



airwise
engineering

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Motorised and Manual Volume Control **Dampers**



Motorised economy air damper

Specifications for aluminium models

Manual Volume Control Dampers

- Damper frames are manufactured of 3mm thick 6060-T5 extruded aluminium profile with a recess designed to retain side seals (where fitted).
- Damper frames are of welded construction for increased rigidity.
- Blades are manufactured of 2.5mm 6060-T5 extruded aluminium profile with a groove to allow fitting of an inflatable seal (where fitted).
- Each blade is mounted and mechanically locked onto an 11mm hexagonal die cast crank and stub shaft which turn in captive two piece engineered plastic bushes.
- All blades are interconnected by 20mm by 4mm aluminium linkages for uniform operation. With the linkage hardware being mounted within the extruded frame and out of the air stream.
- Damper flanges are compatible with METU, MEZ, DUCTMATE and other standard systems.
- Dampers are standard with a lockable quadrant to retain desired blade position when installed.
- Dampers are standard in opposed blade configuration. Parallel configuration is available on request.
- Dampers are not fitted with blade or side seals - **unless requested at time of ordering.**

Motorised Volume Control Dampers

- Damper frames are manufactured of 3mm thick 6060-T5 extruded aluminium profile with a recess designed to retain side seals which are fitted as standard.
- Damper frames are of welded construction for increased rigidity.
- Blades are manufactured of 2.5mm 6060-T5 extruded aluminium profile with a groove to retain the inflatable blade seal fitted as standard.
- Each blade is mounted and mechanically locked onto an 11mm hexagonal die cast or zinc plated crank and stub shaft which turn in captive two piece engineered plastic bushes.
- All blades are interconnected by 20mm by 4mm aluminium linkages for uniform operation. With the linkage hardware being mounted within the extruded frame and out of the air stream.
- Blade End seals and stop/sealing angles fitted top and bottom are standard.
- Damper flanges are compatible with METU, MEZ, DUCTMATE and other standard systems.
- Dampers are standard with 170mm by 11mm hexagonal drive shaft extending 100mm beyond the flange and the attached motor (actuator) mounting plate.
- Dampers are standard in opposed blade configuration. Parallel configuration is available on request.

Both manual and motorised dampers are available with optional fittings.

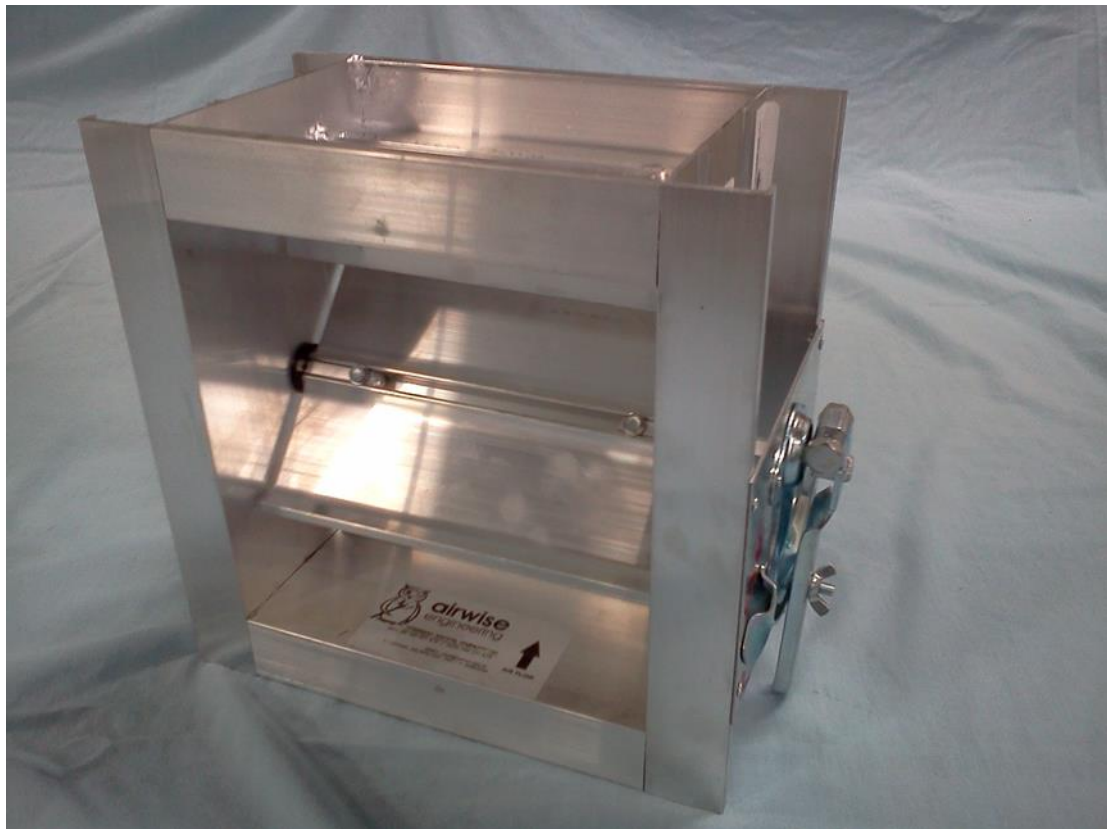
Horizontal orientation is standard but a vertical option is available for motorised dampers. Manual models need only be turned on their side.

