

## 1050 Series Pressure Reducing Valve

### SPECIFICATIONS

- ANSI 150# FLANGED/ NPT THREADED
- VISUAL POSITION INDICATOR
- PROPRIETARY PREVENTATIVE MAINTENANCE DESIGN
- MANUFACTURED TO AWWA C530 STANDARD
- FULL PORT DUCTILE IRON SINGLE CHAMBER

### WORKING TEMPERATURE

- 180°F

### WORKING PRESSURE

- FLANGED: 250 PSI
- THREADED: 400 PSI

### CORROSION PROTECTION

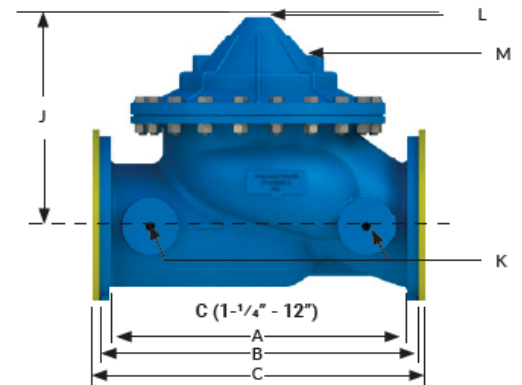
- PAINTED (INTERIOR AND EXTERIOR) NSF® FUSION EPOXY COATED



FLANGED, 2" TO 12"

### COMPONENTS

PART NAME	MATERIAL
BODY	DUCTILE IRON ASTM A536 65-45-12
TRIM	UNLEADED BRONZE ASTM B-62 / SS 304
STEM	STAINLESS STEEL
DIAPHRAGM	BUNA-N
COATING	NSF FUSION EPOXY
PILOT	BRONZE ASTM B-62
FITTINGS	LOW LEAD BRASS
TUBING	COPPER



DIMENSIONS		(INCHES)							
SIZE		2"	3"	4"	6"	8"	10"	12"	
A	GLOBE THREADED	9.38							
B	GLOBE 150#	9.38	12.00	15.00	20.00	25.38	29.75	34.00	
J	COVER TO CENTER	4.69	6.44	8.00	15.81	17.06	17.19	19.50	
K	BODY TAPPING (NPT)	3/8	3/8	3/8	3/8	3/8	3/8	1	
L	COVER CENTER PORT (NPT)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
M	COVER PORT SIZE (NPT)	3/8	3/8	3/8	3/8	3/8	3/8	3/4	
WEIGHT	APPROX. SHIP WT. (LBS)	24	59	127	303	500	815	1040	

# MATERIALS OF CONSTRUCTION

## AVAILABLE SIZES

PATTERN	FLANGED	THREADED	GROOVED
Globe	1-1/2" - 36"	1-1/4" - 3"	1-1/4" - 1-1/2"
Angle	1-1/2" - 12"	1-1/4" - 2"	N/A

## PRESSURE MAX (Maximum Pressure - PSI)

ANSI STANDARD† B16.42				BRITISH STANDARD† BS4504			
Ductile Iron Grade ASTM A536	150 CLASS	300 CLASS	NPTF	Ductile Iron Grade BS 2789	PN10	PN16	BSPPF
	250 PSI	400 PSI	400 PSI		250 PSI	400 PSI	400 PSI

