FlowShield

Marine Shutoff Damper

QUICK FACTS

- Marine Isolation Damper
- FlowShield is suitable for both vertical and horizontal application, with airflow in either direction
- Corrosion Tested - EN60068-2-52 severity 2 conditions
- Supplied with either 430 Ferritic Stainless steel blades, galvenised steel casing or 316 Austenitic Stainless steel blades, casing and drive.

actionair by Swegon

Contents

Technical Description

Design

The Actionair FlowShield is designed to isolate duct runs and compartments against both hazardous and safe atmospheres. Tested to EN1751, it achieves class 3 blade leakage and class C case leakage. It is suitable for Zone 1 atmospheres, with a Schicheck Ex Max actuator.

Material and Surface Treatment

The standard 1.2mm galvanised steel flanged type casing, having a single penetration for the drive control, complies to Class A & B of Eurovent 2/2 and Test procedures for Classes A, B, and C of the HVCA Ductwork Specification DW144, at temperatures not exceeding 70°. Cases also available in 2mm + 3mm.

Prepunched bolt holes are provided as standard (refer to page 3). In addition stainless steel peripheral gasketting is included, which allows for expansion under high temperature conditions.

Casings manufactured in Type 1.4401 (316 grade) Austenitic stainless steel are available as an option.

Adaption

The Actionair FlowShield is suitable for electrical operation up to 70 °C ductwork temperature, 50 °C ambient.

The FlowShield Dampers can be used where the maximum system pressure is up to 1500 Pa and duct velocities to 15m/s.

They are designed for applications in normal dry filtered air systems and should be subjected to a planned inspection programme, with cleaning and light air lubrication in accordance with good industry practice.

Installation

Bolt holes provided as standard on the damper flanges (unless otherwise stated). Matching hole positions are necessary on mating coaming/duct flanges.

Apply approved fire-resistant sealant/gasket to mating flanges and position damper.

Bolt square/rectangular dampers using suitable steel bolts minimum M10 diameter and minimum M6 diameter on circulars.

Maintenance

Depending upon environmental conditions, each damper will merit its own cleaning regime, particularly hostile areas.

'Frequency of maintenance' should be determined by collecting historical data from previous visits, and for this reason, commence maintenance programmes.

Dampers in 'Dry Filtered Air' require very limited maintenance. When exposed to fresh air intakes and/or inclement conditions this may require monthly cleaning and lubrication maintenance to be performed.

Certificates and Standards

- Corrosion Tested - EN60068-2-52 severity 2 conditions
- Sira Certification (Ex) category 2 equipment for zone 1.

Technical Data

Size

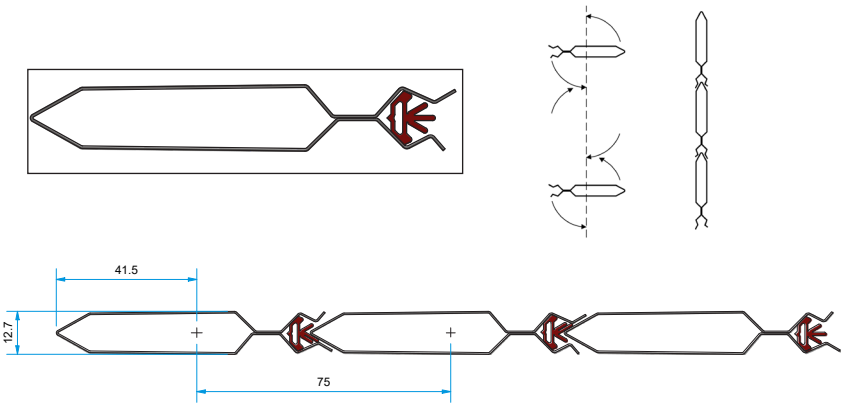
Single damper 100 x 100mm to 1000 x 1000mm.

