								1680	1440	1310	1160	1020	890	760	670	550	2030	1840	1630	1440	1250	1060	940	780	610	
								2360	2030	1840	1630	1440	1250	1060	940	780	610	550	440	400	310	280	200	160		
1-1/4"	C134	3-1/4" SQ.	40	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1060	910	830	730	650	560	480	420	350	280	2450	2110	1910	1690	1490	1300	1100	980	810	640
								1580	1440	1270	1120	980	830	740	610	480	2110	1910	1690	1490	1300	1100	980	810	640	
								2450	2110	1910	1690	1490	1300	1100	980	810	640	550	440	400	310	280	200	160		
1-1/4"	C135	3-1/4" SQ.	50	.020	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1170	1010	910	810	710	620	530	470	390	300	2550	2190	1990	1760	1560	1350	1150	1020	840	660
								1900	1630	1480	1310	1160	1010	860	760	630	500	2190	1960	1780	1570	1390	1210	1030	910	750
								2550	2190	1990	1760	1560	1350	1150	1020	840	660	530	470	400	340	270	200	160		

Note: Copper tube furnished flared one end standard.

STEEL ELEMENTS

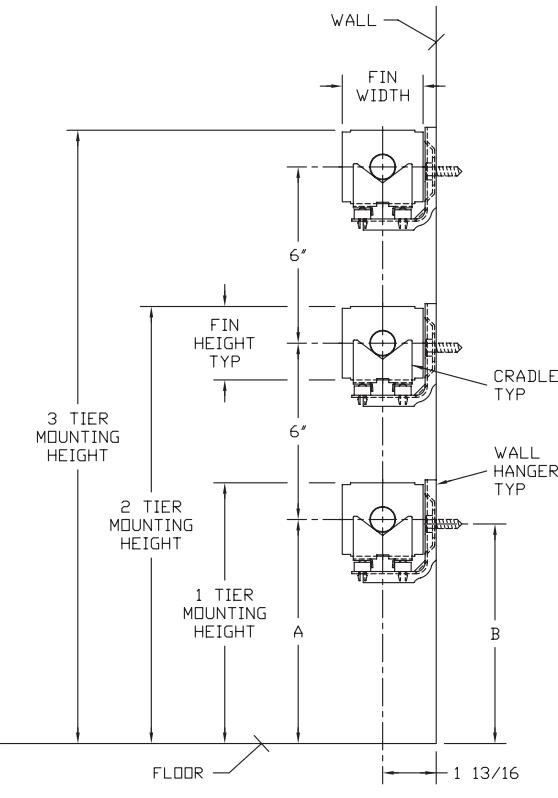
ALL RATINGS ARE IN BTU/HR/LIN FT AND BASED ON 3 FPS VELOCITY, 65° EAT

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.)																	
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																	
								200°	190°	180°	170°	160°	150°	140°	130°	120°	.86	.78	.69	.61	.53	.45	.40	.33	.26
1"	S33	3-1/4" SQ.	32	.032	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	910	780	710	630	560	480	410	360	300	240	1580	1360	1230	1090	960	840	710	630	520
								1680	1460	1330	1170	1040	900	770	680	520	450	1460	1200	1170	1040	900	770	680	520
								2350	2020	1830	1620	1430	1250	1060	940	780	610	550	480	400	330	260	200	160	
1"	S34	3-1/4" SQ.	40	.032	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	990	850	770	680	600	520	450	400	330	260	1700	1460	1330	1170	1040	900	770	680	560
								1590	1440	1270	1120	990	860	730	650	560	480	1700	1460	1330	1170	1040	900	770	680
								2450	2110	1910	1690	1490	1300	1100	980	810	640	550	480	400	330	260	200	160	
1-1/4"	S133	3-1/4" SQ.	32	.032	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	900	770	700	620	550	480	410	360	300	230	1620	1390	1260	1120	990	860	730	650	530
								1900	1620	1390	1260	1120	990	860	730	650	530	450	400	330	260	200	160		
								2250	1940	1760	1550	1370	1200	1070	930	790	640	550	480	400	330	260	200	160	
1-1/4"	S134	3-1/4" SQ.	40	.032	1 2-6 CL 3-6 CL	8-7/8 14-7/8 20-7/8	1000	860	780	690	610	530	450	400	330	260	1700	1460	1330	117					

BARE ELEMENT STYLE "K"

Bare Element "K" Offset

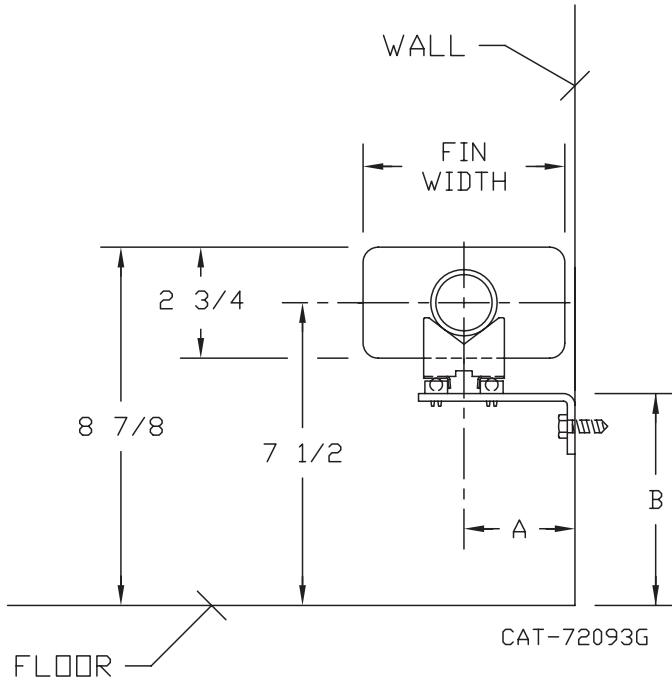
TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A	B	1 TIER MOUNTING HEIGHT
3/4 COPPER	2 1/2 x 2 1/4	1		7 5/8	7 1/2
	2 1/2 x 2 3/4	1		7"	6 3/16
	3 3/4 x 2 3/4	2		7"	8 7/8
1" COPPER	2 1/2 x 2 3/4	1		7 5/8	7 5/16
	3 3/4 x 2 3/4	2		7"	6"
	5" x 2 3/4	3A	7 1/2	6 1/8	10"
1 1/4 COPPER	3 3/4 x 2 3/4	2	2	7"	5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



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
	2 3/4 x 5"	1	2 3/4	5 9/16
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	5 7/16
1" STEEL	2 3/4 x 3 3/4	1	2 1/8	5 1/4
	2 3/4 x 5"	1	2 3/4	5 1/4
1 1/4 STEEL	2 3/4 x 5"	1	2 3/4	5 1/4



