



Monodraught are the recognised market leaders in ultra-low carbon, low energy solutions for Natural Ventilation, Natural Cooling and Natural Lighting.

WINDCATCHER[®], **SUNPIPE**[®] and **COOL-PHASE**[®] brands are synonymous with quality and innovation (ISO9001 & 14001) and are supported by our market leading design service.

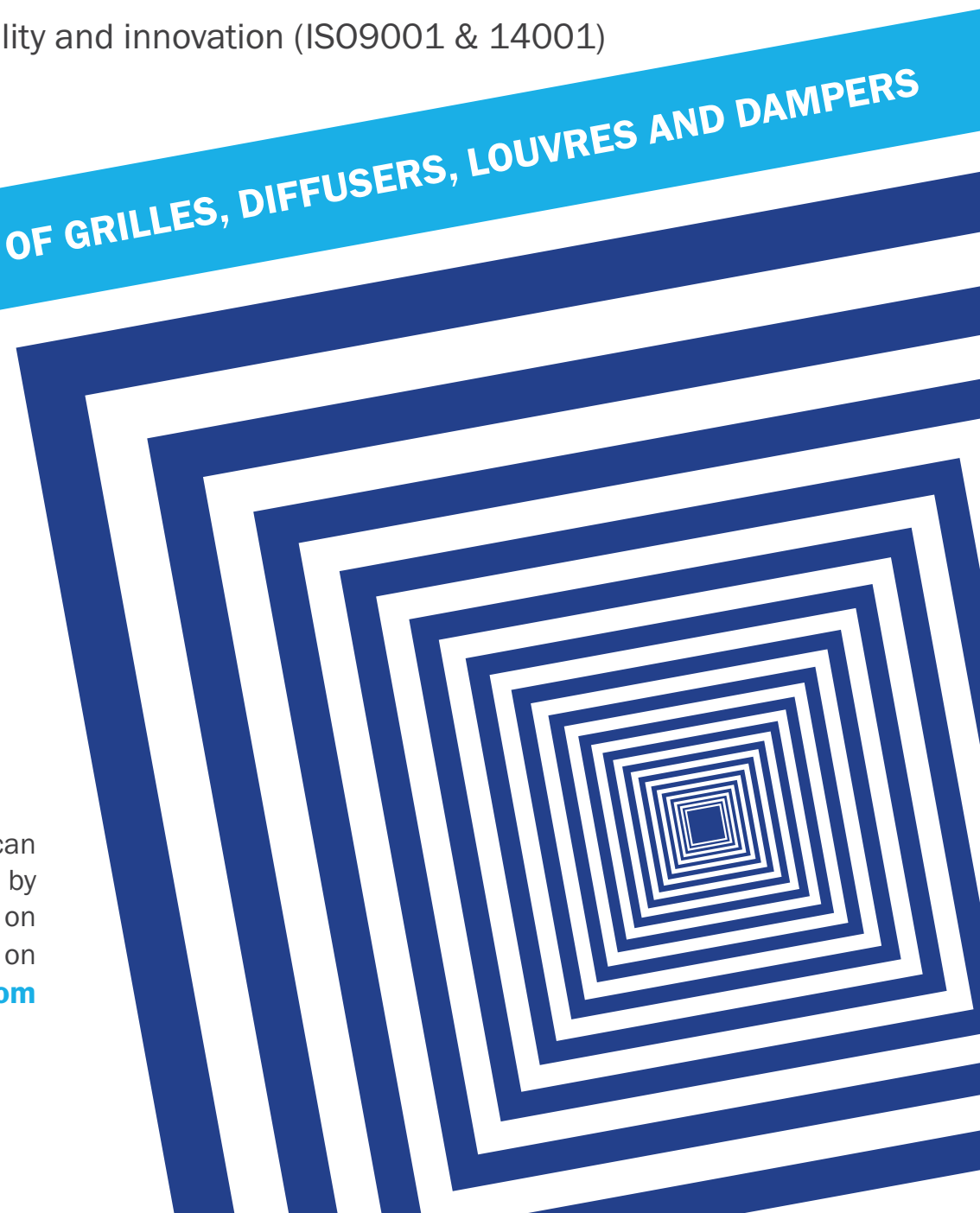
Air-Precision is an addition to Monodraught's portfolio including grilles, diffusers, external louvres and volume control dampers.

PRODUCT RANGE OF GRILLES, DIFFUSERS, LOUVRES AND DAMPERS

We are supporting this range with:

- £1 million of fast moving stock
- Bespoke manufacture with any standard RAL colour within 5 days
- 15 dedicated selection experts
- Designed with industry leading software
- Belimo actuators used throughout
- AA5 anodisation (ISO7599) utilised
- Market leading quality fully supported by a **10 year guarantee**

We are confident that we can beat any quotation you have by 10% so please contact us on **01494897700** or email us on **air-precision@monodraught.com**



Back Draught Shutter / Non-Return Damper - BDS



Back draught shutters are designed to permit air to flow in only one direction. This makes them useful for applications where a duct is only used at intervals and needs to be shut down at other times in order to prevent heat loss or backflow.

