

Wallace & Tiernan® Flow Measurement Equipment Glass Tube Purge Meters Kynar® Frame Type

Kynar® Frame Purge Meters are low capacity, variable-area meters which incorporate several improvements in basic meter design. They feature a positive, easily secured tube lock and a plastic frame of Kynar® resin for strength and rigidity, as well as, corrosion resistance in hostile atmospheres.

These purge meters are designed for such service as: liquid-level measurement; orifice or control line purging; leak detection; controlling flow of aggressive fluids - all in the most, highly corrosive atmospheres often found in pulp and paper mills, petrochemical refining plants, and waste treatment plant influent manholes. They are also ideal for air sampling in industrial atmospheres and for proportioning in devices that require mixtures of gases and liquids, such as continuous photographic processes.

For measuring high-volume flows at 2% full scale accuracy, request literature number WT.520.215.000. UA.PS on the PVC-Tube Varea-Meter® Unit. This flanged meter handles aggressive chemicals in highly corrosive atmospheres and is ideal for connection to plastic pipe.

Features

Structurally Strong Frame

For strength and rigidity, frames are one piece of solid, molded Kynar®. The frame and "end fittings" are molded in one piece to produce a rigid unit which resists pipe strains and protects tube alignment.

Corrosion-Resistant Materials

The one-piece frame and "end fittings", tube retainers, and tube lock are Kynar®. This fluorocarbon plastic frame, unlike acrylic-frame and combination plastic-metal-frame meters, resists aggressive process environments and high temperature process fluids. O-rings are Viton®, with Buna N, Kalrez® and EPR (ethylene-propylene rubber) optional. The optional control valve and valve trim are Kynar® and can be located on the inlet or outlet.

Key Benefits:

- Rugged Kynar® frame to withstand aggressive environments
- Wide choice of arrangement and operating positions
- Quick and easy removal of tube and float for cleaning or replacement
- Built-in anti-back flow device
- Smooth and fine adjustment of flow with optional control valve.

Positive Tube Lock, Tube Shield

A threaded-tube-locking plug, external to the flow, exerts pressure on the tube retainer and locks the tube firmly in place. The tube lock has a screwdriver slot and is accessible from the top of the meter. Tube removal is quick and easy with the meter in the line. O-rings seal the tube at both ends. A clear plastic shield covers the tube. It has tabs which snap into slots in the frame.



Kynar® Frame Purge Meters

Product Sheet

Features (Cont'd)

Stable Float Performance

Wallace & Tiernan® Purge Meter floats are highly stable, give consistently repeatable readings after flow surges and in spite of considerable vibration.

Integral Backcheck

A guided glass ball is built into the meter discharge. It serves as an effective anti-backflow device.

Minimum Parts

All parts, including frames, tubes, tube locks and retainers, and plastic shields are interchangeable for all meter capacities. O-rings are the same size at both ends of the tube. Spare-parts stocking is simplified.

Choice of Arrangements and Operating Positions

Kynar®-frame Purge Meters are available with or without a characterized-stem control valve with knob control. Viton® O-rings are standard; Buna N, Kalrez® and EPR are optional. Inverting the meter and reversing the tube changes the control valve from the inlet to the discharge.

Convenient To Use

This meter's 3-inch scale makes it easy to read out the flow rate. Long movement of the characterized needle in the control valve gives a fine degree of flow control. It also gives positive shut-off.

Technical Data

Accuracy

10% of full scale.

Operating Range

10 to 1.

Pipe Connections

1/4" NPT female at meter inlet and outlet and control valve inlet. Horizontal in, horizontal out connections only.

Mounting

In-line supported by pipe, or wall mounting through holes in the back of the frame.

Table A - Ordering Numbers For Basic Meter Arrangements

Capacity	Basic Meter Arrangement (Viton® O-Rings)	
	with control valve	meter only
Extra Low 1.10 ccm water or 87 sccm air maximum	with control valve	not available
	meter only	70
Low 5 gph / 500 ccm water or 30 scfh / 14 slpm air maximum	with control valve	71
	meter only	72
High 40 gph / 2500 ccm water or 110 scfh / 51 slpm air maximum	with control valve	73
	meter only	74

Scales

3" scale length, standard calibrations as indicated in Table B.

