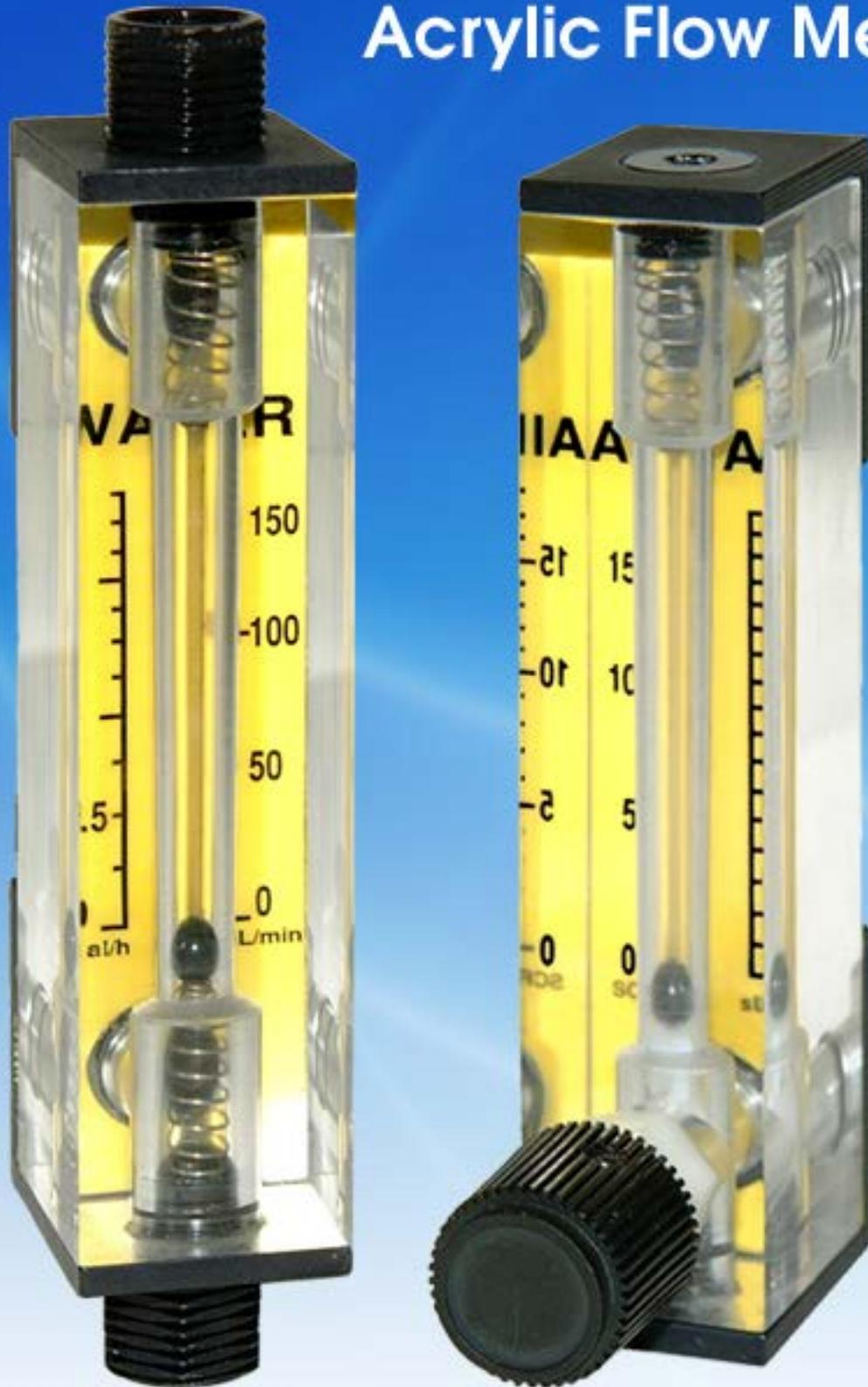


MALBORG

Acrylic Flow Meters



Design Features

- Easy to read English or metric scales.
- Interchangeable scales for routine gases.
- Customer convertible panel to partial or full in-line mounted configurations.
- Panel mounting by means of hex nuts.
- Meters offered with or without built-in low hysteresis needle valves.
- Easy disassembly and assembly for cleaning.

OPTIONAL PRODUCTS

FLOW METER KITS ARE AVAILABLE WITH DIRECT READING SCALES DISPLAYING: AIR, WATER, ARGON, NITROGEN, HELIUM, CARBON DIOXIDE, AND OXYGEN IN BOTH ENGLISH AND METRIC UNITS.



