DURA-VANE II

Submittal

JDVPB1 / B2
Dura-Vane II Architectural Copper/Aluminum and Steel Elements

Specification

☐ **JDVPB1 Pedestal Enclosure**

ENCLOSURE:

STYLE: Dura-Vane II Pedestal
OUTLET: Extruded Aluminum Grille 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)
FINISH ☐ Baked Powder (Std)
☐ Baked Metallic (Opt'l)

ACCESSORIES:

☐ JDV Overlapping Type
All accessories have finger tabs at the bottom for easy installation.

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.

One End Flared (Std)

TYPE: ☐ IPS Steel (Mechanically Expanded)
LENGTHS: 2'0" thru 12'6" in 1" Increments
☐ NPT Thread both Ends (Std)
☐ Beveled Ends for Field Weld

See Catalog for Working Pressures

☐ **JDVPB2 Pedestal Enclosure**

BACKPLATE: Not Applicable

BRACKETS:

☐ Pedestal Brk't w/ B.B. (Std)
☐ Adjustable Pedestal Brk't w/B.B. with Alum Base (Opt'l.)

☐ **JDVPB1**

☐ **JDVPB2**

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 5/8 x 4 1/4	2	6 5/8
3/4 COPPER	4 1/4 x 4 1/4	3A	7"
1" COPPER	3 5/8 x 4 1/4	2	6 13/16
1" COPPER	4 1/4 x 4 1/4	2	6 13/16
1 1/4 COPPER	3 5/8 x 4 1/4	2	6 15/16
1 1/4 COPPER	4 1/4 x 4 1/4	2	6 15/16
1" STEEL	4 1/4 x 4 1/4	2	6 15/16
1 1/4 STEEL	4 1/4 x 4 1/4	2	7 1/8
2" STEEL	4 1/4 x 4 1/4	1	6 7/8

