

Family of **VARI-centric** Air Pressure Stabilisers

Data Sheet

For the effective control of differential room pressures in:

Operating Theatres	Cleanrooms	Pharmacies	Aseptic Suites
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A range of styles and sizes to suit all requirements

Air Pressure Stabilisers are designed for use in clean environments such as operating theatres and cleanrooms to control airborne contamination by controlling room pressure differentials.

Units accurately control the differential air pressure between adjacent rooms and close fully as soon as it drops below the required level. This enables the airflow to be switched to pass through an opened door forcing back airborne contamination without the need to alter air supply or extract rates.

Due to their pinpoint accuracy and low hysteresis, care should be taken to size units so that they operate close to their rated capacity.

Major Features

- Removable air control blades
- Site adjustable
- Factory resetting/replacement
- Matrix frames
- Variable volume flow-rate
- Choice of frame materials and construction
- Specialist bespoke design

Consultant Benefits

- Simple to specify
- Lowest lifetime costs
- Best 'in-use' client satisfaction

Contractor Benefits

- Lowest installation costs
- Minimum commissioning costs
- Best client satisfaction

User Benefits

- Quiet in operation
- Simple to adjust
- Tamper-proof
- Factory exchange/service of air control blades.

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Air Pressure Stabilisers

Standard Air Pressure Stabiliser

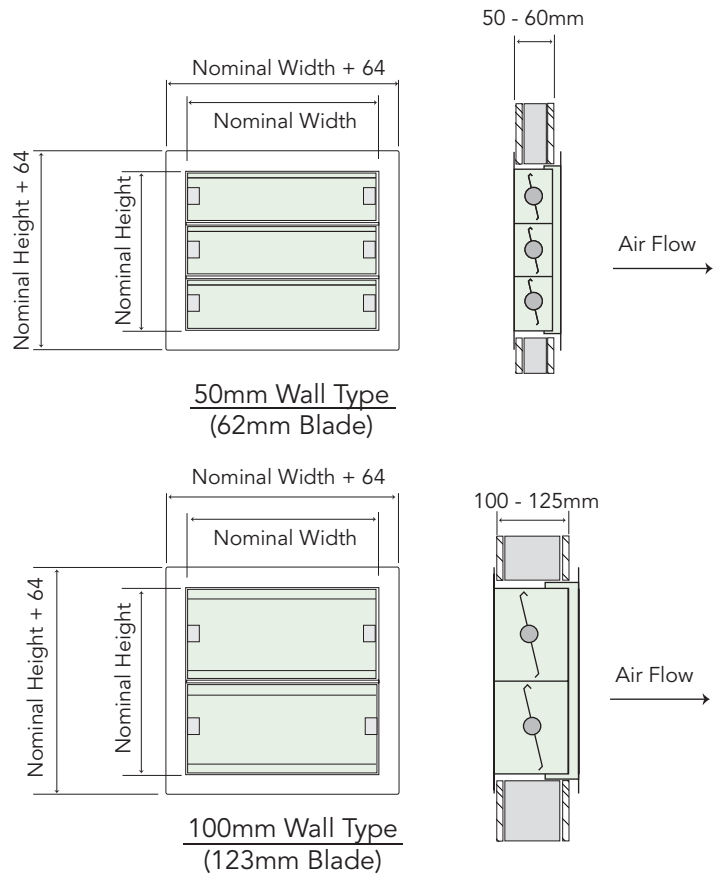
Type APS

Standard

Construction:	Aluminium
Finish:	Polyester Powder Coated White
Wall thickness:	from 50mm to 125mm
Backing Flanges:	Extended to suit thicker walls. Notification required
Air Control Blades:	62mm or 123mm (removable)
Max Blade Length:	62mm blade – 500mm 123mm blade – 750mm
Bearings:	Stainless Steel Sealed Ball Roller type
Pressure Range:	5-35 Pa (fully adjustable)

