

High-Pressure Regulators

RG20 Series

The RG20 is a direct spring-operated, pressure regulator that can be used anywhere pressure regulation of natural gas, air or other gas is required. Its housing can be moved to one of four positions to save space during installation.

The RG20 is designed for easy maintenance by allowing access to the body without removing it from the line. A NACE option is available for sour service.

The RG20H is a high-pressure option that includes a steel housing and spring cover capable of handling pressures above 150 psi.

The RG20R is a self-relieving version of the RG20. If the downstream pressure exceeds the set point, the RG20R will vent the excess pressure to atmosphere.



Specifications

Sizes: 1" & 2"

Connection: Female NPT

Body Type: Globe

Orifice Sizes: .125" (1/8"), .188" (3/16"), .25", .375" (3/8"), .50"

Temperature Range: -20° F to 180° F (-29° C to 82° C)

Body Pressure Rating: 2000 psi

Materials:

Body: WCB steel

Housing and Spring Cover: Aluminum (RG20, RG20R),
WCB steel (RG20H)

Orifice and Disk Holder: Aluminum, stainless (optional)

Disk: Buna, Viton®, nylon

Diaphragm: Buna, Viton® (optional)

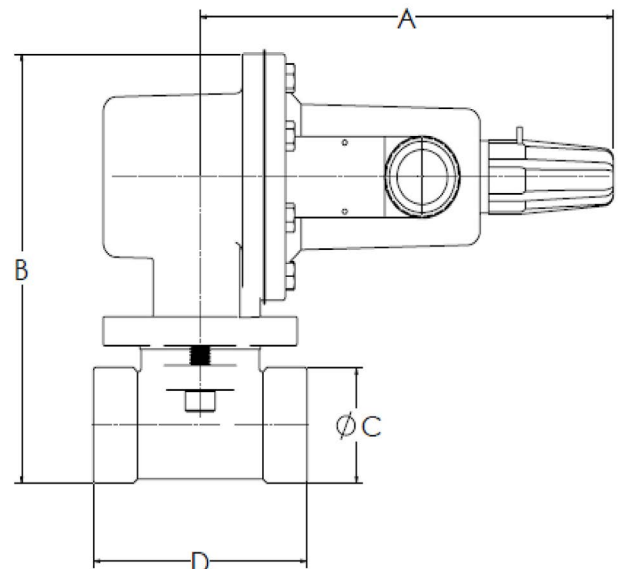
Weight: Approximate

1": 6.5 lbs aluminum or 10 lbs steel

2": 10.5 lbs aluminum or 14 lbs steel

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Dimensions



| Housing and Spring Cover Pressure Ratings | | | |
|---|----------|---------|----------|
| Material Pressure Limitations: | Material | | |
| | RG20 | RG20R | RG20H |
| To prevent housing failure | 375 psi | 375 psi | 1500 psi |
| To prevent leakage to atmosphere | 250 psi | 250 psi | 800 psi |
| To prevent damage to internal parts | 60 psi | 120 psi | 120 psi |

| Body Size | Dimensions | | | | | | | |
|-----------|------------|-------|------|-------|------|------|------|-------|
| | A | | B | | C | | D | |
| | in. | mm | in. | mm | in. | mm | in. | mm |
| 1" | 7.72 | 196.1 | 7.40 | 188.0 | 2.00 | 50.8 | 4.00 | 101.6 |
| 2" | 7.72 | 196.1 | 8.47 | 215.1 | 3.38 | 85.9 | 5.00 | 127.0 |

Capacities of 0.6 S.G. Natural Gas in SCFH – RG20 (Continued)

