Introduction

The **PosiTector 6000** hand-held, electronic Gage non-destructively measures the thickness of coatings on all metals, quickly and accurately. A PosiTector 6000 consists of a Gage body and probe (see pg.19).

Principles of Operation

F probes use the magnetic principle to measure the thickness of non-magnetic coatings on ferrous metals.

N probes use the eddy current principle to measure the thickness of non-conductive coatings on non-ferrous metals.

FN probes combine the full abilities of both the "**F**" and "**N**" probes.

NOTE: Throughout this manual, the Ⓦ symbol indicates more information about the particular topic or feature is available on our website. Go to: www.defelsko.com/manuals

Certification

All probes include a Certificate of Calibration. For organizations with re-certification requirements, gages may be returned at regular intervals for calibration. DeFelsko recommends that customers establish gage calibration intervals based upon their own experience and work environment. Based on our product knowledge, data and customer feedback, a one year calibration interval from either the date of calibration, date of purchase, or date of receipt is a typical starting point.

Wrist Strap

We recommend attaching and wearing the supplied wrist strap.
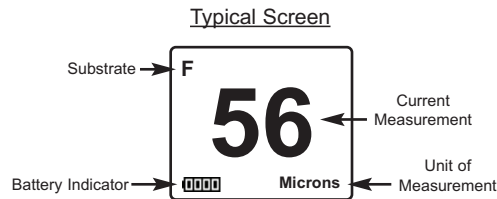
Plastic Lens Shield

The LCD is covered with a thin plastic film for protection against fingerprints and other marks during shipment. This film, while usually removed before using the instrument, can be left in place to protect against paint overspray. Replacements can be purchased.

Operation Overview

The **_PosiTector 6000_** powers-up when the center navigation 🔆 button is pressed. To preserve battery life, the Gage powers-down after approximately 5 minutes of no activity. All settings are retained.

1. Remove red protective rubber cap (if supplied) from probe.

2. Power-up Gage by pressing the center navigation 🔆 button.

3. Place the probe FLAT on the surface to be measured. HOLD STEADY. When a valid measurement is calculated, the Gage BEEPS twice and the measurement is displayed.

4. Lift probe AT LEAST 2 INCHES (5cm) from the surface between measurements - OR - leave probe on the surface in the same location for continuous measurements.

NOTE: If memory is ON while continuous measurements are being taken, only the last value on the display (when the probe is lifted) is stored into memory. **Scan** (pg.17) stores ALL measurements into memory.
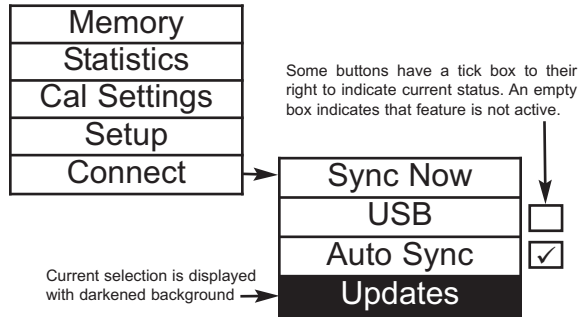
Typical Screen

Substrate → F

56 ← Current Measurement

Battery Indicator → 🔋 **Microns** ← Unit of Measurement

Golden Rule

Measure your uncoated part first! This quick zero-check determines if a _calibration adjustment_ is needed for your substrate. (see pg.5)
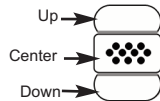
Next, lay the included plastic shims onto a bare surface and measure them individually to ensure the Gage measures a known thickness within tolerance.

Menu Operation

Gage functions are menu controlled. To access the Menu, turn the Gage on, then press the center navigation 〔⋯〕 button.

Memory
Statistics
Cal Settings
Setup
Connect

Some buttons have a tick box to their right to indicate current status. An empty box indicates that feature is not active.

Sync Now	
USB	☐
Auto Sync	☑
Updates	

Current selection is displayed with darkened background ➔

Navigation Button

Up ➔
Center ➔
Down ➔

To navigate, use the **Up** and **Down** buttons to scroll and 〔⋯〕 to **SELECT**.

