

# COMMERCIAL FIN-TUBE

## Radiation Selection Guide

***Slant/Fin***<sup>®</sup>

*America's premier manufacturer of hydronic heating equipment.*

# FIN-TUBE

## RADIATION...

### Meeting the commercial heating needs of engineers, architects, builders and heating contractors.

Slant/Fin radiation products are widely recognized for their unmatched quality of design and performance. The wide range of Slant/Fin enclosures and elements described in this catalog meet most hot water or steam heating requirements for offices, schools, hospitals, stores, etc.

### Standard and custom designs.

When design schemes or retrofit constraints call for a uniquely shaped fin-tube enclosure, Slant/Fin's custom fabrication capabilities let imagination become reality. The designer may specify size and shape variations of standard Slant/Fin products, as well as totally customized shapes.

And every Slant/Fin model, from multi-tier custom enclosures to our low-profile high-output baseboard, is built to stand up to years of use and abuse.

### Faster Delivery.

Shortening the time between specifying fin-tube radiation and completing the installation has long been an industry goal. Now, through design innovations and advanced manufacturing technology, Slant/Fin has improved commercial radiation availability, helping to ensure that your projects are kept on schedule.

Many popular models of fin-tube enclosure and light commercial baseboard radiation are kept in stock at local distributors, so your radiation job can be specified, ordered and installed in just days instead of weeks or months. Multi/Pak 90 Series 2-piece pre-painted enclosures, for instance, knock down flat, and are neatly packaged in a compact box. They are stocked in pre-cut lengths with telescopic accessories, virtually eliminating cutting on the job.

For radiation orders to be shipped from the factory, lead times have been substantially reduced. The Slant/Fin factory has grown to be the most advanced in the industry, with all major metalworking operations under full computer control. Together with deep materials inventory, high production capacity and highly flexible custom painting facilities, Slant/Fin is able to produce long or short runs more economically and deliver commercial radiation products with greater speed and higher quality.



## MULTI/PAK® 90 SERIES

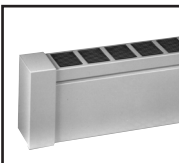
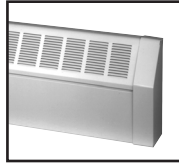
2-piece fin-tube enclosure. Factory packaged. Prepainted. In stock.

Style: Slope-top and flat-top. Aluminum grille optional (90 & 95).  
 Application: Commercial heating. Hot water or steam.  
 Output: 373 to 3140 Btu/hr.  
 Elements: Choice of 11. Copper/aluminum or steel.  
 Finish: Nu-White baked enamel, or custom colors.

On your commercial heating jobs, select the product that installs faster, looks better, lasts longer and saves money -- Multi/Pak 90. These 2-piece fin-tube enclosures are fully packaged and in stock at our factory and local Slant/Fin wholesale distributors.

Multi/Pak 90 provides what you need:

- slope-top and flat-top styling
- wide choice of elements for hot water or steam
- precision built accessories

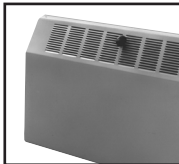


Multi/Pak 90 Series  
page 4-11

## J SERIES

1-piece fin-tube enclosure.

Style: Slope-top  
 Application: Commercial heating. Hot water or steam.  
 Output: 599 to 3854 Btu/hr.  
 Elements: Choice of 6. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors.



page 12-13 J

## FS SERIES

Free standing fin-tube enclosure.

Style: Pedestal mounted enclosure.  
 Application: Commercial heating. Hot water or steam.  
 Output: 599 to 3854 Btu/hr.  
 Elements: Choice of 6. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors.

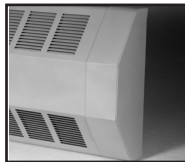


page 14-15 FS

## TBG SERIES

1-piece fin-tube enclosure.

Style: Slope top and bottom.  
 Application: Commercial heating. Hot water or steam. Ideal for upper wall installation.  
 Output: 540 to 2548 Btu/hr.  
 Elements: Choice of 6. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors

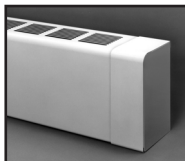


page 16-17 TBG

## R SERIES

1-piece fin-tube enclosure.

Style: Flat-top. Aluminum grille optional.  
 Application: Commercial heating. Hot water or steam.  
 Output: 554 to 3770 Btu/hr.  
 Elements: Choice of 6. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors

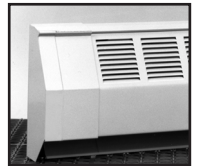


page 18-19 R

## 350 L SERIES

High output slope-top baseboard.

Style: Slope-top, louvered baseboard.  
 Application: Light commercial heating. Hot water or steam  
 Output: 455 to 1397 Btu/hr.  
 Elements: Choice of 5. Copper/aluminum or steel.  
 Finish: Nu-White baked enamel..

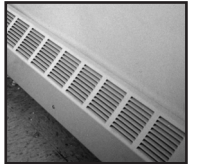


page 20-21 350L

## HD SERIES

Heavy duty slope-top baseboard.

Style: Slope-top, louvered baseboard.  
 Application: Rugged duty residential or light commercial heating. Hot water or steam.  
 Output: 360 to 1660 Btu/hr.  
 Elements: Choice of 6. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors.



page 22-23 HD

## FINE/LINE 30H

Heavy duty baseboard.

Style: Low-profile baseboard..  
 Application: Residential or light commercial heating.  
 Output: 380 to 890 Btu/hr.  
 Elements: 3/4" copper/aluminum.  
 Finish: Nu-White baked enamel.

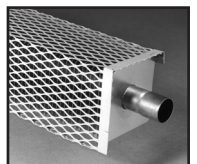


page 23 30H

## F&M SERIES

1-piece element covers.

Style: F-Series: Louvered top.  
 EM Series: Expanded metal  
 Application: Industrial hot water or steam.  
 Output: F Series: 563 to 3497 Btu/hr.  
 EM Series: 581 to 4158 Btu/hr.  
 Elements: Choice of 5. Copper/aluminum or steel.  
 Finish: Electro galvanized or custom colors.

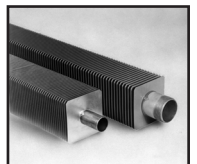


page 24-25 F/EM

## BARE ELEMENTS

Highest quality fin-tube for single or multi-tier installation.

Application: With Slant/Fin enclosures or as bare element installation.  
 Output: To 4316 Btu/hr.  
 Elements: Choice of 11. Copper/aluminum or steel.



page 26-27

## MULTI/PAK® 80 SERIES

High output baseboard radiation.

Style: Low-profile baseboard.  
 Application: Light commercial or deluxe residential heating. Hot water or steam.  
 Output: 420 to 1200 Btu/hr.  
 Elements: Choice of 5. Copper/aluminum or steel.  
 Finish: Nu-White baked enamel.



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## ENGINEERING DATA

Ratings data  
 Specifications



page 29-31



**In the best American manufacturing tradition, we've improved the quality of an established good product to make it even better.**

### Multi/Pak 90 Series

- 2-piece design for convenience, accessibility, ease of cleaning
- Slope-top and flat-top models to meet most specifications
- The "fit and trim" that are the marks of quality craftsmanship
- Readily available from factory and Slant/Fin wholesale distributors
- Baked enamel finish, without premium cost, makes every job a "showcase" installation

It's never been easier to select, purchase and install fin-tube radiation. And you've never encountered better quality. The unique 2-piece design of our Multi-Pak 90 Series allows us to pack these enclosures in a compact 2½" deep protective carton and to ship and warehouse it -- just like residential baseboard! Multi/Pak 90 is available in a variety of slope-top and flat-top models in single-and multi-tier to meet most design and output requirements.

**Easy to order--it's available when you need it.**

Slant/fin has made a commitment, through the production, inventory and distribution of Multi/Pak 90, to meet your most demanding commercial radiator delivery requirements. Never before has fin-tube radiation been prepackaged like

this for "off-the-shelf" availability. Usually commercial enclosure must be ordered many weeks before it's scheduled for installation. It's generally shipped "loose", banded or crated and subject to scratching and damage. And if it turns out that a shipment is short or damaged, the job waits again.

Wait no more. Multi/Pak 90 is stocked at many Slant/Fin wholesalers so you can get it when you need it. Or, it can be promptly shipped direct to your job site from the factory. You also avoid troublesome on-the-job cutting since Multi-Pak 90 comes in lengths of 2, 3, 3½, 4, 5, 6, 7 and 8 feet with telescopic accessories that make up odd inches.



### Convenient to handle.

Individually boxed Multi/Pak 90 is easier to transport and easier to handle at the job site than unpackaged commercial cover. We've put an end to bent corners and dented panels. Every foot of cover you buy is protected until you're ready to hang it on the wall.



### Packed with brackets and hangers. A snap to install.

All the components you need for quick installation--brackets, element hangers, top cover and front cover--are packed in each carton of Multi/Pak 90. Installation is simple. Secure the brackets and hangers to the wall and run your heating elements, the same as you would with ordinary fin-tube radiation. With Multi/Pak 90 you simply snap on the top cover, and then the front cover. To finish the job, there's a full range of easy-to-install, individually cartoned accessories. Most are telescopic for a quick, snug fit. In a snap, you have a distinctive, fully finished installation that is well designed and well-made.

### A finished job with a designer finish.

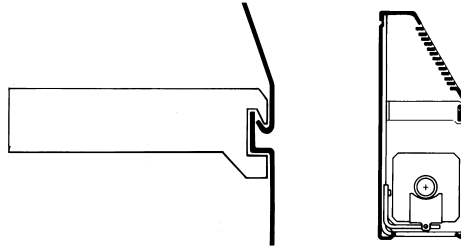
Multi/Pak 90 Series enclosures and accessories are pre-painted in a Nu-White baked enamel at no extra cost. Your finished job harmonizes beautifully with any decor. Or, if painting is preferred, the Nu-White finish is an excellent prime base. Multi/Pak 90 may also be ordered with a custom color finish.



Multi/Pak 90 Series enclosures add exceptional beauty and distinction to any area: office suites, lobbies, show-rooms, restaurants, conference rooms, etc.

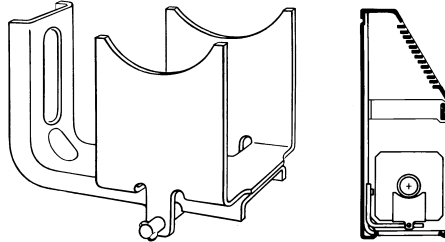
## Cover panels

18 gauge top cover and front cover interlock in rigid support arm channel. Lateral bends in top and front cover, plus strength of support arm, give assembled enclosure exceptional rigidity.



## Element support

- Electro-galvanized bracket has fastening slot that allows 1 1/8" pitch adjustment.
- Electro-galvanized cradle supports finned or bare tubing at same height.
- Sliding guide rod provides full cradle width support. 1 5/16" lateral movement permits smooth, noiseless expansion.

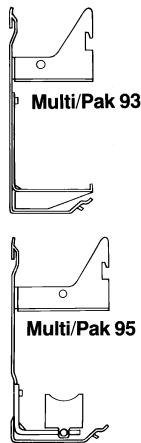


## Pencil-proof louvers

Minimize "see through."

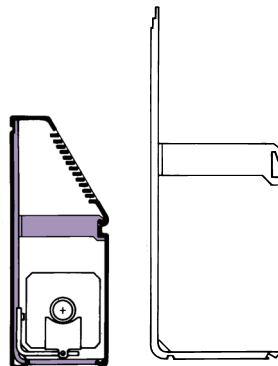
## Multi/Pak 93 and 95 wall brackets

- Extra-heavy 11 gauge wall bracket and panel support arm are die formed with multiple bends that add strength.
- Multi/Pak 93 element hanger permits 7/8" pitch adjustment. Self-adjusting polypropylene expansion cradle on "H" and "E" elements allow silent lateral expansion movement
- Multi/Pak 95 element support and cradle are identical to Multi/Pak 90



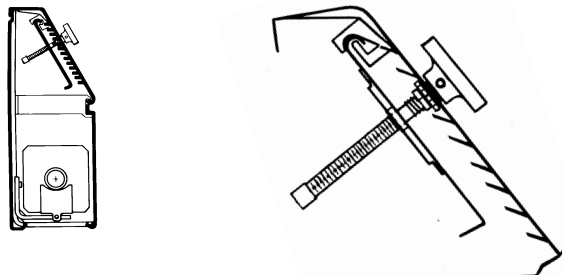
## Multi/Pak 90 wall brackets


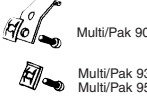

- Heavy duty 14 gauge wall bracket is drawn die formed with multi-directional bends that add strength.
- Mounting slots provide 3/4" height adjustment.
- Large recessed "flat" prevents bracket from crushing wall surface when back panel is not used.



## Damper

Knob operated damper (optional) is activated by precision lead screw and brass trunnion pitch block. Provides years of smooth operation. Damper for slope-top models is shown. Flat top models utilize a hinge type construction.



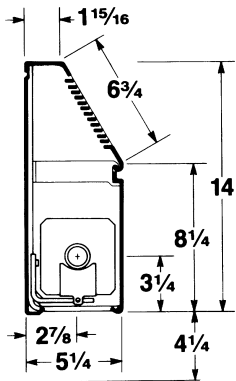
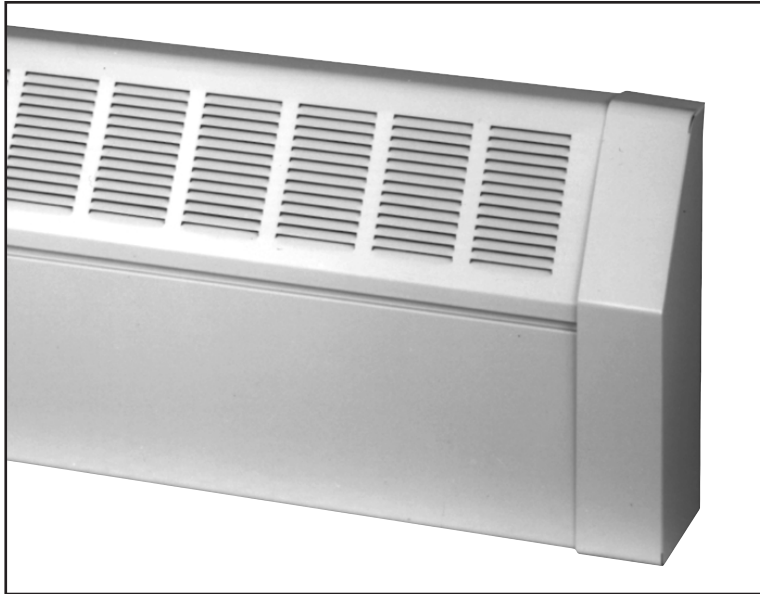
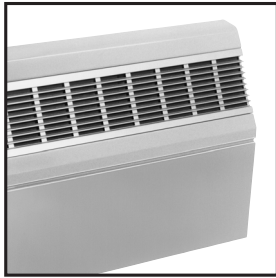
	<b>Hanging Strip</b> Used with hook braces where normal brackets cannot be used
	<b>Tamper-proof lock</b> Locks front cover to lower arm of bracket
	<b>Wall Gasketing</b> For dustproof seal between top of cover and wall

**Slant/Fin**

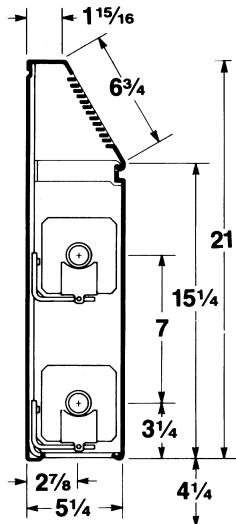
# MULTI/PAK<sup>®</sup> 90

## SLOPE-TOP TWO-PIECE ENCLOSURE

**MODELS 90-14 AND 90-21**



**90-14**



**90-21**

### ORDERING DATA

#### Multi/Pak 90 Complete Enclosure Assembly

**PACKAGING:** Complete two-piece assembly factory packaged with necessary brackets and hangers.

**CONSTRUCTION:** Two-piece interlocking top cover/front cover mount on wall brackets. Lock in place to provide the same shape with better rigidity than one-piece covers.

**DEPTH:** 5 1/4"

**HEIGHTS:** 14" (one tier), 21" (one or two tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'.

**MATERIAL:** 18-gauge steel top and front cover.

**WALL BRACKETS/HANGERS:** Packaged with complete assembly. SC hanger has guide rod to provide 1 15/16" lateral expansion movement, 1 1/8" vertical pitch adjustment. Brackets and hangers provided with complete assembly as follows:

Length	90-14		90-21	
	Brackets	Hangers	Brackets	Hangers
2-5 ft.	2	2	2	4
6-8 ft.	3	3	3	6

**FINISH:** Nu-White baked enamel is standard.

Custom color available on special order.

Anodized architectural aluminum grille optional.

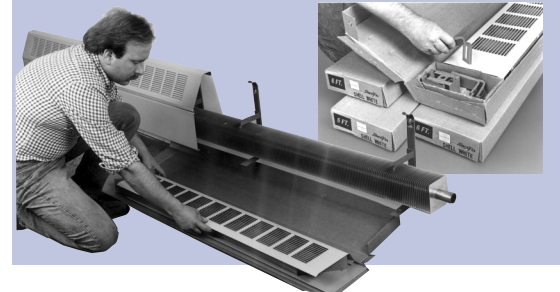
**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Telescopic cover accessories eliminate the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

See pages 4-5 for description of features

#### Multi/Pak 90 Series two-piece fin-tube enclosure. The modern choice in commercial radiation.

- Available as a "stock item".
- Precut lengths, telescopic accessories, speed installations.
- Factory packaging protects the cover until ready to install.
- Easy to install. Easy to service.
- Nu-White baked enamel finish.



