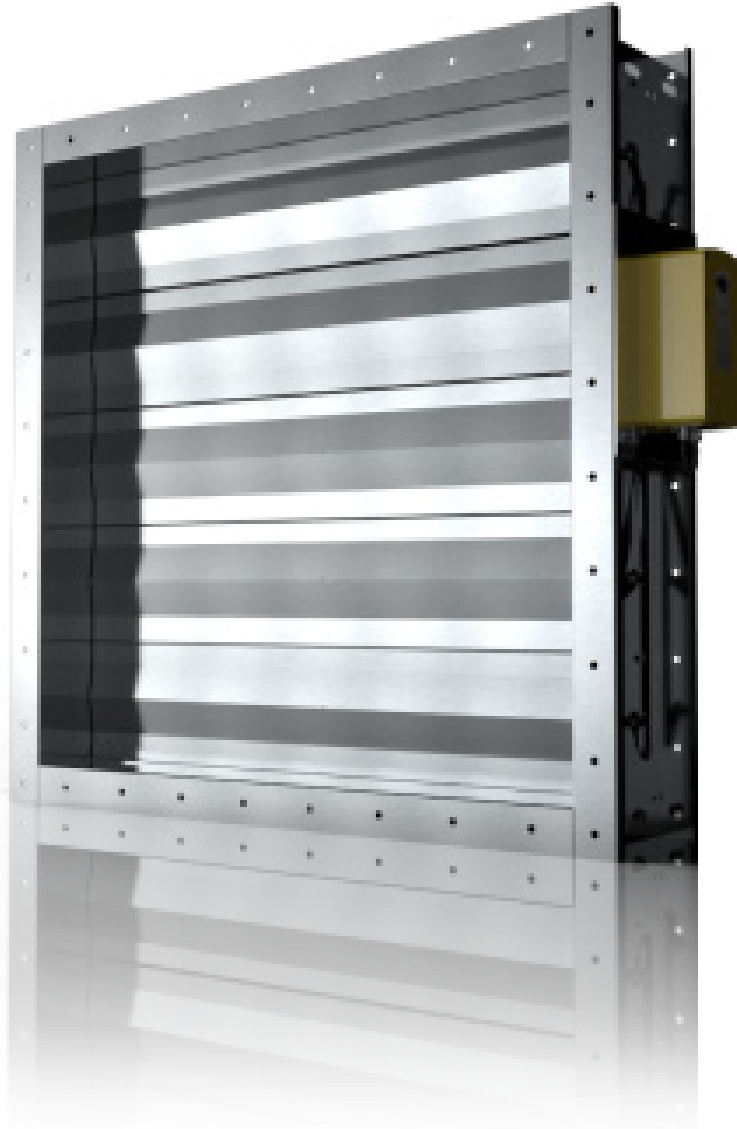


## Shut Off Damper (MID/EID/PID)

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



## Manual/Electric/Pneumatic Isolation (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 400mm diameter.

### Technical Information

#### Minimum Size

150W x 150H x 300D mm

#### Maximum Size

2500W x 2500H x 300D mm

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

#### Reliability Assessment

Functional Safety SIL 2 CSA Sira Certificate (PID & EID only).

### 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 2.0 mm (at 200 mm deep) 3.0-10.0 mm thick (at 300 mm deep)

Fully welded

Flange drilling detail to ISO 15138 or ES (Sellafield) standard  
Custom flanges as option

#### Blades:

##### Materials

Stainless Steel 304L/316L (1.4307/1.4404)

Other Stainless Steel grades available on request

Plug welded to solid shafts

#### Thickness

Double skin from minimum 1.2 mm 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 (3/4") continuous solid shaft in Stainless Steel 316/316L (1.4401/1.4404)

#### Bearings:

Oil impregnated sintered bronze. Low temperature option to -55°C and low leakage bearing assembly option available

#### Side Seals:

Stainless Steel 316L (1.4404)

#### Linkage:

Stainless Steel 316L (1.4404)

5.0 mm thick link bars arranged to provide opposed 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 manually or with electric or pneumatic actuators. The pneumatic and electric controls will be selected based on your exacting requirements.

Dampers can be designed to close, open, or stay put on loss of power when fitted with an electric or pneumatic actuator. The four in-house actuators manufacturers options are Petz, Schischek, Belimo and 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)
- ATEX Zone 1, 21 (II 2GD) and 2, 22 (II 3GD) or non hazardous area, IECEX
- Design temperature (from -60°C to + 70°C)
- IP level
- Environment (High corrosion resistance)

