OPERATION AND MAINTENANCE
MODEL 969 REGULATOR

The model 969 is a small, economical piston type spring loading regulator. The poppet assembly is contained in a cartridge with internal filtration for easy in-field changing. The regulator is self venting. It is suitable for either gas or liquid service.

SPECIFICATIONS

• Maximum inlet pressure	6000 PSI (40MPa)
• Outlet pressure	0 to 250 PSI
• Flow coefficient (C_V)	0.06 (equivalent to 0.07" orifice)
• Rise of outlet pressure with drop of inlet pressure	20 PSI/1000 PSI
• Materials - body and cap -	aluminum
internals -	brass, stainless, alum., delrin
* Seals, -	nylon,BunaN,Viton
• Fittings	1/4" MNPT inlet l/8" FNPT outlet
• Size	1.4" dia x 4" lg

INSTALLATION

Use a suitable pipe thread sealant such as teflon tape on the 1/4" inlet and 1/8" outlet connections. The 1/8" port is the outlet. The 1/4" thread at the bottom is the outlet. Connect the inlet to the source gas such as a high pressure storage tank. The outlet is capable of being adjusted from 0 to 250 PSI. AN OUTLET GUAGE AND RELIEF VALVE SET NO HIGHER THAN 250 PSI SHOULD BE CONNECTED TO THE OUTLET. IF THE INLET PRESSURE CAN EXCEED 6000 PSI A RELIEF VALVE SHOULD ALSO BE INSTALLED AT THE INLET TO PREVENT EXCEEDING 6000 PSI. Avoid overtorquing pipe threads. Normal torque with a 6 or 8 inch wrench is ample. Use anple teflon tape - 3 or 4 turns, not 1 or 2.. The lower one inch thread section can be used for mounting in a one inch hole punched in a mounting plate or panel. The regulator is NOT shipped oxygen clean and should NOT be used for oxygen service as provided. Consult the factory for details.

OPERATION

Operation is very simple. Outlet pressure is adjusted by the pressure adjusting screw 7 (refer to drawing) to the desired value as read on the outlet gauge. When reducing the pressure the regulator will self vent via the vent hole near the cap. This is normal. When reducing set pressure reduce pressure to below the new setting then increase pressure to the new setting.

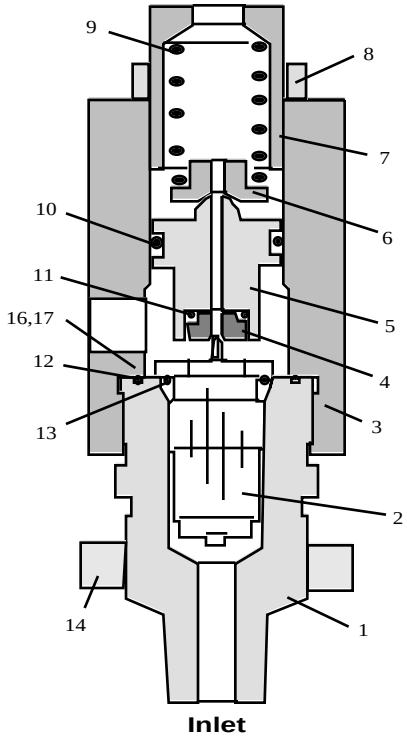
MAINTANENCE & REPAIR

CAUTION As with any regulator or valve, particulates or moisture can plug or freeze the internal filter or valve seat.This can occur when up-stream dryers are not changed or remain unused for long periods allowing corossion materials to accumulate. In critical applications where it is important not to lose flow, a larger particulate filter should be used upstream. Also an orifice such as the Aqua model 796 should be used downstream. This reduces the tendency to freeze when moisture is present. Consult factory for details. The user should establish time intervals for changing the valve cartridge, filter and upstream dryers based on experience and service conditions. No representation is made herein as to time intervals as each use is unique. Back-up systems should be used in very critical applications since field maintenance is hard to insure. The poppet cartridge 832 is a factory assembled item and should be replaced if required and not disassembled unless absolutely necessary. Spare cartridges are available at a nominal cost and should be kept on hand if rapid repairs are required. IN ALL CASES THE UNIT CAN BE RETURNED TO THE FACTORY OR DEALER FOR REPAIR UNDER WARRANTY IF APPLICABLE OR AT A NOMINAL CHARGE. Maintenance or repairs should only be done by qualified personnel in a clean environment by following the drawings and parts lists herein.

If leakage occurs through the regulator or out the regulator vent, allow the inlet and outlet pressure to equalize by shutting off the inlet. If leakage continues after the inlet and outlet equalize the vent seat 4 or piston seal 10 is leaking. Replace them. If leakage stops when the inlet and outlet pressure equalize the poppet cartridge item 2 is leaking. Replace this.

ASSEMBLY & DISASSEMBLY - MODEL 969 REGULATOR

ITEM	QTY	PART NO.	DESCRIPTION
1	1	811	body
2	1	832	cartridge
3	1	974	cap
4	1	726	vent seat
	1	1062	non venting seat
5	1	975	piston (rev 7/03)
6	1	509-2	spring guide
7	1	510	adjusting screw
8	1	511	lock nut
9	1	324-7	spring,
10	1	969-10	seal 2-113, V or N 75
11	1	969-11	seal 2-010, Vit. 90
12	1	969-12	seal 2-018 Vit 90
13	1	969-13	seal 2-014, VIt. 90
14	1	969-14	mount nut, 1"
15		969-15	REPAIR KITincludes items 2,4,10,11,12,13
16	1	1571	spacer see note 5
17	1	969-17	seal 2-019 V90 note 5



NOTES

1. Technical bulletin - 981
2. Use Dow silicone grease 111 or equivalent on seals and threads.
3. part no. 969NV denotes non venting - uses 1062 seat5.
4. ASSEMBLY

a. Clean all parts and insure there are no visible chips or particulates.

b. Inspect vent seat 4 under 10X magnification at sealing edge.

c. Install cartridge 1 with seal 13 in housing 1. Torque to 3 to 10 ft lbs.

d. Install seal 10on piston 5. Pack heavily with dow 111 or 4 grease.

e. Carefully slide piston 5 into cap 3 as shown.

f. Install seal 11 and vent seat4 into piston as shown.

g. Install seal 12 on body 1 as shown.

h. Screw cap 3 and body 1 together. Hold cap 3 downward so seat 4 does not fall out during assembly. Torque to 10 to 20 ft lbs.

i. Install spring guide 6., adjusting screw 7, lock nut 8, and spring 9 as shown.

5. for shorter body version (2.2" long) add items 16 spacer and seal 17 facing up. delete items 16 and 17 for newer longer (2.3") bodies (rev 7/03)