

# SGT

Single-Use Gauge Tee



# SGT (Single-Use Gauge Tee)



The SGT allows for high accuracy pressure monitoring functionality in a single-use system by providing a mounting platform for a reusable sanitary pressure gauge or transducer that also serves as a sterile boundary between the fluid path and the measurement device. The SGT's permanent thermally welded TPE (thermoplastic elastomer) diaphragm maintains the sterility of the single-use system and eliminates cross contamination concerns. Gauges and transducers can be removed from the system for offline calibration without compromising integrity when there is no pressure in the system.

The SGT is available in a variety of connections to accommodate different flow paths. Hose barb connections, which support tubing from 3/8" to 1" inner diameter, and 3/4" sanitary flange connections are available to support nearly all single-use assembly flow paths. All SGT configurations feature 1 1/2" tri-clamp (TC) connectivity for mounting a sanitary pressure gauge or transducer.

The SGT is comprised of two materials of construction – a polypropylene, which is gamma stable and animal component free (ACF), and a TPE (thermoplastic elastomer) diaphragm. The polypropylene is the same material used in most of our encapsulated filters to mitigate the number of fluid contact materials included in Meissner's single-use systems. The SGT can be easily integrated into a Meissner BioFlex® tubing assembly and pre-sterilized for immediate use. The SGT meets the requirements as specified in the current USP Class VI plastics tests and is non-cytotoxic. A partial synopsis of the testing regimen the SGT has been subjected to is provided below.

## Biocompatibility Testing

Materials	Property	Test Method	Value <sup>1</sup>
Polypropylene Body & TPE Diaphragm	USP Class VI	USP <88>	Pass
	Cytotoxicity	USP <87>	Pass
	Buffering Capacity	USP <661>	< 1 mL
	Nonvolatile Residue	USP <661>	< 1 mg
	Residue on Ignition	USP <661>	< 1 mg
	Heavy Metals	USP <661>	< 1 ppm

<sup>1</sup>All test articles gamma irradiated at 28-35.7 kGy.



## Assembly

The SGT is typically provided as part of an integrated fluid path assembly that has been pre-sterilized by gamma irradiation. (The SGT is not compatible with either autoclave or SIP sterilization cycles.) The SGT is provided with a single-use sanitary clamp and a blind cap to protect the TPE diaphragm during shipment and deployment. The TPE diaphragm must be covered with either a blind cap, a pressure transducer or gauge during use.

## Qualification Testing

The SGT was thoroughly tested to ensure that it provides a viable barrier to microbial ingress between the outside environment and the closed fluid path that is created when the inlet/outlet are connected to a process stream. A summary is provided below. Please contact Meissner for details.

Testing	Results Summary	Comments
Container closure integrity testing	No growth	The SGT functions as a viable barrier to microbial ingress to a sterile fluid path.
Pressure Testing - Supported, Gamma irradiated & non-sterile samples	> 150 psi	When the TPE diaphragm is properly supported the SGT is compatible with pressures in excess of what is typically seen in SUS applications. Gamma irradiation does not have an impact on the elevated pressure performance of the SGT.
Pressure Testing - Unsupported, Gamma irradiated & non-sterile samples	5 psi	The TPE diaphragm needs to be properly supported, via either the provided blind cap or a pressure transducer, when the fluid path is pressurized.
Transducer Accuracy Impact	< 0.5% of nominal reading	The SGT does not impact the accuracy of compatible pressure gauges and transducers.

## SGT Holder

An optional stainless steel SGT holder is available, which allows the assembly to be used securely on a table top or mounted to Meissner's end-ported biocontainer rolling stand. The SGT holder is part of Meissner's FlexCessory™ collection of accessories that aid in the deployment of our One-Touch® single-use systems.



## SGT Options

The SGT is typically provided as part of an integrated single-use system that is designed in coordination with Meissner's applications engineering team. It can also be ordered as a stand-alone item for inclusion into systems at point of use or during an alternative integration process. When ordered as a stand-alone item, SGTs are provided as a basic assembly which includes a single-use sanitary clamp and a blind cap to protect the TPE diaphragm. These basic assemblies are each individually double bagged and are available in either non-sterile or gamma irradiated formats.

Provided	Basic Assembly Part No. - <i>included SGT Part No.</i>		Fluid Path Connectivity	Pressure Sensing Interface
Non-Sterile	FTN001-N00-B3341-01	91E91P12	3/8" Hose barbs	1 1/2" TC
	FTN002-N00-B3341-01	91E91P13	1/2" Hose barbs	1 1/2" TC
	FTN003-N00-B3341-01	91E91P15	3/4" Hose barbs	1 1/2" TC
	FTN004-N00-B3341-01	91E91P16	1" Hose barbs	1 1/2" TC
	FTN005-N00-B3341-01	91E91P21	3/4" TCs	1 1/2" TC
Sterilized via gamma irradiation at 25-40 kGy	FTN001-N00-B4130-01	91E91P12	3/8" Hose barbs	1 1/2" TC
	FTN002-N00-B4130-01	91E91P13	1/2" Hose barbs	1 1/2" TC
	FTN003-N00-B4130-01	91E91P15	3/4" Hose barbs	1 1/2" TC
	FTN004-N00-B4130-01	91E91P16	1" Hose barbs	1 1/2" TC
	FTN005-N00-B4130-01	91E91P21	3/4" TCs	1 1/2" TC

Optional	SGT Holder Part No.	Description
SGT Holder (stainless steel)	FAST-001T	Table top unit
	FAST-101T	Shaft mount unit to interface with Dual End-Ported Biocontainer Cart

