

Volume Control Dampers

Rectangular VCD - Airfoil blades



SU 651A Q - Extruded Aluminium Blades - Manual Quadrant
SU 651 Q - Galvanized Steel Blades - Manual Quadrant



SU 651A M - Extruded Aluminium Blades - Motorization
SU 651 M - Galvanized Steel Blades - Motorization

Advantages

- Manual or motorised control.
- Low pressure loss resulting from aerofoil blades.
- Flanged duct connection.

APPLICATION

- Volume control dampers with manual quadrant are generally installed in branches / ducts to manually adjust the air flow in that particular branch / duct or to isolate any particular area of the building.
- Volume control dampers with motorization are generally installed at the inlet and outlet of the AHU to facilitate the air flow or to protect the AHU or ductwork against unwanted ingress.



ALDES Middle East FZE certifies that the VCD model **SU 651A** shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Programs. The AMCA Certified Ratings Seal applies to air performance and air leakage ratings only.

DESCRIPTION

- Motorised VCD or manual VCD that are used to isolate any particular zone / duct of the building are generally air tight. But air tight construction is generally not required for VCD that are only used for balancing the air flow in a branch / duct because blades are always open.

CONSTRUCTION

- Casing: 127mm deep, U-channel casing manufactured from 1.62mm galvanised steel with 30mm flange with pre-punched holes for duct connection. 1.5mm, 1.2mm, 0.9mm, 0.8mm, 0.7mm thicknesses available upon request.
- Blade: Aluminium airfoil blade with extruded profile of 1.2 mm. Galvanised steel airfoil blade available upon request (SU 651).
- Blade Operation: Opposed blade standard. Parallel blade available upon request.
- Blade spindles: Ø12 mm round zinc plated steel joined with blades by bolts & nuts (standard), rivets or welding (optional). 10 X 10mm square spindle available upon request.
- Bush: Oil-impregnated Bronze. Brass, Bronze or Nylon available upon request.
- Linkage: Zinc plated steel external linkage, concealed in frame.
- Control: Manual quadrant (Code Q); Motorization (Code M)

Extra items for air tight VCDs:

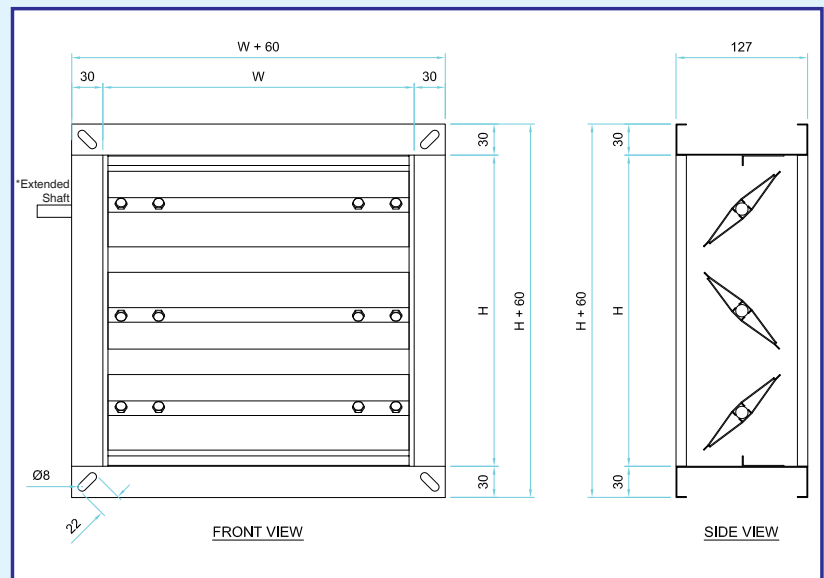
- Blade tip seal: Neoprene. Silicon Rubber or Foam.
- Side seal: Stainless steel, SS301.

Dimensions:

- Minimum single section size: 100mm x 100mm
- Maximum single section size:
914mm x 1219mm (without partition)
2300mm x 1219mm (with partition in width)

Note: Larger sizes are manufactured in multiple sections for assembly at site.

