

Materials: PVC, CPVC, Natural Polypropylene, & PVDF

Marquest Scientific's complete line of TUFF GUARD gauge and instrument isolators are engineered to provide total isolation of all instruments from corrosive and ultra pure fluids while offering a design with the most rugged and complete features in the industry.

Features & Benefits

- Provides a compatible, protective barrier between process fluids and instruments
- Adds system reliability by eliminating instrument failures
- SS reinforcement of the instrument connection to prevent fracturing associated with metal to plastic threads. Integrally molded into port
- Integral wrench provisions for field service
- Diaphragms in Modified PTFE, Viton®, EPDM, and Composite PTFE/FKM for each application
- Displacement capacity for up to 4" diameter gauges and large fill volume sensors
- Self-venting, 1/4" & 1/2" female NPT instrument connections with Viton® O-ring instrument seal

Specifications

Instrument Connection: Venting 1/4" & 1/2" Female NPT

Process Connections: 1/4" & 1/2" Fem NPT, Soc "Slip"

Materials of Construction:

Housing: PVC, CPVC, Polypropylene, & PVDF

Diaphragm: Modified PTFE, Viton®, EPDM, & Composite PTFE/FKM

Working Pressure: 0 - 250 psi at 70 Deg Fahrenheit

Codes & Standards: ARRA Section 1605 "Buy American" Compliant. ASME A112.18.1M

SERIES TG-25XXX-CPV

NO GAUGE INSTALLED
1/4" Vent x 1/2" Fem NPT Inlet
CPVC Body



SERIES TG-25S-PVC

2.5" ECONOMY GAUGE
1/2" Fem NPT Inlet
PVC Body



SERIES TG-25SB-PPR

2.5" STAINLESS/BRASS GAUGE
1/2" Fem NPT Inlet
Polypropylene Body



SERIES TG-25SS-PVD

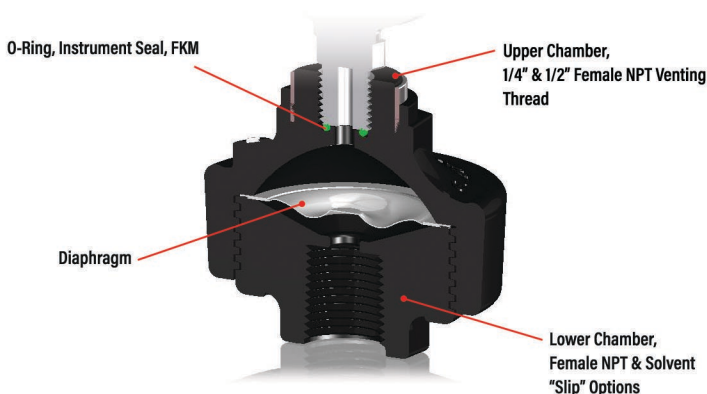
2.5" ALL STAINLESS GAUGE
1/2" Fem NPT Inlet
PVDF Body



(1) Please see backside of data sheet for ordering info, including configuration & material options.

Markets / Applications

- Wastewater Treatment
- Semiconductor MFG
- Chemical Plants
- Chemical Feed Systems
- Food & Beverage
- Desalination Plants
- Wet Processing
- Chemical Odor Control
- PCB Manufacturing
- Pharmaceutical Processing
- Alternative Energy



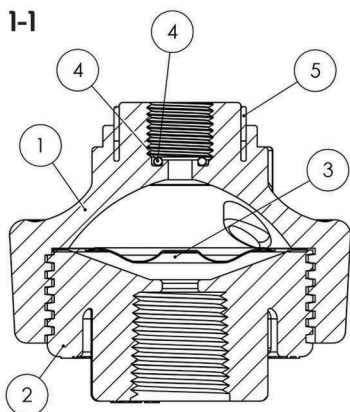
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MARQUEST SCIENTIFIC
Fluid Handling Products

Dimensional Data / Parts List

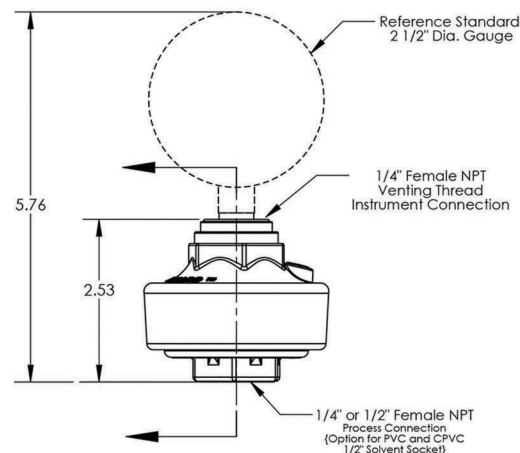
Fig. 1-1



ITEM NO.	DESCRIPTION	QTY
1	Upper Chamber	1
2	Lower Chamber	1
3	Diaphragm	1
4	O-Ring, Instrument Seal, FKM	1
5	Ring, Reinforcing 316 SS	1

*Dimensions in inches

(1) Model TG-25 shown to the right with 2.5" diameter case \ dimension. Optional 1/2" instrument connections available (See instrument port ordering info below).



