

P143 Pressure Regulator

- Versatile
- Control Accuracy
- Compact Design
- Low Pressure Cut-off

The Type P143 pressure regulator is ideal for natural gas, air, propane and general purpose gas pressure regulation. Uses include commercial, residential and light industrial for burners and unit heaters. The P143 has an internal relief device and is available in the low pressure cut off – LPCO – version.

Applications

Applicable to a wide range of gaseous fluids, including air, natural gas and propane. Can be used as a LP regulator.



Materials of Construction

	P143
Body, Bonnet	Iron, Aluminum
Diaphragm	Nitrile
Diaphragm Assembly	Zinc/Nitrile
Gaskets	Non-asbestos, CGR 2750
Pin	Stainless Steel
Vent screen	Stainless Steel
Spring	Zinc-Plated Steel
Diaphragm Piston	Zinc-Plated Steel

Specifications

	P143
Inlet / Outlet	3/4" x 3/4", 3/4" x 1", 1" x 1", 1" x 1-1/4", 1-1/4" x 1-1/4"
Maximum allowable inlet pressure	See Chart
Temperature Range	-20°F to 150 °F
Approximate Weight	5.63 lb. 2.6 kg.

P143 Part Matrix

P143								0	0	
	↑	↑	↑	↑	↑	↑	↑	↑	↑	
C										Low Pressure Cut Off
S										Standard
										Body Size
										3/4 x 3/4 NPT Ports
										3/4 x 1 NPT Ports
										1 x 1 NPT Ports
										1 x 1-1/4 NPT Ports
										1-1/4 x 1-1/4 NPT Ports
										Spring Ranges
										Red Spring LPCO Red Spring Standard
										4.5" – 7.5" WC 3.5" – 6.5" WC
										Blue Spring LPCO Blue Spring Standard
										6" – 9.5" WC 5" – 8.5" WC
										Green Spring LPCO Green Spring Standard
										7.5" – 15" WC 6" – 14" WC
										Orange Spring LPCO Orange Spring Standard
										13.5" – 29" WC 12" – 28" WC
										Purple Spring 1/2 – 2 PSIG (Standard Only)
										Yellow Spring 1/2 – 3 PSIG (Standard Only)
										Black Spring 2 – 6 PSIG (Standard Only)
										Orifice Size
										1/8" (Standard Only)
										3/16" (Standard Only)
										1/4"
										5/16"
										3/8"
										7/16" (LPCO Only)
										1/2" (Standard Only)
										5/8" (Standard Only)
										Body Position
										Up Position
										Down Position
										Right Position
										Left Position
										Vent Position
										12 Position
										3 Position
										6 Position
										9 Position

