Air Control Dampers

Circular Control Damper ADCN

- Up to 90 x 1degree blade settings or infinitely variable.
- Air tight bearings.
- Galvanised steel construction, corrosion free and fire resistant.
- Standard male spigot end connections.
- 10 Position self locking mechanism.
- Available with spigot seal rings.

ADCN

Type ADCN circular control dampers are designed for use in all ductwork providing accurate adjustment of the air flow.

To maintain energy efficient operation the units are provided with bearing seals to maintain air tightness through the duct wall. Suitable for low, medium or high pressure installations.

Easily set with the manual control lever, the standard unit has nine 10° degree steps from open to closed. Upward pressure on the control lever allows adjustment, when released the damper automatically locks into the required position with no chance of movement in operation.

Casing

The damper case of 1mm galvanised steel with male spigot ends to suit standard duct sizes. The external swage provides a positive location and resistance to deformation.

Blades

Formed from 0.7 galvanised steel the blades are shaped to give predictable control characteristics, allowing the volume setting to be pre-set from the air flow graph.

Shafts

The blades are mounted in 6 or 12mm shaft assemblies, dependant on the duct size. The shafts are fitted with O-ring seals to maintain air tightness through the duct wall.

Quadrant

The unique locking quadrant ensures easy setting and positive location. From size 250mm upwards the locating screw resists movement regardless of air pressure or velocity.

Materials

For high temperature or corrosive conditions ADCN dampers are available in stainless steel. ensure

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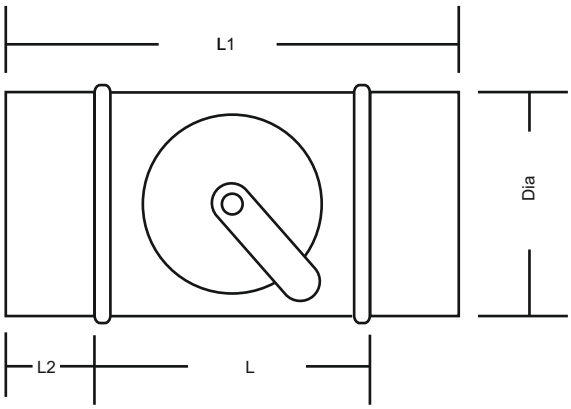
Rega vent

Rega Ventilation Limited
21/22 Eldon Way, Biggleswade, Beds SG18 8NH
fax: 01767 600487 **email:** sales@rega-uk.com

Call us on **01767 600499** or visit
www.regavent.co.uk

Dia mm	L	L1	L2	Weight Kg	Code No
80	130	190	30	0.45	adcnm08
100	130	190	30	0.55	adcnm10
125	130	190	30	0.70	adcnm12
150	155	215	30	0.85	adcnm15
160	165	190	30	0.90	adcnm16
180	185	265	30	1.00	adcnm18
200	205	285	40	1.50	adcnm20
224	229	309	40	1.75	adcnm22
250	255	335	40	2.00	adcnm12
280	285	365	40	3.60	adcnm15
315	320	400	60	4.80	adcnm16
355	360	480	80	5.70	adcnm18
400	405	565	80	7.30	adcnm20
450	455	615	80	8.70	adcnm22
500	505	665	80	12.20	adcnm18
560	565	725	80	14.40	adcnm20
630	635	795	80	20.00	adcnm22
710	715	915	100	24.00	adcnm20
800	805	1005	100	33.00	adcnm22



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Air Control Dampers

Air tight circular ADC

- Airtight up to 1000 Pa
- Manual, electric or pneumatic operation
- Temperature range -30°C to +100°C
- High Strength galvanised steel construction
- Self sealing end termination for fast installation
- Diameters from 100mm to 630mm diameter
- Stainless steel option available

ADC Air Tight Damper

The use of shut off dampers increases as the demand for low energy low leakage systems rises. The Rega circular shut off damper provides an economical method of achieving low leakage at an acceptable capital cost.

Construction

Like all Rega products, these air tight dampers are manufactured to the highest standards of quality, tolerance and performance, giving total confidence to contractor or specifier.

Bodies are constructed of high strength galvanized mild steel to HVCA DW144 standard. The galvanized steel damper blades are fitted with specially formulated silicon rubber seals for the closest contact between blade and body wall.

100mm to 250mm models have hexagonal rod axles with special double 'O' ring seals and pressed steel levers. 280mm-630mm models have heavy duty circular full length shafts with steel ball bearings and blind nut air tight connections.

