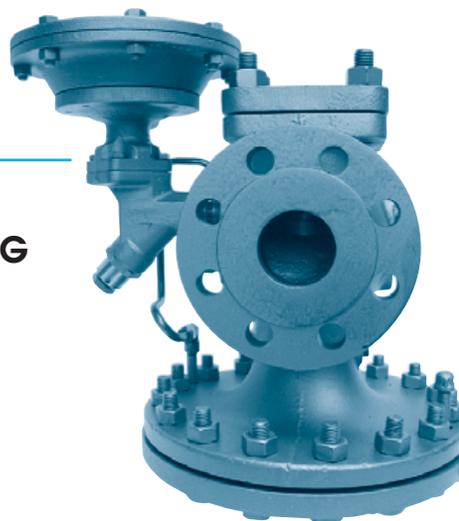


## HDA

### Air-Operated Pilot Regulating Valve

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## HD Regulating Valve with "A" Air Pilot



PILOT-OPERATED REGULATING VALVES

- **Max Inlet Pressure: 300 PSIG**
- **Reduced Outlet Pressure Range: 3-200 PSIG**
- **Min Inlet Pressures:**
  - 15 PSIG** standard main valve
  - 5 PSIG** low pressure main valve

Note: Temperature Range: 0-350°F when used with PTL & PTR temperature controllers

### TYPICAL APPLICATIONS

The HD Regulator with the "A" Air Pilot is used for reducing steam pressure on steam mains and process equipment. The "A" Air Pilot can also be used in conjunction with the PTL and PTR Pneumatic Temperature Controllers for controlling temperature in process applications. The principal advantage of the "A" Air Pilot over standard spring-loaded pilots is that pressure adjustments to the regulator can be made from a remote location. A regulator placed in a difficult to reach or inaccessible location can be adjusted by a remote control panel board placed in an accessible location.

### FEATURES

- Air Pilot can be used with PTL or PTR Pneumatic Temperature Controller
- Pressure adjustments of the regulator can be done from a remote location
- Air-operated pilot insures instant response and very accurate control
- Full port strainer and blowdown valve on pilot adapter for ultimate protection from dirt and scale
- Controls pressure settings within ±1 PSIG

### OPTIONS

- Solenoid Pilot (S-Pilot) can be added for Electrical On/Off Operation of the regulator

MAXIMUM CONTROL AIR PRESSURE ON AIR PILOT IS 125 PSIG

PRESSURE-ADJUSTING RANGES		
Model	Pressure Ranges	Description
A1	3-125 PSIG	1:1 ratio of steam pressure to control air pressure <b>Example:</b> With the A1 air pilot, 10 PSIG of air pressure maintains 10 PSIG of steam pressure
A4	3-200 PSIG	4:1 ratio of steam pressure to control air pressure <b>Example:</b> With the A4 air pilot, 10 PSIG of air pressure maintains 40 PSIG of steam pressure
A6	20-200 PSIG	6:1 ratio of steam pressure to control air pressure <b>Example:</b> With the A6 air pilot, 10 PSIG of air pressure maintains 60 PSIG of steam pressure

### MINIMUM OPERATING PRESSURES

Minimum Inlet Pressure:

**15 PSIG** (Standard Main Valve)

**5 PSIG** (Low Pressure Main Valve)

Minimum Differential Pressure:

**10 PSI** (Standard Main Valve)

**3 PSI** (Low Pressure Main Valve)

### CONTROL AIR PRESSURE RANGE

A-Pilot Control Pressure:

**3-125 PSIG** (depending on pilot selected and desired outlet pressure)

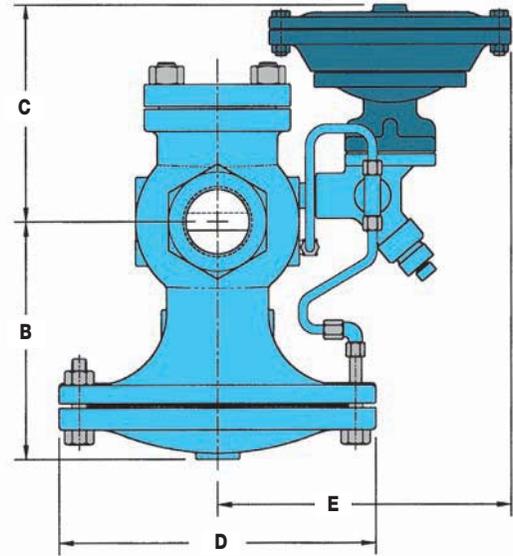
## Air-Operated Pilot Regulating Valve

### DIMENSIONS HD-Series – inches / pounds

Size	Face-To-Face			B	C*	D	E**	Weight (lbs)	
	NPT	150#	300#					NPT	FLG
1/2"	43/8			5 1/2	7 1/2	6 1/2	7 3/4	18	
3/4"	43/8			5 1/2	7 1/2	6 1/2	7 3/4	18	
1"	53/8	5 1/2	6	6 1/4	7 1/2	7	7 3/4	23	35
1 1/4"	6 1/2			7 3/8	7 1/2	8 3/4	8 3/8	43	
1 1/2"	7 1/4	6 7/8	7 3/8	7 3/8	7 1/2	8 3/4	8 3/8	43	60
2"	7 1/2	8 1/2	9	8 1/4	7 1/2	10 7/8	8 3/4	65	85
2 1/2"		9 3/8	10	9	7 1/2	11 3/4	8 3/4		105
3"		10	10 3/4	8 7/8	7 1/2	13 1/4	9 1/2		145
4"		11 7/8	12 1/2	10 7/8	7 1/2	14 3/4	10 1/2		235
6"		15 1/8	16	14 1/8	8 1/4	19 3/4	11 3/4		470

\* Add 2 1/2" to "C" dimension for A4 or A6 Air Pilots on 2" thru 4" valves.

\*\* Add 1 1/2" to "E" dimension for A4, and 2 1/4" for A6.



PILOT-OPERATED REGULATING VALVES

### MATERIALS

Body	Ductile Iron
Cover	Ductile Iron
Gasket	Grafoil
Cover Screws	Steel
Pilot Adapter	Ductile Iron/Cast Steel
Screen	Stainless Steel
Tubing	Copper
Valve Seat	Hardened SST (55 Rc)
Valve Disc	Hardened SST (55 Rc)
Diaphragm	Phosphor Bronze

### HOW IT WORKS

When air pressure is applied to the upper chamber of the air pilot it exerts a downward force on the air pilot's diaphragm. The lower chamber of the air pilot is connected to the outlet side of the regulator using a sensing line. The purpose of the sensing line is to sense the pressure on the outlet side of the regulator. When the intended set pressure is reached, the pilot valve closes which then closes off the flow path of steam to the underside of the diaphragm chamber in the regulator body. The regulator modulates maintaining the desired downstream pressure regardless of the amount of steam being used.

### HOW TO ORDER

#### "A" AIR PILOT

Specify: • Air Pilot **A1**, **A4** or **A6**  
• Remote Control Panel Board: **PL1**, **PL2** or **PL3**

#### REGULATOR BODY

Specify: • **HD** regulator body  
• Regulator size or capacity and pressures of steam required  
• End connections (threaded, 150/300# flanged)