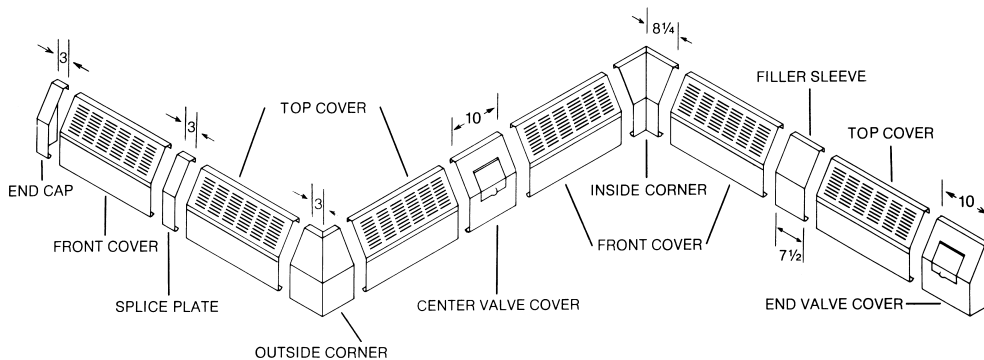
# RATINGS

with or without dampers

Cover Type	Enclosure Height	Element Type	Tube Size and Material	Fin Size and Material	Fins Per Foot	Steam 1 PSI * Btu/Hr. Per Foot	HOT WATER RATINGS*							
							BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
							220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
90-14	14"	S-532	1¼" steel	4¼" steel	32	1380	1449	1311	1187	1076	952	842	731	621
		S-540	1¼" steel	4¼" steel	40	1550	1628	1473	1333	1209	1070	946	822	698
		S-832	2" steel	4¼" steel	32	1400	1470	1330	1204	1092	966	854	742	630
		C-340	¾" copper	4¼" alum.	40	1839	1932	1748	1582	1435	1269	1122	975	828
		C-440	1" copper	4¼" alum.	40	1950	2048	1853	1677	1521	1346	1190	1034	878
		C-540	1¼" copper	4¼" alum.	40	1910	2006	1815	1643	1490	1318	1165	1012	860
90-21	21"	S-532	1¼" steel	4¼" steel	32	1460	1533	1387	1256	1139	1007	891	774	657
		S-540	1¼" steel	4¼" steel	40	1680	1764	1596	1445	1310	1159	1025	890	756
		S-832	2" steel	4¼" steel	32	1520	1596	1444	1307	1186	1049	927	806	684
		C-340	¾" copper	4¼" alum.	40	2013	2114	1895	1731	1570	1389	1228	1067	906
		C-440	1" copper	4¼" alum.	40	2130	2237	2024	1832	1661	1470	1299	1129	959
		C-540	1¼" copper	4¼" alum.	40	2090	2195	1986	1797	1630	1442	1275	1108	941
90-21 Two-tier element	21"	S-532	1¼" steel	4¼" steel	32	2190	2300	2081	1883	1708	1511	1336	1161	986
		S-540	1¼" steel	4¼" steel	40	2380	2499	2261	2047	1856	1642	1452	1261	1071
		S-832	2" steel	4¼" steel	32	2270	2384	2157	1952	1771	1566	1385	1203	1022
		C-340	¾" copper	4¼" alum.	40	2822	2963	2681	2427	2200	1947	1721	1496	1270
		C-440	1" copper	4¼" alum.	40	2990	3140	2841	2571	2332	2063	1824	1585	1346
		C-540	1¼" copper	4¼" alum.	40	2930	3077	2784	2520	2285	2022	1787	1553	1319

\*Based on 65° F entering air temperature.  
For ratings at lower water temperatures, refer to conversion table on page 29

# ACCESSORIES



Fourteen accessories let you "fit" Multi/Pak 90 in virtually any space configuration - fast and easily. Cover accessories are all telescopic. They snap in place without screws or other fasteners. All accessories, unless noted, are finished in Nu-White baked enamel. Custom color available on special order.

## non-telescopic accessories

- Column cover set
- Damper (electro galvanized)\*
- Damper, field installed
- Hanging strip\*
- Back panel (electro galvanized)
- Tamper-proof lock\*
- Wall gasketing\*

\*See p.5 for details

## telescopic accessories



End Cap  
End Cap-slotted  
(not shown)



Splice plate



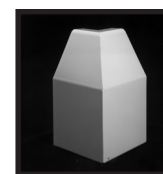
Filler sleeve



Center valve cover



Inside corner, 90°

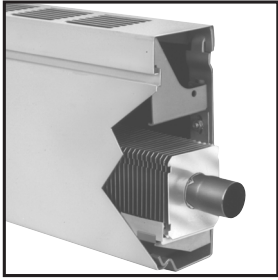


Outside corner, 90°



End valve cover,  
slotted, 10"  
End valve cover, 10"  
(not shown)

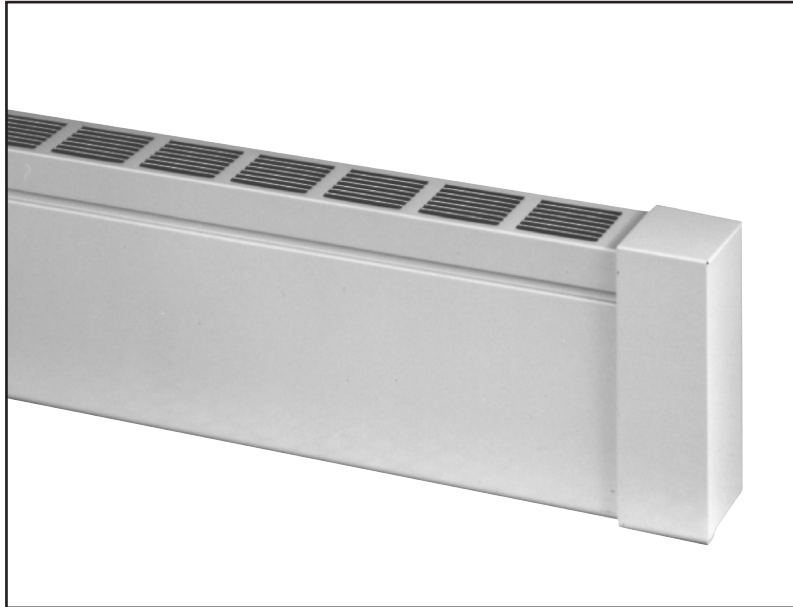
**Slant/Fin**



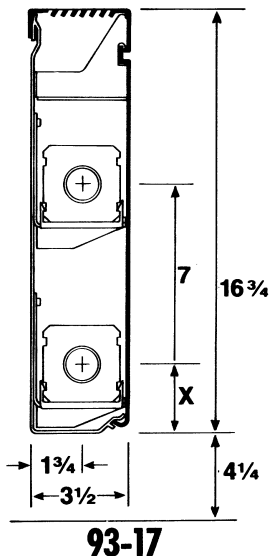
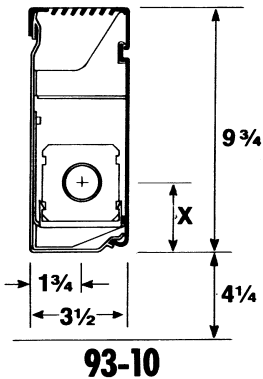
# MULTI/PAK<sup>®</sup> 93

## FLAT-TOP TWO-PIECE ENCLOSURE

**MODELS 93-10 AND 93-17**



ELEMENT	X
H1	3 <sup>3</sup> / <sub>16</sub>
H3	2 <sup>13</sup> / <sub>16</sub>
H4	2 <sup>13</sup> / <sub>16</sub>
H5X	3 <sup>3</sup> / <sub>16</sub>
H6X	3 <sup>3</sup> / <sub>16</sub>
E-75	2 <sup>7</sup> / <sub>8</sub>



### ORDERING DATA

#### Multi/Pak 93 Complete Enclosure Assembly

**PACKAGING:** Complete two-piece assembly factory packaged with necessary brackets and hangers.

**CONSTRUCTION:** Two-piece interlocking top cover/front cover mount on wall brackets. Lock in place to provide the same shape with better rigidity than one-piece covers.

**DEPTH:** 3<sup>1</sup>/<sub>2</sub>"

**HEIGHTS:** 9<sup>3</sup>/<sub>4</sub>" (one tier), 16<sup>3</sup>/<sub>4</sub>" (one or two tier)

**LENGTHS:** 2', 3', 3<sup>1</sup>/<sub>2</sub>', 4', 5', 6', 7', 8'.

**MATERIAL:** 18-gauge steel top and front cover. 11-gauge wall brackets.

**WALL BRACKET/HANGERS:** Packaged with complete assembly. Element hangers permit vertical pitch adjustment. Self-adjusting polypropylene element expansion cradles allow silent lateral expansion movement. Brackets and hangers provided with complete assembly as follows:

Length	93-10		93-17	
	Brackets	Hangers	Brackets	Hangers
2-5 ft.	2	2	2	4
6-8 ft.	3	3	3	6

**FINISH:** Nu-White baked enamel is standard. Custom color available on special order.

**ELEMENTS:** Copper with aluminum fins: H-1, H-3, H-4, H-5X, E-75. Steel with electro-galvanized steel fins: H-6X. Lengths from 2 to 8 ft. See p.26

**JOINTS:** Telescopic cover accessories eliminate the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

See pages 4-5 for description of features.

#### Multi/Pak 90 Series two-piece fin-tube enclosure. The modern choice in commercial radiation.

- Available as a "stock item".
- Factory packaging protects the cover until ready to install.
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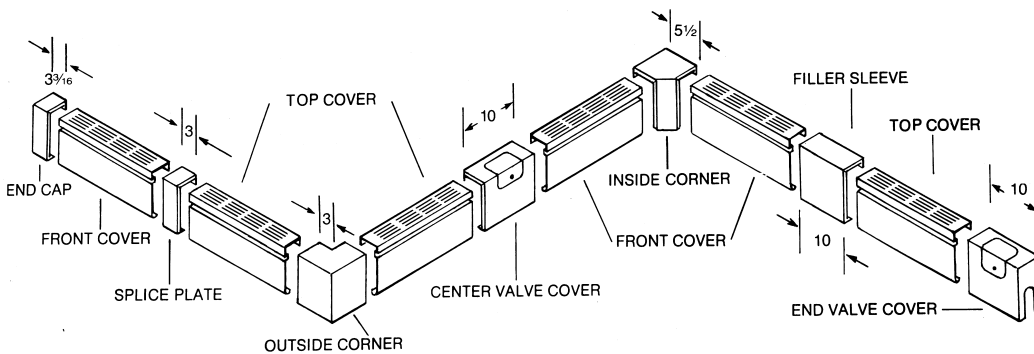
# RATINGS

with or without dampers

Cover Type	Enclosure Height	Element Type	Rows of Heating Elements	Tube Size and Material	Fin Size and Material	Fins Per Foot	Steam 1 PSI* Btu/Hr. Per Foot	HOT WATER RATINGS*							
								220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
93-10	9¾"	H-1	1	¾" copper	3" x 3¼" alum.	48	1079	1133	1025	928	848	745	658	572	486
		H-3	1	¾" copper	2¾" x 2½" alum.	55	991	1041	941	852	773	684	605	525	446
		H-4	1	1" copper	3" x 2½" alum.	48	965	1013	917	830	753	666	589	511	434
		H-5X	1	1¼" copper	3" x 3¼" alum.	48	1030	1082	979	886	803	711	628	546	464
		H-6X	1	1¼" IPS Steel	3" x 3¼" steel	48	883	927	839	759	689	609	539	468	397
		E-75	1	¾" copper	2⅝" x 2¼" alum.	55	828	869	787	712	646	571	505	439	373
93-17	16¾"	H-1	1	¾" copper	3" x 3¼" alum.	48	1182	1241	1123	1017	922	816	721	626	532
		H-3	1	¾" copper	2¾" x 2½" alum.	55	1086	1140	1032	934	847	749	662	576	489
		H-4	1	1" copper	3" x 2½" alum.	48	1057	1110	1004	909	824	729	645	560	476
		H-5X	1	1¼" copper	3" x 3¼" alum.	48	1128	1184	1072	970	880	778	688	598	508
		H-6X	1	1¼" IPS Steel	3" x 3¼" steel	48	947	994	900	814	739	653	578	502	426
		E-75	1	¾" copper	2⅝" x 2¼" alum.	55	907	952	862	780	707	626	553	481	408
93-17 Two-tier element	16¾"	H-1	2	¾" copper	3" x 3¼" alum.	48	1679	1763	1595	1444	1310	1159	1024	890	756
		H-3	2	¾" copper	2¾" x 2½" alum.	55	1543	1620	1466	1327	1204	1065	941	818	694
		H-4	2	1" copper	3" x 2½" alum.	48	1501	1576	1426	1291	1171	1036	916	796	675
		H-5X	2	1¼" copper	3" x 3¼" alum.	48	1602	1682	1522	1378	1250	1105	977	849	721
		H-6X	2	1¼" IPS Steel	3" x 3¼" steel	48	1435	1507	1363	1234	1119	990	875	761	646
		E-75	2	¾" copper	2⅝" x 2¼" alum.	55	1288	1352	1224	1108	1005	889	786	683	580

For ratings at lower water temperatures, refer to conversion table on page 29.  
\*Based on 65° F entering air temperature.

# ACCESSORIES



Fourteen accessories let you "fit" Multi/Pak 90 in virtually any space configuration – fast and easily. Cover accessories are all telescopic. They snap in place without screws or other fasteners. All accessories, unless noted, are finished in Nu-White baked enamel. Custom color available on special order.

## non-telescopic accessories

Column cover set  
 Damper (electro galvanized)\*  
 Hanging strip\*  
 Tamper-proof lock  
 Wall gasketing\*

\*See p.5 for details

## telescopic accessories



End Cap  
End Cap-slotted  
(not shown)



Splice plate



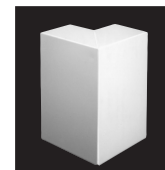
Filler sleeve



Center valve cover



Inside corner, 90°



Outside corner, 90°



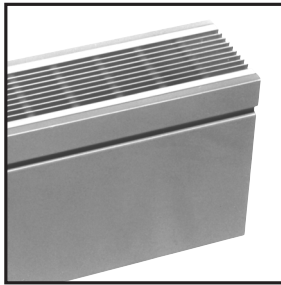
End valve cover,  
slotted, 10"  
End valve cover, 10"  
(not shown)

**Slant/Fin**

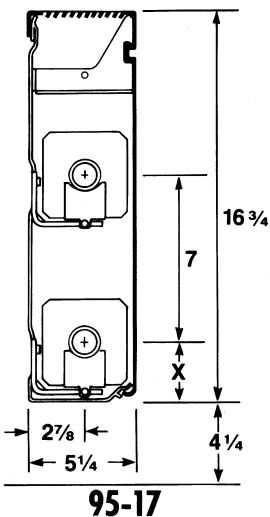
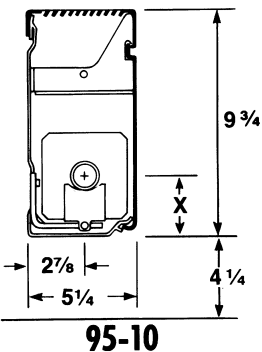
# MULTI/PAK<sup>®</sup> 95

## FLAT-TOP TWO-PIECE ENCLOSURE

**MODELS 95-10 AND 95-17**



ELEMENT	X
C-340	3
C-440	3 <sup>1</sup> / <sub>8</sub>
C-540	3 <sup>1</sup> / <sub>4</sub>
S-532	3 <sup>3</sup> / <sub>8</sub>
S-540	3 <sup>5</sup> / <sub>8</sub>



### ORDERING DATA

#### Multi/Pak 95 Complete Enclosure Assembly

**PACKAGING:** Complete two-piece assembly factory packaged with necessary brackets and hangers.

**CONSTRUCTION:** Two-piece interlocking top cover/front cover mount on wall brackets. Lock in place to provide the same shape with better rigidity than one-piece covers.

**DEPTH:** 5<sup>1</sup>/<sub>4</sub>"

**HEIGHTS:** 9<sup>3</sup>/<sub>4</sub>" (one tier), 16<sup>3</sup>/<sub>4</sub>" (one or two tier)

**LENGTHS:** 2', 3', 3<sup>1</sup>/<sub>2</sub>', 4', 5', 6', 7', 8'. Elements from 2 to 12 ft.

**MATERIAL:** 18-gauge steel top and front cover. 11-gauge wall brackets.

**WALL BRACKETS/HANGERS:** Packaged with complete assembly. SC-2 hanger has guide rod to provide 1<sup>5</sup>/<sub>16</sub>" lateral expansion movement, 1<sup>1</sup>/<sub>8</sub>" vertical pitch adjustment. Brackets and hangers provided with complete assembly as follows:

Length	95-10		95-17	
	Brackets	Hangers	Brackets	Hangers
3-5 ft.	2	2	2	4
6-8 ft.	3	3	3	6

**FINISH:** Nu-White baked enamel is standard.

Custom color available on special order.

Anodized architectural aluminum grille optional.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540. Lengths from 2 to 12 feet.

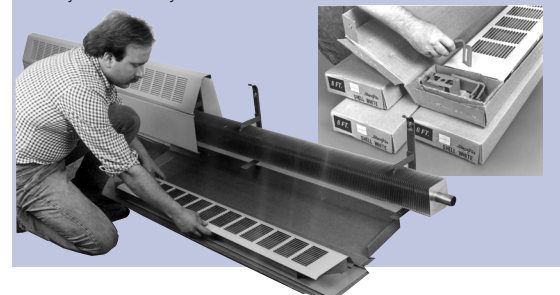
See p. 26.