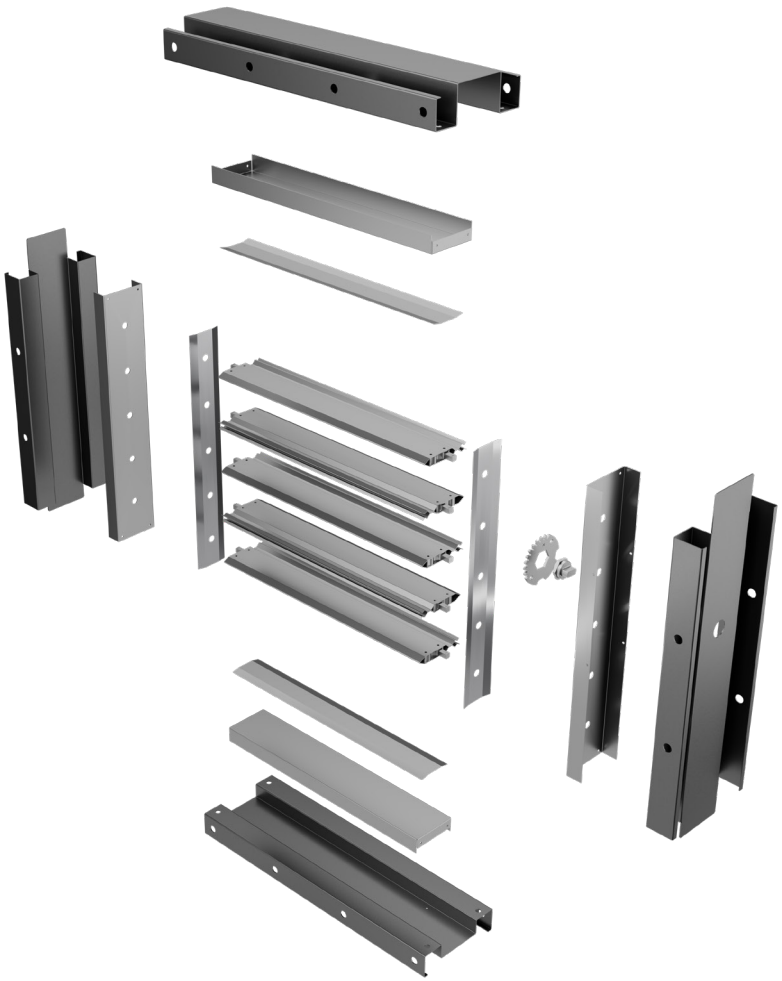
Multiple damper 2080 x 1000mm or 1000 x 2080mm maximum.

Blade Features

The damper blades are aerodynamic double skin Type 1.4016 (430 grade) Ferritic stainless steel, which are 75mm wide and when closed interlock to form a positive low leakage shield. Incorporated in the blade are steel blade end bearings.

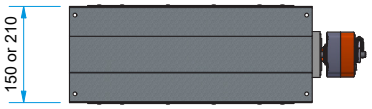
Optional Type 1.4401 (316 Grade) Austenitic stainless steel can be provided for blades and blade end bearings.