Select **Exit** to exit from any menu.

PosiTector.net Ⓦ

To enhance the operation of their Gage, all *PosiTector* users have access to the features provided by *PosiTector.net*. It is a free web-based application offering secure centralized management of thickness readings.

PosiTector Desktop Manager (PDM) is a small Windows based application which allows automatic two-way communication (synchronization) between the Gage and *PosiTector.net (internet connection required).* When installed, *PDM* runs as a start-up application and resides in the Windows notification area (system tray) of a PC. *PDM* is available as a free download within your *PosiTector.net* account.

Register your Gage on PosiTector.net to take full advantage of your gage's capabilities. Visit: www.PosiTector.net

Calibration, Verification & Adjustment

Three steps ensure best accuracy…

1. **Calibration:** typically done by the manufacturer or qualified lab
2. **Verification** of Accuracy: as done by the user
3. **Adjustment:** to a known thickness

Calibration

Calibration is the controlled and documented process of measuring traceable calibration standards and verifying that the results are within the stated accuracy of the Gage. Calibrations are typically performed by the Gage manufacturer or by a certified calibration laboratory in a controlled environment using a documented process.(W)

Verification

Verification is an accuracy check performed by the user using known reference standards. A successful verification requires the Gage to read within the combined accuracy of the Gage and the reference standards.(W)

Adjustment

Adjustment, or *Calibration Adjustment* is the act of aligning the Gage's thickness readings to match that of a known sample in order to improve the effectiveness of the Gage on a specific surface or in a specific portion of its measurement range. 1-point or 2-point calibration adjustments are possible.

NOTE: The symbol disappears whenever a calibration adjustment is made to the Gage.

The *PosiTector 6000* is factory calibrated and performs an automatic self-check each time it takes a measurement. For many applications, no further adjustment is necessary after a Reset (pg.16). Just check ZERO on the uncoated substrate, then measure.

Sometimes Gage readings can be influenced by changes in substrate shape, composition, surface roughness or by measuring in a different location on the part. This is why Calibration Adjustments are made possible.

1- or 2-point Calibration Adjustments may be performed if readings are not falling within the expected range of thickness for the application being measured.

If a calibration adjustment method has not been specified, use a 1-point method first. If measuring the included shims reveals inaccuracies, use the 2-point method. **Factory Calibration settings can be restored at any time by performing a Reset** (pg.16), creating a NEW calibration setting (pg.9), or by DELETING the adjustments made to the Cal 1 calibration setting (pg.9). The symbol appears on the display whenever factory calibration settings are in use.

NOTE: With "**FN**" probes, calibration adjustments for "**F**" and "**N**" principles are stored independent of one another.

NOTE: Once adjusted, you may "lock" the current calibration adjustment to prevent further modification. (See "Cal Lock" on pg.8)

1-point Calibration Adjustment

Also known as an *offset* or *correction value*, there are 4 ways to perform this adjustment:

(1) Simple Zero Calibration Adjustment

Measure your uncoated part. If the Gage does not read "0" within the tolerance of the probe being used, lift the probe from the surface and adjust the display down **(-)** or up **(+)** until it reads "0". Measure and adjust until the average of a series of readings on the uncoated surface is within tolerance of "0" .

(2) Average Zero Calibration Adjustment

To establish "0" on a rough or curved surface a preferred method is to take several readings on the uncoated part and average the result.

Zero

1. Select the **Zero** menu option.

2. Press **(+)** to select the number of readings to be used to obtain an average, typically 3 to 10 readings. The greater the variation between readings, the more readings should be taken to obtain an average.

3. Repeatedly measure the uncoated part. The Gage will wait 2 seconds between readings to allow the user to correctly position the probe on the surface. After the last measurement the Gage will calculate and display "0" which represents the average of all the **Zero** readings taken.

(3) Simple Adjustment to a Known Thickness

It is sometimes desirable to adjust the Gage to a known thickness, such as a shim, rather than adjusting it to zero.

