

Regulator Pressure Ratings

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▶ “N” regulator cannot be used without additional safety equipment above 60 PSIG inlet. Internal relief and internal monitor regulators can be used up to 125 PSIG.

▶ Does not include normal relief function.

SCOPE

Section 192.195 (b) (1) of the DOT Code Part 192 specifies... "Pressure regulation devices capable of meeting the pressure (conditions)... that will be experienced in normal operation... and in the event of failure of some portion of the system...". ASME Guide For Gas Piping Systems – 1973, defines 5 pressure ratings for regulators. The pressure ratings herein conform to these definitions. The pressure ratings listed are maximum conditions and the regulator bulletin must be checked for Orifice vs. Inlet pressure vs. Outlet pressure for recommended operating pressures.

PRESSURE RATINGS

1. Maximum inlet pressure at which the regulator will perform in accordance with manufacturer’s specifications.
2. The maximum pressure to which the inlet may be subjected under abnormal conditions without causing damage to the regulator.
3. The maximum outlet pressure to which the regulator will perform in accordance with the manufacturer’s specifications.
4. The maximum pressure to which the outlet may be subjected under abnormal conditions, without causing damage to internal parts of the regulator.
5. The maximum outlet pressure which can be safely contained by pressure carrying components such as diaphragm cases, actuators, pilots, control lines, etc. "Safely contained" means no bursting or leakage. However, normal internal relief action is not included in leakage.

B42 N, R

Maximum Operating Inlet Pressure

B42 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
N, R	IN. W.C.	125	125	60	35	20	10	Operating
		300	200	150	100	75	40	Emergency
	PSIG	125	125	60	35	20	10	Operating
		300	200	150	100	75	40	Emergency

Operating Outlet Pressure Range: 5" W.C. - 5 PSIG

Maximum Operating Outlet Pressure

B42 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
N, R	IN. W.C.	60 PSIG						Emergency-No Damage
		30 PSIG						Containment
	PSIG	60 PSIG						Emergency-No Damage
		30 PSIG						Containment

- ▶ “N” regulator cannot be used without additional safety equipment above 60 PSIG inlet. Internal relief and internal monitor regulators can be used up to 125 PSIG.

B31 N, R, RAS, IMN, & IMR Maximum Operating Inlet Pressure

B31 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
N, R, RAS, IMN, & IMR	IN. W.C.	125	125	125	100	65	40	Operating
		300	300	300	150	150	100	Emergency
	PSIG	175	175	125	100	60	40	Operating
		300	300	300	150	150	100	Emergency

Operating Outlet Pressure Range: 5" W.C. - 2 PSIG

Maximum Operating Outlet Pressure

B31 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
N, R, RAS, IMN, & IMR	IN. W.C.	60 PSIG						Emergency-No Damage
		18 PSIG						Containment
	PSIG	60 PSIG						Emergency-No Damage
		60 PSIG						Containment

- ▶ Does not include normal relief function.

B34 SN & SR Maximum Operating Inlet Pressure

B34S Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/4" x 3/8"	3/8" x 1/2"	1/2" x 5/8"	5/8" x 3/4"	3/4" x 7/8"	7/8" x 1"	
N, R	IN. W.C.	125	60	25	15	10	10	Operating
		150	150	100	60	40	40	Emergency
	PSIG	125	60	25	15	10	10	Operating
		150	150	100	60	40	40	Emergency

Operating Outlet Pressure Range: 5" W.C. - 2 PSIG

Maximum Operating Outlet Pressure

B34S Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/4" x 3/8"	3/8" x 1/2"	1/2" x 5/8"	5/8" x 3/4"	3/4" x 7/8"	7/8" x 1"	
N, R	IN. W.C.	60 PSIG						Emergency - No Damage
		18 PSIG						Containment
	PSIG	60 PSIG						Emergency - No Damage
		60 PSIG						Containment

- ▶ “N” regulator cannot be used without additional safety equipment above 60 PSIG inlet. Internal relief and internal monitor regulators can be used up to 125 PSIG.

- ▶ Does not include normal relief function.

B34 N, R, M, D, SO, IM, IMR, & IMRV

Maximum Operating Inlet Pressure

B34 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	7/8"x1"	
N, R, SO, IM, & IMR (a)	IN. W.C.	125	125	75	60	65	60	25	Operating
		300	300	300	300	300	230	170	Emergency
M & D (b)	IN. W.C.	175	125	125	125	100	100	100	Operating
		300	300	300	300	300	230	170	Emergency
All Series (b)	PSIG	175	175	150	150	150	150	150	Operating
		300	300	300	300	300	230	170	Emergency

Operating Outlet Pressure Range: 5" W.C. - 5.75 PSIG

Maximum Operating Outlet Pressure

B34 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	7/8"x1"	
All Series	IN. W.C.	60 PSIG							No Damage
		60 PSIG							Containment
	PSIG	60 PSIG							No Damage
		60 PSIG							Containment

► (a) Part 192-197 (6) C For inlet pressure above 60 PSIG; (b) "M" used as a monitor regulator, both ratings apply to inlet and outlet of valve body up to stem seal.

