

Mark 630 Series

High Pressure Regulators

The Jordan Mark 630 self-operated pressure reducing regulator is designed to provide tight shutoff and accurate regulation on high pressure gas systems. It can be used on air and a variety of gases. It is designed to handle inlet pressures up to 1500 psi.

FEATURES

- Inlet pressures to 1500 psi (103,4 bar)
- Tight shutoff
- Easy maintenance
- Rugged design
- Multiple orifice sizes, brass or stainless steel
- NACE compatible option

SPECIFICATIONS

Sizes: 1" (DN25) and 2" (DN50)

End Connections: FNPT (contact factory for other options)

Materials:

- Body: 1" Carbon Steel (WCB A216), 2" Ductile Iron
- Seat: Brass or 316 Stainless Steel (CF8M)
- Disc Assembly: Brass / TFE, 316 / TFE
- Diaphragm: Neoprene, Viton
- Spring Housing: Steel

Service: Air or gas

Temperature Range: -20°F to 150°F (-28,9°C to 65,6°C)

Maximum Inlet Pressure: 1500 psi (103,4 bar)

Reduced Pressure Control Range:

- 27 - 50 psig (1,86 - 3,45 bar)
- 46 - 95 psig (3,17 - 6,55 bar)
- 90 - 150 psig (6,21 - 10,34 bar)
- 150 - 200 psig (10,34 - 13,79 bar)
- 200 - 275 psig (13,79 - 19,0 bar)
- 275 - 500 psig (19,0 - 34,5 bar)

Orifice Sizes (interchangeable): 1/8" (3mm), 3/16" (5mm), 1/4" (6mm), 3/8" (10mm), 1/2" (13mm)



TABLE 1: MAX INLET PRESSURES AND PRESSURE DROPS

Orifice Diameter	1/8"	1/4"	3/8"	1/2"
Max Allowable Inlet Pressure, psig ⁽¹⁾	1500	1500	1000	750
Max Allowable Pressure Drop, psid	1500	1000	500	250

1. The sum of the outlet pressure setting and the maximum allowable pressure drop determines the maximum allowable inlet pressure for a given installation. For example, with a 3/8" seat ring orifice (maximum pressure drop of 500 psi) and a 275 psig outlet pressure setting, the maximum inlet pressure is 775 psig (500 psi + 275 psig).

TABLE 2: OUTLET PRESSURE RANGES

Outlet Pressure Range (psig)	27-50	46-95	90-150	150-200	200-275	275-500
Maximum Outlet Pressure over Pressure Setting ⁽¹⁾ , psig	200					200 ⁽²⁾
Maximum Emergency Outlet (Casing) Pressure, psig	550					

1. Internal parts of the regulator may be damaged if the outlet pressure exceeds the pressure setting beyond the amounts shown.
2. This applies to outlet pressure settings below 350 psig only. For pressure settings above 350 psig, outlet pressure is limited to 550 psig, the maximum emergency outlet (casing) pressure.



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MARK 630 HIGH PRESSURE REGULATOR

TABLE 3: HIGH PRESSURE REGULATOR FLOW CAPACITIES (SCFH OF 0.6 SPECIFIC GRAVITY NATURAL GAS; BASED ON 20% DROOP)

Outlet Pressure Range, psig	Inlet Pressure (psig)	Outlet Pressure (psig)	Orifice Diameter (Inches)				
			1/8	3/16	1/4	3/8	1/2
27-50	60	50	900	2000	3100	5200	8100
	75		1300	2800	3800	7200	10000
	100		1700	3500	5700	10500	13000
	150		2600	5700	8700	13000	17000
	200		3500	7800	11000	16000	19000
	300		5300	10500	14000	20000	23000
	400		6900	13000	17000	23000	—
	550		9600	16000	20000	26000	—
	600		9800	17000	21000	—	—
	1050		17000	23000	27000	—	—
1500	19000	25000	—	—	—		
46-95	60	50	800	1500	2400	4300	6400
	75		1200	2100	3100	5500	8000
	100		1500	3100	4200	7500	10000
	150		2400	4500	6700	11000	14000
	200		3400	6600	9400	14000	17000
	300		5200	8900	11000	16000	20000
	400		6800	11000	15000	20000	—
	550		9500	13000	17000	23000	—
	600		9800	14000	19000	—	—
	1050		14000	19000	22000	—	—
1500	18000	24000	—	—	—		
46-95	100	75	1700	3200	5000	8000	13000
	125		2200	4300	6700	10000	15000
	200		3500	7300	10000	16000	22000
	250		4400	9400	13000	19000	24000
	325		5700	11000	16000	23000	27000
	400		7100	14000	19000	27000	—
	575		9700	18000	23000	30000	—
	600		9900	19000	25000	—	—
	1075		18000	27000	32000	—	—
	1500		23000	32000	—	—	—
90-150	125	100	2000	3600	5500	9200	13000
	150		2500	4600	6800	11000	16000
	200		3600	6600	9400	13000	22000
	250		4400	8500	11000	18000	26000
	300		5300	9800	14000	21000	30000
	350		6100	10000	16000	25000	32000
	400		7000	13000	18000	27000	—
	600		9500	18000	23000	35000	—
	1100		19500	28000	35000	—	—
	1500		25000	35000	—	—	—