Measure the object. If the expected reading is not obtained (within tolerance), lift the probe from the surface and adjust the displayed reading down **(-)** or up **(+)** to the expected thickness. Hold the button down to increase the rate of adjustment.

(4) Average Adjustment to a Known Thickness

On rough or curved surfaces a preferred method is to take several readings on the known thickness and average the result.

1 Pt Adjust

1. Select **1 Pt Adjust** from the **Cal Settings** menu.
2. Press **(+)** to select the number of readings to be used to obtain an average, typically 3 to 10 readings. The greater the variation between readings, the more readings should be taken to obtain an average.

3. Repeatedly measure the known thickness reference. The Gage will wait 2 seconds between readings to allow the user to correctly position the probe on the surface. After the last measurement the Gage will calculate and display the reading which represents the average of all the measurements taken. If the expected reading is not obtained (within tolerance) lift the probe from the surface and adjust the reading down **(-)** or up **(+)** to the expected thickness and press ⊞.

2-point Calibration Adjustment

Preferred method for very unusual substrate materials, shapes or conditions. Provides greater accuracy within a limited, defined range.

This method requires taking two readings at known thickness values: a thin value (often zero) and a thicker value. These values should be on either side of the thickness range to be measured.

2 Pt Adjust

1. Select **2 Pt Adjust** from the **Cal Settings** menu.

2. Press **(+)** to select the number of readings to be used to obtain an average on the thinner item, typically 3 to 10 readings. The greater the variation between readings, the more readings should be taken to obtain an average.

3. Repeatedly measure the thinner item. The Gage will wait for 2 seconds on the surface to allow the user to correctly position the probe on the surface. After the last measurement the Gage will calculate and display a thickness value which represents the average of all the readings taken using the factory calibration settings.

4. Lift the probe from the surface and adjust the displayed reading down **(-)** or up **(+)** to the known thickness value of the thin item. Press ▦ to accept this value.

5. Repeat steps 2 - 4 for the thicker item.

Cal Lock	✓

When selected, the Ⓒ icon will appear and all calibration settings are "locked" to prevent further user adjustments.

N Lock	✓	*(FN ferrous/non-ferrous combination probes only)*

Select Non-Ferrous Lock (**N Lock)** when operating regularly on non-ferrous substrates. The Ⓝ icon will appear and the probe will only use the eddy current principle when measuring. **N Lock** is useful when measuring coatings on plated steel. Ⓦ

Calibration Memory

Cal Memory	*(Advanced models only)*

It is often convenient to store a particular calibration adjustment before making another. Then, if you return to that part, the corresponding calibration *setting* can be restored.

A "setting" is any calibration adjustment. The **PosiTector** *6000* always displays the current calibration setting (ex. **Cal 3**) in the upper right corner of the display.

The setting called **Cal 1** has unique features. It can be adjusted but never deleted, and is always made active with factory settings after a **Reset** (pg.16).

New

Creates a new calibration setting using the next available number (Maximum of 10). By default, these new Cal settings are initially created with the Gage's factory settings. This is indicated with the icon which appears at the bottom of the display. A warning message will prevent the creation of a new **Cal Memory** if a *batch* is open and has readings. Delete the batch first (pg.12).

Open

Loads an existing setting. Use the **Up** or **Down** buttons to scroll until the desired setting appears, then press. A warning message will prevent the opening of a stored Cal setting if a *batch* is open and has readings. Create a new batch first or open a batch containing no readings (pg.10).

Delete

Removes a setting completely from the list. That Cal number can be reused later with the New command. A setting cannot be deleted if readings have been stored into a *batch* using that calibration setting. Delete all readings in that batch first (pg.12). Although **Cal 1** cannot be deleted, the **Delete** function will return it to factory settings.

View

View stored Calibration Settings.

