

CLASSIC

Submittal

JVB/VB-AR14 20 24
Classic Architectural
Copper/Aluminum and
Steel Elements

Specification

JVB Slip Jointed Enclosure

ENCLOSURE:

- STYLE: Classic
 OUTLET: Extruded Aluminum Pencil Proof
- LENGTHS: 2'0" thru 8'0" in 6" Increments
 MAT'L: 16 Ga. CRS (Std)
 14 Ga. CRS (Opt'l)
 16 Ga. Stainless Steel (Opt'l)*
 14 Ga. Stainless Steel (Opt'l)*
 14 Ga. Aluminum (Opt'l)
 12 Ga. Aluminum (Opt'l)
 *Available on "J" Style only
- HEIGHT: 14 7/16"
 20 7/16"
 24 7/16"
- FINISH: Baked Powder (Std)
 Baked Metallic (Opt'l)

ACCESSORIES:

- JVB Overlapping Type
 VB Underlapping Type
 All accessories return to the wall at the bottom and have pre-punched holes for fastening to the wall.

ELEMENT:

- TYPE: Cu/Al (Mechanically Expanded)
 LENGTHS: 2'0" thru 12'6" in 1" Increments for 1" & 1-1/4" Cu.
 2'0" thru 8'0" in 1" Increments for 3/4" Cu.
- TYPE: One End Flared, (Std)
- TYPE: IPS Steel (Mechanically Expanded)
 LENGTHS: 2'0" Thru 12'0" in 1" Increments
 NPT Thread both Ends (Std)
 Beveled Ends for Field Weld
- See Catalog for Working Pressures

BRACKETS:

- Water Brkt w/B.B.
 Steam Brkt w/Brkt Mtd B.B. Hgr
 Wall Brkt w/ B.B. Hgr (For 3rd Tier)

VB Wiped Edge Enclosure

BACKPLATE:

- TYPE: Partial B/P
 LENGTHS: 8'0" Only
 MAT'L: 20 Ga. Prepainted (Std)
 18 Ga. Galvannealed (Opt'l)
- TYPE: Full Ht. B/P (Opt'l)
 LENGTHS: 2'0" thru 8'0" in 6" Increments
 MAT'L: 20 Ga. Galvannealed (Opt'l)
 20 Ga. Painted (Opt'l)
 18 Ga. Painted (Opt'l)

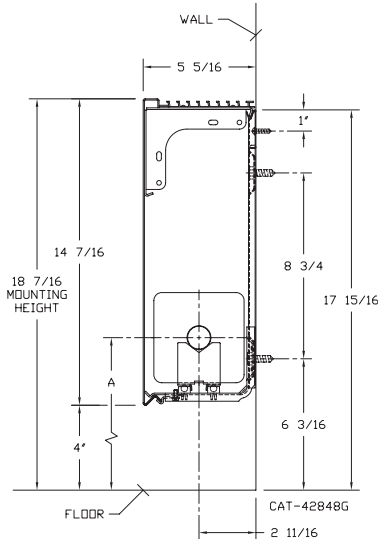
AIRSEAL:

- 1/8" x 3/8" Closed Cell (Opt'l)

DAMPER:

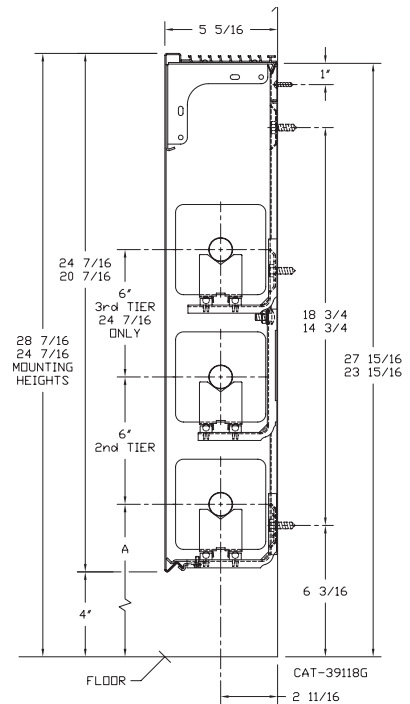
- Dial Type (Opt'l)
 Tamper Resistant (Opt'l)
 Slide Damper (Opt'l)

JVB/VB-AR14
(JVB Shown)



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

JVB/VB-AR20 & 24
(JVB Shown)



COMMERCIAL HYDRONIC PRODUCTS
 260 North Elm St., Westfield, MA 01085
 (413) 564-5535 Fax: (413) 562-8437
 www.sterlingheat.com



PROJECT: _____ DATE: _____
 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 PO NUMBER: _____

