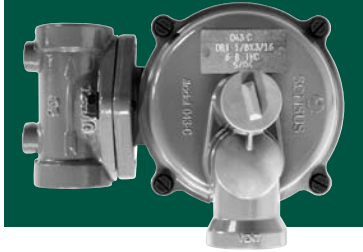


Model 043-C Service Regulator

Technical Data



- Valve Body:** High Tensile Strength Cast Iron (ASTM A-126 Class A)
- Orifice:** Aluminum
- Valve Seat/Stem:** One piece molded Buna-N seat and die-cast zinc stem
- Fulcrum Pin:** Stainless Steel (Type 303)
- Lever:** Zinc and Chromate plated steel (AISI C1010)
- Upper Diaphragm Plate:** Zinc and Dichromate plated steel (14 gauge steel)
- Lower Diaphragm Plate:** Isoplast
- Diaphragm:** Buna-N on Dacron reinforcing fabric 12.6 in² of area

Internal Relief Valve: Set to relieve approximately 7" w.c. above normal outlet pressure setting

Vent Valve Seat and Screen: Neoprene threaded 3/4" with Stainless Steel (16 mesh) screen

Adjustment Ferrule: Delrin

Seal Cap: Fiberglass reinforced polyethylene

Diaphragm Case: Die-cast aluminum (ASTM B85-Alloy SC84A)

Fastener Plating: Dacromet with Plus Black

Operating Temperature: -20°F to 150°F (-28.9°C to -65.5°C)

Shipping Weight: 12 per box - 48 lbs.

Compliances: Exceeds all AGA/ANSI B109.4 and CSA 6-18 specifications

Connection Sizes

Inlet	Outlet	90° Angle	Straight
1/2"	1/2"	X	X
3/4"	3/4"	X	X
3/4"	1"	X	X
3/4"	1-1/4"	-	X
1"	1"	X	X
1"	1-1/4"	-	X
1-1/4"	1-1/4"	-	X

Spring Ranges

	Outlet Pressure Ranges	Spring Color
Std	5" to 7" w.c.	Green
Std	6" to 8" w.c.	Brown
Std	8" to 14" w.c.	Blue
Std	12" to 28" w.c.	Silver
Std	1 to 2 psig	Yellow/Black
Alt	4" to 9" w.c.	Dark Green
Alt	5.5" to 9" w.c.	Orange
HP	2 to 4 psig	Yellow
HP	4 to 5 psig	White

Orifice and Maximum Inlet Pressure

Size	Pressure	Part Number
1/8"	125 psig	757611
3/16"	125 psig	757619
1/4"	60 psig	757623
5/16"	35 psig	757627
3/8"	20 psig	757631
1/2"	10 psig	757453

Maximum Emergency Pressures

The maximum pressure the regulator inlet may be subjected under abnormal conditions without causing damage to the regulator is:

Orifice	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
PSIG	300	200	150	100	75	40

The maximum pressure to which the regulator case may be subjected under abnormal conditions without causing damage to the internal parts is: Set point plus 3 psi. If the outlet pressure exceeds this pressure, the regulator must be removed from service and carefully inspected. Damaged or otherwise unsatisfactory parts must be replaced before returning the regulator to service.

The maximum outlet pressure that can be safely contained in the diaphragm case is 30 psi, the maximum outlet pressure that can be experienced without damage is 60 psig. (Safely contained means no leakage as well as no bursting.)

Full Open Capacity

Use the following formula for the full open capacity:

- $Q = K \sqrt{P_0(P_1 - P_0)} \dots$ (for $\frac{P_1}{P_0}$ less than 1.894)
- $Q = \frac{KP_1}{2} \dots$ (for $\frac{P_1}{P_0}$ greater than 1.894)

Q = maximum capacity of the regulator (in SCFH of 0.6 specific gravity natural gas).
 K = the "K" factor, the regulator constant from the table below.
 P₁ = absolute inlet pressure (psia).
 P₀ = absolute outlet pressure (psia).

Orifice	1/2"	3/8"	5/16"	1/4"	3/16"	1/8"
K	520	292	206	132	74	33

Other Gases

For use on other compatible gases, flow capacities must be adjusted using the following correction factors:

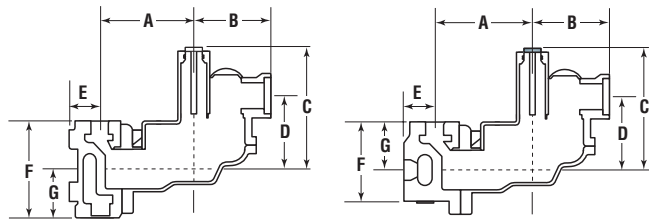
Type Gas	Sp Grav	Corr Factor
Air	1.0	0.77
Propane	1.53	0.63
Propane-air	1.2	0.71
Nitrogen	0.97	0.79
Dry CO ₂	1.52	0.63