**JOINTS:** Telescopic cover accessories eliminate the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

See pages 4-5 for description of features

#### Multi/Pak 90 Series two-piece fin-tube enclosure. The modern choice in commercial radiation.

- Available as a "stock item".
- Factory packaging protects the cover until ready to install.
- Easy to install. Easy to service.
- Precut lengths, telescopic accessories, speed installations.
- Nu-White baked enamel finish.



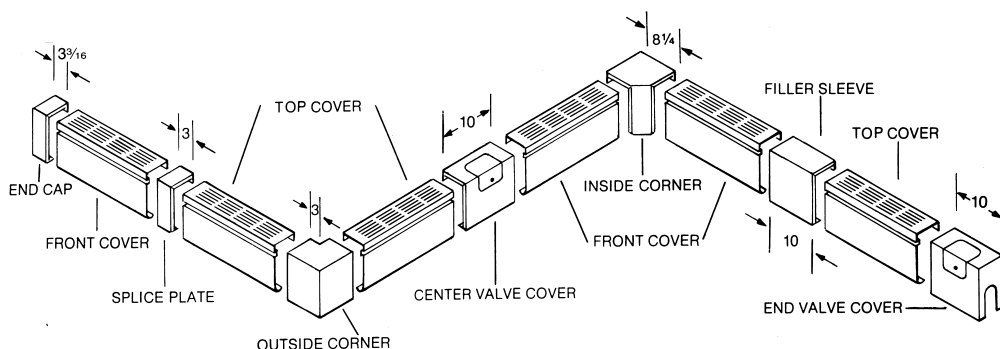
# RATINGS

with or without dampers

Cover Type	Enclosure Height	Element Type	Tube Size and Material	Fin Size and Material	Fins Per Foot	Steam 1 PSI * Btu/Hr. Per Foot	HOT WATER RATINGS* BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
							220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
95-10	9¾"	S-532	1¼" steel	4¼" steel	32	1254	1317	1191	1078	978	865	765	665	564
		S-540	1¼" steel	4¼" steel	40	1470	1544	1397	1264	1147	1014	897	779	662
		C-340	¾" copper	4¼" alum.	40	1680	1764	1597	1445	1311	1159	1025	891	756
		C-440	1" copper	4¼" alum.	40	1780	1869	1691	1531	1388	1228	1086	943	801
		C-540	1¼" copper	4¼" alum.	40	1745	1832	1658	1501	1361	1204	1064	925	785
95-17	16¾"	S-532	1¼" steel	4¼" steel	32	1351	1419	1283	1162	1054	932	824	716	608
		S-540	1¼" steel	4¼" steel	40	1577	1656	1498	1356	1230	1088	962	836	710
		C-340	¾" copper	4¼" alum.	40	1840	1933	1748	1582	1436	1270	1123	976	828
		C-440	1" copper	4¼" alum.	40	1950	2048	1853	1677	1521	1346	1190	1034	878
		C-540	1¼" copper	4¼" alum.	40	1911	2007	1815	1643	1491	1319	1166	1013	860
95-17 Two-tier element	16¾"	S-532	1¼" steel	4¼" steel	32	2153	2261	2045	1852	1679	1486	1313	1141	969
		S-540	1¼" steel	4¼" steel	40	2390	2510	2271	2055	1864	1649	1458	1267	1076
		C-340	¾" copper	4¼" alum.	40	2615	2746	2484	2249	2040	1804	1595	1386	1177
		C-440	1" copper	4¼" alum.	40	2770	2909	2632	2382	2161	1911	1690	1468	1247
		C-540	1¼" copper	4¼" alum.	40	2715	2851	2579	2335	2118	1873	1656	1439	1222

For ratings at lower water temperatures, refer to conversion table on page 29.  
\*Based on 65°F entering air temperature.

# ACCESSORIES



Fourteen accessories let you "fit" Multi/Pak 90 in virtually any space configuration – fast and easily. Cover accessories are all telescopic. They snap in place without screws or other fasteners. All accessories, unless noted, are finished in Nu-White baked enamel. Custom color available on special order.

## non-telescopic accessories

- Column cover set
- Damper (electro galvanized)\*
- Hanging strip\*
- Tamper-proof lock
- Wall gasketing\*

\*See p.5 for details

## telescopic accessories



End Cap  
End Cap-slotted  
(not shown)



Splice plate



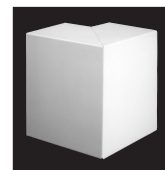
Filler sleeve



Center valve cover



Inside corner, 90°

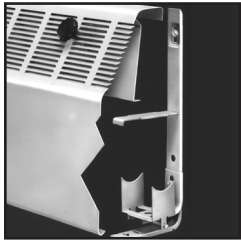


Outside corner, 90°



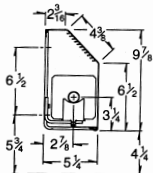
End valve cover,  
slotted, 10"  
End valve cover, 10"  
(not shown)

**Slant/Fin**

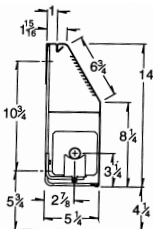


Custom Heights & Configurations Available

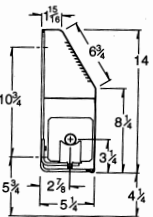
\*Details for optional J-Series damper shown on model JAD-28



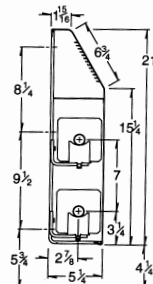
JL-10



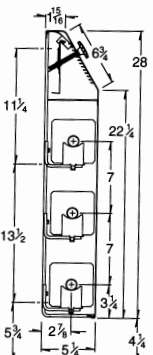
JR-14



JA-14



JA-21

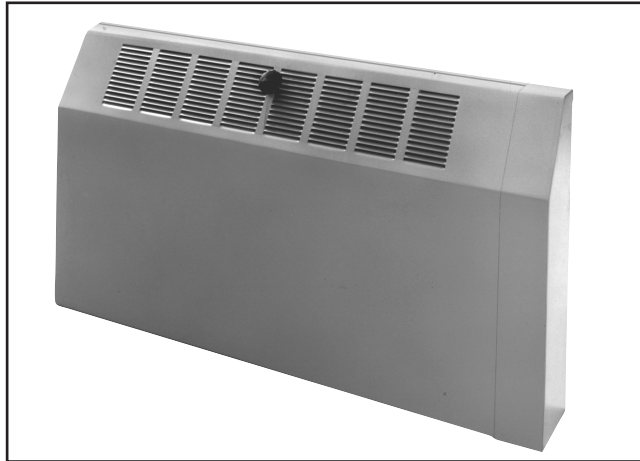


JAD-28\*

# J SERIES

## SLOPE-TOP ONE-PIECE ENCLOSURE

**MODELS: JL-10, JR-10, JA-14, JR-14  
JA-21, JR-21, JA-28, JR-28**



### ORDERING DATA

**CONSTRUCTION:** Single-piece cover mounts on wall brackets

**DEPTH:** 5 1/4"

**HEIGHTS:** 9 7/8" and 14" (one tier), 21" (one or two tier), 28" (up to three tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order.

**MATERIAL:** 18-gauge front cover. 16 and 14-gauge optional. Optional back panel: 20-gauge.

**WALL BRACKETS/HANGERS:** Order separately, specify BKT (bracket only) or BKT ASSY (bracket complete with SC hangers) followed by cover stock number and quantity. Recommended bracket spacing is as follows:

Length	Copper Elements	1 1/4" Steel Elements	2" Steel Elements
2-5 ft.	2	1 per 2 1/2' of cover	1 per 2' of cover
6-8 ft.	3		

**FINISH:** Electro-galvanized is standard. Baked enamel finishes in a variety of colors available on special order, all models.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Slip joint connectors (JR models only) align cover sections which butt to one another, providing a near seamless joint. Use of telescopic accessories with any J Series model eliminates the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated

because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

**JL-10, JA-14 and JA-21** models mount flush with the wall. For readily available prepackaged two-piece fin-tube radiation refer to Multi/Pak 90, pages 4-11.

**JR-10, JR-14, JR-21 and JR-28** models utilize a full or 4 inch back panel. Allows for 3/4" recess into wall and protects wall covering in case removing of enclosure is necessary. Electro-galvanized finish is standard. Optional baked enamel finish available.

#### Built for easy installation, long life

J Series fin-tube enclosures are functional, durable units, popular for deluxe commercial installations: schools, offices, hospitals, churches and office buildings. J Series enclosures feature a graceful, sloping louvered top which minimizes apparent bulk, and discourages use of the enclosure as a shelf or window seat.

- Pencil-proof louvers minimize "see through".
- Heavy duty 14-gauge wall bracket is drawn die formed. Secures cover in place with rigid spring lock action. Snap-in center brace supports middle of cover.
- Bracket mounting slots provide 3/4" height adjustment. Large recessed "flat" prevents bracket from crushing wall surface when back panel is not used.
- Element hanger has sliding guide rod that provides full cradle width support. 1 1/8" lateral movement permits smooth, noiseless expansion. Cradle supports finned or bare tubing at same height. Fastening slot in bracket allows 1 1/8" pitch adjustment.
- Knob-operated damper (optional) modulates fully to control output. See page 5 for details.

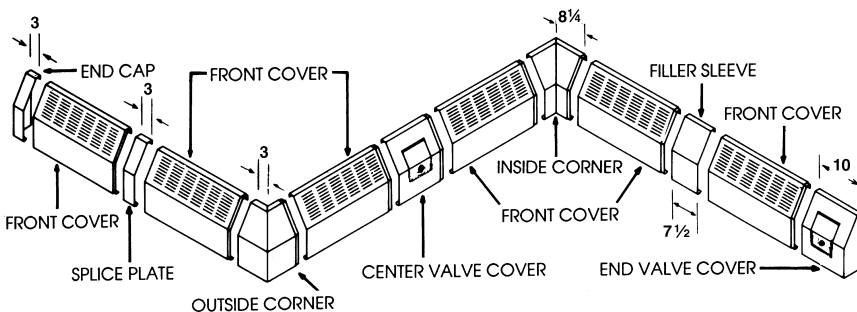
# RATINGS

with or without dampers

Cover Type	Enclosure Height	Element Type	Tube Size and Material	Fin Size and Material	Fins Per Foot	Steam 1 PSI* Btu/Hr. Per Foot	HOT WATER RATINGS*							
							BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
							220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
JL-10 JR-10	9 7/8"	S-532	1 1/4" steel	4 1/4" steel	32	1330	1397	1264	1144	1037	918	811	705	599
		S-540	1 1/4" steel	4 1/4" steel	40	1430	1502	1359	1230	1115	987	872	758	644
		S-832	2" steel	4 1/4" steel	32	1350	1418	1283	1161	1053	931	824	716	608
		C-340	3/4" copper	4 1/4" alum.	40	1753	1840	1665	1507	1367	1210	1069	929	789
		C-440	1" copper	4 1/4" alum.	40	1860	1953	1767	1600	1451	1283	1135	986	837
		C-540	1 1/4" copper	4 1/4" alum.	40	1820	1911	1729	1565	1420	1256	1110	965	819
JA-14 JR-14	14"	S-532	1 1/4" steel	4 1/4" steel	32	1380	1449	1311	1187	1076	952	842	731	621
		S-540	1 1/4" steel	4 1/4" steel	40	1550	1628	1473	1333	1209	1070	946	822	698
		S-832	2" steel	4 1/4" steel	32	1400	1470	1330	1204	1092	966	854	742	630
		C-340	3/4" copper	4 1/4" alum.	40	1839	1932	1748	1582	1435	1269	1122	975	828
		C-440	1" copper	4 1/4" alum.	40	1950	2048	1853	1677	1521	1346	1190	1034	878
		C-540	1 1/4" copper	4 1/4" alum.	40	1910	2006	1815	1643	1490	1318	1165	1012	860
JA-21 JR-21	21"	S-532	1 1/4" steel	4 1/4" steel	32	1460	1533	1387	1256	1139	1007	891	774	657
		S-540	1 1/4" steel	4 1/4" steel	40	1680	1764	1596	1445	1310	1159	1025	890	756
		S-832	2" steel	4 1/4" steel	32	1520	1596	1444	1307	1186	1049	927	806	684
		C-340	3/4" copper	4 1/4" alum.	40	2013	2114	1913	1731	1570	1389	1228	1067	906
		C-440	1" copper	4 1/4" alum.	40	2130	2237	2024	1832	1661	1470	1299	1129	959
		C-540	1 1/4" copper	4 1/4" alum.	40	2090	2195	1986	1797	1630	1442	1275	1108	941
JA-21 JR-21 Two-tier element	21"	S-532	1 1/4" steel	4 1/4" steel	32	2190	2300	2081	1883	1708	1511	1336	1161	986
		S-540	1 1/4" steel	4 1/4" steel	40	2380	2499	2261	2047	1856	1642	1452	1261	1071
		S-832	2" steel	4 1/4" steel	32	2270	2384	2157	1952	1771	1566	1385	1203	1022
		C-340	3/4" copper	4 1/4" alum.	40	2822	2963	2784	2427	2200	1947	1721	1496	1270
		C-440	1" copper	4 1/4" alum.	40	2990	3140	2841	2571	2332	2063	1824	1585	1346
		C-540	1 1/4" copper	4 1/4" alum.	40	2930	3077	2784	2520	2285	2022	1787	1553	1319
JA-28 JR-28	28"	S-532	1 1/4" steel	4 1/4" steel	32	1480	1554	1406	1273	1154	1021	903	784	666
		S-540	1 1/4" steel	4 1/4" steel	40	1710	1796	1625	1471	1334	1180	1043	906	770
		S-832	2" steel	4 1/4" steel	32	1550	1628	1473	1333	1209	1070	946	822	698
		C-340	3/4" copper	4 1/4" alum.	40	2051	2154	1949	1764	1600	1416	1251	1087	924
		C-440	1" copper	4 1/4" alum.	40	2170	2279	2062	1866	1693	1497	1324	1150	977
		C-540	1 1/4" copper	4 1/4" alum.	40	2130	2237	2024	1832	1661	1470	1299	1129	959
JA-28 JR-28 Two-tier element	28"	S-532	1 1/4" steel	4 1/4" steel	32	2290	2405	2176	1969	1786	1580	1397	1214	1031
		S-540	1 1/4" steel	4 1/4" steel	40	2510	2636	2385	2159	1958	1732	1531	1330	1130
		S-832	2" steel	4 1/4" steel	32	2430	2552	2309	2090	1895	1677	1482	1288	1094
		C-340	3/4" copper	4 1/4" alum.	40	2937	3084	2791	2526	2291	2027	1792	1557	1322
		C-440	1" copper	4 1/4" alum.	40	3110	3266	2955	2675	2426	2146	1897	1648	1400
		C-540	1 1/4" copper	4 1/4" alum.	40	3050	3203	2898	2623	2379	2105	1861	1617	1373
JA-28 JR-28 Three-tier element	28"	S-532	1 1/4" steel	4 1/4" steel	32	2830	2972	2689	2434	2207	1953	1726	1500	1274
		S-540	1 1/4" steel	4 1/4" steel	40	2930	3077	2784	2520	2285	2022	1787	1553	1319
		S-832	2" steel	4 1/4" steel	32	2880	3024	2736	2477	2246	1987	1757	1526	1296
		C-340	3/4" copper	4 1/4" alum.	40	3467	3640	3293	2981	2704	2392	2115	1837	1560
		C-440	1" copper	4 1/4" alum.	40	3670	3854	3487	3156	2863	2532	2239	1945	1652
		C-540	1 1/4" copper	4 1/4" alum.	40	3600	3780	3420	3096	2808	2484	2196	1908	1620

Based on 65°F entering air temperature. For ratings at lower water temperatures, refer to conversion table on page 29.

# ACCESSORIES



A complete range of accessories lets you "fit" J-series in virtually any space configuration - fast and easily. Cover accessories are all telescopic. They snap in place without screws or other fasteners. All accessories have gray prime finish. Custom color available on special order.

