



Quick Reference

Keys - Overview

Left Side Key

Home, Measurement Screen	
Long push (2s)	Show pre-set screen (auto-disappear after 2s)
Short push	Save cover and rebar diameters values in spot scan manual mode
Menu	
Short push	Menu Navigation: left

Left Function Key

Device ON/OFF	
Long push (2s)	Power ON
Very Long push (5s)	Power OFF
Menu	
Short push	Return to previous menu level or to measurement screen
Home, Measurement Screen	
Short push	Enter Menu



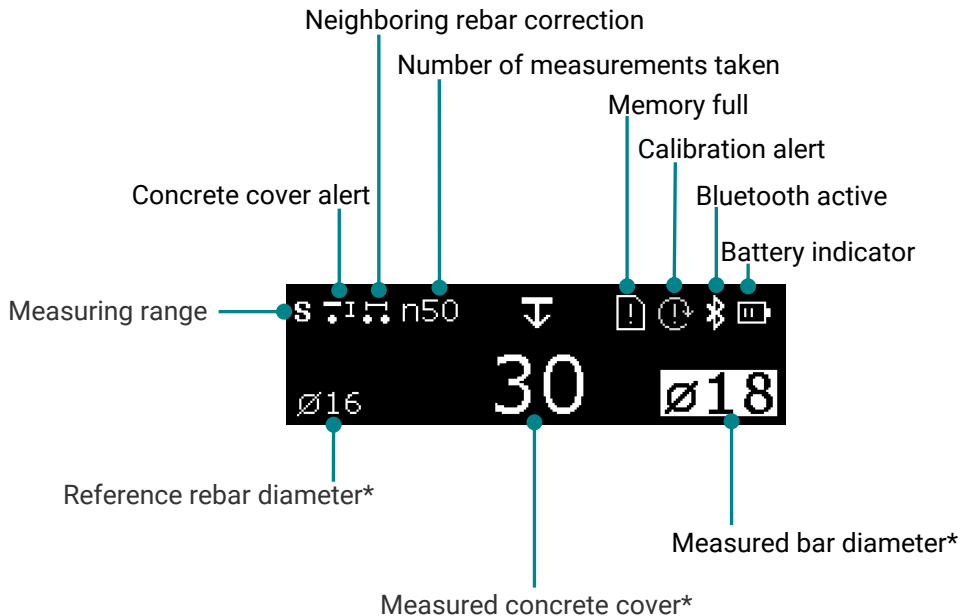
Right Side Key

Home, Measurement Screen	
Short push	Measure Rebar Diameter
Long push (2s)	Calibrate
Menu	
Short push	Menu Navigation: right

Right Function Key

Home, Measurement Screen	
Short push	Toggle between 2 statistic views
Long push (2s)	Start new series with same parameters
Menu	
Short push	Confirm the indicated function and return after 1s to previous menu level

Measurement screen



Further Information

(*) Depending on the unit setting,

Metric Units	mm
ASTM Units	# units of 1/8 inch
Japanese Units	mm

Start Device



Long push
2 sec

Startup Screen



Calibrate Device



Long push
Calibrate



Device needs to be in free space for the complete calibration process
(no metal within a 200 mm / 8" sphere)

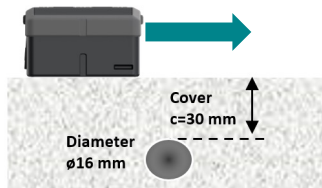


Measure



Measurement screen
(when no rebar or metal object is detected)

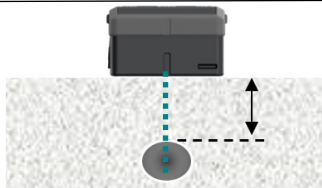
Find Rebar



Move as indicated



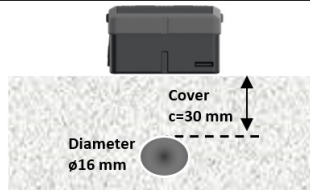
Rebar Position



Rebar located



Diameter & Cover



Short push
Measure

Note

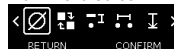
Remove all metallic objects such as rings and watches before you start measuring.

Enter Menu

Home/Measurement Screen



Main Menu Screen



Navigation

Left Side Key
Navigate Left



Right Side Key
Navigate Right












Left Function Key
Return to previous menu level



Right Function Key
Choose indicated function

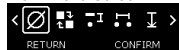


Main Menu – Menu Items

	Reference Rebar Diameter Settings	Configuration of the diameter of the reference rebar
	Operation Mode Settings	Configuration of the operation mode Locate or Spot Scan (data collection)
	Concrete Cover Alert Settings	Configuration of Cover Alert value
	Neighboring Rebar Correction Settings	Configuration of spacing between rebars for neighboring rebar correction
	Measuring Range	Configuration of measuring range depending on metal object depth Standard, Deep or Auto
	Audio Settings	Configuration of all audio signalling Rebar centered, Min cover alert or Key pressed
	Units	Configuration of measurement units In Metric, ASTM or Japanese Units
	Memory	Memory used information / clear
	Information	Show Device Information