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.)																													
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																													
								200°	190°	180°	170°	160°	150°	140°	130°	120°	.86	.78	.69	.61	.53	.45	.40	.33	.26												
3/4"	R01	2-1/2" x 2-1/4"	50	<i>.011</i>	1 2-6CL 3-6CL	8-7/8 14-7/8 20-7/8	800 1370 1870	1.00	690	620	550	490	420	360	320	260	210	800	780	690	600	500	430	380	310	250											
								200°	190°	180°	170°	160°	150°	140°	130°	120°	800	780	690	600	500	430	380	310	250												
								1180	1070	950	840	730	620	550	450	360	1460	1290	1140	990	840	750	620	490	360												
3/4"	R02	2-1/2" x 2-3/4"	60	<i>.010</i>	1 2-6CL 3-6CL	8-7/8 14-7/8 2240	950 1630 1930	1.00	820	740	660	580	500	430	380	310	250	800	730	650	540	420	370	310	250												
								1400	1270	1120	990	860	730	650	540	420	1750	1550	1370	1190	1010	900	740	580	420												
								1930	1750	1550	1370	1190	1010	900	740	580	2210	1900	1720	1520	1350	1170	990	880	730	570											
1"	R03	2-1/2" x 2-3/4"	55	<i>.011</i>	1 2-6CL 3-6CL	8-7/8 14-7/8 20-7/8	930 1610 2210	1.00	800	730	640	570	490	420	370	310	240	880	780	690	600	510	450	370	290												
								1380	1260	1110	980	850	720	640	530	420	2100	1900	1720	1520	1350	1170	990	880	730	570											
								1900	1720	1520	1350	1170	1010	900	740	580	2650	2280	2070	1830	1620	1400	1190	1060	870	690											
3/4"	R04	3-3/4" x 2-3/4"	50	<i>.014</i>	1 2-6CL 3-6CL	8-7/8 14-7/8 20-7/8	1130 1930 2650	1.00	970	880	780	690	600	510	450	370	290	800	730	650	540	420	350	290	2200	1900	1720	1520	1350	1170	990	880	730	570			
								1660	1510	1330	1180	1020	870	770	640	500	2100	1900	1720	1520	1350	1170	990	880	730	570	2280	2070	1830	1620	1400	1190	1060	870	690		
								2260	2050	1810	1600	1390	1180	1050	870	730	580	2630	2260	2050	1810	1600	1390	1180	1050	870	690	2470	2240	1980	1750	1520	1290	1150	950	750	
1"	R05	3-3/4" x 2-3/4"	50	<i>.014</i>	1 2-6CL 3-6CL	8-7/8 14-7/8 20-7/8	1120 1910 2630	1.00	960	870	770	680	590	500	450	370	290	800	730	650	540	420	350	290	2200	1900	1720	1520	1350	1170	990	880	730	570			
								1640	1490	1320	1170	1010	860	760	630	500	2100	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	950	750		
								2260	2050	1810	1600	1390	1180	1050	870	730	580	2630	2260	2050	1810	1600	1390	1180	1050	870	690	2470	2240	1980	1750	1520	1290	1150	950	750	
1"	R07	5" x 2-3/4"	50	<i>.020</i>	1 2-6CL 3-6CL	10 16 22	1260 2100 2870	1.00	1080	980	870	770	670	570	500	420	330	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	950	750	
								2100	1810	1640	1450	1280	1110	950	840	690	550	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	950	750	
								2870	2470	2240	1980	1750	1520	1350	1170	990	880	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	950	750	
1-1/4"	R08	3-3/4" x 2-3/4"	50	<i>.020</i>	1 2-6CL 3-6CL	10 16 22	1070 1830 2560	1.00	920	830	740	650	570	480	430	350	280	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	1020	870	690
								1570	1430	1260	1120	970	820	730	600	500	420	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	1020	900	720
								2560	2200	2000	1770	1560	1360	1150	1020	900	720	2450	2220	1970	1740	1510	1210	1030	910	750	590	2470	2240	1980	1750	1520	1290	1150	1020	900	720
1-1/4"	R10	5" x 2-3/4"	50	<i>.020</i>	1 2-6CL 3-6CL	10 16 22	1230 2070 2850	1.00	1060	960	850	750	650	550	490	410	320	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	1020	900	720
								1650	1420	1290	1140	1010	870	740	660	510	430	2200	1900	1720	1520	1350	1170	990	880	730	570	2470	2240	1980	1750	1520	1290	1150	1020	900	720
								1960	1780	1610	1430	1260	1100	930	830	740	660	2450	2220	1970	1740	1510	1210	1030	910	750	590	2470	2240	1980	1750	1520	1290	1150	1020	900	720

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

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.)																		
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																		
								200°	190°	180°	170°	160°	150°	140°	130°	120°	.86	.78	.69	.61	.53	.45	.40	.33	.26	
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	1100	1000	880	780	680	580	510	420	330	
					2-6CL	14-7/8	2190	1880	1710	1510	1340	1160	990	880	720	570	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	680	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	1090	990	880	770	670	570	510	420	330	
					2-6CL	14-7/8	2180	1870	1700	1500	1330	1160	980	870	720	570	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	680	2980	2560	2320	2060	1820	1580	1340	1190	980
1"	R07R	2-3/4" x 5"	50	.020	1	8-7/8	1610	1380	1260	1110	980	850	720	640	530	420	1380	1260	1110	980	850	720	640	530	420	
					2-6CL	14-7/8	2510	2160	1960	1730	1530	1330	1130	1000	830	650	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	680	3310	2850	2580	2280	2020	1750	1490	1320	1090
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	1080	980	860	760	660	560	500	410	330	
					2-6CL	14-7/8	1980	1700	1540	1370	1210	1050	890	790	650	510	2620	2250	2040	1810	1600	1390	1180	1050	860	680
					3-6CL	20-7/8	2250	2040	1810	1540	1340	1140	1010	830	660	530	420	3310	2850	2580	2280	2020	1750	1490	1320	1090
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	2530	2180	1970	1750	1540	1340	1140	1010	830	660
					2-6CL	14-7/8	2530	2180	1970	1750	1540	1340	1140	1010	830	660	3310	2850	2580	2280	2020	1750	1490	1320	1090	860
					3-6CL	20-7/8	3310	2850	2580	2280	2020	1750	1490	1320	1090	860	680	3310	2850	2580	2280	2020	1750	1490	1320	1090

Note: Copper tube furnished flared one end standard.

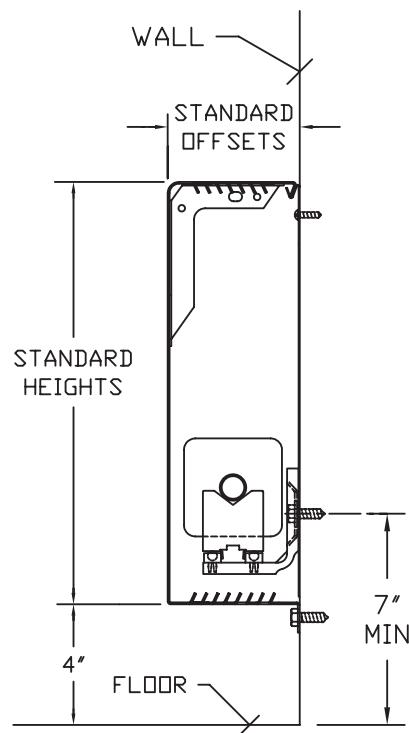
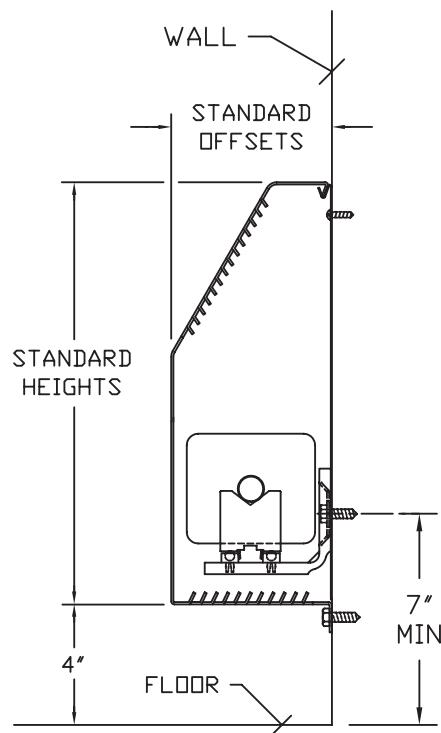
STEEL ELEMENTS

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.)																		
								CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES																		
								200°	190°	180°	170°	160°	150°	140°	130°	120°	.86	.78	.69	.61	.53	.45	.40	.33	.26	
1"	R15R	2-3/4" x 5"	50	.024	1	8-7/8	1140	980	890	790	700	600	510	460	380	300	2010	1730	1570	1390	1230	1070	900	800	660	520
					2-6CL	14-7/8	2100	1730	1570	1390	1230	1070	900	800	660	520	2810	2420	2190	1940	1710	1490	1260	1120	930	730
					3-6CL	20-7/8	2810	2420	2190	1940	1710	1490	1260	1120	930	730	3310	2850	2580	2280	2020	1750	1490	1320	1090	860
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	2040	1750	1590	1410	1240	1080	920	820	670	530
					2-6CL	14-7/8	2040	1750	1590	1410	1240	1080	920	820	670	530	2830	2430	2210	1950	1730	1500	1270	1130	930	740
					3-6CL	20-7/8	2830	2430	2210	1950	1730	1500	1270	1130	930	740	3310	2850	2580	2280	2020	1750	1490	1320	1090	860