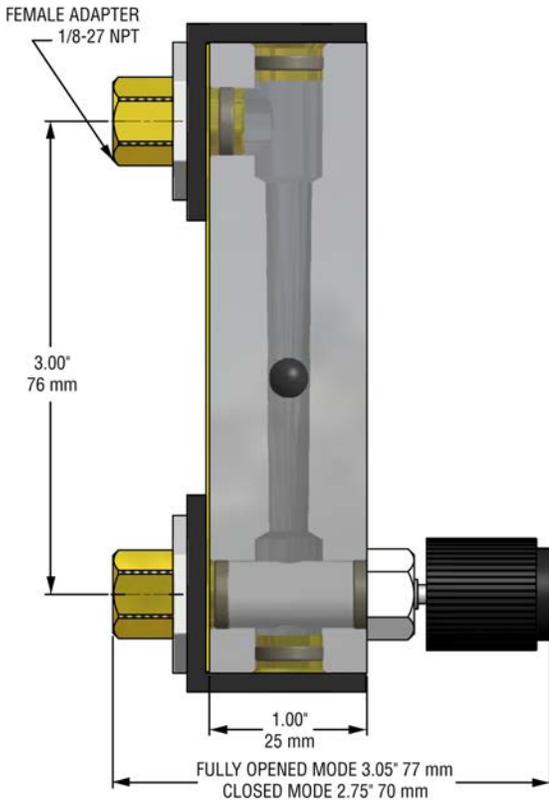
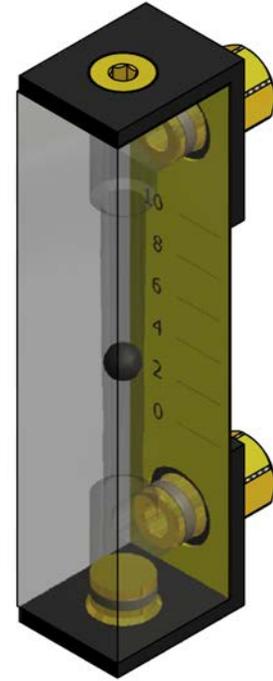
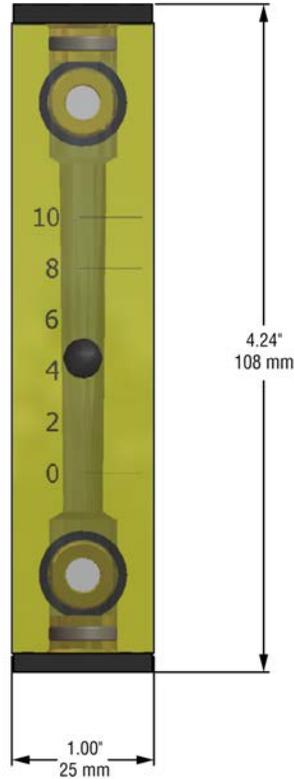
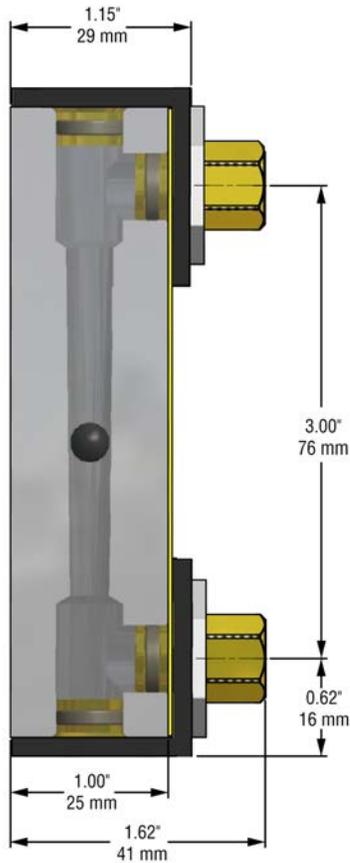
Typical In-Line Meter

**Panel Mounting
Meter with Built In
Needle Valve**

Superior Quality . . .

. . . Stable, Easy to Read Float

DIMENSIONS



ACR SPECIFICATIONS

ACCURACY:	±5% of full scale reading.
MAXIMUM TEMPERATURE:	65°C (150°F).
MAXIMUM PRESSURE:	6.9 bars (100 psig).
METER BLOCK:	Clear machined acrylic.
FLOAT MATERIALS:	Black Glass, stainless steel, Tungsten Carbide.
O-RING SEALS:	Viton®.
FITTINGS:	Brass or stainless 1/8" NPT female connections, built-in needle valves and seal plugs.



ACRYLIC FLOW METERS

ARGON FLOW METERS WITH DIRECT READING SCALES

MODEL NO.	FITTING MATERIAL	VALVE OPTION	DUAL SCALE		FLOAT MATERIAL
			L/min	SCFH	
ACRZB0V03	BRASS	NO	1.1	2.25	GLASS
ACRZB1V03		YES			
ACRZS0V03	STAINLESS	NO	1.1	2.25	GLASS
ACRZS1V03		YES			
ACRZB0V10	BRASS	NO	2.2	5.0	STAINLESS
ACRZB1V10		YES			
ACRZS0V10	STAINLESS	NO	2.2	5.0	STAINLESS
ACRZS1V10		YES			
ACRZB0V17	BRASS	NO	3.0	6.5	CARBOLOY
ACRZB1V17		YES			
ACRZS0V17	STAINLESS	NO	3.0	6.5	CARBOLOY
ACRZS1V17		YES			
ACRYB0V03	BRASS	NO	7.0	15.0	GLASS
ACRYB1V03		YES			
ACRYS0V03	STAINLESS	NO	7.0	15.0	GLASS
ACRYS1V03		YES			
ACRYB0V10	BRASS	NO	13.0	26.0	STAINLESS
ACRYB1V10		YES			
ACRYS0V10	STAINLESS	NO	13.0	26.0	STAINLESS
ACRYS1V10		YES			
ACRYB0V17	BRASS	NO	18.0	37.5	CARBOLOY
ACRYB1V17		YES			
ACRYS0V17	STAINLESS	NO	18.0	37.5	CARBOLOY
ACRYS1V17		YES			
ACRYB0V24	BRASS	NO	40	80	STAINLESS
ACRYB1V24		YES			
ACRYS0V24	STAINLESS	NO	40	80	STAINLESS
ACRYS1V24		YES			

