

CARZ

Explosion Isolation Flap Valve CARZ - protective system.



Explosion Isolation Flap Valve type CARZ is designed as explosion pressure resistance equipment, which is able to prevent a transmission of dangerous effects of explosion pressure wave and flames front to upstream areas.

Description

Welded construction in RAL 5009 blue painted steel plate or stainless steel with strong rubber seal, which is available upon request.

Function

During air flow generated by main fan, the Flap plate is open. In case of an explosion in the downstream equipment (e.g. dust collector) a pressure wave will force to close the Flap plate and lock in position. Large opening angle ensure low pressure drop. When Flap plate is closed it makes an effective barrier against approaching flame front. This prevent the explosion from being transmitted to upstream work areas.

Product name	CARZ
Installation	Indoor
Max flow velocity (m/s)	30
Max Reduced explosion pressure (Pred bar)	0,45
Operating temperature range	-20°C Max +70°C (Min -4 F Max 104 F)
Ambient temperature range	-20°C Max +70°C (Min -4 F Max 104 F)
Maximun Experimentml Safe Gap (Dust: MESG ≥ mm)	2
Explosion class	St1



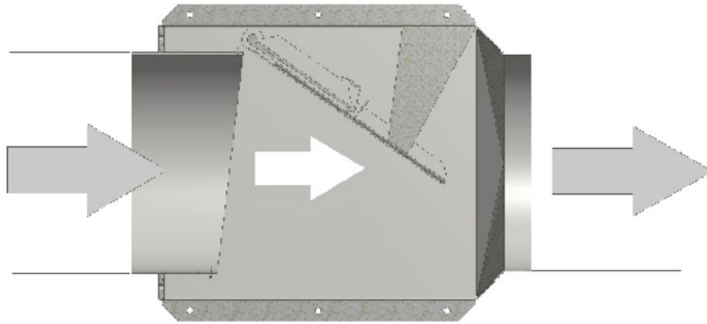
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Diameter (mm)	Connection	Min vessel size (m3)	Weight (kg)	Model
160	FL	0,4	23	73001200
180	FL	0,9	26	73001201
200	FL	0,9	29	73001202
250	FL	0,9	36	73001204
315	FL	0,9	45	73001207
350	FL	0,9	50	73001209
400	FL	0,9	57	73001211
160	NW	0,4	23	73001212
180	NW	0,9	26	73001213
200	NW	0,9	29	73001214
250	NW	0,9	36	73001216
315	NW	0,9	45	73001219
350	NW	0,9	50	73001221
400	NW	0,9	57	73001223
160	QF	0,4	23	73001224
180	QF	0,9	26	73001225
				73001226
250	QF	0,9	29	73001228
315	QF	0,9	36	73001231
350	QF	0,9	45	73001233
400	QF	0,9	57	73001235
160	FL	0,4	23	73000301
180	FL	0,9	26	73000302
200	FL	0,9	29	73000303
250	FL	0,9	36	73000304
315	FL	0,9	45	73000305
350	FL	0,9	50	73000306
400	FL	0,9	57	73000307
250	NW	0,9	36	73000308
180	NW	0,9	26	73000309
200	NW	0,9	29	73000310
315	NW	0,9	45	73000312
350	NW	0,9	50	73000313
400	NW	0,9	57	73000314
160	QF	0,4	23	73000315
180	QF	0,9	26	73000316
200		0,9	29	73000317
250	QF	0,9	29	73000318
315	QF	0,9	36	73000319
350	QF	0,9	45	73000320
400	QF	0,9	57	73000321
160	FL	0,4	23	73001261
180	FL	0,9	26	73001262
200	FL	0,9	29	73001263
250	FL	0,9	36	73001265
325	FL	0,9		73001269
350	FL	0,9	50	73001270
400	FL	0,9	57	73001272
160	QF	0,4	23	73001273
180	QF	0,9	26	73001274
200	QF	0,9	29	73001275
250	QF	0,9	36	73001277
325	QF	0,9		73001281
350	QF	0,9	50	73001282
400	QF	0,9	57	73001284

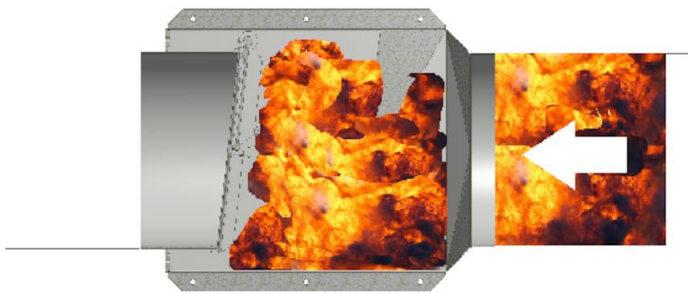
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	Accessory	Part No
	CARZ Locking Sensor set	73001236

