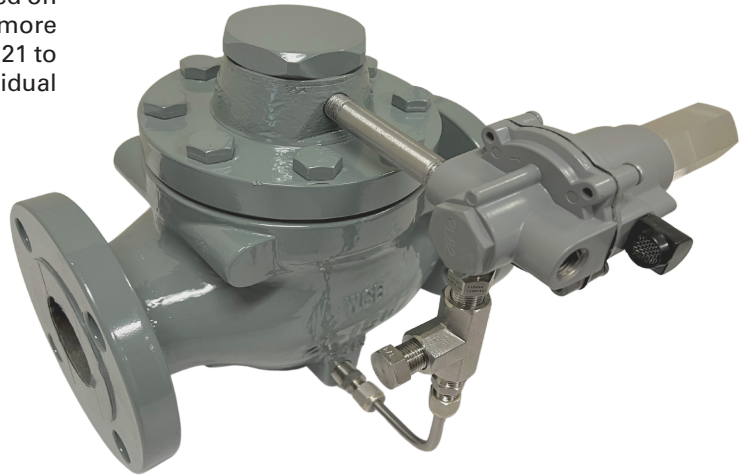


P63 Relief Valve/Back Pressure Regulator

The P1808 pilot-operated relief valve/back pressure regulator is used to maintain pressure on gas separators, and in pressure relief applications in gas distribution systems. The function of the P1808 is controlled by the type of pilot installed on the unit. This allows the unit to achieve wide-open flow more easily. The unit controls pressures from 3 to 125 PSIG (0.21 to 8.6 Bar), and the set pressure can be adjusted for individual requirements by the adjusting screw on the pilot.

Features

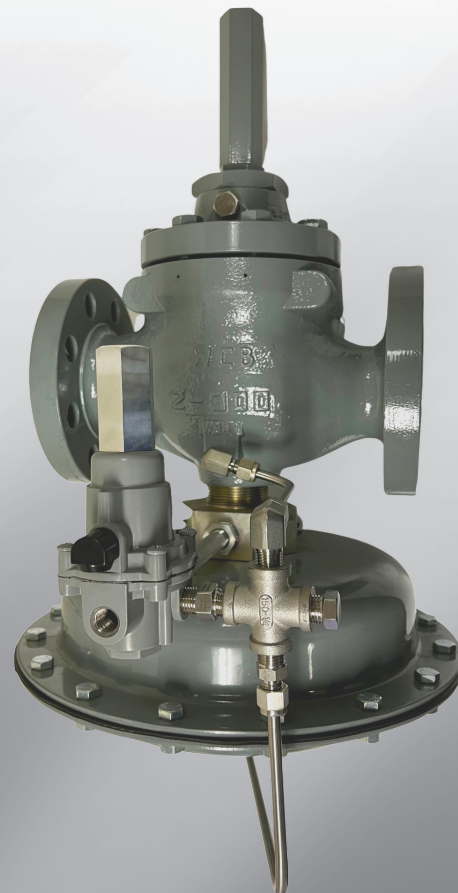
- **Stable Startup** — The unique hollow valve stem in the pilot provides quick pressure registration on top of the main valve plug preventing main valve unseating during normal system startup.
- **Easy In-Line Maintenance** — Top entry design reduces maintenance time. Trim parts can be inspected, cleaned, and replaced without removing the body from the pipeline. If actuator is used, its stem need not be disconnected.
- **Quick Change Trim Package** — The optional quick change trim package allows for faster field maintenance. With standard P63 construction, only body flange cap screws or stud bolt nuts need be removed for quick trim change.



