

19V

11/05

Engine Intake Air Shut-off Valve

Model 4261 SpeedTrap™



Typical applications

- Oil field - drilling rigs, mud trucks, wireline feeders, crude haulers, welders and other machinery
- On/off shore - compressors, gen sets, fire pumps and welders
- Construction - ideal for trenchers, gas co service trucks, sewage pumps
- Transporters - aircraft refuelers and all combustible chemicals or hazardous waste

Key benefits

- Compact design - easy, low cost installation
- Corrosive resistant, anodised aluminium and stainless steel construction
- Use stand-alone or in complete runaway shut-down system
- Remote re-set facility - flexible control

Operation

Diesel run-away is a potential problem that can cause damage to equipment. A diesel engine can run-away and self destruct on hydrocarbon vapours, even if the engine's primary source of fuel is taken away.

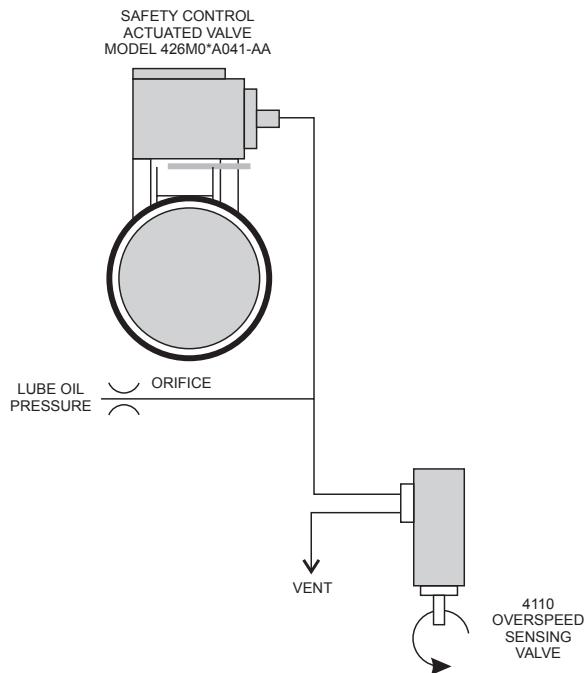
An air intake shut-off valve is recommended for diesel engines which have a possibility of encountering hydrocarbon vapours.

The SpeedTrap™ Intake Air Shut-off Valves from AMOT use the best available technology to shut down a run-away diesel by positively choking off engine intake air.

Specification

Standard materials	Valve body and disc	Anodised aluminium	
	Valve shafts	Stainless steel	
	Seals	Nitrile or Viton	
	Safety control operator	Anodised aluminium	
	Pneumatic cylinders	Aluminium and stainless steel	
	Brackets	Plated steel	
Maximum intake air temp.	Nitrile seals (standard)	93°C	(200°F)
	Viton seals	149°C	(300°F)
Net weight (inc. operator)	2.8 valve size	1.4 - 1.8kg	(3.1 - 4.0lbs)
	3.5 valve size	1.4 - 1.8kg	(3.1 - 4.0lbs)
	5.5 valve size	1.8 - 2.2kg	(4.0 - 4.9lbs)
	8.0 valve size	3.6 - 4.1 kg	(7.9 - 8.8lbs)
Pneumatic rotary actuator	Minimum actuation pressure	310kPa	(45psi)
	Recommended actuation pressure	414 - 552kPa	(60 - 80 psi)
	Maximum actuation pressure	690 kPa	(100psi)
Manual/pneumatic cylinder operator	Minimum actuating pressure	207kPa	(30psi)
	Maximum working pressure	1380kPa	(200psi)
	Mechanical pull to release	67N	(15lbs)
Safety control operator	Adjustable trip pressure	34 - 275kPa	(5-40psi falling)
	Max. pressure on diaphragm	1170kPa	(170psi)
Electric solenoid operators (intermittent duty)	12VDC & 24VDC	96 Watts	
	Maximum coil temperature	175°C	(350°F)
	Duty cycle	12% ie 75 secs (max) on-time followed by 540 secs (min) off-time	

