



NGR06 Series

PRESSURE REDUCING REGULATORS
for Commercial or Industrial Applications



The NGR06 series spring loaded gas regulators with internal relief provide consistent and controlled pressure in a variety of industrial and commercial applications. The internal relief feature is engineered to help minimize over pressurization downstream due to possible dirt/debris that may enter the regulator inhibiting proper lockup. The NGR06 regulators are designed to be used in many applications where non-corrosive dry gases are used such as Natural gas, LP or manufactured type gases.

FEATURES

- Internal Relief
- Outlet pressures up to 7 psig
- 500+ : 1 turndown
- Conforms to ANSI B109.4
- Field Interchangeable Orifice
- Field Interchangeable Springs
- Corrosion resistant exterior

SPECIFICATIONS

Pipe Sizes:	1-1/4" NPT to 3" FL
Gas Types:	Natural Gas, LPG, other non-corrosive dry gases
Maximum Inlet Pressure:	25 to 125 psig per Orifice
Outlet Pressure Range:	2" w.c. to 7 psig
Maximum Emergency Inlet Pressure:	175 psig
Operating Temp:	-20F - +150F
Materials:	Housing: Epoxy Coated Aluminum Valve Body: Cast Iron Diaphragm/Valve Seat: Buna N Orifice: High Strength Brass

NGR06 Series PRESSURE REDUCING REGULATORS

7" w.c. Set Point - 1" Pressure Drop

Inlet Pressure	ORIFICE					
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
1	390	1130	2338	2805	3312	4052
2	662	2065	3584	3390	5649	6273
3	857	2416	3896	4208	6701	8805
5	1130	3039	5299	5297	8961	12831
8	1442	3701	6390	6701	12234	15195
10	1558	4052	6857	7052	15506	15584
15	1948	4870	8182	8416	21569	23616
25	2649	6156	10909	12952	25650	26598
35	3273	6390	14776	16782	28273	
50	4325	6244	19455	22492	32338	
60	5206	8522	22585	26304	34117	
75	6000	9780				
100	7286	11927				
125	9402	13988				

Black S0608C and 2" VB used to develop table

14" w.c. Set Point - 2" Pressure Drop

Inlet Pressure	ORIFICE					
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
1	468	1247	2260	2961	3039	4208
2	623	1870	3351	4208	4675	5455
3	779	2338	4130	5065	5766	6623
5	1169	2883	5143	7325	8416	9584
8	1481	3506	6234	9584	11901	11065
10	1558	3818	6779	10753	12234	13481
15	2026	4675	8338	14026	14551	18525
25	2649	6468	10909	14416	15665	21560
35	3351	8104	14874	16351	18745	
50	4442	10442	15211	18311	19751	
60	5333	12538	16325	19481	22492	
75	6234	15100				
100	7532	19401				
125	9722	23702				

Purple S0608D and 2" VB used to develop table

1 psig Set Point - 20% Pressure Drop

Inlet Pressure	ORIFICE					
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
1						
2	468	935	2260	2649	2416	2961
3	701	1948	3117	3429	3195	4286
5	857	2338	4675	5299	5844	6857
8	1247	3351	6234	7792	7792	10052
10	1325	3506	6779	11688	11812	12545
15	1792	4442	8416	15451	15584	17143
25	2571	5844	12701	23377	25714	26253
35	3273	7403	14805	28556	29411	
50	4442	9351	21327	31168	33251	
60	5308	11374	24844	35065	37874	
75	6475	13623				
100	8437	17466				
125	10384	21259				

Silver S0608E and 2" VB used to develop table

2 psig Set Point - 20% Pressure Drop

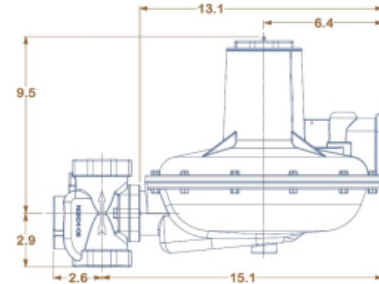
Inlet Pressure	ORIFICE					
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
1						
2						
3	545	1403	2805	3896	4286	6390
5	857	2338	4364	6234	6234	9740
8	1247	3195	5844	7481	7792	15974
10	1403	3662	6857	10831	10909	19481
15	1870	4519	8494	17922	19091	22597
25	2571	6000	13636	26494	27273	30779
35	3195	7403	18701	33506	38182	
50	4208	9818	21923	34453	40922	
60	5076	11684	27292	37153	43301	
75	6139	14011				
100	7916	17948				
125	9705	21914				