To determine the equivalent capacities for other gases, multiply table value by 0.775 for air; 0.789 for nitrogen; 0.628 for propane; 0.548 for butane.

MARK 630 HIGH PRESSURE REGULATOR

TABLE 3: HIGH PRESSURE REGULATOR FLOW CAPACITIES (SCFH OF 0.6 SPECIFIC GRAVITY NATURAL GAS; BASED ON 20% DROOP) (CONT'D)

Outlet Pressure Range, (psig)	Inlet Pressure (psig)	Outlet Pressure (psig)	Orifice Diameter (Inches)				
			1/8	3/16	1/4	3/8	1/2
90-150	150	125	2400	4600	6700	11000	17000
	200		3500	6800	10000	15000	23000
	250		4300	8900	12000	19000	29000
	300		5200	10000	15000	25000	34000
	375		6600	13000	18500	28000	39000
	400		7300	14500	19000	29000	—
	500		7900	15000	25000	36000	—
	625		10000	22000	29000	41000	—
	1125		18000	33000	42000	—	—
	1500		26000	43000	—	—	—
90-150	200	150	3400	6800	10000	16000	26000
	250		4400	8800	13000	20000	32000
	300		5300	10000	15000	24000	35000
	400		7100	14000	22000	34000	42000
	450		7700	17000	24000	36000	—
	650		90000	24000	33000	49000	—
	800		13000	29000	38000	—	—
	1150		20000	38000	49000	—	—
	1500		26000	47000	—	—	—
	150-200		200	150	3400	6200	9300
250		4300	8800		12000	20000	27000
300		5300	10000		15000	24000	30000
400		7100	14000		21000	32000	38000
450		7600	15000		24000	36000	—
650		9000	21000		33000	48000	—
800		13000	27000		37000	—	—
1150		19500	34000		49000	—	—
1500		26000	44000		—	—	—
150-200		250	200		4200	8300	12000
	300	5200		10000	16000	25000	35000
	450	7800		16000	26000	43000	50000
	600	9500		22000	34000	55000	—
	700	11000		25000	40000	61000	—
	800	13000		30000	43000	—	—
	1000	16000		37000	50000	—	—
	1200	20000		41000	59000	—	—
	1500	26000		53000	—	—	—

To determine the equivalent capacities for other gases, multiply table value by 0.775 for air; 0.789 for nitrogen; 0.628 for propane; 0.548 for butane.

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TABLE 3: HIGH PRESSURE REGULATOR FLOW CAPACITIES (SCFH OF 0.6 SPECIFIC GRAVITY NATURAL GAS; BASED ON 20% DROOP) (CONT'D)

Outlet Pressure Range, psig	Inlet Pressure (psig)	Outlet Pressure (psig)	Orifice Diameter (Inches)				
			1/8	3/16	1/4	3/8	1/2
200-275	250	200	4200	8200	11000	20000	29000
	300		5200	10000	14500	25000	35000
	450		7700	16000	24000	40000	50000
	600		9500	22000	31000	51000	—
	700		11000	25000	35000	55000	—
	800		13000	29000	42000	—	—
	1000		16000	36000	50000	—	—
	1500		19000	41000	55000	—	—
200-275	300	250	4900	9000	15000	28000	42000
	400		7000	14000	23000	40000	56000
	500		8500	18000	29000	51000	65000
	600		9500	22000	34000	59000	—
	750		12500	28000	44000	69000	—
	1000		16000	39000	58000	—	—
	1250		21000	49000	69000	—	—
	1500		26000	59000	—	—	—
200-275	300	275	4700	9000	15000	28000	39000
	400		6900	14000	25000	40000	54000
	525		8600	18000	35000	68000	94000
	775		11000	28000	51000	95000	—
	1000		16000	39000	67000	—	—
	1275		21000	50000	87000	—	—
	1500		26000	60000	—	—	—

To determine the equivalent capacities for other gases, multiply table value by 0.775 for air; 0.789 for nitrogen; 0.628 for propane; 0.548 for butane.

