

Fermprobe® Steam Sterilizable pH/ORP Combination Electrode

DESCRIPTION:

The pH Fermprobe® is a gel filled and sealed, pH combination electrode that is steam sterilizable to 135°C and 30 psi. The electrode needs no refilling or pressurization. All pH Fermprobe® electrodes have a **built-in electrolyte salt bridge that protects the electrode from sulfide contamination, adverse reactions with protein materials, and broth diffusion into the reference junction.** With the help of experts in the fermentation industry, a steam sterilizable pH combination electrode has been developed that combines requests for more rugged and more reliable probe with the need for a simple and easy to maintain design. This new electrode, the pH Fermprobe®, has evolved from harsh industrial trials and feedback from the industry technicians who must work with these electrode systems on a daily basis. The optional **T-pull** handle design facilitates insertion & removal of the electrode from its housing. Available in various lengths, the pH Fermprobe® can be readily used in existing Ingold immersion assemblies that have been adapted with the RETROFIT CAP™. Also easily adaptable to fit most makes and models of bench top Fermentation apparatus. The pH Fermprobe® has been field tested and steam sterilized successfully up to 40 cycles.

<p>The Ag47 Double Junction Reference System All Fermprobe have two built-in electrolyte Chambers that act to protect and isolate the sensitive inner AgCl. reference half-cell. This “double junction”, dual chamber design effectively prevents the most common failure modes of pH electrodes in biopharmaceutical applications.</p> <p>All pH and Redox Fermprobes have this double Junction reference system as a standard feature in order to insure maximum service life over the widest range operating conditions.</p>	<p>Cutaway View</p>
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Specifications :

- pH Range:.....0 to 14 pH
- ORP Range:.....-1999 to + 1999 mV
- Diameter:.....12 mm
- TEMP Range:.....-5° to 135° Centigrade Thermoshock Resistant
- Pressure Range:.....300 psi @ 25°C
- 100 psi @ 37°C
- 30 psi @ 135°C
- Bulb Glass Type:Ag-AgCl with Dual salt bridge electrolyte system
- Bulb Impedance:200 Megohms @ 25°C
- Reference Type:Ag47 double junction up system
- Cable Length :.....10 FT (for F600 integral & for F615/635 separate)

F600→ Broadley-James pH Fermprobe® standard design for SIP steam sterilizable applications. Integral low-noise 10 feet long with BNC connector. Flared SS cap for use *RetrofitCap*™ on Ingold side port assemblies.

F615→ Broadley-James pH Fermprobe® for Autoclave applications. Accepts detachable low-noise cable, as ordered below. Flared SS cap with “**T-Pull**” handle

for eases of installation and removal. Complete with captured swage nut for use with *RetrofitCap*™ on Ingold side port assemblies.

F635→ Broadley-James pH Fermprobe® for Autoclave applications. Standard 12 mm diameter allows use with most existing Bench-Top bioreactors with top port entry fitting in head plate. Accepts detachable low-noise cable.

Ordering Information

The Broadley-James pH Fermprobe® is available in a variety of configurations to accommodate the need for either Sterilization in place (SIP) or removal of electrode or entire bioreactor for sterilization in an autoclave. The part numbers ending in DH have a detachable cable, which allows them to be autoclaved. Those electrodes with cables permanently attached cannot withstand autoclaving, but SIP in a proper entry port assembly. All Broadley-James Fermprobe® are 100% integrity tested at 130°C prior to shipment.

pH / ORP sensor selection table

Lengths in mm*	pH Sensor +			ORP Sensor +
	Model No. for F600 Series	Model No. for F615 Series	Model No. for F635 Series	Model No. for F900 Series
130	F600 – B 130 A10 BC	F615 – B 130-DH	F635 – B 130-DH	F900 – B 130 A10 BC
160	F600 – B 160 A10 BC	F615 – B 160-DH	F635 – B 160-DH	F900 – B 160 A10 BC
210	F600 – B 210 A10 BC	F615 – B 210-DH	F635 – B 210-DH	F900 – B 210 A10 BC
260	F600 – B 260 A10 BC	F615 – B 260-DH	F635 – B 260-DH	F900 – B 260 A10 BC
310	F600 – B 310 A10 BC	F615 – B 310-DH	F635 – B 310-DH	F900 – B 310 A10 BC
360	F600 – B 360 A10 BC	F615 – B 360-DH	F635 – B 360-DH	F900 – B 360 A10 BC

* Special lengths on request

+ Standard sensors supplied with 10' integral cable and BNC connector.

Soaker Bottle:

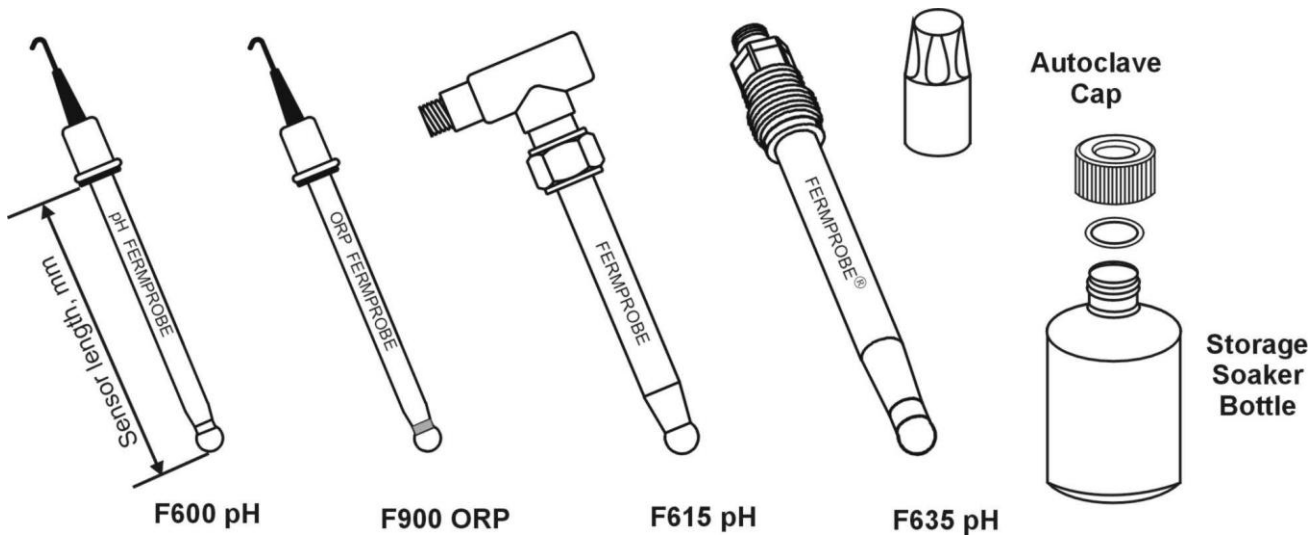
Each pH Fermprobe® shipped complete with a soaker bottle for long term storage. The solution in the bottle keeps the bulb and reference junction hydrated and ready for service right off the shelf.

Cable for F615 & 635:

Fermprobe® HP Detachable Cables are available in standard 10-FT length. HP Detachable Cable other end connection available with BNC or Tinned ends

Autoclave Cap:

Each F-615/635 also shipped with an autoclave cap that protects the connector from moisture should the electrode be autoclaved with steam.



Megitech Automation

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