## Weights

MID / EID / PID Bare Shaft Damper Weight Matrix - 200D

| Kg     | H (mm) |     |     |     |     |     |      |      |      |      |      |     |
|--------|--------|-----|-----|-----|-----|-----|------|------|------|------|------|-----|
|        | 150    | 300 | 450 | 600 | 750 | 900 | 1050 | 1200 | 1550 | 1900 | 2100 |     |
| W (mm) | 150    | 9   | 13  | 17  | 21  | 25  | 28   | 32   | 35   | 50   | 60   | 66  |
|        | 300    | 13  | 19  | 24  | 29  | 33  | 37   | 41   | 46   | 66   | 78   | 84  |
|        | 450    | 18  | 24  | 31  | 36  | 42  | 46   | 51   | 56   | 83   | 96   | 103 |
|        | 600    | 22  | 30  | 38  | 44  | 50  | 55   | 61   | 66   | 99   | 114  | 122 |
|        | 750    | 26  | 36  | 45  | 52  | 59  | 65   | 71   | 77   | 116  | 132  | 140 |
|        | 900    | 31  | 42  | 52  | 59  | 67  | 74   | 80   | 87   | 132  | 150  | 159 |
|        | 1050   | 35  | 47  | 59  | 67  | 76  | 83   | 90   | 97   | 149  | 168  | 178 |
|        | 1200   | 39  | 53  | 66  | 75  | 84  | 92   | 100  | 108  | 165  | 186  | 196 |
|        | 1550   | 56  | 76  | 96  | 110 | 125 | 138  | 151  | 165  | 236  | 269  | 286 |
|        | 1900   | 71  | 94  | 117 | 132 | 150 | 164  | 178  | 193  | 278  | 314  | 334 |
|        | 2250   | 83  | 109 | 135 | 152 | 171 | 187  | 203  | 219  | 317  | 357  | 378 |
|        | 2500   | 91  | 119 | 147 | 166 | 186 | 203  | 220  | 237  | 345  | 387  | 410 |

**Please Note:**

For Manual handwheel and gearbox add 5kg nominally  
 For Belimo actuator with junction box add 3.5kg nominally  
 For Petz or Schischek actuator with junction box add 5kg nominally  
 For Pneumatic actuator and components with controls enclosure add 15kg nominally  
 Control enclosure as an option

## Ordering

|   |                        |
|---|------------------------|
| <b>Type:</b> MID  | <b>Duct Width:</b> 500 |
| <b>Duct Height:</b> 200   | <b>Case Depth:</b> 300 |
| <b>Type Wozair:</b> Manual Isolation Damper<br>Electric Isolation Damper<br>Pneumatic Isolation Damper  |                        |
| <b>Case Material:</b><br><u>Stainless Steel</u><br>Low Carbon 1.4307 = 304L<br>Low Carbon 1.4404 = 316L |                        |
| <u>Mild Steel Sheet</u><br>Pre-Galvanised FeP02 nac = GSS<br>Galvanised after Manufacture = GAM         |                        |
| <b>Case Thickness:</b> 3.0 mm   |                        |
| <u>Controls Options</u><br>P = Pneumatic<br>E = Electric<br>M = Manual                                  |                        |
| Nominal: Clear inside duct dimensions<br>Duct Size: 'Quote' (Width x Height)                            |                        |
| <b>Order Code Example:</b><br>MID/316L/3.0/500W/200H/300D/P   |                        |

## Weights

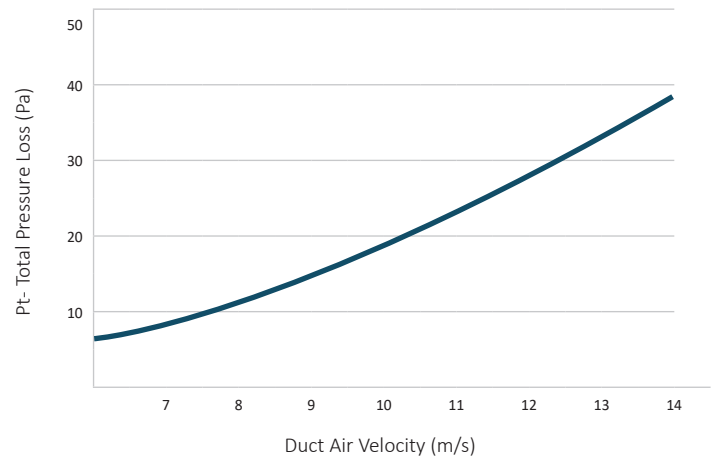
MID / EID / PID Bare Shaft Damper Weight Matrix - 300D