For other non-corrosive gases:

$$\text{Corr Factor} = \sqrt{0.6 / \text{Specific Gravity}}$$

Dimensions

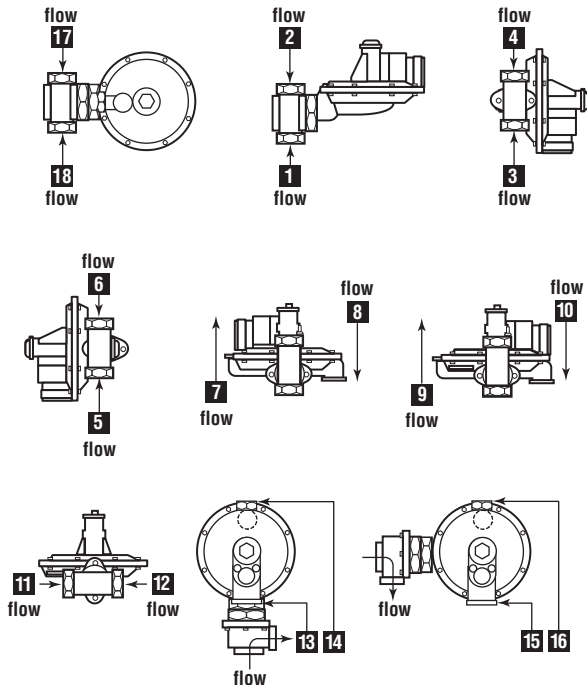
Body	A	B	C	D	E	F	G
Straight	4.00	3.15	5.10	3.05	1.25	4.00	2.00
Angle	4.00	3.15	5.10	3.05	1.25	3.25	2.00



Straight Body Connection

90° Angle Body Connection

Mounting Positions



Pressure Set: 7" w.c. with 1" w.c. @ 50 scfh, droop
Spring: Green except for blue spring in shaded areas

Body Size Outlet: 1/2"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
.5	50	90	100	120	130	230
1	70	110	120	210	250	280
2	90	190	240	260	320	360
3	110	240	260	300	380	420
5	190	280	360	360	440	470
10	250	390	450	450	530	
15	320	450	510	560	680	
20	400	550	640	610		
30	490	600	720			
40	540	680	780			
50	570	750	820			
60	630	850	880			
80	480	900				
100	540	930				
125	620	970				

Pressure Set: 7" w.c. @ 50 scfh, with 1" w.c. droop
Spring: Green except for blue spring in shaded areas

Body Size Outlet: 3/4"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
.5	50	90	100	120	190	240
1	70	110	120	230	250	290
2	90	190	250	260	330	380
3	110	240	290	380	430	470
5	190	300	380	470	510	550
10	250	440	570	650	700	
15	320	550	700	800	820	
20	400	610	800	1000		
30	520	750	890			
40	650	810	940			
50	730	910	1060			
60	820	1050	1130			
80	920	1240				
100	1130	1420				
125	1390	1650				

Outlet Pressure Set Point 7" w.c. @ 50 scfh, and 1.0 w.c. droop
Spring: Green except for blue spring in shaded areas

Body Size Outlet: 1"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
.5	65	90	140	175	210	270
1	80	140	200	275	300	400
2	100	225	250	375	425	600
3	170	310	350	500	575	800
5	215	400	500	725	825	1100
10	340	625	850	1100	1300	-
15	425	850	1200	1550	1650	
20	550	1100	1450	1850	-	-
30	700	1400	2000	-	-	-
40	850	1750	2200	-	-	-
50	1000	2150	2500	-	-	-
60	1150	2300	2500	-	-	-
80	1500	2400	-	-	-	-
100	1800	2500	-	-	-	-
125	2200	2500	-	-	-	-

Pressure Set: 7" w.c. @ 50 scfh, with 1" w.c. droop
 Spring: Green except for blue spring in shaded areas

Body Size Outlet: 1-1/4"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
.5	70	90	110	150	210	310
1	80	140	210	290	300	380
2	140	230	280	350	460	550
3	160	260	360	470	570	660
5	300	330	480	650	740	1020
10	420	550	750	1040	1250	
15	520	750	1170	1500	1680	
20	700	950	1360	1900		
30	850	1320	2120			
40	1010	1900	2520			
50	1150	2280	3100			
60	1490	2720	3260			
80	1820	3400				
100	2230	3870				
125	3000	4460				

Pressure Set: 2 psig @ 50 scfh, with 2% droop
 Spring: Yellow Black

Body Size Outlet: 1/2"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
3	110	240	230	310	410	440
5	180	330	460	550	600	820
10	290	500	680	780	880	1120
15	410	670	880	1010	970	
20	500	790	1000	1150	1220	
30	620	960	1340	1350		
40	750	1090	1400			
50	900	1240	1570			
60	1100	1380	1610			
80	1380	1480				
100	1440	1560				
125	1490	1660				