## non-telescopic accessories

- Column cover set
- Damper (electro galvanized)\*
- Hanging strip\*
- Tamper-proof lock
- Wall gasketing\*

\*See p.5 for details

## telescopic accessories



End Cap  
End Cap-slotted  
(not shown)



Splice plate



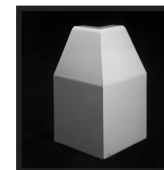
Filler sleeve



Center valve cover



Inside corner, 90°



Outside corner, 90°



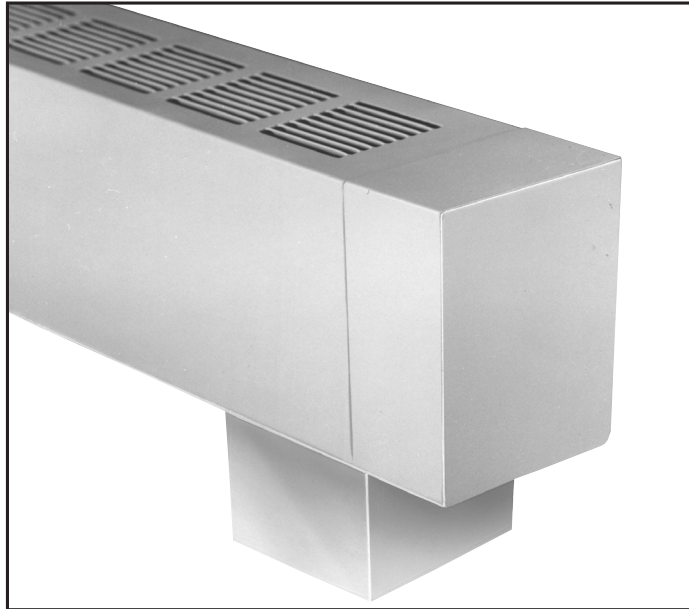
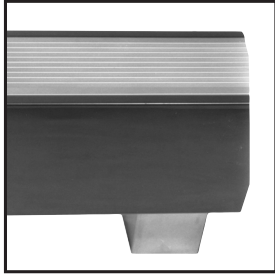
End valve cover,  
slotted, 10"  
End valve cover, 10"  
(not shown)

**Slant/Fin**

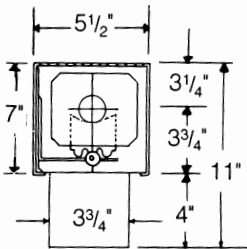
# FS SERIES

## FREE STANDING ENCLOSURE

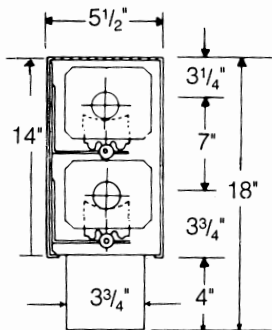
### MODELS FS-21, FS-14 AND FS-7



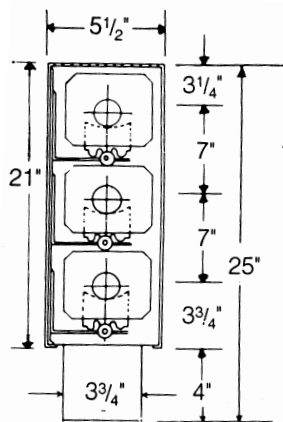
Custom Heights & Configurations Available



**FS-7**



**FS-14**



**FS-21**

## ORDERING DATA

**CONSTRUCTION:** Single piece cover mounts on floor pedestals.

**DEPTH:** 5 1/2"

**INSTALLED HEIGHTS:** 11" (one tier), 18" (one or two tier), 25" (up to three tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order.

**MATERIAL:** FS-7: 18-ga std., 16-ga and 14-ga optional. FS-14 and FS-21: 16-ga std., 14-ga optional.

**PEDESTAL BRACKETS/HANGERS:** Adjustable height floor pedestal supports the elements and enclosure. Large hole in base to bring supply and return piping into cover without showing. Stainless steel escutcheon around base for neat finish. Uses standard SC hangers.

**FINISH:** Electro-galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille optional. Stainless steel escutcheon for pedestals standard.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Slip joint connectors align cover sections which butt to one another, providing a near seamless joint. Use of telescopic accessories eliminates the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

## OPTIONS

Heavier gauge cover.  
Access door, field installed.  
Architectural aluminum grille.  
Custom color.

Recommended number of brackets and hangers for given length.			
Element	2	3	4
S-532	2-5 ft.	6-7 ft.	8 ft.
S-540	2-5 ft.	6-7 ft.	8 ft.
S-832	2-5 ft.	6 ft.	7-8 ft.
C-340	2-5 ft.	6-7 ft.	8 ft.
C-440	2-5 ft.	6-7 ft.	8 ft.
C-540	2-5 ft.	6-7 ft.	8 ft.

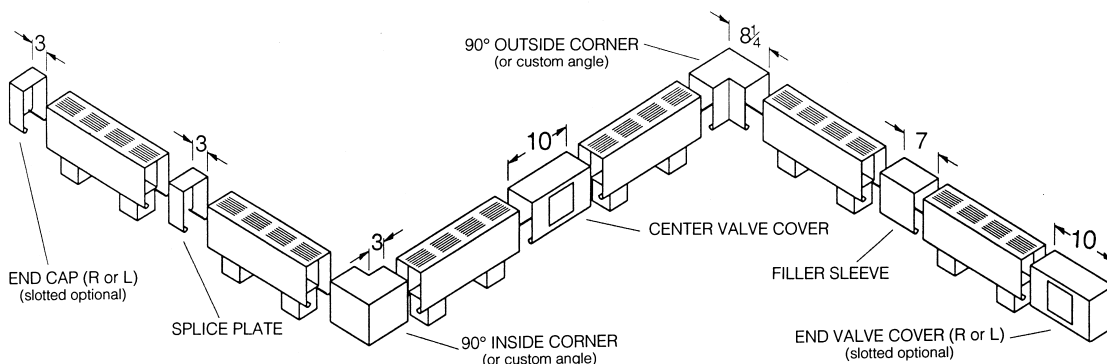
NOTE: When using end brackets on short run supply and return pipes, additional bracket(s) may be required.

# RATINGS

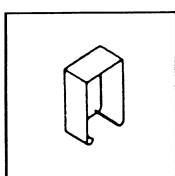
Cover Type	Cover Type	Element Type	Tube Size and Material	Fins Per Foot	Steam 1 PSI * Btu/Hr. Per Foot	HOT WATER RATINGS* BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
						220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
FS-7	7"	S-532	1 1/4" steel	32	1290	1355	1226	1109	1006	890	787	684	581
		S-540	1 1/4" steel	40	1390	1460	1321	1195	1084	959	848	737	626
		S-832	2" steel	32	1315	1381	1249	1131	1026	907	802	697	592
		C-340	3/4" copper	40	1579	1658	1500	1358	1232	1090	963	837	711
		C-440	1" copper	40	1670	1754	1587	1436	1303	1152	1019	885	752
		C-540	1 1/4" copper	40	1640	1722	1558	1410	1279	1132	1000	869	738
FS-14	14"	S-532	1 1/4" steel	32	1330	1397	1264	1144	1037	918	811	705	599
		S-540	1 1/4" steel	40	1540	1617	1463	1324	1201	1063	939	816	693
		S-832	2" steel	32	1365	1433	1297	1174	1065	942	833	723	614
		C-340	3/4" copper	40	1782	1871	1693	1532	1390	1230	1087	945	802
		C-440	1" copper	40	1890	1985	1796	1625	1474	1304	1153	1002	851
		C-540	1 1/4" copper	40	1850	1943	1758	1591	1443	1277	1129	981	833
FS-14 Two-tier element/	14"	S-532	1 1/4" steel	32	1850	1943	1758	1591	1443	1277	1129	981	833
		S-540	1 1/4" steel	40	1955	2053	1857	1681	1525	1349	1193	1036	880
		S-832	2" steel	32	1775	1864	1686	1527	1385	1225	1083	941	799
		C-340	3/4" copper	40	2311	2427	2196	1988	1803	1595	1410	1225	1040
		C-440	1" copper	40	2450	2573	2328	2107	1911	1690	1495	1299	1103
		C-540	1 1/4" copper	40	2400	2520	2280	2064	1872	1656	1464	1272	1080
FS-21	21"	S-532	1 1/4" steel	32	1610	1691	1530	1385	1256	1111	982	853	725
		S-540	1 1/4" steel	40	1675	1759	1591	1441	1307	1156	1022	888	754
		S-832	2" steel	32	1575	1654	1496	1355	1229	1087	961	832	709
		C-340	3/4" copper	40	2008	2108	1908	1727	1566	1386	1225	1064	903
		C-440	1" copper	40	2130	2237	2024	1832	1661	1470	1299	1129	959
		C-540	1 1/4" copper	40	2085	2189	1981	1793	1626	1439	1272	1105	938
FS-21 Two-tier element/	21"	S-532	1 1/4" steel	32	2140	2247	2033	1840	1669	1477	1305	1134	963
		S-540	1 1/4" steel	40	2245	2357	2133	1931	1751	1549	1369	1190	1010
		S-832	2" steel	32	2105	2210	2000	1810	1642	1452	1284	1116	947
		C-340	3/4" copper	40	2648	2781	2507	2277	2066	1827	1616	1404	1192
		C-440	1" copper	40	2810	2951	2670	2417	2192	1939	1714	1489	1265
		C-540	1 1/4" copper	40	2750	2888	2613	2365	2145	1897	1678	1458	1238
FS-21 Three-tier element/	21"	S-532	1 1/4" steel	32	2380	2499	2261	2047	1856	1642	1452	1261	1071
		S-540	1 1/4" steel	40	2540	2667	2413	2184	1981	1753	1549	1346	1143
		S-832	2" steel	32	2300	2415	2185	1978	1794	1587	1403	1219	1035
		C-340	3/4" copper	40	3005	3155	2854	2584	2344	2073	1833	1593	1352
		C-440	1" copper	40	3180	3339	3021	2735	2480	2194	1940	1685	1431
		C-540	1 1/4" copper	40	3120	3276	2964	2683	2434	2153	1903	1654	1404

\*Based on 65°F entering air temperature. For ratings at lower water temperatures, refer to conversion table on page 29.

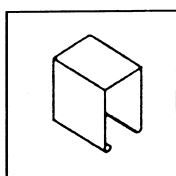
# ACCESSORIES



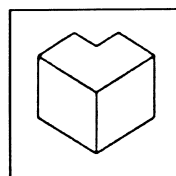
## telescopic accessories



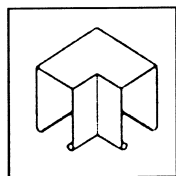
End Cap



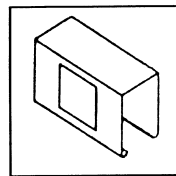
Filler Sleeve



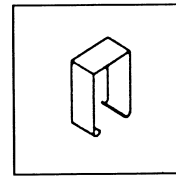
Outside Corner



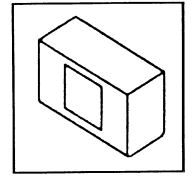
Inside Corner



Center Valve Cover



Splice Plate



End Valve Cover

**Slant/Fin**

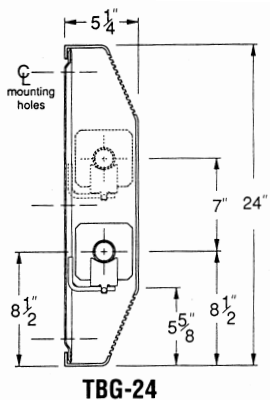
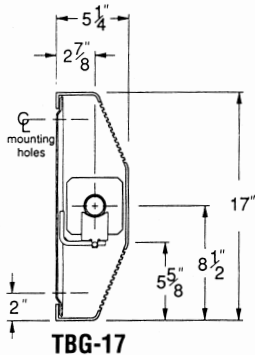


# TBG SERIES

## SLOPE-TOP/BOTTOM ENCLOSURES



Custom Heights  
& Configurations  
Available



### ORDERING DATA

**CONSTRUCTION:** Single piece cover mounts on wall brackets.

**DEPTH:** 5 1/4"

**HEIGHTS:** 17" (one tier), 24" (one or two tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order

**MATERIAL:** 16-ga cover standard, 14-ga optional.

**WALL BRACKET/HANGERS:** Order separately, specify BKT (bracket only) or BKT ASSY (bracket complete with SC hangers) followed by cover stock number and quantity.

Recommended number of brackets and hangers for given length.			
Element	2	3	4
S-532	2-5 ft.	6-7 ft.	8 ft.
S-540	2-5 ft.	6-7 ft.	8 ft.
S-832	2-5 ft.	6 ft.	7-8 ft.
C-340	2-5 ft.	6-7 ft.	8 ft.
C-440	2-5 ft.	6-7 ft.	8 ft.
C-540	2-5 ft.	6-7 ft.	8 ft.

NOTE: When using end brackets on short run supply and return pipes, additional bracket(s) may be required.

**FINISH:** Electro galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille optional.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Slip joint connectors align cover sections which butt to one another, providing a near seam-less joint. Use of telescopic accessories eliminates the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

### OPTIONS

14-gauge cover.  
Access door, field installed.  
Architectural aluminum grille.  
Custom color.

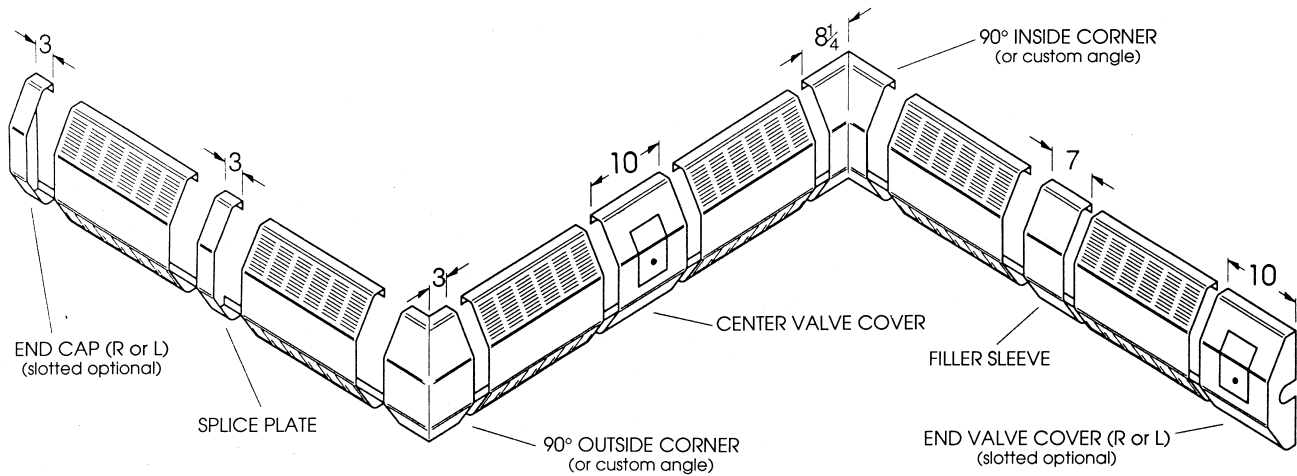


# RATINGS

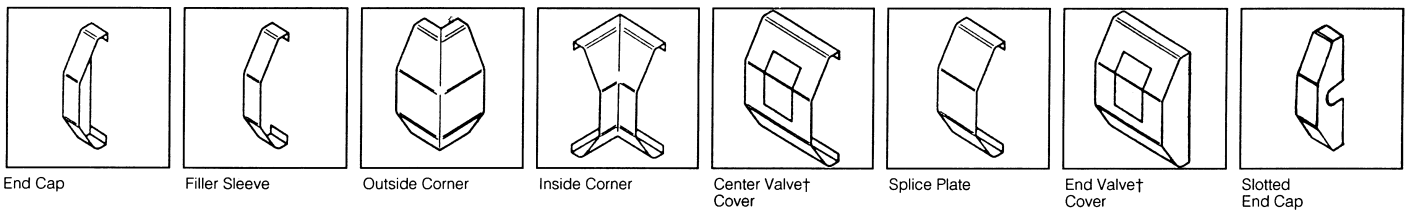
Cover Type	Enclosure Height	Element Type	Tube Size and Material	Fins Per Foot	Steam 1 PSI * Btu/Hr. Per Foot	HOT WATER RATINGS* BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
						220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
TBG-17	17"	S-532	1 1/4" steel	32	1250	1313	1188	1075	975	862	763	663	563
		S-540	1 1/4" steel	40	1344	1411	1277	1156	1048	927	820	712	605
		S-832	2" steel	32	1201	1261	1141	1033	937	829	733	637	540
		C-340	3/4" copper	40	1595	1675	1515	1371	1244	1101	973	846	717
		C-440	1" copper	40	1690	1775	1606	1453	1318	1166	1031	896	761
		C-540	1 1/4" copper	40	1656	1739	1573	1424	1292	1143	1010	878	745
TBG-24	24"	S-532	1 1/4" steel	32	1460	1533	1387	1256	1139	1007	891	774	657
		S-540	1 1/4" steel	40	1505	1580	1430	1294	1174	1038	918	798	677
		S-832	2" steel	32	1345	1412	1278	1157	1049	928	820	713	605
		C-340	3/4" copper	40	1749	1888	1709	1547	1403	1241	1097	953	810
		C-440	1" copper	40	1910	2006	1815	1643	1490	1318	1165	1012	860
		C-540	1 1/4" copper	40	1868	1961	1775	1606	1457	1289	1139	990	841
TBG-24 Two-tier element	24"	S-532	1 1/4" steel	32	1980	2079	1881	1703	1544	1366	1208	1049	891
		S-540	1 1/4" steel	40	2102	2207	1997	1808	1640	1450	1282	1114	946
		S-832	2" steel	32	1890	1985	1796	1625	1474	1304	1153	1002	851
		C-340	3/4" copper	40	2337	2454	2221	2010	1823	1613	1425	1238	1052
		C-440	1" copper	40	2480	2604	2356	2133	1934	1711	1513	1314	1116
		C-540	1 1/4" copper	40	2427	2548	2306	2087	1893	1675	1480	1286	1092

\*Based on 65°F entering air temperature. For ratings at lower water temperatures, refer to conversion table on page 29.

# ACCESSORIES

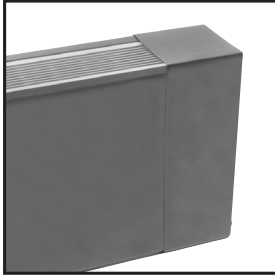


# TELESCOPIC ACCESSORIES



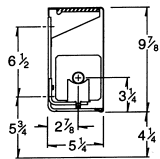
† Access doors: 5" x 9"

**Slant/Fin**

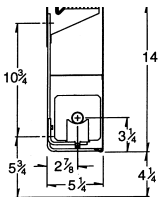


Custom Heights & Configurations Available

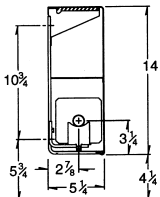
\*Details for optional R-Series Damper shown on model RTD-28



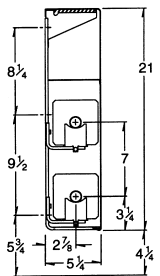
RL-10



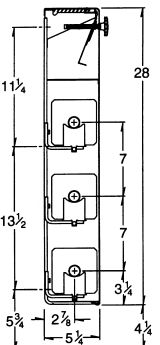
RR-14



RT-14



RT-21



RTD-28\*

# R SERIES

## FLAT-TOP ENCLOSURE

**MODELS RL-10, RR-10, RT-14, RR-14  
RT-21, RR-21, RT-28, RR-28**



### ORDERING DATA

**CONSTRUCTION:** Single piece cover mounts on wall brackets.

**DEPTH:** 5 1/4"

**HEIGHTS:** 9 7/8", 14" (one tier), 21" (one or two tier), 28" (up to three tier).

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order.

