

P627 High Flow Gas Regulator



- Wide Range of Flow Capacities
- Durable Powder Coated Exterior
- Installation Versatility
- NACE Construction Available

The P627 is a spring loaded, direct-operated regulator for both low and high pressure applications in the oil and gas industries. These regulators provide durability, from the powder-coated epoxy exterior finish, as well as installation versatility, from the multi-position body and spring case configurations. These regulators are also available in an external pressure registration model (P627M), and NACE construction.

Applications

- Farm Tap Regulation
- Monitoring Regulators
- Gate Regulators
- Fuel Gas
- Gas Gathering
- Pressure Reduction



Materials of Construction

Body, Bonnet, Diaphragm Case	
Options	Steel Body, Bonnet & Diaphragm Case
	Cast Ductile Iron Body / Aluminum Bonnet & Diaphragm Case
	Steel Body / Aluminum Bonnet & Diaphragm Case (NACE only)
	Steel Casing / LCC Body
	Aluminum / LCC Body
Diaphragm	
Option	Nitrile (low pressure) or Neoprene (high pressure)
Seat	
Options	Nitrile
	Nylon
Orifice	
Options	Aluminum
	Stainless Steel (NACE only)

Specifications

Maximum Inlet Body Pressure		
Nylon Seat	2000 PSIG	Steel
	1000 PSIG	Ductile Iron
	1485 PSIG	Flanged Steel
Nitrile Seat	1000 PSIG	All Units
Outlet		
	5-500 PSIG	
Body Sizes		
	3/4 NPT	
	1 NPT	
	2 NPT	
Orifice Sizes		
	3/32"	
	1/8"	
	3/16"	
	1/4"	
	3/8"	
	1/2"	
Output		
	Outlet Range	Flow Range*
	5-20 PSIG	300-43,000
	15-40 PSIG	1,000-71,000
	35-80 PSIG	1,200-142,000
	10-95 PSIG	1,000-150,000
	70-150 PSIG	2,500-172,000
	140-250 PSIG	3,200-95,000
	240-500 PSIG	4,500-140,000
	* (SCFH of 0.6 S.G. Natural Gas)	
Temperature Range		
	-20° to 180°F	(-18° to 82°C)
Weight Approximate		
1"	5.3 lbs	2.39 kg
2"	8.8 lbs	3.96 kg

Maximum Bonnet and Diaphragm Casing Pressure	Spring & Diaphragm Casing Style	P627		P627M		P627H & P627HM	
		PSIG	BAR	PSIG	BAR	PSIG	BAR
Maximum pressure to spring and diaphragm casing to prevent leak to atmosphere (internal parts damage may occur).	Die Cast Aluminum	250	17.2	N/A	N/A	N/A	N/A
	Steel	250	17.2	250	17.2	800	55.2
Maximum pressure to spring and diaphragm casings to prevent burst of casings during abnormal operation (leak to atmosphere and internal parts may occur).	Die Cast Aluminum	375	25.9	N/A	N/A	N/A	N/A
	Steel	1200	82.7	1200	82.7	1200	82.7
Maximum diaphragm casing overpressure to prevent damage to internal parts.	All	60	4.1	60	4.1	120	8.3

P627 Regulator Rebuild Kits

	Kit Includes	Part Number
P627 Low Pressure	Nitrile diaphragms (2), Nitrile valve disk, O'rings, back-up rings, and retaining pin	971-627-000
	Nitrile diaphragms (2), Nylon valve disk, O'rings, back-up rings, and retaining pin.	971-627-001
P627 High Pressure	Neoprene diaphragm, Nitrile valve disk, O'rings, back-up rings, and retaining pin	971-627-002
	Neoprene diaphragm, Nylon valve disk, O'rings, back-up rings, and retaining pin	971-627-003

	Kit Includes	Part Number
P627 Low Pressure NACE	Nitrile diaphragms (2), SS Nitrile valve disk, O'rings, back-up rings, and retaining pin	971-627-N00
	Nitrile diaphragms (2), SS Nylon valve disk, O'rings, back-up rings, and retaining pin	971-627-N01
P627 High Pressure NACE	Neoprene diaphragm, SS Nitrile valve disk, O'rings, back-up rings, and retaining pin	971-627-N02
	Neoprene diaphragm, SS Nylon valve disk, O'rings, back-up rings, and retaining pin	971-627-N03

P627 Part Matrix

P627							1	
	▲	▲	▲	▲	▲	▲	▲	Port Size
06								3/4"
08								1"
16								2"
								Spring Range
								PSIG BAR
020								5 - 20 0.34 - 1.4
040								15 - 40 1 - 2.8
080								35 - 80 2.4 - 5.5
095								10 - 95 0.7 - 6.6
150								70 - 150 4.8 - 10.3
250**								140 - 250* 9.7 - 17.2
500**								240 - 500* 16.5 - 34.5
								Special Adders
0								None
2								Monitor*
A								150 #RF*
B								300 #RF*
C								600 #RF*
D								Socket Weld*
E								900 #RTJ*
W								150 #RF & Monitor*
X								300 #RF & Monitor*
Y								600 #RF & Monitor*
Z								Socket Weld & Monitor*
								Versions
0								Standard
N								NACE*
F								NACE & Fluorocarbon Elastomers*
T								Stainless Trim*
								Orifice
0								3/32"
2								1/8"
3								3/16"
4								1/4"
6								3/8"
8								1/2"
								Seat Material
0								Nitrile
1								Nylon
								Case / Body
0								Aluminum / Iron
1								Steel / Steel
2								Aluminum / Steel*
6								Aluminum / LCC Steel
7								Steel / LCC Steel
8								Steel / Iron

* Steel Casing/Steel Body Only
NOTE: Nitrile Seat is required for 5-20 psi, 15-40 and 10-95 psi ranges. Nylon Seat is recommended for psi above 140. Consult factory for questions

** P627H or High Pressure Units.

* Steel Casing/Steel Body Only

* Available as Steel/Steel or Aluminum/Steel Only

NOTE: Nitrile Seat is required for 5-20 psi, 15-40 and 10-95 psi ranges. Nylon Seat is recommended for psi above 140. Consult factory for questions.

