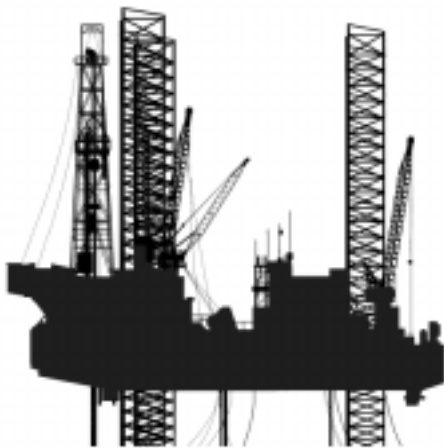
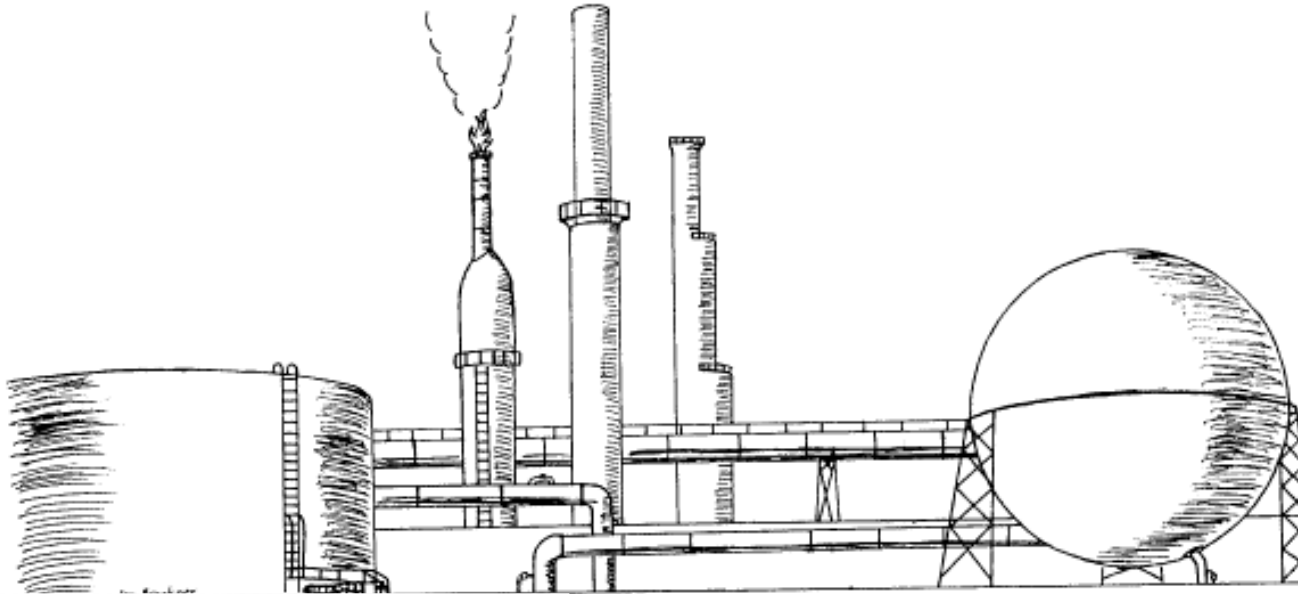




# Model 4261

## Intake Air Shutoff Valves



# **DIESEL RUNAWAY... A CRUCIAL SAFETY ISSUE**

Diesel runaway is a constant problem, injuring personnel and causing severe damage to equipment every year. A diesel engine will runaway and self destruct on hydrocarbon vapors, even if the engine's primary source of fuel is taken away. An intake air shutoff valve is a must for diesel engines which have even a slight possibility of encountering hydrocarbon vapors. AMOT's *SPEEDTRAP* Intake Air Shutoff Valves use the best available technology to shut down a runaway diesel by choking off engine intake air.

