

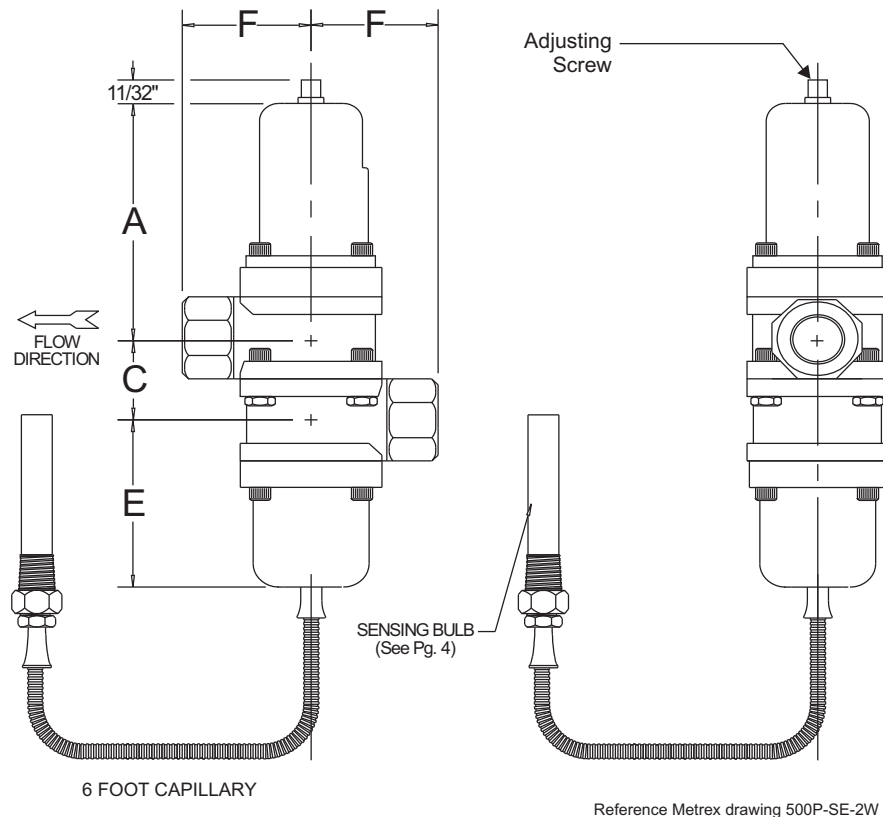
SELECTION CRITERIA

PAGE 1 OF 4

- Fresh water use
- Direct acting
- Actuation by temperature
- Open on temperature increase
- Optional open on temperature decrease
- Screwed end connections NPT
- 2-Way configuration
- 1-1/4" & 1-1/2" sizes
- 350 PSI water pressure standard
- Available water pressure to 500 PSI

CONSTRUCTION DETAILS

- Brass & stainless steel internals
- Buna-N diaphragms & seals
- Brass body



Reference Metrex drawing 500P-SE-2W

VALVE SIZING CHART

| VALVE PART NUMBER | PIPE SIZE | C _v | DIMENSIONS | | | | APPROX. SHIP WT. |
|-------------------|-----------|----------------|------------|---------|----------|--------|------------------|
| | | | A | C | E | F | |
| 500T-125-SE-2W | 1-1/4" | 14.5 | 7-1/4" | 2-1/32" | 4-7/8" | 2-5/8" | 15# |
| 500T-150-SE-2W | 1-1/2" | 17 | 7-3/8" | 2-7/32" | 3-15/16" | 2-3/4" | 18# |

ORDERING INFORMATION

- Use the valve sizing chart on the preceding page tables and charts on page 4 to determine the complete part number.

BASIC PART NUMBER:

500T - - SE -2W-50M-XXX-X

VALVE SIZING CHART

TABLE I ("H" OR "EH")

VALVE CONFIGURATION

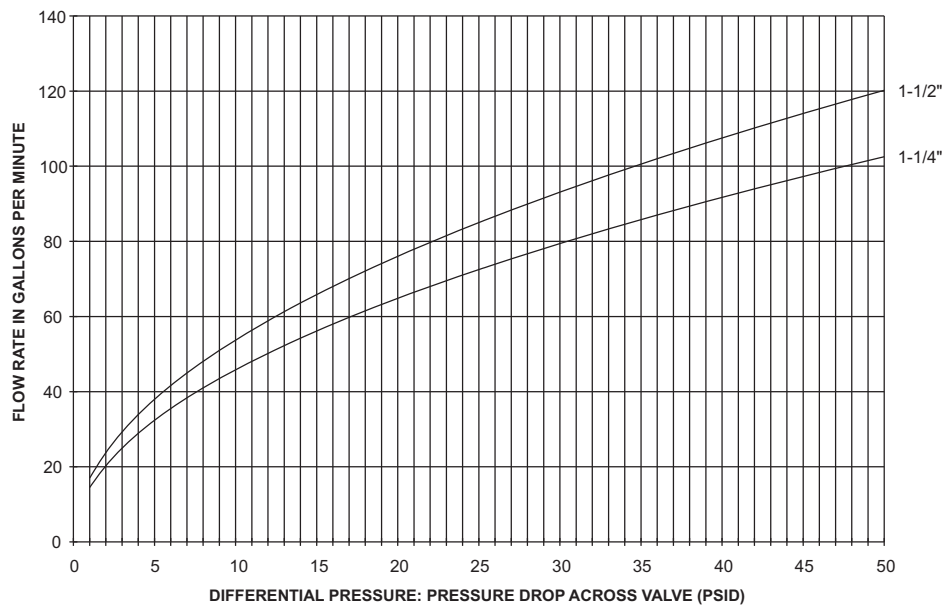
ACTUATOR PART NUMBER (Pg. 4)