STYLE JVB/VB-AR14 20 24

COPPER/ALUMINUM ELEMENT RATINGS

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

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MTG. HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|-----------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | |
| 1.00 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 | | | | | | | | |
| 3/4" | C3/4-433 | 3-5/8" x 4-1/4" | 32 | .020 | 14 | 1 | 18-7/16 | 1360 | 1170 | 1060 | 940 | 830 | 720 | 610 | 540 | 450 | 350 |
| | | | | | 20 | 1 | 24-7/16 | 1400 | 1200 | 1090 | 970 | 850 | 740 | 630 | 560 | 460 | 360 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2220 | 1910 | 1730 | 1530 | 1350 | 1180 | 1000 | 890 | 730 | 580 |
| | | | | | 24 | 1 | 28-7/16 | 1425 | 1230 | 1110 | 980 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2270 | 1950 | 1770 | 1570 | 1380 | 1200 | 1020 | 910 | 750 | 590 |
| 3/4" | C3/4-434 | 3-5/8" x 4-1/4" | 40 | .020 | 14 | 1 | 18-7/16 | 1620 | 1390 | 1260 | 1120 | 990 | 860 | 730 | 650 | 530 | 420 |
| | | | | | 20 | 1 | 24-7/16 | 1710 | 1470 | 1330 | 1180 | 1040 | 910 | 770 | 680 | 560 | 440 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24 | 1 | 28-7/16 | 1800 | 1550 | 1400 | 1240 | 1100 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2490 | 2140 | 1940 | 1720 | 1520 | 1320 | 1120 | 1000 | 820 | 650 |
| 3/4" | C3/4-435 | 3-5/8" x 4-1/4" | 50 | .020 | 14 | 1 | 18-7/16 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 |
| | | | | | 20 | 1 | 24-7/16 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2400 | 2060 | 1870 | 1660 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| | | | | | 24 | 1 | 28-7/16 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2530 | 2180 | 1970 | 1750 | 1540 | 1340 | 1140 | 1010 | 830 | 660 |
| 1" | C433 | 3-5/8" x 4-1/4" | 32 | .020 | 14 | 1 | 18-7/16 | 1410 | 1210 | 1100 | 970 | 860 | 750 | 630 | 560 | 470 | 370 |
| | | | | | 20 | 1 | 24-7/16 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2320 | 2000 | 1810 | 1600 | 1420 | 1230 | 1040 | 930 | 770 | 600 |
| | | | | | 24 | 1 | 28-7/16 | 1480 | 1270 | 1150 | 1020 | 900 | 780 | 670 | 590 | 490 | 380 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| 1" | C434 | 3-5/8" x 4-1/4" | 40 | .020 | 14 | 1 | 18-7/16 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 |
| | | | | | 20 | 1 | 24-7/16 | 1800 | 1550 | 1400 | 1240 | 1100 | 950 | 810 | 720 | 590 | 470 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24 | 1 | 28-7/16 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| 1" | C435 | 3-5/8" x 4-1/4" | 50 | .020 | 14 | 1 | 18-7/16 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 20 | 1 | 24-7/16 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| | | | | | 24 | 1 | 28-7/16 | 2170 | 1870 | 1690 | 1500 | 1320 | 1150 | 980 | 870 | 720 | 560 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2660 | 2290 | 2070 | 1840 | 1620 | 1410 | 1200 | 1060 | 880 | 690 |
| 1-1/4" | C1433 | 3-5/8" x 4-1/4" | 32 | .020 | 14 | 1 | 18-7/16 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 |
| | | | | | 20 | 1 | 24-7/16 | 1420 | 1220 | 1110 | 980 | 870 | 750 | 640 | 570 | 470 | 370 |
| | | | | | 20 | 2 @ 6 CL | 24-7/16 | 2280 | 1960 | 1780 | 1570 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 24 | 1 | 28-7/16 | 1450 | 1250 | 1130 | 1000 | 880 | 770 | 650 | 580 | 480 | 380 |
| | | | | | 24 | 2 @ 6 CL | 28-7/16 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 |
| 1-1/4" | C1434 | 3-5/8" x 4-1/4" | 40 | .020 | 14 | 1 | 18-7/16 | 1660 | 1430 | 1290 | 1150 | 1010 | 880 | 750 | 660 | 550 | 430 |
| | | | | | 20 | 1 | 24-7/16 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 20 | 2 @ 6 CL | 24-7/16 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 |
| | | | | | 24 | 1 | 28-7/16 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| | | | | | 24 | 2 @ 6 CL | 28-7/16 | 2600 | 2240 | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860 | 680 |
| 1-1/4" | C1435 | 3-5/8" x 4-1/4" | 50 | .020 | 14 | 1 | 18-7/16 | 1760 | 1510 | 1370 | 1210 | 1070 | 930 | 790 | 700 | 580 | 460 |
| | | | | | 20 | 1 | 24-7/16 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 |
| | | | | | 20 | 2 @ 6 CL | 24-7/16 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 |
| | | | | | 24 | 1 | 28-7/16 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 |
| | | | | | 24 | 2 @ 6 CL | 28-7/16 | 2500 | 2150 | 1950 | 1720 | 1530 | 1330 | 1130 | 1000 | 830 | 650 |
| 3/4" | C3/4-43 | 4-1/4" SQ. | 32 | .020 | 14 | 1 | 18-7/16 | 1470 | 1260 | 1150 | 1010 | 900 | 780 | 660 | 590 | 490 | 380 |
| | | | | | 20 | 1 | 24-7/16 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2310 | 1990 | 1800 | 1590 | 1410 | 1220 | 1040 | 920 | 760 | 600 |
| | | | | | 24 | 1 | 28-7/16 | 1570 | 1350 | 1220 | 1080 | 960 | 830 | 710 | 630 | 520 | 410 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2410 | 2070 | 1880 | 1660 | 1470 | 1280 | 1080 | 960 | 800 | 630 |
| 24 | 3-6 CL | 28-7/16 | 2770 | 2380 | 2160 | 1910 | 1690 | 1470 | 1250 | 1110 | 910 | 720 | | | | | |