WATER FLOW METERS WITH DIRECT READING SCALES

MODEL NO.	FITTING MATERIAL	VALVE OPTION	DUAL SCALE		FLOAT MATERIAL
			mL/min	GAL/H	
ACRZB0V02	BRASS	NO	20.0	0.3	GLASS
ACRZB1V02		YES			
ACRZS0V02	STAINLESS	NO	20.0	0.3	GLASS
ACRZS1V02		YES			
ACRZB0V09	BRASS	NO	70.0	1.1	STAINLESS
ACRZB1V09		YES			
ACRZS0V09	STAINLESS	NO	70.0	1.1	STAINLESS
ACRZS1V09		YES			
ACRZB0V16	BRASS	NO	100.0	1.5	CARBOLOY
ACRZB1V16		YES			
ACRZS0V16	STAINLESS	NO	100.0	1.5	CARBOLOY
ACRZS1V16		YES			
ACRYB0V02	BRASS	NO	175.0	2.75	GLASS
ACRYB1V02		YES			
ACRYS0V02	STAINLESS	NO	175.0	2.75	GLASS
ACRYS1V02		YES			
ACRYB0V09	BRASS	NO	450.0	6.5	STAINLESS
ACRYB1V09		YES			
ACRYS0V09	STAINLESS	NO	450.0	6.5	STAINLESS
ACRYS1V09		YES			
ACRYB0V16	BRASS	NO	700.0	11.0	CARBOLOY
ACRYB1V16		YES			
ACRYS0V16	STAINLESS	NO	700.0	11.0	CARBOLOY
ACRYS1V16		YES			
ACRYB0V23	BRASS	NO	1400	22	STAINLESS
ACRYB1V23		YES			
ACRYS0V23	STAINLESS	NO	1400	22	STAINLESS
ACRYS1V23		YES			

HELIUM FLOW METERS WITH DIRECT READING SCALES

MODEL NO.	FITTING MATERIAL	VALVE OPTION	DUAL SCALE		FLOAT MATERIAL
			L/min	SCFH	
ACRZB0V05	BRASS	NO	2.0	4.0	GLASS
ACRZB1V05		YES			
ACRZS0V05	STAINLESS	NO	2.0	4.0	GLASS
ACRZS1V05		YES			
ACRZB0V12	BRASS	NO	5.5	11.0	STAINLESS
ACRZB1V12		YES			
ACRZS0V12	STAINLESS	NO	5.5	11.0	STAINLESS
ACRZS1V12		YES			
ACRZB0V19	BRASS	NO	8.0	17.0	CARBOLOY
ACRZB1V19		YES			
ACRZS0V19	STAINLESS	NO	8.0	17.0	CARBOLOY
ACRZS1V19		YES			
ACRYB0V05	BRASS	NO	18.0	40.0	GLASS
ACRYB1V05		YES			
ACRYS0V05	STAINLESS	NO	18.0	40.0	GLASS
ACRYS1V05		YES			
ACRYB0V12	BRASS	NO	35.0	70.0	STAINLESS
ACRYB1V12		YES			
ACRYS0V12	STAINLESS	NO	35.0	70.0	STAINLESS
ACRYS1V12		YES			
ACRYB0V19	BRASS	NO	55.0	110.0	CARBOLOY
ACRYB1V19		YES			
ACRYS0V19	STAINLESS	NO	55.0	110.0	CARBOLOY
ACRYS1V19		YES			
ACRYB0V26	BRASS	NO	110	250	STAINLESS
ACRYB1V26		YES			
ACRYS0V26	STAINLESS	NO	110	250	STAINLESS
ACRYS1V26		YES			

ACRYLIC FLOW METER KITS WITH DIRECT READING SCALES

Kits include an air meter and six interchangeable direct reading dual scales: Argon, Carbon Dioxide, Helium, Nitrogen, Oxygen, and Water.

ACRYLIC FLOW METER KITS																			
MODEL NO.	FITTING MATERIAL	VALVE OPTION	DUAL SCALES														FLOAT MATERIAL		
			AIR		WATER		ARGON		CARBON DIOXIDE		HELIUM		NITROGEN		OXYGEN				
			L/min	SCFH	mL/min	GAL/H	L/min	SCFH	L/min	SCFH	L/min	SCFH	L/min	SCFH	L/min	SCFH			
ACRZB0VK1	BRASS	NO	1.4	2.8	20.0	0.3	1.1	2.25	1.1	2.5	2.0	4.0	1.3	2.75	1.2	2.5	GLASS		
ACRZB1VK1		YES																	
ACRZS0VK1	STAINLESS	NO																	
ACRZS1VK1		YES																	
ACRZB0VK3	BRASS	NO	2.75	5.5	70.0	1.1	2.2	5.0	2.0	5.0	5.5	11.0	2.75	5.5	2.50	5.0		STAINLESS	
ACRZB1VK3		YES																	
ACRZS0VK3	STAINLESS	NO																	
ACRZS1VK3		YES																	
ACRZB0VK4	BRASS	NO	3.5	7.0	100.00	1.5	3.0	6.5	3.0	6.5	8.0	17.0	3.5	7.5	3.5	7.0			CARBOLOY
ACRZB1VK4		YES																	
ACRZS0VK4	STAINLESS	NO																	
ACRZS1VK4		YES																	
ACRYB0VK1	BRASS	NO	8.5	18.0	175.0	2.75	7.0	15.0	7.0	15.0	18.0	40.0	8.0	16.0	8.0	16.0	GLASS		
ACRYB1VK1		YES																	
ACRYS0VK1	STAINLESS	NO																	
ACRYS1VK1		YES																	
ACRYB0VK3	BRASS	NO	16.0	32.5	450.0	6.5	13.0	26.0	12.0	25.0	35.0	70.0	16.0	32.5	15.0	30.0	STAINLESS		
ACRYB1VK3		YES																	
ACRYS0VK3	STAINLESS	NO																	
ACRYS1VK3		YES																	
ACRYB0VK4	BRASS	NO	22.0	45.0	700.0	11.0	18.0	37.5	18.0	37.5	55.0	110.0	22.0	45.0	20.0	42.5		CARBOLOY	
ACRYB1VK4		YES																	
ACRYS0VK4	STAINLESS	NO																	
ACRYS1VK4		YES																	
ACRYB0VK6	BRASS	NO	50	100	1400	22	40	80	35	80	110	250	45	100	45	90	STAINLESS		
ACRYB1VK6		YES																	
ACRYS0VK6	STAINLESS	NO																	
ACRYS1VK6		YES																	

ACRU acrylic meters are being offered with any one of the interchangeable direct reading scales for Water, Argon, Oxygen, Carbon Dioxide, Nitrogen and Helium.

