

# Rittling Regency Enclosures

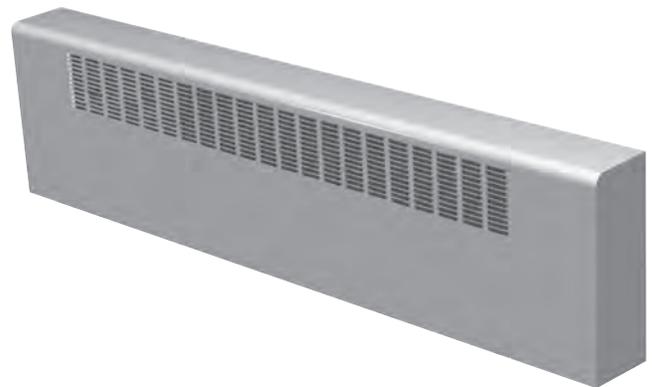
Submittal Data,  
English Language, IP Units

## Submittal data

Project
Job number
Architect
Engineer
Contractor

## Performance data: heating

Mean water temperature	°F
Design room temperature	°F
Heating capacity	BTU/hr ft



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**Revised May 2018.** Zehnder periodically makes changes to the design and/or specifications of its products. As a result, the design and specifications of each product at the time of order may be different than as described herein. Please contact Zehnder's Sales Support staff at 844-934-6337 for specific information on current design and specifications. Designs, specifications and other information contained herein are not express warranties, which are only as expressly set forth by Zehnder in its terms and conditions of sale. The latest version of this document is available at [www.zehnder-ritting.com](http://www.zehnder-ritting.com).

## Features, Regency, Front Grille

FF5/FF3

Provide heat through front panel louvers when installations require heated air to be diffused away from exterior walls.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Snap mounting channel
- Full back panel 20-gauge (18-gauge available) galvanized steel
- Urethane gasket for air seal available
- 4' or 8' lengths

### Hangers

- Self-gauging, snap fit, expansion bracket with positive-locking, bottom-mounting clip provides easy installation as well as security. (Not used with FFHL or FFVL)
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- Second row bracket, slip-in or wall mounted. Used for multiple tiers of element or with FFHL or FFVL enclosures for all rows
- Slip-in pipe hanger (FF) or wall pipe hanger (FFHL, FFVL) for use with bare tube supply and return pipes
- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners

### Damper (optional)

- Durable knob
- Security tamper proof available

### Optional Louvered Inlets

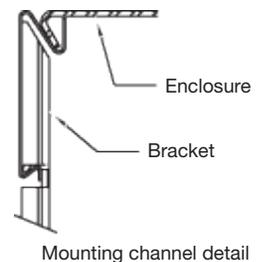
- Horizontal bottom inlet louvers (FFHL)
- Vertical louvered inlet (FFVL)

### Accessories

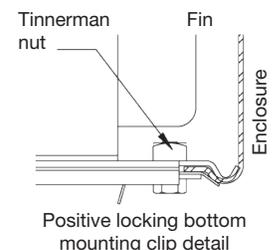
- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available



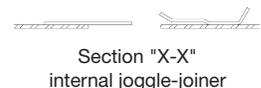
Cutaway view of FF5 enclosure showing 4 1/4" x 4 1/4" fin configuration.



Mounting channel detail



Positive locking bottom mounting clip detail



Section "X-X" internal joggle-joiner

## Features, Regency, Rounded Grille

FR5/FR3

When high heat output is demanded into room and along exterior walls. Appealing enclosure design allows heat to radiate through louvers rounded along top and front edge of cabinet.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Snap mounting channel
- Full back panel 20-gauge (18-gauge available) galvanized steel
- Urethane gasket for air seal available
- 4' or 8' lengths

### Hangers

- Self-gauging, snap fit, expansion bracket with positive-locking, bottom-mounting clip provides easy installation as well as security. (Not used with FRHL or FRVL)
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- Second row bracket, slip-in or wall mounted. Used for multiple tiers of element or with FRHL or FRVL enclosures for all rows
- Slip-in pipe hanger (FR) or wall pipe hanger (FRHL, FRVL) for use with bare tube supply and return pipes
- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners

### Damper (optional)

- Durable knob
- Security tamper proof available

### Optional Louvered Inlets

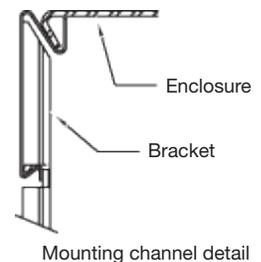
- Horizontal bottom inlet louvers (FRHL)
- Vertical louvered inlet (FRVL)

### Accessories

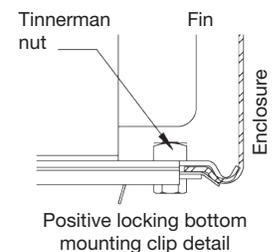
- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available



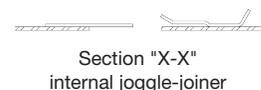
Cutaway view of FR5 enclosure showing 4 1/4" x 4 1/4" fin configuration.



Mounting channel detail



Positive locking bottom mounting clip detail



## Features, Regency, Top Grille

FT5/FT3

Provide an even blanket of heated air through top louvers and emit radiant heat off the front of the cabinet. Ideal for exposed walls and large window areas.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available
- FTR enclosure has a 90° brake in lieu of radiused brake

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Snap mounting channel
- Full back panel 20-gauge (18-gauge available) galvanized steel
- Urethane gasket for air seal available
- 4' or 8' lengths

### Hangers

- Self-gauging, snap fit, expansion bracket with positive-locking, bottom-mounting clip provides easy installation as well as security. (Not used with FTHL or FTVL)
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- Second row, slip-in or wall mounted bracket. Used for multiple tiers of element or with FTHL or FTVL enclosures for all rows
- Slip-in pipe hanger (FT) or wall pipe hanger (FTHL, FTVL) for use with bare tube supply and return pipes

- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners

### Damper (optional)

- Durable knob
- Security tamper proof available

### Optional Louvered Inlets:

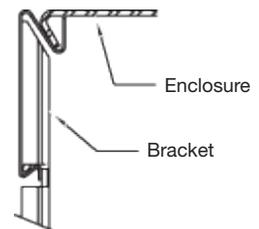
- Horizontal bottom inlet louvers (FTHL)
- Vertical louvered inlet (FTVL)
- No louvers (FTN)

### Accessories

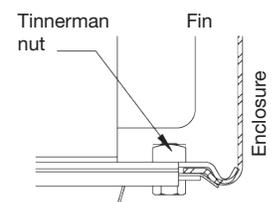
- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available



Cutaway view of FT5 enclosure showing 4 1/4" x 4 1/4" fin configuration.



Mounting channel detail



Positive locking bottom mounting clip detail



Section "X-X" internal joggle-joiner

## Features, Regency, Sloped Grille

**FS5/FS3**

Designed for high heat output through a sloped and louvered outlet. Recommended to prevent enclosure from being used as shelf or step.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Snap mounting channel
- Full back panel 20-gauge (18-gauge available) galvanized steel
- Urethane gasket for air seal available
- 4' or 8' lengths

### Hangers

- Self-gauging, snap fit, expansion bracket with positive-locking, bottom-mounting clip provides easy installation as well as security. (Not used with FSHL or FSVL)
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- Second row, slip-in or wall mounted bracket. Used for multiple tiers of element or with FSHL or FSVL enclosures for all rows
- Slip-in pipe hanger (FS) or wall pipe hanger (FSHL, FSVL) for use with bare tube supply and return pipes
- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners

### Damper (optional)

- Durable knob
- Security tamper proof available

### Optional Louvered Inlets

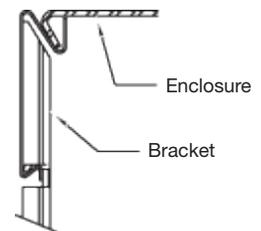
- Horizontal bottom inlet louvers (FSHL)
- Vertical louvered inlet (FSVL)
- No louvers (FSN)

### Accessories

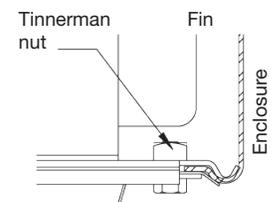
- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available



Cutaway view of FS5 enclosure showing 4 1/4" x 4 1/4" fin configuration.



Mounting channel detail



Positive locking bottom mounting clip detail



Section "X-X"  
internal joggle-joiner

## Features, Regency, Double Sloped Grille

**FSOS**

Double sloped panels provide required heat output when higher wall mounting is called for to restrict accessibility, such as in swimming pool areas and gymnasiums.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Snap mounting channel
- Full back panel 20-gauge (18-gauge available) galvanized steel
- Urethane gasket for air seal available
- 4' or 8' lengths

### Hangers

- Wall mounted slip-in second row brackets
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- Second row wall mounted bracket used for all tiers of element
- Wall pipe hanger for use with bare tube supply and return pipes
- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners

### Damper (optional)

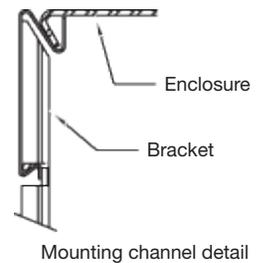
- Durable knob or security tamper proof available

### Accessories

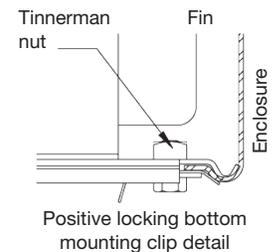
- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available



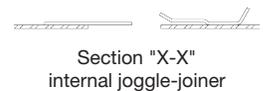
Cutaway view of FSOS enclosure showing 4 1/4" x 4 1/4" fin configuration.



Mounting channel detail



Positive locking bottom mounting clip detail



## Features, Regency, Pedestal

ETL

For use with one or two vertical rows or horizontal columns of finned tube mounted on floor pedestals.

The ETL enclosures have a open inlet with a top-louvered outlet. The brackets support the enclosure and provide expansion cradles for one or two horizontal columns or two rows of finned tube. All types of finned tube manufactured by Zehnder Rittling fit ETL enclosures.

### Enclosure

- 14, 16, 18-gauge primed, phosphatized CRS
- 1' to 8' lengths in 6" increments
- Powder coated finish in prime or standard decorator colors
- Stainless steel available

### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

### Mounting

- Pedestal brackets - 2 available style bases:
  - ◆ Adjustable U (standard) 4" +5/8" / -13/16"
  - ◆ Aluminum floor flange (optional) not available on 2 column
- Enclosure mounts to a cradle-type expansion bracket with positive locking bottom mounting clip to provide easy installation and security

### Hangers

- Bare tube support available for use with ETL5 8" high enclosure
- Slide cradle will accommodate 1-3/4 inch linear expansion for quiet operation
- See charts on pages 81-83 for available combinations

### Joints

- Internal joggle joiners provide hairline joints without any external fasteners
- Trims not required at joints

### Accessories

- Standard accessories are 18-gauge
- Overlap for telescoping fit
- Optional butt fit available

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3¼ X 3¼-32</b>	1	14	18	3.90	<b>940</b>	730	650	570	500
		1	20	24	4.00	<b>960</b>	750	660	590	510
		2	20	24	6.10	<b>1460</b>	1140	1010	890	770
		1	24	28	4.20	<b>1010</b>	790	700	620	540
		2	24	28	6.40	<b>1540</b>	1200	1060	940	820
		3	24	28	7.40	<b>1780</b>	1390	1230	1090	940
	<b>1S-3¼ X 3¼-40</b>	1	14	18	4.40	<b>1060</b>	830	730	650	560
		1	20	24	4.70	<b>1130</b>	880	780	690	600
		2	20	24	6.70	<b>1610</b>	1260	1110	980	850
		1	24	28	4.90	<b>1180</b>	920	810	720	630
		2	24	28	7.00	<b>1680</b>	1310	1160	1020	890
		3	24	28	8.10	<b>1940</b>	1510	1340	1180	1030
	<b>1S-3¼ X 3¼-48</b>	1	14	18	4.90	<b>1180</b>	920	810	720	630
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.40	<b>1780</b>	1390	1230	1090	940
		1	24	28	5.70	<b>1370</b>	1070	950	840	730
		2	24	28	7.60	<b>1820</b>	1420	1260	1110	960
		3	24	28	8.70	<b>2090</b>	1630	1440	1270	1110
<b>1" Dia. steel</b>	<b>1S-4¼ X 4¼-32</b>	1	14	18	5.70	<b>1370</b>	1070	950	840	730
		1	20	24	5.90	<b>1420</b>	1110	980	870	750
		2	20	24	8.80	<b>2110</b>	1650	1460	1290	1120
		1	24	28	6.10	<b>1460</b>	1140	1010	890	770
		2	24	28	9.20	<b>2210</b>	1720	1520	1350	1170
		3	24	28	10.60	<b>2540</b>	1980	1750	1550	1350
	<b>1S-4¼ X 4¼-40</b>	1	14	18	6.40	<b>1540</b>	1200	1060	940	820
		1	20	24	6.90	<b>1660</b>	1290	1150	1010	880
		2	20	24	9.70	<b>2330</b>	1820	1610	1420	1230
		1	24	28	7.10	<b>1700</b>	1330	1170	1040	900
		2	24	28	10.10	<b>2420</b>	1890	1670	1480	1280
		3	24	28	11.60	<b>2780</b>	2170	1920	1700	1470
	<b>1S-4¼ X 4¼-48</b>	1	14	18	7.20	<b>1730</b>	1350	1190	1060	920
		1	20	24	8.00	<b>1920</b>	1500	1320	1170	1020
		2	20	24	10.70	<b>2570</b>	2000	1770	1570	1360
		1	24	28	8.20	<b>1970</b>	1540	1360	1200	1040
		2	24	28	11.10	<b>2660</b>	2070	1840	1620	1410
		3	24	28	12.80	<b>3070</b>	2390	2120	1870	1630

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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English, IP Units

General data

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Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	14	18	3.80	<b>900</b>	700	620	550	480
		1	20	24	3.90	<b>940</b>	730	650	570	500
		2	20	24	6.00	<b>1440</b>	1120	990	880	760
		1	24	28	4.10	<b>980</b>	760	680	600	520
		2	24	28	6.30	<b>1510</b>	1180	1040	920	800
		3	24	28	7.30	<b>1750</b>	1370	1210	1070	930
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	14	18	4.30	<b>1030</b>	800	710	630	550
		1	20	24	4.60	<b>1100</b>	860	760	670	580
		2	20	24	6.60	<b>1580</b>	1230	1090	960	840
		1	24	28	4.80	<b>1150</b>	900	790	700	610
		2	24	28	6.90	<b>1660</b>	1290	1150	1010	880
		3	24	28	8.00	<b>1930</b>	1510	1330	1180	1020
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	14	18	4.80	<b>1150</b>	900	790	700	610
		1	20	24	5.40	<b>1300</b>	1010	900	790	690
		2	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		1	24	28	5.60	<b>1340</b>	1050	920	820	710
		2	24	28	7.50	<b>1800</b>	1400	1240	1100	950
		3	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	14	18	5.60	<b>1340</b>	1050	920	820	710
		1	20	24	5.80	<b>1390</b>	1080	960	850	740
		2	20	24	8.70	<b>2090</b>	1630	1440	1270	1110
		1	24	28	6.00	<b>1440</b>	1120	990	880	760
		2	24	28	9.10	<b>2180</b>	1700	1500	1330	1160
		3	24	28	10.50	<b>2520</b>	1970	1740	1540	1340
	<b>1 1/4S-4 1/4 X 4 1/4-40</b>	1	14	18	6.30	<b>1510</b>	1180	1040	920	800
		1	20	24	6.80	<b>1630</b>	1270	1120	990	860
		2	20	24	9.60	<b>2300</b>	1790	1590	1400	1220
		1	24	28	7.00	<b>1680</b>	1310	1160	1020	890
		2	24	28	10.00	<b>2400</b>	1870	1660	1460	1270
		3	24	28	11.50	<b>2760</b>	2150	1900	1680	1460
	<b>1 1/4S-4 1/4 X 4 1/4-48</b>	1	14	18	7.10	<b>1700</b>	1330	1170	1040	900
		1	20	24	7.90	<b>1900</b>	1480	1310	1160	1010
		2	20	24	10.60	<b>2540</b>	1980	1750	1550	1350
		1	24	28	8.10	<b>1940</b>	1510	1340	1180	1030
		2	24	28	11.00	<b>2640</b>	2060	1820	1610	1400
		3	24	28	12.70	<b>3050</b>	2380	2100	1860	1620

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
2" Dia. steel	2S-4¼ X 4¼-32	1	14	18	5.50	1320	1030	910	810	700
		1	20	24	5.70	1370	1070	950	840	730
		2	20	24	8.60	2060	1610	1420	1260	1090
		1	24	28	5.90	1420	1110	980	870	750
		2	24	28	9.00	2160	1680	1490	1320	1140
		3	24	28	10.40	2500	1950	1730	1530	1330
	2S-4¼ X 4¼-40	1	14	18	6.20	1490	1160	1030	910	790
		1	20	24	6.70	1610	1260	1110	980	850
		2	20	24	9.50	2290	1790	1580	1400	1210
		1	24	28	6.90	1660	1290	1150	1010	880
		2	24	28	9.90	2380	1860	1640	1450	1260
		3	24	28	11.40	2780	2170	1920	1700	1470
	2S-4¼ X 4¼-48	1	14	18	7.00	1680	1310	1160	1020	890
		1	20	24	7.80	1880	1470	1300	1150	1000
		2	20	24	10.50	2520	1970	1740	1540	1340
		1	24	28	8.00	1920	1500	1320	1170	1020
		2	24	28	10.90	2620	2040	1810	1600	1390
		3	24	28	12.50	3000	2340	2070	1830	1590

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>3/4C-2 3/4 X 4 -32</b>	1	14	18	4.43	<b>1063</b>	829	733	648	563
		1	20	24	4.68	<b>1122</b>	875	774	684	595
		2	20	24	6.93	<b>1663</b>	1297	1148	1015	881
		1	24	28	4.90	<b>1175</b>	916	811	717	623
		2	24	28	7.65	<b>1835</b>	1431	1266	1119	972
		3	24	28	8.77	<b>2105</b>	1642	1453	1284	1116
	<b>3/4C-2 3/4 X 4 -40</b>	1	14	18	5.14	<b>1234</b>	963	852	753	654
		1	20	24	5.61	<b>1346</b>	1050	929	821	714
		2	20	24	7.56	<b>1815</b>	1416	1252	1107	962
		1	24	28	5.89	<b>1412</b>	1102	975	862	749
		2	24	28	8.22	<b>1973</b>	1539	1362	1204	1046
		3	24	28	9.43	<b>2264</b>	1766	1562	1381	1200
	<b>3/4C-2 3/4 X 4 -48</b>	1	14	18	5.56	<b>1333</b>	1040	920	813	707
		1	20	24	6.41	<b>1538</b>	1199	1061	938	815
		2	20	24	8.91	<b>2138</b>	1668	1475	1304	1133
		1	24	28	6.88	<b>1650</b>	1287	1139	1007	875
		2	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
		3	24	28	10.62	<b>2548</b>	1987	1758	1554	1350
<b>3/4" Dia. copper</b>	<b>3/4C-3 1/4 X 3 1/4 -32</b>	1	14	18	5.10	<b>1220</b>	950	840	740	650
		1	20	24	5.60	<b>1340</b>	1050	920	820	710
		2	20	24	7.40	<b>1480</b>	1150	1020	900	780
		1	24	28	5.90	<b>1420</b>	1110	980	870	750
		2	24	28	8.20	<b>1970</b>	1540	1360	1200	1040
		3	24	28	9.40	<b>2260</b>	1760	1560	1380	1200
	<b>3/4C-3 1/4 X 3 1/4 -40</b>	1	14	18	5.70	<b>1370</b>	1070	950	840	730
		1	20	24	6.30	<b>1510</b>	1180	1040	920	800
		2	20	24	7.70	<b>1850</b>	1440	1280	1130	980
		1	24	28	6.70	<b>1610</b>	1260	1110	980	850
		2	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		3	24	28	9.90	<b>2380</b>	1860	1640	1450	1260
	<b>3/4C-3 1/4 X 3 1/4 -48</b>	1	14	18	6.20	<b>1490</b>	1160	1030	910	790
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	8.10	<b>1940</b>	1510	1340	1180	1030
		1	24	28	7.60	<b>1820</b>	1420	1260	1110	960
		2	24	28	9.00	<b>2160</b>	1680	1490	1320	1140
		3	24	28	10.40	<b>2500</b>	1950	1730	1530	1330

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>¾" Dia. copper</b>	<b>¾C-4¼ X 4¼-32</b>	1	14	18	6.70	<b>1610</b>	1260	1110	980	850
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	10.50	<b>2520</b>	1970	1740	1540	1340
		1	24	28	7.40	<b>1780</b>	1390	1230	1090	940
		2	24	28	11.60	<b>2780</b>	2170	1920	1700	1470
		3	24	28	13.30	<b>3190</b>	2490	2200	1950	1690
	<b>¾C-4¼ X 4¼-40</b>	1	14	18	7.80	<b>1870</b>	1460	1290	1140	990
		1	20	24	8.50	<b>2040</b>	1590	1410	1240	1080
		2	20	24	11.50	<b>2750</b>	2150	1900	1680	1460
		1	24	28	8.90	<b>2140</b>	1670	1480	1310	1130
		2	24	28	12.50	<b>2990</b>	2330	2060	1820	1580
		3	24	28	14.30	<b>3430</b>	2680	2370	2090	1820
	<b>¾C-4¼ X 4¼-48</b>	1	14	18	8.40	<b>2020</b>	1580	1390	1230	1070
		1	20	24	9.70	<b>2330</b>	1820	1610	1420	1230
		2	20	24	13.50	<b>3240</b>	2530	2240	1980	1720
		1	24	28	10.40	<b>2500</b>	1950	1730	1530	1330
		2	24	28	14.40	<b>3460</b>	2700	2390	2110	1830
		3	24	28	16.10	<b>3860</b>	3010	2660	2350	2050
<b>1" Dia. copper</b>	<b>1C-2¾ X 4-32</b>	1	14	18	4.35	<b>1043</b>	813	720	636	553
		1	20	24	4.62	<b>1109</b>	865	765	676	588
		2	20	24	6.79	<b>1630</b>	1272	1125	994	864
		1	24	28	4.81	<b>1155</b>	901	797	705	612
		2	24	28	7.54	<b>1808</b>	1411	1248	1103	958
		3	24	28	8.64	<b>2072</b>	1616	1430	1264	1098
	<b>1C-2¾ X 4-40</b>	1	14	18	5.09	<b>1221</b>	952	842	745	647
		1	20	24	5.56	<b>1333</b>	1040	920	813	707
		2	20	24	7.45	<b>1789</b>	1395	1234	1091	948
		1	24	28	5.80	<b>1393</b>	1086	961	849	738
		2	24	28	8.11	<b>1947</b>	1519	1343	1188	1032
		3	24	28	9.30	<b>2231</b>	1740	1539	1361	1182
	<b>1C-2¾ X 4-48</b>	1	14	18	5.47	<b>1313</b>	1024	906	801	696
		1	20	24	6.27	<b>1505</b>	1174	1038	918	798
		2	20	24	8.72	<b>2092</b>	1632	1444	1276	1109
		1	24	28	6.74	<b>1617</b>	1261	1116	986	857
		2	24	28	9.38	<b>2251</b>	1755	1553	1373	1193
		3	24	28	10.42	<b>2501</b>	1951	1726	1526	1326

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1" Dia. copper</b>	<b>1C-3¼ X 3¼-32</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	8.10	<b>1940</b>	1510	1340	1180	1030
		3	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
	<b>1C-3¼ X 3¼-40</b>	1	14	18	5.60	<b>1340</b>	1050	920	820	710
		1	20	24	6.20	<b>1490</b>	1160	1030	910	790
		2	20	24	7.60	<b>1820</b>	1420	1260	1110	960
		1	24	28	6.60	<b>1580</b>	1230	1090	960	840
		2	24	28	8.50	<b>2040</b>	1590	1410	1240	1080
		3	24	28	9.80	<b>2350</b>	1830	1620	1430	1250
	<b>1C-3¼ X 3¼-48</b>	1	14	18	6.10	<b>1460</b>	1140	1010	890	770
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	8.00	<b>1920</b>	1500	1320	1170	1020
		1	24	28	7.50	<b>1800</b>	1400	1240	1100	950
		2	24	28	8.90	<b>2140</b>	1670	1480	1310	1130
		3	24	28	10.20	<b>2450</b>	1910	1690	1490	1300
<b>1" Dia. Copper</b>	<b>1C-4¼ X 4¼ -32</b>	1	14	18	6.60	<b>1580</b>	1230	1090	960	840
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	10.30	<b>2470</b>	1930	1700	1510	1310
		1	24	28	7.30	<b>1750</b>	1370	1210	1070	930
		2	24	28	11.40	<b>2740</b>	2140	1890	1670	1450
		3	24	28	13.10	<b>3140</b>	2450	2170	1920	1660
	<b>1C-4¼ X 4¼-40</b>	1	14	18	7.70	<b>1850</b>	1440	1280	1130	980
		1	20	24	8.40	<b>2020</b>	1580	1390	1230	1070
		2	20	24	11.30	<b>2710</b>	2110	1870	1650	1440
		1	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
		2	24	28	12.30	<b>2950</b>	2300	2040	1800	1560
		3	24	28	14.10	<b>3380</b>	2640	2330	2060	1790
	<b>1C-4¼ X 4¼-48</b>	1	14	18	8.30	<b>1990</b>	1550	1370	1210	1050
		1	20	24	9.50	<b>2280</b>	1780	1570	1390	1210
		2	20	24	13.20	<b>3170</b>	2470	2190	1930	1680
		1	24	28	10.20	<b>2450</b>	1910	1690	1490	1300
		2	24	28	14.20	<b>3410</b>	2660	2350	2080	1810
		3	24	28	15.80	<b>3790</b>	2960	2620	2310	2010

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1/4" Dia. copper</b>	<b>1 1/4C-2 3/4 X 4-32</b>	1	14	18	4.29	<b>1030</b>	803	710	628	546
		1	20	24	4.57	<b>1096</b>	855	756	668	581
		2	20	24	6.66	<b>1597</b>	1246	1102	974	847
		1	24	28	4.76	<b>1142</b>	891	788	696	605
		2	24	28	7.40	<b>1775</b>	1385	1225	1083	941
		3	24	28	8.44	<b>2026</b>	1580	1398	1236	1074
	<b>1 1/4C-2 3/4 X 4-40</b>	1	14	18	5.01	<b>1201</b>	937	829	733	637
		1	20	24	5.42	<b>1300</b>	1014	897	793	689
		2	20	24	7.26	<b>1742</b>	1359	1202	1063	923
		1	24	28	5.67	<b>1360</b>	1060	938	829	721
		2	24	28	7.92	<b>1901</b>	1483	1312	1159	1007
		3	24	28	9.10	<b>2185</b>	1704	1507	1333	1158
	<b>1 1/4C-2 3/4 X 4-48</b>	1	14	18	5.34	<b>1280</b>	999	883	781	679
		1	20	24	6.13	<b>1472</b>	1148	1016	898	780
		2	20	24	8.53	<b>2046</b>	1596	1412	1248	1084
		1	24	28	6.60	<b>1584</b>	1236	1093	966	840
		2	24	28	9.19	<b>2204</b>	1719	1521	1345	1168
		3	24	28	10.23	<b>2455</b>	1915	1694	1498	1301
<b>1/4" Dia. copper</b>	<b>1 1/4C-3 1/4 X 3 1/4-32</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	8.00	<b>1920</b>	1500	1320	1170	1020
		3	24	28	9.20	<b>2210</b>	1720	1520	1350	1170
	<b>1 1/4C-3 1/4 X 3 1/4-40</b>	1	14	18	5.60	<b>1340</b>	1050	920	870	710
		1	20	24	6.20	<b>1490</b>	1160	1030	910	790
		2	20	24	7.60	<b>1820</b>	1420	1260	1110	960
		1	24	28	6.60	<b>1580</b>	1230	1090	960	840
		2	24	28	8.40	<b>2020</b>	1580	1390	1230	1070
		3	24	28	9.70	<b>2330</b>	1820	1610	1420	1230
	<b>1 1/4C-3 1/4 X 3 1/4-48</b>	1	14	18	6.10	<b>1460</b>	1140	1010	890	770
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	8.00	<b>1920</b>	1500	1320	1170	1020
		1	24	28	7.40	<b>1780</b>	1390	1230	1090	940
		2	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
		3	24	28	10.20	<b>2450</b>	1910	1690	1490	1300

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF5; standard flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1 1/4" Dia. Copper</b>	<b>1 1/4C-4 1/4 X 4 1/4-32</b>	1	14	18	6.50	<b>1560</b>	1220	1080	950	830
		1	20	24	6.90	<b>1660</b>	1290	1150	1010	880
		2	20	24	10.10	<b>2420</b>	1890	1670	1480	1280
		1	24	28	7.20	<b>1730</b>	1350	1190	1060	920
		2	24	28	11.20	<b>2690</b>	2100	1860	1640	1430
		3	24	28	12.80	<b>3070</b>	2400	2120	1870	1630
	<b>1 1/4C-4 1/4 X 4 1/4-40</b>	1	14	18	7.60	<b>1820</b>	1420	1260	1110	960
		1	20	24	8.20	<b>1970</b>	1540	1360	1200	1040
		2	20	24	11.00	<b>2640</b>	2060	1820	1610	1400
		1	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		2	24	28	12.00	<b>2880</b>	2250	1990	1760	1530
		3	24	28	13.80	<b>3310</b>	2580	2280	2020	1750
	<b>1 1/4C-4 1/4 X 4 1/4-48</b>	1	14	18	8.10	<b>1940</b>	1510	1340	1180	1030
		1	20	24	9.30	<b>2230</b>	1740	1540	1360	1180
		2	20	24	12.90	<b>3100</b>	2420	2140	1890	1640
		1	24	28	10.00	<b>2400</b>	1870	1660	1460	1270
		2	24	28	13.90	<b>3340</b>	2610	2300	2040	1770
		3	24	28	15.50	<b>3720</b>	2900	2570	2270	1970

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL5 and FFVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF3; low profile, flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
1" Dia. steel	1S-3¼ X 3¼-32	1	8	12	3.12	<b>750</b>	590	520	460	400
		1	11	15	3.30	<b>790</b>	620	550	480	420
		1	14	18	3.40	<b>820</b>	640	570	500	430
		2	14	18	4.70	<b>1130</b>	880	780	690	600
	1S-3¼ X 3¼-40	1	8	12	3.40	<b>820</b>	640	570	500	430
		1	11	15	3.80	<b>910</b>	710	630	560	480
		1	14	18	3.90	<b>940</b>	730	650	570	500
		2	14	18	5.30	<b>1270</b>	990	880	770	670
	1S-3¼ X 3¼-48	1	8	12	3.90	<b>940</b>	730	650	570	500
		1	11	15	4.20	<b>1010</b>	790	700	620	540
		1	14	18	4.40	<b>1060</b>	830	730	650	560
		2	14	18	6.00	<b>1440</b>	1120	990	880	760
1¼" Dia. steel	1¼S-3¼ X 3¼-32	1	8	12	3.00	<b>720</b>	560	500	440	380
		1	11	15	3.20	<b>770</b>	600	530	470	410
		1	14	18	3.30	<b>790</b>	620	550	480	420
		2	14	18	4.60	<b>1100</b>	860	760	670	580
	1¼S-3¼ X 3¼-40	1	8	12	3.30	<b>790</b>	620	550	480	420
		1	11	15	3.70	<b>890</b>	690	610	540	470
		1	14	18	3.80	<b>910</b>	710	630	560	480
		2	14	18	5.20	<b>1250</b>	980	860	760	660
	1¼S-3¼ X 3¼-48	1	8	12	3.80	<b>910</b>	710	630	560	480
		1	11	15	4.10	<b>980</b>	760	680	600	520
		1	14	18	4.30	<b>1030</b>	800	710	630	550
		2	14	18	5.90	<b>1420</b>	1110	980	870	750

