1800C and 1800C-HC Service Regulators

Maximum Inlet Pressure 125 PSIG

AMERICAN METER COMPANY

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AMERICAN METER COMPANY
Measurement Engineers Since 1836

1800C Regulator Information

General Information

The American Meter Series 1800C pressure regulators are designed for natural gas applications and feature a compact, lightweight design for fast, easy installation. Interchangeable orifices and springs provide a wide range of outlet pressures and flow rates. Outlet pressures between 3.5" W.C. and 2 PSIG are available. Operating temperature range is -20°F to 150°F (-30°C to 65°C). Maximum flow rate is 2500 SCFH (70.8 m^3/h).

The diaphragm case may be easily removed for routine inspection without disturbing the line connections. All models conform to ANSI Code B109.4-1998, and CGA Service-Type Regulator Specification CAN/CGA-6.18-M95.

Exclusive Seven-Step Corrosion Protection

The protective finish on the Series 1800C regulators resists corrosive effects of weather and harsh environments better than any other in the industry. Each precision die-cast aluminum regulator is treated inside and out with a special conversion coating that is part of an exclusive, seven-step finishing process. This coating greatly inhibits oxidation of the metal's surface that can eventually compromise the integrity of the metal. It also prevents finish paint from cracking and blistering.

A single-coat polyester primer and the high solid polyurethane top coat provide long-lasting protection to all exterior regulator surfaces. The American Meter conversion coating process meets all environmental protection regulations.

High Tensile Strength Valve Bodies

Each series of 1800C regulator is equipped with a high tensile strength cast-iron valve body that rotates in 90° increments and features extra-heavy wall thickness. This provides maximum strength to withstand installation stresses without damage and prevents thread galling experienced with aluminum.

Series 1800C regulator valve bodies are treated with a five-step metal-finishing process. The treated metal is painted with a single-coat polyester paint.

Available valve body sizes are: 3/4" x 3/4", 3/4" x 1", 3/4" x 1-1/4", 1" x 1", 1" x 1-1/4" and 1-1/4" x 1-1/4" NPT or BSP-TR. Also available is an offset valve body in 3/4" x 3/4", 3/4" x 1" and 1" x 1" NPT or BSP-TR.

Application

Models 1813C and 1843C feature full-capacity internal relief valves with large passages to assure the fast release of gas (see performance graphs on page 9). For added protection, a relief valve stop is provided to assure operation under the most severe conditions.

The standard relief spring setting is 8" W.C. above the normal 7" W.C. outlet pressure.

Model 1843C is equipped with overpressure shut-off (OPSO) that provides protection against downstream overpressure. Valve body configuration permits the 1800C Series regulators to be supplied in four positions as specified on page 10. All Series 1800C regulators are available with either right-angle (90°) or straight-flow (180°) valve bodies. Vents can also be supplied in four different positions.

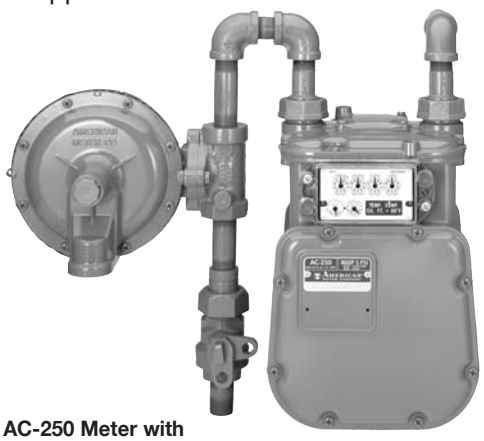
All models are designed with an extra-large, removable weather-proof and bug-proof stainless-steel screened vent to resist freeze-ups and to exclude foreign matter. The vent is threaded 3/4" or 1" NPT and is also available with BSP-TR threads making it suitable for inside installations. Inside installation requires a vent line of sufficient diameter to carry gas vented by the regulator to a safe outside location away from any opening in the building.

Options

Vent Elbow The regulator vent opening should face downward (6 o'clock) to minimize the chance of blockage from ice and snow. If not, a 3/4" NPT plastic, 90° vent elbow (part number 78041P025) and separate protective screen (part number 70400P017) may be screwed into the vent to provide the necessary protection.

Elevation Compensation E.C. orifices are also available, which provide constant outlet pressure even when inlet pressure fluctuates greatly. The elevation compensation orifice is a device which reduces changes in regulator outlet pressure due to change in inlet pressure.

The E.C. orifice is recommended for installations where the inlet pressure may vary over a wide range. The E.C. orifice is available in two sizes: 1/8" x 3/16" (part number 73698G006) and 3/16" (part number 73698G005). Its capacity is the same as a standard orifice of the same size. Consult your American Meter sales representative for specific applications.