Typical applications



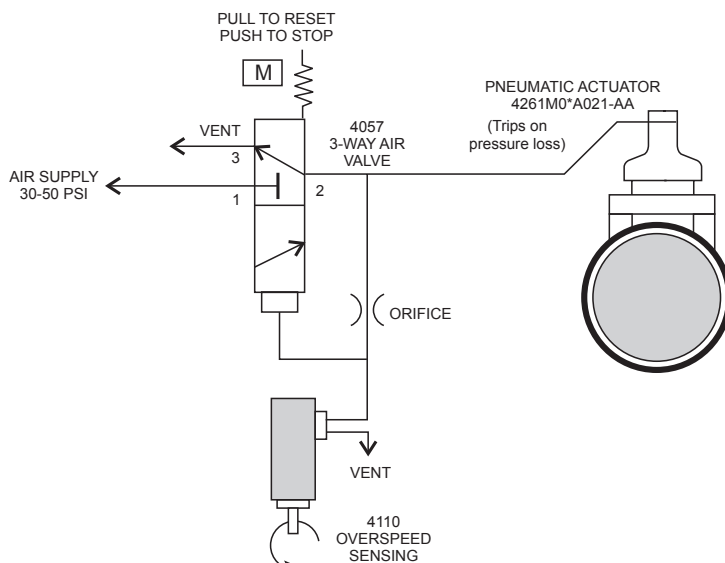
Hydro mechanical automatic system (Safety Control)

- Engines without electricity/air supply
- Offshore engines

System trips on loss of lube oil pressure. The overspeed valve will vent off oil pressure to trip system.

Model 4261M0* A041-AA

Hydromechanical safety controlled SpeedTrap™ (trips on loss of pressure).



Automatic, pneumatic system

- Offshore
- Hazardous areas

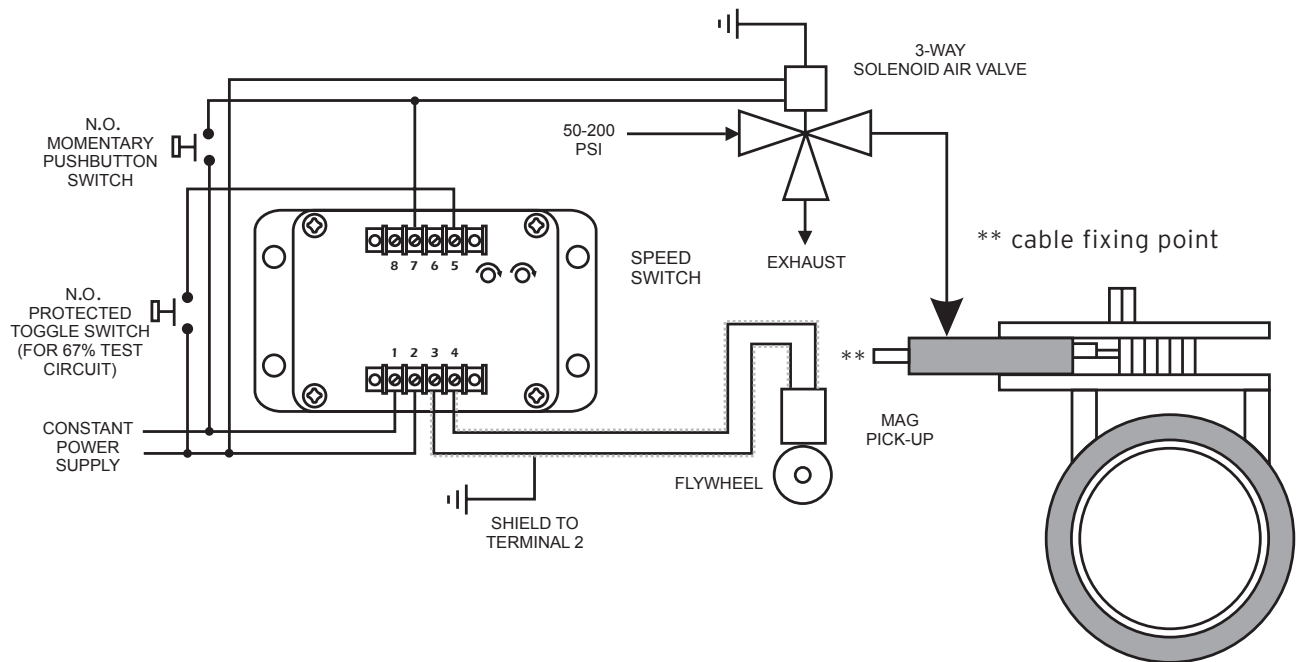
Three-way air valve is pulled to pressurise system and open SpeedTrap™. During a run-away, overspeed sensing valve vents off air pressure to trip SpeedTrap™. Shut down can also be initiated by pushing three-way air valve knob.