## **FREQUENT CAUSES OF DIESEL RUNAWAY**

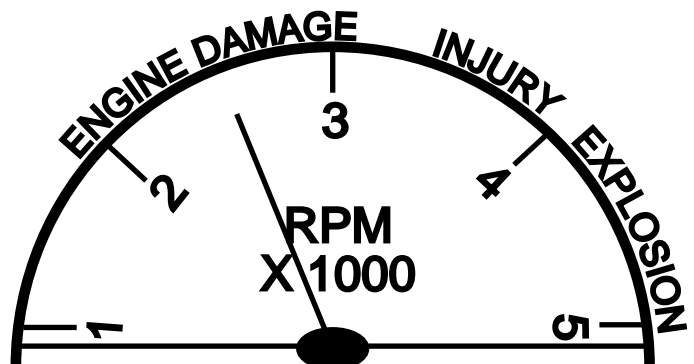
- HYDROCARBON VAPORS
  - Methane
  - Natural Gas
  - Propane
  - Gasoline
  - Aviation Fuel
  - Condensates
  
- COMBUSTIBLE DUSTS
  - Grain Dust
  - Coal Dust
  - Metal Dust
  - Soot
  
- EQUIPMENT MALFUNCTION
  - Governor Misadjustment
  - Governor Linkage Failure
  - PTO Failure/Slippage
  - Overturned Vehicle/Engine

## **INEFFECTIVE RESPONSES TO DIESEL RUNAWAY**

- TURNING OFF THE IGNITION
  - Diesel engines use compression ignition, not spark plugs.
  
- DE-ENERGIZING THE FUEL SOLENOID
  - Hydrocarbon vapors in the intake air will sustain a runaway with the primary fuel source removed.
  
- DISENGAGING THE ENGINE'S LOAD
  - Will accelerate the runaway.

## **THE DIRE CONSEQUENCES OF DIESEL OVERSPEED**

Ultimately, a runaway diesel will self-destruct providing an ignition source for the hydrocarbon vapors which fueled the runaway. A range of undesirable outcomes results from a runaway:



# AMOT SPEEDTRAP STOPS DIESEL RUNAWAY

## FEATURES AND BENEFITS

- Most compact design available.
- Easily installed, saves money.
- Corrosive resistant, anodized aluminum and stainless steel construction.
- Best Available Technology - "Butterfly Valve" design.
- Use "Stand Alone" or in complete Runaway Shut Down System.
- Remote reset capability.
- Manual, pneumatic, electric, or hydro mechanical actuation.

## USED ACROSS ALL INDUSTRIES

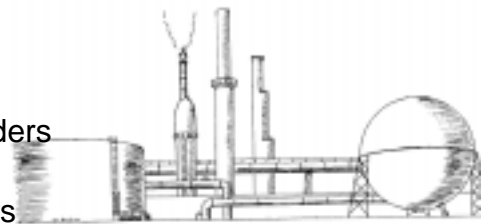
### BULK TRANSPORTERS

Combustible Chemicals  
Aircraft Refuelers  
Gasoline  
Propane  
Hazardous Waste



### OIL FIELD

Drilling Rigs  
Mud Trucks  
Wireline Feeders  
Frac Tankers  
Crude Haulers  
Welders  
Natural Gas Condensate Haulers



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### CONSTRUCTION / INDUSTRIAL

Trenchers  
Gas Co. Service Trucks  
Sewage Pumps  
Hazmat Spill Recovery Trucks  
Mining Equipment  
Boring Equipment

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### MARINE

Oil Spill Recovery Vessels  
Tugs / Support Vessels / Tenders  
Pleasure Craft

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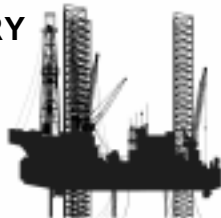
### MUNICIPAL

Busses

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### INDUSTRIAL-STATIONARY

On/Offshore \*  
-Compressors  
-Gen Sets  
-Welders  
-Firepumps



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### EMERGENCY VEHICLES

Fire Trucks\*  
- Municipal  
- Airport  
- Military  
- Petro Chemical / Process  
- Hazmat Spill Recovery Trucks