Special Calibration

Not available with the extra low capacities. Scales calibrated in other than the standard units in Table B are available at extra cost. Calibration for fluids with viscosity other than 1 centistroke also available at extra cost.

Pressure and Temperature Limits

150 PSIG / 10 Bar and 200° F / 93° C

(These temperature and pressure limits must not be exceeded.)

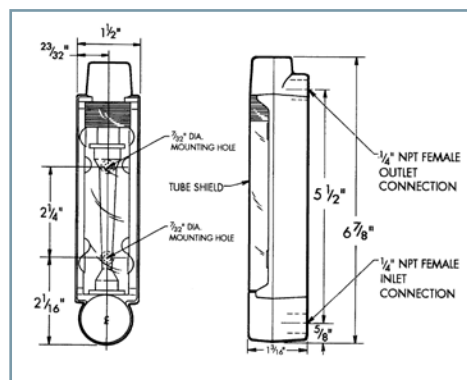
Materials of Construction

Frame / End Fittings	Kynar®
Tube	Borosilicate Glass
Float	See Table B
Tube Retainer	Kynar®
Tube O-Rings	Viton® standard, BUNA N, Kalrez® and EPR optional
Flow insert	Kynar®
(used with high capacity meters only)	
Check Valve Ball	Glass
Control Valve Seat and Stem	Kynar®

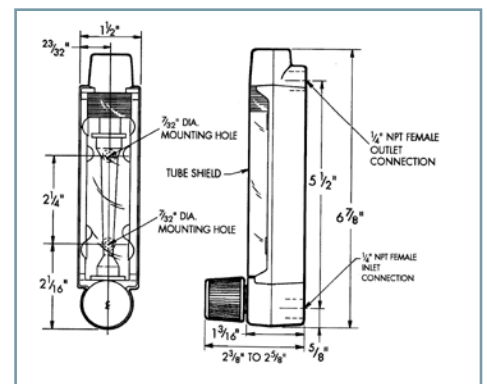
Shipping Weights

Meter only, 1 lb. / 0.45 kgs; Meter with control valve, 2 lbs. / 0.9 kgs

Dimensions



Purge Meter



Purge Meter with Control Valve

Warning: Do not use Glass-Tube Meters for fluids which are toxic, hazardous or attack glass. Write for literature number WT.510.350.000.UA.PS on the Arma-View® II Purgemeter.