STYLE JVB/VB-AR14 20 24

COPPER/ALUMINUM ELEMENT RATINGS

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| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MTG. HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|-----------------------|-------------------|---|------|------|------|------|------|------|------|------|-----|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° | |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | | |
| | | | | | | | | | 1.00 | 0.86 | 0.78 | 0.69 | 0.61 | 0.53 | 0.45 | .40 | .33 | .26 |
| 3/4" | C3/4-44 | 4-1/4" SQ. | 40 | .020 | 14 | 1 | 18-7/16 | 1840 | 1580 | 1440 | 1270 | 1120 | 980 | 830 | 740 | 610 | 480 | |
| | | | | | 20 | 1 | 24-7/16 | 1950 | 1680 | 1520 | 1350 | 1190 | 1030 | 880 | 780 | 640 | 510 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2360 | 2030 | 1840 | 1630 | 1440 | 1250 | 1060 | 940 | 780 | 610 | |
| | | | | | 24 | 1 | 28-7/16 | 2070 | 1780 | 1610 | 1430 | 1260 | 1100 | 930 | 830 | 680 | 540 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | |
| 3/4" | C3/4-45 | 4-1/4" SQ. | 50 | .020 | 14 | 1 | 18-7/16 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 | |
| | | | | | 20 | 1 | 24-7/16 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2480 | 2130 | 1930 | 1710 | 1510 | 1310 | 1120 | 990 | 820 | 640 | |
| | | | | | 24 | 1 | 28-7/16 | 2200 | 1890 | 1720 | 1520 | 1340 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2670 | 2300 | 2080 | 1840 | 1630 | 1420 | 1200 | 1070 | 880 | 690 | |
| 1" | C43 | 4-1/4" SQ. | 32 | .020 | 14 | 1 | 18-7/16 | 1470 | 1260 | 1150 | 1010 | 900 | 780 | 660 | 590 | 490 | 380 | |
| | | | | | 20 | 1 | 24-7/16 | 1540 | 1320 | 1200 | 1060 | 940 | 820 | 690 | 620 | 510 | 400 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2340 | 2010 | 1830 | 1610 | 1430 | 1240 | 1050 | 940 | 770 | 610 | |
| | | | | | 24 | 1 | 28-7/16 | 1580 | 1360 | 1230 | 1090 | 960 | 840 | 710 | 630 | 520 | 410 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2440 | 2100 | 1900 | 1680 | 1490 | 1290 | 1100 | 980 | 810 | 630 | |
| 1" | C44 | 4-1/4" SQ. | 40 | .020 | 14 | 1 | 18-7/16 | 1720 | 1480 | 1340 | 1190 | 1050 | 910 | 770 | 690 | 570 | 450 | |
| | | | | | 20 | 1 | 24-7/16 | 1810 | 1560 | 1410 | 1250 | 1100 | 960 | 810 | 720 | 600 | 470 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| | | | | | 24 | 1 | 28-7/16 | 1920 | 1650 | 1500 | 1320 | 1170 | 1020 | 860 | 770 | 630 | 500 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2600 | 2240 | 2030 | 1790 | 1590 | 1380 | 1170 | 1040 | 860 | 680 | |
| 1" | C45 | 4-1/4" SQ. | 50 | .020 | 14 | 1 | 18-7/16 | 1900 | 1630 | 1480 | 1310 | 1160 | 1010 | 860 | 760 | 630 | 490 | |
| | | | | | 20 | 1 | 24-7/16 | 2090 | 1800 | 1630 | 1440 | 1270 | 1110 | 940 | 840 | 690 | 540 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2510 | 2160 | 1960 | 1730 | 1530 | 1330 | 1130 | 1000 | 830 | 650 | |
| | | | | | 24 | 1 | 28-7/16 | 2250 | 1940 | 1760 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 590 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2710 | 2330 | 2110 | 1870 | 1650 | 1440 | 1220 | 1080 | 890 | 700 | |
| 1-1/4" | C143 | 4-1/4" SQ. | 32 | .020 | 14 | 1 | 18-7/16 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 | |
| | | | | | 20 | 1 | 24-7/16 | 1510 | 1300 | 1180 | 1040 | 920 | 800 | 680 | 600 | 500 | 390 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 | |
| | | | | | 24 | 1 | 28-7/16 | 1550 | 1330 | 1210 | 1070 | 950 | 820 | 700 | 620 | 510 | 400 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2390 | 2060 | 1860 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 | |
| 1-1/4" | C144 | 4-1/4" SQ. | 40 | .020 | 14 | 1 | 18-7/16 | 1690 | 1450 | 1320 | 1170 | 1030 | 900 | 760 | 680 | 560 | 440 | |
| | | | | | 20 | 1 | 24-7/16 | 1780 | 1530 | 1390 | 1230 | 1090 | 940 | 800 | 710 | 590 | 460 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24 | 1 | 28-7/16 | 1890 | 1630 | 1470 | 1300 | 1150 | 1000 | 850 | 760 | 620 | 490 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2550 | 2190 | 1990 | 1760 | 1560 | 1350 | 1150 | 1020 | 840 | 660 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14 | 1 | 18-7/16 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 | |
| | | | | | 20 | 1 | 24-7/16 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24 | 1 | 28-7/16 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14 | 1 | 18-7/16 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 | |
| | | | | | 20 | 1 | 24-7/16 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24 | 1 | 28-7/16 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |
| 1-1/4" | C145 | 4-1/4" SQ. | 50 | .020 | 14 | 1 | 18-7/16 | 1870 | 1610 | 1460 | 1290 | 1140 | 990 | 840 | 750 | 620 | 490 | |
| | | | | | 20 | 1 | 24-7/16 | 2050 | 1760 | 1600 | 1410 | 1250 | 1090 | 920 | 820 | 680 | 530 | |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2460 | 2120 | 1920 | 1700 | 1500 | 1300 | 1110 | 980 | 810 | 640 | |
| | | | | | 24 | 1 | 28-7/16 | 2210 | 1900 | 1720 | 1520 | 1350 | 1170 | 990 | 880 | 730 | 570 | |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2650 | 2280 | 2070 | 1830 | 1620 | 1400 | 1190 | 1060 | 870 | 690 | |

