

# VANGUARD

## Submittal

Style VGF-P  
Flat Top Enclosures  
Element Ratings

Partially Perforated Enclosure

### Specification

**ENCLOSURE:**

- STYLE : "VGF-P"
- OUTLET: Flat Top Partially Perforated
- LENGTHS: 2' thru 8' in 6" Increments
- MATERIAL  14 Ga. C.R.S. Std.  
 12 Ga. C.R.S. Opt'l.
- FINISH:  Baked Primer  
 Factory Baked Powder Opt'l.

- ACCESSORIES:** All overlapping, extend to wall at top. Bottom returns to wall, holes provided for fasteners.
- 14 Ga. Std.
  - 12 Ga. Opt'l.

**ELEMENT:**

- TYPE:  Cu/Al (Mechanically Expanded)
- LENGTHS: 2'0" thru 12'6" in 1" Increments.
- 3/4" Cu Tube Available up to 8'0" Max.
- One End Flared, Std.
- See Catalog for Working Pressures.

**ELEMENT:**

- TYPE:  Steel (Mechanically Expanded)
- LENGTHS: 2'0" thru 12'6" in 1" Increments.
- NPT Threads Both Ends (standard)
- Beveled Ends for Field Weld
- See Catalog for Working Pressures.

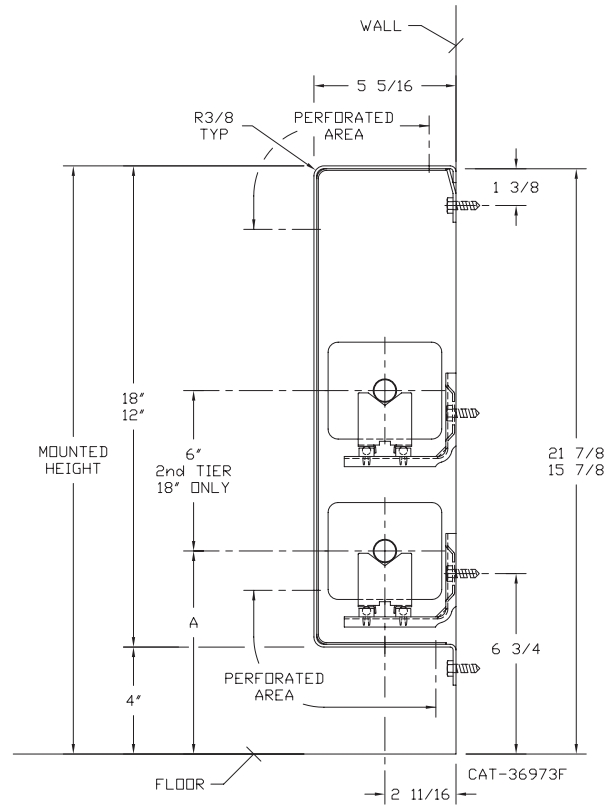
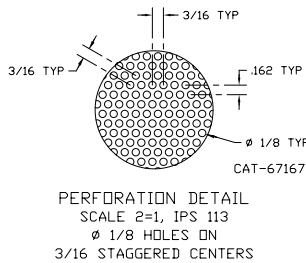
**BACKPLATE:**

- TYPE:  Partial Backplate
- LENGTHS: 8' Only
- MATERIAL:  14 Ga. Painted Std.  
 12 Ga. Opt'l.
- TYPE:  Full Backplate
- LENGTHS: 2' thru 8' in 6" Increments
- MATERIAL:  14 Ga. Painted Std.  
 12 Ga. Opt'l.

- BRACKETS:**  Wall Mtd B.B. Hanger

VGF-12P       VGF-18P

ELEMENT TUBE SIZE	FIN SIZE HEIGHT x WIDTH	CRADLE NUMBER	A
3/4 COPPER	3 5/8 x 4 1/4	2	7 9/16
3/4 COPPER	4 1/4 x 4 1/4	3A	7 15/16
1" COPPER	3 5/8 x 4 1/4	2	7 3/4
1" COPPER	4 1/4 x 4 1/4	2	7 3/4
1 1/4 COPPER	3 5/8 x 4 1/4	2	7 7/8
1 1/4 COPPER	4 1/4 x 4 1/4	2	7 7/8
1" STEEL	4 1/4 x 4 1/4	2	7 7/8
1 1/4 STEEL	4 1/4 x 4 1/4	2	8 1/16
2" STEEL	4 1/4 x 4 1/4	1	7 13/16



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PROJECT: \_\_\_\_\_ DATE: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 ARCHITECT: \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_  
 CONTRACTOR: \_\_\_\_\_  
 PO NUMBER: \_\_\_\_\_