Memory Management

> **Memory**

The ***PosiTector 6000*** can record measurements in memory for printing, transfer to a computer or synchronizing with *PosiTector.net*. Readings are time-stamped as they are taken. (W)

Standard models store up to 250 readings in one group. The following appears within the **Memory** menu:

> *On:* turns memory on and begins recording
> *Off:* stops recording (stored readings remain in memory)
> *Clear:* removes all readings from memory
> *View:* lists all stored readings on the display. It will begin by showing the last several measurements. Use the **Up** and **Down** buttons to page through all readings

Advanced models store 100,000 readings in up to 1,000 batches (groups). The following appears within the **Memory** menu:

> **New Batch**

Closes open batch and creates a new batch name using the next higher number. For example, if only **Batch 1** and **Batch 3** exist, then **Batch 4** would be created and made the current batch. The icon 🖫 appears and basic statistics are displayed. Each measurement will be displayed and stored into this new batch. On-screen statistics are immediately updated with each measurement. New batch names are date stamped at the time they are created.

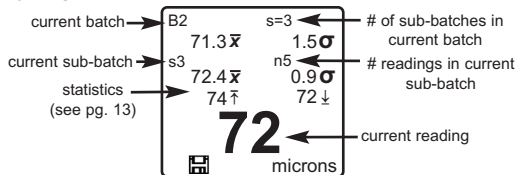Shortcut: When a batch is open, press **(+)** to create a new batch

New Sub-Batch   *(appears only if a batch is currently open)*

Creates a new sub-batch within the currently opened batch.

Shortcut: When a sub-batch is open, create a new sub-batch by pressing **(+)**

In the following example, **B2s2** is a sub-batch of **Batch 2**. Sub-batching allows the user to group related batches so that statistics

can be accumulated for them. **Batch 2** contains the statistics for **B2s1** and **B2s2**.

current batch → B2   s=3 ← # of sub-batches in current batch

71.3 $\bar{x}$ 1.5σ

current sub-batch → s3   n5 ← # readings in current sub-batch

statistics → 72.4 $\bar{x}$ 0.9σ

(see pg. 13)   74↑   72↓

72 ← current reading

💾   microns

| **Display** | *(appears only if a batch is currently open)* (W) |

The following user selectable display options are available:

Chart: A real-time x-y chart of batch or sub-batch readings.
Image: An image uploaded (synchronized) from *PosiTector.net.*
Notes: Instructions or notes uploaded from *PosiTector.net.*
None: default screen showing statistics information when a batch is open.

Shortcut: When a batch is open, press **Up** to scroll through the above display options.

| **New PA2** |

Helps determine if film thickness over a large area conforms to user specified min/max levels.(W)

| **New 90/10** |

Determines if a coating system complies with the IMO performance standard for protective coatings. (W)

| **Open** |

Selects a previously created batch or sub-batch name to open and make current. If it contains measurements, on-screen statistics will immediately reflect values calculated from this batch. The calibration setting (i.e. Cal 2) associated with this batch is also opened (pg.9).

NOTE: A solid triangle ▶ is displayed to the right of the batch name when sub-batches are present. Press [⁑] to view sub-batches. This also applies to the following *Delete*, *View* and *Print* options.

Delete

Removes a batch or sub-batch completely from memory. The name is deleted and all measurements are erased. Sub-batches can be deleted individually. To delete all related sub-batches, simply delete the top-level batch.

View

Lists all readings onto the display from the current or most recently used batch or sub-batch. It begins by showing the last several measurement values. Scroll using the **(-)** or **(+)** buttons. Hold for 1 second to scroll a page at a time.

Print

Sends a statistical summary to the optional Bluetooth wireless printer. Individual measurements with their time stamp are printed if the **Readings** box is ticked. A histogram is printed if the **Graph** box is ticked. HiLo calculations are printed using current HiLo settings if **HiLo Alarm** is turned on (see pg.13).

Close

Stops the recording process, closes the current batch or sub-batch, and removes the statistics from the display.

NOTES:

Remove the last reading from the current open batch by pressing **(-)**.