**MATERIAL:** 18-gauge cover, 16 and 14-ga optional.

**WALL BRACKETS/HANGERS:** Order separately, specify BKT (bracket only) or BKT ASSY (bracket complete with SC hangers) followed by cover stock number and quantity.

Recommended number of brackets and hangers for given length.			
Element	2	3	4
S-532	2-4 ft.	5-7 ft.	8 ft.
S-540	2-4 ft.	5-7 ft.	8 ft.
S-832	2-4 ft.	5-6 ft.	7-8 ft.
C-340	2-5 ft.	6-8 ft.	-
C-440	2-5 ft.	6-8 ft.	-
C-540	2-5 ft.	6-8 ft.	-

NOTE: When using end brackets on short run supply and return pipes, additional bracket(s) may be required.

**FINISH:** Electro galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille optional.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Slip joint connectors align cover sections which butt to one another, providing a near seamless joint. Use of telescopic accessories eliminates the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

**RR-10, RR-14, RR-21 and RR-28** are special order models and require a full or 4 inch back panel. Allows for 3/4" recess into wall and protects wall covering in case removing of enclosure is necessary. Electro-galvanized finish is standard. Optional baked enamel finish available.

### OPTIONS

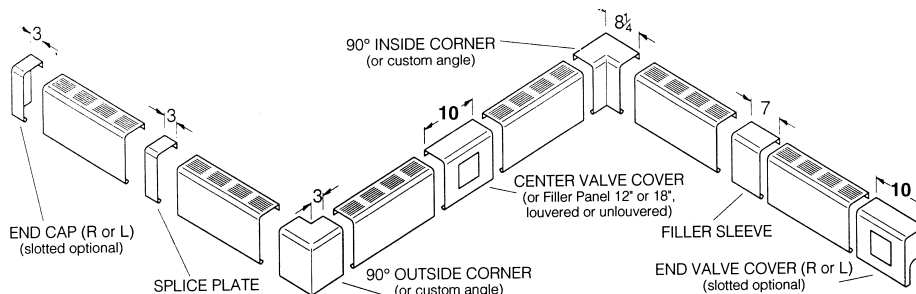
- Damper.
- Back panel.
- 16 and 14-gauge cover.
- Access door, field installed.
- Inlet grille.
- Architectural aluminum grille.
- Custom color.

# RATINGS

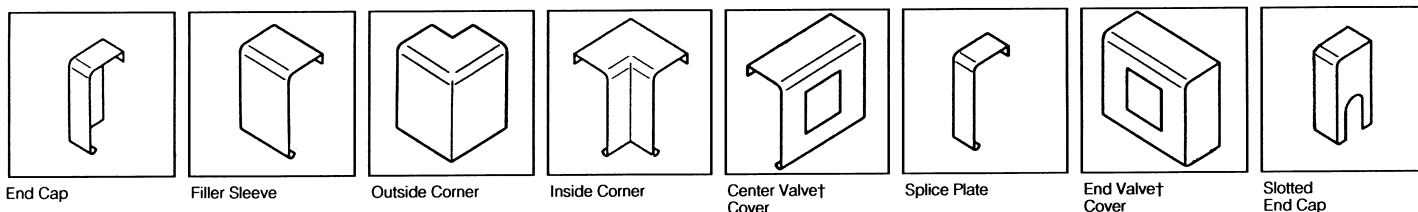
Cover Type	Enclosure Height	Element Type	Tube Size and Material	Fins Per Foot	Steam 1 PSI * Btu/Hr. Per Foot	HOT WATER RATINGS*							
						BTU/HR./FT. (Flow Rate 3 Ft./Sec.)							
						220° F	210° F	200° F	190° F	180° F	170° F	160° F	150° F
						104° C	99° C	93° C	88° C	82° C	77° C	71° C	66° C
RL-10 RR-10	9 7/8"	S-532	1 1/4" steel	32	1230	1292	1169	1058	959	849	750	652	554
		S-540	1 1/4" steel	40	1330	1397	1264	1144	1037	918	811	705	599
		S-832	2" steel	32	1270	1334	1207	1092	991	876	775	673	57
		C-340	3/4" copper	40	1647	1730	1565	1417	1285	1136	1004	872	742
		C-440	1" copper	40	1740	1827	1653	1496	1357	1201	1061	922	783
		C-540	1 1/4" copper	40	1710	1796	1625	1471	1334	1180	1043	906	770
RT-14 RR-14	14"	S-532	1 1/4" steel	32	1280	1344	1216	1101	998	883	781	678	576
		S-540	1 1/4" steel	40	1500	1575	1425	1290	1170	1035	915	795	675
		S-832	2" steel	32	1320	1386	1254	1135	1030	911	805	700	594
		C-340	3/4" copper	40	1714	1800	1628	1474	1337	1183	1046	908	771
		C-440	1" copper	40	1820	1911	1729	1565	1420	1256	1110	965	819
		C-540	1 1/4" copper	40	1780	1869	1691	1531	1388	1228	1086	943	801
RT-21 RR-21	21"	S-532	1 1/4" steel	32	1380	1449	1311	1187	1076	952	842	731	621
		S-540	1 1/4" steel	40	1610	1691	1530	1385	1256	1111	982	853	725
		S-832	2" steel	32	1460	1533	1387	1256	1139	1007	891	774	657
		C-340	3/4" copper	40	1878	1972	1784	1615	1465	1296	1146	996	846
		C-440	1" copper	40	1990	2090	1891	1711	1552	1373	1214	1055	896
		C-540	1 1/4" copper	40	1950	2048	1853	1677	1521	1346	1190	1034	878
RT-21 RR-21 Two-tier element	21"	S-532	1 1/4" steel	32	2200	2310	2090	1892	1716	1518	1342	1166	990
		S-540	1 1/4" steel	40	2440	2562	2318	2098	1903	1684	1488	1293	1098
		S-832	2" steel	32	2230	2342	2119	1918	1739	1539	1360	1182	1004
		C-340	3/4" copper	40	2668	2801	2535	2294	2081	1840	1627	1414	1201
		C-440	1" copper	40	2830	2972	2689	2434	2207	1953	1726	1500	1274
		C-540	1 1/4" copper	40	2770	2909	2632	2382	2161	1911	1690	1468	1247
RT-28 RR-28	28"	S-532	1 1/4" steel	32	1400	1470	1330	1204	1092	966	854	742	630
		S-540	1 1/4" steel	40	1680	1764	1596	1445	1310	1159	1025	890	756
		S-832	2" steel	32	1480	1554	1406	1273	1154	1021	903	784	666
		C-340	3/4" copper	40	1907	2002	1811	1640	1487	1315	1163	1010	858
		C-440	1" copper	40	2020	2121	1919	1737	1576	1394	1232	1071	909
		C-540	1 1/4" copper	40	1980	2079	1881	1703	1544	1366	1208	1049	891
RT-28 RR-28 Two-tier element	28"	S-532	1 1/4" steel	32	2260	2373	2147	1944	1763	1559	1379	1198	1017
		S-540	1 1/4" steel	40	2460	2583	2337	2116	1919	1697	1501	1304	1107
		S-832	2" steel	32	2270	2384	2157	1952	1771	1566	1385	1203	1022
		C-340	3/4" copper	40	2860	3004	2718	2460	2231	1973	1745	1516	1288
		C-440	1" copper	40	3030	3182	2879	2606	2363	2091	1848	1606	1364
		C-540	1 1/4" copper	40	2970	3119	2822	2554	2317	2049	1812	1574	1337
RT-28 RR-28 Three-tier element	28"	S-532	1 1/4" steel	32	2580	2709	2451	2219	2012	1780	1574	1367	1161
		S-540	1 1/4" steel	40	2800	2940	2660	2408	2184	1932	1708	1484	1260
		S-832	2" steel	32	2660	2793	2527	2288	2075	1835	1623	1410	1197
		C-340	3/4" copper	40	3390	3559	3220	2915	2644	2339	2068	1797	1525
		C-440	1" copper	40	3590	3770	3411	3087	2800	2477	2190	1903	1616
		C-540	1 1/4" copper	40	3520	3696	3344	3027	2746	2429	2147	1866	1584

\*Based on 65°F entering air temperature. For ratings at lower water temperatures, refer to conversion table on page 29.

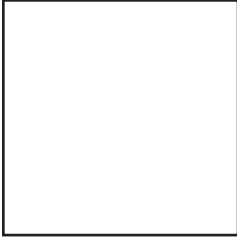
# ACCESSORIES



## telescopic accessories

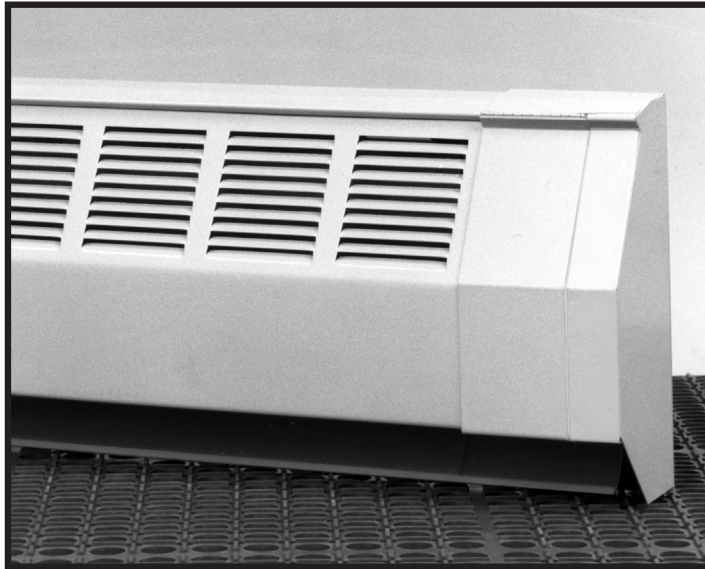


**Slant/Fin**

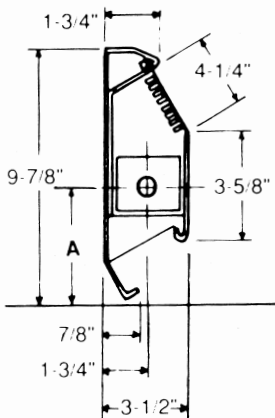


# 350L SERIES

## HIGH OUTPUT, SLOPE-TOP BASEBOARD



350L Series baseboard combines, for the first time, the compactness and economy of baseboard with the high output and heavy-duty construction needed for "in-between" applications. Optional 1" and 1 1/4" copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads where required. With the 1 1/4" all-steel element, Series 350L is perfect for use in one or two pipe steam systems. 350L Series is factory pre-assembled in individual cartons for rapid installations.



Model	Element	"A"
351	H-1	3 5/8"
353	H-3	3 15/16"
354	H-4	3 15/16"
355	H-5	3 5/8"
356	H-6	3 5/8"

- Interchangeable heating elements
- Room control damper optional
- Double-bent aluminum fins won't loosen
- Expansion noises banished
- Extra backbone
- Dent-proof, kick-proof front panel
- Stronger tubes for longer service

**HEAVY-DUTY CONSTRUCTION:** 350L Series is engineered throughout for maximum strength. Super-strong enclosures. Extra-strength steel brackets. Heavy-duty copper and steel tubing with full mill rated bursting strength. Rock-solid interlocking-fin elements so strong you can stand on them. **"CONTRACTOR-DESIGNED"** for fast, economical installation. 350L Series goes straight from carton to wall without disassembling, sorting parts, wasting time. Factory pre-cut lengths of 2 to 8 feet combine with snap-on telescoping accessories to make wall-to-wall installations without cutting.

### ORDERING DATA

**PACKAGING:** 350L Series baseboard cover and heating elements are packaged separately. Cover includes brackets and expansion guides. Cover may be ordered with optional fully modulating damper. **CONSTRUCTION:** Back panel, front cover and optional damper fully assembled at factory, ready to fasten to the wall.

**DEPTH:** 3 1/2"

**HEIGHT:** 9 7/8"

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'

**MATERIAL:** 19-gauge or 16-gauge steel front cover. 24-gauge back cover. 17-gauge brackets.

**ELEMENT SUPPORT:** Self-adjusting, polypropylene expansion cradles are positioned over support brackets, allowing quiet expansion.

**FINISH:** Nu-White (19 ga.); electro-gal. (16 ga.)

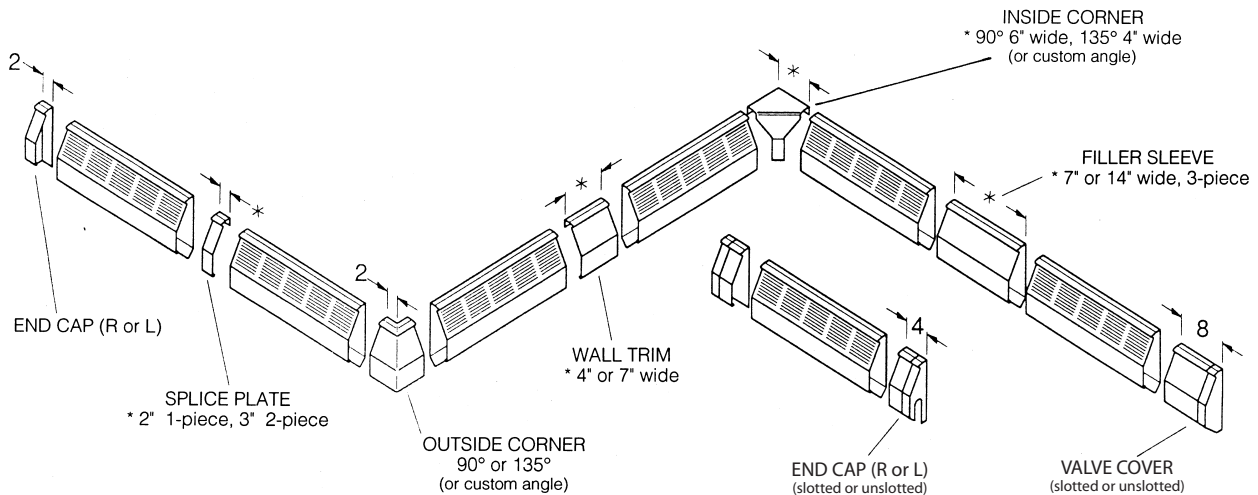
**ELEMENTS:** Choice of five. Copper with aluminum fins: H-1, H-3, H-4 and H-5X; steel with electro-galvanized steel fins: H-6X. See page 26.

# RATINGS

Model Number	Element Type	Tube Size and Material	Fin Size and Material	Fins Per Foot	Water Flow	Pressure Drop †	Steam 1 PSI Btu/Hr. Per Foot	HOT WATER RATINGS* BTU/HR./FT.							
								220° F 104° C	210° F 99° C	200° F 93° C	190° F 88° C	180° F 82° C	170° F 77° C	160° F 71° C	150° F 66° C
351	H-1	3/4" copper	3" x 3/4" x .024 aluminum	48	1 GPM	47	—	1323	1197	1084	983	869	769	668	567
					4 GPM	525		1397	1264	1144	1037	918	811	705	599
353	H-3	3/4" copper	3 5/8" x 2 1/2" x .011" aluminum	55	1 GPM	47	—	1217	1101	997	904	800	707	614	522
					4 GPM	525		1289	1167	1056	958	847	749	651	553
354	H-4	1" copper	3 5/8" x 2 1/2" x .011" aluminum	48	1 GPM	13	—	1217	1101	997	904	800	707	614	522
					4 GPM	145		1289	1167	1056	958	847	749	651	553
355	H-5X	1-1/4" copper	3" x 3/4" x .020" aluminum	48	1 GPM	6	1160	1265	1145	1036	940	831	735	639	542
					4 GPM	63		1338	1210	1096	994	879	777	675	573
356	H-6X	1-1/4" IPS steel	3" x 3/4" x .028 electro-gal. steel	48	1 GPM	3	980	1085	981	888	806	713	630	547	465
					4 GPM	41		1146	1036	938	851	753	666	578	491

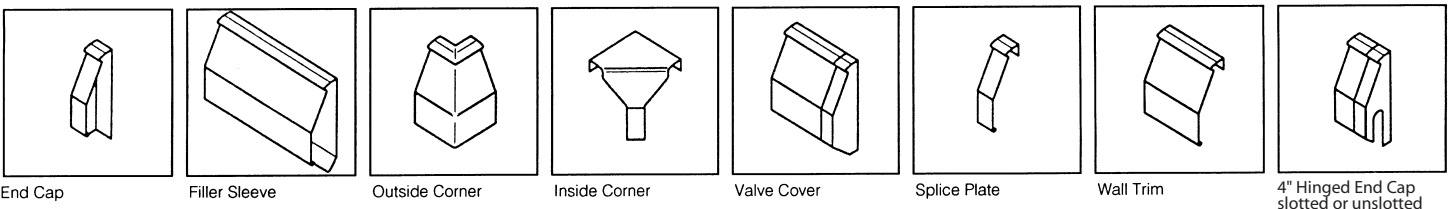
\* Based on 65°F entering air temperature † Millinches per foot.  
 Note: Ratings are based on active finned length (3" less than overall length), and include 15% heating effect factor.  
 Use 4 GPM ratings only when flow is known to be equal to or greater than 4 GPM, otherwise 1 GPM ratings must be used.