AC-250 Meter with 1813C Regulator

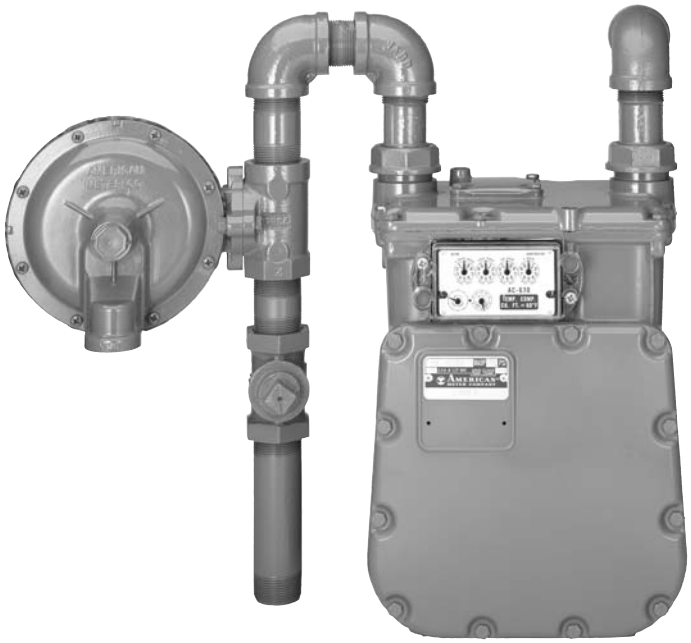
1800C-HC Regulator Information

General Information

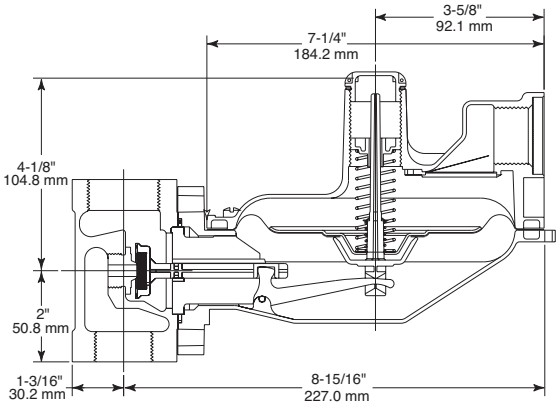
Ideal for light commercial and industrial use, the 1-1/4" 1800C-HC Series regulator is designed to increase output capacity and lessen compounding during medium to high inlet pressure operations. Compounding usually occurs when a larger valve body introduces undesirable flow characteristics, thereby creating an inefficient, boosting effect in the outlet port of the body.

The 1800C-HC regulator's lightweight design features high-capacity capabilities for 1-1/4" NPT connections and flow capacities up to 4900 SCFH depending on inlet pressure and orifice selection. It complements the 1800C Series family of regulators.

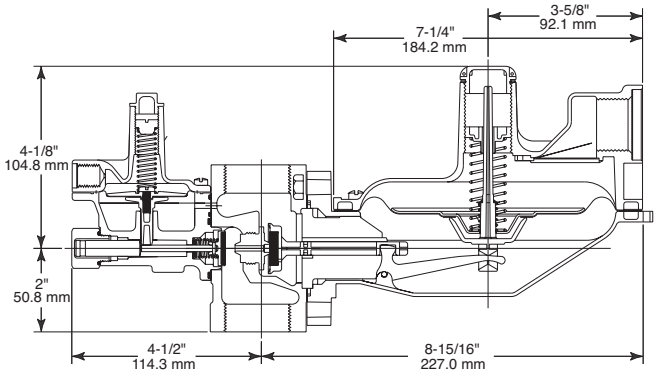
All models conform to ANSI Code B109.4-1998 and CGA Service-Type Regulator Specification CAN/CGA-6.18-M95.