Calibration adjustments cannot be made if any measurements were taken with that setting and stored into a batch.
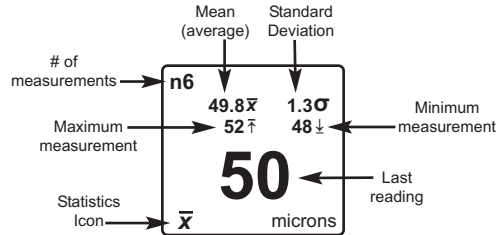
If memory is ON while continuous measurements are being taken, only the last value on the display (when the probe is lifted) is stored into memory. **Scan** stores ALL measurements into memory (pg.17).

Each batch can contain a maximum of 10,000 readings

Statistics Menu

Statistics	✓

When selected, a $\bar{x}$ icon and statistical summary will appear on the display.

Remove the last measurement by pressing the **(-)** button. Press **(+)** to clear statistics.

HiLo Alarm	✓

Allows the Gage to visibly and audibly alert the user when measurements exceed user-specified limits.

When **HiLo Alarm** is selected, the current **Lo** setting is displayed. Adjust down **(-)** or up **(+)**. Alternatively, measure a coating with a thickness close to the required value and make final adjustments with the buttons. Select **NEXT** to accept this value. The current **Hi** setting is now displayed. Follow the same procedure to adjust the **Hi** setting.

The 𝕀 icon will appear on the display.

Measurements will be compared to your defined **HiLo** limits. The Gage beeps if results are within those limits. A single low tone will sound if the reading is below the **Lo** limit, and a high tone if it is above the **Hi** limit. Press **(+)** to clear **HiLo** readings. Ⓦ

Clear

Clears all on-screen **Statistics** and **HiLo** tabulations.

Connect Menu

Connect

Sync Now

Immediately initiates synchronization with *PosiTector.net* when connected (USB or Bluetooth) to an internet connected PC running *PosiTector Desktop Manager* (pg.4). (W)

Auto Sync	✓

Allows the Gage to automatically synchronize with *PosiTector.net* when connected (USB or Bluetooth) to an internet connected PC running *PosiTector Desktop Manager* (pg.4).

NOTE: Additional measurements added to memory while connected are synchronized only when the USB cable is unconnected, then reconnected or when **Connect**>**Sync Now** is selected. (W)

USB	✓

The Gage uses a USB mass storage device class which provides a simple interface to retrieve data in a manner similar to USB flash drives, cameras or digital audio players.

When the "USB Drive" option is selected with a tick mark ✓ , any computer can view and download measurements stored in memory (in batches) by navigating a virtual drive labeled "PosiTector" using the included USB cable.

A formatted HTML report is viewed by selecting the "index.html" file found in the root directory. Optionally, text ".txt" files located in each batch folder provide access to measurement values. Stored readings and graphs can be viewed or copied using universal PC/Mac web browsers or file explorers. The "logo.jpg" file can be replaced with a corporate logo. (W)

NOTE: While the USB cable is connected to a computer, new measurements will not be included in reports and text files until the USB cable is unconnected and then reconnected.

NOTE: When connected, power is supplied through the USB cable. The batteries are not used and the base unit will not automatically power down. If rechargeable (NiMH) batteries are installed, the Gage will trickle charge the batteries.

| Bluetooth | *(Advanced models only)* 🗮 **Bluetooth**®

Allows individual readings to be sent to a computer or compatible handheld device as they are taken using Bluetooth wireless technology.

On: Turns Bluetooth functionality **On**. When selected, the ✸ icon will appear on the display. To deactivate Bluetooth, select **Off**.

NOTE: The Gage and receiving device must be paired before readings can be transmitted.(W)

| Updates |

Determines if a software update is available for your gage (must be connected to an internet connected PC with *PosiTector Desktop Manager* (pg.4)). If an update is available, a prompt will appear allowing the user to choose to perform the update at this time or not.(W)

NOTE: Ensure that stored measurements are backed up to a PC or *PosiTector.net*. The Gage may **Reset** (pg.16) after completion of the update and ALL readings in memory would be erased.

