

# SR SERIES

## 2 Stage Design

An ideal replacement for dual manifold systems, the SR Series combines gas pressure regulating and flame staging in a single unit. Applications include direct-fired heaters with two speed fans, hi-lo control for outdoor heaters, LP natural gas switchover and industrial processing.



SR400

## Specifications

**Pipe Sizes** ..... 3/8" thru 1" threaded connections with NPT or ISO7-1 threads.

**Housing Material** ..... SR400, SR500, SR600: aluminum.

**Mounting** ..... Mount in an upright position only.

**NOTE:** All Maxitrol gas pressure regulators should be installed and operated in accordance with Maxitrol Safety Warning Instructions (see SELMMRSR\_MI\_EN.FR.ES).

**Certifications** ..... SR400, SR500, SR600: ANSI Z21.18/CSA 6.3 Gas Appliance Pressure Regulators (except suffix -2 models).

**Gas Types** ..... Suitable for natural, manufactured, mixed gases, liquefied petroleum gases, and LP gas-air mixtures.

**Rated Inlet Pressure** ..... CSA Certified: 1/2 psi (3.4 kPa)

**Maxitrol Tested** ..... 1 psi (6.9 kPa)

**Flow Rates** ..... up to 1,000 CFH (28.32 m<sup>3</sup>/h)

**Emergency Exposure Limits** ..... 2.5 psi (17.2 kPa)

**Ambient Temperature Ranges** ..... -40 to 175°F (-40 to 79°C)

**Minimum Regulation** ..... SR400, SR500: 5 CFH; SR600: 60 CFH

**NOTE:** SR400-2, SR500-2, SR600-2 models are designed primarily for LP gas applications.

**NOTE:** All models may be powered by a 24 volt AC transformer. When the coil is energized, the appliance is at low fire. When the coil is de-energized, it is high fire. Continuous regulation is maintained to hold the electrically set outlet pressure constant.

**NOTE:** Suffix "W" refers to an aluminum terminal enclosure.



## Capacities and Pressure Drop: inches w.c. (kPa)

| Model Number | Pipe Size   | Flow Rate - CFH (m³/h) |             |             |             |             |             |             |             |              |
|--------------|-------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
|              |             | CSA MAX                | 100 (2.83)  | 200 (5.66)  | 300 (8.50)  | 400 (11.33) | 500 (14.16) | 600 (16.99) | 750 (21.24) | 1000 (28.32) |
| SR400        | 3/8" x 3/8" | 150 (4.02)             | 0.33 (0.08) | 1.30 (0.32) | ---         | ---         | ---         | ---         | ---         | ---          |
|              | 1/2" x 1/2" | 170 (4.8)              | 0.27 (0.07) | 1.10 (0.27) | ---         | ---         | ---         | ---         | ---         | ---          |
| SR500        | 1/2" x 1/2" | 360 (10.2)             | 0.08 (0.02) | 0.30 (0.08) | 0.68 (0.17) | 1.20 (0.30) | ---         | ---         | ---         | ---          |
|              | 3/4" x 3/4" | 400 (11.2)             | 0.05 (0.01) | 0.21 (0.05) | 0.47 (0.12) | 0.83 (0.20) | 1.30 (0.32) | ---         | ---         | ---          |
| SR600        | 3/4" x 3/4" | 600 (16.8)             | ---         | 0.09 (0.02) | 0.20 (0.05) | 0.36 (0.09) | 0.56 (0.14) | 0.81 (0.20) | 1.25 (0.31) | ---          |
|              | 1" x 1"     | 600 (16.8)             | ---         | 0.07 (0.02) | 0.16 (0.04) | 0.29 (0.07) | 0.45 (0.11) | 0.66 (0.16) | 1.00 (0.25) | 1.75 (0.44)  |

**NOTE:** Capacities expressed in CFH (m³/h) @ 0.64 sp gr gas

CSA maximum capacities vary with spring range and pipe size. Please contact Maxitrol directly for CSA maximums. See pages 58-59 for Regulator Sizing Requirements and Examples.