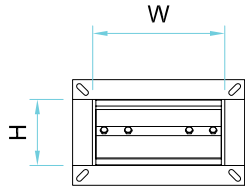
DIMENSIONS (mm)



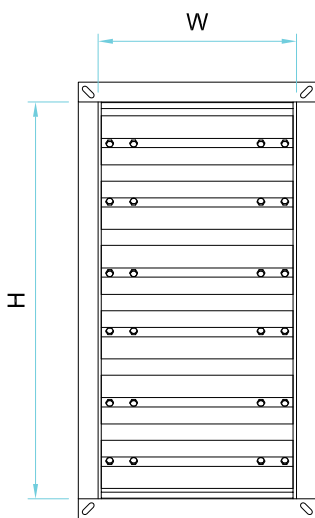
Note: For non-standard materials or thickness, please consult us.

Volume Control Dampers

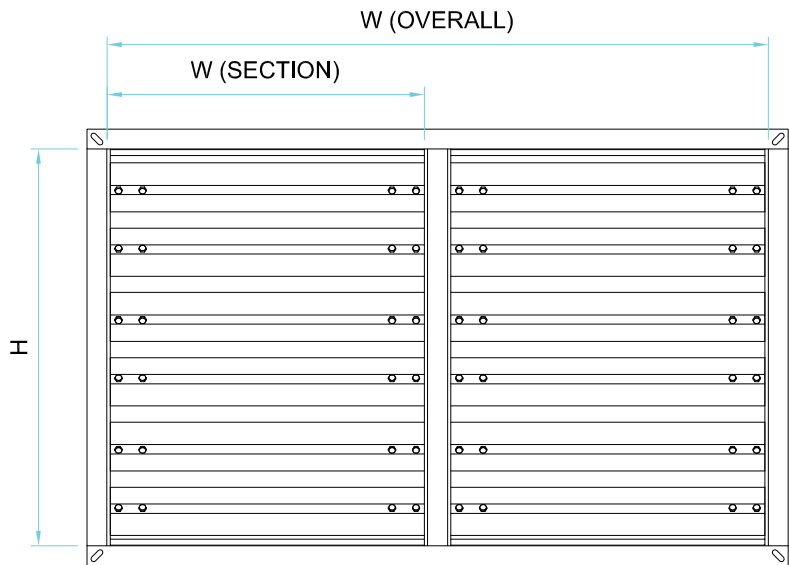
SINGLE / MULTIPLE SECTION CONFIGURATIONS



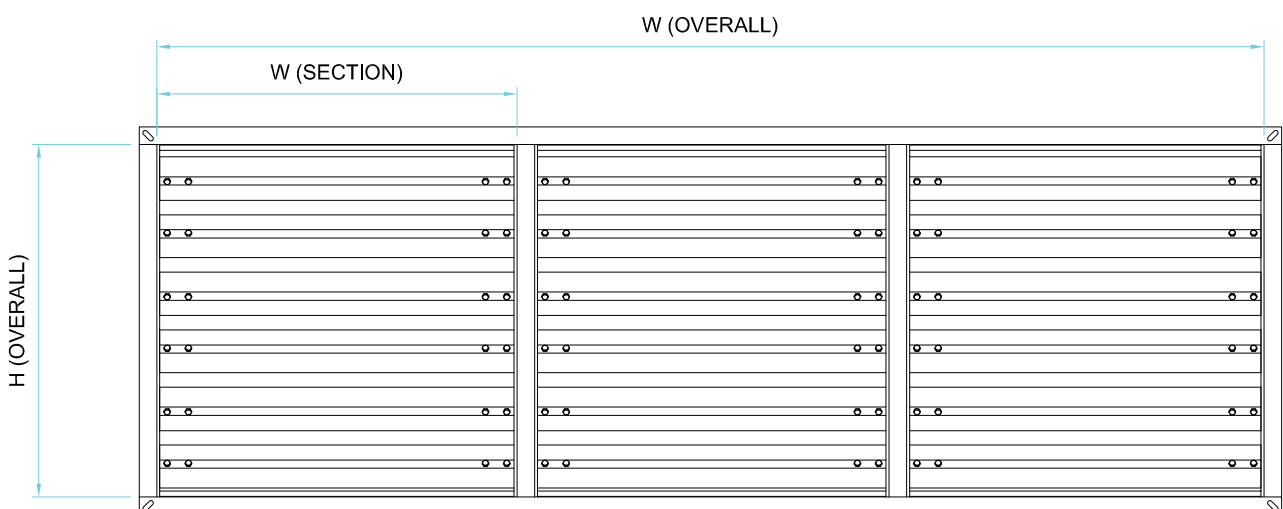
SINGLE SEC. & SINGLE BLADE
 $W \leq 914$; $H \leq 195$



