

# Slantifin commercial FIN-TUBE 

 Radiation Selection Guide- Ideal for use with High Efficiency Boilers - Very Efficient Operation
- Decorator Series Colors Available


## Output Ratings Range: <br> - $110^{\circ} \mathrm{F}$ through $220^{\circ} \mathrm{F}$ Water Temperature <br> - 1 P.S.I. Steam

For BIM objects, go to: www.slantfin.com

MULTI/PAK ${ }^{\text {® }} 90$, 93 \& 95
2-piece fin-tube enclosure. Factory packaged. Prepainted. In stock.
Style: $\quad$ Slope-top and flat-top. Aluminum grille optional ( $90 \& 95$ ).
Application: Commercial heating.
Hot water or steam.
Output: $\quad 373$ to 3140 Btu/hr.
Elements: Choice of 12. Copper/aluminum or steel.
Finish: $\quad$ 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


## J SERIES

1-piece fin-tube enclosure.

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

## HD SERIES \& LC SERIES

Heavy duty slope-top baseboard.
Style: Slope-top, louvered baseboard.
Application: Rugged duty residential or light
commercial heating. Hot water
or steam.
Output: $\quad 360$ to 1660 Btu/hr.
Elements: Choice of 5 . Copper/aluminum or steel.
Finish: Galvanized or custom colors.

## 350 SERIES

High output slope-top baseboard.
Style: Slope-top, louvered baseboard.
Application: Light commercial heating. Hot water or steam
Output: $\quad 460$ to 2250 Btu/hr.
Elements: Choice of 5 . Copper/aluminum
or steel.
Finish: Nu-White baked enamel or galvanized.

## R SERIES

1-piece fin-tube enclosure.
Style: $\quad$ Flat-top. Aluminum grille optional. (Top outlet only) (Front outlet optional 14" thru 28")
Application: Commercial heating. Hot water or steam.
Output: $\quad 554$ to 3770 Btu/hr.
Elements: Choice of 6. Copper/aluminum or steel.
Finish: Galvanized or custom colors.
RT= Top Outlet
RF= Front Outlet

page 16-17
Multi/Pak 90 Series
page 4-10


## FS SERIES

Free standing fin-tube enclosure.

| Style: | Pedestal mounted enclosure. <br> Application: <br> Commercial heating. <br> Hot water or steam. |
| :--- | :--- |
| Output: | 581 to 3339 Btu/hr. <br> Elements: |
| Choice of 6 . Copper/aluminum <br> or steel. |  |
| Finish: | Galvanized or custom colors. |



## TBG SERIES

1-piece fin-tube enclosure.
Style: $\quad$ Slope top and bottom.
Application: Commercial heating. Hot water or steam. Ideal for upper wall installation.


Output: 540 to 2548 Btu/hr.

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. <br>  <br> EM Series: 581 to 4158 Btu/hr. <br> Elements:Choice of 6. Copper/aluminum <br> or steel. <br> Finish: |
| Galvanized or custom colors. |  |



## BARE ELEMENTS

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

Application: With Slant/Fin enclosures or as bare element installation.
Output:
Elements:
To 4316 Btu/hr.
Choice of 12. Copper/aluminum or steel.

## TH SERIES


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Trough Heater is a floor recessed commercial finned tube heater.

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## ENGINEERING DATA

Ratings Data Specifications
(Refer to pages 29-35)

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## 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 - SC Hanger

- Electro-galvanized bracket has fastening slot that allows $1 \frac{1}{8}$ " pitch adjustment.
- Electro-galvanized cradle supports finned or bare tubing at same height.
- Sliding guide rod provides full cradle width support. 15/16" 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 7/6" pitch adjustment. Self-adjusting polypropylene expansion cradle on " H " and " E " elements allow silent lateral expansion movement
- Multi/Pak 95 SC hangers are identical to Multi/Pak 90



## Multi/Pak 90 wall brackets

- Heavy duty 14 gauge wall bracket is drawn die formed with multidirectional 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.



## Internal Splice Plate

Cover sections butt to each other with a nearly seamless fit using the internal splice plate, optional for Multi/Pak 90 slope top enclosures. Eliminates need for an external splice plate.


## 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.


## 5lant/Fin.



Aluminum grille optional.


# MULTIPAK 90 SLOPE-TOP, TWO-PIECE ENCLOSURE Pre-painted. Factory packaged. 

## MODELS 90-14 AND 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: 5¼"
HEIGHTS: 14" (one tier), 21" (one or two tier)
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{½}{ }^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$.
MATERIAL: 18-gauge galvanized steel top and front cover. Stamped grille is standard.
Aluminum grille optional.
FINISH: Nu-White baked enamel (Standard) Galvanized or custom colors available on request.
WALL BRACKETS/HANGERS: Packaged with complete assembly. SC hanger has guide rod to provide $11 / 16^{\prime \prime}$ lateral expansion movement, $1 / 1 / 8^{\prime \prime}$ vertical pitch adjustment. Brackets and hangers provided with complete assembly as follows:

|  | $\mathbf{9 0 - 1 4}$ |  | 90-21 |  |
| :---: | :---: | :---: | :---: | :---: |
| Length | Brackets | Hangers | Brackets | Hangers |
| $2-5 \mathrm{ft}$. | 2 | 2 | 2 | 4 |
| $6-8 \mathrm{ft}$. | 3 | 3 | 3 | 6 |

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 (Canada: 2 to 8 feet). See p. 30.

JOINTS: Cover section joints may be made with internal splice plates or telescopic external splice plates.
With the optional internal splice plate, cover sections butt to each other with a nearly seamless fit.

Telescopic external splice plates, filler sleeves and other accessories make up odd inches and 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


## RATINGS

With or without dampers

| Cover Type | $\begin{aligned} & \text { Enclo- } \\ & \text { sure } \\ & \text { Height } \end{aligned}$ | $\begin{aligned} & \text { Element } \\ & \text { Type } \end{aligned}$ | Tube Size and Material | Fin Size \& Material | Fins <br> Per <br> Foot | Steam <br> 1 PSI* <br> Btu/Hr. <br> Per <br> Foot | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| 90-14 | $14{ }^{\prime \prime}$ | S-532 | 11/4" steel | 41/4" steel | 32 | 1380 | 276 | 359 | 455 | 552 | 621 | 731 | 842 | 952 | 1076 | 1187 | 1311 | 1449 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1550 | 310 | 403 | 512 | 620 | 698 | 822 | 946 | 1070 | 1209 | 1333 | 1473 | 1628 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1400 | 280 | 364 | 462 | 560 | 630 | 742 | 854 | 966 | 1092 | 1204 | 1330 | 1470 |
|  |  | C-340 | $3 / 411$ copper | 41/4" alum. | 40 | 1839 | 368 | 478 | 607 | 736 | 828 | 975 | 1122 | 1269 | 1435 | 1582 | 1748 | 1932 |
|  |  | C-440 | 1" copper | 41/4 ${ }^{1 / 4}$ alum. | 40 | 1950 | 390 | 507 | 644 | 780 | 878 | 1034 | 1190 | 1346 | 1521 | 1677 | 1853 | 2048 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1910 | 382 | 497 | 630 | 764 | 860 | 1012 | 1165 | 1318 | 1490 | 1643 | 1815 | 2006 |
| 90-21 <br> One-tier element | 211 | S-532 | 11/4" steel | 41/4" steel | 32 | 1460 | 292 | 380 | 482 | 584 | 657 | 774 | 891 | 1007 | 1139 | 1256 | 1387 | 1533 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1680 | 336 | 437 | 554 | 672 | 756 | 890 | 1025 | 1159 | 1310 | 1445 | 1596 | 1764 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1520 | 304 | 395 | 502 | 608 | 684 | 806 | 927 | 1049 | 1186 | 1307 | 1444 | 1596 |
|  |  | C-340 | $3 / 4{ }^{\prime \prime}$ copper | $41 / 4 \mathrm{l}$ alum. | 40 | 2013 | 399 | 519 | 658 | 798 | 906 | 1067 | 1228 | 1389 | 1570 | 1731 | 1895 | 2114 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2130 | 426 | 554 | 703 | 852 | 959 | 1129 | 1299 | 1470 | 1661 | 1832 | 2024 | 2237 |
|  |  | C-540 | $11 / 4$ " copper | 41/4" alum. | 40 | 2090 | 418 | 544 | 690 | 836 | 941 | 1108 | 1275 | 1442 | 1630 | 1797 | 1986 | 2195 |
| 90-21 <br> Two-tier element | 211 | S-532 | 11/4" steel | 41/4" steel | 32 | 2190 | 438 | 570 | 723 | 876 | 986 | 1161 | 1336 | 1511 | 1708 | 1883 | 2081 | 2300 |
|  |  | S-540 | 1114" steel | 41/4" steel | 40 | 2380 | 476 | 619 | 785 | 952 | 1071 | 1261 | 1452 | 1642 | 1856 | 2047 | 2261 | 2499 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2270 | 454 | 590 | 749 | 908 | 1022 | 1203 | 1385 | 1566 | 1771 | 1952 | 2157 | 2384 |
|  |  | C-340 | $3 / 4{ }^{1 \prime}$ copper | 41/4" alum. | 40 | 2822 | 564 | 734 | 931 | 1129 | 1270 | 1496 | 1721 | 1947 | 2200 | 2427 | 2681 | 2963 |
|  |  | C-440 | 1" copper | 41/4 alum. | 40 | 2990 | 598 | 778 | 987 | 1196 | 1346 | 1585 | 1824 | 2063 | 2332 | 2571 | 2841 | 3140 |
|  |  | C-540 | $11 / 4$ copper | $4^{1 / 4}{ }^{1 / 2}$ alum. | 40 | 2930 | 586 | 762 | 967 | 1172 | 1319 | 1553 | 1787 | 2022 | 2285 | 2520 | 2784 | 3077 |

* Based on $65^{\circ} \mathrm{F}$ entering air temperature. Note: Ratings are based on active finned length (5-1/4" less than overall length).


## ACCESSORIES



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

## non-telescopic accessories

Column cover set
Damper (electro galvanized, not available with aluminum grille)* Damper, field installed
Hanging strip*
*See p. 3 for details

Back panel (electro galvanized) Tamper-proof lock* Wall gasketing*

## telescopic accessories



End Cap
End Cap-slotted
(not shown)


Splice plate




End valve cover, $\dagger$ slotted, 10" End valve cover, 10" (not shown)

## 5/ant/Fin



| ELEMENT | $\mathbf{X}$ |
| :---: | :---: |
| H 1 | $33 / 16$ |
| H 3 | $2^{13 / 16}$ |
| H 4 | $2^{13 / 16}$ |
| H 5 X | $33 / 16$ |
| H 6 X | $33 / 16$ |
| $\mathrm{E}-75$ | $27 / 8$ |



93-10


# MULTI/PAK 93 FLAT-TOP, TWO-PIECE ENCLOSURE Pre-painted. Factory packaged. 

## MODELS 93-10 AND 93-17



## 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: $31 / 2{ }^{11}$
HEIGHTS: $9^{3 / 4 \prime}$ (one tier), $163 / 4^{\prime \prime}$ (one or two tier)
LENGTHS: 2', $3^{\prime}, 3^{½} 2^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$.
MATERIAL: 18-gauge galvanized steel top and front cover. 11-gauge wall brackets.
FINISH: Nu-White baked enamel is standard. Custom color available on special order.

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:

|  | 93-10 |  | 93-17 |  |
| :---: | :---: | :---: | :---: | :---: |
| Length | Brackets | Hangers | Brackets | Hangers |
| $2-5 \mathrm{ft}$. | 2 | 2 | 2 | 4 |
| $6-8 \mathrm{ft}$. | 3 | 3 | 3 | 6 |

ELEMENTS: Copper with aluminum fins: $\mathrm{H}-1$, H-3, H-4, H-5X, E-75. Steel with electro-galvanized steel fins: H-6X. Lengths from 2 to 8 ft . See p. 30 .

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.

ALUMINUM GRILLE IS NOT AVAILABLE.

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


With or without dampers

| Cover Type | Enclosure Height | ElementType |  |  |  |  | Steam 1 PSI* | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Elements | \& Material | (Width x Height x Thickness) | Foot | Per <br> Foot | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| 93-10 | 9\%/4 | H-1 | 1 | $33^{3 / 2}$ copper | $3^{\prime \prime} \times 31 / 4^{\prime \prime} \times .024$ " aluminum | 48 | 1079 | 216 | 281 | 356 | 432 | 486 | 572 | 658 | 745 | 848 | 928 | 1025 | 1133 |
|  |  | H-3 | 1 | 3/4" copper | $2^{3 / 4} \times 2 \times 2 / 2^{1 / 2} \times .011{ }^{\text {a }}$ aluminum | 55 | 991 | 198 | 258 | 327 | 396 | 446 | 525 | 605 | 684 | 773 | 852 | 941 | 1041 |
|  |  | H-4 | 1 | 1" copper | $3^{\prime \prime} \times 21 /{ }^{1 / 1} \times .0111^{\prime \prime}$ aluminum | 48 | 965 | 193 | 251 | 319 | 386 | 434 | 511 | 589 | 666 | 753 | 830 | 917 | 1013 |
|  |  | H-5X | 1 | 1/1/4" copper | $3^{\prime \prime} \times 31 / 4 \mathrm{x} \times .020$ " aluminum | 48 | 1030 | 206 | 268 | 340 | 412 | 464 | 546 | 628 | 711 | 803 | 886 | 979 | 1082 |
|  |  | H-6X | 1 | 11/4" IPS Steel | 3 " $\times 31 / 4 \times$ x $0288^{\prime \prime}$ aluminized steel | 48 | 883 | 177 | 230 | 291 | 353 | 397 | 468 | 539 | 609 | 689 | 759 | 839 | 927 |
|  |  | E-75 | 1 | $33^{3 / 2}$ copper | 25\%6" $\times 2 / 8 / 8$ aluminum | 55 | 828 | 166 | 215 | 273 | 331 | 373 | 439 | 505 | 571 | 646 | 712 | 787 | 869 |
| 93-17 One-tier element | $163 /{ }^{\prime \prime}$ | H-1 | 1 | 3/4" copper | $3^{\prime \prime} \times 314^{\prime \prime} \times .024$ " aluminum | 48 | 1182 | 236 | 307 | 390 | 473 | 532 | 626 | 721 | 816 | 922 | 1017 | 1123 | 1241 |
|  |  | H-3 | 1 | 3/4" copper | $2^{3 / 4} \times 2 \times 2 / 2^{1 / x} \times .011{ }^{\text {a }}$ aluminum | 55 | 1086 | 217 | 282 | 358 | 435 | 489 | 576 | 662 | 749 | 847 | 934 | 1032 | 1140 |
|  |  | H-4 | 1 | $1 "$ copper | $3^{\prime \prime} \times 21 / 2^{\prime \prime} \times .011{ }^{\text {" }}$ aluminum | 48 | 1057 | 211 | 275 | 349 | 423 | 476 | 560 | 645 | 729 | 824 | 909 | 1004 | 1110 |
|  |  | H-5X | 1 | 1/1/4 copper | $3^{\prime \prime} \times 31 / 4 \mathrm{x} \times .020$ " aluminum | 48 | 1128 | 226 | 293 | 372 | 451 | 508 | 598 | 688 | 778 | 880 | 970 | 1072 | 1184 |
|  |  | H-6X | 1 | 11/4" IPS Steel | $3^{\prime \prime} \times 31 / 4 \times .028{ }^{\text {" }}$ aluminized steel | 48 | 947 | 189 | 246 | 313 | 379 | 426 | 502 | 578 | 653 | 739 | 814 | 900 | 994 |
|  |  | E-75 | 1 | $33^{3} /$ copper | $25 \% 61 \times 28 / 8$ aluminum | 55 | 907 | 181 | 236 | 299 | 363 | 408 | 481 | 553 | 626 | 707 | 780 | 862 | 952 |
| $\begin{array}{\|c\|} \hline 93-17 \\ \text { Two-tier } \\ \text { element } \end{array}$ | $163 /{ }^{\prime \prime}$ | H-1 | 2 | ${ }^{3 / 4}{ }^{\text {/ }}$ copper | $3^{\prime \prime} \times 314^{\prime \prime} \times .024$ " aluminum | 48 | 1679 | 336 | 437 | 554 | 672 | 756 | 890 | 1024 | 1159 | 1310 | 1444 | 1595 | 1763 |
|  |  | H-3 | 2 | 3/4" copper | $2^{33 / 1} \times 2^{1 / 2} \times$ x $0111^{\prime \prime}$ aluminum | 55 | 1543 | 309 | 401 | 509 | 617 | 694 | 818 | 941 | 1065 | 1204 | 1327 | 1466 | 1620 |
|  |  | H-4 | 2 | 1" copper | $3^{\prime \prime} \times 21 / 2^{\prime \prime} \times .0111^{\text {a }}$ aluminum | 48 | 1501 | 300 | 390 | 495 | 600 | 675 | 796 | 916 | 1036 | 1171 | 1291 | 1426 | 1576 |
|  |  | H-5X | 2 | 1/1/4 copper | $3^{\prime \prime} \times 31 / 4^{\prime \prime} \times .020$ aluminum | 48 | 1602 | 320 | 417 | 529 | 641 | 721 | 849 | 977 | 1105 | 1250 | 1378 | 1522 | 1682 |
|  |  | H-6X | 2 | 11/4IIPS Steel | $3^{\prime \prime} \times 31 / 4^{\prime \prime} \times .028^{\prime \prime}$ aluminized steel | 48 | 1435 | 287 | 373 | 473 | 574 | 646 | 761 | 875 | 990 | 1119 | 1234 | 1363 | 1507 |
|  |  | E-75 | 2 | 3 3/" copper | 2\%/6" $\times 2 \%$ 2/ aluminum | 55 | 1288 | 258 | 335 | 425 | 515 | 580 | 683 | 786 | 889 | 1005 | 1108 | 1224 | 1352 |

* Based on $65^{\circ} \mathrm{F}$ entering air temperature. Note: Ratings are based on active finned length (3" less than overall length).


## ACCESSORIES



## non-telescopic accessories

Column cover set
Damper (electro galvanized)*
Hanging strip*

Tamper-proof lock
Wall gasketing*
*See p. 3 for details

## telescopic accessories



End Cap
End Cap-slotted
(not shown)


Splice plate


Filler sleeve


Center valve cover $\dagger$




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

## 5lant/Fin.



| ELEMENT | $\mathbf{X}$ |
| :---: | :---: |
| $C-340$ | 3 |
| C.440 | $31 / 8$ |
| C-540 | $31 / 4$ |
| $S-532$ | $33 / 8$ |
| S-540 | $33 / 8$ |



# MULTI/PAK 95 FLAT-TOP, TWO-PIECE ENCLOSURE Pre-painted. Factory packaged. 

## MODELS 95-10 AND 95-17



## 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: 5¼"
HEIGHTS: $93 / 4^{\prime \prime}$ (one tier), $163 / 4^{\prime \prime}$ (one or two tier)
LENGTHS: 2', 3', 3½', 4', 5', 6', 7', 8'. Elements from 2 to12 ft.