| Outlet Pressure Range | Outlet Pressure | | Inlet Pressure | | 1" Body Size | | | | | 2" Body Size | | | | |
|---|-----------------|--------|----------------|--------|------------------|---------|---------|---------|---------|------------------|---------|---------|---------|---------|
| | | | | | Orifice Diameter | | | | | Orifice Diameter | | | | |
| | | | | | .125" | .188" | .25" | .375" | .50" | .125" | .188" | .25" | .375" | .50" |
| 35 to 80 psig (2.4 to 5.5 bar) Blue Spring | 60 | 4.1 | 75 | 5.2 | 1,230 | 2,760 | 4,880 | 8,630 | 16,100 | 1,260 | 2,760 | 4,900 | 9,000 | 12,300 |
| | | | 100 | 6.9 | 1,740 | 4,010 | 7,000 | 13,000 | 19,300 | 1,740 | 4,010 | 7,000 | 15,000 | 20,400 |
| | | | 150 | 10.3 | 2,580 | 5,850 | 10,500 | 18,900 | 32,800 | 2,580 | 5,850 | 10,500 | 23,300 | 35,200 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 13,700 | 24,000 | 42,200 | 3,370 | 7,630 | 13,700 | 30,400 | 53,900 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 20,100 | 32,500 | 69,100 | 4,910 | 11,200 | 20,100 | 44,600 | 79,000 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 32,900 | 64,000 | 94,300 | 8,090 | 18,300 | 32,900 | 73,000 | 38,800 |
| | | | 750 | 51.8 | 12,000 | 27,200 | 43,380 | 66,000 | 130,000 | 12,000 | 27,200 | 48,900 | 53,000 | 32,000 |
| | | | 1,000 | 69.0 | 16,000 | 36,100 | 50,300 | 67,700 | | 16,000 | 36,100 | 43,000 | 52,000 | |
| | | | 1,250 | 86.2 | 19,000 | 45,000 | 57,000 | | | 19,000 | 45,000 | 70,000 | | |
| | 1,500 | 103 | 22,000 | 54,000 | 63,000 | | | 22,000 | 54,000 | 43,000 | | | | |
| | 1,750 | 121 | 25,000 | 63,000 | | | | 25,000 | 26,000 | | | | | |
| | 2,000 | 138 | 28,000 | | | | | 28,000 | | | | | | |
| | 80 | 5.5 | 100 | 5.2 | 1,600 | 3,750 | 6,650 | 12,200 | 18,600 | 1,630 | 3,750 | 6,400 | 12,800 | 20,400 |
| | | | 150 | 10.3 | 2,580 | 5,850 | 10,500 | 21,100 | 33,600 | 2,580 | 5,850 | 10,500 | 23,300 | 41,300 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 13,700 | 28,400 | 44,100 | 3,370 | 7,630 | 13,700 | 30,400 | 53,900 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 20,100 | 43,300 | 75,400 | 4,910 | 11,200 | 20,100 | 44,600 | 79,000 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 32,900 | 71,600 | 110,000 | 8,090 | 18,300 | 32,900 | 73,000 | 48,000 |
| | | | 750 | 51.8 | 12,000 | 27,200 | 48,900 | 105,500 | 135,000 | 12,000 | 27,200 | 48,900 | 87,000 | 44,000 |
| 1,000 | | | 69.0 | 16,000 | 36,100 | 64,900 | 118,000 | | 16,000 | 36,100 | 65,000 | 63,000 | | |
| 1,250 | | | 86.2 | 19,000 | 45,000 | 80,000 | | | 19,000 | 45,000 | 63,000 | | | |
| 1,500 | | | 103 | 22,000 | 54,000 | 96,000 | | | 22,000 | 54,000 | 86,000 | | | |
| 1,750 | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | | | | |
| 2,000 | 138 | 28,000 | | | | | 28,000 | | | | | | | |
| 70 to 150 psig (4.8 to 10.3 bar) Red Spring | 100 | 6.9 | 150 | 10.3 | 2,510 | 5,540 | 8,710 | 16,000 | 24,000 | 2,510 | 5,540 | 8,600 | 16,000 | 22,000 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 12,000 | 21,300 | 34,100 | 3,370 | 7,630 | 13,700 | 22,000 | 33,000 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 19,400 | 30,100 | 53,200 | 4,910 | 11,200 | 20,100 | 35,000 | 65,300 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 31,800 | 66,500 | 83,900 | 8,090 | 18,300 | 32,900 | 73,000 | 129,000 |
| | | | 750 | 51.8 | 12,000 | 27,200 | 47,300 | 95,300 | 117,000 | 12,000 | 27,200 | 48,900 | 108,000 | 54,000 |
| | | | 1,000 | 69.0 | 16,000 | 36,100 | 59,700 | 100,000 | 120,000 | 16,000 | 36,100 | 64,800 | 82,000 | |
| | | | 1,250 | 86.2 | 19,000 | 45,000 | 72,000 | 114,000 | | 19,000 | 45,000 | 80,000 | 110,000 | |
| | | | 1,500 | 103 | 22,000 | 54,000 | 86,000 | | | 22,000 | 54,000 | 96,000 | | |
| | | | 1,750 | 121 | 25,000 | 63,000 | 95,000 | | | 25,000 | 63,000 | 112,000 | | |
| | 2,000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | | |
| | 125 | 8.6 | 150 | 10.3 | 2,340 | 5,340 | 9,470 | 15,700 | 20,800 | 2,340 | 5,340 | 8,600 | 16,000 | 24,000 |
| | | | 200 | 13.8 | 3,320 | 7,550 | 13,400 | 28,100 | 32,800 | 3,320 | 7,550 | 13,700 | 24,000 | 36,000 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 20,100 | 36,300 | 52,600 | 4,910 | 11,200 | 20,100 | 39,000 | 65,300 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 32,900 | 70,800 | 109,000 | 8,090 | 18,300 | 32,900 | 73,000 | 129,000 |
| | | | 750 | 51.8 | 12,000 | 27,200 | 48,900 | 104,000 | 158,000 | 12,000 | 27,200 | 48,900 | 108,000 | 59,000 |
| | | | 1,000 | 69.0 | 16,000 | 36,100 | 64,800 | 138,000 | 160,000 | 16,000 | 36,100 | 64,800 | 58,000 | |
| | | | 1,250 | 86.2 | 19,000 | 45,000 | 80,000 | 145,000 | | 19,000 | 45,000 | 80,000 | 75,000 | |
| | | | 1,500 | 103 | 22,000 | 54,000 | 96,000 | | | 22,000 | 54,000 | 96,000 | | |
| 1,750 | | | 121 | 25,000 | 63,000 | 112,000 | | | 25,000 | 63,000 | 112,000 | | | |
| 2,000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | | | |
| 150 | 10.3 | 200 | 13.8 | 3,200 | 7,290 | 12,900 | 21,400 | 33,600 | 3,200 | 7,290 | 13,000 | 24,000 | 38,000 | |
| | | 300 | 20.7 | 4,910 | 11,200 | 17,200 | 40,100 | 55,900 | 4,910 | 11,200 | 20,100 | 44,600 | 64,200 | |
| | | 500 | 34.5 | 8,090 | 18,300 | 32,900 | 70,300 | 111,000 | 8,090 | 18,300 | 32,900 | 73,000 | 129,000 | |
| | | 750 | 51.8 | 12,000 | 27,200 | 48,900 | 104,000 | 160,000 | 12,000 | 27,200 | 48,900 | 108,000 | 62,000 | |
| | | 1,000 | 69.0 | 16,000 | 36,100 | 64,800 | 138,000 | 162,000 | 16,000 | 36,100 | 64,800 | 144,000 | | |
| | | 1,250 | 86.2 | 19,000 | 45,000 | 80,000 | 150,000 | | 19,000 | 45,000 | 80,000 | 81,000 | | |
| | | 1,500 | 103 | 22,000 | 54,000 | 96,000 | | | 22,000 | 54,000 | 96,000 | | | |
| | | 1,750 | 121 | 25,000 | 63,000 | 112,000 | | | 25,000 | 63,000 | 112,000 | | | |
| | | 2,000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | |

- 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 set point.
- For 5 psig (0.34 bar) pressure set point, the droop is 2 psig (0.14 bar).
- Grayed out areas indicate that the inlet pressure is too high for a given orifice size.
- 10-95 psi utility spring available.
- To convert capacities to another gas, multiply by .775 and divide by the square root of the specific gravity of the desired gas.
- To convert SCFH to m³ /hr, multiply 0.0268.

Capacities of 0.6 S.G. Natural Gas in SCFH – RG20R (Continued)

| Outlet Pressure Range | Outlet Pressure | | Inlet Pressure | | 1" Body Size | | | | | 2" Body Size | | | | |
|---|-----------------|--------|----------------|--------|------------------|--------|--------|--------|--------|------------------|--------|--------|--------|--------|
| | | | | | Orifice Diameter | | | | | Orifice Diameter | | | | |
| | psig | bar | psig | bar | .125" | .188" | .25" | .375" | .50" | .125" | .188" | .25" | .375" | .50" |
| 35 to 80 psig (2.4 to 5.5 bar) Blue Spring | 60 | 4.1 | 75 | 5.2 | 1,230 | 2,760 | 4,860 | 8,600 | 12,800 | 1,230 | 2,760 | 4,860 | 8,600 | 12,800 |
| | | | 100 | 6.9 | 1,740 | 3,910 | 7,000 | 12,500 | 16,700 | 1,740 | 3,910 | 7,000 | 12,500 | 16,700 |
| | | | 150 | 10.3 | 2,580 | 5,850 | 10,500 | 16,800 | 23,000 | 2,580 | 5,850 | 10,500 | 16,800 | 23,000 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 13,700 | 20,900 | 27,700 | 3,370 | 7,630 | 13,700 | 20,900 | 27,700 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 20,100 | 28,100 | | 4,910 | 11,200 | 20,100 | 28,100 | |
| | | | 500 | 34.5 | 8,090 | 18,300 | 28,500 | | | 8,090 | 18,300 | 28,500 | | |
| | | | 750 | 51.8 | 12,000 | 27,200 | 37,400 | | | 12,000 | 27,200 | 37,400 | | |
| | | | 1,000 | 69.0 | 16,000 | 33,300 | | | | 16,000 | 33,300 | | | |
| | | | 1,250 | 86.2 | 19,000 | | | | | 19,000 | | | | |
| | 1,500 | 103 | 22,000 | | | | | 22,000 | | | | | | |
| | 1,750 | 121 | 25,000 | | | | | 25,000 | | | | | | |
| | 2,000 | 138 | | | | | | | | | | | | |
| | 80 | 5.5 | 100 | 5.2 | 1,630 | 3,570 | 6,490 | 12,000 | 17,200 | 1,630 | 3,570 | 6,490 | 12,000 | 17,200 |
| | | | 150 | 10.3 | 2,580 | 5,750 | 10,500 | 18,900 | 25,000 | 2,580 | 5,750 | 10,500 | 18,900 | 25,000 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 13,700 | 23,000 | 29,000 | 3,370 | 7,630 | 13,700 | 23,000 | 29,000 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 20,100 | 26,000 | | 4,910 | 11,200 | 20,100 | 26,000 | |
| | | | 500 | 34.5 | 8,090 | 18,300 | 29,000 | | | 8,090 | 18,300 | 29,000 | | |
| | | | 750 | 51.8 | 12,000 | 23,100 | 30,900 | | | 12,000 | 23,100 | 30,900 | | |
| 1,000 | | | 69.0 | 16,000 | 27,400 | | | | 16,000 | 27,400 | | | | |
| 1,250 | | | 86.2 | 19,000 | | | | | 19,000 | | | | | |
| 1,500 | | | 103 | 22,000 | | | | | 22,000 | | | | | |
| 1,750 | 121 | 25,000 | | | | | 25,000 | | | | | | | |
| 2,000 | 138 | | | | | | | | | | | | | |
| 70 to 150 psig (4.8 to 10.3 bar) Red Spring | 100 | 6.9 | 150 | 10.3 | 2,510 | 5,540 | 8,310 | 15,500 | 20,300 | 2,510 | 5,540 | 8,310 | 15,500 | 20,300 |
| | | | 200 | 13.8 | 3,370 | 7,630 | 12,000 | 20,100 | 25,700 | 3,370 | 7,630 | 12,000 | 20,100 | 25,700 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 18,200 | | | 4,910 | 11,200 | 18,200 | | |
| | | | 500 | 34.5 | 8,090 | 18,300 | | | | 8,090 | 18,300 | | | |
| | | | 750 | 51.8 | 12,000 | | | | | 12,000 | | | | |
| | | | 1,000 | 69.0 | 16,000 | | | | | 16,000 | | | | |
| | | | 1,250 | 86.2 | | | | | | | | | | |
| | | | 1,500 | 103 | | | | | | | | | | |
| | | | 1,750 | 121 | | | | | | | | | | |
| | 2,000 | 138 | | | | | | | | | | | | |
| | 125 | 8.6 | 150 | 10.3 | 2,300 | 5,090 | 9,130 | 15,700 | 20,800 | 2,300 | 5,090 | 9,130 | 15,700 | 20,800 |
| | | | 200 | 13.8 | 3,320 | 7,360 | 13,160 | 22,400 | 28,800 | 3,320 | 7,360 | 13,160 | 22,400 | 28,800 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 19,700 | | | 4,910 | 11,200 | 19,700 | | |
| | | | 500 | 34.5 | 8,090 | 18,300 | | | | 8,090 | 18,300 | | | |
| | | | 750 | 51.8 | 12,000 | | | | | 12,000 | | | | |
| | | | 1,000 | 69.0 | 16,000 | | | | | 16,000 | | | | |
| | | | 1,250 | 86.2 | | | | | | | | | | |
| | | | 1,500 | 103 | | | | | | | | | | |
| | | | 1,750 | 121 | | | | | | | | | | |
| | 2,000 | 138 | | | | | | | | | | | | |
| | 150 | 10.3 | 200 | 13.8 | 3,200 | 7,020 | 12,500 | 21,400 | 30,600 | 3,200 | 7,020 | 12,500 | 21,400 | 30,600 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 17,200 | | | 4,910 | 11,200 | 17,200 | | |
| | | | 500 | 34.5 | 8,090 | 18,300 | | | | 8,090 | 18,300 | | | |
| | | | 750 | 51.8 | 12,000 | | | | | 12,000 | | | | |
| | | | 1,000 | 69.0 | 16,000 | | | | | 16,000 | | | | |
| | | | 1,250 | 86.2 | | | | | | | | | | |
| | | | 1,500 | 103 | | | | | | | | | | |
| 1,750 | | | 121 | | | | | | | | | | | |
| 2,000 | 138 | | | | | | | | | | | | | |

