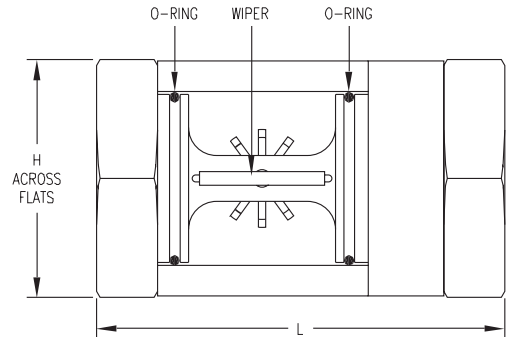


PROCESS OBSERVATION SOLUTIONS

INSTALLATION, OPERATION & MAINTENANCE MANUAL

FOR SERIES: **S17C**



NOTICE
Read Safety Precautions on back before installing or operating!

Dimensions		
Sizes	L Inches (mm)	H Inches (mm)
1/4" & 3/8"	2-3/4" (70)	1-1/2" (38)
1/2" & 3/4"	3-11/16" (94)	2-1/4" (57)
1", 1-1/4" & 1-1/2"	4-7/8" (124)	2-3/4" (70)

INSTALLATION

1. Use proper sealing compound on the fitting threads.
2. Check the flow direction arrow on hex to make sure the sight flow is aligned properly.
3. Attach sight flow indicator to the correct size fittings.
4. Hold the sight flow indicator in place with the correct size wrench by hex adjacent to the fitting.
5. Avoid over tightening the fittings or placing stress on the sight flow indicator.
6. Attach the other side of the sight flow indicator repeating steps 1-5 above making sure a torque load is NOT applied across the unit.

OPERATION

1. Gradually introduce the medium into the sight flow indicator. Avoid any pressure surges.
2. The rotation of the impeller indicates flow. See table for minimum flowrate values.
3. By rotating the glass axially, the wipers will clean the inner surface of the glass. Care should be taken while medium is flowing.

SPECIFICATIONS

Wetted Materials:

Body:

- B - Nickel plated brass
- D - 316 Stainless Steel

Window: Tempered Borosilicate glass

O-ring: Fluorelastomer

Wiper: Fluorelastomer

Spindle: 416 Stainless Steel

Impeller: Acetal Plastic

Temperature Limit: 212°F (100°C)

Pressure Limit: 230 psig (1585.8 kPa)

Minimum Flow-rate for Impeller Rotation		
Size (Inches)	Water GPM (LPM)	Air GPM (LPM)
1/4"	0.10 (0.38)	1.1 (31.2)
3/8"	0.10 (0.38)	1.1 (31.2)
1/2"	0.25 (0.95)	2.0 (56.6)
3/4"	0.30 (1.14)	2.0 (56.6)
1"	0.50 (1.89)	4.0 (113.3)
1-1/4"	0.80 (3.03)	5.0 (141.6)
1-1/2"	1.0 (3.79)	5.0 (141.6)

You have purchased a quality Sight Flow Indicator. Please protect your safety and that of others by observing the following safety instructions when installing and operating your new Sight Flow Indicator.

Safety Precautions for Proper Installation and Operation

Always inspect sight flow indicator units for fractures, cracks or other defects before installation. If unit is found with any defect, do NOT install. Consult John C. Ernst. The defective products performance and safety cannot be guaranteed.

In no instance are the temperature and pressure limits specified on the instrument to be exceeded. This includes the following circumstances:

➤ **“Water Hammer”**

The sudden surge that occurs when a downstream flow is suddenly stopped (i.e. shutting a valve). This causes the water in the line upstream to slam into the wall stopping the flow (i.e. valve) sometimes causing severe damage to the sight flow indicator. Damage is due to the water mass momentum causing a large pressure increase.

➤ **“Fluid Surges”**

Empty fluid lines pressurized suddenly (i.e. by a pump or the rapid opening of a supply valve) can cause a large fluid surge with no back pressure. These conditions are similar to “water hammer”.

➤ **“Thermal Liquid Expansion/Contraction”**

This may be due to water freezing in the unit or a liquid thermally expanding in an isolated unit. Both cases can be avoided by draining units when no in use.

Never install a sight flow indicator unit in an unsupported position.

- Make sure that the lines connected to both sides of the unit do **NOT** put undue stress on the unit at any time.
- Check alignment of the lines on both sides of the unit to prevent torque from being applied to the unit when installed.
- Always consider the weight of the unit, fluid lines, and the medium when calculating stresses.

Use Care when installing the sight flow unit to fittings.

- Always hold unit with wrench at hex adjacent of connection when installing.
- Do **NOT** apply torque loads across the unit.
- Do **NOT** overtighten fittings.
- Use proper sealing techniques (i.e. pipe thread sealant tape, joint compound) to ease tightening of fittings and ensure proper seal.
- Do **NOT** hold unit by housing or glass when installing. Always, use hex fitting provided.
- Avoid causing any damage to the glass surface when installing the unit. Even slight damaging the surface of the glass may greatly reduce the glass, strength.

These units are designed to use specific mediums (i.e. water, air, and oil). For use with other mediums, consult John C. Ernst LLC. Inc’s Sales department.

LIMITED WARRANTY

Period of Coverage: The John C. Ernst LLC. expressly warrants products to the original purchaser to be free from defects in the material and workmanship for 12 months from date of shipment. John C. Ernst LLC. will, at its option, replace or repair any products which fail during the warranty period due to defective material or workmanship. Evaluations, repairs, and replacements will most often occur in Sparta NJ 07871 USA, or another facility determined by the John C. Ernst LLC.. The warranty does not cover costs required to transport warranted units to or from the John C. Ernst facility.

Limitations: The responsibility of the John C. Ernst LLC. is hereunder limited to repairing or replacing the product at its expense. This warranty shall not apply if the product has been disassembled, tampered with, repaired, subjected to misuse, neglect, accident, or otherwise altered in any way. The warranty does not guarantee products against normal wear, glass breakage, clouding, or corrosion. The John C. Ernst LLC. shall not be liable for loss, shipping costs, damage, or expenses related directly or indirectly to the installation or use of its products. It is expressly understood that the John C. Ernst LLC. is not responsible for damage or injury caused to other products, buildings, personnel, citizens, or property by reason of the installation or use of its products.

Advertised ratings apply only to units serviced with parts supplied by the John. C. Ernst LLC. Use of parts during maintenance from other companies will void the warranty. Service must be done in accordance with the instructions of the product that is being serviced.

THIS IS JOHN C. ERNST, LLC’S. SOLE WARRANTY AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED WHICH ARE HEREBY EXCLUDED, INCLUDING IN PARTICULAR ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WE WILL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY NATURE.

How to get Warranty Service: Prior to submitting any claim for warranty service, the owner must submit proof of purchase, and obtain written authorization to return the product. All returns must be sent back with an MSDS for the application that the product was used in, and with a maintenance log of all service including inspections. Thereafter, the product shall be returned to the John C. Ernst LLC. with freight paid and packaged to prevent damage in transit. Should damage in transit occur the John C. Ernst LLC. will not be held liable.