AC-630 Meter with 1813C-HC Regulator



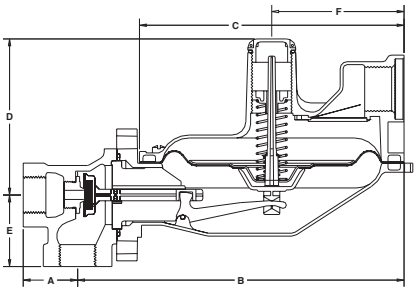
1813C-HC



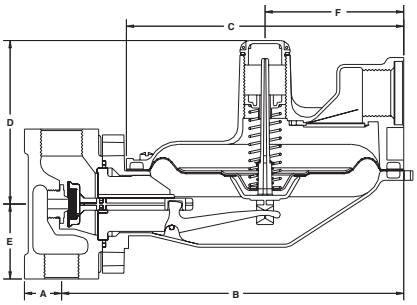
1843C-HC

1800C Service Regulator

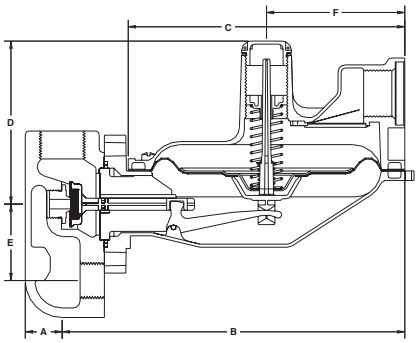
Dimensions



1813C – 90°



1813C – 180°



1813C – Offset

Models 1813C

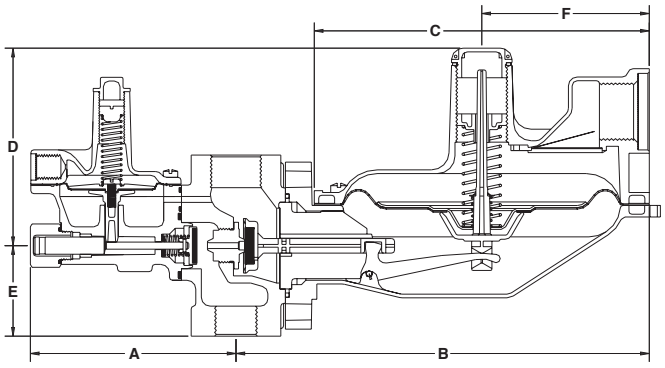
Inlet	Outlet	Dimensions – inches *(mm)*								
		A			B	C	D	E	E	F
		90°	180°	Offset					Offset	
3/4"	3/4"	1-9/16 *(39.7)*	1 *(25.4)*	1 *(25.4)*	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	2 *(50.8)*	3-5/8 *(92.1)*
3/4"	1"	1-9/16 *(39.7)*	1 *(25.4)*	1 *(25.4)*	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	2 *(50.8)*	3-5/8 *(92.1)*
1"	1"	1-9/16 *(39.7)*	1 *(25.4)*	1 *(25.4)*	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	2 *(50.8)*	3-5/8 *(92.1)*
1"	1-1/4"	—	1-1/8 *(28.6)*	—	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	—	3-5/8 *(92.1)*
1-1/4"	1-1/4"	—	1-1/8 *(28.6)*	—	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	—	3-5/8 *(92.1)*
3/4"	1-1/4"	—	1-1/8 *(28.6)*	—	8-7/8 *(225.4)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	—	3-5/8 *(92.1)*

1843C Service Regulator

Dimensions

Model 1843C

Inlet	Outlet	Dimensions – inches *(mm)*					
		A	B	C	D	E	F
3/4"	3/4"	4-1/2 *(114.3)*	8-15/16 *(227.0)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	3-5/8 *(92.1)*
3/4"	1"	4-1/2 *(114.3)*	8-15/16 *(227.0)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	3-5/8 *(92.1)*
1"	1"	4-1/2 *(114.3)*	8-15/16 *(227.0)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	3-5/8 *(92.1)*
1"	1-1/4"	4-1/2 *(114.3)*	8-15/16 *(227.0)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	3-5/8 *(92.1)*
1-1/4"	1-1/4"	4-1/2 *(114.3)*	8-15/16 *(227.0)*	7-1/4 *(184.2)*	4-1/8 *(104.8)*	2 *(50.8)*	3-5/8 *(92.1)*



Model 1843C

Overpressure Shut-Off Regulators

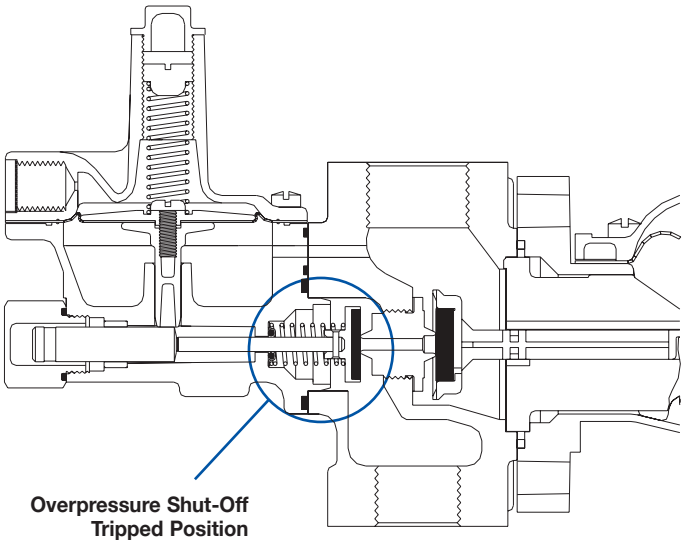
General Information

Models 1843C and 1843C-HC regulators are compact units designed to regulate line pressure and to provide protection against any downstream overpressure.

Rugged, Compact OPSO Operates independently. The OPSO will shut off the gas supply in the event of a serious downstream pressure build-up.

Adjustable Overpressure Shut-Off Pressure is adjustable via the overpressure shut-off adjustment screw to settings from 14" to 35" W.C. and 1 to 3-1/2 PSIG depending on spring selected.

Extra Safety Models 1843C and 1843C-HC provide added protection by incorporating a full-capacity relief valve. This internal valve is the same as in the 1813C and 1813C-HC and operates in the same manner to combine safety features.



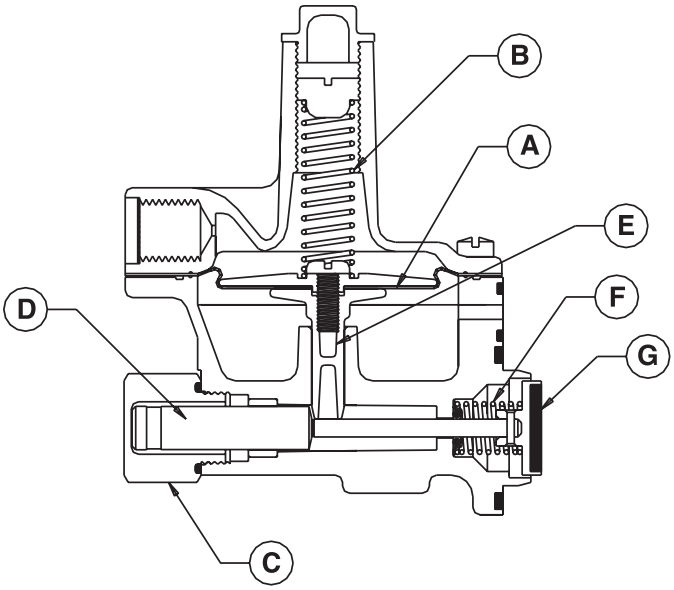
Overpressure Shut-Off Tripped Position

How the OPSO Operates

When the outlet pressure exceeds the OPSO set point, the pressure under the OPSO diaphragm (A) compresses the pressure spring (B) forcing the diaphragm stem (E) upwards and releasing plunger (D). This permits the shut-off spring (F) to force the shut-off disc (G) against the back side of the special double-ended orifice.

