

Flame Arresters and Low Pressure Venting Equipment Catalog



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End-of-Line Deflagration Arresters





Series		Explosion Groups	Connection Sizes	Operating Conditions	Features
670		Group D IIA, IIA1	1" - 4" 25mm - 100mm	Contact your Protectoseal representative.	Parallel Plate Element Weatherhood Automatic Condensate Drainage
670E		Group D, Group C IIA, IIA1, IIB1, IIB2, IIB3	1" - 6" 25mm - 150mm	Contact your Protectoseal representative.	Parallel Plate Element Weatherhood Automatic Condensate Drainage
ERB		Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3	3/8" - 3" 10mm - 80mm	-4°F to +140°F -20°C to +60°C	E-Flow® Technology RE-Flow® Technology Threaded Connections
EVA		Group D (MESG > 0.9) IIA, IIA1	1/2" - 24" 15mm - 600mm	-4°F to +140°F -20°C to +60°C	E-Flow® Technology Removable Elements Extensive Options List
EVB		Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3	1/2" - 24" 15mm - 600mm	-4°F to +140°F -20°C to +60°C	E-Flow® Technology Removable Elements Extensive Options List
EHB /ESA		Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3	1/2" - 24" 15mm - 600mm	-4°F to +302°F -20°C to +150°C	Short Time Burn Option Extended Operating Limits E-Flow® Technology Removable Elements
AVC		Group D, Group C, Group B (MESG < 0.50) IIA, IIA1, IIB1, IIB2, IIB3, IIB, IIC	1/2" - 16" 15mm - 400mm	-4°F to +140°F -20°C to +60°C	Removable Elements Extensive Options List
860		Group D IIA, IIA1	2" - 8" 50mm - 200mm	Contact your Protectoseal representative.	Weatherhood Interchangeable Elements Swing-Bolt Design Automatic Condensate Drainage
SV		Group D, Group C (MESG ≥ 0.65) IA, IIA1, IIB1, IIB2, IIB3	1/2" - 2" 15mm - 50mm	-4°F to +140°F -20°C to +60°C	Light Alloy Models Fixed Elements Threaded Connections

In-Line Deflagration Arresters





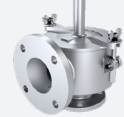
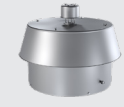


Series	Explosion Group	Connection Sizes	Operating Conditions	Features
LCA	 <p>Group D (MESG > 0.9) IIA1, IIA</p>	1/2" - 24" 15mm - 600mm	+140°F (+60°C), 1.60 bar (23 psia) up to 12" (DN300) +320°F (+160°C), 1.45 bar (21 psia) up to 12" (DN300) +140°F (+60°C), 1.45 bar (21 psia) for sizes 14" & 16" (DN350 & DN400) +140°F (+60°C), 1.20 bar (17 psia) up to 24" (DN600)	<p>Concentric Design Extended Operating Limits Short Time Burn Removable Elements</p>
LCB		1/2" - 12" 15mm - 300mm	+140°F (+60°C), 1.10 bar (16 psia) up to 1.60 bar (23 psia) for 2" and 1.50 bar (22 psia) for 4"	
LEA	 <p>Group D (MESG > 0.9) IIA1, IIA</p>	1/2" - 16" 15mm - 400mm	+140°F (+60°C), 1.60 bar (23 psia) +320°F +160°C, 1.45 bar (21 psia) +140°F (+60 °C), 1.45 bar (21 psia) for 12" - 16" (DN300 - DN400)	<p>Eccentric Design Extended Operating Limits Short Time Burn Removable Elements</p>
LEB		1/2" - 4" 15mm - 100mm	+140°F (+60°C), 1.50 bar (22 psia) +302°F (+150°C), 1.10 bar (16 psia)	
4950*	 <p>Group D IIA1, IIA</p>	1 - 12" 25mm - 300mm	Contact your Protectoseal representative.	<p>Parallel Plate Design Removable Arrester Element Automatic Condensate Drainage</p>
SGE-IB	 <p>Group D, Group C (MESG ≥ 0.65) IA1, IIA, IIB1, IIB2, IIB3</p>	1/2" - 16" 15mm - 400mm	+302°F (+150°C), 1.30 bar (19 psia) up to 8" (DN200) +140°F (+60°C), 1.60 bar (23 psia) up to 8" (DN200) 1.25 bar (18 psia) up to 16" (DN400)	<p>Extended Operating Limits Removable Elements</p>
DFB	 <p>Group D, Group C (MESG ≥ 0.65) IIA1, IIA, IIB1, IIB2, IIB3</p>	1" - 6" 25mm - 150mm	+140°F (+60°C), 1.60 bar (23 psia) +302°F (+150°C), 1.30 bar (19 psia)	<p>Extended Operating Limits Removable Elements</p>
DFC		1" - 6" 25mm - 150mm	+140°F (+60°C) 1.10 bar (16 psia) up to 4" (DN100) 1.45 bar (21 psia) 4" (DN100) 1.20 bar (17 psia) for 6" (DN150)	
MB-IB	 <p>Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3</p>	1/2" - 3/4" 15mm - 20mm	-4°F to +140°F -20°C to +60°C	<p>Fixed Elements</p>

*Vent-Line/In-Line Deflagration Flame Arrester.