| Kg     | H (mm) |     |     |     |     |     |      |      |      |      |      |     |
|--------|--------|-----|-----|-----|-----|-----|------|------|------|------|------|-----|
|        | 150    | 300 | 450 | 600 | 750 | 900 | 1050 | 1200 | 1550 | 1900 | 2100 |     |
| W (mm) | 150    | 11  | 16  | 21  | 26  | 30  | 34   | 38   | 42   | 60   | 72   | 78  |
|        | 300    | 16  | 22  | 28  | 34  | 40  | 44   | 49   | 54   | 78   | 91   | 98  |
|        | 450    | 21  | 29  | 36  | 43  | 50  | 54   | 60   | 65   | 96   | 110  | 119 |
|        | 600    | 26  | 35  | 43  | 52  | 60  | 65   | 71   | 77   | 115  | 130  | 139 |
|        | 750    | 32  | 42  | 51  | 61  | 70  | 75   | 83   | 88   | 133  | 149  | 160 |
|        | 900    | 37  | 49  | 59  | 70  | 79  | 85   | 94   | 100  | 151  | 168  | 180 |
|        | 1050   | 42  | 55  | 66  | 78  | 89  | 95   | 105  | 111  | 169  | 187  | 200 |
|        | 1200   | 47  | 62  | 74  | 87  | 99  | 105  | 116  | 122  | 188  | 207  | 221 |
|        | 1550   | 66  | 87  | 105 | 125 | 143 | 154  | 169  | 181  | 261  | 292  | 313 |
|        | 1900   | 82  | 107 | 127 | 150 | 170 | 182  | 200  | 212  | 308  | 340  | 364 |
|        | 2250   | 96  | 124 | 147 | 172 | 195 | 207  | 227  | 240  | 351  | 386  | 413 |
|        | 2500   | 105 | 136 | 160 | 188 | 212 | 225  | 247  | 260  | 382  | 418  | 447 |

**Please Note:**

For Manual handwheel and gearbox add 5kg nominally  
 For Belimo actuator with junction box add 3.5kg nominally  
 For Petz or Schischek actuator with junction box add 5kg nominally  
 For Pneumatic actuator and components with controls enclosure add 15kg nominally  
 Control enclosure as an option

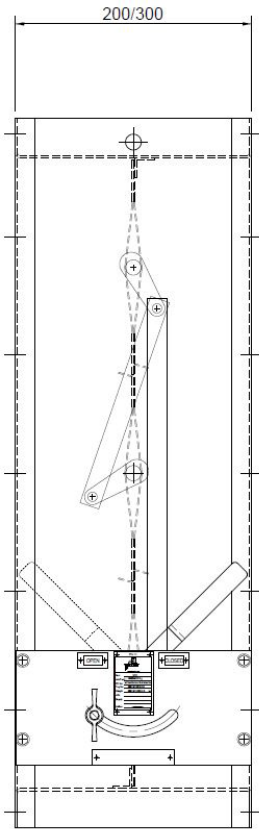
## Performance



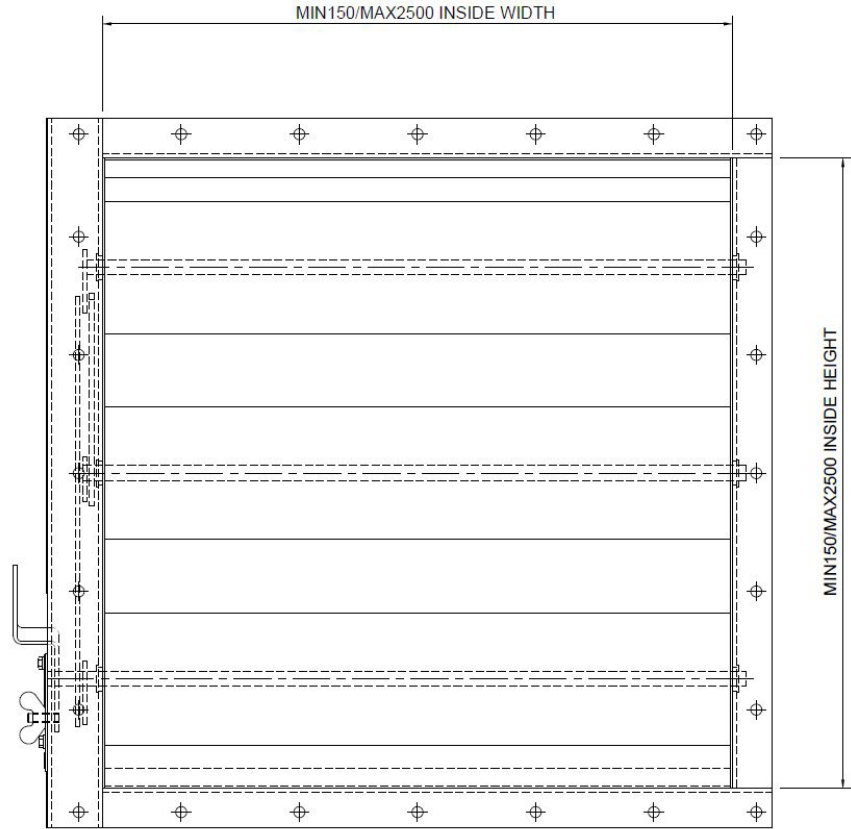
Full aerodynamic performance data is presented above and is based on conclusive tests.

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

## Dimension Drawing Example



SIDE ELEVATION  
LINKAGE COVER  
PLATES OMITTED FOR  
CLARITY



FRONT ELEVATION

## Additional Images



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