Model 4261M0* A021-AA (air to run) 4261MD* A025-AA (air to close)

Pneumatic actuator

Spring return operated SpeedTrap™

Typical applications continued



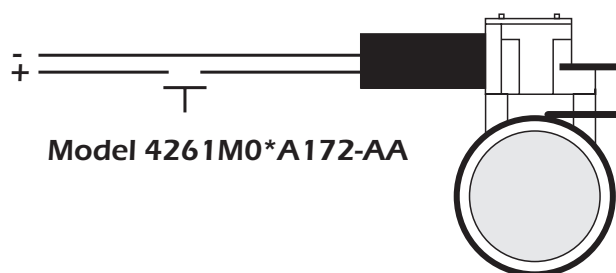
Electro/pneumatic automatic system (manual pneumatic)

- Tank trucks
- Oil field trucks
- Construction machinery
- Industrial engines

Magnetic pick-up (or alternator) sends RPM signal to speed switch. When RPM indicates run-away condition, speed switch trips, activating 3-way solenoid valve and closing intake air shut-off valve. Protected toggle switch activated test circuit allows systems to be tested at 67% of run-away speed.

Model 4261MO* A027-AA

Manual pneumatic operated SpeedTrap™



Electronic solenoid operated system

- Fire trucks
- Manned construction equipment

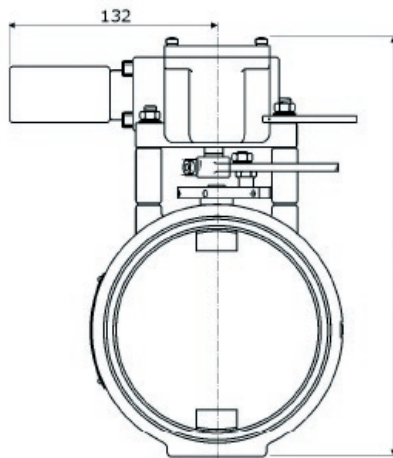
The 4261 is manually cocked to run the engine and the solenoid built into it must be energised to shut down. This system is widely used even though it is not fail safe. Wire breakage or loss of electrical power will disable the system, so frequent testing by actuation is recommended.

Model 4261MO* A172-AA and 4261MO* A171-AA

Electric solenoid operated SpeedTrap™

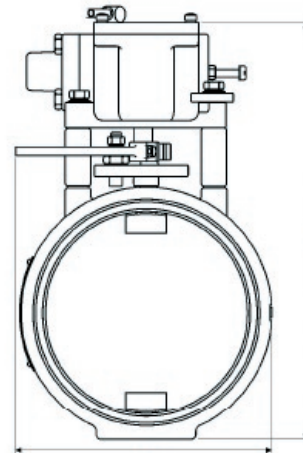
Dimensions

Solenoid



A 201
B 222
C 273
D 336

Safety Control



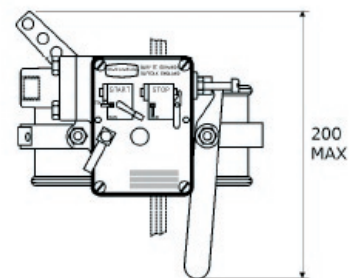
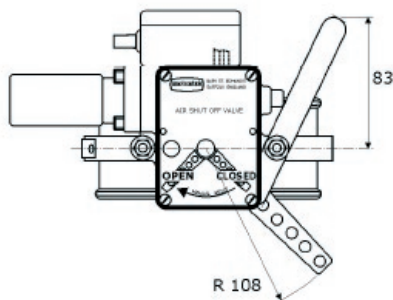
A 204
B 225
C 276
D 340

KEY

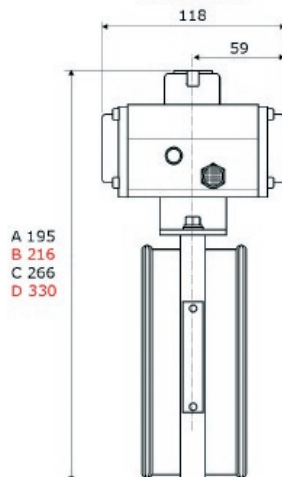
A = 2.8 version
B = 3.5 version
C = 5.5 version
D = 8.0 version