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Performance Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL3 and FFVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF3; low profile, flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>3/4C-23/4 X 4-32</b>	1	8	12	4.20	<b>1010</b>	790	700	620	540
		1	11	15	4.50	<b>1080</b>	840	750	660	570
		1	14	18	4.80	<b>1150</b>	900	790	700	610
		2	14	18	6.60	<b>1580</b>	1230	1090	960	840
	<b>3/4C-23/4 X 4-40</b>	1	8	12	4.60	<b>1110</b>	860	760	670	580
		1	11	15	5.00	<b>1200</b>	940	830	730	640
		1	14	18	5.30	<b>1270</b>	990	880	770	670
		2	14	18	7.30	<b>1750</b>	1370	1210	1070	930
	<b>3/4C-23/4 X 4-48</b>	1	8	12	5.00	<b>1200</b>	940	830	730	640
		1	11	15	5.50	<b>1320</b>	1030	910	810	700
		1	14	18	5.80	<b>1390</b>	1080	960	850	740
		2	14	18	7.90	<b>1900</b>	1480	1310	1160	1010
<b>3/4" Dia. copper</b>	<b>3/4C-31/4 X 31/4-32</b>	1	8	12	4.10	<b>980</b>	760	680	600	520
		1	11	15	4.40	<b>1060</b>	830	730	650	560
		1	14	18	4.70	<b>1130</b>	880	780	690	600
		2	14	18	6.40	<b>1540</b>	1200	1060	940	820
	<b>3/4C-31/4 X 31/4-40</b>	1	8	12	4.50	<b>1080</b>	840	750	660	570
		1	11	15	4.90	<b>1180</b>	920	810	720	630
		1	14	18	5.10	<b>1220</b>	950	840	740	650
		2	14	18	7.00	<b>1680</b>	1310	1160	1020	890
	<b>3/4C-31/4 X 31/4-48</b>	1	8	12	5.00	<b>1200</b>	940	830	730	640
		1	11	15	5.30	<b>1270</b>	990	880	770	670
		1	14	18	5.60	<b>1340</b>	1050	920	820	710
		2	14	18	7.60	<b>1820</b>	1420	1260	1110	960
<b>1" Dia. copper</b>	<b>1C-23/4 X 4-32</b>	1	8	12	4.10	<b>980</b>	760	680	600	520
		1	11	15	4.40	<b>1060</b>	830	730	650	560
		1	14	18	4.70	<b>1130</b>	880	780	690	600
		2	14	18	6.50	<b>1560</b>	1220	1080	950	830
	<b>1C-23/4 X 4-40</b>	1	8	12	4.50	<b>1080</b>	840	750	660	570
		1	11	15	4.90	<b>1180</b>	920	810	720	630
		1	14	18	5.20	<b>1250</b>	980	860	760	660
		2	14	18	7.20	<b>1730</b>	1350	1190	1060	920
	<b>1C-23/4 X 4-48</b>	1	8	12	4.90	<b>1180</b>	920	810	720	630
		1	11	15	5.40	<b>1300</b>	1010	900	790	690
		1	14	18	5.70	<b>1370</b>	1070	950	840	730
		2	14	18	7.80	<b>1870</b>	1460	1290	1140	990

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Performance Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL3 and FFVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FF3; low profile, flat top, front outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-3/4 X 3/4-32	1	8	12	4.00	960	750	660	590	510
		1	11	15	4.30	1030	800	710	630	550
		1	14	18	4.60	1100	860	760	670	580
		2	14	18	6.30	1510	1180	1040	920	800
	1C-3/4 X 3/4-40	1	8	12	4.40	1060	830	730	650	560
		1	11	15	4.80	1150	900	790	700	610
		1	14	18	5.00	1200	940	830	730	640
		2	14	18	6.90	1660	1290	1150	1010	880
	1C-3/4 X 3/4-48	1	8	12	4.90	1180	920	810	720	630
		1	11	15	5.20	1250	980	860	760	660
		1	14	18	5.50	1320	1030	910	810	700
		2	14	18	7.50	1800	1400	1240	1100	950
1/4" Dia. copper	1/4C-2 1/4 X 4-32	1	8	12	4.00	960	750	660	590	510
		1	11	15	4.30	1030	800	710	630	550
		1	14	18	4.60	1110	860	760	670	580
		2	14	18	6.40	1540	1200	1060	940	820
	1/4C-2 1/4 X 4-40	1	8	12	4.40	1060	830	730	650	560
		1	11	15	4.80	1150	900	790	700	610
		1	14	18	5.10	1220	950	840	740	650
		2	14	18	7.10	1700	1330	1170	1040	900
	1/4C-2 1/4 X 4-48	1	8	12	4.80	1150	900	790	700	610
		1	11	15	5.30	1270	990	880	770	670
		1	14	18	5.60	1340	1050	920	820	710
		2	14	18	7.70	1850	1440	1280	1130	980
1/4" Dia. copper	1/4C-3/4 X 3/4-32	1	8	12	3.50	840	660	580	510	450
		1	11	15	3.80	910	710	630	560	480
		1	14	18	4.00	960	750	660	590	510
		2	14	18	5.50	1320	1030	910	810	700
	1/4C-3/4 X 3/4-40	1	8	12	4.40	1060	830	730	650	560
		1	11	15	4.70	1130	880	780	690	600
		1	14	18	5.00	1200	940	830	730	640
		2	14	18	6.90	1660	1290	1150	1010	880
	1/4C-3/4 X 3/4-48	1	8	12	4.80	1150	900	790	700	610
		1	11	15	5.10	1220	950	840	740	650
		1	14	18	5.40	1300	1010	900	790	690
		2	14	18	7.40	1780	1390	1230	1090	940

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important Performance Information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FFHL3 and FFVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3¼ X 3¼-32</b>	1	14	18	4.10	<b>980</b>	770	680	600	520
		1	20	24	4.20	<b>1010</b>	790	700	620	540
		2	20	24	6.30	<b>1510</b>	1180	1040	920	800
		1	24	28	4.40	<b>1060</b>	830	730	650	560
		2	24	28	6.60	<b>1580</b>	1230	1090	960	840
		3	24	28	7.70	<b>1850</b>	1440	1280	1130	980
	<b>1S-3¼ X 3¼-40</b>	1	14	18	4.60	<b>1100</b>	860	760	670	580
		1	20	24	4.90	<b>1180</b>	920	810	720	630
		2	20	24	6.90	<b>1660</b>	1290	1150	1010	880
		1	24	28	5.10	<b>1220</b>	950	840	740	650
		2	24	28	7.30	<b>1750</b>	1370	1210	1070	930
		3	24	28	8.40	<b>2020</b>	1580	1390	1230	1070
	<b>1S-3¼ X 3¼-48</b>	1	14	18	5.10	<b>1220</b>	950	840	740	650
		1	20	24	5.70	<b>1370</b>	1070	950	840	730
		2	20	24	7.70	<b>1850</b>	1440	1280	1130	980
		1	24	28	5.90	<b>1420</b>	1110	980	870	750
		2	24	28	8.00	<b>1920</b>	1500	1320	1170	1020
		3	24	28	9.20	<b>2210</b>	1720	1520	1350	1170
<b>1" Dia. steel</b>	<b>1S-4¼ X 4¼-32</b>	1	14	18	5.90	<b>1420</b>	1110	980	870	750
		1	20	24	6.10	<b>1460</b>	1140	1010	890	770
		2	20	24	9.20	<b>2210</b>	1720	1520	1350	1170
		1	24	28	6.30	<b>1510</b>	1180	1040	920	800
		2	24	28	9.60	<b>2300</b>	1790	1590	1400	1220
		3	24	28	11.00	<b>2640</b>	2060	1820	1610	1400
	<b>1S-4¼ X 4¼-40</b>	1	14	18	6.60	<b>1580</b>	1230	1090	960	840
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	10.10	<b>2420</b>	1890	1670	1480	1280
		1	24	28	7.40	<b>1780</b>	1390	1230	1090	940
		2	24	28	10.50	<b>2520</b>	1970	1740	1540	1340
		3	24	28	12.00	<b>2880</b>	2250	1990	1760	1530
	<b>1S-4¼ X 4¼-48</b>	1	14	18	7.50	<b>1800</b>	1400	1240	1100	950
		1	20	24	8.40	<b>2020</b>	1580	1390	1230	1070
		2	20	24	11.10	<b>2660</b>	2070	1840	1620	1410
		1	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		2	24	28	11.50	<b>2760</b>	2150	1900	1680	1460
		3	24	28	13.30	<b>3190</b>	2490	2200	1950	1690

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	14	18	4.00	<b>960</b>	750	660	590	510
		1	20	24	4.10	<b>980</b>	760	680	600	520
		2	20	24	6.20	<b>1490</b>	1160	1030	910	790
		1	24	28	4.30	<b>1030</b>	800	710	630	550
		2	24	28	6.50	<b>1560</b>	1220	1080	950	830
		3	24	28	7.50	<b>1800</b>	1400	1240	1100	950
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	14	18	4.50	<b>1080</b>	840	750	660	570
		1	20	24	4.80	<b>1150</b>	900	790	700	610
		2	20	24	6.80	<b>1630</b>	1270	1120	990	860
		1	24	28	5.00	<b>1200</b>	940	830	730	640
		2	24	28	7.10	<b>1700</b>	1330	1170	1040	900
		3	24	28	8.20	<b>1970</b>	1540	1360	1200	1040
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.60	<b>1340</b>	1050	920	820	710
		2	20	24	7.50	<b>1800</b>	1400	1240	1100	950
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	7.80	<b>1870</b>	1460	1290	1140	990
		3	24	28	9.00	<b>2160</b>	1680	1490	1320	1140
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	14	18	5.80	<b>1390</b>	1080	960	850	740
		1	20	24	6.00	<b>1440</b>	1120	990	880	760
		2	20	24	9.00	<b>2160</b>	1680	1490	1320	1140
		1	24	28	6.20	<b>1490</b>	1160	1030	910	790
		2	24	28	9.40	<b>2260</b>	1760	1560	1380	1200
		3	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
	<b>1 1/4S-4 1/4 X 4 1/4-40</b>	1	14	18	6.50	<b>1560</b>	1220	1080	950	830
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	9.90	<b>2380</b>	1860	1640	1450	1260
		1	24	28	7.20	<b>1730</b>	1350	1190	1060	920
		2	24	28	10.30	<b>2470</b>	1930	1700	1510	1310
		3	24	28	11.80	<b>2830</b>	2210	1950	1730	1500
	<b>1 1/4S-4 1/4 X 4 1/4-48</b>	1	14	18	7.30	<b>1750</b>	1370	1210	1070	930
		1	20	24	8.20	<b>1970</b>	1540	1360	1200	1040
		2	20	24	10.90	<b>2620</b>	2040	1810	1600	1390
		1	24	28	8.40	<b>2020</b>	1580	1390	1230	1070
		2	24	28	11.30	<b>2710</b>	2110	1870	1660	1440
		3	24	28	13.00	<b>3120</b>	2430	2150	1900	1650

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
2" Dia. steel	2S-4¼ X 4¼-32	1	14	18	5.80	1390	1080	960	850	740
		1	20	24	6.00	1440	1120	990	880	760
		2	20	24	8.80	2110	1650	1460	1280	1120
		1	24	28	6.20	1490	1160	1030	910	790
		2	24	28	9.10	2180	1700	1500	1330	1160
		3	24	28	10.50	2520	1970	1740	1540	1340
	2S-4¼ X 4¼-40	1	14	18	6.50	1560	1220	1080	950	830
		1	20	24	6.90	1660	1290	1150	1010	880
		2	20	24	9.50	2280	1790	1570	1390	1210
		1	24	28	7.20	1730	1350	1190	1060	920
		2	24	28	10.00	2400	1870	1660	1460	1270
		3	24	28	11.50	2760	2150	1900	1680	1460
	2S-4¼ X 4¼-48	1	14	18	7.30	1750	1370	1210	1070	930
		1	20	24	7.90	1900	1480	1310	1160	1010
		2	20	24	10.20	2450	1910	1690	1490	1300
		1	24	28	8.40	2020	1580	1390	1230	1070
		2	24	28	10.80	2590	2020	1790	1580	1370
		3	24	28	12.40	2980	2320	2060	1820	1580

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/8" Dia. copper</b>	<b>3/8C-23/4 X 4-32</b>	1	14	18	4.57	<b>1096</b>	855	756	668	581
		1	20	24	4.81	<b>1155</b>	901	797	705	612
		2	20	24	7.21	<b>1729</b>	1349	1193	1055	916
		1	24	28	5.09	<b>1221</b>	952	842	745	647
		2	24	28	7.92	<b>1901</b>	1483	1312	1159	1007
		3	24	28	9.10	<b>2185</b>	1704	1507	1333	1158
	<b>3/8C-23/4 X 4-40</b>	1	14	18	5.42	<b>1300</b>	1014	897	793	689
		1	20	24	5.89	<b>1412</b>	1102	975	862	749
		2	20	24	7.65	<b>1835</b>	1431	1266	1119	972
		1	24	28	6.13	<b>1472</b>	1148	1016	898	780
		2	24	28	8.31	<b>1993</b>	1555	1375	1216	1056
		3	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
	<b>3/8C-23/4 X 4-48</b>	1	14	18	5.80	<b>1393</b>	1086	961	849	738
		1	20	24	6.60	<b>1584</b>	1236	1093	966	840
		2	20	24	7.87	<b>1888</b>	1472	1302	1151	1000
		1	24	28	7.12	<b>1709</b>	1333	1179	1043	906
		2	24	28	8.58	<b>2059</b>	1606	1421	1256	1091
		3	24	28	9.85	<b>2363</b>	1843	1630	1441	1252
<b>3/4" Dia. copper</b>	<b>3/4C-31/4 X 31/4-32</b>	1	14	18	5.30	<b>1270</b>	990	880	770	670
		1	20	24	5.80	<b>1390</b>	1080	960	850	740
		2	20	24	8.10	<b>1940</b>	1510	1340	1180	1030
		1	24	28	6.10	<b>1460</b>	1140	1010	890	770
		2	24	28	9.00	<b>2160</b>	1680	1490	1320	1140
		3	24	28	10.30	<b>2470</b>	1930	1700	1510	1310
	<b>3/4C-31/4 X 31/4-40</b>	1	14	18	5.90	<b>1420</b>	1110	980	870	750
		1	20	24	6.50	<b>1560</b>	1220	1080	950	830
		2	20	24	9.40	<b>2260</b>	1760	1560	1380	1200
		1	24	28	6.90	<b>1660</b>	1290	1150	1010	880
		2	24	28	9.70	<b>2330</b>	1820	1610	1420	1230
		3	24	28	10.70	<b>2570</b>	2000	1770	1570	1360
	<b>3/4C-31/4 X 31/4-48</b>	1	14	18	6.40	<b>1540</b>	1200	1060	940	820
		1	20	24	7.40	<b>1780</b>	1390	1230	1090	940
		2	20	24	9.70	<b>2330</b>	1820	1610	1420	1230
		1	24	28	7.90	<b>1900</b>	1480	1310	1160	1010
		2	24	28	10.00	<b>2400</b>	1870	1660	1460	1270
		3	24	28	11.00	<b>2640</b>	2060	1820	1610	1400

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>¾" Dia. copper</b>	<b>¾C-4¼ X 4¼-32</b>	1	14	18	6.90	<b>1660</b>	1290	1150	1010	880
		1	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		2	20	24	10.90	<b>2620</b>	2040	1810	1600	1390
		1	24	28	7.70	<b>1850</b>	1440	1280	1130	980
		2	24	28	12.00	<b>2880</b>	2250	1990	1760	1530
		3	24	28	13.80	<b>3310</b>	2580	2280	2020	1750
	<b>¾C-4¼ X 4¼-40</b>	1	14	18	8.20	<b>1970</b>	1540	1360	1200	1040
		1	20	24	8.90	<b>2140</b>	1670	1480	1310	1130
		2	20	24	11.60	<b>2780</b>	2170	1920	1700	1470
		1	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
		2	24	28	12.60	<b>3020</b>	2360	2080	1840	1600
		3	24	28	14.40	<b>3460</b>	2700	2390	2110	1830
	<b>¾C-4¼ X 4¼-48</b>	1	14	18	8.80	<b>2110</b>	1650	1460	1290	1120
		1	20	24	10.00	<b>2400</b>	1870	1660	1460	1270
		2	20	24	11.90	<b>2860</b>	2230	1970	1740	1520
		1	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
		2	24	28	13.00	<b>3120</b>	2430	2150	1900	1650
		3	24	28	14.90	<b>3580</b>	2790	2470	2180	1900
<b>1" Dia. copper</b>	<b>1C-2¾ X 4 -32</b>	1	14	18	4.48	<b>1076</b>	839	742	656	570
		1	20	24	4.76	<b>1142</b>	891	788	696	605
		2	20	24	7.07	<b>1696</b>	1323	1170	1035	899
		1	24	28	4.95	<b>1188</b>	927	820	725	630
		2	24	28	7.78	<b>1868</b>	1457	1289	1139	990
		3	24	28	8.91	<b>2138</b>	1668	1475	1304	1133
	<b>1C-2¾ X 4 -40</b>	1	14	18	5.28	<b>1267</b>	988	874	773	672
		1	20	24	5.75	<b>1379</b>	1076	952	841	731
		2	20	24	7.54	<b>1808</b>	1411	1248	1103	958
		1	24	28	6.00	<b>1439</b>	1122	993	878	763
		2	24	28	8.20	<b>1967</b>	1534	1357	1200	1042
		3	24	28	9.30	<b>2231</b>	1740	1539	1361	1182
	<b>1C-2¾ X 4 -48</b>	1	14	18	5.67	<b>1360</b>	1060	938	829	721
		1	20	24	6.46	<b>1551</b>	1210	1070	946	822
		2	20	24	7.73	<b>1855</b>	1447	1280	1131	983
		1	24	28	6.99	<b>1676</b>	1308	1157	1023	888
		2	24	28	8.39	<b>2013</b>	1570	1389	1228	1067
		3	24	28	9.63	<b>2310</b>	1802	1594	1409	1224

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-3¼ X 3¼-32	1	14	18	5.20	1250	980	860	760	660
		1	20	24	5.70	1370	1070	950	840	730
		2	20	24	7.90	1900	1480	1310	1160	1010
		1	24	28	6.00	1440	1120	990	880	760
		2	24	28	8.80	2110	1650	1460	1290	1120
		3	24	28	10.10	2420	1890	1670	1480	1280
	1C-3¼ X 3¼-40	1	14	18	5.80	1390	1080	960	850	740
		1	20	24	6.40	1540	1200	1060	940	820
		2	20	24	9.20	2210	1720	1520	1350	1170
		1	24	28	6.80	1630	1270	1120	990	860
		2	24	28	9.50	2280	1780	1570	1390	1210
		3	24	28	10.60	2540	1980	1750	1550	1350
	1C-3¼ X 3¼-48	1	14	18	6.30	1510	1180	1040	920	800
		1	20	24	7.20	1730	1350	1190	1060	920
		2	20	24	9.50	2280	1780	1570	1390	1210
		1	24	28	7.70	1850	1440	1280	1130	980
		2	24	28	9.80	2350	1830	1620	1430	1250
		3	24	28	10.80	2590	2020	1790	1580	1370
1" Dia. copper	1C-4¼ X 4¼-32	1	14	18	6.80	1630	1270	1120	990	860
		1	20	24	7.20	1730	1350	1190	1060	920
		2	20	24	10.70	2570	2000	1770	1570	1360
		1	24	28	7.50	1800	1400	1240	1100	950
		2	24	28	11.80	2830	2210	1950	1730	1500
		3	24	28	13.50	3240	2530	2240	1980	1720
	1C-4¼ X 4¼-40	1	14	18	8.00	1920	1500	1320	1170	1020
		1	20	24	8.70	2090	1630	1440	1270	1110
		2	20	24	11.40	2740	2140	1890	1670	1450
		1	24	28	9.10	2180	1700	1500	1330	1160
		2	24	28	12.40	2980	2320	2060	1820	1580
		3	24	28	14.10	3380	2640	2330	2060	1790
	1C-4¼ X 4¼-48	1	14	18	8.60	2060	1610	1420	1260	1090
		1	20	24	9.80	2350	1830	1620	1430	1250
		2	20	24	11.70	2810	2190	1940	1710	1490
		1	24	28	10.60	2540	1980	1750	1550	1350
		2	24	28	12.70	3050	2380	2100	1860	1620
		3	24	28	14.60	3500	2730	2420	2140	1860

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-2 3/4 X 4-32</b>	1	14	18	4.43	<b>1063</b>	829	733	648	563
		1	20	24	4.68	<b>1122</b>	875	774	684	595
		2	20	24	6.93	<b>1663</b>	1297	1148	1015	881
		1	24	28	4.90	<b>1175</b>	916	811	717	623
		2	24	28	7.65	<b>1835</b>	1431	1266	1119	972
		3	24	28	8.77	<b>2105</b>	1642	1453	1284	1116
	<b>1 1/4C-2 3/4 X 4-40</b>	1	14	18	5.23	<b>1254</b>	978	865	765	665
		1	20	24	5.67	<b>1360</b>	1060	938	829	721
		2	20	24	7.40	<b>1775</b>	1385	1225	1083	941
		1	24	28	5.94	<b>1426</b>	1112	984	870	756
		2	24	28	8.06	<b>1934</b>	1508	1334	1180	1025
		3	24	28	9.19	<b>2204</b>	1719	1521	1345	1168
	<b>1 1/4C-2 3/4 X 4-48</b>	1	14	18	5.61	<b>1346</b>	1050	929	821	714
		1	20	24	6.41	<b>1538</b>	1199	1061	938	815
		2	20	24	7.59	<b>1822</b>	1421	1257	1111	965
		1	24	28	6.88	<b>1650</b>	1287	1139	1007	875
		2	24	28	8.25	<b>1980</b>	1544	1366	1208	1049
		3	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-3 1/4 X 3 1/4-32</b>	1	14	18	4.80	<b>1150</b>	900	790	700	610
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.70	<b>1850</b>	1440	1280	1130	980
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		3	24	28	9.90	<b>2380</b>	1860	1640	1450	1260
	<b>1 1/4C-3 1/4 X 3 1/4-40</b>	1	14	18	5.70	<b>1370</b>	1070	950	840	730
		1	20	24	6.20	<b>1490</b>	1040	1030	910	790
		2	20	24	9.00	<b>2160</b>	1680	1490	1320	1140
		1	24	28	6.50	<b>1560</b>	1220	1080	950	830
		2	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
		3	24	28	10.40	<b>2500</b>	1950	1720	1530	1330
	<b>1 1/4C-3 1/4 X 3 1/4-48</b>	1	14	18	6.10	<b>1460</b>	1140	1010	890	770
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	9.30	<b>2230</b>	1740	1540	1360	1180
		1	24	28	7.60	<b>1820</b>	1420	1260	1110	960
		2	24	28	9.60	<b>2300</b>	1790	1590	1400	1220
		3	24	28	10.70	<b>2570</b>	2000	1770	1570	1360

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR5; standard, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1 1/4" Dia. copper	1 1/4C-4 1/4 X 4 1/4-32	1	14	18	6.70	1610	1260	1110	980	850
		1	20	24	7.10	1700	1330	1170	1040	900
		2	20	24	10.50	2520	1970	1740	1540	1340
		1	24	28	7.40	1780	1390	1230	1090	940
		2	24	28	11.60	2780	2170	1920	1700	1480
		3	24	28	13.30	3190	2490	2200	1950	1690
	1 1/4C-4 1/4 X 4 1/4-40	1	14	18	7.90	1900	1480	1310	1160	1010
		1	20	24	8.60	2060	1610	1420	1260	1090
		2	20	24	11.20	2690	2100	1860	1640	1430
		1	24	28	9.00	2160	1680	1490	1320	1140
		2	24	28	12.20	2930	2290	2020	1790	1550
		3	24	28	13.90	3340	2610	2300	2040	1770
	1 1/4C-4 1/4 X 4 1/4-48	1	14	18	8.50	2040	1590	1410	1240	1080
		1	20	24	9.70	2330	1820	1610	1420	1230
		2	20	24	11.50	2760	2150	1900	1680	1460
		1	24	28	10.40	2500	1950	1720	1530	1330
		2	24	28	12.50	3000	2340	2070	1830	1590
		3	24	28	14.40	3460	2700	2390	2110	1830

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL5 and FRVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR3; low profile, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
1" Dia. steel	1S-3¼ X 3¼-32	1	8	12	3.30	790	620	550	480	420
		1	11	15	3.50	840	660	580	510	450
		1	14	18	3.70	890	690	610	540	470
		2	14	18	5.00	1200	940	830	730	640
	1S-3¼ X 3¼-40	1	8	12	3.60	860	670	590	520	460
		1	11	15	3.90	940	730	650	570	500
		1	14	18	4.10	980	760	680	600	520
		2	14	18	5.60	1340	1050	920	820	710
	1S-3¼ X 3¼-48	1	8	12	4.10	980	760	680	600	520
		1	11	15	4.40	1060	830	730	650	560
		1	14	18	4.60	1100	860	760	670	580
		2	14	18	6.30	1510	1180	1040	920	800
1¼" Dia. steel	1¼S-3¼ X 3¼-32	1	8	12	3.20	770	600	530	470	410
		1	11	15	3.40	820	640	570	500	430
		1	14	18	3.60	860	670	590	520	460
		2	14	18	4.90	1180	920	810	720	630
	1¼S-3¼ X 3¼-40	1	8	12	3.50	840	660	580	510	450
		1	11	15	3.80	910	710	630	560	480
		1	14	18	4.00	960	750	660	590	510
		2	14	18	5.50	1320	1030	910	810	700
	1¼S-3¼ X 3¼-48	1	8	12	4.00	960	750	660	590	510
		1	11	15	4.30	1030	800	710	630	550
		1	14	18	4.50	1080	840	750	660	570
		2	14	18	6.20	1490	1160	1030	910	790

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL3 and FRVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

**General data**

Performance ratings: model FR3; low profile, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
3/8" Dia. copper	3/8C-23/8 X 4-32	1	8	12	4.40	1060	830	730	650	560
		1	11	15	4.70	1130	880	780	690	600
		1	14	18	5.00	1200	940	830	730	640
		2	14	18	6.80	1630	1270	1120	990	860
	3/8C-23/8 X 4-40	1	8	12	4.80	1150	900	790	700	610
		1	11	15	5.20	1250	980	860	760	660
		1	14	18	5.50	1320	1030	910	810	700
		2	14	18	7.50	1800	1400	1240	1100	950
	3/8C-23/8 X 4-48	1	8	12	5.20	1250	980	860	760	660
		1	11	15	5.70	1370	1070	950	840	730
		1	14	18	6.00	1440	1120	990	880	760
		2	14	18	8.20	1970	1540	1360	1200	1040
3/4" Dia. copper	3/4C-31/4 X 31/4-32	1	8	12	4.20	1010	790	700	620	540
		1	11	15	4.50	1080	840	750	660	570
		1	14	18	4.70	1130	880	780	690	600
		2	14	18	6.40	1540	1200	1060	940	820
	3/4C-31/4 X 31/4-40	1	8	12	4.50	1080	840	750	660	570
		1	11	15	4.90	1180	920	810	720	630
		1	14	18	5.20	1250	980	860	760	660
		2	14	18	7.10	1700	1330	1170	1040	900
	3/4C-31/4 X 31/4-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.40	1300	1010	900	790	690
		1	14	18	5.70	1370	1070	950	840	730
		2	14	18	7.90	1900	1480	1310	1160	1010
1" Dia. copper	1C-23/4 X 4-32	1	8	12	4.30	1030	800	710	630	550
		1	11	15	4.60	1100	860	760	670	580
		1	14	18	4.90	1180	920	810	720	630
		2	14	18	6.70	1610	1260	1110	980	850
	1C-23/4 X 4-40	1	8	12	4.70	1130	880	780	690	600
		1	11	15	5.10	1220	950	840	740	650
		1	14	18	5.40	1300	1010	900	790	690
		2	14	18	7.40	1780	1390	1230	1090	940
	1C-23/4 X 4-48	1	8	12	5.10	1220	950	840	740	650
		1	11	15	5.60	1340	1050	920	820	710
		1	14	18	5.90	1420	1110	980	870	750
		2	14	18	8.10	1940	1510	1340	1180	1030

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL3 and FRVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FR3; low profile, flat top, round outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-3¼ X 3¼-32	1	8	12	4.10	980	760	680	600	520
		1	11	15	4.40	1060	830	730	650	560
		1	14	18	4.70	1130	880	780	690	600
		2	14	18	6.40	1540	1200	1060	940	820
	1C-3¼ X 3¼-40	1	8	12	4.50	1080	840	750	660	570
		1	11	15	4.90	1180	920	810	720	630
		1	14	18	5.20	1250	980	860	760	660
		2	14	18	7.10	1700	1330	1170	1040	900
	1C-3¼ X 3¼-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.40	1300	1010	900	790	690
		1	14	18	5.70	1370	1070	950	840	730
		2	14	18	7.80	1870	1460	1290	1140	990
1¼" Dia. copper	1¼C-2¼ X 4-32	1	8	12	4.10	980	760	680	600	520
		1	11	15	4.40	1060	830	730	650	560
		1	14	18	4.70	1130	880	780	690	600
		2	14	18	6.40	1540	1200	1060	940	820
	1¼C-2¼ X 4-40	1	8	12	4.60	1100	860	760	670	580
		1	11	15	4.90	1180	920	810	720	630
		1	14	18	5.20	1250	980	860	760	660
		2	14	18	7.10	1700	1330	1170	1040	900
	1¼C-2¼ X 4-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.40	1300	1010	900	790	690
		1	14	18	5.70	1370	1070	950	840	730
		2	14	18	7.80	1870	1460	1290	1140	990
1½" Dia. copper	1½C-3¼ X 3¼-32	1	8	12	3.60	860	670	590	520	460
		1	11	15	3.90	940	730	650	570	500
		1	14	18	4.10	980	760	680	600	520
		2	14	18	5.60	1340	1050	920	820	710
	1½C-3¼ X 3¼-40	1	8	12	4.50	1800	840	750	660	570
		1	11	15	4.80	1150	900	790	700	610
		1	14	18	5.10	1220	950	840	740	650
		2	14	18	7.00	1680	1310	1160	1020	890
	1½C-3¼ X 3¼-48	1	8	12	4.90	1180	920	810	720	630
		1	11	15	5.30	1270	990	880	770	670
		1	14	18	5.60	1340	1050	920	820	710
		2	14	18	7.70	1850	1440	1280	1130	980

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
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- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FRHL3 and FRVL3 ratings are derated by 12.5%.
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3¼ X 3¼-32</b>	1	14	18	4.00	<b>960</b>	750	660	590	510
		1	20	24	4.10	<b>980</b>	760	680	600	520
		2	20	24	6.20	<b>1490</b>	1160	1030	910	790
		1	24	28	4.30	<b>1030</b>	800	710	630	550
		2	24	28	6.50	<b>1560</b>	1220	1080	950	830
		3	24	28	7.50	<b>1800</b>	1400	1240	1100	960
	<b>1S-3¼ X 3¼-40</b>	1	14	18	4.50	<b>1080</b>	840	750	660	570
		1	20	24	4.80	<b>1150</b>	900	790	700	610
		2	20	24	6.80	<b>1630</b>	1270	1120	990	860
		1	24	28	5.00	<b>1200</b>	940	830	730	640
		2	24	28	7.10	<b>1700</b>	1330	1170	1040	900
		3	24	28	8.30	<b>1990</b>	1550	1370	1210	1050
	<b>1S-3¼ X 3¼-48</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.60	<b>1340</b>	1050	920	820	710
		2	20	24	7.50	<b>1800</b>	1400	1240	1100	950
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	7.70	<b>1850</b>	1440	1280	1130	980
		3	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
<b>1" Dia. steel</b>	<b>1S-4¼ X 4¼-32</b>	1	14	18	5.80	<b>1390</b>	1080	960	850	740
		1	20	24	6.00	<b>1440</b>	1120	990	880	760
		2	20	24	9.00	<b>2160</b>	1680	1490	1320	1140
		1	24	28	6.20	<b>1490</b>	1160	1030	910	790
		2	24	28	9.40	<b>2260</b>	1760	1560	1380	1200
		3	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
	<b>1S-4¼ X 4¼-40</b>	1	14	18	6.50	<b>1560</b>	1220	1080	950	830
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	9.90	<b>2380</b>	1860	1640	1450	1260
		1	24	28	7.20	<b>1730</b>	1350	1190	1060	920
		2	24	28	10.30	<b>2470</b>	1930	1700	1510	1310
		3	24	28	11.80	<b>2830</b>	2210	1950	1730	1500
	<b>1S-4¼ X 4¼-48</b>	1	14	18	7.30	<b>1750</b>	1370	1210	1070	930
		1	20	24	8.20	<b>1970</b>	1540	1360	1200	1040
		2	20	24	10.90	<b>2620</b>	2040	1810	1600	1390
		1	24	28	8.40	<b>2020</b>	1580	1390	1230	1070
		2	24	28	11.30	<b>2710</b>	2110	1870	1650	1440
		3	24	28	13.10	<b>3140</b>	2450	2170	1920	1660