Shut-off Assembly	Adjustable Trip Point Range
72978G070	14" to 35" W.C.
72978G071	1 to 3-1/2 PSIG

Note: *When selecting the shut-off spring range, a differential of 14" W.C. above the normal operating pressure and the shut-off pressure is recommended for normal line pressure variations. The OPSO setting is preset at the factory to the desired trip point. To reset the OPSO, simply unscrew cap (C) and pull back the plunger (D) until the diaphragm stem (E) repositions.*



1800C and 1800C-HC Service Regulators

Full-Open Regulator Relief Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity:

For critical flow rates

$$Q = 0.5\ C \times \frac{P_1}{\sqrt{G}}$$

For sub-critical flows

$$Q = C \frac{\sqrt{P_2 h}}{\sqrt{G}}$$

Key

Q = Maximum capacity of regulator
C = Orifice constant (see table below)
P_1 = Inlet absolute pressure (PSIA)
P_2 = Outlet absolute pressure (PSIA)
h = Differential pressure (P1-P2)
G = Specific gravity of gas

Orifice	C
1/8"	25
1/8" x 3/16"	25
3/16"	57
1/4"	98
5/16"	149
3/8"	208
1/2"	353
9/16"	421

1800C Regulator Capacity Performance

Capacity 3/4" Outlet 1800C Regulator Set Point 7.0" W.C. at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P044. Outlet pressure variance not to exceed +2" -1" W.C. from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
1 (0.07)		175 (5.0)	250 (7.1)	325 (9.2)	350 (9.9)	400 (11.3)	400 (11.3)
2 (0.14)		300 (8.5)	425 (12.0)	475 (13.5)	550 (15.6)	650 (18.4)	650 (18.4)
3 (0.21)		375 (10.6)	500 (14.2)	600 (17.0)	700 (19.8)	800 (22.7)	800 (22.7)
5 (0.34)	275 (7.8)	500 (14.2)	700 (19.8)	800 (22.7)	950 (26.9)	1000 (28.3)	1200 (34.0)
10 (0.70)	375 (10.6)	750 (21.2)	1100 (31.2)	1200 (34.0)	1400 (39.6)	1500 (42.5)	1700 (48.1)
15 (1.00)	450 (12.7)	950 (26.9)	1400 (39.6)	1500 (42.5)	1600 (45.3)	1900 (53.8)	2000 (56.6)
20 (1.40)	500 (14.2)	1100 (31.2)	1700 (48.1)	1700 (48.1)	1900 (53.8)	2200 (62.3)	2300 (65.1)
30 (2.10)	700 (19.8)	1400 (39.6)	2000 (56.6)	2200 (62.3)	2400 (68.0)	2500 (70.8)	
40 (2.80)	800 (22.7)	1700 (48.1)	2400 (68.0)	2500 (70.8)	2500 (70.8)		
60 (4.10)	1100 (31.2)	2300 (65.1)	2500 (70.8)	2500 (70.8)			
100 (6.90)	1700 (48.1)	2500 (70.8)	2500 (70.8)				
125 (8.60)	2100 (59.5)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Capacity 1" Outlet 1800C Regulator Set Point 7.0" W.C. at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P044. Outlet pressure variance not to exceed +2" -1" W.C. from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
1 (0.07)		175 (5.0)	250 (7.1)	300 (8.5)	375 (10.6)	475 (13.5)	500 (14.2)
2 (0.14)		250 (7.1)	350 (9.9)	450 (12.7)	500 (14.2)	600 (17.0)	650 (18.4)
3 (0.21)		300 (8.5)	450 (12.7)	550 (15.6)	700 (19.8)	850 (24.1)	950 (26.9)
5 (0.34)	250 (7.1)	450 (12.7)	650 (18.4)	750 (21.2)	950 (26.9)	1200 (34.0)	1300 (36.8)
10 (0.70)	350 (9.9)	700 (19.8)	1000 (28.3)	1400 (39.6)	1600 (45.3)	1900 (53.8)	2000 (56.6)
15 (1.00)	425 (12.0)	900 (25.5)	1400 (39.6)	1900 (53.8)	2100 (59.5)	2500 (70.8)	2500 (70.8)
20 (1.40)	500 (14.2)	1100 (31.2)	1700 (48.1)	2300 (65.1)	2500 (70.8)	2500 (70.8)	
30 (2.10)	600 (17.0)	1400 (39.6)	2300 (65.1)	2500 (70.8)	2500 (70.8)		
40 (2.80)	750 (21.2)	1700 (48.1)	2500 (70.8)	2500 (70.8)			
60 (4.10)	1000 (28.3)	2400 (68.0)	2500 (70.8)				
100 (6.90)	1600 (45.3)	2500 (70.8)					
125 (8.60)	2000 (56.6)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Capacity 1-1/4" Outlet 1800C Regulator Set Point 7.0" W.C. at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P044. Outlet pressure variance not to exceed +2" -1" W.C. from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
1 (0.07)		200 (5.7)	325 (9.2)	350 (9.9)	375 (10.6)	475 (13.5)	500 (14.2)
2 (0.14)		325 (9.2)	500 (14.2)	600 (17.0)	700 (19.8)	950 (26.9)	1400 (39.6)
3 (0.21)		425 (12.0)	650 (18.4)	950 (26.9)	1200 (34.0)	1700 (48.1)	1900 (53.8)
5 (0.34)	275 (7.8)	550 (15.6)	1000 (28.3)	1600 (45.3)	2100 (59.5)	2500 (70.8)	2500 (70.8)
10 (0.70)	375 (10.6)	850 (24.1)	1500 (42.5)	2400 (68.0)	2500 (70.8)	2500 (70.8)	2500 (70.8)
15 (1.00)	450 (12.7)	1000 (28.3)	1800 (51.0)	2500 (70.8)			
20 (1.40)	550 (15.6)	1200 (34.0)	2100 (59.5)				
30 (2.10)	700 (19.8)	1600 (45.3)					
40 (2.80)	800 (22.7)						
60 (4.10)	1100 (31.2)						
100 (6.90)	1400 (39.6)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800C Regulator Capacity Performance