\* Required By MMS CFR 250.80 & 250.100

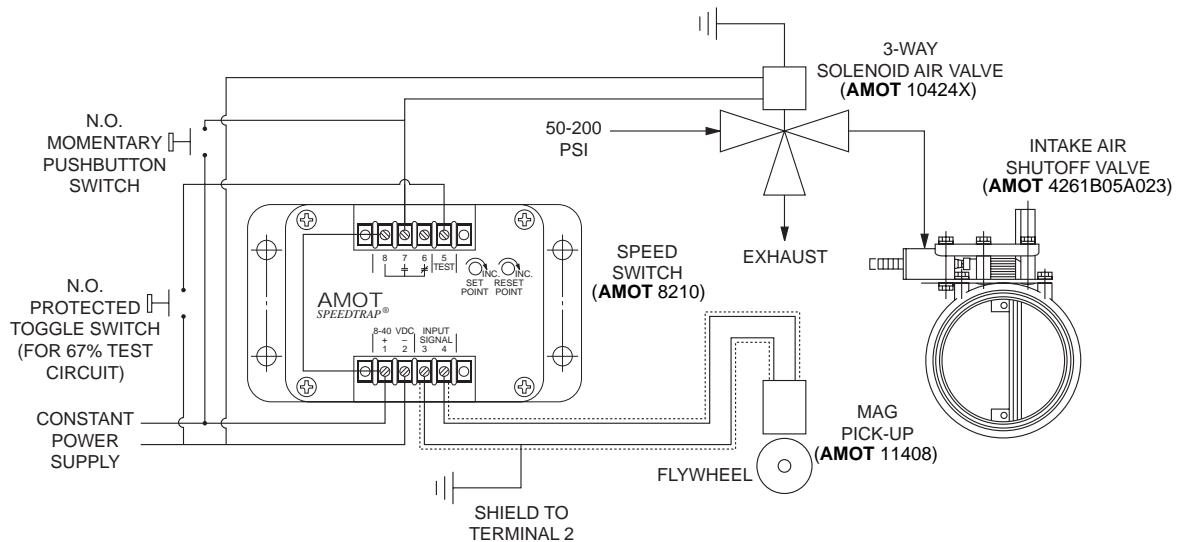
\* Recommended by NFPA 1901 - 1904

# A *SPEEDTRAP* SOLUTION EXISTS FOR YOUR APPLICATION

## TYPICAL APPLICATIONS

### Electronic / Pneumatic Automatic System

- Tank Trucks
- Well Service Rigs
- Vacuum Trucks
- Hazardous Materials Transporters



Magnetic pick-up sends RPM signal to speed switch. When RPM indicates runaway condition, speed switch trips, activating 3-way solenoid valve and closing intake air shutoff valve. Intake air shutoff valve can also be tripped by normally open momentary pushbutton. Protected toggle switch activated test circuit allows system to be tested (at 67% of overspeed) with out overspeeding engine.

### MODEL 4262B0 \* A023

Manual Pneumatic  
Operated *SPEEDTRAP*



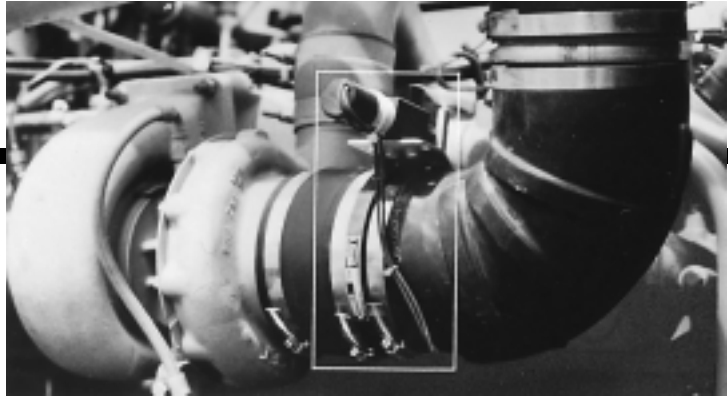
(Manual pull  
or pneumatic  
pressure to  
close)