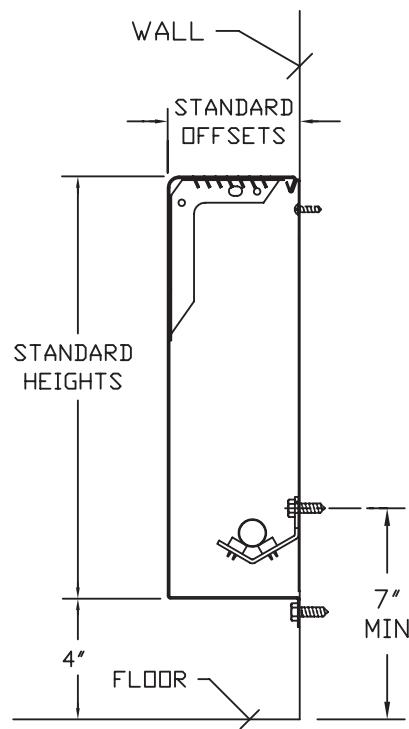
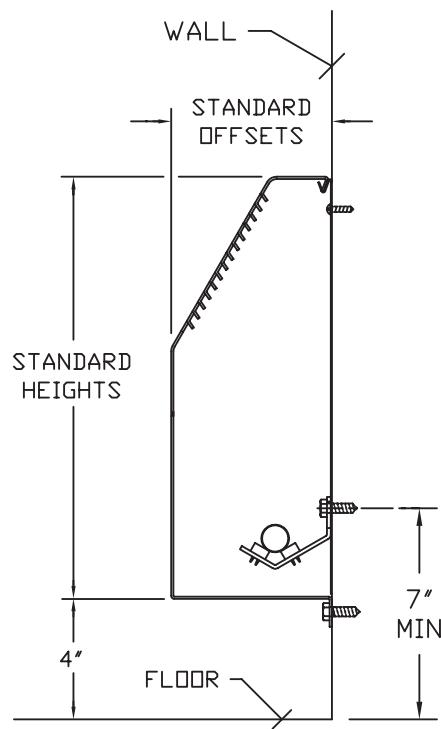
Notes: 1) Steel fins furnished as .032 thick, painted black.

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


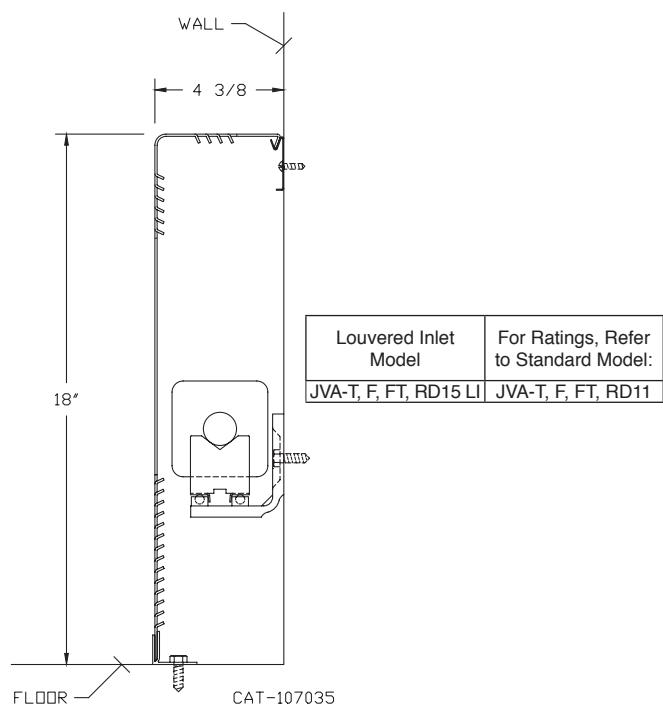
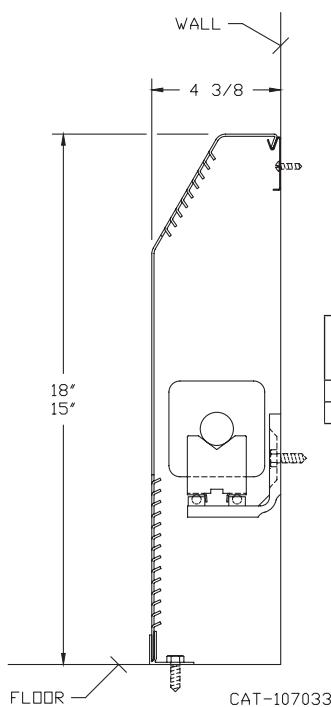
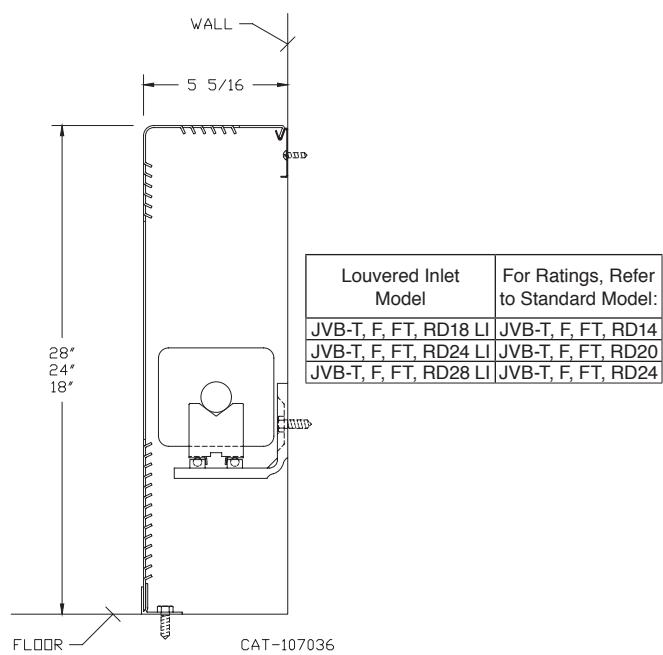
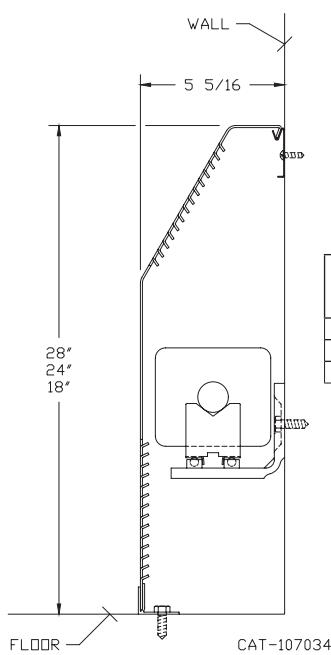
RETURN TO WALL, LOUVERED INLET
RWLI

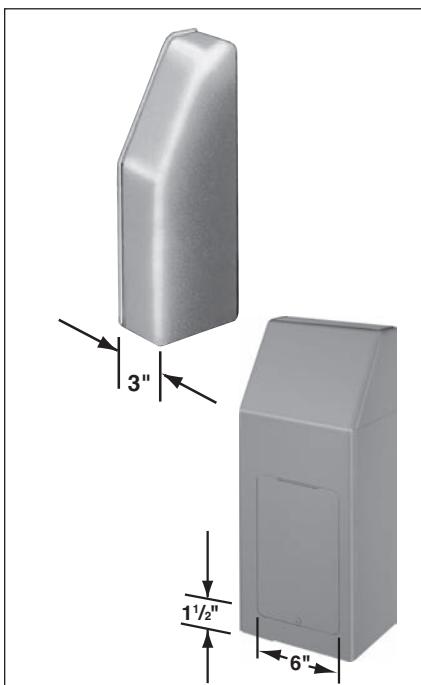


RETURN TO WALL, NO INLET LOUVERS
DRAFT BARRIER STYLE
RWDB

CAT-53178C

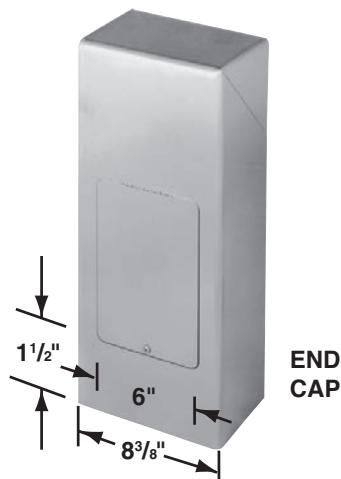
TO-FLOOR LOUVERED INLET STYLES





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.

