HDPT

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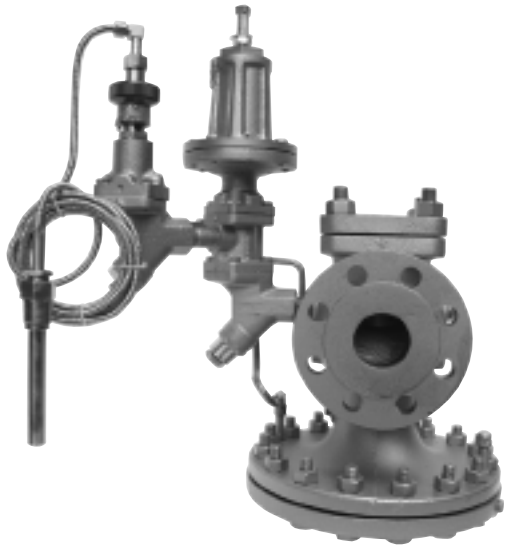
Pilot-Operated Pressure & Temperature Regulating Valve

Revised 9/2004

HD Regulating Valve with "P" Pressure & "T" Temperature Pilots

- **Reduced Outlet Pressure Range: 3-200 PSIG**
- **Inlet Pressure Max: 300 PSIG**
  Inlet Pressure Min: 15 PSIG
- **Temperature Control Range: 60°-260°F**



TYPICAL APPLICATIONS

The **HD** or **D** Regulator with both the **"P" Pressure Pilot** and **"T" Temperature Pilot** is used to simultaneously control both pressure and temperature in process applications.

Using both the temperature and pressure pilot on the same regulator eliminates the need for two separate regulators to control temperature and pressure.

FEATURES

- **Pressure and temperature pilot combinations eliminate the need for two separate regulators**
- **Choices of 3 overlapping pressure ranges**
- **Pilot is installed using four bolts**
- **Full port strainer and blowdown valve on pilot adapter to eliminate failure caused by contaminated steam systems**
- **Watson McDaniel's pilots can be used with other manufacturer's valves**
- **T-Pilot bulb may be installed at any angle**

OPTIONS

- Solenoid Pilot can be added for electrical on/off control of the regulator

RECOMMENDED PRESSURE

Differential Pressure: 10 PSIG minimum
Minimum Inlet Pressure: 15 PSIG*

**Minimum Inlet Pressure for Temperature Regulator: 5 PSIG*

TEMPERATURE-ADJUSTING RANGES

Temperature	Identifying Colors
60 - 120°F (16 - 49°C)	yellow
100 - 160°F (38 - 71°C)	black
120 - 180°F (49 - 82°C)	blue
160 - 220°F (71 - 104°C)	red
200 - 260°F (93 - 127°C)	green

* Other ranges available; consult Factory.

PRESSURE-ADJUSTING SPRING RANGES

Pressure	Identifying Colors
3-25 PSIG	yellow
20-100 PSIG	blue
80-200 PSIG	red

MATERIALS

	D-SERIES	HD-SERIES
Body	Cast Iron	**Ductile Iron**
Cover	Cast Iron	**Ductile Iron**
Gasket	Garlock 3400	Garlock 3400
Cover Screws	Steel	Steel
Pilot Adapter	Cast Iron	**Ductile Iron**
Screen	Stainless Steel	Stainless Steel
Tubing	Copper	Copper
Valve Seat	Hardened SST (55Rc)	Hardened SST (55Rc)
Valve Disc	Hardened SST (55Rc)	Hardened SST (55Rc)
Diaphragm	Phosphor Bronze	Phosphor Bronze