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL5 and FTVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	14	18	3.90	<b>940</b>	730	650	570	500
		1	20	24	4.00	<b>960</b>	750	660	590	510
		2	20	24	6.10	<b>1460</b>	1140	1010	890	770
		1	24	28	4.20	<b>1010</b>	790	700	620	540
		2	24	28	6.40	<b>1540</b>	1200	1060	940	820
		3	24	28	7.40	<b>1780</b>	1390	1230	1090	940
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	14	18	4.40	<b>1060</b>	830	730	650	560
		1	20	24	4.70	<b>1130</b>	880	780	690	600
		2	20	24	6.70	<b>1610</b>	1260	1110	980	850
		1	24	28	4.90	<b>1180</b>	920	810	720	630
		2	24	28	7.00	<b>1680</b>	1310	1160	1020	890
		3	24	28	8.10	<b>1940</b>	1510	1340	1180	1030
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	14	18	4.90	<b>1180</b>	920	810	720	630
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.40	<b>1780</b>	1390	1230	1090	940
		1	24	28	5.70	<b>1370</b>	1070	950	840	730
		2	24	28	7.60	<b>1820</b>	1420	1260	1110	960
		3	24	28	8.70	<b>2090</b>	1630	1440	1270	1110
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	14	18	5.70	<b>1370</b>	1070	950	840	730
		1	20	24	5.90	<b>1420</b>	1110	980	870	750
		2	20	24	8.80	<b>2110</b>	1650	1460	1290	1120
		1	24	28	6.10	<b>1460</b>	1140	1010	890	770
		2	24	28	9.20	<b>2210</b>	1720	1520	1350	1170
		3	24	28	10.60	<b>2540</b>	1980	1750	1550	1350
	<b>1 1/4S-4 1/4 X 4 1/4-40</b>	1	14	18	6.40	<b>1540</b>	1200	1060	940	820
		1	20	24	6.90	<b>1660</b>	1290	1150	1010	880
		2	20	24	9.70	<b>2330</b>	1820	1610	1420	1230
		1	24	28	7.10	<b>1700</b>	1330	1170	1040	900
		2	24	28	10.10	<b>2420</b>	1890	1670	1480	1280
		3	24	28	11.60	<b>2780</b>	2170	1920	1700	1470
	<b>1 1/4S-4 1/4 X 4 1/4-48</b>	1	14	18	7.20	<b>1730</b>	1350	1190	1060	920
		1	20	24	8.00	<b>1920</b>	1500	1320	1170	1020
		2	20	24	10.70	<b>2570</b>	2000	1770	1570	1360
		1	24	28	8.20	<b>1970</b>	1540	1360	1200	1040
		2	24	28	11.10	<b>2660</b>	2070	1840	1620	1410
		3	24	28	12.80	<b>3070</b>	2390	2120	1870	1630

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL5 and FTVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
2" Dia. steel	2S-4¼ X 4¼-32	1	14	18	5.70	<b>5.70</b>	1070	950	840	730
		1	20	24	5.90	<b>5.90</b>	1110	980	870	750
		2	20	24	8.60	<b>8.60</b>	1610	1420	1260	1090
		1	24	28	6.10	<b>6.10</b>	1140	1010	890	770
		2	24	28	8.90	<b>8.90</b>	1670	1480	1310	1130
		3	24	28	10.20	<b>10.20</b>	1910	1690	1490	1300
	2S-4¼ X 4¼-40	1	14	18	6.40	<b>6.40</b>	1200	1060	940	820
		1	20	24	6.80	<b>6.80</b>	1270	1120	990	860
		2	20	24	9.30	<b>9.30</b>	1740	1540	1360	1180
		1	24	28	7.10	<b>7.10</b>	1330	1170	1040	900
		2	24	28	9.80	<b>9.80</b>	1830	1620	1430	1250
		3	24	28	11.30	<b>11.30</b>	2110	1870	1650	1440
	2S-4¼ X 4¼-48	1	14	18	7.20	<b>7.20</b>	1350	1190	1060	920
		1	20	24	7.70	<b>7.70</b>	1440	1280	1130	980
		2	20	24	10.00	<b>10.00</b>	1870	1660	1460	1270
		1	24	28	8.20	<b>8.20</b>	1540	1360	1200	1040
		2	24	28	10.60	<b>10.60</b>	1980	1750	1550	1350
		3	24	28	12.20	<b>12.20</b>	2290	2020	1790	1550

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
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English, IP Units

General data

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In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat					
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
<b>Copper element</b>											
<b>3/4" Dia. copper</b>	<b>3/4C-2 3/4 X 4-32</b>	1	14	18	4.48	<b>1076</b>	839	742	656	570	
		1	20	24	4.76	<b>1142</b>	891	788	696	605	
		2	20	24	7.07	<b>1696</b>	1323	1170	1035	899	
		1	24	28	4.95	<b>1188</b>	927	820	725	630	
		2	24	28	7.78	<b>1868</b>	1457	1289	1139	990	
		3	24	28	8.97	<b>2152</b>	1678	1485	1312	1140	
	<b>3/4C-2 3/4 X 4-40</b>	1	14	18	5.23	<b>1254</b>	978	865	765	665	
		1	20	24	5.75	<b>1379</b>	1076	952	841	731	
		2	20	24	7.73	<b>1855</b>	1447	1280	1131	983	
		1	24	28	6.00	<b>1439</b>	1122	993	878	763	
		2	24	28	8.44	<b>2026</b>	1580	1398	1236	1074	
	<b>3/4C-2 3/4 X 4-48</b>	1	14	18	5.67	<b>1360</b>	1060	938	829	721	
		1	20	24	6.55	<b>1571</b>	1225	1084	958	833	
		2	20	24	9.10	<b>2185</b>	1704	1507	1333	1158	
		1	24	28	6.99	<b>1676</b>	1308	1157	1023	888	
		2	24	28	9.71	<b>2330</b>	1817	1608	1421	1235	
	<b>3/4" Dia. copper</b>	<b>3/4C-3 1/4 X 3 1/4-32</b>	1	14	18	5.20	<b>1250</b>	980	860	760	660
			1	20	24	5.70	<b>1370</b>	1070	950	840	730
2			20	24	7.50	<b>1800</b>	1400	1240	1100	950	
1			24	28	6.00	<b>1440</b>	1120	990	880	760	
2			24	28	8.40	<b>2020</b>	1580	1390	1230	1070	
3			24	28	9.60	<b>2300</b>	1790	1590	1400	1220	
<b>3/4C-3 1/4 X 3 1/4-40</b>		1	14	18	5.80	<b>1390</b>	1080	960	850	740	
		1	20	24	6.40	<b>1540</b>	1200	1060	940	820	
		2	20	24	8.80	<b>2110</b>	1650	1460	1290	1120	
		1	24	28	6.80	<b>1630</b>	1270	1120	990	860	
		2	24	28	9.20	<b>2210</b>	1720	1520	1350	1170	
<b>3/4C-3 1/4 X 3 1/4-48</b>		1	14	18	6.40	<b>1540</b>	1200	1060	940	820	
		1	20	24	7.30	<b>1750</b>	1370	1210	1070	930	
		2	20	24	8.50	<b>2040</b>	1590	1410	1240	1080	
		1	24	28	7.90	<b>1900</b>	1480	1310	1160	1010	
		2	24	28	9.50	<b>2280</b>	1780	1570	1390	1210	
3		24	28	11.00	<b>2640</b>	2060	1820	1610	1400		

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- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL5 and FTVL5 ratings are derated by 12.5%.
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>¾" Dia. copper</b>	<b>¾C-4¼ X 4¼-32</b>	1	14	18	6.80	<b>1630</b>	1270	1120	990	860
		1	20	24	7.20	<b>1730</b>	1350	1190	1060	920
		2	20	24	10.70	<b>2570</b>	2000	1770	1570	1360
		1	24	28	7.50	<b>1800</b>	1400	1240	1100	950
		2	24	28	11.80	<b>2830</b>	2210	1950	1730	1500
		3	24	28	13.60	<b>3260</b>	2540	2250	1990	1730
	<b>¾C-4¼ X 4¼-40</b>	1	14	18	7.90	<b>1900</b>	1480	1310	1160	1010
		1	20	24	8.70	<b>2090</b>	1630	1440	1270	1110
		2	20	24	11.70	<b>2810</b>	2190	1940	1710	1490
		1	24	28	9.10	<b>2180</b>	1700	1500	1330	1160
		2	24	28	12.80	<b>3070</b>	2390	2120	1870	1630
		3	24	28	14.60	<b>3500</b>	2730	2420	2140	1860
	<b>¾C-4¼ X 4¼-48</b>	1	14	18	8.60	<b>2060</b>	1610	1420	1260	1090
		1	20	24	9.90	<b>2380</b>	1860	1640	1450	1260
		2	20	24	13.80	<b>3310</b>	2580	2280	2020	1750
		1	24	28	10.60	<b>2540</b>	1980	1750	1550	1350
		2	24	28	14.70	<b>3530</b>	2750	2440	2150	1870
		3	24	28	16.40	<b>3940</b>	3070	2720	2400	2090
<b>1" Dia. copper</b>	<b>1C-2¾ X 4-32</b>	1	14	18	4.43	<b>1063</b>	829	733	648	563
		1	20	24	4.68	<b>1122</b>	875	774	684	595
		2	20	24	6.93	<b>1663</b>	1297	1148	1015	881
		1	24	28	4.90	<b>1175</b>	916	811	717	623
		2	24	28	7.65	<b>1835</b>	1431	1266	1119	972
		3	24	28	8.77	<b>2105</b>	1642	1453	1284	1116
	<b>1C-2¾ X 4-40</b>	1	14	18	5.14	<b>1234</b>	963	852	753	654
		1	20	24	5.61	<b>1346</b>	1050	929	821	714
		2	20	24	7.59	<b>1822</b>	1421	1257	1111	965
		1	24	28	5.89	<b>1412</b>	1102	975	862	749
		2	24	28	8.25	<b>1980</b>	1544	1366	1208	1049
		3	24	28	9.43	<b>2264</b>	1766	1562	1381	1200
	<b>1C-2¾ X 4-48</b>	1	14	18	5.56	<b>1333</b>	1040	920	813	707
		1	20	24	6.41	<b>1538</b>	1199	1061	938	815
		2	20	24	8.91	<b>2138</b>	1668	1475	1304	1133
		1	24	28	6.88	<b>1650</b>	1287	1139	1007	875
		2	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
		3	24	28	10.62	<b>2548</b>	1987	1758	1554	1350

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-3¼ X 3¼-32	1	14	18	5.10	1220	950	840	740	650
		1	20	24	5.60	1340	1050	920	820	710
		2	20	24	7.40	1780	1390	1230	1090	940
		1	24	28	5.90	1420	1110	980	870	750
		2	24	28	8.20	1970	1540	1360	1200	1040
		3	24	28	9.40	2260	1760	1560	1380	1120
	1C-3¼ X 3¼-40	1	14	18	5.70	1370	1070	950	840	730
		1	20	24	6.30	1510	1180	1040	920	800
		2	20	24	8.60	2060	1610	1420	1260	1090
		1	24	28	6.70	1610	1260	1110	980	850
		2	24	28	9.00	2160	1680	1490	1320	1140
		3	24	28	10.30	2470	1930	1700	1510	1310
	1C-3¼ X 3¼-48	1	14	18	6.30	1510	1180	1040	920	800
		1	20	24	7.20	1730	1350	1190	1060	920
		2	20	24	8.30	1990	1550	1370	1210	1060
		1	24	28	7.70	1850	1440	1280	1130	980
		2	24	28	9.30	2230	1740	1540	1360	1180
		3	24	28	10.80	2590	2020	1790	1580	1370
1" Dia. copper	1C-4¼ X 4¼-32	1	14	18	6.70	1610	1260	1110	980	850
		1	20	24	7.10	1700	1330	1170	1040	900
		2	20	24	10.50	2520	1970	1740	1540	1340
		1	24	28	7.40	1780	1390	1230	1090	940
		2	24	28	11.60	2780	2170	1920	1700	1470
		3	24	28	13.30	3190	2490	2200	1950	1690
	1C-4¼ X 4¼-40	1	14	18	7.80	1870	1460	1290	1140	990
		1	20	24	8.50	2040	1590	1410	1240	1080
		2	20	24	11.50	2760	2150	1900	1680	1460
		1	24	28	8.90	2140	1670	1480	1310	1130
		2	24	28	12.50	3000	2340	2070	1830	1590
		3	24	28	14.30	3430	2680	2370	2090	1820
	1C-4¼ X 4¼-48	1	14	18	8.40	2020	1580	1390	1230	1070
		1	20	24	9.70	2330	1820	1610	1420	1230
		2	20	24	13.50	3240	2530	2240	1980	1720
		1	24	28	10.40	2500	1950	1720	1530	1330
		2	24	28	14.40	3460	2700	2390	2110	1830
		3	24	28	16.10	3860	3010	2660	2350	2050

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL5 and FTVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-2 3/4 X 4-32</b>	1	14	18	4.35	<b>1043</b>	813	720	636	553
		1	20	24	4.62	<b>1109</b>	865	765	676	588
		2	20	24	6.79	<b>1630</b>	1272	1125	994	864
		1	24	28	4.81	<b>1155</b>	901	797	705	612
		2	24	28	7.54	<b>1808</b>	1411	1248	1103	958
		3	24	28	8.64	<b>2072</b>	1616	1430	1264	1098
	<b>1 1/4C-2 3/4 X 4-40</b>	1	14	18	5.09	<b>1221</b>	952	842	745	647
		1	20	24	5.56	<b>1333</b>	1040	920	813	707
		2	20	24	7.45	<b>1789</b>	1395	1234	1091	948
		1	24	28	5.80	<b>1393</b>	1086	961	849	738
		2	24	28	8.11	<b>1947</b>	1519	1343	1188	1032
		3	24	28	9.30	<b>2231</b>	1740	1539	1361	1182
	<b>1 1/4C-2 3/4 X 4-48</b>	1	14	18	5.47	<b>1313</b>	1024	906	801	696
		1	20	24	6.27	<b>1505</b>	1174	1038	918	798
		2	20	24	8.72	<b>2092</b>	1632	1444	1276	1109
		1	24	28	6.74	<b>1617</b>	1261	1116	986	857
		2	24	28	9.38	<b>2251</b>	1755	1553	1373	1193
		3	24	28	10.42	<b>2501</b>	1951	1726	1526	1326
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-3 1/4 X 3 1/4-32</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	8.10	<b>1940</b>	1510	1340	1180	1030
		3	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
	<b>1 1/4C-3 1/4 X 3 1/4-40</b>	1	14	18	5.60	<b>1340</b>	1050	920	820	710
		1	20	24	6.10	<b>1460</b>	1140	1010	890	770
		2	20	24	8.40	<b>2020</b>	1580	1390	1230	1070
		1	24	28	6.40	<b>1540</b>	1200	1060	940	820
		2	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
		3	24	28	10.10	<b>2420</b>	1890	1670	1480	1280
	<b>1 1/4C-3 1/4 X 3 1/4-48</b>	1	14	18	6.20	<b>1490</b>	1160	1030	910	790
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	8.10	<b>1940</b>	1510	1340	1180	1030
		1	24	28	7.50	<b>1800</b>	1400	1240	1100	950
		2	24	28	9.10	<b>2180</b>	1700	1500	1330	1160
		3	24	28	10.50	<b>2520</b>	1970	1740	1540	1340

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL5 and FTVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT5; standard, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. Copper</b>	<b>1 1/4 C-4 1/4 X 4 1/4-32</b>	1	14	18	6.60	<b>1580</b>	1230	1090	960	840
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	10.30	<b>2470</b>	1930	1700	1510	1310
		1	24	28	7.30	<b>1750</b>	1370	1210	1070	930
		2	24	28	11.40	<b>2740</b>	2140	1890	1670	1450
		3	24	28	13.10	<b>3140</b>	2450	2170	1920	1660
	<b>1 1/4 C-4 1/4 X 4 1/4-40</b>	1	14	18	7.70	<b>1850</b>	1440	1280	1130	980
		1	20	24	8.40	<b>2020</b>	1580	1390	1230	1070
		2	20	24	11.30	<b>2710</b>	2110	1870	1650	1440
		1	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
		2	24	28	12.30	<b>2950</b>	2300	2040	1800	1560
		3	24	28	14.10	<b>3380</b>	2640	2330	2060	1790
	<b>1 1/4 C-4 1/4 X 4 1/4-48</b>	1	14	18	8.30	<b>1990</b>	1550	1370	1210	1050
		1	20	24	9.50	<b>2280</b>	1780	1570	1390	1210
		2	20	24	13.20	<b>3170</b>	2470	2190	1930	1680
		1	24	28	10.20	<b>2450</b>	1910	1690	1490	1300
		2	24	28	14.20	<b>3410</b>	2660	2350	2080	1810
		3	24	28	15.80	<b>3790</b>	2960	2620	2310	2010

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT3; low profile, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3/4 X 3/4-32</b>	1	8	12	3.20	<b>770</b>	600	530	470	410
		1	11	15	3.40	<b>820</b>	640	570	500	430
		1	14	18	3.50	<b>840</b>	660	580	510	450
		2	14	18	4.80	<b>1150</b>	900	790	700	610
	<b>1S-3/4 X 3/4-40</b>	1	8	12	3.50	<b>840</b>	660	580	510	450
		1	11	15	3.90	<b>940</b>	730	650	570	500
		1	14	18	4.00	<b>960</b>	750	660	590	510
		2	14	18	5.40	<b>1300</b>	1010	900	790	680
	<b>1S-3/4 X 3/4-48</b>	1	8	12	4.00	<b>960</b>	750	660	590	510
		1	11	15	4.30	<b>1030</b>	800	710	630	540
		1	14	18	4.50	<b>1080</b>	840	750	660	570
		2	14	18	6.10	<b>1460</b>	1140	1010	890	770
<b>1/4" Dia. steel</b>	<b>1/4S-3/4 X 3/4-32</b>	1	8	12	3.10	<b>740</b>	580	510	450	390
		1	11	15	3.30	<b>790</b>	620	550	480	420
		1	14	18	3.40	<b>820</b>	640	570	500	430
		2	14	18	4.70	<b>1130</b>	880	780	690	600
	<b>1/4S-3/4 X 3/4-40</b>	1	8	12	3.40	<b>820</b>	640	570	500	430
		1	11	15	3.80	<b>910</b>	710	630	560	480
		1	14	18	3.90	<b>940</b>	730	650	570	500
		2	14	18	5.30	<b>1270</b>	990	880	770	670
	<b>1/4S-3/4 X 3/4-48</b>	1	8	12	3.90	<b>940</b>	730	650	570	500
		1	11	15	4.20	<b>1010</b>	790	700	620	540
		1	14	18	4.40	<b>1060</b>	830	730	650	560
		2	14	18	6.00	<b>1440</b>	1120	990	880	760

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL3 and FTVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT3; low profile, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>1S-3/4 X 3/4-32</b>	1	8	12	4.30	<b>1030</b>	800	710	630	550
		1	11	15	4.60	<b>1100</b>	860	760	670	580
		1	14	18	4.90	<b>1180</b>	920	810	720	630
		2	14	18	6.70	<b>1610</b>	1260	1110	980	850
	<b>1S-3/4 X 3/4-40</b>	1	8	12	4.70	<b>1130</b>	880	780	690	600
		1	11	15	5.10	<b>1220</b>	950	840	740	650
		1	14	18	5.40	<b>1300</b>	1010	900	790	690
		2	14	18	7.40	<b>1780</b>	1390	1230	1090	940
	<b>1S-3/4 X 3/4-48</b>	1	8	12	5.10	<b>1220</b>	950	840	740	650
		1	11	15	5.60	<b>1340</b>	1050	920	820	710
		1	14	18	5.90	<b>1420</b>	1100	980	870	750
		2	14	18	8.00	<b>1920</b>	1500	1320	1170	1020
<b>3/4" Dia. copper</b>	<b>1¼S-3/4 X 3/4-32</b>	1	8	12	4.10	<b>980</b>	760	680	600	520
		1	11	15	4.40	<b>1060</b>	830	730	650	560
		1	14	18	4.70	<b>1130</b>	880	780	690	600
		2	14	18	6.40	<b>1540</b>	1200	1060	940	820
	<b>1¼S-3/4 X 3/4-40</b>	1	8	12	4.50	<b>1080</b>	840	750	660	570
		1	11	15	4.90	<b>1180</b>	920	810	720	630
		1	14	18	5.20	<b>1250</b>	980	860	760	660
		2	14	18	7.10	<b>1700</b>	1330	1170	1040	900
	<b>1¼S-3/4 X 3/4-48</b>	1	8	12	5.00	<b>1200</b>	940	830	730	640
		1	11	15	5.40	<b>1300</b>	1010	900	790	690
		1	14	18	5.70	<b>1370</b>	1070	950	840	730
		2	14	18	7.80	<b>1870</b>	1460	1290	1140	990

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL3 and FTVL3 ratings are derated by 12.5%.
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT3; low profile, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-2¾ X 4-32	1	8	12	4.20	1010	790	700	620	540
		1	11	15	4.50	1080	840	750	660	570
		1	14	18	4.80	1150	900	790	700	610
		2	14	18	6.60	1580	1230	1090	960	840
	1C-2¾ X 4-40	1	8	12	4.60	1110	870	770	680	590
		1	11	15	5.00	1200	940	830	730	640
		1	14	18	5.30	1270	990	880	770	670
		2	14	18	7.30	1750	1370	1210	1070	930
	1C-2¾ X 4-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.50	1320	1030	910	810	700
		1	14	18	5.80	1390	1080	960	850	740
		2	14	18	7.90	1900	1480	1310	1160	1010
1" Dia. copper	1C-3¼ X 3¼-32	1	8	12	4.00	960	750	660	590	510
		1	11	15	4.30	1030	800	710	630	550
		1	14	18	4.60	1100	860	760	670	580
		2	14	18	6.30	1510	1180	1040	920	800
	1C-3¼ X 3¼-40	1	8	12	4.40	1060	830	730	650	560
		1	11	15	4.80	1150	900	790	700	610
		1	14	18	5.10	1220	950	840	740	650
		2	14	18	7.00	1680	1310	1160	1020	890
	1C-3¼ X 3¼-48	1	8	12	4.90	1180	920	810	720	630
		1	11	15	5.30	1270	990	880	770	670
		1	14	18	5.60	1340	1050	920	820	710
		2	14	18	7.70	1850	1440	1280	1130	980

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL3 and FTVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FT3; low profile, flat top, top outlet

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-2 3/4 X 4-32</b>	1	8	12	4.10	<b>980</b>	760	680	600	520
		1	11	15	4.40	<b>1060</b>	830	730	650	560
		1	14	18	4.70	<b>1130</b>	880	780	690	600
		2	14	18	6.50	<b>1560</b>	1220	1080	950	830
	<b>1 1/4C-2 3/4 X 4-40</b>	1	8	12	4.50	<b>1080</b>	840	750	660	570
		1	11	15	4.90	<b>1180</b>	920	810	720	630
		1	14	18	5.20	<b>1250</b>	980	860	760	660
		2	14	18	7.20	<b>1730</b>	1350	1190	1060	920
	<b>1 1/4C-2 3/4 X 4-48</b>	1	8	12	4.90	<b>1180</b>	920	810	720	630
		1	11	15	5.40	<b>1300</b>	1010	900	790	690
		1	14	18	5.70	<b>1370</b>	1070	950	840	730
		2	14	18	7.80	<b>1870</b>	1460	1290	1140	990
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-3 1/4 X 3 1/4-32</b>	1	8	12	3.50	<b>840</b>	660	580	510	450
		1	11	15	3.80	<b>910</b>	710	630	560	480
		1	14	18	4.00	<b>960</b>	750	660	590	510
		2	14	18	5.50	<b>1320</b>	1030	910	810	700
	<b>1 1/4C-3 1/4 X 3 1/4-40</b>	1	8	12	4.40	<b>1060</b>	830	730	650	560
		1	11	15	4.70	<b>1130</b>	880	780	690	600
		1	14	18	5.00	<b>1200</b>	940	830	730	640
		2	14	18	6.90	<b>1660</b>	1290	1150	1010	880
	<b>1 1/4C-3 1/4 X 3 1/4-48</b>	1	8	12	4.80	<b>1150</b>	900	790	700	610
		1	11	15	5.20	<b>1250</b>	980	860	760	660
		1	14	18	5.50	<b>1320</b>	1030	910	810	700
		2	14	18	7.50	<b>1800</b>	1400	1240	1100	950

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FTHL3 and FTVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3¼ X 3¼-32</b>	1	14	18	4.10	<b>980</b>	770	680	600	520
		1	20	24	4.20	<b>1010</b>	790	700	620	540
		2	20	24	6.30	<b>1510</b>	1180	1040	920	800
		1	24	28	4.40	<b>1060</b>	830	730	650	560
		2	24	28	6.60	<b>1580</b>	1230	1090	960	840
		3	24	28	7.70	<b>1850</b>	1440	1280	1130	980
	<b>1S-3¼ X 3¼-40</b>	1	14	18	4.60	<b>1100</b>	860	760	670	580
		1	20	24	4.90	<b>1180</b>	920	810	720	630
		2	20	24	6.90	<b>1660</b>	1290	1150	1010	880
		1	24	28	5.10	<b>1220</b>	950	840	740	650
		2	24	28	7.30	<b>1750</b>	1360	1200	1060	920
		3	24	28	8.40	<b>2020</b>	1570	1390	1230	1060
	<b>1S-3¼ X 3¼-48</b>	1	14	18	5.10	<b>1220</b>	950	840	740	650
		1	20	24	5.70	<b>1370</b>	1070	950	840	730
		2	20	24	7.70	<b>1850</b>	1440	1280	1130	980
		1	24	28	5.90	<b>1420</b>	1110	980	870	750
		2	24	28	8.00	<b>1920</b>	1500	1320	1170	1020
		3	24	28	9.20	<b>2210</b>	1720	1520	1350	1170
<b>1" Dia. steel</b>	<b>1S-4¼ X 4¼-32</b>	1	14	18	5.90	<b>1420</b>	1110	980	870	750
		1	20	24	6.10	<b>1460</b>	1140	1010	890	770
		2	20	24	9.20	<b>2210</b>	1720	1520	1350	1170
		1	24	28	6.30	<b>1510</b>	1180	1040	920	800
		2	24	28	9.60	<b>2300</b>	1790	1590	1400	1220
		3	24	28	11.00	<b>2640</b>	2060	1820	1610	1400
	<b>1S-4¼ X 4¼-40</b>	1	14	18	6.60	<b>1580</b>	1230	1090	960	840
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	10.10	<b>2420</b>	1890	1670	1480	1280
		1	24	28	7.40	<b>1780</b>	1390	1230	1090	940
		2	24	28	10.50	<b>2520</b>	1970	1740	1540	1340
		3	24	28	12.00	<b>2880</b>	2250	1990	1760	1530
	<b>1S-4¼ X 4¼-48</b>	1	14	18	7.50	<b>1800</b>	1400	1240	1100	950
		1	20	24	8.40	<b>2020</b>	1580	1390	1230	1070
		2	20	24	11.10	<b>2660</b>	2070	1840	1620	1410
		1	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		2	24	28	11.50	<b>2760</b>	2150	1900	1680	1460
		3	24	28	13.30	<b>3190</b>	2490	2200	1950	1690

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	14	18	4.00	<b>960</b>	750	660	590	510
		1	20	24	4.10	<b>980</b>	760	680	600	520
		2	20	24	6.20	<b>1490</b>	1160	1030	910	790
		1	24	28	4.30	<b>1030</b>	800	710	630	550
		2	24	28	6.50	<b>1560</b>	1220	1080	950	830
		3	24	28	7.50	<b>1800</b>	1400	1240	1100	950
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	14	18	4.50	<b>1080</b>	840	750	660	570
		1	20	24	4.80	<b>1150</b>	900	790	700	610
		2	20	24	6.80	<b>1630</b>	1270	1120	990	860
		1	24	28	5.00	<b>1200</b>	940	830	730	640
		2	24	28	7.10	<b>1700</b>	1330	1170	1040	900
		3	24	28	8.20	<b>1970</b>	1540	1360	1200	1040
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	14	18	5.00	<b>1200</b>	940	830	730	640
		1	20	24	5.60	<b>1340</b>	1050	920	820	710
		2	20	24	7.50	<b>1800</b>	1400	1240	1100	960
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	7.80	<b>1870</b>	1460	1290	1140	990
		3	24	28	9.00	<b>2160</b>	1680	1490	1320	1140
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	14	18	5.80	<b>1390</b>	1080	960	850	740
		1	20	24	6.00	<b>1440</b>	1120	990	880	760
		2	20	24	9.00	<b>2160</b>	1680	1490	1320	1140
		1	24	28	6.20	<b>1490</b>	1160	1030	910	790
		2	24	28	9.40	<b>2260</b>	1760	1560	1380	1200
		3	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
	<b>1 1/4S-4 1/4 X 4 1/4-40</b>	1	14	18	6.50	<b>1560</b>	1220	1080	950	830
		1	20	24	7.00	<b>1680</b>	1310	1160	1020	890
		2	20	24	9.90	<b>2380</b>	1860	1640	1450	1260
		1	24	28	7.20	<b>1730</b>	1350	1190	1060	920
		2	24	28	10.30	<b>2470</b>	1930	1700	1510	1310
		3	24	28	11.80	<b>2830</b>	2210	1950	1730	1500
	<b>1 1/4S-4 1/4 X 4 1/4-48</b>	1	14	18	7.30	<b>1750</b>	1370	1210	1070	930
		1	20	24	8.20	<b>1970</b>	1540	1360	1200	1040
		2	20	24	10.90	<b>2620</b>	2040	1810	1600	1390
		1	24	28	8.40	<b>2020</b>	1580	1390	1230	1070
		2	24	28	11.30	<b>2710</b>	2110	1870	1660	1440
		3	24	28	13.00	<b>3120</b>	2430	2150	1900	1650

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
2" Dia. steel	2S-4¼ X 4¼-32	1	14	18	5.80	1390	1080	960	850	740
		1	20	24	6.00	1400	1120	990	880	760
		2	20	24	8.80	2110	1650	1460	1280	1120
		1	24	28	6.20	1490	1160	1030	910	790
		2	24	28	9.10	2180	1700	1500	1330	1160
		3	24	28	10.50	2520	1970	1740	1540	1340
	2S-4¼ X 4¼-40	1	14	18	6.50	1560	1220	1080	950	830
		1	20	24	6.90	1660	1290	1150	1010	880
		2	20	24	9.50	2280	1790	1570	1390	1210
		1	24	28	7.20	1730	1350	1190	1060	920
		2	24	28	10.00	2400	1870	1660	1460	1270
		3	24	28	11.50	2760	2150	1900	1680	1460
	2S-4¼ X 4¼-48	1	14	18	7.30	1750	1370	1210	1070	930
		1	20	24	7.90	1900	1480	1310	1160	1010
		2	20	24	10.20	2450	1910	1690	1490	1300
		1	24	28	8.40	2020	1580	1390	1230	1070
		2	24	28	10.80	2590	2020	1790	1580	1370
		3	24	28	12.40	2980	2320	2060	1820	1580