TEMPERATURE RANGES

| Range Designator | Crack Open Temperature Adjustment Range | Change to Full Open Across the Range* |
|------------------|---|---------------------------------------|
| L low | 5 to 105 F (-15 to 40 C) | 35 to 12 F (19 to 7 C) |
| X cross ambient | 60 to 140 F (15 to 60 C) | 25 to 12 F (14 to 7 C) |
| S standard | 90 to 140 F (30 to 60 C) | 20 to 12 F (11 to 7 C) |
| H high | 100 to 170 F (40 to 80 C) | 25 to 12 F (14 to 7 C) |
| V very high | 160 to 230 F (70 to 110 C) | 40 to 21 F (22 to 12 C) |

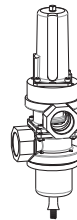
* The temperature change necessary to bring the valve from crack to full open decreases exponentially from the low end of the Crack Open Temperature to the high end of the Crack Open Temperature in each range. Example: a valve with a S (standard) range actuator set to open at 95°F will require an approximate rise in temperature of 20°F to go full open. The same valve set to open at 135°F will require an approximate rise in temperature of 12°F to go full open.

FLOW DATA



VALVE RATING & CONFIGURATION

| TABLE I | | | |
|-----------------|----------|---------|---------|
| PRESSURE RATING | STANDARD | H | EH |
| DESIGN PRESSURE | 350 PSI | 450 PSI | 500 PSI |
| PROOF PRESSURE | 525 PSI | 675 PSI | 750 PSI |



"LL"
LOWER PORT
TO LEFT



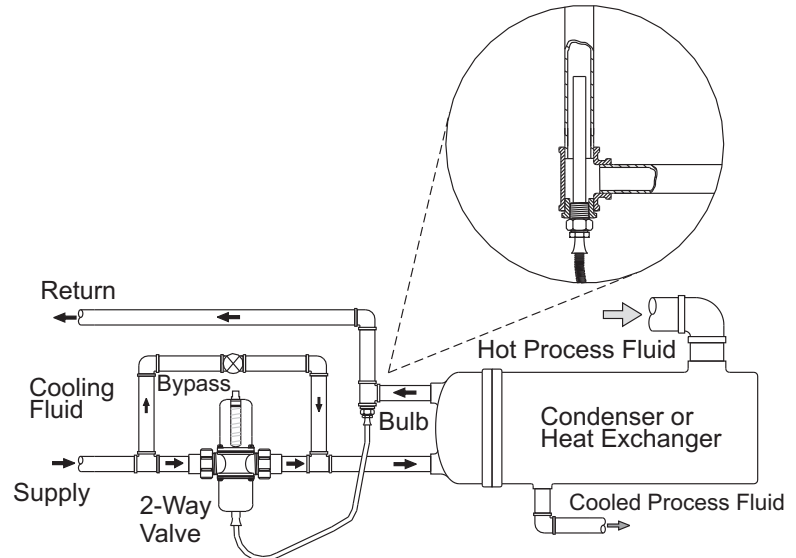
"BP"
BOTH PORTS
PARALLEL
(DEFAULT)



"LR"
LOWER PORT
TO RIGHT

2-WAY TEMPERATURE REGULATOR TYPICAL APPLICATION

- Thermostatic actuated valves are typically used to modulate the water flow in response to a temperature signal and are used in a wide variety of industrial and commercial process control applications where water is used as a heat transfer medium. For example, this type of valve is used to maintain precise control of the temperature of Hydraulic fluid in plastic injection molding Equipment.



The Bypass valve allows an adjustable, continuous low flow of water (usually 10% of maximum flow) through the heat exchanger to transport heat to the sensing bulb. Valves with internal bypass are available.

INSTALLATION INSTRUCTIONS

- 1) Valves can be mounted in any position without affecting performance. However, for ease of adjustment consider the accessibility of the adjusting screw.
- 2) Connect the incoming water line to the valve inlet. Direction of water flow (see drawing) is indicated by the arrow cast on the side of the valve body.
- 3) Insert / Install sensing bulb in desired location.