In-Line Detonation Arresters

Series		Explosion Group	Connection Sizes	Operating Conditions	Features
UCA		Group D (MESG > 0.9) IIA, IIA1	1/2" - 24" 15mm - 600mm	+140°F (+60°C), 1.20 bar (17 psia) up to 12" (DN300) 1.10 bar (16 psia) up to 18" (DN450) 1.50 bar (22 psia) up to 4" (DN100) +302°F (+150°C), 1.40 bar (20 psia) up to 4" (DN100) 1.10 bar (16 psia) for 8" - 16" (DN200 - DN400)	E-Flow® Technology HEDS® Technology Short Time Burn Removable Elements
UCB		Group D, Group C (MESG ≥ 0.65) IIA1, IIA, IIB1, IIB2, IIB3	1/2" - 12" 15mm - 300mm	+140°F (+60°C), 1.10 bar (16 psia)	
UEA		Group D (MESG > 0.9) IIA, IIA1	1/2" - 16" 15mm - 400mm	+140°F (+60°C), 1.20 bar (17 psia) up to 12" (DN300) 1.10 bar (16 psia) up to 16" (DN400)	E-Flow® Technology HEDS® Technology Short Time Burn Removable Elements
UEB		Group D, Group C (MESG ≥ 0.65) IIA1, IIA, IIB1, IIB2, IIB3	1/2" - 4" 15mm - 100mm	+140°F (+60°C), 1.10 bar (16 psia)	
25000		Group D IIA, IIA1	2" - 18" 50mm - 450mm	Contact your Protectoseal representative.	Crimped Metal Arrester Element Straight Through Flow Pattern Interchangeable Arrester Element Welded Steel Housing
26000		Group D, Group C IIA1, IIA, IIB1, IIB2, IIB3	2" - 12" 50mm - 300mm	Contact your Protectoseal representative.	Crimped Metal Arrester Element Straight Through Flow Pattern Interchangeable Arrester Element Welded Steel Housing
35000		Group D IIA, IIA1	2" - 8" 50mm - 200mm	Contact your Protectoseal representative.	Crimped Metal Arrester Element Straight Through Flow Pattern Interchangeable Arrester Element Welded Steel Housing
36000 RP		Group D, Group C IIA1, IIA, IIB1, IIB2, IIB3	2" - 8" 50mm - 200mm	Contact your Protectoseal representative.	Crimped Metal Arrester Element Straight Through Flow Pattern Interchangeable Arrester Element Welded Steel Housing

Pressure and Vacuum Relief Vents

Series		Sizes	Connections	Pressure Setting Range	Vacuum Setting Range	Spring-Loading	FRP	Thermo-Plastic
8540H End-of-Line Pressure and Vacuum Relief Vent		2" - 12" 50mm - 300mm	Mates with 125#/150# ANSI and DIN PN 16	0.5 - 48 oz/in ² 2.15 - 206.84 mbar	0.5 - 23 oz/in ² 2.15 - 99.11 mbar	Yes	Yes	Yes
8540G End-of-Line Pressure and Vacuum Relief Vent - Improved Performance		2" - 12" 50mm - 300mm	Mates with 125#/150# ANSI and DIN PN 16	0.5 - 48 oz/in ² 2.15 - 206.84 mbar	0.5 - 23 oz/in ² 2.15 - 99.11 mbar	Yes	Yes	Yes
8740 In-Line Pressure & Vacuum Relief Vent		2", 3" & 4" 50mm, 80mm, 100mm	Outlet connection has standard NPT threads. Inlet connection mates with 125#/150# ANSI and DIN PN 16	1 - 26 oz/in ² 4.31 - 112.04 mbar	1 oz/in ² 4.31 mbar	No	No	No
18540D Pipe-Away Pressure and Vacuum Relief Vent		2" - 12" 50mm - 300mm	Mates with 125#/150# ANSI and DIN PN 16	0.5 - 47 oz/in ² 2.15 - 202.53 mbar	0.5 - 23 oz/in ² 2.15 - 202.53 mbar	Yes	Yes	Yes
3908 Pressure and Vacuum Relief Thief Hatch		8" 200mm	API flat face flange	2, 4, 6, 8, 12, 16, 24, 32 oz./sq. in.	0.4, 0.9, 3.5 oz./sq. in.	No	No	No
17800 Pipe-Away Pressure Relief Vent		2" - 12" 50mm - 300mm	Mates with 125#/150# ANSI and DIN PN 16	0.5 - 47 oz/in ² 2.15 - 202.53 mbar	N/A	Yes	Yes	Yes
56000 PIN-TECH™ Bubble-Tight <500ppm Pressure Relief Vent		2" - 24" 50mm - 600mm	Mates with applicable ANSI, API or DIN PN 16	0.75 - 15 psig 51.71 - 1034.21 mbar	N/A	Yes	Yes	Yes
6240 End-of-Line Vacuum Relief Vent		2" - 12" 50mm - 300mm	Mates with 125#/150# ANSI or DIN PN 16	N/A	0.5 - 23 oz/in ² 2.15 - 99.11 mbar	Yes	Yes	Yes
16240 Side-Mounted Vacuum Relief Vent		2" - 14" 50mm - 350mm	Mates with 125#/150# ANSI or DIN PN 16	N/A	0.5 - 47 oz/in ² 2.15 - 193.92 mbar	Yes	Yes	Yes