► Does not include normal relief function.

- ▶ (a) Part 192-197 (6) C For inlet pressure above 60 PSIG; (b) “M” used as a monitor regulator, both ratings apply to inlet and outlet of valve body up to stem seal.

B38 N, R, M, D, IM, IMR, & IMRV Maximum Operating Inlet Pressure

B38 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
N, R (a)	IN. W.C.	125	125	75	60	60	40	25	Operating
		300	300	300	300	170	125	100	Emergency
M, D (b)	IN. W.C.	175	125	125	125	100	75	50	Operating
		300	300	300	300	170	125	100	Emergency
All Series (b)	PSIG	175	175	150	150	100	75	50	Operating
		300	300	300	300	170	125	100	Emergency
IM, IMR	IN. W.C.	125	125	60	60	30	--	--	Operating
		300	300	300	300	170	--	--	Emergency

Operating Outlet Pressure Range: 5" W.C. - 8.7 PSIG

Maximum Operating Outlet Pressure

B38 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	8.7 PSIG							Emergency-No Damage
		30 PSIG							Containment
All Series	PSIG	8.7 PSIG							Emergency-No Damage
		30 PSIG							Containment

- ▶ Maximum emergency outlet pressure - containment does not include relief action on “R” models.

B531 N, R, IM, IMR, & IMRV Maximum Operating Inlet Pressure

B531 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
N, R	IN. W.C.	125	125	125	75	60	30	Operating
		300	300	300	150	150	100	Emergency
IM	IN. W.C.	125	125	60	60	--	--	Operating
		300	300	300	150	--	--	Emergency

Operating Outlet Pressure Range: 5" W.C. - 2.0 PSIG

Maximum Operating Outlet Pressure

B531 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	
All Series	IN. W.C.	60 PSIG						Emergency-No Damage
		60 PSIG						Containment
All Series	PSIG	60 PSIG						Emergency- No Damage
		60 PSIG						Containment

- ▶ “N” regulator cannot be used without additional safety equipment above 60 PSIG inlet. Internal relief and internal monitor regulators can be used up to 125 PSIG.

- ▶ Does not include normal relief function.

B838 N, R, M, D, IM, IMR, & IMRV

Maximum Operating Inlet Pressure

B838 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
N, R	IN. W.C.	125	125	75	60	60	40	25	Operating
		300	300	300	300	170	125	100	Emergency
M, D	IN. W.C.	175	125	125	125	100	75	50	Operating
		300	300	300	300	170	125	100	Emergency
All Series	PSIG	175	175	150	150	100	75	50	Operating
		300	300	300	300	170	125	100	Emergency
IM	IN. W.C.	125	125	60	60	30	--	--	Operating
		300	300	300	300	170	--	--	Emergency

Operating Outlet Pressure Range: 5" W.C. - 8.7 PSIG

Maximum Operating Outlet Pressure

B838 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	30 PSIG							Emergency-No Damage
		30 PSIG							Containment
	PSIG	30 PSIG							Emergency-No Damage
		30 PSIG							Containment

CL31 N, R, IM, IMN, & IMR

Maximum Operating Inlet Pressure

CL31 Model Series	Type of Reg. PSIG To	ORIFICE SIZE					Notes
		1/8"	3/16"	1/4"	3/8"		
All Series	PSIG	125	125	125	60		Operating
		175	175	175	90		Emergency

Operating Outlet Pressure Range: 1 PSIG - 20 PSIG

Maximum Operating Outlet Pressure

CL31 Model Series	Type of Reg. PSIG To	ORIFICE SIZE					Notes
		1/8"	3/16"	1/4"	3/8"		
All Series	IN. W.C.	60 PSIG					Emergency-No Damage
		60 PSIG					Containment
	PSIG	60 PSIG					Emergency-No Damage
		60 PSIG					Containment

► "M" used as a monitor regulator, both ratings apply to inlet and outlet of valve body up to the stem seal.

► Maximum emergency outlet pressure - containment (does not include relief action on "R" models).

► If inlet pressure is more than 60 PSIG outlet must be safetied not to exceed 60 PSIG

► Does not include relief action of pilot internal relief valve.

- ▶ The maximum emergency inlet pressure is based on 75% of twice the differential pressure shown in “Main Regulator Closing Spring Data”, however, the inlet pressure is never to exceed 300 PSIG.
- ▶ Each regulator is tested at 90 PSIG on the outlet side based on the same test requirement for meters (192.359) manufactures shell test pressure. Normal burst pressure is 120-130 PSIG.

- ▶ Does not include relief action of pilot internal relief valve.