Scales are mounted at the front of the flow body and are positioned and secured by a clear front plate held in place by four screws.

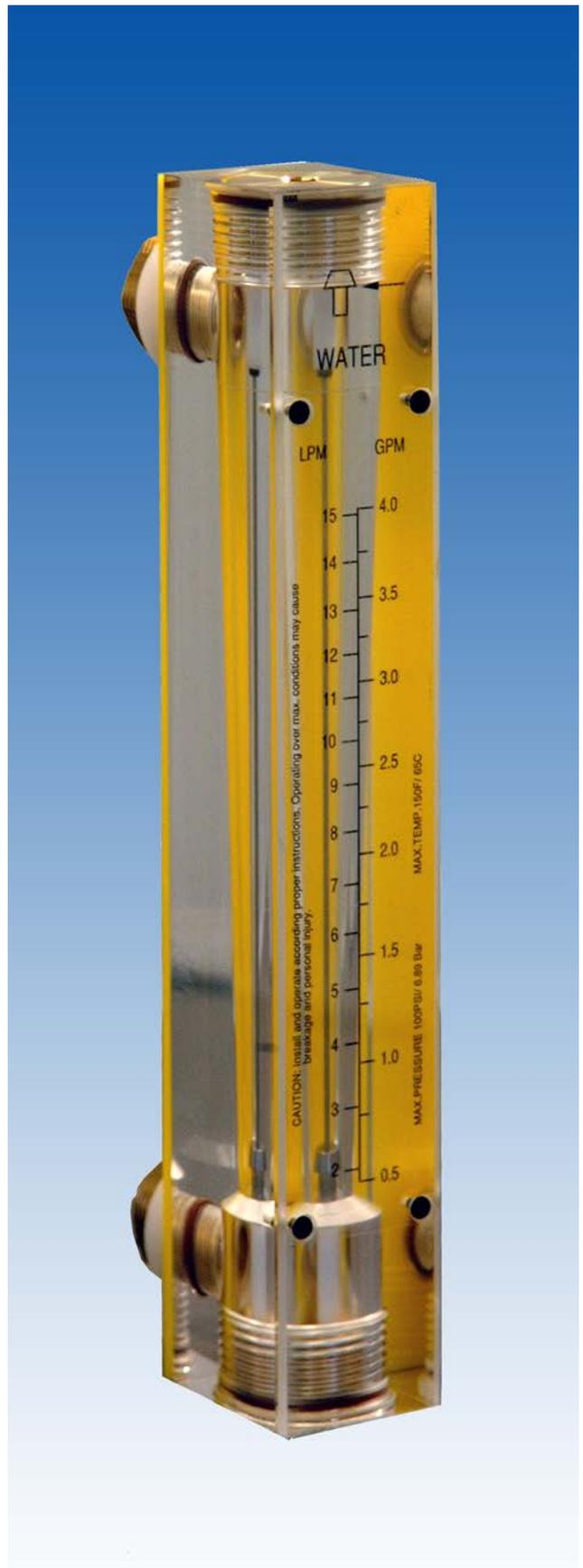
Dual scales display flow rates in both metric and English units. Long scales facilitate high resolution readings. Optional scales can be developed for diverse flow conditions facilitating OEM applications.

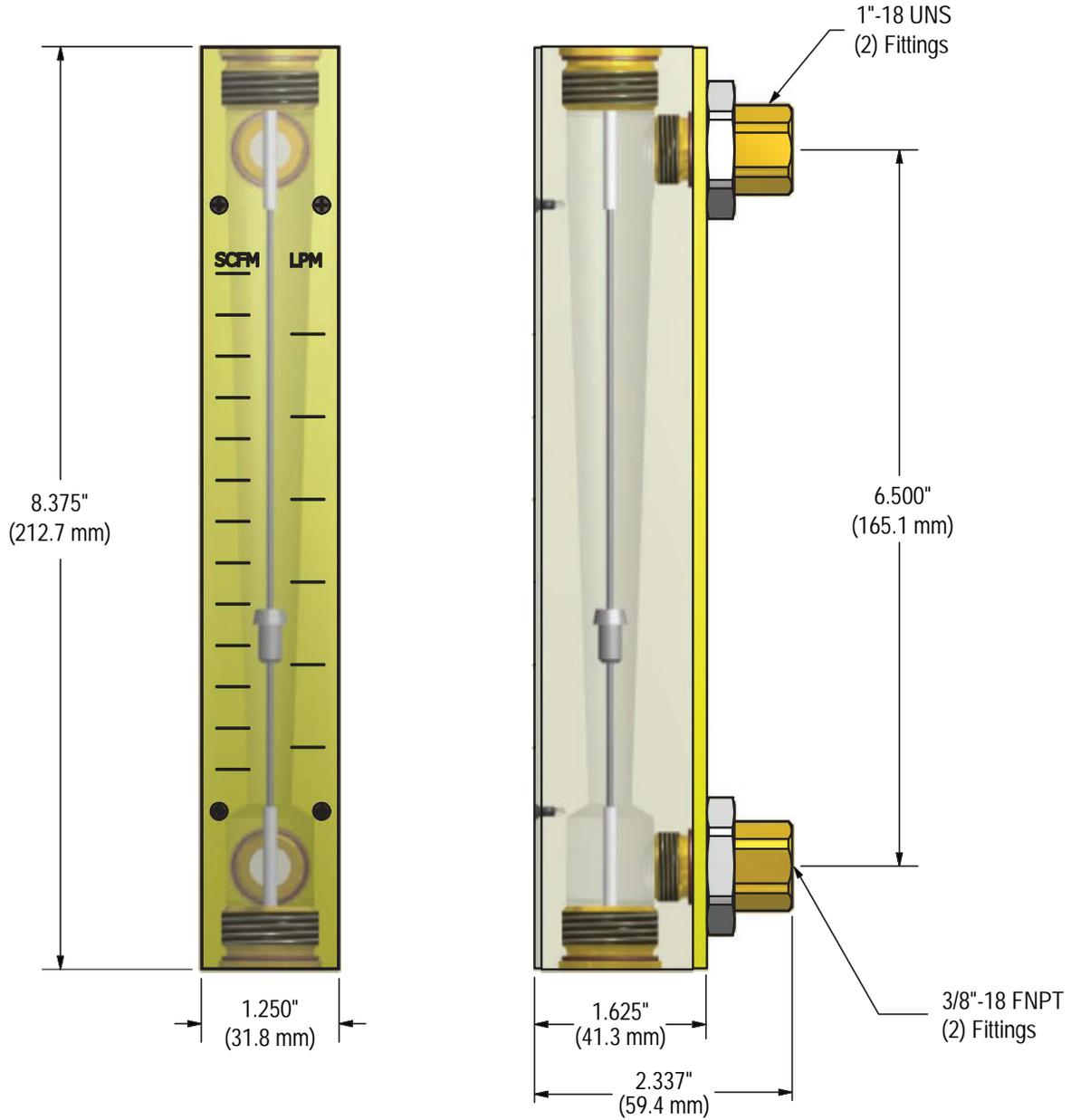
The yellow colored backing enhances the readability of scales and helps minimize eye fatigue.