Spring-Loaded and Non-Metallic Vents



Spring-Loaded Pressure/Vacuum Relief Vents

- Designed for higher operating pressures.
- Available in pressure only, pressure/vacuum, and vacuum only configurations.
- Settings range from 3 PSIG through 12 PSIG.
- The spring-loaded vents are available in sizes up to 24" in many configurations and materials.
- Depending on the size and required setting, Protectoseal will furnish one, two or three springs of appropriate rating for accuracy, smoothness, and maximum flow capacity.
- The side not spring-loaded will have conventional weight loading with a minimum setting of 2 oz./sq. in.



Fiberglass Reinforced Plastic Pressure/Vacuum Relief Vents

- Fiberglass reinforced plastic (FRP) vents are exceptionally rugged.
- The unique one-piece housing and hand lay-up construction eliminates seams, ensuring the integrity of the vent throughout a long service life.
- Glass reinforcing fibers, coupled with careful choice of plastic resin, provides maximum resistance to the effects of strong corrosive media.
- Standard resins of construction include Derakane 470®, Derakane 411®, and Furan.


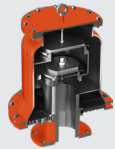


Thermo-Plastic Resin Pressure/Vacuum Relief Vents

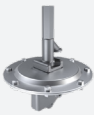


- Thermoplastic resin vents are highly resistant to acids and chemically hostile environments.
- They are constructed using PVC, polypropylene, polyethylene, and PVDF materials.
- The vents are extremely rugged and durable in construction.
- They use no metal parts, including exterior hardware, ensuring a long service life in corrosive atmospheres.



End-of-Line Combo Conservation Vents and Arresters

Series		Explosion Group	Connection Sizes	Operating Conditions	Features
830		Group D IIA, IIA1	2" - 10" 50mm - 250mm	Contact your Protectoseal representative.	Air-Cushion Pallet Design Interchangeable Elements Swing-Bolt Design Automatic Condensate Drainage
FAB		Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3	2" - 12" 50mm - 300mm	-4°F to +140°F -20°C to +60°C	Enhanced Flow and Pressure Drop Compact Lightweight Easy to Install
FAB-E		Group D, Group C (MESG ≥ 0.65) IIA, IIA1, IIB1, IIB2, IIB3	2" - 12" 50mm - 300mm	-4°F to +302°F -20°C to +150°C	

Tank Blanketing Valves

Series		Connections	Inlet Gas Pressure Range	Settings
30 Pilot Operated Tank Blanketing Valve (½")		½ FNPT inlet & outlet standard	10 psig to 200 psig 0.7 barg to 13.7 barg	-0.1 in. W.C. to 69.2 in. W.C. -0.25 mbarg to +172 mbarg
20 Pilot Operated Tank Blanketing Valve (1")		1" NPT inlet & outlet	20 psig to 200 psig 1.4 barg to 13.7 barg	-0.5 in. W.C. to 69.2 in. W.C. -1.25 mbarg to +172 mbarg
10 Pilot Operated Tank Blanketing Valve (2")		2" NPT inlet & outlet	40 psig to 130 psig 2.8 barg to 9.0 barg	-0.5 in. W.C. to 69.2 in. W.C. -1.25 mbarg to +172 mbarg