Options

Bespoke Sizes:	Sizes can be tailored to suit any constraint
Construction:	Mild Steel or Stainless Steel
Finish:	Various other colours and finishes

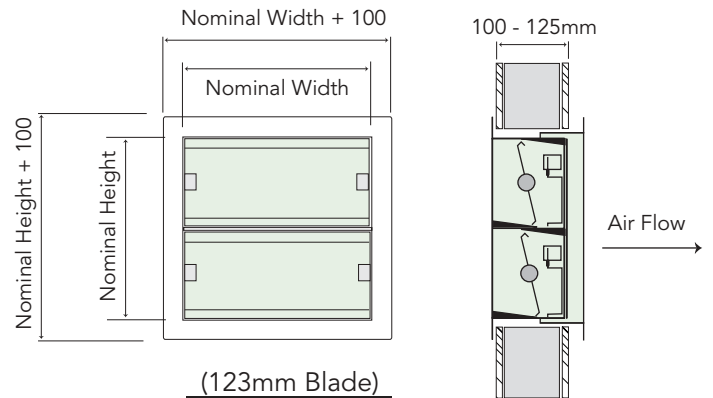


2 hour Fire Rated (Non-protruding)

Type APS F

Standard

Construction:	Stainless Steel
Finish:	Hairline
Backing Flanges:	Extended to suit thicker walls. Notification required
Air Control Blade:	123mm removable – standard
Bearings:	Stainless Steel Sealed Ball Roller type
Pressure Range:	5-35 Pa (fully adjustable)
Fire Rating:	Two hour fire rated to BS.426 Part 20 (Warrington Fire Research Station)



Ceiling Mount

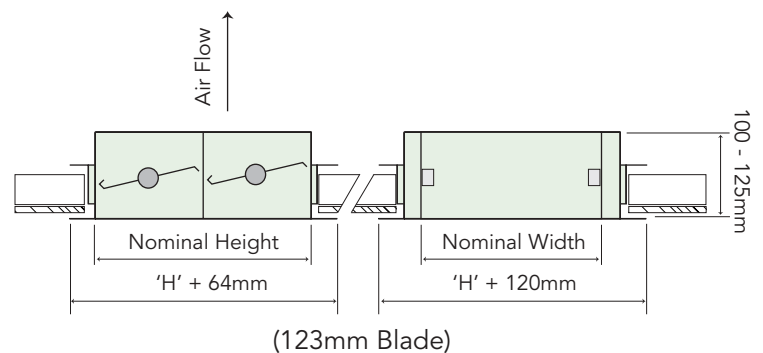
Type APS C

Standard

Construction:	Aluminium
Finish:	Polyester Powder Coated White
Air Control Blade:	123mm-standard
Bearings:	Stainless Steel Sealed Ball Roller type
Pressure Range:	5-35 Pa (fully adjustable)

Options

Frame:	Mild Steel and Stainless Steel
Finish:	Various other colours and finishes



General Specifications

4 hour Fire Rated

Type APS FD

Standard

Construction: Aluminium stabiliser section in
Stainless Steel mounting frame

Finish: Polyester Powder Coated White

Air Control Blade: 123mm removable

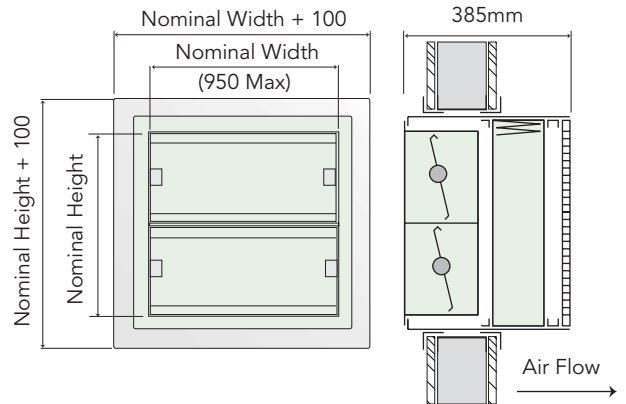
Bearings: Stainless Steel Sealed Ball Roller type

Pressure Range: 5-35 Pa (fully adjustable)

Options

Finish: Various other colours and finishes

Fire Damper: Various proprietary makes of curtain fire damper



Smoke/Fire Rated Combinations

Type APS FSD

The combination of smoke/fire dampers with air pressure stabilisers is often accompanied by spatial problems. There are a number of approaches which can be made to overcome such difficulties. It is not possible to show all the potential arrangements – the example shown represents a common solution.