Capacity 3/4" Outlet 1800C Regulator Set Point 2 PSIG at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
3 (0.21)	150 (4.2)	175 (5.0)	300 (8.5)	325 (9.2)	375 (10.6)	400 (11.3)	500 (14.2)
5 (0.34)	250 (7.1)	325 (9.2)	450 (12.7)	525 (14.9)	575 (16.3)	700 (19.8)	750 (21.2)
10 (0.70)	375 (10.6)	550 (15.6)	700 (19.8)	825 (23.4)	1000 (28.3)	1200 (34.0)	1300 (36.8)
15 (1.00)	450 (12.7)	750 (21.2)	900 (25.5)	1100 (31.2)	1300 (36.8)	1500 (42.5)	1800 (51.0)
20 (1.40)	550 (15.6)	900 (25.5)	1200 (34.0)	1300 (36.8)	1600 (45.3)	1900 (53.8)	
30 (2.10)	700 (19.8)	1200 (34.0)	1500 (42.5)	1800 (51.0)	2100 (59.5)		
40 (2.80)	850 (24.1)	1500 (42.5)	2000 (56.6)	2200 (62.3)			
60 (4.10)	1100 (31.2)	2100 (59.5)	2500 (70.8)				
100 (6.90)	1700 (48.1)	2500 (70.8)					
125 (8.60)	2100 (59.5)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Capacity 1" Outlet 1800C Regulator Set Point 2 PSIG at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
3 (0.21)	150 (4.2)	225 (6.4)	250 (7.1)	350 (9.9)	425 (12.0)	550 (15.6)	550 (15.6)
5 (0.34)	225 (6.4)	350 (9.9)	450 (12.7)	500 (14.2)	650 (18.4)	750 (21.2)	900 (25.5)
10 (0.70)	350 (9.9)	600 (17.0)	750 (21.2)	850 (24.1)	1000 (28.3)	1300 (36.8)	1500 (42.5)
15 (1.00)	425 (12.0)	800 (22.7)	1000 (28.3)	1100 (31.2)	1400 (39.6)	1700 (48.1)	2000 (56.6)
20 (1.40)	500 (14.2)	1000 (28.3)	1200 (34.0)	1400 (39.6)	1800 (51.0)	2100 (59.5)	
30 (2.10)	650 (18.4)	1300 (36.8)	1700 (48.1)	2000 (56.6)	2500 (70.8)		
40 (2.80)	800 (22.7)	1700 (48.1)	2200 (62.3)	2500 (70.8)			
60 (4.10)	1100 (31.2)	2500 (70.8)	2500 (70.8)				
100 (6.90)	1700 (48.1)	2500 (70.8)					
125 (8.60)	2100 (59.5)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Capacity 1-1/4" Outlet 1800C Regulator Set Point 2 PSIG at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
3 (0.21)	150 (4.2)	225 (6.4)	350 (9.9)	375 (10.6)	425 (12.0)	550 (15.6)	550 (15.6)
5 (0.34)	225 (6.4)	350 (9.9)	500 (14.2)	600 (17.0)	700 (19.8)	900 (25.5)	1100 (31.2)
10 (0.70)	350 (9.9)	600 (17.0)	850 (24.1)	1100 (31.2)	1200 (34.0)	1700 (48.1)	2200 (62.3)
15 (1.00)	425 (12.0)	850 (24.1)	1200 (34.0)	1600 (45.3)	1900 (53.8)	2500 (70.8)	2500 (70.8)
20 (1.40)	500 (14.2)	1000 (28.3)	1700 (48.1)	2200 (62.3)	2500 (70.8)	2500 (70.8)	
30 (2.10)	650 (18.4)	1500 (42.5)	2500 (70.8)	2500 (70.8)	2500 (70.8)		
40 (2.80)	800 (22.7)	1900 (53.8)	2500 (70.8)	2500 (70.8)			
60 (4.10)	1100 (31.2)	2500 (70.8)	2500 (70.8)				
100 (6.90)	1700 (48.1)	2500 (70.8)					
125 (8.60)	2100 (59.5)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800C-HC Regulator Capacity Performance

Capacity 1-1/4" Outlet 1800C-HC Regulator Set Point 7.0" W.C. at 50 SCFH

SCFH (m^3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA. Pressure spring 70017P044. Outlet pressure variance not to exceed +2" -1" W.C. from set point, horizontal position.

