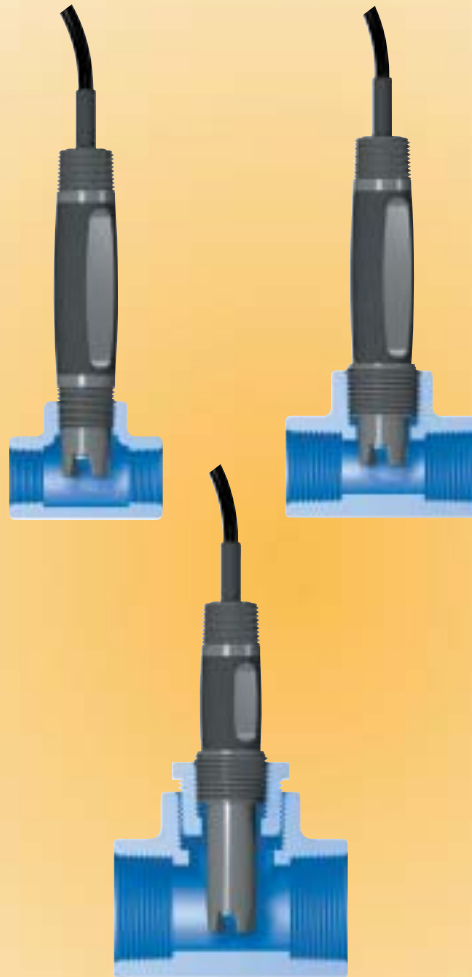


pH, ORP and D.O. Sensors for Industrial Applications

submersion



on-line



insertion



SP Series ProcessProbe™

Glass or Polymer Body Sensors with Pg13.5 Threads

The SP Series ProcessProbe electrodes are available for pH and ORP measurements. The SP Series electrodes are 12 mm x 120 mm with threaded Pg13.5 cap. These dimensions make them compatible with many pre-existing housings found in industrial and waste treatment applications. Like all ProcessProbes, these electrodes are designed to work with Broadley-James transmitters and most other brands of existing instruments and cables.

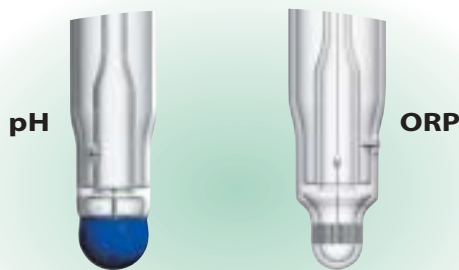
The Double Junction Reference system used in all Broadley-James' ProcessProbes reliably prevents process contaminants from fouling the reference. Since the reference is sealed, there is no electrolyte maintenance required.

SP100 Specifications

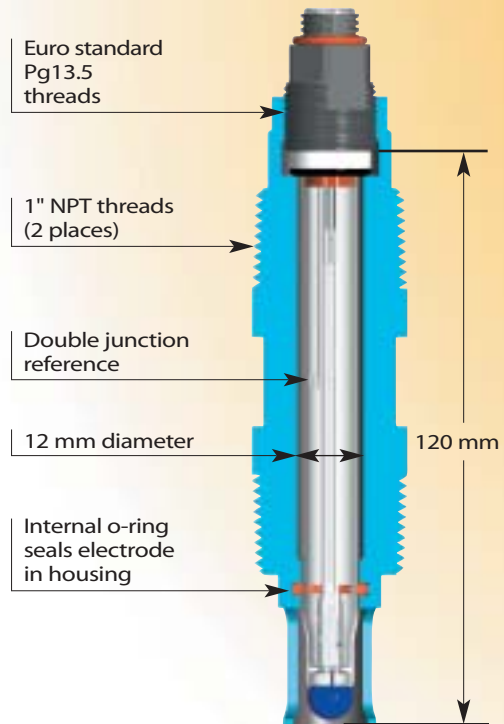
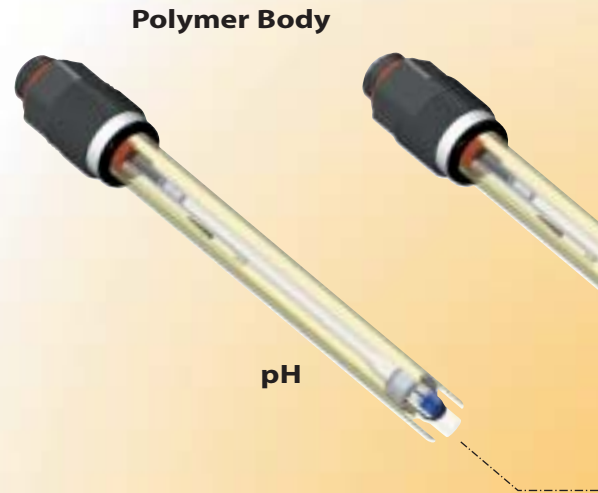
- pH Range 0 - 14 pH (2 - 12 pH with optimum accuracy)
- Redox Range ±5000mV
- Temperature Range . . . 0 to 80° C
- Max. Pressure Range . . . 4 bar, 58 psig
- Wetted Materials Glass, Ceramic, Epoxy, Silicone

