HONEYWELL AMERICAN METER SR100

Industrial Regulator

Brief information

Application: The compact, high capacity SR113 service regulator is designed for residential or light commercial/industrial applications using various hydrocarbon or other non-corrosive gases.

Control: A comprehensive range of springs is available, as described overleaf. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap. The wide capacity range provides the ability to standardize on varying applications. Full lockup capability provides assurance that downstream pressure will not build up during no-flow situations. Full capacity relief provides safety during abnormal overpressure occurrences.

Technical Data:

Inlet Pressures up to 125 PSIG

Outlet Pressures: 6" w.c. to 2 PSIG.

Regulator Pressure Rating

125 PSIG (8.6 bar)	=	Maximum recommended inlet pressure for normal service. Maximum recommended pressure may vary with orifice size.
175 PSIG (12 bar)	=	Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case. 2 PSIG (138 mbar) = Maximum outlet pressure for normal service.
10 PSIG (689 mbar)	=	Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). If regulator is subjected to these conditions, it should be removed from service.
50 PSIG (3.5 bar)	=	Maximum outlet pressure for abnormal service without damage to internal components. If regulator is subjected to these conditions, it should be removed from service.

FEATURES & BENEFITS

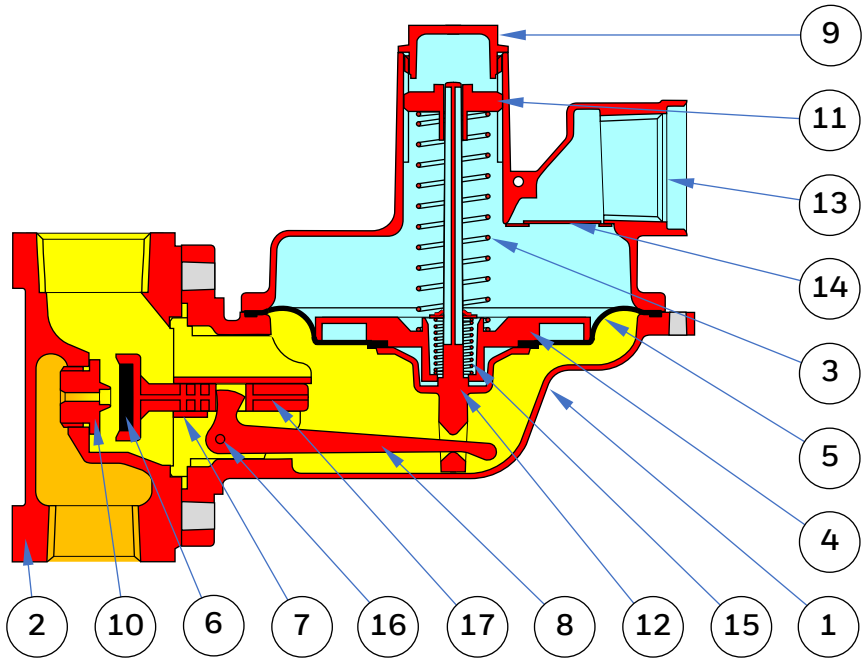
Main Features

- Outlet pressure ranges available 6" w.c. up to 2 PSIG
- Temperature range: -20°F to +150°F (-30°C to +65°C)
- Variety of interchangeable orifices
- Cast Iron Valve Body Sizes 3/4" and 1"; available in 90 degree (right angle), 180 degree (straight) and offset configurations.
- Threaded connections meet ANSI/ASME B1.20.1 or BS 21/EN 10226.
- Capacities through 2500 SCFH
- Full capacity internal relief valve
- 3/4" or 1" NPT threaded vents
- Molded Diaphragm provides more precise outlet pressure control
- All models conform to ANSI Code B109.4 and CGA Service-type Regulator Specification CAN/CGA 6.18-M95.