* Supplied only with NACE components, specify 'N' in part number.

P627 Flow Capacities of Natural Gas (0.6 S.G.) in SCFH¹



Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		3/4" Body Size						1" Body Size					
	PSIG	BAR	PSIG	BAR	Port Diameter, inches						Port Diameter, inches					
					3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2
5 to 20 psig ² (0.34 to 1.4 BAR)	5 ³	0.34	10	0.69	170	320	700	1060	1540	1900	170	330	710	1100	1900	2500
			15	1.0	240	330	810	1300	2150	3350	240	390	890	1600	2500	3350
			20	1.4	290	460	1140	1800	3050	4350	290	500	1160	2060	3400	4450
			30	2.1	380	610	1530	2490	3880	6850	380	670	1560	2800	4750	6900
			60	4.1	640	1170	2550	4240	6270	7370	640	1170	2600	4710	8140	13,700
			75	5.2	770	1410	3020	5100	6620	7700	770	1410	3150	5710	9790	14,500
	10	0.69	100	6.9	990	1800	3800	5980	7440	7900	990	1800	4070	7310	12,500	16,000
			15	1.03	210	320	800	1290	2100	3300	210	375	880	1590	2480	3300
			20	1.4	280	455	1130	1790	3000	4300	280	490	1150	2050	3380	4410
			30	2.1	380	610	1530	2480	3860	6830	380	670	1560	2800	4720	6840
			60	4.1	640	1170	2550	4240	6270	7370	640	1170	2600	4710	8140	13,700
			75	5.2	770	1410	3020	5100	6620	7700	770	1410	3150	5710	9790	14,500
			100	6.9	990	1800	3800	5980	7440	7900	990	1800	4070	7310	12,500	16,000
			150	10.3	1420	2580	5700	7130	8180	8200	1420	2580	5850	10,500	17,000	18,000
			200	13.8	1850	3370	6970	7250	8200	8300	1850	3370	7630	13,700	18,000	18,500
			300	20.7	2700	4910	8000	8050	8250		2700	4910	11,200	19,800	20,000	
			500	34.5	4010	8090	8060	8100			4400	8090	15,700	20,000		
			750	51.7	4400	8930	8950				5400	12,000	18,000			
			1000	69.0	4450	10,300					5800	14,000				
			1250	86.2	4540						6300					
	1500	103	4880						6600							
	1750	121	5230						6800							
	2000	138	5900						7600							
	20	1.4	30	2.1	350	620	1400	2490	4360	6290	350	620	1450	2580	4360	6290
			50	3.4	550	1000	2280	4010	7870	8500	550	1000	2280	4090	7870	14,100
			60	4.1	640	1170	2640	4680	8340	8940	640	1170	2640	4750	9690	14,500
			100	6.9	990	1800	3980	7220	11,500	12,600	990	1800	4070	7310	13,900	23,300
			150	10.3	1420	2580	5850	10,400	12,100	13,100	1420	2580	5850	10,500	17,700	34,200
			200	13.8	1850	3370	7340	12,000	13,200	13,700	1850	3370	7630	13,700	26,600	39,100
			300	20.7	2700	4910	11,200	13,000	15,600		2700	4910	11,200	20,100	37,000	
			500	34.5	4400	8090	18,300	15,100			4400	8090	18,300	32,900		
			750	51.7	6600	12,000	14,200				6600	12,000	23,600			
			1000	69.0	7300	14,600					8900	16,000				
			1250	86.2	7500						10,000					
			1500	103	7800						10,400					
			1750	121	8400						12,000					
2000			138	8600						14,000						
15 to 40 PSIG (1.0 to 2.8 BAR)	40	2.8	60	4.1	610	1090	2530	4350	8140	9420	610	1090	2530	4510	9290	9420
			75	5.2	760	1370	3080	5510	10,300	13,600	760	1370	3080	5640	10,800	16,500
			100	6.9	990	1790	4070	7220	13,200	15,300	990	1790	4070	7310	14,700	21,900
			150	10.3	1420	2580	5850	10,400	17,400	18,200	1420	2580	5850	10,500	20,500	34,500
			200	13.8	1850	3370	7630	13,500	18,000	18,500	1850	3370	7630	13,700	27,100	46,400
			300	20.7	2700	4910	11,200	18,500	20,000	20,700	2700	4910	11,200	20,100	40,100	67,100
			500	34.5	4400	8090	18,300	24,000	27,000		4400	8090	18,300	32,900	63,900	
			750	51.7	6600	12,000	23,000	24,200			6600	12,000	27,200	39,400		
			1000	69.0	8700	16,000	24,400				8700	16,000	36,100			
			1250	86.2	11,000	18,000					11,000	19,000				
			1500	103	12,000	21,000					13,000	22,000				
			1750	121	13,000						15,000					
			2000	138	14,000						17,000					
			35 to 80 PSIG (2.4 to 5.5 BAR)	60	4.1	75	5.2	700	1230	2760	4750	8620	15,200	700	1230	2760
100	6.9	970				1740	4010	6990	12,800	17,300	970	1740	4010	7000	13,000	19,300
150	10.3	1420				2580	5850	10,300	18,600	23,000	1420	2580	5850	10,500	18,900	32,800
200	13.8	1850				3370	7630	13,500	21,600	27,400	1850	3370	7630	13,700	24,000	42,200
300	20.7	2700				4910	11,200	19,800	26,100	30,100	2700	4910	11,200	20,100	32,500	69,100
500	34.5	4400				8090	18,300	28,100	28,900	33,400	4400	8090	18,300	32,900	64,000	94,300
750	51.8	6600				12,000	26,300	30,000	37,000	45,000	6600	12,000	27,200	43,380	66,000	130,000
1000	69.0	8700		16,000	30,000	31,200	37,400		8700	16,000	36,100	50,300	67,700			
1250	86.2	11,000		19,000	31,600	34,000			11,000	19,000	45,000	57,000				
1500	103	13,000		22,000	30,400	36,000			13,000	22,000	54,000	63,000				
1750	121	15,000		25,000	34,000				15,000	25,000	63,000					
2000	138	17,000		28,000					17,000	28,000						
80	5.5	100		5.2	900	1600	3750	6490	12,200	17,300	900	1600	3750	6650	12,200	18,600
		150		10.3	1410	2580	5850	10,200	19,600	25,700	1410	2580	5850	10,500	21,100	33,600
		200	13.8	1850	3370	7630	13,500	25,400	29,300	1850	3370	7630	13,700	28,400	44,100	
		300	20.7	2700	4910	11,200	19,800	32,700	33,500	2700	4910	11,200	20,100	43,300	75,400	
		500	34.5	4400	8090	18,300	31,900	36,000	36,700	4400	8090	18,300	32,900	71,600	110,000	
		750	51.8	6600	12,000	27,200	35,000	44,000	46,000	6600	12,000	27,200	48,900	105,500	135,000	
		1000	69.0	8700	16,000	36,100	38,000	56,200		8700	16,000	36,100	64,900	118,000		
1250	86.2	11,000	19,000	37,000	40,000			11,000	19,000	45,000	80,000					
1500	103	13,000	22,000	38,000	44,000			13,000	22,000	54,000	96,000					
1750	121	15,000	25,000	42,000				15,000	25,000	63,000						
2000	138	17,000	28,000					17,000	28,000							