# ACCESSORIES



Matching snap-on accessories lets you speed through virtually any job condition without custom cutting and fitting. Piano hinged accessories permit easy access with flush or recessed installations.

## telescopic accessories



End Cap      Filler Sleeve      Outside Corner      Inside Corner      Valve Cover      Splice Plate      Wall Trim      4" Hinged End Cap slotted or unslotted

**Slant/Fin**

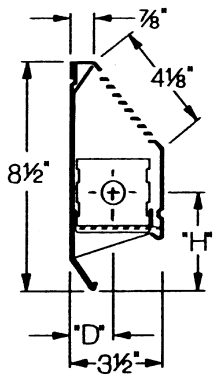


# HD SERIES

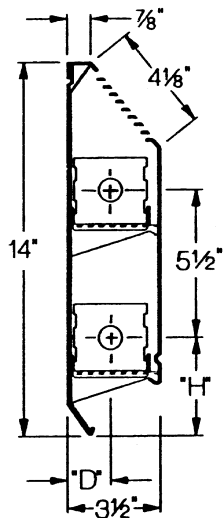
## HEAVY DUTY, 16 GAUGE SLOPE-TOP BASEBOARD



Custom Heights & Configurations Available



**HD-850**



**HD-1400**

Element	"H"	"D"
H-1	4 1/16"	1 3/4"
H-3, H-4	3 5/8"	1 5/8"
H-5	4"	1 3/4"

The extraordinary strength of HD Series baseboard makes it ideal for installation in sites where rugged treatment is anticipated. HD Series is especially recommended for schools, institutions and public housing. Its compact size and high output make it suitable for a wide range of new and retrofit applications. In addition to heavy gauge enclosure and support brackets, HD Series baseboard cover is secured in place with screws at each bracket location. Optional 1" and 1 1/4" copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads where required. With the 1 1/4" all-steel element, HD Series is perfect for use in one or two pipe steam systems. HD Series is factory pre-assembled in individual cartons for rapid installations.

### ORDERING DATA

**PACKAGING:** Complete two-piece enclosure assembly factory packaged with necessary brackets and hangers.

**CONSTRUCTION:** Full back panel with interlocking slope-top front panel. Bracket with element guide spot welded to back panel every 24 inches alternating with cabinet spacer welded to back panel every 24 inches giving rigid support to front every 12 inches. There are dimpled anchoring holes every 12 inches. For fastening front to brackets, use 8 x 3/8" self tapping screws with countersunk head as supplied by others. Pencil proof.

**DEPTH:** 3 1/2"

**HEIGHTS:** 8 1/2" (one tier), 14" (one or two tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order

**MATERIAL:** 16-gauge steel front cover, 20-gauge back panel.

**FINISH:** Electro-galvanized is standard. Available in baked enamel. Custom color available on special order.

**ELEMENTS:** Choice of five elements. Copper with aluminum fins. Steel with electro-galvanized steel fins.

Lengths from 2 to 8 feet. From 710 to 1340 Btu/hr/ft at 200° F water temperature. See p.26.

**JOINTS:** Telescopic cover accessories eliminate the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

# RATINGS

Model Number	Element Type	Rows of Heating Element	Tube Size and Material	Fin Size and Material	Fins per Foot	Water Flow	Pressure Drop†	Stream 1PSI* Btuh/Hr. Per Foot	HOT WATER RATINGS* BTUH/HR./FT.							
									220°F 104°C	210°F 99°C	200°F 93°C	190°F 88°C	180°F 82°C	170°F 77°C	160°F 71°C	150°F 66°C
HD-850‡	H-1	1	¾" copper	3¼" x 4" x .024" aluminum	48	1 GPM 4 GPM	47 525	—	1050 1110	970 1030	890 940	800 850	720 760	640 680	550 580	470 500
HD-850‡	H-3	1	¾" copper	2½" x 2¾" x .011" aluminum	55	1 GPM 4 GPM	47 525	—	940 990	870 920	790 840	720 760	640 680	570 600	490 520	420 440
HD-850	H-4	1	1" copper	3⅝" x 2½" x .011" aluminum	48	1 GPM 4 GPM	13 145	—	1030 980	860 1000	780 830	710 750	630 670	560 590	460 500	41 430
HD-850	H-5	1	1¼" copper	3" x 3¼" x .020" aluminum	48	1 GPM 4 GPM	6 63	1160	1010 1070	920 980	860 880	770 810	680 710	600 640	550 560	430 460
HD-850	H-6	1	1½" IPS steel	3" x 3¼" x .025" electro-gal. steel	48	1 GPM 4 GPM	3 41	980	850 900	780 830	710 750	640 680	570 600	510 540	440 450	360 370
HD-1400‡	H-1	2	¾" copper	3¼" x 3" x .024" aluminum	48	1 GPM 4 GPM	47 525	—	1570 1660	1450 1530	1320 1400	1190 1260	1070 1130	940 990	820 870	690 730
HD-1400‡	H-3	2	¾" copper	2½" x 2¾" x .011" electro-gal. steel	55	1 GPM 4 GPM	47 525	—	1460 1540	1340 1420	1230 1300	1110 1170	1000 1060	880 930	770 810	650 690
HD-1400	H-4	2	1" copper	3⅝" x 2½" x .011" aluminum	48	1 GPM 4 GPM	13 145	—	1440 1480	1330 1400	1220 1290	1100 1160	990 1050	870 920	740 790	64 680
HD-1400	H-5	2	1¼" copper	3" x 3¼" x .020" aluminum	48	1 GPM 4 GPM	6 63	1630	1530 1620	1400 1480	1290 1340	1160 1220	1030 1080	900 950	820 850	650 690
HD-1400	H-6	2	1½" IPS steel	3" x 3¼" x .025" electro-gal. steel	48	1 GPM 4 GPM	3 41	1440	1370 1450	1260 1330	1140 1210	1030 1090	920 970	810 850	710 740	580 600

\* Based on 65°F entering air temperature.

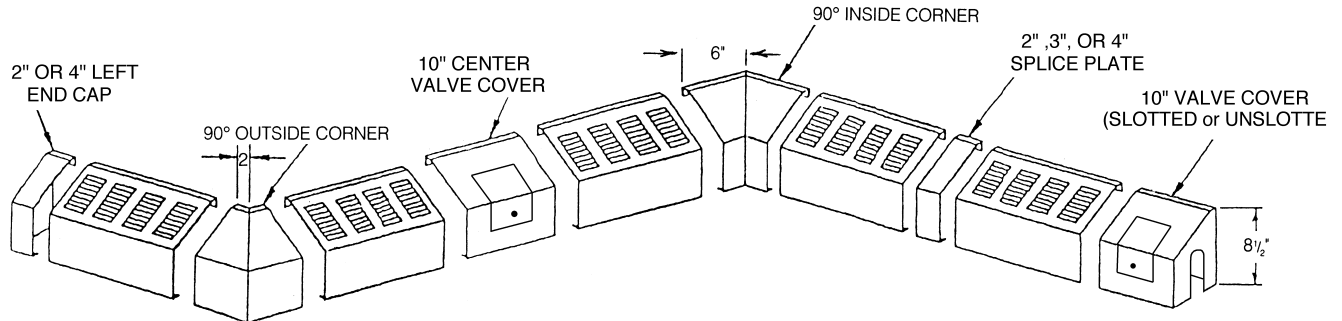
† Millinches per foot.

‡ I=B=R listed ratings.

Note: Ratings are based on active finned length (3" less than overall length), and include 15% heating effect factor.

Use 4 GPM rating only when flow is known to be equal to or greater than 4 GPM; otherwise 1 GPM ratings must be used.

# ACCESSORIES



## FINE/LINE 30H

HEAVY DUTY, 18-GAUGE BASEBOARD RADIATION

The heavier duty version of Fine/Line 30.



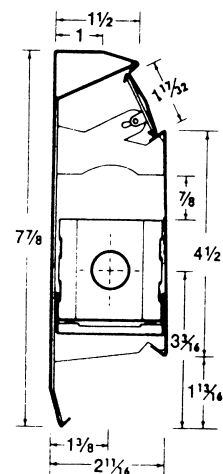
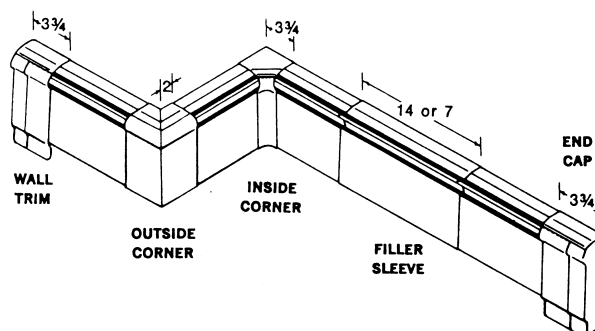
Fine/Line 30H is the heavier duty version of Fine/Line 30, the standard of the baseboard heating industry. In addition to a heavier front panel, Fine/Line 30H is equipped with an additional support bracket in 6', 7' and 8' lengths for extra strength.

**CONSTRUCTION:** Complete baseboard package includes 18 gauge front cover, support brackets, back panel, damper, heating element with expansion cradles.

**FINISH:** Nu-White baked enamel.

**OUTPUT:** 860 Btu/hr./ft. at 215° water temperature, 4 g.p.m. flow.

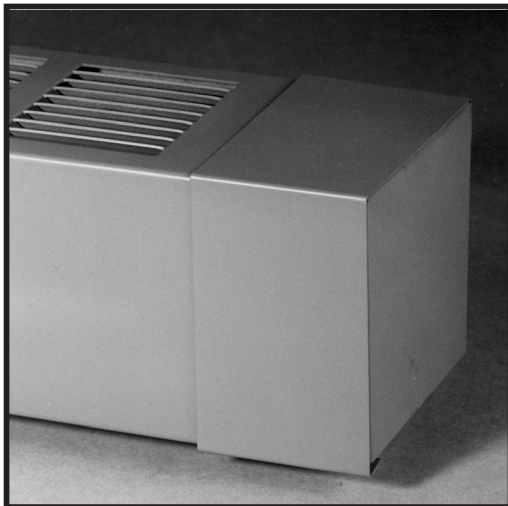
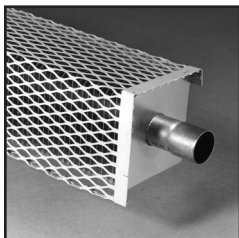
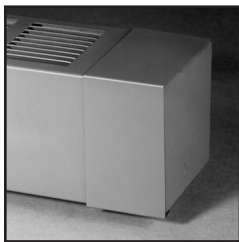
Refer to Pub. 30H-10 for additional details.



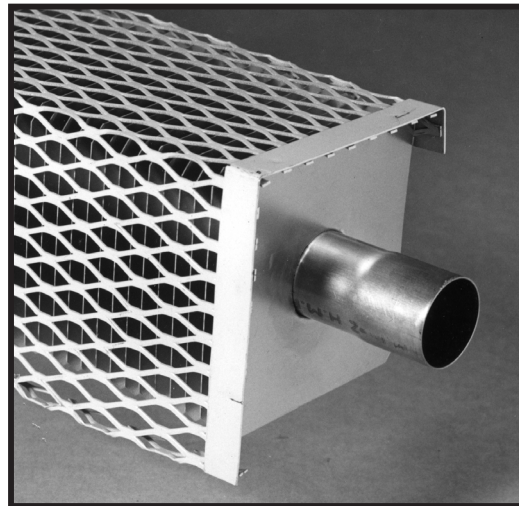
**Slant/Fin**

# F & EM SERIES

## LOUVERED AND EXPANDED METAL ELEMENT COVERS

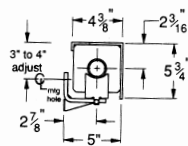


F SERIES

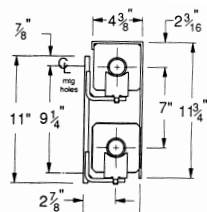


EM SERIES

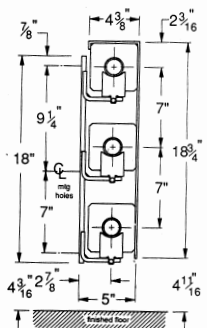
Custom Heights & Configurations Available



F-5  
EM-5



F-12  
EM-12



F-19  
EM-19

Element positions shown maximize output of enclosure. Single or double rows of elements may be placed in any of the two or three positions. Element position is adjustable vertically by 1 1/8" and horizontally by 1 5/16".

### ORDERING DATA

**CONSTRUCTION:** Single piece cover attaches directly to element.

**DEPTH:** 4 3/8"

**HEIGHTS:** 4 3/4" (one tier), 11 3/4" (two tier), 18 3/4" (three tier)

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8'. Other 1/2' lengths available to order.

**MATERIAL:** 18-gauge cover, 16-gauge optional.

**WALL BRACKETS/HANGERS:** Order separately, specify BKT (bracket only) or BKT ASSY (bracket complete with SC hangers) followed by cover stock number and quantity.

**FINISH:** Electro-galvanized standard. Available in baked enamel.

**ELEMENTS:** Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540, S-832. Lengths from 2 to 12 feet. See p. 26.

**JOINTS:** Telescopic accessories eliminate the need to perfectly butt one length of cover to the next. Critical linear and vertical tolerances are eliminated because telescopic assembly absorbs misalignment that might result from uneven floors and walls.

Recommended number of brackets and hangers for given length.			
Element	2	3	4
S-532	2-4 ft.	5-7 ft.	8 ft.
S-540	2-4 ft.	5-7 ft.	8 ft.
S-832	2-4 ft.	5-6 ft.	7-8 ft.
C-340	2-5 ft.	6-8 ft.	—
C-440	2-5 ft.	6-8 ft.	—
C-540	2-5 ft.	6-8 ft.	—

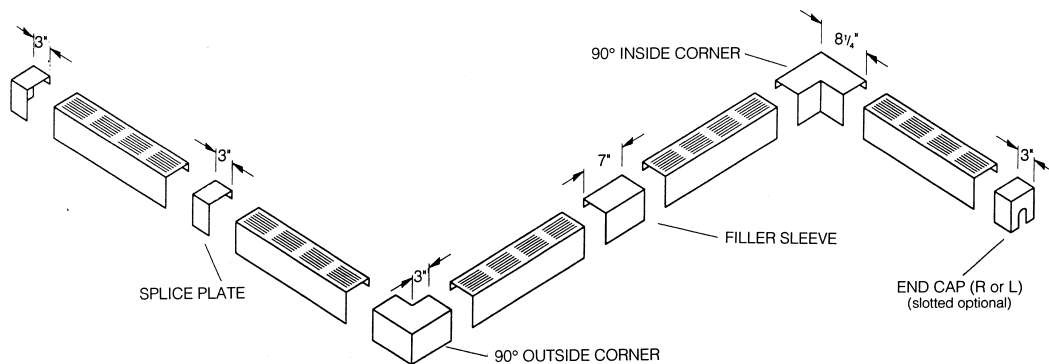
\* Based on 65°F entering air temperature. For ratings at a lower water temperature, refer to conversion table on page 29.



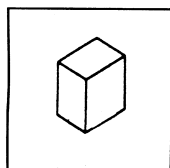
# RATINGS

Model Number	Enclosure Height	Element Type	Tube Size and Material	Fins per Foot	Stream 1PSI* BtuHr./Per Foot	HOT WATER RATINGS*							
						BTUH/HR./FT. (Flow Rate 3 Ft./Sec.)							
						220°F 104°C	220°F 104°C	220°F 104°C	220°F 104°C	210°F 99°C	200°F 93°C	190°F 88°C	180°F 82°C
F-5	4¾"	S-532	1¼" steel	32	1250	1313	1188	1075	975	862	763	663	563
		S-540	1¼" steel	40	1340	1407	1273	1152	1045	925	817	710	603
		S-832	2" steel	32	1280	1344	1216	1101	998	883	781	678	576
		C-340	¾" copper	40	1560	1638	1482	1341	1217	1077	951	827	702
		C-440	1" copper	40	1650	1733	1568	1419	1287	1139	1007	875	743
C-540	1¼" copper	40	1620	1701	1539	1393	1264	1118	988	859	729		
F-12 Two-tier element.	11¾"	S-532	1¼" steel	32	2070	2174	1967	1780	1615	1428	1263	1097	932
		S-540	1¼" steel	40	2160	2268	2052	1858	1685	1490	1318	1145	972
		S-832	2" steel	32	2090	2195	1986	1797	1630	1442	1275	1108	941
		C-340	¾" copper	40	2600	2730	2470	2236	2028	1794	1586	1378	1170
		C-440	1" copper	40	2750	2888	2613	2365	2145	1897	1678	1458	1238
C-540	1¼" copper	40	2700	2835	2565	2322	2106	1863	1647	1431	1215		
F-19 Three-tier element.	18¾"	S-532	1¼" steel	32	2580	2709	2451	2219	2012	1780	1574	1367	1161
		S-540	1¼" steel	40	2690	2825	2556	2313	2098	1856	1641	1426	1211
		S-832	2" steel	32	2610	2741	2480	2245	2036	1801	1592	1383	1175
		C-340	¾" copper	40	3139	3296	2982	2700	2449	2166	1915	1664	1413
		C-440	1" copper	40	3330	3497	3164	2864	2597	2298	2031	1765	1499
C-540	1¼" copper	40	3260	3423	3097	2804	2543	2249	1989	1728	1467		
EM-5	4¾"	S-532	1¼" steel	32	1290	1355	1226	1109	1006	890	787	684	581
		S-540	1¼" steel	40	1370	1439	1302	1178	1069	945	836	726	617
		S-832	2" steel	32	1310	1376	1245	1127	1022	904	799	694	590
		C-340	¾" copper	40	1656	1739	1574	1424	1292	1143	1010	878	745
		C-440	1" copper	40	1750	1838	1663	1505	1365	1208	1068	928	788
C-540	1¼" copper	40	1720	1806	1634	1479	1342	1187	1049	912	774		
EM-12	11¾"	S-532	1¼" steel	32	2270	2384	2157	1952	1771	1566	1385	1203	1022
		S-540	1¼" steel	40	2390	2510	2271	2055	1864	1649	1458	1267	1076
		S-832	2" steel	32	2290	2405	2176	1969	1786	1580	1397	1214	1031
		C-340	¾" copper	40	2918	3064	2772	2510	2276	2014	1780	1547	1314
		C-440	1" copper	40	3090	3245	2936	2657	2410	2132	1885	1638	1391
C-540	1¼" copper	40	3030	3182	2879	2606	2363	2091	1848	1606	1364		
EM-19	18¾"	S-532	1¼" steel	32	3060	3213	2907	2632	2387	2111	1867	1622	1377
		S-540	1¼" steel	40	3140	3297	2983	2700	2449	2167	1915	1664	1413
		S-832	2" steel	32	3080	3234	2926	2649	2402	2125	1879	1632	1386
		C-340	¾" copper	40	3736	3923	3550	3214	2914	2578	2279	1980	1681
		C-440	1" copper	40	3960	4158	3762	3406	3089	2732	2416	2099	1782
C-540	1¼" copper	40	3880	4074	3686	3337	3026	2677	2367	2056	1746		