1800C Regulator Capacity SCFH (m^3/h)							
Inlet PSIG (bar)	Orifice Size						
	1/8 x 3/16	3/16	1/4	5/16	3/8	1/2	9/16
1 (0.07)		175 (5.0)	200 (5.7)	250 (7.1)	350 (9.9)	475 (13.5)	525 (14.9)
2 (0.14)		275 (7.8)	350 (9.9)	450 (12.7)	525 (14.9)	675 (19.1)	800 (22.7)
3 (0.21)		350 (9.9)	450 (12.7)	600 (17.0)	750 (21.2)	800 (22.7)	1100 (31.2)
5 (0.34)	275 (7.8)	450 (12.7)	700 (19.8)	850 (24.1)	1000 (28.3)	1500 (42.5)	1600 (45.3)
10 (0.70)	350 (9.9)	600 (17.0)	1100 (31.2)	1500 (42.5)	1600 (45.3)	2500 (70.8)	2700 (76.5)
15 (1.00)	425 (12.0)	950 (26.9)	1300 (36.8)	2300 (65.1)	2600 (73.6)	3300 (93.5)	3300 (93.5)
20 (1.40)	475 (13.5)	1100 (31.2)	1900 (53.8)	2900 (82.1)	3400 (96.3)	4200 (118.9)	3900 (110.4)
30 (2.10)	600 (17.0)	1500 (42.5)	2500 (70.8)	4000 (113.3)	4600 (130.3)	4900 (138.8)	
40 (2.80)	750 (21.2)	1800 (51.0)	3200 (90.6)	4900 (138.8)	4900 (138.8)		
60 (4.10)	1100 (31.2)	2500 (70.8)	4400 (124.6)	4900 (138.8)			
100 (6.90)	1600 (45.3)	3800 (107.6)					
125 (8.60)	2000 (56.6)						

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800C and 1800C-HC Service Regulators

Pressure Springs

Outlet Pressure	Color Code	Part Number
3.5" to 6" W.C.	Blue	70017P043
3.5" to 7.5" W.C.	Tan	70017P089
5.5" to 8.5" W.C.	Yellow	70017P044
6" to 12" W.C.	Brown	70017P137
6" to 15" W.C.	Purple	70017P042
12" to 28" W.C.	White	70017P060
24" to 48" W.C.	Red	70017P082
42" W.C. to 2 PSIG	Red – Red	70017P049

Orifice Sizes

Orifice Size	Part Number	
	Standard	w/OPSO
9/16"	72494P026	72751P019
1/2"	72494P025	72751P016
3/8"	72494P023	72751P014
5/16"	72494P022	72751P013
1/4"	72494P021	72751P012
3/16"	72494P020	72751P011
1/8" x 3/16"	72494P030	72751P020
1/8"	72494P019	N/A

Maximum Recommended Inlet Pressure

Orifice Size	Inlet Pressure (PSIG)
9/16"	20
1/2"	50
3/8"	70
5/16"	125
1/4"	125
3/16"	125
1/8" x 3/16"	125
1/8"	125

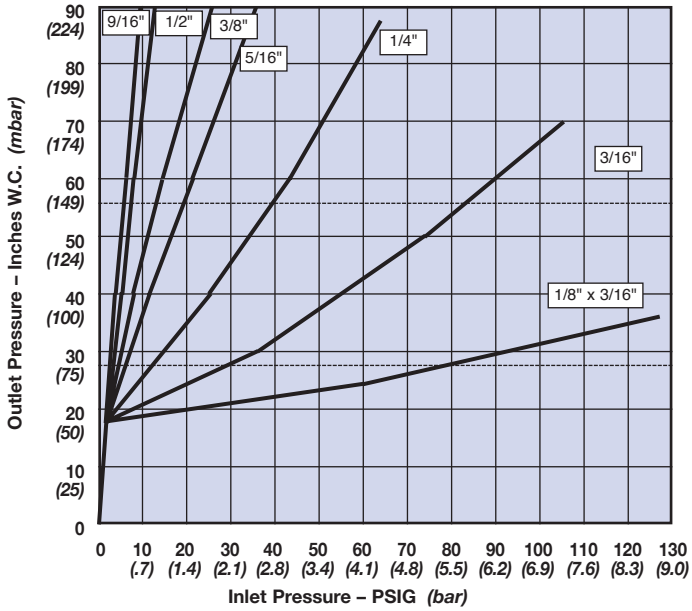
1800C and 1800C-HC Service Regulators

Regulator Relief Valve Performance

There are several methods of measuring the relief performance of a regulator. The worst case scenario will occur when the lever is disconnected. The data presented in the tables below represent this condition.

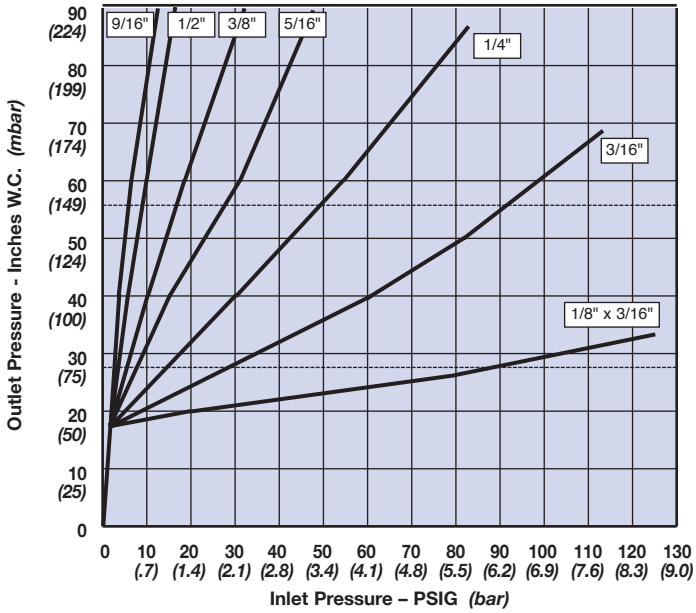
Outlet Pressure Relative to Inlet Pressure

3/4" Screened Vent – No Vent Pipe
Set Pressure 7" W.C.