Table B - Ordering Numbers For Tubes, Scales and Floats - Water/Air

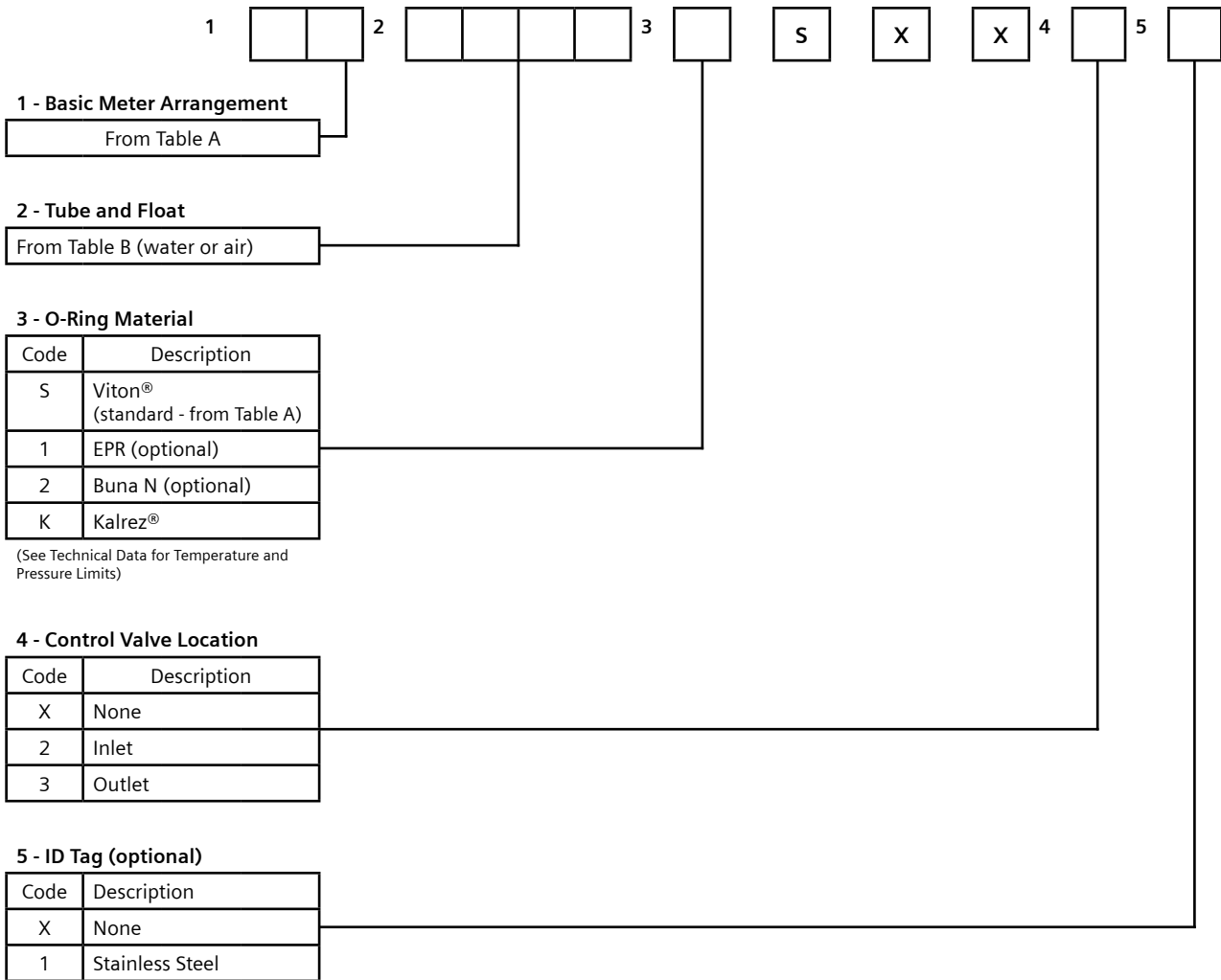
	Maximum Capacity and Scale Units	Water	Air	Float Material
Extra Low Capacity	0.32 ccm 0-100%	C013	-	Sapphire
	30 sccm 0-100%	-	D013	Sapphire
	0.65 ccm 0-100%	C033	-	316 SS
	46 sccm 0-100%	-	D033	316 SS
	1.10 ccm 0-100%	C053	-	Tantalum
	87 sccm 0-100%	-	D053	Tantalum
Low Capacity	0.1 gph 0-100% (0.38 lph)	A073 C073	- -	Black Glass
	1.0 scfh 0-100% (1.7 scmh)	- -	E073 D073	Black Glass
	0.5 gph 30 ccm 0-100%	A083 B083 C083	-	316 SS
	2.5 scfh 0-100% (4.2 scmh)	-	E083 D083	316 SS
	1.0 gph 60 ccm 0-100%	A093 B093 C093	-	Black Glass
	6.0 scfh 0-100% (10 scmh)	-	E093 D093	Black Glass
	3.0 gph 180 ccm 0-100%	A103 B103 C103	-	316 SS
	12.0 scfh 0-100% (20.3 scmh)	-	E103 D103	316 SS
	20.0 scfh 0-100% (34 scmh)	-	E123 D123	Black Glass
	5.0 gph* 30.0 scfh*	A113	E113	Black Glass
High Capacity	8.0 gph 500ccm 0-100%	A123 B123 C123	-	316 SS
	36.0 scfh 0-100% (61 scmh)	-	E133 D133	316 SS
	15.0 gph 900 ccm 0-100%	A133 B133 C133	-	316 SS
	60.0 scfh 0-100% (102 scmh)	-	E143 D143	Black Glass
	25.0 gph 1500 ccm 0-100%	A143 B143 C143	-	316 SS
	110.0 scfh 0-100% (187 scmh)	-	E153 D153	316 SS
	40.0 gph 2500 ccm 0-100%	A153 B153 C153	-	Tantalum

*Wide range tube with dual scale for 5 gph and 30 scfh.

NOTE: 472 sccm = 1 scfh. These metric capacities only available as 0-100% scale.

Ordering Procedure

Determine the capacity range of the basic meter. Determine if control valve is required, inlet or outlet location.
 Determine maximum capacity and scale units for water or air measurement. (For special calibration contact factory.)
 Determine O-ring material: Order number should have 12 characters.



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