ACRU Flow Meters are configured for "panel mount 3/8" female NPT connections.

ACRU SPECIFICATIONS

ACCURACY:	±5% of full scale reading.
CONNECTIONS:	3/8" Female NPT.
MAXIMUM TEMPERATURE:	150 °F/ 65 °C Maximum.
MAXIMUM PRESSURE:	100 psi/6.89 Bar Maximum.
FLOAT AND GUIDE:	316 stainless steel.
INLET/OUTLET CONNECTIONS:	Brass.
PANEL MOUNTING:	Polypropylene® Nuts.





FLOW CAPACITIES

MODEL NO.	FLOW MEDIUM	MAXIMUM FLOW		MODEL NO.	FLOW MEDIUM	MAXIMUM FLOW	
ACRUBOV01	WATER	15 L/min	4 GPM	ACRUBOV21	WATER	8.5 L/min	2.25 GPM
ACRUBOV02	AIR	550 L/min	20 SCFM	ACRUBOV22	AIR	270 L/min	9.5 SCFM
ACRUBOV03	ARGON	525 L/min	19 SCFM	ACRUBOV23	ARGON	220 L/min	8 SCFM
ACRUBOV04	OXYGEN	550 L/min	20 SCFM	ACRUBOV24	OXYGEN	250 L/min	9 SCFM
ACRUBOV05	CARBON DIOXIDE	475 L/min	17 SCFM	ACRUBOV25	CARBON DIOXIDE	210 L/min	7.5 SCFM
ACRUBOV06	NITROGEN	575 L/min	21 SCFM	ACRUBOV26	NITROGEN	270 L/min	9.5 SCFM
ACRUBOV07	HELIUM	1500 L/min	55 SCFM	ACRUBOV27	HELIUM	700 L/min	25 SCFM

ACRUV acrylic meters are being offered with any one of the interchangeable direct reading scales for Water, Argon, Oxygen, Carbon Dioxide, Nitrogen and Helium.

Scales are mounted at the front of the flow body and are positioned and secured by a clear front plate held in place by four screws. Low hysteresis, multi-turn needle valve is included.

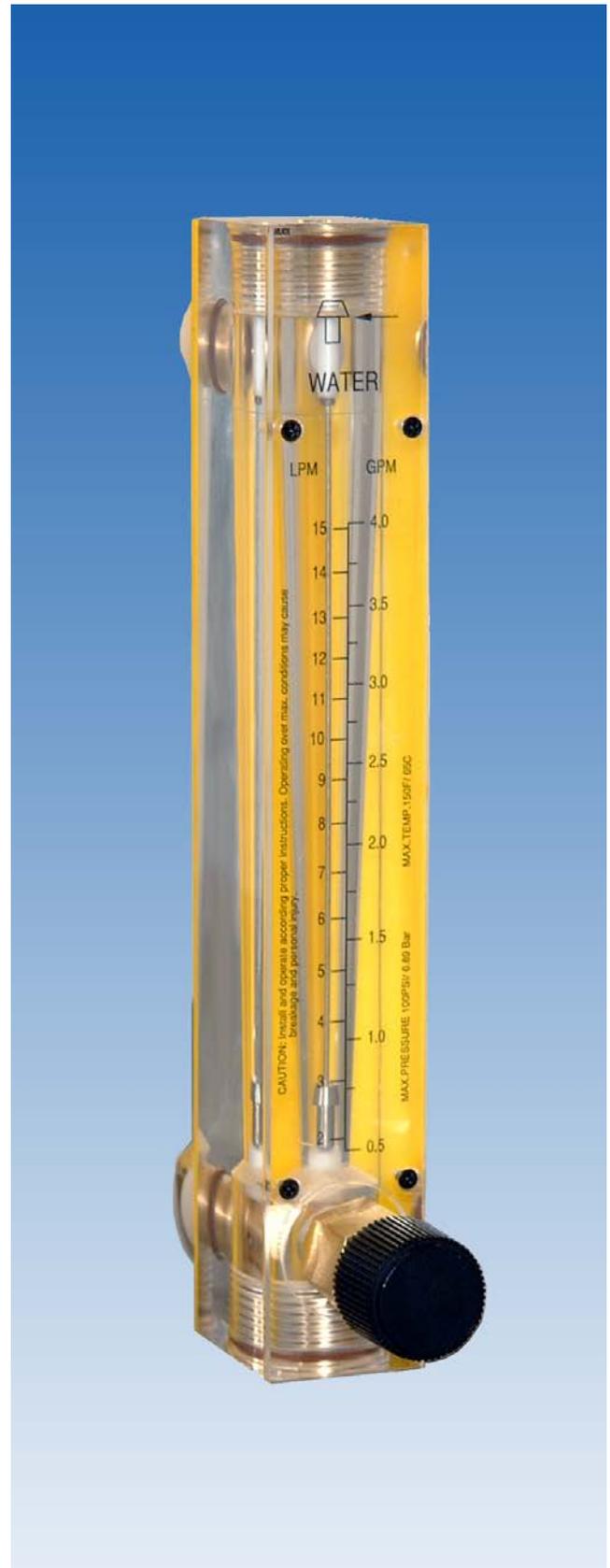
Dual scales display flow rates in both metric and English units. Long scales facilitate high resolution readings. Optional scales can be developed for diverse flow conditions facilitating OEM applications.