SINGLE SEC. & MULTIPLE BLADE
 $W \leq 914$; $195 > H \leq 1219$



(HEIGHT SINGLE SEC.) X (WIDTH MULTIPLE SEC.)
 $914 > W \leq 1828$; $H \leq 1219$



(HEIGHT SINGLE SEC.) X (WIDTH MULTIPLE SEC.)
 $1828 > W \leq 2300$; $H \leq 1219$

Note: Larger sizes are manufactured in multiple sections for assembly at site.

Volume Control Dampers

AIR PERFORMANCE

PRESSURE DROP / INTAKE

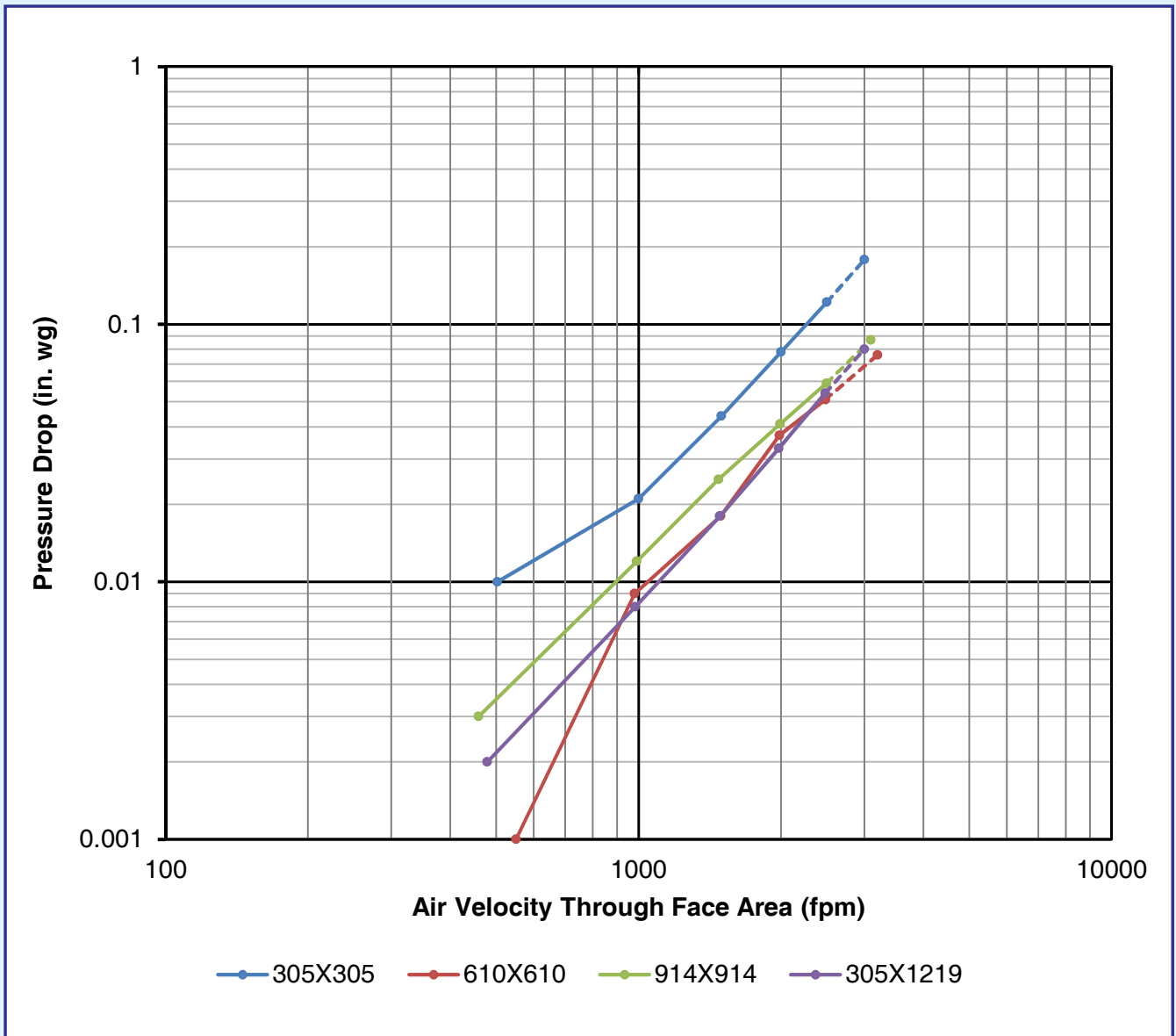
- SU 651A Air Performance testing has been performed in accordance with Test Method as per ANSI/AMCA Standard 500-D, Figure 5.3 (Duct Upstream and Downstream).