### MODEL 4262B0 \* A071

& 4262B0 \* A072  
Electric Solenoid  
Operated *SPEEDTRAP*

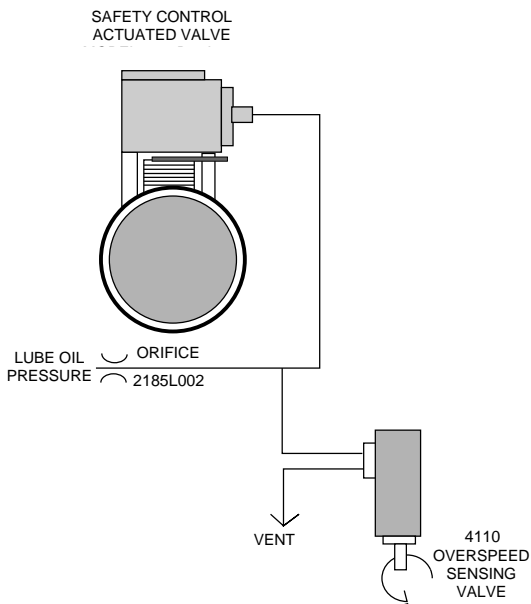


(Energize to  
close)



### Hydro Mechanical Automatic System

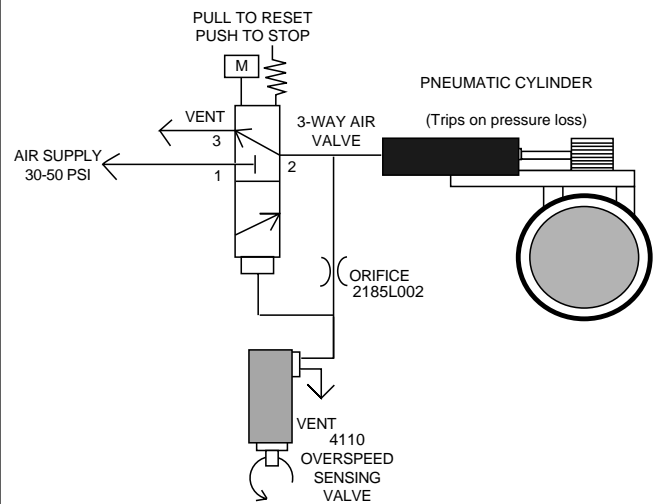
- Engines Without Electricity / Air Supply
- Offshore Engines



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

### Automatic, Pneumatic System

- Offshore
- Hazardous Areas



Three-way air valve is pulled to pressurize system and open *SPEEDTRAP*. During a runaway, overspeed sensing valve vents off air pressure to trip *SPEEDTRAP*. Shut down can also be initiated by pushing three-way air valve knob.

### MODEL 4262B04A041

Hydro Mechanical Safety Controlled *SPEEDTRAP*



(Trips on loss of pressure)

### MODEL 4262B0 \* A021 (Air to run)

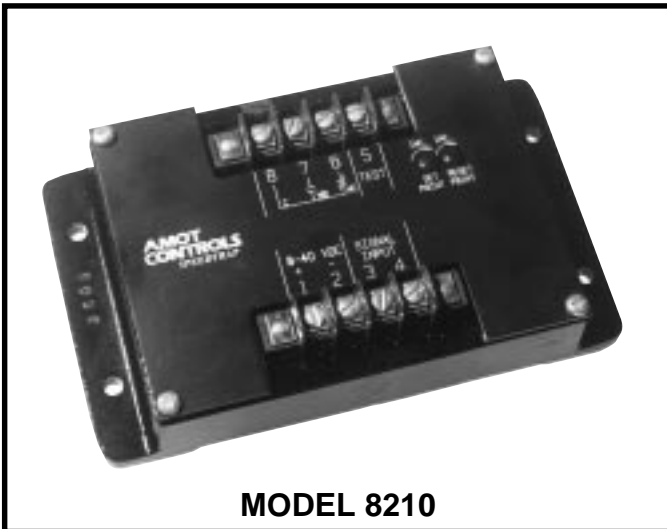
& 4262B0 \* A025 (Air to close)