## Spring Selection: inches w.c. (kPa)

| Model      | Available Springs |                                 |                                 |                                 |                               |                            |
|------------|-------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|----------------------------|
| SR400 (-1) | Maximum           | 3 to 5 (0.75 to 1.25) S. Steel  | 2.5 to 3.5 (0.62 to 0.87) White | 4 to 6 (1 to 1.5) S. Steel      | 3 to 5 (0.75 to 1.25) White   | ---                        |
|            | Minimum           | SR400                           |                                 | SR400-1                         |                               | 2.5 to 4 (0.62 to 1) Black |
|            |                   | 0.3 to 1.2 (0.07 to 0.3) Plated | 0.3 to 1.2 (0.07 to 0.3) Plated | 1 to 2.8 (0.25 to 0.7) Blue     | 1 to 2.8 (0.25 to 0.7) Blue   |                            |
| SR400-2*   | Maximum           | 7.5 to 12 (1.87 to 3) - Blue    |                                 |                                 |                               |                            |
| SR500 (-1) | Maximum           | 3 to 5 (0.75 to 1.25) S. Steel  | 1.5 to 3.5 (0.37 to 0.87) White | 3.5 to 6 (0.87 to 1.5) S. Steel | 2 to 4.5 (0.5 to 1.12) White  | ---                        |
|            | Minimum           | SR500                           |                                 | SR500-1                         |                               | 2.5 to 4 (0.62 to 1) Black |
|            |                   | 0.3 to 1.2 (0.07 to 0.3) Plated | 0.3 to 1.2 (0.07 to 0.3) Plated | 1 to 2.8 (0.25 to 0.07) Blue    | 1 to 2.8 (0.25 to 0.7) Blue   |                            |
| SR500-2*   | Maximum           | 7.5 to 12 (1.87 to 3) - Blue    |                                 |                                 |                               |                            |
| SR600 (-1) | Maximum           | 3 to 5 (0.75 to 1.25) S. Steel  | 2.5 to 4 (0.62 to 1) White      | 4 to 6 (1 to 1.5) S. Steel      | 3 to 5.5 (0.75 to 1.37) White | ---                        |
|            | Minimum           | SR600                           |                                 | SR600-1                         |                               | 2.5 to 4 (0.62 to 1) Black |
|            |                   | 0.5 to 1.2 (0.12 to 0.3) Plated | 0.5 to 1.2 (0.07 to 0.3) Plated | 1 to 2.8 (0.25 to 0.7) Blue     | 1 to 2.8 (0.25 to 0.7) Blue   |                            |
| SR600-2*   | Maximum           | 7.5 to 12 (1.87 to 3) - Blue    |                                 |                                 |                               |                            |

\* For LP application - may be used with any minimum spring.