Temperature

The standard volume control operates within the temperature range -30°C to 100°C. For higher temperatures, to 300°C a special version is available

Control

The Air tight damper body is manufactured from galvanised steel with a butt laser welded seam. The damper is supplied with an integral neoprene seal providing an air tight joint with no additional sealing required. At high pressures a mechanical fixing, self drilling screw or rivet, will be required between the duct and the damper.

The ADC air tight damper is available in stainless steel as an option.

Application

The unit is suitable for providing tight shut of for extract and supply ducts in both high and low velocity systems.

Insulation

ADC units are available to special order with 25mm or 50mm insulation to reduce noise or heat transfer.

Control

On manual models up to 250mm diameter the blades can be locked in any of 9 fixed positions at 10° intervals or can be infinitely variable.
Electric or Pneumatic actuators are available with the options of open/close or fully modulating operation. In addition for safety applications spring return actuators are available.

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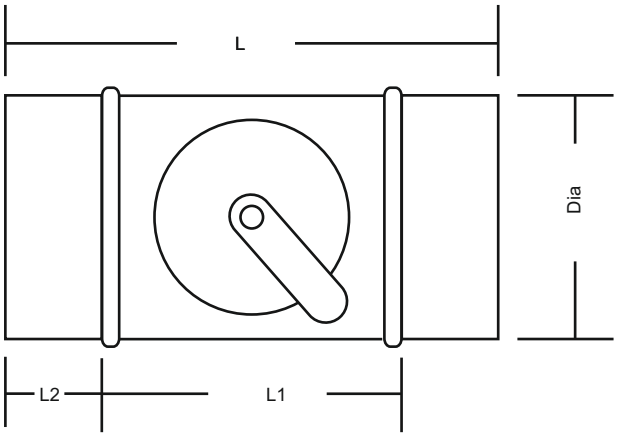
Dia mm	L	LI	L2	Approx. Weight Kg	Part No.
100	190	130	30	0.7	adc10
125	190	130	30	0.8	adc12
150	215	155	30	1.0	adc15
160	225	165	30	1.2	adc16
180	265	205	30	1.3	adc18
200	285	205	40	1.5	adc20
224	310	230	40	1.7	adc22
250	335	255	40	1.9	adc25
300	440	320	60	4.5	adc30
315	440	320	60	4.7	adc30
355	520	360	80	5.9	adc35
400	565	405	80	7.4	adc40
450	615	455	80	9.0	adc45
500	665	505	80	12.5	adc50
560	725	565	80	14.8	adc56
630	795	635	80	20.5	adc63



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Air Control Damper

Constant Volume Control VRK-223

- Constant or variable air volume control
- Pressure range 20Pa to 1000 Pa
- Temperature range -30°C to +100°C
- Factory set air volume may be adjusted on site
- Self sealing end termination for fast installation
- Diameters from 100mm to 400mm diameter
- Air flow rates from 12 l/s to 1300 l/s

VRK 233

The VRK 233 operates as an independent volume control device without the need for an external power supply. As a self actuating control damper the unit maintains the required air volume regardless of changes in system pressure, overcoming the need for commission balancing and ensuring constant air flow in service.

Operation

The flow controller works with a free moving control plate, supported by PTFE bearings, connected to a tensioning spring. Aerodynamic forces balance the spring force maintaining a defined blade position to finely control the set air volume.

Pressure & Accuracy

The controller operates at pressures up to 1000Pa from a minimum "lift off" pressure controlled by air velocity (see diagram 1). At normal air volumes the flow rate is normally maintained at the required level within a tolerance of +/-10%, below 100m^3/h the tolerance is +/-10m^3/h. Certain factors such as; air velocity below 4m/s, proximity to bends, reducers etc may reduce the accuracy of control.

Temperature

The standard volume control operates within the temperature range -30°C to 100°C. For higher temperatures, to 300°C a special version is available

Construction

The controller body is manufactured from galvanised steel with a butt laser welded seam. The smooth external finish allows the use of profiled ends with rubber self sealing O-rings. When fitted into the duct the O ring rolls up the tapered body of the controller spigot to provide an air tight seal. The self sealing systems speeds fitting reducing installation costs. The control blade, running in maintenance free PTFE bearings, is fitted with a pneumatic damper preventing any oscillation that can be caused by turbulent air flow.

The VRK233 is available in stainless steel or a paint finish to all RAL colours.

