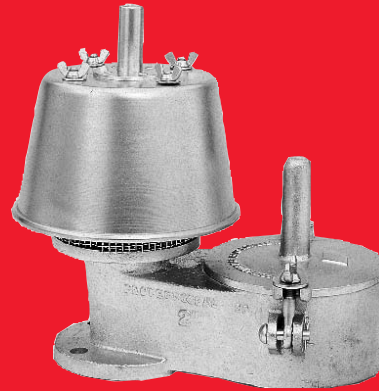


# SERIES 8540G

## Improved Performance, Aluminum, End-of-Line Pressure / Vacuum Breather Vent

- Sizes 2" (DN 50) through 12" (DN 300)
- Unique design allows for quick lift of the pallet and higher flows at lower overpressures
- Settings achieved by weight loading
- Reduces costly evaporation losses
- Leakage rate of less than 1 SCFH of air at 90% of set point
- Patented, FEP Film "Air-Cushioned Seating"
- Low-leak pallet design - certified test reports
- Conforms to the latest ATEX Directive
- Factory tested / certified for leakage and correct settings
- Available in Aluminum only



# SERIES 8540G

### OBJECTIVE

The Protectoseal Series 8540G Improved Performance, End-of-Line Pressure / Vacuum Conservation Vent provides both pressure and vacuum relief to maintain tank's vapor space within safe operating parameters. Vent settings minimize loss of product. Under pressure venting conditions, tank vapors are expelled to atmosphere.

The new Series 8540G provides quicker pressure pallet lift and improved flow performance at low overpressures just above the relief set point. This provides the benefit of higher flows at lower overpressures which can be beneficial in storage tank vapor control schemes requiring tight operating bands with the tank's emergency relief vents, tank blanketing valves and other associated devices in the vapor control system.

### TECHNIQUE

Pallets in the vent housing allow intake of air and outflow of vapors as the tank normally breathes in and out. Pallets open and close to permit only the intake or outlet relief necessary to remain within permissible working pressures and avoid damage to tank.

Peripheral pallet assembly guides and center pallet stem guides insure proper alignment of pallet assembly on the seat and smooth lifting and reseating action.

### Optimized Performance Vents™

Protectoseal's "Optimized Performance Vents" incorporate patented features that provide the optimum overall vent performance with regard to sealing, set point, flow and resealing (blow down).

### SPECIAL FEATURES

**Enhanced Flow Design.** A redesigned pallet assembly allows for quicker lift of the pallet at lower overpressure resulting in higher flows.

**Quick Inspection, Easy Maintenance.** Design and light weight of entire unit permits easy, convenient handling for inspection and maintenance.

**Maintains Accurate Pressure Settings.** Set points are accurate to within +/- 3% across the entire range of available settings.

**Air-Cushioned Seating.** A flat, smooth diaphragm of FEP film is supported on both sides of an annular channel to form a floating air seal with the seat. An outer support rim assures proper seating.

**Automatic Condensate Drainage.** Self-draining housing body and drip rings keep condensate away from seating surfaces. Vent is protected from freezing, binding and clogging.

**Low-Leakage.** Vent leakage is no more than 1 SCFH at 90% of the set pressure. Pressure tested against leakage through castings and gasketed joints.

**Sizes Available.** 2" (DN 50) through 12" (DN 300) sizes. Aluminum flanged to mate with 125# ANSI and DIN PN 16 flat face flanges. Other drilling patterns are also available upon special request.

### PRO-FLOW® Sizing and Selection Software.

Use PRO-FLOW® to select the correct size unit for pressure and vacuum relief calculated in accordance with API 2000, ISO 28300, NFPA 30 and OSHA 1910.106.

### CONSTRUCTION

Cast aluminum housing / cover with aluminum pallet assemblies. A number of available options are shown below.

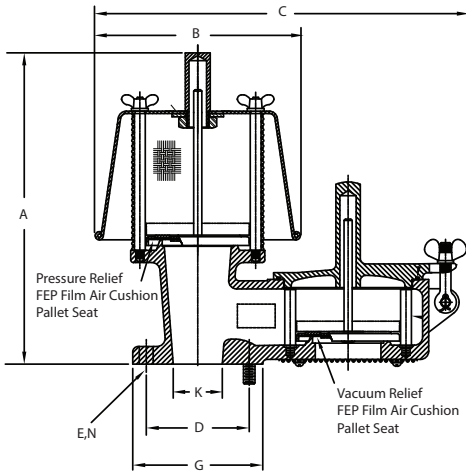
#### Available Options.