A 137
B 148
C 162
D 222

Dimensions in mm

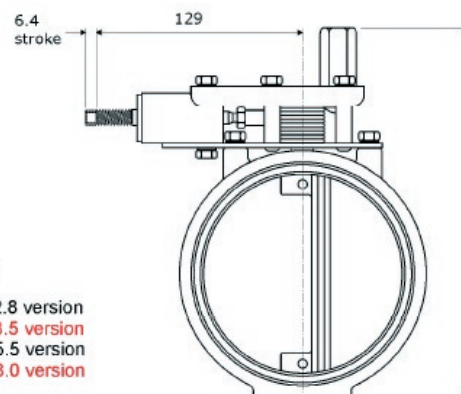


Pneumatic



A 195
B 216
C 266
D 330

Manual/Pneumatic

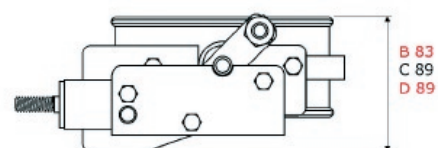
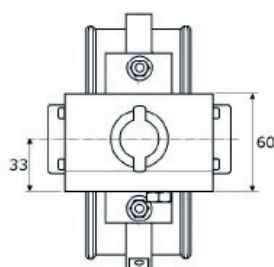


A 164
B 165
C 236
D 299

KEY

A = 2.8 version
B = 3.5 version
C = 5.5 version
D = 8.0 version

Dimensions in mm



Specification check list

Use the tables below to select the unique specification of your 4261 SpeedTrap™ Air Intake Shut-off Valve

Please select one characteristic from each section. Each characteristic is associated with a code that you will need to state when ordering.

Basic model code	Code	✓
Model	4261M	✓

Valve size	Code	✓
2.8 inch	02	
3.5 inch	03	
5.5 inch	05	
8.0 inch	08	

Valve material	Code	✓
Aluminium/Buna N (std)	A	
Aluminium/Viton	C	

Operators	Code	✓
All valve operator codes except 71* and 72*	0	
Standard	1	
Limit switch installed	2	
Terminal box installed	3	
Limit switch and terminal box installed	4	

Valve operator	Code	✓
Slave operator for use on 'V' engines	11	
Pneumatic rotary actuator, pressurise to run, spring return to close. NPT threads	21	
Pneumatic rotary actuator, pressurise to run, spring return to close. BSP PL	22	
Pneumatic rotary actuator, pressurise to close, spring return to open. NPT	25	
Pneumatic rotary actuator, pressurise to close, spring return to open. BSP PL	26	
Manual/pneumatic cylinder, manually cocked to run, pressurise or manual trip to shut down. NPT thread	27	
Manual/pneumatic cylinder, manually cocked to run, pressurise or manual trip to shut down. BSP PL	28	
Safety control, NPT thread	41	
Safety control, BSP PL	45	
Electric solenoid, 12 VDC, manually cocked to run, energise to shut down	71*	
Electric solenoid, 24 VDC manually cocked to run, energise to shut down.	72*	

Special requirements	Code	✓
Standard	AA	
Please contact AMOT for any special requirements.		

Accessories

A range of accessories can be purchased along side your SpeedTrap™ valve:

Electronic Speed Switch

type: 8210K
see datasheet 02S

Mechanical Overspeed Sensing Valve

type: 4110
see datasheet 17V

3-way Logic Valves

type: 4057
see datasheet 20V

Once you have made your selection, or if you need advice, please call us on:

+44(0)1284 762222

fax +44(0)1284 760256 email info@amot.com

Europe and Africa

AMOT
Western Way
Bury St Edmunds
Suffolk, IP33 3SZ
England

Tel +44 (0) 1284 762222
Fax +44 (0) 1284 760256
Email info@amot.com

AMOT Controls GmbH
Rondenbarg 25
22525 Hamburg
Germany

Tel +49 (0) 40 8537 1298
Fax +49 (0) 40 8537 1331
Email germany@amot.com

Asia and Australasia

AMOT Shanghai
Rm A8-671 Jiahua Business Center
808 Hongqiao Road
Shanghai 200030
China

Tel +86 (0) 21 6447 9708
Fax +86 (0) 21 6447 9718
Email shanghai@amot.com

AMOT Singapore
10 Eunos Road 8 #12-06
Singapore Post Centre
Singapore 408600

Tel +65 6293 4320
Fax +65 6293 3307
Email singapore@amot.com

Americas

AMOT USA
8824 Fallbrook Dr
Houston
TX 77064
USA

Tel: +1 (281) 940 1800
Fax +1 (281) 668 8802
Email sales@amotusa.com