GENERAL DESCRIPTION

- The 500 series valves are high water pressure, direct acting, modulating water regulating valves utilizing internal diaphragm construction to give a smooth, well balanced action. The pressure-balanced design assures fast response to changes in temperature and protection against both gradual and sudden water pressure changes. All water pressure boundaries are o-ring sealed for leak-proof, set & forget reliability.

ADJUSTMENT

- To adjust temperature setting, use a wrench and turn adjusting screw on top of the spring housing. Turn to the right (counter clockwise) to raise the temperature and the left (clockwise) to lower.

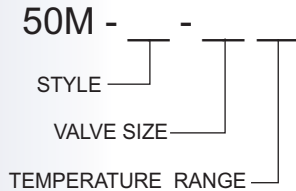
MANUAL OVERRIDE

- All valves may be manually flushed by inserting a screwdriver in openings at opposite sides of the spring housing and lifting the lower spring plate to open the valve. The valve adjustment is not affected by manual flushing.

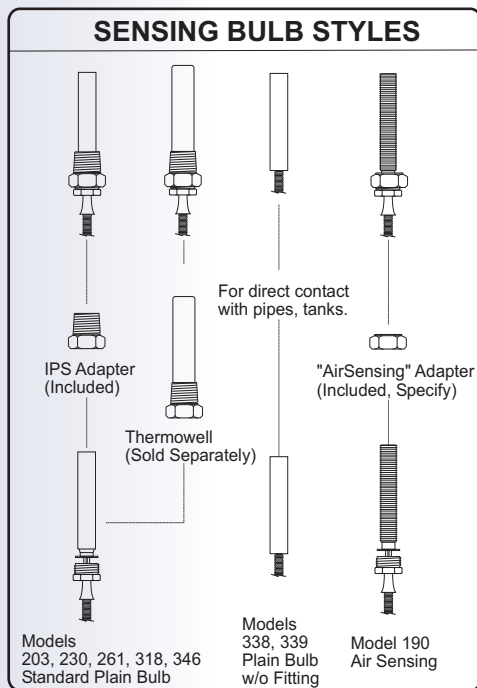


TO DETERMINE ACTUATOR PART NUMBER

1. Select the desired Bulb style for the appropriate valve series.
2. Select the Applicable Valve size.
3. Select the Temperature Range to reference the part number.



Example: For a 1-1/4" 2-Way application to control at 110°F, you could select our 500 Series valve and specify a 50M-203-1S thermostatic actuator (see Model 203 on right).



| MODEL 190 • FINNED TUBE AIR SENSING TYPE • "A"=3/4" | | | |
|---|------------------------|--------|------------------|
| VALVE SIZE | TEMPERATURE RANGE (°F) | L (in) | PART NUMBER |
| 1-1/4, 1-1/2 | 5-105 or 60-140 | 24.00 | 50M-190-1L or 1X |
| | 90-140 | 7.00 | 50M-190-1S |
| | 100-170 or 160-230 | 7.00 | 50M-190-1H or 1V |

| MODEL 203 • 3/4" NPT INSERTION TYPE • "A"=3/4" | | | |
|--|------------------------|--------|------------------|
| VALVE SIZE | TEMPERATURE RANGE (°F) | L (in) | PART NUMBER |
| 1-1/4, 1-1/2 | 5-105 or 60-140 | 15.00 | 50M-203-1L or 1X |
| | 90-140 | 4.50 | 50M-203-1S |
| | 100-170 or 160-230 | 4.50 | 50M-203-1H or 1V |

| MODEL 230 • 1/2" NPT INSERTION TYPE • "A"=9/16" | | | |
|---|------------------------|--------|------------------|
| VALVE SIZE | TEMPERATURE RANGE (°F) | L (in) | PART NUMBER |
| 1-1/4, 1-1/2 | 5-105 or 60-140 | 30.00 | 50M-230-1L or 1X |
| | 90-140 | 8.00 | 50M-230-1S |
| | 100-170 or 160-230 | 8.00 | 50M-230-1H or 1V |

| MODEL 338 • PLAIN TUBE STRAP-ON TYPE • "A"=3/4" | | | |
|---|------------------------|--------|------------------|
| VALVE SIZE | TEMPERATURE RANGE (°F) | L (in) | PART NUMBER |
| 1-1/4, 1-1/2 | 5-105 or 60-140 | 15.00 | 50M-338-1L or 1X |
| | 90-140 | 4.50 | 50M-338-1S |
| | 100-170 or 160-230 | 4.50 | 50M-338-1H or 1V |

| MODEL 346 • 1" NPT INSERTION TYPE • "A"=1" | | | |
|--|------------------------|--------|------------------|
| VALVE SIZE | TEMPERATURE RANGE (°F) | L (in) | PART NUMBER |
| 1-1/4, 1-1/2 | 5-105 or 60-140 | 10.00 | 50M-346-1L or 1X |