1. Capacity is based on 20 percent droop unless otherwise noted below.
 2. For pressure setting under 10 PSIG (0.69 BAR) limit the input pressure to 100 PSIG (6.9 BAR) to obtain the setpoint.
 3. For 5 PSIG (0.34 BAR) pressure set point, the droop is 2 PSIG (0.14 BAR)

P627 Flow Capacities of Natural Gas (0.6 S.G.) in SCFH¹

Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		3/4" Body Size						1" Body Size						
					Port Diameter, inches						Port Diameter, inches						
	PSIG	BAR	PSIG	BAR	3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2	
70 to 150 PSIG (4.8 to 10.3 BAR)	100	6.9	150	10.3	1170	2510	5540	8710	16,000	20,300	1170	2510	5540	8710	16,000	20,300	
			200	13.8	1850	3370	7630	12,000	21,300	25,700	1850	3370	7630	12,000	21,300	25,700	
			300	20.7	2700	4910	11,200	19,400	30,000	31,700	2700	4910	11,200	19,400	30,100	53,200	
			500	34.5	4400	8090	18,300	31,800	39,000	39,200	4400	8090	18,300	31,800	66,500	83,900	
			750	51.8	6600	12,000	27,200	39,000	39,200	45,900	6600	12,000	27,200	47,300	95,300	117,000	
			1000	69.0	8700	16,000	36,100	40,000	40,500	47,000	8700	16,000	36,100	59,700	100,000	117,000	
			1250	86.2	11,000	19,000	39,000	40,500	41,000		11,000	19,000	45,000	72,000	114,000		
			1500	103	13,000	22,000	43,000	44,000			13,000	22,000	54,000	86,000			
			1750	121	15,000	25,000	45,000	47,000			15,000	25,000	63,000	95,000			
	2000	138	17,000	28,000	46,000				17,000	28,000	71,000						
	125	8.6	150	10.3	1250	2340	5340	9130	15,700	20,800	1250	2340	5340	9470	15,700	20,800	
			200	13.8	1830	3320	7550	13,160	22,500	28,600	1830	3320	7550	13,400	28,100	32,800	
			300	20.7	2700	4910	11,200	19,800	32,700	38,000	2700	4910	11,200	20,100	36,300	52,600	
			500	34.5	4400	8090	18,300	32,500	43,800	51,700	4400	8090	18,300	32,900	70,800	109,000	
			750	51.8	6600	12,000	27,200	48,300	49,900	71,400	6600	12,000	27,200	48,900	104,000	158,000	
			1000	69.0	8700	16,000	36,100	50,000	52,900	72,000	8700	16,000	36,100	64,800	138,000	160,000	
			1250	86.2	11,000	19,000	45,000	53,000	58,000		11,000	19,000	45,000	80,000	145,000		
			1500	103	13,000	22,000	51,000	56,000			13,000	22,000	54,000	96,000			
			1750	121	15,000	25,000	52,000	60,000			15,000	25,000	63,000	112,000			
	2000	138	17,000	28,000	53,000				17,000	28,000	71,000						
	150	10.3	200	13.8	1760	3200	7290	12,500	21,400	30,600	1760	3200	7290	12,900	21,400	33,600	
			300	20.7	2700	4910	11,200	17,200	34,700	46,000	2700	4910	11,200	17,200	40,100	55,900	
			500	34.5	4400	8090	18,300	32,500	48,900	59,700	4400	8090	18,300	32,900	70,300	111,000	
			750	51.8	6600	12,000	27,200	48,300	59,000	72,000	6600	12,000	27,200	48,900	104,000	160,000	
1000			69.0	8700	16,000	36,100	64,100	81,100	85,000	8700	16,000	36,100	64,800	138,000	162,000		
1250			86.2	11,000	19,000	45,000	68,000	90,000		11,000	19,000	45,000	80,000	150,000			
1500			103	13,000	22,000	54,000	72,000			13,000	22,000	54,000	96,000				
1750			121	15,000	25,000	63,000	77,000			15,000	25,000	63,000	112,000				
2000			138	17,000	28,000	71,000				17,000	28,000	71,000					

Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		627 - 2" Body Size						627M - 2" Body Size						
					Port Diameter, inches						Port Diameter, inches						
	PSIG	BAR	PSIG	BAR	3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2	
5 to 20 psig ² (0.34 to 1.4 BAR)	5 ³	0.34	10	0.69	170	330	710	1080	1700	2400	170	330	710	1080	1700	2400	
			15	1.0	240	390	890	1250	1900	2700	240	390	890	1250	1900	2700	
			20	1.4	290	500	1160	1900	2650	3900	290	500	1160	1900	2650	3900	
			30	2.1	380	670	1560	2800	3680	6500	380	670	1560	2800	3680	6500	
			60	4.1	640	1170	2600	4750	7250	17,800	640	1170	2600	4750	7250	15,000	
			75	5.2	770	1410	3150	5700	8060	22,400	770	1410	3150	5700	8060	17,900	
			100	6.9	990	1790	4070	7310	16,200	28,700	990	1790	4070	7310	14,600	23,000	
			15	1.03	210	375	880	1220	1860	2670	210	375	880	1220	1860	2670	
	20	1.4	280	490	1150	1880	2610	3830	280	490	1150	1880	2610	3830			
	30	2.1	380	670	1560	2760	3640	6460	380	670	1560	2760	3640	6460			
	60	4.1	640	1170	2600	4750	7250	17,800	640	1170	2600	4750	7250	15,000			
	75	5.2	770	1410	3150	5700	8060	22,400	770	1410	3150	5700	8060	17,900			
	100	6.9	990	1790	4070	7310	16,200	28,700	990	1790	4070	7310	14,600	23,000			
	150	10.3	1420	2580	5850	10,500	23,300	25,900 ⁵	1420	2580	5850	10,500	21,000	33,000			
	200	13.8	1850	3370	7630	13,700	22,700 ⁵	24,000 ⁵	1850	3370	7630	13,700	27,300	43,000			
	300	20.7	2700	4910	11,200	10,300 ⁵	12,800 ⁵		2700	4910	11,200	20,100	40,100				
	500	34.5	4400	8090	18,300	21,000 ⁵			4400	8090	18,300	32,900					
	750	51.7	6600	12,000	27,200				6600	12,000	27,200						
	1000	69.0	8700	16,000					8700	16,000							
	1250	86.2	11,000						11,000								
	1500	103	13,000						13,000								
	1750	121	15,000						15,000								
	2000	138	17,000						17,000								
	20	1.4	30	2.1	350	620	1450	2350	4300	6110	350	620	1450	2480	4300	6110	
50			3.4	550	1000	2280	4040	7100	12,800	550	1000	2280	4040	7100	12,800		
60			4.1	640	1170	2640	4750	8400	15,700	640	1170	2640	4750	8400	15,000		
100			6.9	990	1800	4070	7310	16,200	28,700	990	1800	4070	7310	14,600	23,000		
150			10.3	1420	2580	5850	10,500	23,300	29,000 ⁵	1420	2580	5850	10,500	21,000	33,000		
200			13.8	1850	3370	7630	13,700	24,000 ⁵	33,000 ⁵	1850	3370	7630	13,700	27,300	43,000		
300			20.7	2700	4910	11,200	11,200	20,100	19,600 ⁵	2700	4910	11,200	20,100	40,100			
500			34.5	4400	8090	18,300	32,900			4400	8090	18,300	32,900				
750			51.7	6600	12,000	27,200				6600	12,000	27,200					
1000			69.0	8700	16,000					8700	16,000						
1250			86.2	11,000						11,000							
1500			103	13,000						13,000							
1750	121	15,000						15,000									
2000	138	17,000						17,000									

- Capacity is based on 20 percent droop unless otherwise noted below.
- For pressure setting under 10 PSIG (0.69 BAR) limit the input pressure to 100 PSIG (6.9 BAR) to obtain the setpoint.
- For 5 PSIG (0.34 BAR) pressure set point, the droop is 2 PSIG (0.14 BAR)
- Capacities are based on 25 percent boost if setting is less than 12 PSIG (0.8 BAR), 3 PSIG (0.2 BAR) boost if setting is from 12 to 60 PSIG (0.2 to 4 BAR), and 5 percent boost if setting is greater than 60 PSIG (4 BAR).

