DATA SHEET
INLET PRESSURE REGULATOR

The Pumps with Nine Lives

Nickel Aluminum Bronze Model: **7075**

SPECIFICATIONS	U.S.	Metric
Flow Range	15–70 gpm	57–265 lpm
Regulator Inlet Pressure Range	40–300 psi	2.8–20.7 bar
Pump Inlet Pressure Range*	25–75 psi	1.7–5.2 bar
Temperature Range	33°–180° F	0.5°–82° C
Inlet Fitting	1¼" NPT(F)	1¼" NPT(F)
Discharge Fitting	1¼" NPT(F)	1¼" NPT(F)
Clean Out Fitting	1¼" NPT(F)	1¼" NPT(F)
Weight	9 lbs	4.1 kg
Dimensions	9.50 x 5.0 x 4.75"	241 x 127 x 120.6 mm

*Do not exceed individual inlet pressure rating.

FEATURES

- Convenient in-line style allows either horizontal or vertical mounting.
- The regulator's wide capacity range can accommodate various water supply flows and pressures, making it a flexible solution for different conditions.
- Easy access design allows pressure adjustment, flushing and cleaning without removing the regulator from the water lines.
- Heavy-duty bronze lower body and cast iron upper body construction ensure a long regulator life.

SELECTION

Select an inlet pressure regulator to match the system flow and inlet pressure. This regulator handles a wide range of inlet pressure conditions up to 300 psi for systems up to 70 gpm.

Note: Do not operate this regulator in a system with less than 40 psi inlet pressure or cavitation will result.

INSTALLATION

This inlet pressure regulator can be installed in either a vertical or horizontal position whichever allows for easy access of pressure adjustment and flushing. This regulator can be used with pumps up to a 2" inlet port without restricting the flow. An inlet filter should be installed prior to the inlet pressure regulator to ensure optimum performance and minimize wear to the valve and seat.

OPERATION

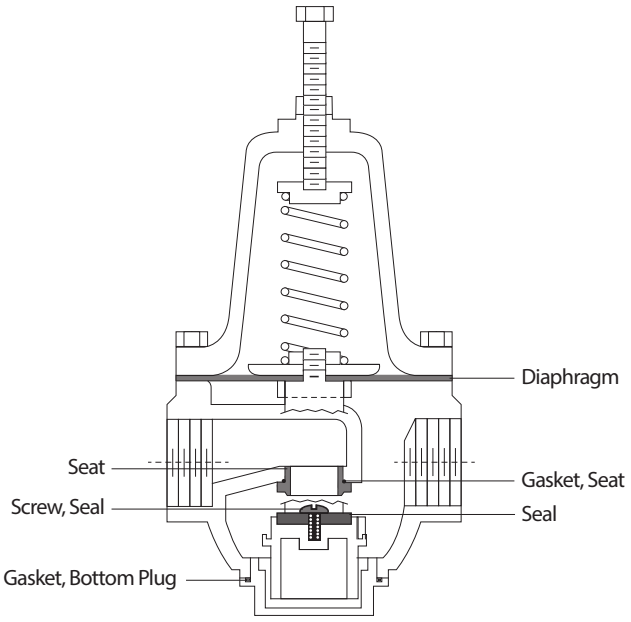
To set the pressure on this regulator, loosen the locking nut and turn the adjusting screw clockwise to increase the pressure and counterclockwise to decrease the pressure setting.

7075 Inlet Pressure Regulation Chart

System Flow GPM (LPM)	Inlet Pressure from Selected Water Supply – PSI (BAR)						
	40 (2.8)	60 (4)	80 (5.5)	100 (6.9)	150 (10)	200 (14)	300 (20.7)
	Pump Inlet Adjustment Pressure – PSI (BAR)						
15 (57)	20–30 (1.4–2.1)	20–50 (1.4–3.4)	20–70 (1.4–4.8)	20–90 (1.4–6.2)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
20 (76)	20–30 (1.4–2.1)	20–50 (1.4–3.4)	20–70 (1.4–4.8)	20–90 (1.4–6.2)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
25 (95)	20–30 (1.4–2.1)	20–50 (1.4–3.4)	20–70 (1.4–4.8)	20–90 (1.4–6.2)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
30 (114)	20–25 (1.4–1.7)	20–45 (1.4–3.1)	20–65 (1.4–4.5)	20–85 (1.4–5.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
35 (133)	20–25 (1.4–1.7)	20–45 (1.4–3.1)	20–65 (1.4–4.5)	20–85 (1.4–5.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
40 (152)	N/A	20–40 (1.4–2.8)	20–60 (1.4–4.1)	20–80 (1.4–5.5)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
50 (189)	N/A	20–35 (1.4–2.4)	20–55 (1.4–3.8)	20–75 (1.4–5.2)	20–100 (1.4–6.9)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
60 (227)	N/A	20–32 (1.4–2.2)	20–52 (1.4–3.6)	20–72 (1.4–4.9)	20–90 (1.4–6.2)	20–100 (1.4–6.9)	20–100 (1.4–6.9)
70 (265)	N/A	20–30 (1.4–2.1)	20–50 (1.4–3.4)	20–70 (1.4–4.8)	20–80 (1.4–5.5)	20–90 (1.4–6.2)	20–100 (1.4–6.9)

