Pressure Reducing Regulators

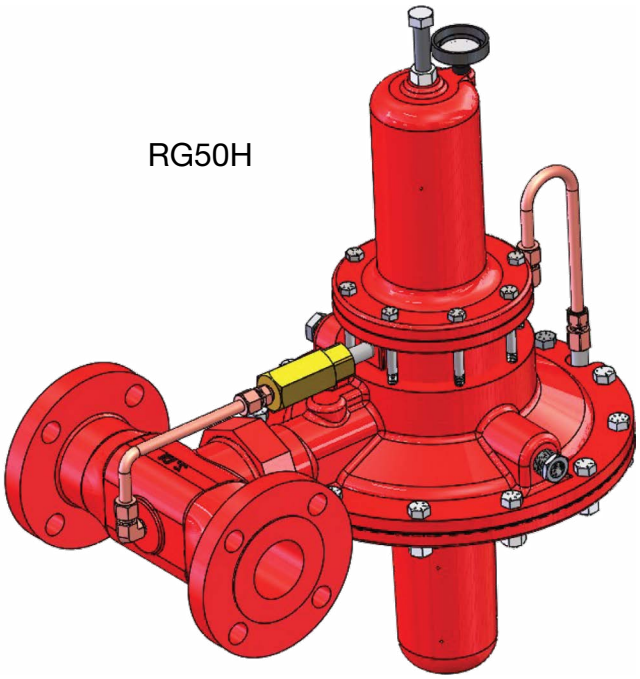
RG50 Model

The RG50 is a pressure reducing regulator used in natural gas distribution systems. The RG50 provides high accuracy, no atmospheric bleed and a heavy main spring for tight shutoff.

High-capacity pressure control, excellent low-flow control and ease of maintenance make the RG50 the perfect solution for pressure reducing applications.

Two pilot options with different spring ranges are available. RG50H has a spring range of 10-65 psi and RG50HP has a spring range of 35-100 psi.

RG50H



RG50HP

Specifications

Sizes: 2”
Connection: Female NPT, flanged
Body Type: Globe
Port Sizes: 7/8”, 1 1/8”,
Reduced Sizes 7/8” x 5/8”, 7/8” x 1/2”, 7/8” x 3/8”
Spring Range: RG50H 10-65 psi, RG50PH 35-100 psi
Maximum Inlet Pressure:
7/8” Orifice: 400 psi
1-1/8” Orifice: 300 psi
Temperature Range:
Viton: 0° F to 300° F (-18° C to 149° C)
Buna, Nylon, Neoprene: -20° F to 180° F (-29° C to 82° C)
Set Pressure Range: 35 to 100 psi
Maximum Actuator Pressures:
Operating: 100 psi
Emergency: 110 psi
Maximum Pilot Spring Case Pressure for Pressure Loading:
100 psi
Maximum Rated Travel: 1/4 in/ 6.4 mm
Weight: 115lbs
Proportional Band: 1 to 2 psi In. W.C.
Materials:
Body: Ductile iron
Actuator Casing: Ductile iron
Pilot Body and Spring Case: Ductile iron
Orifice, Disk Holder and Shuttle: Brass
Disk: Buna, Viton®, nylon

Body Pressure Ratings	
NPT	600 psi
150 Class Flange	250 psi
300 Class Flange	640 psi