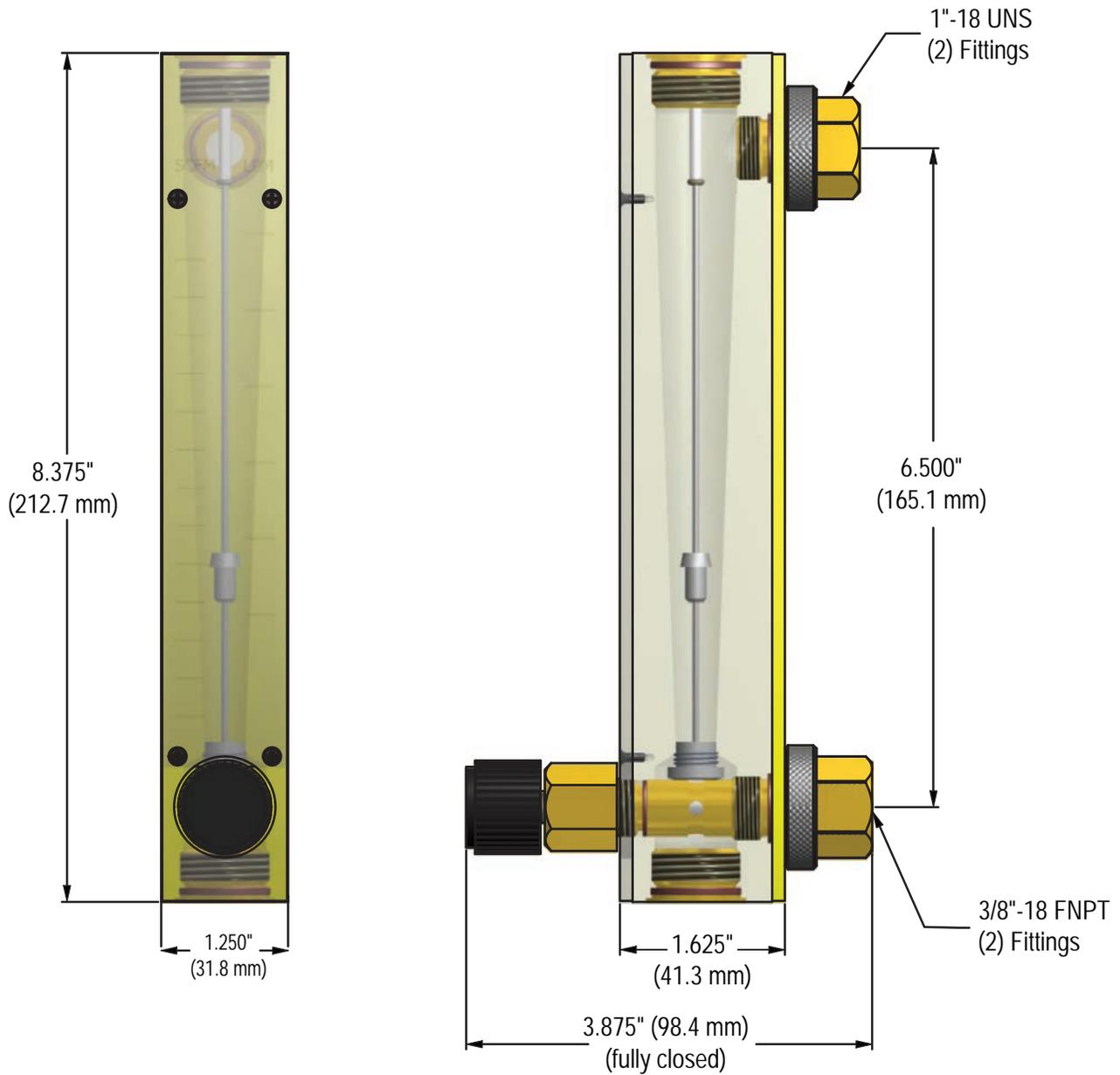
The yellow colored backing enhances the readability of scales and helps minimize eye fatigue.

ACRU Flow Meters are configured for “panel mount” 3/8" female NPT connections.