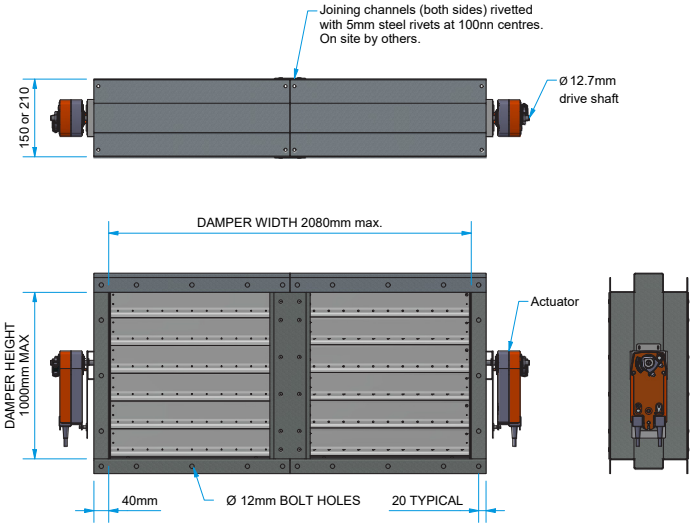


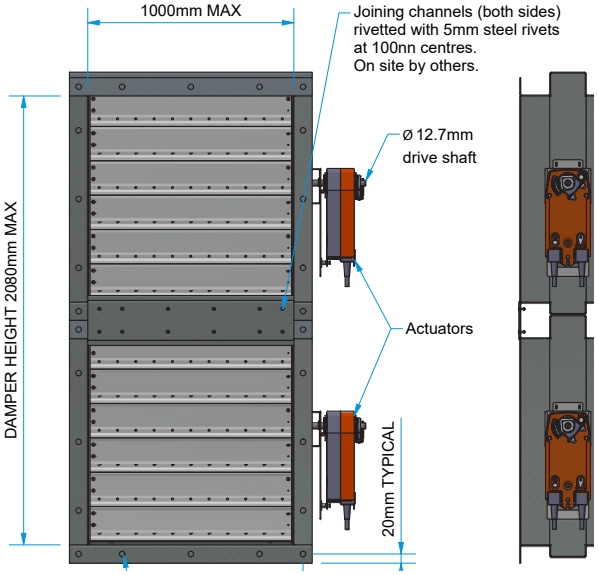


Dimensions and Weights

Multiple Damper

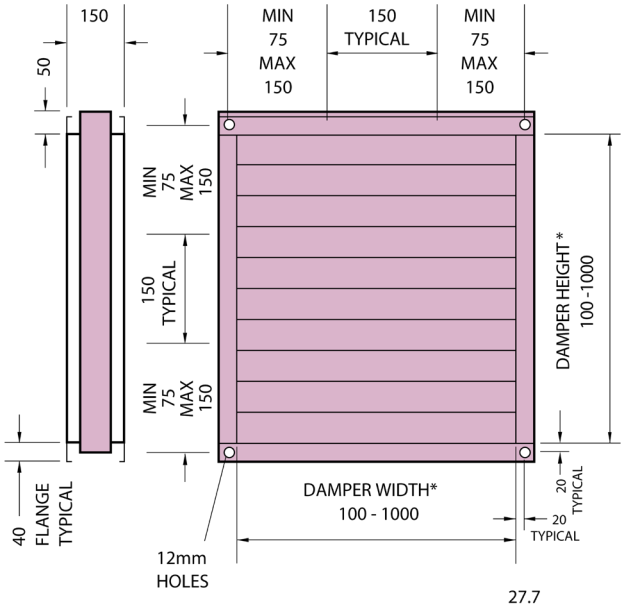




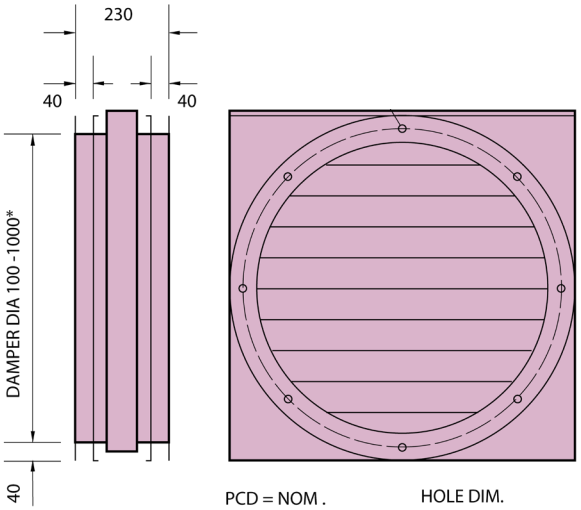


Square and Rectangular

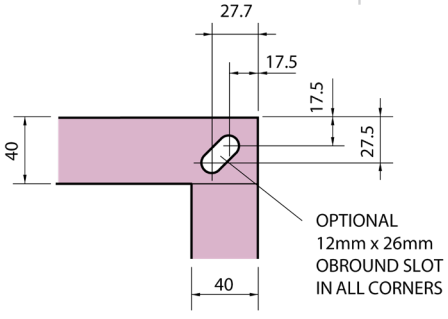
*1mm Increments



Circular



The FlowShield can also be supplied with plain flanges, slot