

FLAMQUENCH™ FLAMELESS VENTING

DESCRIPTION

Fike designs simple, reliable explosion protection solutions to meet your safety requirements. During normal venting, an explosion is freely discharged, allowing flames and dust to exit the process vessel being protected. When the process vessel is located indoors, ducts are generally used to safely convey the explosion outside the building. However the cost of implementing larger explosion vents and ducts limits the practical use due to dramatically decreased venting efficiency.

Fike FlamQuench flameless vents are designed to protect people and equipment from flames and dust. In the event of an explosion, flame and dust discharge into the FlamQuench device. The flame from the explosion is extinguished as it travels through several layers of heat-absorbing stainless steel mesh, while dust screens retain a high percentage of particulate. This allows explosion venting to be utilized indoors or when the vent discharge path can be dangerous to personnel.



FlamQuench Flameless Vent

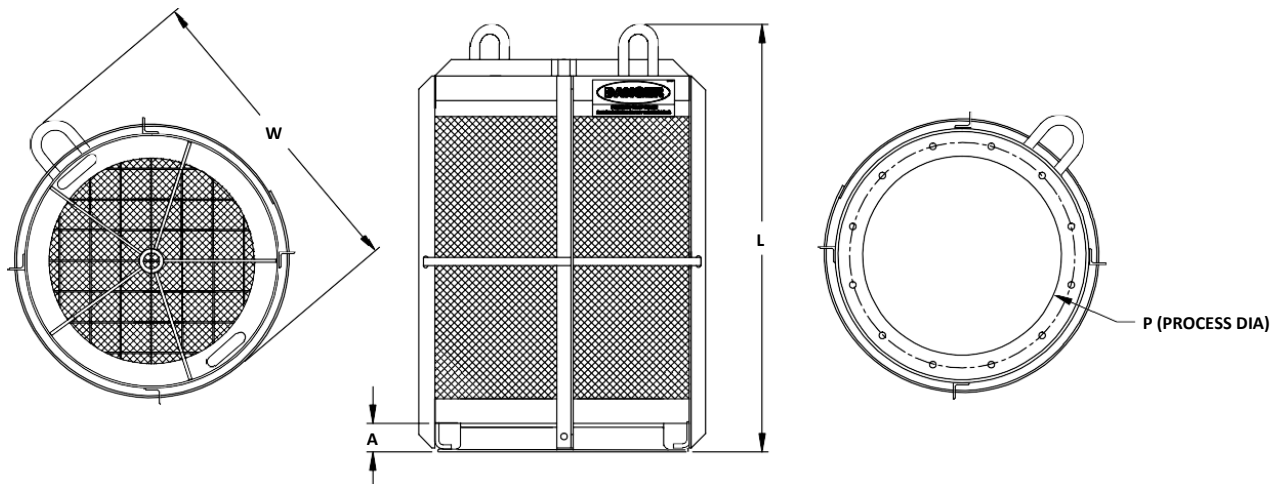
FEATURES AND BENEFITS

Flame Filter	Prevents flames from emerging from vented areas – perfect for indoor applications and retains high percentage of dust
Eliminate Vent Ducts	Replaces expensive ductwork or relocation of process equipment
Optimal Relief Area	Enhanced venting efficiency over venting with ductwork
Dynamically Tested	Tested under full-scale explosion conditions, not just computer modeling
High Mechanical Integrity	Longer service life
Non-Fragmenting Design	Reduced risk to personnel and equipment
Virtually Maintenance Free	Reduced cost of ownership

SPECIFICATIONS

Compliance	FM approved through 24", NFPA 68, ATEX Certification available (consult factory)
Materials of Construction	316 SST
Companion Explosion Vents	Circular Fike models must be ordered separately with burst indication. Insulated and core-filled vents, such as the CV-I and CV-CF respectively, should not be used with flameless venting devices.
Installation Location	Device must be installed a minimum distance from walls, equipment and personnel to ensure proper pressure relief and personnel safety. Consult installation manual for details.
Operating Conditions	Device is not exposed to process conditions. Choose explosion vent to match operating conditions. Maximum process temperature is 500°F.
Environmental Conditions	Ambient pressure and temperature (-40° to +140°F). Keep device free of deposits.
Hazard	Non-metallic organic dusts with flame temperatures of $\leq 1500^{\circ}\text{C}/2732^{\circ}\text{F}$ $K_{st} \leq 300 \text{ bar-m/s}$ $P_{red} \leq 1 \text{ bar} / 14.5 \text{ psi}$ Consult factory when more than 1 device is required or protected volume $> 20 \text{ m}^3 (706 \text{ ft}^3)$.
Accessories	Burst indicator lead cables, mounting bases, gaskets, dust covers and reload kits

SPECIFICATIONS



Flame Filter Assembly		Dimensions				Approximate Weight
FlamQuench II Size	P/N	W	L	A	P	Lbs. (kg)
8"	E34-001-08	13.0 in (330 mm)	23.5 in (597 mm)	1.8 in (45 mm)	8.1 in (206 mm)	44 lbs (20 kg)
12"	E34-001-12	19.0 in (483 mm)	26.3 in (667 mm)	1.8 in (45 mm)	12.2 in (310 mm)	80 lbs (36 kg)
14"	E34-001-14	22.3 in (565 mm)	31.5 in (800 mm)	2.5 in (64 mm)	14.2 in (360 mm)	113 lbs (51 kg)
16"	E34-001-16	25.0 in (635 mm)	35.5 in (902 mm)	2.5 in (64 mm)	16.3 in (413 mm)	168 lbs (76 kg)
20"	E34-001-20	28.5 in (724 mm)	35.5 in (902 mm)	2.5 in (64 mm)	20.3 in (514 mm)	199 lbs (90 kg)
24"	E34-001-24	32.5 in (826 mm)	57.8 in (1467 mm)	2.5 in (64 mm)	24.3 in (616 mm)	402 lbs (182 kg)
30"	E34-001-30	38.8 in (984 mm)	86.3 in (2191 mm)	2.5 in (64 mm)	30.3 in (768 mm)	635 lbs (288 kg)
36"	E34-001-36	46.3 in (1175 mm)	88.3 in (2242 mm)	2.5 in (64 mm)	36.3 in (921 mm)	804 lbs (365 kg)
40"	E34-001-40	49.8 in (1264 mm)	88.3 in (2242 mm)	2.5 in (64 mm)	40.3 in (1022 mm)	965 lbs (438 kg)