Non Return Valve EV-VF VigiFLAP

APPLICATIONS

The **VigiFLAP** is a non-return valve designed to prevent propagation of overpressure or flame front caused by an explosion downstream in vessels such as dust collectors, cyclones or filters into the piping system.

The valve is held open either by air flow or proprietary locking mechanism. As a result the VigiFLAP can be used to isolate either the inlet or outlet of a filter from explosion.

In the event of an explosion, the valve closes and locks preventing passage of the flame front (as required by NFPA regulations).

CERTIFICATIONS & STANDARDS

EN 16447
EN 15089
NFPA 69

STANDARD FEATURES

- **Body :** painted steel
- **100% stainless steel AISI 304**
- **Diameters : ø6" to ø52" / ø160 mm to ø1320 mm**
- **Gasket : EPDM (Silicone FDA 392°F/200°C option)**
- **Pressure drop :** Lower pressure drop with round domed flap

OPTIONAL FEATURES

The EM-NRV is 100% NFPA 69 compliant with the following optional features :

- **Body :** Galvanized steel
- **Body :** Stainless steel
- **Frame silicone FDA :** 392°F/200 °C
- Accumulated dust level : Dust level sensor to prevent dust accumulation
- Connection box installed on the body, according to the ATEX zone (opposite side of the locking mechanism)

DIMENSIONS

TECHNICAL DATA					
PART NUMBER	DN (inch)	DN (mm)	Door gasket	Body gasket	Body
50206 - 020211	ø 6	ø 160	EPDM	EPDM	Mild steel
50207 - 020211	ø 7	ø 180	EPDM	EPDM	Mild steel
50208 - 020211	ø 8	ø 200	EPDM	EPDM	Mild steel
50210 - 020211	ø 10	ø 250	EPDM	EPDM	Mild steel
50212 - 020211	ø 12	ø 300	EPDM	EPDM	Mild steel
50214 - 020211	ø 14	ø 350	EPDM	EPDM	Mild steel
50216 - 020211	ø 16	ø 400	EPDM	EPDM	Mild steel
50218 - 020211	ø 18	ø 450	EPDM	EPDM	Mild steel
50220 - 020211	ø 20	ø 500	EPDM	EPDM	Mild steel
50222 - 020211	ø 22	ø 550	EPDM	EPDM	Mild steel
50224 - 020211	ø 24	ø 600	EPDM	EPDM	Mild steel
50226 - 020211	ø 26	ø 650	EPDM	EPDM	Mild steel
50228 - 020211	ø 28	ø 700	EPDM	EPDM	Mild steel
50230 - 020211	ø 30	ø 750	EPDM	EPDM	Mild steel
50231 - 020211	ø 31	ø 800	EPDM	EPDM	Mild steel
50233 - 020211	ø 33	ø 850	EPDM	EPDM	Mild steel
50235 - 020211	ø 35	ø 900	EPDM	EPDM	Mild steel
50237 - 020211	ø 37	ø 950	EPDM	EPDM	Mild steel
50239 - 020211	ø 39	ø 1000	EPDM	EPDM	Mild steel
50243 - 020211	ø 43	ø 1100	EPDM	EPDM	Mild steel
50247 - 020211	ø 47	ø 1200	EPDM	EPDM	Mild steel
50252 - 020211	ø 52	ø 1320	EPDM	EPDM	Mild steel

** Units in inches rounded to the closest whole number*

FREE FLOWING DESIGN

The alignment of the VigiFlap Valve and piping system is designed to maintain a continuous self-cleaning air stream, with extremely low frictional resistance

FREE FLOW DESIGN

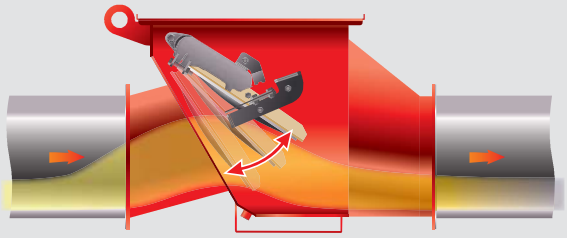
Explosion Isolation Valve EV VigiFLAP

PROCESS FLOW POSITIONS

PROCESS

FLOW POSITIONS :