SP200 Specifications

- pH Range 0 - 14 pH (2 - 12 pH with optimum accuracy)
- Redox Range ±5000 mV
- Temperature Range . . . -5 to 110° C
- Max Pressure Range . . . 10 bar, 150 psig
- Wetted Materials Glass, Ceramic



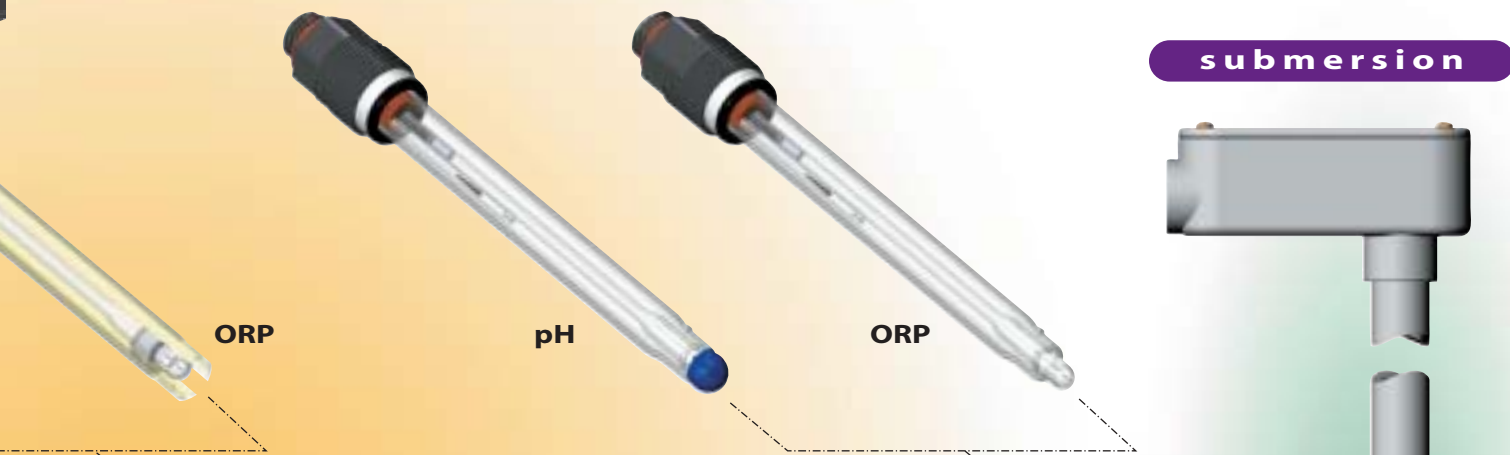
The **SP100** has a polymer body intended for use in applications up to 80° C and 4 bar (58 psig). This sensor may be a more economical alternative for low temp and low pressure industrial applications.