Standard P63

Specifications

Plug	316 Stainless Steel
Type P63 Main Valve	
Body and Body Flange	WCB Steel
Cage	Stainless Steel (Standard Linear)
Type P63 Approximate Weights (including pilot)	
2 Inch / DN 50	55 pounds / 25 kg
4 Inch / DN 100	145 pounds / 66 kg



P63 with Actuator

P63 Standard Ordering Part Matrix

P63S											0
	↑	↑↑	↑	↑	↑	↑	↑	↑	↑	↑	Configuration
	B										Backpressure
	R										Relief Valve
											Port Size
		16									2"
		32									4"
											Connections
			0								2" NPT (only for 2" body)
			A								150RF
			B								300RF
											Main Spring
				2							10 - 40 PSI
				6							40 - 125 PSI
											Elastomers
					0						Nitrile
											Pilot - Set Point Range
						0					No Pilot Installed
											PL82/PL82B
							A				10 - 18 PSI (Only use with 10-40 PSI Main Spring)
							B				15 - 40 PSI (Only use with 10-40 PSI Main Spring)
							C				35 - 125 PSI (Only use with 4-125 PSI Main Spring)
											Cage Type/Construction
								1			CF8M Linear Cage (2" only at this time)
								3			CF8M Noise Reduction Cage (4" only at this time)
											Travel Indicator
									1		No Travel Indicator, SS Fitting
									2		Steel Travel Indicator Fittings
									3		Stainless Steel Travel Indicator Fittings
											Body Material
										1	Steel

P63 Actuator Build Ordering Part Matrix

P63A											0
	↑	↑↑	↑	↑	↑	↑	↑	↑	↑	↑	Configuration
	R										Relief Valve
											Port Size
		16									2"
		32									4"
											Connections
			0								2" NPT (only for 2" body)
			A								150RF
			B								300RF
											Main Spring
				2							3 - 20 PSI
				6							20 - 65 PSI
											Elastomers
					0						Nitrile
											Pilot - Set Point Range
						0					No Pilot Installed
											PL82B
							A				3 - 18 PSI (Only use with 3-20 PSI Main Spring)
							B				15 - 40 PSI (Only use with 20-65 PSI Main Spring)
							C				35 - 65 PSI (Only use with 20-65 PSI Main Spring)
											Cage Type/Construction
								1			CF8M Linear Cage (2" only at this time)
								3			CF8M Noise Reduction Cage (4" only at this time)
											Travel Indicator
									1		No Travel Indicator, SS Fitting
									2		Steel Travel Indicator Fittings
									3		Stainless Steel Travel Indicator Fittings
											Body Material
										1	Steel

2" Standard Build Relief Capacities to Atmosphere(1)

Body Size		Pilot	Main Valve Spring Color	Pilot Spring Pressure		Set Pressure (2)		Buildup Over Set Pressure Needed To Begin Opening Main Valve(3)		Buildup Over Set Pressure Needed To Fully Open Main Valve(4)(5)		Pressure Drop Below Set Pressure Needed To Reseat Pilot		Approximate Flow Capacities of 0.6 SG Natural Gas (2:1 Line to body size Piping)	
NPS	DN			psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
2	50	PL82	Yellow	10 - 18	0.69 - 1.2	10	0.69	0.3	0.02	8.3	0.57	2.8	0.19	89,000	2,385
						15	1.0	0.3	0.02	3.3	0.23			89,000	2,385
						18	1.2	0.2	0.02	0.4	0.03			89,000	2,385
				15 - 40	1.0 - 2.8	20	1.4	0.4	0.03	0.6	0.04	3.5	0.24	95,000	2,546
						30	2.1	0.4	0.02	0.4	0.03			122,000	3,270
						35	2.4	0.3	0.02	0.7	0.05			136,000	3,645
			Green	35 - 125	2.4 - 8.6	40	2.8	0.4	0.03	0.5	0.03	7.5	0.52	149,000	3,993
						40	2.8	1.0	0.07	1.8	0.12			153,000	4,100
						50	3.4	1.2	0.08	1.7	0.12			180,000	4,824
						60	4.1	1.3	0.09	1.7	0.11			207,000	5,548
						80	5.5	1.4	0.09	1.8	0.13			261,000	6,995
						100	6.9	1.4	0.10	1.8	0.12			315,000	8,442
		PL82B	Yellow	10 - 18	0.69 - 1.2	10	0.69	1.5	0.10	8.3	0.57	1	0.07	89,000	2,385
						15	1.0	0.5	0.03	3.3	0.23			89,000	2,385
						18	1.2	0.4	0.03	0.8	0.06			90,000	2,412
				15 - 40	1.0 - 2.8	20	1.4	0.9	0.06	1.3	0.09	1	0.07	97,000	2,600
						30	2.1	0.8	0.05	0.9	0.06			123,000	3,296
						35	2.4	0.8	0.05	0.9	0.06			137,000	3,672
			Green	35 - 125	2.4 - 8.6	40	2.8	0.8	0.05	0.9	0.06	1	0.07	150,000	4,020
						40	2.8	2.3	0.16	3.3	0.23			157,000	4,208
						50	3.4	2.4	0.17	3.4	0.23			184,000	4,931
						60	4.1	2.3	0.16	3.3	0.23			211,000	5,655
						80	5.5	2.3	0.16	3.2	0.22			265,000	7,102
						100	6.9	3.0	0.21	3.6	0.25			320,000	8,576
125	8.6	3.2	0.22	3.8	0.26	388,000	10,398								