STYLE JVB/VB-AR14, 20 & 24

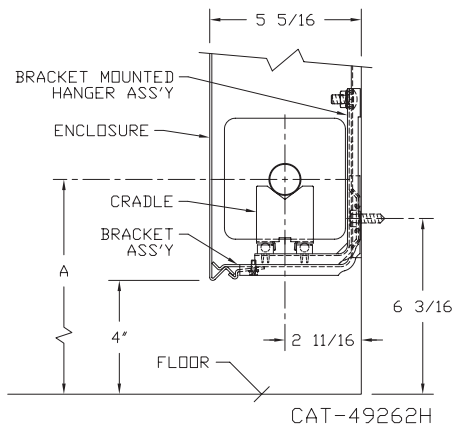
STEEL ELEMENT RATINGS

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

| TUBE SIZE | CATALOG DESIGNATION | FIN SIZE HEIGHT X WIDTH | FINS PER FT. | FIN THICKNESS IN INCHES | ENCL HEIGHT IN INCHES | TIERS AND CENTERS IN INCHES | MTG. HEIGHT IN INCHES | STEAM 215° FACTOR | HOT WATER (AVG.) | | | | | | | | |
|-----------|---------------------|-------------------------|--------------|-------------------------|-----------------------|-----------------------------|-----------------------|-------------------|---|------|------|------|------|------|------|------|------|
| | | | | | | | | | 200° | 190° | 180° | 170° | 160° | 150° | 140° | 130° | 120° |
| | | | | | | | | | CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES | | | | | | | | 1.00 |
| 1" | S43 | 4-1/4" SQ. | 32 | .032 | 14 | 1 | 18-7/16 | 1210 | 1040 | 940 | 830 | 740 | 640 | 540 | 480 | 400 | 310 |
| | | | | | 20 | 1 | 24-7/16 | 1270 | 1090 | 990 | 880 | 770 | 670 | 570 | 510 | 420 | 330 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2080 | 1790 | 1620 | 1440 | 1270 | 1100 | 940 | 830 | 690 | 540 |
| | | | | | 24 | 1 | 28-7/16 | 1310 | 1130 | 1020 | 900 | 800 | 690 | 590 | 520 | 430 | 340 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2120 | 1820 | 1650 | 1460 | 1290 | 1120 | 950 | 850 | 700 | 550 |
| 1" | S44 | 4-1/4" SQ. | 40 | .032 | 14 | 1 | 18-7/16 | 1440 | 1240 | 1120 | 990 | 880 | 760 | 650 | 580 | 480 | 370 |
| | | | | | 20 | 1 | 24-7/16 | 1530 | 1320 | 1190 | 1060 | 930 | 810 | 690 | 610 | 500 | 400 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2330 | 2000 | 1820 | 1610 | 1420 | 1230 | 1050 | 930 | 770 | 610 |
| | | | | | 24 | 1 | 28-7/16 | 1600 | 1380 | 1250 | 1100 | 980 | 850 | 720 | 640 | 530 | 420 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2395 | 2060 | 1870 | 1650 | 1460 | 1270 | 1080 | 960 | 790 | 620 |
| 1" | S45 | 4-1/4" SQ. | 50 | .032 | 14 | 1 | 18-7/16 | 1490 | 1280 | 1160 | 1030 | 910 | 790 | 670 | 600 | 490 | 390 |
| | | | | | 20 | 1 | 24-7/16 | 1565 | 1350 | 1220 | 1080 | 950 | 830 | 700 | 630 | 520 | 410 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2285 | 1970 | 1780 | 1580 | 1390 | 1210 | 1030 | 910 | 750 | 590 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2320 | 2000 | 1810 | 1600 | 1420 | 1230 | 1040 | 930 | 770 | 600 |
| | | | | | 24 | 3-6 CL | 28-7/16 | 2620 | 2250 | 2040 | 1810 | 1600 | 1390 | 1180 | 1050 | 860 | 680 |
| 1-1/4" | S143 | 4-1/4" SQ. | 32 | .032 | 14 | 1 | 18-7/16 | 1110 | 950 | 870 | 770 | 680 | 590 | 500 | 440 | 370 | 290 |
| | | | | | 20 | 1 | 24-7/16 | 1170 | 1010 | 910 | 810 | 710 | 620 | 530 | 470 | 390 | 300 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 1910 | 1640 | 1490 | 1320 | 1170 | 1010 | 860 | 760 | 630 | 500 |
| | | | | | 24 | 1 | 28-7/16 | 1200 | 1030 | 940 | 830 | 730 | 640 | 540 | 480 | 400 | 310 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 1940 | 1670 | 1510 | 1340 | 1180 | 1030 | 870 | 780 | 640 | 500 |
| 1-1/4" | S144 | 4-1/4" SQ. | 40 | .032 | 14 | 1 | 18-7/16 | 1430 | 1230 | 1120 | 990 | 870 | 760 | 640 | 570 | 470 | 370 |
| | | | | | 20 | 1 | 24-7/16 | 1520 | 1310 | 1190 | 1050 | 930 | 810 | 680 | 610 | 500 | 400 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 24 | 1 | 28-7/16 | 1590 | 1370 | 1240 | 1100 | 970 | 840 | 720 | 640 | 520 | 410 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2300 | 1980 | 1790 | 1590 | 1400 | 1220 | 1040 | 920 | 760 | 600 |
| 1-1/4" | S145 | 4-1/4" SQ. | 50 | .032 | 14 | 1 | 18-7/16 | 1460 | 1260 | 1140 | 1010 | 890 | 770 | 660 | 580 | 480 | 380 |
| | | | | | 20 | 1 | 24-7/16 | 1535 | 1320 | 1200 | 1060 | 940 | 810 | 690 | 610 | 510 | 400 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2240 | 1930 | 1750 | 1550 | 1370 | 1190 | 1010 | 900 | 740 | 580 |
| | | | | | 24 | 1 | 28-7/16 | 1595 | 1370 | 1240 | 1100 | 970 | 850 | 720 | 640 | 530 | 410 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2275 | 1960 | 1770 | 1570 | 1390 | 1210 | 1020 | 910 | 750 | 590 |
| 2" | S242 | 4-1/4" SQ. | 25 | .032 | 14 | 1 | 18-7/16 | 1090 | 940 | 850 | 750 | 660 | 580 | 490 | 440 | 360 | 280 |
| | | | | | 20 | 1 | 24-7/16 | 1130 | 970 | 880 | 780 | 690 | 600 | 510 | 450 | 370 | 290 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 1830 | 1570 | 1430 | 1260 | 1120 | 970 | 820 | 730 | 600 | 480 |
| | | | | | 24 | 1 | 28-7/16 | 1150 | 990 | 900 | 790 | 700 | 610 | 520 | 460 | 380 | 300 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 1850 | 1590 | 1440 | 1280 | 1130 | 980 | 830 | 740 | 610 | 480 |
| 2" | S243 | 4-1/4" SQ. | 32 | .032 | 14 | 1 | 18-7/16 | 1290 | 1110 | 1010 | 890 | 790 | 680 | 580 | 520 | 430 | 340 |
| | | | | | 20 | 1 | 24-7/16 | 1330 | 1140 | 1040 | 920 | 810 | 700 | 600 | 530 | 440 | 350 |
| | | | | | 20 | 2-6 CL | 24-7/16 | 2030 | 1750 | 1580 | 1400 | 1240 | 1080 | 910 | 810 | 670 | 530 |
| | | | | | 24 | 1 | 28-7/16 | 1380 | 1190 | 1080 | 950 | 840 | 730 | 620 | 550 | 460 | 360 |
| | | | | | 24 | 2-6 CL | 28-7/16 | 2060 | 1770 | 1610 | 1420 | 1260 | 1090 | 930 | 820 | 680 | 540 |
| 24 | 3-6 CL | 28-7/16 | 2370 | 2040 | 1850 | 1640 | 1450 | 1260 | 1070 | 950 | 780 | 620 | | | | | |

