

**GLASS TUBE  
PURGE METERS  
KYNAR-FRAME TYPE**

**FEATURES**

These plastic purge meters are low capacity, variable-area flow meters which incorporate several improvements in basic meter design. They feature a positive, easily secured tube lock. A plastic frame of Kynar® vinylidene fluoride resin is outstanding for its strength and rigidity; also for its 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 moist, 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 or liquids, such as continuous photographic processes.

For measuring high-volume flows at 2% full scale accuracy, request TI 520.215 on the PVC-tube Varea-Meter®. This flanged meter handles aggressive chemicals in highly corrosive atmospheres and is ideal for connection to plastic pipe.

**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 and EPR (ethylene-propylene rubber) optional. The optional control valve and valve trim are Kynar and can be located on the inlet or outlet.

**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.

**STABLE FLOAT PERFORMANCE**

Wallace & Tiernan Products 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.



# SELECTION PROCEDURE

## FEATURES (continued)

### 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 and EPR are optional. Inverting the meter and reversing the tube changes the control valve from the inlet to the discharge.

### CONVENIENT TO USE

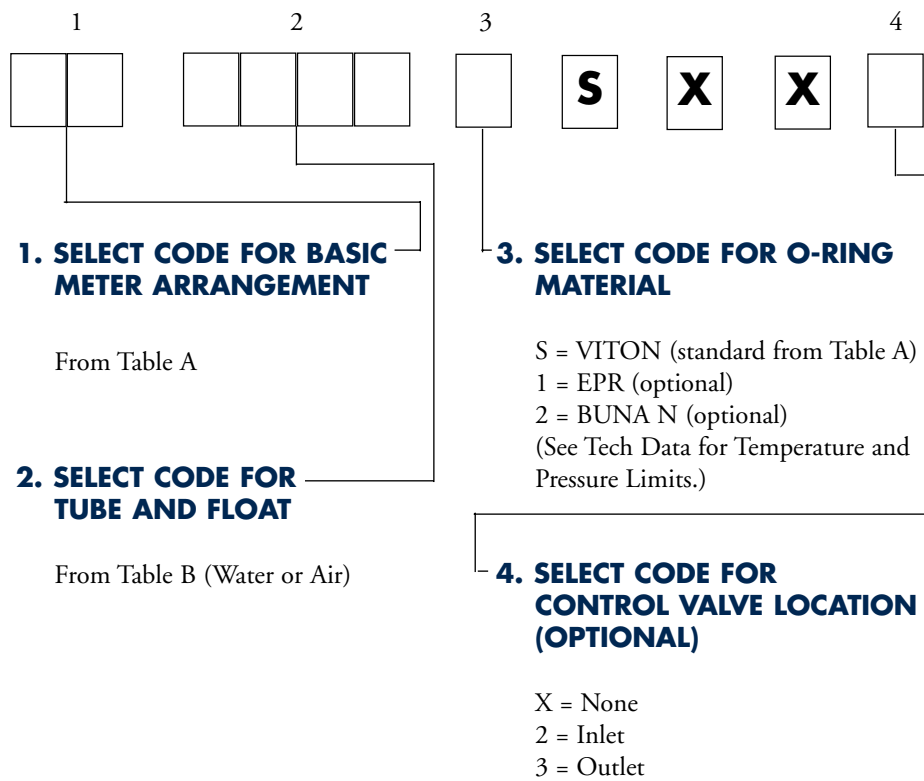
This meter's 3-inch scale makes it easy to read out the flow rate. Long movement of the characterized needle in the control valve gives a fine degree of flow control. It also gives positive shut-off.



## 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, consult factory.)  
Determine O-ring material:  
Order number should have 11 characters.



**TABLE A**

ORDERING NUMBERS FOR BASIC METER ARRANGEMENTS		
CAPACITY	BASIC METER ARRANGEMENT (VITON O-RINGS)	
EXTRA LOW 1.10 ccm water or 87 sccm air maximum	WITH CONTROL VALVE	NOT AVAILABLE
	METER ONLY	70
LOW 5 gph water or 30 scfh air maximum	WITH CONTROL VALVE	71
	METER ONLY	72
HIGH 40 gph water or 110 scfh air maximum	WITH CONTROL VALVE	73
	METER ONLY	74

**WARNING: DO NOT USE**  
**GLASS-TUBE PURGE METERS**  
for fluids which are toxic or hazardous  
or which attack glass. Write for catalog  
file 510.250 on the W&T Arma-  
View™ Purge Meter.