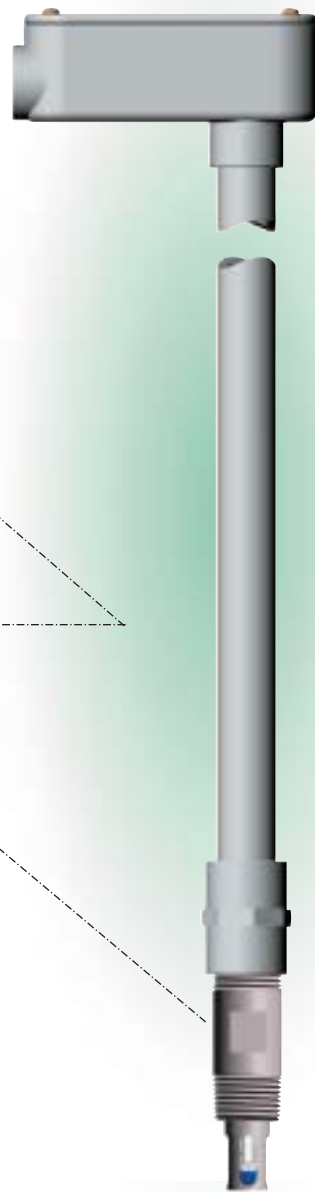
12 mm pH and ORP Sensors

The **SP200** has a glass body to withstand temperatures up to 110° C and pressures up to 10 bar. It utilizes the same glass found in DynaProbe electrodes. The glass formula allows for minimum Sodium ion interference while retaining fast response.

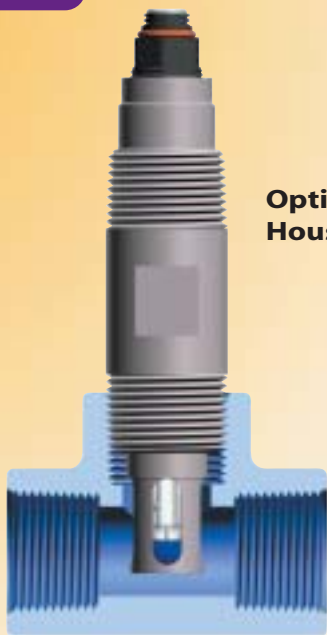
Glass Body



submersion



on-line



Optional CPVC Housing

1" NPT tee

S400 Series ProcessProbe™

submersion

Typical submersion assembly with S400 sensor mounted on 3/4" O.D. pipe with junction box