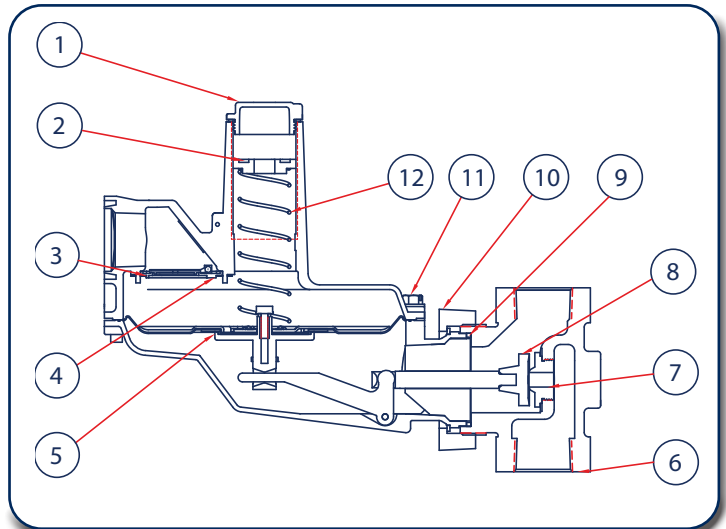
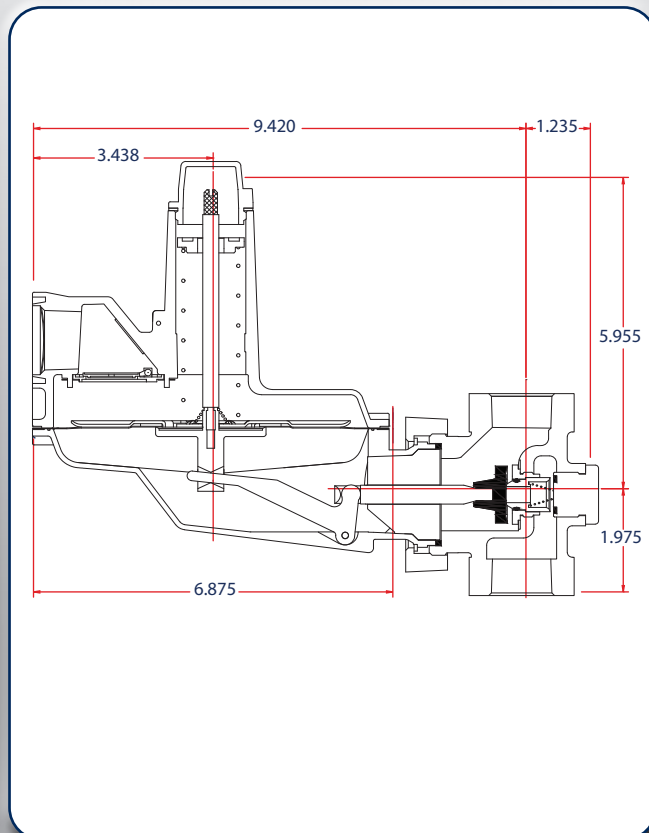
Max Inlet Pressure (PSIG)

Orifice	LPCO	Standard
1/8		125
3/16		125
1/4	60	60
5/16	40	40
3/8	25	40
7/16	15	—
1/2		20
5/8		10

P143 Standard Parts

Item	Description		Part Number
1	Bonnet Cap	With gasket for Standard, acetal	610-065-000/ 662-230-000
2	Adjustment Screw, Acetal		648-528-000
3	Vent	Subassembly	822-036-000
4	Collar (2 required)		612-008-000
5	Diaphragms		
	Standard Diaphragm, plate & washer nitrile		804-265-001
6	Standard Bodies	3/4" x 3/4" Port Iron	664-357-000
		3/4" x 1" Port Iron	664-357-002
		1" x 1" Port Iron	664-357-001
		1" x 1-1/4" Port Iron	664-357-003
		1-1/4" x 1-1/4" Port Iron	664-357-004
7	Standard Orifice - Aluminum	1/8"	688-053-000
		3/16"	688-053-001
		1/4"	688-053-002
		5/16"	688-053-003
		3/8"	688-053-004
		1/2"	688-053-005
		5/8"	688-053-006
8	Main Seat, nitrile		650-168-000
9	Square Ring		662-226-000
10	Housing Nut & Retaining Ring,		803-073-000
11	Build Screws, plated steel (8 required)		648-529-000
12	Range Springs	3.5"-6.5" WC Red, Plated Steel	655-723-000
		5"-8.5" WC Blue, Plated Steel	655-723-001
		6"-14" WC Green, Plated Steel	655-723-002
		12"-33" WC Orange, Plated Steel	655-723-003
	Range Springs (Not for use in LPCO)	.5-2 PSI - Purple, Plated Steel	655-723-004
		.5-3 PSI - Yellow, Plated Steel	655-723-005
		2-6 PSI - Black, Plated Steel	655-723-006

P143 Standard Dimensions



P143 Standard Model Flow Capacities

Capacity* in SCFH Natural Gas
(0.6 specific gravity – 14.65 PSIG – 65°F)