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/8" Dia. copper</b>	<b>3/8C-2 3/4 X 4-32</b>	1	14	18	4.57	<b>1096</b>	855	756	668	581
		1	20	24	4.81	<b>1155</b>	901	797	705	612
		2	20	24	7.21	<b>1729</b>	1349	1193	1055	916
		1	24	28	5.09	<b>1221</b>	952	842	745	647
		2	24	28	7.92	<b>1901</b>	1483	1312	1159	1007
		3	24	28	9.10	<b>2185</b>	1704	1507	1333	1158
	<b>3/8C-2 3/4 X 4-40</b>	1	14	18	5.42	<b>1300</b>	1014	897	793	689
		1	20	24	5.89	<b>1412</b>	1102	975	862	749
		2	20	24	7.65	<b>1835</b>	1431	1266	1119	972
		1	24	28	6.13	<b>1472</b>	1148	1016	898	780
		2	24	28	8.31	<b>1993</b>	1555	1375	1216	1056
		3	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
	<b>3/8C-2 3/4 X 4-48</b>	1	14	18	5.80	<b>1393</b>	1086	961	849	738
		1	20	24	6.60	<b>1584</b>	1236	1093	966	840
		2	20	24	7.87	<b>1888</b>	1472	1302	1151	1000
		1	24	28	7.12	<b>1709</b>	1333	1179	1043	906
		2	24	28	8.58	<b>2059</b>	1606	1421	1256	1091
		3	24	28	9.85	<b>2363</b>	1843	1630	1441	1252
<b>3/4" Dia. copper</b>	<b>3/4C-3 1/4 X 3 1/4-32</b>	1	14	18	5.30	<b>1270</b>	990	880	770	670
		1	20	24	5.80	<b>1390</b>	1080	960	850	740
		2	20	24	8.10	<b>1940</b>	1510	1340	1180	1030
		1	24	28	6.10	<b>1460</b>	1140	1010	890	770
		2	24	28	9.00	<b>2160</b>	1680	1490	1320	1140
		3	24	28	10.30	<b>2470</b>	1930	1700	1510	1310
	<b>3/4C-3 1/4 X 3 1/4-40</b>	1	14	18	5.90	<b>1420</b>	1110	980	870	750
		1	20	24	6.50	<b>1560</b>	1220	1080	950	830
		2	20	24	9.40	<b>2260</b>	1760	1560	1380	1200
		1	24	28	6.90	<b>1660</b>	1290	1150	1010	880
		2	24	28	9.70	<b>2330</b>	1820	1610	1420	1230
		3	24	28	10.70	<b>2570</b>	2000	1770	1570	1360
	<b>3/4C-3 1/4 X 3 1/4-48</b>	1	14	18	6.40	<b>1540</b>	1200	1060	940	820
		1	20	24	7.40	<b>1780</b>	1390	1230	1090	940
		2	20	24	9.70	<b>2330</b>	1820	1610	1420	1230
		1	24	28	7.90	<b>1900</b>	1480	1310	1160	1010
		2	24	28	10.00	<b>2400</b>	1870	1660	1460	1270
		3	24	28	11.00	<b>2640</b>	2060	1820	1600	1400

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>3/4C-4 1/4 X 4 1/4-32</b>	1	14	18	6.90	<b>1660</b>	1290	1150	1010	880
		1	20	24	7.30	<b>1750</b>	1370	1210	1070	930
		2	20	24	10.90	<b>2620</b>	2040	1810	1600	1390
		1	24	28	7.70	<b>1850</b>	1440	1280	1130	980
		2	24	28	12.00	<b>2880</b>	2250	1990	1760	1530
		3	24	28	13.80	<b>3310</b>	2580	2280	2020	1760
	<b>3/4C-4 1/4 X 4 1/4-40</b>	1	14	18	8.20	<b>1970</b>	1540	1360	1200	1040
		1	20	24	8.90	<b>2140</b>	1670	1480	1300	1130
		2	20	24	11.60	<b>2780</b>	2170	1920	1700	1470
		1	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
		2	24	28	12.60	<b>3020</b>	2360	2080	1840	1600
		3	24	28	14.40	<b>3460</b>	2700	2390	2110	1830
	<b>3/4C-4 1/4 X 4 1/4-48</b>	1	14	18	8.80	<b>2110</b>	1650	1460	1290	1120
		1	20	24	10.00	<b>2400</b>	1870	1660	1460	1270
		2	20	24	11.90	<b>2860</b>	2230	1980	1740	1520
		1	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
		2	24	28	13.00	<b>3120</b>	2430	2150	1900	1650
		3	24	28	14.90	<b>3580</b>	2790	2470	2180	1900
<b>1" Dia. copper</b>	<b>1C-2 3/4 X 4-32</b>	1	14	18	4.48	<b>1076</b>	839	742	656	570
		1	20	24	4.76	<b>1142</b>	891	788	696	605
		2	20	24	7.07	<b>1696</b>	1323	1170	1035	899
		1	24	28	4.95	<b>1188</b>	927	820	725	630
		2	24	28	7.78	<b>1868</b>	1457	1289	1139	990
		3	24	28	8.91	<b>2138</b>	1668	1475	1304	1133
	<b>1C-2 3/4 X 4-40</b>	1	14	18	5.28	<b>1267</b>	988	874	773	672
		1	20	24	5.75	<b>1379</b>	1076	952	841	731
		2	20	24	7.54	<b>1808</b>	1411	1248	1103	958
		1	24	28	6.00	<b>1439</b>	1122	993	878	763
		2	24	28	8.20	<b>1967</b>	1534	1357	1200	1042
		3	24	28	9.30	<b>2231</b>	1740	1539	1361	1182
	<b>1C-2 3/4 X 4-48</b>	1	14	18	5.67	<b>1360</b>	1060	938	829	721
		1	20	24	6.46	<b>1551</b>	1210	1070	946	822
		2	20	24	7.73	<b>1855</b>	1447	1280	1131	983
		1	24	28	6.99	<b>1676</b>	1308	1157	1023	888
		2	24	28	8.39	<b>2013</b>	1570	1389	1228	1067
		3	24	28	9.63	<b>2310</b>	1802	1594	1409	1224

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1" Dia. copper</b>	<b>1C-3¼ X 3¼-32</b>	1	14	18	5.20	<b>1250</b>	980	860	760	660
		1	20	24	5.70	<b>1370</b>	1070	950	840	730
		2	20	24	7.90	<b>1900</b>	1480	1310	1160	1010
		1	24	28	6.00	<b>1440</b>	1120	990	880	760
		2	24	28	8.80	<b>2110</b>	1650	1460	1290	1120
		3	24	28	10.10	<b>2420</b>	1890	1670	1480	1280
	<b>1C-3¼ X 3¼-40</b>	1	14	18	5.80	<b>1390</b>	1080	960	850	740
		1	20	24	6.40	<b>1540</b>	1200	1060	940	820
		2	20	24	9.20	<b>2210</b>	1720	1520	1350	1170
		1	24	28	6.80	<b>1630</b>	1270	1120	990	860
		2	24	28	9.50	<b>2280</b>	1780	1570	1390	1210
		3	24	28	10.60	<b>2540</b>	1980	1750	1550	1350
	<b>1C-3¼ X 3¼-48</b>	1	14	18	6.30	<b>1510</b>	1180	1040	920	800
		1	20	24	7.20	<b>1730</b>	1350	1190	1060	920
		2	20	24	9.50	<b>2280</b>	1780	1570	1390	1208
		1	24	28	7.70	<b>1850</b>	1440	1280	1130	980
		2	24	28	9.80	<b>2350</b>	1830	1620	1430	1250
		3	24	28	10.80	<b>2590</b>	2020	1790	1580	1370
<b>1" Dia. copper</b>	<b>1C-4¼ X 4¼-32</b>	1	14	18	6.80	<b>1630</b>	1270	1120	990	860
		1	20	24	7.20	<b>1730</b>	1350	1190	1060	920
		2	20	24	10.70	<b>2570</b>	2000	1770	1570	1360
		1	24	28	7.50	<b>1800</b>	1400	1240	1100	950
		2	24	28	11.80	<b>2830</b>	2200	1950	1730	1500
		3	24	28	13.50	<b>3240</b>	2530	2240	1980	1720
	<b>1C-4¼ X 4¼-40</b>	1	14	18	8.00	<b>1920</b>	1500	1320	1170	1020
		1	20	24	8.70	<b>2090</b>	1630	1440	1270	1110
		2	20	24	11.40	<b>2740</b>	2140	1890	1670	1450
		1	24	28	9.10	<b>2180</b>	1700	1500	1330	1160
		2	24	28	12.40	<b>2980</b>	2330	2060	1820	1580
		3	24	28	14.10	<b>3380</b>	2640	2330	2060	1790
	<b>1C-4¼ X 4¼-48</b>	1	14	18	8.60	<b>2060</b>	1610	1420	1260	1090
		1	20	24	9.80	<b>2350</b>	1830	1620	1430	1250
		2	20	24	11.70	<b>2810</b>	2190	1940	1710	1490
		1	24	28	10.60	<b>2540</b>	1980	1750	1550	1350
		2	24	28	12.70	<b>3050</b>	2380	2100	1860	1620
		3	24	28	14.60	<b>3500</b>	2730	2420	2140	1860

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-2 1/4 X 4-32</b>	1	14	18	4.43	<b>1063</b>	829	733	648	563
		1	20	24	4.68	<b>1122</b>	875	774	684	595
		2	20	24	6.93	<b>1663</b>	1297	1148	1015	881
		1	24	28	4.90	<b>1175</b>	916	811	717	623
		2	24	28	7.65	<b>1835</b>	1431	1266	1119	972
		3	24	28	8.77	<b>2105</b>	1642	1453	1284	1116
	<b>1 1/4C-2 1/4 X 4-40</b>	1	14	18	5.23	<b>1254</b>	978	865	765	665
		1	20	24	5.67	<b>1360</b>	1060	938	829	721
		2	20	24	7.40	<b>1775</b>	1385	1225	1083	941
		1	24	28	5.94	<b>1426</b>	1112	984	870	756
		2	24	28	8.06	<b>1934</b>	1508	1334	1180	1025
		3	24	28	9.19	<b>2204</b>	1719	1521	1345	1168
	<b>1 1/4C-2 1/4 X 4-48</b>	1	14	18	5.61	<b>1346</b>	1050	929	821	714
		1	20	24	6.41	<b>1538</b>	1199	1061	938	815
		2	20	24	7.59	<b>1822</b>	1421	1257	1111	965
		1	24	28	6.88	<b>1650</b>	1287	1139	1007	875
		2	24	28	8.25	<b>1980</b>	1544	1366	1208	1049
		3	24	28	9.52	<b>2284</b>	1781	1576	1393	1210
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-3 1/4 X 3 1/4-32</b>	1	14	18	4.80	<b>1150</b>	900	790	700	610
		1	20	24	5.50	<b>1320</b>	1030	910	810	700
		2	20	24	7.70	<b>1850</b>	1400	1280	1130	980
		1	24	28	5.80	<b>1390</b>	1080	960	850	740
		2	24	28	8.60	<b>2060</b>	1610	1420	1260	1090
		3	24	28	9.90	<b>2380</b>	1860	1640	1450	1260
	<b>1 1/4C-3 1/4 X 3 1/4-40</b>	1	14	18	5.70	<b>1370</b>	1070	950	840	730
		1	20	24	6.20	<b>1490</b>	1160	1030	910	790
		2	20	24	9.00	<b>2160</b>	1680	1490	1320	1140
		1	24	28	6.50	<b>1560</b>	1220	1080	950	830
		2	24	28	9.30	<b>2230</b>	1740	1540	1360	1180
		3	24	28	10.40	<b>2500</b>	1950	1720	1530	1330
	<b>1 1/4C-3 1/4 X 3 1/4-48</b>	1	14	18	6.10	<b>1460</b>	1140	1040	890	770
		1	20	24	7.10	<b>1700</b>	1330	1170	1040	900
		2	20	24	9.30	<b>2230</b>	1740	1540	1360	1180
		1	24	28	7.60	<b>1820</b>	1420	1260	1110	960
		2	24	28	9.60	<b>2300</b>	1790	1590	1400	1220
		3	24	28	10.70	<b>2570</b>	2000	1770	1570	1360

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS5; standard, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1 1/4" Dia. copper	1 1/4C-4 1/4 X 4 1/4-32	1	14	18	6.70	1610	1260	1110	980	850
		1	20	24	7.10	1700	1330	1170	1040	900
		2	20	24	10.50	2520	1970	1740	1540	1340
		1	24	28	7.40	1780	1390	1230	1090	940
		2	24	28	11.60	2780	2170	1920	1700	1480
		3	24	28	13.30	3190	2490	2200	1950	1690
	1 1/4C-4 1/4 X 4 1/4-40	1	14	18	7.90	1900	1480	1310	1160	1010
		1	20	24	8.60	2060	1610	1420	1260	1090
		2	20	24	11.20	2690	2100	1860	1640	1430
		1	24	28	9.00	2160	1680	1490	1320	1140
		2	24	28	12.20	2930	2290	2020	1790	1550
		3	24	28	13.90	3340	2610	2300	2040	1770
	1 1/4C-4 1/4 X 4 1/4-48	1	14	18	8.50	2040	1590	1410	1240	1080
		1	20	24	9.70	2330	1820	1610	1420	1230
		2	20	24	11.50	2760	2150	1900	1680	1460
		1	24	28	10.40	2500	1950	1720	1530	1330
		2	24	28	12.50	3000	2340	2070	1830	1590
		3	24	28	14.40	3460	2700	2390	2110	1830

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL5 and FSVL5 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS3; low profile, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
<b>1" Dia. steel</b>	<b>1S-3¼ X 3¼-32</b>	1	8	12	3.30	<b>790</b>	620	550	480	420
		1	11	15	3.50	<b>840</b>	660	580	510	450
		1	14	18	3.70	<b>890</b>	690	610	540	470
		2	14	18	5.00	<b>1200</b>	940	830	730	640
	<b>1S-3¼ X 3¼-40</b>	1	8	12	3.60	<b>860</b>	670	590	520	460
		1	11	15	3.90	<b>940</b>	730	650	570	500
		1	14	18	4.10	<b>980</b>	760	680	600	520
		2	14	18	5.60	<b>1340</b>	1050	920	820	710
	<b>1S-3¼ X 3¼-48</b>	1	8	12	4.10	<b>980</b>	760	680	600	520
		1	11	15	4.40	<b>1060</b>	830	730	650	560
		1	14	18	4.60	<b>1100</b>	860	760	670	580
		2	14	18	6.30	<b>1510</b>	1180	1040	920	800
<b>1½" Dia. steel</b>	<b>1¼S-3¼ X 3¼-32</b>	1	8	12	3.20	<b>770</b>	600	530	470	410
		1	11	15	3.40	<b>820</b>	640	570	500	430
		1	14	18	3.60	<b>860</b>	670	590	520	460
		2	14	18	4.90	<b>1180</b>	920	810	720	630
	<b>1¼S-3¼ X 3¼-40</b>	1	8	12	3.50	<b>840</b>	660	580	510	450
		1	11	15	3.80	<b>910</b>	710	630	560	480
		1	14	18	4.00	<b>960</b>	750	660	590	510
		2	14	18	5.50	<b>1320</b>	1030	910	810	700
	<b>1¼S-3¼ X 3¼-48</b>	1	8	12	4.00	<b>960</b>	750	660	590	510
		1	11	15	4.30	<b>1030</b>	800	710	630	550
		1	14	18	4.50	<b>1080</b>	840	750	660	570
		2	14	18	6.20	<b>1490</b>	1160	1030	910	790

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL3 and FSVL3 ratings are derated by 12.5%.
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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS3; low profile, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>3/4C-23/4 X 4-32</b>	1	8	12	4.40	<b>1060</b>	830	730	650	560
		1	11	15	4.70	<b>1130</b>	880	780	690	600
		1	14	18	5.00	<b>1200</b>	940	830	730	640
		2	14	18	6.80	<b>1630</b>	1270	1120	990	860
	<b>3/4C-23/4 X 4-40</b>	1	8	12	4.80	<b>1150</b>	900	790	700	610
		1	11	15	5.20	<b>1240</b>	970	850	760	660
		1	14	18	5.50	<b>1320</b>	1030	910	810	700
		2	14	18	7.50	<b>1800</b>	1400	1240	1100	950
	<b>3/4C-23/4 X 4-48</b>	1	8	12	5.20	<b>1240</b>	970	850	760	660
		1	11	15	5.70	<b>1360</b>	1060	940	830	720
		1	14	18	6.00	<b>1440</b>	1120	990	880	760
		2	14	18	8.20	<b>1970</b>	1540	1360	1200	1040
<b>3/4" Dia. copper</b>	<b>3/4C-31/4 X 31/4-32</b>	1	8	12	4.20	<b>1010</b>	790	700	620	540
		1	11	15	4.50	<b>1080</b>	840	750	660	570
		1	14	18	4.70	<b>1130</b>	880	780	690	600
		2	14	18	6.40	<b>1540</b>	1200	1060	940	820
	<b>3/4C-31/4 X 31/4-40</b>	1	8	12	4.50	<b>1080</b>	840	750	660	570
		1	11	15	4.90	<b>1180</b>	920	810	720	630
		1	14	18	5.20	<b>1250</b>	980	860	760	660
		2	14	18	7.10	<b>1700</b>	1330	1170	1040	900
	<b>3/4C-31/4 X 31/4-48</b>	1	8	12	5.00	<b>1200</b>	940	830	730	640
		1	11	15	5.40	<b>1300</b>	1010	900	790	690
		1	14	18	5.70	<b>1370</b>	1070	950	840	730
		2	14	18	7.90	<b>1900</b>	1480	1310	1160	1010
<b>1" Dia. copper</b>	<b>1C-23/4 X 4-32</b>	1	8	12	4.30	<b>1030</b>	800	710	630	550
		1	11	15	4.60	<b>1100</b>	860	760	670	580
		1	14	18	4.90	<b>1180</b>	920	810	720	630
		2	14	18	6.70	<b>1610</b>	1260	1110	980	850
	<b>1C-23/4 X 4-40</b>	1	8	12	4.70	<b>1130</b>	880	780	690	600
		1	11	15	5.10	<b>1220</b>	950	840	740	650
		1	14	18	5.40	<b>1300</b>	1010	900	790	690
		2	14	18	7.40	<b>1780</b>	1390	1230	1090	940
	<b>1C-23/4 X 4-48</b>	1	8	12	5.10	<b>1220</b>	950	840	740	650
		1	11	15	5.60	<b>1340</b>	1050	920	820	710
		1	14	18	5.90	<b>1420</b>	1110	980	870	750
		2	14	18	8.10	<b>1940</b>	1510	1340	1180	1030

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL3 and FSVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FS3; low profile, sloped top

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-3¼ X 3¼-32	1	8	12	4.10	980	760	680	600	520
		1	11	15	4.40	1060	830	730	650	560
		1	14	18	4.70	1130	880	780	690	600
		2	14	18	6.40	1540	1200	1060	940	820
	1C-3¼ X 3¼-40	1	8	12	4.50	1080	840	750	660	570
		1	11	15	4.90	1180	920	810	720	630
		1	14	18	5.20	1250	980	860	760	660
		2	14	18	7.10	1700	1330	1170	1040	900
	1C-3¼ X 3¼-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.40	1300	1010	900	790	690
		1	14	18	5.70	1370	1070	950	840	730
		2	14	18	7.80	1870	1460	1290	1140	990
1¼" Dia. copper	1¼C-2¾ X 4-32	1	8	12	4.10	980	760	680	600	520
		1	11	15	4.40	1060	830	730	650	560
		1	14	18	4.70	1130	880	780	690	600
		2	14	18	6.40	1540	1200	1060	940	820
	1¼C-2¾ X 4-40	1	8	12	4.60	1100	860	760	670	580
		1	11	15	4.90	1180	920	810	720	630
		1	14	18	5.20	1250	980	860	760	660
		2	14	18	7.10	1700	1330	1170	1040	900
	1¼C-2¾ X 4-48	1	8	12	5.00	1200	940	830	730	640
		1	11	15	5.40	1300	1010	900	790	690
		1	14	18	5.70	1370	1070	950	840	730
		2	14	18	7.80	1870	1460	1290	1140	990
1½" Dia. copper	1½C-3¼ X 3¼-32	1	8	12	3.60	860	670	590	520	460
		1	11	15	3.90	940	730	650	570	500
		1	14	18	4.10	980	760	680	600	520
		2	14	18	5.60	1340	1050	920	820	710
	1½C-3¼ X 3¼-40	1	8	12	4.50	1080	840	750	660	570
		1	11	15	4.80	1150	900	790	700	610
		1	14	18	5.10	1220	950	840	740	650
		2	14	18	7.00	1680	1310	1160	1020	890
	1½C-3¼ X 3¼-48	1	8	12	4.90	1180	920	810	720	630
		1	11	15	5.30	1270	990	880	770	670
		1	14	18	5.60	1340	1050	920	820	710
		2	14	18	7.70	1850	1440	1280	1130	980

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)

- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- FSHL3 and FSVL3 ratings are derated by 12.5%.
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS5; standard, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat					
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
<b>Steel element</b>											
1" Dia. steel	1S-3¼ X 3¼-32	1	18	22	3.82	<b>917</b>	716	633	560	486	
		1	24	28	4.39	<b>1053</b>	821	727	642	558	
		2	24	28	6.65	<b>1595</b>	1244	1100	973	845	
	1S-3¼ X 3¼-40	1	18	22	4.18	<b>1004</b>	783	693	612	532	
		1	24	28	4.90	<b>1176</b>	917	811	717	623	
		2	24	28	7.31	<b>1755</b>	1369	1211	1070	930	
	1S-3¼ X 3¼-48	1	18	22	4.60	<b>1104</b>	861	762	673	585	
		1	24	28	5.39	<b>1293</b>	1009	892	789	685	
		2	24	28	8.04	<b>1930</b>	1506	1332	1177	1023	
	1" Dia. steel	1S-4¼ X 4¼-32	1	18	22	5.10	<b>1223</b>	954	844	746	648
			1	24	28	5.85	<b>1404</b>	1095	969	856	744
			2	24	28	8.86	<b>2126</b>	1659	1467	1297	1127
1S-4¼ X 4¼-40		1	18	22	5.58	<b>1338</b>	1044	923	816	709	
		1	24	28	6.53	<b>1568</b>	1223	1082	956	831	
		2	24	28	9.75	<b>2340</b>	1825	1614	1427	1240	
1S-4¼ X 4¼-48		1	18	22	6.13	<b>1472</b>	1148	1016	898	780	
		1	24	28	7.19	<b>1724</b>	1345	1190	1052	914	
		2	24	28	10.72	<b>2574</b>	2007	1776	1570	1364	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS5; standard, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat					
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
<b>Steel element</b>											
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	18	22	3.75	<b>899</b>	702	621	549	477	
		1	24	28	4.30	<b>1032</b>	805	712	630	547	
		2	24	28	6.51	<b>1564</b>	1220	1079	954	829	
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	18	22	4.10	<b>984</b>	768	679	600	522	
		1	24	28	4.80	<b>1153</b>	899	795	703	611	
		2	24	28	7.17	<b>1720</b>	1342	1187	1049	912	
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	18	22	4.51	<b>1082</b>	844	747	660	574	
		1	24	28	5.28	<b>1268</b>	989	875	773	672	
		2	24	28	7.88	<b>1892</b>	1476	1306	1154	1003	
	<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	18	22	5.00	<b>1199</b>	935	827	732	636
			1	24	28	5.74	<b>1377</b>	1074	950	840	730
			2	24	28	8.69	<b>2085</b>	1626	1438	1272	1105
<b>1 1/4S-4 1/4 X 4 1/4-40</b>		1	18	22	5.47	<b>1312</b>	1023	905	800	695	
		1	24	28	6.40	<b>1537</b>	1199	1061	938	815	
		2	24	28	9.56	<b>2294</b>	1789	1583	1399	1216	
<b>1 1/4S-4 1/4 X 4 1/4-48</b>		1	18	22	6.01	<b>1443</b>	1126	996	880	765	
		1	24	28	7.04	<b>1691</b>	1319	1167	1031	896	
		2	24	28	10.51	<b>2523</b>	1968	1741	1539	1337	
<b>2" Dia. steel</b>		<b>2S-4 1/4 X 4 1/4-32</b>	1	18	22	4.91	<b>1179</b>	919	813	719	625
			1	24	28	5.69	<b>1366</b>	1066	943	833	724
			2	24	28	8.27	<b>1986</b>	1549	1370	1211	1052
	<b>2S-4 1/4 X 4 1/4-40</b>	1	18	22	5.40	<b>1297</b>	1011	895	791	687	
		1	24	28	6.26	<b>1503</b>	1172	1037	917	796	
		2	24	28	9.10	<b>2184</b>	1704	1507	1332	1158	
	<b>2S-4 1/4 X 4 1/4-48</b>	1	18	22	5.94	<b>1426</b>	1113	984	870	756	
		1	24	28	6.89	<b>1653</b>	1289	1141	1008	876	
		2	24	28	10.01	<b>2402</b>	1874	1658	1465	1273	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS5; standard, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
<b>3/4" Dia. copper</b>	<b>3/4C-2 3/4 X 4-32</b>	1	18	22	4.24	<b>1016</b>	793	701	620	539
		1	24	28	4.48	<b>1076</b>	839	742	656	570
		2	24	28	6.66	<b>1597</b>	1246	1102	974	847
	<b>3/4C-2 3/4 X 4-40</b>	1	18	22	5.01	<b>1201</b>	937	829	733	637
		1	24	28	5.47	<b>1313</b>	1024	906	801	696
		2	24	28	7.12	<b>1709</b>	1333	1179	1043	906
	<b>3/4C-2 3/4 X 4-48</b>	1	18	22	5.42	<b>1300</b>	1014	897	793	689
		1	24	28	6.13	<b>1472</b>	1148	1016	898	780
		2	24	28	7.32	<b>1756</b>	1369	1211	1071	930
<b>3/4" Dia. copper</b>	<b>3/4C-3 1/4 X 3 1/4-32</b>	1	18	22	4.81	<b>1155</b>	901	797	705	612
		1	24	28	5.09	<b>1223</b>	954	844	746	648
		2	24	28	7.56	<b>1815</b>	1416	1252	1107	962
	<b>3/4C-3 1/4 X 3 1/4-40</b>	1	18	22	5.69	<b>1365</b>	1065	942	833	723
		1	24	28	6.22	<b>1493</b>	1164	1030	910	791
		2	24	28	8.09	<b>1943</b>	1515	1340	1185	1030
	<b>3/4C-3 1/4 X 3 1/4-48</b>	1	18	22	6.16	<b>1478</b>	1152	1019	901	783
		1	24	28	6.97	<b>1673</b>	1305	1154	1020	886
		2	24	28	8.31	<b>1995</b>	1556	1377	1217	1057
<b>3/4" Dia. copper</b>	<b>3/4C-4 1/4 X 4 1/4-32</b>	1	18	22	6.40	<b>1540</b>	1201	1063	939	816
		1	24	28	6.80	<b>1630</b>	1271	1125	994	864
		2	24	28	10.10	<b>2420</b>	1888	1670	1476	1283
	<b>3/4C-4 1/4 X 4 1/4-40</b>	1	18	22	7.60	<b>1820</b>	1420	1256	1110	965
		1	24	28	8.30	<b>1990</b>	1552	1373	1214	1055
		2	24	28	10.80	<b>2590</b>	2020	1787	1580	1373
	<b>3/4C-4 1/4 X 4 1/4-48</b>	1	18	22	8.20	<b>1970</b>	1537	1359	1202	1044
		1	24	28	9.30	<b>2230</b>	1739	1539	1360	1182
		2	24	28	11.10	<b>2660</b>	2075	1835	1623	1410

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS5; standard, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1" Dia. copper	1C-2¼ X 4-32	1	18	22	4.15	997	777	688	608	528
		1	24	28	4.43	1063	829	733	648	563
		2	24	28	6.60	1584	1236	1093	966	840
	1C-2¼ X 4-40	1	18	22	4.90	1175	916	811	717	623
		1	24	28	5.34	1280	999	883	781	679
		2	24	28	6.99	1676	1308	1157	1023	888
	1C-2¼ X 4-48	1	18	22	5.28	1267	988	874	773	672
		1	24	28	6.00	1439	1122	993	878	763
		2	24	28	7.21	1729	1349	1193	1055	916
1" Dia. copper	1C-3¼ X 3¼-32	1	18	22	4.72	1133	883	781	691	600
		1	24	28	5.03	1208	942	833	737	640
		2	24	28	7.50	1800	1404	1242	1098	954
	1C-3¼ X 3¼-40	1	18	22	5.56	1335	1041	921	814	708
		1	24	28	6.06	1455	1135	1004	888	771
	1C-3¼ X 3¼-48	1	18	22	6.00	1440	1123	994	878	763
		1	24	28	6.81	1635	1275	1128	997	867
		2	24	28	8.19	1965	1533	1356	1199	1041
		1C-4¼ X 4¼-32	1	18	22	6.30	1510	1178	1042	921
1	24		28	6.70	1610	1256	1111	982	853	
2	24		28	10.00	2400	1872	1656	1464	1272	
1C-4¼ X 4¼-40	1	18	22	7.40	1780	1388	1228	1086	943	
	1	24	28	8.10	1940	1513	1339	1183	1028	
	2	24	28	10.60	2540	1981	1753	1549	1346	
	1C-4¼ X 4¼-48	1	18	22	8.00	1920	1498	1325	1171	1018
1		24	28	9.10	2180	1700	1504	1330	1155	
2		24	28	10.90	2620	2044	1808	1598	1389	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS5; standard, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> /ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
1 1/4" Dia. copper	1 1/4C-2 3/4 X 4-32	1	18	22	4.10	<b>983</b>	767	679	600	521
		1	24	28	4.35	<b>1043</b>	813	720	636	553
		2	24	28	6.46	<b>1551</b>	1210	1070	946	822
	1 1/4C-2 3/4 X 4-40	1	18	22	4.81	<b>1155</b>	901	797	705	612
		1	24	28	5.28	<b>1267</b>	988	874	773	672
		2	24	28	6.88	<b>1650</b>	1287	1139	1007	875
	1 1/4C-2 3/4 X 4-48	1	18	22	5.23	<b>1254</b>	978	865	765	665
		1	24	28	5.94	<b>1426</b>	1112	984	870	756
		2	24	28	7.07	<b>1696</b>	1323	1170	1035	899
1 1/4" Dia. copper	1 1/4C-3 1/4 X 3 1/4-32	1	18	22	4.66	<b>1118</b>	872	771	682	592
		1	24	28	4.94	<b>1185</b>	924	818	723	628
		2	24	28	7.34	<b>1763</b>	1375	1216	1075	934
	1 1/4C-3 1/4 X 3 1/4-40	1	18	22	5.47	<b>1313</b>	1024	906	801	696
		1	24	28	6.00	<b>1440</b>	1123	994	878	763
		2	24	28	7.81	<b>1875</b>	1463	1294	1144	994
	1 1/4C-3 1/4 X 3 1/4-48	1	18	22	5.94	<b>1425</b>	1112	983	869	755
		1	24	28	6.75	<b>1620</b>	1264	1118	988	859
		2	24	28	8.03	<b>1928</b>	1503	1330	1176	1022
1 1/4" Dia. copper	1 1/4C-4 1/4 X 4 1/4-32	1	18	22	6.20	<b>1490</b>	1162	1028	909	790
		1	24	28	6.60	<b>1580</b>	1232	1090	964	837
		2	24	28	9.80	<b>2350</b>	1833	1622	1434	1246
	1 1/4C-4 1/4 X 4 1/4-40	1	18	22	7.20	<b>1750</b>	1365	1208	1068	928
		1	24	28	8.00	<b>1920</b>	1498	1325	1171	1018
		2	24	28	10.40	<b>2500</b>	1950	1725	1525	1325
	1 1/4C-4 1/4 X 4 1/4-48	1	18	22	7.90	<b>1900</b>	1482	1311	1159	1007
		1	24	28	9.00	<b>2160</b>	1685	1490	1318	1145
		2	24	28	10.70	<b>2570</b>	2005	1773	1568	1362

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS3; low profile, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>										
1" Dia. steel	1S-3¼ X 3¼-32	1	14	18	3.44	<b>826</b>	644	570	504	438
	1S-3¼ X 3¼-40	1	14	18	3.76	<b>903</b>	705	623	551	479
	1S-3¼ X 3¼-48	1	14	18	4.14	<b>994</b>	775	686	606	527
1¼" Dia. steel	1¼S-3¼ X 3¼-32	1	14	18	3.37	<b>809</b>	631	559	494	429
	1¼S-3¼ X 3¼-40	1	14	18	3.69	<b>886</b>	691	611	540	469
	1¼S-3¼ X 3¼-48	1	14	18	4.06	<b>974</b>	760	672	594	516

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: model FSOS3; low profile, double sloped

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Rows of element (on 6-inch centers)	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>										
3/4" Dia. copper	3/4C-2 3/4 X 4-32	1	14	18	3.52	<b>844</b>	658	582	515	447
	3/4C-2 3/4 X 4-40	1	14	18	4.15	<b>997</b>	778	688	608	528
	3/4C-2 3/4 X 4-48	1	14	18	4.50	<b>1079</b>	842	745	658	572
3/4" Dia. copper	3/4C-3 1/4 X 3 1/4-32	1	14	18	3.99	<b>959</b>	748	661	585	508
	3/4C-3 1/4 X 3 1/4-40	1	14	18	4.72	<b>1133</b>	884	782	691	600
	3/4C-3 1/4 X 3 1/4-48	1	14	18	5.11	<b>1226</b>	957	846	748	650
1" Dia. copper	1C-2 3/4 X 4-32	1	14	18	3.45	<b>827</b>	645	571	642	433
	1C-2 3/4 X 4-40	1	14	18	4.06	<b>975</b>	761	673	498	508
	1C-2 3/4 X 4-48	1	14	18	4.38	<b>1052</b>	820	726	585	552
1" Dia. copper	1C-3 1/4 X 3 1/4-32	1	14	18	3.73	<b>895</b>	698	617	546	474
	1C-3 1/4 X 3 1/4-40	1	14	18	4.62	<b>1108</b>	864	765	676	587
	1C-3 1/4 X 3 1/4-48	1	14	18	4.74	<b>1138</b>	887	785	694	603
1 1/4" Dia. copper	1 1/4C-2 3/4 X 4-32	1	14	18	3.40	<b>816</b>	637	563	498	433
	1 1/4C-2 3/4 X 4-40	1	14	18	3.99	<b>959</b>	748	661	585	508
	1 1/4C-2 3/4 X 4-48	1	14	18	4.34	<b>1041</b>	812	718	635	552
1 1/4" Dia. copper	1 1/4C-3 1/4 X 3 1/4-32	1	14	18	3.86	<b>928</b>	723	640	566	492
	1 1/4C-3 1/4 X 3 1/4-40	1	14	18	4.54	<b>1089</b>	850	752	665	577
	1 1/4C-3 1/4 X 3 1/4-48	1	14	18	4.93	<b>1183</b>	923	816	721	627

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important Rating Information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended. For greater heights, refer to EZselect selection software.)
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software.)

- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software.)
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software.)
- Refer to IOM for Linear expansion of steel and copper finned tube with temperature.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: models ETL5 and ETL10; standard, pedestal

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Columns of Element (on 5-inch centers)	Rows of Element (on 6-inch centers)	Enclosure height (inches)	Recommended minimum installed height (inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
						215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>											
1" Dia. steel	1S-3¼ X 3¼-32	1	1	6	10	3.6	<b>870</b>	679	600	531	461
		1	1	8	12	3.7	<b>889</b>	694	614	542	471
		1	2	12	16	5.5	<b>1309</b>	1021	903	799	694
		2	1	6	10	6.6	<b>1590</b>	1240	1097	970	843
	1S-3¼ X 3¼-40	1	1	6	10	3.9	<b>940</b>	733	649	573	498
		1	1	8	12	4.1	<b>973</b>	759	671	594	516
		1	2	12	16	5.9	<b>1426</b>	1112	984	870	756
		2	1	6	10	6.9	<b>1660</b>	1295	1145	1013	880
	1S-3¼ X 3¼-48	1	1	6	10	4.2	<b>1000</b>	780	690	610	530
		1	1	8	12	4.4	<b>1056</b>	824	729	644	560
		1	2	12	16	6.3	<b>1505</b>	1174	1038	918	798
		2	1	6	10	7.6	<b>1830</b>	1427	1263	1116	970
1" Dia. steel	1S-4¼ X 4¼-32	1	1	6	10	5	<b>1230</b>	959	849	750	652
		1	1	8	12	5.1	<b>1235</b>	963	852	753	655
		1	2	12	16	7.2	<b>1727</b>	1347	1191	1053	915
		2	1	6	10	9.4	<b>2250</b>	1755	1553	1373	1193
	1S-4¼ X 4¼-40	1	1	6	10	5.2	<b>1270</b>	991	876	775	673
		1	1	8	12	5.4	<b>1297</b>	1012	895	791	688
		1	2	12	16	7.6	<b>1828</b>	1426	1261	1115	969
		2	1	6	10	9.9	<b>2400</b>	1872	1656	1464	1272
	1S-4¼ X 4¼-48	1	1	6	10	5.8	<b>1410</b>	1100	973	860	747
		1	1	8	12	6.1	<b>1458</b>	1137	1006	890	773
		1	2	12	16	8.4	<b>2018</b>	1574	1392	1231	1069
		2	1	6	10	10.7	<b>2580</b>	2012	1780	1574	1367

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

- Contact Factory when ordering 2" steel elements to ensure proper fit in the enclosure. For important rating information regarding above charts, refer to EZselect selection software.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: models ETL5 and ETL10; standard, pedestal

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Columns of Element (on 5-inch centers)	Rows of Element (on 6-inch centers)	Enclosure height (inches)	Recommended minimum installed height (inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
						215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Steel element</b>											
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-3 1/4 X 3 1/4-32</b>	1	1	6	10	3.7	<b>890</b>	694	614	543	472
		1	1	8	12	3.8	<b>914</b>	713	631	558	484
		1	2	12	16	5.6	<b>1344</b>	1048	927	820	712
		2	1	6	10	6.8	<b>1630</b>	1271	1125	994	864
	<b>1 1/4S-3 1/4 X 3 1/4-40</b>	1	1	6	10	4	<b>960</b>	749	662	586	509
		1	1	8	12	4.2	<b>998</b>	778	689	609	529
		1	2	12	16	6.1	<b>1464</b>	1142	1010	893	776
		2	1	6	10	7.1	<b>1700</b>	1326	1173	1037	901
	<b>1 1/4S-3 1/4 X 3 1/4-48</b>	1	1	6	10	4.3	<b>1030</b>	803	711	628	546
		1	1	8	12	4.5	<b>1081</b>	843	746	659	573
		1	2	12	16	6.4	<b>1536</b>	1198	1060	937	814
		2	1	6	10	7.8	<b>1870</b>	1459	1290	1141	991
<b>1 1/4" Dia. steel</b>	<b>1 1/4S-4 1/4 X 4 1/4-32</b>	1	1	6	10	5.2	<b>1250</b>	975	863	763	663
		1	1	8	12	5.4	<b>1285</b>	1002	886	784	681
		1	2	12	16	7.3	<b>1752</b>	1367	1209	1069	929
		2	1	6	10	9.6	<b>2300</b>	1794	1587	1403	1219
	<b>1 1/4S-4 1/4 X 4 1/4-40</b>	1	1	6	10	5.4	<b>1300</b>	1014	897	793	689
		1	1	8	12	5.6	<b>1347</b>	1051	930	822	714
		1	2	12	16	8.1	<b>1944</b>	1516	1341	1186	1030
		2	1	6	10	10.2	<b>2450</b>	1911	1691	1495	1299
	<b>1 1/4S-4 1/4 X 4 1/4-48</b>	1	1	6	10	6	<b>1440</b>	1123	994	878	763
		1	1	8	12	6.3	<b>1509</b>	1177	1041	920	800
		1	2	12	16	8.7	<b>2088</b>	1629	1441	1274	1107
		2	1	6	10	11	<b>2640</b>	2059	1822	1610	1399
<b>2" Dia. steel</b>	<b>2S-4 1/4 X 4 1/4-32</b>	1	1	6	10	5.1	<b>1220</b>	952	842	744	647
		1	1	8	12	5.2	<b>1260</b>	983	869	769	668
		1	2	12	16	7.3	<b>1760</b>	1372	1214	1073	933
		2	1	6	10	9.5	<b>2280</b>	1778	1573	1391	1208
	<b>2S-4 1/4 X 4 1/4-40</b>	1	1	6	10	5.6	<b>1340</b>	1045	925	817	710
		1	1	8	12	5.8	<b>1397</b>	1090	964	852	741
		1	2	12	16	8.5	<b>2033</b>	1586	1403	1240	1077
		2	1	6	10	10.4	<b>2500</b>	1950	1725	1525	1325
	<b>2S-4 1/4 X 4 1/4-48</b>	1	1	6	10	6.1	<b>1460</b>	1139	1007	891	774
		1	1	8	12	6.4	<b>1534</b>	1196	1058	936	813
		1	2	12	16	8.9	<b>2147</b>	1674	1481	1309	1138
		2	1	6	10	11.5	<b>2760</b>	2153	1904	1684	1463

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

- Contact Factory when ordering 2" steel elements to ensure proper fit in the enclosure. For important rating information regarding above charts, refer to EZselect selection software.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: models ETL5 and ETL10; standard, pedestal

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Columns of Element (on 5-inch centers)	Rows of Element (on 6-inch centers)	Enclosure height (inches)	Recommended minimum installed height (inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
						215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>											
3/4" Dia. copper	¾C-2¾ X 4-32	1	1	6	10	3.7	<b>900</b>	702	621	549	477
		1	1	8	12	4.2	<b>1005</b>	784	694	613	533
		1	2	12	16	6.7	<b>1608</b>	1254	1110	981	852
		2	1	6	10	7	<b>1680</b>	1310	1159	1025	890
	¾C-2¾ X 4-40	1	1	6	10	4	<b>970</b>	757	669	592	514
		1	1	8	12	4.6	<b>1099</b>	857	759	671	583
		1	2	12	16	7.1	<b>1704</b>	1329	1176	1039	903
		2	1	6	10	7.4	<b>1770</b>	1381	1221	1080	938
	¾C-2¾ X 4-48	1	1	6	10	4.3	<b>1040</b>	811	718	634	551
		1	1	8	12	5.0	<b>1190</b>	928	821	726	631
		1	2	12	16	7.5	<b>1800</b>	1404	1242	1098	954
		2	1	6	10	7.9	<b>1890</b>	1474	1304	1153	1002
3/4" Dia. copper	¾C-3¼ X 3¼-32	1	1	6	10	3.7	<b>880</b>	686	607	537	466
		1	1	8	12	4.2	<b>1005</b>	784	694	613	533
		1	2	12	16	6.3	<b>1505</b>	1174	1038	918	797
		2	1	6	10	6.1	<b>1690</b>	1318	1166	1031	896
	¾C-3¼ X 3¼-40	1	1	6	10	4	<b>980</b>	764	676	598	519
		1	1	8	12	4.6	<b>1099</b>	857	759	671	583
		1	2	12	16	7.3	<b>1754</b>	1368	1210	1070	930
		2	1	6	10	7.4	<b>1780</b>	1388	1228	1086	943
	¾C-3¼ X 3¼-48	1	1	6	10	4.3	<b>1050</b>	819	725	641	557
		1	1	8	12	5.0	<b>1190</b>	928	821	726	631
		1	2	12	16	6.7	<b>1617</b>	1261	1115	986	857
		2	1	6	10	7.9	<b>1900</b>	1482	1311	1159	1007
3/4" Dia. copper	¾C-4¼ X 4¼-32	1	1	6	10	5.1	<b>1230</b>	959	849	750	652
		1	1	8	12	5.8	<b>1386</b>	1081	956	845	734
		1	2	12	16	9.4	<b>2256</b>	1760	1557	1376	1196
		2	1	6	10	9.6	<b>2300</b>	1794	1587	1403	1219
	¾C-4¼ X 4¼- 40	1	1	6	10	5.8	<b>1380</b>	1076	952	842	731
		1	1	8	12	6.6	<b>1594</b>	1243	1100	972	845
		1	2	12	16	10.1	<b>2412</b>	1881	1664	1471	1278
		2	1	6	10	10.5	<b>2520</b>	1966	1739	1537	1336
	¾C-4¼ X 4¼-48	1	1	6	10	6.9	<b>1650</b>	1287	1139	1007	875
		1	1	8	12	8.0	<b>1910</b>	1490	1318	1165	1012
		1	2	12	16	10.3	<b>2472</b>	1928	1706	1508	1310
		2	1	6	10	12.7	<b>3040</b>	2371	2098	1854	1611

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

- Contact Factory when ordering 2" steel elements to ensure proper fit in the enclosure. For important rating information regarding above charts, refer to EZselect selection software.

# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: models ETL5 and ETL10; standard, pedestal

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Columns of Element (on 5-inch centers)	Rows of Element (on 6-inch centers)	Enclosure height (inches)	Recommended minimum installed height (inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
						215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>											
1" Dia. copper	1C-2¾ X 4-32	1	1	6	10	3.7	890	694	614	543	472
		1	1	8	12	4.2	1005	784	694	613	533
		1	2	12	16	6.6	1584	1236	1093	966	840
		2	1	6	10	6.9	1660	1295	1145	1013	880
	1C-2¾ X 4-40	1	1	6	10	4	960	749	662	586	509
		1	1	8	12	4.6	1099	857	759	671	583
		1	2	12	16	6.9	1656	1292	1143	1010	878
		2	1	6	10	7.3	1750	1365	1208	1068	928
	1C-2¾ X 4-48	1	1	6	10	4.3	1030	803	711	628	546
		1	1	8	12	5.0	1190	928	821	726	631
		1	2	12	16	7.2	1728	1348	1192	1054	916
		2	1	6	10	7.8	1870	1459	1290	1141	991
1" Dia. copper	1C-3¼ X 3¼-32	1	1	6	10	3.6	860	671	593	525	456
		1	1	8	12	4.1	978	763	675	597	518
		1	2	12	16	6.2	1485	1158	1025	906	787
		2	1	6	10	6.6	1580	1232	1090	964	837
	1C-3¼ X 3¼-40	1	1	6	10	3.8	910	710	628	555	482
		1	1	8	12	4.4	1044	815	721	637	553
		1	2	12	16	6.6	1580	1232	1090	964	837
		2	1	6	10	7	1680	1310	1159	1025	890
	1C-3¼ X 3¼-48	1	1	6	10	4.1	980	764	676	598	519
		1	1	8	12	4.7	1135	885	783	692	601
		1	2	12	16	6.9	1650	1287	1139	1007	875
		2	1	6	10	7.5	1800	1404	1242	1098	954
1" Dia. copper	1C-4¼ X 4¼-32	1	1	6	10	5.1	1210	944	835	738	641
		1	1	8	12	5.8	1386	1081	956	845	734
		1	2	12	16	9.3	2232	1741	1540	1362	1183
		2	1	6	10	9.4	2250	1755	1553	1373	1193
	1C-4¼ X 4¼-40	1	1	6	10	5.7	1350	1053	932	824	716
		1	1	8	12	6.5	1566	1222	1081	956	830
		1	2	12	16	9.8	2352	1835	1623	1435	1247
		2	1	6	10	10.3	2470	1927	1704	1507	1309
	1C-4¼ X 4¼-48	1	1	6	10	6.8	1620	1264	1118	988	859
		1	1	8	12	7.8	1882	1468	1299	1148	998
		1	2	12	16	10.1	2422	1889	1671	1477	1283
		2	1	6	10	12.4	2980	2324	2056	1818	1579

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

- Contact Factory when ordering 2" steel elements to ensure proper fit in the enclosure. For important rating information regarding above charts, refer to EZselect selection software.

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# Enclosure Submittal Data

English, IP Units

General data

Performance ratings: models ETL5 and ETL10; standard, pedestal

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element	Columns of Element (on 5-inch centers)	Rows of Element (on 6-inch centers)	Enclosure height (inches)	Recommended minimum installed height (inches)	EDR* (ft <sup>2</sup> / ft)	Steam heat	Hot water heat				
						215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
<b>Copper element</b>											
<b>1 1/4" Dia. copper</b>	<b>1 1/4C-2 3/4 X 4-32</b>	1	1	6	10	3.7	<b>890</b>	694	614	543	472
		1	1	8	12	4.2	<b>1005</b>	784	694	613	533
		1	2	12	16	6.6	<b>1584</b>	1236	1093	966	840
		2	1	6	10	6.9	<b>1660</b>	1295	1145	1013	880
	<b>1 1/4C-2 3/4 X 4-40</b>	1	1	6	10	4	<b>960</b>	749	662	586	509
		1	1	8	12	4.6	<b>1099</b>	857	759	671	583
		1	2	12	16	7.1	<b>1704</b>	1329	1176	1039	903
		2	1	6	10	7.3	<b>1750</b>	1365	1208	1068	928
	<b>1 1/4C-2 3/4 X 4-48</b>	1	1	6	10	4.2	<b>1010</b>	788	697	616	535
		1	1	8	12	4.8	<b>1163</b>	907	802	709	616
		1	2	12	16	7.2	<b>1728</b>	1348	1192	1054	916
		2	1	6	10	7.7	<b>1850</b>	1443	1277	1129	981
<b>1 1/4" Dia. copper</b>	<b>1 1/4C- 3 1/4 X 3 1/4-32</b>	1	1	6	10	3.6	<b>860</b>	671	593	525	456
		1	1	8	12	4.1	<b>978</b>	763	675	597	518
		1	2	12	16	6.5	<b>1560</b>	1217	1077	952	827
		2	1	6	10	6.6	<b>1580</b>	1232	1090	964	837
	<b>1 1/4C- 3 1/4 X 3 1/4-40</b>	1	1	6	10	3.8	<b>910</b>	710	628	555	482
		1	1	8	12	4.4	<b>1044</b>	815	721	637	553
		1	2	12	16	6.8	<b>1634</b>	1274	1127	997	866
		2	1	6	10	7	<b>1680</b>	1310	1159	1025	890
	<b>1 1/4C- 3 1/4 X 3 1/4-48</b>	1	1	6	10	4	<b>960</b>	749	662	586	509
		1	1	8	12	4.6	<b>1107</b>	864	764	675	587
		1	2	12	16	6.0	<b>1437</b>	1121	991	876	761
		2	1	6	10	7.4	<b>1780</b>	1388	1228	1086	943
<b>1 1/4" Dia. copper</b>	<b>1 1/4C- 4 1/4 X 4 1/4-32</b>	1	1	6	10	5	<b>1200</b>	936	828	732	636
		1	1	8	12	5.7	<b>1359</b>	1060	937	829	720
		1	2	12	16	9.1	<b>2184</b>	1704	1507	1332	1158
		2	1	6	10	9.3	<b>2230</b>	1739	1539	1360	1182
	<b>1 1/4C- 4 1/4 X 4 1/4-40</b>	1	1	6	10	5.6	<b>1340</b>	1045	925	817	710
		1	1	8	12	6.4	<b>1539</b>	1200	1062	939	816
		1	2	12	16	9.7	<b>2328</b>	1816	1606	1420	1234
		2	1	6	10	10.2	<b>2450</b>	1911	1691	1495	1299
	<b>1 1/4C- 4 1/4 X 4 1/4-48</b>	1	1	6	10	6.7	<b>1610</b>	1256	1111	982	853
		1	1	8	12	7.7	<b>1855</b>	1447	1280	1131	983
		1	2	12	16	9.9	<b>2376</b>	1853	1639	1449	1259
		2	1	6	10	12.3	<b>2950</b>	2301	2036	1800	1564

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

- Contact Factory when ordering 2" steel elements to ensure proper fit in the enclosure. For important rating information regarding above charts, refer to EZselect selection software.

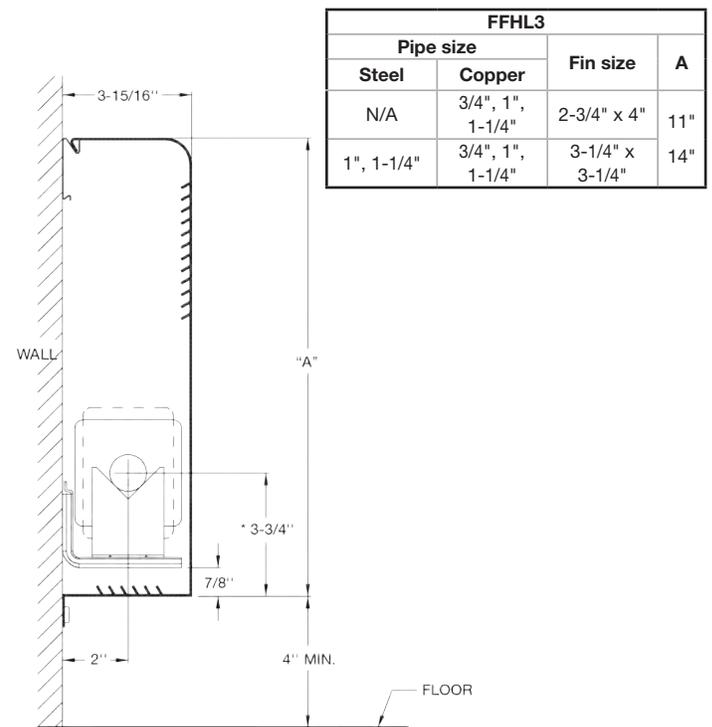
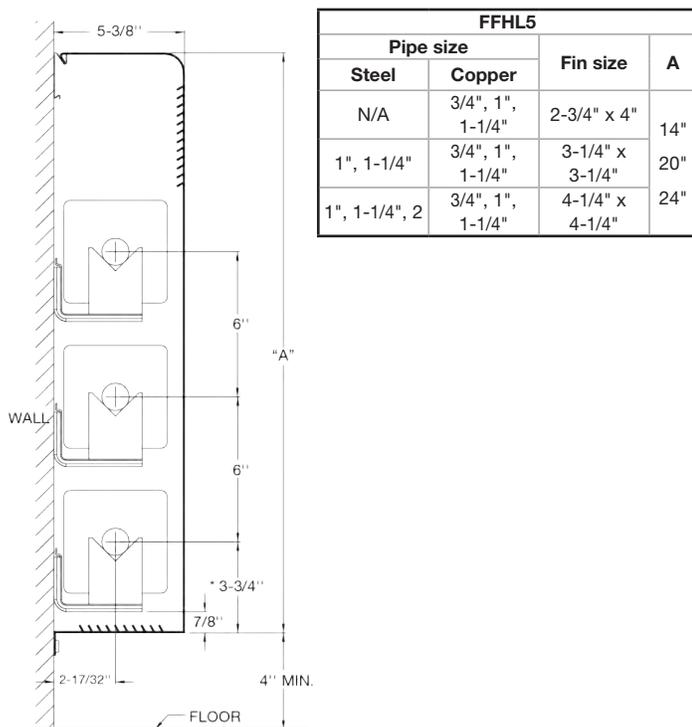
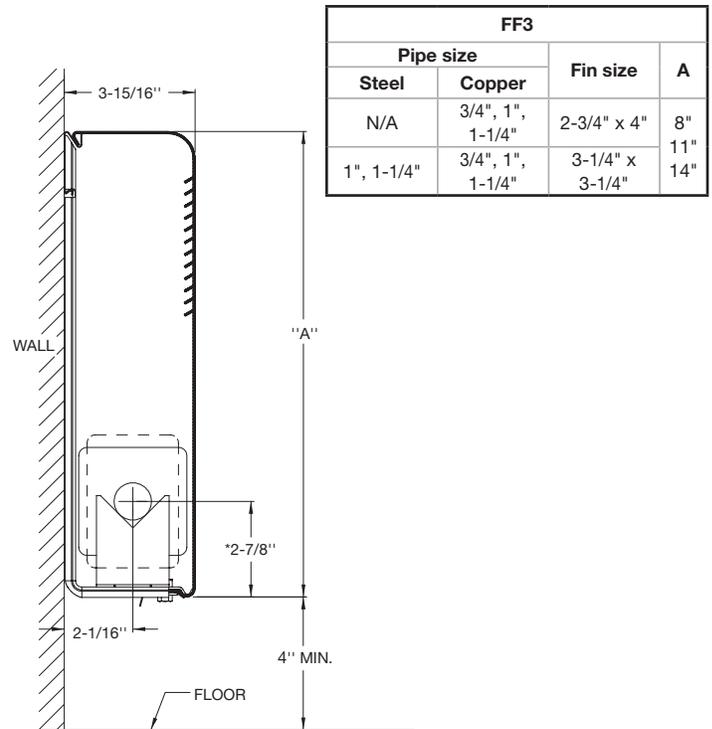
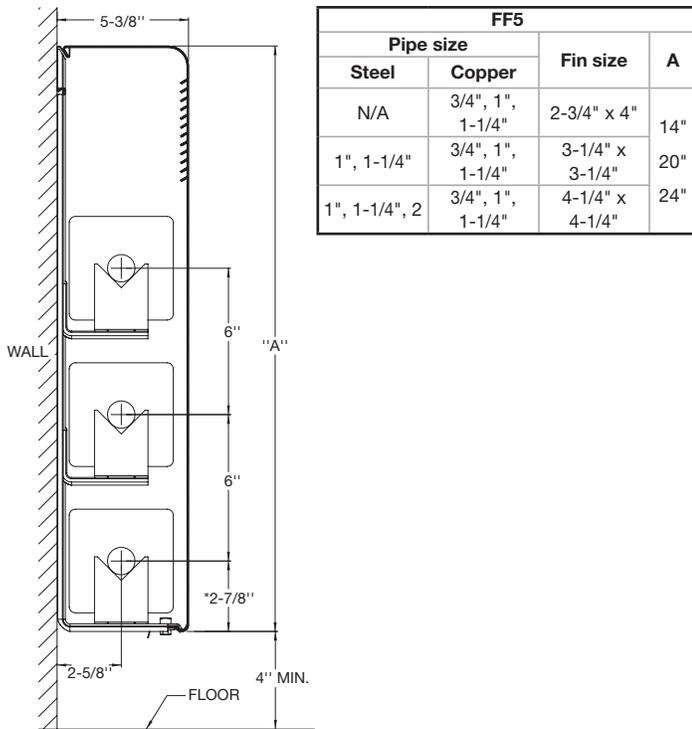
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# Enclosure Submittal Data

English, IP Units

## Dimensional data

## Flat front enclosures



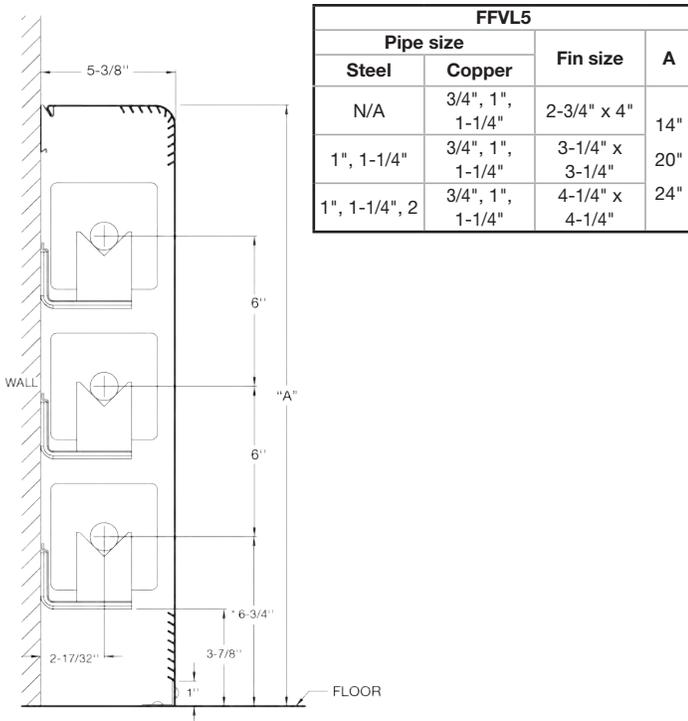
**Notes:**  
 ■ \*Center lines are based on 1" copper tube.

■ Damper option is dependent on enclosure size and piping configurations.

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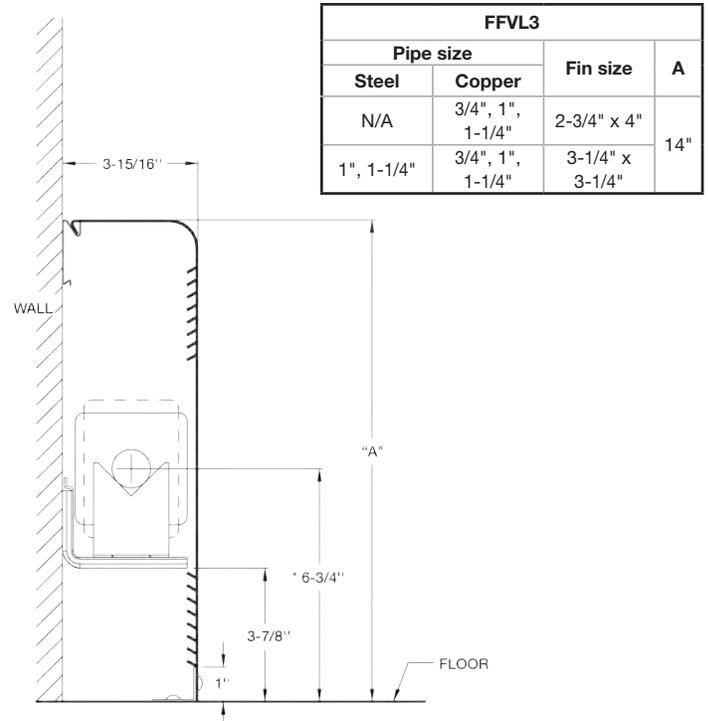
## Dimensional data

## Flat front enclosures



**Notes:**

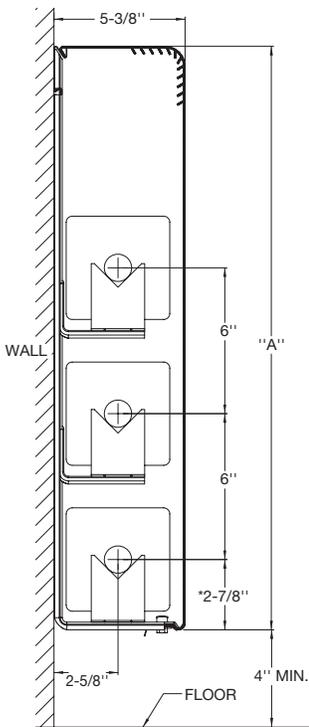
- \*Center lines are based on 1" copper tube.



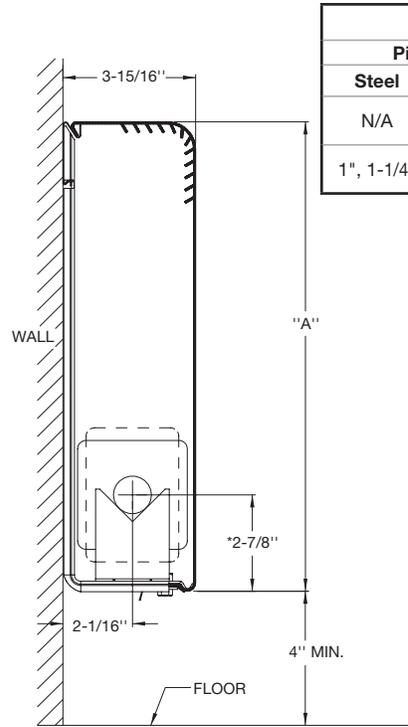
- Damper option is dependent on enclosure size and piping configurations.