Series BDS back draught shutters are manufactured from extruded aluminium throughout, ensuring an inherently high resistance to corrosion along with minimal weight.

Blades are supplied unlinked as standard. allowing them to open and close independently of each other. For larger units or where the application involves higher air velocities, blades can be linked. This has a damping effect, smoothing the blades' motion as they are opened and closed.

If required, blades can also have concealed weights fitted, to allow the damper to be set up on site to open at a specific pressure.

Materials:

- Frame and blades: Extruded aluminium
- Drive system: Acetyl as standard, brass and zinc if high temperature specification
- Galvanised steel spigot plates (if required)
- Felt blade edge seal (not fitted if high temperature specification is required)

Mass / m² face area:

- 14 kg

Free Area:

- 86% maximum

Important note:

This product in its standard configuration is only intended for use in vertical orientation.

We can supply units suitable for a horizontal application (where normal airflow is upwards) but must be advised at ordering stage.

This product is unsuitable for use horizontally when normal airflow is downwards.

Sizes:

- Minimum: 100 mm x 100 mm nominal
- Maximum single unit: 2900 mm x 2900 mm nominal
- Widths above 1200 mm nominal size will use mullions.

Frame:

- 40 mm Wide flange
- 100 mm Overall depth

Options:

Model:

- Model A: Square flanged (standard for square / rectangular sizes)
- Model B: Square spigotted
- Model C: Circular spigotted
- Model D: Flat oval spigotted

Frame Type:

- **"Nothing"**: Standard frame with two 40 mm flanges
- **40:10 IN 40** : Frame with 40 mm flange one side and 10 mm wide flange on other. Air in through 40 mm flange side (only available with Model A connection type)
- **40:10 IN 10** : Frame with 40 mm flange one side and 10 mm wide flange on other. Air in through 10 mm flange side (only available with Model A connection type)

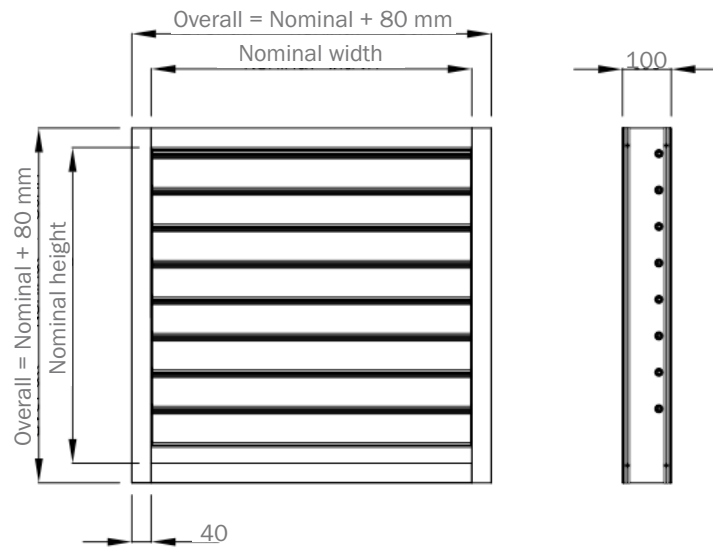
Debris Screen:

- BS: Bird screen (12 mm x 12 mm mesh)
- IS: Insect mesh

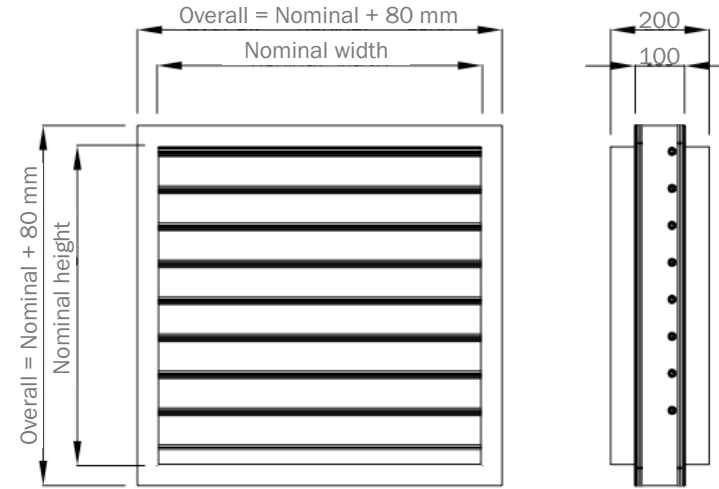
Back Draught Shutter / Non-Return Damper - BDS