1. Capacities are based on the set pressure plus buildup to achieve full opening with a standard linear cage and a high gain pilot restriction (or restriction plug for a PL82B)
 2. Set Pressure is defined as the point at which the pilot begins to relieve
 3. Crack pressure is the buildup over set pressure for a flow to begin through the main valve
 4. Fully open pressure is the pressure buildup over set pressure to fully stroke the main valve plug
 5. Set Pressure plus buildup should not exceed the maximum rated limit of the unit
- * PL82 pilot is used with the Backpressure configuration, PL82B pilot is used with the Relief Valve configuration*

4" Standard Build Relief Capacities to Atmosphere(1)

Body Size		Pilot	Main Valve Spring Color	Pilot Spring Pressure		Set Pressure (2)		Buildup Over Set Pressure Needed To Begin Opening Main Valve(3)		Buildup Over Set Pressure Needed To Fully Open Main Valve(4)(5)		Pressure Drop Below Set Pressure Needed To Reseat Pilot		Approximate Flow Capacities of 0.6 SG Natural Gas (2:1 Line to body size Piping)	
NPS	DN			psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
4	100	PL82	Yellow	10 - 18	0.69 - 1.2	10	0.69	0.3	0.02	5.5	0.38	2.8	0.19	229,000	6,137
						15	1.03	0.35	0.02	1.3	0.09			235,000	6,298
						18	1.24	0.35	0.02	1.2	0.08			257,000	6,888
				15 - 40	1.0 - 2.8	20	1.38	0.45	0.03	1	0.07	271,000	7,263		
						30	2.07	0.45	0.03	1	0.07	347,000	9,300		
						35	2.41	0.45	0.03	1	0.07	385,000	10,318		
			Green	35 - 125	2.4 - 8.6	40	2.76	0.5	0.03	0.9	0.06	422,000	11,310		
						50	3.45	0.8	0.06	1.4	0.10	426,000	11,417		
						60	4.14	0.8	0.06	1.4	0.10	502,000	13,454		
						80	5.52	1	0.07	1.7	0.12	577,000	15,464		
						100	6.90	1.1	0.08	1.7	0.12	733,000	19,644		
						125	8.62	1.5	0.10	1.9	0.13	885,000	23,718		
		PL82B	Yellow	10 - 18	0.69 - 1.2	10	0.69	0.6	0.04	5.5	0.38	1	0.07	229,000	6,137
						15	1.03	0.6	0.04	1.9	0.13			240,000	6,432
						18	1.24	1	0.07	1.7	0.12			261,000	6,995
				15 - 40	1.0 - 2.8	20	1.38	1	0.07	2	0.14	279,000	7,477		
						30	2.07	1	0.07	1.8	0.12	353,000	9,460		
						35	2.41	1	0.07	1.8	0.12	391,000	10,479		
			Green	35 - 125	2.4 - 8.6	40	2.76	1	0.07	1.7	0.12	428,000	11,470		
						40	2.76	2.4	0.17	3.6	0.25	443,000	11,872		
						50	3.45	2.4	0.17	3.3	0.23	517,000	13,856		
						60	4.14	2.4	0.17	3.1	0.21	591,000	15,839		
						80	5.52	2.6	0.18	3.4	0.23	745,000	19,966		
						100	6.90	2.6	0.18	3.2	0.22	896,000	24,013		
125	8.62	2.6	0.18	3.4	0.23	1,088,000	29,158								

