

Explosion Isolation Flap Valve CARZ-N Ø315-1000mm

Explosion Isolation Flap Valve CARZ-N - protective system



Explosion Isolation Flap Valve type CARZ-N prevents a transmission of explosion pressure wave and flames front from the filter to your workplace. By using our CARZ-N Explosion Isolation Flap Valve, you reduce the risk from dust explosion for both people and equipment.

Function

During normal operation, the valve is kept open, and large opening angle ensure low pressure drop. In case of an explosion in the filter, the pressure wave will force to close the flap plate and lock in position. When flap plate is closed it makes an effective barrier against approaching flame front. This prevent the explosion from being transmitted from the filter to upstream work areas.

No matter what industry you are in or what type of dust is generated in your factory, we can provide the complete dust explosion protection solution of filters, and explosion isolation flap valves.

- Independently tested to latest and most stringent standards and regulations
- Compliant with international dust explosion protection codes (ATEX, NFPA69, IECEx)
- Widest range of sizes, applications and filter system configurations on the market (e.g. approval for positive and negative pressure systems, approval for St2 dusts up to size 630 inclusive)
- Manufactured fully by Nederman under certified quality assurance system, ensuring highest level of quality and reliability

Product name	Explosion Isolation Flap Valve CARZ-N Ø315-1000mm
Material	Welded carbon steel, painted RAL5009
Operating temperature range	-20 - +70°C (0 - 160F)
Ambient temperature range	-20 - +60°C (0 - 140F)
Connection	FL
Note	LEL = Lower Explosion Limit = MEC Minimum Explosion Concentration
Max velocity in duct (m/s)	30
Minimum velocity in duct	0
Install type	Push and Pull



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Diameter (in)	Weight (lbs)	Explosion Class ATEX	Dust Concentration in duct	Minimum vessel size, push (m³)	Minimum vessel size, pull (m³)	Dust type	Kst (bar m/s)	Maximum reduced pressure, Pred (bar)	[model]
450	385	St2	ST1: Any; ST2: < LEL	1,6	0,9		300	ST1: 0,5 bar; ST2: 0,4 bar	73008267*
500	440	St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008268*
560	493	St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008269*
630	572	St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008270*
710	836	St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008271
800	948	St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008272
900	1078	St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008273
1000	1245	St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008274
450		St2	ST1: Any; ST2: < LEL	1,6	0,9		300	ST1: 0,5 bar; ST2: 0,4 bar	73008473*
500		St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008474*
560		St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008475*
630		St2	ST1: Any; ST2: < LEL	1,6	1,6		300	ST1: 0,5 bar; ST2: 0,4 bar	73008476*
710		St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008477
800		St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008478
900		St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008479
1000		St1	Any	3,2	3,2		200	PULL: 0,35 bar; PUSH: 0,4 bar	73008480
315		St2	Any	0,46	0,46		300	0,5	73008481
350		St2	ST1: Any; ST2: < LEL	1,6	0,9		300	ST1: 0,5 bar; ST2: 0,4 bar	73008482*
400		St2	ST1: Any; ST2: < LEL	1,6	0,9		300	ST1: 0,5 bar; ST2: 0,4 bar	73008483*

*LEL = Lower Explosion Limit = MEC Minimum Explosion Concentration

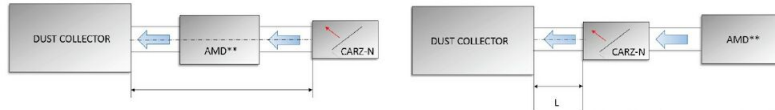
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Special installation requirements

PULL configuration



PUSH configuration



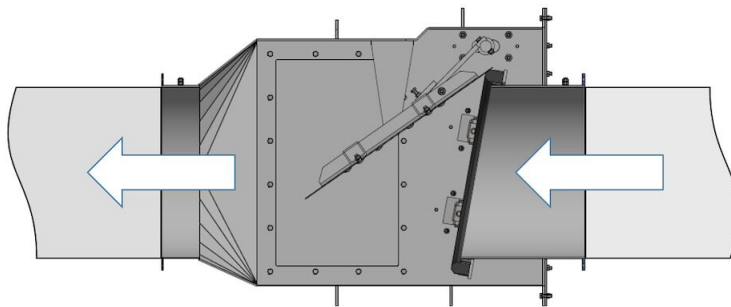
**AMD=Air moving device or fan

Parameter	Dust type	Size 315 mm	Size 350 - 450 mm	Size 500 - 1000 mm
L min	Organic	5 m (16.4 ft) for PULL & PUSH	5,5 m (18 ft) for PULL 5 m (16.4 ft) for PUSH	5,5 m (18 ft) for PULL 5 m (16.4 ft) for PUSH
	Metallic	5,3 m (17.4 ft) only for PULL	5,5 m (18 ft) only for PULL	N/A
L max	Organic	10,2 m (33.5 ft) for PULL 10 m (32.8 ft) for PUSH	10 m (32.8 ft) for PULL & PUSH	10 m (32.8 ft) for PULL & PUSH
	Metallic	10,3 m (33.8 ft) only for PULL	10,5 m (34.5 ft) only for PULL	N/A
Max. flow velocity		30 m · s ⁻¹ (5,906 fpm)		
Max. number of bends (between CARZ-N and protected vessel)		straight duct with max. 2 bends 90 dgr		

AMD**=Air moving device or fan

L=for min and max ducting lengths, see specific part numbers.

Suction direction



Suction direction

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