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

FINISH: Nu-White baked enamel is standard. Custom color available on special order.
Anodized architectural aluminum grille optional.
WALL BRACKETS/HANGERS: Packaged with complete assembly. SC-2 hanger has guide rod to provide $15 / 16^{\prime \prime}$ lateral expansion movement, $11 / 8^{\prime \prime}$ vertical pitch adjustment. Brackets and hangers provided with complete assembly as follows:

|  | $\mathbf{9 5 - 1 0}$ |  | $\mathbf{9 5 - 1 7}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Length | Brackets | Hangers | Brackets | Hangers |
| $2-5 \mathrm{ft}$. | 2 | 2 | 2 | 4 |
| $6-8 \mathrm{ft}$. | 3 | 3 | 3 | 6 |

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 (Canada: 2 to 8 feet). See p. 30.

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


With or without dampers

| Cover Type | Enclosure Height | $\begin{array}{\|l} \hline \text { Element } \\ \text { Type } \\ \hline \end{array}$ | Tube Size \& Material | Fin Size \& Material | Fins <br> Per <br> Foot | Steam <br> 1 PSI* <br> Btu/Hr. <br> Per Foot | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
|  |  | S-532 | 11/4" steel | 4/4/" steel | 32 | 1254 | 251 | 326 | 414 | 501 | 564 | 665 | 765 | 865 | 978 | 1078 | 1191 | 1317 |
|  |  | S-540 | 11/4" steel | 4/4/4 steel | 40 | 1470 | 294 | 382 | 485 | 588 | 662 | 779 | 897 | 1014 | 1147 | 1264 | 1397 | 1544 |
| 95-10 | $93 / 4$ | S-832 | 2" steel | 4/4/ " steel | 32 | 1310 | 263 | 341 | 433 | 524 | 590 | 694 | 799 | 904 | 1022 | 1126 | 1244 | 1375 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1680 | 336 | 437 | 555 | 672 | 756 | 891 | 1025 | 1159 | 1311 | 1445 | 1597 | 1764 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1780 | 356 | 463 | 587 | 712 | 801 | 943 | 1086 | 1228 | 1388 | 1531 | 1691 | 1869 |
|  |  | C-540 | 11/4/ copper | 41/4" alum. | 40 | 1745 | 349 | 454 | 576 | 698 | 785 | 925 | 1064 | 1204 | 1361 | 1501 | 1658 | 1832 |
|  |  | S-532 | $1^{1 / 41 / 4}$ steel | 47/4" steel | 32 | 1351 | 270 | 351 | 446 | 540 | 608 | 716 | 824 | 932 | 1054 | 1162 | 1283 | 1419 |
|  |  | S-540 | 2" steel | 4/4/ ${ }^{\text {s }}$ steel | 40 | 1577 | 315 | 410 | 520 | 631 | 710 | 836 | 962 | 1088 | 1230 | 1356 | 1498 | 1656 |
| 95-17 |  | S-832 | 2" steel | 4/4/" steel | 32 | 1390 | 279 | 362 | 460 | 556 | 626 | 737 | 848 | 959 | 1089 | 1195 | 1320 | 1460 |
| One-tier | $16^{3 / 4}$ | C-340 | 3/4" copper | 4\%/4" alum. | 40 | 1840 | 368 | 478 | 607 | 736 | 828 | 976 | 1123 | 1270 | 1436 | 1582 | 1748 | 1933 |
| element |  | C-440 | 1" copper | 41/4" alum. | 40 | 1950 | 390 | 507 | 644 | 780 | 878 | 1034 | 1190 | 1346 | 1521 | 1677 | 1853 | 2048 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1911 | 382 | 497 | 630 | 764 | 860 | 1013 | 1166 | 1319 | 1491 | 1643 | 1815 | 2007 |
|  |  | S-532 | 11/4" steel | 41/4" steel | 32 | 2153 | 431 | 560 | 710 | 861 | 969 | 1141 | 1313 | 1486 | 1679 | 1852 | 2045 | 2261 |
| 95-17 |  | S-540 | 11/4" steel | 4/4/4steel | 40 | 2390 | 478 | 622 | 789 | 956 | 1076 | 1267 | 1458 | 1649 | 1864 | 2055 | 2271 | 2510 |
| Two-tier |  | S-832 | 2" steel | 4/4/4 steel | 32 | 2230 | 447 | 580 | 737 | 892 | 1004 | 1182 | 1360 | 1539 | 1740 | 1918 | 2118 | 2341 |
| element | $16^{3 / 4}$ | C-340 | 3/4" copper | 41/4" alum. | 40 | 2615 | 523 | 680 | 863 | 1046 | 1177 | 1386 | 1595 | 1804 | 2040 | 2249 | 2484 | 2746 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2770 | 554 | 720 | 914 | 1108 | 1247 | 1468 | 1690 | 1911 | 2161 | 2382 | 2632 | 2909 |
|  |  | C-540 | $11 / 4 \mathrm{l}$ copper | 41/4" alum. | 40 | 2715 | 543 | 706 | 896 | 1086 | 1222 | 1439 | 1656 | 1873 | 2118 | 2335 | 2579 | 2851 |

* Based on $65^{\circ}$ F entering air temperature. Note: Ratings are based on active finned length (5-1/4" less than overall length).


## ACCESSORIES



## non-telescopic accessories

Fourteen accessories let you "fit" Multi/Pak 95 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.

Column cover set
Damper (electro galvanized, not available with aluminum grille)* Hanging strip*
*See p. 3 for details

Tamper-proof lock*
Wall gasketing*

## telescopic accessories



End Cap
End Cap-slotted (not shown)


Splice plate


Filler sleeve


Center valve cover $\dagger$



Outside corner, $90^{\circ}$


End valve cover, $\dagger$ slotted, 10" End valve cover, 10" (not shown)

## 5lant/Fin.



JAD-28*

J SERIES MODELS: JL-10, JA-14, JA-21, JA-28


## ORDERING DATA

CONSTRUCTION: Single-piece cover mounts on wall brackets

DEPTH: $51 / 4$ "
HEIGHTS: $97 / \mathrm{B}^{\prime \prime}$ and $14^{\prime \prime}$ (one tier), $21^{\prime \prime}$ (one or two tier), 28 " (up to three tier)
LENGTHS: 2', 3’, 3½, 4', 5', 6', 7', 8'. Other ½' lengths available to order.
MATERIAL: 18-gauge front cover. 16 and 14-gauge optional. Optional back panel: 20-gauge.
FINISH: Galvanized is standard. Baked enamel finishes in a variety of colors available on special order, all models.
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 <br> Elements | $1^{1 / 4 "}$ Steel <br> Elements | $2^{\prime \prime}$ Steel <br> Elements |
| :---: | :---: | :---: | :---: |
| $2-5 \mathrm{ft}$. | 2 | 1 per $2^{1 / 1 / 2}$ <br> of cover | 1 per $2^{\prime}$ <br> of cover |
| $6-8 \mathrm{ft}$. | 3 |  |  |

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 (Canada: 2 to 8 feet). See p. 30.
JOINTS: Internal splice plates (JA models only; see p.5) 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, JA-21 and JA-28 models mount flush with the wall. For readily available prepackaged twopiece fin-tube radiation refer to Mult/Pak 90, pages 4-11. 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 $3 / 4^{\prime \prime}$ 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. $15 / 16^{\prime \prime}$ lateral movement permits smooth, noiseless expansion. Cradle supports finned or bare tubing at same height. Fastening slot in bracket allows $11 / 8^{\prime \prime}$ pitch adjustment.
- Knob-operated damper (optional) modulates fully to control output. See page 5 for details.


## RATINGS

With or without dampers

* Based on $65^{\circ}$ F entering air temperature. Note: Ratings are based on active finned length ( $5-1 / 4^{\prime \prime}$ less than overall length).

| Cover Type | Enclosur <br> e Height | Element Type | Tube Size and Material | Fin Size and Material | Fins <br> Per <br> Foot | Steam <br> 1 PSI* <br> Btu/Hr. <br> Per <br> Foot | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220{ }^{\circ} \mathrm{F}$ |
| JL-10 | 97/8" | S-532 | $1^{1} / 4^{\prime \prime}$ steel | $4^{1} / 4^{\prime \prime}$ steel | 32 | 1330 | 266 | 346 | 439 | 532 | 599 | 705 | 811 | 918 | 1037 | 1144 | 1264 | 1397 |
|  |  | S-540 | $1 \frac{1 / 4 " ~ s t e e l ~}{\text { l }}$ | 41/4" steel | 40 | 1430 | 286 | 372 | 472 | 572 | 644 | 758 | 872 | 987 | 1115 | 1230 | 1359 | 1502 |
|  |  | S-832 | 2" steel | 4 $1 / 4^{\prime \prime}$ steel | 32 | 1350 | 270 | 351 | 446 | 540 | 608 | 716 | 824 | 931 | 1053 | 1161 | 1283 | 1418 |
|  |  | C-340 | 3/4" copper | 4 $1 / 4$ " alum. | 40 | 1753 | 351 | 456 | 578 | 701 | 789 | 929 | 1069 | 1210 | 1367 | 1507 | 1665 | 1840 |
|  |  | C-440 | 1" copper | 41/4" ${ }^{1 / 4}$ alum. | 40 | 1860 | 372 | 484 | 614 | 744 | 837 | 986 | 1135 | 1283 | 1451 | 1600 | 1767 | 1953 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1820 | 364 | 473 | 601 | 728 | 819 | 965 | 1110 | 1256 | 1420 | 1565 | 1729 | 1911 |
| JA-14 | 14" | S-532 | 1/1/4" steel | 4 $1 / 4^{\prime \prime}$ steel | 32 | 1380 | 276 | 359 | 455 | 552 | 621 | 731 | 842 | 952 | 1076 | 1187 | 1311 | 1449 |
|  |  | S-540 | $1 \frac{1}{4} /{ }^{\prime \prime}$ steel | 4 $1 / 4^{\prime \prime}$ steel | 40 | 1550 | 310 | 403 | 512 | 620 | 698 | 822 | 946 | 1070 | 1209 | 1333 | 1473 | 1628 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1400 | 280 | 364 | 462 | 560 | 630 | 742 | 854 | 966 | 1092 | 1204 | 1330 | 1470 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1839 | 368 | 478 | 607 | 736 | 828 | 975 | 1122 | 1269 | 1435 | 1582 | 1748 | 1932 |
|  |  | C-440 | 1" copper | 4 $1 / 411$ alum. | 40 | 1950 | 390 | 507 | 644 | 780 | 878 | 1034 | 1190 | 1346 | 1521 | 1677 | 1853 | 2048 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1910 | 382 | 497 | 630 | 764 | 860 | 1012 | 1165 | 1318 | 1490 | 1643 | 1815 | 2006 |
| JA-21 <br> One-tier element | 21" | S-532 | $1 \frac{1}{1 / 4}$ " steel | 4 $1 / 4^{\prime \prime}$ steel | 32 | 1460 | 292 | 380 | 482 | 584 | 657 | 774 | 891 | 1007 | 1139 | 1256 | 1387 | 1533 |
|  |  | S-540 | $1 \frac{1}{4 \prime \prime}$ " steel | $41 / 4^{\prime \prime}$ steel | 40 | 1680 | 336 | 437 | 554 | 672 | 756 | 890 | 1025 | 1159 | 1310 | 1445 | 1596 | 1764 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1520 | 304 | 395 | 502 | 608 | 684 | 806 | 927 | 1049 | 1186 | 1307 | 1444 | 1596 |
|  |  | C-340 | 3/4" copper | 4 $1 / 4 / 1 /$ alum. | 40 | 2013 | 403 | 524 | 665 | 805 | 906 | 1067 | 1228 | 1389 | 1570 | 1731 | 1913 | 2114 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2130 | 426 | 554 | 703 | 852 | 959 | 1129 | 1299 | 1470 | 1661 | 1832 | 2024 | 2237 |
|  |  | C-540 | $1^{1 / 4}{ }^{\prime \prime}$ coppper | 41/4" alum. | 40 | 2090 | 418 | 544 | 690 | 836 | 941 | 1108 | 1275 | 1442 | 1630 | 1797 | 1986 | 2195 |
| JA-21 <br> Two-tier element | 21" | S-532 | $1 \frac{1}{1 / 4}$ " steel | $41 / 4^{\prime \prime}$ steel | 32 | 2190 | 438 | 570 | 723 | 876 | 986 | 1161 | 1336 | 1511 | 1708 | 1883 | 2081 | 2300 |
|  |  | S-540 | $1 \frac{1}{4} /{ }^{\prime \prime}$ steel | 4 $1 / 4^{\prime \prime}$ steel | 40 | 2380 | 476 | 619 | 785 | 952 | 1071 | 1261 | 1452 | 1642 | 1856 | 2047 | 2261 | 2499 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2270 | 454 | 590 | 749 | 908 | 1022 | 1203 | 1385 | 1566 | 1771 | 1952 | 2157 | 2384 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2822 | 586 | 762 | 967 | 1172 | 1270 | 1496 | 1721 | 1947 | 2200 | 2427 | 2784 | 2963 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2990 | 598 | 778 | 987 | 1196 | 1346 | 1585 | 1824 | 2063 | 2332 | 2571 | 2841 | 3140 |
|  |  | C-540 | $1^{1 / 4}{ }^{11}$ copper | 41/4" alum. | 40 | 2993 | 586 | 762 | 967 | 1172 | 1319 | 1553 | 1787 | 2022 | 2285 | 2520 | 2784 | 3077 |
| JA-28 <br> One-tier element | 28" | S-532 | $1 \frac{1}{4} /{ }^{\prime \prime}$ steel | $41 / 4^{\prime \prime}$ steel | 32 | 1480 | 296 | 385 | 488 | 592 | 666 | 784 | 903 | 1021 | 1154 | 1273 | 1406 | 1554 |
|  |  | S-540 | $1 \frac{1}{4} /{ }^{\prime \prime}$ steel | 4 $1 / 411$ " steel | 40 | 1710 | 342 | 445 | 564 | 684 | 770 | 906 | 1043 | 1180 | 1334 | 1471 | 1625 | 1796 |
|  |  | S-832 | 2" steel | $4 \sqrt{4 \prime \prime}$ steel | 32 | 1550 | 310 | 403 | 512 | 620 | 698 | 822 | 946 | 1070 | 1209 | 1333 | 1473 | 1628 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2051 | 410 | 533 | 677 | 821 | 924 | 1087 | 1251 | 1416 | 1600 | 1764 | 1949 | 2154 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2170 | 434 | 564 | 716 | 868 | 977 | 1150 | 1324 | 1497 | 1693 | 1866 | 2062 | 2279 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 2130 | 426 | 554 | 703 | 852 | 959 | 1129 | 1299 | 1470 | 1661 | 1832 | 2024 | 2237 |
| JA-28 <br> Two-tier element | 28" | S-532 | $1 \frac{1}{1 / 4}$ " steel | 4 $1 / 4^{\prime \prime}$ steel | 32 | 2290 | 458 | 596 | 756 | 916 | 1031 | 1214 | 1397 | 1580 | 1786 | 1969 | 2176 | 2405 |
|  |  | S-540 | $1 \frac{1}{4}$ " steel | 41/4" steel | 40 | 2510 | 502 | 653 | 828 | 1004 | 1130 | 1330 | 1531 | 1732 | 1958 | 2159 | 2385 | 2636 |
|  |  | S-832 | $2^{\prime \prime}$ steel | $41 / 4$ " steel | 32 | 2430 | 486 | 632 | 802 | 972 | 1094 | 1288 | 1482 | 1677 | 1895 | 2090 | 2309 | 2552 |
|  |  | C-340 | 3/4" copper | 4 $1 / 4 / 1 /$ alum. | 40 | 2937 | 588 | 764 | 970 | 1175 | 1322 | 1557 | 1792 | 2027 | 2291 | 2526 | 2791 | 3084 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3110 | 622 | 809 | 1026 | 1244 | 1400 | 1648 | 1897 | 2146 | 2426 | 2675 | 2955 | 3266 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 3050 | 610 | 793 | 1007 | 1220 | 1373 | 1617 | 1861 | 2105 | 2379 | 2623 | 2898 | 3203 |
| JA-28 <br> Three-tier element | 28" | S-532 |  | 41/4" steel | 32 | 2830 | 566 | 736 | 934 | 1132 | 1274 | 1500 | 1726 | 1953 | 2207 | 2434 | 2689 | 2972 |
|  |  | S-540 | 11/4" steel | $41 / 4$ " steel | 40 | 2930 | 586 | 762 | 967 | 1172 | 1319 | 1553 | 1787 | 2022 | 2285 | 2520 | 2784 | 3077 |
|  |  | S-832 | $2^{\prime \prime}$ steel | $41 / 4$ " steel | 32 | 2880 | 576 | 749 | 950 | 1152 | 1296 | 1526 | 1757 | 1987 | 2246 | 2477 | 2736 | 3024 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 3467 | 693 | 901 | 1144 | 1387 | 1560 | 1837 | 2115 | 2392 | 2704 | 2981 | 3293 | 3640 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3670 | 734 | 954 | 1211 | 1468 | 1652 | 1945 | 2239 | 2532 | 2863 | 3156 | 3487 | 3854 |
|  |  | C-540 | $1^{11 / 4}$ " copper | 4114" alum. | 40 | 3600 | 720 | 936 | 1188 | 1440 | 1620 | 1908 | 2196 | 2484 | 2808 | 3096 | 3420 | 3780 |


telescopic 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 | Tamper-proof lock |
| :--- | :--- |
| Damper (electro galvanized)* | Wall gasketing* |
| Hanging strip* |  |

*See p. 3 for details


## Slant/Fin.



HD-850


HD-1400

| Element | "H" | "D" |
| :--- | :--- | :---: |
| $\mathrm{H}-1$ | $41 / 6 "$ | $13 / 4 "$ |
| $\mathrm{H}-3, \mathrm{H}-4$ | $35 / 8$ | $15 /{ }^{\prime \prime} "$ |
| $\mathrm{H}-5 \mathrm{x}, \mathrm{H}-6 \mathrm{x}$ | $4 "$ | $13 / 4 "$ |

# HD SERIES HEAVY DUTY, 16 GAUGE SLOPE-TOP BASEBOARD 



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 rental properties, military housing, 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 square drive screws at each bracket location. Optional 1" and $1 \frac{1}{4}$ " copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads where required. With the $1 \frac{1}{4}$ " all-steel element, HD Series is perfect for use in one or two pipe steam systems. HD Series is shipped pre-assembled in individual cartons for rapid installations.