Pneumatic Cylinder Operated *SPEEDTRAP* Spring Return



\* Specify size from Model Coding Table

# ACCESSORIES FOR SINGLE SOURCE RESPONSIBILITY



**MODEL 8210**

## 8210 ELECTRONIC SPEED SWITCH

- Accurate, reliable protection against dangerous high RPM's.
- Compact, rugged design.
- Easy to install, few connectors.
- 67% test circuit allows field setting and testing without overspeeding engine.

## 4110 MECHANICAL OVERSPEED SENSING VALVE

- Rugged, reliable design.
- For use in pneumatic or hydraulic control lines.
- Long lasting bearings.
- Manual or pneumatic reset.
- Adaptable to all popular engine makes and models.



**MODEL 4110**



**MODEL 21000**

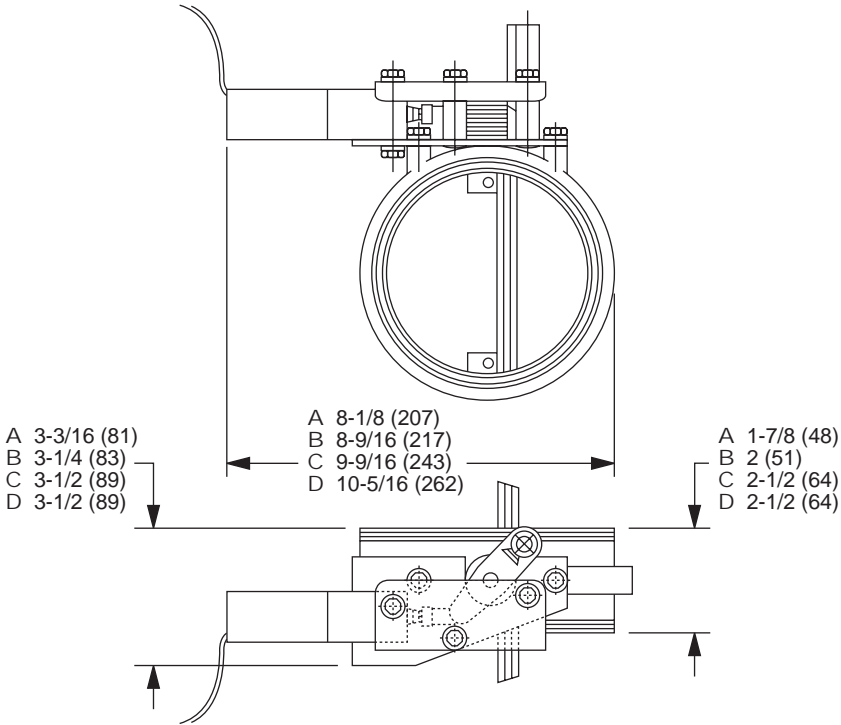
## 21000 3-WAY STAINLESS STEEL PNEUMATIC SPOOL VALVES

- Unique In-Knob visual Pilot Indicator
- Latch & Pin
- Balanced Spool
- Latching Pilot

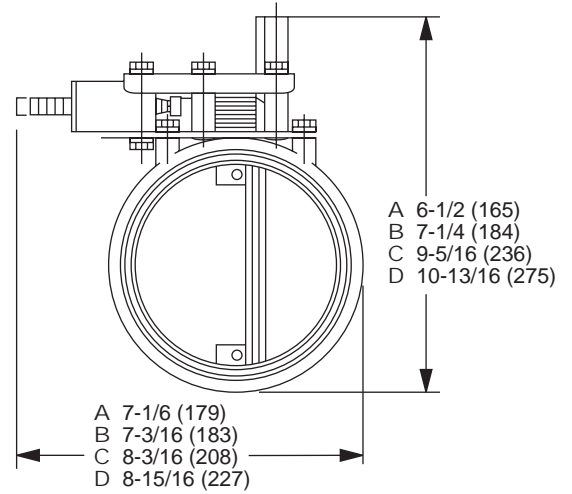
Also see AMOT's new Model 4262, for more of the Speedtrap solutions that you expect from AMOT Control.

