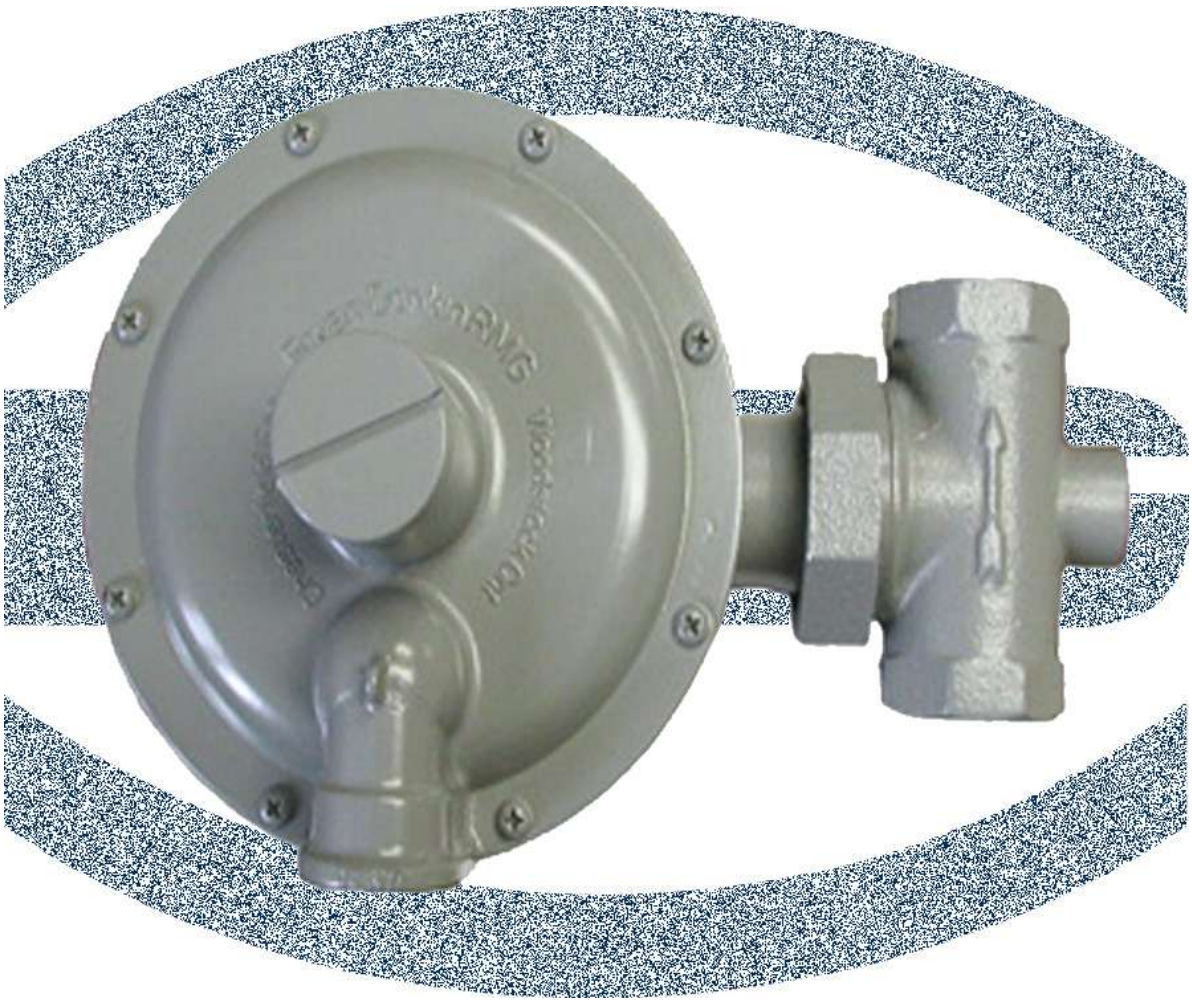
MODEL 240 GAS PRESSURE REGULATOR

General Description

Edition
GD240.06



BRYAN DONKIN RMG CANADA LIMITED

Serving the Gas Industry—WORLDWIDE

MODEL 240 GAS PRESSURE REGULATOR

General Description

Applications

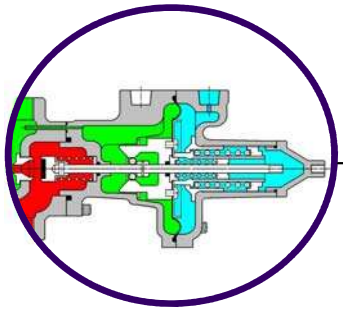
- Primarily utilized for residential, commercial and industrial applications
- For natural gas and all non-corrosive gaseous media
- Various options for specialty applications

Characteristics

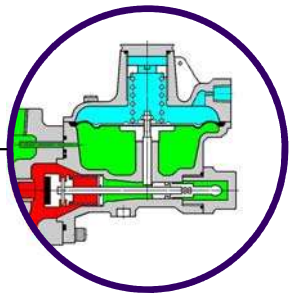
- Specifically designed for safe, accurate, pressure reduction of gaseous media
- Wide inlet pressure range 1—125 psig (0.07-8.6 bar) depending on orifice diameter
- Maximum inlet pressure 150 psig (10 bar)
- Maximum operating pressure 125 psig (8.6 bar)
- Spring-loaded, lever-operated to accommodate changes in inlet pressure
- Pilot-operated version available for increased capacity, higher outlet pressure setting range
- Various interchangeable orifices for ease of maintenance and increased turndown ratio to accommodate a wide range of flows and pressure conditions (inlet & outlet pressures)
- Outlet pressure settings from 4” w.c. to 3 psig (10-210 mbar) over 5 spring ranges
- 4 different inlet/outlet thread diameters (National or British Pipe Standards – NPT, BSPT, BSPP)
- Available in angle body (90°) and inline body (180°) design
- 1” flanged version available in ANSI150 or PN16 with flat or raised face profiles
- Various relief valve assemblies available (full, limited and zero capacity relief discharge)
- ¾” threaded vent connection
- Available with Internal Impulse or Control Line (I.C.L.) or External Impulse or Control Line Connections (E.C.L.)
- Ease of maintenance due to interchangeable diaphragm casing cartridge accessible via a union nut to the body
- Various safety slam-shut valve (SSV) models available for pressure/flow cut-off protection
- Custom designed and pre-fabricated regulator assemblies available