**Dimensional data**

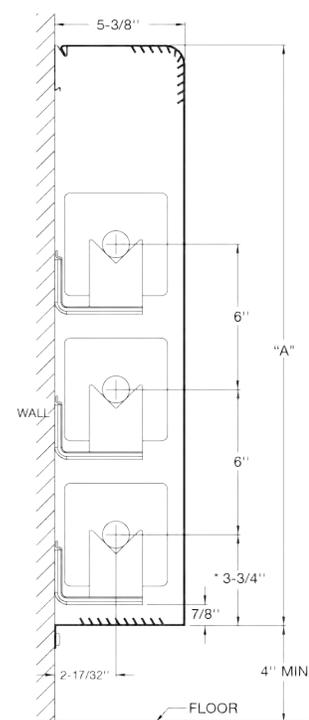
## Flat round enclosures



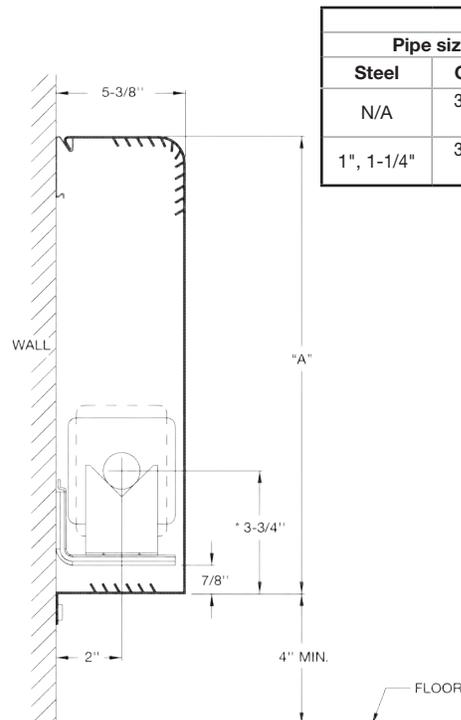
FR5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FR3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	8"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	11"
			14"



FRHL5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FRHL3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	8"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	11"
			14"

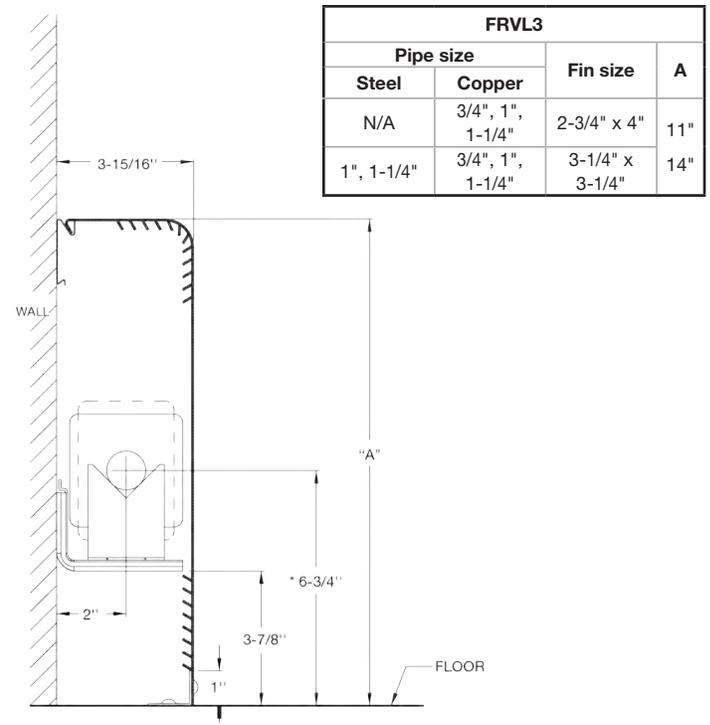
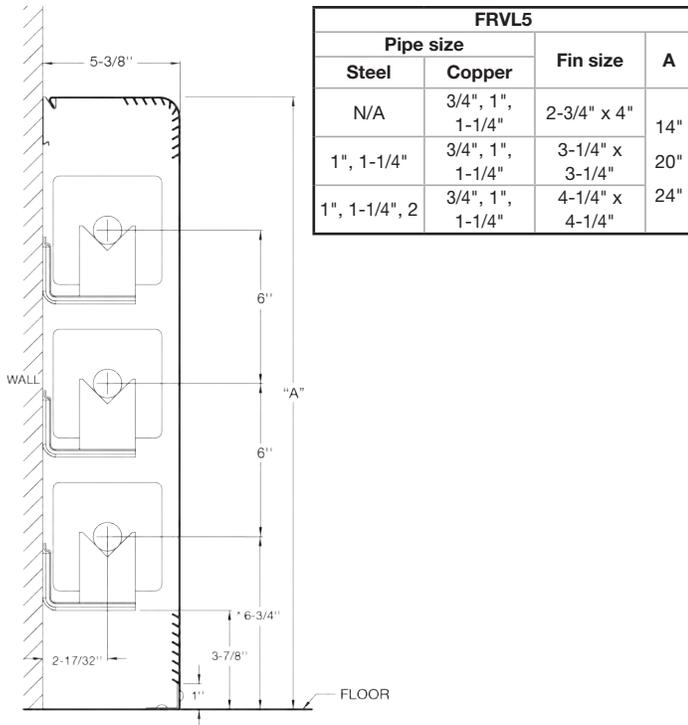
**Notes:**  
 ■ \*Center lines are based on 1" copper tube.

■ Damper option is dependent on enclosure size and piping configurations.

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## Dimensional data

## Flat round enclosures



**Notes:**  
 ■ \*Center lines are based on 1" copper tube.

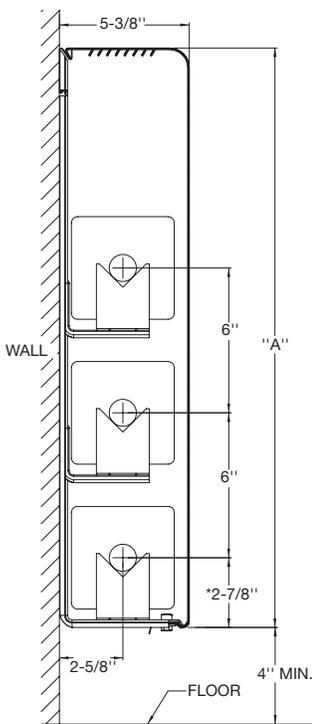
■ Damper option is dependent on enclosure size and piping configurations.

# Enclosure Submittal Data

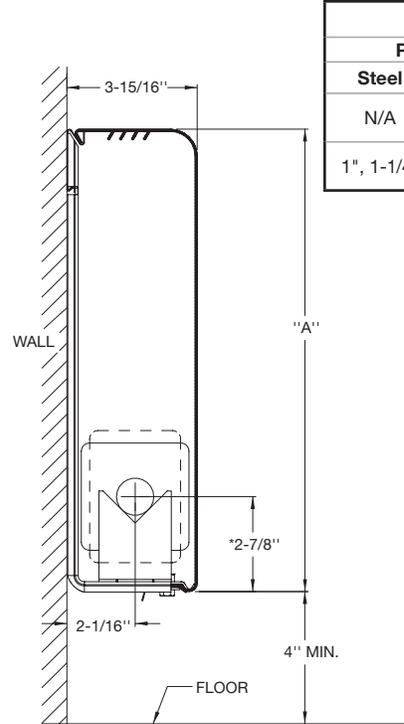
English, IP Units

## Dimensional data

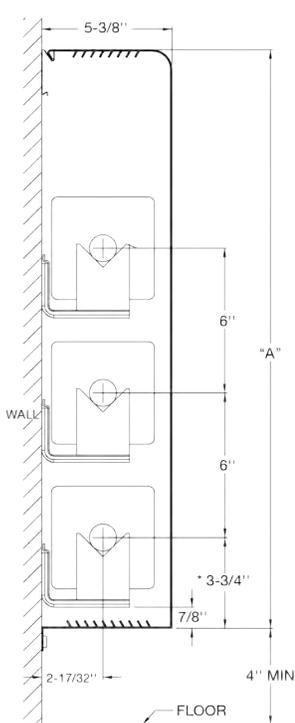
## Flat top enclosures



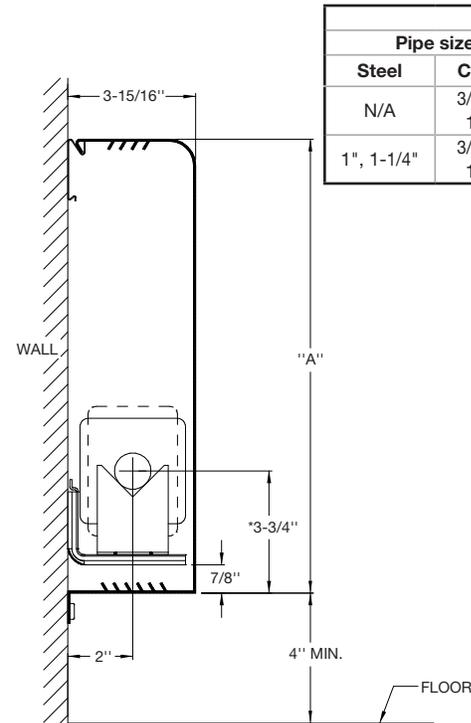
FT5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FT3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	8"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	11"
			14"



FTHL5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FTHL3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	8"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	11"
			14"

- Notes:**
- \*Center lines are based on 1" copper tube.
  - Damper option is dependent on enclosure size and piping configurations.

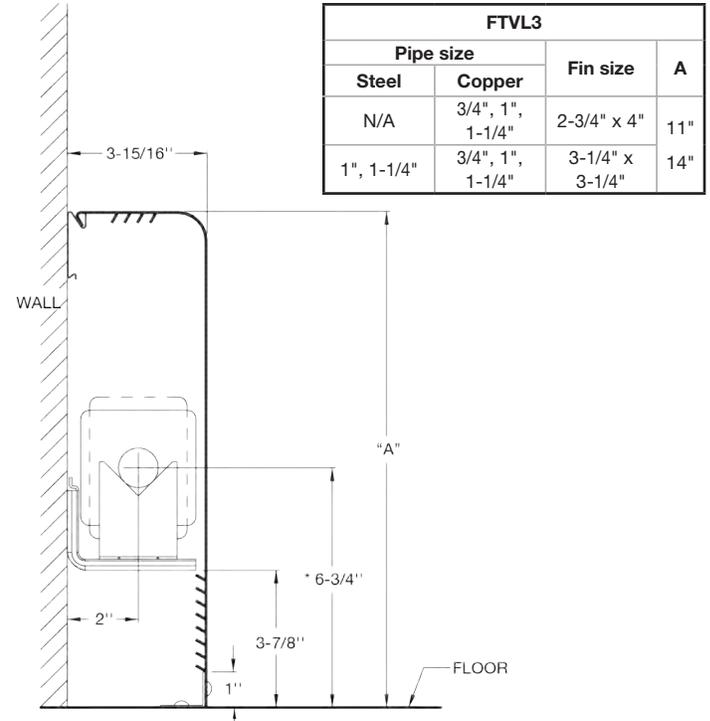
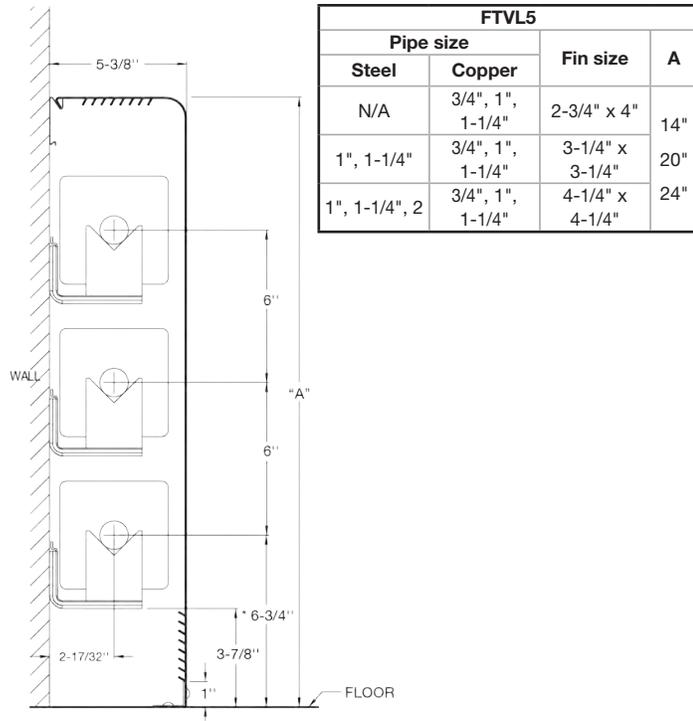
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# Enclosure Submittal Data

English, IP Units

## Dimensional data

## Flat top enclosures



**Notes:**

■ \*Center lines are based on 1" copper tube.

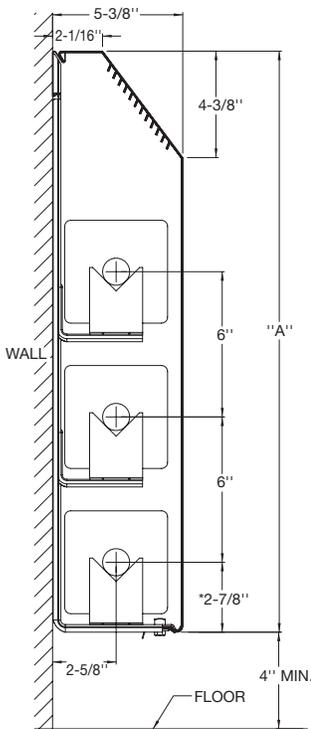
■ Damper option is dependent on enclosure size and piping configurations.

# Enclosure Submittal Data

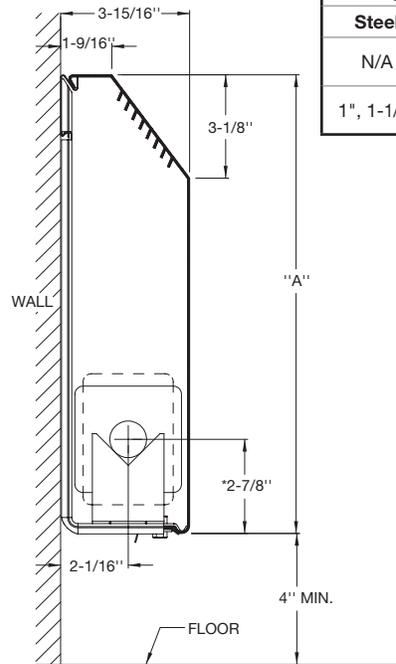
English, IP Units

## Dimensional data

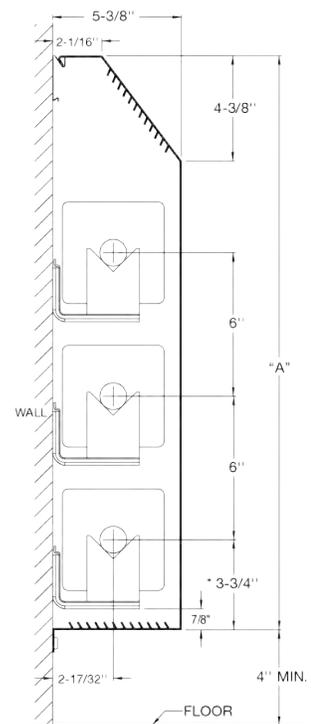
## Flat sloped enclosures



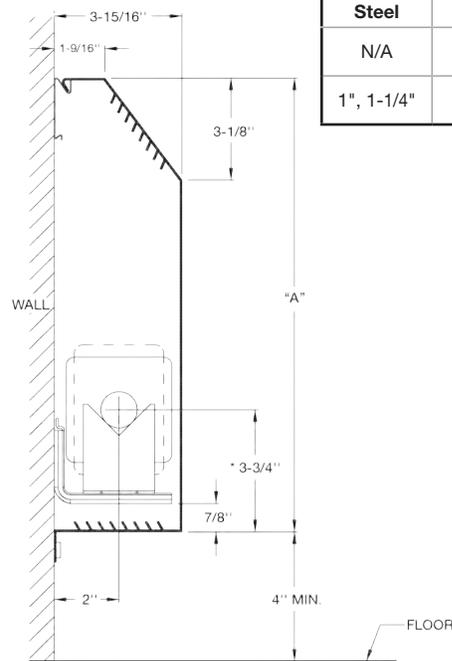
FS5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FS3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	8"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	11"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	14"



FSHL5			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	14"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	20"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



FSHL3			
Pipe size		Fin size	A
Steel	Copper		
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	11"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	14"

- Notes:**
- \*Center lines are based on 1" copper tube.
  - Damper option is dependent on enclosure size and piping configurations.

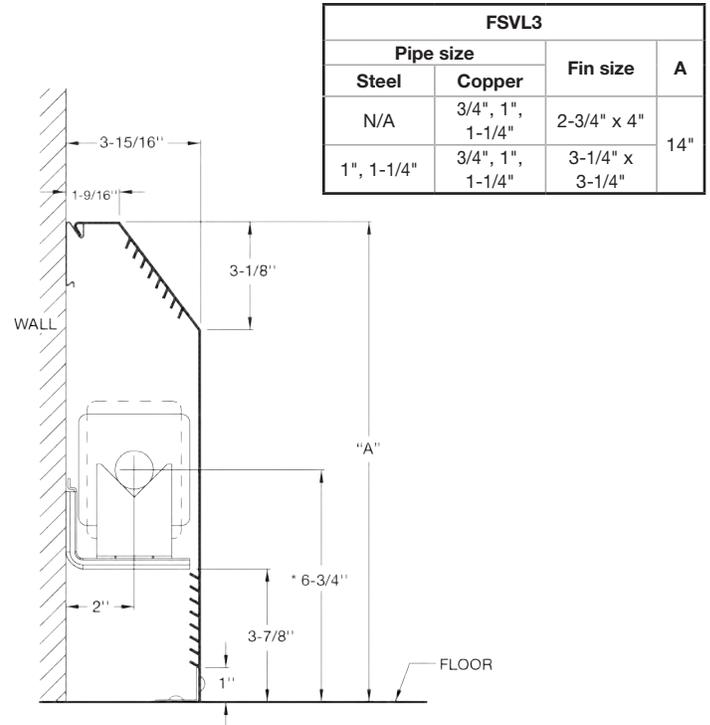
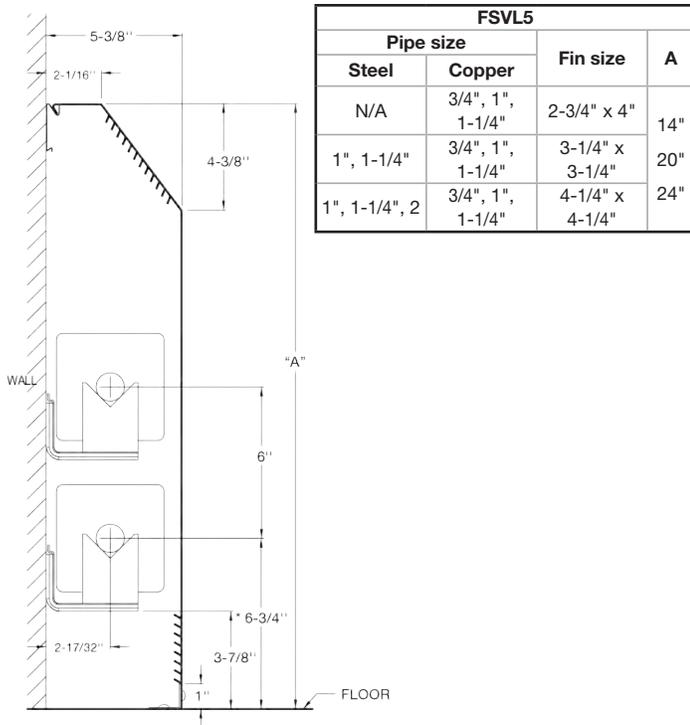
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# Enclosure Submittal Data

English, IP Units

## Dimensional data

## Flat sloped enclosure



**Notes:**

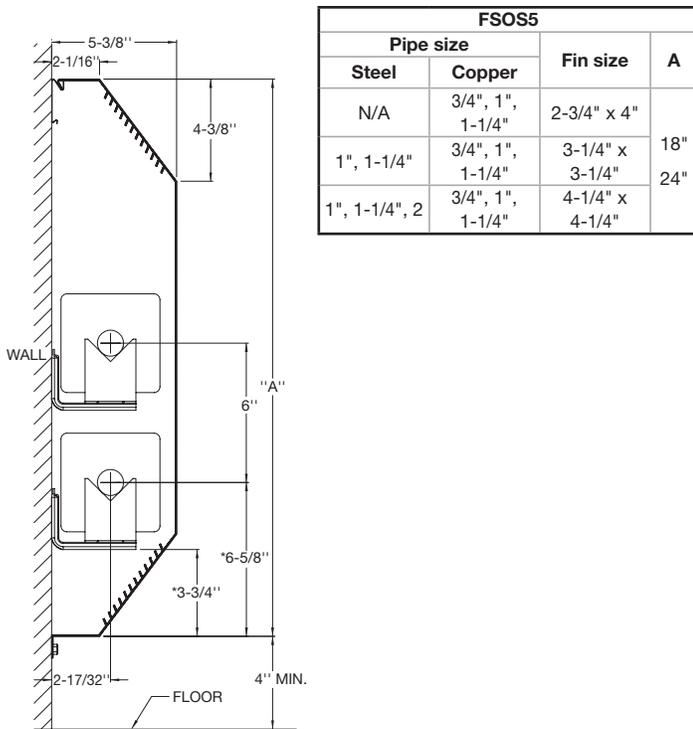
■ \*Center lines are based on 1" copper tube.

■ Damper option is dependent on enclosure size and piping configurations.

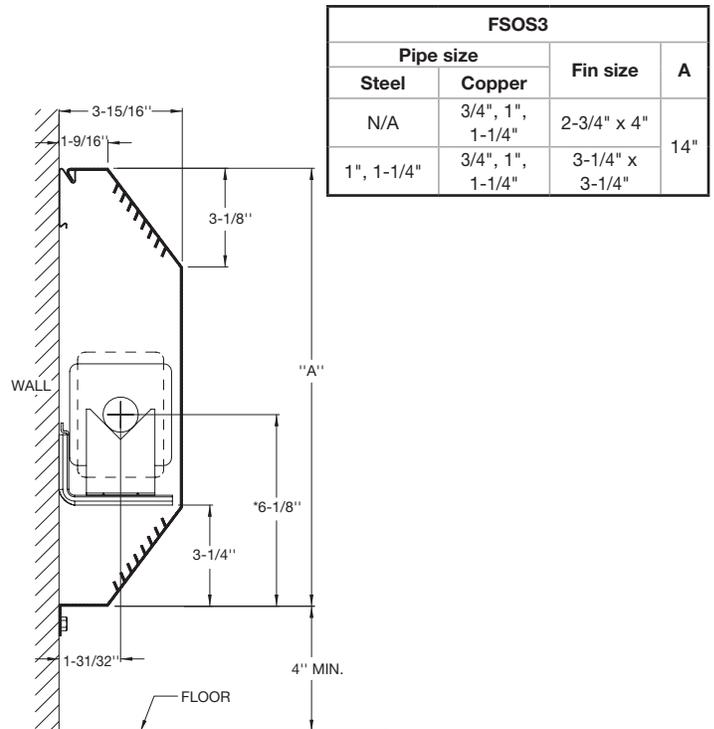
Revised May 2018. Zehnder periodically makes changes to the design and/or specifications of its products. As a result, the design and specifications of each product at the time of order may be different than as described herein. Please contact Zehnder's Sales Support staff at 844-934-6337 for specific information on current design and specifications. Designs, specifications and other information contained herein are not express warranties, which are only as expressly set forth by Zehnder in its terms and conditions of sale. The latest version of this document is available at [www.zehnder-ritting.com](http://www.zehnder-ritting.com).

Dimensional data

## Double sloped enclosures



- Notes:**
- \*Center lines are based on 1" copper tube.

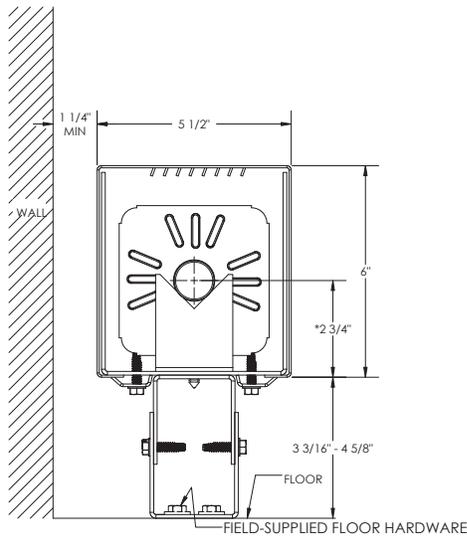


- Damper option is dependent on enclosure size and piping configurations.

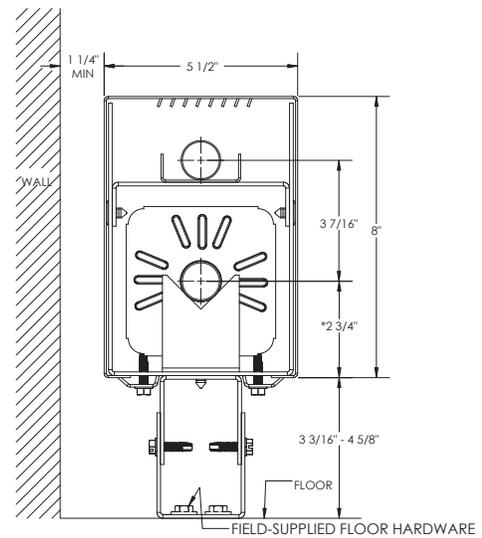
 Dimensional data

**Pedestal enclosures**

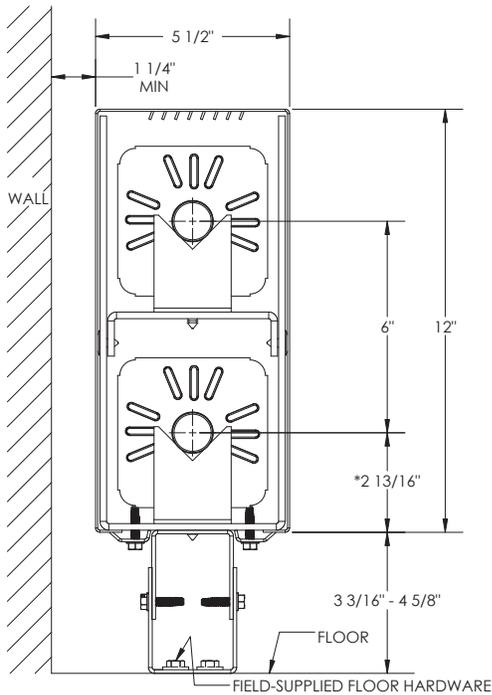
**ETL506: One column, one row style**



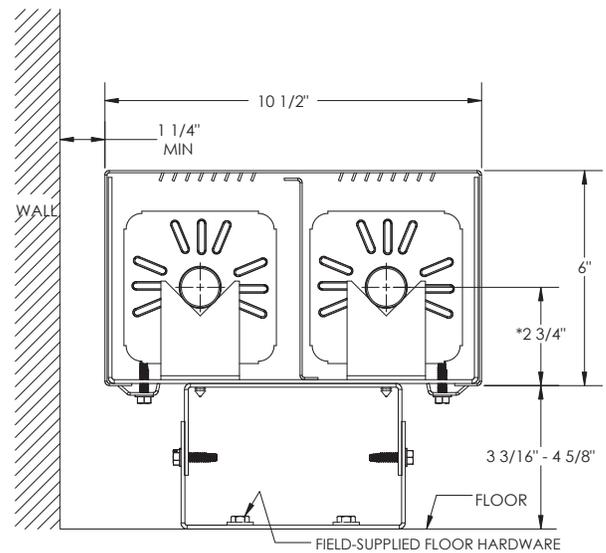
**ETL508: One column, one row plus return style**



**ETL512: One column, two row style**



**ETL10: Two column, one row style**



- Notes:**
- \*Center lines are based on 1" copper tube.

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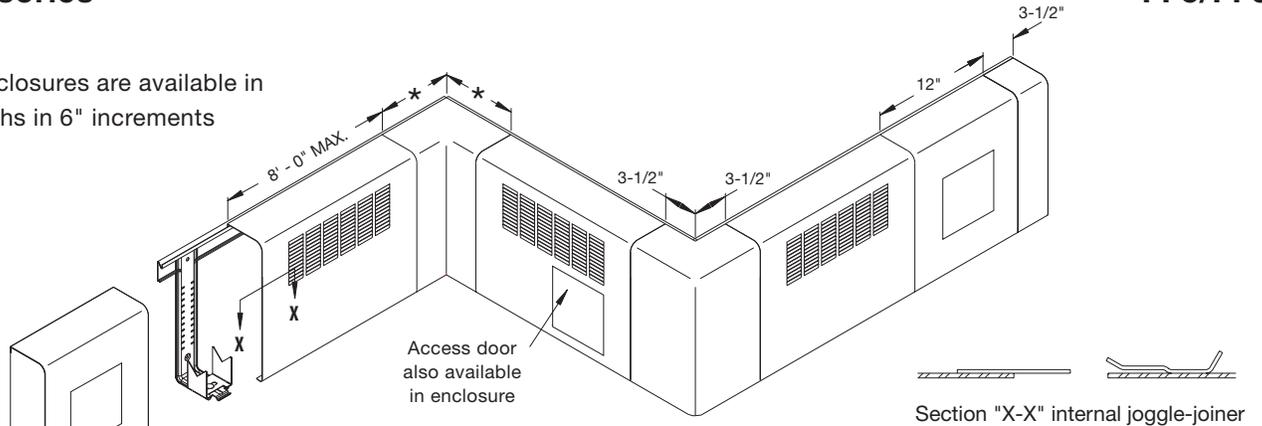
# Enclosure Submittal Data

English, IP Units

## Accessories

FF5/FF3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



"SNMC"  
Snap  
mounting  
channel



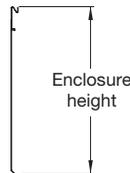
"SNEXP"  
Snap enclosure  
expansion  
bracket



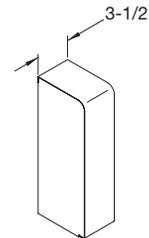
"SLSRB"  
Slip-in second  
row bracket



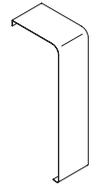
"SLPH"  
Slip-in pipe  
hanger



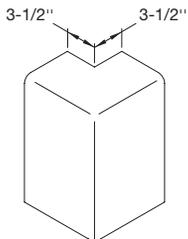
"SNFBP"  
Snap full  
back panel



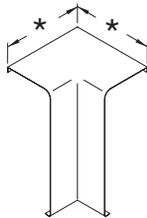
"EC"  
End cap (left  
hand shown)



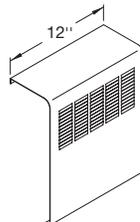
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



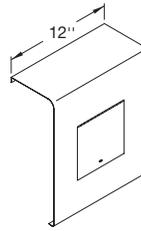
"OC"  
Outside corner



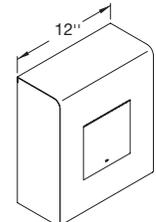
"IC"  
Inside corner  
\*7-1/2" for FF3,  
9" for FF5



"AS"  
Removable enclosure  
section butt type style  
only. No joggles or joiners



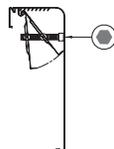
"AP"  
Access panel with  
access door  
(Security lock opt.)



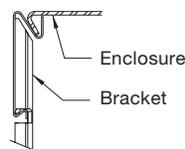
"AC"  
End cap with access door  
(left side shown)  
(Security lock opt.)