- Alternate diaphragm materials
- Material certifications for castings
- Lower than standard minimum pressure and vacuum settings
- Higher than standard maximum vacuum settings
- Mounting connections added to vacuum port
- Steam jacketing available
- Electronic or mechanical indication of vent opening
- FEP coating
- Kynar® coating (*Kynar® is a Registered Trademark of Arkema, Inc.*)
- Consult factory for special requests

Series	Housing	Pallet	Pallet Diaphragm	Weight Material
8540G	Aluminum 356	Aluminum	FEP Film	Steel or Lead

*Note: Aluminum flanged to mate with 125# ANSI and DIN PN 16 flat face flanges.*

### DIMENSIONS & ORDERING INFORMATION



Dimensions shown are for reference only,  
contact Factory for certified drawings.

Cat. No.*	Flange	Ht.	Width	Length	B.C.	Dia.	Dia.	Holes
	K	A	B	C	D	G	E	N
8542G	2"	14"	9 $\frac{3}{8}$ "	15 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "	6	$\frac{3}{4}$ "	4
8542DNG	DN 50	356mm	238mm	394mm	125mm	165mm	18mm	4
8543G	3"	16 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	17 $\frac{1}{2}$ "	6"	7 $\frac{1}{2}$ "	$\frac{3}{4}$ "	4
8543DNG	DN 80	425mm	292mm	445mm	160mm	200mm	18mm	8
8544G	4"	17 $\frac{11}{16}$ "	13"	20 $\frac{1}{4}$ "	7 $\frac{1}{2}$ "	9"	$\frac{3}{4}$ "	8
8544DNG	DN 100	449mm	330mm	514mm	180mm	220mm	18mm	8
8546G	6"	24 $\frac{1}{2}$ "	16 $\frac{3}{4}$ "	26 $\frac{1}{2}$ "	9 $\frac{1}{2}$ "	11"	$\frac{7}{8}$ "	8
8546DNG	DN 150	662mm	425mm	673mm	240mm	285mm	22mm	8
8548G	8"	27 $\frac{1}{8}$ "	19 $\frac{1}{2}$ "	31 $\frac{1}{4}$ "	11 $\frac{1}{4}$ "	13 $\frac{1}{2}$ "	$\frac{7}{8}$ "	8
8548DNG	DN 200	689mm	495mm	794mm	295mm	340mm	22mm	12
8550G	10"	29 $\frac{1}{4}$ "	23 $\frac{3}{8}$ "	37 $\frac{1}{8}$ "	14 $\frac{1}{4}$ "	16"	1"	12
8550DNG	DN 250	743mm	600mm	954mm	355mm	405mm	26mm	12
8552G	12"	31"	25 $\frac{3}{8}$ "	40 $\frac{1}{8}$ "	17"	19"	1"	12
8552DNG	DN 300	787mm	645mm	1038mm	410mm	460mm	26mm	12

\* Cat. No. designates Aluminum Housing & Pallets.

### PRESSURE AND/OR VACUUM SETTINGS (Consult factory for settings outside of STANDARD range.)

Flange Size	STANDARD MINIMUM SETTINGS			STANDARD MAXIMUM SETTINGS					
	PRESSURE & VACUUM			PRESSURE			VACUUM		
	oz./in. <sup>2</sup>	in.W.C.	kPa	oz./in. <sup>2</sup>	in.W.C.	kPa	oz./in. <sup>2</sup>	in.W.C.	kPa
2" / DN 50	0.50	0.87	0.22	48.00	83.04	20.68	11.00	19.03	4.74
3" / DN 80	0.50	0.87	0.22	48.00	83.04	20.68	11.00	19.03	4.74
4" / DN 100	0.50	0.87	0.22	48.00	83.04	20.68	7.40	12.80	3.19
6" / DN 150	0.50	0.87	0.22	48.00	83.04	20.68	18.00	31.14	7.76
8" / DN 200	0.50	0.87	0.22	48.00	83.04	20.68	18.00	31.14	7.76
10" / DN 250	0.50	0.87	0.22	48.00	83.04	20.68	19.00	32.87	8.19
12" / DN 300	0.50	0.87	0.22	48.00	83.04	20.68	23.00	39.79	9.91

### ADDITIONAL PRODUCTS FROM PROTECTOSEAL

#### Series 18540



Pipe-Away Pressure Vacuum Relief Vent for applications that require hazardous vapors be processed into manifolded piping and not released into the atmosphere.

#### Series 7800



Emergency Vent protects tanks against rupture or explosion resulting from excessive internal pressure caused by exposure to fires.

#### Series 4950



Vent Line / In-Line Parallel Plate Flame Arrester is designed for installation in open vent pipe or bleed lines from storage or processing tanks. Suitable for NEC Group D (IEC Group IIA) vapors.

#### Series 830



Combination Pressure / Vacuum Relief Vent & Flame Arrester provides pressure and vacuum relief as well as protection from propagation of externally introduced flames. Suitable for NEC Group D (IEC Group IIA) vapors.