## ORDERING DATA

PACKAGING: Complete two-piece enclosure assembly factory packaged with necessary brackets and hangers. Elements ordered and packaged separately.
CONSTRUCTION: Full back panel with interlocking slopetop 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 $8 \times 3 / 8^{\prime \prime}$ self tapping screws with countersunk head as supplied in carton. Pencil proof louvers. Damper optional.
DEPTH: $3^{1 ⁄ 2} 2^{\prime \prime}$
HEIGHTS: $8^{1 / 21}$ (one tier), $14^{\prime \prime}$ (one or two tier)
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{1 ⁄ 2} 2^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$. Other ${ }^{1} / 2^{\prime}$ lengths available to order
MATERIAL: 16-gauge steel front cover, 20-gauge back panel.
FINISH: Galvanized is standard. 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 $200^{\circ} \mathrm{F}$ water temperature. See p. 30.
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. Accessories are fastened to cover with pan-head sheet metal screws (supplied by others).

## RATINGS

|  |  |  |  | Fin Size and |  |  |  | $\begin{aligned} & \text { Steam } \\ & 1 \text { PSI* } \end{aligned}$ | HOT WATER RATINGS* BTU/HR./FT. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\left\lvert\, \begin{gathered} \text { Model } \\ \text { Number } \end{gathered}\right.$ | $\begin{array}{\|l} \text { Element } \\ \text { Type } \end{array}$ | Element | Material | (Width x Height x Thickness) | Foot | $\begin{gathered} \text { Water } \\ \text { Flow } \end{gathered}$ | Pressure Drop $\dagger$ | Btu/Hr. <br> Per Foot | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $30^{\circ}$ | 140 | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | 180 | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $10^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| $\begin{array}{\|l\|l\|} \hline \text { HD-850 } \\ \text { Single-tier } \\ \hline \end{array}$ | H-1 | 1 | $\begin{gathered} 3 / 44^{3} \\ \text { copper } \end{gathered}$ | $\begin{gathered} 3^{\prime \prime} \times 314 " \times .024 " \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{array}{\|l\|l\|} \hline 1 \mathrm{GPM} \\ 4 \mathrm{GPM} \end{array}$ | $\begin{gathered} 47 \\ 525 \end{gathered}$ |  | $\begin{aligned} & 190 \\ & 200 \\ & \end{aligned}$ | $\begin{array}{\|l\|} \hline 260 \\ 270 \end{array}$ | $\begin{aligned} & 320 \\ & 340 \end{aligned}$ | $\begin{aligned} & 390 \\ & 420 \end{aligned}$ | $\begin{array}{\|l\|} \hline 470 \\ 500 \end{array}$ | $\begin{aligned} & 550 \\ & 580 \end{aligned}$ | $\begin{aligned} & 640 \\ & 680 \end{aligned}$ | $\begin{aligned} & 720 \\ & 760 \end{aligned}$ | $\begin{aligned} & 800 \\ & 850 \\ & 80 \end{aligned}$ | $\begin{aligned} & 890 \\ & 940 \end{aligned}$ | $\begin{array}{\|c} 970 \\ 1030 \end{array}$ | $\begin{aligned} & 1050 \\ & 1110 \end{aligned}$ |
| $\begin{array}{\|l} \hline \text { HD-850 } \\ \text { Single-tier } \\ \hline \end{array}$ | H-3 | 1 | $\begin{gathered} \begin{array}{c} 3 / 4 \\ \text { 3/4 } \\ \text { copper } \end{array} \\ \hline \end{gathered}$ | $\begin{aligned} & 2^{3 / 4} /^{\prime \prime} \times 2^{1 / 2 " n} \times .0111^{\prime \prime} \\ & \text { aluminum } \end{aligned}$ | 55 | $\begin{array}{\|l\|} 1 \\ 1 \\ 4 \\ 4 \end{array}$ | $\begin{gathered} 47 \\ 525 \\ \hline \end{gathered}$ |  | $\begin{array}{\|l\|} \hline 170 \\ 180 \\ \hline \end{array}$ | $\begin{aligned} & 230 \\ & 240 \end{aligned}$ | $\begin{aligned} & 290 \\ & 300 \\ & \hline \end{aligned}$ | $\begin{aligned} & 350 \\ & 370 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 420 \\ 440 \\ \hline \end{array}$ | $\begin{aligned} & 490 \\ & 520 \\ & \hline \end{aligned}$ | $\begin{aligned} & 570 \\ & 600 \\ & \hline \end{aligned}$ | $\begin{aligned} & 640 \\ & 680 \\ & \hline \end{aligned}$ | $\begin{aligned} & 720 \\ & 760 \end{aligned}$ | 790 | 870 920 | 940 990 |
| $\begin{array}{\|l\|} \hline \text { HD-850 } \\ \text { Single-tier } \\ \hline \end{array}$ | H-4 | 1 | $\begin{gathered} 1^{11} \\ \text { copper } \\ \hline \end{gathered}$ | $\begin{gathered} 3 \text { " } \times 2 \text { 2/k" } \times .011 " 1 " \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{aligned} & 16 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{array}{r} 13 \\ 145 \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline 170 \\ 180 \\ \hline \end{array}$ | $\begin{aligned} & 230 \\ & 240 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 280 \\ 300 \\ \hline \end{array}$ | $\begin{aligned} & 340 \\ & 360 \end{aligned}$ | $\begin{aligned} & 410 \\ & 430 \\ & \hline \end{aligned}$ | $\begin{aligned} & 460 \\ & 500 \end{aligned}$ | $\begin{aligned} & 560 \\ & 590 \\ & \hline \end{aligned}$ | $\begin{aligned} & 630 \\ & 670 \end{aligned}$ | $\begin{aligned} & 710 \\ & 750 \end{aligned}$ | 780 830 | $\begin{array}{r} 860 \\ 1000 \\ \hline \end{array}$ | 1030 <br> 980 <br> 1 |
| $\begin{aligned} & \begin{array}{l} \mathrm{HD}-850 \\ \text { Single-tier } \end{array} \end{aligned}$ | H-5X | 1 | $\begin{gathered} 11 / 410 \\ \text { copper } \end{gathered}$ | $\begin{gathered} 3 " \times 314 " \times .020 " 1 \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{aligned} & 16 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{gathered} 6 \\ 63 \\ \hline \end{gathered}$ | 1160 | $\begin{array}{\|l\|} \hline 180 \\ 190 \\ \hline \end{array}$ | $\begin{aligned} & 240 \\ & 250 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 300 \\ 320 \\ \hline \end{array}$ | $\begin{array}{\|l} 360 \\ 390 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 430 \\ 460 \\ \hline \end{array}$ | $\begin{aligned} & 550 \\ & 560 \\ & \hline \end{aligned}$ | $\begin{aligned} & 600 \\ & 640 \\ & \hline \end{aligned}$ | $\begin{aligned} & 680 \\ & 710 \end{aligned}$ | $\begin{aligned} & 7700 \\ & 810 \end{aligned}$ | 880 | 920 | 1010 <br> 1070 |
| $\begin{array}{\|l\|} \hline \text { HD-850 } \\ \text { Single-tier } \end{array}$ | H-6X | 1 | $\begin{aligned} & 1 / 1 / 4 \mathrm{IIPS} \\ & \text { steel } \\ & \hline \end{aligned}$ | $\begin{aligned} & \begin{array}{l} 3 " \times 31 / 4 " \times .028 " 1 \\ \text { aluminized steel } \end{array} \end{aligned}$ | 48 | $\begin{array}{\|l\|} 1 \\ 1 \\ 4 \mathrm{GPM} \\ \hline \end{array}$ | $\begin{gathered} 3 \\ 41 \\ \hline \end{gathered}$ | 980 | $\begin{aligned} & \hline 150 \\ & 150 \\ & \hline \end{aligned}$ | $\begin{aligned} & 200 \\ & 200 \\ & \hline \end{aligned}$ | $\begin{aligned} & 250 \\ & 260 \end{aligned}$ | $\begin{aligned} & 300 \\ & 310 \\ & 3 \end{aligned}$ | $\begin{aligned} & 360 \\ & 370 \\ & \hline \end{aligned}$ | $\begin{aligned} & 440 \\ & 450 \\ & \hline \end{aligned}$ | $\begin{aligned} & 510 \\ & 540 \\ & \hline \end{aligned}$ | $\begin{aligned} & 570 \\ & 600 \\ & \hline \end{aligned}$ | $\begin{aligned} & 640 \\ & 680 \end{aligned}$ | 710 | $\begin{aligned} & 780 \\ & 830 \\ & \hline \end{aligned}$ | 850 900 |
| $\begin{aligned} & \text { HD-1400 } \\ & \text { Single-tier } \\ & \hline \end{aligned}$ | H-1 | 1 | $\begin{gathered} 3 /{ }_{3}^{4 / 4} \\ \text { copper } \end{gathered}$ | $\begin{gathered} 3^{\prime \prime} \times 3^{1 / 4} \times .024^{\prime \prime} \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{array}{\|l\|l\|} \hline 1 \text { GPM } \\ 4 \\ \hline \end{array}$ | $\begin{aligned} & 47 \\ & 525 \end{aligned}$ |  | $\begin{aligned} & 260 \\ & 280 \\ & 280 \end{aligned}$ | $\begin{aligned} & 350 \\ & 370 \end{aligned}$ | $\begin{aligned} & 440 \\ & 470 \\ & \hline \end{aligned}$ | $\begin{aligned} & 540 \\ & 570 \end{aligned}$ | $\begin{array}{\|l} 640 \\ 680 \\ \hline \end{array}$ | $\begin{aligned} & 760 \\ & 810 \\ & \hline \end{aligned}$ | $\begin{aligned} & 870 \\ & 920 \end{aligned}$ | $\begin{gathered} 990 \\ 1050 \\ \hline \end{gathered}$ | $\begin{array}{\|l\|l} 1100 \\ 1170 \\ \hline \end{array}$ | $\begin{array}{\|l} 1220 \\ 1300 \\ \hline \end{array}$ | $\begin{aligned} & 1340 \\ & 1420 \end{aligned}$ | 1450 1540 |
| $\begin{aligned} & \text { HD-1400 } \\ & \text { Single-tier } \end{aligned}$ | H-3 | 1 | $\begin{gathered} 3 / 4 \\ \text { 3/4 } \\ \text { copper } \\ \hline \end{gathered}$ | $\begin{aligned} & 2^{3 / 4} /^{\prime \prime} \times 2 / 1 / 4 \times .011 " 1 \\ & \text { aluminum } \end{aligned}$ | 55 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{gathered} 47 \\ 525 \\ \hline \end{gathered}$ |  | $\begin{array}{\|l\|} \hline 190 \\ 200 \\ \hline \end{array}$ | $\begin{aligned} & 250 \\ & 270 \\ & 270 \end{aligned}$ | $\begin{aligned} & 320 \\ & 340 \end{aligned}$ | $\begin{aligned} & 390 \\ & 410 \end{aligned}$ | $\begin{array}{\|l\|} \hline 460 \\ 486 \\ \hline \end{array}$ | $\begin{aligned} & 540 \\ & 570 \end{aligned}$ | $\begin{aligned} & 620 \\ & 660 \\ & \hline \end{aligned}$ | 705 | $\begin{aligned} & 780 \\ & 820 \end{aligned}$ | 865 900 | 945 | 1030 <br> 1090 |
| $\begin{array}{\|l\|l\|} \hline \text { HD-1400 } \\ \text { Single-tier } \\ \hline \end{array}$ | H-4 | 1 | $\begin{gathered} 1^{11} \\ \text { copper } \\ \hline \end{gathered}$ | $\begin{gathered} 3 \text { " } \times 2 \text { 2k" } \times .011 " 1 " \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{array}{\|l\|l\|} \hline 1 \mathrm{GPM} \\ 4 \mathrm{GPPM} \\ \hline \end{array}$ | $\begin{array}{r} 13 \\ 145 \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline 180 \\ 200 \\ \hline \end{array}$ | $\begin{aligned} & 250 \\ & 260 \\ & \hline \end{aligned}$ | $\begin{aligned} & 310 \\ & 330 \end{aligned}$ | $\begin{aligned} & 380 \\ & 400 \end{aligned}$ | $\begin{array}{\|l\|} \hline 450 \\ 480 \\ \hline \end{array}$ | $\begin{aligned} & 504 \\ & 530 \\ & \hline \end{aligned}$ | $\begin{aligned} & 613 \\ & 650 \\ & \hline \end{aligned}$ | $\begin{aligned} & 690 \\ & 730 \\ & 730 \end{aligned}$ | $\begin{aligned} & 7777 \\ & 820 \end{aligned}$ | $\begin{aligned} & 854 \\ & 900 \\ & \hline \end{aligned}$ | $\begin{array}{r} 942 \\ 1000 \\ \hline \end{array}$ | $\begin{array}{\|l\|l\|} \hline 1129 \\ 1190 \\ \hline \end{array}$ |
| $\begin{aligned} & \text { HD-1400 } \\ & \text { Single-tier } \end{aligned}$ | H-5X | 1 | $\begin{gathered} 11 / 4 " \\ \text { copper } \end{gathered}$ | $\begin{aligned} & 3^{1 " \times 31 / 41 \times .020 " 1} \\ & \text { aluminum } \end{aligned}$ | 48 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{gathered} \hline 6 \\ 63 \\ \hline \end{gathered}$ | 1160 | $\begin{array}{\|l\|} \hline 240 \\ 260 \\ \hline \end{array}$ | $\begin{aligned} & 320 \\ & 350 \\ & \hline \end{aligned}$ | $\begin{aligned} & 400 \\ & 440 \end{aligned}$ | $\begin{aligned} & 480 \\ & 530 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 576 \\ 635 \\ \hline \end{array}$ | $\begin{aligned} & 678 \\ & 748 \\ & \hline \end{aligned}$ | $\begin{aligned} & 859 \\ & 948 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 952 \\ 1051 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 1045 \\ 1154 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 1139 \\ 1257 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 1233 \\ 1361 \\ \hline \end{array}$ | 1326 |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Single-tier } \end{array}$ | H-6X | 1 | $\begin{aligned} & 1 / 4 \mathrm{INPS} \\ & \text { steel } \\ & \hline \end{aligned}$ | $\begin{aligned} & 3^{1 " \times 31 / 4 " \times .028 " 1} \\ & \text { aluminized steel } \end{aligned}$ | 48 | $\begin{aligned} & 1 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{array}{r} 3 \\ 41 \\ \hline \end{array}$ | 980 | $\begin{array}{\|l\|} \hline 160 \\ 160 \end{array}$ | $\begin{aligned} & 210 \\ & 220 \end{aligned}$ | $\begin{array}{\|l\|} \hline 260 \\ 270 \\ \hline \end{array}$ | $\begin{aligned} & 320 \\ & 330 \end{aligned}$ | $\begin{aligned} & 383 \\ & 396 \\ & \hline \end{aligned}$ | $\begin{aligned} & 469 \\ & 488 \end{aligned}$ | $\begin{aligned} & 535 \\ & 561 \end{aligned}$ | 607 | $\begin{aligned} & 680 \\ & 719 \end{aligned}$ | 752 | 831 878 | 904 <br> 957 |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Two-tier } \\ \hline \end{array}$ | H-1 | 2 | $\begin{gathered} \begin{array}{c} 3 / 4 \\ \text { /n } \\ \text { copper } \end{array} \\ \hline \end{gathered}$ | $\begin{gathered} 3^{\prime \prime} \times 3^{1 / 4} \times .024^{\prime \prime} \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{array}{\|l\|l\|} \hline 1 \mathrm{GPM} \\ 4 \mathrm{GPPM} \end{array}$ | $\begin{gathered} 47 \\ 525 \\ \hline \end{gathered}$ | - | $\begin{array}{\|l\|} \hline 280 \\ 300 \\ \hline \end{array}$ | $\begin{aligned} & 380 \\ & 400 \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline 480 \\ 510 \end{array}$ | $\begin{aligned} & 580 \\ & 610 \\ & \hline \end{aligned}$ | $\begin{aligned} & 690 \\ & 730 \end{aligned}$ | $\begin{aligned} & 820 \\ & 870 \\ & \hline \end{aligned}$ | $\begin{aligned} & 940 \\ & 990 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|l\|} 1070 \\ 1130 \end{array}$ | $\begin{array}{\|l\|l\|} \hline 1190 \\ 1260 \end{array}$ | $\begin{array}{\|l\|l} 1320 \\ 1400 \end{array}$ | $\begin{aligned} & 1450 \\ & 1530 \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline 1570 \\ 1660 \end{array}$ |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Two-tier } \\ \hline \end{array}$ | H-3 | 2 |  | $\begin{aligned} & 2^{3 / 4} \times 2{ }^{1 / 21 " x .011 " 1} \\ & \text { aluminum } \end{aligned}$ | 55 | $\begin{array}{\|l\|} \hline 1 \text { GPM } \\ 4 \text { GPM } \end{array}$ | $\begin{array}{r} 47 \\ 525 \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline 270 \\ 280 \\ \hline \end{array}$ | $\begin{aligned} & 360 \\ & 380 \end{aligned}$ | $\begin{array}{\|l} 450 \\ 480 \\ \hline \end{array}$ | $\begin{aligned} & 550 \\ & 580 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 650 \\ 690 \\ \hline \end{array}$ | $\begin{aligned} & 770 \\ & 810 \\ & \hline \end{aligned}$ | $\begin{aligned} & 880 \\ & 930 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1000 \\ & 1060 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|l} 1110 \\ 1170 \\ \hline \end{array}$ | $\begin{aligned} & 1230 \\ & 1300 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1340 \\ & 1420 \\ & \hline \end{aligned}$ | 1460 <br> 1540 |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Two-tier } \\ \hline \end{array}$ | H-4 | 2 | $\begin{gathered} 1^{1 "} \\ \text { copper } \end{gathered}$ | $\begin{gathered} 3^{\prime \prime} \times 2 \frac{1 / 2 " \times .011 " ~}{\text { aluminum }} \\ \hline \end{gathered}$ | 48 | $\begin{aligned} & 1 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{array}{r} 13 \\ 145 \end{array}$ |  | $\begin{aligned} & 260 \\ & 280 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 350 \\ 370 \\ \hline \end{array}$ | $\begin{array}{\|l} 440 \\ 470 \\ \hline \end{array}$ | $\begin{aligned} & 540 \\ & 570 \end{aligned}$ | $\begin{array}{\|l\|} \hline 640 \\ 680 \end{array}$ | $\begin{aligned} & 740 \\ & 790 \end{aligned}$ | $\begin{aligned} & 870 \\ & 920 \\ & \hline \end{aligned}$ | $\begin{array}{r} 990 \\ 1050 \end{array}$ | $\begin{array}{\|l\|} 1100 \\ 1160 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 1220 \\ 1290 \\ \hline \end{array}$ | $\begin{aligned} & 1330 \\ & 1400 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} 1440 \\ 1480 \\ \hline \end{array}$ |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Two-tier } \\ \hline \end{array}$ | H-5X | 2 | $\begin{gathered} 11 / 410 \\ \text { copper } \end{gathered}$ |  | 48 | $\begin{aligned} & 16 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{gathered} 6 \\ 63 \\ \hline \end{gathered}$ | 1630 | $\begin{aligned} & 270 \\ & 280 \\ & 280 \end{aligned}$ | $\begin{array}{\|l} 360 \\ 380 \\ \hline \end{array}$ | $\begin{array}{\|l} 450 \\ 480 \\ \hline \end{array}$ | $\begin{aligned} & 550 \\ & 580 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 650 \\ 690 \\ \hline \end{array}$ | $\begin{aligned} & 820 \\ & 850 \\ & \hline \end{aligned}$ | $\begin{aligned} & 900 \\ & 950 \end{aligned}$ | $\begin{array}{\|l} 1030 \\ 1080 \\ \hline \end{array}$ | $\begin{aligned} & 1160 \\ & 1220 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 1290 \\ 1340 \\ \hline \end{array}$ | $\begin{aligned} & 1400 \\ & 1480 \end{aligned}$ | $\begin{array}{\|l} 1530 \\ 1620 \\ \hline \end{array}$ |
| $\begin{array}{\|l\|} \hline \text { HD-1400 } \\ \text { Two-tier } \end{array}$ | H-6X | 2 | $\begin{aligned} & \mathbf{c}_{11 / 4 \mathrm{II}}^{1} \mathrm{IPS} \\ & \text { steel } \end{aligned}$ | $\begin{aligned} & 3^{3 \prime} \times 31 / 4 \mathrm{x} \times .028^{\prime \prime} \\ & \text { aluminized steel } \end{aligned}$ | 48 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{aligned} & 3 \\ & 41 \end{aligned}$ | 1440 | $\begin{array}{\|l\|} \hline 240 \\ 250 \\ \hline \end{array}$ | $\begin{aligned} & 320 \\ & 330 \end{aligned}$ | $\begin{aligned} & 400 \\ & 410 \end{aligned}$ | $\begin{aligned} & 490 \\ & 500 \end{aligned}$ | $\begin{aligned} & 580 \\ & 600 \end{aligned}$ | $\begin{aligned} & 710 \\ & 740 \end{aligned}$ | $\begin{aligned} & 810 \\ & 850 \end{aligned}$ | $\begin{aligned} & 920 \\ & 970 \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline 1030 \\ 1090 \end{array}$ | $\begin{array}{\|l\|l\|} \hline 1140 \\ 1210 \end{array}$ | $\begin{aligned} & 1260 \\ & 1330 \end{aligned}$ | $\begin{array}{\|l\|l} 1370 \\ 1450 \end{array}$ |

* Based on $65^{\circ} \mathrm{F}$ entering air temperature. $\dagger$ 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 rating only when flow is known to be equal to or greater than 4 GPM; otherwise 1 GPM ratings must be used.

