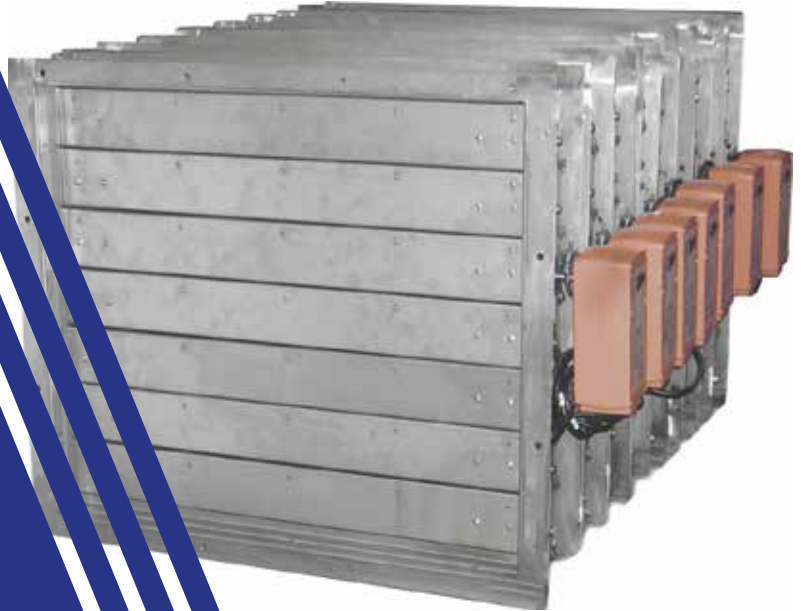
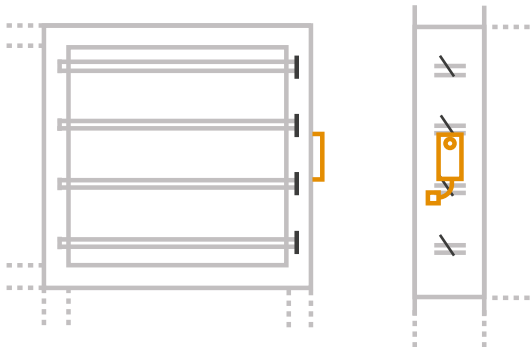


# GAS RETENTION DAMPERS

Information & Spec Sheet



V1



## DESIGN

Gas retention Dampers are otherwise known as low leakage Dampers. Used in situations when leakage is an issue, for example in fire suppression systems or cold air environments.

Whilst the damper is not Fire Rate it could be used in conjunction with a Fire Damper, which would be more economic in some cases than a Motorised Smoke/Fire Damper.

The robust Frames of 2mm means they are suitable for heavy Duty assemblies as well as lighter HVAC installations. Our Damper designs have been tried and tested for over 35 years.

Also known as Low Leakage Dampers.



**All Engineered Air Treatment Damper designs have been tried and tested for over 35 years.**

## FEATURES

- Manufactured from tried & tested designs
- Flexible Flange arrangements and depth requirements
- Dampers Mechanism is easily accessible for Maintenance
- Dampers in Dry environment have very little maintenance requirements
- 2 Year warranty from date of despatch,
- Excellent Customer Service from Engineers that have manufactured the dampers they sell. Our Sales staff have over 30 years' experience.
- Tested to BS EN 1751:1999 Class 2 Closed blade leakage. Tested to BS EN 1751:1999 Class C Casing Leakage.
- Experience in passing Gas retention Integrity tests.

**All materials used are class 'A' Fully traceable as part of ISO 9001**



## STANDARD LAYOUT

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<b>MATERIALS</b>	Pre-Galvanised M.S. to BS EN 10346 2015 DX51D
<b>CASING</b>	2mm Fully Welded and Cleaned for Smoother finish Coated in silver enamel QD8 (C3 Class top coat)
<b>BLADES</b>	0.8mm 'Z' Type Double Skinned, parallel opening standard
<b>SHIMS</b>	ST/ST Spring Loaded
<b>SPINDLES</b>	Stainless Steel
<b>HARDWARE</b>	BZP
<b>BUSHES</b>	Phosphur Bronze Bushes
<b>MESH</b>	1/2" x16g Mesh Fingerguard ideal for keeping fingers and pests out
<b>FINISH</b>	Self colour- All welds dressed and Coated in Silver enamel QD8 (C3 Class top coat)