Body Size 3/4" x 3/4"							
Inlet	Orifice						
PSIG	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2	-	-	-	-	340	450	510
1	-	-	-	480	500	510	530
2	-	-	530	560	570	580	600
3	-	420	600	560	630	650	670
5	250	560	700	720	730	770	790
7.5	310	700	840	860	880	900	900
10	370	830	950	970	1000	1020	1020
20	530	1200	1220	1240	1250	1270	-
40	860	1570	1330	1340	1450	-	-
60	1200	1660	1520	-	-	-	-
80	1500	1710	-	-	-	-	-
125	1800	1900	-	-	-	-	-

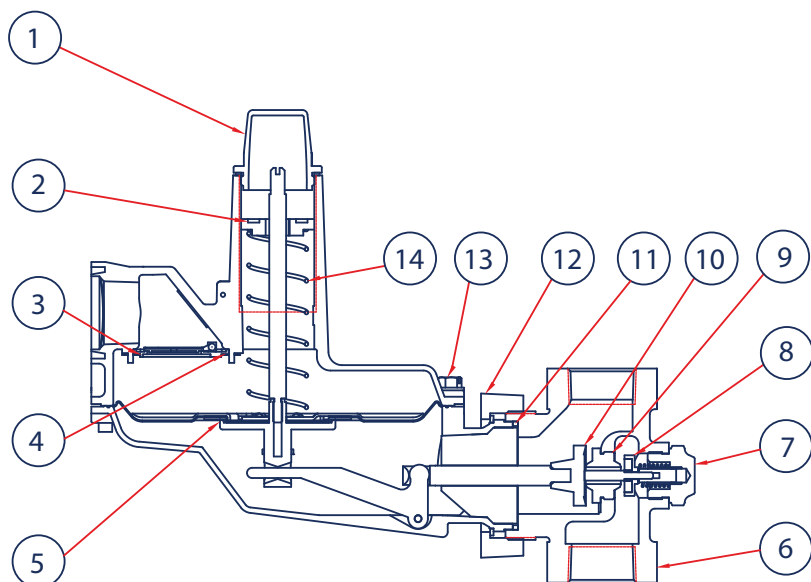
Body Size 3/4" x 1" • 1" X 1"							
Inlet	Orifice						
PSIG	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2	-	-	-	-	350	460	520
1	-	-	-	480	550	600	650
2	-	-	530	700	840	880	780
3	-	420	650	870	1000	920	810
5	250	580	890	1120	1160	950	970
7.5	310	700	1140	1340	1270	1140	1060
10	370	840	1360	1500	1330	1200	1180
20	530	1230	2000	1600	1480	1400	-
40	860	1700	2000	1640	1900	-	-
60	1200	1900	2000	-	-	-	-
80	1540	2000	-	-	-	-	-
125	2100	2100	-	-	-	-	-