Yellow S0608F and 2" VB used to develop table

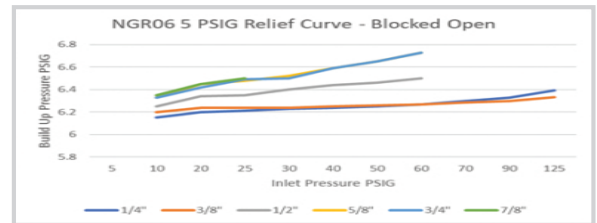
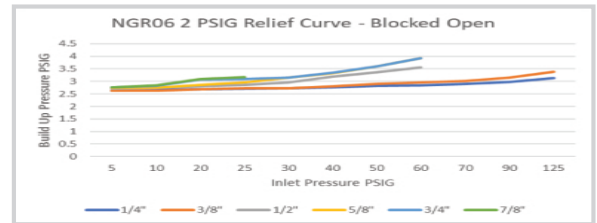
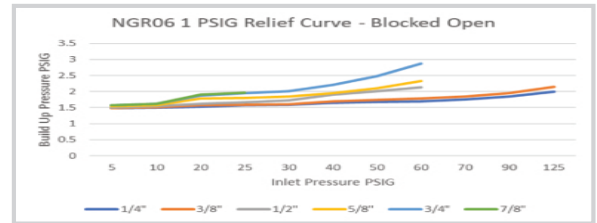
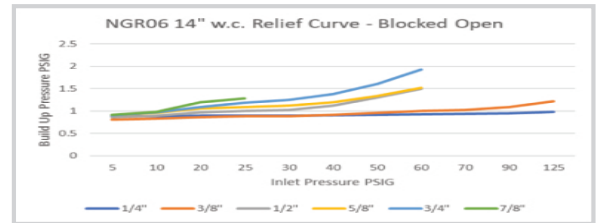
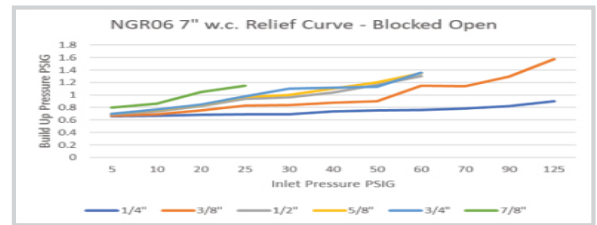
Model	Pipe Size	Vent (NPT)	Wt. (lb)
NGR06	1-1/4", 1-1/2", 2"	1"	18.25
	2" FL		29.05
	3" FL		36.30

Gas Type	Specific Gravity	Correction Factor (CF)
Natural Gas	0.60	1.00
Propane	1.53	0.63
Air	1.00	0.77
Propane-Air-Mix	1.20	0.71
Nitrogen	0.97	0.79
Butane	2.01	0.55
Carbon Dioxide (Dry)	1.52	0.63
Carbon Monoxide (Dry)	0.97	0.79

Orifice Max Pressure		
Size	Max Inlet Pressure	P/N
1/4"	125 psig	F0406A
3/8"	125 psig	F0406B
1/2"	60 psig	F0406C
5/8"	60 psig	F0406D
3/4"	60 psig	F0406E
7/8"	25 psig	F0406F



Spring Chart		
Color	Outlet Range	P/N
Orange	2"wc - 4"wc	S0608A
Green	3"wc - 7"wc	S0608B
Black	5"wc - 13"wc	S0608C
Purple	7"wc - 20" wc	S0608D
Silver	19"wc - 2 psig	S0608E
Yellow	1.5 psig - 3 psig	S0608F
White	2.5 psig - 7 psig	S0608G