ACRU SPECIFICATIONS

ACCURACY:	±5% of full scale reading.
CONNECTIONS:	3/8" Female NPT.
MAXIMUM TEMPERATURE:	150 °F/ 65 °C Maximum.
MAXIMUM PRESSURE:	100 psi/6.89 Bar Maximum.
FLOAT AND GUIDE:	316 stainless steel.
INLET/OUTLET CONNECTIONS:	Brass.
PANEL MOUNTING:	Polypropylene® Nuts.
VALVE PARTS:	Brass.





FLOW CAPACITIES

MODEL NO.	FLOW MEDIUM	MAXIMUM FLOW		MODEL NO.	FLOW MEDIUM	MAXIMUM FLOW	
ACRUB1V01	WATER	15 L/min	4 GPM	ACRUB1V21	WATER	8.5 L/min	2.25 GPM
ACRUB1V02	AIR	550 L/min	20 SCFM	ACRUB1V22	AIR	270 L/min	9.5 SCFM
ACRUB1V03	ARGON	525 L/min	19 SCFM	ACRUB1V23	ARGON	220 L/min	8 SCFM
ACRUB1V04	OXYGEN	550 L/min	20 SCFM	ACRUB1V24	OXYGEN	250 L/min	9 SCFM
ACRUB1V05	CARBON DIOXIDE	475 L/min	17 SCFM	ACRUB1V25	CARBON DIOXIDE	219 L/min	7.5 SCFM
ACRUB1V06	NITROGEN	575 L/min	21 SCFM	ACRUB1V26	NITROGEN	270 L/min	9.5 SCFM
ACRUB1V07	HELIUM	1500 L/min	55 SCFM	ACRUB1V27	HELIUM	700 L/min	25 SCFM

Unique ACRT acrylic meters are being offered with any one of the interchangeable direct reading scales for Air, Water, Argon and Nitrogen.

Scales are mounted at the front of the flow body and are positioned and secured by a clear front shield held in place by two screws.

Dual scales display flow rates in both metric and English units. Optional scales can be developed for diverse flow conditions facilitating OEM applications.

The yellow colored backing enhances the readability of scales and helps minimize eye fatigue.

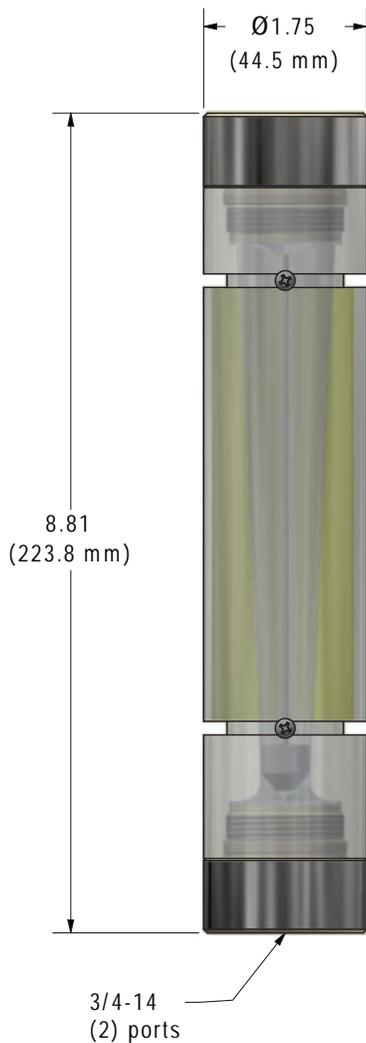
ACRT Flow Meters are configured for “in-line” 3/4" female NPT connections.

Optional needle valve is available. See page 12.

The image shows a vertical acrylic flow meter. It has a clear front shield with a yellow backing. The scale is labeled 'AIR' and shows dual scales for SCFM and LPM. The scale ranges from 200 to 2100. The meter has a white top and bottom cap. The text 'ACRT' is printed in blue at the bottom of the image.

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ACRT SPECIFICATIONS

ACCURACY:	±5% of full scale reading.
MAXIMUM TEMPERATURE:	130 °F/ 54 °C Maximum.
MAXIMUM PRESSURE:	100 psi/6.89 Bar Maximum.
FLOAT AND GUIDE:	316 stainless steel.
CONNECTIONS:	Polypropylene.
O-RINGS:	Viton®.
BODY:	Optical clear cast acrylic.

FLOW CAPACITIES

MODEL NO.	FLOW MEDIUM	MAXIMIM FLOW	
ACRTB0V01	WATER	20 L/min	5 GPM
ACRTB0V02	AIR	1000 L/min	35 SCFM
ACRTB0V03	ARGON	800 L/min	25 SCFM
ACRTB0V06	NITROGEN	1050 L/min	37 SCFM
ACRTB0V11	WATER	40 L/min	11 GPM
ACRTB0V12	AIR	1550 L/min	55 SCFM
ACRTB0V13	ARGON	1300 L/min	46 SCFM
ACRTB0V16	NITROGEN	1550 L/min	55 SCFM
ACRTB0V21	WATER	56 L/min	15 GPM
ACRTB0V22	AIR	2100 L/min	73 SCFM
ACRTB0V23	ARGON	1800 L/min	64 SCFM
ACRTB0V26	NITROGEN	2200 L/min	78 SCFM

ACRTV meters are being offered with any one of the interchangeable direct reading scales for Air, Water, Argon and Nitrogen.

Scales are mounted at the front of the flow body and are positioned and secured by a clear front shield held in place by two screws. Low hysteresis, multi-turn needle valve is included.