MODEL 240 GAS PRESSURE REGULATOR

General Description



◊Under & Over Pressure Safety Slam-Shut Valve (UPCO/OPCO) options available



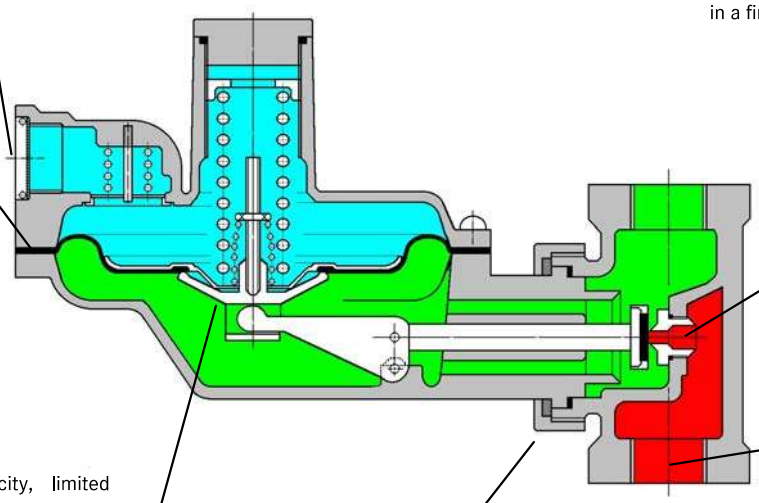
◊Over Pressure Safety Slam-Shut Valve (OPCO) options available

◊Outlet pressures from 4" w.c. to 3 psig over 6 spring ranges. Set point can be adjusted easily with standard screwdriver. Regulator top cap has the capability of including the provision for a wire seal.

◊Integral slam-shut valves available to protect against under (UPCO) and over pressure (OPCO) conditions in the downstream pipe-work. Slam-shut valves also available with low differential pressure cut-off and thermal trip (T-type) protection feature to shut gas off if regulator is engulfed in a fire.

◊¾" threaded vent connection protected by screen that is easily removed to attach vent extender or vent-line.

◊Reinforced molded diaphragm for increased speed of response and durabil-



◊Pressure test points available at inlet & outlet chambers of the body, as an option.

◊Several available orifice diameters to accommodate a wide range of pressure conditions and flow require-

◊4 different pipe thread diameters available on an inline (180°) body designs with ¾", 1", 1¼", 1½" NPT, BSPT or BSPP.

◊Available with angle (90°) body with 1" x 1" NPT, BSPT or BSPP

◊1" flanged connections available in ANSI150 or PN16 with flat or raised face profiles

◊Available with full capacity, limited capacity, no capacity internal relief valve designs to manage the capability of the regulator to discharge over pressure gas. Safety diaphragms also available.

◊Cartridge style regulator diaphragm casing design with union body connection so retrofitting new regulator casings is very easy without removing regulator body from the pipe-work.

◊Available with Internal Impulse or Control Line (I.C.L.) or External Impulse or Control Line Connections (E.C.L.)

Atmospheric Pressure

Inlet Pressure

Outlet Pressure

◊Available with integrated union fitting with o-ring seal for 100% bubble-tight seal on both inlet or outlet body connections to ease and reduce installation labor. Union available in standard or insulated versions.

MODEL 240 GAS PRESSURE REGULATOR

General Description

Available Constructions

240 R: full internal relief capacity
240 P: no internal relief capacity
240LR-290 OPCO: limited internal relief capacity with integral Over Pressure Cut-Off safety slam-shut valve
240P-290 OPCO: no internal relief capacity with integral Over Pressure Cut-Off safety slam-shut valve
240SD-290 OPCO SD: no internal relief capacity with safety diaphragms and Over Pressure Cut-Off safety slam-shut valve
240LR-309 UPCO/OPCO: limited internal relief capacity with integral Under and Over Pressure Cut-Off safety slam-shut valve
240P-309 UPCO/OPCO: no internal relief capacity with integral Under and Over Pressure Cut-Off safety slam-shut valve
240SD-309 UPCO/OPCO: no internal relief capacity with safety diaphragms and Under and Over Pressure Cut-Off safety slam-shut valve.
Pilot-Operated Version: refer to Model 240 PL and Model 2473PL Regulator
Thermal Protection (T-Type): no internal relief capacity with safety diaphragms and integral safety slam-shut valve (OPCO or UPCO/OPCO) that has shut-off protection if assembly is engulfed in a fire. Assembly has many steel component parts.
I.C.L. Type: Internally sensing or internal control line to measure outlet pressure
E.C.L. Type: Externally sensing or external control line required to measure outlet pressure in downstream pipe-work. Diaphragm casings drilled and tapped ½" NPT or BSPT to connect downstream sensing line.
F version: complete with inlet mess filter

Body Sizes and Connection Types

Angle Screwed Type Body

- 1" x 1"

Inline Screwed Type Body

- ¾", 1", 1¼" & 1½" screwed
- NPT, BSPT or BSPP threaded types
- U-type: with modified inlet union fitting on either inlet and/or outlet connections

Flanged Type Body

- 1" flanged inlet/outlet
- ANSI150RF, ANSI150FF, PN16RF, PN16FF types

MODEL 240 GAS PRESSURE REGULATOR

General Description

Pressure Ratings

Maximum Recommended Inlet Pressure

- 150 psig (10 bar)