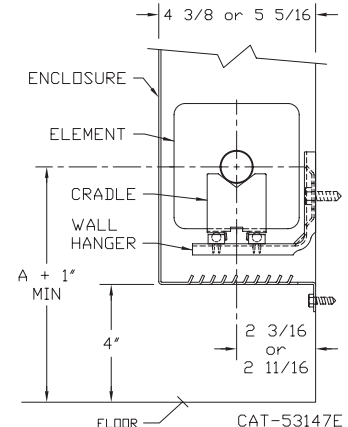
ELEMENT CENTERLINE DIMENSIONS FOR INSTALLATIONS USING STEAM

STEAM BRACKET W/ BRACKET MOUNTED HANGER



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

WALL MOUNTED BRACKET/LOUVERED INLET RETURN TO WALL



DESIGN DATA

COMMERCIAL FINNED TUBE RATING CORRECTION CHARTS

CATALOG FINNED TUBE RATINGS ARE BASED UPON THE FOLLOWING CONDITIONS:

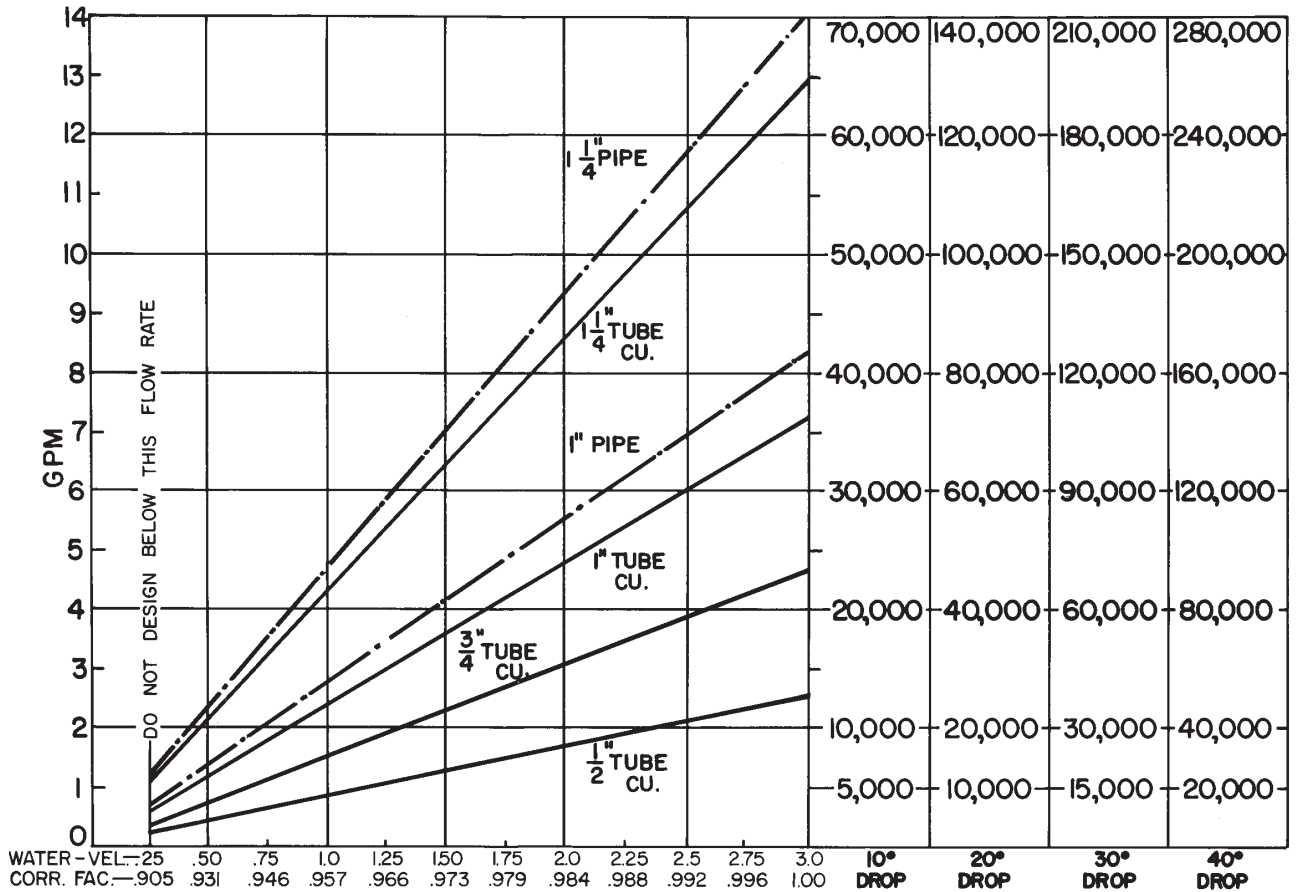
- 215°F AVERAGE WATER OR STEAM TEMPERATURE
- 65°F ENTERING AIR TEMPERATURE
- 3 FEET PER SECOND WATER FLOW RATE
- CATALOG MOUNTING HEIGHT

USE THE FOLLOWING CALCULATION WITH CORRECTION FACTORS FOR JOB CONDITIONS TO DETERMINE CORRECTED RATING:

$$\text{CORRECTED RATING} = (\text{215°F CATALOG RATING}) \times \left(\frac{\text{CORRECTION FACTOR FOR STEAM OR WATER AND AVERAGE AIR TEMP.}}{\text{CORRECTION FACTOR FOR FLOW RATE}} \right) \times \left(\frac{\text{CORRECTION FOR MOUNTING HTG.-SEE CATALOG RATING}}{\text{CORRECTION FOR MOUNTING HTG.-SEE CATALOG RATING}} \right)$$

USE THE FOLLOWING CHARTS TO SELECT CORRECTION FACTORS

CHART/WATER VEL./CORR. FACTOR / PRESS. DROP/TOTAL BTU.

