

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 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 and large fill volume sensors
- Self-venting, 1/4" & 1/2" female NPT instrument connections with Viton® O-ring instrument seal



SERIES TG-25S-PVC
2.5" ECONOMY GAUGE
1/2" Fem NPT Inlet
PVC Body



SERIES TG-25SB-CPV
2.5" STAINLESS/BRASS GAUGE
1/2" Fem NPT Inlet
CPVC Body



SERIES TG-25SS-PVD
2.5" ALL STAINLESS GAUGE
1/2" Fem NPT Inlet
PVDF Body

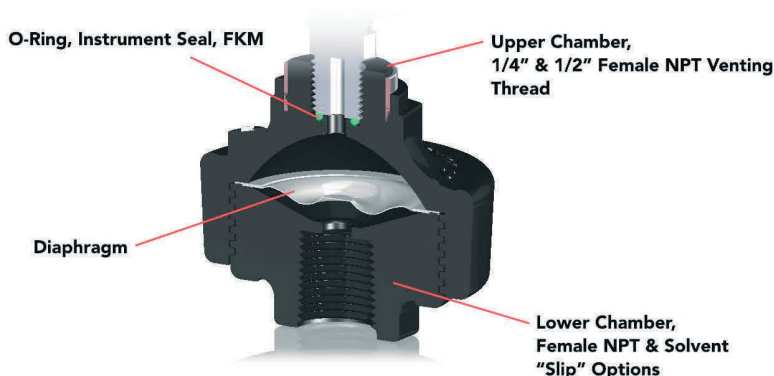
(1) Please see backside of data sheet for ordering info, including configuration & material options.

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

Markets / Applications

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



Where Quality Meets Service & Value™



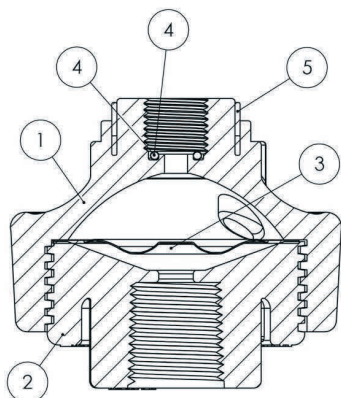
MARQUEST SCIENTIFIC
Fluid Handling Products

Gauge Guards

TUFF GUARD™
Series TG

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

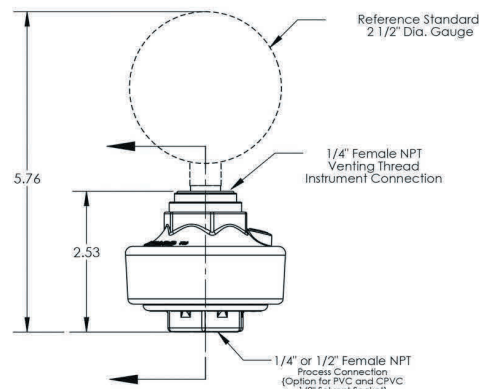
Pressure / Temperature Data

WORKING PRESSURES PSI

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 Ounces*
PVC	200	250	250	220	140	135	---	---	---	---	---	6.2
CPVC	230	250	250	230	200	200	150	120	60	---	---	6.4
PP	200	240	240	210	145	125	75	60	---	---	---	5.1
PVDF	240	250	250	250	250	230	220	200	160	140	80	7.2

WEIGHTS

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" MNPT without gauges.



*Dimensions in inches

(1) Model TG-25 shown above with 2.5" diameter case dimension.

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	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
		5S = 1/2" Solvent Soc	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 fills available. Units ordered with out 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.

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MARQUEST SCIENTIFIC
Fluid Handling Products

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