## OPTIONS FOR MATERIALS

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<b>MATERIALS</b>	Zintec, Aluminium, marine grade Aluminium, 304, 316 Stainless Steel
<b>CASING</b>	2mm, 3mm to 6mm
<b>BLADES</b>	0.7 to 1.5mm 'Z' Type Double Skinned, parallel opening standard
<b>SPINDLES</b>	304 or 316 Stainless Steel
<b>HARDWARE</b>	A2 and A4
<b>BUSHES</b>	Phosphor Bronze, SFL Bearings, St/st Teflon lined - Take Note That Leakages are with Phosphor Bronze.
<b>MESH</b>	1" Sq, 3mm and we can fit security bars
<b>INSULATED</b>	Styrofoam insulation available depending on U Value required, we can supply to 10mm = 2.08 U Value, 25mm =1.08 U value ,50mm= 0.53 U value.

## ADDITIONAL DAMPER INFORMATION

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Engineered Air Treatment Ltd. Pride themselves on solving Damper issues and due to the many options available we would recommend contacting our sales team who would also assist where possible.



We have experience of supplying dampers from **-30°C to +80°C**



Approx **30Kg's per m<sup>2</sup>**. We can supply lifting eyes if required.



Please see graph overleaf

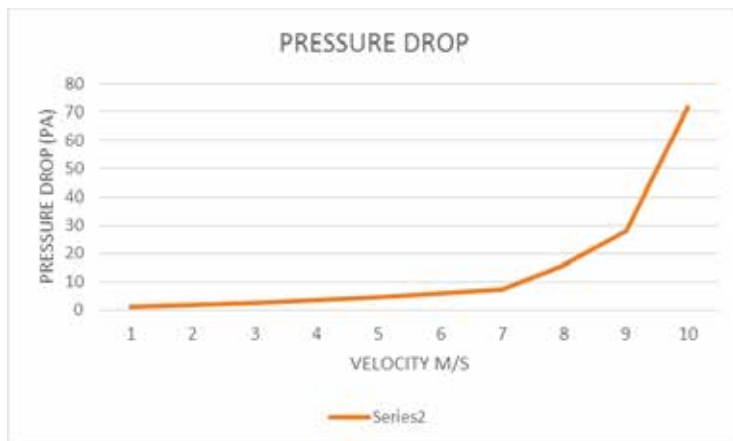


Minimum **150mm**, maximum **2000mm** Module size, For bigger sizes speak to sales staff.

# PRESSURE DROP

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Chart based on Standard Blades and at Air at 15 Deg C



## TESTS

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They have been tested by BSRIA using standards BSEN1751:1999 class 2 (see test report 53356-1)

### IN CONCLUSION:

#### Classification of closed Blades Leakage

According to Annex B of BSEN1751:1999 the sample tested conforms to Class 2 rated in 4 Classes, 4 being the best rating

#### Classification of Case Leakage

According to Annex B of BSEN1751:1999 the sample tested conforms to Class C rated in 3 Classes, 3 being the best rating

Notes- Dampers have been tested and passed pressure tests on containers for 10 to 20 minutes. Due to the nature of the tests we can not guarantee a time.

## OPTIONAL EXTRAS

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Option for Atex Rating

External Micro switches

Viewing windows

Lifting Eyes

Mesh Bird Guard and Insect Mesh

Fan Plenum boxes can also be supplied to the rear of the Dampers

Qualified to Construction standards with Welder certs, procedures and tests available

External visual indicators

Covers over the Actuators and Mechanisms

Powdercoated Finish

Aluminium Blades available

Flanges can be drilled to Suit and be 40mm to 100mm

# ACTUATORS

Various Arrange of Actuators can be fitted to the Dampers, Complete Belimo Range, Schischek. Rotork, Pneumatic, hydraulics, Gas Trip close with manual Reset.