**TABLE B**

<b>ORDERING NUMBERS FOR TUBES, SCALES, AND FLOATS – WATER/AIR</b>				
	<b>MAXIMUM CAPACITY AND SCALE UNITS</b>	<b>WATER</b>	<b>AIR</b>	<b>FLOAT MATERIAL</b>
<b>EXTRA LOW CAPACITY</b>	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
<b>LOW CAPACITY</b>	0.1gph 0-100%	A073 C073	-	Black Glass
	1.0 scfh 0-100%	-	E073 D073	Black Glass
	0.5 gph 30 ccm 0-100%	A083 B083 C083	-	316 ss
	2.5 scfh 0-100%	-	E083 D083	316 ss
	1.0 gph 60 ccm 0-100%	A093 B093 C093	-	Black Glass
	6.0 scfh 0-100%	-	E093 D093	Black Glass
	3.0 gph 180 ccm 0-100%	A103 B103 C103	-	316 ss
	12.0 scfh 0-100%	-	E103 D103	316 ss
	20.0 scfh 0-100%	-	E123 D123	Black Glass
	5.0 gph* 30.0 scfh*	A113	E113	Black Glass
<b>HIGH CAPACITY</b>	8.0 gph 500 ccm 0-100%	A123 B123 C123	-	316 ss
	36.0 scfh 0-100%	-	E133 D133	316 ss
	15.0 gph 900 ccm 0-100%	A133 B133 C133	-	316 ss
	60.0 scfh 0-100%	-	E143 D143	Black Glass
	25.0 gph 1500 ccm 0-100%	A143 B143 C143	-	316 ss
	110.0 scfh 0-100%	-	E153 D153	316 ss
	40.0 gph 2500 ccm 0100%	A153 B153 C153	-	Tantalum

\*Wide range tube with dual scale for 5 gph and 30 scfh.  
NOTE: 472 SCCM=1 scfh

**GLASS TUBE  
PURGE METERS  
KYNAR-FRAME TYPE**

**TECHNICAL DATA**

**Accuracy and Operating Range**

10% of full scale over 10:1 range.

**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.

**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 centistoke also available at extra cost.

**Pressure and Temperature Limits**

150 psig and 200° F  
(These temperature and pressure limits must not be exceeded.)

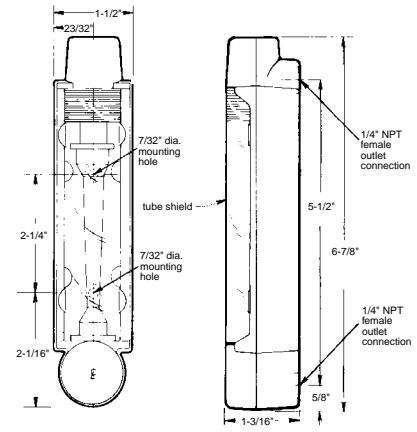
**Materials of Construction**

FRAME/END FITTINGS	Kynar
TUBE	Borosilicate glass
FLOAT	See table B
TUBE RETAINER	Kynar
TUBE O-RINGS	Viton standard, Buna N and EPR optional
FLOW INSERT (used with high capacity meters only)	Kynar
CHECK VALVE BALL	glass
CONTROL VALVE SEAT AND STEM	Kynar

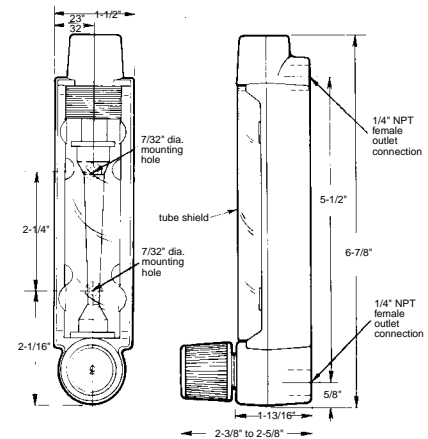
**Shipping Weights**

Meter only, 1 lb.  
Meter with control valve, 2 lbs.

**DIMENSIONS**



**PURGE METER**



**PURGE METER WITH CONTROL VALVE**



Wallace & Tiernan Products  
1901 West Garden Road  
Vineland, NJ 08360  
856.507.9000 tel  
856.507.4125 fax

[www.wallaceandtiernan.usfilter.com](http://www.wallaceandtiernan.usfilter.com)

Literature # TI 510.105UA 9/99

©1999 United States Filter Corporation

*Progressive changes in design may be made without prior announcement.*