## ACCESSORIES



## LC SERIES 18 GAUGE SLOPE TOP BASEBOARD



LC-850 and LC-1400 do not have a backpanel. One piece wall mounting bracket/element holder is ordered separately from cover, therefore bracket spacing is determined by system design and installation. LC cover hangs on top of the bracket and snaps on the bottom, similar to regular baseboard. LC series is ideal for use in replacement applications where you want to use the existing, installed element and just replace the cover. Output ratings are the same as HD series. Contact Slant/Fin for more detailed information.


Slant/Fin.


350-10


350-14

| Model | Element | "A" |
| :---: | :---: | :---: |
| 351 | $\mathrm{H}-1$ | $3^{15 / 6 "}$ |
| 353 | $\mathrm{H}-3$ | $3^{5 / 8 "}$ |
| 354 | $\mathrm{H}-4$ | $3^{5 / 8 "}$ |
| 355 | $\mathrm{H}-5 \mathrm{x}$ | $3^{15 / 16^{\prime \prime}}$ |
| 356 | $\mathrm{H}-6 \mathrm{x}$ | $3^{15 / 16^{\prime \prime}}$ |

350 SERIES
HIGH-OUTPUT, SLOPE-TOP BASEBOARD Pre-painted. Factory packaged.


350 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 $11 / 4$ " copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads where required. With the $1 \frac{1}{4}$ " all-steel element, 350 Series is perfect for use in one or two pipe steam systems. 350 Series is factory assembled and shipped in individual cartons for rapid installations.

- Two heights for one or two heating element tiers
- Nu-White enamel finish standard
- Choice of 5 copper or steel heating elements
- Fully assembled and factory packaged
- Room control damper optional
- Extra backbone
- Strong front panel resists kicks and dents
- Optional 16-gauge front cover

HEAVY-DUTY CONSTRUCTION: 350 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 interlock-ing-fin elements so strong you can stand on them. "CONTRACTOR-DESIGNED" for fast, economical installation. 350 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: Complete 350 Series baseboard enclosures are factory assembled and individually packaged. Cover and heating elements are packaged and sold separately. Cover includes brackets and expansion cradles. 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: $3122^{11}$
HEIGHT: $978^{\prime \prime}$ (one tier) and 137/8" (one or two tier)
LENGTHS: 2', $3^{\prime}, 3^{½} 2^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$.
MATERIAL: 19-gauge steel or 16-gauge galvanized steel front cover. 24-gauge back cover. 17-gauge brackets.
FINISH: 19-gauge model: Nu-White enamel finish. 16-gauge model: galvanized finish. Custom colors available.

ELEMENT SUPPORT: Self-adjusting, polypropylene expansion cradles are positioned over support brackets, allowing quiet expansion.
ELEMENTS: Choice of five. Copper with aluminum fins: $\mathrm{H}-1, \mathrm{H}-3, \mathrm{H}-4$ and $\mathrm{H}-5 X$; steel with electro-galvanized steel fins: H-6X. See page 30.

## RATINGS

|  | Element Type | Tiers of Heating <br> Element | Tube Size \& Material | Fin Size and Material (Width x Height x Thickness) | Fins <br> Per <br> Foot | Water Flow | Pressure <br> Drop $\dagger$ | Steam 1 PSI* Btu/Hr. Per Foot | HOT WATER RATINGS* BTU/HR./FT. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model Number |  |  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| 351-10 | H-1 | 1 | 3/4 | "3" x 31/4" x .024" | 48 | 1 GPM | 47 |  | 230 | 310 | 390 | 480 | 570 | 670 | 770 | 870 | 980 | 1080 | 1200 | 1320 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 250 | 330 | 410 | 500 | 600 | 700 | 810 | 920 | 1040 | 1140 | 1260 | 1400 |
| 353-10 | H-3 | 1 | 3/4" | 23/4" $\times 21 / 2{ }^{1 / 2} \times .011{ }^{\prime \prime}$ | 55 | 1 GPM | 47 |  | 210 | 290 | 360 | 440 | 520 | 610 | 710 | 800 | 900 | 1000 | 1100 | 1220 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 230 | 300 | 380 | 460 | 550 | 650 | 750 | 850 | 960 | 1060 | 1170 | 1290 |
| 354-10 | H-4 | 1 | , |  | 48 | 1 GPM | 13 |  | 210 | 290 | 360 | 440 | 520 | 610 | 710 | 800 | 900 | 1000 | 1100 | 1220 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 145 |  | 230 | 310 | 380 | 460 | 550 | 650 | 750 | 850 | 960 | 1060 | 1170 | 1290 |
| 355-10 | H-5X | 1 | 1-1/4" |  | 48 | 1 GPM | 6 | 1160 | 220 | 300 | 370 | 450 | 540 | 640 | 730 | 830 | 940 | 1040 | 1140 | 1260 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 63 | 1160 | 230 | 310 | 390 | 480 | 570 | 670 | 780 | 880 | 990 | 1100 | 1210 | 1340 |
| 356-10 | H-6X | 1 | 1-1/4" IPS | $3 \mathrm{l} \times 311 / 4 \mathrm{x}$ x .028" | 48 | 1 GPI | 3 | 980 | 190 | 250 | 320 | 390 | 460 | 550 | 630 | 710 | 810 | 890 | 980 | 1080 |
| Single-tier |  |  | steel | aluminized steel |  | 4 GPM | 41 | 980 | 200 | 270 | 340 | 410 | 490 | 580 | 670 | 750 | 850 | 940 | 1040 | 1150 |
| 350-14 | H-1 | 1 | 3/4" | $3^{\prime \prime} \times 31 / 4{ }^{1 / 2} \times$.024" | 48 | 1 GPM | 47 |  | 245 | 328 | 412 | 501 | 597 | 704 | 892 | 989 | 1085 | 1182 | 1279 | 1376 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 259 | 347 | 435 | 530 | 631 | 744 | 984 | 1091 | 1198 | 1305 | 1412 | 1519 |
| 353-14 | H-3 | 1 | 3/4" | 23/4" $\times 21 / 21{ }^{1 / 2} \times .011{ }^{\prime \prime}$ | 55 | 1 GPM | 47 |  | 230 | 309 | 388 | 472 | 562 | 661 | 838 | 929 | 1020 | 1111 | 1202 | 1293 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 243 | 327 | 410 | 499 | 594 | 699 | 925 | 1025 | 1126 | 1226 | 1308 | 1428 |
| 354-14 | H-4 | 1 | 1 | $3^{\prime \prime} \times 21 / 22^{\prime \prime} \times .011{ }^{\prime \prime}$ | 48 | 1 GPM | 13 |  | 230 | 309 | 388 | 472 | 562 | 661 | 838 | 929 | 1020 | 1111 | 1202 | 1293 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 145 |  | 243 | 327 | 410 | 499 | 594 | 699 | 925 | 1025 | 1126 | 1226 | 1308 | 1428 |
| 355-14 | H-5x | 1 | 1-1/4" | $3^{\prime \prime} \times 31 / 4{ }^{1 / 2} \times$.020 | 48 | 1 GPM | 6 |  | 236 | 317 | 397 | 484 | 576 | 678 | 859 | 952 | 1045 | 1139 | 1233 | 1326 |
| Single-tier |  |  | copper | aluminum |  | 4 GPM | 63 | 1280 | 249 | 335 | 420 | 512 | 609 | 717 | 948 | 1051 | 1154 | 1257 | 1361 | 1464 |
| 356-14 | H-6x | 1 | 1-1/4" IPS | 3 " x 3 $11 / 4 \mathrm{x} \times .028^{\prime \prime}$ | 48 | 1 GPM | 3 |  | 204 | 273 | 343 | 417 | 497 | 585 | 742 | 822 | 903 | 984 | 1064 | 1145 |
| Single-tier |  |  | steel | aluminized steel |  | 4 GPM | 41 | 1105 | 216 | 289 | 363 | 441 | 525 | 618 | 819 | 907 | 997 | 1085 | 1175 | 1265 |
| 351-14 | H-1 | 2 | $3 / 4$ | $3 \mathrm{l} \times 311 / 4 \mathrm{x}$ x .024" | 48 | 1 GPM | 47 |  | 360 | 480 | 610 | 740 | 880 | 1040 | 1290 | 1440 | 1590 | 1740 | 1890 | 2030 |
| Two-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 380 | 510 | 640 | 780 | 970 | 1150 | 1420 | 1590 | 1750 | 1920 | 2080 | 2250 |
| 353-14 | H-3 | 2 | 3/4" | 23/4" $\times 21 / 21{ }^{1 / 2} \times .011{ }^{\prime \prime}$ | 55 | 1 GPM | 47 |  | 340 | 460 | 570 | 700 | 830 | 980 | 1210 | 1350 | 1490 | 1630 | 1770 | 1910 |
| Two-tier |  |  | copper | aluminum |  | 4 GPM | 525 |  | 360 | 490 | 600 | 740 | 910 | 1080 | 1340 | 1490 | 1650 | 1800 | 1960 | 2110 |
| 354-14 | H-4 | 2 | $1{ }^{1 \prime}$ | $3 \mathrm{l} \times 21 / 22^{\prime \prime} \times .011{ }^{\prime \prime}$ | 48 | 1 GPM | 13 |  | 340 | 460 | 570 | 700 | 830 | 980 | 1210 | 1350 | 1490 | 1630 | 1770 | 1910 |
| Two-tier |  |  | copper | aluminum |  | 4 GPM | 145 |  | 360 | 490 | 600 | 740 | 910 | 1080 | 1340 | 1490 | 1650 | 1800 | 1960 | 2110 |
| 355-14 | H-5x | 2 | 1-1/4" | $3^{\prime \prime} \times 31 / 4{ }^{1 / 2} \times$.020 | 48 | 1 GPM | 6 |  | 350 | 470 | 590 | 710 | 850 | 1000 | 1240 | 1390 | 1530 | 1670 | 1820 | 1960 |
| Two-tier |  |  | copper | aluminum |  | 4 GPM | 63 | 1890 | 370 | 500 | 620 | 750 | 940 | 1100 | 1370 | 1530 | 1690 | 1850 | 2010 | 2160 |
| 356-14 | H-6x | 2 | 1-1/4" IPS | $3^{\prime \prime} \times 3^{1 / 174} \times .028^{\prime \prime}$ | 48 | 1 GPM | 3 |  | 300 | 400 | 500 | 610 | 730 | 860 | 1070 | 1200 | 1320 | 1450 | 1570 | 1690 |
| Two-tier |  |  | steel | aluminized steel |  | 4 GPM | 41 | 1630 | 320 | 420 | 530 | 640 | 810 | 950 | 1190 | 1320 | 1460 | 1600 | 1730 | 1870 |

* Based on $65^{\circ} \mathrm{F}$ entering air temperature $\dagger$ 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

 INSIDE CORNER
" $90^{\prime} 6^{\prime \prime}$ wide, $135^{\circ} 4^{\prime \prime}$ wide (or custom angle)

VALVE COVER
(slotted or unslotted)

Matching snap-on accessories let 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

4" Hinged End Cap slotted or unslotted
All accessories are available for 10 " and 14 " high cabinets.

## Slant/Fin.



Aluminum grille optional.


RTD-28*

R SERIES
FLAT-TOP ENCLOSURE

## MODELS RL-10, RT-14, RT-21, RT-28



## ORDERING DATA

CONSTRUCTION: Single piece cover mounts on wall brackets.
DEPTH: 5¼"
HEIGHTS: $978^{\prime \prime \prime}, 14$ (one tier), 21" (one or two tier), 28" (up to three tier).
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{1 ⁄ 2}^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$. Other $1_{1 / 2}{ }^{\prime}$ lengths available to order.
MATERIAL: 18-gauge cover, 16 and 14-ga optional.
FINISH: Galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille 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 <br> for given length. |  |  |
| :--- | :---: | :---: | :---: |
| Element | 2 | 3 | 4 |
| S-532 | $2-4 \mathrm{ft}$. | $5-7 \mathrm{ft}$. | 8 ft. |
| S-540 | $2-4 \mathrm{ft}$. | $5-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{S}-832$ | $2-4 \mathrm{ft}$. | $5-6 \mathrm{ft}$. | $7-8 \mathrm{ft}$. |
| $\mathrm{C}-340$ | $2-5 \mathrm{ft}$. | $6-8 \mathrm{ft}$. | - |
| $\mathrm{C}-440$ | $2-5 \mathrm{ft}$. | $6-8 \mathrm{ft}$. | - |
| $\mathrm{C}-540$ | $2-5 \mathrm{ft}$. | $6-8 \mathrm{ft}$. | - |

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


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 (Canada: 2 to 8 feet). See p. 30.
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

## Louver locations

R-Series enclosures may be ordered with these alternate louver locations:
Model RF: Louvered front (N/A on RL-10).
Aluminum grille not available for front outlet.

## OTHER OPTIONS

Damper, field installed
(not available with aluminum grille) Back panel.
16 and 14-gauge cover.
Access door, field installed.
Inlet grille.
Architectural aluminum grille.
Custom color.