1 Process airflow maintains flap open position

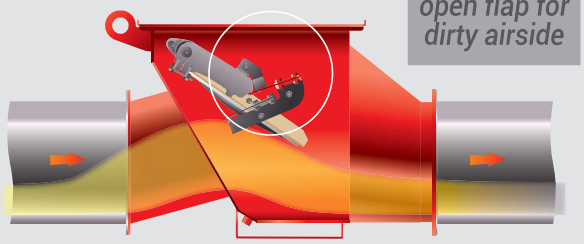


Installation with floating flap

or

Installation with flap locked open

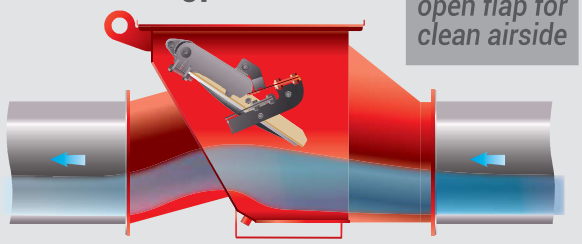
2 Flap locked in open position



Locked open flap for dirty airside

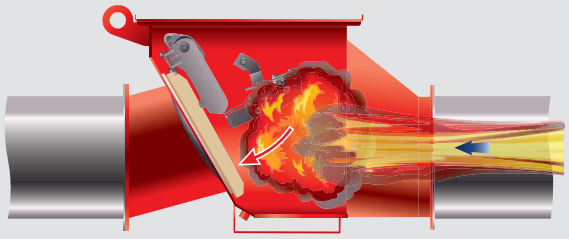
or

Locked open flap for clean airside



EXPLOSION EVENT

EXPLOSION PRESSURE WAVE ACTIVATES FLAP CLOSURE :



