

VisiFerm DO

family



The VisiFerm DO is the first optical oxygen sensor with integrated opto-electronics, having the full functionality of a measuring device with self-diagnostics. It is steam sterilizable, autoclavable and CIP compatible. The VisiFerm requires less maintenance than a classical oxygen sensor as it does not have a mechanically sensitive membrane or a corrosive electrolyte.

💡
“Did you know... that Hamilton invented the first optical DO sensor in 12 mm format?”

Benefits

- ▶ No fragile membrane – with a solid sensor cap
- ▶ No polarization time required
- ▶ Instantly stable values, low drift, quick response
- ▶ Electrolyte-free, so no leakage
- ▶ Convenient precalibration in the laboratory, because data is stored in the sensor head

Typical applications

- ▶ Ethanologenic fermentation
- ▶ Biotechnical fermentation
- ▶ Brewery fermentation, filtration, filling
- ▶ Proactive corrosion control in HVAC systems

Specifications

Measuring range	4 ppb to 25 ppm (DO)
Measurement Principle	Oxygen dependent luminescence quenching
Response time $t_{98\%}$	< 30 s at 25 °C, from air to nitrogen
Process temperature	-10 to 140 °C, the sensor provides no DO reading above 85 °C
Operating voltage	7 to 30 VDC max. 1 W
Pressure range (relative to ambient)	-1 to 12 bar
Hygienic aspects	Autoclavable, CIP, SIP
Surface Quality	$R_a < 0.4 \mu\text{m}$ (N5)
Material	Stainless steel 1.4435
O-ring	EPDM

For more specifications see www.hamiltoncompany.com

Ordering Information

VisiFerm DO Family Structure

243666	Code		Interface		
	1	Arc			
	2	ECS			
		Code	a-length (mm)		
		1	120		
		2	160		
		3	225		
		4	325		
		5	425		
			Code	ODO Cap	
			1	H0	
			2	H2	
243666 –				← Order Code	

ODO Cap H0: For general application in biotechnology, water treatment and monitoring as well as in breweries, wineries and soft drink processing.

ODO Cap H2: The ODO Cap H2 is designed for fermentation processes where sterilization in place (SIP) is performed in media containing higher amounts of lipophilic compounds. It comes with a hygienic design.

Accessories



- **ODO Cap H0 Kit** Ref 243515
- **ODO Cap H2 Kit** Ref 243505

Cables see page 112
Arc Accessories see page 116
Housings see page 127



Born with a Purpose

Beverly is designed for at-line and laboratory use in small and midsize breweries as well as in the beverage industry to provide excellent reliability in a rugged design, and purpose built to handle the environmental extremes encountered in everyday brewing operations.

Superior performance at an affordable price is achieved using Hamilton's best in class optical sensor VisiFerm DO with built-in intelligence, making Beverly the brewer's best friend.



Ordering Information

Type	Ref
Beverly	817100

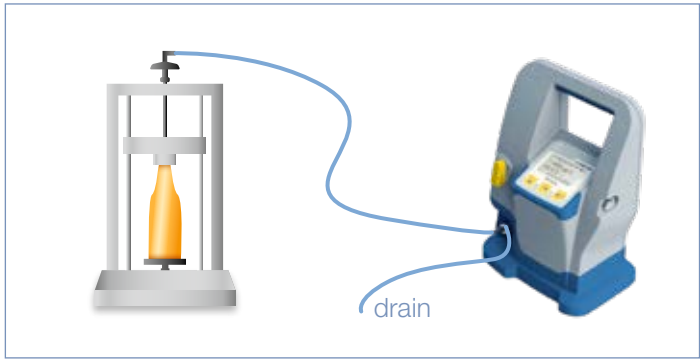


Benefits

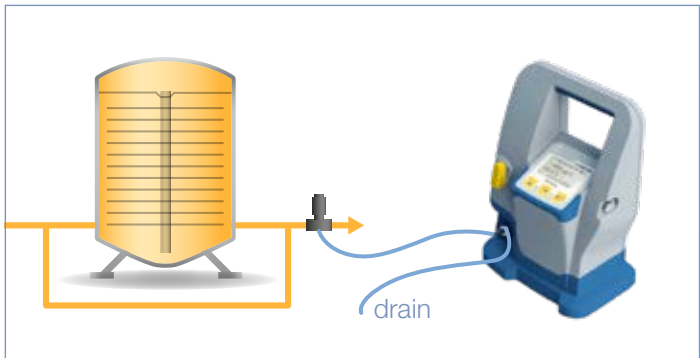
- ▶ Efficiency and serviceability bred from VisiFerm DO optical sensors
- ▶ Built to endure IP 67 watertight standards
- ▶ Stamina for 50 hours of continuous operation
- ▶ Fast response time down to ppb level
- ▶ Calibration without removing the sensor

Portable DO Measurement

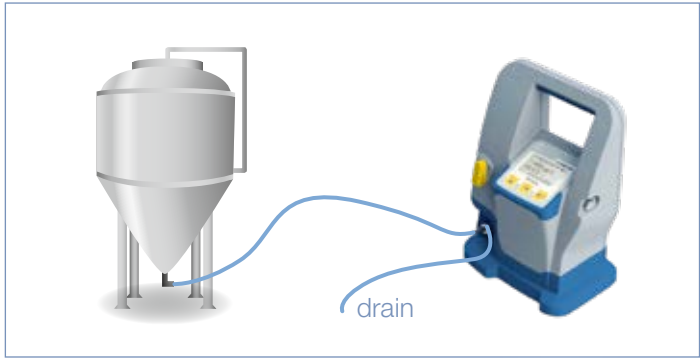
Measure DO in the bottle or can



Measure DO during or after filtration



Check DO of bright beer tank prior to bottling



Beverly can be used as shown in the pictures and even beyond. An additional application is to check the oxygen content of the exhaust gas of vessels while flushing with CO₂ after cleaning and prior to filling. Measuring the oxygen at this point can help to save time and CO₂. Even if Beverly stays connected to a pipe or a vessel while CIP is running it's robust stainless steel flow cell prevents damage.

Specifications

Operating temperature range	0 to 80 °C (media) 0 to 40 °C (environment)
Operating pressure range	0 to 10 bar
Dimensions (B x W x H)	222 x 142 x 322 mm
Ø O.D. Barbed hose fittings	8 mm
Weight	4.7 kg
Protection rate	IP67
Battery	50 h (continuous operation)
Measuring range	20 ppb to 25 ppm (DO)
Accuracy at 25 °C	1 ± 0.05%-vol: 21± 0.2%-vol
Measurement principle	Oxygen dependent luminescence quenching
Response time t _{98%}	< 30 s at 25 °C, from air to nitrogen

For more specifications see www.hamiltoncompany.com

Accessories



- **VisiFerm DO** Ref 243666-211
- **ODO Cap Kit H0** Ref 243515
- **Hoses** Ref 817134
- **Power supply** Ref 817804
- **Torx screwdriver** Ref 817145