Maximum Recommended Operating Pressure

- 125 psig (8.6 bar) with ⅛” (3.2mm) orifice
- 100 psig (7 bar) with 3⁄16” (5.0mm) orifice
- 75 psig (5 bar) with ¼” (7.0mm) orifice
- 60 psig (4 bar) with ⅜” (9.0mm) orifice
- 30 psig (2 bar) with 7⁄16” (11.0mm) & ½” (12.5mm) orifice

Materials of Construction

Screwed Body	Cast Iron
Flanged Body	Cast Iron
Diaphragm Casings	Die Cast Aluminum
Diaphragm	Molded Nitrile Rubber with Nylon Reinforcing
Valve Head (Seat)	Buna-N Rubber & Polyurethane
Diaphragm Plates	Steel
Orifice (standard)	Aluminum
Orifice (with safety slam shut valve)	Brass or Stainless Steel (T-type)
Vent Screen	Stainless Steel
Fasteners	Steel
Top Cap (standard)	Aluminum

Weights

- w/ screwed body (¾” & 1”) – 5 lb. (2.3 kg)
- w/ screwed body (1¼” & 1½”) – 6.5 lb. (3.0 kg)
- w/ flanged body – 9 lb. (4.1 kg)
- w/ 290 OPCO - add 1.1 lb. (0.5 kg)
- w/ 309 UPCO/OPCO – add 2.2 lb. (1.0 kg)
- w/ 309 T-Type UPCO/OPCO – add 4.75 lb. (2.2 kg)

Temperature Rating

- -40° to 60° Celsius
- -40° to 120° Fahrenheit

MODEL 240 GAS PRESSURE REGULATOR

General Description

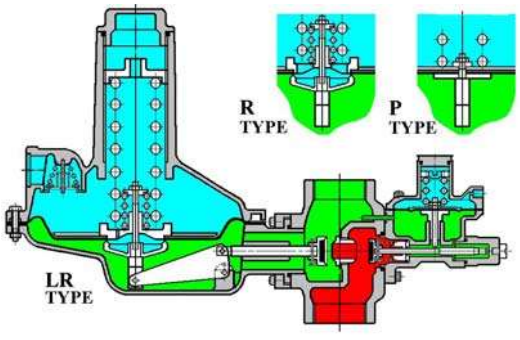
Outlet Pressure Range

Range (imperial)	Range (metric)	Spring Number/Colour
4” – 8” w.c.	10 – 20 mbar	126 (red)
6” - 14” w.c.	15 – 35 mbar	131 (self)
10” - 17” w.c.	25 – 43 mbar	127 (green)
16” – 30” w.c.	40 – 76 mbar	392 (white)
1 – 2 psig	70 – 140 mbar	393 (blue)
2 – 3 psig	140 – 210 mbar	394 (grey)

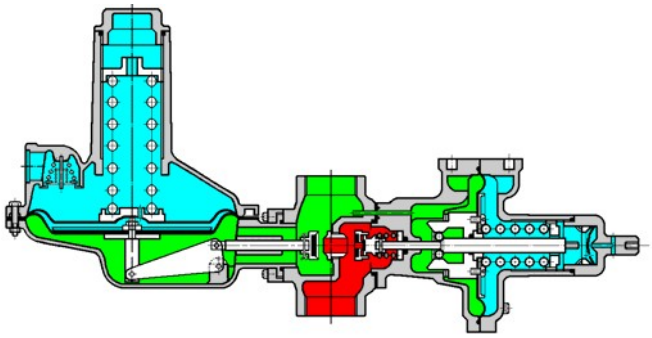
Relief Pressure Range

Outlet Pressure Spring	Relief Range (imperial)	Relief Range (metric)
126	8” - 18” w.c.	20 – 45 mbar
131	12” - 28” w.c.	30 – 70 mbar
127	20” - 40” w.c.	50 – 100 mbar
392	30” - 56” w.c.	75 – 140 mbar
393	1.5 - 4 psig	105 - 280 mbar
394	4 – 5 psig	280 – 420 mbar

Relief Valve Options



SD-Type
Safety Diaphragm



Pilot-Operated Version for Higher Outlet Pressures and Flow Capacity, see Model 240PL and 2473PL Regulator Technical Bulletins.

MODEL 240 GAS PRESSURE REGULATOR

General Description

Performance Capacity — ¾" & 1" body

Spring 126 (range 4" - 8" w.c.) (range 10 — 20 mbar)

SET POINT 7" w.c. (18 mbar)
DROOP/BOOST 1" w.c. 2.5 mbar
Accuracy Class 20%

Outlet Pressure psig	Outlet Pressure bar	Orifice Size (millimeters/inches)											
		⅛" (3.2mm)		3⁄16" (5.0mm)		¼" (7.0mm)		⅜" (9.0mm)		7⁄16" (11.0mm)		½" (12.5mm)	
1	(0.070)	150	(4.3)	200	(5.7)	200	(5.7)	300	(8.5)	350	(9.1)	400	(11.3)
2	(0.140)	200	(5.7)	250	(7.1)	300	(8.5)	500	(14.2)	525	(14.9)	550	(15.6)
5	(0.350)	250	(7.1)	425	(12.0)	700	(19.8)	1250	(35.4)	1000	(28.3)	1200	(34.0)
10	(0.700)	400	(11.3	800	(22.7)	950	(26.9)	1950	(55.2)	1450	(41.1)	1700	(48.2)
15	(1)	550	(15.6)	1250	(35.4)	1200	(34.0)	2750	(77.9)	1950	(55.2)	1850	(52.4)
30	(2)	900	(25.5)	1800	(51.0)	1850	(52.4)	3550	(100.6)	3250	(92.1)	2600	(72.7)
45	(3)	1200	(34.0)	2400	(68.0)	2250	(63.7)	3900	(110.5)				
60	(4)	1450	(41.1)	2900	(82.2)	2300	(65.2)	3550	(100.6)				
75	(5)	1650	(46.7)	3400	(96.3)	2350	(66.6)						
100	(7)	1750	(49.6)	3500	(99.2)								
125	(8.6)	2200	(62.3)										

ft³/hr
(m³/hr)