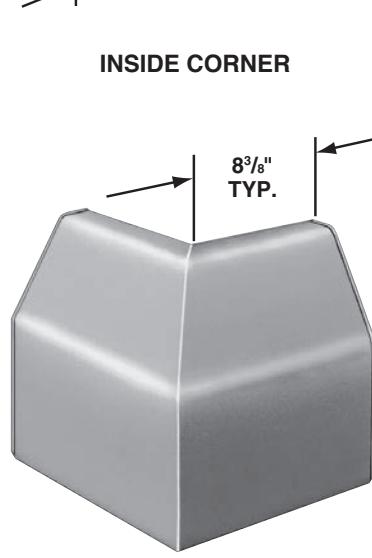
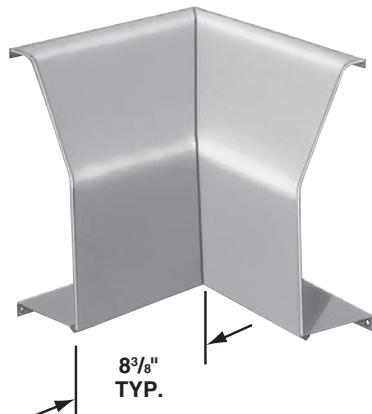
ACCESS DOOR LOCATIONS FLAT TOP END CAP & WALL SLEEVE		
ENCLOSURE OFFSET	ENCLOSURE HEIGHT	ACCESS DOOR SIZE
3 9/16	8", 11"	6" x 5"
3 9/16	14"	6" x 9"
4 3/8	14"	6" x 9"
5 5/16	14", 20", 24"	6" x 9"

CAT-68521-1E

ALTERNATE ACCESS DOOR LOCATIONS
ARE AVAILABLE, CONSULT FACTORY.

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"

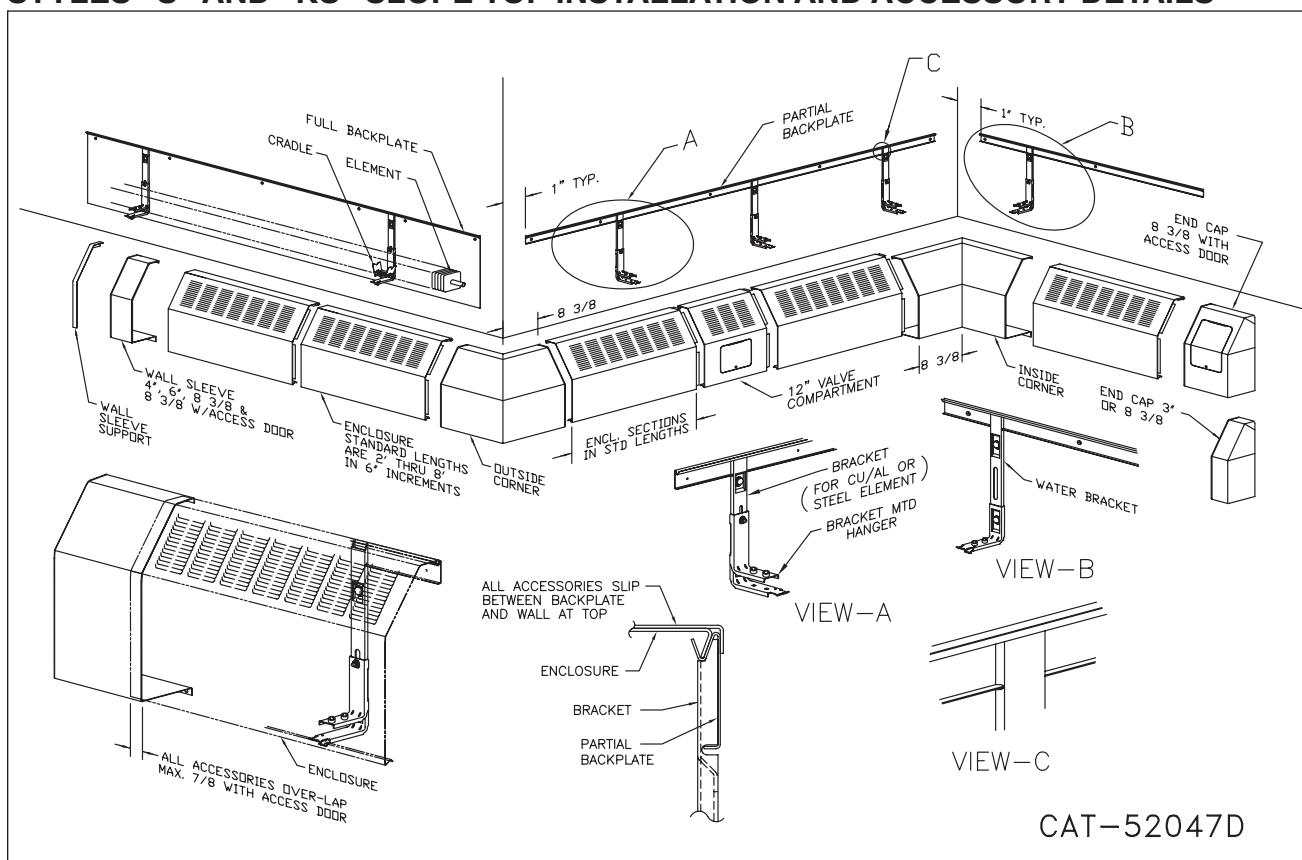
CAT-68521-4E



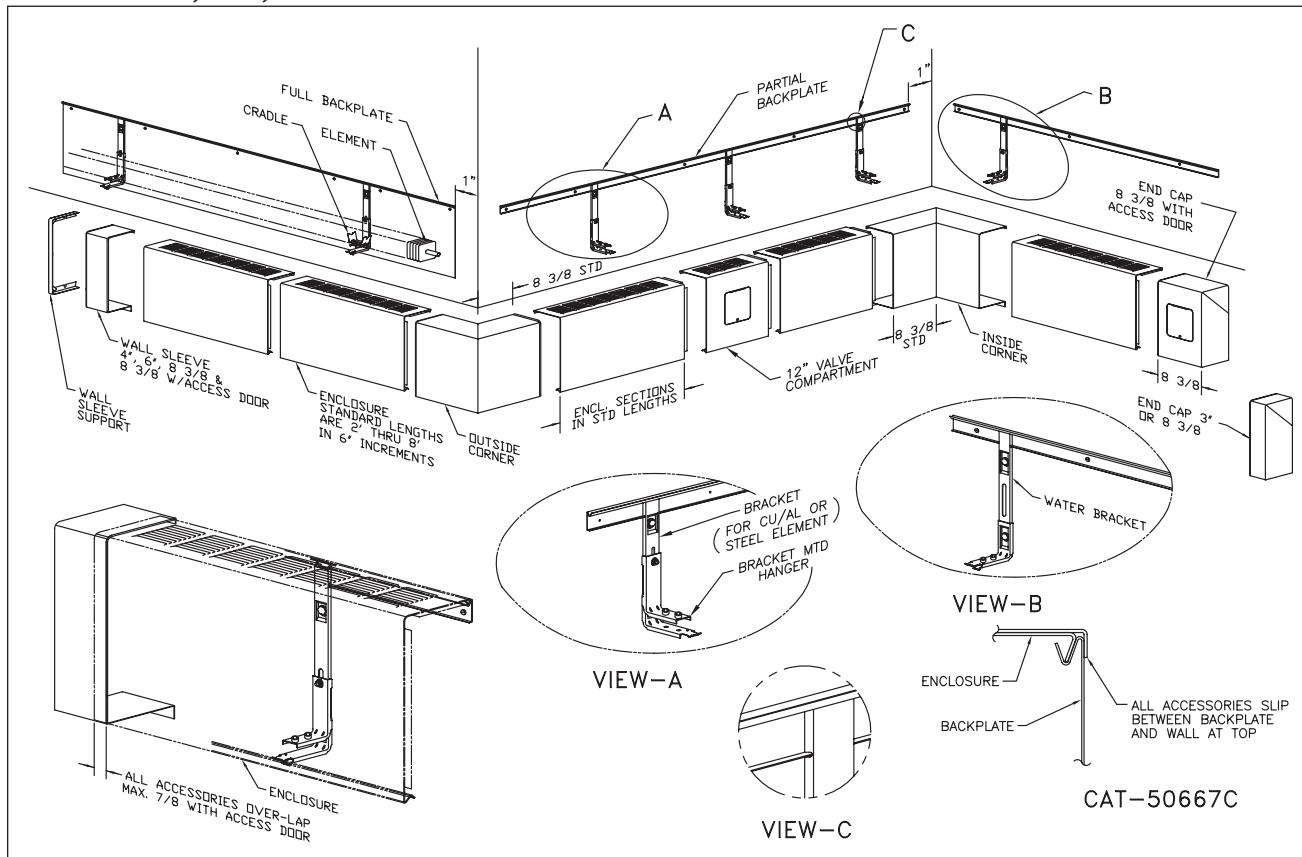
ACCESS DOOR LOCATIONS FLAT TOP VALVE COMPARTMENT		
ENCLOSURE OFFSET	ENCLOSURE HEIGHT	ACCESS DOOR SIZE
3 9/16	8", 11"	6" x 5"
3 9/16	14"	6" x 9"
4 3/8	14"	6" x 9"
5 5/16	14", 20", 24"	6" x 9"