305x305 mm	
Velocity (fpm)	ΔP (in. wg)
2502	0.122
2001	0.078
1497	0.044
1000	0.021
503	0.010

610x610 mm	
Velocity (fpm)	ΔP (in. wg)
2484	0.051
1985	0.037
1492	0.018
981	0.009
551	0.001

914x914 mm	
Velocity (fpm)	ΔP (in. wg)
2496	0.059
1993	0.041
1476	0.025
991	0.012
459	0.003

305x1219 mm	
Velocity (fpm)	ΔP (in. wg)
2481	0.054
1981	0.033
1486	0.018
984	0.008
479	0.002



Volume Control Dampers

AIR PERFORMANCE

PRESSURE DROP / EXHAUST

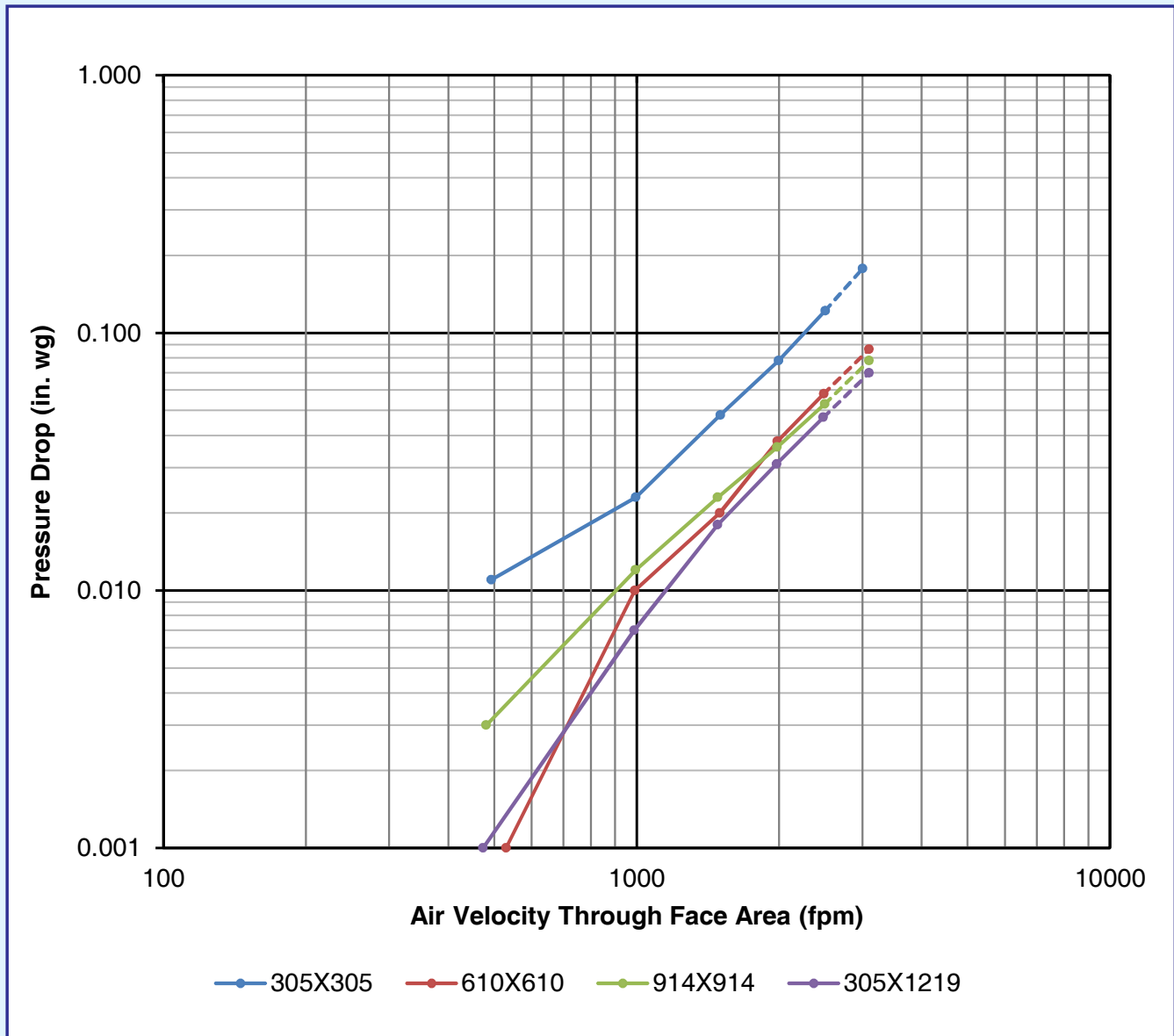
- SU 651A Air Performance testing has been performed in accordance with Test Method as per ANSI/AMCA Standard 500-D, Figure 5.3 (Duct Upstream and Downstream).

305x305 mm	
Velocity (fpm)	ΔP (in. wg)
2503	0.122
1995	0.078
1502	0.048
996	0.023
493	0.011

610x610 mm	
Velocity (fpm)	ΔP (in. wg)
2486	0.058
1984	0.038
1499	0.020
991	0.010
530	0.001

914x914 mm	
Velocity (fpm)	ΔP (in. wg)
2497	0.053
1981	0.036