Spring 131 (range 6" - 14" w.c.) (range 15 — 35 mbar)

SET POINT 10" w.c. (25 mbar)
DROOP/BOOST 2" w.c. 5.0 mbar
Accuracy Class 20%

1	(0.070)	150	(4.2)	175	(4.6)	200	(5.7)	325	(9.2)	300	(8.5)	350	(9.9)
2	(0.140)	225	(6.4)	300	(8.5)	375	(10.6)	700	(19.8)	750	(21.2)	850	(24.1)
5	(0.350)	300	(8.5)	600	(17.0)	800	(22.7)	1400	(39.7)	1250	(35.4)	1200	(34.0)
10	(0.700)	400	(11.3)	950	(26.9)	1200	(34.0)	1600	(45.3)	1850	(52.4)	1600	(45.3)
15	(1)	650	(18.4)	1200	(34.0)	1850	(52.4)	2100	(59.5)	2750	(77.9)	2000	(56.7)
30	(2)	800	(22.7)	1700	(48.2)	2100	(59.5)	2750	(77.9)	3000	(85.0)	2500	(70.8)
45	(3)	1100	(31.2)	2300	(65.2)	2550	(72.2)	3000	(85.0)				
60	(4)	1550	(43.9)	2750	(77.9)	2750	(77.9)	3550	(100.6)				
75	(5)	1750	(49.6)	3250	(92.1)	2900	(82.2)						
100	(7)	1900	(53.8)	3300	(93.5)								
125	(8.6)	2100	(59.5)										

ft³/hr
(m³/hr)

Spring 127 (range 10" - 17" w.c.) (range 25 — 43 mbar)

SET POINT 15" w.c. (38 mbar)
DROOP/BOOST 3" w.c. 7.5 mbar
Accuracy Class 20%

1	(0.070)	125	(3.5)	150	(4.2)	150	(4.2)	250	(7.1)	300	(8.5)	325	(9.2)
2	(0.140)	250	(7.1)	200	(5.7)	250	(70.8)	425	(12.0)	500	(14.2)	550	(15.6)
5	(0.350)	300	(8.5)	400	(11.3)	500	(14.2)	800	(22.7)	900	(25.5)	1000	(28.3)
10	(0.700)	400	(11.3)	600	(17.0)	800	(22.7)	1150	(32.6)	1250	(35.4)	1300	(36.8)
15	(1)	500	(14.2)	900	(25.5)	925	(26.2)	1400	(39.7)	1500	(42.5)	1600	(45.3)
30	(2)	750	(21.2)	1350	(38.2)	1450	(41.1)	1800	(51.0)	1900	(53.8)	2000	(56.7)
45	(3)	1000	(28.3)	1500	(42.5)	1850	(52.4)	2200	(62.3)				
60	(4)	1400	(39.7)	1650	(46.7)	1900	(53.8)	2300	(65.2)				
75	(5)	1600	(45.3)	1800	(51.0)	2000	(56.7)						
100	(7)	1950	(55.2)	1900	(53.8)								
125	(8.6)	2450	(69.4)										

ft³/hr
(m³/hr)

Scfh (ft³/hr) - natural gas, 0.6 sg
Scmh (m³/hr) - natural gas, 0.6 sg

MODEL 240 GAS PRESSURE REGULATOR

General Description

Performance Capacity – ¾" & 1" body

	Outlet Pressure	Inlet Pressure		Orifice Size (millimeters/inches)											
		psig	bar	⅛" (3.2mm)		3/16" (5.0mm)		¼" (7.0mm)		⅜" (9.0mm)		7/16" (11.0mm)		½" (12.5mm)	
Spring 392 (range 16" – 30" w.c.) (range 40 – 76 mbar)	SET POINT 28" w.c. (70 mbar)	2	(0.140)	250	(7.1)	275	(7.8)	475	(13.6)	475	(13.6)	550	(15.6)	650	(18.4)
		5	(0.350)	350	(9.9)	500	(14.2)	750	(21.2)	1100	(31.2)	1200	(34.0)	1250	(35.4)
		10	(0.700)	500	(14.2)	950	(26.9)	950	(26.9)	1300	(36.8)	1400	(39.7)	1600	(45.3)
	DROOP/ BOOST 6" w.c. 15 mbar	15	(1)	650	(18.4)	1200	(34.0)	1300	(36.8)	1500	(42.5)	1700	(48.2)	1900	(53.8)
		30	(2)	900	(17.0)	1450	(41.1)	1650	(46.7)	1900	(53.8)	1950	(55.2)	2100	(59.5)
		45	(3)	1200	(34.0)	2000	(56.7)	2050	(58.1)	2100	(59.5)				
	Accuracy Class 20%	60	(4)	1400	(39.7)	2100	(59.5)	2150	(60.9)	2200	(62.3)				
		75	(5)	1750	(49.6)	2500	(70.8)	2600	(73.7)						
		100	(7)	1800	(51.0)	2750	(77.9)						ft³/hr		
		125	(8.6)	1850	(52.4)								(m³/hr)		
Spring 393 (range 1 – 2 psig) (range 70 – 140 mbar)	SET POINT 2 psig (140 mbar)	5	(0.350)	300	(8.5)	450	(12.7)	725	(20.5)	1000	(28.3)	1000	(28.3)	1000	(28.3)
		10	(0.700)	450	(12.7)	500	(14.2)	950	(26.9)	1500	(42.5)	1550	(43.9)	1650	(46.7)
		15	(1)	550	(15.6)	800	(22.7)	1400	(39.7)	1750	(49.6)	1900	(53.8)	2000	(56.7)
	DROOP/ BOOST 11" w.c. 28 mbar	30	(2)	925	(26.2)	1150	(32.6)	1800	(51.0)	2200	(62.3)	2450	(69.4)	2650	(75.1)
		45	(3)	1200	(34.0)	1700	(48.2)	2200	(62.3)	2850	(80.7)				
		60	(4)	1450	(41.1)	2100	(59.5)	2500	(70.8)	2850	(80.7)				
	Accuracy Class 20%	75	(5)	1700	(48.2)	2300	(65.2)	2650	(75.1)						
		100	(7)	1950	(55.2)	2600	(73.7)						ft³/hr		
		125	(8.6)	2400	(68.0)								(m³/hr)		
Spring 394 (range 2 – 3 psig) (range 140 – 210 mbar)	SET POINT 2.5 psig (175 mbar)	5	(0.350)	200	(5.7)	500	(14.2)	525	(14.9)	850	(24.1)	900	(25.5)	1050	(29.7)
		10	(0.700)	425	(12.0)	750	(21.2)	1000	(28.3)	1350	(38.2)	1500	(42.5)	1600	(45.3)
		15	(1)	575	(16.3)	900	(25.5)	1300	(36.8)	1650	(46.7)	1750	(49.6)	1850	(52.4)
	DROOP/ BOOST 14" w.c. 35 mbar	30	(2)	950	(26.9)	1600	(45.3)	1700	(48.2)	2250	(63.7)	2400	(68.0)	2600	(73.7)
		45	(3)	1150	(32.6)	2050	(58.1)	2150	(60.9)	2650	(75.1)				
		60	(4)	1400	(39.7)	2250	(63.7)	2400	(68.0)	2750	(77.9)				
	Accuracy Class 20%	75	(5)	1800	(51.0)	2500	(70.8)	2850	(109.1)						
		100	(7)	2200	(62.3)	2650	(75.1)						ft³/hr		
		125	(8.6)	2700	(76.5)								(m³/hr)		