CL34 M, D, N, R, IM, IMN, & IMR

Maximum Operating Inlet Pressure

CL34 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	
M-1	IN. W.C.	175	175	175	175	175	175	Operating
		SEE NOTES						Emergency
D-1	IN. W.C.	175	125	125	100	100	100	Operating
		SEE NOTES						Emergency
M-1&2 D-1&2	PSIG	175	175	175	175	175	175	Operating
		SEE NOTES						Emergency
IM-1	IN. W.C.	100	100	75	50	50	30	Operating
		SEE NOTES						Emergency
IM-1&2	PSIG	150	150	150	150	150	150	Operating
		SEE NOTES						Emergency

Operating Outlet Pressure Range: CL-1 Pilot = 5" W.C. - 5 PSIG
CL-2 Pilot = 5 PSIG - 60 PSIG

Maximum Operating Outlet Pressure

CL34 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	
All Series	IN. W.C.	66 PSIG						Emergency-No Damage
		66 PSIG						Containment
	PSIG	66 PSIG						Emergency-No Damage
		66 PSIG						Containment

- ▶ The emergency inlet pressure is based on 75% of twice the differential shown in “Main Regulator Closing Spring Data”, however, the inlet pressure is never to exceed 200 PSIG.

- ▶ Each regulator is tested at 90 PSIG on the outlet side based on the same test requirement for meters (192.359) manufactures shell test pressure. Normal burst pressure is 120-130 PSIG.

- ▶ Does not include relief action of pilot internal relief valve.

CL38 N, R, IM, IMN, & IMR

Maximum Operating Inlet Pressure

CL38 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	125	125	125	125	75	60	50	Operating
		SEE NOTES							Emergency
	PSIG	125	125	125	125	100	75	75	Operating
SEE NOTES							Emergency		

Operating Outlet Pressure Range: CL-1 Pilot = 5" W.C. - 5 PSIG
CL-2 Pilot = 5 PSIG - 30 PSIG

Maximum Operating Outlet Pressure

CL38 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	40 PSIG							Emergency-No Damage
		40 PSIG							Containment
	PSIG	40 PSIG							Emergency-No Damage
		40 PSIG							Containment

CL838 N, R, IM, IMN, & IMR

Maximum Operating Inlet Pressure

CL838 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	125	125	125	125	75	60	50	Operating
		SEE NOTES							Emergency
	PSIG	125	125	125	125	100	75	75	Operating
		SEE NOTES							Emergency

Operating Outlet Pressure Range: CL-1 Pilot = 5" W.C. - 5 PSIG
CL-2 Pilot = 5 PSIG - 30 PSIG

Maximum Operating Outlet Pressure

CL838 Model Series	Type of Reg. PSIG To	ORIFICE SIZE							Notes
		3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-3/8"	
All Series	IN. W.C.	40 PSIG							Emergency-No Damage
									Containment
	PSIG	40 PSIG							Emergency-No Damage
									Containment

► The emergency inlet pressure is based on 75% of twice the differential shown in "Main Regulator Closing Spring Data", however, the inlet pressure is never to exceed 200 PSIG.

► Each regulator is tested at 90 PSIG on the outlet side based on the same test requirement for meters (192.359) manufactures shell test pressure. Normal burst pressure is 120-130 PSIG.

► Does not include relief action of pilot internal relief valve.

B36 R

Maximum Operating Inlet Pressure

B36 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	
All Series	PSIG	175	175	175	150	--	--	Operating
		300	300	300	300	300	300	Emergency

Operating Outlet Pressure Range: 1 PSIG - 60 PSIG

Maximum Operating Outlet Pressure

B36 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	
All Series	PSIG	300 PSIG						Emergency-No Damage
								Containment

► Inlet pressure per orifice size may be restricted by outlet pressure build-up due to relief capacity and the MAOP, plus over pressure limits.

► Does not include normal relief function.

- ▶ When the B35M is used as an operating regulator, use the pressure limits shown for B35N for good regulation and control.

- ▶ “R” model relief will function with orifice sizes 3/16” and larger.

- ▶ Does not include normal relief function.

- ▶ Inlet pressure per orifice size may be restricted by outlet pressure build-up due to relief capacity and the MAOP, plus over pressure limits.

- ▶ Does not include normal relief function.

B35 N, R, & M

Maximum Operating Inlet Pressure

B35 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		3/32"	1/8"	3/16"	1/4"	3/8"	1/2"	
N	PSIG	1000	1000	1000	900	600	300	Operating
		1200						Emergency
R	PSIG	1000	800	500	400	300	100	Emergency
		1200						Emergency
M	PSIG	1000	Diff 1000	Diff 1000	Diff 1000	Diff 1000	Diff 1000	Operating
		1200						Emergency

Operating Outlet Pressure Range: 3 PSIG - 150 PSIG

Maximum Operating Outlet Pressure

B35 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		3/32"	1/8"	3/16"	1/4"	3/8"	1/2"	
All Series	PSIG	150 PSIG & Normal Outlet Pressure Set						Emergency-No Damage
		1000 PSIG						Containment

B56 R

Maximum Operating Inlet Pressure

B56 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	
All Series	PSIG	1000	1000	1000	600	200	200	Operating
		1200						Emergency

Operating Outlet Pressure Range: 1 PSIG - 60 PSIG

Maximum Operating Outlet Pressure

B56 Model Series	Type of Reg. PSIG To	ORIFICE SIZE						Notes
		1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	
All Series	IN. W.C.	300 PSIG						Emergency-No Damage
		300 PSIG						Containment