



VAREC SERIES 5400A FLAME ARRESTER

A Group 'D', end-of-line flame arrester designed to prevent the propagation of flames into a storage vessel



FEATURES

- Net free area through the bank is three to four times the unit pipe size, reducing surface friction, optimizing flow capacity and minimizing pressure drop.
- Large surface area of the bank improves heat dissipation.
- Spiral wound and crimped bank element.
- Rugged construction for extended life.
- Unitized design with jackscrews for easy inspection and maintenance.
- Bank element can be inspected or cleaned quickly and replaced between the end housings.
- Handle provided for easy handling.
- Broad range of materials available.
- UL and FM approved*.

* See page 2 for approvals

GENERAL APPLICATION

These units are generally used in conjunction with low flash point liquids and flammable gases or vapors throughout the petroleum, petrochemical, chemical, pulp and paper, food and beverage and other industries where flame propagation is a potential problem.

TECHNICAL DATA

Materials: Aluminum, carbon steel, stainless steel, ductile iron
Sizes: 2" to 12" (50 to 300 mm)
Connections: Drilled flanges
Pressure rating: To 10 psi (0.7 bar)

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SPECIFICATIONS

Connections

- Flange drilling per ANSI Class 150.
- Flat face flange - aluminum.
- Raised face flange - CS, ductile iron and 316 SS.

Materials

Housing:

- Heavy wall, 356 HT low copper aluminum, standard.
- CS, ductile iron or 316 SS, optional.

Bank assembly:

- Low copper aluminum core housing and element, standard.
- Low copper aluminum core housing with 316 SS element, optional.
- All 316 SS core housing and element, optional.

Pressure

Pressure rating: leak proof to 10 psi (69.0 kPa).

Pressure drop: should not exceed 1 psi (6.9 kPa).

Location⁽¹⁾

Within 15 feet (4.6 m) upstream of flame source when used in accordance with UL Listing, or 10 pipe diameters when used in accordance with FM approval.

Configuration

- Net free area: three to four times the corresponding size standard pipe.
- Bank assembly: spiral wound and crimped element with core housing and integral handle.

Approvals

- UL (Underwriters Laboratories) listed in all aluminum construction in 2", 3", 4"⁽¹⁾.
- FM (Factory Mutual) all sizes, all materials⁽¹⁾.

NOTE

1. For use on hydrocarbon storage tanks, installed NOT MORE THAN 15 FEET from the open end of the vent pipe when used in accordance with UL Listing or 10 pipe diameters when used in accordance with FM Approval. These test conditions may not represent the actual service conditions of piping system design. It is recommended that the arrester be independently tested under actual service conditions before installation.

PRODUCT OVERVIEW

The 5400A Series utilizes two principles to stop the propagation of flame from external sources: the dissipation of heat, in which the temperature of the flame front is reduced below the flash point of the vapor by the absorption of heat through the surface of the bank assembly; and the quenching of Class 'D' vapors. The space between the bank assembly crimps is smaller than the diameter required to pass a flame of a Class 'D' gas.

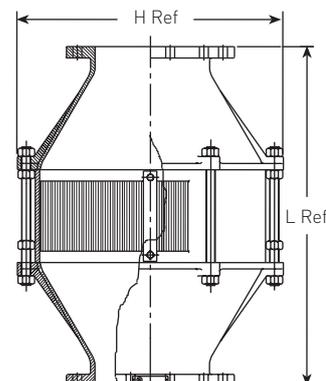
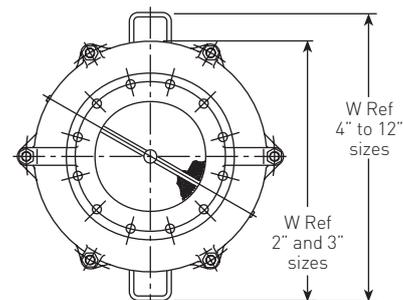
They should be installed vertically on tank vent systems or in piping headers. For distances or gas classifications outside the limits detailed under 'Location', a detonation arrester should be used.