Capacities of 0.6 S.G. Natural Gas in Thousand SCFH

Inlet Pressure		Outlet Pressure, psig/bar with Orifice Size 7/8 (22 mm)																							
		10 / 0.7		15 / 1.0		20 / 1.4		25 / 1.7		30 / 2.1		35 / 2.4		40 / 2.8		45 / 3.1		50 / 3.5		60 / 4.1		75 / 5.2		100 / 6.9	
psig	bar	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h
15	1	7.8	0.2																						
20	1.4	14.4	0.4	10.8	0.3																				
25	1.7	19.2	0.5	16.2	0.4	12	0.3																		
30	2.1	23	0.6	20	0.5	17	0.5	12.5	0.3																
35	2.1	26	0.7	24	0.6	21	0.6	18	0.5	13	0.3														
40	2.8	28	0.8	28	0.8	26	0.7	23	0.6	19	0.5	14.4	0.4												
50	3.4	34	0.9	34	0.9	34	0.9	31	0.8	28	0.8	25	0.7	21	0.6	15.5	0.4								
60	4.1	42	1.1	42	1.1	42	1.1	42	1.1	37	1.0	35	0.9	30	0.8	27	0.7	23	1.6						
75	5.2	47	1.3	47	1.3	47	1.3	47	1.3	47	1.3	47	1.3	45	1.2	41	1.1	37	1.0	30	0.8				
100	6.9	59	1.3	59	1.6	59	1.6	59	1.6	59	1.6	59	1.6	59	1.6	59	1.6	59	1.6	53	1.4	44	1.2		
125	8.6	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	73	2.0	66	1.8	48	1.3
150	10.3	86	2.3	86	2.3	46	2.3	46	2.3	46	2.3	86	2.3	86	2.3	86	2.3	86	2.3	86	2.3	86	2.3	72	1.9
175	12.1	96	2.6	96	2.6	96	2.6	96	2.6	96	2.6	93	2.6	93	2.6	93	2.6	93	2.6	93	2.6	93	2.6	93	2.5
200	13.8	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9	108	2.9
225	15.5	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3	123	3.3
250	17.2	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5	132	3.5
300	20.7	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3	162	4.3
350	24.1	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0	188	5.0
400	27.6	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8	215	5.8
Outlet Pressure, psig/bar with Orifice Size 1-1/8 (29 mm)																									
15	1	13	0.4																						
20	1.4	24	0.6	18	0.5																				
25	1.7	32	0.9	27	0.7	20	0.5																		
30	2.1	39	1.0	34	0.9	28	0.8	21	0.6																
35	2.1	44	1.2	40	1.1	35	0.9	30	0.8	22	0.6														
40	2.8	47	1.3	47	1.3	43	1.2	38	1.0	32	0.9	24	0.6												
50	3.4	57	1.5	57	1.5	57	1.5	52	1.4	47	1.3	42	1.1	35	0.9	26	0.7								
60	4.2	65	1.7	65	1.7	65	1.7	65	1.7	62	1.7	58	1.6	50	1.3	45	1.2	38	1.0						
75	5.2	78	2.1	78	2.1	78	2.1	78	2.1	78	2.1	78	2.1	74	2.0	68	1.8	60	0.9	50	1.3				
100	6.9	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	99	2.7	88	2.4		
125	8.6	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	122	3.3	80	2.1
150	10.3	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	143	3.8	120	3.2
175	12.1	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	160	4.3	155	4.2
200	13.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8	180	4.8
225	15.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5	205	5.5
250	17.2	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9	220	5.9
300	20.7	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1	265	7.1

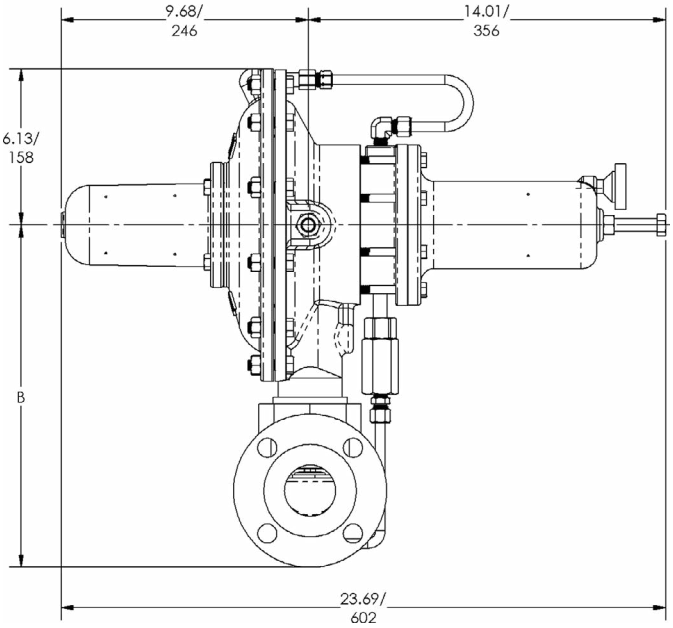
- Grayed out areas indicate that the inlet pressure is too high for a given orifice size.
- To convert capacities to another gas, multiply by .775 and divide by the square root of the specific gravity of the desired gas.
- To convert SCFH to m3 /hr, multiply by 0.0268