# DIMENSIONS

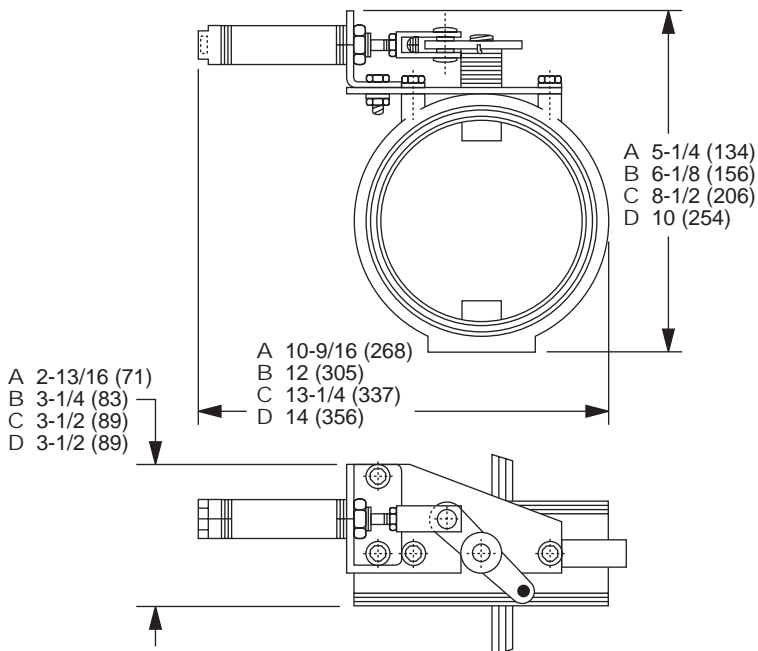
## Solenoid



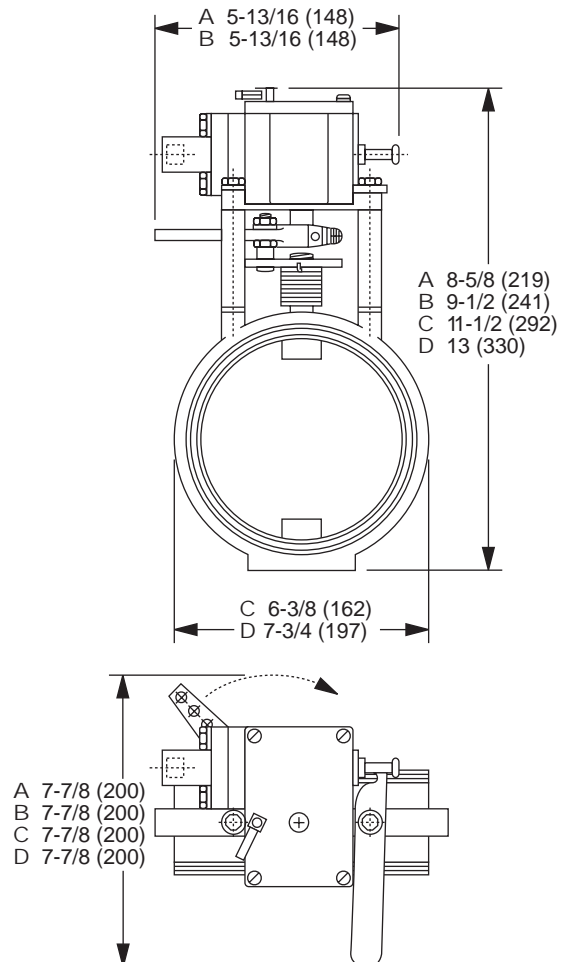
## Manual/Pneumatic



## Pneumatic Cylinder



## Safety Control



Legend: **A = 2.8" Version**  
**B = 3.5" Version**  
**C = 5.5" Version**  
**D = 7.0" Version**  
 ( ) = MM  
 For 8" Dimensions or more detailed  
 dimensions of the above, contact your  
 local AMOT representative