P627 Flow Capacities of Natural Gas (0.6 S.G.) in SCFH¹



Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		627 – 2" Body Size						627M – 2" Body Size					
	PSIG	BAR	PSIG	BAR	Port Diameter, inches						Port Diameter, inches					
					3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2
15 to 40 PSIG (1.0 to 2.8 BAR)	40	2.8	60	4.1	610	1090	2530	4370	8680	13,300	610	1090	2530	4370	8680	13,300
			75	5.2	760	1370	3080	5540	11,900	19,300	760	1370	3080	5540	10,700	19,300
			100	6.9	990	1800	4070	7310	16,200	25,400	990	1800	4070	7310	14,600	25,400
			150	10.3	1420	2580	5850	10,500	23,300	41,300	1420	2580	5850	10,500	21,000	37,000
			200	13.8	1850	3370	7630	13,700	30,400	53,900	1850	3370	7630	13,700	27,300	48,000
			300	20.7	2700	4910	11,200	20,100	44,600	46,000 ⁵	2700	4910	11,200	20,100	40,100	71,000
			500	34.5	4400	8090	18,300	32,900	22,000 ⁵		4400	8090	18,300	32,900	65,000	
			750	51.7	6600	12,000	27,200	28,000 ⁵			6600	12,000	27,200	28,000 ⁵		
			1000	69.0	8700	16,000	36,100				8700	16,000	36,100			
			1250	86.2	11,000	19,000					11,000	19,000				
			1500	103	13,000	22,000					13,000	22,000				
			1750		15,000						15,000					
2000		17,000						17,000								
35 to 80 PSIG (2.4 to 5.5 BAR)	60	4.1	75	5.2	700	1260	2760	4900	9000	12,300	700	1230	2760	4900	9000	12,300
			100	6.9	970	1740	4010	7000	15,000	20,400	970	1740	4010	7000	15,000	20,400
			150	10.3	1420	2580	5850	10,500	23,300	35,200	1420	2580	5850	10,500	23,300	35,200
			200	13.8	1850	3370	7630	13,700	30,400	53,900	1850	3370	7630	13,700	30,400	48,500
			300	20.7	2700	4910	11,200	20,100	44,600	79,000 ⁵	2700	4910	11,200	20,100	44,600	71,000
			500	34.5	4400	8090	18,300	32,900	73,000 ⁵	38,800 ⁵	4400	8090	18,300	32,900	73,000	116,000
			750	51.8	6600	12,000	27,200	48,900 ⁵	53,000 ⁵	32,000	6600	12,000	27,200	48,900	108,000	172,000
			1000	69.0	8700	16,000	36,100	43,000 ⁵	52,000		8700	16,000	36,100	65,000	144,000	
			1250	86.2	11,000	19,000	45,000	70,000 ⁵			11,000	19,000	45,000	81,000		
			1500	103	13,000	22,000	54,000 ⁵	43,000			13,000	22,000	54,000	97,000		
	1750	121	15,000	25,000	26,000				15,000	25,000	63,000					
	2000	138	17,000	28,000					17,000	28,000						
	80	5.5	100	5.2	900	1630	3750	6400	12,000	20,400	900	1630	3750	6400	12,800	20,400
			150	10.3	1410	2580	5850	10,500	23,300	41,300	1410	2580	5850	10,500	23,300	37,200
			200	13.8	1850	3370	7630	13,700	30,400	53,900	1850	3370	7630	13,700	30,400	48,500
			300	20.7	2700	4910	11,200	20,100	44,600	79,000 ⁵	2700	4910	11,200	20,100	44,600	71,000
			500	34.5	4400	8090	18,300	32,900	73,000 ⁵	48,000 ⁵	4400	8090	18,300	32,900	73,000	116,000
			750	51.8	6600	12,000	27,200	48,900	87,000 ⁵	44,000	6600	12,000	27,200	48,900	108,000	172,000
			1000	69.0	8700	16,000	36,100	65,000 ⁵	63,000		8700	16,000	36,100	65,000	144,000	
			1250	86.2	11,000	19,000	45,000	63,000 ⁵			11,000	19,000	45,000	81,000		
1500			103	13,000	22,000	54,000	86,000			13,000	22,000	54,000	97,000			
1750			121	15,000	25,000	63,000				15,000	25,000	63,000				
2000	138	17,000	28,000					17,000	28,000							
70 to 150 PSIG (4.8 to 10.3 BAR)	100	6.9	150	10.3	1170	2510	5540	8600	16,000	22,000	1170	2510	5540	8600	16,000	22,000
			200	13.8	1850	3370	7630	13,700	22,000	33,000	1850	3370	7630	13,700	22,000	33,000
			300	20.7	2700	4910	11,200	20,100	35,000	65,300	2700	4910	11,200	20,100	35,000	59,000
			500	34.5	4400	8090	18,300	32,900	73,000	129,000	4400	8090	18,300	32,900	73,000	116,000
			750	51.8	6600	12,000	27,200	48,900	108,000	54,000 ⁵	6600	12,000	27,200	48,900	108,000	172,000
			1000	69.0	8700	16,000	36,100	64,800	82,000 ⁵		8700	16,000	36,100	64,800	144,000	
			1250	86.2	11,000	19,000	45,000	80,000	110,000 ⁵		11,000	19,000	45,000	80,000	179,000	
			1500	103	13,000	22,000	54,000	96,000			13,000	22,000	54,000	96,000		
			1750	121	15,000	25,000	63,000	112,000			15,000	25,000	63,000	112,000		
			2000	138	17,000	28,000	71,000				17,000	28,000	71,000			
	125	8.6	150	10.3	1250	2340	5340	8600	16,000	24,000	1250	2340	5340	8600	16,000	24,000
			200	13.8	1830	3320	7550	13,000	24,000	36,000	1830	3320	7550	13,000	24,000	36,000
			300	20.7	2700	4910	11,200	20,100	39,000	65,300	2700	4910	11,200	20,100	39,000	59,000
			500	34.5	4400	8090	18,300	32,900	73,000	129,000	4400	8090	18,300	32,900	73,000	116,000
			750	51.8	6600	12,000	27,200	48,900	108,000	59,000 ⁵	6600	12,000	27,200	48,900	108,000	172,000
			1000	69.0	8700	16,000	36,100	64,800	82,000 ⁵		8700	16,000	36,100	64,800	144,000	
			1250	86.2	11,000	19,000	45,000	80,000	75,000 ⁵		11,000	19,000	45,000	80,000	179,000	
			1500	103	13,000	22,000	54,000	96,000			13,000	22,000	54,000	96,000		
			1750	121	15,000	25,000	63,000	112,000			15,000	25,000	63,000	112,000		
			2000	138	17,000	28,000	71,000				17,000	28,000	71,000			
150	10.3	200	13.8	1760	3200	7290	13,000	24,000	38,000	1760	3200	7290	13,000	24,000	38,000	
		300	20.7	2700	4910	11,200	20,100	44,600	64,200	2700	4910	11,200	20,100	44,600	58,000	
		500	34.5	4400	8090	18,300	32,900	73,000	129,000	4400	8090	18,300	32,900	73,000	116,000	
		750	51.8	6600	12,000	27,200	48,900	108,000	62,000 ⁵	6600	12,000	27,200	48,900	108,000	172,000	
		1000	69.0	8700	16,000	36,100	64,800	144,000		8700	16,000	36,100	64,800	144,000		
		1250	86.2	11,000	19,000	45,000	80,000	81,000 ⁵		11,000	19,000	45,000	80,000	179,000		
		1500	103	13,000	22,000	54,000	96,000			13,000	22,000	54,000	96,000			
		1750	121	15,000	25,000	63,000	112,000			15,000	25,000	63,000	112,000			
2000	138	17,000	28,000	71,000				17,000	28,000	71,000						

1. Capacity is based on 20 percent droop unless otherwise noted below.

5. Capacities are based on 25 percent boost if setting is less than 12 PSIG (0.8 BAR), 3 PSIG (0.2 BAR) boost if setting is from 12 to 60 PSIG (0.2 to 4 BAR), and 5 percent boost if setting is greater than 60 PSIG (4 BAR).

