

# VANGUARD

## Submittal

Style VGF  
Flat Top Enclosures  
Element Ratings

Fully Perforated Enclosure

### Specification

**ENCLOSURE:**

- STYLE : "VGF"
- OUTLET: Flat Top Fully Perforated
- LENGTHS: 2' thru 8' in 6" Increments
- MATERIAL  14 Ga. C.R.S. Std.  
 12 Ga. C.R.S. Opt'l.  
 14 Ga. Steel 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.

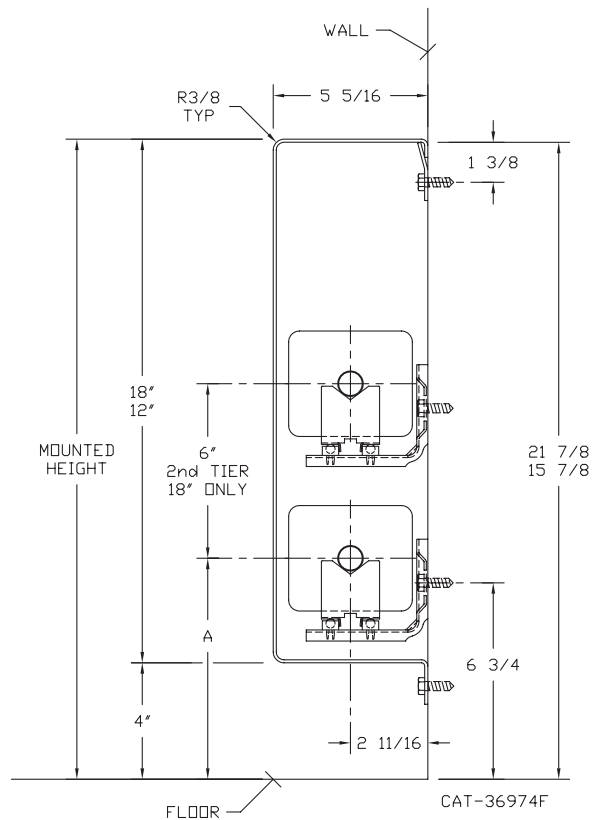
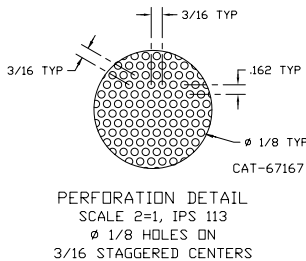
**BACKPLATE:**