5 psig Set Point - 20% Pressure Drop						
Inlet Pressure	ORIFICE					
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
1						
2						
3						
5						
8	1013	2883	5455	7558	8649	11688
10	1325	3117	6545	10597	10753	18701
15	1792	3974	8260	16364	14805	27273
25	2571	5766	11688	25714	23377	30779
35	3273	7403	14805	31169	36623	
50	4364	9662	20066	34318	37846	
60	5203	11401	23365	38879	44019	
75	6316	13867				
100	8184	17930				
125	10068	21964				

White S0608G and 2" VB used to develop table

Flow capacities in SCFH of 0.60 specific gravity gas @ 60° F and 14.7 psia. Boost Ring set at 0. Individual results may vary.

Blocked open relief curves developed using a 3/32" blockage across valve seat. Lever disconnect curves available upon request. Individual results may vary.

INSTALLATION INSTRUCTIONS

WARNING: A regulator may vent some gas to the atmosphere. Where ignition sources may be present, vented gas may accumulate and cause fire or explosion resulting in personal injury, death and/or property damage.

WARNING: Failure to follow these Instructions, National Fuel Gas Code(NFPA 54) guidelines, local/state codes when installing/maintaining gas regulators can result in an explosion and/or fire causing property damage and personal injury or death. ONLY A QUALIFIED PERSON MUST INSTALL OR SERVICE THE REGULATOR.

Installation

Installation shall be performed in accordance with local codes, or in the absence of local codes, in accordance with the National Fuel Gas Code, ANSI Z223.1/NFPA 54.

1. Confirm proper regulator has been chosen for the defined application.
2. Remove inlet and outlet protection plugs from the regulator. Verify no debris is within the inlet or outlet of the regulator. TURN OFF GAS SUPPLY TO MOUNTING LOCATION.
3. Apply proper pipe joint sealant to the male pipe threads only. If flange connections are used, ensure appropriate gasket is installed between mating flanges.
4. Gas MUST flow in direction of the 'arrow' on the underside of the regulator. 'IN' is indicated on the inlet side of the regulator.
5. Regulator may be installed in any position with concern of 'VENT' location as per 6 & 7 below.

CAUTION: USE PRECAUTION WHEN RUNNING VENT PIPING. ENSURE END OF VENT PIPING IS ADEQUATELY AWAY FROM ANY IGNITION SOURCES.

6. OUTDOOR INSTALL – When installing in an outdoor environment or where debris or excessive moisture may be in the air the 'VENT' should never face upward allowing debris or liquid to enter. The 'VENT' screen should never be removed unless a 'VENT' piping is needed to route the venting to another location.
7. INDOOR INSTALL – As per applicable local and state codes may dictate, a separate 'VENT' piping is required for each regulator to allow the regulator to function properly and relief gas in the case of internal relief. Do not combine vent lines. Vent pipe inner diameter should increase one nominal pipe size approximately every 15 feet of length. This is important for proper performance. Example: 3/8" to 1/2" to 3/4", etc.
8. Tighten inlet/outlet piping to proper torque. If flange connections are used ensure bolts are tightened evenly and do not stress the flange by uneven piping or improper flange-to-flange spacing as this may result in broken flanges or leakage and is not covered under manufacturer warranty.

Start-up Procedure

1. Verify Inlet pressure does not exceed regulator and/or orifice MAOP as shown in the specification tables. Mount pressure gauge downstream of the regulator to monitor regulator outlet pressure.
2. With the downstream pressure valve closed, slowly open the inlet valve. Allow the pressure to build slowly until proper downstream pressure is shown on the gauge.

Outlet Pressure Adjustment

1. Remove spring cap from regulator.
2. With proper tool rotate adjustment ferrule CLOCKWISE to INCREASE pressure and COUNTERCLOCKWISE to DECREASE pressure.
3. Replace spring cap.

COMMON SPARE PARTS	
PART	P/N
Orifice O-Ring	NGR0406-ORFR
Valve Body Gasket	NGR0406-VBG
Spring Cap	NGR0608-SC
Spring Cap Gasket	NGR0608-SCG
Spring Ferrule	NGR06-SF
Valve Body Bolts	NGR0406-VBB
Valve Seat	NGR0406-VS