Scfh (ft³/hr) - natural gas, 0.6 sg
Scmh (m³/hr) - natural gas, 0.6 sg

MODEL 240 GAS PRESSURE REGULATOR

General Description

Performance Capacity – 1¼" & 1½" body

Spring 126 (range 4" – 8" w.c.) (range 10 – 20 mbar)

Outlet Pressure	Inlet Pressure psig	Inlet Pressure bar	Orifice Size (millimeters/inches)											
			⅛" (3.2mm)		3/16" (5.0mm)		¼" (7.0mm)		⅜" (9.0mm)		7/16" (11.0mm)		½" (12.5mm)	
SET POINT 7" w.c. (18 mbar)	1	(0.070)	150	(4.3)	200	(5.7)	400	(11.3)	475	(13.5)	525	(14.9)	550	(15.6)
	2	(0.140)	200	(5.7)	400	(11.3)	625	(17.7)	650	(18.4)	800	(22.7)	800	(22.7)
	5	(0.350)	275	(7.8)	650	(18.4)	850	(24.1)	1175	(33.3)	1300	(36.8)	1300	(36.8)
DROOP/ BOOST 1" w.c. 2.5 mbar	10	(0.700)	300	(8.5)	1000	(28.3)	1700	(48.2)	1600	(45.3)	2050	(58.1)	2100	(59.5)
	15	(1)	425	(12.0)	1250	(35.4)	2100	(59.5)	2300	(65.2)	2600	(73.7)	2700	(76.5)
	30	(2)	525	(14.9)	1850	(52.4)	3300	(93.5)	2750	(77.9)	3000	(85.0)	3200	(90.7)
Accuracy Class 20%	45	(3)	850	(24.1)	2450	(69.4)	3900	(110.5)	2900	(82.2)				
	60	(4)	1000	(28.3)	2950	(83.6)	4500	(127.5)	3000	(85.0)				
	75	(5)	1650	(46.7)	3650	(103.4)	5200	(147.3)						
	100	(7)	1700	(48.2)	4200	(119.0)								
	125	(8.6)	2450	(69.4)										

ft³/hr

(m³/hr)

Spring 131 (range 6" – 14" w.c.) (range 15 – 35 mbar)

SET POINT 10" w.c. (25 mbar)	1	(0.070)	125	(3.5)	175	(5.0)	175	(5.0)	350	(9.9)	375	(10.6)	400	(11.3)
	2	(0.140)	175	(5.0)	350	(9.9)	375	(10.6)	650	(18.4)	525	(14.9)	800	(22.7)
	5	(0.350)	300	(8.5)	475	(13.5)	500	(14.2)	925	(26.2)	1050	(29.7)	1300	(36.8)
DROOP/ BOOST 2" w.c. 5.0 mbar	10	(0.700)	475	(13.5)	575	(16.3)	600	(17.0)	1700	(48.2)	1800	(51.0)	1850	(52.4)
	15	(1)	550	(15.6)	850	(24.1)	1300	(36.8)	1950	(55.2)	2100	(59.5)	2500	(70.8)
	30	(2)	800	(22.7)	1400	(39.7)	1800	(51.0)	2500	(70.8)	3300	(93.5)	3000	(85.0)
Accuracy Class 20%	45	(3)	1050	(29.7)	1850	(52.4)	2400	(68.0)	3150	(89.2)				
	60	(4)	1300	(36.8)	2200	(62.3)	2600	(73.7)	3400	(96.3)				
	75	(5)	1650	(46.7)	2000	(56.7)	2700	(76.5)						
	100	(7)	1800	(51.0)	2500	(70.8)								
	125	(8.6)	2000	(56.7)										

ft³/hr

(m³/hr)

Spring 127 (range 10" – 17" w.c.) (range 25 – 43 mbar)