We supply as standard Belimo SFA or SFA-S2 Dual Voltage Motor open/Spring failsafe Close

## Technical data



Spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings

- For air dampers up to approx. 4 m<sup>2</sup>
- Torque 20 Nm
- Nominal voltage AC 24 ... 240 V / DC 24 ... 125 V
- Control: Open-close
- Two integrated auxiliary switches

Safety

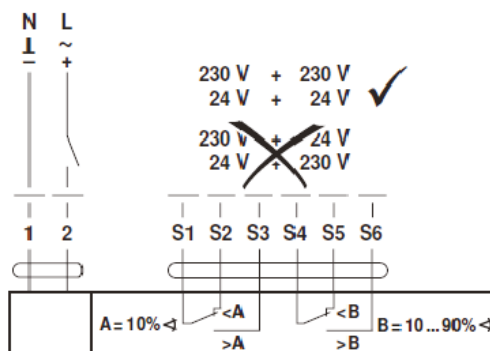
<b>Electrical data</b>	Nominal voltage	AC 24 ... 240 V, 50/60 Hz / DC 24 ... 125 V
	Nominal voltage range	AC 19,2 ... 264 V / DC 21,6 ... 137,5 V
	Power consumption In operation	7 W @ nominal torque
	At rest	3.5 W
	For wire sizing	18 VA
Auxiliary switch		2 x SPDT, 1 mA ... 3 (0.5) A, AC 250 V ☐ (1 x fix 10% / 1 x adjustable 10 ... 90%)
Connection	Motor	Cable 1 m, 2 x 0.75 mm <sup>2</sup>
	Auxiliary switch	Cable 1 m, 6 x 0.75 mm <sup>2</sup>
<b>Functional data</b>	Torque Motor	Min. 20 Nm @ nominal voltage
	Spring return	Min. 20 Nm
Direction of rotation		Can be selected by mounting L / R
Manual override		With hand crank and interlocking switch
Angle of rotation		Max. 95°↔, can be limited with adjustable mechanical end stop
Running time	Motor	≤75 s (0 ... 20 Nm)
	Spring return	20 s @ -20 ... 50°C / max. 60 s @ -30°C
Sound power level	Motor	≤45 dB (A)
	Spring return	≤62 dB (A)
Service life		Min. 60,000 emergency positions
Position indication		Mechanical
<b>Safety</b>	Protection class	II Totally insulated ☐
	Degree of protection	IP54 NEMA2, UL Enclosure Type 2
EMC	Low-voltage directive	CE according to 2004/108/EC
	Certification	CE according to 2006/95/EC
Mode of operation		Type 1.AA.B
	Rated impulse voltage Actuator	4 kV
	Auxiliary switch	2.5 kV
Control pollution degree		3
Ambient temperature		-30 ... +50°C
Non-operating temperature		-40 ... +80°C
Ambient humidity		95% r.h., non-condensating
Maintenance		Maintenance-free
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 3
	Weight	Approx. 2.4 kg

## Electrical installation

Wiring diagram

### Notes

- Caution: Power supply voltage possible!
- Parallel connection of other actuators possible. Note the performance data.



Cable colours:

- 1 = blue
- 2 = brown
- S1 = violet
- S2 = red
- S3 = white
- S4 = orange
- S5 = pink
- S6 = grey



Engineered Air Treatment are proud of our quality record which allows us to have complete confidence in the products we offer. We adhere to our ISO9001 accreditation and install these values into our valuable employees. This confidence allows us to offer a 2 year warranty with all our products.

**We also have complete traceability and files over 20 years old to look back on. We are a can do company.**

## **CE Marking for Standard Gas Retention Dampers**

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The CE marking shall be the only marking which attests the conformity of the product with the applicable requirements of the relevant Community harmonisation legislation providing for its affixing"

There is also currently no relevant Community Harmonisation Legislation for a standard damper to adhere to and so CE marking to an official European standard is not possible.

CE Marking is required if dampers are Classed as fire rated safety products or according the building regulation 2016 a supporting the structure of the building, that is unless it comes into the Bespoke construction Section of the legislation and then due care and diligence needs to be illustrated.

This is our own interpretation of the current legislation and would react accordingly if required by law.

Engineered Air Treatment Ltd are a ISO9001: 2015 certified company, and can offer full material certification and traceability. We can also issue Certificate of Conformity, stating that we have supplied as ordered. We also supply EC Declaration of Incorporation with our products.