CAT-68521-3E

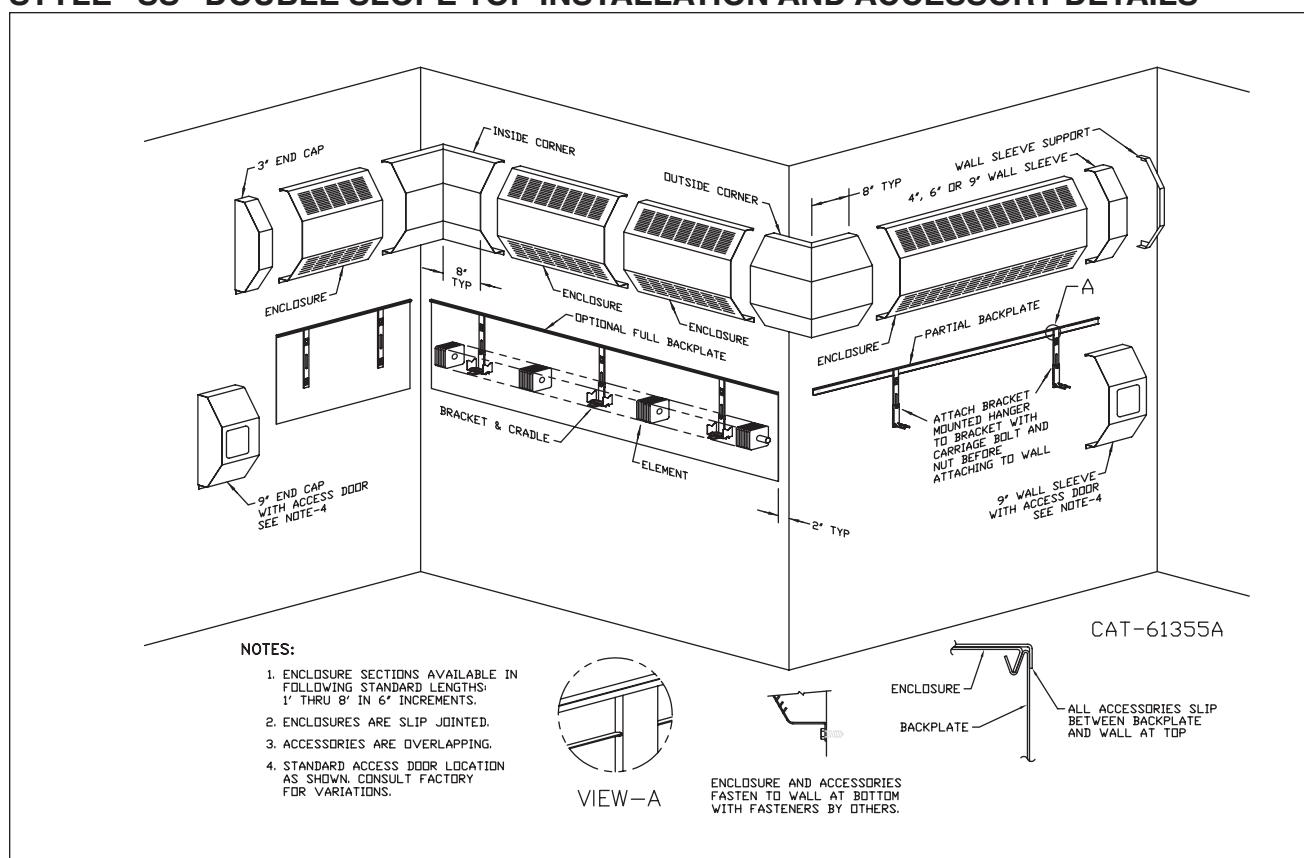
STYLES "S" AND "KS" SLOPE TOP INSTALLATION AND ACCESSORY DETAILS



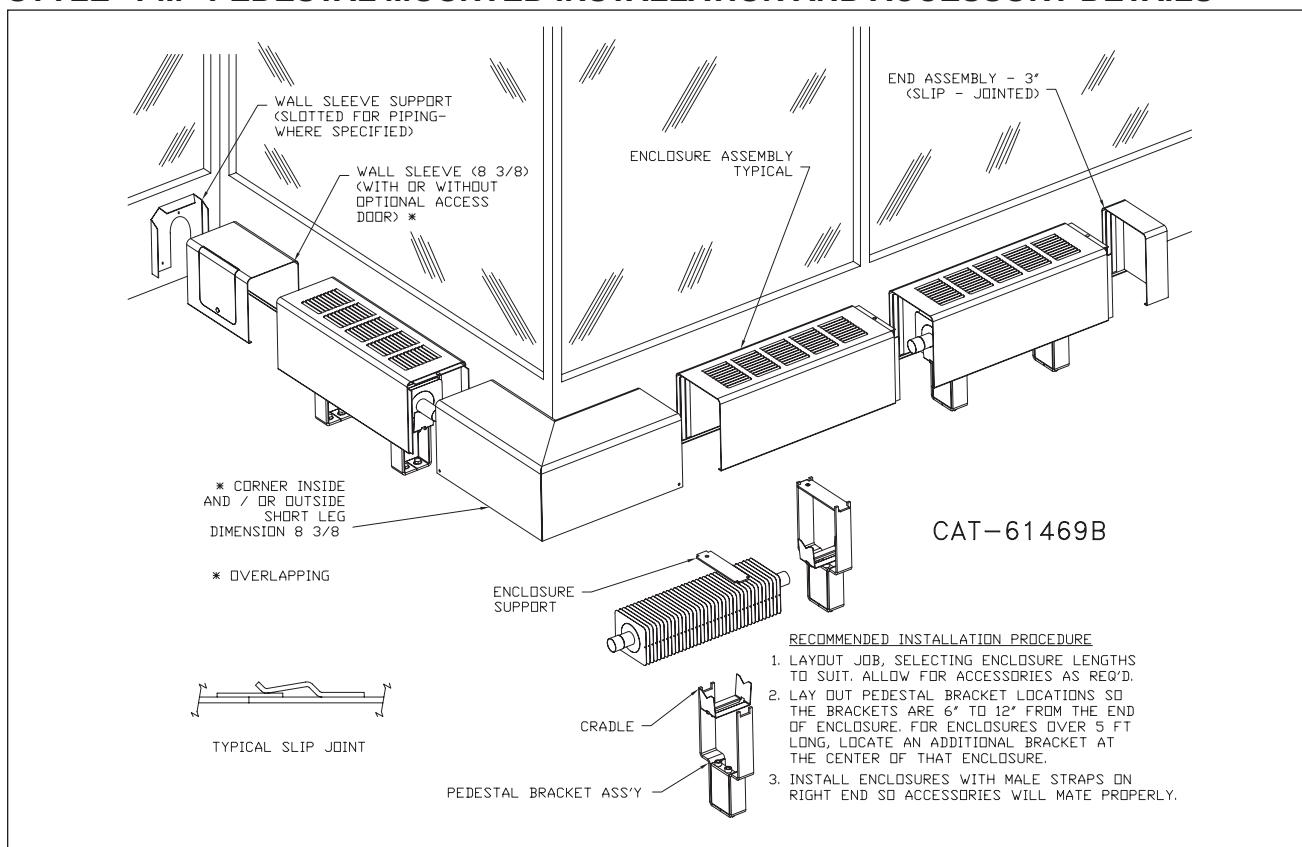
STYLES "F", "T", "FT" AND "KT" INSTALLATION AND ACCESSORY DETAILS



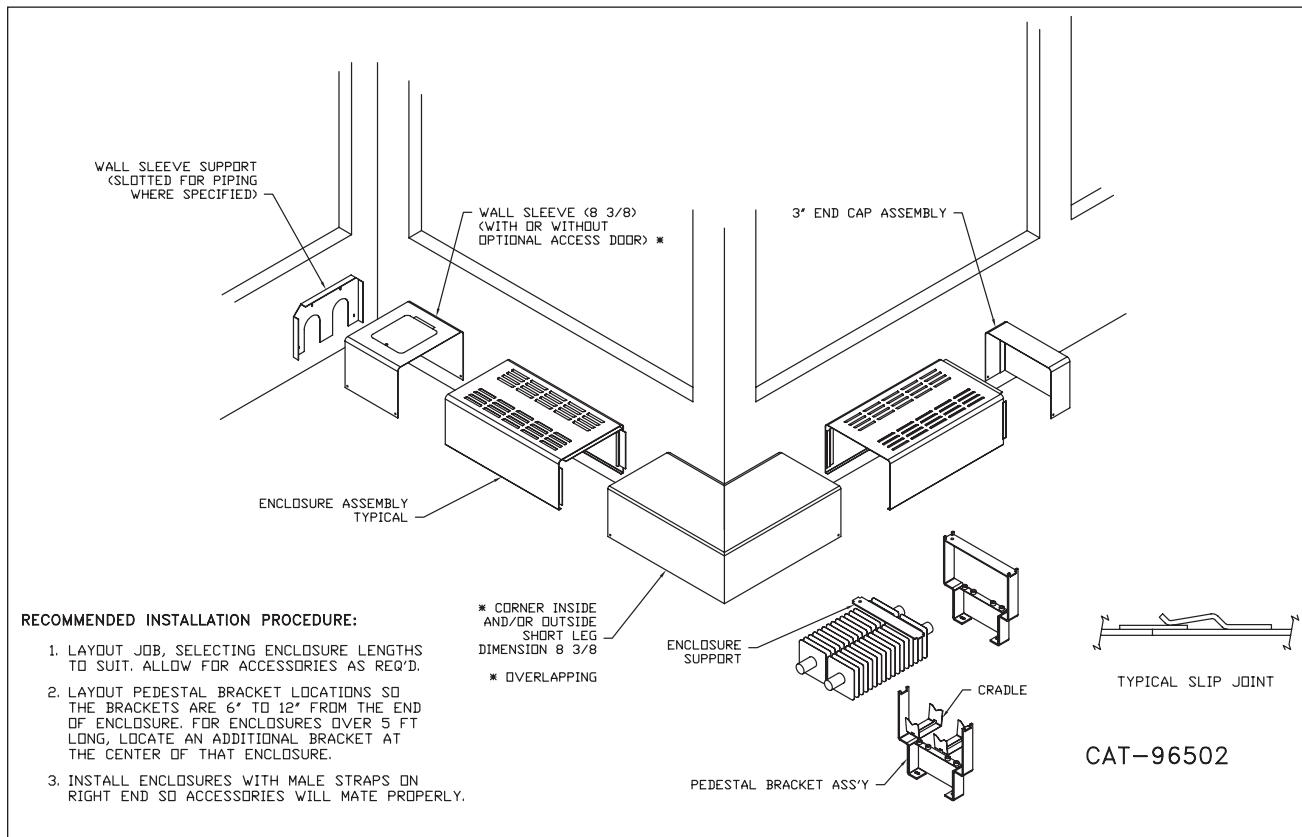
STYLE "SS" DOUBLE SLOPE TOP INSTALLATION AND ACCESSORY DETAILS



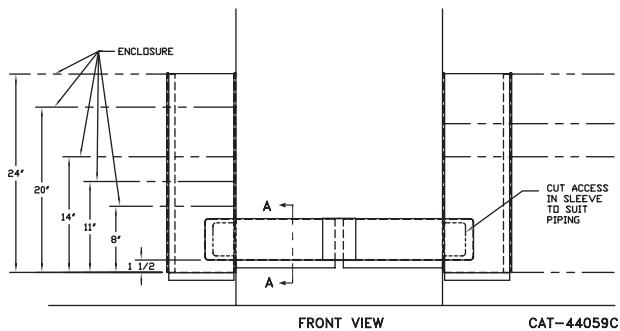
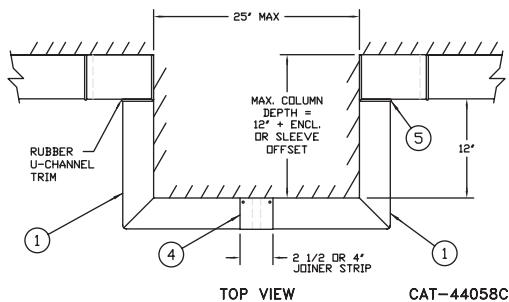
STYLE "PM" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS



