

INSTALLATION & OPERATION INSTRUCTIONS FOR FR5500 SERIES FLOWMETERS

The FR5500 acrylic block flowmeters are available in various ranges in SAE and SI units for air and water. Other meters are available on a special order basis for other fluids. When properly installed and maintained, these durable acrylic meters will provide years of trouble-free operation.

| SPECIFICATIONS | |
|-------------------------------|---|
| ACCURACY: | ± 5% Full Scale |
| FLOATS: | Stainless Steel |
| INTERNAL WETTED PARTS: | Stainless Steel / PVC |
| METER BODY: | Machined Clear Acrylic |
| FITTINGS: | Brass, PVC or Stainless Steel <ul style="list-style-type: none"> • 1 ½-11 ½ FNPT Fittings • 2-11 ½ FNPT Fittings |
| ELASTOMERS: | <ul style="list-style-type: none"> • Buna-N with Brass Fittings • Viton® with Stainless Steel or PVC |
| MAXIMUM TEMPERATURE: | 150°F (65 °C) |
| MAXIMUM PRESSURE: | 100 PSI (690 kPa) |

UNPACKING

Precautions have been taken to prevent any damage from occurring during shipment. However, if the meter is received damaged, *report it to the carrier immediately*. Before installing, verify that you have the model and flow range required.

ACHIEVING ACCURATE FLOWRATES

To obtain an accurate flowrate, the float must be read at the position indicated on the meter. Additionally, the flowmeter should be installed in a manner, which minimizes both external vibrations and internal flow variations. Special care should be taken so that the connections to the meter's inlet and outlet fittings do not overly restrict the flow of the liquid or gas being metered. This could result in a reduced flow volume, preventing the meter from reaching its maximum flowrate. Furthermore, internal pressures could be affected, which can cause inaccurate flow readings. On start-up, slowly purge any fluid trapped in the meter.

INSTALLATION

These meters are supplied with either 1 ½- 11 ½ or 2- 11 ½ FNPT union fittings. **(Stainless steel union rings are heavy, use caution when handling as they can cause damage to flowmeter.)** When installing the meter, remove the tail of the union fitting from the top and bottom of the flowmeter. Connect the union tails to the flow loop. (Use pipe thread sealant or Teflon® tape to achieve a positive seal when connecting the union fittings.) Once the tails are installed, remove the float restraint, position the meter between the union tails and tighten the union rings to the union tails. **Over-tightening may cause damage to the fitting, flowmeter or both; which will result in leaks or meter failure.** Flowmeter dimensions are shown in the figure on the reverse side.

CLEANING AND DISASSEMBLY

Occasional cleaning may be required if dirt appears in the flow tube or if float movement becomes restricted. To clean, remove the flowmeter from the flow system by disconnecting the union fittings. Remove the top rod guide assembly by turning it counter-clockwise. Be sure to support the rod guide to prevent it from scratching the metering tube. Once the top rod guide assembly is removed, carefully remove the bottom rod guide assembly, the rod guide and the float through the bottom of the flowmeter. Wash the tapered hole, float stops, and rod guide with a mild liquid detergent and soft brush. Rinse all parts with clean water and dry thoroughly with clean air or nitrogen. **Do not use solvents to clean this meter** as they will attack the acrylic and destroy the unit.

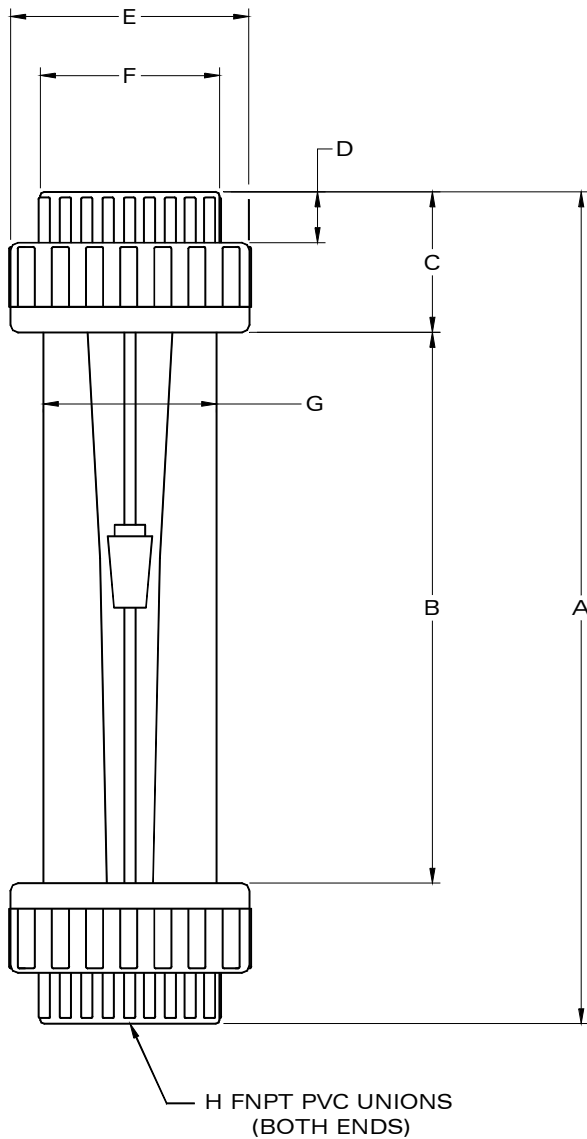
REASSEMBLY

Check to make sure that all parts are clean and dry. To lubricate the o-rings, apply a small amount of lubricating grease such as halocarbon on them prior to reassembly. Reinstall the bottom rod guide assembly, the rod guide and the float into the bottom of the flowmeter body. Make sure the rod guide assembly is seated firmly in the body of the meter. Align the rod guide through the spring on the top rod guide assembly and tighten the top rod guide assembly by rotating it clockwise.

