

PosiTector® *SPG OS*

probe for convex surfaces

Addendum to Instruction Manual v. 1



*Built-in V-groove for pipes
up to 30 cm (12") OD*


When attached to either a PosiTector Standard or Advanced body, the **PosiTector SPG OS** probe measures the peak-to-valley profile height of flat or convex abrasive blast cleaned surfaces.

The **PosiTector SPG OS** features two operating modes – **OD (Outside Diameter) mode** (default) and **Normal mode**.

OD mode is designed for use on the convex, outside diameter (OD) surface of curved parts. **OD mode** is the default operating mode. When active, an “OD” is displayed in the top icon bar of the Gage screen.

In **Normal mode**, the probe operates like the **PosiTector SPG**, taking a reading immediately after the probe tip touches the test surface. Normal mode is recommended for measuring on flat surfaces. To enable **Normal mode**, uncheck **OD mode** in the **Setup Menu**.


How to Measure

The **PosiTector SPG OS** powers-up when the center navigation  button is pressed. To preserve battery life, it powers-down after approximately 5 minutes of no activity. All settings are retained.

Measuring Convex/OD Surfaces:


In **OD mode (default)**, the **PosiTector SPG OS** uses a proprietary sampling process to measure the profile height as the probe tip makes contact with the test surface.

The **PosiTector SPG OS** is suitable for use on a minimum OD of 3 mm (0.125").

1. Remove the protective plastic cap from probe
2. Power-up the Gage by pressing the center navigation  button
3. Ensure **OD mode** is checked within the **Setup menu**
4. Place the included glass zero plate onto a stable, flat surface. Take a measurement on the plate with the **PosiTector SPG OS**. If the average of several readings is greater than $\pm 5 \mu\text{m}$ (0.2 mil), **Zero** the instrument.
5. Place the probe on the surface to be measured with the V-groove aligned with the axis of the curved surface. For optimal measurement results, slightly rotate the probe while in contact with the test surface. An hour glass icon appears on the Gage display during the sampling process. After the probe tip touches the test surface, the time required to obtain a reading is typically less than 2 seconds. The Gage will BEEP twice and display the measurement.
6. Lift the probe from the surface between measurements

NOTE: An optional **Large V-groove Adaptor** is available to assist with probe placement when measuring on a pipe or tank with an OD between 30 cm (12") and 46 cm (18"). Contact DeFelsko for more information.

Measuring Flat Surfaces:

1. Remove the protective plastic cap from probe
2. Power-up the Gage by pressing the center navigation  button
3. Uncheck **OD mode** from within the Setup menu
4. Place the included glass zero plate onto a stable, flat surface. Take a measurement on the plate with the **PosiTector SPG OS**. If the average of several readings is greater than $\pm 5 \mu\text{m}$ (0.2 mil), **Zero** the instrument.

Measuring Flat Surfaces (cont.):


5. Place the probe FLAT on the surface to be measured such that the tip of the probe reaches into the bottom of a profile valley. HOLD STEADY. The Gage will BEEP twice and display the measurement.
6. Lift the probe from the surface between measurements

Zeroing the Instrument

The **PosiTector SPG OS** can be zeroed using two methods. Both methods are found under the **Zero menu** option.



NOTE: The **PosiTector SPG OS** will automatically enter **Normal mode** when performing a zero adjustment. **OD mode** operation (if selected) is resumed when the zero adjustment is completed.

Glass Plate Zero (Preferred)

1. Select **Zero** from the menu
2. Press the  button to select the number of readings to be used to obtain an average, typically 3
3. Repeatedly measure the glass plate. After the last measurement the gage will calculate a Zero which represents the average of all the Zero readings taken.

Factory Zero

If a glass plate or suitable smooth, hard surface is not available, the factory zero setting can be restored:

1. Select **Zero** from the menu
2. Press the down button to select “Reset” and press the center navigation  button. The factory calibration icon  will appear on the screen.

NOTES:

- ◆ The factory zero setting is restored during a RESET
- ◆ The factory zero setting may not always be accurate, particularly after a probe tip exchange. For best accuracy, the gage should be zeroed on the included glass plate.

Probe Specifications:

Range		0–500 μm 0–20 mils
Accuracy		$\pm(5 \mu\text{m} + 5\%)$ $\pm(0.2 \text{ mils} + 5\%)$
Tip	Angle	60°*
	Radius	50 μm (2 mils)



*Optional V-groove available
for pipes 30 – 46 cm
(12" – 18") OD*

Minimum Diameter: 3 mm (0.125")

- ♦ **Warning:** If the optional **Large V-groove Adaptor** is used when measuring on an OD greater than 46 cm (18"), the probe may not measure accurately.

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