SET POINT 15" w.c. (38 mbar)	1	(0.070)	100	(2.8)	150	(4.2)	150	(4.2)	300	(8.5)	350	(9.9)	375	(10.6)
	2	(0.140)	175	(5.0)	200	(5.7)	250	(7.1)	450	(12.7)	500	(14.2)	600	(17.0)
	5	(0.350)	275	(7.8)	375	(10.6)	525	(14.9)	900	(25.5)	1000	(28.3)	1100	(31.2)
DROOP/ BOOST 3" w.c. 7.5 mbar	10	(0.700)	300	(8.5)	450	(12.7)	825	(23.4)	1500	(42.5)	1600	(45.3)	1700	(48.2)
	15	(1)	350	(9.9)	650	(18.4)	1250	(35.4)	2400	(68.0)	2700	(76.5)	2600	(73.7)
	30	(2)	750	(21.2)	1050	(29.7)	2000	(56.7)	3100	(87.8)	3400	(96.3)	3400	(96.3)
Accuracy Class 20%	45	(3)	1000	(28.3)	1450	(41.1)	2250	(63.7)	3400	(96.3)				
	60	(4)	1400	(39.7)	1600	(45.3)	2400	(68.0)	4000	(113.3)				
	75	(5)	1500	(42.5)	1800	(51.0)	2800	(79.3)						
	100	(7)	1850	(52.4)	2400	(68.0)								
	125	(8.6)	2200	(62.3)										

ft³/hr

(m³/hr)

Scfh (ft³/hr) - natural gas, 0.6 sg
Scmh (m³/hr) - natural gas, 0.6 sg

MODEL 240 GAS PRESSURE REGULATOR

General Description

Performance Capacity — 1¼" & 1½" body

	Outlet Pressure	Inlet Pressure		Orifice Size (millimeters/inches)											
		psig	bar	⅛" (3.2mm)		3/16" (5.0mm)		¼" (7.0mm)		⅜" (9.0mm)		7/16" (11.0mm)		½" (12.5mm)	
Spring 392 (range 16" - 30" w.c.) (range 40 – 76 mbar)	SET POINT 28" w.c. (70 mbar)	2	(0.140)	225	(6.4)	400	(11.3)	425	(12.0)	500	(14.2)	600	(17.0)	625	(17.7)
		5	(0.350)	400	(11.3)	550	(15.6)	900	(25.5)	1200	(34.0)	1400	(39.7)	1500	(42.5)
		10	(0.700)	600	(17.0)	925	(26.2)	950	(26.9)	1950	(55.2)	2100	(59.5)	2150	(60.9)
	DROOP/ BOOST 6" w.c. 15 mbar	15	(1)	750	(21.2)	1300	(36.8)	1200	(34.0)	2700	(76.5)	2850	(80.7)	2900	(82.2)
		30	(2)	1000	(28.3)	1550	(43.9)	1750	(49.6)	2800	(79.3)	3100	(87.8)	3150	(89.2)
		45	(3)	1200	(34.0)	2100	(59.5)	1900	(53.8)	4300	(121.8)				
	Accuracy Class 20%	60	(4)	1500	(42.5)	2450	(69.4)	2600	(73.7)	4300	(121.8)				
		75	(5)	1650	(46.7)	2650	(75.1)	3000	(85.0)						
		100	(7)	2000	(56.7)	3100	(87.8)								
		125	(8.6)	2200	(62.3)										
													ft³/hr		
													(m³/hr)		
Spring 393 (range 1 – 2 psig) (range 70 – 140 mbar)	SET POINT 2 psig (140 mbar)	5	(0.350)	300	(8.5)	500	(14.2)	800	(22.7)	1150	(32.6)	1250	(35.4)	1300	(36.8)
		10	(0.700)	400	(11.3)	700	(19.8)	1000	(28.3)	1550	(43.9)	1650	(46.7)	1700	(48.2)
		15	(1)	650	(18.4)	1000	(28.3)	1450	(41.1)	2600	(73.7)	2700	(76.5)	2750	(77.9)
	DROOP/ BOOST 11" w.c. 28 mbar	30	(2)	1100	(31.2)	1550	(43.9)	2100	(59.5)	3500	(99.2)	3600	(102.0)	3650	(103.4)
		45	(3)	1500	(42.5)	2100	(59.5)	2350	(66.6)	4300	(121.8)				
		60	(4)	1600	(45.3)	2700	(76.5)	3200	(90.7)	4300	(121.8)				
	Accuracy Class 20%	75	(5)	1900	(53.8)	3000	(85.0)	3450	(97.7)						
		100	(7)	2100	(59.5)	3200	(90.7)								
		125	(8.6)	2600	(73.7)										
													ft³/hr		
													(m³/hr)		
Spring 394 (range 2 – 3 psig) (range 140 – 210 mbar)	SET POINT 2.5 psig (175 mbar)	5	(0.350)	250	(47.2)	525	(14.9)	575	(16.3)	900	(25.5)	1000	(32.8)	1100	(31.2)
		10	(0.700)	425	(12.0)	700	(19.8)	1050	(29.7)	1550	(43.9)	1650	(46.7)	1750	(49.6)
		15	(1)	575	(16.3)	1000	(28.3)	1450	(41.1)	1750	(49.6)	1900	(53.8)	1950	(55.2)
	DROOP/ BOOST 14" w.c. 35 mbar	30	(2)	1050	(29.7)	1700	(48.2)	2100	(59.5)	3200	(90.7)	3250	(92.1)	3300	(93.5)
		45	(3)	1300	(36.8)	2200	(62.3)	2475	(70.1)	3450	(97.7)				
		60	(4)	1550	(43.9)	2850	(80.7)	3050	(86.4)	3600	(102.0)				
	Accuracy Class 20%	75	(5)	1950	(55.2)	2950	(83.6)	3200	(90.7)						
		100	(7)	2300	(65.2)	3250	(92.1)								
		125	(8.6)	2900	(82.2)										
													ft³/hr		
													(m³/hr)		