- 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-12       VGF-18

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



260 North Elm St., Westfield, MA 01085  
(413) 568-9571 Fax: (413) 564-5661  
www.vulcanrad.com



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

# Flat Top Enclosures – Fully Perforated – VGF

**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°
									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	950	820	740	660	580	500	430	380	310	250	190	140
					18 (5-5/16")	1	22	980	840	760	680	600	520	440	390	320	250	200	150
					"	2 @ 6 CL	"	1750	1510	1370	1210	1070	930	790	700	580	460	350	260
3/4"	VC3/4-434	3-5/8" X 4-1/4"	40	.020	12 (5-5/16")	1	16	1140	980	890	790	700	600	510	460	380	300	230	170
					18 (5-5/16")	1	22	1170	1010	910	810	710	620	530	470	390	300	230	180
					"	2 @ 6 CL	"	2040	1750	1590	1410	1240	1080	920	820	670	530	410	310
3/4"	VC3/4-435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1270	1090	990	880	770	670	570	510	420	330	250	190
					18 (5-5/16")	1	22	1290	1110	1010	890	790	680	580	520	430	340	260	190
					"	2 @ 6 CL	"	2280	1960	1780	1570	1390	1210	1030	910	750	590	460	340
1"	VC433	3-5/8" X 4-1/4"	32	.020	12 (5-5/16")	1	16	990	850	770	680	600	520	450	400	330	260	200	150
					18 (5-5/16")	1	22	1020	880	800	700	620	540	460	410	340	270	200	150
					"	2 @ 6 CL	"	1820	1570	1420	1260	1110	960	820	730	600	470	360	270
1"	VC434	3-5/8" X 4-1/4"	40	.020	12 (5-5/16")	1	16	1110	950	870	770	680	590	500	440	370	290	220	170
					18 (5-5/16")	1	22	1140	980	890	790	700	600	510	460	380	300	230	170
					"	2 @ 6 CL	"	1980	1700	1540	1370	1210	1050	890	790	650	510	400	300
1"	VC435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1270	1090	990	880	770	670	570	510	420	330	250	190
					18 (5-5/16")	1	22	1290	1110	1010	890	790	680	580	520	430	340	260	190
					"	2 @ 6 CL	"	2270	1950	1770	1570	1380	1200	1020	910	750	590	450	340
1-1/4"	VC1433	3-5/8" X 4-1/4"	32	.020	12 (5-5/16")	1	16	1030	890	800	710	630	550	460	410	340	270	210	150
					18 (5-5/16")	1	22	1060	910	830	730	650	560	480	420	350	280	210	160
					"	2 @ 6 CL	"	1900	1630	1480	1310	1160	1010	860	760	630	490	380	290
1-1/4"	VC1434	3-5/8" X 4-1/4"	40	.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	1160	1000	900	800	710	610	520	460	380	300	230	170
					"	2 @ 6 CL	"	2020	1740	1580	1390	1230	1070	910	810	670	530	400	300
1-1/4"	VC1435	3-5/8" X 4-1/4"	50	.020	12 (5-5/16")	1	16	1270	1090	990	880	770	670	570	510	420	330	250	190
					18 (5-5/16")	1	22	1290	1110	1010	890	790	680	580	520	430	340	260	190
					"	2 @ 6 CL	"	2280	1960	1780	1570	1390	1210	1030	910	750	590	460	340
3/4"	VC3/4-43	4-1/4" SQ.	32	.020	12 (5-5/16")	1	16	1050	900	820	720	640	560	470	420	350	270	210	160
					18 (5-5/16")	1	22	1090	940	850	750	660	580	490	440	360	280	220	160
					"	2 @ 6 CL	"	2100	1810	1640	1450	1280	1110	950	840	690	550	420	320
3/4"	VC3/4-44	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1150	990	900	790	700	610	520	460	380	300	230	170
					18 (5-5/16")	1	22	1180	1010	920	810	720	630	530	470	390	310	240	180
					"	2 @ 6 CL	"	2150	1850	1680	1480	1310	1140	970	860	710	560	430	320
3/4"	VC3/4-45	4-1/4" SQ.	50	.020	12 (5-5/16")	1	16	1300	1120	1010	900	790	690	590	520	430	340	260	200
					18 (5-5/16")	1	22	1340	1150	1050	920	820	710	600	540	440	350	270	200
					"	2 @ 6 CL	"	2360	2030	1840	1630	1440	1250	1060	940	780	610	470	350
1"	VC43	4-1/4" SQ.	32	.020	12 (5-5/16")	1	16	1180	1010	920	810	720	630	530	470	390	310	240	180
					18 (5-5/16")	1	22	1200	1030	940	830	730	640	540	480	400	310	240	180
					"	2 @ 6 CL	"	2330	2000	1820	1610	1420	1230	1050	930	770	610	470	350
1"	VC44	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1310	1130	1020	900	800	690	590	520	430	340	260	200
					18 (5-5/16")	1	22	1330	1140	1040	920	810	700	600	530	440	350	270	200
					"	2 @ 6 CL	"	2450	2110	1910	1690	1490	1300	1100	980	810	640	490	370
1"	VC45	4-1/4" SQ.	50	.020	12 (5-5/16")	1	16	1380	1190	1080	950	840	730	620	550	460	360	280	210
					18 (5-5/16")	1	22	1420	1220	1110	980	870	750	640	570	470	370	280	210
					"	2 @ 6 CL	"	2460	2120	1920	1700	1500	1300	1110	980	810	640	490	370
1-1/4"	VC143	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	1100	950	860	760	670	580	500	440	360	290	220	170
					"	2 @ 6 CL	"	2220	1910	1730	1530	1350	1180	1000	890	730	580	440	330
1-1/4"	VC144	4-1/4" SQ.	40	.020	12 (5-5/16")	1	16	1280	1100	1000	880	780	680	580	510	420	330	260	190
					18 (5-5/16")	1	22	1310	1130	1020	900	800	690	590	520	430	340	260	200
					"	2 @ 6 CL	"	2410	2070	1880	1660	1470	1280	1080	960	800	630	480	360
1-1/4"	VC145	4-1/4" SQ.	50	.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	1400	1200	1090	970	850	740	630	560	460	360	280	210
					"	2 @ 6 CL	"	2420	2080	1890	1670	1480	1280	1090	970	800	630	480	360
1"	VS43	4-1/4" SQ.	32	.032	12 (5-5/16")	1	16	1000	860	780	690	610	530	450	400	330	260	200	150
					18 (5-5/16")	1	22	1040	890	810	720	630	550	470	420	340	270	210	160
					"	2 @ 6 CL	"	1980	1700	1540	1370	1210	1050	890	790	650	510	400	300
1"	VS44	4-1/4" SQ.	40	.032	12 (5-5/16")	1	16	1130	970	880	780	690	600	510	450	370	290	230	170
					18 (5-5/16")	1	22	1170	1010	910	810	710	620	530	470	390	300	230	180
					"	2 @ 6 CL	"	2090	1800	1630	1440	1270	1110	940	840	690	540	420	310
1"	VS45	4-1/4" SQ.	50	.032	12 (5-5/16")	1	16	1200	1030	940	830	730	640	540	480	400	310	240	180
					18 (5-5/16")	1	22	1240	1070	970	860	760	660	560	500	410	320	250	190
					"	2 @ 6 CL	"	2140	1840	1670	1480	1310	1130	960	860	710	560	430	320
1-1/4"	VS143	4-1/4" SQ.	32	.032	12 (5-5/16")	1	16	990	850	770	680	600	520	450	400	330	260	200	150
					18 (5-5/16")	1	22	1030	890	800	710	630	550	460	410	340	270	210	150
					"	2 @ 6 CL	"	1960	1690	1530	1350	1200	1040	880	780	650	510	390	290
1-1/4"	VS144	4-1/4" SQ.	40	.032	12 (5-5/16")	1	16	1120	960	870	770	680	590	500	450	370	290	220	170
					18 (5-5/16")	1	22	1160	1000	900	800	710	610	520	460	380	300	230	170
					"	2 @ 6 CL	"	2080	1790	1620	1440	1270	1100	940	830	690	540	420	310
1-1/4"	VS145	4-1/4" SQ.	50	.032	12 (5-5/16")	1	16	1170	1010	910	810	710	620						