1484	0.023
995	0.012
481	0.003

305x1219 mm	
Velocity (fpm)	ΔP (in. wg)
2480	0.047
1976	0.031
1483	0.018
988	0.007
474	0.001



Volume Control Dampers

AIR PERFORMANCE

AIR LEAKAGE

- Tested for air leakage at standard air density in accordance with ANSI/AMCA Standard 500-D, Figure 5.4. Data are based on a torque of 44 in-lbs./ft² applied to close and seal the damper during the test. Air leakage is based on operation between 0°C-49°C (32°F-120°F).

Maximum Allowable Leakage, cfm/ft ²				
Class	1 inch. wg	2 inch. wg	3 inch. wg	4 inch. wg
1A	3	N/A	N/A	N/A
1	4	6	7	8
2	10	14	17	20
3	40	57	69	80

AMCA Leakage Class				
DAMPER SIZE	1 inch. wg	2 inch. wg	3 inch. wg	4 inch. wg
305 mm x 1220 mm (12 inch x 48 inch)	CLASS 1A	CLASS I	CLASS I	CLASS I
610 mm x 610 mm (24 inch x 24 inch)	CLASS 1A	CLASS I	CLASS I	CLASS I
914 mm x 914 mm (36 inch x 36 inch)	CLASS 3	CLASS 3	CLASS 3	CLASS 3