



Flow-Through Cells for O₂ and pH

Pick the matching design



Dear Max Mustermann

The PreSens' Flow-Through Cells (FTCs) meet the requirements of a diversity of areas of applications, as perfusion monitoring in gases and liquids in bioengineering, production of microchips, in ecological research, zoology, limnology, geosciences, or solid state technology. As we do offer a large variety of designs, with today's newsletter we want to give you a self-explanatory overview of FTCs available for oxygen and pH (see [matrix](#) below).

You happen to have varying technical demands on a flow-through cell? Or your application comes from the area of medical and life science research or the food sector? [Get in touch](#) with our experts at PreSens who will assist finding a customized solution.

We are looking forward to hearing from you!

Your PreSens Team

>> [Product Matrix](#)







>> [Oxygen Monitoring in Smallest Volumes of Gases or Liquids](#)

>> [Oxygen Monitoring in Pipes](#)

>> [In-line Monitoring with Single-Use or Re-Usable Flow-Through Cells](#)

Product Information: Overview of Flow-Through Cells

>> [Back](#)

Metal	Reusable		Stainless steel tee with connectors for 1/16" steel tubing	X		
			FTM is available with connector diameters of 6 mm, 1/4" or 1/2"			
Plastic	Disposable	X 	Available with and without irradiation		Luer L-cell, inner diameter 5 mm, cell volume 0.3 mL; 1/4" x 1/4", cell volume 2.1 mL; 3/8" x 3/8", cell volume 4.6 mL; 1/2" x 1/2", cell volume 8.3 mL	
		X 				
	Reusable	X 		X		
		Ultra Trace 0 - 200 ppmv O ₂	Trace 0 - 20% O ₂	Normal 0 - 100% O ₂	HP5 pH 5.5 - 8.5	LG1 pH 4.0 - 7.5
		O ₂			pH	

Oxygen Monitoring in Smallest Volumes of Gases or Liquids with Metal Flow-Through Cells FTCM:

The FTCM-PS7 is a stainless steel tee with integrated microsensor. It has connectors for 1/16" steel tubing. Customers from the food sector, bioengineering, medical and life science research or natural substance research ask for them.

- **FTCM-PS1** (measurement range 0 - 50 % O₂, limit of detection 0.05 % O₂)
- **FTCM-PS7** (measurement range 0 - 100 % O₂, limit of detection 0.03 % O₂)
- **FTCM-PS8** (measurement range 0 - 10 % O₂, limit of detection 0.007 % O₂)

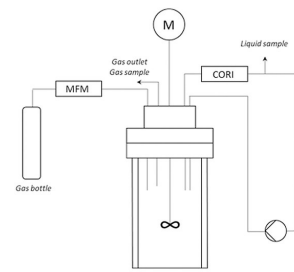
Oxygen Monitoring in Pipes:

An oxygen exchange window is integrated in a metal flow-through connector. The FTM can be integrated in pipes with o.d. 6 mm or other diameters using the respective adapters. This type of FTC should be of special interest to users from the food & beverage industry, to bioengineering companies or producers of microchips.

- **FTM-PS3** (max. measurement range 0 - 100 % O₂, limit of detection 0.03 % O₂)
- **FTM-PS6** (max. measurement range 0 - 10 % O₂, limit of detection 0.5 ppb)
- **FTM-PS9** (max. measurement range 0 - 200 ppmv O₂, limit of detection 0.5 ppmv O₂)

Exemplary Application:

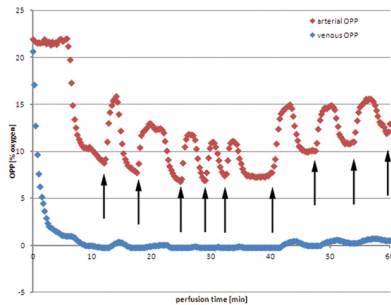
Gas Input Measurements Using an Optical Oxygen Probe: Oxygen Input into the Liquid Phase of Three Different Reactor Concepts Measured with OXY-1 SMA trace



In-line Monitoring with Single-Use Flow-Through Cells (FTC-SU) and Reusable Flow-Through Cells (FTC):

Miniaturized chemical optical oxygen and pH sensors integrated in single-use flow-through cells or oxygen sensors integrated in reusable flow-through cells allow non-invasive online monitoring of oxygen and pH in perfusion systems as requested in ecological research, zoology, limnology, geosciences, or solid state technology.

- **FTC-SU-PS \bar{t} 3** (measurement range 0 - 45 mg/L)
- **FTC-SU-PS \bar{t} 6** (measurement range 0 - 2 mg/L)
- **FTC-SU-HP5** (measurement range pH 5.5 - 8.5)
- **FTC-SU-LG1** (measurement range pH 4.0 - 7.5)
- **FTC-PS \bar{t} 3-YAU** (measurement range 0 - 45 mg/L; stands autoclavation)
- **FTC-PS \bar{t} 6 YAU** (measurement range 0 - 2 mg/L; stands autoclavation)
- **FTC-PS \bar{t} 3-YOP** (measurement range 0 - 45 mg/L; with optical isolation)



Exemplary Applications:

- **Monitoring Oxygen in Perfused Muscular Tissue Using Flow-Through Cells FTC-PS \bar{t} 3**
- **Perfusion Culture of Cell Seeded 3D Scaffold**
- **pH Regulation for a Liver Cell Bioreactor**
- **Simultaneous pH, CO₂ and O₂ Measurements in Algae Photobioreactor**

You would like to learn even more about PreSens Precision Sensing? Please visit our homepage www.presens.de and don't hesitate to contact us. Any feedback will be appreciated.

With kind regards

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