

# THE SERIES 57

“Fire Chief”



## In-line Detonation Flame Arrester

### United States Coast Guard Accepted

Accepted by the U.S. Coast Guard (U.S.C.G. CFR154) for 2" – 18" line sizes. They can be installed in any identical line size piping configuration regardless of length and restrictions.

Accepted by PTB for 4", 6", 8" and 10" sizes. Full line approval pending.

### Tested in Excess of Existing Standards

Accepted to ATEX 94/9/EC and EN12874 as well as other international standards. (CSA, USCG, FM, UL, PTB, BSI, IMO) Tested for conditions not mandated by existing standards, such as momentum impulse (long run stable detonation), thermal failure and reignition of downstream unburned gases providing maximum protection against all modes of flame propagation.

### Passive Operation

Completely self contained with no reliance on power supplies, sensors, actuators or any external components.

### Type I - Endurance Burn Accepted

Accepted by the U.S. Coast Guard for Type I continuous burn protection. Due to the increased stabilization flame protection, Type I arresters do not require additional temperature monitors, quick closing valves and associated equipment as is the case with Type II arresters.

### Protection Independent of Location

Can arrest flame fronts anywhere in the piping system regardless of pipe length and configuration.

### Self-Sealing Element Design

Unique self-sealing element design is impervious to impact damage from repeated high pressure (4,000+ psi/276 bar) detonation shock waves. Actual protection increases when exposed to these forces.

### Detonation Momentum Attenuators

Incorporates Westech's patented Detonation Momentum Attenuators (DMA) plates to provide shock wave protection, as well as particulate knock out of entrained solids in the vapour stream.

### Large Element Surface Area

Designed up to 13 times the surface area of conventional arresters decreasing pressure drop and fouling effects.

### Low Pressure Drop

Reduces arrester costs as well as costs associated with piping systems and components.

### Easily Cleaned

Unique element design allows for ease of removal and cleaning.

### Increased Element Thickness

.025" (0.65 mm) provides substantial corrosion allowance for increased protection and longer element life.

### Optional Features

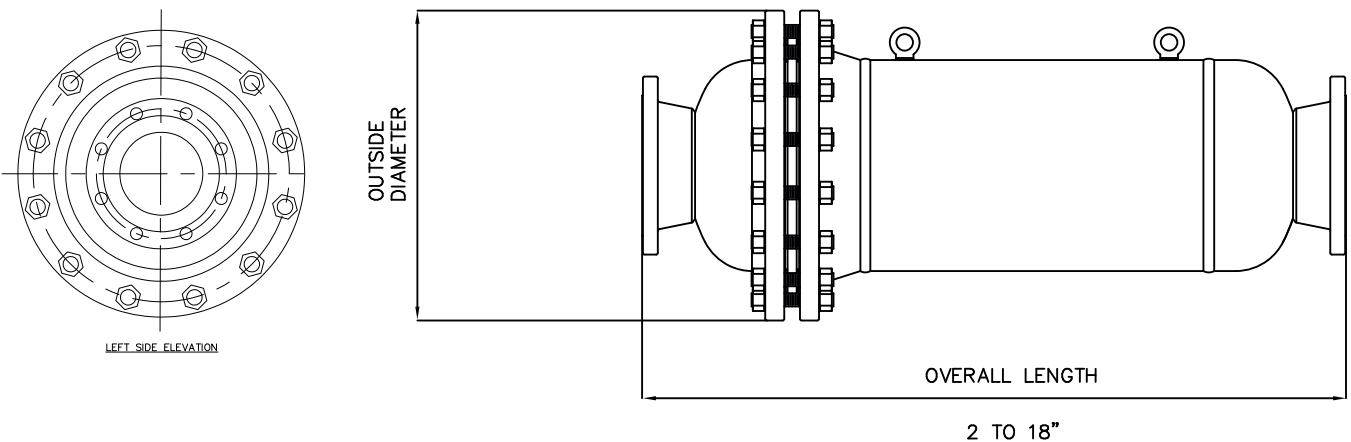
- Arrester housing fabricated in 316 SS
- DIN mating flange connections
- Special alloy fabrication and internal coatings
- Special surface finishes
- Special testing and designs

MEASURE EXCELLENCE. PERFORM BETTER.

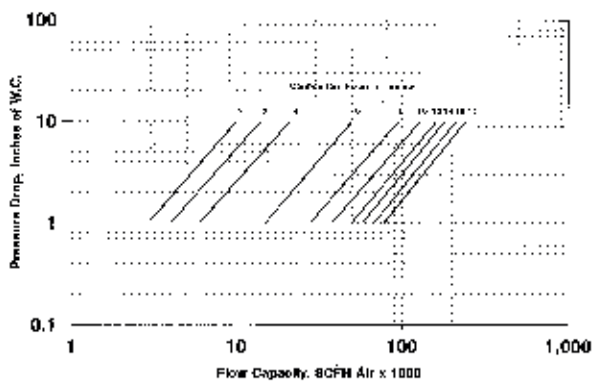


**WESTECH SERIES 57  
MODEL WFA57 GENERAL DIMENSIONS**

Model Number	Line Size	Overall Length	Outside Diameter	Overall Weight	Element Weight
WFA57-02	2" (50 mm)	25" (635 mm)	13 1/2" (340 mm)	175 lbs (80 kg)	45 lbs (20 kg)
WFA57-03	3" (75 mm)	35 1/4" (900 mm)	13 1/2" (340 mm)	225 lbs (100 kg)	75 lbs (35 kg)
WFA57-04	4" (100 mm)	36 13/16" (935 mm)	16" (410 mm)	350 lbs (160 kg)	100 lbs (45 kg)
WFA57-06	6" (150mm)	51" (1300 mm)	21" (530 mm)	775 lbs (350 kg)	285 lbs (130 kg)
WFA57-08	8" (200mm)	53 1/4" (1350 mm)	23 1/2" (600 mm)	1,020 lbs (465 kg)	495 lbs (225 kg)
WFA57-10	10" (250mm)	56 7/8" (1450 mm)	27 1/2" (700 mm)	1,570 lbs (710 kg)	685 lbs (310 kg)
WFA57-12	12" (300mm)	70 7/8" (1800 mm)	32" (810 mm)	2,190 lbs (995 kg)	950 lbs (430 kg)
WFA57-14	14" (350mm)	72 1/2" (1825 mm)	34 1/4" (870 mm)	2,790 lbs (1270 kg)	1,195 lbs (540 kg)
WFA57-16	16" (400mm)	73 3/8" (1865 mm)	36 1/2" (925 mm)	3,115 lbs (1410 kg)	1,355 lbs (615 kg)
WFA57-18	18" (450mm)	76 7/8" (1950 mm)	38 3/4" (985 mm)	3,840 lbs (1740 kg)	1,480 lbs (670 kg)



**WESTECH INDUSTRIAL LTD.  
Series 57 Detonation Flame Arrester Flow Chart**  
Chart Compiled From Certified Flow Curves



**APPLICATION DATA REQUIRED**

1. Line size
2. Vapour pressure
3. Vapour composition (gas group)
4. Vapour temperature
5. Flow rate
6. Allowable pressure drop
7. Vertical or horizontal installation
8. Materials of construction
9. Options required
10. Process description