Menu Navigation – Reference rebar diameter

Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right

Metric units



ASTM units



Japanese



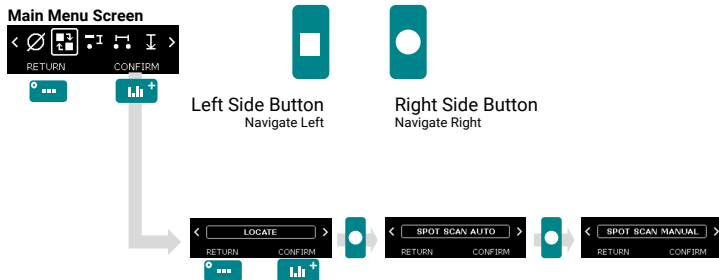
Further Information

Before measuring be sure you set the right units system for your inspection

Units

Metric Units	mm
ASTM Units	# units of 1/8 inch
Japanese Units	mm

Menu Navigation – Operation mode



Further Information

LOCATE	Rebar location or Metal detection without data storage
SPOT SCAN AUTO	Automatic data collection of concrete cover when a rebar is detected
SPOT SCAN MANUAL	Manual data collection of concrete cover and/or rebar diameter values with Left Side Key button

Menu Navigation – Minimum cover alert

Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right

Metric & Japanese units



ASTM units

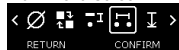


Further Information

If a minimum cover alert is selected, the LED is lit when the cover is below this limit. If audio is on, an audio signal is given. The minimum cover setting is possible with a cover up to 180 mm / 7.08".

Menu Navigation – Neighboring rebar correction

Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right

Metric & Japanese units

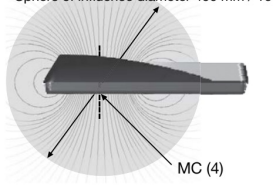


ASTM units



Further Information

Sphere of influence diameter 400 mm / 16"



Any ferromagnetic material within the sphere may have an influence on the signal value (e.g. during a reset)

It compensates the influence of 1st and 2nd layer neighbor rebars (AI) or 1st layer neighbor rebars only (NRC) on cover measurement of 1st layer rebars. If both a1 and a2 spacings are entered, $\Phi 1 \leq \Phi 2$ and Standard Range is set, then the Artificial Intelligence is automatically applied. If only a1 spacing is entered or $\Phi 1 > \Phi 2$ or Large/Spot Range is set, then the Neighboring Rebar Correction (only taking into account 1st layer) is automatically applied.

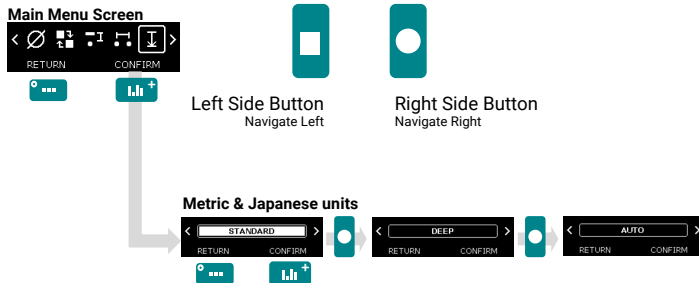
The user can enter the spacing value manually or choose the Auto function, which redirects to a Single-Line scan where the spacing is automatically measured and averaged.

The rebar size measurement is anyway only corrected with NRC.

NOTE!

This effect can be reduced by the neighboring bar correction

Menu Navigation – Measuring range

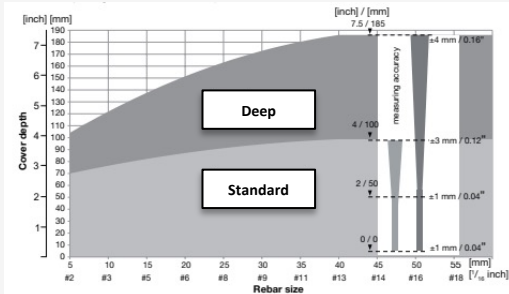


Further Information

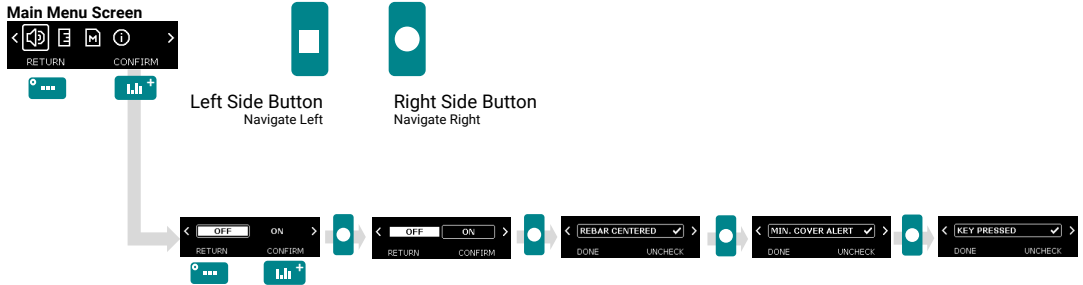
Select between:

Mode	Rebar or metal object depth
Standard	< 80mm (Default)
Deep	from 80mm to 180mm
Auto	Switches automatically from Standard to Deep

The pulse induction principle used by PM8000 has defined operating ranges and accuracies. The measuring range is dependent on the bar size. The expected accuracy of the cover measurement is indicated in the graphic below. (Complies with BS1881 part 204, for a single rebar with sufficient spacing and known diameter).