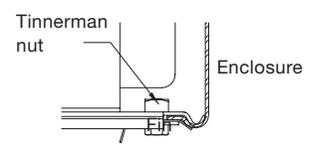
Knob  
damper



Security  
damper



Snap mounting  
channel detail



Detail of  
enclosure bottom  
mounting clip

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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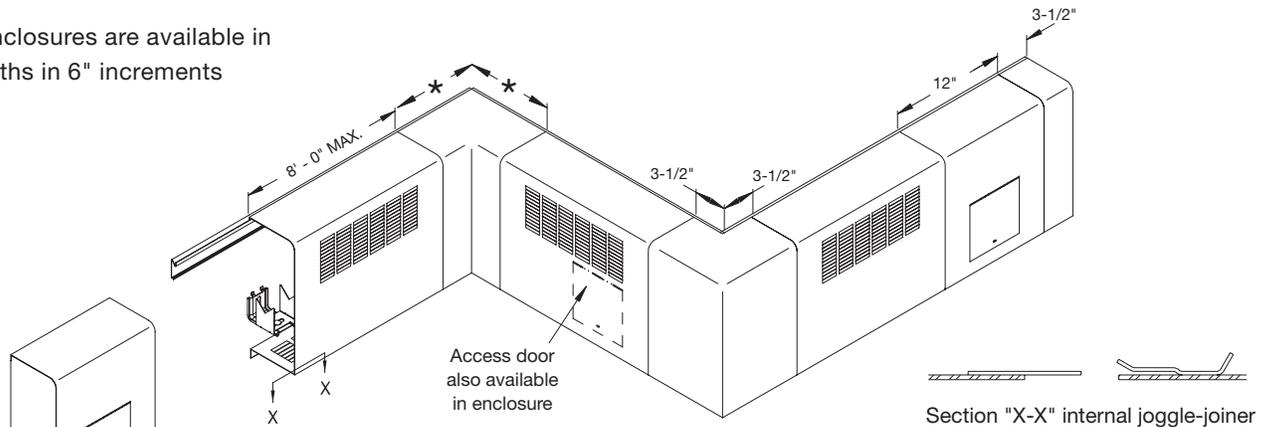
# Enclosure Submittal Data

English, IP Units

## Accessories

FFHL5/FFHL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



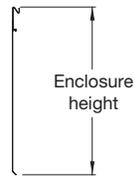
"SNMC"  
Snap mounting channel



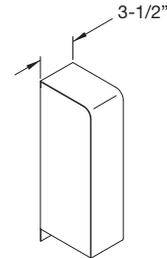
"SLSRB"  
Slip-in second row bracket



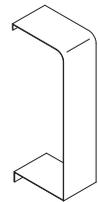
"WPH"  
Wall pipe hanger



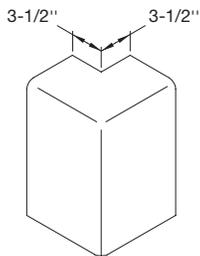
"SNFBP"  
Snap full back panel



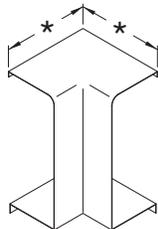
"EC"  
End cap (left hand shown)



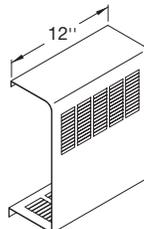
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



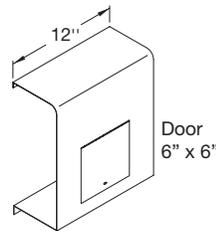
"OC"  
Outside corner



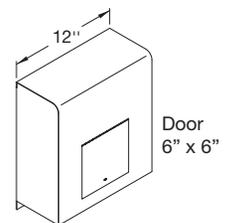
"IC"  
Inside corner  
\*7-1/2" for FFHL3,  
9" for FFHL5



"AS"  
Removable enclosure section butt type style only. No joggles or joiners



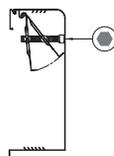
"AP"  
Access panel with access door (Security lock opt.)



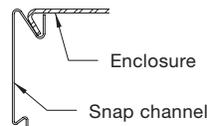
"AC"  
End cap with access door (left side shown) (Security lock opt.)



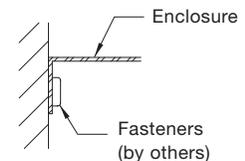
Knob damper



Security damper



Snap mounting channel detail



Mounting detail of enclosure bottom

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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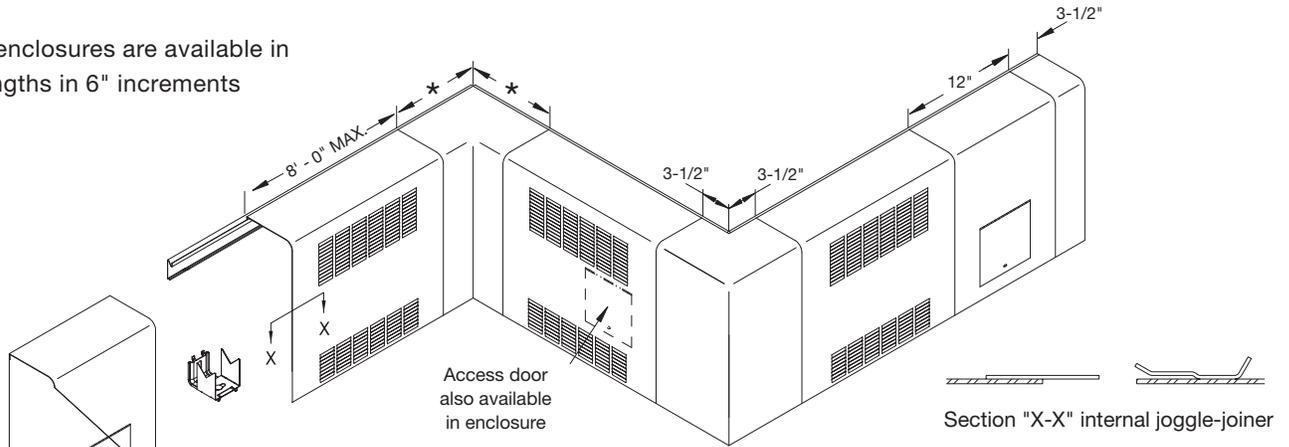
# Enclosure Submittal Data

English, IP Units

## Accessories

FFVL5/FFVL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



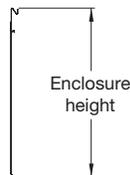
"SNMC"  
Snap mounting channel



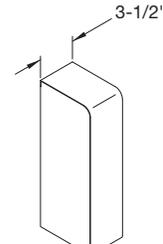
"SLSRB"  
Slip-in second row bracket



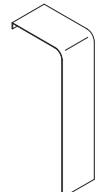
"WPH"  
Wall pipe hanger



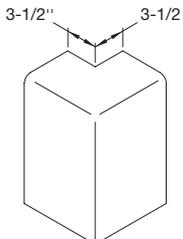
"SNFBP"  
Snap full back panel



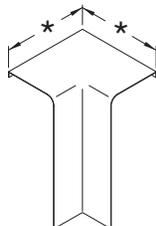
"EC"  
End cap (left hand shown)



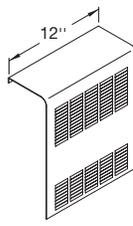
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



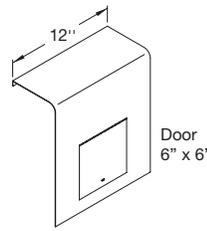
"OC"  
Outside corner



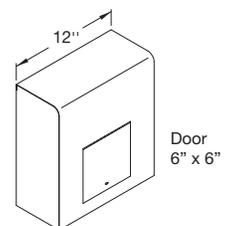
"IC"  
Inside corner  
\*7-1/2" for FFVL3,  
9" for FFVL5



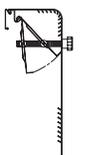
"AS"  
Removable enclosure section butt type style only. No joggles or joiners



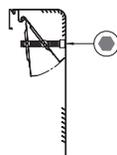
"AP"  
Access panel with access door (Security lock opt.)



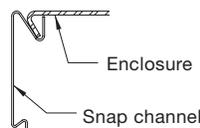
"AC"  
End cap with access door (left side shown) (Security lock opt.)



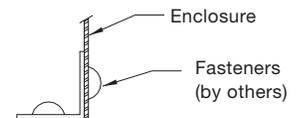
Knob damper



Security damper



Snap mounting channel detail



Floor mounting angle detail

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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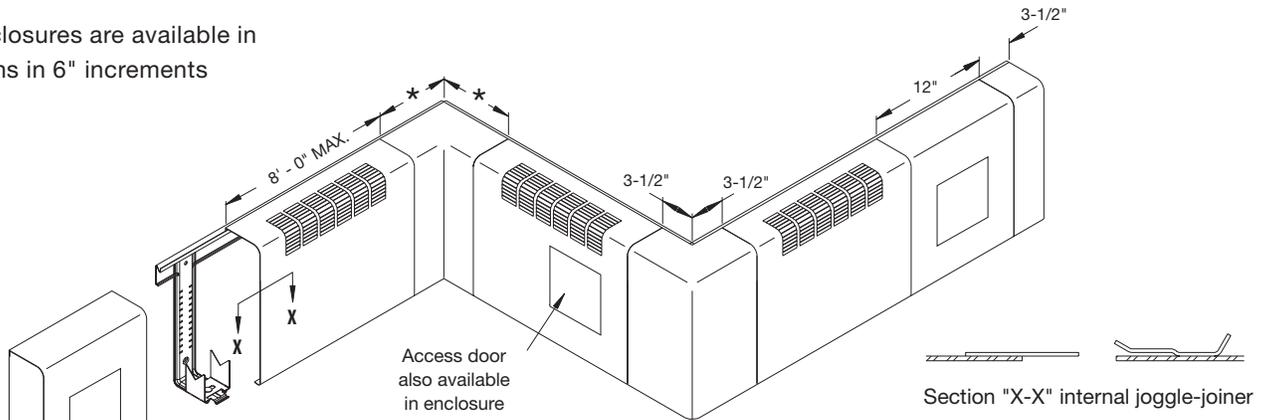
# Enclosure Submittal Data

English, IP Units

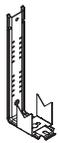
## Accessories

FR5/FR3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



"SNMC"  
Snap mounting channel



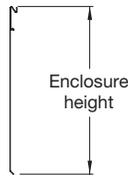
"SNEXP"  
Snap enclosure expansion bracket



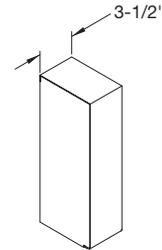
"SLSRB"  
Slip-in second row bracket



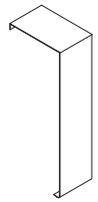
"SLPH"  
Slip-in pipe hanger



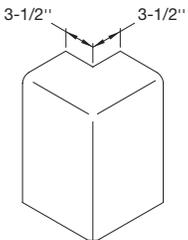
"SNFBP"  
Snap full back panel



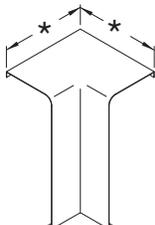
"EC"  
End cap (left hand shown)



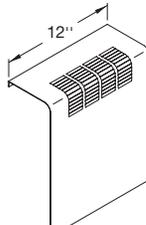
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



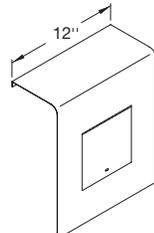
"OC"  
Outside corner



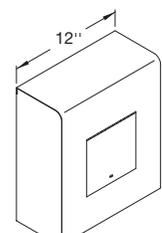
"IC"  
Inside corner  
\*7-1/2" for FR3,  
9" for FR5



"AS"  
Removable enclosure section butt type style only. No joggles or joiners



"AP"  
Access panel with access door (Security lock opt.)



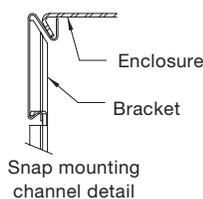
"AC"  
End cap with access door (left side shown) (Security lock opt.)



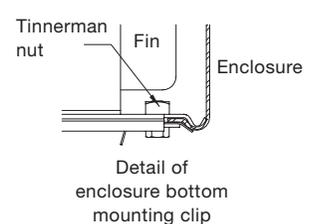
Knob damper



Security damper



Snap mounting channel detail



Detail of enclosure bottom mounting clip

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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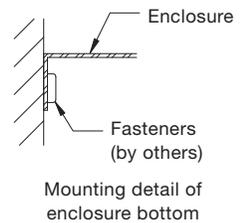
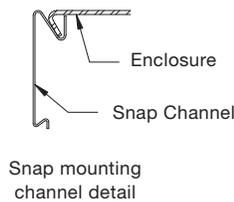
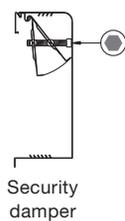
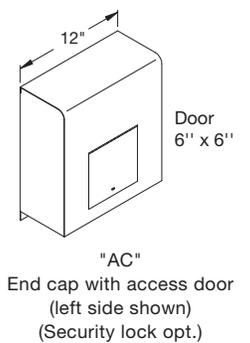
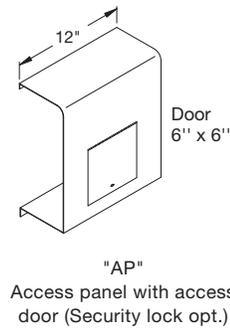
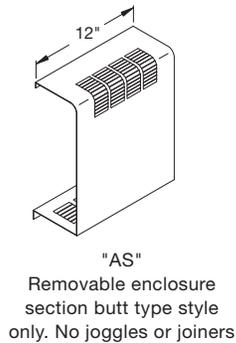
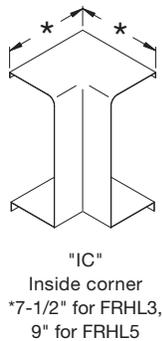
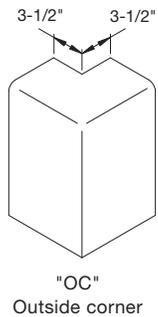
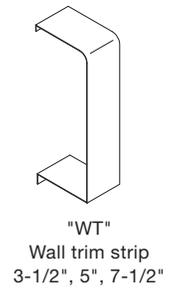
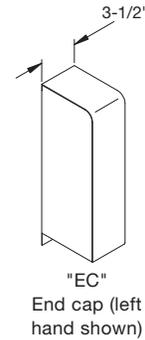
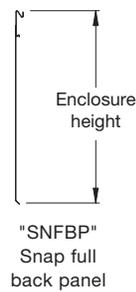
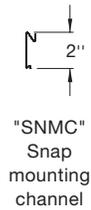
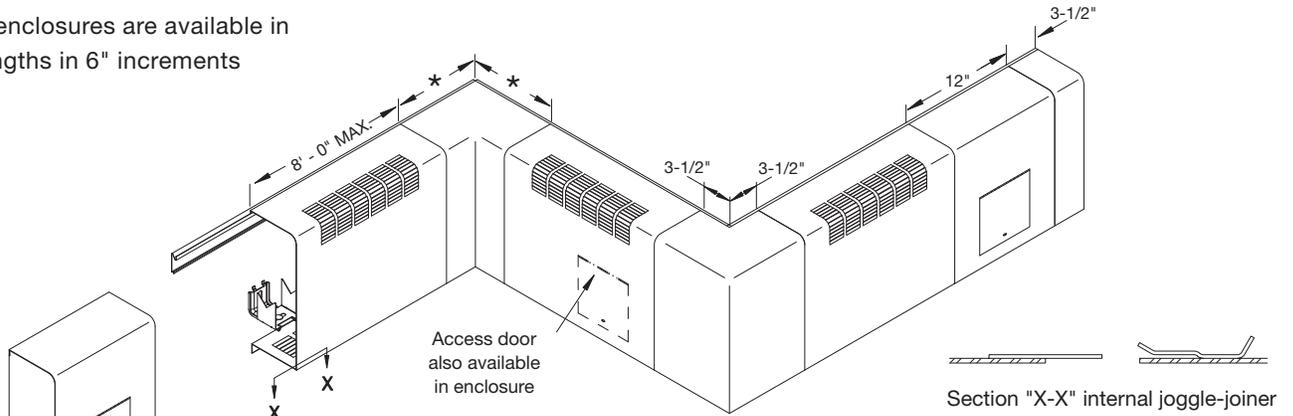
# Enclosure Submittal Data

English, IP Units

## Accessories

FRHL5/FRHL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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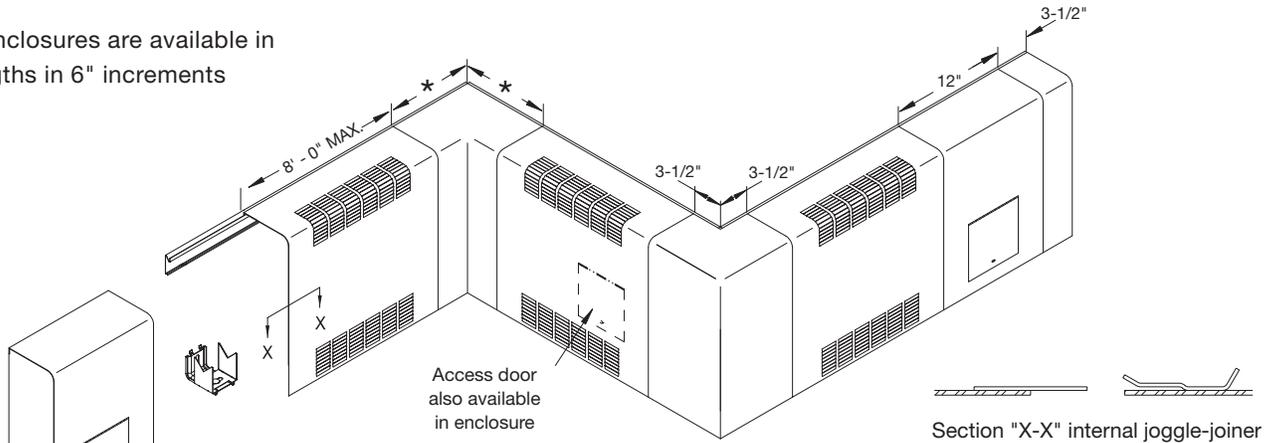
# Enclosure Submittal Data

English, IP Units

## Accessories

FRVL5/FRVL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



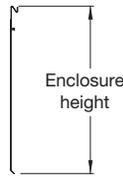
"SNMC"  
Snap mounting channel



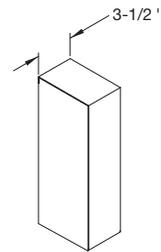
"SLSRB"  
Slip-in second row bracket



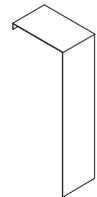
"WPH"  
Wall pipe hanger



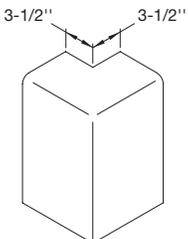
"SNFBP"  
Snap full back panel



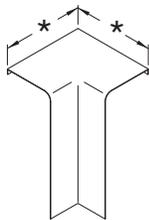
"EC"  
End cap (left hand shown)



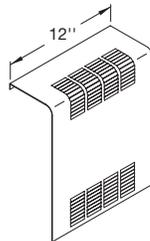
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



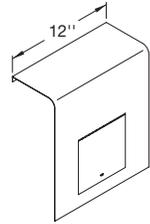
"OC"  
Outside corner



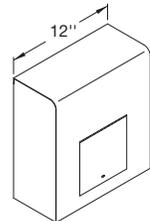
"IC"  
Inside corner  
\*7-1/2" for FRVL3,  
9" for FRVL5



"AS"  
Removable enclosure section butt type style only. No joggles or joiners



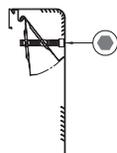
"AP"  
Access panel with access door (Security lock opt.)



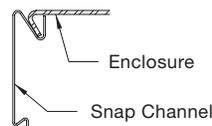
"AC"  
End cap with access door (left side shown) (Security lock opt.)



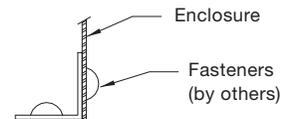
Knob damper



Security damper



Snap mounting channel detail



Floor mounting angle detail

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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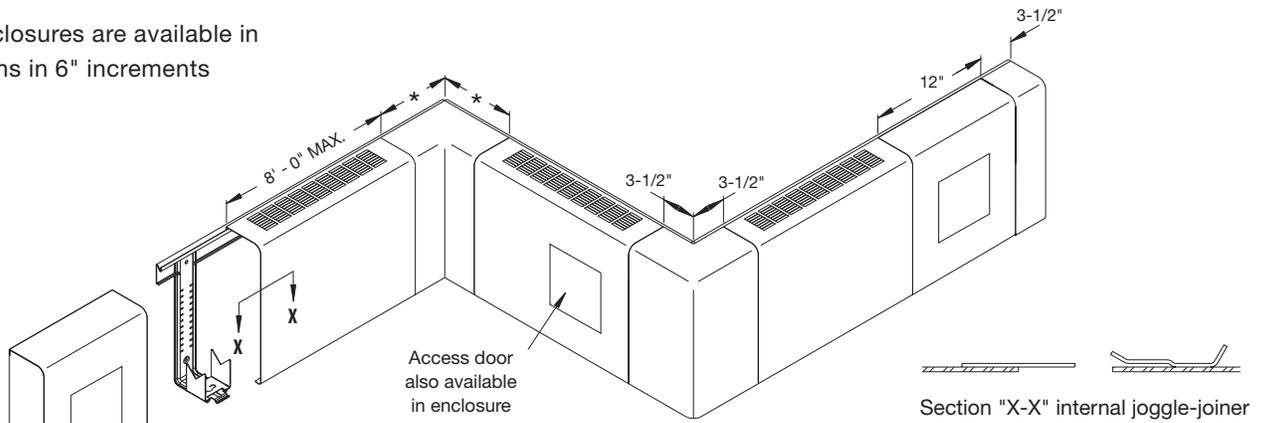
# Enclosure Submittal Data

English, IP Units

## Accessories

FT5/FT3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



"SNMC"  
Snap mounting channel



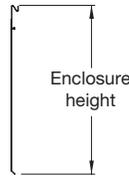
"SNEXP"  
Snap enclosure expansion bracket



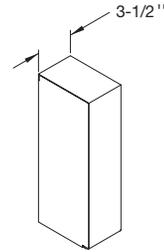
"SLSRB"  
Slip-in second row bracket



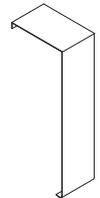
"SLPH"  
Slip-in pipe hanger



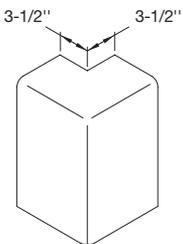
"SNFBP"  
Snap full back panel



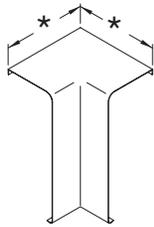
"EC"  
End cap (left hand shown)



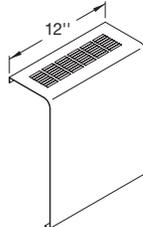
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



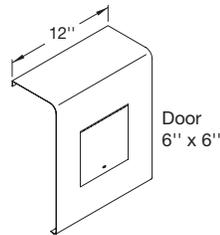
"OC"  
Outside corner



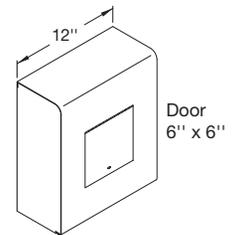
"IC"  
Inside corner  
\*7-1/2" for FT3,  
9" for FT5



"AS"  
Removable enclosure section butt type style only. No joggles or joiners



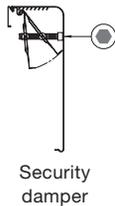
"AP"  
Access panel with access door (Security lock opt.)  
Door 6" x 6"



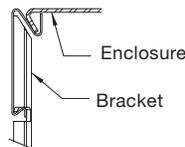
"AC"  
End cap with access door (left side shown) (Security lock opt.)  
Door 6" x 6"



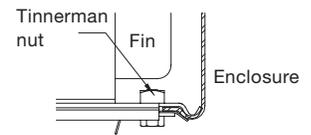
Knob damper



Security damper



Snap mounting channel detail



Detail of enclosure bottom mounting clip

**Notes:**

- All accessories are overlap type, butt type optional (except as noted)

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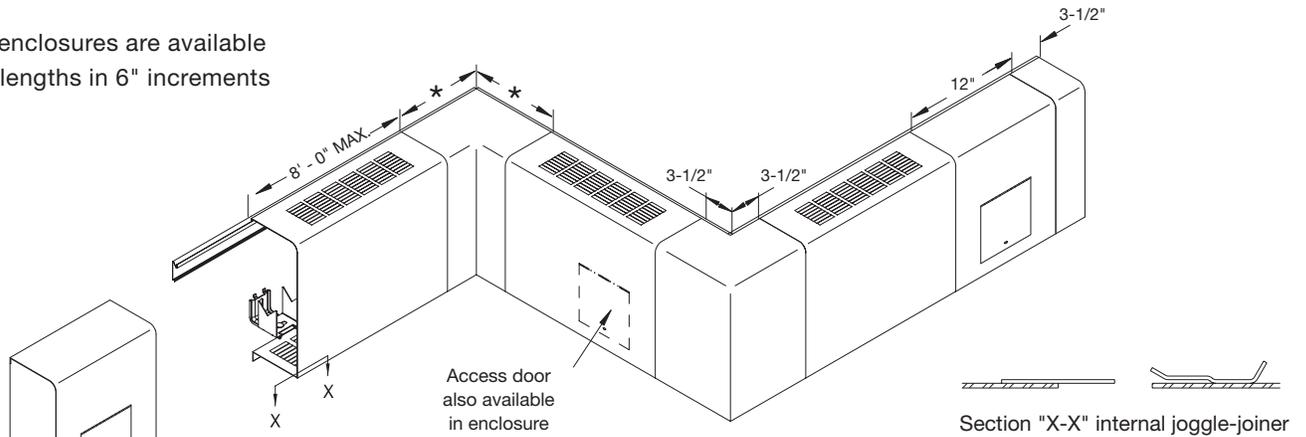
# Enclosure Submittal Data

English, IP Units

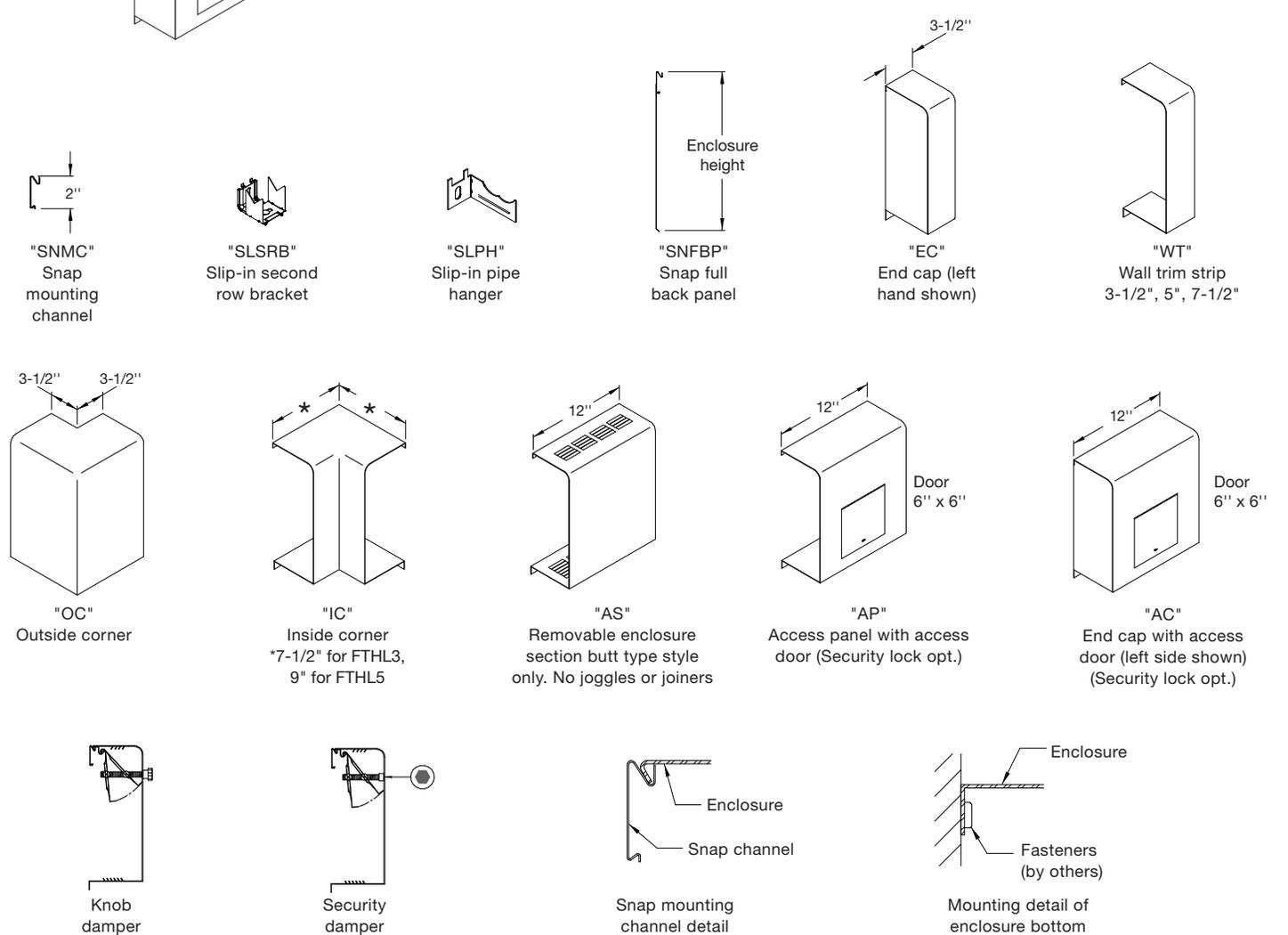
## Accessories

FTHL5/FTHL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



Section "X-X" internal joggle-joiner



**Notes:**

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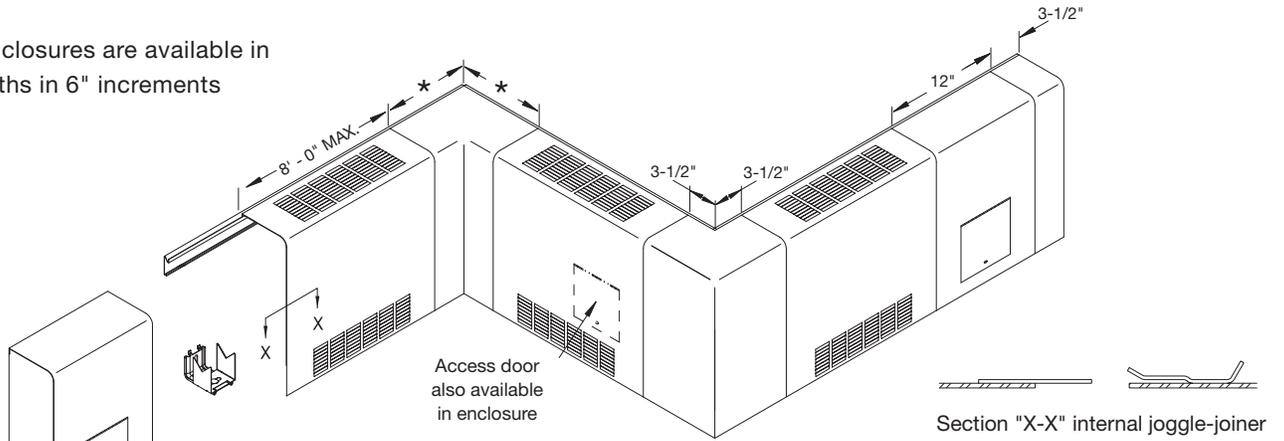
# Enclosure Submittal Data

English, IP Units

## Accessories

FTVL5/FTVL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



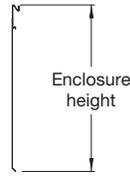
"SNMC"  
Snap mounting channel



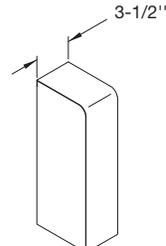
"SLSRB"  
Slip-in second row bracket



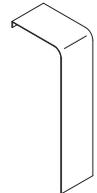
"WPH"  
Slip-in pipe hanger



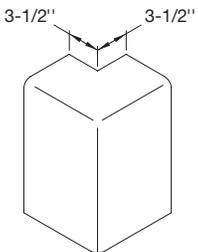
"SNFBP"  
Snap full back panel



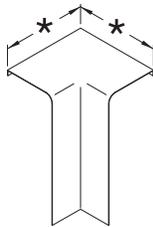
"EC"  
End cap (left hand shown)



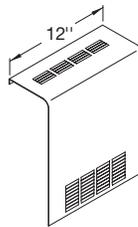
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



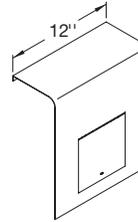
"OC"  
Outside corner



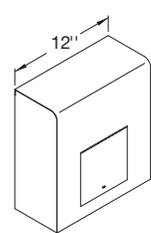
"IC"  
Inside corner  
\*7-1/2" for FTVL3,  
9" for FTVL5



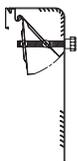
"AS"  
Removable enclosure section butt type style only. No joggles or joiners



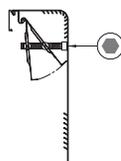
"AP"  
Access panel with access door (Security lock opt.)  
Door 6" x 6"



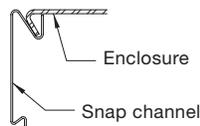
"AC"  
End cap with access door (left side shown) (Security lock opt.)  
Door 6" x 6"



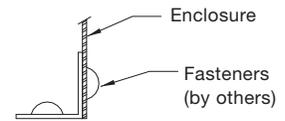
Knob damper



Security damper



Snap mounting channel detail



Floor mounting angle detail

### Notes:

- All accessories are overlap type, butt type optional (except as noted)

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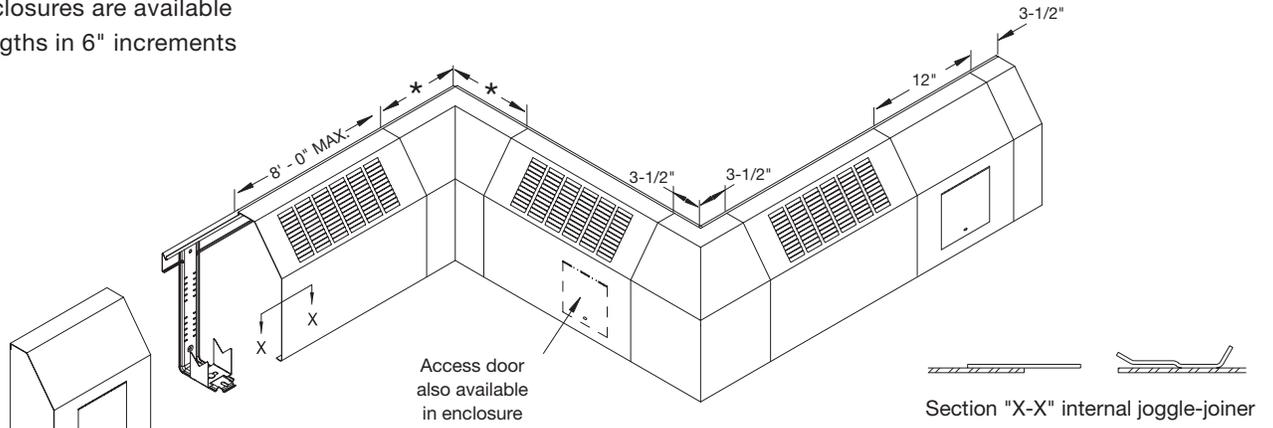
# Enclosure Submittal Data

English, IP Units

## Accessories

FS5/FS3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



"SNMC"  
Snap mounting channel



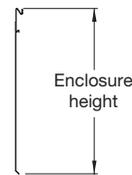
"SNEXP"  
Snap enclosure mounting bracket



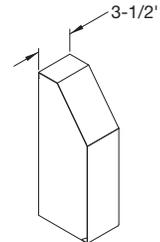
"SLSRB"  
Slip-in second row bracket



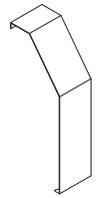
"SLPH"  
Slip-in pipe hanger



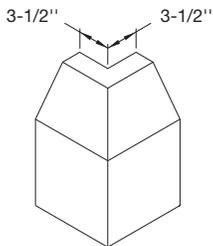
"SNFBP"  
Snap full back panel



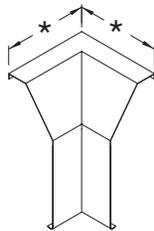
"EC"  
End cap (left hand shown)



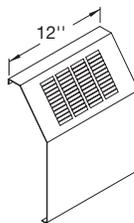
"WT"  
Wall trim strip  
3-1/2", 5", 7-1/2"



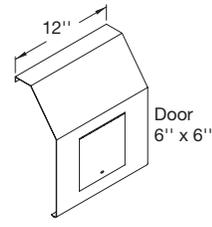
"OC"  
Outside corner



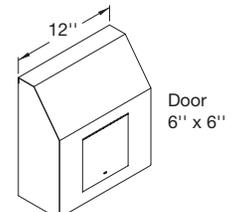
"IC"  
Inside corner  
\*7-1/2" for FS3,  
9" for FS5



"AS"  
Removable enclosure section butt type style only. No joggles or joiners



"AP"  
Access panel with access door (Security lock opt.)