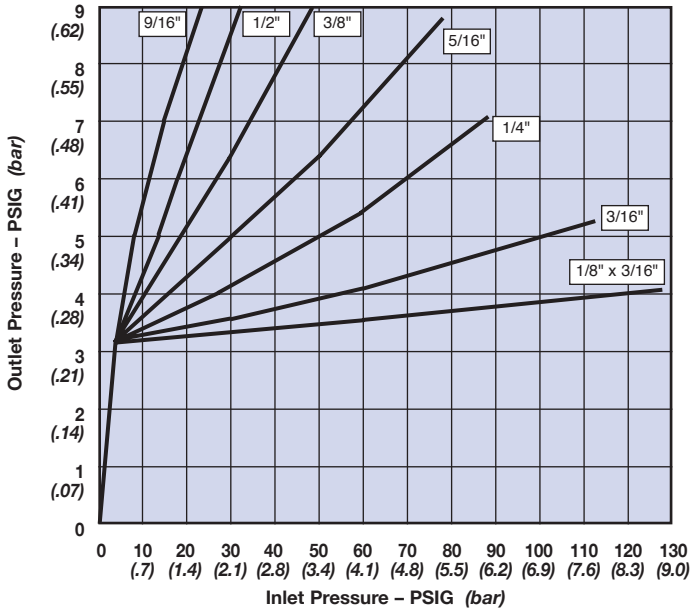
Outlet Pressure Relative to Inlet Pressure

1" Screened Vent – No Vent Pipe
Set Pressure 7" W.C.



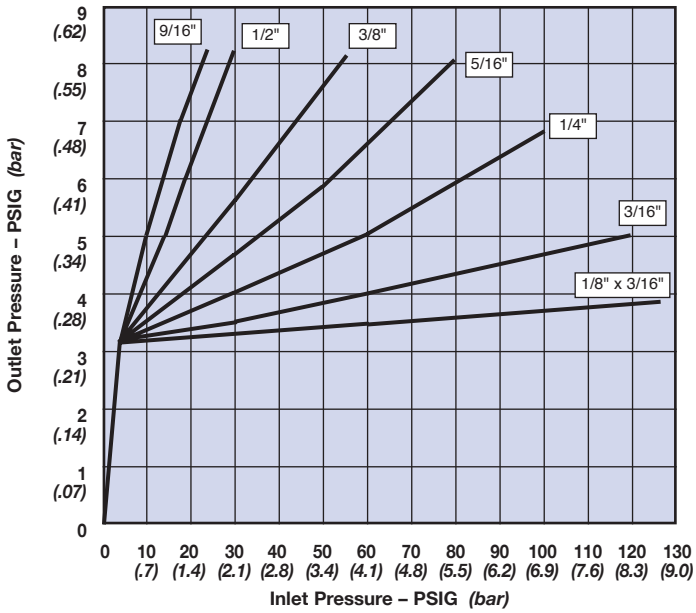
Outlet Pressure Relative to Inlet Pressure

3/4" Screened Vent – No Vent Pipe
Set Pressure 2 PSIG



Outlet Pressure Relative to Inlet Pressure

1" Screened Vent – No Vent Pipe
Set Pressure 2 PSIG



1800C and 1800C-HC Service Regulators

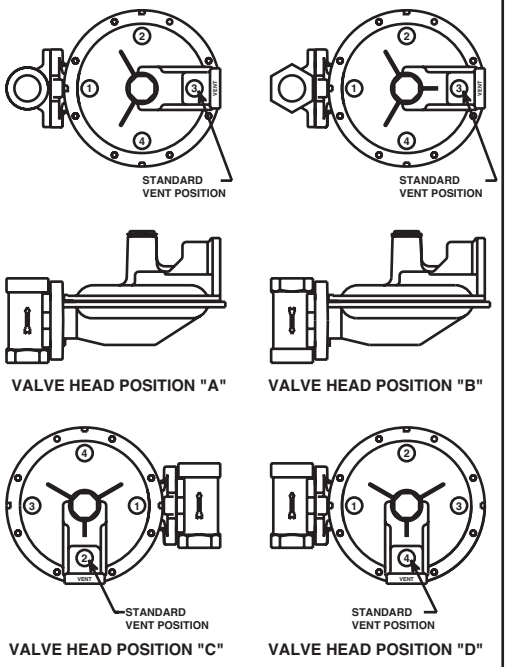
Regulator Descriptions

Model Number	Description
1813C and 1813C-HC	Basic regulator with full-capacity internal relief with 3/4" or 1" NPT vent.
1843C and 1843C-HC	Basic regulator with full-capacity internal relief and overpressure shut-off and 3/4" or 1" NPT vent.
1853C w/Jeavons USSA and 1853C-HC w/Jeavons USSA	Basic regulator with full-capacity internal relief and overpressure, underpressure shut-off and 3/4" or 1" NPT vent.

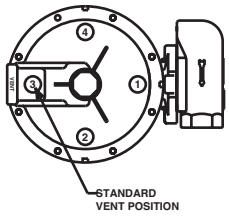
For Jeavons USSA operation, see brochure SB-8556.

