



INSTALLATION & OPERATION INSTRUCTIONS
OF MR3000 SERIES FLOWMETER

The KEY INSTRUMENTS MR3000 flowmeters are available in various ranges in both SAE and SI units for air and water. These direct-reading scales are also available for other gases and liquids. If the flowmeter is used for fluids other than air and water, please consult chemical compatibility data for possible effects on the meter. When properly installed and maintained, this durable Polycarbonate flowmeter will provide many years of trouble-free service.

UNPACKING

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

ACHIEVING ACCURATE FLOWRATES

To obtain an accurate flowrate, the float must be read correctly. If the meter has a ball float, the flowrate should be read from the center of the ball. If the meter has a bullet float, the flowrate should be read from the groove in the float. Additionally, the flowmeter should be installed vertically and 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 liquid or gas flow 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 air/gas trapped in the meter.

INSTALLATION

In order for flowmeter to function properly, it is important that the flowmeter is mounted vertically. When installing 1/8-27 MNPT fittings into the flowmeter, care should be taken not to over tighten them. **The fittings should be installed with a maximum torque of 60 in-lbs.** Use pipe thread sealant or Teflon® tape to achieve a positive seal when connecting the flowmeter. The flowmeter is provided with two clips and two 10-32 screws, to be used in conjunction with the female threads on the backplate of the flowmeter. **These 10-32 screws should be installed with a maximum torque of 5 in-lbs. Caution! Exceeding these specifications may cause damage to the flowmeter.** (See Figure 1 for the location of the mounting holes.)

MAINTENANCE

Occasional cleaning may become necessary if dirt appears in the flowmeter or if float movement is restricted. To clean, rotate "Retaining Clip" (See Figure 1) counter-clockwise, approximately 1/8 turn, to align clip with slot. Gently remove the retaining clip from the flowmeter. The top plug, ring and gasket can then be removed. Once the outlet fitting is removed from the back of the meter, the float can then be removed. It is not necessary to remove the flow tube from the flowmeter body. Wash flow tube, float, outlet fitting and top plug with clean water and a soft brush. Rinse all parts with clean water and dry thoroughly. To reassemble, simply reverse the disassembly process. **Do not use solvents or strong bases for cleaning.**

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

CAUTION

THIS FLOWMETER IS DESIGNED FOR USE WITH NON-HAZARDOUS FLUIDS AT PRESSURES UP TO 100 PSIG (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 OR TEMPERATURE LIMITS MAY CAUSE FAILURE WHICH COULD RESULT IN INJURY.

MR3000 SERIES FLOWMETER INSTALLATION INSTRUCTIONS

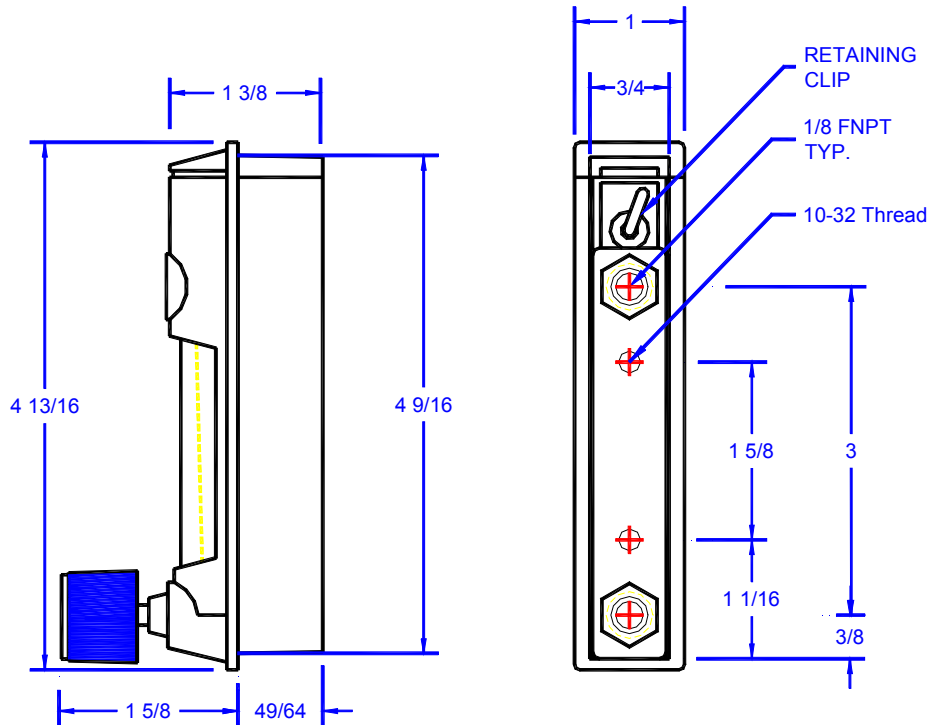


Figure 1

MR3000 SERIES FLOW RATES			
RANGE	MODEL	RANGE	MODEL
SCFH OF AIR	CODE	LPM OF AIR	CODE
0.1-1	3A00	0.05-0.5	3A12
0.2-2.5	3A01	0.1-1.5	3A13
0.4-5	3A02	0.4-5	3A14
1-11	3A03	0.2-2.5	3A23
1-22	3A04	1-10	3A15
4-60	3A05	2-30	3A16
10-110	3A06	4-50	3A17
20-200	3A07	10-100	3A18
GPH OF WATER	CODE	CCM OF WATER	CODE
0.2-2.5	3L28	4-50	3L09
0.4-5	3L19	5-110	3L10
1-10	3L20	20-300	3L11
2-25	3L21		

SPECIFICATIONS	
ACCURACY:	± 4% FULL SCALE
BODY & TUBE:	POLYCARBONATE
FLOATS:	BLACK GLASS, CARBIDE, STAINLESS STEEL. ALUMINUM
PRESSURE:	100 PSIG MAX
TEMPERATURE:	150° F/ 65° C MAX
SEALS:	BUNA N WITH BRASS FITTINGS & VITON WITH STAINLESS STEEL

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