MANOTHERM

GLASS TUBE ROTAMETER

MT-F200RT

FEATURES

- Suitable for measuring gas and liquid flow
- Corrosion resistant glass
- Easy reading
- Easy to maintain and replace
- Limit switch option
- Wide rangeability 10:1

PRODUCT OVERVIEW

The operation of a rotameter is based on the variable area principle. Variable area refers to the area between a tapered glass tube and a float inside the tube. The flow of a fluid raises the float inside a tapered tube, increasing the area through which the fluid can pass. The larger the flow, the higher will be the float position. Float position is directly proportional to the flowrate of the fluid, and it moves up or down in proportion to the fluid flowrate. Therefore, the scale may be graduated directly with the unit of flow. Special scales with mm reading or percentage of flow reading is also possible based on request. Because of glass compatibility with most corrosive fluids, glass tube rotameter is the standard choice for general application gas and liquid flow metering either corrosive or non-corrosive.

STANDARD PARAMETERS

Size*	½" to 2½"
Accuracy	±2% of full scale
Tube material	Glass
Body Material	SS / Carbon Steel
Connection material	PVC/Brass/CS/SS (based upon the request or fluid compatibility aspects)
Float material	Depends on range and media
Max pressure	10 bar
Max temperature	80°C
Connection type*	Thread / Flange
Connection size	Refer to the flow range tables
O-Ring material*	Silicone rubber

*Optional connection types such as flanged connection are possible based on request.

DESIGN STANDARD

Glass tube rotameters are designed according to VDI/VDE 3513 Blatt 1. Maximum permissible error is defined according to VDI/VDE 3513 Blatt 2. Other applicable standards are ISA RP16.5, ISA RP16.6 and VDI/VDE 3513 Blatt 3. The BARON INSTRUMENTS Co. uses proprietary developed softwares to design rotameters according to above-mentioned standards.

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FLOW RANGES FOR WATER

Range Code	Conn Size and Type	Range for Water at 20°C
L67	½" BSP (F)	16-160 l/h
L68	½" BSP (F)	25-250 l/h
L70	½" BSP (F)	40-400 l/h
L72	1" BSP (F)	60-600 l/h
L75	1" BSP (F)	100-1000 l/h
L77	1½" BSP (F)	160-1600 l/h
L79	1½" BSP (F)	250-2500 l/h
L81	2" BSP (F)	0.4-4 m^3/h
L83	2" BSP (F)	0.6-6 m^3/h
L85	2½" BSP (F)	1-10 m^3/h
L86	2½" BSP (F)	1.6-16 m^3/h
L00	Please specify	Please specify

FLOW RANGES FOR AIR

Range Code	Conn Size and Type	Range for Air at 20°C, 1 atm
A81	½" BSP (F)	0.25-2.5 Nm^3/h
A83	½" BSP (F)	0.4-4 m^3/h
A85	½" BSP (F)	0.6-6 Nm^3/h
A89	1" BSP (F)	1-10 Nm^3/h
A91	1" BSP (F)	1.6-16 Nm^3/h
A93	1" BSP (F)	2.5-25 Nm^3/h
A95	1½" BSP (F)	4-40 Nm^3/h
A97	1½" BSP (F)	6-60 Nm^3/h
A101	2" BSP (F)	10-100 Nm^3/h
A103	2" BSP (F)	16-160 Nm^3/h
A00	Please specify	Please specify

SELECTION GUIDE FOR WATER/AIR

To select the right flowmeter for your application, please specify the following when ordering a rotameter for water or air flow measurement:

1) Fluid name (water or air):
2) Flow range (minimum and maximum):
3) Operating pressure:
4) Operating temperature:
5) Maximum pressure:
6) Maximum temperature:

SELECTION GUIDE FOR OTHER FLUIDS

The flow ranges specified in flow ranges tables are for air and water, only. If the fluid is other than air and water, specify the below information. Our sales engineers will help you choose the right rotameter.

1) Fluid name:
2) Flow range (minimum and maximum):
3) Operating pressure:
4) Operating temperature:
5) Maximum pressure:
6) Maximum temperature:
7) Fluid density:
8) Fluid viscosity (only for liquids):

NOTES

1. Each meter is calibrated individually in our flow calibration site. As a standard rule, meters intended for liquid measurement are calibrated by water and those intended for gas measurement are calibrated by air. We also provide correction factors to convert meter reading to operating condition if requested.
2. Rangeability of rotameters is generally 10:1. This means that if the desired maximum flow rate is $10m^3/h$, the minimum measurable flow rate is $1m^3/h$. The meter cannot measure from zero!
3. The scale on the meter is correct ONLY for the specified fluid at pressure and temperature shown on the meter. If the fluid, operating temperature or operating pressure are different from what is written on the meter scale, correction factors need to be applied. In this case, contact us to provide you with the necessary correction coefficients.