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Suction direction



Explosion direction

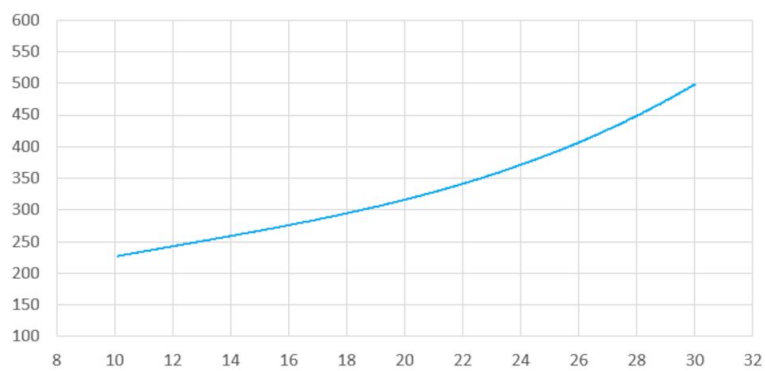


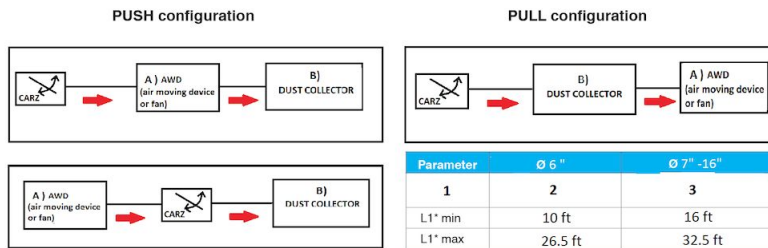
Chart of pressure drop vs. air velocity in duct

Pressure drop CARZ, sizes 160 -400

X- Axis: Air velocity in duct (m/s)

Y-Axis: Pressure drop (Pa)

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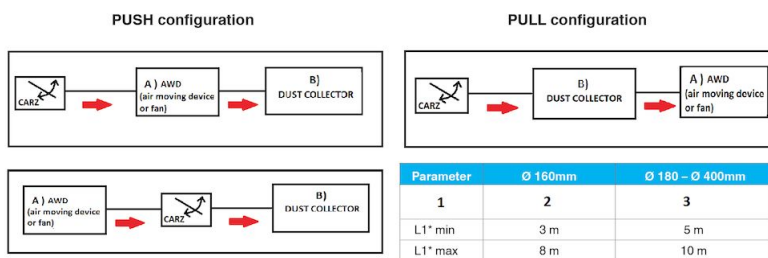


Push/ Pull configuration, imperial

- A) AWD (air moving device or fan)
- B) Dust Collector

- 1) Elbows
- 2) Straight duct and max. 2 elbows 90°
- 3) Straight duct and max. 2 elbows 90°

L1 - Installation distance from the vessel, where the explosion could occur, to the CARZ.



Push/ Pull configuration, metric

- A) AWD (air moving device or fan)
- B) Dust Collector

- 1) Elbows
- 2) Straight duct and max. 2 elbows 90°
- 3) Straight duct and max. 2 elbows 90°

L1 - Installation distance from the vessel, where the explosion could occur, to the CARZ.

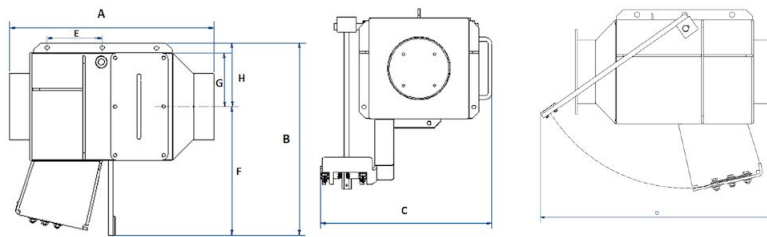
Flap valve size OD	Dimensions								Weight (lbs)	Part number	
	A (inch)	B (inch)	C (inch)	D (inch)	E (inch)	F (inch)	G (inch)	H (inch)		QuickFit	Flanged
(6")	19.5	18.5	17.1	22.9	7.7	12.2	5.1	6.1	51	73001273	73001261
(7")	20.3		17.9		8.1	11.9	5.5	6.5	57	73001274	73001262
(8")	21.1		18.7	8.5	11.4	5.9	6.9	64	73001275	73001263	
(10")	23.0		20.7	23.0	9.5	10.5	6.9	7.9	79	73001277	73001265
(12,5")	26.0	19.9	24.2	26.0	10.8	9.1	8.4	9.9	104	73001281	73001269
(14")	27.0	20.9	25.2	27.0	11.5	8.5	8.9	10.4	110	73001282	73001270
(16")	28.9	22.8	27.2	28.9	12.4	7.8	9.8	11.5	126	73001284	73001272

Dimension table, Imperial

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Flap valve size OD	Dimensions [mm]								Weight [kg]	Part number					
	A	B	C	D	E	F	G	H		FL	QF	NW**	Stainless steel version		
													FL	QF	NW**
160mm	495		435		196	310	130	155	23	73001200	73001224	73001212	73000301	73000315	73000308
180mm	515		455	581	206	301	140	165	26	73001201	73001225	73001213	73000302	73000316	73000309
200mm	535	470	475		216	291	150	175	29	73001202	73001216	73001214	73000303	73000317	73000310
250mm	585		525	585	241	266	175	200	36	73001204	73001228	73001216	73000304	73000318	73000311
315mm	650	495	605	650	273	230	213	253	45	73001207	73001231	73001219	73000305	73000319	73000312
350mm*	685	530	640	685	291	217	225	265	50	73001209	73001233	73001221	73000306	73000320	73000313
400mm	735	580	690	735	316	198	250	290	57	73001211	73001235	73001223	73000307	73000321	73000314

Dimensions table, metric



Dimensions