



NGR08 Series

PRESSURE REDUCING REGULATORS
for Commercial or Industrial Applications



The NGR08 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 NGR08 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

NGR08 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"	1"	1-1/4"	1-3/8"
1	390	857	982	2104	2961	4208	4286	6234
2	545	1403	1543	3039	3818	5143	7636	8961
3	701	1714	1964	3896	4831	5766	9039	9896
5	1013	2494	2665	5455	6390	6701	11610	12779
8	1247	3195	5844	7169	9662	12857	16364	17532
10	1558	3662	6468	8961	11065	15662	18701	21662
20	2182	5377	9818	14182	19558	20260	26883	37403
30	3117	7013	12779	19481	25169	25714	32338	
40	3896	8416	16753	23377	27273	27662	37403	
50	4831	9818	21506	25325	28501	28675		
60	5922	11221	27273	33662	33850	34121		
70	6692	13372						
90	8446	16626						
125	11512	22308						

Green S0608B used to develop table

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

Inlet Pressure	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"
1	312	779	1169	1558	2338	3584	3584	3974
2	545	1169	2260	2883	3896	4753	5766	6156
3	701	1714	2727	3584	4364	6390	7792	7325
5	1013	2182	3896	4987	5299	8649	9506	10597
8	1403	3506	5065	6857	7231	11688	12312	15584
10	1636	3818	5922	8260	9252	10987	13247	19948
20	2338	5532	8961	12468	13321	16987	13481	38805
30	3117	7013	11766	17143	18242	22130	24935	
40	3896	8494	14416	20026	22675	27273	38182	
50	4519	9974	17143	23050	24156	37403		
60	5221	11922	21273	34286	34410	40052		
70	5922	13948						
90	7668	17490						
125	10341	23587						

Black S0608C used to develop table

1 psig Set Point - 20% Pressure Drop

Inlet Pressure	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"
1								
2	390	935	1948	2026	2571	3429	5688	5143
3	468	1091	2338	3195	3584	5143	7714	7013
5	545	1636	3117	4831	5299	9039	10130	10052
8	935	2494	4675	6857	8541	10675	15584	14416
10	1403	3273	5065	8260	13569	18701	20260	15195
20	2104	5221	9896	14026	16542	22584	23377	31403
30	2805	6935	13870	20554	21410	25412	29223	
40	4130	8961	15584	23563	26571	28961	30211	
50	5610	9273	20104	26523	28831	38386		
60	6319	12089	24054	33839	36296	41113		
70	7366	13870						
90	9461	17387						
125	13093	23475						

Silver S0608E used to develop table

2 psig Set Point - 20% Pressure Drop

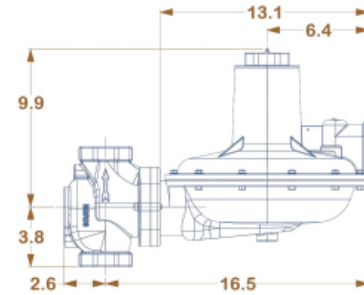
Inlet Pressure	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"
1								
2								
3	390	623	2182	2494	3506	5123	5844	6701
5	545	1792	3506	5377	6156	9105	9351	9974
8	857	2805	4909	7523	7792	14412	15584	15650
10	1169	3584	6234	9156	9818	16520	17143	17456
20	1870	5455	9974	13253	14571	21105	21818	22597
30	2727	7247	14571	15486	17766	25545	25714	
40	3506	8571	18701	24432	26494	31008	31169	
50	4364	10130	28052	31001	31169	38440		
60	5209	12511	30778	35227	36412	43618		
70	6032	14186						
90	7666	17648						
125	10524	23726						