P627 Flow Capacities of Natural Gas (0.6 S.G.) in SCFH¹

Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		627H or HM – 3/4" Body Size						627H or HM – 1" Body Size							
	PSIG	BAR	PSIG	BAR	Port Diameter, inches						Port Diameter, inches							
					3/32	1/8	3/16	1/4	3/8	1/2	3/32	1/8	3/16	1/4	3/8	1/2		
140 to 250 PSIG (9.7 to 17.2 BAR)	150	10.3	200	13.8	1760 ⁶	3200 ⁴	7290	11,500	21,600	31,000	1760 ⁶	3200 ⁴	7290	11,500	21,600	31,000		
			250	17.2	2260 ⁶	4100 ⁴	9200	15,400	28,600	40,000	2260 ⁶	4100 ⁴	9200	15,400	28,600	40,000		
			300	20.7	2700	4910	11,200	19,300	31,000	46,000	2700	4910	11,200	19,300	31,000	46,000		
			400	27.6	3600	6500	14,800	24,700	40,000	50,000	3600	6500	14,800	25,000	40,000	50,000		
			500	34.5	4400	8090	18,300	29,700	51,000		4400	8090	18,300	32,000	51,000			
			750	51.7	6600	12,000	27,200	43,000			6600	12,000	27,200	46,000				
			1000	69.0	8700	16,000	36,100	57,000			8700	16,000	36,100	60,000				
			1250	86.2	11,000	19,000	45,000				11,000	19,000	45,000					
			1500	103	13,000	22,000	54,000				13,000	22,000	54,000					
			1750	121	15,000	25,000	63,000				15,000	25,000	63,000					
	2000	138	17,000	28,000					17,000	28,000								
	200	13.8	250	17.2	2160 ⁶	3850 ⁴	8400	15,000	31,000	41,000	2160 ⁶	3850 ⁴	8400	15,000	31,000	41,000		
			300	20.7	2700 ⁶	4910 ⁴	11,200	19,500	36,000	52,000	2700 ⁶	4910 ⁴	11,200	19,500	36,000	52,000		
			400	27.6	3600	6500	14,800	25,500	52,000	68,000	3600	6500	14,800	26,500	52,000	68,000		
			500	34.5	4400	8090	18,300	31,000	61,000		4400	8090	18,300	33,000	61,000			
			750	51.7	6600	12,000	27,200	45,500			6600	12,000	27,200	49,000				
			1000	69.0	8700	16,000	36,100	60,000			8700	16,000	36,100	65,000				
			1250	86.2	11,000	19,000	45,000				11,000	19,000	45,000					
			1500	103	13,000	22,000	54,000				13,000	22,000	54,000					
			1750	121	15,000	25,000	63,000				15,000	25,000	63,000					
			2000	138	17,000	28,000					17,000	28,000						
	250	17.2	300	20.7	2500 ⁶	4500 ⁴	9900	18,500	37,000	52,000	2500 ⁶	4500 ⁴	9900	18,500	37,000	75,000		
			400	27.6	3600 ⁶	6400 ⁴	14,300	26,000	55,000	74,000	3600 ⁶	6400 ⁴	14,300	26,000	55,000	81,000		
			500	34.5	4400	8090	18,300	33,000	64,000	87,000	4400	8090	18,300	33,000	64,000	95,000		
			750	21.7	6600	12,000	27,200	49,000	93,000		6600	12,000	27,200	49,000	102,000			
			1000	69.0	8700	16,000	36,100	65,000			8700	16,000	36,100	65,000				
			1250	86.2	11,000	19,000	45,000	81,000			11,000	19,000	45,000	81,000				
			1500	103	13,000	22,000	54,000				13,000	22,000	54,000					
1750			121	15,000	25,000	63,000				15,000	25,000	63,000						
2000			138	17,000	28,000	71,000				17,000	28,000	71,000						
240 to 500 PSIG (16.5 to 34.5 BAR)			250	17.2	300	20.7	2500 ⁶	4500 ⁴	9300	14,000	25,000	37,000	2500 ⁶	4500 ⁴	9300	14,000	25,000	37,000
	400	27.6			3600 ⁶	6400 ⁴	14,300	21,400	36,000	49,000	3600 ⁶	6400 ⁴	14,300	21,400	36,000	49,000		
	500	34.6			4400	8090	18,300	26,300	42,000	62,000	4400	8090	18,300	26,300	42,000	62,000		
	750	51.7			6600	12,000	27,200	37,100	57,000		6600	12,000	27,200	37,100	57,000			
	1000	69.0			8700	16,000	36,100	47,400			8700	16,000	36,100	47,400				
	1250	86.2			11,000	19,000	45,000	57,000			11,000	19,000	45,000	57,000				
	1500	103			13,000	22,000	54,000				13,000	22,000	54,000					
	1750	121			15,000	25,000	63,000				15,000	25,000	63,000					
	2000	138			17,000	28,000	71,000				17,000	28,000	71,000					
	300	20.7			350	24.1	2900 ⁶	5150 ⁴	11,300	18,400	31,000	45,000	2900 ⁶	5150 ⁴	11,300	18,400	31,000	45,000
			400	27.6	3500 ⁶	6200 ⁴	13,700	23,400	40,000	52,000	3500 ⁶	6200 ⁴	13,700	23,400	40,000	52,000		
			500	34.5	4400	8090	18,300	32,000	53,000	67,000	4400	8090	18,300	32,000	53,000	67,000		
			750	51.7	6600	12,000	27,200	48,000	80,000		6600	12,000	27,200	48,000	80,000			
			1000	69.0	8700	16,000	36,100	62,000			8700	16,000	36,100	62,000				
			1250	86.2	11,000	19,000	45,000	79,000			11,000	19,000	45,000	79,000				
			1500	103	13,000	22,000	54,000				13,000	22,000	54,000					
			1750	121	15,000	25,000	63,000				15,000	25,000	63,000					
	2000	138	17,000	28,000	71,000				17,000	28,000	71,000							
240 to 500 PSIG (16.5 to 34.5 BAR)	400	27.6	450	31.0	3600 ⁶	6400 ⁴	14,000	25,000	47,000	67,000	3600 ⁶	6400 ⁴	14,000	25,000	47,000	67,000		
			500	34.6	4400 ⁶	8090 ⁴	18,300	32,000	54,000	77,000	4400 ⁶	8090 ⁴	18,300	32,000	54,000	77,000		
			750	51.7	6600	12,000	27,200	49,000	91,000		6600	12,000	27,200	49,000	91,000			
			1000	69.0	8700	16,000	36,100	65,000			8700	16,000	36,100	65,000				
			1250	86.2	11,000	19,000	45,000	81,000			11,000	19,000	45,000	81,000				
			1500	103	13,000	22,000	54,000				13,000	22,000	54,000					
			1750	121	15,000	25,000	63,000				15,000	25,000	63,000					
			2000	138	17,000	28,000	71,000				17,000	28,000	71,000					
			500	34.5	550	37.9	4300 ⁶	7700 ⁴	16,800	33,000	62,000	90,000	4300 ⁶	7700 ⁴	16,800	33,000	62,000	90,000
					600	47.4	4900 ⁶	8800 ⁴	19,400	37,000	70,000	104,000	4900 ⁶	8800 ⁴	19,400	37,000	70,000	104,000
	750	51.7			6600	12,000	27,200	49,000	88,000	137,000	6600	12,000	27,200	49,000	88,000	140,000		
	1000	69.0			8700	16,000	36,100	65,000	130,000		8700	16,000	36,100	65,000	130,000			
	1250	86.2			11,000	19,000	45,000	81,000			11,000	19,000	45,000	81,000				
	1500	103			13,000	22,000	54,000	97,000			13,000	22,000	54,000	97,000				
	1750	121			15,000	25,000	63,000				15,000	25,000	63,000					
	2000	138			17,000	28,000	71,000				17,000	28,000	71,000					