Updates - Sample Screen

currently installing
update 2 of 3 total ⟶ **2 / 3**

progress bar ⟵
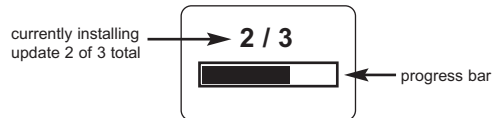
⚠ **DO NOT** unplug the Gage during the update operation.

Setup Menu

Reset

Reset restores factory settings and returns the Gage to a known, out-of-the-box condition. It is handy when settings have been changed, if the Gage behaves unusually, or if a calibration adjustment is not possible.

The following occurs:

- all batches are closed and stored measurements, images and batch names are erased.

- all calibration adjustments and **Cal Memory** are cleared and returned to the Gage's factory calibration settings.

- the factory calibration symbol appears on the display: It disappears if a calibration adjustment is made by the user.

- menu settings are returned to the following:

Hi Res = OFF	**Fast Mode** = OFF
Memory = OFF	**Scan Mode** = OFF
Statistics Mode = OFF	**Backlight** = Night
Hi Lo Alarm = OFF	**SYNC** = ON
Cal Lock = OFF	**USB** = ON
Display = None	**Bluetooth** = OFF
N Lock = OFF	

A more thorough **Reset** can be performed when the Gage is powered down by simultaneously holding both the center and **(+)** buttons until the **Reset** symbol ↻ appears. This is handy when the Gage fails to power-up or operate properly. It performs the same function as a menu **Reset** with addition of:

Units = microns	**Language** = English
Flip Display = Normal	**Battery Type** = Alkaline
White on Black = OFF	

NOTES:

- Keep the Gage away from metal during a **Reset**.

- Date and Time are not affected by a **Reset**.

Gage Info

Displays the Gage model number, serial number, software packages, *PosiTector.net registration key* and the amount of remaining memory for storage of readings.

NOTE: For security purposes, the *registration key* is required to add the Gage to your *PosiTector.net* account.

Hi Res ✓

Increases the displayed Gage resolution as follows:

Resolution	Range
0.01 mil	0.00 - 99.00 mils
0.1 mil	100.0 - 999.9 mils
0.1 um	0.0 - 999.9 um
1.0 um	over 1000 um

NOTE: Gage accuracy is not affected.

Fast ✓ ▶▶

Increases measurement speed for most probes. Useful for quick inspection or when measuring large areas with thick coatings where proper probe positioning is not critical. Swift up/down probe movement is required. Reduced accuracy may be noted.

Scan ✓ *(Advanced models only)*

Useful when taking several measurements in a small area and storing them into memory while the probe is in contact with the surface. May reduce the life of the probe. *Recommended for smooth surfaces only.*

Flip Display

This option causes the display to read upside down. Ideal for use on a worktable (separate cable probes) and overhead (removable built-in probes) with the resultant display conveniently pointed toward the operator.

White on Black (*Advanced models only*)

Inverses the LCD display to white on a black to provide better readability in some surroundings.

Backlight (*Advanced models only*)

Selects display brightness (Sun, Normal or Night). All settings will dim slightly after a period of no activity to conserve battery life. Press the **Down** button to brighten the display.

Set Clock

All batches are *date*-stamped when created, and all measurements are *time*-stamped (24 hour format) when stored into memory. It is therefore important to keep both the date and time current using this menu option. Use the **Up** and **Down** buttons to scroll. Press **(-) (+)** buttons to adjust value. Select OK.

Battery Type

Selects the type of batteries used in the Gage from a choice of "Alkaline", "Lithium" or "NiMH" (Nickel-metal hydride rechargeable). If NiMH is selected, the Gage will trickle charge the batteries while connected via USB to a PC or optional AC charger. A proper selection calibrates the battery state indicator icon for the battery type. No damage will occur if the wrong battery type is selected.

NOTE: DeFelsko recommends the use of *eneloop* (NiMH) rechargeable batteries.

Units

Converts the display from inch to metric or vice versa. Stored measurements in memory are not converted.

NOTE: Switching units will turn off **Statistics**, **HiLo Alarm**, and closes **Memory**.