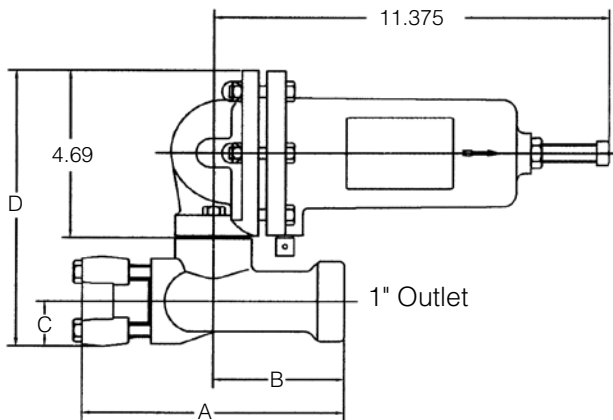
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TABLE 3: HIGH PRESSURE REGULATOR FLOW CAPACITIES (SCFH OF 0.6 SPECIFIC GRAVITY NATURAL GAS; BASED ON 20% DROOP) (CONT'D)

Outlet Pressure Range, (psig)	Inlet Pressure (psig)	Outlet Pressure (psig)	Orifice Diameter (Inches)				
			1/8	3/16	1/4	3/8	1/2
275-500	300	275	4500	7500	10000	20000	31000
	400		6600	12000	16000	31000	43000
	525		8600	16000	21000	39000	56000
	775		11000	24000	32000	55000	—
	1000		17000	32000	43000	—	—
	1275		21000	40000	53000	—	—
275-500	1500	300	26000	46000	—	—	—
	400		6600	11000	16000	31000	42000
	550		9700	18000	23000	44000	63000
	600		9900	19000	26000	48000	—
	700		11000	23000	30000	54000	—
	800		13000	26000	35000	61000	—
275-500	900	400	15000	29000	39000	—	—
	1300		22000	43000	58000	—	—
	1500		26000	49000	—	—	—
	500		8300	16000	24000	44000	62000
	650		10000	24000	33000	61000	86000
	800		13000	30000	41000	76000	—
275-500	900	500	15000	34000	49000	85000	—
	1000		17000	38000	54000	—	—
	1200		20000	46000	63000	—	—
	1400		24000	55000	76000	—	—
	1500		26000	60000	—	—	—
	550		8700	16000	26000	50000	77000
275-500	750	500	12000	28000	40000	78000	100000
	900		15000	34000	52000	92000	—
	1000		17000	39000	60000	100000	—
	1500		26000	59000	72000	—	—

To determine the equivalent capacities for other gases, multiply table value by 0.775 for air; 0.789 for nitrogen; 0.628 for propane; 0.548 for butane.

DIMENSIONAL DATA



GENERAL DIMENSIONS

Size	A	B	C	D
1"	7 3/8	3 11/16	1 3/16	7 5/8
2"	7 7/8	3 15/16	2	8 7/16

OVERPRESSURE PROTECTION

As is true with many regulators, the Mark 630 Series regulator has an outlet pressure rating that is lower than the inlet pressure rating. Overpressure protection is needed to avoid overpressure if the actual inlet pressure can exceed the outlet pressure rating.

ORDERING SCHEMATIC

To specify a MK630 High Pressure Regulator, build a model number by making a selection from each category in the product Designator Coding System below.

Model #	—	Size	/	1	2	3	4	5	6	7

Model	
630	Model

4	Options
S	Standard Unit
N	NACE
O	Other (Specify)

Size	
100	1"
200	2"

5 & 6	Seat Ring Orifice
12	1/8"
18	3/16"
25	1/4"
38	3/8"
50	1/2"

1 & 2	Body Material
CS	Carbon Steel (1" only)
DI	Ductile Iron (2" only)

3	Outlet Pressure Range
1	27 to 50 psig
2	46 to 95 psig
3	90 to 150 psig
4	150 to 200 psig
5	200 to 275 psig
6	275 to 500 psig

7	Trim Material
B	Brass
6	316 SS*

* SS option meets NACE requirements. When ordering, use the "N" designation.

