



# Air Control Dampers

## Insulated Damper 100Ai/165Ai

- Insulated dampers for shut off applications
- Fully sealed for leakage less than 10 l/s per square metre
- Aerofoil section blades for low air flow resistance in the fully open position.
- Insulated blades for low thermal conductivity
- Wear resistant aluminium gear fitted to both ends of blades
- Nylon bearings ensure maintenance free long life



### 100Ai

- Blade width 100mm
- Casing Depth 110mm
- Maximum Module Size:  
Width(A)mm 1000mm  
Height(B)mm 1000mm
- Operating temperature 80°C max

### 165Ai

- Blade width 165mm
- Casing Depth 175mm
- Maximum Module Size:  
Width(A)mm 1400mm  
Height(B)mm 1600mm
- Operating temperature 80°C max

### Casing

The damper frame of 1.2mm galvanised steel is extremely rigid to prevent distortion, which can result in binding blades. To minimize resistance and turbulent air flow the top and bottom frame sections are profiled to fill the space left by using standard blade sizes. Above the maximum module size units may be ganged and coupled for site assembly. The casings are fitted with top and bottom stops with neoprene seals to limit blade rotation to 180° and reduce leakage in the closed position.

### Blades

Aerofoil section blades ensure minimum flow resistance in the fully open position. The roll formed section, in 0.7mm galvanised steel, produces a high strength structure allowing long blade lengths with minimum deflection under pressure conditions. The blades are fitted with 12mm galvanised steel stub shafts. Blade edge seals in Neoprene rubber are compressed as the dampers close to provide positive sealing, with almost zero leakage through the blades.

### Insulation

The hollow profile blades are filled with high density mineral wool insulation giving a thermal resistance of 1.6. The joints between blade ends and drive gears are fully sealed to prevent fibre breakout.

### Operation

Aluminium gears are fitted at both ends of each blade. The gears are produced by a unique roll forming process which produces hardened teeth. The result is a gear which is extremely hard wearing giving long service life under constant movement or dusty conditions. Half gears are used to allow the top and bottom seals to extend the full width of the damper.



## Bearings

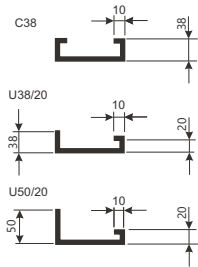
High density nylon bearing are designed to operate for the life of the damper without the need for lubrication or any other form of maintenance. The standard bearings are suitable for working temperatures up to 90 C.

## Seals

Blade edge seals and top and bottom seals prevent leakage through the damper blades. Behind each gear a neoprene foam sealed cell gasket prevents leakage at the sides of the damper. The seal is faced with PTFE to minimize friction and keep operating torque low. All joints between blades and gears are fully sealed.

## Flanges

Three standard flange profiles are available as follows:



In addition flanges may be formed and drilled to match proprietary systems such as Mez or Ductmate. Non standard profiles are available.

## Actuation

Rega dampers may be supplied with manual operating quadrant or 12mm shaft for motorised control. If required the units can be factory fitted with pneumatic or electric actuators to customer specification. For motor sizing torque ratings may be taken from the graphs. For multi module units coupled for driving by one motor add 5Nm, for each join, to the total torque of the individual modules.

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