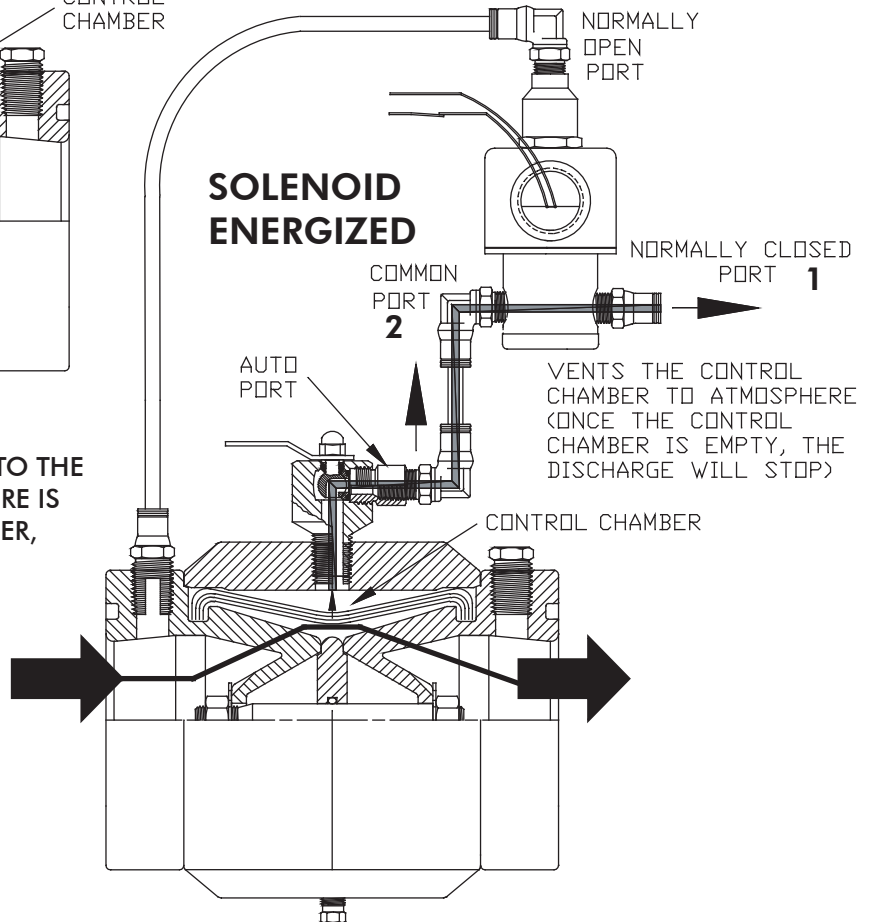


THREE-WAY SOLENOID CONTROL OPERATING LOGIC

NOTE: WITH NO POWER APPLIED TO THE SOLENOID, THE UPSTREAM PRESSURE IS APPLIED TO THE CONTROL CHAMBER, KEEPING THE VALVE CLOSED.



NOTE: WITH POWER APPLIED TO THE SOLENOID, THE CONTROL CHAMBER IS VENTED TO ATMOSPHERE, DISCHARGING ITS CONTENTS UNTIL THE VALVE IS FULLY OPEN.

VOLUME OF CONTROL CHAMBER

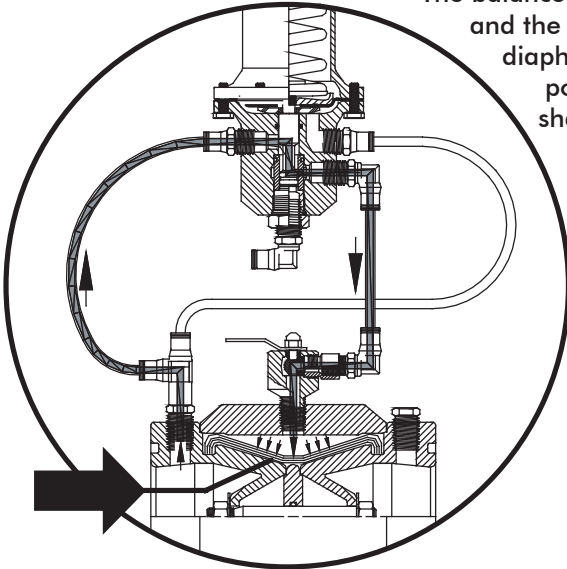
2" VALVE	0.16 QUART 145 ML
3" VALVE	1/4 QUART 1/4 LITER
4" VALVE	1/2 QUART 1/2 LITER
6" VALVE	2 QUART 2 LITER
8" VALVE	4 QUARTS 4 LITER