- 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 set point.
- For 5 psig (0.34 bar) pressure set point, the droop is 2 psig (0.14 bar).
- Grayed out areas indicate that the inlet pressure is too high for a given orifice size.
- 10-95 psi utility spring available.
- To convert capacities to another gas, multiply by .775 and divide by the square root of the specific gravity of the desired gas.
- To convert SCFH to m³ /hr, multiply 0.0268.

Capacities of 0.6 S.G. Natural Gas in SCFH – RG20H

| Outlet Pressure Range | Outlet Pressure | | Inlet Pressure | | 1" Body Size | | | | | 2" Body Size | | | | |
|---|-----------------|--------|----------------|--------|------------------|--------|---------|---------|--------|------------------|--------|---------|---------|--------|
| | | | | | Orifice Diameter | | | | | Orifice Diameter | | | | |
| | psig | bar | psig | bar | .125" | .188" | .25" | .375" | .50" | .125" | .188" | .25" | .375" | .50" |
| 140 to 250 psig (9.7 to 17.2 bar) Blue Spring RG20H Only | 150 | 10.3 | 200 | 13.8 | 3,200 | 7,290 | 11,500 | 21,600 | 31,000 | 3,200 | 7,290 | 13,700 | 24,100 | 31,000 |
| | | | 250 | 17.2 | 4,100 | 9,200 | 15,400 | 28,600 | 40,000 | 4,100 | 9,200 | 16,100 | 28,600 | 40,000 |
| | | | 300 | 20.7 | 4,910 | 11,200 | 19,300 | 31,000 | 46,000 | 4,910 | 11,200 | 19,300 | 31,000 | 46,000 |
| | | | 400 | 27.6 | 6,500 | 14,800 | 25,000 | 40,000 | 50,000 | 6,500 | 14,800 | 25,000 | 40,000 | 50,000 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 32,000 | 51,000 | | 8,090 | 18,300 | 32,000 | | |
| | | | 750 | 51.7 | 12,000 | 27,200 | 46,000 | | | 12,000 | 27,200 | 48,000 | | |
| | | | 1,000 | 69.0 | 16,000 | 36,100 | 60,000 | | | 16,000 | 36,100 | 65,000 | | |
| | | | 1,250 | 86.2 | 19,000 | 45,000 | | | | 19,000 | 45,000 | | | |
| | | | 1,500 | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | |
| | | | 1,750 | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | |
| | 2,000 | 138 | 28,000 | | | | | 28,000 | | | | | | |
| | 200 | 13.8 | 250 | 17.2 | 3,850 | 8,400 | 15,000 | 31,000 | 41,000 | 3,850 | 8,400 | 16,100 | 33,000 | 41,000 |
| | 300 | | 20.7 | 4,910 | 11,200 | 19,500 | 36,000 | 52,000 | 4,910 | 11,200 | 20,100 | 36,000 | 52,000 | |
| | 400 | | 27.6 | 6,500 | 14,800 | 26,500 | 52,000 | 68,000 | 6,500 | 14,800 | 26,500 | 52,000 | 68,000 | |
| | 500 | | 34.5 | 8,090 | 18,300 | 33,000 | 61,000 | | 8,090 | 18,300 | 33,000 | 61,000 | | |
| | 750 | | 51.8 | 12,000 | 27,200 | 49,000 | | | 12,000 | 27,200 | 49,000 | | | |
| | 1,000 | | 69.0 | 16,000 | 36,100 | 65,000 | | | 16,000 | 36,100 | 65,000 | | | |
| | 1,250 | | 86.2 | 19,000 | 45,000 | | | | 19,000 | 45,000 | | | | |
| | 1,500 | | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | | |
| | 1,750 | | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | | |
| | 2,000 | | 138 | 28,000 | | | | | 28,000 | | | | | |
| | 250 | 17.2 | 300 | 20.7 | 4,500 | 9,900 | 18,500 | 37,000 | 75,000 | 4,500 | 9,900 | 18,500 | 37,000 | 75,000 |
| | 400 | | 27.6 | 6,400 | 14,300 | 26,000 | 55,000 | 81,000 | 6,400 | 14,300 | 26,000 | 55,000 | 81,000 | |
| | 500 | | 34.5 | 8,090 | 18,300 | 33,000 | 64,000 | 95,000 | 8,090 | 18,300 | 33,000 | 64,000 | 95,000 | |
| | 750 | | 51.8 | 12,000 | 27,200 | 49,000 | 102,000 | | 12,000 | 27,200 | 49,000 | 102,000 | | |
| | 1,000 | | 69.0 | 16,000 | 36,100 | 65,000 | | | 16,000 | 36,100 | 65,000 | | | |
| | 1,250 | | 86.2 | 19,000 | 45,000 | 81,000 | | | 19,000 | 45,000 | 81,000 | | | |
| | 1,500 | | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | | |
| 1,750 | 121 | | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | | | |
| 2,000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | | | |
| 240 to 500 psig (16.5 to 34.5 bar) Red Spring RG20H Only | 250 | 17.2 | 300 | 20.7 | 4,500 | 9,900 | 18,500 | 37,000 | 75,000 | 4,500 | 9,900 | 18,500 | 37,000 | 75,000 |
| | | | 400 | 27.6 | 6,400 | 14,300 | 26,000 | 55,000 | 81,000 | 6,400 | 14,300 | 26,000 | 55,000 | 81,000 |
| | | | 500 | 34.5 | 8,090 | 18,300 | 33,000 | 64,000 | 95,000 | 8,090 | 18,300 | 33,000 | 64,000 | 95,000 |
| | | | 750 | 51.8 | 12,000 | 27,200 | 49,000 | 102,000 | | 12,000 | 27,200 | 49,000 | 102,000 | |
| | | | 1,000 | 69.0 | 16,000 | 36,100 | 65,000 | | | 16,000 | 36,100 | 65,000 | | |
| | | | 1,250 | 86.2 | 19,000 | 45,000 | 81,000 | | | 19,000 | 45,000 | 81,000 | | |
| | | | 1,500 | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | |
| | | | 1,750 | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | |
| | 2,000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | | |
| | 300 | 20.7 | 350 | 24.1 | 5,150 | 11,300 | 18,400 | 31,000 | 45,000 | 5,150 | 11,300 | 18,400 | 31,000 | 45,000 |
| | 400 | | 27.6 | 6,200 | 13,700 | 23,400 | 40,000 | 52,000 | 6,200 | 13,700 | 23,400 | 40,000 | 52,000 | |
| | 500 | | 34.5 | 8,090 | 18,300 | 32,000 | 53,000 | 67,000 | 8,090 | 18,300 | 32,000 | 53,000 | 67,000 | |
| | 750 | | 51.7 | 12,000 | 27,200 | 48,000 | 80,000 | | 12,000 | 27,200 | 48,000 | 80,000 | | |
| | 1000 | | 69 | 16,000 | 36,100 | 62,000 | | | 16,000 | 36,100 | 62,000 | | | |
| | 1250 | | 86.2 | 19,000 | 45,000 | 79,000 | | | 19,000 | 45,000 | 79,000 | | | |
| | 1500 | | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | | |
| | 1750 | | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | | |
| | 2000 | | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | |

Capacities of 0.6 S.G. Natural Gas in SCFH – RG20H (Continued)

| Outlet Pressure Range | Outlet Pressure | | Inlet Pressure | | 1" Body Size | | | | | 2" Body Size | | | | |
|---|-----------------|--------|----------------|------|------------------|--------|--------|---------|---------|------------------|--------|--------|---------|---------|
| | | | | | Orifice Diameter | | | | | Orifice Diameter | | | | |
| | | | | | psig | bar | psig | bar | .125" | .188" | .25" | .375" | .50" | .125" |
| 240 to 500 psig (16.5 to 34.5 bar) Red Spring | 400 | 27.6 | 450 | 31 | 6,400 | 14,000 | 25,000 | 47,000 | 67,000 | 6,400 | 14,000 | 25,000 | 47,000 | 67,000 |
| | | | 500 | 34.6 | 8,090 | 18,300 | 32,000 | 54,000 | 77,000 | 8,090 | 18,300 | 32,000 | 54,000 | 77,000 |
| | | | 750 | 51.7 | 12,000 | 27,200 | 49,000 | 91,000 | | 12,000 | 27,200 | 49,000 | 91,000 | |
| | | | 1000 | 69 | 16,000 | 36,100 | 65,000 | | | 16,000 | 36,100 | 65,000 | | |
| | | | 1250 | 86.2 | 19,000 | 45,000 | 81,000 | | | 19,000 | 45,000 | 81,000 | | |
| | | | 1500 | 103 | 22,000 | 54,000 | | | | 22,000 | 54,000 | | | |
| | | | 1750 | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | |
| RG20H Only | 500 | 34.5 | 2000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | |
| | | | 550 | 37.9 | 7,700 | 16,800 | 33,000 | 62,000 | 90,000 | 7,700 | 16,800 | 33,000 | 62,000 | 90,000 |
| | | | 600 | 47.4 | 8,800 | 19,400 | 37,000 | 70,000 | 104,000 | 8,800 | 19,400 | 37,000 | 70,000 | 104,000 |
| | | | 750 | 51.7 | 12,000 | 27,200 | 49,000 | 88,000 | 140,000 | 12,000 | 27,200 | 49,000 | 88,000 | 140,000 |
| | | | 1000 | 69 | 16,000 | 36,100 | 65,000 | 130,000 | | 16,000 | 36,100 | 65,000 | 130,000 | |
| | | | 1250 | 86.2 | 19,000 | 45,000 | 81,000 | | | 19,000 | 45,000 | 81,000 | | |
| | | | 1500 | 103 | 22,000 | 54,000 | 97,000 | | | 22,000 | 54,000 | 97,000 | | |
| 1750 | 121 | 25,000 | 63,000 | | | | 25,000 | 63,000 | | | | | | |
| 2000 | 138 | 28,000 | 71,000 | | | | 28,000 | 71,000 | | | | | | |