Standard length with guard



Standard length with recessed bulb



3/4" NPT tee

on-l

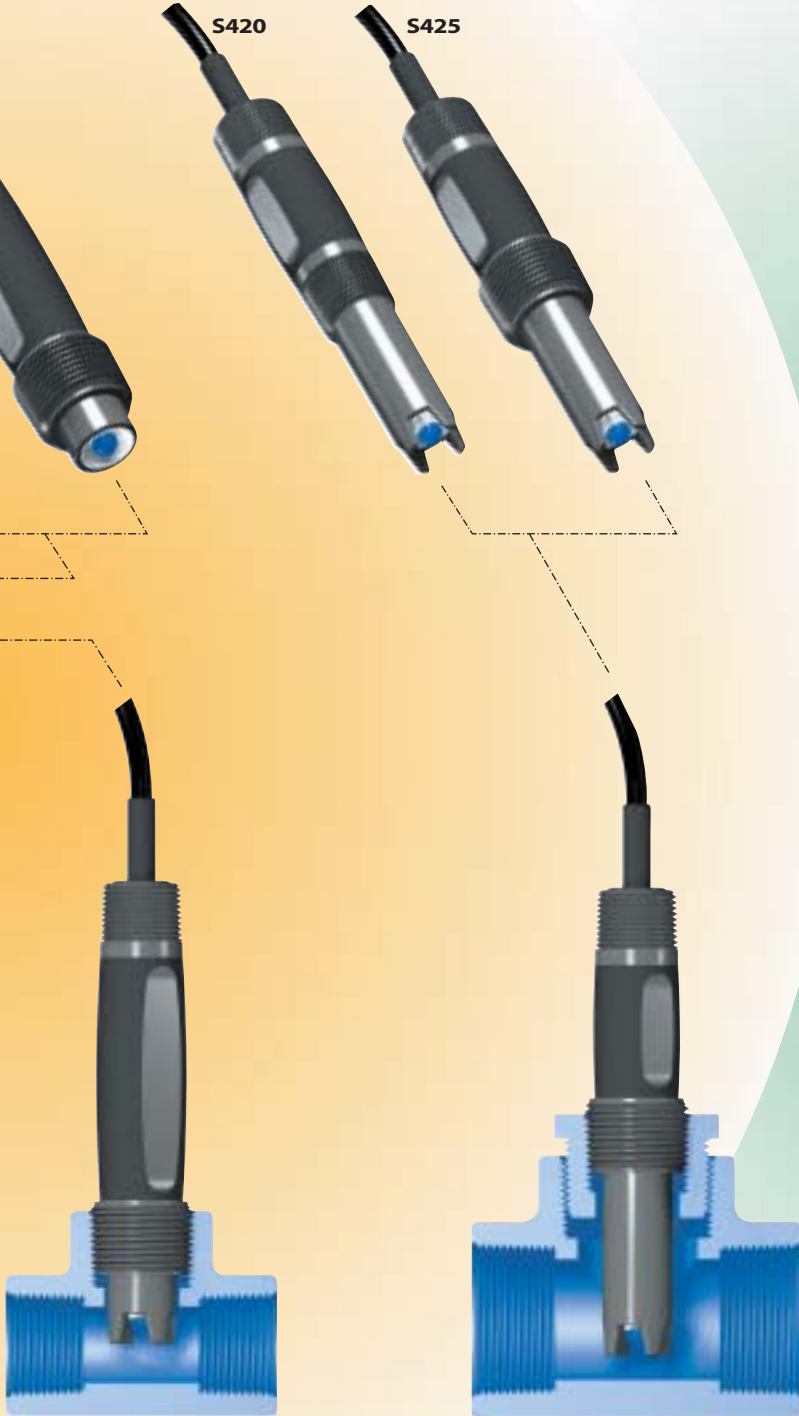
pH and ORP Sensors with Ryton Housings

line

Extended length with guard

S420

S425



1" NPT tee

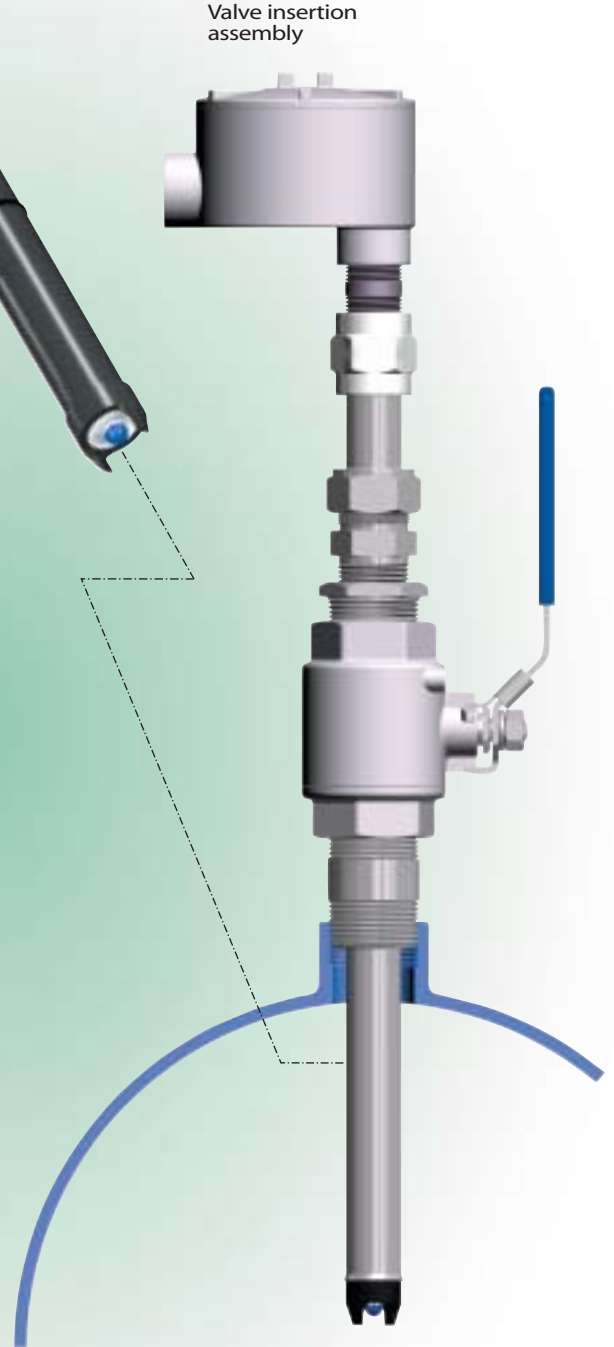
1 1/2" NPT tee

insertion

Replacement sensor for insertion assembly

S477

SA877 Valve insertion assembly



S400 Series ProcessProbe™

Broadley-James pH and ORP Sensors for the Process Industries

These sensors are designed for rugged service in submersion or on-line applications. The reference cell features a Double Junction design for extended service life in harsh applications. The body, with integral pipe threads, is molded from chemical-resistant Ryton (PPS) and the reference junction is porous Teflon or ceramic. Built-in temperature compensators are available. Optional sensor guard on the front of the sensor protects the sensor tip from impact. Sensor also available in ORP (Redox) version.

