

Medium Duty Back Draft Damper – BDE100

Model: BDE100

The Holyoake BDE100 is a **Medium Duty** back draft, pressure relief, or non-return damper. Constructed from extruded aluminium and stainless steel components, with a single blade seal and side seal, it is capable of handling high turbulent air velocities and provides minimal leakage when closed against reverse flow.

Standard Construction

- Frame:** 6063 T5 extruded aluminium, mechanically joined with screws through screw pipes.
- Blades:** 6063 T5 extrusion for main blades on 100mm centres; bottom weir used for intermediate heights.
- Linkage:** Concealed in frame, with stainless steel cranks and link pins, and extruded control bars.
- Axles:** Hexagonal stainless steel.
- Bearings:** Two piece moulded glass reinforced nylon, pressed into frame, with the outer sleeve locked with locating ribs (-8°C – 220°C).
- Blade Seal:** Extruded EDPM (0°C – 80°C).
- Side Seal:** Flexible (convex) aluminium.
- Control Shaft:** 304 stainless steel hexagonal shaft complete with control plate.
- Blade Rotation:** Parallel only.
- Finish:** Mill standard, anodised, and powder-coat options available.
- Minimum Size:** Flanged Surround 150mm Wide x 100mm High (Airstream).
Channel Surround 200mm Wide x 150mm High (Nominal).
- Maximum Single Unit Size:** Flanged Surround 1200mm Wide x 1800mm High (Airstream).
Channel Surround 1250mm Wide x 1850mm High (Nominal).

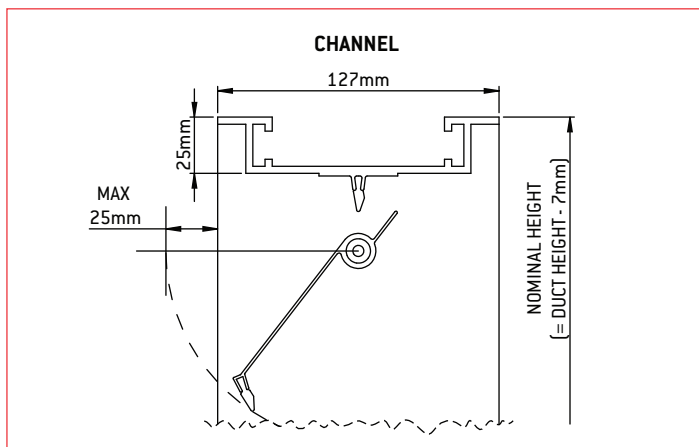
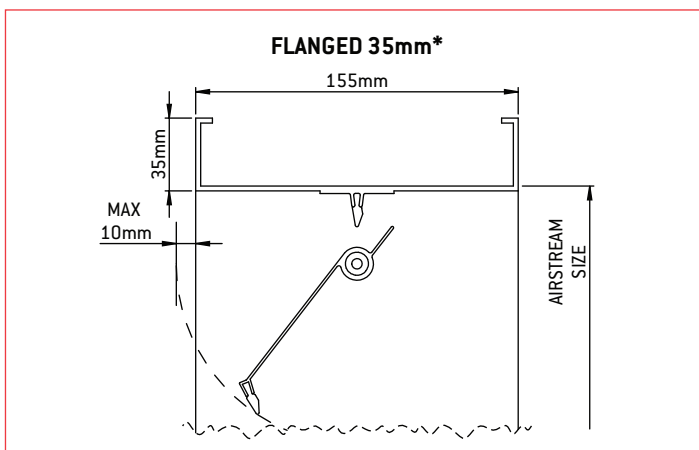
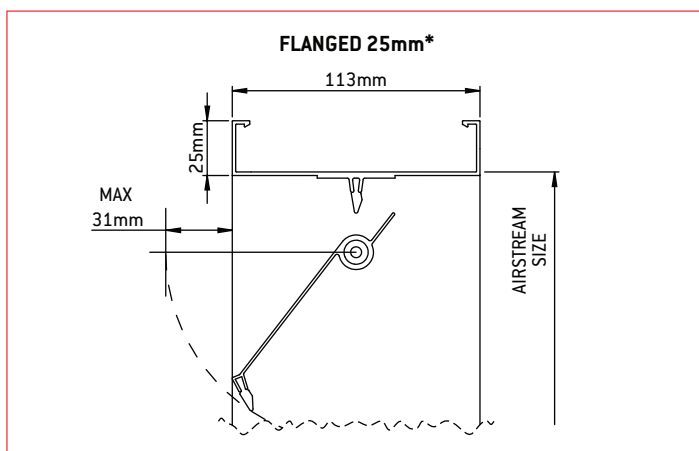
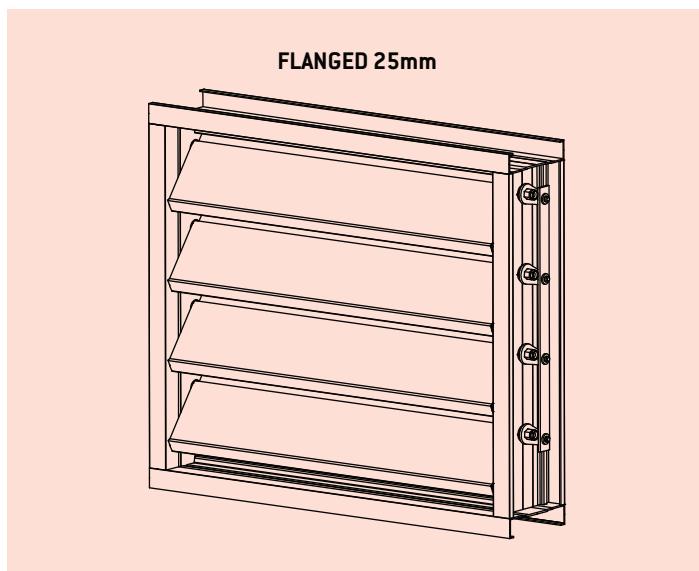
Features