| Cover Type | Enclosure Height | ElementType | Tube Size and Material | Fin Size and Material | Fins <br> Per <br> Foot | Steam <br> 1 PSI* <br> Btu/Hr. <br> Per Foot | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| RL-10 | $97 /{ }^{\prime \prime}$ | S-532 | 11/4" steel | 41/4" steel | 32 | 1230 | 246 | 320 | 406 | 492 | 554 | 652 | 750 | 849 | 959 | 1058 | 1169 | 1292 |
|  |  | S-540 | $11 / 4$ steel | 41/4" steel | 40 | 1330 | 266 | 346 | 439 | 532 | 599 | 705 | 811 | 918 | 1037 | 1144 | 1264 | 1397 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1270 | 254 | 330 | 419 | 508 | 572 | 673 | 755 | 876 | 991 | 1092 | 1207 | 1334 |
|  |  | C-340 | 3/4 copper | 41/4" alum. | 40 | 1647 | 329 | 428 | 544 | 659 | 742 | 872 | 1004 | 1136 | 1285 | 1417 | 1565 | 1730 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1740 | 348 | 452 | 574 | 696 | 783 | 922 | 1061 | 1201 | 1357 | 1496 | 1653 | 1827 |
|  |  | C-540 | 1114 l copper | $41 / 4 \mathrm{l}$ alum. | 40 | 1710 | 342 | 445 | 564 | 684 | 770 | 906 | 1043 | 1180 | 1334 | 1471 | 1625 | 1796 |
| RT-14 | 14" | S-532 | 11/4" steel | 41/4" steel | 32 | 1280 | 256 | 333 | 422 | 512 | 576 | 678 | 781 | 883 | 998 | 1101 | 1216 | 1344 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1500 | 300 | 390 | 495 | 600 | 675 | 795 | 915 | 1035 | 1170 | 1290 | 1425 | 1575 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1320 | 264 | 343 | 436 | 528 | 594 | 700 | 805 | 911 | 1030 | 1135 | 1254 | 1386 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1714 | 343 | 446 | 566 | 685 | 771 | 908 | 1046 | 1183 | 1337 | 1474 | 1628 | 1800 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1820 | 364 | 473 | 601 | 728 | 819 | 965 | 1110 | 1256 | 1420 | 1565 | 1729 | 1911 |
|  |  | C-540 | 1114 " copper | 41/4" alum. | 40 | 1780 | 356 | 463 | 587 | 712 | 801 | 943 | 1086 | 1228 | 1388 | 1531 | 1691 | 1869 |
| RT-21 <br> One-tier element | 21" | S-532 | 1/14" steel | 41/4" steel | 32 | 1380 | 276 | 359 | 455 | 552 | 621 | 731 | 842 | 952 | 1076 | 1187 | 1311 | 1449 |
|  |  | S-540 | $11 / 4$ steel | $41 / 4$ steel | 40 | 1610 | 322 | 419 | 531 | 644 | 725 | 853 | 982 | 1111 | 1256 | 1385 | 1530 | 1691 |
|  |  | S-832 | 2" steel | 4/4/4 steel | 32 | 1460 | 292 | 380 | 482 | 584 | 657 | 774 | 891 | 1007 | 1139 | 1256 | 1387 | 1533 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1878 | 376 | 488 | 620 | 751 | 846 | 996 | 1146 | 1296 | 1465 | 1615 | 1784 | 1972 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1990 | 398 | 518 | 657 | 796 | 896 | 1055 | 1214 | 1373 | 1552 | 1711 | 1891 | 2090 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1950 | 390 | 507 | 644 | 780 | 878 | 1034 | 1190 | 1346 | 1521 | 1677 | 1853 | 2048 |
| RT-21 <br> Two-tier element | 21" | S-532 | $11 / 4$ " steel | 4/41" steel | 32 | 2200 | 440 | 572 | 726 | 880 | 990 | 1166 | 1342 | 1518 | 1716 | 1892 | 2090 | 2310 |
|  |  | S-540 | 1/1/4 steel | 41/4" steel | 40 | 2440 | 488 | 634 | 805 | 976 | 1098 | 1293 | 1488 | 1684 | 1903 | 2098 | 2318 | 2562 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2230 | 446 | 580 | 736 | 892 | 1004 | 1182 | 1360 | 1539 | 1739 | 1918 | 2119 | 2342 |
|  |  | C-340 | 3/4" copper | $41 / 4 \mathrm{l}$ alum. | 40 | 2668 | 534 | 694 | 881 | 1067 | 1201 | 1414 | 1627 | 1840 | 2081 | 2294 | 2535 | 2801 |
|  |  | C-440 | 1" copper | $41 / 4110$ alum. | 40 | 2830 | 566 | 736 | 934 | 1132 | 1274 | 1500 | 1726 | 1953 | 2207 | 2434 | 2689 | 2972 |
|  |  | C-540 | 1114" copper | 41/4" alum. | 40 | 2770 | 554 | 720 | 914 | 1108 | 1247 | 1468 | 1690 | 1911 | 2161 | 2382 | 2632 | 2909 |
| RT-28 One-tier element | 28 " | S-532 | $11 / 4$ " steel | 41/4" steel | 32 | 1400 | 280 | 364 | 462 | 560 | 630 | 742 | 854 | 956 | 1092 | 1204 | 1330 | 1470 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1680 | 336 | 437 | 554 | 672 | 756 | 890 | 1025 | 1159 | 1310 | 1445 | 1596 | 1764 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1480 | 296 | 385 | 488 | 592 | 666 | 784 | 903 | 1021 | 1154 | 1273 | 1406 | 1554 |
|  |  | C-340 | 3/4" copper | $41 / 4 \mathrm{l}$ alum. | 40 | 1907 | 381 | 496 | 629 | 763 | 858 | 1010 | 1163 | 1315 | 1487 | 1640 | 1811 | 2002 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2020 | 404 | 525 | 667 | 808 | 909 | 1071 | 1232 | 1394 | 1576 | 1737 | 1919 | 2121 |
|  |  | C-540 | 1114" copper | 41/4" alum. | 40 | 1980 | 396 | 515 | 653 | 792 | 891 | 1049 | 1208 | 1366 | 1544 | 1703 | 1881 | 2079 |
| RT-28 Two-tier element | 28 " | S-532 | 11/4" steel | 41/4" steel | 32 | 2260 | 452 | 588 | 746 | 904 | 1017 | 1198 | 1379 | 1559 | 1763 | 1944 | 2147 | 2373 |
|  |  | S-540 | 11/4" steel | $41 / 4$ steel | 40 | 2460 | 492 | 640 | 812 | 984 | 1107 | 1304 | 1501 | 1697 | 1919 | 2116 | 2337 | 2583 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2270 | 454 | 590 | 749 | 908 | 1022 | 1203 | 1385 | 1566 | 1771 | 1952 | 2157 | 2384 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2860 | 572 | 744 | 944 | 1144 | 1288 | 1516 | 1745 | 1973 | 2231 | 2460 | 2718 | 3004 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3030 | 606 | 788 | 1000 | 1212 | 1364 | 1606 | 1848 | 2091 | 2363 | 2606 | 2879 | 3182 |
|  |  | C-540 | 1114 copper | 41/4" alum. | 40 | 2970 | 594 | 772 | 980 | 1188 | 1337 | 1574 | 1812 | 2049 | 2317 | 2554 | 2822 | 3119 |
| RT-28 <br> Three-tier element | 28 " | S-532 | $11 / 4$ steel | $41 / 4 \mathrm{l}$ " steel | 32 | 2580 | 516 | 671 | 851 | 1032 | 1161 | 1367 | 1574 | 1780 | 2012 | 2219 | 2451 | 2709 |
|  |  | S-540 | $11 / 4$ steel | $41 / 4$ steel | 40 | 2800 | 560 | 728 | 924 | 1120 | 1260 | 1484 | 1708 | 1932 | 2184 | 2408 | 2660 | 2940 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2660 | 532 | 692 | 878 | 1064 | 1197 | 1410 | 1623 | 1835 | 2075 | 2288 | 2527 | 2793 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 3390 | 678 | 881 | 1119 | 1356 | 1525 | 1797 | 2068 | 2339 | 2644 | 2915 | 3220 | 3559 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3590 | 718 | 934 | 1185 | 1436 | 1616 | 1903 | 2190 | 2477 | 2800 | 3087 | 3411 | 3770 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 3520 | 704 | 915 | 1162 | 1408 | 1584 | 1866 | 2147 | 2429 | 2746 | 3027 | 3344 | 3696 |

Based on $65^{\circ} \mathrm{F}$ entering air temperature.
Note: Ratings are based on active finned length ( $5-1 / 4$ " less than overall length.)

## ACCESSORIES



## telescopic accessories



End Cap


Filler Sleeve


Outside Corner


Inside Corner


Center Valve $\dagger$ Cover


Splice Plate


End Valve $\dagger$


Slotted
End Cap

## Slant/Fin.



FS-7


FS-14


FS-21

FS SERIES
FREE STANDING ENCLOSURE

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


## ORDERING DATA

CONSTRUCTION: Single piece cover mounts on floor pedestals.

DEPTH: $5 ½ 1$
INSTALLED HEIGHTS: 11" (one tier), 18" (one or two tier), 25" (up to three tier)
 lengths available to order.
MATERIAL: FS-7: 16-ga std., 14-ga optional. FS-14 and FS-21: 16-ga std., 14-ga optional.
FINISH: Galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille optional. Stainless steel escutcheon for pedestals standard.
PEDESTAL BRACKETS/HANGERS: Order separately. Adjustable height floor pedestal supports the elements and enclosure. Uses standard SC hangers. Large hole in base to bring supply and return piping into cover without showing. Stainless steel escutcheon around base for neat finish.

|  | Recommended number of pedestals <br> for given length. |  |  |
| :--- | :---: | :---: | :---: |
| Element | 2 | 3 | 4 |
| $\mathrm{~S}-532$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{S}-540$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{C}-340$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$ | 8 ft. |
| $\mathrm{C}-440$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{C}-540$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |

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


ELEMENTS: Copper with aluminum fins: C-340, C-440, C-540. Steel with electro-galvanized steel fins: S-532, S-540. Lengths from 2 to12 feet (Canada: 2 to 8 feet). See p. 30.
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.

NOTE: Pedestals used as a pipe chase for individual vertical supply or return pipes (max 1-1/4" pipe) must be dedicated for pipe chase use and will not be able to support element or horizontal piping. SC hangers will not fit into pedestals used for this function.

## OPTIONS

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

## RATINGS

| Cover Type | Enclosure Height | $\begin{array}{\|l} \text { Element } \\ \text { Type } \end{array}$ | Tube Size \& Material | Fin Size <br> \& Material | $\begin{aligned} & \text { Fins } \\ & \text { Per } \\ & \text { Foot } \end{aligned}$ | Steam $1 \mathrm{PSI}{ }^{\star}$ <br> Btu/Hr. <br> Per Foot | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| FS-7 | 7" | S-532 | 11/4" steel | 41/4" steel | 32 | 1290 | 258 | 336 | 426 | 516 | 581 | 684 | 787 | 890 | 1006 | 1109 | 1226 | 1355 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1390 | 278 | 362 | 459 | 556 | 626 | 737 | 848 | 959 | 1084 | 1195 | 1321 | 1460 |
|  |  | C-340 | $3 / 4 / 1$ copper | 41/4" alum. | 40 | 1579 | 316 | 411 | 521 | 632 | 711 | 837 | 963 | 1090 | 1232 | 1358 | 1500 | 1658 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1670 | 334 | 434 | 551 | 668 | 752 | 885 | 1019 | 1152 | 1303 | 1436 | 1587 | 1754 |
|  |  | C-540 | 11/4" copper | $41 / 4$ alum. | 40 | 1640 | 328 | 426 | 541 | 656 | 738 | 869 | 1000 | 1132 | 1279 | 1410 | 1558 | 1722 |
| FS-14 One-tier element | 14" | S-532 | 11/4" steel | 41/4" steel | 32 | 1330 | 266 | 346 | 439 | 532 | 599 | 705 | 811 | 918 | 1037 | 1144 | 1264 | 1397 |
|  |  | S-540 | 11/4" steel | $41 / 4$ steel | 40 | 1540 | 308 | 400 | 508 | 616 | 693 | 816 | 939 | 1063 | 1201 | 1324 | 1463 | 1617 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1782 | 356 | 463 | 588 | 713 | 802 | 945 | 1087 | 1230 | 1390 | 1532 | 1693 | 1871 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1890 | 378 | 492 | 624 | 756 | 851 | 1002 | 1153 | 1304 | 1474 | 1625 | 1796 | 1985 |
|  |  | C-540 | 1114" copper | 41/4" alum. | 40 | 1850 | 370 | 481 | 611 | 740 | 833 | 981 | 1129 | 1277 | 1443 | 1591 | 1758 | 1943 |
| FS-14 <br> Two-tier element | 14" | S-532 | $11 / 4 / 1$ steel | 41/4" steel | 32 | 1850 | 370 | 481 | 611 | 740 | 833 | 981 | 1129 | 1277 | 1443 | 1591 | 1758 | 1943 |
|  |  | S-540 | 11/4" steel | $41 / 4$ steel | 40 | 1955 | 391 | 508 | 645 | 782 | 880 | 1036 | 1193 | 1349 | 1525 | 1681 | 1857 | 2053 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2311 | 462 | 601 | 763 | 925 | 1040 | 1225 | 1410 | 1595 | 1803 | 1988 | 2196 | 2427 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2450 | 490 | 637 | 809 | 980 | 1103 | 1299 | 1495 | 1690 | 1911 | 2107 | 2328 | 2573 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 2400 | 480 | 624 | 792 | 960 | 1080 | 1272 | 1464 | 1656 | 1872 | 2064 | 2280 | 2520 |
| FS-21 One-tier element | 21" | S-532 | 11/4" steel | 41/4 steel | 32 | 1610 | 322 | 419 | 531 | 644 | 725 | 853 | 982 | 1111 | 1256 | 1385 | 1530 | 1691 |
|  |  | S-540 | 11/4" steel | $41 / 4$ steel | 40 | 1675 | 335 | 435 | 553 | 670 | 754 | 888 | 1022 | 1156 | 1307 | 1441 | 1591 | 1759 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2008 | 402 | 522 | 663 | 803 | 903 | 1064 | 1225 | 1386 | 1566 | 1727 | 1908 | 2108 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2130 | 426 | 554 | 703 | 852 | 959 | 1129 | 1299 | 1470 | 1661 | 1832 | 2024 | 2237 |
|  |  | C-540 | 1114" copper | $41 / 4 \mathrm{l}$ alum. | 40 | 2085 | 417 | 542 | 688 | 832 | 938 | 1105 | 1272 | 1439 | 1626 | 1793 | 1981 | 2189 |
| FS-21 <br> Two-tier element | 21" | S-532 | $11 / 4$ steel | 41/4 1 steel | 32 | 2140 | 428 | 556 | 706 | 856 | 963 | 1134 | 1305 | 1477 | 1669 | 1840 | 2033 | 2247 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 2245 | 449 | 584 | 741 | 898 | 1010 | 1190 | 1369 | 1549 | 1751 | 1931 | 2133 | 2357 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2648 | 528 | 686 | 871 | 1056 | 1192 | 1404 | 1616 | 1827 | 2066 | 2277 | 2516 | 2781 |
|  |  | C-440 | 1" copper | $41 / 4 \mathrm{c}$ alum. | 40 | 2810 | 562 | 731 | 927 | 1124 | 1265 | 1489 | 1714 | 1939 | 2192 | 2417 | 2670 | 2951 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 2750 | 550 | 715 | 908 | 1100 | 1238 | 1458 | 1678 | 1897 | 2145 | 2365 | 2613 | 2888 |
| FS-21 <br> Three-tier element | 21" | S-532 | 11/4" steel | 41/4 steel | 32 | 2380 | 476 | 619 | 785 | 952 | 1071 | 1261 | 1452 | 1642 | 1856 | 2047 | 2261 | 2499 |
|  |  | S-540 | 11/4" steel | $41 / 4$ steel | 40 | 2540 | 508 | 660 | 838 | 1016 | 1143 | 1346 | 1549 | 1753 | 1981 | 2184 | 2413 | 2667 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 3005 | 601 | 781 | 991 | 1202 | 1352 | 1593 | 1833 | 2073 | 2344 | 2584 | 2854 | 3155 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3180 | 636 | 827 | 1049 | 1272 | 1431 | 1685 | 1940 | 2194 | 2480 | 2735 | 3021 | 3339 |
|  |  | C-540 | 11/4" copper | $41 / 4 \mathrm{c}$ alum. | 40 | 3120 | 624 | 811 | 1030 | 1248 | 1404 | 1654 | 1903 | 2153 | 2434 | 2683 | 2964 | 3276 |

*Based on $65^{\circ} \mathrm{F}$ entering air temperature.
Note: Ratings are based on active finned length (5-1/4" less than overall length.)

## ACCESSORIES



(or custom angle)
(slotted optional)

## telescopic accessories



End Cap


Filler Sleeve


Outside Corner


Inside Corner


Center Valve Cover $\dagger$


Splice Plate


End Valve Cover $\dagger$

## Slant/Fin.



TBG-24

## TBCSERIES SLOPE-TOP/BOTTOM ENCLOSURES



## ORDERING DATA

CONSTRUCTION: Single piece cover mounts on wall brackets.

## DEPTH: 51/4"

HEIGHTS: 17" (one tier), 24" (one or two tier)
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{1 ⁄ 2}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$. Other $1 / 2{ }^{\prime}$ lengths available to order
MATERIAL: 16-ga cover standard, 14-ga optional.
FINISH: Galvanized standard. Custom color baked enamel available on special order. Anodized architectural aluminum grille 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 <br> for given length. |  |  |  |
| :--- | :--- | :--- | ---: | :---: |
| Element | 2 | 3 | 4 |  |
| $\mathrm{~S}-532$ | $2-5 \mathrm{ft}$ | $6-7 \mathrm{ft}$ | 8 ft. |  |
| $\mathrm{S}-540$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$ | 8 ft. |  |
| $\mathrm{S}-832$ | $2-5 \mathrm{ft}$. | 6 ft. | $7-8 \mathrm{ft}$. |  |
| $\mathrm{C}-340$ | $2-5 \mathrm{ft}$ | $6-7 \mathrm{ft}$ | 8 ft. |  |
| $\mathrm{C}-440$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |  |
| $\mathrm{C}-540$ | $2-5 \mathrm{ft}$. | $6-7 \mathrm{ft}$. | 8 ft. |  |

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


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 (Canada: 2 to 8 feet). See p. 30.

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

14-gauge cover.
Access door, field installed.
Architectural aluminum grille.
Damper, field installed
(not available with aluminum grille)
Custom color.

| Cover Type | Enclosure Height | Element Type | Tube Size \& Material | Fin Size \& Material | Fins <br> Per <br> Foot | Steam <br> 1 PSI* <br> Btu/Hr. <br> Per <br> Foot | HOT WATER RATINGS* BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | 180\% | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| TBG-17 | 17" | S-532 | 11/4" steel | 41/4" steel | 32 | 1250 | 250 | 325 | 413 | 500 | 563 | 663 | 763 | 862 | 975 | 1075 | 1188 | 1313 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1344 | 269 | 349 | 444 | 538 | 605 | 712 | 820 | 927 | 1048 | 1156 | 1277 | 1411 |
|  |  | S-832 | $2^{\prime \prime}$ steel | $41 / 4$ steel | 32 | 1201 | 240 | 312 | 396 | 480 | 540 | 637 | 733 | 829 | 937 | 1033 | 1141 | 1261 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1595 | 319 | 415 | 526 | 638 | 717 | 846 | 973 | 1101 | 1244 | 1371 | 1515 | 1675 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1690 | 338 | 440 | 558 | 676 | 761 | 896 | 1031 | 1166 | 1318 | 1453 | 1606 | 1775 |
|  |  | C-540 | 11/4" copper | $41 / 4$ alum. | 40 | 1656 | 331 | 431 | 546 | 662 | 745 | 878 | 1010 | 1143 | 1292 | 1424 | 1573 | 1739 |
| TBG-24 One-tier element | 24" | S-532 | 11/4" steel | 41/4" steel | 32 | 1460 | 292 | 380 | 482 | 584 | 657 | 774 | 891 | 1007 | 1139 | 1256 | 1387 | 1533 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1505 | 301 | 391 | 497 | 602 | 677 | 798 | 918 | 1038 | 1174 | 1294 | 1430 | 1580 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1345 | 269 | 350 | 444 | 538 | 605 | 713 | 820 | 928 | 1049 | 1157 | 1278 | 1412 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1798 | 360 | 468 | 594 | 720 | 810 | 953 | 1097 | 1241 | 1403 | 1547 | 1709 | 1888 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1910 | 382 | 497 | 630 | 764 | 860 | 1012 | 1165 | 1318 | 1490 | 1643 | 1815 | 2006 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 1868 | 374 | 486 | 617 | 747 | 841 | 990 | 1139 | 1289 | 1457 | 1606 | 1775 | 1961 |
| TBG-24 Two-tier element | $24 "$ | S-532 | 11/4" steel | 41/4" steel | 32 | 1980 | 396 | 515 | 653 | 792 | 891 | 1049 | 1208 | 1366 | 1544 | 1703 | 1881 | 2079 |
|  |  | S-540 | 1/1/4 steel | 41/4" steel | 40 | 2102 | 420 | 547 | 694 | 841 | 946 | 1114 | 1282 | 1450 | 1640 | 1808 | 1997 | 2207 |
|  |  | S-832 | $2^{\prime \prime}$ steel | 41/4" steel | 32 | 1890 | 378 | 492 | 624 | 756 | 851 | 1002 | 1153 | 1304 | 1474 | 1625 | 1796 | 1985 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 2337 | 468 | 608 | 772 | 935 | 1052 | 1238 | 1425 | 1613 | 1823 | 2010 | 2221 | 2454 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2480 | 496 | 645 | 818 | 992 | 1116 | 1314 | 1513 | 1711 | 1934 | 2133 | 2356 | 2604 |
|  |  | C-540 | 1114" copper | 41/4" alum. | 40 | 2427 | 485 | 631 | 801 | 971 | 1092 | 1286 | 1480 | 1675 | 1893 | 2087 | 2306 | 2548 |

*Based on $65^{\circ} \mathrm{F}$ entering air temperature.
Note: Ratings are based on active finned length ( $5-1 / 4^{\prime \prime}$ less than overall length.)

