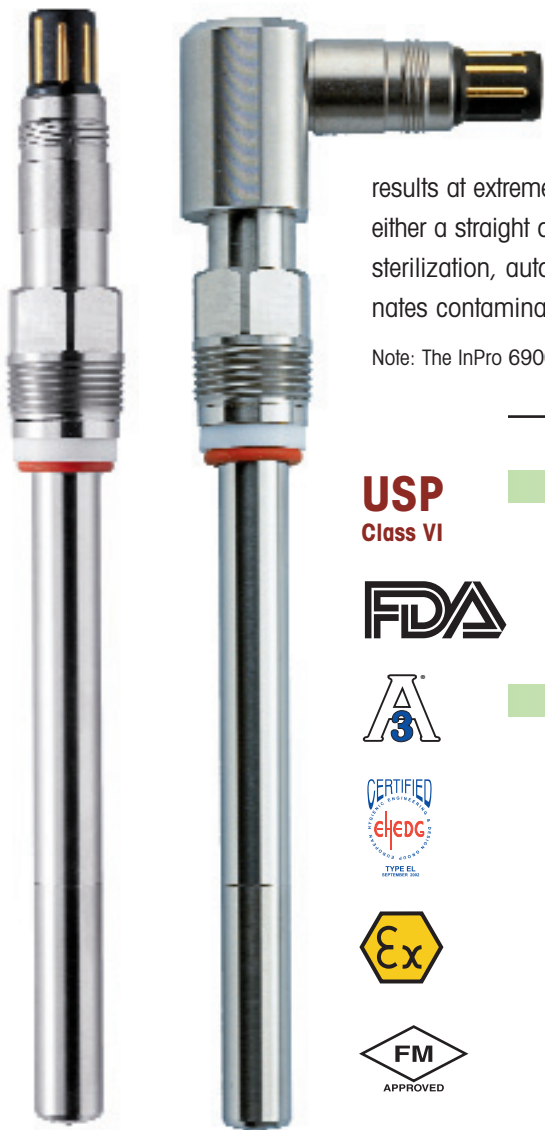


Dissolved Oxygen Sensors

InPro® 6900 12 mm Dissolved Oxygen Sensors



The InPro 6900 dissolved oxygen sensor with 12 mm diameter body offers the same advanced features as the InPro 6800 with the additional benefit of measuring oxygen as low as 1 ppb. INGOLD's unique cathode design, membrane and specially formulated electrolyte generate stable and accurate results at extremely low levels of oxygen (1 ppb). These sensors have a waterproof VP connector in either a straight or angled configuration. A durable 316L stainless steel construction allows for steam sterilization, autoclaving in place, or CIP and the hygienically polished sensor finish virtually eliminates contamination of the process.

Note: The InPro 6900 must be used in conjunction with the 4100ppb, 4100e 2H(X), 4500, or M 700 transmitters.

Specifications

USP
Class VI



Performance

Operating Range:	1 ppb to Saturation in aqueous solutions 3 ppb to Saturation in CO ₂ containing solutions
Accuracy:	≤ ± [1 % +1 ppb] / ≤ ± [1 % +3ppb]
Response time at 25 °C:	98 % of final value in < 90s
Sensor signal in air 25 °C:	250 to 500 nA
Residual Signal in oxygen-free Medium:	< 0.03 % of the signal in ambient air

Construction

Measuring principle:	Polarographic Clark electrode
Cable connection:	VP
Connector design:	Straight or angled
Sensor body:	316L stainless steel
Membrane material:	Teflon/Silicone/Teflon (reinforced with steel mesh)
Surface roughness of wetted parts:	N5 (Ra= 16µin)
O-ring material:	Silicone (FDA and USP Class VI positive listed)
Sensor diameter:	12 mm

Working Conditions

Temperature compensation:	Automatic
Measuring temperature range:	0 to 80 °C
Environmental temperature range:	-5 to 140 °C (sterilizable and autoclavable)
Measuring pressure resistance:	0.2 to 6 bar (2.9 to 87 psi absolute) 0.2 to 9 bar (2.9 to 130 psi) with T-6900 R
Mechanical pressure resistance:	Maximum 12 bar (174 psi absolute)

