Guardian Pressure/Vacuum Valve, TTMA Flanged Connection

The Betts' Guardian™ combination valve is a spring loaded reclosing pressure and vacuum relief device for use on a cargo tank's primary pressure relief and vacuum relief systems. The combination relief valve is designed, tested and marked in accordance with 49CFR §178.345-10, 49CFR §178.347-4 and 49CFR §178.348-4.

- Compact, optimized flow design.
- 316 Stainless Steel construction.
- Teflon seals and wear components.
- Safety Stop Screw to help prevent accidental unthreading of housing.
- Seal tabs on shroud for security measures.
- Simple In-Place Maintenance.
- Available ECTFE (Halar®) coated.
- Multiple sizes and mounting options.
- Multiple seal options.
- Vibration damping vacuum vent.
- 4″ TTMA flange connection has eight 3/8-16 UNC X .65 deep blind holes.
- 3″ TTMA flange connection has eight .44″ diameter through holes

Part Number	Size and Connection	Weight lbs. [kg]
RVC3F*-**	3" TTMA FLG.	16.9 [7.7]
RVC4F*-**	4" TTMA FLG.	18.2 [8.3]

- An Example of a part number would be RVP3AT-25. This would have PTFE seals and be used on a 25 MAWP tank.

- Part numbers with ECTFE (Halar®) coating as follows: RVPL3A*-. "L" indicates ECTFE coated.**

- Values shown are test values. Actual results may vary due to service conditions.

* Seal Material Code	Material	Temp. Range
T	PTFE	-40°F to +400°F [-40°C to +204°C]
F	Fluorosilicone	-50°F to +350°F [-45°C to +176°C]
K	Kalrez	-20°F to +400°F [-28°C to +204°C]

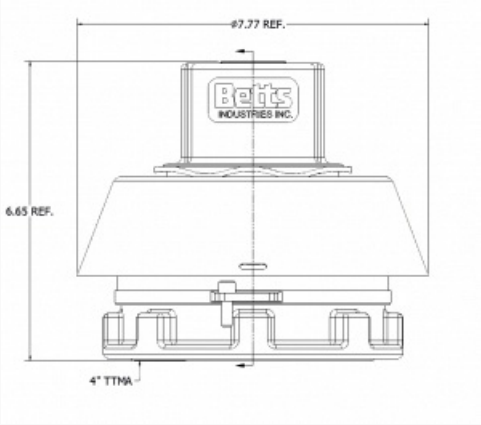
Seal Material Code	Material	Temp. Range
VB	FKM BLT	-15°F to +400°F [-26°C to +204°C]

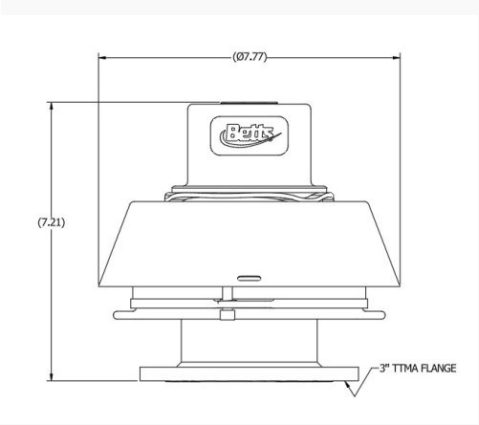
Valve Size	** Code Tank MAWP	Set Pressure	Rated Pressure Air Flow Capacity (out-breathing)	Water Flow Rate (Out)	Set Vacuum	Rated Vacuum Air Flow Capacity (in-breathing)
3"	25 psig. [1.72 bar]	30 psig [2.06 bar]	360,569 SCFH @ 40 psig [10,210 SCMH @ 2.75 bar] 409,559 SCFH @ 45 psig [11,597 SCMH @ 3.10 bar]	980 gpm @ 40 psig. 1,050 gpm @ 45 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
3"	30 psig. [2.06 bar]	36 psig [2.48 bar]	409,559 SCFH @ 45 psig [11,597 SCMH @ 3.10 bar]	1,050 gpm @ 45 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
3"	35 psig. [2.41 bar]	42 psig [2.89 bar]	457,740 SCFH @ 52.5 psig [12,961 SCMH @ 3.62 bar]	1,075 gpm @ 52.5 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
3"	40 psig. [2.75 bar]	48 psig [3.31 bar]	514,539 SCFH @ 60 psig [14,570 SCMH @ 4.13 bar]	1,100 gpm @ 60 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
4"	25 psig. [1.72 bar]	30 psig [2.06 bar]	365,828 SCFH @ 40 psig [10,359 SCMH @ 2.75 bar] 421,629 SCFH @ 45 psig [11,939 SCMH @ 3.10 bar]	1,000 gpm @ 40 psig. 1,100 gpm @ 45 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
4"	30 psig. [2.06 bar]	36 psig [2.48 bar]	421,629 SCFH @ 45 psig [11,939 SCMH @ 3.10 bar]	1,100 gpm @ 45 psig.	1.5 psig [10.3 kPa]	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]
4"	35 psig. [2.41 bar]	42 psig [2.89 bar]	487,967 SCFH @ 52.5 psig [13,817 SCMH @ 3.62 bar]	1,150 gpm @ 52.5 psig.	1.5 psig [10.3 kPa]1.5	12,500 SCFH @ 3.0 psig [353 SCMH @ 206.8 kPa]

Replace ** in Part Number to Designate Cargo Tank MAWP in PSIG

Notes: 1) Values shown are test values. Actual results may vary due to service conditions.

2) Set pressure is defined as point at which continuous flow is seen, felt or heard around the seat area. (nomenclature per ASME Section XII Part TR-110 and TTMA TB-126.)





MM-RV002 – INSTALLATION AND MAINTENANCE MANUAL FOR 407/412 P/V/C GUARDIAN VENT

Seal Kit part number: SK-RVCT*

***Mounting gasket not included in seal kit**

Spanner wrench part number: 75825EY

Dis-assembly wrench number : 75819ZC

⚠ **WARNING**: This product can expose you to chemicals including Chromium (hexavalent compounds) which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov. For additional information on Betts products and Proposition 65 list please see: http://www.bettsind.com/prop-65/