## ACCESSORIES



## TELESCOPIC ACCESSORIES



## Slant/Fin.



# MULTI/PAK 80 HIGH-OUTPUT, LOW-PROFILE BASEBOARD 



Nu-White is standard color. Eight additional colors are available.

## Made with Rust-Resistant Galvanized Steel.

The industry standard for heavy-duty, high-output baseboard heating, Multi/Pak 80 is trusted by contractors and engineers for its performance and durability. 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. Multi/Pak 80 is engineered for maximum strength throughout. Dent-proof 18-gauge front panels. Massive steel brackets. Heavy wall tubing with full mill-rated bursting strength. For fast, economical installation, Multi/Pak 80 enclosures are factory preassembled in "Zip Strip" cartons. Factory pre-cut lengths of 2 to 14 feet combine with snap-on telescoping accessories to produce wall-to-wall installations without cutting.

- Galvanized steel cover resists rust
- Engineered for maximum strength and good looks
- 18-gauge front panel resists damage
- Massive steel brackets
- Fully modulating damper
- Choice of 5 interchangeable heating elements
- Packaged in individual Zip-Strip cartons
- Modern replacement for hot water or steam radiators


## INTERCHANGEABLE HEATING ELEMENTS:

Available with a choice of five heating elements, Multi/Pak 80 meets a wide variety of heating requirements. With the optional high-output $3 / 4$ " copper/aluminum element, it is the perfect alternative to costly, bulky commercial enclosures in "problem areas" of high heat loss. Optional 1 " and $11 / 4$ " copper/aluminum elements permit higher flow rates, longer series-loop runs and lower pump loads. The $11 / 4$ elements are suitable for use in one or two pipe steam systems.

## 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 packaged and shipped separately.
CONSTRUCTION: Back panel, front cover and damper fully assembled at factory, ready to fasten to the wall.

DEPTH: $3122^{1}$
HEIGHT: 87/8"
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{½} 2^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}, 10^{\prime}, 12^{\prime}, 14^{\prime}$ (Canada: 2 to 8 feet).

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

FINISH: Nu-White baked enamel.
ELEMENT SUPPORT: Self-adjusting, polypropylene expansion cradles are positioned over support brackets, allowing quiet expansion.

ELEMENTS: Choice of five. Copper with aluminum fins: $\mathrm{H}-1, \mathrm{H}-3, \mathrm{H}-4$ and $\mathrm{H}-5 \mathrm{X}$; steel with electro-galvanized steel fins: H-6X. See page 30.

## RATINGS

|  |  |  | Fin Size and Material | Fins |  |  |  | HOT WATER RATINGS $\ddagger$ BTU／HR．／FT． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | $\left\lvert\, \begin{gathered} \text { Element } \\ \text { Type } \end{gathered}\right.$ | Size and Material | x Thickness） | Foot | Water Flow | Pressure Drop $\dagger$ | Btu／Hr． <br> Per Foot | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| 80－D | H－1 | $\begin{gathered} \begin{array}{c} 3 / 4 \\ \text { copper } \end{array} \end{gathered}$ | $\begin{gathered} 3 \times 31 / 4 \times .024^{\prime \prime} \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{aligned} & 1 \mathrm{GPM} \\ & 4 \mathrm{GPM} \end{aligned}$ | $\begin{gathered} 47 \\ 525 \end{gathered}$ |  | $\begin{aligned} & 210^{*} \\ & 220^{*} \end{aligned}$ | $\begin{aligned} & 290^{*} \\ & 310^{*} \end{aligned}$ | $\begin{array}{\|l\|} \hline 360^{*} \\ 380^{*} \end{array}$ | $\begin{aligned} & 440^{*} \\ & 470^{*} \end{aligned}$ | $\begin{aligned} & 520 \\ & 550 \end{aligned}$ | $\begin{array}{\|l\|} \hline 610 \\ 640 \end{array}$ | $\begin{aligned} & 700 \\ & 740 \end{aligned}$ | $\begin{aligned} & 790 \\ & 840 \end{aligned}$ | $\begin{aligned} & 880 \\ & 930 \end{aligned}$ | $\begin{array}{\|c\|} \hline 970 \\ 1030 \\ \hline \end{array}$ | $\begin{aligned} & 1060 \\ & 1120 \end{aligned}$ | $\begin{array}{\|l\|} \hline 1140 \\ 1200 \\ \hline \end{array}$ |
| 83－A | H－3 | $\begin{gathered} \begin{array}{c} 3 / 4 \\ \text { copper } \end{array} \end{gathered}$ | $\begin{aligned} & 2^{3 / 4} \times 2^{1 / 2} \times .011 " 1 " \\ & \quad \text { aluminum } \end{aligned}$ | 55 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{aligned} & 47 \\ & 525 \end{aligned}$ |  | $\begin{aligned} & \hline 200^{*} \\ & 210^{*} \end{aligned}$ | $\begin{array}{l\|} \hline 270^{*} \\ 290^{*} \end{array}$ | $\begin{array}{\|l\|} \hline 340^{*} \\ 360^{*} \end{array}$ | $\begin{aligned} & 410^{*} \\ & 430^{*} \end{aligned}$ | $\begin{aligned} & 490 \\ & 520 \end{aligned}$ | $\begin{array}{\|l\|} \hline 570 \\ 600 \\ \hline \end{array}$ | $\begin{aligned} & 650 \\ & 690 \end{aligned}$ | $\begin{aligned} & 730 \\ & 770 \end{aligned}$ | $\begin{aligned} & 810 \\ & 860 \end{aligned}$ | $\begin{aligned} & 890 \\ & 940 \end{aligned}$ | $\begin{array}{\|c\|} \hline 970 \\ 1030 \\ \hline \end{array}$ | $\begin{aligned} & 1050 \\ & 1110 \end{aligned}$ |
| 80－D | H－4 | $\begin{gathered} 1 " \\ \text { copper } \end{gathered}$ | $\begin{aligned} & 3 \text { " } \times 21 / 2 \times \times .011 " \\ & \text { aluminum } \end{aligned}$ | 48 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{gathered} 13 \\ 145 \end{gathered}$ |  | $\begin{aligned} & 200^{*} \\ & 210^{*} \end{aligned}$ | $\begin{aligned} & 260^{\star} \\ & 270^{\star} \end{aligned}$ | $\begin{array}{l\|} 330^{*} \\ 350^{*} \end{array}$ | $\begin{aligned} & 400^{*} \\ & 420^{*} \end{aligned}$ | $\begin{array}{\|l} \hline 480 \\ 510 \end{array}$ | $\begin{array}{\|l\|} \hline 560 \\ 610 \end{array}$ | $\begin{aligned} & 640 \\ & 680 \end{aligned}$ | $\begin{aligned} & 720 \\ & 760 \end{aligned}$ | $\begin{aligned} & 800 \\ & 850 \end{aligned}$ | $\begin{aligned} & 880 \\ & 930 \end{aligned}$ | $\begin{array}{\|c\|} \hline 960 \\ 1010 \\ \hline \end{array}$ | $\begin{aligned} & 1040 \\ & 1100 \end{aligned}$ |
| 80－D | H－5X | $\begin{gathered} 11 / 4 " \\ \text { copper } \end{gathered}$ | $\begin{gathered} \hline 3 \times 31 / 4 " \times .020 " \\ \text { aluminum } \end{gathered}$ | 48 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{gathered} 6 \\ 63 \end{gathered}$ | 1130 | $\begin{aligned} & \hline 190^{*} \\ & 200^{*} \end{aligned}$ | 260＊ | $\begin{array}{\|l\|} \hline 320^{*} \\ 340^{*} \end{array}$ | $\begin{aligned} & 390^{*} \\ & 410^{*} \end{aligned}$ | 470 | 560 | 650 | 740 | 830 | 920 | 1010 | 1100 |
| 80－D | H－6X | $\begin{aligned} & \hline 1 / 1 / \mathrm{IIPS} \\ & \text { steel } \end{aligned}$ | 3"x 3¹/4"x .028" aluminized steel | 48 | $\begin{aligned} & 1 \text { GPM } \\ & 4 \text { GPM } \end{aligned}$ | $\begin{gathered} \hline 3 \\ 41 \end{gathered}$ | 990 | － | 二 | 二 | 二 | 410 | 490 | $\begin{aligned} & \hline 560 \\ & 590 \end{aligned}$ | 640 | 710 | 790 | 860 | 940 990 |

$\dagger$ Millinches per foot．＊Ratings at $140^{\circ} \mathrm{F}$ and lower temperatures determined by multiplying $150^{\circ} \mathrm{F}$ rating by the applicable factor specified in Table E in the $\mathrm{I}=\mathrm{B}=\mathrm{R}$ Testing and Rating Standard for Baseboard radiation．
$\ddagger$ With $65^{\circ} \mathrm{F}$ entering air．
NOTE：Ratings are for element installed as per drawing shown in＂Dimensional Data＂window（open＂Dimensional Data＂window to view）with damper open，with expansion cradles．Ratings are based on active finned length（ $5^{\prime \prime}$ to 6 ＂less than overall length）and include $15 \%$ heating effect factor．
Ratings are also based on：
81－A：$\quad 3 / 4^{\prime \prime}$ nominal copper tubing with $3^{\prime \prime} \times 3-1 / 4^{\prime} \times .024$＂aluminum fins spaced 48 per linear foot（unpainted）；
83－A2： $3 / 4^{\prime \prime}$ nominal copper tubing with 2－3／4＂x 2－1／2＂x ．011＂aluminum fins spaced 55 per linear foot（unpainted）；
84－A3： 1 ＂nominal copper tubing with 3 ＂x 2－1／2＂x ．011＂aluminum fins spaced 48 per linear foot（unpainted）；
85－AX：1－1／4＂nominal copper tubing with $3^{\prime \prime} \times 3-1 / 4^{\prime \prime} \times .020^{\prime \prime}$ aluminum fins spaced 48 per linear foot（unpainted）；
86－AX：$\quad 1-1 / 4^{\prime \prime}$ IPS steel with $3^{\prime \prime} \times 3-1 / 4^{\prime \prime} \times .028^{\prime \prime}$ aluminized steel fins spaced 48 per linear foot（unpainted）；
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

Over 20 easy－to－install accessories are available in a variety of hinged，non－hinged，telescoping，snap－on and custom angle models to complete any installation．


OUTSIDE
CORNER
$90^{\circ}$ or $135^{\circ}$

## additional accessories

Splice Plate，2＂
Valve cover＊，8＂
Valve cover，slotted＊，8＂
Inside corner＊，custom angle
Outside corner＊，custom angle

Center valve cover＊， $8^{\prime \prime}$
Zone valve box
Back panel for inside corner
Column cover set
＊Telescopic accessories

## TELESCOPIC ACCESSORIES



Filler Sleeve


Hinged End Cap


Hinged Wall Trim


Hinged Valve Cover


Hinged Inside Corner


Outside Corner

## 5/ant/Fin.



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 $11 / 8$ " and horizontally by

# F \& EM SERIES LOUVERED AND EXPANDED METAL ELEMENT COVERS 

F and EM Series are industrial covers where the cover hangs directly on the 4$1 / 4^{\prime \prime}$ by $4-1 / 4^{\prime \prime}$ finned tube element. Available from the factory in a protective galvanized finish or baked enamel over the protective galvanized finish.


F SERIES


EM SERIES

## ORDERING DATA

CONSTRUCTION: Single piece cover attaches directly to element.
DEPTH: 43/8"
HEIGHTS: $4^{3} / 4^{\prime \prime}$ (one tier), $11^{3} / 4^{\prime \prime}$ (two tier), $18 \frac{3}{4} 4^{\prime \prime}$
(three tier)
LENGTHS: $2^{\prime}, 3^{\prime}, 3^{½} 2^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$. Other ${ }^{1 / 2}$ lengths available to order.

MATERIAL: F: 18-ga cover. EM: 16-ga cover.
FINISH: Galvanized standard. Available in baked enamel.

WALL BRACKETS/HANGERS: Order separately, specify BKT (bracket only) or BKT ASSY (bracket complete with SC hangers) followed by cover stock number and quantity.
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 (Canada: 2 to 8 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 <br> of brackets <br> for given length. |  |  |
| :---: | :---: | :---: | :---: |
| Element | 2 | 3 | 4 |
| $\mathrm{~S}-532$ | $2-4 \mathrm{ft}$. | $5-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{S}-540$ | $2-4 \mathrm{ft}$ | $5-7 \mathrm{ft}$. | 8 ft. |
| $\mathrm{S}-832$ | $2-4 \mathrm{ft}$ | $5-6 \mathrm{ft}$. | $7-8 \mathrm{ft}$. |
| $\mathrm{C}-340$ | $2-5 \mathrm{ft}$ | $6-8 \mathrm{ft}$. | - |
| $\mathrm{C}-440$ | $2-5 \mathrm{ft}$ | $6-8 \mathrm{ft}$. | - |
| $\mathrm{C}-540$ | $2-5 \mathrm{ft}$. | $6-8 \mathrm{ft}$. | - |

## RATINGS

| Model Number | Enclosur e Height | ElementType | Tube Size and Material | Fin Size and Material | Fins <br> Per <br> Foot | $\begin{gathered} \hline \text { Steam } \\ 1 \mathrm{PSI} \\ \text { Btu/Hr. } \\ \text { Per } \\ \text { Foot } \end{gathered}$ | HOT WATER RATINGS* <br> BTU/HR./FT. (Flow Rate $3 \mathrm{Ft} . / \mathrm{Sec}$. ) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| F-5 | 43/4" | S-532 | 11/4" steel | 41/4" steel | 32 | 1250 | 250 | 325 | 413 | 500 | 563 | 663 | 763 | 862 | 975 | 1075 | 1188 | 1313 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1340 | 268 | 348 | 442 | 536 | 603 | 710 | 817 | 925 | 1045 | 1152 | 1273 | 1407 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 1280 | 256 | 333 | 422 | 512 | 576 | 678 | 781 | 883 | 998 | 1101 | 1216 | 1344 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 1560 | 312 | 406 | 515 | 624 | 702 | 827 | 951 | 1077 | 1217 | 1341 | 1482 | 1638 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1650 | 330 | 429 | 545 | 660 | 743 | 875 | 1007 | 1139 | 1287 | 1419 | 1568 | 1733 |
|  |  | C-540 | 11/4" copper | 4114" alum. | 40 | 1620 | 324 | 421 | 535 | 648 | 729 | 859 | 988 | 1118 | 1264 | 1393 | 1539 | 1701 |
| F-12 <br> Two-tier element | 113/4" | S-532 | 11/4" steel | 41/4" steel | 32 | 2070 | 414 | 538 | 683 | 828 | 932 | 1097 | 1263 | 1428 | 1615 | 1780 | 1967 | 2174 |
|  |  | S-540 | 1/1/4 steel | 41/4" steel | 40 | 2160 | 432 | 562 | 713 | 864 | 972 | 1145 | 1318 | 1490 | 1685 | 1858 | 2052 | 2268 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2090 | 418 | 544 | 690 | 836 | 941 | 1108 | 1275 | 1442 | 1630 | 1797 | 1986 | 2195 |
|  |  | C-340 | 3/4 copper | 41/4" alum. | 40 | 2600 | 520 | 676 | 858 | 1040 | 1170 | 1378 | 1586 | 1794 | 2028 | 2236 | 2470 | 2730 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 2750 | 550 | 715 | 908 | 1100 | 1238 | 1458 | 1678 | 1897 | 2145 | 2365 | 2613 | 2888 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 2700 | 540 | 702 | 891 | 1080 | 1215 | 1431 | 1647 | 1863 | 2106 | 2322 | 2565 | 2835 |
| F-19 <br> Three-tier element | 183/4" | S-532 | 11/4" steel | 41/4" steel | 32 | 2580 | 516 | 671 | 851 | 1032 | 1161 | 1367 | 1574 | 1780 | 2012 | 2219 | 2451 | 2709 |
|  |  | S-540 | $11 / 4$ steel | 41/4" steel | 40 | 2690 | 538 | 700 | 888 | 1076 | 1211 | 1426 | 1641 | 1856 | 2098 | 2313 | 2556 | 2825 |
|  |  | S-832 | 2 " steel | 41/4" steel | 32 | 2610 | 522 | 679 | 861 | 1044 | 1175 | 1383 | 1592 | 1801 | 2036 | 2245 | 2480 | 2741 |
|  |  | C-340 | 3/4" copper | 41/4" alum. | 40 | 3139 | 628 | 816 | 1036 | 1256 | 1413 | 1664 | 1915 | 2166 | 2449 | 2700 | 2982 | 3296 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 3330 | 666 | 866 | 1099 | 1332 | 1499 | 1765 | 2031 | 2298 | 2597 | 2864 | 3164 | 3497 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 3260 | 652 | 848 | 1076 | 1304 | 1467 | 1728 | 1989 | 2249 | 2543 | 2804 | 3097 | 3423 |
| EM-5 | 43/4" | S-532 | 11/4" steel | 41/4" steel | 32 | 1290 | 258 | 336 | 426 | 516 | 581 | 684 | 787 | 890 | 1006 | 1109 | 1226 | 1355 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 1370 | 274 | 356 | 452 | 548 | 617 | 726 | 836 | 945 | 1069 | 1178 | 1302 | 1439 |
|  |  | S-832 | 2" steel | 4/4/4 steel | 32 | 1310 | 262 | 341 | 432 | 524 | 590 | 694 | 799 | 904 | 1022 | 1127 | 1245 | 1376 |
|  |  | C-340 | 3/4" copper | $41 / 4$ alum. | 40 | 1656 | 331 | 431 | 547 | 663 | 745 | 878 | 1010 | 1143 | 1292 | 1424 | 1574 | 1739 |
|  |  | C-440 | 1" copper | 41/4" alum. | 40 | 1750 | 350 | 455 | 578 | 700 | 788 | 928 | 1068 | 1208 | 1365 | 1505 | 1663 | 1838 |
|  |  | C-540 | 11/4" copper | 411/4 alum. | 40 | 1720 | 344 | 447 | 568 | 688 | 774 | 912 | 1049 | 1187 | 1342 | 1479 | 1634 | 1806 |
| EM-12 <br> Two-tier element | 113/4" | S-532 | 11/4" steel | 4/41" steel | 32 | 2270 | 454 | 590 | 749 | 908 | 1022 | 1203 | 1385 | 1566 | 1771 | 1952 | 2157 | 2384 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 2390 | 478 | 622 | 789 | 956 | 1076 | 1267 | 1458 | 1649 | 1864 | 2055 | 2271 | 2510 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 2290 | 458 | 596 | 756 | 916 | 1031 | 1214 | 1397 | 1580 | 1786 | 1969 | 2176 | 2405 |
|  |  | C-340 | 3/4 copper | 41/4" alum. | 40 | 2918 | 584 | 759 | 963 | 1167 | 1314 | 1547 | 1780 | 2014 | 2276 | 2510 | 2772 | 3064 |
|  |  | C-440 | 1" copper | 4114" alum. | 40 | 3090 | 618 | 804 | 1020 | 1236 | 1391 | 1638 | 1885 | 2132 | 2410 | 2657 | 2936 | 3245 |
|  |  | C-540 | 11/4" copper | 4114" alum. | 40 | 3030 | 606 | 788 | 1000 | 1212 | 1364 | 1606 | 1848 | 2091 | 2363 | 2606 | 2879 | 3182 |
| EM-19 <br> Three-tier element | 183/4" | S-532 | $11 / 4$ " steel | 4/4/4" steel | 32 | 3060 | 612 | 796 | 1010 | 1224 | 1377 | 1622 | 1867 | 2111 | 2387 | 2632 | 2907 | 3213 |
|  |  | S-540 | 11/4" steel | 41/4" steel | 40 | 3140 | 628 | 816 | 1036 | 1256 | 1413 | 1664 | 1915 | 2167 | 2449 | 2700 | 2983 | 3297 |
|  |  | S-832 | 2" steel | 41/4" steel | 32 | 3080 | 616 | 801 | 1016 | 1232 | 1386 | 1632 | 1879 | 2125 | 2402 | 2649 | 292 | 3234 |
|  |  | C-340 | $3 / 4$ copper | 41/4" alum. | 40 | 3736 | 747 | 972 | 1233 | 1495 | 1681 | 1980 | 2279 | 2578 | 2914 | 3214 | 3550 | 3923 |
|  |  | C-440 | 1" copper | 4114" alum. | 40 | 3960 | 792 | 1030 | 1307 | 1584 | 1782 | 2099 | 2416 | 2732 | 3089 | 3406 | 3762 | 4158 |
|  |  | C-540 | 11/4" copper | 41/4" alum. | 40 | 3880 | 776 | 1009 | 1280 | 1552 | 1746 | 2056 | 2367 | 2677 | 3026 | 3337 | 3686 | 4074 |

* Based on $65^{\circ}$ F entering air temperature. Note: Ratings are based on active finned length ( $5-1 / 4$ " less than overall length).