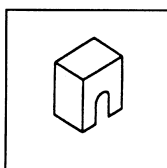
# ACCESSORIES



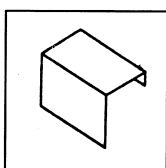
# TELESCOPIC ACCESSORIES



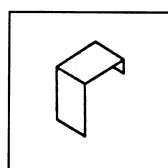
End Cap



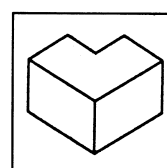
Slotted End Cap



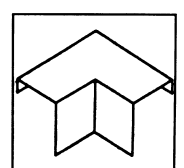
Filler Sleeve



Splice Plate



Outside Corner

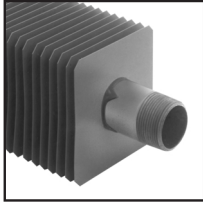


Inside Corner

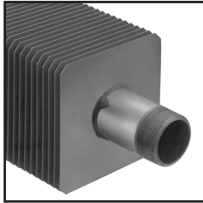
# BARE ELEMENTS

## STEEL ELEMENTS

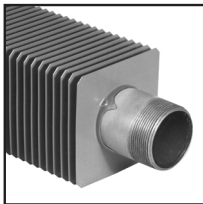
## COPPER/ALUMINUM ELEMENTS



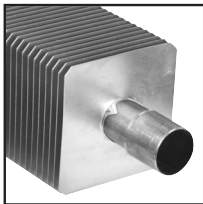
S-532



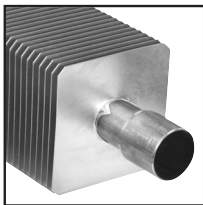
S-540



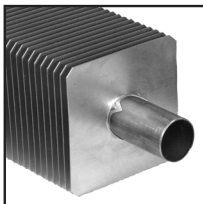
S-832



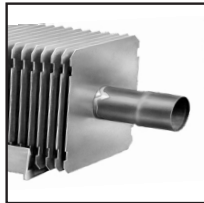
C-340



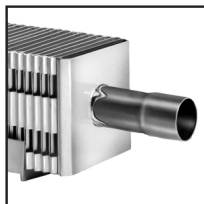
C-440



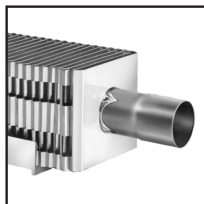
C-540



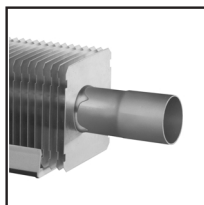
H-1



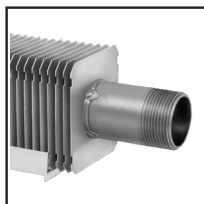
H-3



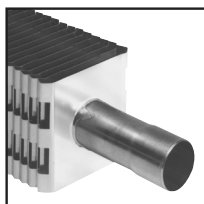
H-4



H-5X



H-6X



E-3

### STRONGER, EASY TO JOIN ELEMENTS

Slant/ Fin makes 12 types of fin-tube which may be used with the various enclosures shown in this catalog. Instead of light-wall tubing, Slant/Fin uses only copper seamless-drawn tubing or Schedule 40 steel pipe. Each fin has a tongue-and-groove collar which interlocks with the next fin for accurate and uniform spacing and prevents fins from twisting loose. This full wall thickness and strength of copper tubing and IPS steel pipe are maintained by forcing tubing through undersized fin holes under high hydraulic pressure. A force-fit mechanical bond is attained which maintains maximum heat transfer indefinitely.

Compact models (E-3, H-3 and H-4) feature double bent aluminum fins, providing extra heating surface in a slimmer profile. Edges of each fin are wedged against the next. Fins reinforce each other - won't be crushed, bent or twisted. End fins are of plated steel for extra ruggedness.

Expanded copper tubing ends eliminate couplings, reduce soldering. Steel elements are factory threaded at both ends.

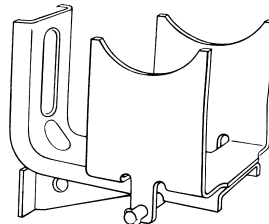
## ORDERING DATA

**PACKAGING:** Factory packaged in individual cartons (except E-3 which is packaged 3 elements to a carton). "E" and "H" elements include plastic expansion cradles.

**LENGTHS:** Precut standard lengths  
S and C Series: 2, 3, 3½, 4, 5, 6, 7, 8, 9, 10, 11, 12 feet.

E and H Series: 2, 3, 3½, 4, 5, 6, 7, 8 feet.

**FINISH:** Copper/aluminum elements - natural finish.  
Steel elements - natural finish.



### M-1 Expansion Hanger:

Specify for bare element installations.

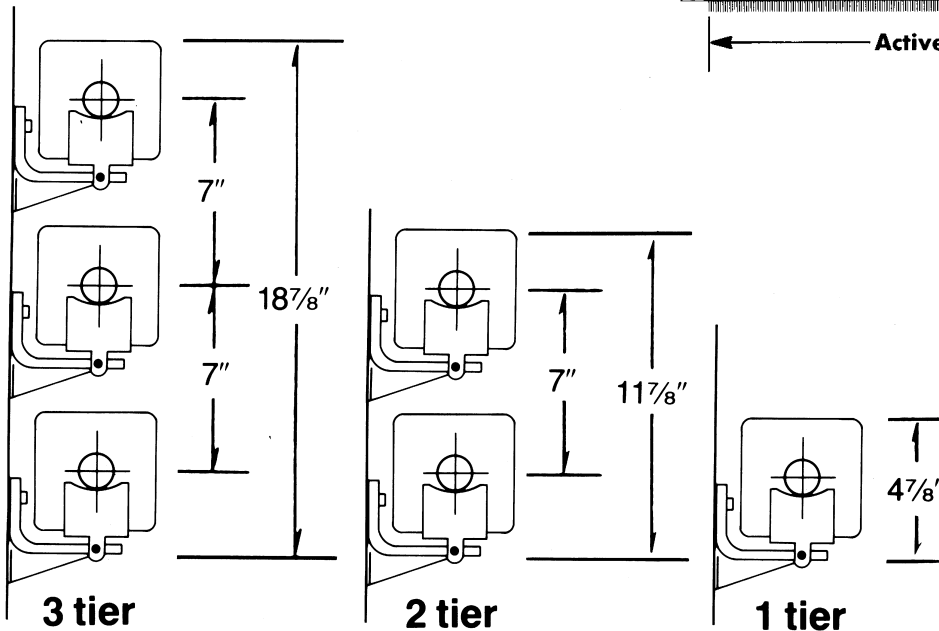
# RATINGS

Model Number	Tube Size and Material	Fin Size and Material	Fins per Foot	No. of Tiers 7" cl	Stream 1PSI* Btuh/Hr. Per Foot	HOT WATER RATINGS*							
						BTUH/HR./FT. (Flow Rate 3 Ft./Sec.)							
						220°F	210°F	200°F	190°F	180°F	170°F	160°F	150°F
						104°C	99°C	93°C	88°C	82°C	77°C	71°C	66°C
S-532	1½" IPS steel	4¼" x 4¼" x .024" electro-gal. steel	32	1	1340	1407	1273	1152	1045	925	817	710	603
				2	2410	2531	2290	2073	1880	1663	1470	1277	1085
				3	3170	3329	3012	2726	2473	2187	1934	1680	1427
S-540	1½" IPS steel	4¼" x 4¼" x .024" electro-gal. steel	40	1	1490	1565	1416	1281	1162	1028	909	790	671
				2	2530	2657	2404	2176	1973	1746	1543	1341	1139
				3	3220	3381	3059	2769	2512	2222	1964	1707	1449
S-832	2" IPS steel	4¼" x 4¼" x .024" electro-gal. steel	32	1	1360	1428	1292	1170	1061	938	830	721	612
				2	2420	2541	2299	2081	1888	1670	1476	1283	1089
				3	3190	3350	3031	2743	2488	2201	1946	1691	1436
C-340	¾" copper	4¼" x 4¼" x .020" aluminum	40	1	1724	1810	1638	1482	1344	1189	1052	914	776
				2	3033	3186	2882	2609	2366	2094	1851	1608	1366
				3	3881	4075	3687	3338	3027	2678	2367	2057	1747
C-440	1" copper	4¼" x 4¼" x .020" aluminum	40	1	1830	1922	1739	1574	1427	1263	1116	970	824
				2	3210	3371	3050	2761	2504	2215	1958	1701	1445
				3	4110	4316	3905	3535	3206	2836	2507	2178	1850
C-540	1¼" copper	4¼" x 4¼" x .020" aluminum	40	1	1790	1880	1701	1539	1398	1235	1092	949	806
				2	3150	3308	2993	2709	2457	2174	1922	1670	1418
				3	4030	4232	3829	3466	3143	2781	2458	2136	1814
H-1	¾" copper	3" x 3 ¼" x .024" aluminum	48	1	—	1179	1067	966	876	775	685	595	505
				2	—	1673	1513	1370	1243	1099	972	844	717
				3	—	2646	2394	2167	1966	1739	1537	1336	1134
H-5X	1¼" copper	3" x 3 ¼" x .020" aluminum	48	1	1085	1139	1031	933	846	749	662	575	488
				2	1540	1617	1463	1324	1201	1063	939	816	693
				3	2435	2557	2313	2094	1899	1680	1485	1291	1096
H-6X	1½" IPS steel	3" x 3 ¼" x .028" electro-gal. steel	48	1	950	998	903	817	741	656	580	504	428
				2	1440	1512	1368	1238	1123	994	878	763	648
				3	2050	2153	1948	1763	1599	1415	1251	1087	923

NOTE: H-3, H-4 and E-3 elements are not recommended for bare-element installation.  
H-1 is not recommended for steam applications.

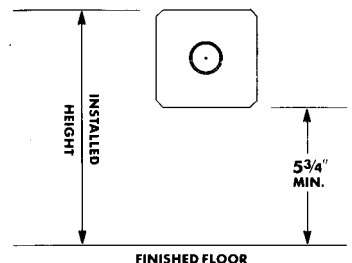
For ratings at lower water temperatures, refer to conversion table on page 29.  
† Based on 65°F entering air temperature

Active length of each element is as follows:  
S and C series—5¼" less than total length.  
E and H series—3" less than total length.



Dimensions for bare element installation without enclosures ("S" and "C" elements).

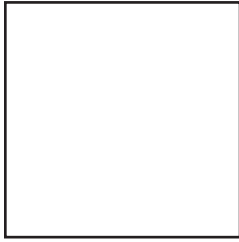
The installed height for elements is defined as the distance from the finished floor to the top of the fin. The minimum mounting height on all elements without enclosures is 5¾" from finished floor to bottom of fins of lowest element.



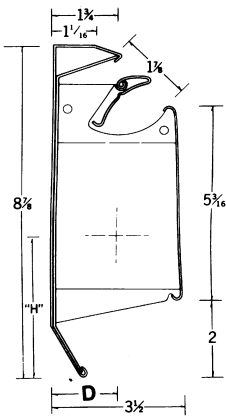
**Slant/Fin**

# MULTI/PAK<sup>®</sup> 80

## HIGH OUTPUT, LOW PROFILE BASEBOARD



Multi/Pak 80 combines the compactness, economy, and ease of installation of baseboard with the high capacity, rugged construction and design versatility needed for industrial and commercial use. A choice of five interchangeable elements meets a broad range of heating requirements. The 1" and 1 1/4" copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads.



### ORDERING DATA

**PACKAGING:** Complete assembly - Model 83A2. Factory assembled, packaged in individual Zip-Strip cartons. Includes H-3 element, enclosure, brackets, plastic expansion cradles and damper. Model 81A, 84A3, 85A and 86A. Cover and element, as described above, packaged and shipped separately.

**CONSTRUCTION:** Back panel, front cover and damper fully assembled at factory, ready to fasten to the wall.

**DEPTH:** 3 1/2"

**HEIGHT:** 8 7/8"

**LENGTHS:** 2', 3', 3 1/2', 4', 5', 6', 7', 8', 10', 12', 14'.

**MATERIAL:** 18-gauge steel front cover. 21-gauge back cover. 16-gauge brackets.

**ELEMENT SUPPORT:** Self-adjusting, poly-propylene expansion cradles are positioned over support brackets, allowing quiet expansion.

**FINISH:** Nu-White baked enamel.

**ELEMENTS:** Choice of five. Copper with aluminum fins: H-1, H-3, H-4 and H-5X; steel with electro-galvanized steel fins: H-6X. See page 26.

### SNAP-ON ACCESSORIES

- End cap\*, 4"
- Wall trim\*, 4"
- Valve cover\*, 8"
- Valve cover, slotted\*, 8"
- Filler sleeve, 7" or 14"
- Inside corner\*, 90°, 135° or custom angle
- Outside corner\*, 90°-135° or custom angle
- Center valve cover\*, 8"
- Zone valve box
- Back panel for inside
- Column cover set

\*Telescopic accessories

ELEMENT	"H"	"D"
H-1	3 7/8"	1 3/4"
H-3	3 1/2"	1 9/16"
H-4	3 1/2"	1 9/16"
H-5X	3 7/8"	1 3/4"
H-6X	3 7/8"	1 3/4"

### RATINGS

Model Number	Element Type	Tube Size and Material	Fin Size and Material	Fins per Foot	Water Flow	Pressure Drop†	Stream 1PSI* Btuh/Hr. Per Foot	HOT WATER RATINGS*							
								BTUH/HR./FT.							
								220°F 104°C	210°F 99°C	200°F 93°C	190°F 88°C	180°F 82°C	170°F 77°C	160°F 71°C	150°F 66°C
81 A	H-1	3/8" copper	3 x 3 3/4" x .024" aluminum	48	1 GPM	47	-	1140	1060	970	880	790	700	610	520
					4 GPM	525		1200	1120	1030	930	840	740	640	550
83-A2	H-3	3/8" copper	2 3/4" x 2 1/2" x .011" aluminum	55	1 GPM	47	-	1050	970	890	810	730	650	570	490
					4 GPM	525		1110	1030	940	860	770	690	600	520
84-A3	H-4	1" copper	3" x 2 1/2" x .011" aluminum	48	1 GPM	13	-	1040	960	880	800	720	640	560	480
					4 GPM	145		1100	1010	930	850	760	680	610	510
85-A	H-5X	1 1/4" copper	3" x 3 3/4" x .020" aluminum	48	1 GPM	6	1160	1100	1010	920	830	740	650	560	470
					4 GPM	63		1160	1070	970	890	790	700	610	520
86-A	H-6X	1 1/4" IPS steel	3" x 3 3/4" x .028" electro-gal. steel	48	1 GPM	3	990	940	870	790	720	640	570	500	420
					4 GPM	41		990	920	840	760	680	600	530	440

**SPECIFICATIONS**

Ratings are based on active (finned) length. Active length of "S" and "C" elements is 5¼" less than total length. Fin size of "S" and "C" elements is 4¼" x 4¼". Active length of "H" and "E" elements is 3" less than total length. See p. 26-27 for the specifications of individual "H" and "E" elements.

**Water Ratings And Flow Rates**

The hot water ratings shown in this catalog are based on the following

- Water velocity: 3 or more feet per second
- Entering air temp: 65°
- Steam temperature: 215°

Proceed as follows to determine output under conditions different than above:

Water velocity less than 3 feet per second: multiply the hot water ratings by the factors shown in Table 1.