## MATERIAL (Standard)

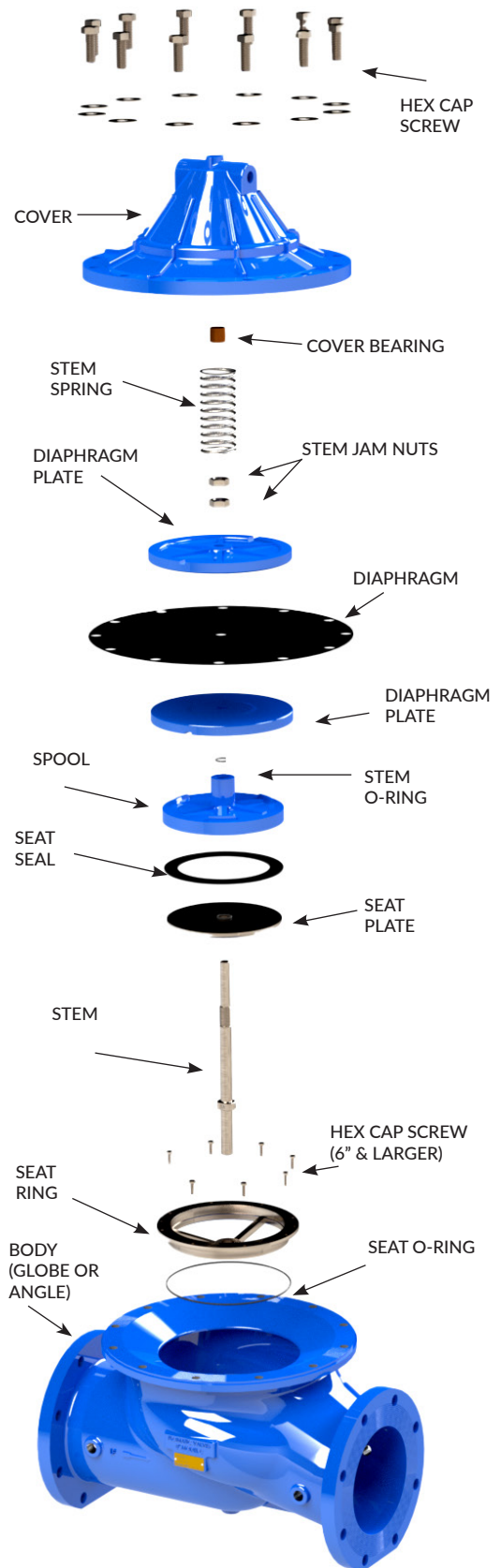
COMPONENT	VALVE SIZE		
	1-1/4" - 4"	6" - 10"	12" - 36"
Body, Cover & Top Cover	ASTM A 536 65-45-12 Ductile Iron		
Spool & Diaphragm Plate	ASTM A 536 65-45-12 Ductile Iron		
Seat Ring & Seat Plate	316 Stainless Steel		
Stem Bushings	Unleaded Bronze		
Seat Seal	Buna-N		
Diaphragm	Nylon Reinforced Buna-N		
Stem & Seat O-rings	Buna-N		
Stem	304 Stainless Steel		
Stem Spring	302 Stainless Steel		
Fasteners	18-8 Stainless Steel		
Coating	NSF 61 Approved Fusion Epoxy		

## MATERIAL (Optional)

COMPONENT	VALVE SIZE		
	1-1/4" - 4"	6" - 10"	12" - 36"
Seat Ring & Seat Plate	Unleaded Bronze		
Stem Bushings	316 Stainless Steel		
Seat Seal	EPDM / Viton (Limited Sizes)		
Diaphragm	EPDM / Viton (Limited Sizes)		
Stem & Seat O-rings	EPDM / Viton		

## OPERATING TEMPERATURE (Maximum)

SEAL MATERIAL	BUNA-N	EPDM	VITON
Max Temp ° F	180° F	225° F	350° F



## 1050 Series Pressure Reducing Valve INSTALLATION, OPERATION & MAINTENANCE

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The Model 1050 Pressure Reducing Valve maintains a constant downstream pressure regardless of variations in the flow rate and/or upstream pressure.

### **INSTALLATION:**

1. Flush the pipeline before inserting the valve.
2. Exercise caution to prevent dirt/debris from entering valve and control piping.
3. Install the valve with the "arrow" on body pointing in the direction of flow.
4. Attach sub-assemblies to main valve if necessary.
5. Allow enough clearance above valve for removal of diaphragm assembly.

### **START-UP:**

1. Install pressure gauges to inlet and outlet (optional).
2. Ensure the upstream and cover ball valves are open, while the PM by-pass and downstream ball valves are closed
3. Open 1/4" air bleeder at the top of the valve.
4. Leave the downstream mainline isolation valve closed and open the mainline upstream isolation valve just enough to permit flow
5. Once filling, allow to pressurize and control flow out of the 1/4" air bleeder until the water is clear and free of any air
6. Close 1/4" air bleeder when all air has been removed from valve cover.
7. Once completely pressurized, slowly open the upstream main line isolation valve followed by the downstream main line isolation valve
8. The control valve should be closed because the downstream ball valve is closed, so at this time, back the pilot off (counterclockwise) one full turn
9. Open the downstream ball valve, and adjust the pilot to the desired set point (Clockwise to increase pressure/ Counterclockwise to decrease pressure)
10. **Confirm the upstream, downstream & cover port ball valves are all fully open while the PM by-pass remains closed (See PM Operation for preventative maintenance order of operations)**

**CAUTION:** any adjustment should be done slowly.

## 1050 Series Pressure Reducing Valve INSTALLATION, OPERATION & MAINTENANCE

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### **PM OPERATION (Preventative Maintenance):**