Technical Drawings:

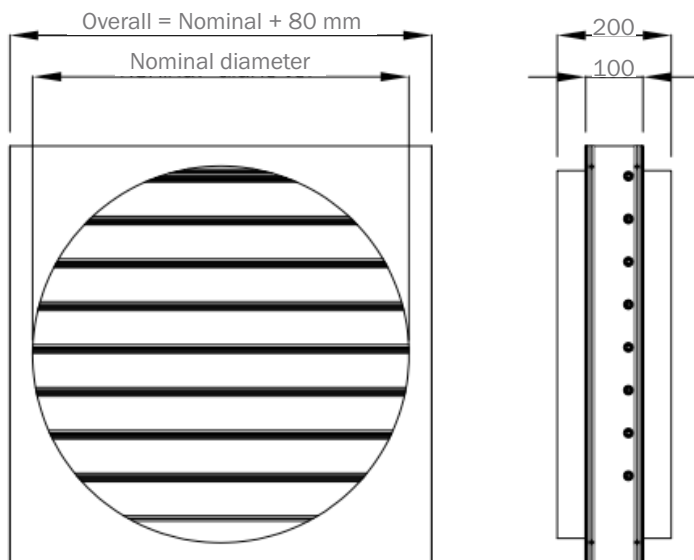
- **Model A: Square flanged (no case)**



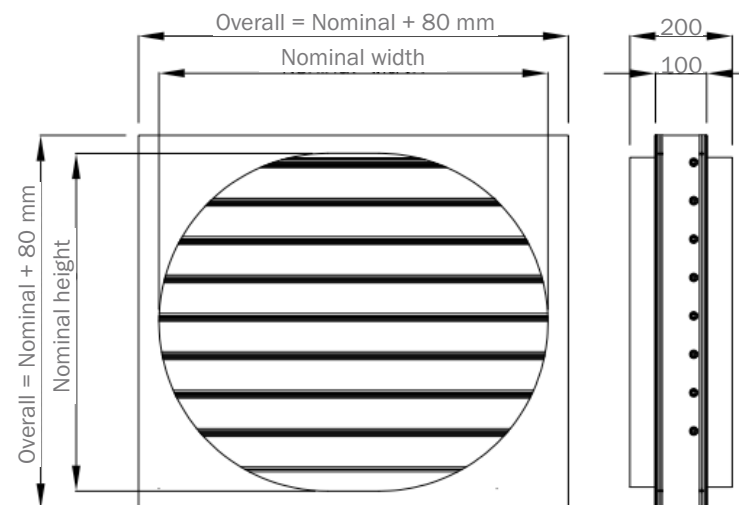
- **Model B: Square spigotted**



- **Model C: Circular spigotted**



- **Model D: Flat oval spigotted**



Spigots:

Model B spigots supplied 6 mm under nominal size.

Model C and D spigots supplied 3 mm under nominal size.

Manufacturing Tolerance: + or - 1.5 mm.

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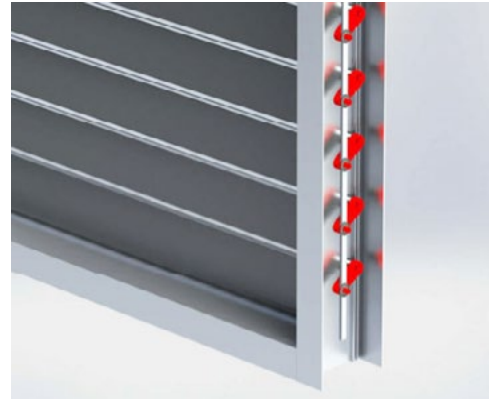
Options:

Linked Blades:

Back draught shutters are supplied as standard with unlinked blades. This works well at low air velocities, however can result in blades opening and closing violently at high velocities.

At higher velocities, above 5 m/s for example, we recommend the specification of linked blades.

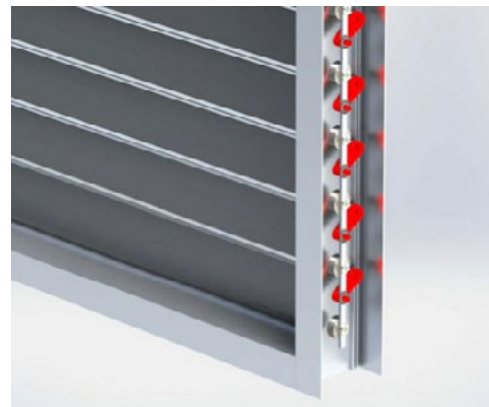
This involves a concealed linkage being fitted to the blades which has a damping effect, greatly smoothing the motion of the blades as they open and close.