## ACCESSORIES



## TELESCOPIC ACCESSORIES



End Cap


Slotted End Cap


Filler Sleeve


Splice Plate


Outside Corner

inside Corner


S-832


C-340


C-440


## 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 ( $\mathrm{E}-75, \mathrm{H}-3$ and $\mathrm{H}-4$ ) 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 $\mathrm{E}-75$ which is packaged 3 elements to a carton). "E" and "H" elements include plastic expansion cradles.
LENGTHS: Precut standard lengths
S and C Series: $2,3,3 ½, 4,5,6,7,8,9,10,11$, 12 feet. (Canada: 2 to 8 feet) (C-340 up to 10 ft .)

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


M-1 Expansion Hanger:
Specify for bare element installations.

## BARE ELEMENT RATINGS

| Model <br> Number | Tube <br> Size and Material | Fin Size and Material (Width x Height x Thickness) | Fins per Foot | No.of Tiers 7" cl | Pressu re Drop ${ }^{\dagger}$ | Steam $1 \mathrm{PS}{ }^{\star}$ Btu/Hr. Per Foot | HOT WATER RATINGS* BTU/HR./FT. (Flow Rate 3 Ft./Sec.) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ | $210^{\circ} \mathrm{F}$ | $220^{\circ} \mathrm{F}$ |
| S-532 | 11/4IPS steel | $\begin{aligned} & 4^{1 / 4 / 4} \times 4^{1 / 4} \times .024^{\prime \prime} \\ & \text { electro-gal. steel } \end{aligned}$ | 32 | 1 | 420 | 1080 | 216 | 281 | 356 | 432 | 486 | 572 | 659 | 745 | 842 | 929 | 1026 | 1134 |
|  |  |  |  | 2 |  | 1950 | 390 | 507 | 644 | 780 | 878 | 1034 | 1190 | 1346 | 1521 | 1677 | 1853 | 2048 |
|  |  |  |  | 3 |  | 2560 | 512 | 666 | 845 | 1024 | 1152 | 1357 | 1562 | 1766 | 1997 | 2202 | 2432 | 2688 |
| S-540 | 11/4IIPS steel |  electro-gal. steel | 40 | 1 |  | 1200 | 230 | 300 | 370 | 460 | 540 | 640 | 730 | 830 | 940 | 1030 | 1140 | 1260 |
|  |  |  |  | 2 | 420 | 2210 | 442 | 575 | 729 | 884 | 995 | 1171 | 1348 | 1525 | 1724 | 1901 | 2100 | 2321 |
|  |  |  |  | 3 |  | 2810 | 562 | 731 | 927 | 1124 | 1265 | 1489 | 1714 | 1939 | 2192 | 2417 | 2670 | 2951 |
| S-832 | 2 "IPS steel | 41/4" x 41/4" x .024" electro-gal. steel | 32 | 1 |  | 1130 | 226 | 294 | 373 | 452 | 509 | 599 | 689 | 780 | 881 | 972 | 1074 | 1187 |
|  |  |  |  | 2 | 252 | 2010 | 402 | 523 | 663 | 804 | 905 | 1065 | 1226 | 1387 | 1568 | 1729 | 1910 | 2111 |
|  |  |  |  | 3 |  | 2650 | 530 | 689 | 875 | 1060 | 1193 | 1405 | 1617 | 1829 | 2067 | 2279 | 2518 | 2783 |
| C-340 | 3/4"copper | $\begin{aligned} & \hline 4 / 4^{1 / 2} \times 4 \frac{1 / 4 "}{} \times .020^{\prime \prime} \\ & \text { aluminum } \end{aligned}$ | 40 | 1 |  | 1610 | 322 | 419 | 531 | 644 | 725 | 853 | 982 | 1111 | 1256 | 1385 | 1530 | 1691 |
|  |  |  |  | 2 | 708 | 2830 | 566 | 736 | 934 | 1132 | 1274 | 1500 | 172 | 1953 | 2207 | 2434 | 2689 | 2972 |
|  |  |  |  | 3 |  | 3620 | 724 | 941 | 1195 | 1448 | 1629 | 1919 | 2208 | 2498 | 2824 | 3113 | 3439 | 3801 |
| C-440 | 1" copper | $\begin{aligned} & \hline 4 / 44^{1 \times 4} \times 4 / 4 \times .020 " \\ & \text { aluminum } \end{aligned}$ | 40 | 1 |  | 1600 | 300 | 400 | 500 | 610 | 720 | 850 | 980 | 1100 | 1250 | 1380 | 1520 | 1680 |
|  |  |  |  | 2 | 504 | 2710 | 542 | 705 | 894 | 1084 | 1220 | 1436 | 1653 | 1870 | 2114 | 2331 | 2575 | 2846 |
|  |  |  |  | 3 |  | 3490 | 698 | 907 | 1152 | 1396 | 1571 | 1850 | 2129 | 2408 | 2722 | 3001 | 3316 | 3665 |
| C-540 | 11/4" copper | $\begin{array}{\|l\|} \hline 4 / 44^{1 \times 4} \times 4 / 4 \times .020 " \\ \text { aluminum } \end{array}$ | 40 | 1 |  | 1600 | 300 | 400 | 500 | 610 | 720 | 850 | 980 | 1100 | 1250 | 1380 | 1520 | 1680 |
|  |  |  |  | 2 | 396 | 2810 | 562 | 731 | 927 | 1124 | 1265 | 1489 | 1714 | 1939 | 2192 | 2417 | 2670 | 2951 |
|  |  |  |  | 3 |  | 3600 | 720 | 936 | 1188 | 1440 | 1620 | 1908 | 2196 | 2484 | 2808 | 3096 | 3420 | 3780 |
| H-1 | 3/4" copper | $\begin{gathered} \hline 3^{\prime \prime} \times 33_{1 / 4 " ~}^{\text {" }} \times .024 " \\ \text { aluminum } \end{gathered}$ | 48 | 1 |  |  | 218 | 283 | 360 | 436 | 491 | 578 | 665 | 752 | 850 | 937 | 1036 | 1145 |
|  |  |  |  | 2 | 708 |  | 392 | 510 | 647 | 784 | 882 | 1039 | 1196 | 1352 | 1529 | 1686 | 1862 | 2058 |
|  |  |  |  | 3 |  |  | 640 | 832 | 1056 | 1280 | 1440 | 1696 | 1952 | 2208 | 2496 | 2752 | 3040 | 3360 |
| H-5X | 11/4" copper | $\begin{gathered} 3^{\prime \prime} \times 33_{1 / 4}^{\prime \prime} \times .020 " \\ \text { aluminum } \end{gathered}$ | 48 | 1 |  | 940 | 188 | 244 | 310 | 376 | 423 | 498 | 573 | 649 | 733 | 808 | 893 | 987 |
|  |  |  |  | 2 | 396 | 1330 | 266 | 346 | 439 | 532 | 599 | 705 | 811 | 918 | 1037 | 1144 | 1264 | 1397 |
|  |  |  |  | 3 |  | 2140 | 422 | 549 | 696 | 844 | 950 | 1118 | 1287 | 1456 | 1646 | 1815 | 2005 | 2216 |
| H-6X | 11/4" IPS steel | $\begin{aligned} & 3^{3 \prime} \times 3 \times 3 / 4 \mathrm{x} \times .028^{\prime \prime} \\ & \text { aluminized steel } \end{aligned}$ | 48 | 1 |  | 850 | 170 | 221 | 281 | 340 | 383 | 451 | 519 | 587 | 663 | 731 | 808 | 893 |
|  |  |  |  | 2 | 420 | 1290 | 258 | 335 | 426 | 516 | 581 | 684 | 787 | 890 | 1006 | 1109 | 1226 | 1355 |
|  |  |  |  | 3 |  | 1840 | 368 | 478 | 607 | 736 | 828 | 975 | 1122 | 1270 | 1435 | 1582 | 1748 | 1932 |

${ }^{*}$ Based on $65^{\circ}$ F entering air temperature. † Millinches per foot, based on flow rate of 3FPS; according to ASHRAE fundamentals handbook, 2001 NOTE: H-3, H-4 and E-3 elements are not recommended for bare-element installation. H-1 is not recommended for steam applications. Ratings are based on active finned length (S \& C series 5 " less than overall length.) (H series-4" less than overall length.)

Active length of each element is as follows:
For copper tube H and C elements -4 " less than total length. For steel pipe H and S elements $-5^{\prime \prime}$ 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 $53 / 4^{\prime \prime}$ from finished floor to bottom of fins of lowest element.

Slant/Fin Trough Heater is a floor recessed commercial finned tube heater. It is ideal for applications with windows coming to the floor, installation by doors or just applications where the building owner does not want visible finned tube. For installations by windows, the cold convective air generated by the window is caught and heated in the natural convective air currents created by the Trough Heater. Cold drafts will be minimized or eliminated. No noise and no electricity.

Heat output ratings are published from $110^{\circ} \mathrm{F}$ to $200^{\circ} \mathrm{F}$ water and low pressure steam $\left(215^{\circ} \mathrm{F}\right) 1$ P.S.I. steam ratings. It is ideal for use with high efficiency boiler, standard efficiency boiler and district steam applications. Your choice of $3 / 411$ " 1 , 1 $1 / 4$ " copper tube and $1 \frac{1}{4} / 4^{\prime \prime}$ 2" schedule 40 steel pipe elements with $41 / 4^{\prime \prime} \times 41 / 4^{\prime \prime}$ square fins.
With finned tube heating buildings as far south as the South Pole and as far north as Prudhoe Bay- Alaska, Slant/Fin should be your choice for quality and high performance heating products.

| $\underset{\#}{\text { Model }}$ | Tube <br> Size \& Material | Fins <br> Size \& Material | $\begin{array}{\|l\|} \hline \text { Fins } \\ \text { Per } \\ \text { Foot } \end{array}$ | Entering Air Temp. ${ }^{\circ}{ }^{F}$ | $\begin{gathered} \text { Steam } \\ 1 \text { PSI } \\ \text { BTU/HR. } \\ \text { per } \\ \text { Foot } \end{gathered}$ | Hot Water Ratings <br> BTU/HR./FT. (Flow Rate 3 Ft/Sec.) |  |  |  |  |  |  |  |  |  | " ${ }^{\text {" }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $110^{\circ} \mathrm{F}$ | $120^{\circ} \mathrm{F}$ | $130^{\circ} \mathrm{F}$ | $140^{\circ} \mathrm{F}$ | $150^{\circ} \mathrm{F}$ | $160^{\circ} \mathrm{F}$ | $170^{\circ} \mathrm{F}$ | $180^{\circ} \mathrm{F}$ | $190^{\circ} \mathrm{F}$ | $200^{\circ} \mathrm{F}$ |  |
| S-532 | 1-1/4" IPS Steel | $4-1 / 4^{\prime \prime} \times 4-1 / 4^{\prime \prime} \times .024$ <br> Electro-gal steel | 32 | 47 | 900 | 180 | 230 | 300 | 360 | 410 | 480 | 550 | 620 | 700 | 770 | 6-11/16" |
| S-540 | 1-1/4" IPS Steel | $4-1 / 4^{\prime \prime} \times 4-1 / 4^{\prime \prime} \times .024$ <br> Electro-gal steel | 40 | 47 | 1000 | 200 | 260 | 330 | 400 | 450 | 530 | 610 | 690 | 780 | 860 | 6-11/16" |
| S-832 | 2" IPS Steel | $4-1 / 4^{\prime \prime} \times 4-1 / 4^{\prime \prime} \times .024$ <br> Electro-gal steel | 32 | 47 | 940 | 190 | 240 | 310 | 380 | 420 | 500 | 570 | 650 | 730 | 810 | 7-1/16" |
| C-340 | 3/4" IPS Copper | $\begin{aligned} & \hline 4-1 / 4 " \times 4-1 / 4^{\prime \prime} \times .020 \\ & \text { Aluminum } \end{aligned}$ | 40 | 47 | 1340 | 270 | 350 | 440 | 540 | 600 | 710 | 820 | 920 | 1050 | 1150 | 6-5/16" |
| C-440 | 1" IPS Copper | $\begin{gathered} \hline 4-1 / 4 \text { " } \times 4-1 / 4^{\prime \prime} \times .020 \\ \text { Aluminum } \end{gathered}$ | 40 | 47 | 1290 | 260 | 340 | 430 | 520 | 580 | 680 | 790 | 890 | 1010 | 1110 | 6-1/2" |
| C-540 | 1-1/4" IPS <br> Copper | $\begin{aligned} & 4-1 / 4^{\prime \prime} \times 4-1 / 4^{\prime \prime} \times .020 \\ & \text { Aluminum } \end{aligned}$ | 40 | 47 | 1330 | 270 | 350 | 440 | 530 | 600 | 700 | 810 | 920 | 1040 | 1140 | 6-5/8" |

Notes: 1. Ratings based on 24 square inches for free open air per linear foot of grille for air inlet and also outlet.
2. For $65^{\circ} \mathrm{F}$ entering air temperature divide above ratings by 1.2 to arrive at output.

Model
TRL Liner- the standard liner is 20 gauge galvanized steel. 18 and 16 gauge steel is optional available in 2,3,4,5,6,7, and 8 foot lengths.
TRB TR Baffle- optimizes heat output by separating heated supply air with cool return air. Installed between element and air intake and ends just below the Grille. The baffle is 20 gauge galvanized steel. Available in same lengths of Liner and should be matched up to every foot of active finned element.
$\begin{array}{cl}\text { LBS } & \text { Liner Brackets Supports- made from 3/16" thick hot rolled steel. TR Brackets support } \\ \mathrm{t} & \text { he heating element and the TR Baffle. }\end{array}$

| Element | Recommended number of brackets for given length |  |  |
| :---: | :---: | :---: | :---: |
|  | 2 | 3 | 4 |
| S-532, S-540 | $2-4 \mathrm{ft}$. | $5-7 \mathrm{ft}$. | $8 \mathrm{ft}$. |
| S-832 | $2-4 \mathrm{ft}$. | $5-6 \mathrm{ft}$ | $7-8 \mathrm{ft}$. |
| C-340, C-440, C-540 | $2-5 \mathrm{ft}$ | $6-8 \mathrm{ft}$. | - |

SC Hanger Slide Cradle that mounts on Liner Bracket to hold element or bare pipe. SC Hangers prevent expansion noise do to expansion/contraction of heating elements and bare pipe. Use one for every Liner Bracket.
Elements Select from 6 element models. Three models with steel pipe and steel fines and three models with copper pipes and aluminum fins.
Grille The floor grille is supplied by others. There are several grille manufacturers who manufacture and supply custom grilles designed to match the rooms décor.

## SPECIFICATIONS

Ratings are based on active (finned) length. Active length of " $S$ " and " C " elements is $5 \frac{1}{4}$ " less than total length. Fin size of " $S$ " and " $C$ " elements is $4 \frac{1}{4}$ " $x$ $41 / 4$ ". 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: | $65^{\circ}$ |
| Steam temperature: | $215^{\circ}$ |

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 BTUH OUTPUTS AT WATER FLOW RATES OF LESS THAN 3 FEET PER SECOND. AHRI RECOMMENDS THAT A MINIMUM VELOCITY OF $0.25 \mathrm{ft} / \mathrm{s}$ BE USED IN SYSTEM DESIGN TO PREVENT A LAMINAR FLOW CONDITION.

| 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 |

## Steam Ratings

Steam ratings are expressed in BTU per hour per lineal foot of activelength, based on steam or $215^{\circ} \mathrm{F}, 1 \mathrm{PSI},\left(101.5^{\circ} \mathrm{C}\right)$ and $65^{\circ} \mathrm{F}\left(18.3^{\circ} \mathrm{C}\right)$ entering air.

## Recommended Installed Height

 (Does not apply to units with horizontal outlet)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:


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

| Installed height | $36^{\prime \prime}$ |
| :--- | :--- |$\quad[1.00 \div 1.15] \times 1500=1304 \mathrm{Btu} / \mathrm{Hr} . / \mathrm{Ft}$.