# Flat Top Enclosures – Partially Perforated – VGF-P

ELEMENT RATINGS  
All Ratings are Based on 3 FPS Velocity

TUBE SIZE	CATALOG DESIGNATION	FIN SIZE HEIGHT X WIDTH	FINS PER FT.	FIN THICKNESS IN INCHES	ENCLOSURE DEPTH AND HEIGHT IN INCHES	TIERS AND CENTERS IN INCHES	MOUNTING HEIGHT IN INCHES	STEAM 215° FACTOR 1.00	HOT WATER (AVG.)										
									200°	190°	180°	170°	160°	150°	140°	130°	120°	110°	100°
									CORRECTION FACTORS FOR AVERAGE WATER TEMPERATURES										
									0.86	0.78	0.69	0.61	0.53	0.45	.40	.33	.26	.20	.15
3/4"	VC3/4-433	3-5/8" X 4-1/4"	32	.020	12 (5-5/16")	1	16	1000	860	780	690	610	530	450	400	330	260	200	150
					18 (5-5/16")	1	22	1170	1010	910	810	710	620	530	470	390	300	230	180
					"	2 @ 6 CL	"	1780	1530	1390	1230	1090	940	800	710	590	460	360	270
3/4"	VC3/4-434	3-5/8" X 4-1/4"	40	.020	12 (5-5/16")	1	16	1200	1030	940	830	730	640	540	480	400	310	240	180
					18 (5-5/16")	1	22	1400	1200	1090	970	850	740	630	560	460	360	280	210
					"	2 @ 6 CL	"	2080	1790	1620	1440	1270	1100	940	830	690	540	420	310
3/4"	VC3/4-435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1350	1160	1050	930	820	720	610	540	450	350	270	200
					18 (5-5/16")	1	22	1610	1380	1260	1110	980	850	720	640	530	420	320	240
					"	2 @ 6 CL	"	2290	1970	1790	1580	1400	1210	1030	920	760	600	460	340
1"	VC433	3-5/8" X 4-1/4"	32	.020	12 (5-5/16")	1	16	1040	890	810	720	630	550	470	420	340	270	210	160
					18 (5-5/16")	1	22	1220	1050	950	840	740	650	550	490	400	320	240	180
					"	2 @ 6 CL	"	1860	1600	1450	1280	1130	990	840	740	610	480	370	280
1"	VC434	3-5/8" X 4-1/4"	40	.020	12 (5-5/16")	1	16	1170	1010	910	810	710	620	530	470	390	300	230	180
					18 (5-5/16")	1	22	1360	1170	1060	940	830	720	610	540	450	350	270	200
					"	2 @ 6 CL	"	2020	1740	1580	1390	1230	1070	910	810	670	530	400	300
1"	VC435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1350	1160	1050	930	820	720	610	540	450	350	270	200
					18 (5-5/16")	1	22	1610	1380	1260	1110	980	850	720	640	530	420	320	240
					"	2 @ 6 CL	"	2280	1960	1780	1570	1390	1210	1030	910	750	590	460	340
1-1/4"	VC1433	3-5/8" X 4-1/4"	32	.020	12 (5-5/16")	1	16	1080	930	840	750	660	570	490	430	360	280	220	160
					18 (5-5/16")	1	22	1270	1090	990	880	770	670	570	510	420	330	250	190
					"	2 @ 6 CL	"	1930	1660	1510	1330	1180	1020	870	770	640	500	390	290
1-1/4"	VC1434	3-5/8" X 4-1/4"	40	.020	12 (5-5/16")	1	16	1190	1020	930	820	730	630	540	480	390	310	240	180
					18 (5-5/16")	1	22	1390	1200	1080	960	850	740	630	560	460	360	280	210
					"	2 @ 6 CL	"	2060	1770	1610	1420	1260	1090	930	820	680	540	410	310
1-1/4"	VC1435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1350	1160	1050	930	820	720	610	540	450	350	270	200
					18 (5-5/16")	1	22	1610	1380	1260	1110	980	850	720	640	530	420	320	240
					"	2 @ 6 CL	"	2290	1970	1790	1580	1400	1210	1030	920	760	600	460	340
3/4"	VC3/4-43	4-1/4" SQ.	32	.020	12 (5-5/16")	1	16	1080	930	840	750	660	570	490	430	360	280	220	160
					18 (5-5/16")	1	22	1230	1060	960	850	750	650	550	490	410	320	250	180
					"	2 @ 6 CL	"	1960	1690	1530	1350	1200	1040	880	780	650	510	390	290
3/4"	VC3/4-44	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1330	1140	1040	920	810	700	600	530	440	350	270	200