Menu Navigation – Audio



Further Information

Select/Deselect the sound settings for the following alerts (Default: all off)

- Rebar center detected
- Minimum Cover alert
- Key pressed

Menu Navigation – Units

Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right



Menu Navigation – Memory

Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right



Menu Navigation – Info


Main Menu Screen



Left Side Button
Navigate Left



Right Side Button
Navigate Right



SN: PMB0-007-50B2
FW VERSION: 1.0-27
BT ID: DE233D151C182B00
CONTAINS FCC ID: WAF2005

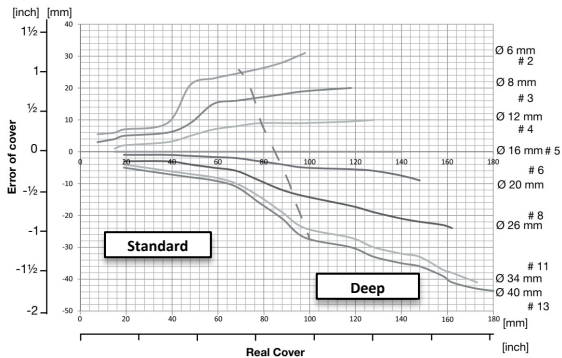
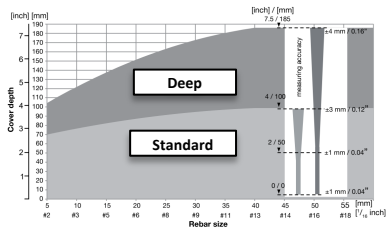


Measurement - Accuracy



Measuring Range

The pulse induction principle used by PM8000 has defined operating ranges and accuracies. The measuring range is dependent on the bar size. The expected accuracy of the cover measurement is indicated in the graphic below. (Complies with BS1881 part 204, for a single rebar with sufficient spacing and known diameter).

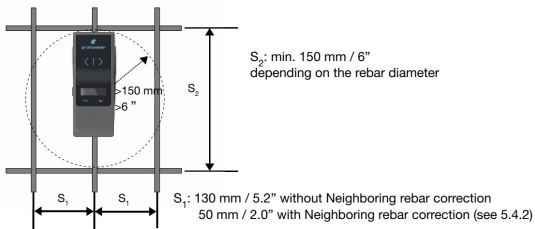


Measurement – Rebar Diameter

Factors Affecting Diameter Determination

Two factors affect the determination of the rebar diameter:

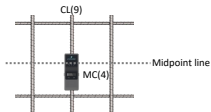
1. Cover depth.
Diameter can be determined for rebars with cover not exceeding 80% of the Standard range. 64 mm / 2.5".
2. Spacing between neighboring bars.
For accurate determination of the diameter, the spacing between the rebars must be greater than the limits shown in the drawing below with reference to the MC (4).



Diameter Measurement on Areas with sufficient Spacing of the Rebars

Method 1

Map out a rebar grid on a test surface and then select one rebar from the grid that has sufficient spacing from other rebars. Step 1 Create a rebar grid as described in 5.2.4. Step 2 Select one rebar that has the largest spacing from neighboring rebars. Step 3 Use a ruler and confirm that the spacing is at least as indicated in 3.4.4. If not, redo Steps 1 and 2 until a rebar is located with the required spacing to a neighboring rebar. Step 4 Place the MC (4) of the PM8000 over the rebar at the midpoint line of the rebars running crosswise to the rebar under test and click the Function Key (6) on the left side.



Diameter Measurement on Areas with insufficient Spacing of the Rebars (Neighboring Rebar Correction)

Method 2

Neighboring rebars that are within the sphere of influence will be detected by the PM8000 and will affect cover depth and diameter estimation results. A insufficient spacing is smaller as the minimum spacing defined in 3.4.4. The effects of neighboring rebars can be mitigated by keying-in a correction value. NOTE! This works only for rebars of the same layer running in parallel to the rebar under test. Step 1 Create a rebar as described in 5.2.4. Step 2 Select one rebar that has the largest spacing from neighboring rebars. Step 3 Use a ruler to measure the spacing. In case the spacing from the rebar under test to a neighboring rebar is equal or less than 130 mm / 5.2" go to the main menu, select the icon and input the measured spacing. Verify that neighboring rebar correction symbol is active in the status line at the top of the display. Step 4 Place the MC (4) of the PM8000 over the rebar at the midpoint line of the rebars running crosswise to the rebar under test and click the Function Key (6) on the left side.

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For more information on the product use of the product,
please refer to the Product Name PM8000 documentation

It is available for download on



www.screeningeagle.com/en/products/profometer-pm8000

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