Standard

Construction: Aluminium stabiliser section in
Stainless Steel mounting frame

Finish: Polyester Powder Coated White

Air Control Blade: 123mm removable

Bearings: Stainless Steel Sealed Ball Roller type

Pressure Range: 5-35 Pa (fully adjustable)

Options

Finish: Polyester Powder Coated White
(optional other finishes)

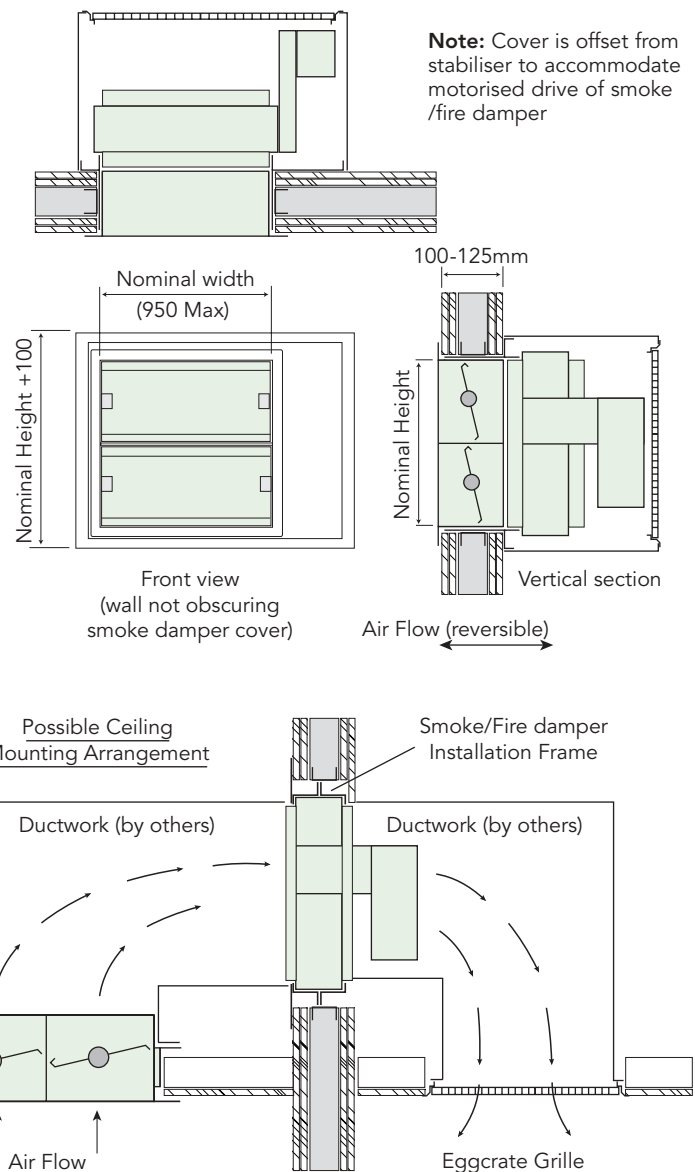
Smoke/Fire Damper: Various proprietary makes of
smoke/fire damper

Fire Rating: Up to 4 hours fire and smoke
protection

Smoke/Fire Damper conventionally wall mounted in proprietary installation frame coupled via ductwork to ceiling mounted air pressure stabiliser.

