

### HD Main Valve • Ductile Iron

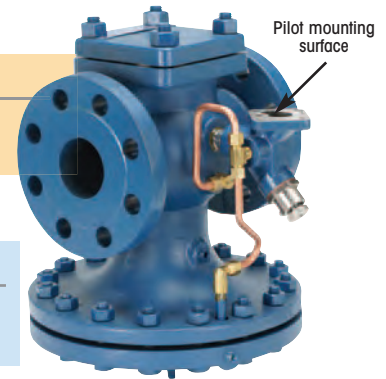
Main Valve	<b>HD-Series</b>	
Sizes	<b>1/2" – 6"</b>	
Connections	<b>NPT: 1/2" - 2"</b> <b>FLG: 1" - 6"</b>	
Body Material	<b>Ductile Iron</b>	
PMO Max. Operating Pressure	<b>300 PSIG</b>	
Design Pressure/ Temperature Ratings	NPT	450 PSIG @ 650° F
	150# FLG	150 PSIG @ 566° F
	300# FLG	450 PSIG @ 650° F

#### STANDARD Main Valve Spring:

Inlet Pressure: **15-300 PSIG**  
Example Model Code: **HD-12-N**

#### LOW-PRESSURE Main Valve Spring:

Inlet Pressure: **5-20 PSIG**  
Example Model Code: **HD-12-N-LP**



Pilot-Operated REGULATORS

#### Model Code Configuration Chart

Models		Code	Size	Code	Connection Type	Options (Suffix)
<b>HD</b>	Full Port	<b>12</b>	1/2"	<b>N</b>	NPT (1/2"-2")	<b>SSD</b> SS Diaphragm
<b>HDR</b>	Reduced Port	<b>13</b>	3/4"	<b>BSP</b>	BSPT (1/2"-2")	<b>SSXT</b> SS External Tubing
		<b>14</b>	1"	<b>F150</b>	150# FLG (1" - 6")	<b>LP</b> Low Pressure (LP Spring, EPDM Diaphragm, & By-Pass Tubing)
		<b>15</b>	1 1/4"	<b>F300</b>	300# FLG (1" - 6")	<b>LDP</b> Low-Differential Pressure (LDP Spring & Bronze Diaphragm)
		<b>16</b>	1 1/2"			Note: For more than one Option, combine suffixes. Example: <b>SSD-SSXT</b>
		<b>17</b>	2"			
		<b>18</b>	2 1/2"			
		<b>19</b>	3"			
		<b>20</b>	4"			
		<b>22</b>	6"			

Model Codes below are for HD Main Valve ONLY. Control Pilot must be ordered separately. When two or more pilots are used on the same valve, a pilot adapter must be ordered also. Use Part Number BADAPTER.

#### ANSI/FCI 70-3 Class IV Shut-off

Size/Connection	STANDARD Inlet Pressure 15 - 300 PSI	LOW-PRESSURE Inlet Pressure 5 - 20 PSI	Weight lbs
1/2" NPT	HD-12-N	HD-12-N-LP	24
3/4" NPT	HD-13-N	HD-13-N-LP	24
1" NPT	HD-14-N	HD-14-N-LP	30
1" 150# FLG	HD-14-F150	HD-14-F150-LP	31
1" 300# FLG	HD-14-F300	HD-14-F300-LP	34
1 1/4" NPT	HD-15-N	HD-15-N-LP	50
1 1/2" NPT	HD-16-N	HD-16-N-LP	51
1 1/2" 150# FLG	HD-16-F150	HD-16-F150-LP	54
1 1/2" 300# FLG	HD-16-F300	HD-16-F300-LP	60
2" NPT	HD-17-N	HD-17-N-LP	72
2" 150# FLG	HD-17-F150	HD-17-F150-LP	80
2" 300# FLG	HD-17-F300	HD-17-F300-LP	82
2 1/2" 150# FLG	HD-18-F150	HD-18-F150-LP	105
2 1/2" 300# FLG	HD-18-F300	HD-18-F300-LP	109
3" 150# FLG	HD-19-F150	HD-19-F150-LP	150
3" 300# FLG	HD-19-F300	HD-19-F300-LP	158
4" 150# FLG	HD-20-F150	HD-20-F150-LP	230
4" 300# FLG	HD-20-F300	HD-20-F300-LP	250
6" 150# FLG	HD-22-F150	HD-22-F150-LP	450
6" 300# FLG	HD-22-F300	HD-22-F300-LP	472

#### Ordering Instructions:

**NOTE:** When two or more pilots are used on the same valve: An additional Pilot Adapter for Second Pilot is required: (Not required for Solenoid Pilot)

Use part number: **(BADAPTER)**

Options & Adders:	Code
Low Pressure Main Valve:	<b>LP</b>
Reduced Port Valves:	<b>HDR</b>
Stainless Steel Diaphragm:	<b>SSD</b>
Stainless Steel External Tubing:	<b>SSXT</b>
Required for secondary Pilot: (Not required for Solenoid Pilot)	<b>BADAPTER</b>

\*Low-Differential Valves: **LDP**

\*Special Low-Differential Main Valve available when Inlet pressure is 25 PSIG or above, and differential pressure requirement is 10 PSI or less; Consult factory.