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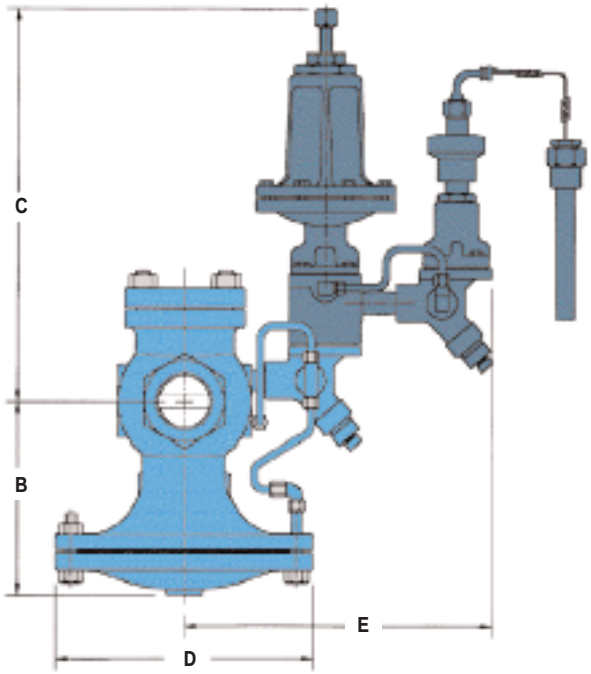
DIMENSIONS D-Series – inches / pounds

Size	Face-To-Face NPT	Face-To-Face 125#	Face-To-Face 250#	B	C	D	E	Weight (lbs) NPT	Weight (lbs) FLG
1/2"	5 1/8			5 1/8	13 1/2	5 7/8	11 1/2	18	
3/4"	5 1/2			5 1/2	13 1/2	6 1/2	11 3/4	21	
1"	6 1/8			6 1/8	13 1/2	7	12	25	
1 1/4"	8 1/2			7	14 3/4	8 3/4	12 1/2	45	
1 1/2"	9 1/2			7 1/8	14 3/4	8 3/4	13	55	
2"	9 3/4	9 1/2	9 5/8	7 1/8	15 1/4	10 7/8	13 1/2	90	105
2 1/2"		10	10 5/8	8 3/4	15 1/4	11 3/4	14		135
3"		11	11 3/4	9 1/8	15 1/4	13 1/4	14 1/2		180

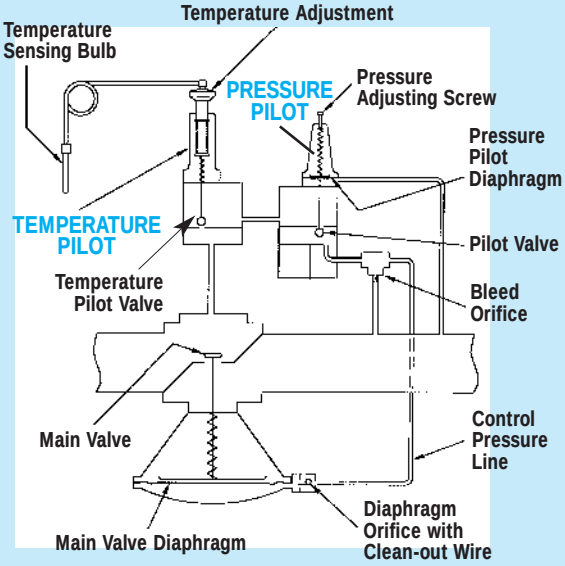
DIMENSIONS HD-Series – inches / pounds

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



HOW IT WORKS

A pressure pilot and temperature pilot can be used together to control the operation of the regulator. The pressure pilot limits the outlet pressure of the regulator when the temperature pilot calls for steam. The temperature pilot senses the temperature of the process that is being controlled and opens or closes the regulator accordingly. Using a pressure-temperature pilot combination eliminates having to use two separate valves.



HOW TO ORDER

"T" TEMPERATURE PILOT

Specify:
- Temperature range from the chart or indicate the set temperature of the process you wish to control.
- The length of capillary required. 8-ft. is standard.
- Bulb type needed: T, TU, TUBW, TUSW, TBW & TSW.

"P" PRESSURE PILOT

Specify:
- Pressure range from the chart

REGULATOR BODY

Specify:
- **HD** or **D** regulator body.
- Regulator size or capacity and pressures of steam required.
- End connections (threaded, 125/150/250/300# flanged).