Airflow regulators and dampers





Built-in sensors and advanced communication capabilities can be integrated with Howden's Monitoring and Control Stations.

Howden airflow regulators and dampers are an integral part of Ventsim[™] CONTROL Optimized Mine Ventilation Systems. With designs based on decades of experience and expertise in mine ventilation, Howden offers standard regulators and customized configurations to suit your application requirements.

Engineered for high-performance, trouble-free operation

Robust and durable, built for extended problem-free use over many years

Tried and tested opposed-blade louver design

Manufactured from heavy-gauge steel galvanized in a hot-dip process

Rugged outer shell protects the gears and bearings from knocks and rough treatment typical in underground mines

Over-torque protection device prevents damage to the louvre blades if excess force is applied

Moving parts are pared down to reduce wear and minimize maintenance

Designed for optimized flow control, with the opposed blade system providing precise flow regulation

Regulator quickly adjusts from fully open to fully close

Sized to fit your requirements

Our Howden mine ventilation engineers carry out a detailed analysis of local conditions to determine the optimum size for your needs. Their proposed configuration is verified and validated through extensive computer modeling of the system.

Framed design eases installation and maintenance

Each unit is manufactured with a separate, pre-fabricated frame which is fitted into a bulkhead in advance. The regulator is then bolted on to the frame.

This frame design makes installation exceptionally fast and straightforward and makes it easy to remove the unit for access, if required.

Regulators are manufactured and tested and then shipped for on-site installation and commissioning by our local specialist.



Regulators make a substantial contribution to optimizing overall system performance.



The simple plug-and-play design allows regulators to easily be added to existing and new systems.

Product specifications

Howden Ventsim[™] manufactures any size of louver type automatic air flow regulators complete with actuator and connectors ready for MCS or MCSg control.

Each regulator can be fabricated together with a frame that is pre-installed in a bulkhead for ease of installation. Howden VentSim ventilation engineering services provide sizing calculations for the regulators.

Regulator operation may be verified and validated within a mine ventilation model.

Precise, verifiable ventilation control with automatic or manual options

An actuator offers remote and local control options; and may incorporate pre-installed bi-directional flow sensors (BFS)

The actuation mechanism and monitoring functions can be integrated into Howden Monitoring and Control Stations as part of an automated mine ventilation management system.

Input and output signals are provided via configurable 4-20mA connections

Automatic air flow regulator with actuator and the optional grille



Automatic air flow regulator frame







Mechanical

External construction:	- A-36 hot dip galvanized construction of frame, regulator, and blades
	- Stainless steel shafts
	- Helical gears
	- Side mounted Dodge 1-15/16 bearings
	- Guards for both sides of the regulator (drive side and the non-drive side) hot dip galvanized
	- Actuator support base
	- Bolts for regulator to frame
	- Safety grille on opening (optional)
Standard dimensions:	- 1.9 x 1.9 x 0.42m (Automatic air flow regulator)
	- 2.44 x 2.44 x 0.20m (Frame)
	- 0.55 x 0.85 x 0.32m (Actuator)
Weight:	- 608 kg (Automatic air flow regulator)
	- 245 kg (Frame)
	- 68.93 kg (Actuator)

Environmental conditions

Standard:	Weatherproof
Enclosure protection:	NEMA type 4X/6P
Ambient temperature:	-40°C - +60°C
Corrosion protection:	KS

Electrical data

Mains voltage:	600 Volts AC / 480 Volts AC
Phase:	3-Ph
Frequency:	50 Hz / 60 Hz
Type of duty:	S4 – 25% intermittent duty
Motor protection	(D-1T-O140) 3 thermal switches, 1 N.C. contact per phase wired in series 140°C
	Class F insulation, tropicalized
Motor type:	3 ph AC motor type AD/VD



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Motor data

Motor designation:	VD0R063-2-0.12
Nominal power (HP):	1/6
Nominal power (kW):	0.12
Nominal speed (RPM):	3,360
Nominal current (FLA):	0.6
Current approx. Imax. (RTA):	0.7
Starting current (LRA):	2.4
NEC code letter:	К
COS:	0.52

Actuator features

Output speed:	19 RPM
Valve attachment:	FA10
Torque switches:	(6) 2 single switches for each direction
Limit switches:	(8.2) limit switches in tandem operation for end positions (2 gear train 8 contacts)
Position transm.:	(40.4) EWG 4-wire system
Turn per stroke:	13.25 turns per stroke at output drive act.

Local control override

LOCAL operation:	Push buttons OPEN, STOP, CLOSE
Indication lights:	OPEN-red, FAULT-yellow, CLOSE-green

This product is a part of TMVS – Total Mine Ventilation Solutions, the integrated suite of expertise, products and services that provides efficiency and safety across your mine operations.