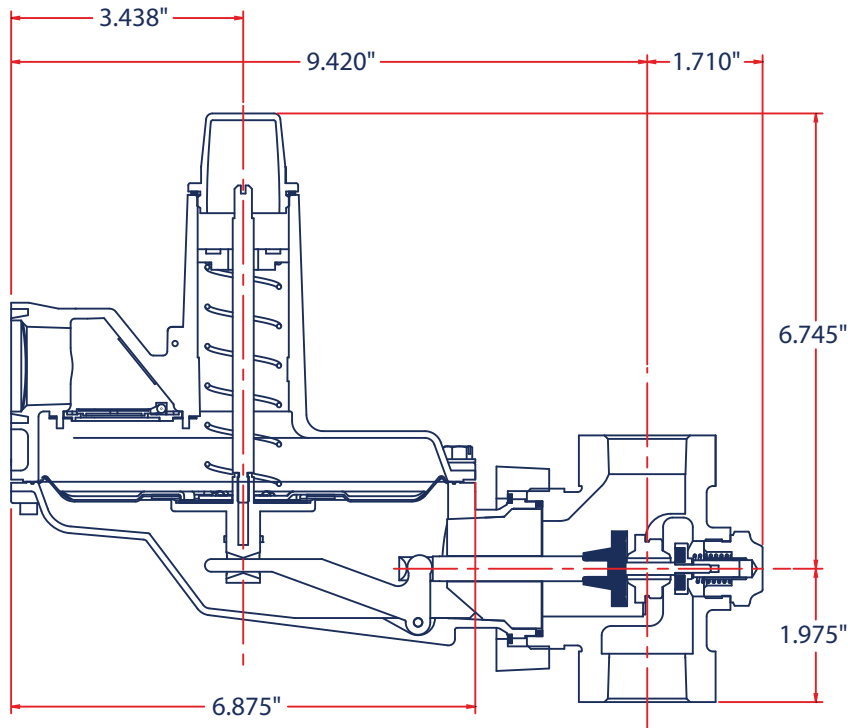
Body Size 1" X 1-1/4" • 1-1/4" X 1-1/4"							
Inlet	Orifice						
PSIG	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2	-	-	-	-	350	460	520
1	-	-	-	480	550	680	760
2	-	-	530	700	840	1020	1030
3	-	420	650	870	1030	1200	1050
5	250	580	890	1180	1350	1490	1060
7.5	310	700	1140	1500	1610	1580	1060
10	370	840	1360	1700	1710	1800	1180
20	630	1230	1600	1800	1900	1900	-
40	860	1800	2200	1900	2000	-	-
60	1200	2100	2400	-	-	-	-
80	1550	2200	-	-	-	-	-
125	2250	2400	-	-	-	-	-

*Consult manufacturer for test conditions

P143 Low Pressure Cut Off Parts

Item	Description		Part Number
1	Bonnet Cap	With gasket for LPCO, Aluminum	610-062-000/ 662-230-000
2	Adjustment Screw, Acetal		648-528-000
3	Vent	Collar (2 required)	612-008-000
4		Subassembly	822-036-000
5	Diaphragms		
	LPCO Diaphragm, plate & washer, nitrile		804-265-000
6	LPCO Bodies	3/4" x 3/4" Port Iron	664-351-000
		3/4" x 1" Port Iron	664-351-002
		1" x 1" Port Iron	664-351-001
		1" x 1-1/4" Port Iron	664-351-003
		1-1/4" x 1-1/4" Port Iron	664-351-004
7	LPCO Bottom Plug Assembly		819-008-000
8	LPCO Cutoff Seat Assembly		810-043-000
9	LPCO Orifice - Aluminum	1/4" - Double Sided	688-052-000
		5/16" - Double Sided	688-052-001
		3/8" - Double Sided	688-052-002
		7/16" - Double Sided	688-052-003
10	Main Seat, nitrile		650-168-000
11	Square Ring		662-226-000
12	Housing Nut & Retaining Ring		803-073-000
13	Build Screws, plated steel (8 required)		648-529-000
14	Range Springs	4.5"-7.5" WC Red, Plated Steel	655-723-000
		6"-9.5" WC Blue, Plated Steel	655-723-001
		7.5"-15" WC Green, Plated Steel	655-723-002
		13.5"-29" WC Orange, Plated Steel	655-723-003