**TABLE 1**

FACTORS FOR DETERMINING OUTPUTS AT WATER FLOW RATES OF LESS THAN 3 FEET PER SECOND

Flow Rate Ft./Sec.	Factor	Flow Rate Ft./Sec.	Factor
3.0	1.00	1.5	.973
2.75	.996	1.25	.966
2.5	.992	1.0	.957
2.25	.988	.75	.946
2.0	.984	.5	.931
1.75	.979	.25	.905

**TABLE 2**

CORRECTION FACTORS FOR WATER TEMPERATURES† AND AIR TEMPERATURES OTHER THAN STANDARD

AVERAGE WATER TEMP. °F	ENTERING AIR TEMPERATURE								
	45	50	55	60	65	70	75	80	85
90	.19	.16	.13	.11	.08	.06			
100	.25	.22	.19	.16	.13	.11	.08	.06	
110	.31	.28	.25	.22	.19	.16	.13	.11	.08
120	.38	.34	.31	.28	.25	.22	.19	.16	.13
130	.45	.42	.38	.34	.31	.28	.25	.22	.19
140	.53	.49	.45	.42	.38	.34	.31	.28	.25
150	.61	.57	.53	.49	.45	.42	.38	.34	.31
155	.65	.61	.57	.53	.49	.45	.42	.38	.34
160	.69	.65	.61	.57	.53	.49	.45	.42	.38
165	.73	.69	.65	.61	.57	.53	.49	.45	.42
170	.78	.73	.69	.65	.61	.57	.53	.49	.45
175	.82	.78	.73	.69	.65	.61	.57	.53	.49
180	.86	.82	.78	.73	.69	.65	.61	.57	.53
185	.91	.86	.82	.78	.73	.69	.65	.61	.57
190	.95	.91	.86	.82	.78	.73	.69	.65	.61
195	1.00	.95	.91	.86	.82	.78	.73	.69	.65
200	1.05	1.00	.95	.91	.86	.82	.78	.73	.69
205	1.09	1.05	1.00	.95	.91	.86	.82	.78	.73
210	1.14	1.09	1.05	1.00	.95	.91	.86	.82	.78
215	1.20	1.14	1.09	1.05	1.00	.95	.91	.86	.82
220	1.25	1.20	1.14	1.09	1.05	1.00	.95	.91	.86
225	1.32	1.25	1.20	1.14	1.09	1.05	1.00	.95	.91
230	1.39	1.32	1.25	1.20	1.14	1.09	1.05	1.00	.95
235	1.41	1.39	1.32	1.25	1.20	1.14	1.09	1.05	1.00
240	1.44	1.41	1.39	1.32	1.25	1.20	1.14	1.09	1.05

† Also applies to equivalent saturated steam temperatures. Entering air temperature other than 65°F: multiply the catalog steam rating by the factors shown in Table 2. Water temperature other than 215°F: multiply the catalog steam rating by the factors shown in Table 2.

**Steam Ratings**

Steam ratings are expressed in BTU per hour per lineal foot of active-length, based on steam or 215° F, 1 PSI, (101.5° C) and 65° F (18.3° C) entering air.

**Recommended Installed Height**

Ratings include the factor shown in Table 3 for the recommended installed height. If the unit is to be installed at a height other than that recommended, the rating must be adjusted as follows:

$$\left[ \frac{\text{Factor from Table 3 for actual installed height}}{\text{Factor from Table 3 for recommended installed height}} \right] \times \text{Rating shown on pages 7, 11, 13, 15, 17, 19, 25 \& 27}$$

Example for installed heights other than recommended (example based on Multi/Pak 95-10):

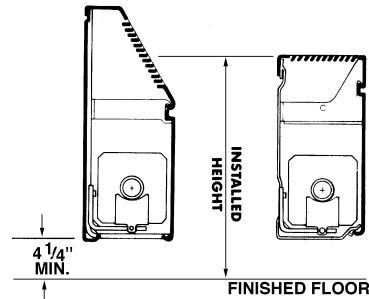
Given:

- Installed height 36" [1.00 ÷ 1.15] x 1500 = 1304 Btu/Hr./Ft.
- Recommended height 14"
- Water Temperature 200°F
- Cover type 95-10
- Element C-540

† Use the values in Table 3 below for both the "RECOMMENDED HEIGHT" factors and for the "ACTUAL HEIGHT" factors.

**TABLE 3**

Height †	Factor	Height †	Factor
36" or more	1.00	25"	1.08
34"	1.01	24"	1.09
32"	1.02	23"	1.10
30"	1.03	22"	1.11
29"	1.04	21"	1.12
28"	1.05	20"	1.13
27"	1.06	19"	1.14
26"	1.07	18" or less	1.15



The **installed height** for enclosures is defined as the distance from the finished floor to the center of the outlet. Recommended height is based on a minimum mounting height for all covers and enclosures of 4¼" from finished floor to bottom of front panel.

**Dampers**

Dampers are available as options on most enclosures, and are shown in diagrams wherever applicable. Ratings are for enclosures without dampers, or with dampers in fully open position.

**Water Content**

- Slant/Fin commercial radiation elements contain the following volume of water: ¾" copper tube .....0.023 gal./ft.
- Model C440, 1" copper tube .....0.040 gal./ft.
- Model C540, 1¼" copper tube .....0.063 gal./ft.
- Model S532, S540, 1¼" steel pipe .....0.077 gal./ft.
- Model S832, 2" steel pipe .....0.174 gal./ft.

**NOTE:**

All ratings have been determined in the Slant/Fin Environmental Laboratory in conformance with accepted industry practice concerning testing and rating procedures for finned tube (commercial) radiation. Fin-tube must be installed in accordance with installation diagrams on Form CP-10 and 90-40 to obtain the ratings indicated. Use of material or installation methods other than those specified by Slant/Fin may result in a change in the ratings.

\* Engineering data pertains to all products in this publication except Multi/Pak 80 and H and E Series bare elements.

# ENGINEERING DATA

## SPECIFICATIONS

### Multi/Pak 90

Furnish and install as shown on the plans Multi/Pak® 90—slope-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of two interlocking sections: a top cover and front cover. Top cover will be common to one-tier (90-14) and two-tier (90-21) models. (A knob-actuated damper shall be provided.) Top of enclosure shall consist of stamped grille pre-painted and with pencil-proof air discharge louvers. Front skirt shall interlock with top panel to form lateral decorative panel. Front skirt shall be removable.

Interlocking top cover and front cover shall both be fabricated from 18-gauge steel in Nu-White baked enamel or as custom matched as per specification. Brackets and hangers have electro-galvanized finish.

Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans. Furnish required channeled bracket-hanger assemblies with heavy flag brace for rigid front skirt and element support. Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

### Multi/Pak 93

Furnish and install as shown on the plans Multi/Pak® 93—flat-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of two interlocking sections: a top cover and front cover. Top cover will be common to one-tier (93-10) and two-tier (93-17) models. (A knob-actuated damper shall be provided.) Top of enclosure shall consist of stamped grille pre-painted and with pencil-proof air discharge louvers. Front skirt shall interlock with top panel to form lateral decorative panel. Front skirt shall be removable.

Interlocking top cover and front cover shall both be fabricated from 18-gauge steel in Nu-White baked enamel or as custom matched as per specification. Brackets and hangers have electro-galvanized finish.

Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans. Furnish required channeled bracket-hanger assemblies with heavy flag brace for rigid front skirt and element support. Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

### Multi/Pak 95

Furnish and install as shown on the plans Multi/Pak® 95—flat-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of two interlocking sections: a top cover and front cover. Top cover will be common to one-tier and two-tier models. (A knob-actuated damper shall be provided.) Top of enclosure shall consist of stamped grille pre-painted and with pencil-proof air discharge louvers. Front skirt shall interlock with top panel to form lateral decorative panel. Front skirt shall be removable.

Interlocking top cover and front cover shall

both be fabricated from 18-gauge steel in Nu-White baked enamel or as custom matched as per specification. Brackets and hangers have electro-galvanized finish.

Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans. Furnish required channeled bracket-hanger assemblies with heavy flag brace for rigid front skirt and element support. Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

### J Series

Furnish and install as shown on the plans J Series—slope-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of one piece construction. (A knob-actuated damper shall be provided.) Top part of enclosure shall consist of stamped grille with pencil-proof air discharge louvers.

Cover shall be fabricated from 18-gauge steel in gray prime or as custom matched as per specification. Brackets and hangers have electro-galvanized finish.

Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans. Furnish required channeled bracket-hanger assemblies with heavy flag brace for rigid front skirt and element support. Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

### FS Series

Furnish and install as shown on the plans "FS" Series free standing enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of one piece construction. Enclosure shall be (FS-7, FS-14, FS-21) and shall have (1, 2 or 3) tier element. Top part of enclosure shall consist of stamped grille with pencil-proof air discharge louvers.

Cover shall be fabricated from 18 (16) gauge steel in hot dipped wiped coat galvanized finish or as custom color matched as per specification.

Brackets and hangers shall be channeled steel in hot dipped wiped coat galvanized finish. Brackets and hangers shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans.

Furnish required channeled bracket-hanger assemblies with heavy floor mounting flange for rigid front skirt and element support.

Provide all required accessories for a complete installation. Enclosure accessories in hot dipped wiped coat galvanized steel shall be telescopic and match enclosure color.

### TBG Series

Furnish and install as shown on the plans "TBG" Series top & bottom slope enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of one piece construction. Enclosure shall be (TBG-17, TBG-24) and shall have

(1 or 2) tier element. (A knob actuated damper shall be provided.) Top and bottom slope of enclosure shall consist of stamped grille with pencil-proof air discharge louvers. (Optional: A full height back panel shall be provided of 20-gauge steel in hot dipped wiped coat galvanized finish.)

Cover shall be fabricated from 18 (16) gauge steel in hot dipped wiped coat galvanized finish or as custom matched as per specification.

Brackets and hangers shall be channeled steel in hot dipped wiped coat galvanized finish. Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans.

Furnish required channeled bracket-hanger assemblies with heavy channeled bracket for rigid front skirt and element support.

Provide all required accessories for a complete installation. Enclosure accessories in hot dipped wiped coat galvanized steel shall be telescopic and match enclosure color.

### R Series

Furnish and install as shown on the plans "R" Series round top enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation.

Cover shall be of one piece construction. Enclosure shall be (RL-10, RT-14, RT-21 or RT-28) and shall have (1, 2 or 3) tier element. (A knob actuated damper shall be provided.) Top part of enclosure shall consist of stamped grille with pencil-proof air discharge louvers. (Optional: A full height back panel shall be provided of 20-gauge steel in hot dipped wiped coat galvanized finish.)

Cover shall be fabricated from 18 (16) gauge steel in hot dipped wiped coat galvanized finish or as custom color matched as per specification.

Brackets and hangers shall be channeled steel in hot dipped wiped coat galvanized finish. Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans.

Furnish required channeled bracket-hanger assemblies with heavy flag brace for rigid front skirt and element support.

Provide all required accessories for a complete installation. Enclosure accessories in hot dipped wiped coat galvanized steel shall be telescopic and match enclosure color.

### 350L Series

Furnish and install 350L Series baseboard cover assembly as manufactured by Slant/Fin Corporation, consisting of one-piece bottom, back and top panel, and one-piece front panel, formed of cold rolled steel. Bottom and top edges of back panel shall be formed to provide channels along entire length, to receive full-height support brackets.

Brackets shall be die formed of electro-galvanized cold rolled steel, for rigid bracing and spring locking. Slide-action expansion cradles, formed of polypropylene, shall be inserted between heating element and support bracket. Cradles shall protect element bottom and sides from contact with brackets or cover, confining element to free lateral expansion for noiseless operation.

Provide all required accessories for a

complete installation. Cover accessories shall be telescopic and shall match enclosure color.

All cover components shall be painted in Nu-White, oven baked melamine cross-linked polyester enamel.

#### HD Series

Furnish and install as shown on the plans HD Series—slope-top baseboard with element, required mounting components and accessories as manufactured by Slant/Fin Corporation. Complete two-piece enclosure assembly shall consist of full back panel with interlocking slope top front panel, factory packaged with necessary brackets.

Front cover shall be fabricated from 16-gauge steel, back panel from 20-gauge steel. The front panel & accessories shall be finished in Nu-White baked enamel finish or as custom color matched as per specifications. Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths, heights and capacities as scheduled on plans.

Bracket with element guide shall be spot welded to back panel every 24 inches alternating with cabinet spacer welded to back panel every 24 inches giving rigid support to front every 12" inches. There are dimpled anchoring holes every 12 inches. For fastening front to brackets, use 8 x 3/8" self tapping screws with countersunk head as supplied by others.

Provide all required accessories for a complete installation. Cover accessories shall be telescopic to eliminate the need to perfectly butt one length of cover to the next.

#### F & EM Series

Furnish and install as shown on the plans "F" or "EM" Series flat-top enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin Corporation. Cover shall be of one piece construction. Enclosure shall be EM-5, EM-12, EM-19, F-5, F-12 or F-19 and shall have (1,2 or 3) tier element. EM enclosure shall be made of expanded steel. F enclosure shall consist of stamped top grille with pencil-proof air discharge louvers.

Covers shall be fabricated from 18-gauge steel in bonded zinc finish or as custom color matched as per specification.

Brackets and hangers shall be channeled steel in bonded zinc finish. Fin-tube element(s) shall be Model\_\_\_\_\_. Provide lengths and capacities as scheduled on plans.

Furnish required channeled bracket-hanger assemblies for rigid element support.

Provide all required accessories for complete installation. Enclosure accessories in bonded zinc steel shall be telescopic and match enclosure color.

#### Multi/Pak 80

Furnish and install Multi/Pak® 80 baseboard cover assembly as manufactured by Slant/Fin Corporation, consisting of one-piece 21-gauge back and top panel, and one-piece 18-gauge front panel, formed of cold rolled steel. Bottom and top edges of back panel shall be formed to provide channels along entire length, to receive full-height support brackets.

Brackets shall be die formed of zinc-bonded 16-gauge quarter-hard cold rolled steel, for rigid bracing and spring locking. Slide-action expansion cradles, formed of polypropylene, shall be inserted between heating element and support bracket. Cradles shall protect element bottom and sides from contact with brackets or cover, confining element to free lateral expansion for noiseless operation. Room-control damper vane, of quarter-hard cold rolled steel, shall be provided for each length of enclosure, and shall modulate fully and freely, yet retain any setting through its arc without protruding knobs or other devices. Support bracket shall be formed to retain and support damper vane without use of additional pivots. All cover components shall be painted in Nu-White, oven baked melamine cross-linked polyester enamel.

#### C-540, C-440 and C-340 Element

Furnish and install C-540, C-440 and C-340 fin-tube heating elements as manufactured by Slant/Fin Corporation, consisting of 1 1/4" nominal\* copper seamless-drawn tubing\* with 4 1/4" x 4 1/4" x .020" aluminum fins spaced 40 per linear foot. Fins shall be mechanically bonded to the tubing to increase thermal contact and to space and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element shall be expanded to receive the expanded end of another, without couplings.

\* C-440 is 1" copper pipe. C-340 is 3/4" copper pipe.

#### S-540, S-532 and S-832 Element

Furnish and install S-540 and S-532 fin-tube heating element as manufactured by Slant/Fin Corporation, consisting of 1 1/4" IPS steel pipe\* (Schedule 40), with 4 1/4" x 4 1/4" x .024" steel fins spaced 40 per linear foot for S-540 and 32 per linear foot for S-532 and S-832. The pipe shall be forced through undersized fin holes to obtain a force-fit mechanical bond. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. Both ends of each element pipe shall be threaded with IPS standard threads.

\* S-832 is 2" IPS steel pipe.

#### H-1 Element

Furnish and install H-1 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 3/4" nominal copper tubing, with 3" x 3 1/4" x .024" aluminum fins, spaced 48 per linear foot. Fins shall be mechanically bonded to the tubing to increase thermal contact and to space and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element tube shall be expanded to receive the unexpanded end of another, without couplings.

#### H-3 Element

Furnish and install H-3 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 3/4" nominal copper tubing, with 3 1/2" x 2 1/2" x .011" aluminum fins bent to 2 3/4" x 2 1/2", spaced 55 per linear foot. Fins shall be mechanically bonded to the tubing to increase thermal contact and to space

and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element tube shall be expanded to receive the unexpanded end of another, without couplings.

#### H-4 Element

Furnish and install H-4 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 1" nominal copper tubing, with 3 1/2" x 2 1/2" x .011" aluminum fins bent to 3" x 2 1/2", spaced 48 per linear foot. Fins shall be mechanically bonded to the tubing to increase thermal contact and to space and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element tube shall be expanded to receive the unexpanded end of another, without couplings.

#### H-5X Element

Furnish and install H-5 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 1 1/4" nominal copper tubing, with 3" x 3 1/4" x .020" aluminum fins, spaced 48 per linear foot. Fins shall be mechanically bonded to the tubing to increase thermal contact and to space and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element tube shall be expanded to receive the unexpanded end of another, without couplings.

#### H-6X Element

Furnish and install H-6 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 1 1/4" IPS steel pipe (Schedule 40), with 3" x 3 1/4" x .028" steel fins, spaced 48 per linear foot. Fins shall be mechanically bonded to the pipe to increase thermal contact and to space and lock the fins uniformly in place. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. Both ends of each element pipe shall be threaded with IPS standard threads.

#### E-3 Element

Furnish and install E-3 baseboard heating element as manufactured by Slant/Fin Corporation, consisting of 3/4" nominal copper tubing with 2 1/2" x 2 1/2" x .009" aluminum fins, bent to 2 3/4" x 2 1/2", spaced 55 per linear foot. A flange with four teeth shall be formed on each fin to increase thermal contact and to space and lock the fins uniformly in place. One end of each element tube shall be expanded to receive the unexpanded end of another, without couplings.

# Better manufacturing technology ensures higher quality.



*Fin-tube enclosures are formed on press brakes that perform a sequence of precision computer controlled operations, each with precision of a ten-thousandth of an inch. Near perfect repeatability ensures a uniform fit on the job from piece to piece, for problem free installations.*

Slant/Fin is proud to operate the industry's most modern manufacturing facility for fin-tube enclosures and light commercial baseboard radiation. With all major metal-working operations under full computer control, a deep inventory of raw materials and semi-finished products, and an automated, high-capacity painting facility, the on-time delivery of consistently high quality commercial radiation products is ensured.

*This computer controlled turret press stores programs for hundreds of items. It sets up quickly and changes tools automatically as it stamps out the flat blanks needed to fabricate Slant/Fin commercial radiation accessories.*



*Slant/Fin's high-capacity painting facility includes unique modular spray paint stations that permit quick changeover from one color to the next. A custom color spray operation can be set up off line and moved into its production position in a matter of minutes with virtually no down time, making shorter custom runs more practical.*



## **Slant/Fin**

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