STYLE "2PM" PEDESTAL MOUNTED INSTALLATION AND ACCESSORY DETAILS



COLUMN ENCLOSURES

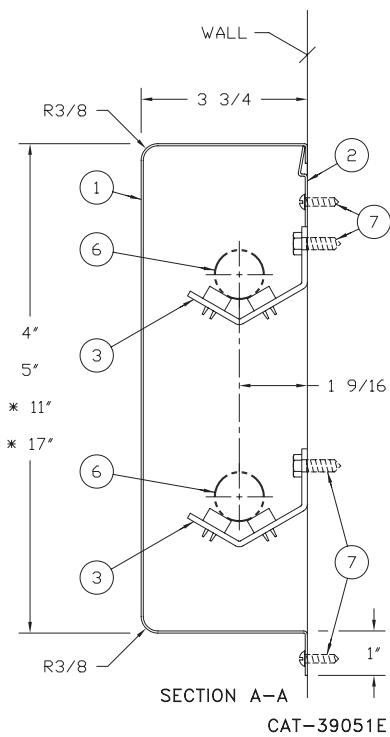


NOTE —
ALL PARTS SUPPLIED TO
MAXIMUM DIMENSIONS,
AS SHOWN TO BE CUT
ON THE JOB TO SUIT
INDIVIDUAL COLUMN SIZES.

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

FOR JV/S8 CALL FOR 4" HIGH

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



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.