Regulator Assembly Positions

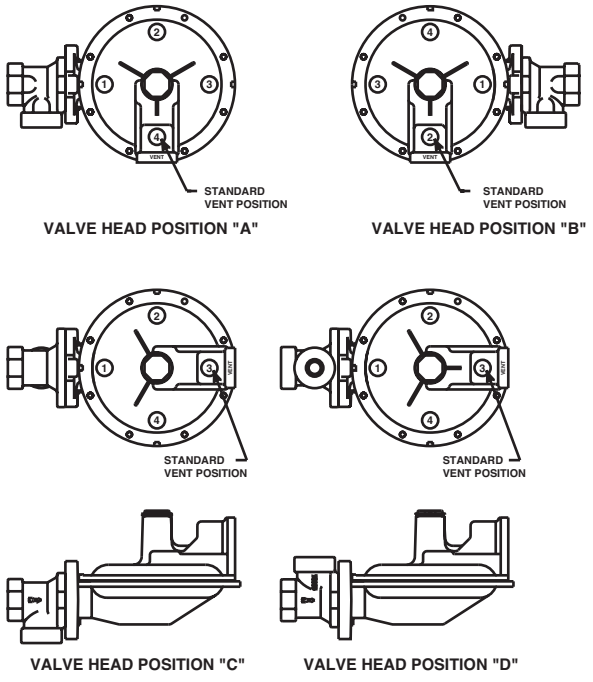
For 180° Models



For Offset Models



For 90° Models



1800C and 1800C-HC Service Regulators

Construction

Lower Diaphragm Case – Precision die-cast aluminum with an exclusive seven-step advanced conversion coating, single-coat polyester primer and high solid polyurethane top coat.

Top Assembly – Precision die-cast aluminum with an exclusive seven-step advanced conversion coating, single-coat polyester primer and high solid polyurethane top coat.

Valve Body – Cast grey iron, undercoated, single-coat polyester primer and high solid polyurethane top coat, (Rotates in 90 degree increments).

Pressure Spring – Steel, zinc plated and yellow chromate. Color coded for identification.

Diaphragm Plate – Steel, terne plated.

Seat Disc – Buna-N.

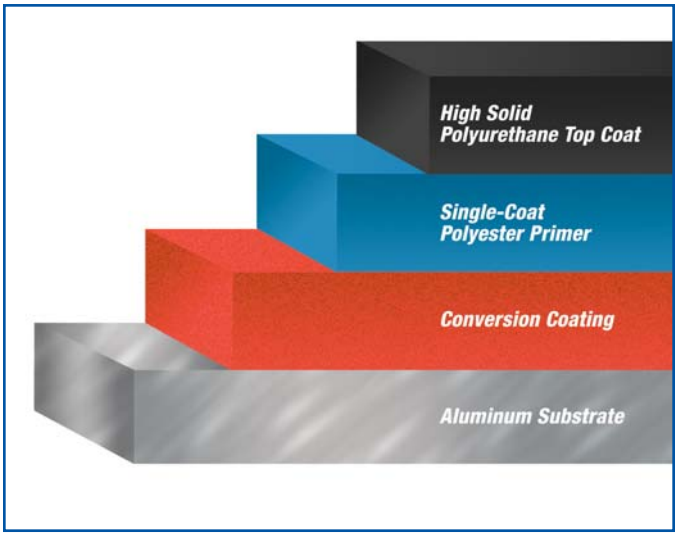
Orifice – Super high strength, corrosion-resistant, aluminum.

Lever – Stamped aluminum.

Vent Screen – Stainless steel.

Seal Plug – Polyester thermoplastic UV stabilized.

Corrosion Protection



Ordering Information

1 Model number
2 Size of inlet and outlet
3 Inlet pressure, PSIG *(bar)*
4 Outlet pressure, inches w.c. *(mbar)* or PSIG *(bar)*
5 Flow, scfh (m^3/h)
6 Kind and specific gravity of gas
7 Orifice size
8 Regulator assembly position number
9 Possible variation in inlet pressure for E.C. Orifice models

Maximum ___ PSIG *(bar)*
Minimum ___ PSIG *(bar)*

Shipping Weight

17.5 lbs/carton of four regulators

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.***

A Complete Family of Gas Measurement, Pressure Regulation, and Testing Systems

AC250 Diaphragm Meter

American Meter is the industry's leading supplier of diaphragm meters with models for applications from domestic service to large industrial users. See bulletin SB 3500 for more information.

Rotary Meter with Prefabricated Sets

Prefabricated new or replacement meter sets to customer specifications are available.

Pre-Calibrated Replacement Cartridges

Tested at atmospheric or actual operating pressure, pre-calibrated measurement cartridges are available for field service changes. Cartridges returned to the factory for re-certification and/or service are tested at five flow rates and at specified pressure.

1800 PFM Series

1800 PFM industrial regulators are designed for applications requiring medium-to-high capacity, extremely precise outlet-pressure control, and fast response to changing loads. See bulletin SB 8551 for more information.

Turbine Gas Meters

High-performance meters provide accurate measurement of high-volume gas flow. Turbines are available from 3" to 12" line sizes and line pressures up to 1440 PSIG. See bulletin SB 4510 for more information.

ISO 9001: 2000

QMI REGISTERED

Certificate No. 006697

Contact your AMCO/CMCO sales representative for more information.

Screwed Filters

Filtration down to 10 microns. Protects meter and regulator stations from dirt and pipe scale damage. See bulletin SB 12521 for more information.

ELSTER AMCO

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