



## Shut Off Damper (MID/EID/PID)

High quality engineering delivers long-life reliability with the Wozair Isolation Damper. With the option for Class 3 closed blade leakage to EN1751.



## Shut Off Damper

Built for ventilation systems where isolation is maintained in critical areas. The Isolation Damper is manufactured using modern CNC laser cutting and folding processes, with metal to metal blade tip and blade edge sealing arrangements to achieve exceptional performance without the aid of gasket materials (no silicone gasket).

Airflow can be in either direction and installed in any orientation with either manual, electrical or pneumatic actuation.

Circular ductwork dampers are also available in the form of the BID and can be supplied either as single blade butterfly type up to 16" diameter.

## Technical Information

### Minimum Size

6"W x 6"H x 12"D

### Maximum Size

98"W x 98"H x 12"D

Dampers for larger airways can be assembled from a number of single units. Contact Wozair to discuss your specific requirements.

### Leakage

Closed blade leakage to Class 2 EN1751, Class 3 available on request  
Case leakage to Class B EN1751, Class C available on request

### Explosive Atmosphere

ATEX/IECEX SGS Baseefa/SGS Fimko Oy.

### Functional Safety

Functional Safety SIL 2 CSA SIra Certificate (PID & EID only). Contact us to discuss your requirement.

## Materials of Construction

### Casing and Flanges:

#### Materials

Stainless Steel 304L/316L (1.4307/1.4404)  
Carbon Steel (GAM)  
Other Stainless Steel grades available on request

#### Thickness

Minimum 14G (at 8" deep) 11G-¾G thick (at 12" deep)  
Fully welded

Flange drilling detail to ISO 15138 standard  
Custom flanges as option

### Blades:

#### Materials

Stainless Steel 304L/316L (1.4307/1.4404)  
Other Stainless Steel grades available on request

#### Thickness

Double skin from minimum 18G thick each skin in same material as casing except Stainless Steel 304L for all GAM casing options

Plug welded to solid shafts

### Shafts:

Ø19 mm (¾") continuous solid shaft in Stainless Steel 316/316L (1.4401/1.4404)

### Bearings:

Oil impregnated sintered bronze. Low temperature option to -67°F and low leakage bearing assembly option available

### Side Seals:

Stainless Steel 316L (1.4404)

### Linkage:

Stainless Steel 316L (1.4404)  
6G thick link bars arranged to provide parallel blade motion

### Blade Gasket:

N/A; metal to metal forms the seal

## Mechanical Options

The following options can be incorporated if required:

- Increased flange thickness
- Ceramic, Stainless Steel bearings or for chemical application PTFE bearings in place of phosphor bronze oilite (as standard)
- Transitions; various options for fitting into circular ductwork
- Earth bosses
- Lifting lugs



## Control Options

Wozair dampers can be operated with electric or pneumatic actuators. The pneumatic and electric controls will be selected based on your exacting requirements.

Dampers can be designed to close or open on loss of power when fitted with an electric or pneumatic actuator. The electric actuators options are Petz, Schischek and Belimo, and pneumatic actuator by Powertork.

The actuator will be selected following your technical needs:

- Electric or pneumatic actuation system
- Fail open, fail close or fail stay put
- Requested closing time (1, 2 or 3 seconds closing time or longer)
- Class I, II, III Division 1 BCDEFG T6 and zone 1, 2, 21, 22
- Class I, II, III Division 2 ABCDEFG T6 and zone 2, 22
- ATEX and IECEx Zone 1, 21 (II 2GD) and 2, 22 (II 3GD) or non hazardous area, based on actuator selection
- Design Temperature (from -76°F/-60°C to +158°F/+70°C subject to actuator selection)
- NEMA / IP rating
- Environment (High corrosion resistance)

## Ordering

<b>Type:</b>	MID	<b>Duct Width:</b>	20"
<b>Duct Height:</b>	8"	<b>Case Depth:</b>	12"
<b>Type Wozair:</b>	Manual Isolation Damper Electric Isolation Damper Pneumatic Isolation Damper		
<b>Case Material:</b>	<u>Stainless Steel</u> Low Carbon 1.4307 = 304L Low Carbon 1.4404 = 316L		
<b>Mild Steel Sheet</b>	Galvanised after Manufacture = GAM		
<b>Case Thickness:</b>	11G		
<b>Controls Options</b>	ML = Manual Lever (EN1751 Class 2 blade leakage) MG = Manual handwheel with gearbox (EN1751 Class 3 blade leakage) E = Electric P = Pneumatic		
Nominal:	Clear inside duct dimensions		
Duct Size:	'Quote' (Width x Height)		
<b>Order Code Example:</b>	MID/316L/11G/20W/8H/12D/E		

## Weights

FGD Bare Shaft Damper Weight Matrix - 8"D

lb	H (in)											
	6	12	18	24	30	35	41	47	61	75	83	
W (in)	6	20	29	37	46	55	62	71	77	110	132	146
	12	29	42	53	64	73	82	90	101	146	172	185
	18	40	53	68	79	93	101	112	123	183	212	227
	24	49	66	84	97	110	121	134	146	218	251	269
	30	57	79	99	115	130	143	157	170	256	291	309
	35	68	93	115	130	148	163	176	192	291	331	351
	41	77	104	130	148	168	183	198	214	328	370	392
	47	86	117	146	165	185	203	220	238	364	410	432
	61	123	168	212	243	276	304	333	364	520	593	631
	75	157	207	258	291	331	362	392	425	613	692	736
	89	183	240	298	335	377	412	448	483	699	787	833
98	201	262	324	366	410	448	485	522	761	853	904	

