

Model P53 • Capacitance Probe, Pressurized Vessel Insertion/Removal

Features

- 🔧 Inspect, test, or service without shutting down or depressurizing the process
- ✓ Remove or insert 'up-from-the-bottom' or 'in-from-the-side' sensor without draining a tank
- 👍 Simple, direct inserted design useful for many common applications
- ⚡ PTFE insulation allows operation on conductive or nonconductive materials
- 🔧 High pressure PTFE seal is reliable, and corrosion proof
- ✦ Open design is easy to clean and resists material collection and deposition
- ✚ Easily installed in any orientation: vertically down or up, horizontal, or at an angle

Description

The Delta Controls **Model P53** Capacitance Probe is intended for applications where it would be impractical, or impossible, to depressurize or drain the process system for **inspection** and **testing** of the probe instrument. Such processes include oil refineries, gas cycle plants, large storage tanks, and toxic materials.

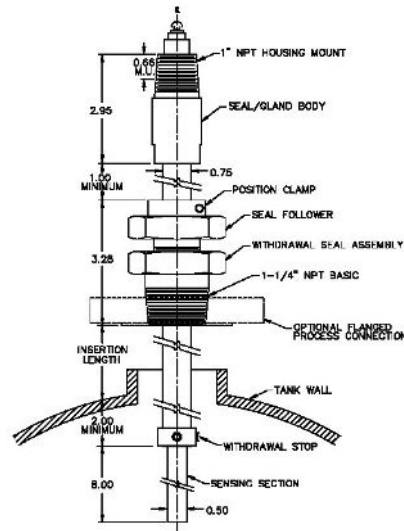
The **gland body** is effectively elongated by the addition of a polished, seamless tube coaxially mounted over part of the sensing probe. A second sealing gland with PTFE seals is installed on the outside of the tube. An **isolation valve** on the vessel shuts off the tank liquid. The second gland is screwed into the isolation valve and **tightened to prevent leaks**. The valve is then opened and the P53 is pushed in through the valve until the active portion of the sensing rod is inside the vessel. A mechanical **clamp locks the probe** in position until a need to remove it occurs. The gland follower seal design has been **reliably used for more than 30 years**. The PTFE insulation jacket is a welded heavy extrusion instead of a thin coating or glued in place.



Model P53

Specifications

Working Pressure:	-15 psig to +50 psig (-1.03 bar to +3.4 bar)
Working Temperature:	-460 °F to +400 °F (-273 °C to 204 °C)
Insertion Length:	≤ 20 ft (6 m)
Process Connection:	1.25 in MPT minimum
Threaded Process Connection:	1.25 in
Flanged Process Connection:	1.5 in minimum
Flange Rating:	≤ 600 lb
Available Wetted Materials:	316 Stainless Steel, PTFE, carbon steel (other materials available)
Other:	Optional isolation valve



P53 Shown Top Mounted

Model Numbering System

MODEL EXAMPLE	MODEL	-	INSERTION LENGTH	-	TUBE LENGTH	-	PROCESS CONNECTION	-	OPTIONS ¹
	P53Y	-	***	-	***	-	2"150RS	-	AA
MODEL	DESCRIPTION								
P53Y	Capacitance Probe, Pressurized Vessel Insertion/ Removal, 316 Stainless Steel								
INSERTION LENGTH	DESCRIPTION								
***	*** in of insertion (240 in)								
TUBE LENGTH	DESCRIPTION								
***	*** in tube length								
PROCESS CONNECTION	DESCRIPTION								
	Refer to 120 for process connections								
	MPT size 1.25 in minimum								
	Flange size 1.5 in, Class 150 minimum								
OPTIONS¹	DESCRIPTION								
AA	None								
PH4	Probe head housing with terminals for use with remote mounted electronics unit, 4X housing								
PH7	Probe head housing with terminals for use with remote mounted electronics unit, 7X housing								

Notes:

¹ A hyphen will separate multiple options selected

REQUIRED ORDERING INFORMATION:

- Detailed model number
- Tag or nameplate detail (if required)
- Documentation & testing packages (if required, refer to Additional Resources)

APPLICATION DETAILS:

- Process fluid or material name
- Process fluid or material dielectric constant
- Maximum process temperature
- Maximum process pressure