DIMENSIONS, inches and pounds (millimeters and kilograms)

	Size code						
	2	3	4	6	8	0	1
	Nominal pipe size						
	2	3	4	6	8	10	12
	(50)	(80)	(100)	(150)	(200)	(250)	(300)
L Length	14½ (368)	16½ (419)	20 ⁵ / ₁₆ (516)	21¾ (552)	25¾ (654)	30½ (775)	34 ⁹ / ₁₆ (878)
H Height	9½ (241)	11½ (292)	13¼ (337)	17¾ (451)	22 (559)	24 (610)	30 (762)
W Width	9½ (232)	11 ³ / ₁₆ (284)	15% (397)	19 (483)	23¼ (591)	25¼ (641)	31¼ (787)
Shipping weight	25 (11)	35 (16)	45 (20)	90 (41)	140 (64)	210 (95)	325 (148)

NOTES

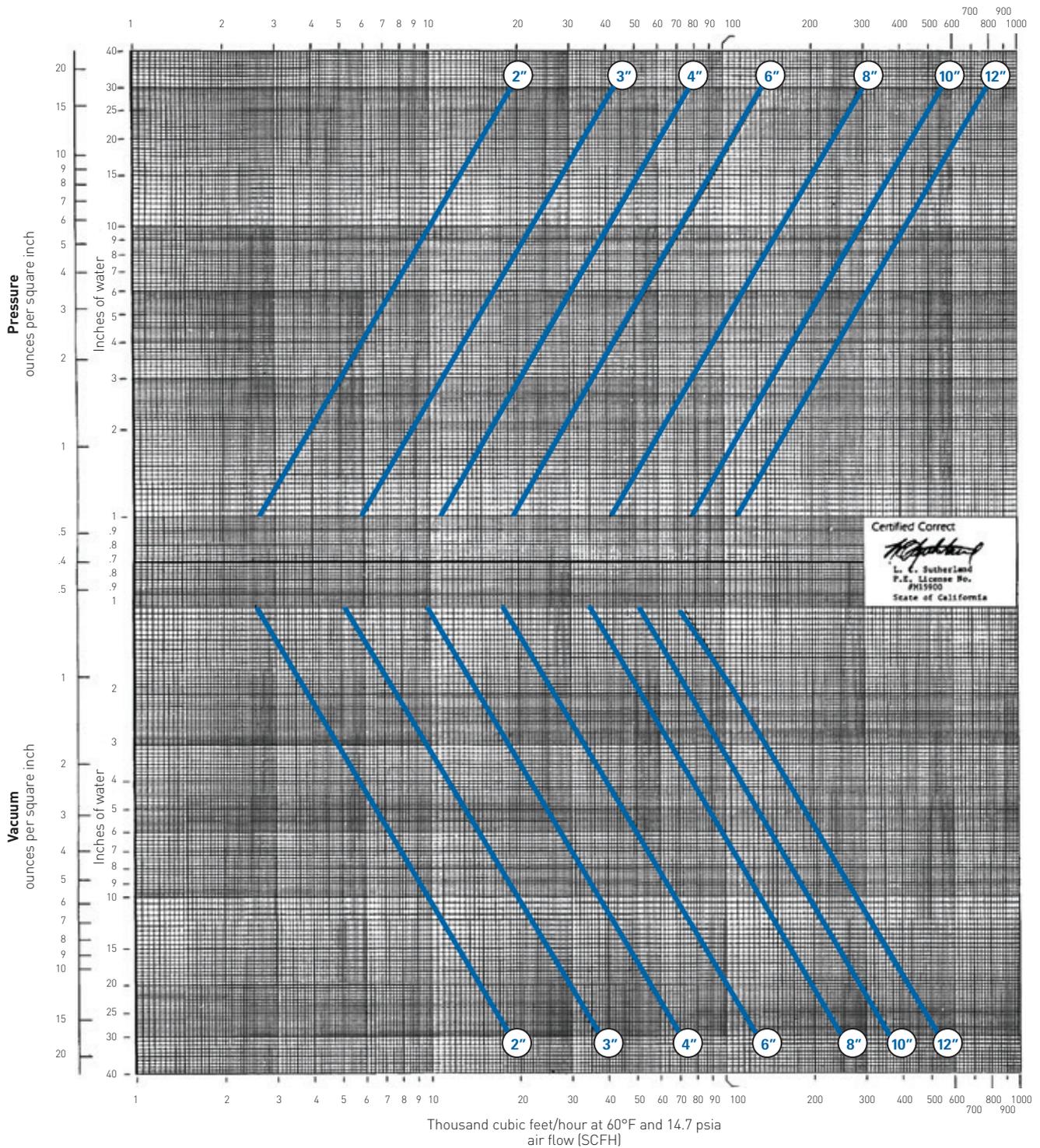
Installation, mounting arrangement and dimensions are preliminary information not to be used for construction. Certified drawings are available on request.



