



- Sizes 2" (DN 50) through 12" (DN 300)
- 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 with European ATEX Directive 94/9/EC
- Factory tested / certified for leakage and correct settings
- Available in Aluminum, Ductile Iron, Stainless Steel, Carbon Steel, and Alloy C / C276



**SERIES  
8540**

### OBJECTIVE

The Protectoseal Series 8540, 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.

### 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

**Fast 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. All other materials mate with 150# ANSI and DIN PN 16 raised face flanges. Other drilling patterns are also available upon special request.

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

### CONSTRUCTION

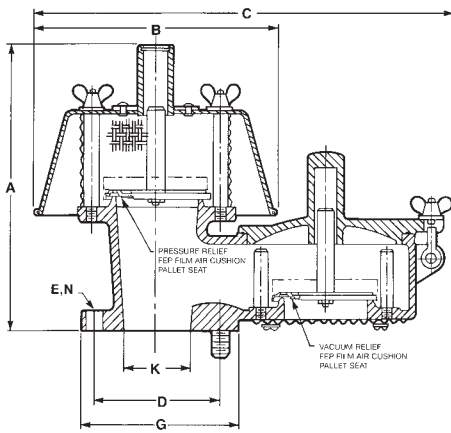
A comprehensive range of materials is offered as shown in the chart below. Non-metallic (thermoplastic resin & FRP) construction available. Other materials and features can be furnished upon request.

#### 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 indication of vent opening
- FEP coating
- Kynar® coating (*Kynar® is a Registered Trademark of Arkema, Inc.*)
- Special cleaning & packaging for the storage of ultrapure liquids

Series	Housing	Pallet	Pallet Diaphragm	Weight Material
8540H	Aluminum 356	Aluminum	FEP Film	Steel or Lead
C8540H	Ductile Iron	316 S.S.	FEP Film	Steel or Lead
CS8540H	Cast Steel	316 S.S.	FEP Film	Steel or Lead
F8540H	316 S.S.	316 S.S.	FEP Film	S.S. or Lead
RE8540H	Aluminum 356	316 S.S.	FEP Film	Steel or Lead
M8540H	Alloy C	C276	FEP Film	C276 or Lead

*Note: Aluminum flanged to mate with 125# ANSI and DIN PN 16 flat face flanges. All other materials mate with 150# ANSI and DIN PN 16 raised face flanges.*



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

### DIMENSIONS & ORDERING INFORMATION

Cat. No.*	Flange	Ht.	Width	Length	B.C.	Dia.	Dia.	Holes
	K	A	B	C	D	G	E	N
8542H	2"	14"	9½"	15½"	4¾"	6	¾"	4
8542DNH	DN50	356mm	241mm	394mm	125mm	165mm	18mm	4
8543H	3"	16¾"	11½"	17½"	6"	7½"	¾"	4
8543DNH	DN75	425mm	292mm	445mm	160mm	200mm	18mm	8
8544H	4"	18½"	13"	20¼"	7½"	9"	¾"	8
8544DNH	DN100	470mm	330mm	514mm	180mm	220mm	18mm	8
8546H	6"	23⅝"	17"	26½"	9½"	11"	⅞"	8
8546DNH	DN150"	587mm	432mm	673mm	240mm	285mm	22mm	8
8548H	8"	25"	19½"	31¼"	11¼"	13½"	⅞"	12
8548DNH	DN200	635mm	495mm	794mm	295mm	340mm	22mm	12
8550H	10"	27"	23¼"	37¼"	14¼"	16"	1"	12
8550DNH	DN250	686mm	591mm	946mm	355mm	405mm	26mm	12
8552H	12"	30½"	25½"	41"	17"	19"	1"	12
8552DNH	DN300	775mm	648mm	1041mm	410mm	460mm	26mm	12


\* Cat. No. designates Aluminum Housing & Pallets, please refer to chart on the reverse for other materials of construction.

### 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		
	Aluminum			Other Materials			All Materials			All Materials		
	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	oz./in. <sup>2</sup>	in.W.C.	kPa
2" / DIN 50	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	11.00	19.03	4.74
3" / DIN 75	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	11.00	19.03	4.74
4" / DIN 100	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	7.40	12.80	3.19
6" / DIN 150	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	18.00	31.14	7.76
8" / DIN 200	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	18.00	31.14	7.76
10" / DIN 250	0.50	0.87	0.22	0.75	1.30	0.32	48.00	83.04	20.68	19.00	32.87	8.19
12" / DIN 300	0.50	0.87	0.22	0.75	1.20	0.32	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.