**NOTE:** See pages 56-57 for complete Spring Selection Chart.

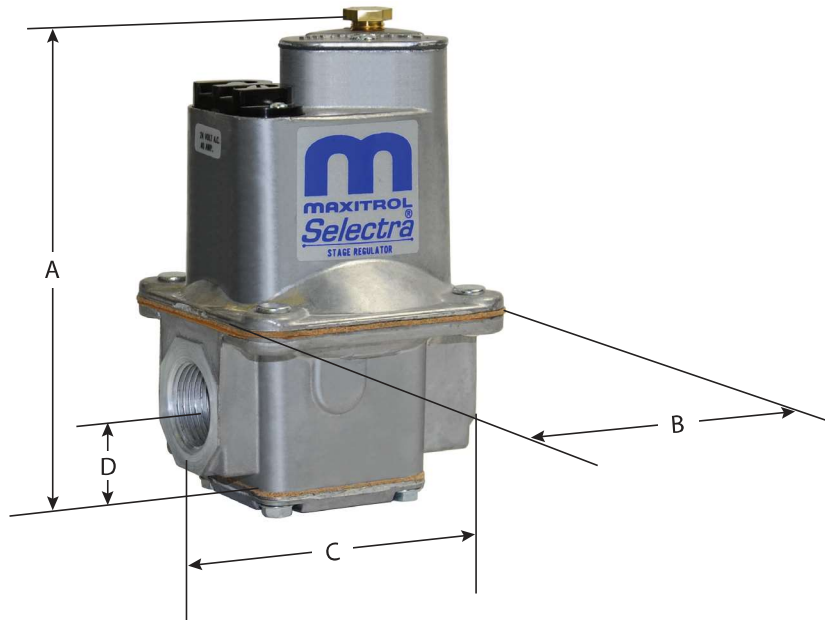
# SR SERIES

2 Stage Design

## Dimensions

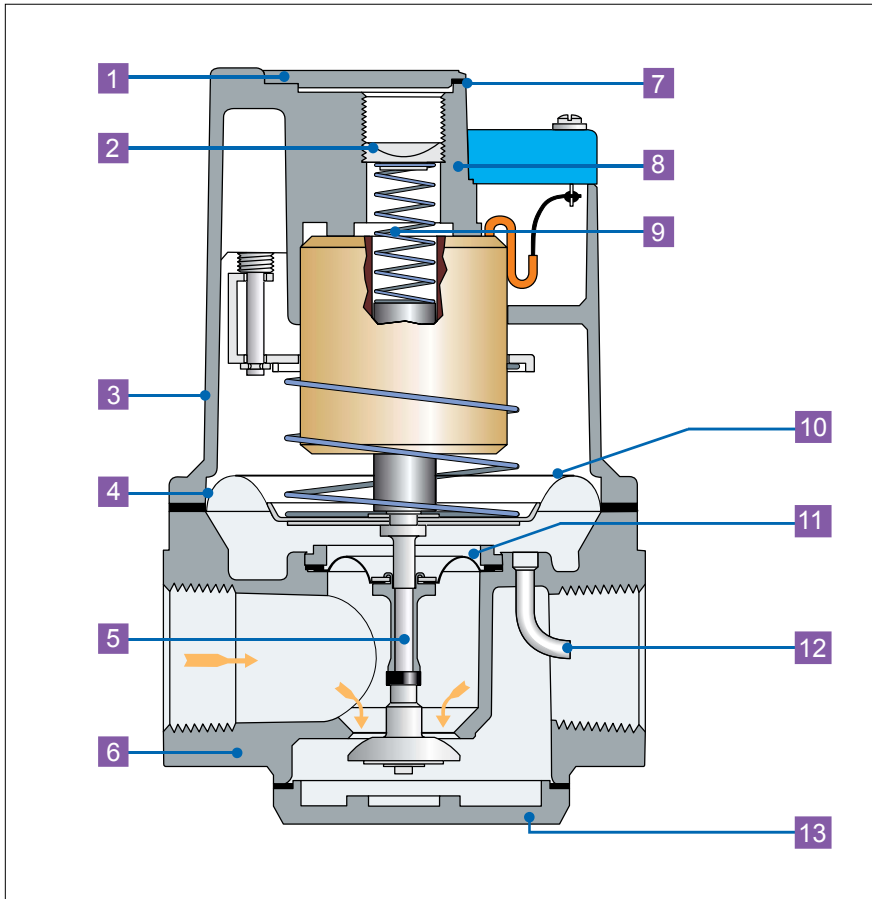
| Model | Pipe Size  | Vent Connection                                 | Dimensions       |                 |                 |                 |
|-------|------------|---|------------------|-----------------|-----------------|-----------------|
|       |            |   | A                | B               | C               | D               |
| SR400 | 3/8", 1/2" | 1/8" NPT, 12A06 vent limiting device installed. | 4"<br>(102 mm)   | 2"<br>(51 mm)   | 2.2"<br>(56 mm) | 1"<br>(25 mm)   |
| SR500 | 1/2", 3/4" | 1/8" NPT, 12A06 vent limiting device installed. | 5.3"<br>(135 mm) | 3.2"<br>(81 mm) | 3.4"<br>(86 mm) | 1.2"<br>(30 mm) |
| SR600 | 3/4", 1"   | 1/8" NPT, 12A06 vent limiting device installed. | 7"<br>(178 mm)   | 3.9"<br>(99 mm) | 4"<br>(102 mm)  | 1.5"<br>(38 mm) |

**NOTE:** Dimensions are maximums and to be used only as an aid in designing clearance for the valve. Actual production dimensions may vary somewhat from those shown.



SR400, SR500, SR600

## 2 Stage Design



- 1 Seal Cap
- 2 Adjusting Screw
- 3 Top Housing
- 4 Regulating Diaphragm
- 5 Stem & Valve
- 6 Bottom Housing
- 7 Seal Cap Gasket
- 8 Stack
- 9 Spring
- 10 Diaphragm Plates
- 11 Balancing Diaphragm
- 12 Sensing Tube
- 13 Bottom Plate

**NOTE:** Diagrams are graphical representations only and may differ from actual product.