Damper sizing specification

- Damper frames are 3.0mm in thickness, 152mm in width and the flange is 35mm.
- Damper blades are 2.5mm in thickness and 150mm in width.
- Single Modules from 100mm by 100mm airway dimension to 2400mm by 2400mm airway dimension.
- Dampers are manufactured to order and size increments of 1mm are possible.
- Dampers having an airway dimension over 1200mm in width have a central mullion.
- Multi module dampers are also available.

Variations

- Vertical dampers.
- Ultra-low leak dampers.
- Pressed frames in choice of dimensions.
- Pressed blades. NOTE: these are normally linked within the airway.
- Internal pockets. These accommodate motors or quadrants within the airway when external space or access is limited.
- Two part (economy) dampers with or without horizontal mullion.
- Many other variations are available. The limit is normally your or our imagination.



Manual Damper without blade or side seals.

Damper types and applications

Dampers are available in two types of blade configuration:-

Opposed Blade-The standard configuration: An opposed blade damper is constructed so that adjacent blades rotate in opposite directions to each other. The rotation does not change the direction of airflow, but it does increase the airflow resistance as the air is funnelled through a smaller opening. Opposed blade dampers must be opened wider in the intermediate stages to obtain the same airflow as a parallel damper.

Major control applications:

- Outside or Exhaust Air (with weather louvre or bird/vermin mesh)
- Coil Face
- Bypass (with perforated baffle)

Parallel Blade-optional: A parallel blade damper is constructed so that adjacent blades rotate in the same direction as each other. The rotation changes the direction of the airflow and can provide mixing and linear airflow characteristics, with only a small increase in airflow resistance.

Major control applications:

- Return Air
- Outside or Exhaust Air (without weather louvre or bird/vermin mesh)
- Bypass (without perforated baffle)
- Two position operation or On/Off (all applications)

Installation and Maintenance

Installation:

Prior to installation store dampers in a safe and clean location to minimise risk of damage, excessive corrosion and limit exposure to building dust.

To work smoothly dampers must always be installed square and flat. Misalignment or twisting of the frame may cause binding of the blade or linkage. This may lead to increased leakage, non-operation, overloading of actuators and breakage of components.

Damper blades must always be installed horizontally except in the case of special vertical models.

All directional labels must be adhered to. This is particularly the case for orientation labels - UP or Install Vertical and Airflow.

Openings should exceed the blade length dimension. Care should be taken to ensure internal duct insulation does not interfere with blade operation.

Once installed clean and check the damper. Manually test that it operates freely before connecting actuators or fixing position of quadrant.

Actuators when used must be supported rigidly in line and square with the frame. From the closed position; stroke all actuators.

If damper is fitted in a duct run provision of an access panel of adequate size should be fitted for future maintenance.

Note 1: Dampers should not be painted on site. Coatings can be applied in the factory and should be specified at time of ordering. If painting is required ensure that shafts, bearings and linkages are adequately masked.

Note 2: Do not modify dampers. This may lead to premature failure or unsatisfactory operation.

NOTE: Failure to observe the above may void the warranty.

Maintenance:

It is recommended that a maintenance schedule for dampers be implemented for any installation.

Visual inspection of the damper for any faults, signs of excessive wear and corrosion should be the first step in any maintenance operation.

Bearings require regular lubrication to ensure free blade operation. We recommend the use of silicone spray every 6 months. In high corrosive environments the frequency should be increased to intervals not greater than every 4 months.

Dampers should be kept clean of any outside pollutant's and corrosive build-ups. This may be by use of pressure cleaners, being mindful that excessive pressure may damage blades and/or their seals.

Alternatively solvent and brush method can be applied. This is particularly so if oily lubricants are used as they may collect dust and foreign matter at a greater rate than dry lubricants.

Safety Notice for Handling & Operating Dampers

- 1. Refer to Operation & Maintenance Instructions before operating any damper.**
- 2. Whenever possible use assistance when installing any damper regardless of size.**

3. Dampers may have sharp edges or corners.
4. Pinch points exist: e.g. between blades or operating linkages.
5. Dampers may be heavy.
6. Dampers may be hot if left in direct sunlight.
7. Glare may be a factor when handling aluminium or stainless steel dampers in bright sunlight.

THIS NOTICE MAY NOT BE ALL INCLUSIVE.

EXERCISE CARE AT ALL TIMES

THINK SAFETY.



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