Note: Regulator can be adjusted to below 0 psi/bar at all flows. However, the system is at high risk for cavitation and is not recommended for optimum pump performance.

EXPLODED VIEW



PARTS LIST

PN	MATL	DESCRIPTION	QTY
33017	*NBR*	*Kit, O-Ring*	*1*
In Kit	NBR	Diaphragm	1
In Kit	S	Seat	1
In Kit	NBR	Gasket, Seat	1
In Kit	S	Screw, Seal	1
In Kit	NBR	Seal	1
In Kit	NBR	Gasket, Bottom Plug	1
—	ZP	Screw, Adjusting	1
—	BB	Locknut	1
—	NY	Gasket	1
—	STL	Retainer, Spring	1
—	STL	Spring	1
—	F	Body, Upper	1
—	ZP	Bolt, Retaining	6
—	BB	Nut, Diaphragm	1
—	ZP	Lockwasher	1
—	ZP	Plate, Diaphragm	1
—	BZ	Clevis, Seal	1
—	BZ	Body, Lower	1
—	BZ	Washer, Seal	1
—	BZ	Seal Support	1
—	BZ	Plug, Bottom	1

Italics are optional items.

Material Codes (Not Part of Part Number): BB=Brass BZ=Bronze
F=Cast Iron NBR=Medium Nitrile (Buna-N) NY=Nylon S=304SS
STL=Steel ZP=Zinc Plated

MAINTENANCE

Periodically check and clean the inlet pressure regulator on a similar schedule to the inlet filter. Remove the bottom plug and flush it with water. Inspect the diaphragm, valve and seat on a schedule similar to servicing the pump valves and seals.

Servicing the Diaphragm

1. Remove the six (6) retaining bolts fastening the upper and lower body.
2. Remove the upper body and main spring.
3. Remove the diaphragm nut, lockwasher, diaphragm plate and diaphragm from the seal clevis screw.
4. Examine the diaphragm for cracks, tears or deterioration. Replace as needed. Place the new diaphragm on to seal clevis.
5. Position the diaphragm plate with the curved side down onto the diaphragm.
   Note: Align the six (6) body holes with the six (6) diaphragm holes.
6. Reinstall the lockwasher and diaphragm nut and torque to 90 in-lbs (10 Nm).
7. Reinstall the main spring and upper body. Replace the six (6) retaining screws and torque to 130 in-lbs (15 Nm).

Servicing the Seat and Seals

1. Remove bottom plug and gasket.
2. Remove seal support from the seal clevis.
3. Using a screwdriver, remove the seal from the seal support.
4. Examine the seal for cuts, pitting and wear. Replace as needed.
5. With the seal removed, use a 1¼" socket to remove the seat.
6. Examine the seat gasket for pitting, cuts or wear. Replace as needed.
7. Examine the seat for pitting, cuts or wear. Replace as needed.
8. Install the new seat gasket under the seat.
9. Install the new seat into the lower body and torque to 200 in-lbs (23 Nm).
10. Install the new seal into the seal support. Then thread the seal support onto the seal clevis and torque to 200 in-lbs (23 Nm).
11. Reinstall the bottom plug and torque to 240 in-lbs (26.5 Nm).

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Water leaking out top adjusting bolt	• Worn diaphragm • Improper adjustment of screw setting	• Replace diaphragm as outlined under Servicing the Diaphragm • Turn top adjusting screw clockwise to increase inlet pressure to pump
Low inlet pressure to pump	• Inadequate water supply	• Minimum 40 psi to pump and regulator. Inlet line should be equal or one size larger than pump inlet port. Minimize elbows and line length
Excessive inlet pressure to pump	• Debris in regulator • Improper adjustment screw setting	• Remove bottom plug and flush regulator • Turn top adjusting screw counterclockwise to reduce inlet pressure to pump

⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty

CAT PUMPS 1681 94th Lane N.E., Minneapolis, MN 55449-4324 P: (763) 780-5440 F: (763) 780-2958 E: techsupport@catpumps.com www.catpumps.com