



TMM50 Heavy-Duty Line



Example applications

- Process control with NIR spectroscopy in the petrochemical industry and all processes in the chemical industry that involve high temperatures and/or high pressures
- Reaction tracking in organic solvent processes with NIR
- Process control and measurement in highly corrosive media at high temperatures and/or pressures
- Solvent blending



Benefits

- No sealing rings, elastomers, etc., only sapphire and stainless steel (Hastelloy, tantalum, etc.)
- Easy process connection via standard flanges
- Optical layer thickness selectable by the customer
- Fibre optics can be changed during the ongoing process
- Little reduction in cross section thanks to slim probes
- Very high energy throughput for a good signal-to-noise ratio
- Suitable for all common fibre optic coupled spectrometers and photometers
- Wavelength ranges: UV/VIS/NIR



Technical Specifications Standard Flowcell

Measuring Principle	Transmittance
Material Process Window	Sapphire
Material Flowcell	1.4571
Process Connection	DIN or ANSI Flange
Sealing Material	Hastelloy C276
Temperature Range	-5°C bto 300°C (pertinent to Sealing Material)
Pressure Range	up to 200 bar / 2900lb/sq.in. (pertinent to Flange)
Optical Path Length	freely selectable up to 20 mm / 0,78 Zoll
Optical Fiber	0,5 m / 19,7 Zoll Stainless Steel Coat 600/660 µm Quarzfiber with SMA Connection and Stainless Steel Sleeve 130 mm / 5,12 Zoll
Compliance	Pressure Equipment Directive 2014/68/EU

Other materials such as other stainless steels or Hastelloy are manufactured upon customer request. Other types of flanges or sealing materials can also be used according to customer can be used. For UV applications or on request, the cell can be manufactured with process windows of quartz and collimation optics made of Suprasil® 1.