Application

The unit is suitable for extract and supply ducts in both high and low velocity systems. It may be installed in either the horizontal or vertical planes. VRK 233 units are normally supplied factory set to the required air volume and may be labelled with the design location to further ease installation. Subsequent site adjustment is possible using an allen key and the easily visible volume scale showing the available range of the volume control.

Insulation

VRK controls are available to special order with 25mm or 50mm insulation to reduce noise or heat transfer.

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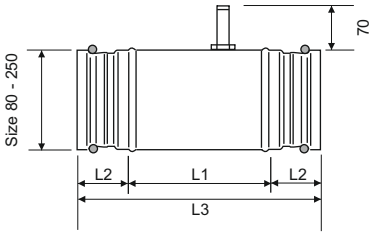
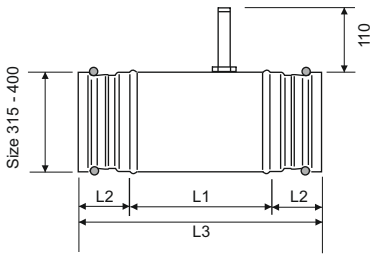
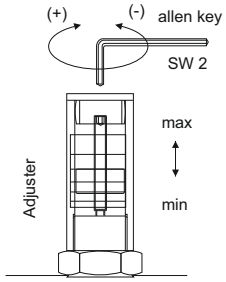


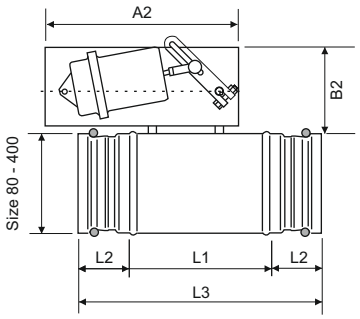




Characteristics
Mechanical, no external power supply.
Push fit ends with rolling O-ring seals.

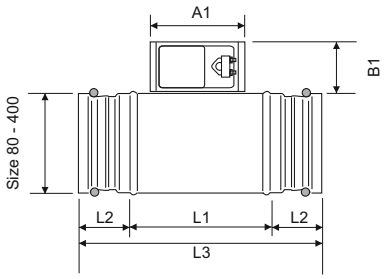
Flow rate factory pre-set with site adjustment option.
On-request factory set only, no site adjustment possible.

Type VRK 233-2



Characteristics
As version 233-1 but factory preset with variable pneumatic actuator, control pressure 0.2 to 1.0 bar.
Adjustment ratio of 1 to 3 in operational range.

Type VRK 233-3



Characteristics
As version 233-2 but factory preset with two setting point electrical actuator for operating voltage of 230 volt.
Type 233-4 as 233-3 but with additional auxiliary switch for an additional setting command.
Type 233-5 as 233-3 but operating voltage 24volts.
Type 233-6 as 233-3 but with a variable control via a 24 volt electric actuator with proportional control from 0 - 10 volt DC.

Size in mm ø	Volume flow in m^3/h min.	max.	Dimensions in mm L_1	L_2	L_3	A_1	B_1	A_2	B_2
80	40	125	120	40	200	155	105	225	100
100	70	220	170	40	250	155	105	255	100
125	100	280	170	40	250	155	105	225	100
140	140	400	170	40	250	155	105	225	100
160	180	500	240	40	320	155	105	225	100
200	250	900	240	40	320	155	105	225	100
250	500	1500	240	40	320	155	105	225	100
315	800	3000	220	60	340	155	105	300	150
400	1000	4500	295	60	415	230	160	300	150

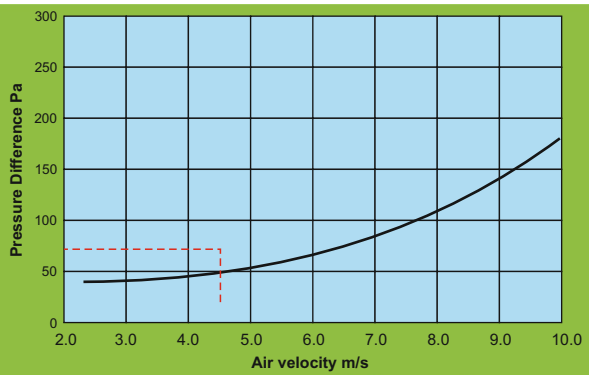


Diagram 1: Minimum Static Pressure difference at the volume control

Example

Controller: Type 233
Diameter: 160mm

Air Velocity 4.5 m/s
Airflow: 325 m^3/h

Pressure difference from diagram 1: 50Pa

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