Deflagration locks flap in place

Reset requires manual unlocking

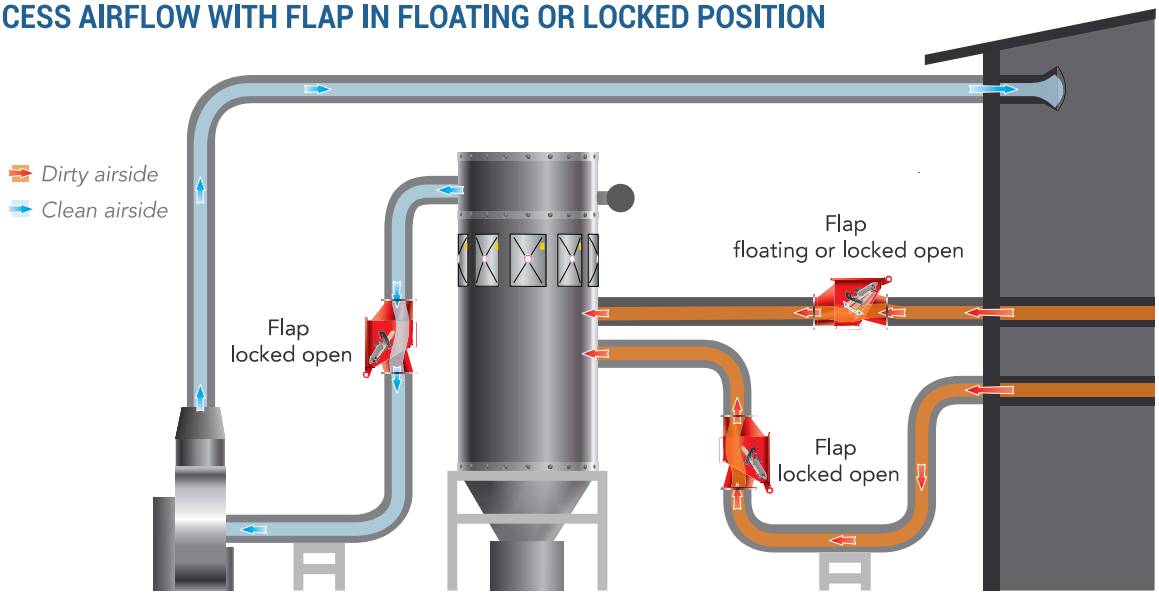
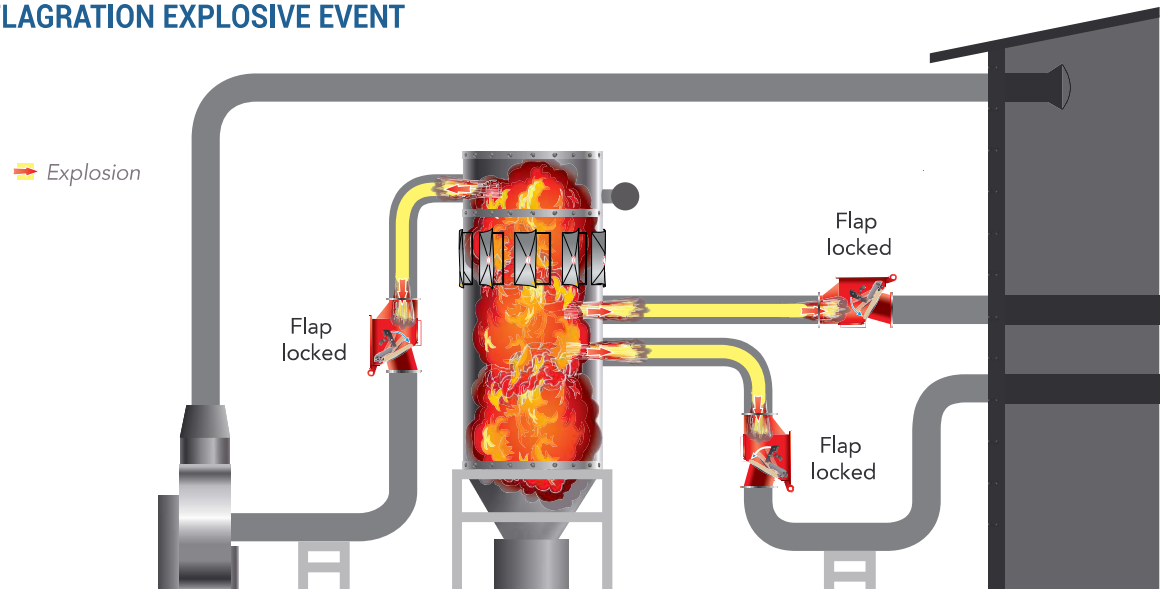
TECHNICAL INFORMATION

KST MAX	*St1 ≤ 200 bar.m/s St2 ≤ 300 bar.m/s*	**DUST**	*Any kind of dust*	**POSITION OF THE DEVICE**	*Vertical / Horizontal*
KST MIN	*≤ 50 bar.m/s*	**AMBIENT TEMPERATURE**	*-4°F... +140°F -20°C... +60°C*	**FLUX**	*Overpressure or vacuum*
PMAX	*145 psi ≤ 10 bar*	**SPEED FLOW**	*2950-6890 fpm 15m/s... 35m/s*	**FLOW TEMPERATURE**	*≤ 176° F ≤ 80° C*
MESG	*1/16" 1.5 mm (ex: sulfur)*	**DUST CONCENTRATION**	*No limit*	**INTERIOR**	*ATEX zone 20*

EV VigiFLAP TYPICAL INSTALLATION CONFIGURATIONS

THE EV VigiFLAP IS DESIGNED FOR USE ON BOTH THE DIRTY AND CLEAN AIR SIDE OF FILTER, WITH OR WITHOUT ELBOWS

PROCESS AIRFLOW WITH FLAP IN FLOATING OR LOCKED POSITION



DEFLAGRATION EXPLOSIVE EVENT