1. Capacities are based on the set pressure plus buildup to achieve full opening with a Noise Reduction cage and a high gain pilot restriction (or restriction plug for a PL82B)
 2. Set Pressure is defined as the point at which the pilot begins to relieve
 3. Crack pressure is the buildup over set pressure for a flow to begin through the main valve
 4. Fully open pressure is the pressure buildup over set pressure to fully stroke the main valve plug
 5. Set Pressure plus buildup should not exceed the maximum rated limit of the unit
- * PL82 pilot is used with the Backpressure configuration, PL82B pilot is used with the Relief Valve configuration*

Actuator Build Relief Capacities to Atmosphere(1)



Body Size		Pilot	Main Valve Spring Color	Pilot Spring Pressure		Set Pressure (2)		Buildup Over Set Pressure Needed To Begin Opening Main Valve(3)		Buildup Over Set Pressure Needed To Fully Open Main Valve(4)(5)		Pressure Drop Below Set Pressure Needed To Reseat Pilot		Approximate Flow Capacities of 0.6 SG Natural Gas (2:1 Line to body size Piping)				
NPS	DN			psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	SCFH	Nm ³ /h	
2	50	PL82B	Yellow	3-18	0.2-1.2	3	0.2	0.5	0.03	0.65	0.04	1	0.07	34,000	911			
						5	0.3	0.6	0.04	0.8	0.06			44,000	1,179			
						10	0.7	0.6	0.04	0.8	0.06			63,000	1,688			
						15	1.0	0.5	0.03	0.8	0.06			86,000	2,305			
						18	1.2	0.5	0.03	0.78	0.05			95,000	2,546			
						20	1.4	1	0.07	1.1	0.08			101,000	2,707			
						30	2.1	0.85	0.06	1.1	0.08			130,000	3,484			
						35	2.4	1	0.07	1.1	0.08			144,000	3,859			
			Green	15-40	1.0-2.8	40	2.8	1	0.07	1.1	0.08			158,000	4,234			
						35-65	2.4-4.5	35	2.4	1.1	0.08			1.6	0.11	145,000	3,886	
								40	2.8	1.3	0.09			1.7	0.12	160,000	4,288	
								50	3.4	1.3	0.09			1.7	0.12	188,000	5,038	
								60	4.1	1.5	0.10			1.7	0.12	216,000	5,789	
						65	4.5	1.5	0.10	1.7	0.12			231,000	6,191			
						Yellow	3-18	0.2-1.2	3	0.2	0.6			0.04	2.2	0.15	120,000	3,216
									5	0.3	0.55			0.04	1.3	0.09	133,000	3,564
10	0.7	0.5	0.03	1.1	0.08				183,000	4,904								
15	1.0	0.5	0.03	1.1	0.08				246,000	6,593								
18	1.2	0.6	0.04	1	0.07				269,000	7,209								
20	1.4	1	0.07	1.2	0.08				286,000	7,665								
30	2.1	1	0.07	1.1	0.08				365,000	9,782								
35	2.4	1	0.07	1.1	0.08				405,000	10,854								
Green	15-40	1.0-2.8	40	2.8	1	0.07	1.1	0.08	445,000	11,926								
			35-65	2.4-4.5	35	2.4	1.9	0.13	2.3	0.16	415,000	11,122						
					40	2.8	1.9	0.13	2.2	0.15	454,000	12,167						
					50	3.4	1.9	0.13	2.2	0.15	534,000	14,311						
					60	4.1	2	0.14	2.2	0.15	614,000	16,455						
			65	4.5	2.1	0.14	2.2	0.15	654,000	17,527								

1. Capacities are based on the set pressure plus buildup to achieve full opening with a standard linear cage for a 2" valve and a Noise Reduction cage for a 4" valve and a high gain pilot restriction (or restriction plug for a PL82B)
 2. Set Pressure is defined as the point at which the pilot begins to relieve
 3. Crack pressure is the buildup over set pressure for a flow to begin through the main valve
 4. Fully open pressure is the pressure buildup over set pressure to fully stroke the main valve plug
 5. Set Pressure plus buildup should not exceed the maximum rated limit of the unit
- * PL82 pilot is used with the Backpressure configuration, PL82B pilot is used with the Relief Valve configuration*

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