Pressure / Temperature Data

MAX WORKING PRESSURES PSI (water, non-shock)

WEIGHTS

Material	10°C 50°F	20°C 68°F	30°C 86°F	40°C 104°F	50°C 122°F	60°C 140°F	70°C 158°F	80°C 176°F	90°C 194°F	100°C 212°F	120°C 248°F	Net Weights Pounds*
PVC	200	250	250	220	140	135	---	---	---	---	---	0.387
CPVC	230	250	250	230	200	200	150	120	60	---	---	0.40
PP	200	240	240	210	145	125	75	60	---	---	---	0.318
PVDF	240	250	250	250	250	230	220	200	160	140	80	0.45

Temperature Ranges: PVC: 14 to 140 F (10 to 60 C), CPVC: 50 to 194 F (10 to 90 C), PP: 46 to 176 F (8 to 80 C), PVDF: -22 to 248 F (-30 to 120°C). *Weights are for unfilled 1/4" Female NPT x 1/2" Female NPT without gauge.



CALIBRATION CERTIFICATES AVAILABLE
Please Contact Marquest

How to Order Tuff Guard

Part No: **TG - 2 5 T 060 SS - PVC**

DIAPHRAGM MATERIAL

- T = Modified PTFE
- V = Viton®
- E = EPDM
- C = Composite PTFE/FKM

MODEL	INSTRUMENT PORT	PROCESS INLET PORT	GAUGE PRESSURE RANGE*	GAUGE INSTALLED	BODY MATERIAL	
Tuff Guard	2 = 1/4" Vented Female NPT	2 = 1/4" Female NPT	XXX = No Gauge Installed	LEAVE BLANK = No Gauge	PVC = Polyvinyl Chloride	
	5 = 1/2" Vented Female NPT	5 = 1/2" Female NPT	H030 = 0-30 in Hg Vacuum	S = Standard 2.5" Black Painted Steel Case, Marquest, Dry Case, 2-3-2 % Accuracy	CPV = CPVC, Chlorinated Polyvinyl Chloride	
	(1) Viton FKM O-ring seal is used for sealing instrument to thread. Zero pressure build during instrument install.	2S = 1/4" Solvent Soc	SS = 1/2" Solvent Soc	015 = 0-15 PSI	SB = Stainless Case / Brass Internals 2.5" Wika 212.53, Glycerin Filled Case, 2.5% Accuracy	PPR = Reinforced, Glass Filled Polypropylene
				030 = 0-30 PSI	SS = All Stainless 2.5" Ashcroft 1008s, Glycerin Filled Case, 1.5% Accuracy	PVD = 100% HP Virgin PVDF
			060 = 0-60 PSI			
			100 = 0-100 PSI			
			160 = 0-160 PSI			
			200 = 0-200 PSI			
			300 = 0-300 PSI			

Example: TG-25T060SS-PVC (Gauge Installed)

PVC Tuff Guard Isolator, 1/2" Female NPT Inlet, Modified PTFE Diaphragm, 0-60 PSI All Stainless 2.5" Dia. Ashcroft 1008s Glycerin Filled Gauge Installed, Assembly Tested.

Example: TG-22CXXX-PVDF (No Gauge Installed)

PVDF Tuff Guard Isolator, 1/4" Vented Female NPT x 1/4" Female NPT Inlet, PTFE/FKM Composite Diaphragm, No Gauge Installed

(1) Assemblies with gauge installed have an Aqueous Glycerin (70% USDA 99.5% Glycerin / 30% Distilled Water) internal fill in the upper chamber and gauge stem internals. Silicone, Halocarbon, and Glycol fills available. Units ordered without an instrument, need to be filled per installation instructions.

(1) Only specify pressure range when ordering with a gauge installed. When ordering a unit with no gauge installed, please place "XXX".

(2) We offer both dual scale and compound pressure ranges. Please contact factory.

(1) We offer a variety of other gauge & instrument options from Ashcroft, Wika, & US Ametek including 3.5", 4" Dial Sizes. The Tuff Guard is also perfectly suited for a variety of pressure sensors. Please contact factory.

Marquest Scientific, Inc.

2950 Airway Avenue, Costa Mesa, 92626 California

Toll Free 866 452 2349 Fax 714 491 9199

www.marquestscientific.com | www.GaugeGuards.com



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