-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 set point.

-For 5 psig (0.34 bar) pressure set point, the droop is 2 psig (0.14 bar).

-Grayed out areas indicate that the inlet pressure is too high for a given orifice size.

-10-95 psi utility spring available.

-To convert capacities to another gas, multiply by .775 and divide by the square root of the specific gravity of the desired gas.

-To convert SCFH to m³ /hr, multiply 0.0268.

Pressure Ranges

| Outlet Pressure Range | Orifice Size | Maximum Inlet Pressure | | | | | | | | | | | |
|---------------------------------------|--------------|------------------------|-------|-----------|------|------------|------|------------|------|-----------|------|------------|------|
| | | RV20 and RV20H | | | | | | RV20R | | | | | |
| | | Nylon Disk | | Buna Disk | | Viton Disk | | Nylon Disk | | Buna Disk | | Viton Disk | |
| | | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar |
| 5' to 20 psig (0.34 to 1.4 bar) | .125" | 1000 | 69 | 1000 | 69.0 | 300 | 20.7 | 1000 | 69 | 1000 | 69 | 300 | 20.7 |
| | .188" | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 |
| | .25" | 500 | 34.5 | 500 | 34.5 | 300 | 20.7 | 500 | 34.5 | 500 | 34.5 | 300 | 20.7 |
| | .375" | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 |
| | .50" | 250 | 17.2 | 250 | 17.2 | 250 | 17.2 | 200 | 13.8 | 200 | 13.8 | 200 | 13.8 |
| 15 to 40 psig (1.0 to 2.8 bar) | .125" | 1500 | 103.4 | 1000 | 69.0 | 300 | 20.7 | 1500 | 103 | 1000 | 69 | 300 | 20.7 |
| | .188" | 1000 | 69.0 | 1000 | 69.0 | 300 | 20.7 | 1000 | 69 | 1000 | 69 | 300 | 20.7 |
| | .25" | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 |
| | .375" | 500 | 34.5 | 500 | 34.5 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 |
| | .50" | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 200 | 13.8 | 200 | 13.8 | 200 | 13.8 |
| 35 to 80 psig (2.4 to 5.5 bar) | .125" | 2000 | 137.9 | 1000 | 69.0 | 300 | 20.7 | 1750 | 121 | 1000 | 69 | 300 | 20.7 |
| | .188" | 1750 | 120.7 | 1000 | 69.0 | 300 | 20.7 | 1000 | 69 | 1000 | 69 | 300 | 20.7 |
| | .25" | 1500 | 103.4 | 1000 | 69.0 | 300 | 20.7 | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 |
| | .375" | 1000 | 69.0 | 1000 | 69.0 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 |
| | .50" | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 | 200 | 13.8 | 200 | 13.8 | 200 | 13.8 |
| 70 to 150 psig (4.8 to 10.3 bar) | .125" | 2000 | 137.9 | 1000 | 69.0 | 300 | 20.7 | 1000 | 69 | 1000 | 69 | 300 | 20.7 |
| | .188" | 2000 | 137.9 | 1000 | 69.0 | 300 | 20.7 | 500 | 34.5 | 500 | 34.5 | 300 | 20.7 |
| | .25" | 1750 | 120.7 | 1000 | 69.0 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 | 300 | 20.7 |
| | .375" | 1250 | 86.2 | 1000 | 69.0 | 300 | 20.7 | 200 | 13.8 | 200 | 13.8 | 200 | 13.8 |
| | .50" | 750 | 51.7 | 750 | 51.7 | 300 | 20.7 | 200 | 13.8 | 200 | 13.8 | 200 | 13.8 |
| 140 to 250 psig (9.7 to 17.2 bar) | .125" | 2000 | 138 | | | | | | | | | | |
| | .188" | 1750 | 121 | | | | | | | | | | |
| | .25" | 1500 | 103 | | | | | | | | | | |
| | .375" | 1000 | 69.0 | | | | | | | | | | |
| | .50" | 750 | 51.7 | | | | | | | | | | |
| 240 to 500 psig (16.5 to 34.5 bar) | .125" | 2000 | 138 | | | | | | | | | | |
| | .188" | 1750 | 121 | | | | | | | | | | |
| | .25" | 1500 | 103 | | | | | | | | | | |
| | .375" | 1000 | 69.0 | | | | | | | | | | |
| | .50" | 750 | 51.7 | | | | | | | | | | |

¹. For outlet pressure setting below 10 psi (.69 bar), the inlet pressure should be 100 psi (6.9 bar) or less.