Silver S0608E used to develop table

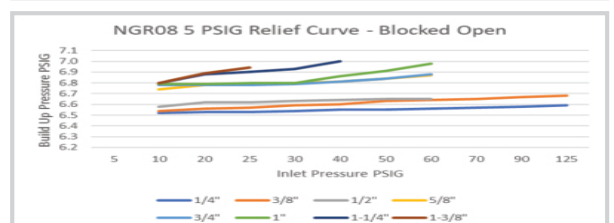
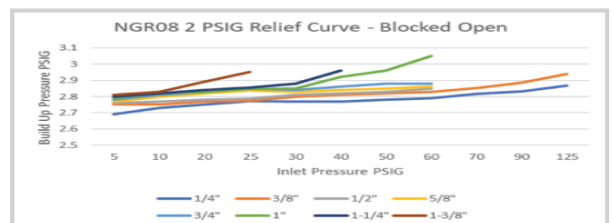
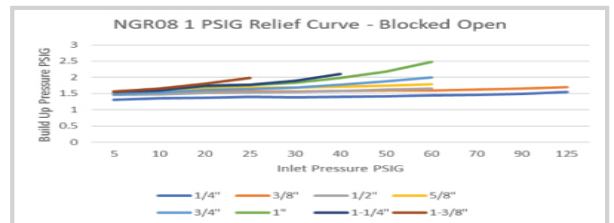
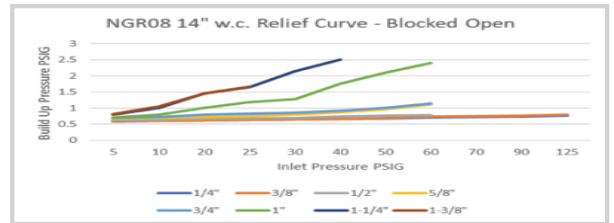
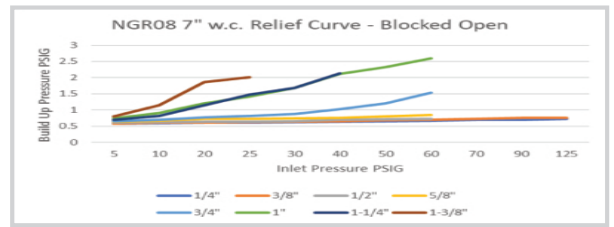
Model	Pipe Size	Vent (NPT)	Wt. (lb)
NGR08	1-1/4", 1-1/2", 2"	1"	25.30
	2" FL		35.00
	3" FL		47.80

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	F08A
3/8"	125 psig	F08B
1/2"	60 psig	F08C
5/8"	60 psig	F08D
3/4"	60 psig	F08E
1"	60 psig	F08F
1-1/4"	40 psig	F08G
1-3/8"	25 psig	F08H



Spring Chart		
Color	Outlet Range	P/N
Orange	2"wc - 4"wc	S0608A
Green	5"wc - 8"wc	S0608B
Black	8"wc - 18"wc	S0608C
Purple	13"wc - 24"wc	S0608D
Silver	1 psig - 2 psig	S0608E
Yellow	2 psig - 4 psig	S0608F
White	4 psig - 7 psig	S0608G



5 psig Set Point - 20% Pressure Drop								
Inlet Pressure	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"
1								
2								
3								
5								
8	857	2416	3818	6078	7636	7792	12312	18701
10	1247	2727	5065	8961	9896	12078	15195	25403
20	2494	5221	8416	16286	17143	25714	33506	35065
30	3039	6779	12935	25325	33117	35651	38741	
40	3896	8571	16364	28051	35121	37874	43025	
50	4519	10052	20260	32338	37543	39512		
60	5542	12151	24206	32961	38837	44546		
70	6297	13924						
90	7788	17307						
125	10626	23541						
White S0608G 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	NGR08-ORFR
Valve Body Gasket	NGR08-VBG
Spring Cap	NGR0608-SC
Spring Cap Gasket	NGR0608-SCG
Spring Ferrule	NGR08-SF
Valve Body Bolts	NGR08-VBB
Valve Seat	NGR08-VS