

Mistrale Natural Ventilation

Our Mistrale Natural Ventilation System has been developed with maximum project flexibility in mind. Different buildings and structural designs combined with the building location and design purpose present a wide variety of factors which can affect system selection. As standard we offer 6 model configurations (Model A to Model F) but the ability to also pick and mix the various components of Mistrale enables us to adapt our product for a multitude of different installations.



Mistrale Model A

Intake unit with Heating or Heating/Cooling Coil

Model A is the most popular natural ventilation unit choice and is primarily intended as a supply/intake unit for low level mounting installation. A low level model provides for optimum air flow and comfort conditions as cooling outside air will be drawn through the assembly at low room level with the warmer air then ventilating through higher level wall grille and damper assemblies (See Model F) into the stack. Units are typically fitted with a coil to allow for initial heating of the air, when required, before entering the room.

Standard arrangement (as illustrated) comprises

- External Louvre - Standard high efficiency weather louvre with choice of flange, channel or window beading fixing frame options.
- Insulated Volume Control Damper - Manual or Motor control.
- Heating/Cooling Coil.
- Decorative Fascia Grille - Standard routed or perforated face pattern fascia panel in standard or low surface temperature format.

Size Range

Effective damper size.

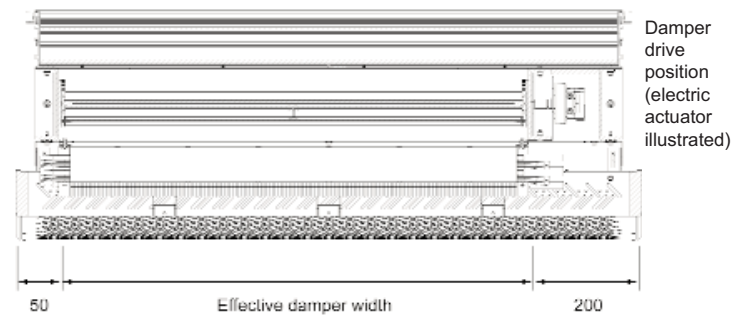
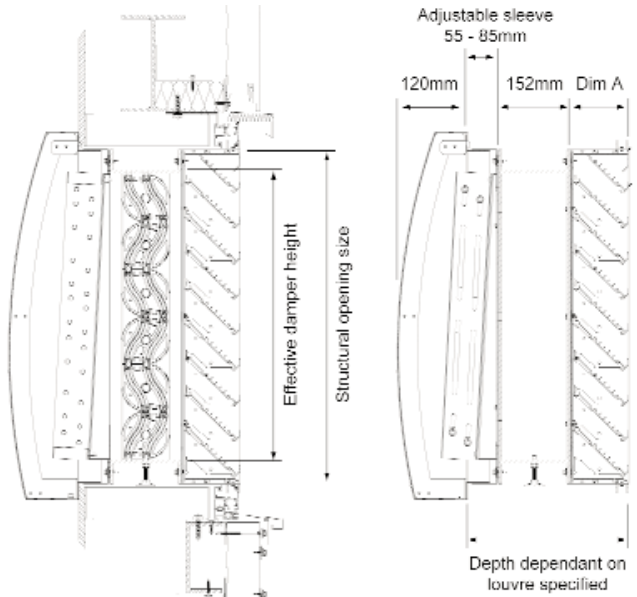
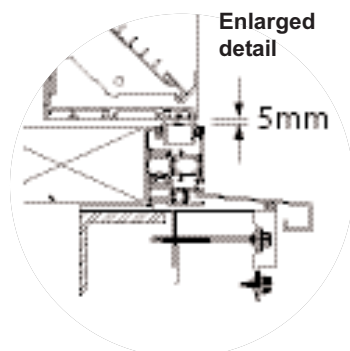
Width 300, 800 or 1300mm
Height 206, 406 or 606mm

Structural opening sizes

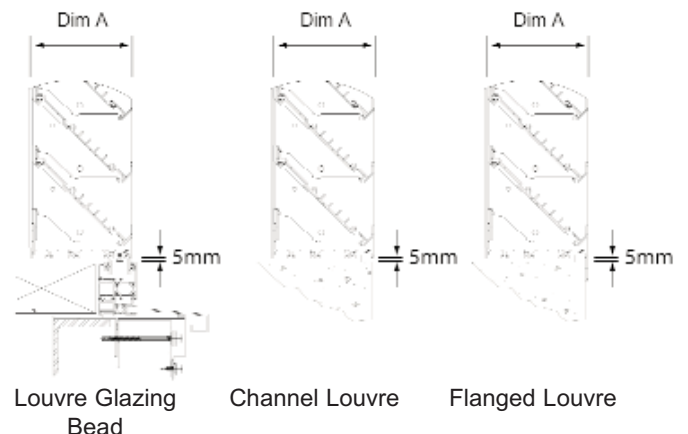
Damper width + 260mm
Damper height + 110mm

Finish

Both the external louvre and the fascia grille finished to standard BS/RAL colours.