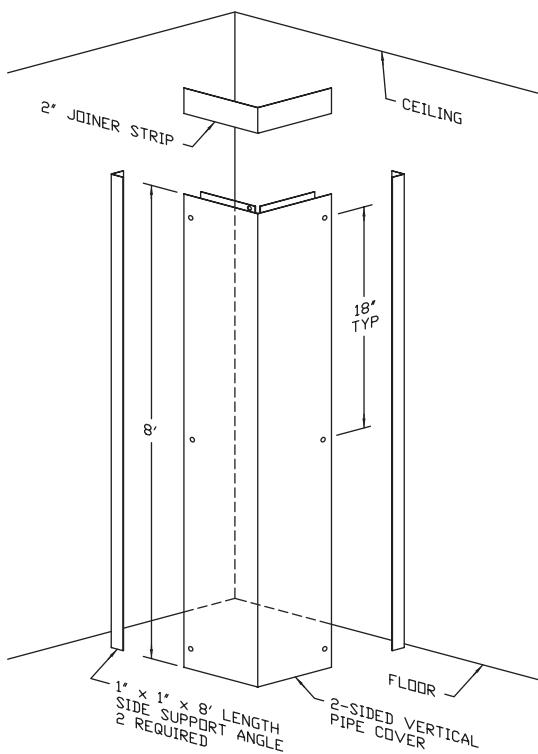
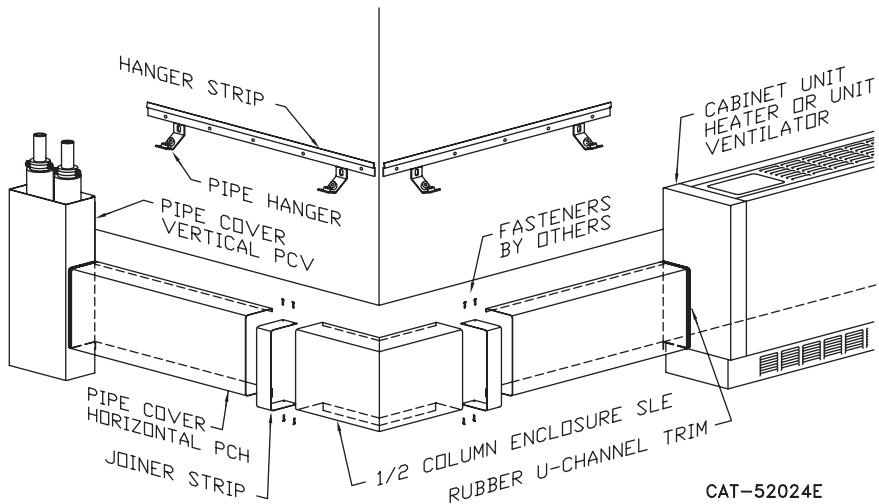


DETAILS AND DIMENSIONS

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 1/2" 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)

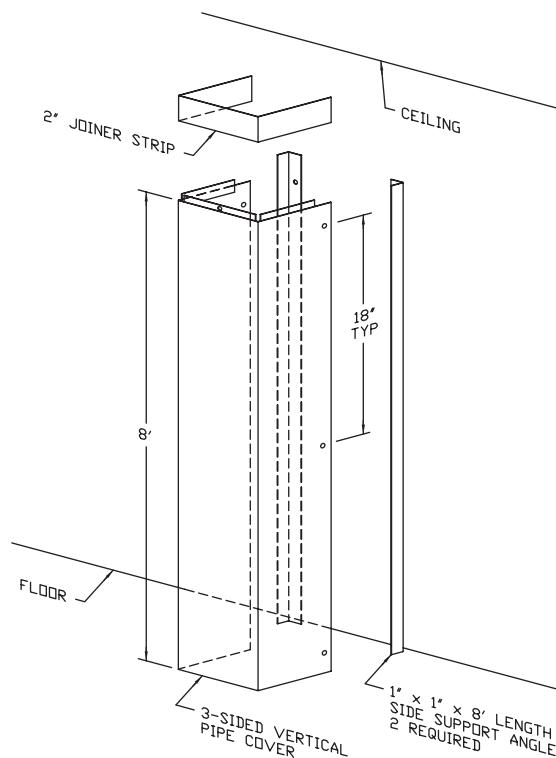


FASTENERS ARE BY OTHERS.

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

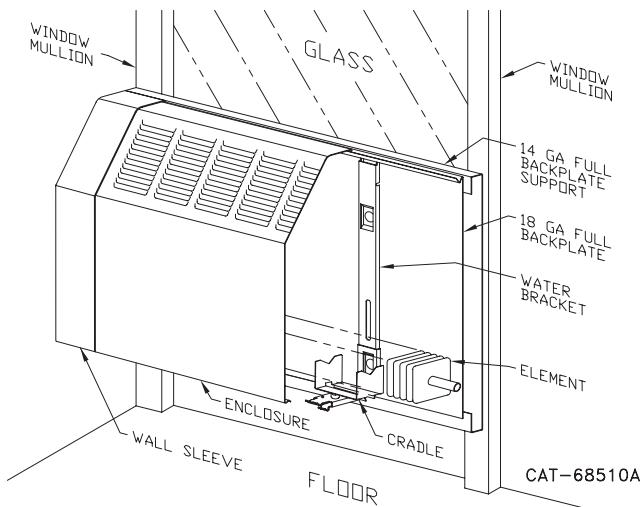


FASTENERS ARE BY OTHERS.

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

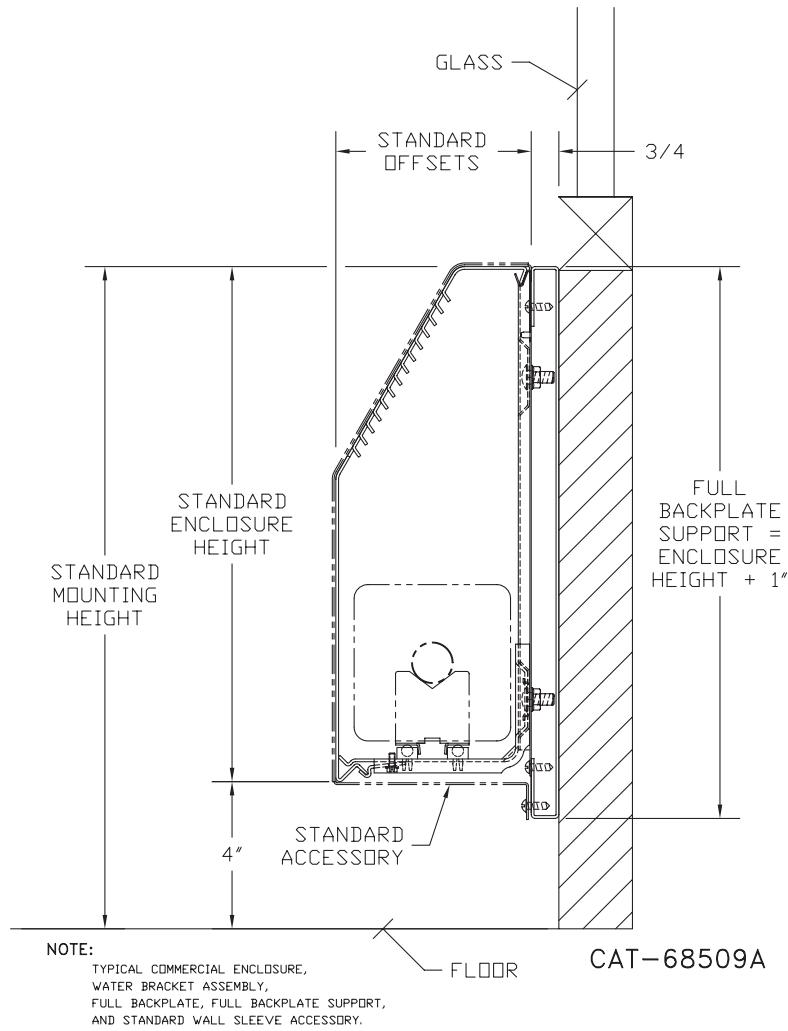


Versa-Line Radiation is easily adaptable to panel wall, curtain wall, and window wall construction.