Certificates

EHEDG, FDA/USP Class VI, 3.1B, Ra16,
ATEX (II 1/2 G EEx ia IIC T6/T5/T4),
FM (IS CLI, Div 1, GR ABCD)

Feature Overview

- Revolutionary "rapid rebuild system" allows for service in seconds
- Detection limit down to 1 ppb!
- Accurate measurement at very low levels of oxygen
- Long lasting and easy to maintain membranes
- FDA positive listed materials of construction
- Hygienically polished surface finish of N5 (Ra= 16µin)
- EHEDG certified for cleanability and 3A compliant
- Wetted O-rings comply with FDA and USP Class VI standards
- Steam sterilizable

Other Highlights

- Small 12 mm diameter saves valuable space
- Waterproof VP connector
- Angled connector versions allow for easy removal from fermentor and reduces strain on cable
- Variety of sensor lengths available
- Withstands CIP

Ordering Information

12 mm InPro 6900 D.O. Sensors

Product	Length	Connector Style	Order Number
InPro 6900	70 mm	Straight VP	52 200 944
InPro 6900	120 mm	Straight VP	52 200 945
InPro 6900	220 mm	Straight VP	52 200 946
InPro 6900	70 mm	Angled VP	52 200 947
InPro 6900	120 mm	Angled VP	52 200 948
InPro 6900	220 mm	Angled VP	52 200 949

InPro 6900 Consumables

Product	Order Number
InPro 6900 Membrane body, single T-6900	52 201 049
InPro 6900 Membrane kit T-6900 (4 membranes, 1 O-ring set, 25 ml of electrolyte)	52 201 003
InPro 6900 reinforced Membrane body, single T-6900 R	52 201 108
InPro 6900 reinforced Membrane kit T-6900 R (4 membranes, 1 O-ring set, 25 ml of electrolyte)	52 201 109
Membrane bodies (20 pieces), T-6900	52 201 050
Electrolyte filling solution (5 ml)	52 201 005
InPro 6900 Replacement Anode/Cathode assembly	52 200 943

InPro 6900 Accessories

Product	Order Number
InPro 6900 Sensor Master Polarization Unit	52 200 893
Adapter T-82 cable to VP electrode connector	52 200 939
Adapter VP cable to T-82 electrode connector	52 200 940
Cap sleeve with protective cage P-Type	52 200 038
Cap sleeve with protective cage N-Type	52 200 037

Sensor Cables (see also Cable section pg. 166)

Product	Order Number
VP Cable VP6-ST/ 1 m (3.3 ft)	52 300 107
VP Cable VP6-ST/ 3 m (9.9 ft)	52 300 108
VP Cable VP6-ST/ 5 m (16.4 ft)	52 300 109
VP Cable VP6-ST/ 10 m (32.8 ft)	52 300 110
VP Cable VP6-ST/ 15 m (49.2 ft)	52 300 144
VP Cable VP6-ST/ 20 m (65.6 ft)	52 300 141
VP Cable w/ right angle, 3 m (9.9 ft)	53 600 070
VP Cable w/ right angle, 5 m (16.4 ft)	53 600 072
VP Cable w/ right angle, 10 m (32.8 ft)	53 600 073

Suitable Housings

- InFit 761 see pg. 144
- InFit 762/763B see pg. 146
- InTrac 787 see pg. 164
- InTrac 797 e see pg. 160
- InTrac 777 e see pg. 156
- InDip see pg. 152
- InFlow see pg. 150

Replaceable Anode/Cathode Assembly



Did you know?

The InPro 6900 sensor can only be used in conjunction with the 4100ppb, 4100e 2H(X), 4500, or M 700 dissolved oxygen transmitters because of the InPro 6900's advanced design. See more information about the 4100ppb on page 80 and the M 700 on page 88.

InPro 6900 Sensor Master with Sensor