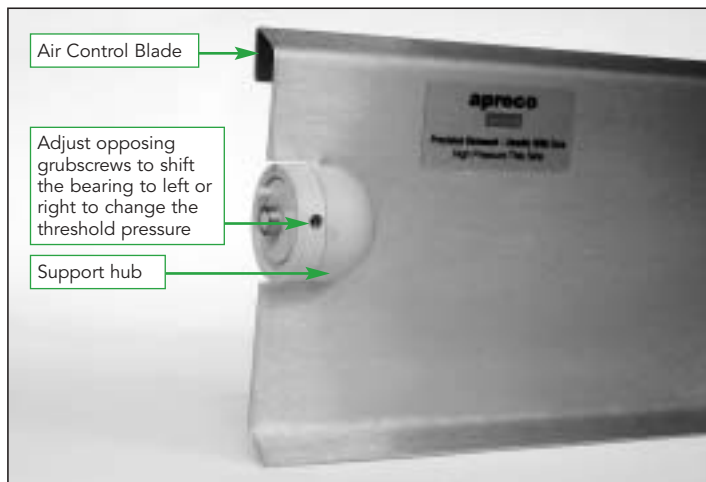
Note: Ductwork should be designed to be generously sized to minimise additional dynamic pressure drop.

Please let us have details of your installation situation and we will suggest possible alternative arrangements.



Air Pressure Stabilisers

Patented VARI-centric Balancing System



Operation

How do Air Pressure Stabilisers work?

The graph opposite shows how the volume flow rate and differential pressures are related. Each characteristic curve shows a minimal increase in flow as the pressure increases to the threshold pressure. At this point the air control blade opens and, with very little increase in pressure, becomes fully open and the full rated volume flows. Further increase in flow will occur with increased pressure differential.

VARI-centric air pressure stabilisers are available which can be adjusted to give reduced flow rates.

Unit Selection

Design Service

The quickest and most effective way to specify and size an air pressure stabiliser is by using our design support and selection service. Send us your design brief and we will make your selections for you OR...

How to Size and Select Units

To obtain an indicative size of standard 100mm wall units (123mm blades) use the data in Table 1 to calculate the total length of blade required and divide it into sections of equal length using values from Table 2. The blades can then be accommodated into single or dual column matrix frames.

To calculate the Nominal Dimensions, total the width and height of the blades in the matrix and add 10mm per divider between adjacent blades.

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For additional information on installation, operating and maintenance instructions in downloadable format, please visit our website.

Note: Specifiers must satisfy themselves that the materials used in the construction of the equipment are compatible with the environment in which they will be placed and do not pose a hazard or risk of injury. Where there is any doubt please refer to our technical department. Apreco operates a policy of continual product development. The information contained within this data sheet may therefore be subject to change without notice.

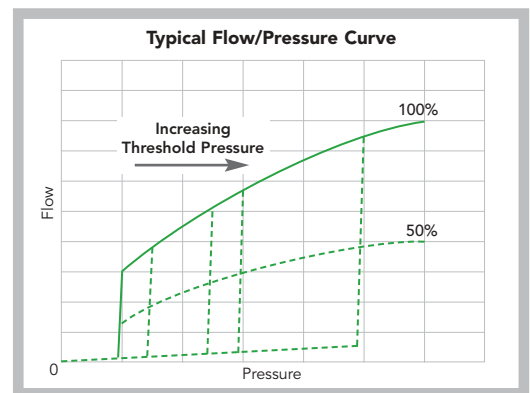


Table 1

Pa	l/s
5	143
10	202
15	247
20	286
25	319
30	350
35	378

Table 2

123mm Blades	
200	450
225	500
250	550
275	600
300	650
350	700
400	750

Typical order code:

aps123S 2/1/600 ALP10/160 ...

- Type Code
- Blade height
- Flow Direction
S=Standard
R=Reverse
- No of Rows
- No of Columns
- Nominal Width (Blade Width)
(+10mm for 2x Col units)
- Frame construction
ALP=Aluminium Painted
SS=Stainless Steel
- Pressure Setting in Pa
- Flow Rate
- Special conditions

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