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. (7½" 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

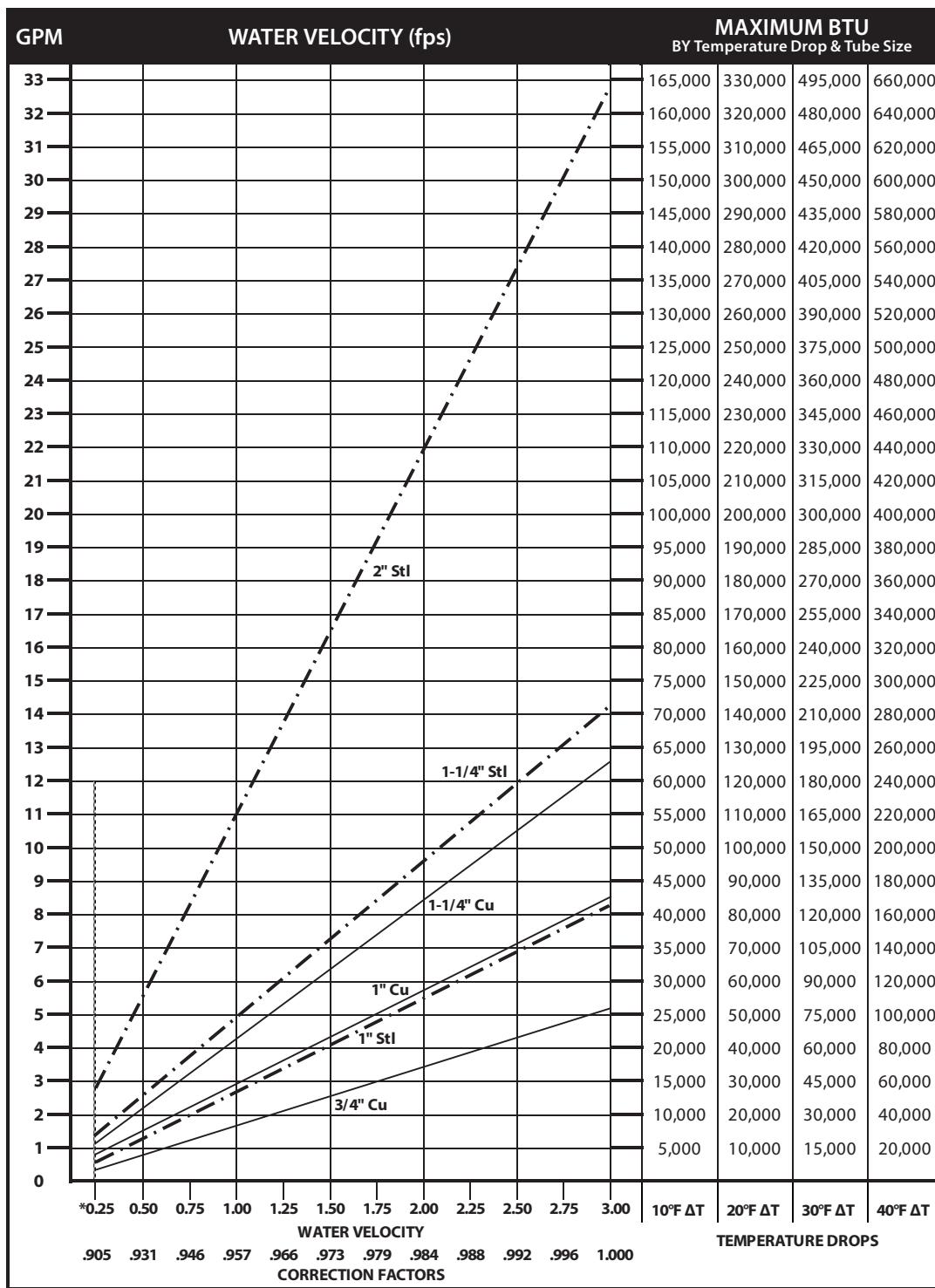
For assistance with ratings and selection, please use our online Specifier.

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

STEAM		ENTERING AIR TEMPERATURE °F													
PRESSURE GAUGE	TEMP. °F	45	55	STD 65	70	75	80	85	90	100	110	120	130	140	150
(VAC) 15"	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
HG	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
(VAC) 10"	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
(VAC) 5"															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
► .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	0.36
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	0.34
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
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
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	0.55
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
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
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
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
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
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	1.03
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
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
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
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
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
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
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

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

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



*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

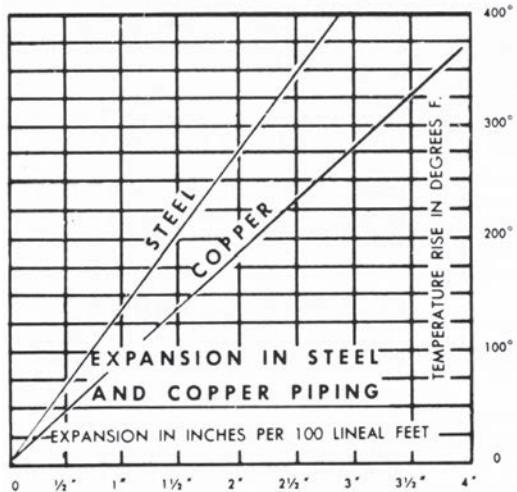
Nominal Pipe Size	Water Velocity (ft/sec)											
	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
3/4" Copper	0.06	0.20	0.42	0.72	1.09	1.53	2.04	2.61	3.25	3.95	4.71	5.53
1" Copper	0.04	0.15	0.32	0.54	0.81	1.14	1.52	1.94	2.42	2.94	3.50	4.11
1 1/4" Copper	0.03	0.12	0.25	0.43	0.64	0.90	1.20	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

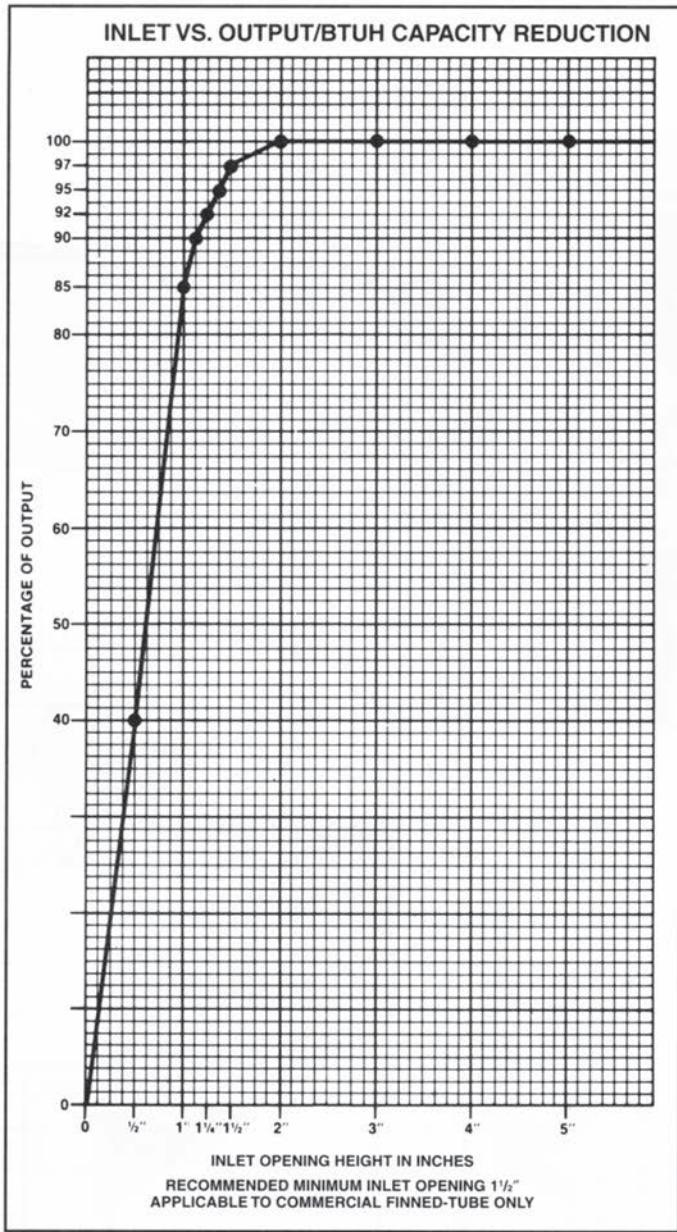
% Solution	Ethylene Glycol	Propylene Glycol
20	.952	.988
30	.921	.968
40	.888	.943
50	.852	.912

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

NOTES

VersaLine
by Sterling

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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