Pressure Set: 2 psig @ 50 scfh, with 2% droop
 Spring: Yellow Black

Body Size Outlet: 3/4"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
3	110	240	230	320	420	530
5	230	330	460	560	620	840
10	290	560	680	800	940	1220
15	420	770	880	1060	1100	
20	500	800	1020	1180	1250	
30	620	1190	1340	1350		
40	750	1280	1400			
50	900	1560	1570			
60	1110	1600	1650			
80	1420	1750				
100	1450	1980				
125	1490	2270				

Outlet Pressure Set Point 2 psig w.c. @ 50 scfh, and 2% droop
 Spring: Yellow/Black

Body Size Outlet: 1"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
3	130	240	320	450	490	560
5	180	340	460	680	730	925
10	320	600	850	1240	1280	1540
15	440	850	1150	1600	1600	-
20	530	1040	1420	2000	2000	-
30	710	1430	1920	2400	-	-
40	875	1700	2390	-	-	-
50	1050	2100	2800	-	-	-
60	1200	2400	3130	-	-	-
80	1500	2700	-	-	-	-
100	1850	3000	-	-	-	-
125	2100	3500	-	-	-	-

Pressure Set: 2 psig @ 50 scfh, with 2% droop
 Spring: Yellow Black

Body Size Outlet: 1-1/4"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
3	110	240	320	360	420	610
5	180	340	450	520	670	960
10	310	560	790	950	1030	1640
15	440	780	1020	1340	1510	
20	520	940	1320	1620	2060	
30	700	1380	1810	2300		
40	860	1660	2400			
50	1010	2160	2900			
60	1180	2380	3440			
80	1500	3410				
100	1820	3990				
125	2220	4710				

Outlet Pressure Set Point 5 psig w.c. @ 50 scfh, and 2% droop
 Spring: White

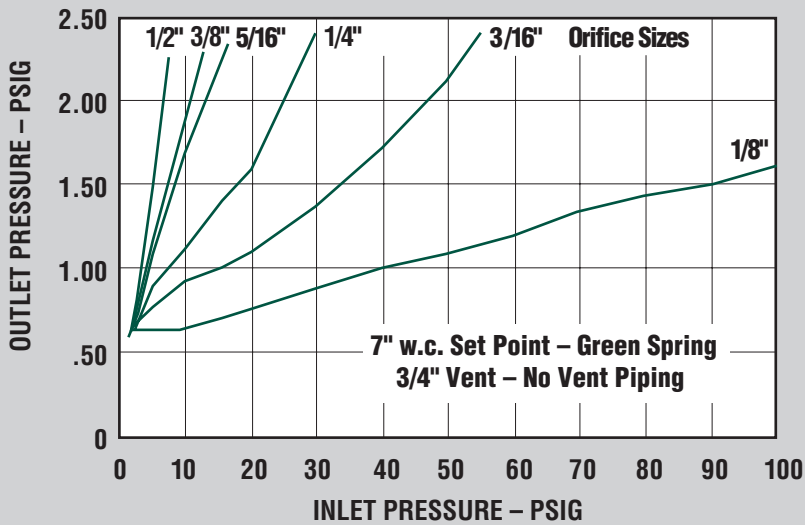
Body Size Outlet: 1"

Inlet Psig	Orifice					
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
10	175	240	300	355	420	610
15	230	365	430	555	650	-
20	255	445	525	650	770	-
30	370	570	710	950	-	-
40	405	745	940	-	-	-
50	455	855	1160	-	-	-
60	535	925	1450	-	-	-
80	714	1003	-	-	-	-
100	865	1215	-	-	-	-
125	1054	1480	-	-	-	-

Flow capacities in SCFH of 0.60 specific gravity gas @ 60° F and 14.7 psia. For maximum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Note: The last capacity figure in each column indicates the maximum capacity for each orifice at recommended pressure within the optimum performance range.

Relief Valve Performance: Lever Disconnected



Authorized Distributor:

Limited Warranty

Seller warrants the Goods to be free from defects in materials manufactured by Seller and in Seller's workmanship for a period of **(one(1) year)** after tender delivery (the "Warranty Period"). **THIS LIMITED WARRANTY**

- (A) IS IN LIEU OF, AND SELLER DISCLAIMS AND EXCLUDES, ALL OTHER WARRANTIES, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF CONFORMITY TO MODELS OR SAMPLES;**
- (B)** does not apply to any Goods which have been (I) repaired, altered or improperly installed; (II) subjected to improper use or storage; (III) used or incorporated with other materials or equipment, after Buyer or anyone using the Goods has, or reasonably should have, knowledge of any defect or nonconformance of the Goods; or (IV) manufactured, fabricated or assembled by anyone other than the Seller;
- (C)** shall not be effective unless Buyer notifies Seller in writing of any purported defect or nonconformance within **(thirty (30) days)** after Buyer discovers or should have reasonably discovered such purported defect or nonconformance; and
- (D)** shall only extend to Buyer and not to any subsequent buyers or users of the Goods. Buyer shall provide Seller access to the Goods as to which Buyer claims a purported defect or nonconformance; upon request by Seller, Buyer shall, at its own risk and expense, promptly return the Goods in question to Seller's Plant.