LOGIC1

New 4" Valve 1 quart/1 liter

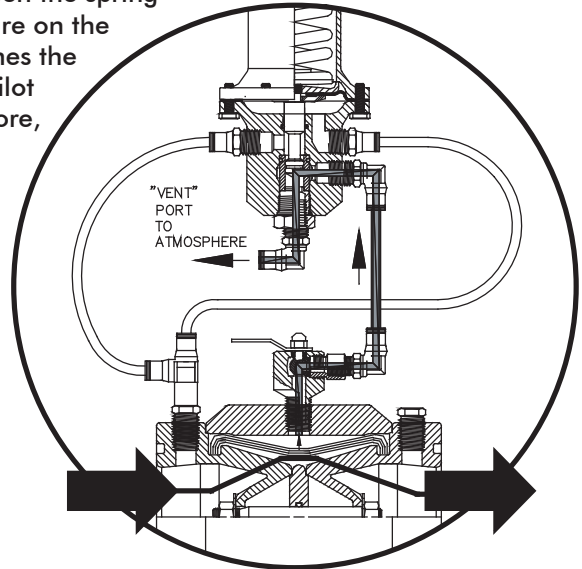
THREE-WAY PRESSURE CONTROL—SUSTAINING OPERATING LOGIC

PRESSURE LOWER THAN CONTROL SET POINT



NOTE: WATER FROM THE UPSTREAM PORT ENTERS THE CONTROL CHAMBER IF THE UPSTREAM PRESSURE IS LOWER THAN THE CONTROL SET POINT PRESSURE. THE VALVE CLOSSES UNTIL THE CONTROL SET POINT PRESSURE IS REACHED.

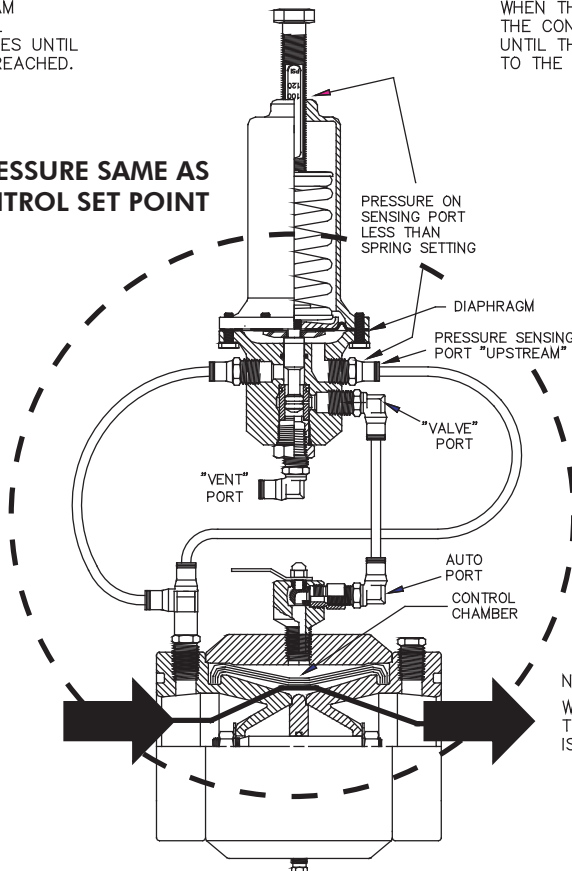
PRESSURE HIGHER THAN CONTROL SET POINT



NOTE: WATER FROM THE CONTROL CHAMBER IS VENTED WHEN THE UPSTREAM PRESSURE IS GREATER THAN THE CONTROL SET POINT. THE VALVE OPENS UNTIL THE UPSTREAM PRESSURE IS REDUCED TO THE CONTROL SET POINT PRESSURE.

The balance of force between the spring and the sensing pressure on the diaphragm determines the position of the pilot shaft, and therefore, which ports will open.

PRESSURE SAME AS CONTROL SET POINT

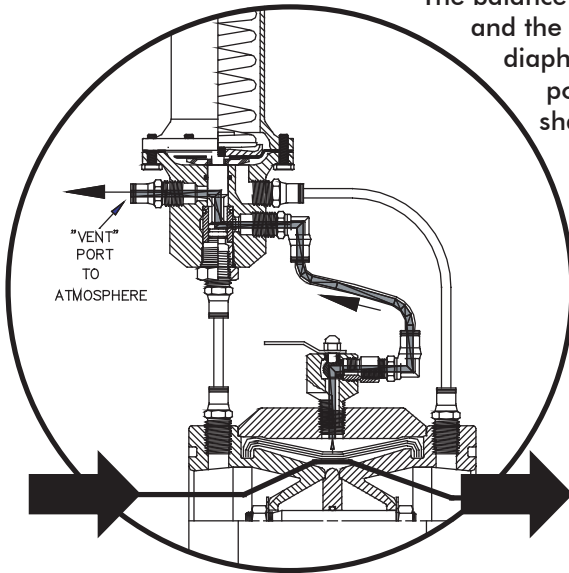


NOTE: WHEN THE SENSING PRESSURE MATCHES THE CONTROL SET POINT PRESSURE, THERE IS NO FLOW THROUGH THE CONTROLS.