					18 (5-5/16")	1	22	1520	1310	1190	1050	930	810	680	610	500	400	300	230
					"	2 @ 6 CL	"	2210	1900	1720	1520	1350	1170	990	880	730	570	440	330
3/4"	VC3/4-45	4-1/4" SQ.	50	.020	12 (5-5/16")	1	16	1440	1240	1120	990	880	760	650	580	480	370	290	220
					18 (5-5/16")	1	22	1730	1490	1350	1190	1060	920	780	690	570	450	350	260
					"	2 @ 6 CL	"	2130	1830	1660	1470	1300	1130	960	850	700	550	430	320
1"	VC43	4-1/4" SQ.	32	.020	12 (5-5/16")	1	16	1080	930	840	750	660	570	490	430	360	280	220	160
					18 (5-5/16")	1	22	1230	1060	960	850	750	650	550	490	410	320	250	180
					"	2 @ 6 CL	"	1990	1710	1550	1370	1210	1050	900	800	660	520	400	300
1"	VC44	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1360	1170	1060	940	830	720	610	540	450	350	270	200
					18 (5-5/16")	1	22	1550	1330	1210	1070	950	820	700	620	510	400	310	230
					"	2 @ 6 CL	"	2290	1970	1790	1580	1400	1210	1030	920	760	600	460	340
1"	VC45	4-1/4" SQ.	50	.020	12 (5-5/16")	1	16	1470	1260	1150	1010	900	780	660	590	490	380	290	220
					18 (5-5/16")	1	22	1770	1520	1380	1220	1080	940	800	710	580	460	350	270
					"	2 @ 6 CL	"	2150	1850	1680	1480	1310	1140	970	860	710	560	430	320
1-1/4"	VC143	4-1/4" SQ.	32	.020	12 (5-5/16")	1	16	1130	970	880	780	690	600	510	450	370	290	230	170
					18 (5-5/16")	1	22	1290	1110	1010	890	790	680	580	520	430	340	260	190
					"	2 @ 6 CL	"	2070	1780	1610	1430	1260	1100	930	830	680	540	410	310
1-1/4"	VC144	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1340	1150	1050	920	820	710	600	540	440	350	270	200
					18 (5-5/16")	1	22	1530	1320	1190	1060	930	810	690	610	500	400	310	230
					"	2 @ 6 CL	"	2250	1940	1760	1550	1370	1190	1010	900	740	590	450	340
1-1/4"	VC145	4-1/4" SQ.	50	.020	12 (5-5/16")	1	16	1450	1250	1130	1000	880	770	650	580	480	380	290	220
					18 (5-5/16")	1	22	1740	1500	1360	1200	1060	920	780	700	570	450	350	260
					"	2 @ 6 CL	"	2110	1810	1650	1460	1290	1120	950	840	700	550	420	320
1"	VS43	4-1/4" SQ.	32	.032	12 (5-5/16")	1	16	1030	890	800	710	630	550	460	410	340	270	210	150
					18 (5-5/16")	1	22	1100	950	860	760	670	580	500	440	360	290	220	170
					"	2 @ 6 CL	"	1890	1630	1470	1300	1150	1000	850	760	620	490	380	280
1"	VS44	4-1/4" SQ.	40	.032	12 (5-5/16")	1	16	1160	1000	900	800	710	610	520	460	380	300	230	170
					18 (5-5/16")	1	22	1240	1070	970	860	760	660	560	500	410	320	250	190
					"	2 @ 6 CL	"	1990	1710	1550	1370	1210	1050	900	800	660	520	400	300
1"	VS45	4-1/4" SQ.	50	.032	12 (5-5/16")	1	16	1220	1050	950	840	740	650	550	490	400	320	240	180
					18 (5-5/16")	1	22	1310	1130	1020	900	800	690	590	520	430	340	260	200
					"	2 @ 6 CL	"	2040	1750	1590	1410	1240	1080	920	820	670	530	410	310
1-1/4"	VS143	4-1/4" SQ.	32	.032	12 (5-5/16")	1	16	1020	880	800	700	620	540	460	410	340	270	200	150
					18 (5-5/16")	1	22	1090	940	850	750	660	580	490	440	360	280	220	160
					"	2 @ 6 CL	"	1870	1610	1460	1290	1140	990	840	750	620	490	370	280
1-1/4"	VS144	4-1/4" SQ.	40	.032	12 (5-5/16")	1	16	1150	990	900	790	700	610	520	460	380	300	230	170
					18 (5-5/16")	1	22	1230	1060	960	850	750	650	550	490	410	320	250	180
					"	2 @ 6 CL	"	1980	1700	1540	1370	1210	1050	890	790	650	510	400	300
1-1/4"	VS145	4-1/4" SQ.	50																