Emergency Relief Vents

Series		Sizes	Connections	Pressure Setting Range	Vacuum Setting Range
52600 Emergency Pressure and Vacuum Relief Vent		16" - 24" 400mm - 600mm	Mates with applicable ANSI, API flange or DIN 16 PN	0.75 - 6 oz/in ² 3.23 - 25.86 mbar	0.5 - 0.75 oz/in ² 2.15 - 3.23 mbar
7800 End-of-Line Emergency Pressure Vent		2" - 24" 50mm - 600mm	ANSI, DIN 16 PN or API flange	1 - 48 oz/in ² 4.31 - 206.84 mbar	N/A
54000 Spring-Loaded Emergency Pressure Relief Vents		16" - 24" 400mm - 600mm	Mates with applicable ANSI, API flange or DIN 16 PN	1 - 11 psig 68.95 - 758.42 mbar	N/A
51700 Hinged Emergency Pressure Relief Manhole Cover Vent		16" - 24" 400mm - 600mm	Mates with applicable ANSI, API flange or DIN 16 PN	0.57 - 34.6 oz/in ² 2.45 - 149.10 mbar	N/A
53300 Emergency Pressure Relief Manhole Cover Vent		16" - 24" 400mm - 600mm	Mates with applicable ANSI, API flange or DIN 16 PN	1.10 - 6 oz/in ² 4.74 - 25.86 mbar	N/A

Free Vents

Series		Sizes	Connections	Features
5200G Weatherhood Free Vent		2" - 12" 50mm - 300mm	Mates with 125# / 150# ANSI and DIN PN 16 flat face flanges	Removable Weatherhood Protective Screen Lightweight Design Factory Inspected

Specialty Valves and Fittings



Air Dryer
Series 782/PVC782

- Sizes 2" and 3" (50mm and 80mm)
- Reduced pressure drops
- Flanged and threaded options available
- Integral humidity indicator
- Easy inspection and maintenance
- Large, removable desiccant receptacle
- Desiccant chamber with a large diameter



Internal Safety Valve
Series 3000

- Sizes range from 2" to 12" (50mm to 300mm)
- Closes automatically in the event of a fire
- Simple one-handed valve operation
- By-pass valve for pressure equalization
- Exceptional flow capability
- Easily replaceable fuse link
- 160°F (71°C) fusible link included



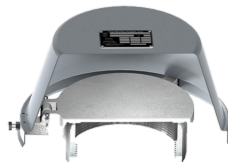
Gauge Hatches
Series 4960/4970/4980/5690

- Sizes 4", 6" and 8" (100mm, 150mm and 200mm)
- Allows manual tank gauging, sampling and temperature readings
- Free-lifting and lockdown models available
- Thermometer hook, gauge marker and lock hole included
- Hinged cover can be opened a full 75° to 80°



Water Drain Valve
Series 660

- Sizes range from 2" to 6" (50mm to 150mm)
- Removes excess water from the tank
- Simple one-handed valve operation
- Two-stage opening and closing
- Padlock bracket prevents unauthorized valve opening
- Non-freeze design



Pressure Relief Rim Vent
Series 4276

- Cost-effective and functional design
- 6" (152mm) FNPT connection
- Vapors vent to atmosphere
- Integral weatherhood protects tank opening
- Screens protect the tank's interior from debris
- Lightweight design allows for easy handling
- Easy to install and maintain



Rupture Disks

- Sizes range from 3/8" to 16" (20mm to 400mm)
- Protects the valve from corrosive and viscous products
- Prevents fugitive emissions
- Easy to service and maintain
- Protects the valve (spring) from pressure fluctuations and cycling

Complementary Equipment



Liquid Level Indicators Series 40000/41000

- Accurate liquid level gauging of fixed and floating roof tanks
- Allows for quick and easy readings
- Easy installation for “tanks-in-service” or “tanks-out-of-service”
- Float-actuated indicators
- Resistant to corrosive petroleum products



Automatic Tank Gauge Series 42000B

- High precision in measuring liquid levels
- Reduced time needed for readings
- Used on tanks up to 65' tall and at pressures up to 50 PSIG
- Conveniently mounted on the tank's top or side
- Limit and programme switches available upon request



Fuel Tank Safety Caps

- Sizes range from 3/8" to 16" (20mm to 400mm)
- Manually engaged compression spring latch
- Provides automatic pressure relief if tank pressure exceeds normal limits
- Self-closing, hinged cap design
- Padlock opening prevents theft or unauthorized access



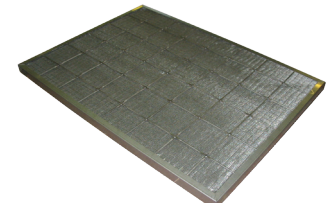
Temperature Sensors

- ATEX certified for use with Flame Arresters
- Measures process flow temperature
- Flame detection and monitoring
- Easy integration with on-site process controls
- Tailored to customer specifications



Proximity Switches

- To be used with low-pressure venting equipment
- Pallet lift detection
- ATEX certified for zoned installation
- Easy integration with on-site process controls



Flashback Guards

- Available in 304L and 316L stainless steel
- Knitted mesh panels
- Individualized design for specific applications
- Tailored frames and mountings available upon request

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