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8/2022

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

STYLES JDVPB1 & JDVPB2 DURA-VANE II

COPPER/ALUMINUM ELEMENT RATINGS ALL RATINGS ARE BASED ON 3 FPS VELOCITY, 65° EAT					ENCL DEPTH IN INCHES	ROWS AND CENTERS IN INCHES	MTG. HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)								
									200°	190°	180°	170°	160°	150°	140°	130°	120°
TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FIN PER FT.	FIN THICKNESS IN INCHES					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	5 1/2	1	11	1040	890	810	720	630	550	470	420	340	270
					10 7/8	2 - 4 1/2	11	2080	1790	1620	1440	1270	1100	940	830	690	540
3/4″	C3/4-434	3-5/8″ x 4-1/4″	40	.020	5 1/2	1	11	1250	1080	980	860	760	660	560	500	410	330
					10 7/8	2 - 4 1/2	11	2490	2140	1940	1720	1520	1320	1120	1000	820	650
3/4″	C3/4-435	3-5/8″ x 4-1/4″	50	.020	5 1/2	1	11	1380	1190	1080	950	840	730	620	550	460	360
					10 7/8	2 - 4 1/2	11	2750	2370	2150	1900	1680	1460	1240	1100	910	720
1″	C433	3-5/8″ x 4-1/4″	32	.020	5 1/2	1	11	1080	930	840	750	660	570	490	430	360	280
					10 7/8	2 - 4 1/2	11	2170	1870	1690	1500	1320	1150	980	870	720	560
1″	C434	3-5/8″ x 4-1/4″	40	.020	5 1/2	1	11	1210	1040	940	830	740	640	540	480	400	310
					10 7/8	2 - 4 1/2	11	2430	2090	1900	1680	1480	1290	1090	970	800	630
1″	C435	3-5/8″ x 4-1/4″	50	.020	5 1/2	1	11	1380	1190	1080	950	840	730	620	550	460	360
					10 7/8	2 - 4 1/2	11	2750	2370	2150	1900	1680	1460	1240	1100	910	720
1-1/4″	C1433	3-5/8″ x 4-1/4″	32	.020	5 1/2	1	11	1130	970	880	780	690	600	510	450	370	290
					10 7/8	2 - 4 1/2	11	2250	1940	1760	1550	1370	1190	1010	900	740	590
1-1/4″	C1434	3-5/8″ x 4-1/4″	40	.020	5 1/2	1	11	1240	1070	970	860	760	660	560	500	410	320
					10 7/8	2 - 4 1/2	11	2480	2130	1930	1710	1510	1310	1120	990	820	640
1-1/4″	C1435	3-5/8″ x 4-1/4″	50	.020	5 1/2	1	11	1380	1190	1080	950	840	730	620	550	460	360
					10 7/8	2 - 4 1/2	11	2750	2370	2150	1900	1680	1460	1240	1100	910	720
3/4″	C3/4-43	4-1/4″ SQ.	32	.020	5 1/2	1	11	1150	990	900	790	700	610	520	460	380	300
					10 7/8	2 - 4 1/2	11	2300	1980	1790	1590	1400	1220	1040	920	760	600
3/4″	C3/4-44	4-1/4″ SQ.	40	.020	5 1/2	1	11	1380	1190	1080	950	840	730	620	550	460	360
					10 7/8	2 - 4 1/2	11	2750	2370	2150	1900	1680	1460	1240	1100	910	720
3/4″	C3/4-45	4-1/4″ SQ.	50	.020	5 1/2	1	11	1420	1220	1110	980	870	750	640	570	470	370
					10 7/8	2 - 4 1/2	11	2840	2440	2220	1960	1730	1510	1280	1140	940	740
1″	C43	4-1/4″ SQ.	32	.020	5 1/2	1	11	1150	990	900	790	700	610	520	460	380	300
					10 7/8	2 - 4 1/2	11	2300	1980	1790	1590	1400	1220	1040	920	760	600
1″	C44	4-1/4″ SQ.	40	.020	5 1/2	1	11	1280	1100	1000	880	780	680	580	510	420	330
					10 7/8	2 - 4 1/2	11	2560	2200	2000	1770	1560	1360	1150	1020	840	670
1″	C45	4-1/4″ SQ.	50	.020	5 1/2	1	11	1440	1240	1120	990	880	760	650	580	480	370
					10 7/8	2 - 4 1/2	11	2890	2490	2250	1990	1760	1530	1300	1160	950	750
1-1/4″	C143	4-1/4″ SQ.	32	.020	5 1/2	1	11	1200	1030	940	830	730	640	540	480	400	310
					10 7/8	2 - 4 1/2	11	2410	2070	1880	1660	1470	1280	1080	960	800	630
1-1/4″	C144	4-1/4″ SQ.	40	.020	5 1/2	1	11	1430	1230	1120	990	870	760	640	570	470	370
					10 7/8	2 - 4 1/2	11	2860	2460	2230	1970	1740	1520	1290	1140	940	740
1-1/4″	C145	4-1/4″ SQ.	50	.020	5 1/2	1	11	1470	1260	1150	1010	900	780	660	590	490	380
					10 7/8	2 - 4 1/2	11	2940	2530	2290	2030	1790	1560	1320	1180	970	760

Copper tube furnished flared one end standard.