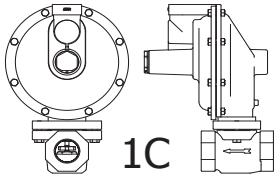
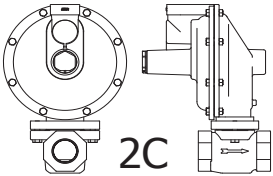
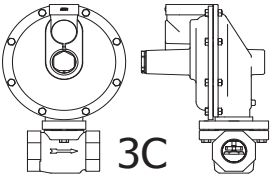
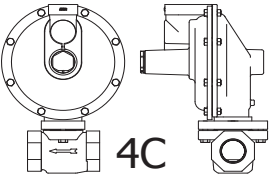
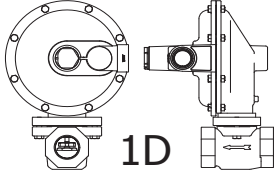
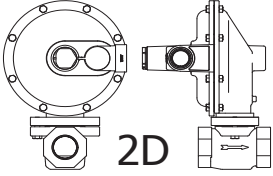
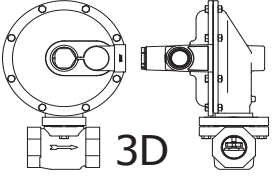
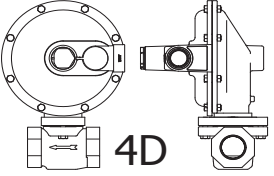
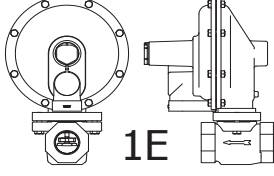
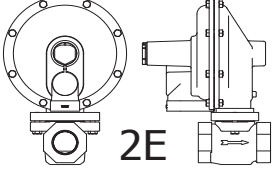
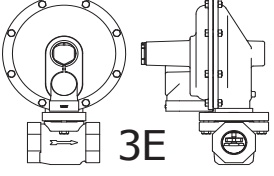
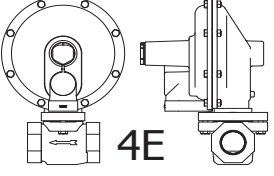
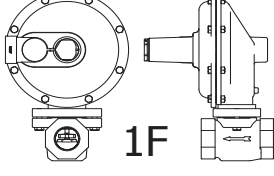
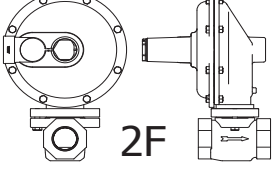
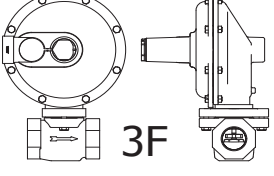
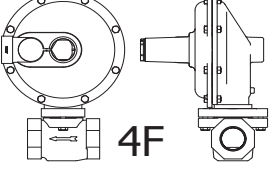
P143 LPCO Flow Capacities

Capacity* in SCFH Natural Gas
(0.6 specific gravity – 14.65 PSIG –65°F)