### Additional nominal weights:

Manual handle 7lb

Belimo actuator with junction box 7lb

Petz or Schischek actuator with junction box 11lb

Pneumatic actuator and components with controls enclosure 33lb

FGD Bare Shaft Damper Weight Matrix - 12"D

lb	H (in)											
	6	12	18	24	30	35	41	47	61	75	83	
W (in)	6	24	35	46	57	66	75	84	93	132	159	172
	12	35	49	62	75	88	97	108	119	172	201	216
	18	46	64	79	95	110	119	132	143	212	243	262
	24	57	77	95	115	132	143	157	170	254	287	306
	30	71	93	112	134	154	165	183	194	293	328	353
	35	82	108	130	154	174	187	207	220	333	370	397
	41	93	121	146	172	196	209	231	245	373	412	441
	47	104	137	163	192	218	231	256	269	414	456	487
	61	146	192	231	276	315	340	373	399	575	644	690
	75	181	236	280	331	375	401	441	467	679	750	802
	89	212	273	324	379	430	456	500	529	774	851	911
98	231	300	353	414	467	496	545	573	842	922	985	

### Additional nominal weights:

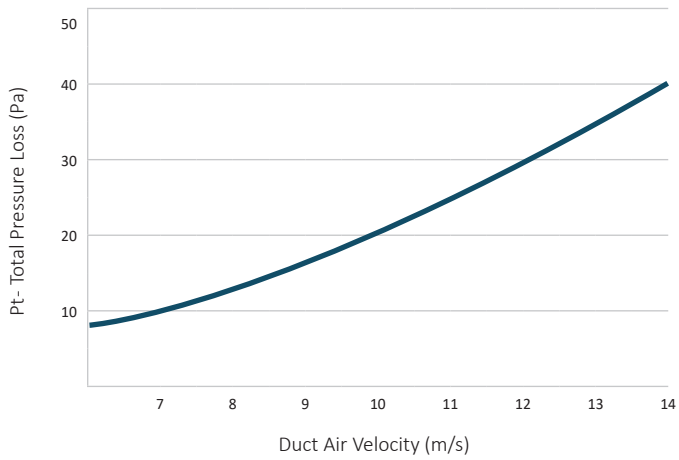
Manual handle 7lb

Belimo or Johnson Controls actuator with junction box 7lb

Petz or Schischek actuator with junction box 11lb

Pneumatic actuator and components with controls enclosure 33lb

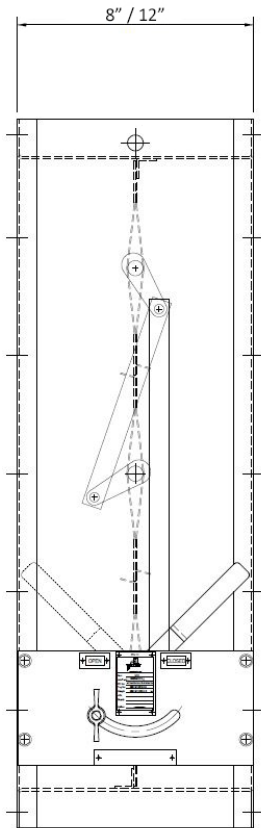
## Performance



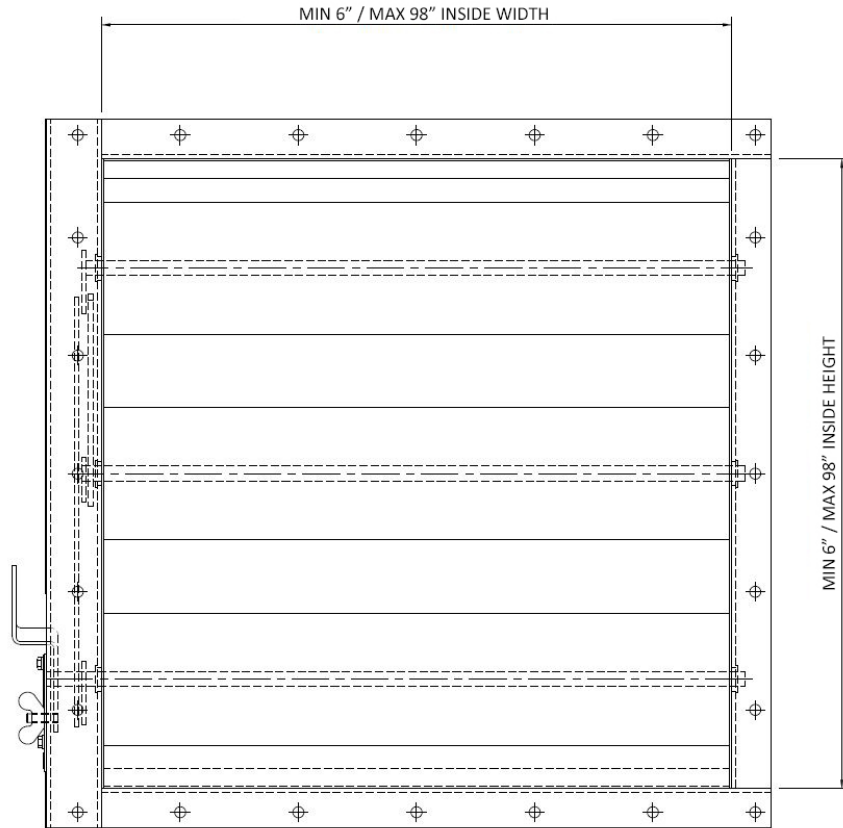
Full aerodynamic performance data is presented above and is based on 12" deep diameter.

**Total Pressure Loss** - the difference in pressure measured across the Fire Damper when the blades are fully open.

## Dimension Drawing (example with manual lever controls)



SIDE ELEVATION  
LINKAGE COVER  
PLATES OMITTED FOR  
CLARITY



FRONT ELEVATION

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