STEEL ELEMENT RATINGS ALL RATINGS ARE BASED ON 3 FPS VELOCITY, 65° EAT					ENCL DEPTH IN INCHES	ROWS AND CENTERS IN INCHES	MTG. HEIGHT IN INCHES	STEAM 215° FACTOR	HOT WATER (AVG.)								
									200°	190°	180°	170°	160°	150°	140°	130°	120°
I.P.S. SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FIN PER FT.	FIN THICKNESS IN INCHES					CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES								
								1.00	0.86	0.78	0.69	0.61	0.53	0.45	.40	.33	.26
1″	S43	4-1/4″ SQ.	32	.032	5 1/2	1	11	1140	980	890	790	700	600	510	460	380	300
					10 7/8	2 - 4 1/2	11	2270	1950	1770	1570	1380	1200	1020	910	750	590
1″	S44	4-1/4″ SQ.	40	.032	5 1/2	1	11	1280	1100	1000	880	780	680	580	510	420	330
					10 7/8	2 - 4 1/2	11	2560	2200	2000	1770	1560	1360	1150	1020	840	670
1″	S45	4-1/4″ SQ.	50	.032	5 1/2	1	11	1360	1170	1060	940	830	720	610	540	450	350
					10 7/8	2 - 4 1/2	11	2720	2340	2120	1880	1660	1440	1220	1090	900	710
1-1/4″	S143	4-1/4″ SQ.	32	.032	5 1/2	1	11	1050	900	820	720	640	560	470	420	350	270
					10 7/8	2 - 4 1/2	11	2100	1810	1640	1450	1280	1110	950	840	690	550
1-1/4″	S144	4-1/4″ SQ.	40	.032	5 1/2	1	11	1270	1090	990	880	770	670	570	510	420	330
					10 7/8	2 - 4 1/2	11	2550	2190	1990	1760	1560	1350	1150	1020	840	660
1-1/4″	S145	4-1/4″ SQ.	50	.032	5 1/2	1	11	1330	1140	1040	920	810	700	600	530	440	350
					10 7/8	2 - 4 1/2	11	2670	2300	2080	1840	1630	1420	1200	1070	880	690
2″	S242	4-1/4″ SQ.	25	.032	5 1/2	1	11	980	840	760	680	600	520	440	390	320	250
					10 7/8	2 - 4 1/2	11	1960	1690	1530	1350	1200	1040	880	780	650	510
2″	S243	4-1/4″ SQ.	32	.032	5 1/2	1	11	1280	1100	1000	880	780	680	580	510	420	330
					10 7/8	2 - 4 1/2	11	2560	2200	2000	1770	1560	1360	1150	1020	840	670

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

Optional Adjustable Pedestal Bracket Assembly with Aluminum Floor Flange

JDVPB1

Adjustable Pedestal Brk't

JDVPB2

Adjustable Pedestal Brk't

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A MIN	A MAX
3/4 COPPER	3 5/8 x 4 1/4	2	6 13/16	7 11/16
3/4 COPPER	4 1/4 x 4 1/4	3A	7 3/16	8 1/16
1″ COPPER	3 5/8 x 4 1/4	2	6 15/16	7 13/16
1″ COPPER	4 1/4 x 4 1/4	2	6 15/16	7 13/16
1 1/4 COPPER	3 5/8 x 4 1/4	2	7 1/8	8″
1 1/4 COPPER	4 1/4 x 4 1/4	2	7 1/8	8″
1″ STEEL	4 1/4 x 4 1/4	2	7 1/16	7 15/16
1 1/4 STEEL	4 1/4 x 4 1/4	2	7 5/16	8 3/16
2″ STEEL	4 1/4 x 4 1/4	1	7 1/16	7 15/16

RETURN PIPING OPTIONS - JDVPB1 & JDVPB2

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A	B WITH 3/4 HWR
3/4 COPPER	3 5/8 x 4 1/4	2	6 5/8	2 3/8

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A	B WITH 3/4 HWR	B WITH 1″ HWR
3/4 COPPER	3 5/8 x 4 1/4	6	7 3/8	2 11/16	N/A
1″ COPPER	3/5/8 x 4 1/4	6	7 9/16	N/A	2 3/4

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A	B WITH 3/4 HWR
3/4 COPPER	3 5/8 x 4 1/4	2	6 5/8	2 3/8

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A	B WITH 3/4 HWR	B WITH 1″ HWR
3/4 COPPER	3 5/8 x 4 1/4	6	7 3/8	2 11/16	2 9/16

DESIGN DATA

COMMERCIAL FINNED TUBE CHARTS FOR RATING CORRECTIONS

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

CORRECTION FACTORS FOR WATER TEMPERATURES AND AIR TEMPERATURES OTHER THAN STANDARD

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

CORRECTION FACTORS FOR STEAM PRESSURES AND AIR TEMPERATURES OTHER THAN STANDARD

STEAM PRESSURE		ENTERING AIR TEMPERATURE °F														
GAUGE	ABS. PSI	TEMP. °F	45	55	STD 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
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	258.5	1.63	1.52	1.40	1.33	1.28	1.23	1.17	1.07	1.02	0.92	0.82	0.73	0.64	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.