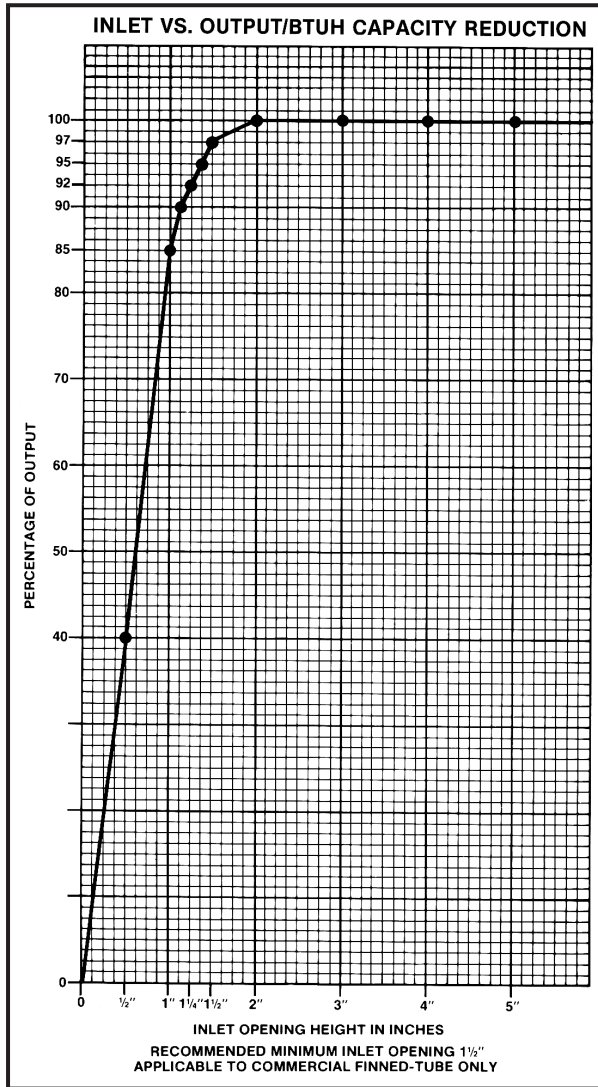


| | | | | | | | | | |
|------------------|------|------|------|------|------|------|------|------|------|
| 1/2 COP. ALUM. | 1,80 | 2,33 | 5,33 | 9,16 | | | | | |
| 3/4 COP. ALUM. | .5 | 1,5 | 3,16 | 5,4 | 6,25 | | | | |
| 1\" COP. ALUM. | .233 | .41 | .83 | 1,45 | 2,16 | 2,83 | 3,66 | | |
| 1\" PIPE | .37 | .79 | 1,3 | 2,00 | 2,70 | 3,70 | 4,80 | | |
| 1 1/4 COP. ALUM. | .16 | .33 | .55 | .79 | 1,08 | 1,33 | 1,8 | 2,25 | 2,26 |
| 1 1/4 PIPE | .09 | .18 | .31 | .5 | .70 | 1,0 | 1,1 | 1,3 | 1,6 |
| | | | | | | | | 1,8 | 2,58 |
| | | | | | | | | | 2,3 |
| | | | | | | | | | |
| | | | | | | | | | 3,3 |

PRESSURE DROP PER 100 LINEAR FT., IN FEET OF HEAD

DESIGN DATA

INLET AIR CORRECTION FACTOR



GUARANTEED WORKING PRESSURES

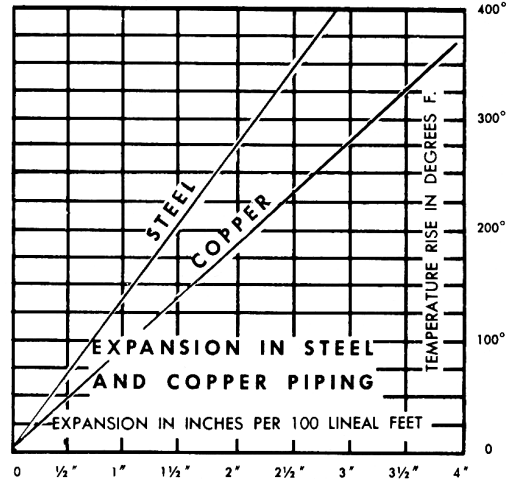
- 1" IPS — 780 AT TEMPERATURES UP TO 650°F.
 - 1 1/4" IPS — 660 AT TEMPERATURES UP TO 650°F.
 - 2" IPS — 405 AT TEMPERATURES UP TO 650°F.
 - 1 1/4" CU — 194 AT TEMPERATURES UP TO 300°F.
 - 1" CU — 204 AT TEMPERATURES UP TO 300°F.
 - 3/4" CU — 218 PSI AT TEMPERATURES UP TO 300°F.
- MAXIMUM PRESSURES AT OTHER TEMPERATURES ARE AVAILABLE UPON REQUEST.

RATE OF PITCH FOR STEAM 1/2" DROP OVER 20 FT. RUN.

| PIPE WATER CAPACITIES AND QUANTITIES CIRCULATED AT VELOCITY OF 3* FEET PER SECOND | | | |
|--|----------------------|----------------------------|--------------------------|
| Pipe Size | Gals. Per Linear Ft. | Gals./Min. @ 3' Sec. Vel.* | Lbs./Hr. @ 3' Sec. Vel.* |
| 1/2" | .016 | 2.88 | 1440 |
| 3/4" | .023 | 4.14 | 2070 |
| 1" | .040 | 7.20 | 3600 |
| 1 1/4" | .063 | 11.34 | 5660 |
| 1 1/2" | .102 | 18.36 | 9160 |
| 2" | .170 | 30.60 | 15300 |
| 2 1/2" | .275 | 49.50 | 24850 |
| 3" | .390 | 70.20 | 35000 |