1. Capacity is based on 20 percent droop unless otherwise noted below.
 4. Outlet pressure setting may shift ± 15 PSIG.
 6. Small orifices and low pressure drops may cause the set point to shift + 15 psig (1.3 BAR).

P627 Flow Capacities of Natural Gas (0.6 S.G.) in SCFH¹



Outlet Pressure Range	Outlet Pressure Setting		Inlet Pressure		627H or HM – 2" Body Size						
					Port Diameter, inches						
	PSIG	BAR	PSIG	BAR	3/32	1/8	3/16	1/4	3/8	1/2	
140 to 250 PSIG (9.7 to 17.2 BAR)	150	10.3	200	13.8	1760 ⁶	3200 ⁴	7290	13,700	24,100	31,000	
			250	17.2	2260 ⁶	4100 ⁴	9200	16,100	28,600	40,000	
			300	20.7	2700	4910	11,200	19,300	31,000	46,000	
			400	27.6	3600	6500	14,800	25,000	40,000	50,000	
			500	34.5	4400	8090	18,300	32,000			
			750	51.7	6600	12,000	27,200	48,000			
			1000	69.0	8700	16,000	36,100	65,000			
			1250	86.2	11,000	19,000	45,000				
			1500	103	13,000	22,000	54,000				
			1750	121	15,000	25,000	63,000				
			2000	138	17,000	28,000					
			250	17.2	2160 ⁶	3850 ⁴	8400	16,100	33,000	41,000	
	300	20.7	2700 ⁶	4910 ⁴	11,200	20,100	36,000	52,000			
	400	27.6	3600	6500	14,800	26,500	52,000	68,000			
	500	34.5	4400	8090	18,300	33,000	61,000				
	750	51.7	6600	12,000	27,200	49,000					
	1000	69.0	8700	16,000	36,100	65,000					
	1250	86.2	11,000	19,000	45,000						
	1500	103	13,000	22,000	54,000						
	1750	121	15,000	25,000	63,000						
	2000	138	17,000	28,000							
	300	20.7	2500 ⁶	4500 ⁴	9900	18,500	37,000	75,000			
	400	27.6	3600 ⁶	6400 ⁴	14,300	26,000	55,000	81,000			
	500	34.5	4400	8090	18,300	33,000	64,000	95,000			
	750	51.7	6600	12,000	27,200	49,000	102,000				
	1000	69.0	8700	16,000	36,100	65,000					
	1250	86.2	11,000	19,000	45,000	81,000					
	1500	103	13,000	22,000	54,000						
	1750	121	15,000	25,000	63,000						
	2000	138	17,000	28,000	71,000						
	240 to 500 PSIG (16.5 to 34.5 BAR)	250	17.2	300	20.7	2500 ⁶	4500 ⁴	9300	14,000	25,000	37,000
				400	27.6	3600 ⁶	6400 ⁴	14,300	21,400	36,000	49,000
				500	34.6	4400	8090	18,300	26,300	42,000	62,000
				750	51.7	6600	12,000	27,200	37,100	57,000	
				1000	69.0	8700	16,000	36,100	47,400		
				1250	86.2	11,000	19,000	45,000	57,000		
1500				103	13,000	22,000	54,000				
1750				121	15,000	25,000	63,000				
2000				138	17,000	28,000	71,000				
350				24.1	2900 ⁶	5150 ⁴	11,300	18,400	31,000	45,000	
400				27.6	3500 ⁶	6200 ⁴	13,700	23,400	40,000	52,000	
500				34.5	4400	8090	18,300	32,000	53,000	67,000	
750		51.7	6600	12,000	27,200	48,000	80,000				
1000		69.0	8700	16,000	36,100	62,000	79,000				
1250		86.2	11,000	19,000	45,000						
1500		103	13,000	22,000	54,000						
1750		121	15,000	25,000	63,000						
2000		138	17,000	28,000	71,000						
240 to 500 PSIG (16.5 to 34.5 BAR)		400	27.6	450	31.0	3600 ⁶	6400 ⁴	14,000	25,000	47,000	67,000
				500	34.6	4400 ⁶	8090 ⁴	18,300	32,000	54,000	77,000
				750	51.7	6600	12,000	27,200	49,000	91,000	
				1000	69.0	8700	16,000	36,100	65,000		
				1250	86.2	11,000	19,000	45,000	81,000		
				1500	103	13,000	22,000	54,000			
				1750	121	15,000	25,000	63,000			
				2000	138	17,000	28,000	71,000			
				550	37.9	4300 ⁶	7700 ⁴	16,800	33,000	62,000	90,000
				600	47.4	4900 ⁶	8800 ⁴	19,400	37,000	70,000	104,000
				750	51.7	6600	12,000	27,200	49,000	88,000	140,000
				1000	69.0	8700	16,000	36,100	65,000	130,000	
		1250	86.2	11,000	19,000	45,000	81,000				
		1500	103	13,000	22,000	54,000	97,000				
		1750	121	15,000	25,000	63,000					
		2000	138	17,000	28,000	71,000					

1. Capacity is based on 20 percent droop unless otherwise noted below.
 4. Outlet pressure setting may shift ± 15 PSIG.
 6. Small orifices and low pressure drops may cause the set point to shift + 15 psig (1.3 BAR).