corner holes, customers own bolt hole pattern (available - square / rectangular and circular) or circular spigot.



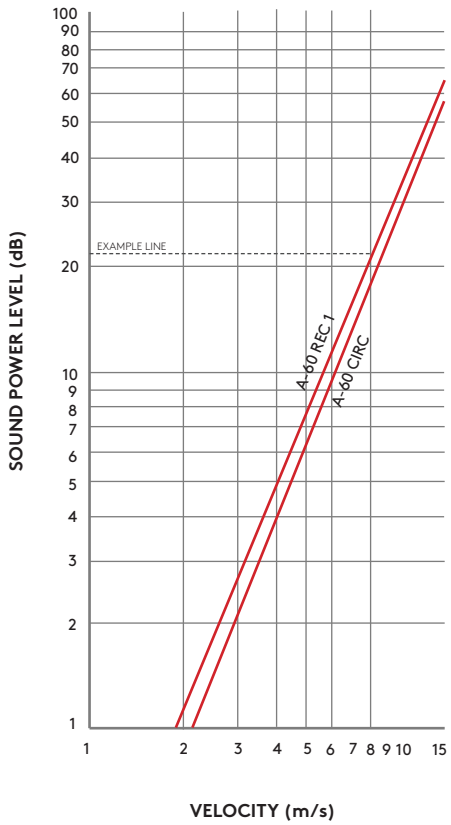
Circular Damper Fixing Hole Details

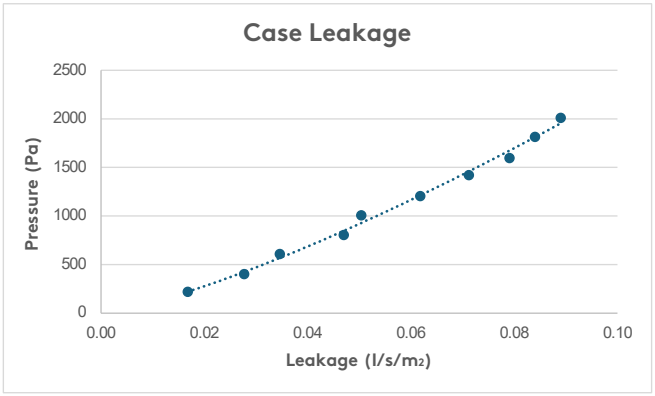
Damper Dia.	Number of Holes	Hole Dia.
100 - 250	4 off	7.0
251 - 500	8 off	10.0
501 - 750	12 off	12.0
751 - 1000	16 off	12.0