*3 Ft./Sec. Velocity is Basic for Hot Water Rating Factors Shown on this Page.

$$\text{VELOCITY FT./SEC.} = \frac{\text{LBS. PER HOUR}}{(\text{GALS. PER FT.}) (3600) (8.3)}$$



GLYCOL CORRECTION FACTORS

Fluid Temperature 200°F

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

Fluid Temperature 180°F

| % Solution | Ethylene Glycol | Propylene Glycol |
|------------|-----------------|------------------|
| 20 | .946 | .982 |
| 30 | .913 | .961 |
| 40 | .879 | .934 |
| 50 | .842 | .902 |

Fluid Temperature 140°F

| % Solution | Ethylene Glycol | Propylene Glycol |
|------------|-----------------|------------------|
| 20 | .934 | .97 |
| 30 | .898 | .946 |
| 40 | .861 | .916 |
| 50 | .821 | .881 |

ALTITUDE FACTORS

Approximate factors for convective heat value at varying altitudes

| Altitude | Ferrous Units | Copper Alum. Units |
|------------|---------------|--------------------|
| Sea Level | 1.000 | 1.000 |
| 1,000 ft. | .984 | .969 |
| 2,000 ft. | .968 | .938 |
| 3,000 ft. | .952 | .908 |
| 4,000 ft. | .936 | .878 |
| 5,000 ft. | .920 | .850 |
| 6,000 ft. | .904 | .822 |
| 7,000 ft. | .889 | .795 |
| 8,000 ft. | .874 | .768 |
| 9,000 ft. | .859 | .743 |
| 10,000 ft. | .844 | .718 |
| 15,000 ft. | .771 | .603 |
| 20,000 ft. | .703 | .502 |

CORRECTION FACTORS FOR STEAM PRESSURES AND AIR TEMPERATURES OTHER THAN STANDARD

| STEAM | | ENTERING AIR TEMPERATURE, °F | | | | | | | | | | | | | | |
|--------------|----------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pressure | | Temp. | | | STD | | | | | | | | | | | |
| Gauge | Abs. Psi | °F | 45 | 55 | 65 | 70 | 75 | 80 | 85 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |
| (Vac) 15" Hg | 7.32 | 178.9 | 0.90 | 0.80 | 0.70 | 0.65 | 0.60 | 0.56 | 0.51 | 0.45 | 0.39 | 0.32 | 0.25 | 0.18 | 0.13 | 0.08 |
| (Vac) 10" | 9.78 | 192.2 | 1.02 | 0.91 | 0.81 | 0.76 | 0.71 | 0.66 | 0.62 | 0.55 | 0.48 | 0.40 | 0.33 | 0.26 | 0.20 | 0.14 |
| (Vac) 5" | 12.25 | 202.9 | 1.11 | 1.00 | 0.90 | 0.85 | 0.79 | 0.75 | 0.70 | 0.63 | 0.56 | 0.48 | 0.40 | 0.33 | 0.27 | 0.20 |
| (Vac) 0 Psi | 14.696 | 212.0 | 1.19 | 1.09 | 0.97 | 0.92 | 0.87 | 0.82 | 0.77 | 0.70 | 0.63 | 0.54 | 0.46 | 0.38 | 0.31 | 0.25 |
| ▶ .899 | 15.595 | 215.0 | 1.22 | 1.11 | 1.00 | 0.95 | 0.90 | 0.84 | 0.80 | 0.75 | 0.65 | 0.57 | 0.48 | 0.40 | 0.33 | 0.26 |
| 5 | 19.70 | 227.1 | 1.34 | 1.22 | 1.11 | 1.05 | 1.00 | 0.95 | 0.90 | 0.81 | 0.75 | 0.66 | 0.57 | 0.49 | 0.41 | 0.34 |
| 10 | 24.70 | 239.4 | 1.45 | 1.33 | 1.22 | 1.17 | 1.11 | 1.05 | 1.00 | 0.91 | 0.85 | 0.75 | 0.66 | 0.58 | 0.50 | 0.42 |
| 15 | 29.70 | 249.8 | 1.55 | 1.43 | 1.31 | 1.26 | 1.20 | 1.14 | 1.09 | 1.00 | 0.94 | 0.84 | 0.75 | 0.66 | 0.57 | 0.49 |
| 20 | 34.70 | 258.8 | 1.63 | 1.52 | 1.40 | 1.33 | 1.28 | 1.23 | 1.17 | 1.07 | 1.02 | 0.92 | 0.82 | 0.73 | 0.64 | 0.55 |
| 25 | 39.70 | 266.8 | 1.71 | 1.59 | 1.47 | 1.41 | 1.36 | 1.30 | 1.25 | 1.15 | 1.09 | 0.98 | 0.89 | 0.80 | 0.71 | 0.62 |
| 30 | 44.70 | 274.0 | 1.78 | 1.66 | 1.54 | 1.48 | 1.42 | 1.37 | 1.31 | 1.21 | 1.15 | 1.05 | 0.95 | 0.85 | 0.76 | 0.68 |
| 40 | 54.70 | 286.7 | 1.91 | 1.79 | 1.66 | 1.61 | 1.54 | 1.49 | 1.43 | 1.32 | 1.27 | 1.16 | 1.06 | 0.97 | 0.87 | 0.78 |
| 50 | 64.70 | 297.7 | 2.02 | 1.90 | 1.77 | 1.71 | 1.65 | 1.60 | 1.54 | 1.42 | 1.37 | 1.26 | 1.16 | 1.06 | 0.96 | 0.87 |
| 60 | 74.70 | 307.3 | 2.10 | 2.00 | 1.87 | 1.81 | 1.75 | 1.69 | 1.63 | 1.51 | 1.47 | 1.35 | 1.25 | 1.15 | 1.05 | 0.95 |
| 70 | 84.70 | 316.0 | 2.20 | 2.09 | 1.95 | 1.89 | 1.83 | 1.77 | 1.71 | 1.59 | 1.55 | 1.44 | 1.33 | 1.23 | 1.12 | 1.03 |
| 80 | 94.70 | 323.9 | 2.27 | 2.17 | 2.03 | 1.97 | 1.91 | 1.85 | 1.80 | 1.69 | 1.63 | 1.52 | 1.41 | 1.31 | 1.20 | 1.10 |
| 90 | 104.70 | 331.2 | 2.36 | 2.24 | 2.11 | 2.05 | 1.98 | 1.93 | 1.87 | 1.74 | 1.70 | 1.59 | 1.48 | 1.38 | 1.28 | 1.17 |
| 100 | 114.70 | 337.9 | 2.43 | 2.31 | 2.18 | 2.11 | 2.05 | 2.00 | 1.94 | 1.81 | 1.77 | 1.65 | 1.54 | 1.44 | 1.33 | 1.23 |
| 125 | 139.70 | 352.9 | 2.59 | 2.47 | 2.33 | 2.27 | 2.21 | 2.16 | 2.10 | 1.96 | 1.92 | 1.80 | 1.69 | 1.59 | 1.48 | 1.38 |
| 150 | 164.70 | 365.9 | 2.73 | 2.62 | 2.47 | 2.43 | 2.35 | 2.29 | 2.23 | 2.08 | 2.05 | 1.94 | 1.82 | 1.72 | 1.61 | 1.51 |
| 175 | 189.70 | 377.4 | 2.86 | 2.74 | 2.60 | 2.54 | 2.47 | 2.41 | 2.35 | 2.21 | 2.17 | 2.05 | 1.95 | 1.85 | 1.73 | 1.63 |
| 200 | 214.70 | 387.8 | 2.95 | 2.85 | 2.71 | 2.63 | 2.58 | 2.52 | 2.47 | 2.31 | 2.29 | 2.17 | 2.06 | 1.96 | 1.84 | 1.75 |