RG20R Internal Relief Performance

| Outlet Pressure Range | Outlet Pressure Setting | | Max Downstream Pressure | | Maximum Inlet Pressure to keep Maximum Allowed Downstream System Pressure from Being Exceeded | | | | |
|--|-------------------------|------|-------------------------|------|---|-------|------|-------|------|
| | | | | | PSI Shown Per Orifice Diameter | | | | |
| | psig | bar | psi | bar | .125" | .188" | .25" | .375" | .50" |
| 5-20 psig ² (0.34 to 1.4 bar) Yellow Spring | 10 | 0.69 | 60 | 41 | 740 | 320 | 190 | 95 | 75 |
| | | | 100 | 6.9 | 1,500 | 620 | 390 | 180 | 130 |
| | | | 125 | 8.6 | 1,900 | 830 | 480 | 220 | 160 |
| | | | 175 | 12.1 | 2,000 | 1,100 | 670 | 320 | 220 |
| | | | 200 | 13.8 | 2,000 | 1,300 | 770 | 360 | 260 |
| | | | 250 | 17.2 | 2,000 | 1,600 | 960 | 450 | 320 |
| | 15 | 1.0 | 60 | 4.1 | 620 | 260 | 170 | 90 | 70 |
| | | | 100 | 6.9 | 1,400 | 610 | 370 | 170 | 130 |
| | | | 125 | 8.6 | 1,900 | 810 | 480 | 220 | 160 |
| | | | 175 | 12.1 | 2,000 | 1,100 | 670 | 320 | 220 |
| | | | 200 | 13.8 | 2,000 | 1,800 | 770 | 360 | 260 |
| | | | 250 | 17.2 | 2,000 | 1,600 | 960 | 450 | 320 |
| | 20 | 1.4 | 60 | 4.1 | 490 | 210 | 130 | 80 | 65 |
| | | | 100 | 6.9 | 1,300 | 600 | 360 | 170 | 120 |
| | | | 125 | 8.6 | 1,800 | 800 | 480 | 220 | 160 |
| | | | 175 | 12.1 | 2,000 | 1,100 | 670 | 320 | 220 |
| | | | 200 | 13.8 | 2,000 | 1,300 | 770 | 360 | 260 |
| | | | 250 | 17.2 | 2,000 | 1,600 | 960 | 450 | 320 |
| 15-40 psig ² (1.0 to 2.8 bar) Green Spring | 15 | 1.0 | 60 | 4.1 | 380 | 210 | 130 | 80 | 65 |
| | | | 100 | 6.9 | 1300 | 590 | 350 | 170 | 120 |
| | | | 125 | 8.6 | 1800 | 800 | 470 | 220 | 160 |
| | | | 175 | 12.1 | 2000 | 1100 | 640 | 320 | 220 |
| | | | 200 | 13.8 | 2000 | 1300 | 780 | 370 | 260 |
| | | | 250 | 17.2 | 2000 | 1600 | 960 | 450 | 320 |
| | 20 | 1.4 | 60 | 4.1 | 200 | 150 | 100 | 70 | 65 |
| | | | 100 | 6.9 | 1200 | 550 | 330 | 160 | 120 |
| | | | 125 | 8.6 | 1700 | 760 | 480 | 220 | 160 |
| | | | 175 | 12.1 | 2000 | 1100 | 670 | 320 | 220 |
| | | | 200 | 13.8 | 2000 | 1300 | 770 | 360 | 260 |
| | | | 250 | 17.2 | 2000 | 1600 | 960 | 450 | 320 |
| | 30 | 2.1 | 100 | 6.9 | 950 | 450 | 260 | 140 | 110 |
| | | | 125 | 8.6 | 1500 | 670 | 400 | 190 | 150 |
| | | | 175 | 12.1 | 2000 | 1000 | 610 | 300 | 220 |
| | | | 200 | 13.8 | 2000 | 1200 | 760 | 360 | 260 |
| | | | 250 | 17.2 | 2000 | 1600 | 970 | 460 | 320 |
| | | | 100 | 6.9 | 700 | 330 | 200 | 120 | 108 |
| | 40 | 2.1 | 125 | 8.6 | 1300 | 560 | 340 | 180 | 140 |
| | | | 175 | 12.1 | 1800 | 1000 | 550 | 290 | 220 |
| | | | 200 | 13.8 | 2000 | 1200 | 730 | 350 | 250 |
| | | | 250 | 17.2 | 2000 | 1600 | 970 | 460 | 320 |
| | | | 125 | 8.6 | 1100 | 500 | 300 | 170 | 140 |
| | | | 150 | 10.3 | 1600 | 750 | 440 | 230 | 180 |
| 35-80 psig (2.4 to 5.5 bar) Blue Spring | 40 | 2.8 | 175 | 12.1 | 2000 | 980 | 580 | 290 | 220 |
| | | | 200 | 13.8 | 2000 | 1200 | 720 | 340 | 250 |
| | | | 250 | 17.2 | 2000 | 1600 | 940 | 450 | 320 |
| | | | 125 | 8.6 | 820 | 400 | 230 | 150 | 140 |
| | | | 150 | 10.3 | 1400 | 650 | 370 | 210 | 170 |
| | 50 | 3.4 | 175 | 12.1 | 1900 | 700 | 530 | 270 | 210 |
| | | | 200 | 13.8 | 2000 | 1100 | 670 | 330 | 240 |
| | | | 250 | 17.2 | 2000 | 1500 | 920 | 430 | 320 |
| | | | 150 | 10.3 | 850 | 430 | 250 | 170 | 160 |
| | | | 175 | 12.1 | 1400 | 670 | 400 | 230 | 190 |
| | 70 | 4.8 | 200 | 13.8 | 2000 | 920 | 550 | 280 | 230 |
| | | | 250 | 17.2 | 2000 | 1300 | 830 | 400 | 310 |
| 150 | | | 10.3 | 500 | 300 | 200 | 160 | 150 | |
| 175 | | | 12.1 | 1200 | 550 | 330 | 210 | 190 | |
| 80 | 5.5 | 200 | 13.8 | 1700 | 800 | 480 | 270 | 220 | |
| | | 250 | 17.2 | 2000 | 1200 | 770 | 390 | 300 | |