LOGIC5

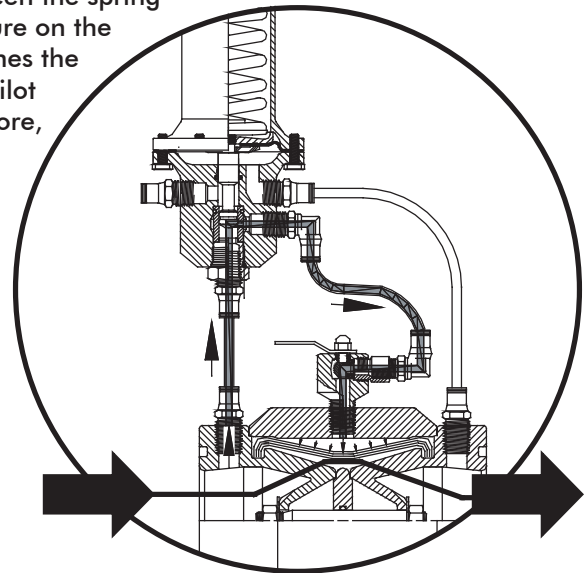
THREE-WAY PRESSURE CONTROL—REDUCING OPERATING LOGIC

PRESSURE LOWER THAN CONTROL SET POINT



The balance of force between the spring and the sensing pressure on the diaphragm determines the position of the pilot shaft, and therefore, which ports will open.

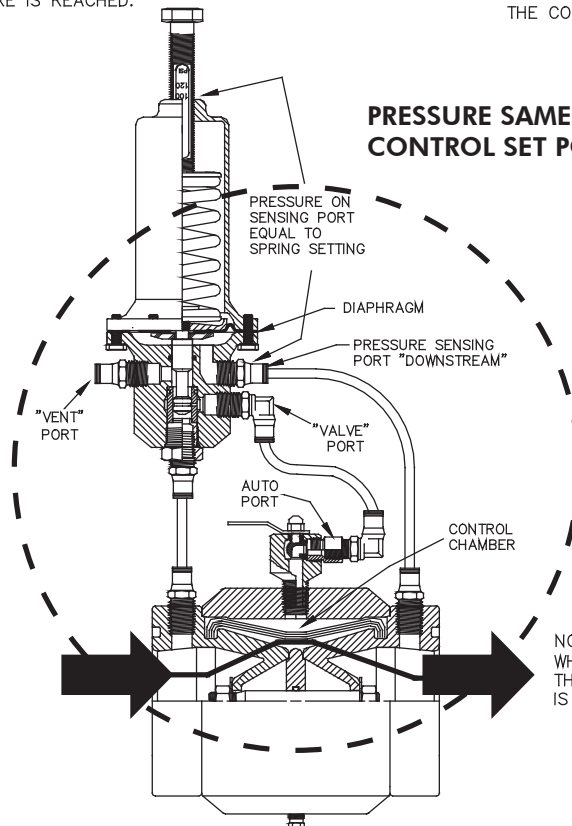
PRESSURE HIGHER THAN CONTROL SET POINT



NOTE: WATER FROM THE CONTROL CHAMBER IS VENTED WHEN THE DOWNSTREAM PRESSURE IS LESS THAN THE CONTROL SET POINT. THE VALVE OPENS UNTIL THE CONTROL SET POINT PRESSURE IS REACHED.

NOTE: WATER FROM THE UPSTREAM PORT ENTERS THE CONTROL CHAMBER IF THE DOWNSTREAM PRESSURE IS HIGHER THAN THE CONTROL SET POINT PRESSURE. THE VALVE CLOSSES UNTIL THE CONTROL SET POINT PRESSURE IS REACHED.

PRESSURE SAME AS CONTROL SET POINT



NOTE: WHEN THE SENSING PRESSURE MATCHES THE CONTROL SET POINT PRESSURE, THERE IS NO FLOW THROUGH THE CONTROLS.

LOGIC

GENERAL VALVE CONTROL COMBINATIONS THAT WORK TOGETHER

BASIC FUNCTION	ELECTRIC	PRESSURE REDUCING	PRESSURE SUSTAINING	COMBO PRES. REDUCE/SUSTAIN	RATE-OF-FLOW CONTROL	CHECK VALVE	SLEEVE EXHAUST	HYDRAULIC RELAY
ELECTRIC		✓	✓ ^①	✓ ^①	✓	✓	✓	NO
PRESSURE REDUCING	✓		✓	NO	✓	✓ ^②	✓	✓
PRESSURE SUSTAINING	✓ ^①	✓		NO	✓	✓	✓ ^③	✓
COMBO PRES. REDUCE/SUSTAIN	✓ ^①	NO	NO		NO	✓	NO	✓
RATE-OF-FLOW CONTROL	✓	✓	✓	NO		NO	NO	✓
CHECK VALVE	✓	✓ ^⑤	✓	✓	NO		NO	✓
SLEEVE EXHAUST	✓	✓	✓ ^③	NO	NO	NO		✓
HYDRAULIC RELAY	NO	✓	✓	✓	✓	✓	✓	

Filters work with any controls.

Use the NVS Selector computer program to be certain the Rate-of-Flow, the pressure controls, and the solenoids match valve size.

- ① Input 'S' number
- ② Use solenoid or only S34
- ③ Upstream 30 psi minimum
- ④ Requires Solenoid
- ⑤ Only S34