Fixing Options

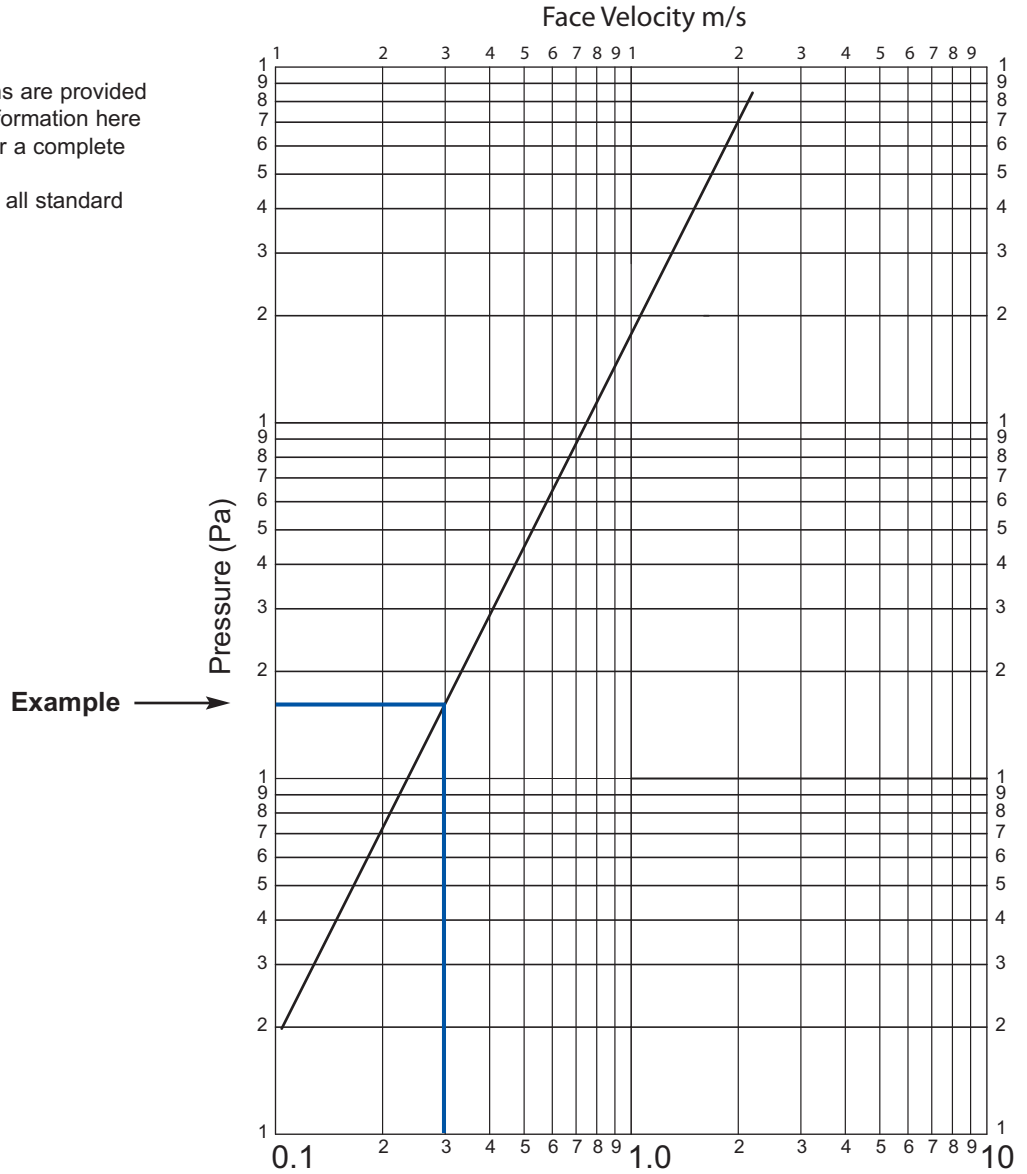


Dim 'A' WG/100 - 121mm
WH/75 - 121mm
WG/75 - 72mm
WG/38 - 50mm

System Performance

Natural Ventilation Unit Pressure Drop

Although pressure/volume graphs are provided for individual components the information here provides pressure loss details for a complete natural ventilation assembly. Data based on Model Type A for all standard sizes.



Example

Volume @
0.3 m/s
effective

Unit Size	Effective Area m ²	face velocity	Pressure drop (Pa)	Ce
1300 x 600	0.78	0.234	1.6	1.18
1300 x 400	0.52	0.158	1.6	1.18
1300 x 200	0.26	0.078	1.6	1.18
800 x 600	0.48	0.144	1.6	1.18
800 x 400	0.32	0.096	1.6	1.18
800 x 200	0.16	0.048	1.6	1.18
300 x 600	0.18	0.053	1.6	1.18
300 x 400	0.12	0.036	1.6	1.18
300 x 200	0.06	0.018	1.6	1.18

Alternative effective face velocities can be selected from the graph with revised pressure details

For the sizing of all unit types when incorporated into building designs please refer to Gilberts selection software program