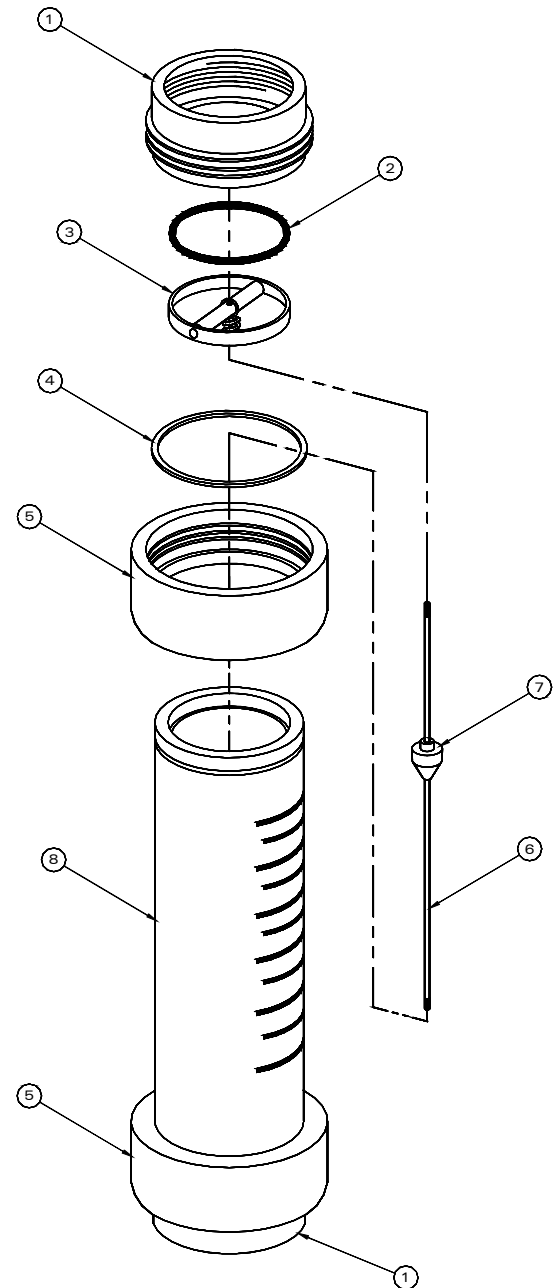
If you have any questions regarding the installation, maintenance or use of this flowmeter, please call the Customer Service Department at 1-800-356-7483.

CAUTION

THIS FLOWMETER IS DESIGNED FOR USE WITH NON-HAZARDOUS FLUIDS AT PRESSURES UP TO 100 PSI (690 kPa) AND TEMPERATURES UP TO 150 °F (65 °C). DO NOT USE HAZARDOUS FLUIDS AND DO NOT EXCEED TEMPERATURE OR PRESSURE LIMITS. USE WITH HAZARDOUS FLUIDS OR EXCEEDING THE PRESSURE AND TEMPERATURE LIMITS MAY CAUSE FAILURE WHICH COULD RESULT IN INJURY.



| NUMBER | DESCRIPTION |
|--------|--------------------|
| 1 | Union Tail |
| 2 | O-Ring |
| 3 | Rod Guide Assembly |
| 4 | Retaining Ring |
| 5 | Union Ring |
| 6 | Rod Guide |
| 7 | Float |
| 8 | Flowmeter Body |



| LETTER | DIMENSION-IN / (MM) | | | |
|--------|-----------------------|-----------------------|-------------------|--------------------|
| A | 13-1/4 | 13-3/8 | 13-7/8 | 13-1/2 |
| B | 9 | 9-1/8 | 8-15/16 | 9-3/16 |
| C | 2-1/4 | 2-1/8 | 2-1/2 | 2-5/32 |
| D | 7/8 | 7/8 | 1 | 15/16 |
| E | 3-1/2 | 3-1/2 | 4-1/8 | 4 |
| F | 2-1/2 | 2-1/2 | 3-1/16 | 3 |
| G | 2-1/2 | 2-1/2 | 3 | 3 |
| H | 1 1/2- 11 1/2 FNPT | 1 1/2- 11 1/2 FNPT | 2- 11 1/2 FNPT | 2- 11 1/2 FNPT |
| MAT'L | PVC | Stainless Steel | PVC | Stainless Steel |

CONTINUED PRODUCT IMPROVEMENT MAY RESULT IN SPECIFICATION REVISIONS
 WHEN ORDERING PARTS PLEASE INCLUDE PART DESCRIPTION, ITEM NUMBER AND TYPE OF MATERIAL REQUIRED.