Specifications

pH Range..... 0 - 14 pH
ORP Range ± 5000 mV
Temperature Range... 0 - 105° C
Max. Pressure/Temp .. 150 psig at 100° C
Reference..... Ag-AgCl
Wetted Materials..... Ryton, Teflon, Glass
Std. Cable Length..... 10 Feet

Maximum Flow Rate:

10 ft. (3 m) per second

Output Impedance:

< 250 megohms at 25° C

Chemical-resistant Wetted Materials

These high quality sensors are constructed of corrosion-resistant wetted materials including Ryton®, Teflon® and glass.

Coaxial Porous Teflon Reference Junction

The large annular junction resists fouling. Also, the sealed, double-junction reference electrode is highly resistant to poisoning.

Options Include:

- Built-in temperature compensation
- Built-in solution ground
- Custom cable lengths
- Choice of cable connectors

Suitable for High Temperature Applications

Compatible With Most pH and ORP Analyzers



Options



Coaxial Teflon Junction

Designed to withstand tough industrial applications. Best overall performance with rugged dome pH bulb.



Dual Ceramic Pin Junction

For use in highly alkaline processes. Best choice for use at higher pressures.



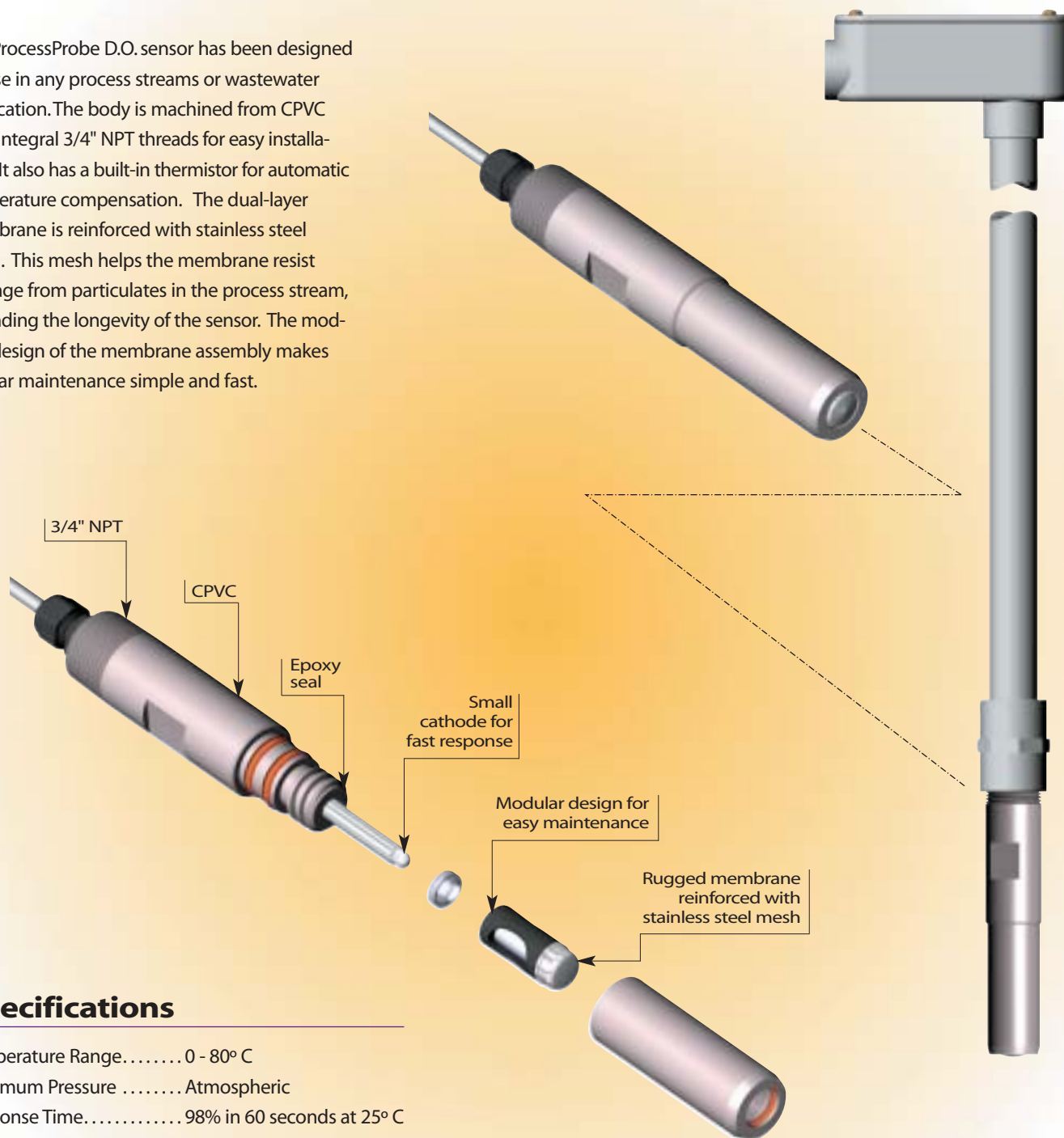
Flat pH Bulb/Self Cleaning

Designed for obstructionless contact with the sample stream for self-cleaning service. Features coaxial, porous Teflon junction.

ProcessProbe™ D.O. Sensors

Dissolved Oxygen Measurement for the Process Industries

The ProcessProbe D.O. sensor has been designed for use in any process streams or wastewater application. The body is machined from CPVC with integral 3/4" NPT threads for easy installation. It also has a built-in thermistor for automatic temperature compensation. The dual-layer membrane is reinforced with stainless steel mesh. This mesh helps the membrane resist damage from particulates in the process stream, extending the longevity of the sensor. The modular design of the membrane assembly makes regular maintenance simple and fast.



Specifications

- Temperature Range..... 0 - 80° C
- Maximum Pressure Atmospheric
- Response Time..... 98% in 60 seconds at 25° C
- Sensor Body CPVC
- Membrane..... PTFE/Silicone reinforced with stainless steel mesh
- O-ring seals Silicone rubber
- Standard Cable Length 10 ft.

DynaProbe II® pH and ORP Sensors

High Pressure and High Temperature Sensors