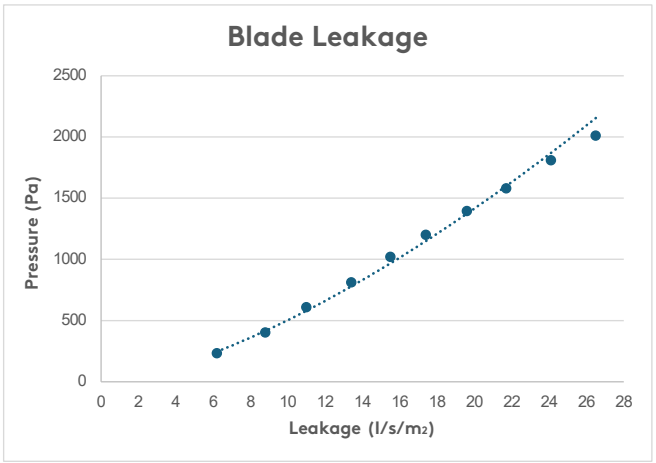
Performance

Acoustic

Pressure Drop Vs Velocity Table 1

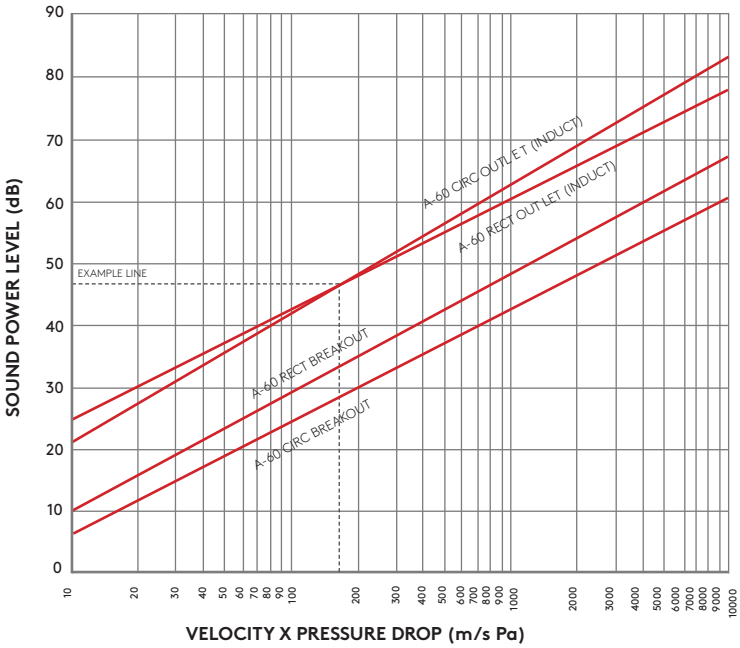






Velocity (m/s) X Pressure Drop (Pa) Vs Sound

Power Level (dB) Table 2



Outlet (Induct) Spectrum Corrections

Octave Band Centre Frequency		63	125	250	500	1K	2K	4K	8K
A-60	RECT	5	4	5	5	3	1	-3	-5
A-60	CIRC	9	4	4	5	3	1	-3	-6

Breakout Spectrum Corrections

63	125	250	500	1K	2K	4K	8K	HZ
5	4	5	5	3	1	-3	-5	DB
9	4	4	5	3	1	-3	-6	DB

Order Key

Composite Reference: 300/430SS/M6/430

		1	2	3	4
Order example:	**FlowShield**	300	430SS	M6	430
Duct Size:					
100 x 100mm - 1000 x 1000mm	Diameter				
Case Material:					
430SS	Stainless Steel (Grade 430)				
316SS	Stainless Steel (Grade 316)				
GSS	Galvanised Steel				
Control Options:					
M5	24V Power open / Spring close				
M5	24V Power open / Power close				
M6	230V Power open / Spring close				
M6	230V Power open / Power close				
ATEX	ATEX Rated				
Blade Material:					
430 Grade	Type 1.4016 Ferritic Stainless Steel				
316 Grade	Type 1.4401 Austenitic Stainless Steel				

Specification Text

The Actionair FlowShield is a marine shut off damper offering. It is constructed from galvanised steel 1.2mm, 2mm, 3mm thick, 40mm flanged, rectangular or circular casing, (316 stainless steel option available).

75mm interlocking 430 grade stainless steel aerodynamic blades, steel blade end bearings and 316 grade stainless steel peripheral gasketting (316 grade stainless steel blade and blade end bearings available).

The totally enclosed precise movement opposed blade drive is positioned out of the airstream for protection against damage and is hard wearing and free running.