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FLOW CURVES

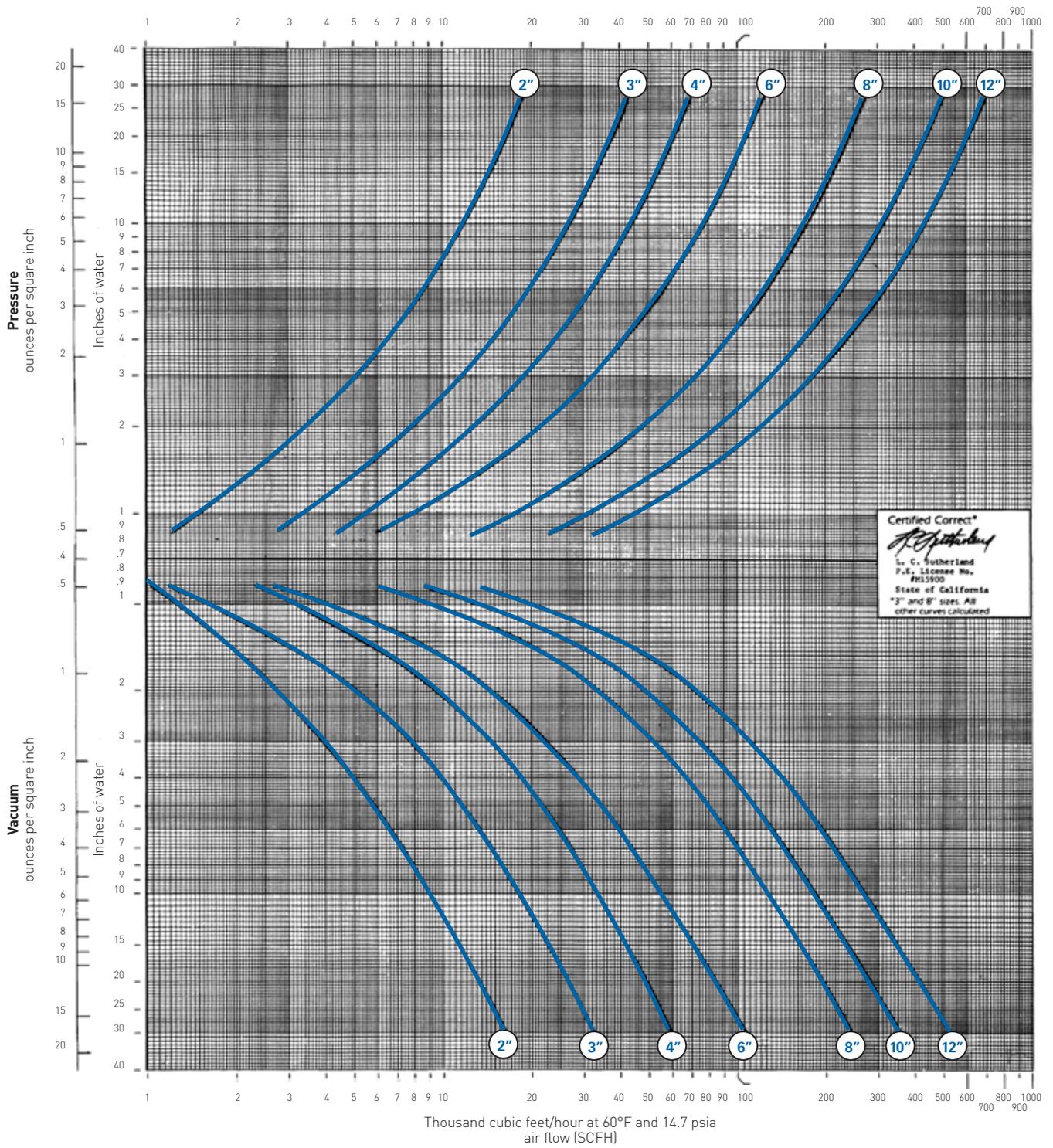
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FLOW CURVES

2010B SERIES RELIEF VALVE WITH 5400A SERIES FLAME ARRESTER
 SET AT 0.865 INCHES OF WATER PRESSURE AND VACUUM



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SELECTION GUIDE

Example:	5400A	2	1
Model			
5400A	Flame arrester (vertical installation only)		
Size			
2	2"		
3	3"		
4	4"		
6	6"		
8	8"		
0	10"		
1	12"		
Materials: housing/core/element			
1	Aluminum/aluminum/aluminum		
2	Aluminum/316 SS/316 SS		
3	Carbon steel/316 SS/316 SS		
5	Ductile iron/316 SS/316 SS		
6	316 SS/316 SS/316 SS		

Example: 2" Flame arrester with aluminum housing, aluminum core housing and element.