- Shaded areas indicate maximum inlet pressures allowed during system malfunction only.
- See Pressure Ranges, table gives the maximum inlet pressure for normal regulator operation.

RG20R Internal Relief Performance (Continued)

| Outlet Pressure Range | Outlet Pressure Setting | | Max Downstream Pressure | | Maximum Inlet Pressure to keep Maximum Allowed Downstream System Pressure from Being Exceeded | | | | |
|--|-------------------------|------|-------------------------|------|---|-------|------|-------|------|
| | | | | | PSI Shown Per Orifice Diameter | | | | |
| | psig | bar | psi | bar | .125" | .188" | .25" | .375" | .50" |
| 70-150 psig (4.8 to 10.3 bar) Red Spring | 70 | 1.4 | 175 | 12.1 | 600 | 400 | 260 | 200 | 175 |
| | | | 200 | 13.8 | 1,200 | 630 | 380 | 250 | 210 |
| | | | 250 | 17.2 | 2,000 | 1,100 | 680 | 360 | 290 |
| | 80 | 5.5 | 175 | 12.1 | 250 | 240 | 200 | 190 | 175 |
| | | | 200 | 13.8 | 960 | 520 | 330 | 240 | 210 |
| | | | 250 | 17.2 | 2,000 | 1,000 | 620 | 350 | 280 |
| | 100 | 6.9 | 200 | 13.8 | 250 | 240 | 230 | 210 | 210 |
| | | | 250 | 17.2 | 1,600 | 770 | 520 | 320 | 270 |
| | 125 | 8.6 | 250 | 17.2 | 1,000 | 500 | 390 | 290 | 260 |
| | 150 | 10.3 | 250 | 17.2 | 260 | 260 | 260 | 260 | 260 |

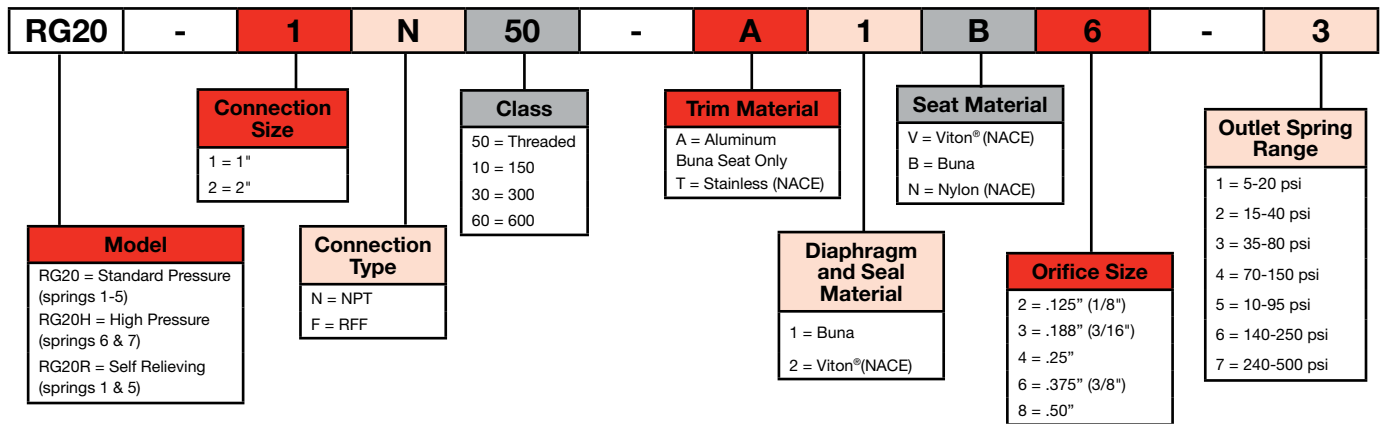
- Shaded areas indicate maximum inlet pressures allowed during system malfunction only.
- See Pressure Ranges, table gives the maximum inlet pressure for normal regulator operation.

How to Order

Options are listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information. Repair kits are available.

Example Model No. **RG20-1N50-A1B6-3**

RG20 Series Regulator, 1" Body, Threaded Ends, Aluminum Disk Holder, Buna Diaphragm, Buna Seat and Seals, .375" Orifice, 35-80 PSI



Note: Nylon is only recommended for use with springs 3-7 (35-500 psi).

| | Approximate Weight | |
|----|--------------------|--------|
| | Material | |
| | Aluminum | Steel |
| 1" | 6.5 lbs | 10 lbs |
| 2" | 10.5 lbs | 14 lbs |

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