# SPECIFICATIONS

## Safety Control Operator

Adjustable Tripping Pressure ..... 5-40 psi Falling  
 ..... (34-275 kPa)  
 Maximum Pressure on Diaphragm..... 170 psi (1170 kPa)

## Pneumatic Cylinder

Minimum Actuating Pressure ..... 30 psi (207 kPa)  
 Maximum Working Pressure ..... 200 psi (1380 kPa)

## Electric Solenoid Operators (intermittent duty)

12VDC Type ..... 107 Watts  
 24VDC Type ..... 107 Watts  
 Maximum Coil Temperature ..... 350°F (175°C)  
 Rated for intermittent duty; 1 minute on, 9 minutes off

## Manual Operator

Mechanical Pull to Release ..... 15 lbs (67N)

## Standard Materials

Valve Body & Disk ..... Hard Anodized Aluminum  
 Valve Shafts ..... Stainless Steel  
 Seals ..... Buna N  
 Safety Control Operator ..... Anodized Aluminum  
 Pneumatic Cylinders ..... Aluminum & Stainless Steel  
 Brackets ..... Plated Steel

## Maximum Intake Air Temperature

Buna N Seals (standard) ..... 200°F (121°C)

## Net Weight (including operator)

2.8" Size Valve ..... 3.1 - 4.0 lbs. (1.4 - 1.8kg)  
 3.5" Size Valve ..... 3.1 - 4.0 lbs. (1.4 - 1.8kg)  
 4.0" Size Valve ..... See 4262 Literature, Form 1344  
 5.5" Size Valve ..... 4.0 - 4.9lbs. (1.8 - 2.2kg)  
 7.0" Size Valve ..... 5.0 - 5.9 lbs. (2.3 - 2.7kg)  
 8.0" Size Valve ..... 5.2 - 6.1 lbs. (2.4 - 2.8kg)

## MODEL CODE SYSTEM

*SPEEDTRAP* **4261B 05**     **A**     **0**     **41 - ( )**     **Special Requirements (MTO) Made To Order**

VALVE SIZE	CODE
2.8 inch	02
3.5 inch	03
4.0 inch	**
5.5 inch	05
7.0 inch	07
8.0 inch	08

VALVE MATERIAL	CODE
Aluminum/Buna N (Std)	A
Aluminum/Viton (Optional)	C

TABLE C	CODE
(Standard)	0

CODE	VALVE OPERATOR
<b>21</b>	<b>Pneumatic Cylinder,</b> Pressurize to run, spring return to close, NPT threads.
<b>23</b>	<b>Manual/Pneumatic Cylinder,</b> Manually cocked to run, pressurize or manual trip to shut down, NPT thread.
<b>25</b>	<b>Pneumatic Cylinder,</b> pressurize to close, spring return to open
<b>41</b>	<b>Safety Control,</b> NPT thread.
<b>71 *</b>	<b>Electric Solenoid,</b> 12 VDC, manually cocked to run, energize to shut down.
<b>72 *</b>	<b>Electric Solenoid,</b> 24 VDC manually cocked to run, energize to shut down.

\* Contact factory before using in mobile applications.

\*\*See 4262 Literature, Form 1344.

**Note:** Letters or numbers in the MTO space, other than nothing, A1 or AA, indicate the unit is built to special requirements and some of the other code numbers may not be valid. Check with the factory for full specification of such models.

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