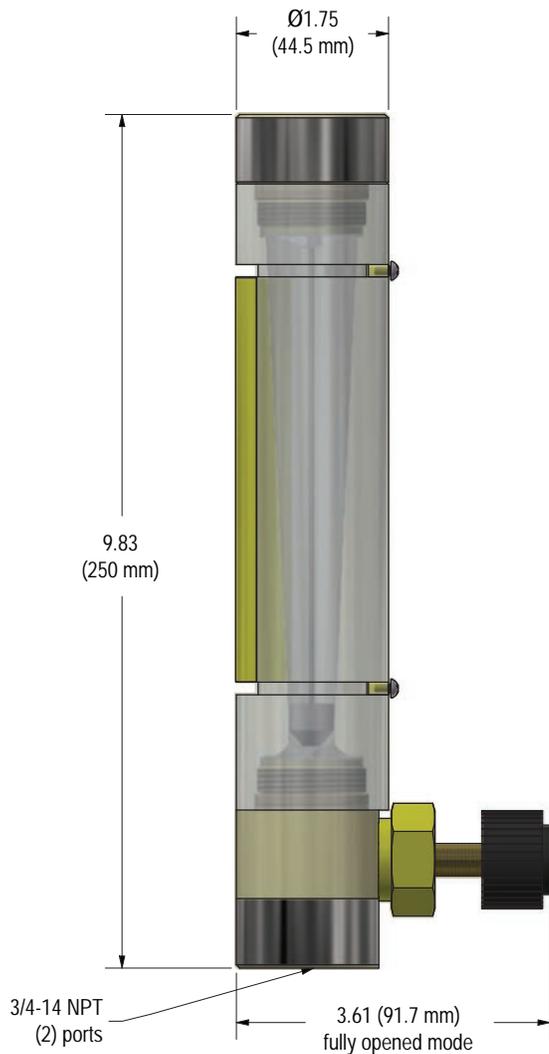
Dual scales display flow rates in both metric and English units. Optional scales can be developed for diverse flow conditions facilitating OEM applications.

The yellow colored backing enhances the readability of scales and helps minimize eye fatigue.

ACRTV Flow Meters are configured for "in-line" 3/4" female NPT connections.



ACRTV Valve Option



ACRTV SPECIFICATIONS

ACCURACY:	±5% of full scale reading.
MAXIMUM TEMPERATURE:	130 °F/ 54 °C Maximum.
MAXIMUM PRESSURE:	100 psi/6.89 Bar Maximum.
FLOAT AND GUIDE:	316 stainless steel.
CONNECTIONS:	Polypropylene.
O-RINGS:	Viton®.
BODY:	Optical clear cast acrylic.
VALVE PARTS:	Brass.

FLOW CAPACITIES

MODEL NO.	FLOW MEDIUM	MAXIMIM FLOW	
ACRTB1V01	WATER	20 L/min	5 GPM
ACRTB1V02	AIR	1000 L/min	35 SCFM
ACRTB1V03	ARGON	800 L/min	25 SCFM
ACRTB1V06	NITROGEN	1050 L/min	37 SCFM
ACRTB1V11	WATER	40 L/min	11 GPM
ACRTB1V12	AIR	1500 L/min	53 SCFM
ACRTB1V13	ARGON	1300 L/min	46 SCFM
ACRTB1V16	NITROGEN	1550 L/min	55 SCFM
ACRTB1V21	WATER	56 L/min	15 GPM
ACRTB1V22	AIR	2100 L/min	73 SCFM
ACRTB1V23	ARGON	1800 L/min	64 SCFM
ACRTB1V26	NITROGEN	2200 L/min	78 SCFM

EUROPEAN SERVICE CENTER

Authorized service and Calibration Facility For Aalborg Products located in **Germany MTC-Aalborg***

Klosterrunsstraße 18 P.O. Box 1321 Müllheim D-79379 Germany **Telefon:** +49 (0)7631 5545

Fax:+49 (0)7631 14740 • **Web:** www.analyt-mtc.de • **E-mail:** info@analyt_mtc.de *SGS ISO9001 Certification is not applicable.

Products Manufactured By Aalborg

ROTAMETERS

Single Tube

Aluminum / Brass / Stainless • Interchangeable Glass Flow Tubes • Optional Valves

Multiple Tube

Two to Six Channels • Aluminum or Stainless

PTFE Single and Multiple Tube

Chemically Inert • 1 to 4 Channels • Interchangeable Glass Flow tubes

PTFE - PFA

Chemically Inert • Low to Medium Flow of Corrosive Liquids with PFA Flow Tube

Kits

Aluminum / Stainless / PTFE • Including Five Glass Flow Tubes and a Set of Floats

Gas Proportioners

Aluminum / Stainless • Used for Blending Two or Three Gases

Medium Range

Glass Safety Shield • Dual Air and Water Scale

Optical Sensor Switch

Non-Invasive Means for Detection of a High or Low Flow

High Flow Industrial Stainless Steel Flow Meters

Heavy Duty Stainless Steel • Direct Reading Air and Water Scales

VALVES

Barstock

Brass or Stainless • Standard or High Precision

PTFE

Chemically Inert • Needle or Metering

Proportionating Solenoid

Stainless • For Controlling Gas or Liquid Flow

• Pulse width Modulated

SMV • Stepping Motor Valve

PERISTALTIC PUMPS

Fixed RPM Pumps

Pump Heads

Tubing Pumps

Variable Speeds

Dispensing Pumps

Flexible Tubings

ELECTRONIC METERS & CONTROLLERS

Low Cost Mass Flow Meters

Aluminum or Stainless • With or Without LCD Readout

Low Cost Mass Flow Controllers

Aluminum or Stainless • With or Without LCD Readout

Mass Flow Controllers

Stainless • One to Four Channel Systems

Digital Mass Flow Controllers

Auto Zero • Totalizer • Alarms • Built in RS485

Multi Parameter Digital Mass Flow Meters

Displays Flow Pressure and Temperature

Paddle Wheel Meters

For Liquids • Optional Temperature Measurements

Smart Rate / Totalizer / Signal Conditioner

LCD Keypad • RS232 / 485 • Pulse Output • Alarms