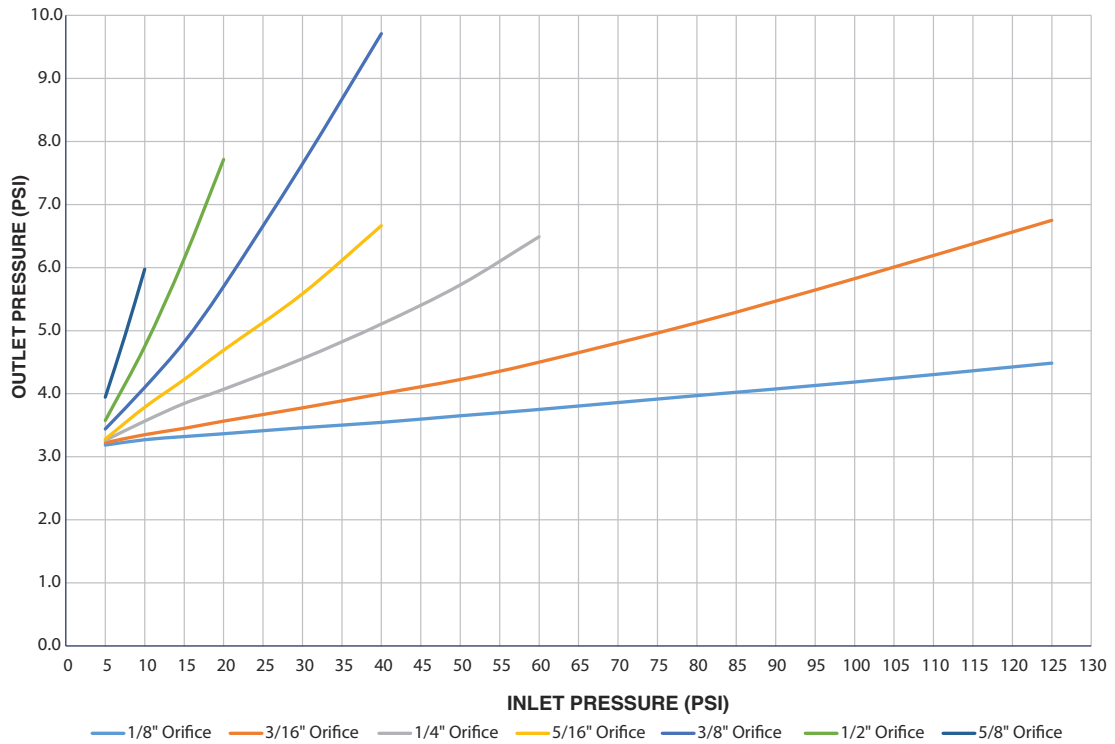
Pipe Size (inches)	Inlet Pressure (PSIG)		Outlet Pressure Red Spring 4 – 7-1/2" WC Blue Spring 6-1/2" – 9-1/2" WC				Outlet Pressure Green Spring 7-1/2 – 15" " WC			
			Orifice Size, Inches				Orifice Size, Inches			
			7/16	3/8	5/16	1/4	7/16	3/8	5/16	1/4
3/4" x 3/4"	1/2	.034	240	180	90		140	120	90	
	1	.068	400	300	200	100	250	200	160	90
	2	.137	580	420	300	140	370	320	240	140
	5	.344	800	750	600	230	580	530	460	220
	10	.684	1050	990	740	380	780	720	700	370
	15	1.03	1140	1050	950	46	920	860	800	480
	25	1.72		1100	1100	640		900	1000	660
	40	2.75			1300	870			1300	910
	60	4.14				1160				1160
3/4" x 1" 1" x 1"	1/2	.034	270	210	90		160	120	90	
	1	.068	430	310	210	100	260	230	160	90
	2	.137	650	420	300	140	410	350	270	140
	5	.344	1100	750	610	230	800	730	470	220
	10	.684	1300	1120	760	380	1220	1090	740	370
	15	1.03	1300	1300	960	460	1300	1300	930	480
	25	1.72		1300	1300	640		1300	1160	660
	40	2.75			1300	870			1300	910
	60	4.14				1160				1160
1" x 1-1/4" 1-1/4" x 1-1/4"	1/2	.034	270	210	90		160	120	90	
	1	.068	430	310	210	100	260	230	160	90
	2	.137	650	420	300	140	430	350	270	140
	5	.344	1100	750	510	230	870	730	470	220
	10	.684	1300	1120	760	380	1300	1090	740	370
	15	1.03	1300	1300	960	460	1300	1300	930	480
	25	1.72		1300	1300	640		1300	1160	660
	40	2.75			1300	870			1300	910
	60	4.14				1160				1160

*Consult manufacturer for test conditions

Straight Body Orientations

VENT/BODY ORIENTATIONS BELGAS STRAIGHT BODY REGULATORS			
 1C	 2C	 3C	 4C
 1D	 2D	 3D	 4D
 1E	 2E	 3E	 4E
 1F	 2F	 3F	 4F
NUMBER = BODY ORIENTATION, 1-UP, 2-DOWN, 3-RIGHT, 4-LEFT		LETTER = VENT CLOCK POSITION, C-12, D-3, E-6, F-9	

P143 RELIEF CURVES 2 PSIG SET POINT, LEVER DISCONNECT



P143 RELIEF CURVES 7" W.C. SET POINT, LEVER DISCONNECT