Scfh (ft^3/hr) - natural gas, 0.6 sg
Scmh (m^3/hr) - natural gas, 0.6 sg

MODEL 240 GAS PRESSURE REGULATOR

General Description

Capacity Calculation or Correction Factors for Other Gases

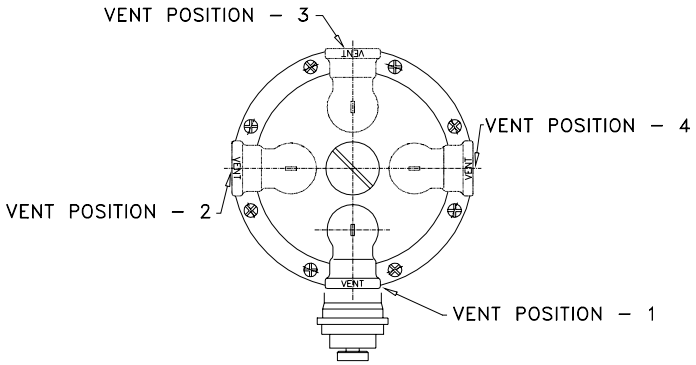
Gas Type	Specific Gravity	Correction Factor (CF)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide (Dry)	1.52	0.63
Carbon Monoxide (Dry)	0.97	0.79
Natural Gas	0.60	1.00
Nitrogen	0.97	0.79
Propane	1.53	0.63
Propane-Air-Mix	1.20	0.71

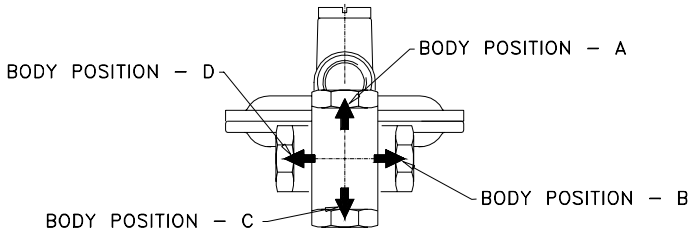
For Other Correction Factors

$$C_F = \sqrt{\frac{0.6}{\text{Sg of Gas}}}$$

Vent and Body Orientations

Orientation — Body Position Letter followed by Vent Position Number





MATCH GAS FLOW INDICATING ARROW FOUND ON CASTING

MODEL 240 GAS PRESSURE REGULATOR

General Description

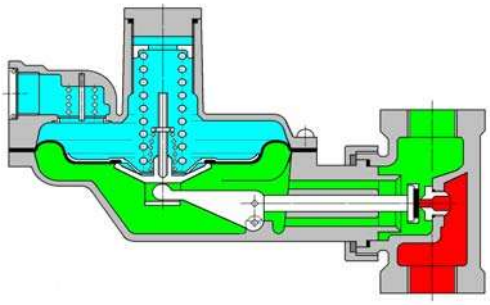
Sectional Diagrams

Inlet Pressure

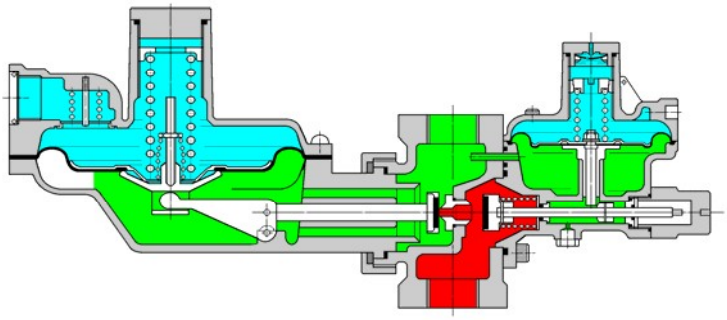
Outlet Pressure

Atmospheric

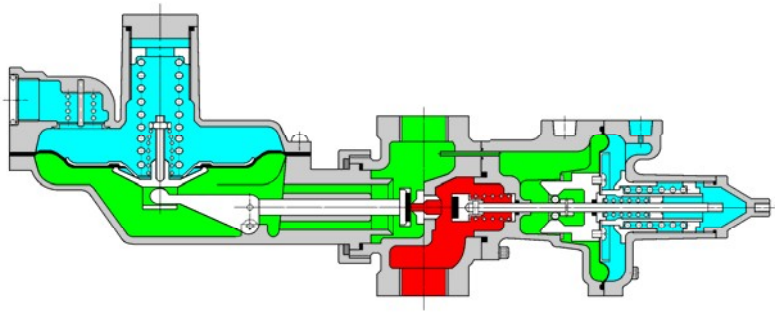
240 R (screwed body)



240 – 290 OPCO



240 – 309 UPCO/OPCO



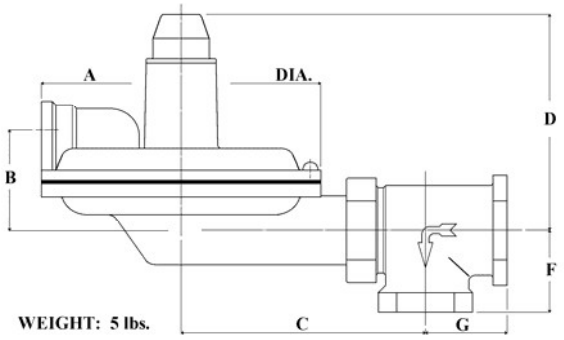
MODEL 240 GAS PRESSURE REGULATOR

General Description

Dimensional Drawings

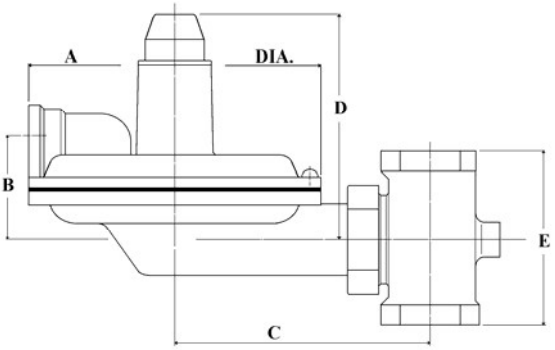
240 (angle body)

Overall Length – 11.5”