Probes

The **PosiTector *6000*** consists of a gage body and a probe. A wide selection of interchangeable probes are available. Each retain their own unique calibration information. *All Gage bodies accept all probes.* To disconnect, power-down the Gage and pull the plastic probe connector horizontally (in the direction of the arrow) away from the Gage body.

When powered-up the **PosiTector *6000*** automatically determines what type of probe is attached and does a self-check. Probes "sense" when they are near metal and immediately attempt a measurement followed by another every 2 seconds. They stop when removed from the vicinity of metal and power-down after 5 minutes of no activity.

This continuous measurement feature is intended to allow careful probe placement on small or odd-shaped surfaces. Ignore all readings taken before the probe is properly placed.

Standard probes

These constant-pressure, stainless steel probes are hermetically sealed to be totally waterproof - **ideal for underwater use**. Hold them at the 2 knurled rings and push the outer spring-loaded sleeve down.

FN Combination Probe

An ***FN*** probe combines the capabilities of both "***F***" and "***N***" probes. Switching between the two is automatic. First, the probe attempts a measurement using the magnetic principle. If the coating is non-magnetic over steel, a reading is displayed with a letter "***F***". If not, the probe *automatically* attempts a measurement using the eddy current principle. If the coating is non-conductive over metal, a reading is displayed with the letter "***N*** (see also **N Lock** pg.8).

19
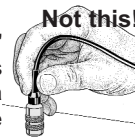
Temperature

Operating range: +32° to +120°F (0 to +50°C)

The **PosiTector 6000** compensates automatically for temperature. Allow a few minutes for the probe to reach ambient temperature before measuring.

Discard the first measurement taken in a notably different temperature condition. When measuring surfaces much hotter or colder than ambient, lift the probe at least 6 inches (15cm) and allow 1 second off the surface between measurements.

Power Supply / Battery Indicator

Power Source: 3 AAA alkaline, Lithium or optional Nickel-metal hydride (NiMH) rechargeable batteries. For best battery indicator results, ensure the appropriate **Battery Type** is selected in the Gage **Setup**>**Battery Type** menu (pg.18).

The battery indicator ▯▮▮▮▮ displays a full bar with fresh alkaline or fully charged batteries installed. As the batteries weaken, the bar will be reduced. When the battery symbol is low ▯▮▯▯▮ the Gage can still be used, but the batteries should be changed at the earliest opportunity. The Gage will turn off automatically when batteries are very low, preceded by a *Low Battery Warning* on the display.

⚠ To retain all user settings and stored memory readings, only replace the batteries after the Gage has automatically powered-down.

Battery performance decreases at low temperatures.

eneloop Batteries *(available option)*
DeFelsko recommends the use of *eneloop* (NiMH) rechargeable batteries.

eneloop batteries combine the advantages of rechargeable batteries and disposable (Alkaline) batteries. They discharge very slowly and can be stored for long periods without having self discharge concerns.

Troubleshooting

Some common reports received by our Service Department along with possible causes are located on our website. Most conditions however can be cleared with a **Reset** (pg.16).Ⓦ

Returning for Service

Before returning the Gage for service…

1. Install new batteries in the proper alignment.

2. Examine the probe tip for dirt or damage. The probe should move up and down freely.

3. Perform a Gage **Reset** (pg.16).

4. Place a plastic shim onto bare metal (steel or non-steel, depending upon whether you have an "*F*" or "*N*" probe) and attempt a measurement.

If you must return the Gage for service, describe the problem fully and include measurement results, if any. Be sure to also include the Gage, probe, your company name, company contact, telephone number and fax number or email address.

 Website: www.defelsko.com/support

Available Options

A variety of accessories are available to help you get the most from your **PosiTector** *6000* coating thickness gage.Ⓦ

Limited Warranty, Sole Remedy and Limited Liability

DeFelsko's sole warranty, remedy, and liability are the express limited warranty, remedy, and limited liability that are set forth on its website:

www.defelsko.com/terms

The Measure of Quality

www.defelsko.com