

3000# SIGHT FEED INDICATOR, MODEL SFI

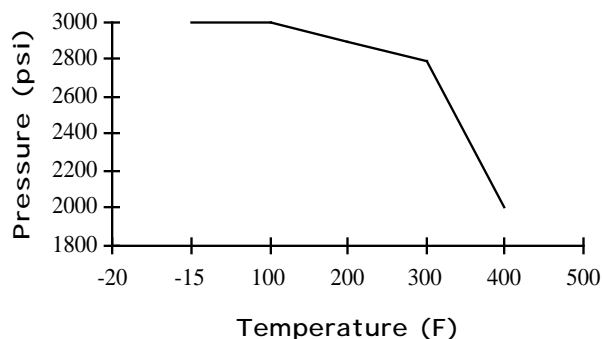
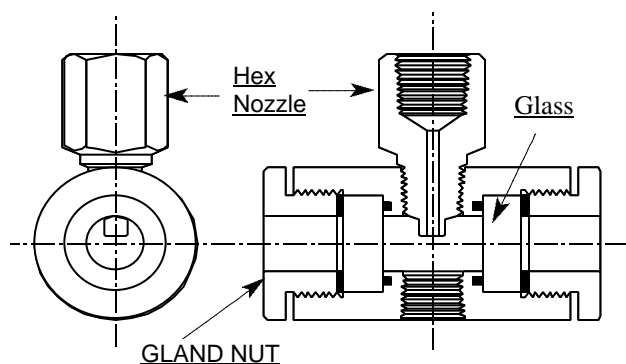


Fig. 1 SFI Pressure and Temperature Rating

Thank you for choosing "INFERNO" products. Inferno products are designed and constructed to give satisfactory performance in a wide range of environmental and operating conditions. If the correct design and materials were specified at the time of purchase, satisfactory service will depend on reasonable care in the subsequent installation, operation, and maintenance of the product.

INSTALLATION

To help ensure trouble-free operation of your sight feed indicator (SFI), read this Instruction Manual carefully and follow its recommendations. Failure to follow any instruction could possibly result in a malfunction of the gage or glass breakage during service, which can cause property damage or bodily injury.

Before installing the gage the following items should be considered:

- Check for suitability of the SFI in service before installing.
- Check chemical compatibility of process with materials of SFI construction.
- Check maximum pressure and temperature of service with ratings of the SFI (see Fig. 1). Do not exceed ratings of the SFI in service.

OPERATION

A. Hydrostatic Test

We recommend a hydrostatic test on the gage assembly at 1.5 times the operating pressure whenever possible, especially in high pressure applications. The SFI is factory tested to 1.5 times the rated pressure and does not need to be re-tested at time of installation. However, if glasses and seals have been replaced during maintenance, then the SFI should be re-tested by the user.

CAUTION: DO NOT USE WRENCH ON GLAND NUTS. If a leak develops during testing, do not use wrench to tighten gland nuts. Wait until the pressure has been vented to atmosphere before attempting any work on the SFI. Hand-tight the gland nuts. If it does not eliminate the leak, disassemble the SFI and follow the maintenance procedure.

B. Starting Up

If a large temperature difference exists between the SFI and process fluid, raise or lower the temperature slowly by cracking the connecting valves open. Do not open the valves all the way until the SFI is either fully warmed up or cooled down. The glass used in the SFI is tempered borosilicate glass that can stand large temperature shocks. But the amount is limited by other factors such as stresses imposed during installation which reduces the glass resistance to thermal shock.

C. Shutting Down

Allow pressure and temperature in the SFI to reach ambient/atmospheric conditions slowly.

MAINTENANCE

CAUTION: Never perform any maintenance until the SFI has been vented to the atmosphere, has equilibrated to ambient temperature, and has been drained of all process liquids/gases.

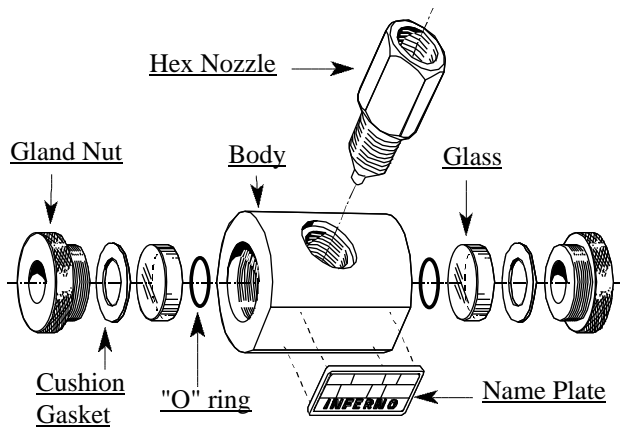


Fig. 2 SFI Assembly

A. Disassembly

See Fig. 2 for the SFI assembly. Loosen the gland nuts by hand. Replacement "O" ring is size 021, material is viton. Replacement cushion gasket is 1/32" compressed non-asbestos material (see Maintenance, Section C for details). Cushion gasket can protect glass from contact with metal. Omission of cushion gasket will cause gland nut to scratch top surface of glass and will cause glass breakage which may result in severe damage to life and property. Replacement glass should be free of scratches or chips that may cause local stress concentration and lower the strength of the glass in bending. The glass is available through INFERNO. Do not substitute glass from other sources. Original glass is tempered borosilicate (Pyrex). Substitute glasses available may be Pyrex but are probably not tempered. In order to be rated to 3000 psi the Inferno SFI must carry tempered glass which is three times stronger than regular annealed glass.

B. Reassembly

Inspect "O" ring grooves to make sure that there are no nicks or imperfections that could cause leakage. Wipe all mating surfaces clean before re-assembling.

See Fig. 2 for the SFI assembly. First insert "O" ring into the groove on one side of the body. Then place the glass carefully over top of the "O" ring. Install the cushion gasket on top of the glass. Lubricate the threads of the gland nut. Finally hand-tight the gland nut. Hand-tight is all that is required. The gland nut will not loosen when the body is under internal hydraulic pressure, in fact the nut will become very stiff and hard to turn. Under no circumstance use wrench to tighten the gland nut. Glass is subject to breakage when wrench-tightened and capable of causing severe damage to life and property.

Hydrotest to 1.5 times working pressure. Or gas test submerged under water to check for bubbles indicating leakage.

CAUTION: Gas testing must be done with great precaution because large amount of stored energy is present in the chamber when pressurized with gas. A gas pressure check should be done by specially trained personnel only.

C. SFI Parts List

3251: Body, SA 479 T-316 CF stainless steel.

3252: Gland nut, SA 479 T-316 CF stainless steel.

3261: Cushion gasket, non-asbestos, NBR binder (K-4401), 1/32" thick.

3171: Glass, clear, borosilicate glass tempered, 1/2" thick x 1-1/4" diameter.

3254: Hex nozzle with 1/8" drip orifice, SA 479 T-316 CF stainless steel, 1/2" NPTF.

3255: "O" ring, viton 90 durometer, Parker size 2-021.

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