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


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 $41 / 4$ from finished floor to bottom of front panel.

| Height $\dagger$ | Factor | Height $\dagger$ | Factor |
| :---: | :---: | :---: | :---: |
| 36" or more | 1.00 | 25 | 1.08 |
| 34" | 1.01 | $24 "$ | 1.09 |
| $32 "$ | 1.02 | 23" | 1.10 |
| 30" | 1.03 | $22^{\prime \prime}$ | 1.11 |
| 29" | 1.04 | $21^{\prime \prime}$ | 1.12 |
| 28" | 1.05 | 20" | 1.13 |
| 27" | 1.06 | 19" | 1.14 |
| 26" | 1.07 | 18 " or less | 1.15 |

## 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: $3^{1 / 4}$ 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

TABLE 3
CORRECTION FACTORS FOR WATER TEMPERATURES $\dagger$ AND AIR TEMPERATURES OTHER THAN STANDARD

| AVG. WATER TEMP. | ENTERING AIR TEMPERATURE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 110 | 120 | 130 | 140 | 150 |
| 90 | . 19 | . 16 | . 13 | . 12 | . 11 | . 06 |  |  |  |  |  |  |  |  |  |  |  |
| 100 | . 25 | . 22 | . 19 | . 17 | . 15 | . 11 | . 08 | . 06 |  |  |  |  |  |  |  |  |  |
| 110 | . 31 | . 28 | . 25 | . 22 | . 20 | . 16 | . 13 | . 11 | . 08 | . 06 |  |  |  |  |  |  |  |
| 120 | . 38 | . 34 | . 31 | . 28 | . 26 | . 22 | . 19 | . 16 | . 13 | . 11 | . 08 | . 06 |  |  |  |  |  |
| 130 | . 45 | . 42 | . 38 | . 35 | . 33 | . 28 | . 25 | . 22 | . 19 | . 16 | . 13 | . 11 | . 06 |  |  |  |  |
| 140 | . 53 | . 49 | . 45 | . 42 | . 40 | . 34 | . 31 | . 28 | . 25 | . 21 | . 19 | . 16 | . 11 | . 06 |  |  |  |
| 150 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 34 | . 31 | . 28 | . 24 | . 21 | . 16 | . 11 | . 06 |  |  |
| 155 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 34 | . 31 | . 29 | . 25 | . 19 | . 14 | . 09 |  |  |
| 160 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 34 | . 31 | . 28 | . 21 | . 16 | . 11 | . 06 |  |
| 165 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 34 | . 31 | . 25 | . 19 | . 14 | . 09 |  |
| 170 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 34 | . 28 | . 21 | . 16 | . 11 | . 06 |
| 175 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 38 | . 31 | . 25 | . 19 | . 14 | . 09 |
| 180 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 42 | . 34 | . 28 | . 21 | . 16 | . 11 |
| 185 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 45 | . 38 | . 31 | . 25 | . 19 | . 14 |
| 190 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 49 | . 42 | . 34 | . 28 | . 21 | . 16 |
| 195 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 53 | . 45 | . 38 | . 31 | . 25 | . 19 |
| 200 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 57 | . 49 | . 42 | . 34 | . 28 | . 21 |
| 205 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 61 | . 53 | . 45 | . 38 | . 31 | . 25 |
| 210 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 65 | . 57 | . 49 | . 42 | . 34 | . 28 |
| 215 (Standard Temp.) | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 69 | . 61 | . 53 | . 45 | . 38 | . 31 |
| 220 | 1.25 | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 73 | . 65 | . 57 | . 49 | . 42 | . 34 |
| 225 | 1.32 | 1.25 | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 78 | . 69 | . 61 | . 53 | . 45 | . 38 |
| 230 | 1.39 | 1.32 | 1.25 | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 82 | . 73 | . 65 | . 57 | . 49 | . 42 |
| 235 | 1.41 | 1.39 | 1.32 | 1.25 | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 86 | . 78 | . 69 | . 61 | . 53 | . 45 |
| 240 | 1.44 | 1.41 | 1.39 | 1.32 | 1.25 | 1.20 | 1.14 | 1.09 | 1.05 | 1.00 | . 95 | . 91 | . 82 | . 73 | . 65 | . 57 | . 49 |

$\dagger$ Also applies to equivalent saturated steam temperatures.
Entering air temperature other than $65^{\circ} \mathrm{F}$ : multiply the catalog steam rating by the factors shown in Table 2. Water temperature other than $215^{\circ} \mathrm{F}$ : multiply the catalog steam rating by the factors shown in Table 2.

## 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.


## $B T U H=G P M \times 500 \times \Delta T^{\circ} F$

## $G P M=(B T U H \div 500)$ $\Delta \mathrm{T}^{\circ} \mathrm{F}$

| TUBE/PIPE WATER CAPACITIES AND QUANTITIES |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| CIRCULATED AT VELOCITY OF 3* FEET PER SECOND |  |  |  |  |
| Size | Gals. Per | Gals./Min. @ | Lbs./Hr. @ |  |
| 3/4" Copper Tube | Linear Ft. | 3'/Sec. Vel.* | $3^{\prime} /$ Sec. Vel.* |  |
| 1" Copper Tube | 0.023 | 4.14 | 2,070 |  |
| 1-1/4" Copper Tube | 0.040 | 7.20 | 3,600 |  |
| 1-1/4"NPT Steel Pipe | 0.063 | 11.34 | 5,670 |  |
| 2" NPT Steel Pipe | 0.077 | 13.86 | 6,930 |  |

*3'/Sec. Velocity is Basis for Hot Water Rating Factors.

## Water Velocity Ft./Sec. = Lbs. per Hour <br> (Gals. per Ft.)(3600)(8.3)



## ELEMENT APPLICATION FOR STEAM

## Maximum Runs. Lineal Feet of Fin-Pipe:

The following table indicates maximum normal runs of fin-pipe for steam systems. These runs in lineal feet are based on conservative velocities and the rapid removal of condensate. Pressure drops in column headings are per hundred equivalent feet of pipe.

| Type | Size | Square Ft. per Linear Ft. @ 1 psi | One Pipe | Two Pipe |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Low Pressure |  | 30 psi | $150 \text { psi }$ |
|  |  |  |  | 1 oz . | 2 oz. | 8 oz. | 16 oz . |
|  |  |  | Maximum Length of Individual Run in Lineal Feet |  |  |  |  |
| S540 | 1-1/4" ips | 6.30 | 10 | 18 | 25 | 52 | 90 |
| S832 | 2" ips | 5.70 | 30 | 60 | 85 | 190 | 300 |
| C540 | 1-1/4" cop. | 7.50 | 8 | 16 | 22 | 45 | - |
| H5X | 1-1/4" cop. | 4.70 | 8 | 16 | 22 | 45 | - |
| H6X | 1-1/4" ips | 4.10 | 10 | 18 | 25 | 52 | - |

* Made of schedule 40 seamed pipe

STEAM CAPACITIES OF PIPING (Low Pressure, 1psig) "Square Feet, EDR"

| Pipe Size | Horizontal Supply and Return Mains |  |  |  | Two-Pipe |  |  | One-Pipe |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1 \mathrm{oz}$. | 2 oz. | 3 oz. | Risers |  | Undripped Runouts | Supply Risers | Runouts \& Valves |
| $1{ }^{\prime \prime}$ | Supply | 56 | 79 | 111 | Upfeed | 56 | 34 | 45 | 28 |
|  | Wet Return Dry Return | $\begin{aligned} & 700 \\ & 320 \end{aligned}$ | $\begin{gathered} 1000 \\ 412 \end{gathered}$ | $\begin{gathered} 1400 \\ 460 \end{gathered}$ | Return | 450 |  |  |  |
| 1-1/4" | Supply | 122 | 173 | 245 | Upfeed | 122 | 75 | 98 | 62 |
|  | Wet Return Dry Return | $\begin{gathered} 1200 \\ 670 \end{gathered}$ | $\begin{gathered} \hline 1700 \\ 868 \end{gathered}$ | $\begin{gathered} 2400 \\ 962 \end{gathered}$ | Return | 990 |  |  |  |
| 1-1/2" | Supply | 190 | 269 | 380 | Upfeed | 190 | 108 | 152 | 93 |
|  | Wet Return Dry Return | $\begin{aligned} & 1900 \\ & 1060 \end{aligned}$ | $\begin{aligned} & 2700 \\ & 1360 \end{aligned}$ | $\begin{aligned} & 3800 \\ & 1510 \end{aligned}$ | Return | 1500 |  |  |  |
| $2 "$ | Supply | 386 | 546 | 771 | Upfeed | 386 | 195 | 288 | 169 |
|  | Wet Return Dry Return | $\begin{aligned} & 4000 \\ & 2300 \end{aligned}$ | $\begin{aligned} & 5600 \\ & 2960 \end{aligned}$ | $\begin{aligned} & 8000 \\ & 3300 \end{aligned}$ | Return | 3000 |  |  |  |
| 2-1/2" | Supply | 635 | 898 | 1270 | Upfeed | 635 | 395 | 464 | 260 |
|  | Wet Return Dry Return | $\begin{aligned} & \hline 6700 \\ & 3800 \end{aligned}$ | $\begin{aligned} & 9400 \\ & 4900 \end{aligned}$ | $\begin{gathered} 13,400 \\ 5450 \end{gathered}$ | Return | - |  |  |  |
| $3 "$ | Supply | 1160 | 1650 | 2330 | Upfeed | 1130 | 700 | 800 | 475 |
|  | Wet Return Dry Return | $\begin{gathered} 10,700 \\ 7000 \end{gathered}$ | $\begin{gathered} 15,000 \\ 9000 \end{gathered}$ | $\begin{aligned} & 21,400 \\ & 10,000 \end{aligned}$ | Return | - |  |  |  |
| 3-1/2" | Supply | 1740 | 2460 | 3470 | Upfeed | 1550 | 1150 | 1140 | 745 |
|  | Wet Return Dry Return | $\begin{aligned} & 16,000 \\ & 10,000 \end{aligned}$ | $\begin{aligned} & \hline 22,000 \\ & 12,900 \end{aligned}$ | $\begin{aligned} & \hline 32,000 \\ & 14,300 \end{aligned}$ | Return | - |  |  |  |
| 4" | Supply | 2460 | 3480 | 4910 | Upfeed | 2040 | 1700 | 1520 | 1110 |
|  | Wet Return Dry Return | $\begin{aligned} & 22,000 \\ & 15,000 \end{aligned}$ | $\begin{aligned} & 31,000 \\ & 19,000 \end{aligned}$ | $\begin{aligned} & 44,000 \\ & 21,500 \end{aligned}$ | Return | - |  |  |  |
| 5" | Supply | 4550 | 6430 | 9090 | Adapted from the ASHRAE Guide. |  |  |  |  |
| $6{ }^{\prime \prime}$ | Supply | 7460 | 10,550 | 14,900 |  |  |  |  |  |  |  |  |
| For downfeed supply risers, use "Supply" figures above. |  |  |  |  |  |  |  |  |  |  |  |  |

Pressure drop columns are in ounces per 100 feet, equivalent length of run. Equivalent length of run can be approximated as double the actual length of pipe.
Total pressure drop for the entire system should not exceed one-half the normal boiler-guage pressure. Supply and return mains must be sized for a uniform pressure drop for each system.

To convert to pounds, divide above figure by 4.
To convert to Btu's, multiply above figures by 240 .
Pipe capacities are based on a normal pitch of $1 / 4^{\prime \prime}$ in 10 feet for two-pipe steam, and $1 / 2^{\prime \prime}$ pitch in 10 feet for one-pipe steam. If pitch is increased to 2 " in 10 ", the runout capacities above may be increased by $20 \%$.
The maximum lengths of fin-pipe listed above may also be increased by $20 \%$ if 2 " pitch is used.

Notes
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$\qquad$ $\longrightarrow$

## SPECIFICATIONS

## Multi/Pak 90

Furnish and install as shown on the plans Multi/Pak ${ }^{\circledR} 90$-slope-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin. Cover shall be of two interlocking sections: a top cover and front cover. Top cover will be common to one-tier (90-14) and twotier (90-21) models. (Optional: A knob-actuated damper shall be provided). Top cover shall consist of stamped grille with pencil-proof air discharge louvers. Front cover shall interlock with top cover to form lateral decorative panel. Front cover shall be removable without removal of the top cover.

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

Provide and install Slant/Fin's internal splice plate. The internal splice plate shall provide an internal slip connection without creating unsightly weld marks on the front of the cover. The resultant joint will be a neat butt joint; the need for an external splice plate is eliminated.

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 panel 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 ${ }^{\oplus} 93$-flat-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin.

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. (Optional: 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 ${ }^{\circledR} 95$-flat-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin.

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. (Optional: 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.

## JA-14, JA-21 or JA-28 Series

Furnish and install as shown on the plans JA slope-top fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin. Cover shall be of one-piece construction. Top part of enclosure shall consist of stamped grille with pencil-proof air discharge louvers. (Optional: A knob-actuated damper shall be provided.)

Cover shall be fabricated from 18 (16 or 14) gauge galvanized steel. Cover finish shall be galvanized or powder coated to a color as per specification. Brackets and hangers shall have a galvanized finish. Cover panels to join using Internal Splice Plates, resultant joint has covers butting to one another resulting in a clean joint without unsightly weld marks on front of cover.
(Optional: Cover with anodized aluminum grill in place of pencil-proof louvers. Cover shall be fabricated from 18 (16 or 14) gauge galvanized steel. Cover finish shall be galvanized or powder coated to a color as per specification. Brackets and hangers shall have a galvanized finish. Covers panels shall join using slip joint resulting in a clean joint.)Please note that knob-actuated damper is not available on aluminum grill cover.
(Optional: A full height back panel shall be provided of 20 gauge galvanized steel.)

Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

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 panel and element support.

## JL-10 Series

Furnish and install as shown on the plans JL-10 slopetop fin-tube enclosures with elements, required mounting components and all accessories as manufactured by Slant/Fin.

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

Cover shall be fabricated from 18 (16 or 14) gauge galvanized steel finish or powder coated to a color as per specification. Brackets and hangers shall have a galvanized finish.
(Optional: Cover with anodized aluminum grill in place of pencil proof louvers. Cover shall be fabricated from 18 (16 or 14)-gauge galvanized steel. Cover finish shall be galvanized or powder coated to a color as per specification. Brackets and hangers shall have a galvanized finish. Cover panels shall join using slip joint resulting in a clean joint.) Please note that damper is not available on aluminum grill cover.
(Optional: A full height back panel shall be provided of 20-gauge galvanized steel.)

Provide all required accessories for complete installation. Cover accessories shall be telescopic and shall match enclosure color.

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 panel and element support.

## 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.

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 electro galvanized shall consist of stamped grille with pencil-proof air discharge louvers. All enclosures shall have female-to-female slip joint connection with interlocking internal splice. The internal splice provides additional strength with a nearly invisible joint.

Cover shall be fabricated in 16 gauge ( 14 gauge optional) galvanized steel 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 $\qquad$ . 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 electro 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. Cover shall be of one piece construction. Enclosure shall be (TBG-17, TBG-24) and shall have (1 or 2) tier element. (Optional: A knob-actuated damper shall be provided.) Top and bottom slope of enclosure shall consist of stamped grille with pencilproof air discharge louvers. All enclosures shall have female-to-female slip joint connection with interlocking internal splice. The internal splice provides additional strength with a nearly invisible joint. (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 16 gauge ( 14 gauge option) steel in 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 $\qquad$ 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 electro-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.

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. (Optional: A knobactuated damper shall be provided.) Top part of enclosure shall consist of stamped grille with pencil-proof air discharge louvers. All enclosures shall have female-tofemale slip joint connection with interlocking internal splice. The internal splice provides additional strength with a nearly invisible joint. (Optional: A full height back panel shall be provided of 20-gauge electro galvanized steel finish.)

Cover shall be fabricated from 18 (16 or14) 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 $\qquad$ . 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 electro galvanized steel shall be telescopic and match enclosure color.

350 Series
Furnish and install 350 Series Model
baseboard cover assembly as manufactured by
Slant/Fin, consisting of one-piece bottom, back and top panel, and one-piece 19 (16) 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 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 model HD-850, HD-1400 $\qquad$ HD Series slope-top baseboard with element, required mounting components and accessories as manufactured by Slant/Fin. 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 galvanized steel, back panel from 20-gauge galvanized steel. The front panel \& accessories shall be finished in galvanized finish or as custom color matched as per specifications. Fin-tube element(s) shall be Model $\qquad$ Provide lengths, heights and
capacities as scheduled on plans.
Bracket with element hanger shall be spot welded to back panel every 12 inches. There shall be dimpled anchoring holes every 12 inches on front cover. Use 8 x $3 / 8$ " self-tapping screws with countersunk heads to fasten front cover to brackets. Screws recess into dimpled anchoring holes on front cover. Screws are supplied in carton with cover.

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. Accessories to be fastened with screws (pan-head) supplied by others.

## LC Series

Furnish and install as shown on the plans model (LC-850, LC-1400) LC Series-slope top baseboard with element, required brackets and accessories as manufactured by Slant/Fin.

Front Cover shall be fabricated from 18-gauge galvanized steel. Top horizontal lip of cover shall be no wider than $7 / 8$ inch, this is to prevent standing on the cover. Outlet louvers shall be located on the front sloped face of the cover, louvers located on the top of the cover are not acceptable. Cover finish shall be galvanized finish or custom color matched as per specification.

Front cover to be mounted on the wall with one piece wall brackets. Brackets shall be spaced no further than 2 feet apart with bracket secured to wall studs and not to the wall board. Slide-action expansion cradles shall be inserted between heating element and cover brackets. Slide-action expansion cradles are supplied with heating element. Installer shall secure front cover to mounting brackets by drilling hole into vertical flange on lower front cover and screwing front cover to each wall bracket. Screws are field supplied.

Finned tube heating element shall be Model $\qquad$ (One, Two) tiers of element to be installed within cover. Provide lengths, heights and capacities as scheduled on plans. (Add specification for model of element being specified)

Provide all required accessories for a complete installation. Accessories shall be telescopic to eliminate the need to perfectly butt one length of cover to the next. Accessories to be fastened with pan head screws to front cover, screws are field supplied.

## Multi/Pak 80

Furnish and install Mult/Pak 80 baseboard cover assembly as manufactured by Slant/Fin, consisting of one-piece 21-gauge back and top panel, and one-piece 18 -gauge front panel, formed of cold rolled galvanized 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 16gauge 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.

## 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. Cover shall be of one piece construction. Enclosure shall be EM-5, EM-12, EM-19, $\mathrm{F}-5, \mathrm{~F}-12$ or $\mathrm{F}-19$ 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 pencilproof air discharge louvers.

Covers shall be fabricated from 18-gauge (16gauge for EM) steel in electro galvanized finish or as custom color matched as per specification.

Brackets and hangers shall be channeled steel in electro galvanized finish. Fin-tube element(s) shall be Model $\qquad$ Provide lengths and capacitiies 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.

## 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, consisting of $1 \frac{1}{4} /{ }^{\prime \prime}$ nominal* copper seamlessdrawn tubing ${ }^{*}$ with $4^{1 / 1 / 4} \times 44^{1 / 4} \times .020$ " 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.
${ }^{*} \mathrm{C}-440$ 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, consisting of $1 \frac{114 "}{}$ IPS steel pipe* (Schedule 40), with $41 / 4 " \times 41 / 4 \times 1 \times 224$ "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 therma 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.


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