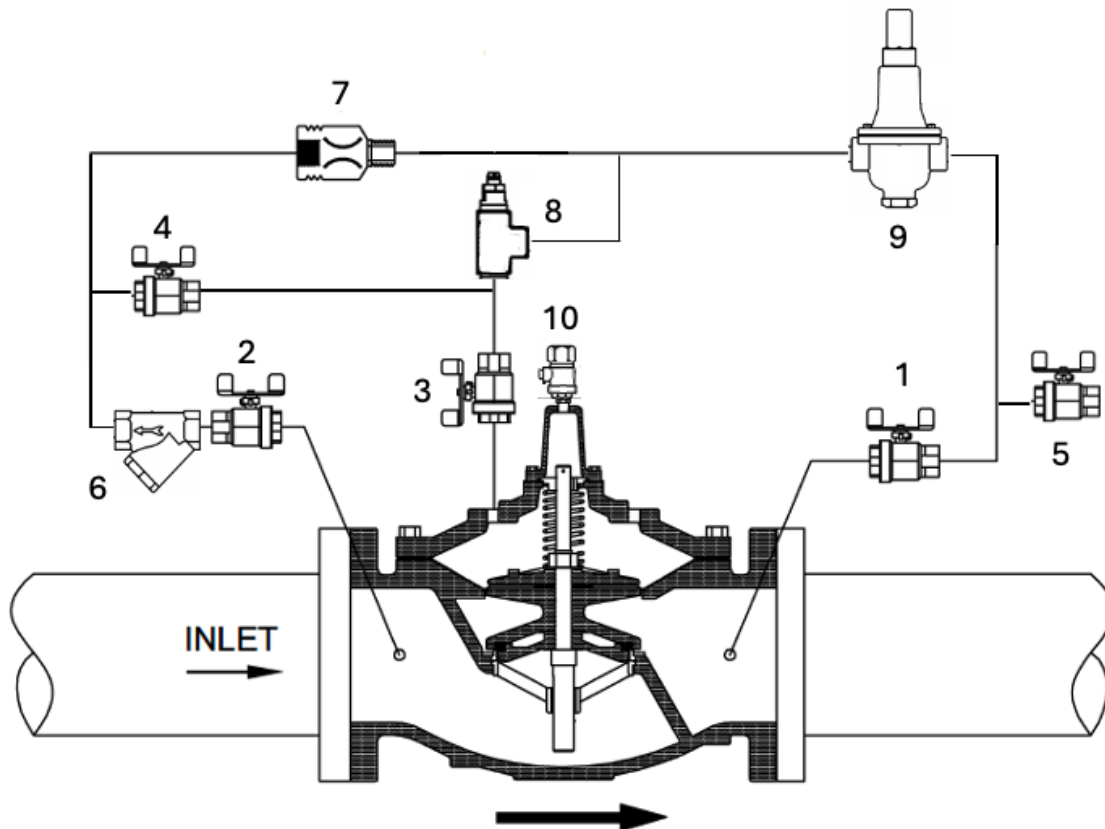
With a proprietary preventative maintenance pilotry, the 1050 series automatic control valve utilizes specialized piping to allow for quick and easy flushing of the problematic ports and diaphragm.

### **PM Operation:**

1. Close downstream ball valve(1), and allow the control valve to close. Once the control valve is closed, listen for any flow through the valve. If there is still flow, the seat may be damaged, but if no flow occurs, the seat has been inspected and confirmed in good condition
2. Close the downstream main line isolation valve to protect the system as the control valve will open and close throughout the preventative maintenance process
3. Close the upstream port ball valve (2) and remove the y-strainer plug(6). Open the upstream ball valve(2) to permit high flow through the y-stainer (6) until the water is cold and clear. Once complete, close the upstream port ball valve(2) and reinstall the y-strainer plug(6).
4. Open the downstream PM ball valve(5) and slowly open the downstream port ball valve (1) to permit high flow through the downstream PM Ball valve (5). Flush until the water is cold and clear then close the downstream port ball valve(1) and the downstream PM ball valve (5).
5. Open the PM by-pass ball valve(4) and slowly open the upstream port ball valve (2) permitting high flow into the cover. Slowly open the cover flushing port ball valve (10) and flush until the water is cold and clear. Once complete, close the cover flushing port (10), then the by-pass ball valve (4).
6. Ensure the upstream (2) and cover port (3) ball valves are open, and the by-pass ball valve (4) and downstream port ball valve are closed (1).
7. Open the downstream mainline isolation valve
8. Open the downstream port ball valve(1) and adjust the pilot (9) set point if necessary (Clockwise to increase pressure/Counterclockwise to decrease pressure)

**\*\*Each flush should be a minimum of 30 seconds\*\***

## 1050 Series Pressure Reducing Valve



1. Downstream Port Ball Valve
2. Upstream Port Ball Valve
3. Cover Port Ball Valve
4. PM By-pass Ball Valve (Normally Closed)
5. Downstream PM Ball Valve (Normally Closed)
6. Y-Strainer
7. Fixed Orifice
8. Adjustable Opening Speed Control (AOS)
9. Pressure Reducing Pilot
10. Position Indicator/ Cover Flushing Port Ball Valve