APS 123
Air Pressure Stabiliser

Designed specifically for Operating Theatre & Clean Room environments

Client Benefits:

- Removable blades for improved maintenance
- SteriTouch® antimicrobial protection as standard
- Quiet day-to-day operation
- Self contained units
- Low maintenance
- Unique, patented balancing system

The patented VARI-centric® range of Air Pressure Stabilisers is purpose-designed for clean environments, such as Operating Theatres, Isolation Rooms, Pharmacies and Cleanrooms, to control airborne contamination by controlling pressure differentials between rooms.

The VARI-centric® balancing system accurately controls the differential air pressure between adjacent rooms, with the blades closing fully as soon as the pressure differential drops below the required level. This diverts the airflow to pass through an open door forcing back airborne contamination without the need to alter the air extract and supply.

Positive pressurisation of Operating Theatres to protect them from the ingress of infectious agents passing through the open doors, by providing high air volume rates, is a well established principle of hygiene and infection control, forming the fundamental principles on which Health Technical Memoranda HTM03-01 is based.

In following the philosophy of HBN 4 Supplement 1: *Isolation facilities in acute settings*, Air Pressure Stabilisers are utilised to control the pressure differential between the Lobby and Isolation Room.

Within Cleanrooms they are used to facilitate the cascade of air pressures to maintain a sterile environment where facilities are conforming to ISO 14664-1 and BS 5295.

Apreco VARI-centric® Air Pressure Stabilisers and associated products are supplied as standard with SteriTouch®, utilising Silver technology – which is already used extensively within the healthcare sector as an excellent antimicrobial protection in conjunction with good hygiene practices. SteriTouch® is extremely effective in helping to protect against harmful bacteria including MRSA, E-coli, Salmonella and C-diff.

Product Data

Items:
Air Pressure Stabiliser with backing flanges to fit a standard wall thickness range of 100 to 130mm. Extended rear backing flanges can be supplied to accommodate deeper walls.

Materials:
Aluminium, Carbon / Stainless Steel frames and blades to suit application.

Standard Finish:
RAL9010 powder coated white SteriTouch®, antimicrobial protection as standard.

Bearings:
Stainless Steel ball roller type 'sealed for life' ball bearings.

Pressure Control Range:
3 - 50 Pa with a setting accuracy of +/- 1 Pa over the operating range.

Unit Selection

To obtain an indicative size of a APS 123 unit (standard 100mm to 130mm walls) use Table A below to calculate the total length of blade required, and divide it into sections of equal length using values from Table B.

Example:
Selecting a stabiliser capable of transferring 220 l/s (0.22m³/s) @ 14Pa.

Therefore 220 x 4.39 = 966 mm of total blade length.

Where: 220 (Volume of l/s)
4.39 (Factor from Table A relating to 14Pa)

Table A (Factors)

Pa	Factor	Pa	Factor	Pa	Factor
3	9.49	15	4.25	35	2.78
5	7.35	20	3.68	40	2.60
8	5.81	22	3.51	45	2.45
10	5.20	25	3.29	50	2.33
11	4.96	30	3.00		
14	4.39	32	2.91		

Table B (Blade Lengths in mm)

200	350	500	625	1000
250	400	550	675	
300	450	575	750	

Divide this total into equal lengths using one of the standard blade lengths from Table B.
It is suggested that consideration should be made regarding any physical restrictions the building may impose before calculating the blade lengths of units.
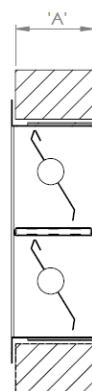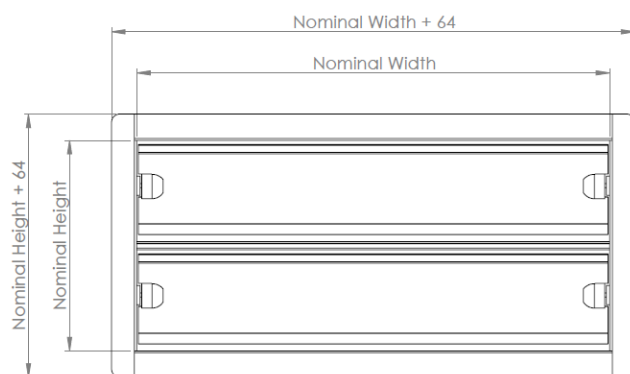
Therefore 966 divided by 2 (blades) = 483mm.
Round up to the nearest increment gives you 2 x 500 mm blades.

Where: 966 (Total blade length)
500 (Standard blade length from Table B)

Dimensions

Wall depth 'A'	Unit Type
50-79mm	APS 62
80-99mm	APS 100
100-130mm	APS 123

	Height single row (base unit)	Height each additional row	With single column
Nominal Size Matrix	123mm		Blade length
Aperture Size Matrix	141mm	+ 133 per row	Blade length + 18mm
Over flange size matrix	187mm		Blade length + 64mm