From Keenan and Keyes — Linear Interpolation.

Note: Gauge pressure should be corrected for altitude.

CORRECTION FACTORS FOR WATER TEMPERATURES AND AIR TEMPERATURES OTHER THAN STANDARD

| AVERAGE WATER TEMP. °F | ENTERING AIR TEMPERATURE, °F | | | | | | | | | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 45 | 55 | STD | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 110 | 120 | 130 | 140 | 150 |
| 90 | .19 | .13 | .11 | .06 | | | | | | | | | | | |
| 100 | .25 | .19 | .15 | .11 | .08 | .06 | | | | | | | | | |
| 110 | .31 | .25 | .20 | .16 | .13 | .11 | .08 | .06 | | | | | | | |
| 120 | .38 | .31 | .26 | .21 | .19 | .16 | .13 | .11 | .08 | .06 | | | | | |
| 130 | .45 | .38 | .33 | .28 | .25 | .21 | .19 | .16 | .13 | .11 | .06 | | | | |
| 140 | .53 | .45 | .40 | .34 | .31 | .28 | .25 | .21 | .19 | .16 | .11 | .06 | | | |
| 150 | .61 | .53 | .45 | .41 | .38 | .34 | .31 | .28 | .25 | .21 | .16 | .11 | .06 | | |
| 160 | .69 | .61 | .53 | .49 | .45 | .41 | .38 | .34 | .31 | .28 | .21 | .16 | .11 | .06 | |
| 170 | .77 | .69 | .61 | .57 | .53 | .49 | .45 | .41 | .38 | .34 | .28 | .21 | .16 | .11 | .06 |
| 180 | .86 | .77 | .69 | .65 | .61 | .57 | .53 | .49 | .45 | .41 | .34 | .28 | .21 | .16 | .11 |
| 190 | .95 | .86 | .78 | .73 | .69 | .65 | .61 | .57 | .53 | .49 | .41 | .34 | .28 | .21 | .16 |
| 200 | 1.05 | .95 | .86 | .82 | .77 | .73 | .69 | .65 | .61 | .57 | .49 | .41 | .34 | .28 | .21 |
| 210 | 1.14 | 1.05 | .95 | .91 | .86 | .82 | .77 | .73 | .69 | .65 | .57 | .49 | .41 | .34 | .28 |
| ▶ 215 (STD.) | 1.19 | 1.09 | 1.00 | .95 | .91 | .86 | .82 | .77 | .73 | .69 | .61 | .53 | .45 | .38 | .31 |
| 220 | 1.24 | 1.14 | 1.05 | 1.00 | .95 | .91 | .86 | .82 | .77 | .73 | .65 | .57 | .49 | .41 | .34 |
| 230 | 1.34 | 1.24 | 1.14 | 1.09 | 1.05 | 1.00 | .95 | .91 | .86 | .82 | .73 | .65 | .57 | .49 | .41 |
| 240 | 1.44 | 1.34 | 1.25 | 1.19 | 1.14 | 1.09 | 1.05 | 1.00 | .95 | .91 | .82 | .73 | .65 | .57 | .49 |
| 250 | 1.55 | 1.44 | 1.34 | 1.29 | 1.24 | 1.19 | 1.14 | 1.09 | 1.05 | 1.00 | .91 | .82 | .73 | .65 | .57 |
| 260 | 1.66 | 1.55 | 1.44 | 1.39 | 1.34 | 1.29 | 1.24 | 1.19 | 1.14 | 1.09 | 1.00 | .91 | .82 | .73 | .65 |
| 270 | 1.76 | 1.66 | 1.55 | 1.50 | 1.44 | 1.39 | 1.34 | 1.29 | 1.24 | 1.19 | 1.09 | 1.00 | .91 | .82 | .73 |
| 280 | 1.87 | 1.76 | 1.66 | 1.60 | 1.55 | 1.50 | 1.44 | 1.39 | 1.34 | 1.29 | 1.19 | 1.09 | 1.00 | .91 | .82 |
| 290 | 1.99 | 1.87 | 1.76 | 1.71 | 1.66 | 1.60 | 1.55 | 1.50 | 1.44 | 1.39 | 1.29 | 1.19 | 1.09 | 1.00 | .91 |
| 300 | 2.10 | 1.99 | 1.87 | 1.82 | 1.76 | 1.71 | 1.66 | 1.60 | 1.55 | 1.50 | 1.39 | 1.29 | 1.19 | 1.09 | 1.00 |