DynaProbes were designed to withstand the aggressive environment of pulp and paper manufacturing. The patented internal design features a solid state, reference half-cell with the unique IonTrap™ for extended sensor life in the most severe applications. Choose from the different body styles, body materials, reference materials and bulb designs to create a sensor to fit any industrial application. The three primary sensor designs are: Twist Lock, Pipe Thread, and Valve Retraction.

Twist Lock

Seals into the twist-lock housing adapter via dual o-rings for in-line measurements. The body is molded from chemical-resistant Ryton (PPS) and the reference junction is porous Teflon.

ST851 Series Specifications

pH Range 0 – 14 pH
ORP Range ± 5000 mV
Temperature Range 0 - 120° C
Maximum Pressure 50 psig at 120° C
Standard Wetted Materials Ryton, Teflon, Glass, Viton o-rings
Options Available Dome bulb, Flat bulb, or High pH glass
Compatible Housings Twist-Lock Adapter for threaded tee

ST851 Series



Pipe Thread

These DynaProbes are designed for in-line or submersion applications. The sensor body threads directly into a tee or end of a pipe and is molded from chemical-resistant Ryton.

ST873 and ST956 Series Specifications

pH Range 0 – 14 pH
ORP Range ± 5000 mV
Temperature Range 0 - 140° C
Maximum Pressure 150 psig at 120° C
Standard Wetted Materials Ryton, Teflon and Glass
Options Available Dome bulb, Flat bulb, or High pH glass
Compatible Housings 1" NPT or 3/4" NPT fittings

ST873 Series



These sensors are also available with a flat bulb design to allow the turbulence of the process to clean the sensor, minimizing clogging.

Valve Retraction

This sensor model is designed for use with the insertion/retraction assemblies. The sensor body, with integral bulb guard and anti-blowout restraint, is molded from chemical-resistant materials and the reference junction is porous Teflon.

ST977 Series Specifications

pH Range 0 – 14 pH
ORP Range ± 5000 mV
Temperature Range 0 - 120° C
Maximum Pressure 100 psig at 90° C
Standard Wetted Materials Ryton, Teflon and Glass
Compatible Housings Valve retraction assembly
Insertion sensor assembly

ST977 Series



All three designs are available with the following options:

- ORP Measurement
- Built-in Temperature Compensation
- Solution Ground
- Custom Cable Length