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

DESIGN DATA

GPM	10°F ΔT	20°F ΔT	30°F ΔT	40°F ΔT
33	165,000	330,000	495,000	660,000
32	160,000	320,000	480,000	640,000
31	155,000	310,000	465,000	620,000
30	150,000	300,000	450,000	600,000
29	145,000	290,000	435,000	580,000
28	140,000	280,000	420,000	560,000
27	135,000	270,000	405,000	540,000
26	130,000	260,000	390,000	520,000
25	125,000	250,000	375,000	500,000
24	120,000	240,000	360,000	480,000
23	115,000	230,000	345,000	460,000
22	110,000	220,000	330,000	440,000
21	105,000	210,000	315,000	420,000
20	100,000	200,000	300,000	400,000
19	95,000	190,000	285,000	380,000
18	90,000	180,000	270,000	360,000
17	85,000	170,000	255,000	340,000
16	80,000	160,000	240,000	320,000
15	75,000	150,000	225,000	300,000
14	70,000	140,000	210,000	280,000
13	65,000	130,000	195,000	260,000
12	60,000	120,000	180,000	240,000
11	55,000	110,000	165,000	220,000
10	50,000	100,000	150,000	200,000
9	45,000	90,000	135,000	180,000
8	40,000	80,000	120,000	160,000
7	35,000	70,000	105,000	140,000
6	30,000	60,000	90,000	120,000
5	25,000	50,000	75,000	100,000
4	20,000	40,000	60,000	80,000
3	15,000	30,000	45,000	60,000
2	10,000	20,000	30,000	40,000
1	5,000	10,000	15,000	20,000
0				

*Do not design below .25 fps.

DYNAMIC FORMULAS

$$BTU = GPM \times 500 \times TD$$

$$GPM = \left(\frac{BTU}{500}\right) \div TD$$

$$TD = \left(\frac{BTU}{500}\right) \div GPM$$

Pressure Drop at Given Water Velocities (Feet of Water per 100 ft. of pipe) based on Hazen - Williams calculation

Nominal Pipe Size	Water Velocity (ft/sec)											
	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
3/4" Copper	0.06	0.20	0.42	0.72	1.09	1.53	2.04	2.61	3.25	3.95	4.71	5.53
1" Copper	0.04	0.15	0.32	0.54	0.81	1.14	1.52	1.94	2.42	2.94	3.50	4.11
1 1/4" Copper	0.03	0.12	0.25	0.43	0.64	0.90	1.20	1.54	1.92	2.33	2.78	3.26
1" Steel	0.04	0.15	0.32	0.54	0.81	1.14	1.52	1.95	2.42	2.94	3.51	4.12
1 1/4" Steel	0.03	0.11	0.23	0.40	0.60	0.84	1.12	1.44	1.79	2.17	2.59	3.05
2" Steel	0.02	0.07	0.14	0.25	0.37	0.52	0.69	0.89	1.10	1.34	1.60	1.88

DESIGN DATA

GUARANTEED WORKING PRESSURES

1" IPS — 780 at Temperatures up to 650˚F.
1-1/4" IPS — 660 at Temperatures up to 650˚F.
2" IPS — 405 at Temperatures up to 650˚F.
1-1/4" CU — 194 at Temperatures up to 300˚F.
1" CU 204 at Temperatures up to 300˚F.
3/4" CU 218 PSI at Temperatures up to 300˚F.

MAXIMUM PRESSURES AT OTHER TEMPERATURES ARE AVAILABLE UPON REQUEST.

Pipe Water Capacities and Quantities Circulated at Velocity of 3 Feet Per Second

Nominal Pipe Size	Pipe I.D. (inches)	Gals Per Lin. Ft.	GPM @ 3' per sec Velocity
3/4" Copper	0.835	0.028	5.12
1" Copper	1.077	0.047	8.52
1 1/4" Copper	1.315	0.071	12.70
1" Steel	1.075	0.047	8.49
1 1/4" Steel	1.395	0.079	14.29
2" Steel	2.115	0.183	32.85

Glycol Correction Factors

Fluid Temperature 200°F

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

Fluid Temperature 180°F

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

Fluid Temperature 140°F

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

ALTITUDE FACTORS

Approximate factors for convective heat value at varying altitudes

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