#### By-Pass Tubing (pre-installed)

See Parts Section for Kit #

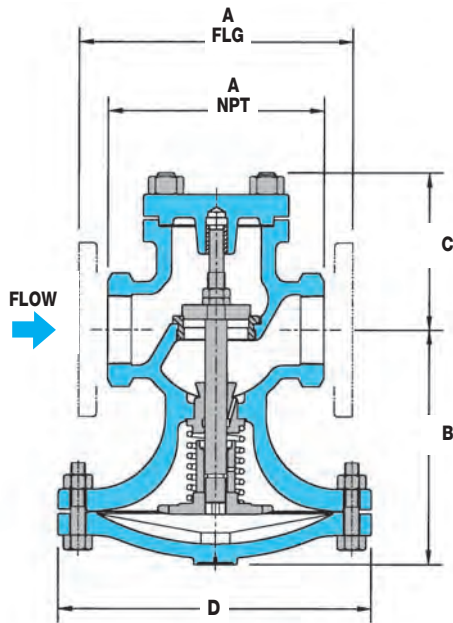
Use for improved control when excessive system condensate is possible (included on LP valves)

Low-Pressure Main Valve not available with SS Diaphragms

#### Example Model Codes for Main Valve:

- HD-15-N**  
(HD Series Valve with 1 1/4" Threaded, NPT connections)
- HDR-16-F150**  
(HD Series Valve, Reduced Port with 1 1/2" 150# Flanged connections)
- HD-20-F300-SSXT**  
(HD Series Valve with 4" 300# Flanged connections & SS External tubing)

HD Main Valve • Ductile Iron



**OPERATING PRESSURES**

Inlet Pressure Range: (for Main Valve):  
**15-300 PSIG** (Standard Main Valve)  
**5-20 PSIG** (Low-Pressure Main Valve)

Minimum Differential Pressure (for Main Valve):\*  
**10 PSI** (Standard Main Valve)  
**3 PSI** (Low-Pressure Main Valve)

\* Not required for Temperature Pilot applications

HD-Series DIMENSIONS – inches									
Size	(A) Face-To-Face			B	C	D	Weight (lbs)		
	NPT	150#	300#				NPT	150#	300#
1/2"	4 <sup>3</sup> / <sub>8</sub>			5 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	6 <sup>3</sup> / <sub>4</sub>	24		
3/4"	4 <sup>3</sup> / <sub>8</sub>			5 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	6 <sup>3</sup> / <sub>4</sub>	24		
1"	5 <sup>3</sup> / <sub>8</sub>	5 1/2	6	6 1/4	3 1/2	7 1/8	30	31	34
1 1/4"	6 1/2			7 <sup>3</sup> / <sub>8</sub>	4 <sup>7</sup> / <sub>8</sub>	8 <sup>7</sup> / <sub>8</sub>	50		
1 1/2"	7 1/4	6 <sup>7</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	4 <sup>7</sup> / <sub>8</sub>	8 <sup>7</sup> / <sub>8</sub>	51	54	60
2"	7 1/2	8 1/2	9	8 1/4	5 <sup>3</sup> / <sub>8</sub>	10 <sup>7</sup> / <sub>8</sub>	72	80	82
2 1/2"		9 <sup>3</sup> / <sub>8</sub>	10	9	5 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>4</sub>		105	109
3"		10	10 <sup>3</sup> / <sub>4</sub>	8 <sup>7</sup> / <sub>8</sub>	6 <sup>3</sup> / <sub>4</sub>	13 1/4		150	158
4"		11 <sup>7</sup> / <sub>8</sub>	12 1/2	11	7 1/2	14 <sup>3</sup> / <sub>4</sub>		230	250
6"		15 1/8	16	14 1/2	10	19 <sup>3</sup> / <sub>4</sub>		450	472

Note: 150# flanges are flat face.  
 300# flanges are raised face.

**Option: Stainless diaphragms and external tubing - consult factory**

Standard pilot mounting is on the right side of the regulator when looking into the outlet port (as shown). Pilot mounting on HD regulators are field-reversible.

**MATERIALS**

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

**Ordering Instructions:** HD Series Regulator with a Pilot

Model Code for Main Valve: **HD-19-F150** HD Series Valve with 3" 150# Flanges  
 Model Code for Pilot: **PP-B** Pressure Pilot, 20-100 PSIG (Blue spring color)

**HD Valve with Pressure Pilot**

Model Code for Main Valve: **HD-17-F150**  
 (2" HD Series Valve with 150# Flanges)  
 Model Code for Pilot: **PP-B**  
 (Pressure Pilot with 20-100 PSIG Range)

**HD Valve with Temperature Pilot**

Model Code for Main Valve: **HD-17-F150**  
 (2" HD Series Valve with 150# Flanges)  
 Model Code for Pilot: **PTU-14-8**  
 (Temperature Pilot (100-160° F) with 8 Ft. Capillary)

**HD Valve with Pressure & Temperature Pilots**

\* If 2 Pilots are used on the same valve, a Secondary Pilot Adapter is required.

Model Code for Main Valve: **HD-17-F150**  
 (2" HD Series Valve with 150# Flanges)  
 Model Code for Pilot: **PP-B**  
 (Pressure Pilot with 20-100 PSIG Range)  
 Model Code for Pilot: **PTU-14-8**  
 (Temperature Pilot (100-160° F) with 8 Ft. Capillary)  
 Model Code for Secondary Pilot Adapter\*: **BADAPTER**

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