

Vent-Line / In-Line Flame Arrester

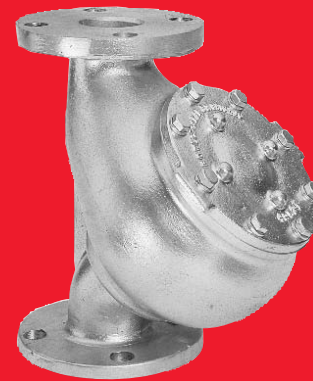
Suitable for use with NEC Group D (IEC Explosion Group IIA) Vapors



PROTECTOSEAL

SERIES
4950

- Sizes 1" (DN 25) through 12" (DN 300)
- FM Approved in 1" through 12"
- Listed by Underwriters Laboratories in 1" through 10"
- Suitable for use with vapors equivalent to NEC 500 Group D, IEC Group IIA
- Vertically mounted, circular plate-type flame arrester
- Protects against fire and explosion
- Minimizes pressure drop under normal operating conditions
- Easy inspection and maintenance
- Factory inspected prior to shipment
- Available in Aluminum, Ductile Iron and Stainless Steel

**OBJECTIVE**

The Protectoseal Series 4950 Vent-Line / In-Line Flame Arresters are designed to be installed in open vent pipes from storage or processing tanks, bleed lines or other vapor conveying lines. The arresters are used to prevent propagation of an external flame source through the vent opening and into the tank. These arresters provide maximum air-flow consistent with operating efficiency and safety.

TECHNIQUE

When properly mounted in an open vent pipe line, the 4950 Series Flame Arrester allows vapors to discharge into the atmosphere and allows air to be drawn into the pipe through the specially designed flame arrester grid assembly. In the event of a fire source outside the tank, the flame arrester provides protection for the tank's contents. The flame arresters are suitable for locations varying from 20' to 50' from the open end of the vent pipe depending upon size. The 1" size is approved for installation at distances up to 50' from the open end of the pipe. The 2" and larger sizes are suitable for installations up to 20' from the open end of the pipe. All arresters can be mounted vertically in the pipe line. The 1", 2", 3" and 6" sizes can also be installed in horizontal pipe lines with the grid opening in the upward position to prevent trapping of condensate.

SPECIAL FEATURES

Fast Inspection, Easy Maintenance. Removal of screws allows easy access to the flame arrester element assembly for inspection and maintenance. A spare element can be quickly inserted into the housing to protect the tank's interior while the original is being serviced. The element can be removed without breaking the flanged pipe line mounting connections.

Automatic Condensate Drainage. Vertically mounted, circular plate-type flame arrester is employed for self-drainage of condensate. This prevents accumulation of condensate subject to freezing and consequent clogging of the arrester under low temperature conditions.

Positive Flame Arresting. The Series 4950 Vent-Line / In-Line Flame Arrester employs the circular-plate, precisely-spaced, type flame arrester to protect tank contents by preventing the propagation of fire into the tank. A series of sturdy, round plates are assembled on aligning bolts within the housing.

Correct, uniform spacing between the individual plates is provided. Plates are fabricated from $\frac{1}{16}$ " to $\frac{3}{32}$ " heavy gauge metal, depending on material of construction, to resist distortion and bending during cleaning, assuring maintenance of factory inspection standards.

Sizes Available. 1" size is a standard NPT threaded connection. Adapter flange available. 2" (DN 50) through 12" (DN 300) sizes mate with standard flanged ANSI connections. Aluminum flanged bodies mate with 125# ANSI flat face flanges and DIN PN 16 flat face flanges. All other material flanged bodies mate with 150# raised face flanges and DIN PN 16 raised face flanges.

Test Lab Listings. Approved by Factory Mutual Research (FM) in 1" through 12". Listed by Underwriters Laboratories (UL) in 1" through 10".

PRO-FLOW[®] Sizing and Selection Software.

Use PRO-FLOW[®] to calculate flame arrester flow requirements in accordance with API 2000, ISO 28300, NFPA 30 and OSHA 1910.106.

Quality Assurance. Each unit is factory inspected to meet Protectoseal's high standards prior to shipment.

CONSTRUCTION

A comprehensive range of materials is offered as shown in the chart below. Other materials and features can be furnished upon request.

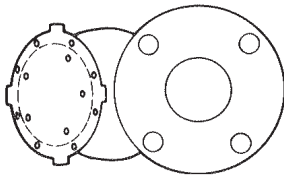
Available Options.