Weighted Blades:

The specification of weighted blades equips back draught shutters with linked blades, but also means removable steel weights will be fitted to the concealed linkage bar.

These weights increase the pressure required to open the damper and can be removed or added to the linkage bar on site to adjust the point at which the damper opens.



Debris Screen:

Bird or insect mesh screens can be fitted to back draught shutters. Available with the mesh fixed directly to the damper frame (non-removable) or housed in a bolt-on removable frame (shown) to allow for easier cleaning and maintenance.



High Temperature Specification:

Standard BDSs make use of acetyl drive system components, which are only suitable for use in environments with temperatures up to around 70°C.

Monodraught can replace these components with brass and cast zinc replacements enabling use in temperatures up to approx 300°C.

Please note: *If high temperature specification is required, dampers will be supplied without the standard felt blade edge seals.*



Back Draught Shutter / Non-Return Damper - BDS

Options:

40:10 Frame

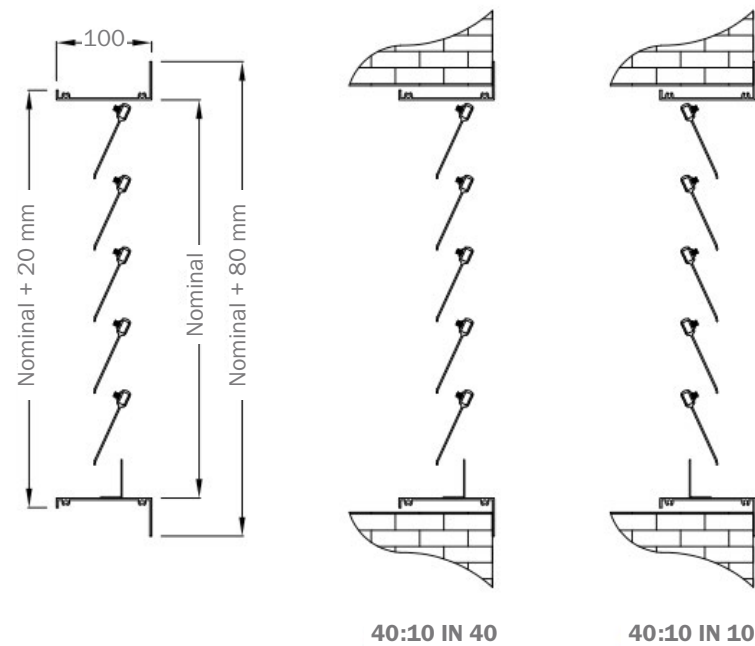
As standard Series BDS back draught shutters are supplied with a 100 mm deep frame with 40 mm flanges. If required this can be replaced with a flange of the same depth, but with one 40 mm flange and one 10 mm flange.

This is useful where a damper is going to be wall mounted.

If this option is selected please specify which airflow configuration is required:

- **40:10 IN 40 - Air in through 40 mm flange side:** Airflow in through the 40 mm flange side, out of the 10 mm flange side.
- **40:10 IN 10 - Air in through 10 mm flange side:** Airflow out of the 40 mm flange side, in through the 10 mm flange side.

Please note: Drive system components protrude a maximum of 25 mm past the 10 mm flange on the damper sides. No components protrude past the 10 mm flange on the top and bottom.



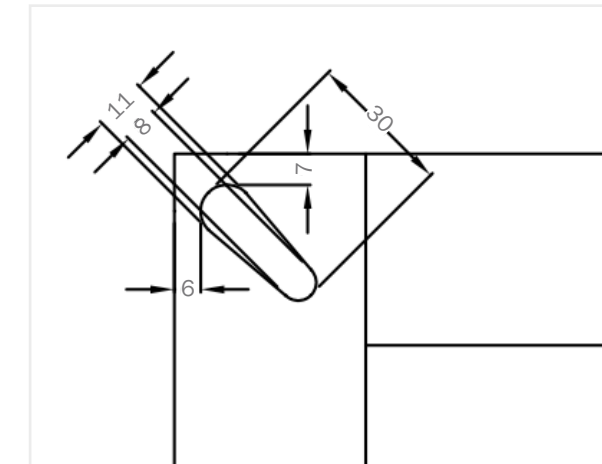
Fixings:

Teardrop Corner Fixing Holes:

BDSs can have teardrop shaped fixings holes prepunched in the corners of the unit to aid fitting into flanged ductwork systems.

Hole dimensions are as shown below.

Only available with a Model A connection type.




Custom Fixing Holes:


Specific layouts of fixing holes can be pre-drilled into one or both of the damper flanges if required to make installation on site quick and easy.


Finish:


- Standard: Mill Aluminium
- RAL: Polyester powder coated to RAL
- BS: Polyester powder coated to BS



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