P627 Flow Coefficients

Orifice Size		3/4 Inch Body			1 Inch (DIN 25) Body			2 Inch (DIN 50) Body			K
Inches	mm	Wide-Open C _v for External Relief Sizing	Wide-Open C _v for External Relief Sizing	C ₁	Wide-Open C _v for External Relief Sizing	Wide-Open C _v for External Relief Sizing	C ₁	Wide-Open C _v for External Relief Sizing	Wide-Open C _v for External Relief Sizing	C ₁	
3/32	2.4	6.9	0.24	29.2	6.9	0.24	28.5	6.9	0.23	29.7	0.72
1/8	3.2	12.5	0.43	29.1	12.5	0.43	29.4	12.5	0.42	29.5	0.62
3/16	4.8	29	1.01	28.6	29	0.93	31.2	29	1.02	28.5	0.72
1/4	6.4	50	1.63	30.5	50	1.71	29.3	52	1.66	31.3	0.76
3/8	9.5	108	2.99	36.1	108	3.42	31.6	115	3.39	33.9	0.79
1/2	12.7	190	4.87	39.0	190	5.29	35.9	200	5.01	39.9	.074

P627 Parts

Item	Description	Part Number
1	Cover Adj. Screw, plastic	610-053-000
2	Adjustment Screw	648-465-000
3	Locknut	634-154-000
4	Bonnet, P627 - Aluminum	604-210-000
	Bonnet, P627M, P627H & P627HM - Steel	604-211-000
5	Vent Screw Assembly	836-005-000
6	Spring Guide, Upper	626-079-000
7	Range Spring	
	5-20 PSIG–Yellow	655-661-000
	15-40 PSIG–Green	655-661-001
	35-80 PSIG & 10-95–PSIG Blue	655-661-002
	70-150 PSIG–Red	655-661-003
	140-250 PSIG–Blue	655-661-002
8	240-500 PSIG–Red	655-661-003
	Spring Guide, Lower (P627 or P627M only)	643-191-000
9	Build Screw, Spring Case (8 required)	
	P627 - Aluminum	648-466-000
	P627 or P627M - Steel	648-467-003
	P627H or P627HM	648-467-002
10	Diaphragm Piston (P627 or P627M only)	637-306-000
11	Diaphragm P627 & P627M	
	Aluminum/Iron Case (Nitrile)	618-069-000
	Steel Case (Nitrile)	618-070-000
	Diaphragm P627H & P627HM	
	Steel Case (Neophene)	618-070-001
12	Screw, Diaphragm P627 & P627M	648-466-002
	Screw, Diaphragm P627H & P627HM	648-467-000
13	Post, Pusher P627 & P627M Assy	827-005-000
	Post, Pusher P627H & P627HM Assy	827-005-001
	Post, Pusher P627 & P627M, NACE	827-008-000
	Post, Pusher P627H & P627HM, NACE	827-008-001
14	Diaphragm Case P627 - Aluminum	629-202-000
	Diaphragm Case P627 & P627H - Steel	629-203-000
	Diaphragm Case P627M & P627HM- Steel	629-204-000
	Diaphragm Case, Aluminum/Steel Body	629-215-000
15	Lever	703-004-000
	Lever, NACE	703-005-000
16	Lever Screw (2 required)	648-466-002
	Lever Screw, NACE (2 required)	648-474-000
17	Pin, Lever	635-053-000
	Pin, Lever, NACE	635-057-000
18	Lever Retainer	643-192-000
	Lever Retainer, NACE	643-194-000
19	Stem O-ring, Nitrile	649-000-003
20	Stem Backup Ring, TFE (2 required)	644-047-000
21	Pin, Groove	635-054-000
	Pin, Groove NACE	635-058-000
22	Stem Guide	626-083-000
23	Pin Clip	635-055-000
	Pin Clip NACE	635-056-000
24	Stem, 316SS	689-005-000
25	Diaphragm Case O-ring, Nitrile (P627 & P627H)	649-280-000
26	Boost Body P627 or P627H	686-003-000
27	Stabilizer, Nitrile P627 or P627H	649-278-000

Item	Description	Part Number
28	Seat assembly - Aluminum holder/nitrile disk	822-019-000
	Seat assembly - Aluminum/nylon	822-019-001
	Seat assembly - 316SS Holder/Nitrile (NACE only)	822-020-000
	Seat assembly - 316SS/Nylon (NACE only)	822-020-001
29	Orifice - Aluminum	
	3/32"	688-013-005
	1/8"	688-013-004
	3/16"	688-013-003
	1/4"	688-013-002
	3/8"	688-013-001
	1/2"	688-013-000
	Orifice - 316SS (NACE units)	
	3/32"	688-014-005
	1/8"	688-014-004
	3/16"	688-014-003
	1/4"	688-014-002
30	3/8"	688-014-001
	1/2"	688-014-000
	Body - Ductile Iron	
	3/4 NPT	664-280-000
	1 NPT	664-280-001
	2 NPT	664-282-000
	Body - Steel	
	3/4 NPT	664-281-000
	1 NPT	664-281-001
	2 NPT	664-283-000
	3/4 NPT LCC	664-325-000
	1 NPT LCC	664-325-001
31	2 NPT LCC	664-326-000
	3/4 NPT Socket Weld	664-356-000
	1 NPT Socket Weld	664-358-000
	2 NPT Socket Weld	664-359-000
	Nameplate (not shown)	632-474-000
	Diaphragm Spacer (P627H or P627HM only)	654-167-000
32		
33	O-ring, Spacer (P627H or P627HM only)	649-279-000
34	O-ring, Throat Block (2 required)	649-281-000
35	Throat Block (P627M or P627HM only)	626-081-000
36	Backup Ring, Throat Block (2 required)	644-048-000
37	Build Screw, 3/4" & 1" Aluminum unit	648-466-001
	Build Screw, All Steel Bodies	648-467-001
	Build Screw 2" Aluminum Unit (2 required)*	648-466-003
	*For 648-466-003 only, order 662-000-023 Lock Washer.	
38	Spring Guide, Lower (P627H & P627HM only)	637-307-000
39	Thread Locker	Consult factory
40	Name Plate Drive Screw (2 required) (not shown)	648-464-000
41	NACE Tag (not shown)	632-503-000

P627 Parts