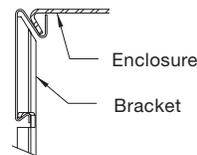
"AC"  
End cap with access door (left side shown) (Security lock opt.)



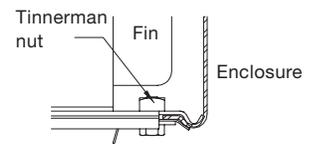
Knob damper



Security damper



Snap mounting channel detail



Detail of enclosure bottom mounting clip

**Notes:**

- All accessories are overlap type, butt type optional (except as noted)

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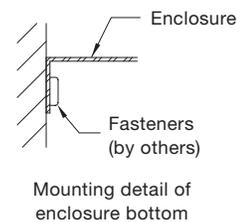
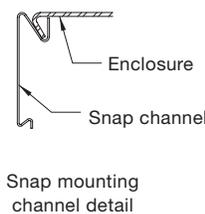
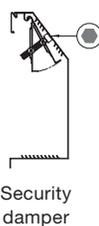
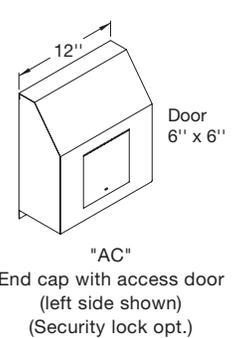
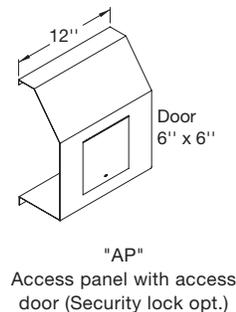
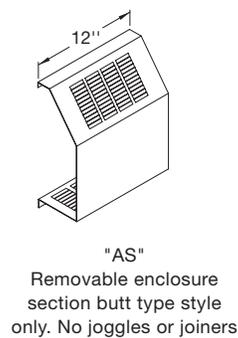
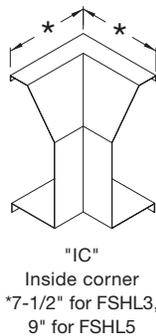
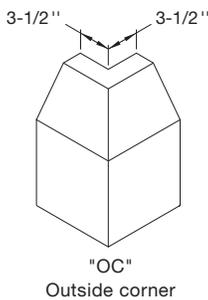
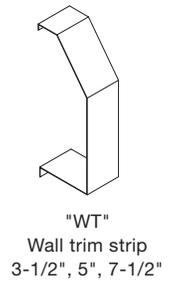
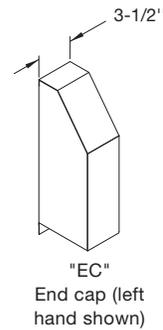
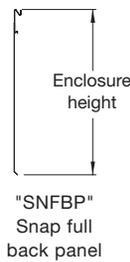
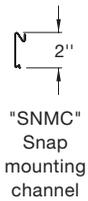
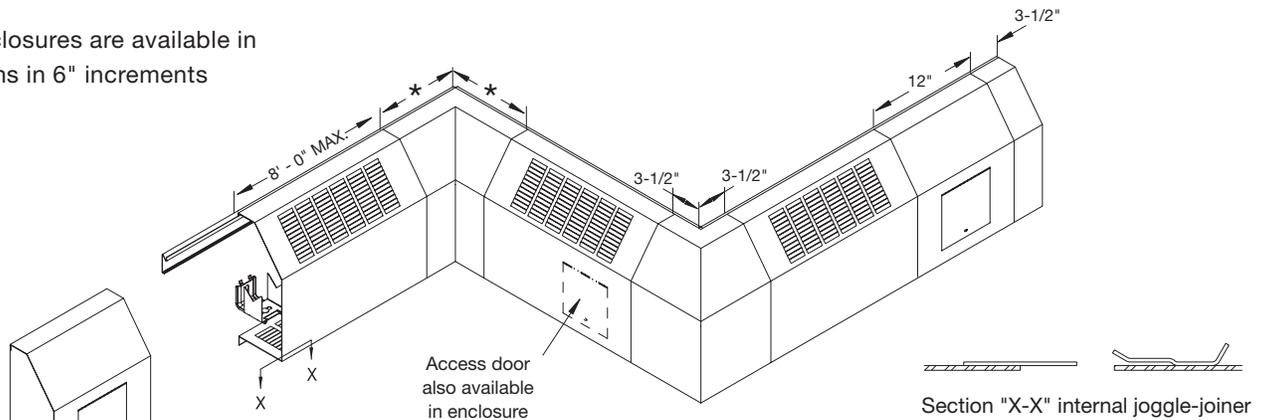
# Enclosure Submittal Data

English, IP Units

## Accessories

**FSHL5/FSHL3**

- Standard enclosures are available in 1' to 8' lengths in 6" increments



**Notes:**

- All accessories are overlap type, butt type optional (except as noted)

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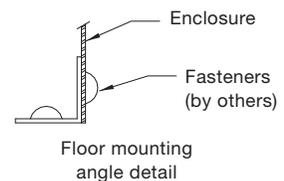
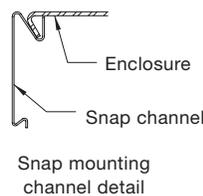
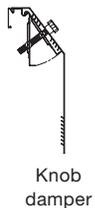
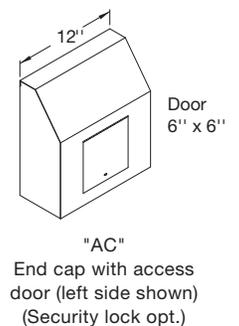
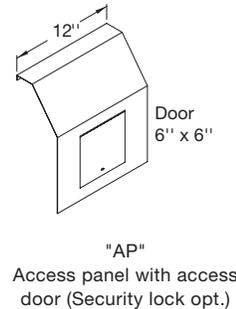
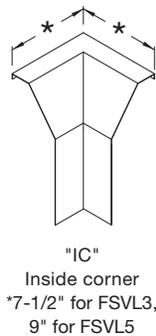
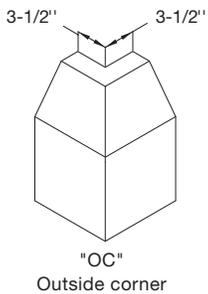
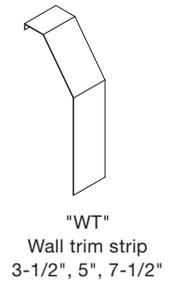
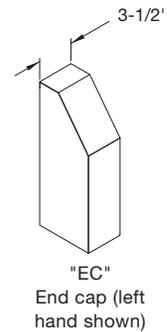
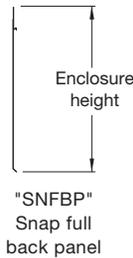
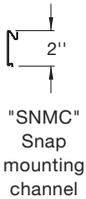
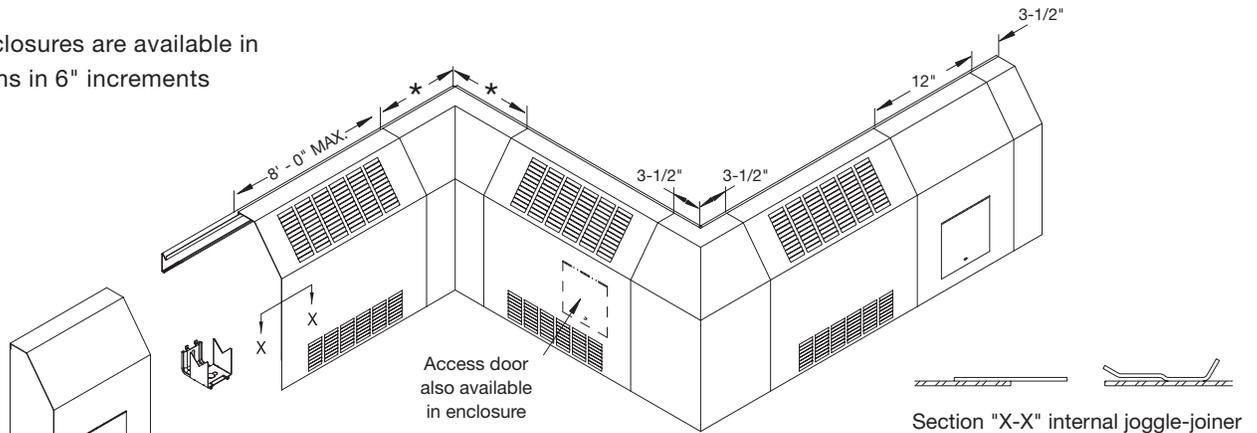
# Enclosure Submittal Data

English, IP Units

## Accessories

FSVL5/FSVL3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



**Notes:**

- All accessories are overlap type, butt type optional (except as noted)

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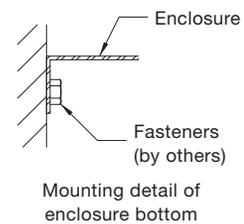
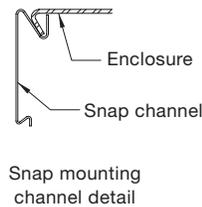
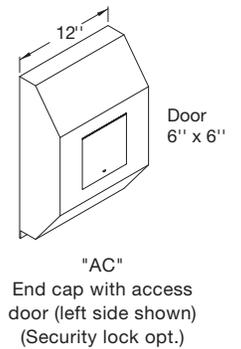
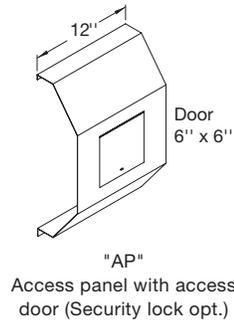
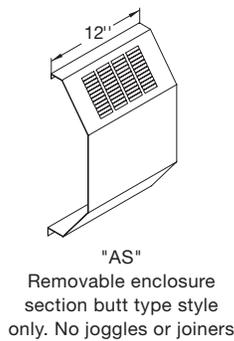
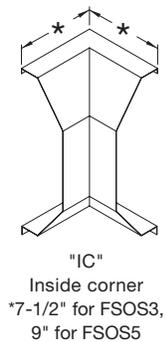
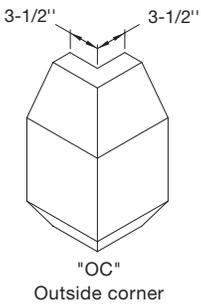
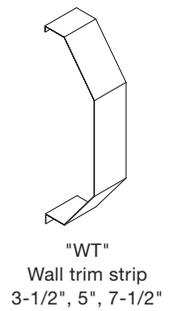
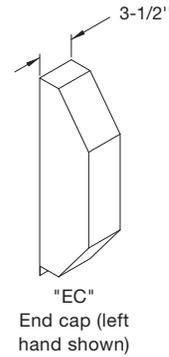
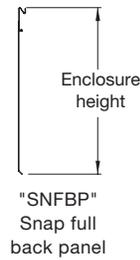
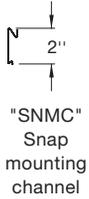
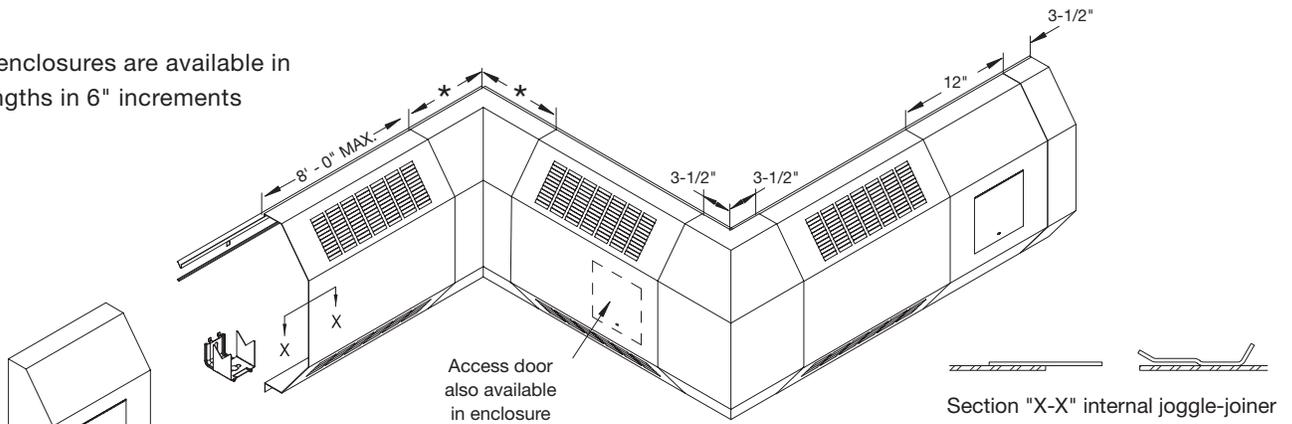
# Enclosure Submittal Data

English, IP Units

## Accessories

FSOS5/FSOS3

- Standard enclosures are available in 1' to 8' lengths in 6" increments



**Notes:**

- All accessories are overlap type, butt type optional (except as noted)

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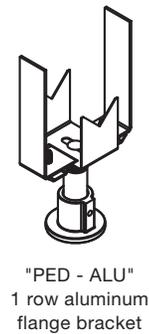
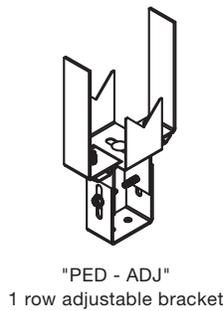
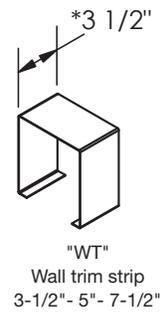
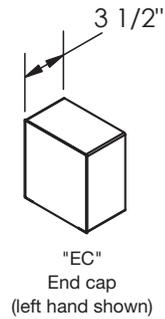
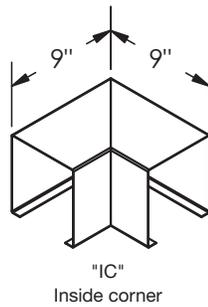
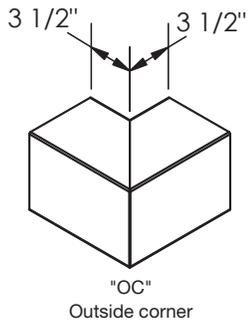
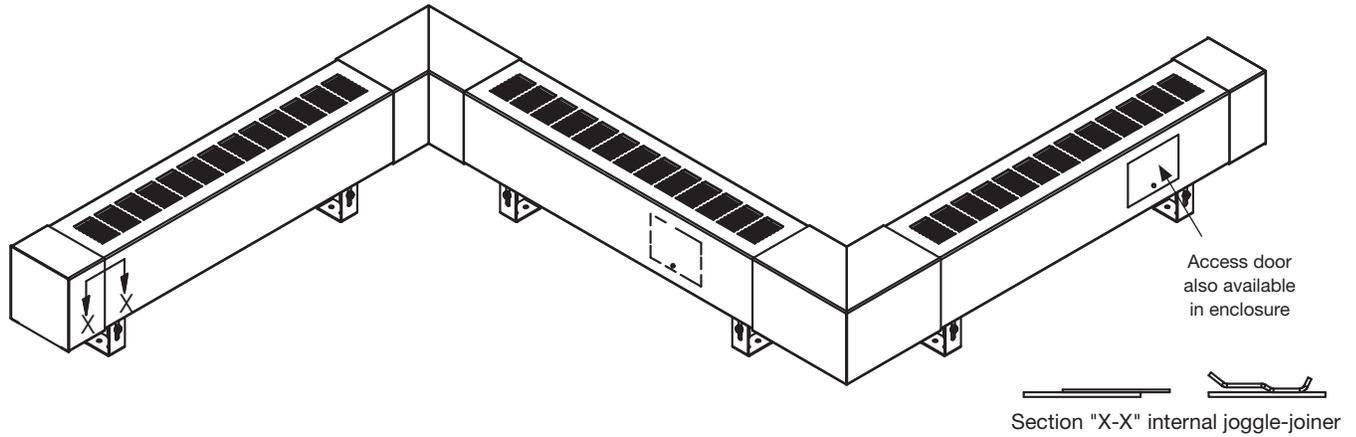
# Enclosure Submittal Data

English, IP Units

## Accessories

ETL506 and ETL508

- Standard enclosures are available in 1' to 8' lengths in 6" increments

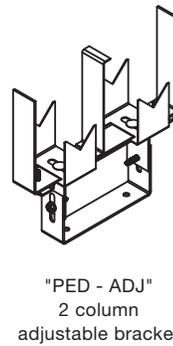
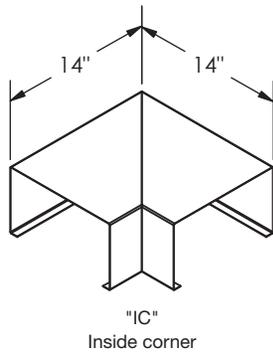
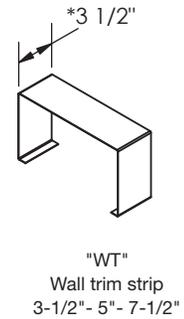
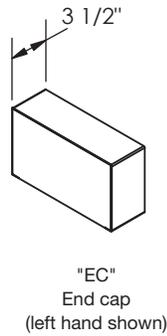
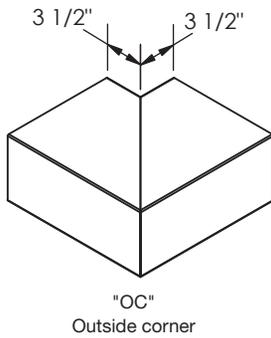
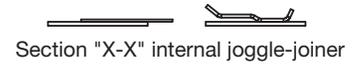
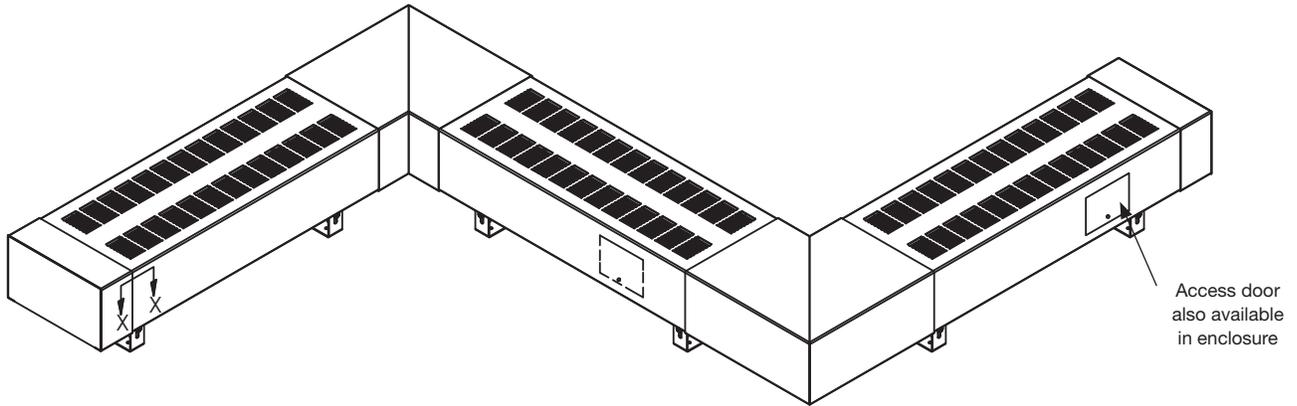


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## Accessories

ETL1006

- Standard enclosures are available in 1' to 8' lengths in 6" increments



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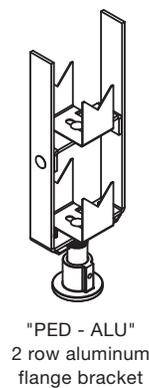
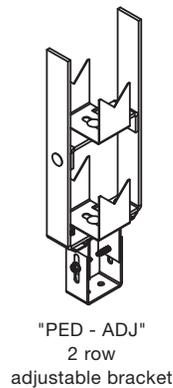
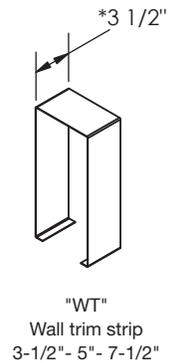
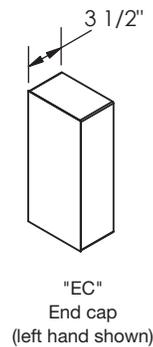
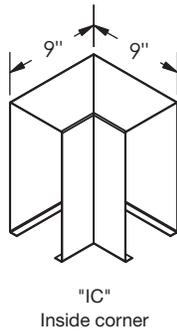
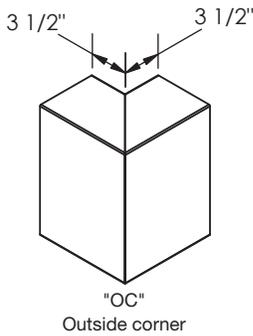
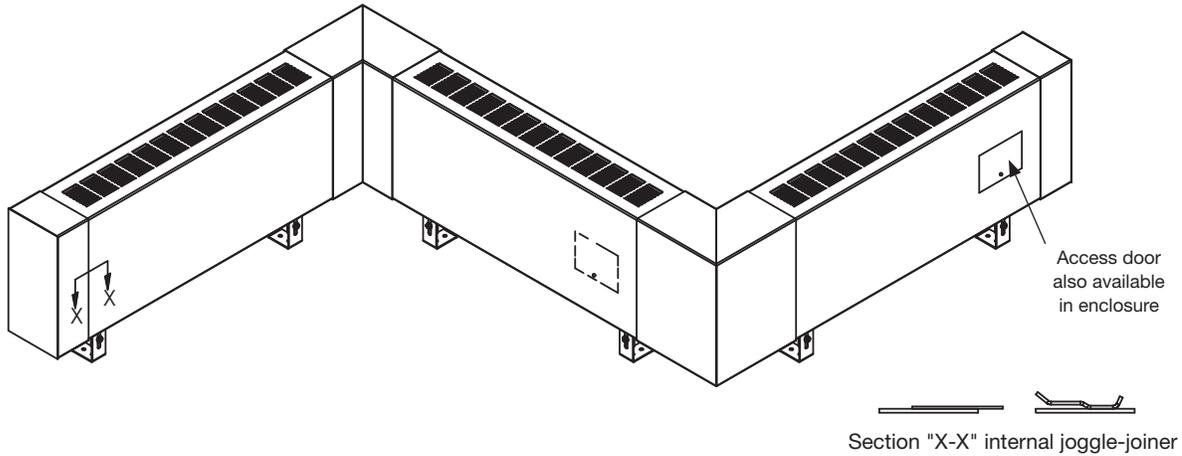
# Enclosure Submittal Data

English, IP Units

## Accessories

ETL512

- Standard enclosures are available in 1' to 8' lengths in 6" increments



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## Mechanical specifications

### General

Furnish and install finned tube heating elements and enclosures as indicated on plans, with required mounting components and accessories. Material shall be manufactured in accordance with Zehnder Rittling's High Quality Standards and in conformance to ISO 9001:2008 standards established and maintained by Zehnder Rittling of Buffalo, New York.

### Steel heating elements

Steel heating elements shall consist of 0.027" thick galvanized fins permanently bonded to high pressure A106 seamless schedule 40B steel tubing by mechanically expanding the steel tubing to the steel fins. Steel tube wall thickness; 1" dia. - 0.0133", 1-1/4" dia. - 0.140", 2" dia - 0.154", prior to tube expansion.

### Guaranteed working pressures:

1" IPS - 780 psig at temperature up to 650°F. 1-1/4" IPS - 660 psig at temperatures up to 650°F. 2" IPS - 405 psig at temperatures up to 650°F.

### Copper-aluminum heating elements

Copper-aluminum heating elements shall consist of 0.016" thick, 1100 grade aluminum fins permanently bonded to lightly annealed copper alloy 122 seamless drawn tubing by mechanically expanding the copper tubing to the aluminum fins. Copper tube wall thickness; 3/4" dia - 0.020", 1" dia. - 0.025", 1-1/4" dia. - 0.028", prior to tube expansion. Copper tube meets the following ASTM standard designations: ASTM B42, ASTM B68, ASTM B75, ASTM B88, ASTM B111, ASTM B152, ASTM B280.

### Guaranteed working pressures:

1-1/4" CU - 194 psig at temperatures up to 300°F.  
1" CU - 204 psig at temperature up to 300°F. 3/4" CU - 218 psig at temperatures up to 300°F.

### Mounting channel or full back panel

Snap mounting channel shall be die formed from 23-gauge galvanized steel and the full back panel from 20-gauge galvanized steel. For rigidity, the top projection of the mounting channel or full back panel shall position the enclosure away from the wall so as to allow for installation or removal of enclosure without damage to wall. A urethane gasket is available to form air seal at wall (optional).

### Wall hanger brackets for all open inlet enclosures

All hanger brackets shall be die formed for rigidity. Brackets used for first row or one row of finned tube shall incorporate a positive-lock mounting clip for the enclosure for all open inlet enclosures. Brackets will be self-gauging, allowing for a single measurement installation.

### Wall hanger brackets for all open inlet enclosures

All hanger brackets shall be die formed for rigidity. Brackets will support the element and fasten directly to the wall. They will not attach to the enclosure.

All hangers must provide for lengthwise movement of elements during expansion and contraction as well as aligning elements to prevent contact with brackets, walls, or enclosure.

### ETL hanger brackets

All brackets must provide for lengthwise movement of elements during expansion and contraction as well as aligning elements to prevent contact with brackets, walls or enclosure. Brackets to be adjustable type (+5/8 / -13/16) as standard. Optional solid post with aluminum floor flange available. Brackets to be provided with all pieces for floor mounting, excluding fasteners.

## Mechanical specifications

### Enclosures and accessories

Enclosures shall be of the type as shown on the drawings. Enclosures shall be manufactured from 14-16-18-gauge cold rolled steel. All enclosures shall be reinforced with welded gussets. The joining of enclosure shall be accomplished by use of internal joggle joiners to provide for hairline joints and added rigidity. No sheet metal screws or other fastening devices shall be visible.

Securing the top portion of the enclosure to the wall will be accomplished by use of a full length mounting channel or full back panel.

The lower portion of open inlet enclosures will be secured by use of a positive-locking, bottom-mounting clip using fasteners, thus preventing removal without tools.

VL enclosures will be secured to the floor using floor mounting angle or channel (fasteners by others).

HL enclosures will be secured to the wall by the flange of the enclosure (with fasteners by others).

Pedestal enclosures will attach to the brackets which will be mounted directly to the floor, no wall supports or brackets are needed.

### Dampers

Enclosure dampers shall be provided where indicated. Damper blades shall be fabricated from 18-gauge material painted to match enclosure color. Threaded damper screw and trunion shall provide positive operation of blade to provide variable heat output.

Damper shall be operated by solid plastic damper knobs attached to damper screw. Recessed security allen head operators shall be used in secure areas as indicated. Consult factory on enclosure heights of 8" or below.

### Access doors

Access doors shall be provided where noted on plans. Doors shall be 6" x 6". Doors shall be hinged and have slotted operators. Recessed security allen head operators shall be used in secure areas as indicated. Doors shall be positioned directly in enclosure or in 12" long access panel. Consult factory on enclosure heights of 8" or below.

### Paint

All enclosures and accessories shall be degreased and chemically phosphatized before application of a durable, attractive, electrostatic epoxy powder coating. Decorator colors are available from Zehnder Rittling's color selector chart.

## Warranty

Zehnder Rittling guarantees its products to be free from defects in material and workmanship for a period of one year from date of shipment from our Buffalo, New York factory.

Should there be any defects in the good(s), the purchaser should promptly notify Zehnder Rittling and upon receipt of written consent from Zehnder Rittling, the purchaser shall return the defective good(s) to the factory for inspection with freight prepaid. If inspection shows the goods to be defective, Zehnder Rittling will at its discretion repair or replace the said item(s).

Defects arising from damage due to shipment, improper installation, negligence or misuse by others are not covered by this warranty.

This warranty is extended only to the original purchaser from Zehnder Rittling.