- Medium duty robust blades.
- Aluminium and stainless steel construction.
- Vertical, or horizontal mounting (blades must always be horizontal).
- Aluminium blade side seal.
- Linked blades (to avoid flutter).
- Gravity operation.

Special Construction Options

- Frame:**
- (1) Flanged 25mm* - square cut ends
 - (2) Flanged 35mm* - square cut ends
 - (3) Channel - mitred corners
- Balancing:**
- (1) Counterweights**
 - (2) Tension springs
- Elevated Temperatures:** High temperature blade seals (max 225°C).

* This frame has been designed to couple with proprietary flange systems.
** Ganged together to set desired opening pressure.

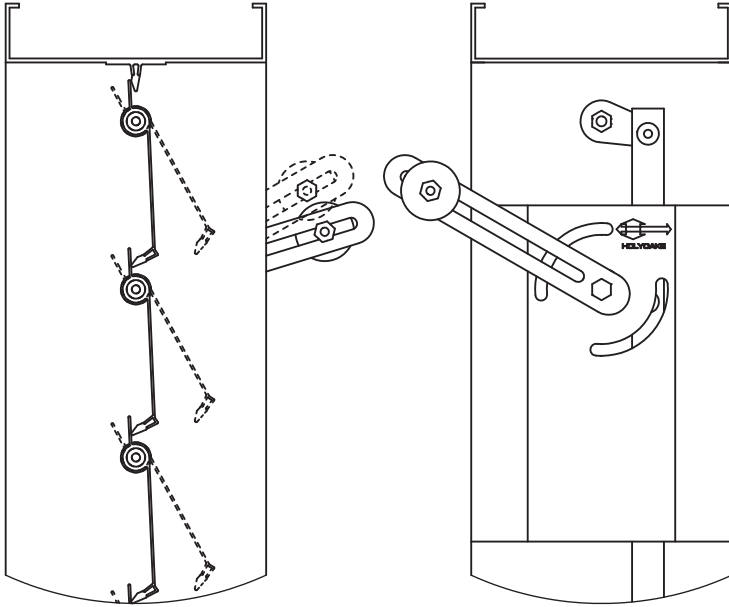


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Pressure Control

To maintain pressure control the blades remain closed under gravity. To increase the opening pressure weights and springs can be added to the control shaft via a lever arm. Weights can be ganged together to set desired opening pressure. Dashed lines show blades and weights in an open position.



Factory calibration is not available; the correct amount of weight, with optional tension springs, is determined by on site commissioning by others.

Although not a precise device this can provide a simple solution to pressure control problems within the parameters indicated below, or the product can be purely utilised as a back draft, or non return valve.

Before ordering a BDE100 please consult your local Holyoake branch to discuss selection criteria.

Installation

BDE100 dampers must NOT be installed with the blades vertical.

BDE100 dampers must NOT be mounted in the 'inverted' position.

Install square and free from racking.

Flanged versions are installed between ducts, so airstream sizes apply.

Channel versions are installed inside ducts, so nominal sizes apply.

Where used in close proximity to fans, ensure that turbulence does not cause the damper to exceed the maximum velocities (AVERAGE or SPOT).

Maximum Velocity: 10m/s AVERAGE, 12m/s SPOT

Do not use the BDE100 as a weather proof louver. When mounted in external walls they should be installed in conjunction with Holyoake OHL series outside louvers, detailed in Section F.

When BDE100 dampers are mounted horizontally (floor mounted) only upwards airflow can be accommodated.