- Material certifications for castings
- Flange connections for 1" units
- Steam jacketing

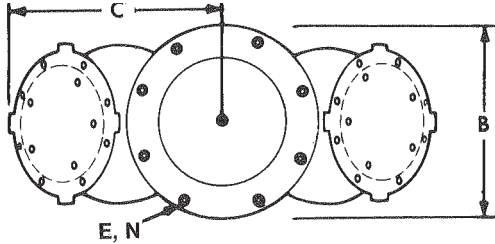
Series	Housing	Flame Arrester Grid Assembly
4950	Aluminum 356	Aluminum
C4950	Ductile Iron	316 S.S.
E4950	Aluminum 356	316 S.S.
F4950	316 S.S.	316 S.S.

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.

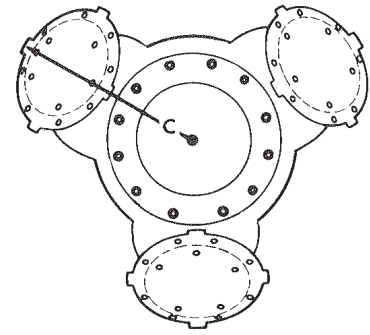
One Flame
Arrester Section
4951
4952F
4953F
4956F



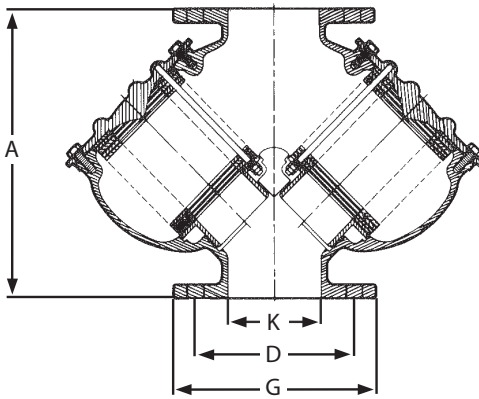
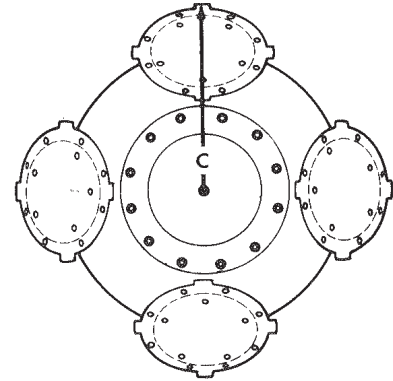
Two Flame
Arrester Sections
4954F
4958F



Three Flame
Arrester Sections
4960F



Four Flame
Arrester Sections
4962BF



DIMENSIONS & ORDERING INFORMATION (Dimensions shown are for reference only, contact Factory for certified drawings.)

Cat. No.*	Flange K	Connection	Ht. A	Width B	Radius C	B.C. D	Dia. G	Dia. E	Holes N	Test Lab Listing
4951	1"	Threaded	6 ³ / ₄ "	6"	4 ⁷ / ₈ "	-	-	-	-	FM / UL
4952F	2"	Flanged	10 ⁵ / ₈ "	8 ¹ / ₂ "	7 ¹ / ₈ "	4 ³ / ₄ "	6"	3 ⁴ / ₈ "	4	FM / UL
4952DNF	DN 50	Flanged	270mm	216mm	181mm	125mm	165mm	18mm	4	-
4953F	3"	Flanged	12 ³ / ₄ "	9 ¹ / ₂ "	9 ¹ / ₈ "	6"	7 ¹ / ₂ "	3 ⁴ / ₈ "	4	FM / UL
4953DNF	DN 80	Flanged	324mm	241mm	232mm	160mm	200mm	18mm	8	-
4954F	4"	Flanged	13 ³ / ₈ "	10"	9 ¹ / ₄ "	7 ¹ / ₂ "	9"	3 ⁴ / ₈ "	8	FM / UL
4954DNF	DN 100	Flanged	340mm	254mm	235mm	180mm	220mm	18mm	8	-
4956F	6"	Flanged	21 ³ / ₈ "	14 ¹ / ₂ "	16 ¹ / ₄ "	9 ¹ / ₂ "	11"	7 ⁷ / ₈ "	8	FM / UL
4956DNF	DN 150	Flanged	543mm	368mm	413mm	240mm	285mm	22mm	8	-
4958F	8"	Flanged	23 ³ / ₈ "	14 ¹ / ₂ "	16 ⁷ / ₈ "	11 ³ / ₄ "	13 ¹ / ₂ "	7 ⁷ / ₈ "	8	FM / UL
4958DNF	DN 200	Flanged	600mm	368mm	429mm	295mm	340mm	22mm	12	-
4960F	10"	Flanged	24 ¹ / ₈ "	18"	18"	14 ¹ / ₄ "	16"	1"	12	FM / UL
4960DNF	DN 250	Flanged	613mm	457mm	457mm	355mm	405mm	26mm	12	-
4962BF	12"	Flanged	28"	18 ³ / ₈ "	18 ³ / ₈ "	17"	19"	1"	12	FM
4962DNF	DN 300	Flanged	711mm	467mm	467mm	410mm	460mm	26mm	12	-

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