Maximum Allowable Pressure Drop and Minimum Differential Pressures

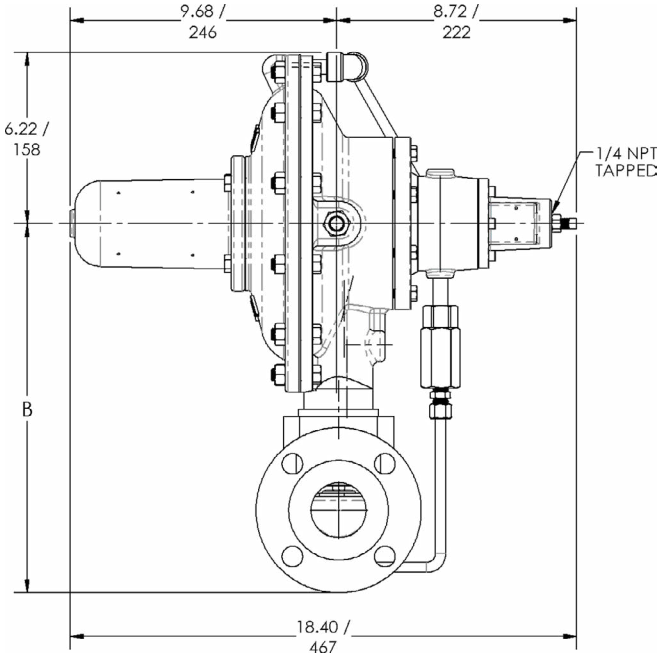
Maximum Allowable Pressure Drop		Minimum Differential Pressure for Full Stroke		Disk Material	Maximum Orifice Size
psig	bar	psig	bar		In.
150	10.3	3	0.21	Buna and Viton	1 1/8
250	17.2	3	0.21	Buna and Viton	7/8
300	20.7	10	0.69	Nylon	1 1/8
400	27.6	10	0.69	Nylon	7/8

Dimensions

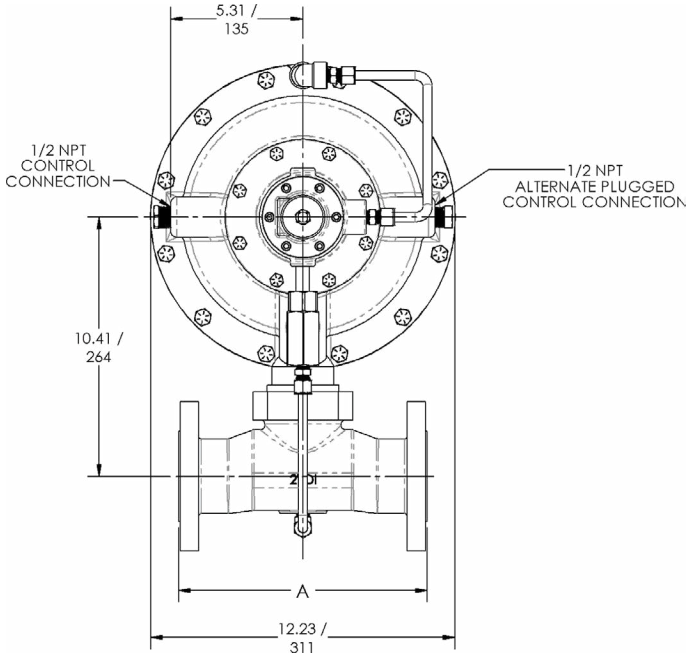
RG50H



RG50HP



RG50 Models



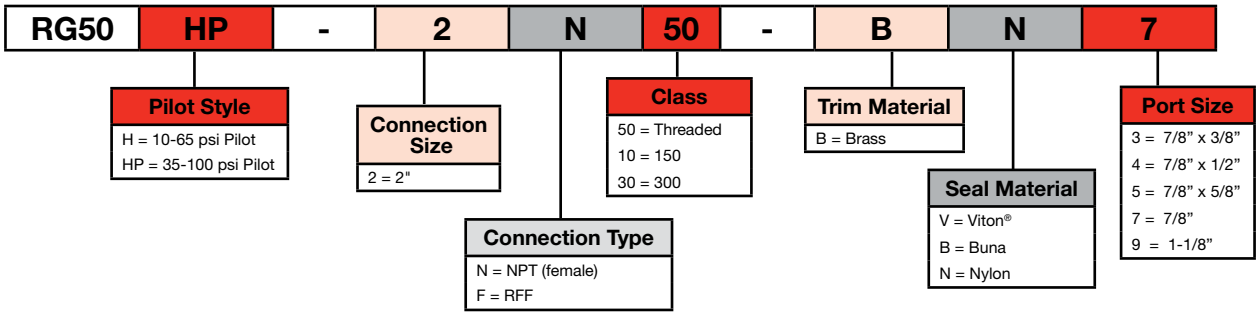
Dimensions		
Body	A	B
NPT	6.25”	12.28”
Class 150	10.00”	13.41”
Class 300	10.50”	13.66”

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. **RG50HP-2N50-BN7**

RG50 Series, HP 35-100 psi Pilot, 2” Body, Threaded Ends, Brass Trim with Nylon Seat, 7/8” Port



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