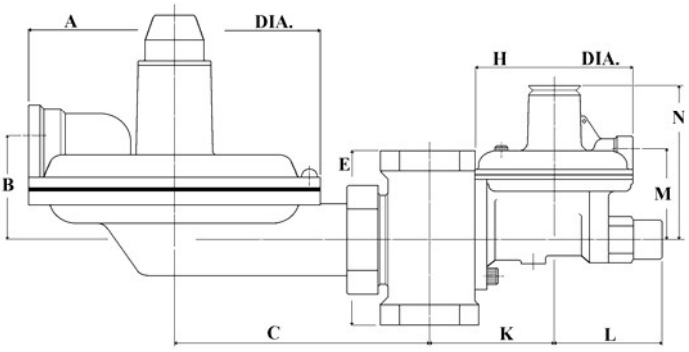
240 (screwed body)

Overall Length – **11.5"**



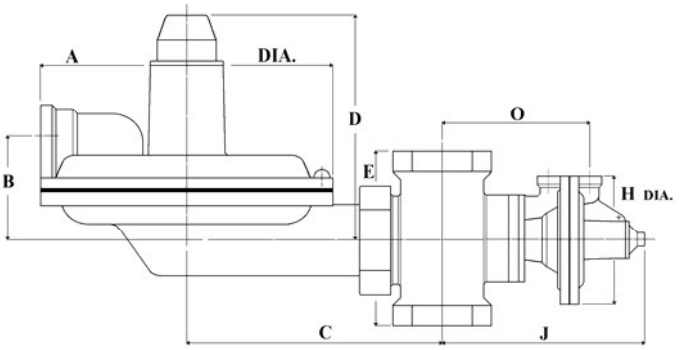
240–290 (screwd body)

Overall Length – 16”



240–309 (screwed body)

Overall Length – 17"



Body Size	A	B	C	D	E	F	G	H	J	K	L	M	N	O
¾" & 1"	6¾"	2¼"	6"	5¼"	4"	2"	2"	3¾"	5¾"	4¼"	2½"	2¼"	3¾"	3¾"
1¼" & 1½"	6¾"	2¼"	6"	5¼"	5"	2"	2"	3¾"	5¾"	4¼"	2½"	2¼"	3¾"	3¾"

Internal Relief Valve and Safety Slam Shut Valve Options

Regulators for Reduced Clearances or Venting Limitations

- Please contact one of our representatives for more detailed information

Regulators for Indoor Installations without Requirement for Vent-Line

- Please contact one of our representatives for more detailed information

Internal Safety Relief Valve (SRV) Description

- The SRV is designed to monitor the pressure in the outlet chamber or downstream of the regulator and to relieve by either venting gas leakages or full flow capacity (depending on the device design) into the atmosphere in the event of an over-pressure condition.
- If the pressure in the measuring chamber exceeds the force of the set point spring of the relief valve, the diaphragm rises and opens the relief valve. The gas then flows from the outlet pressure line to atmosphere or another desired location.
- The relief gas pressure and flow is discharged until the pressure is returned to the predetermined safe level.
- The safety relief pressure of the internal relief valve occurs slightly above the set pressure of the main spring or outlet pressure

Safety Slam Shut Valve (SSV) Description

- The SSV is designed to monitor the outlet pressure and to interrupt the gas flow, if preset limits are exceeded.
- This preset pressure is adjustable in the field.
- If the measured pressure reaches the set point of the SSV, a release mechanism is triggered and the SSV closes the valve on the inlet pressure side of the regulator. This closing function completely blocks the forward movement of gas past the SSV.
- Safety slam shut valves are available in over pressure cut off (OPCO) protection or under and over pressure cut off (UPCO/OPCO) protection.
- After the SSV is tripped, the condition that triggered the closing of the valve must be addressed and then the SSV can be manually reset.
- Thermal trip protection is also available as an option to shut the gas flow off, if the safety slam shut valve is exposed to high temperatures or engulfed in a fire (T-Type).
- Please contact one of our representatives for the technical brochure on all of our safety slam shut valves.

MODEL 240 GAS PRESSURE REGULATOR

General Description

Commissioning and Installation Instructions

Please contact one of our representatives for the installation and commissioning instructions. Additionally, the commissioning and installation instructions are found in each box that the equipment is shipped in and can be downloaded from the website.

Ordering Information

1. Inlet pressure (minimum and maximum)
2. Outlet pressure requirement
3. Flow requirement (minimum and maximum)
4. Type of gas
5. Temperature
6. Pipe connections (inlet and outlet)
7. Internal or external impulse (sensing)
8. Safety options or requirements (SRV and/or SSV)
9. Vent and body orientation
10. Other critical information (system design or description)

Product Portfolio

- Pressure regulators for every application from domestic, commercial, industrial to transmission line, city gate stations and other gas utility applications.
- Safety relief valves
- Safety slam shut valves
- Metering equipment (rotary displacement, turbine, vortex shedding, ultrasonic)
- Volume correctors (temperature and pressure)
- Filters
- Underground pressure regulator and metering modules
- Ball valves
- Station design and assembly (prefabricated stations, skid-mounted assemblies, small regulator/meter-set assemblies)
- Flame arrestors
- Data logging and software
- Check and non-return valves
- Training and after-sales service

Contact Information

Bryan Donkin RMG Canada Limited
50 Clarke Street South, Woodstock, Ontario, Canada N4S 7Y5
Phone: +1-519-539-8531
Fax: +1-519-537-3339
Email: neil@bdrmgcanada.com
Website: www.rmg.com

RMG Regel + Messtechnik GmbH
Osterholzstrasse 45, D-34123, Kassel, Germany
Phone: +49-561-5007-0
Fax: +49-561-5007-107
Website: www.rmg.com

Bryan Donkin RMG Gas Controls Limited
Enterprise Drive, Holmewood, Chesterfield S42 5UZ England
Phone: +44-1246-501501
Fax: +44-1246-501-500
Website: www.rmg.com

Distributor Information