Options

- Vent Elbow
- Splashguard
- Pressure Taps
- Offset Valve Body

SR100 Regulator Components



Orifice Sizes

Orifice Size	Part Number
5/16"	72494P022
1/4"	72494P021
3/16"	72494P020
1/8" x 3/16"	72494P030

Loading Springs

Outlet Pressure	Color Code	Part Number
6" - 8" w.c.	Blue/Yellow	70017P138
7" - 12" w.c.	Blue/Red	70017P139
13" - 16" w.c.	Blue/White	70017P140
21" - 35" w.c.	Blue/Orange	70017P141
1.8 – 2 PSIG	White	70017P060

Item No.	Description	Material	Notes
1	Diaphragm Case	Diecast Aluminum	With unique seven-step advanced conversion coating. Single coat polyester primer and high solid polyurethane topcoat.
2	Valve Body	Gray Cast Iron	Undercoated, single coat polyester primer and high solid polyurethane topcoat.
3	Loading Spring	Spring Steel	Zinc plated and chromate. Color coded for identification.
4	Diaphragm Plate	Reinforced Nylon	
5	Diaphragm	Buna N	
6	Seat Disc	Buna N	60, 70 (std) or 80 durometer rating
7	Plunger Guide	Reinforced Nylon	
8	Lever	Stamped Aluminum	
9	Seal Plug	Reinforced Nylon	
10	Orifice	Aluminum	High strength, corrosion resistant
11	Pressure Adjustment Screw	Reinforced Nylon	
12	Relief Valve	Reinforced Nylon	
13	Vent Screen	Stainless Steel	Fitted with removable weather and bug-proof stainless-steel screen to resist freeze- ups and to exclude foreign matter. The vent is threaded ¾" or 1" NPT.
14	Vent Valve	Stainless Steel	with Electrogalvanized steel retainer
15	Relief Valve Spring	Spring Steel	Zinc plated and yellow chromate. Non-adjustable. Color coded for identification. Standard set point of 9" w.c. above outlet set pressure of 7" w.c. Standard set point of 1.1 psig above outlet set pressure of 2 psig.
16	Lever Pin	Carbon Steel	Zinc Plated
17	Plunger	Reinforced Nylon	

SR100 Capacity Data

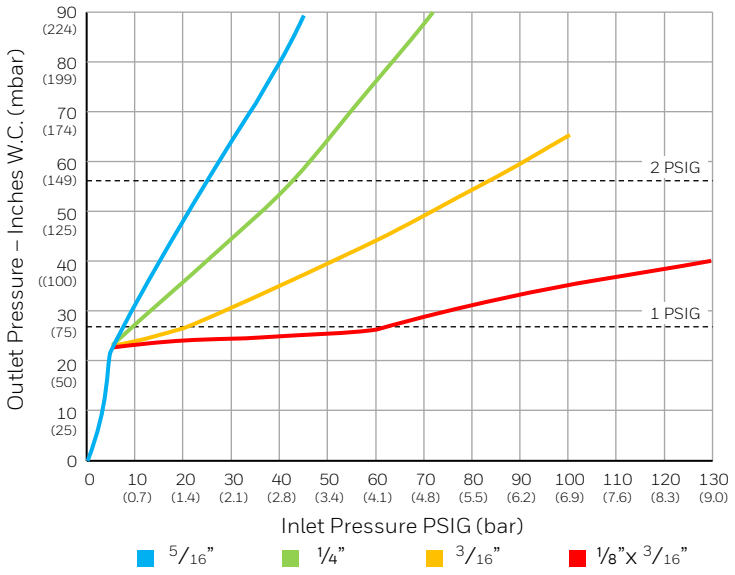
Capacity 1" Outlet Valve Body, SCFH (m^3/h)
Set Pressure of 7" W.C. @ 50 SCFH

Inlet Pressure PSIG (bar)	Orifice Size			
	1/8"x 3/16"	3/16"	1/4"	5/16"
5 (0.34)	250 (7.08)	400 (11.33)	550 (15.57)	475 (13.45)
10 (0.69)	350 (9.91)	700 (19.82)	1100 (31.15)	1500 (42.48)
15 (1.03)	450 (12.74)	900 (25.49)	1700 (48.14)	2100 (59.47)
20 (1.38)	500 (14.16)	1100 (31.15)	2000 (56.63)	2500 (70.79)
30 (2.07)	650 (18.41)	1500 (42.48)	2500 (70.79)	2500 (70.79)
40 (2.76)	800 (22.65)	1800 (50.97)	2500 (70.79)	2500 (70.79)
60 (4.14)	1100 (31.15)	2400 (67.96)	2500 (70.79)	2500 (70.79)

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Regulator Relief Valve Performance
Outlet Pressure Relative to Inlet Pressure

Screen Vent – No Vent Pipe
Set Pressure 7" W.C.
Failure by disconnecting linkage between diaphragm and valve mechanism.

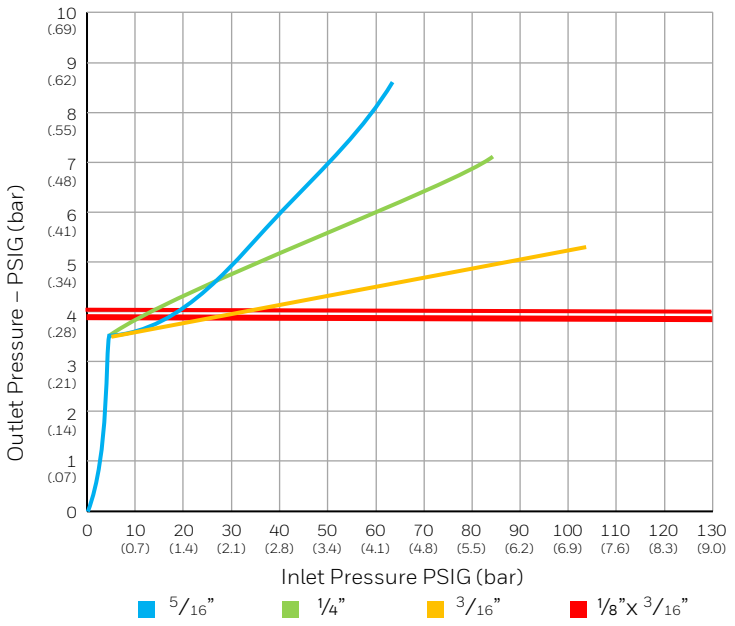


Capacity 1" Outlet Valve Body, SCFH (m^3/h)
Set Pressure of 2 PSIG @ 50 SCFH

Inlet Pressure PSIG (bar)	Orifice Size			
	1/8"x 3/16"	3/16"	1/4"	5/16"
5 (0.34)	175 (4.96)	150 (4.25)	300 (8.50)	250 (7.08)
10 (0.69)	300 (8.50)	275 (7.79)	400 (11.33)	425 (12.03)
15 (1.03)	375 (10.62)	350 (9.91)	600 (16.99)	550 (15.57)
20 (1.38)	450 (12.74)	450 (12.74)	700 (19.82)	750 (21.24)
30 (2.07)	550 (15.57)	600 (16.99)	950 (26.90)	1000 (28.32)
40 (2.76)	750 (21.24)	800 (22.65)	1300 (36.81)	1400 (39.64)
60 (4.14)	1000 (28.32)	1300 (36.81)	1900 (53.80)	2100 (59.47)

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Screen Vent – No Vent Pipe
Set Pressure 2 PSIG
Failure by disconnecting linkage between diaphragm and valve mechanism.



SR100 Dimensions

Model SR113 - 90º

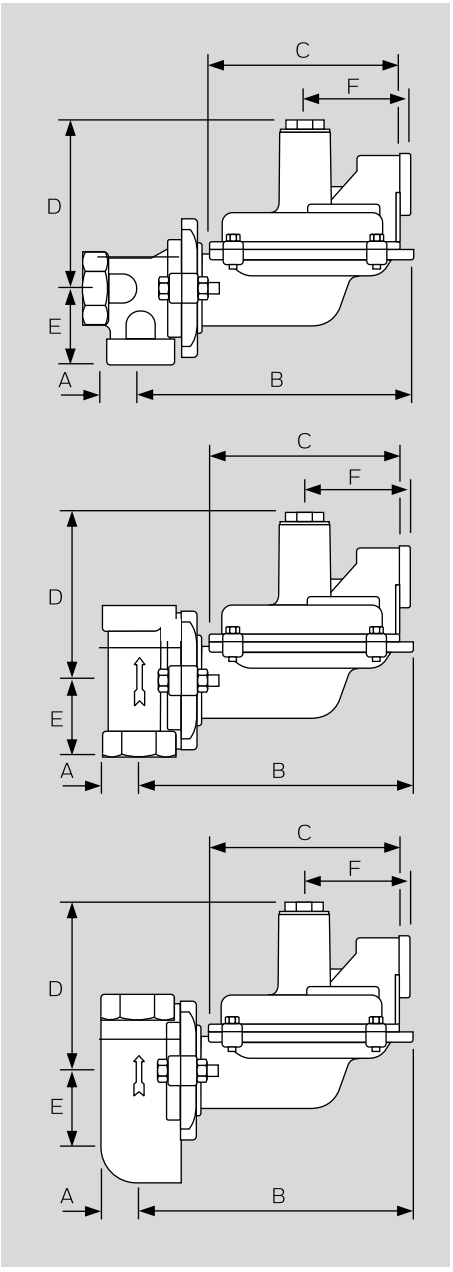
Inlet	Outlet	A	B	C	D	E	F
3/4”	3/4”	1- 1/2” 38.1mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
3/4”	1”	1- 1/2” 38.1mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
1”	1”	1- 1/2” 38.1mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm

Model SR113 - 180º

Inlet	Outlet	A	B	C	D	E	F
3/4”	3/4”	1” 25.4mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
3/4”	1”	1” 25.4mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
1”	1”	1” 25.4mm	7 - 1/8” 181mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm

Model SR113 - Offset

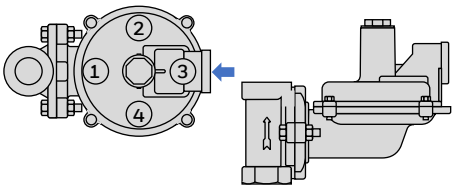
Inlet	Outlet	A	B	C	D	E	F
3/4”	3/4”	1” 25.4mm	8 - 9/16” 217.5mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
3/4”	1”	1” 25.4mm	8 - 9/16” 217.5mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm
1”	1”	1” 25.4mm	8 - 9/16” 217.5mm	5 - 3/8” 136.5mm	4 – 7/16” 112.7mm	2” 50.8mm	2 – 13/16” 71.5mm



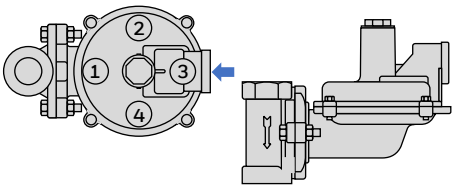
SR100 Regulator Assembly Positions

180° Models

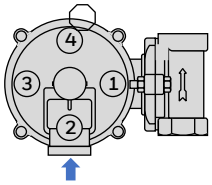
Valve Head Position 'A'



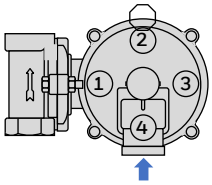
Valve Head Position 'B'



Valve Head Position 'C'

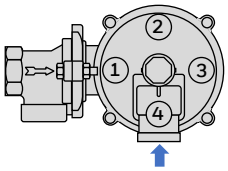


Valve Head Position 'D'

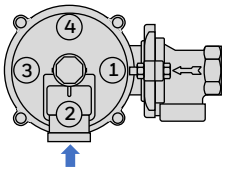


90° Models

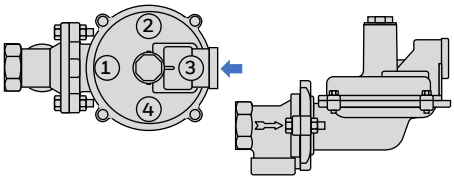
Valve Head Position 'A'



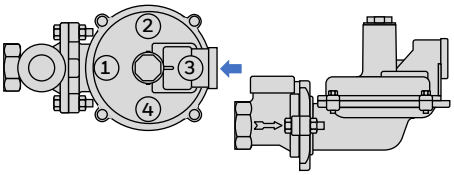
Valve Head Position 'B'



Valve Head Position 'C'

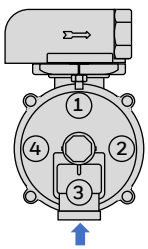


Valve Head Position 'D'



Offset Models

Valve Head Position 'D'



⬆ = Standard Vent Position

Example of Regulator Assembly Position

In the photo above the SR113 Regulator shown has a 180 degree valve head in Position "C" (Flow upward) with the vent in position 2 (Looking down). This would be assembly position C2.

Ordering Information

1. Model number
2. Size of inlet and outlet
3. Valve Head type
4. Inlet pressure, PSIG (bar)
5. Outlet pressure, inches W.C. (mbar) or PSIG (bar)
6. Spring Range
7. Flow, SCFH (m^3/h)
8. Kind and specific gravity of gas
9. Orifice size
10. Regulator assembly position number

Shipping Weight

12.8 lbs/carton of four regulators

OTHER GAS CAPACITIES

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (Fg). The table below lists this factor for some of the more common gases.

GAS TYPE	SPECIFIC GRAVITY	CONVERSION FACTOR (Fg)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

$$\sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of gas being used}}}$$

For more information

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