



Measuring Systems

Hilti. Outperform. Outlast.



Laser Range Meters

Laser range meter PD 5	Page 29, 31
Laser range meter PD-I	Page 29, 31
Laser range meter PD-E	Page 30, 31



Multi-Directional Lasers

Combilaser PMC 46	Page 32, 34
Point laser PMP 45	Page 32, 34
Multi-line laser PM 4-M	Page 33-34



Rotating Lasers

Rotating laser PR 3	Page 35-37
Rotating laser PR 2-HS	Page 35-37



Detection Systems

Transpointer PX 10	Page 41
Ferrodetecter PS 30	Page 41
Multidetector PS 50	Page 42
Ferrosan system PS 250	Page 42, 44
X-Scan system PS 1000	Page 43-44



Optical Tools

Optical level POL 10	Page 45, 48
Optical level POL 15	Page 45, 48
Theodolite POT 10	Page 46, 48
Total station POS 15	Page 46, 48
Total station POS 18	Page 47-48

Superior measuring

UNLEASHING FULL MEASURING POWER.

Hilti Pulse Power very impressively meets the challenges in measuring and alignment tasks of all kinds with high reliability and efficiency.



Unique measuring performance.

Extremely fast. Extremely reliable.

Forget what you know about measuring technologies.

Hilti Pulse Power works with up to 1 million impulses per second allowing for highly reliable readings even under the most difficult conditions.

Pulse Power is yet another demonstration of Hilti's innovative ability and foresight. The challenge of achieving even greater reliability and efficiency in various measuring and alignment tasks has been met very convincingly. The advantages of Hilti Pulse Power are now available with a comprehensive product portfolio. Hilti once more, impressively substantiates the power of innovation.

Transfer reference heights



Distance measurement



Leveling





Rotating Laser



PR 3

Catch the Beam in one pass

On a bright, sunny day, the task of transferring reference heights over moderate distances can often become a tedious process due to difficulty in locating the rotating laser beam. Not with Hilti Pulse Power! Thanks to the high-frequency pulses of the laser beam, a single pass of the rotating laser beam over the receiver is all that is needed for immediate location of the line.

Range Meters



PD-E



PD-I



PD 5

Top measuring performance

Thanks to Hilti Pulse Power, accurate, reliable readings can now be taken even under the most unfavorable conditions such as in bright sunlight. Hilti Pulse Power makes trouble-free measurements of distances up to 100 meters possible without need for a target plate - achieved efficiently with only one person.

Line and Combilasers



PMC 46



PM 2-L










































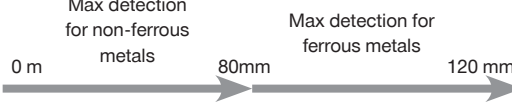









PM 4-M

Visibility without compromise

The Hilti PM 2-L line-laser, PM-4M multiline laser and the PMC 46 combi-laser feature outstanding visibility of the lines they project, whether working with or without a receiver. In interior finishing, Hilti Pulse Power effectively avoids the nuisance of having to return to the tool to change operating modes and realign when working under frequently changing light conditions.

Working range

				Measuring tools	10	30	50	100 m	200 m	300 m	Applications	
Indoor	Outdoor											
Laser range meters	●	○	PD 5									
	●	○	PD-I									
	●	●	PD-E									
Multidirectional lasers	●		PM 2-L									 
	●	○	PMP 45									  
	●	○	PM 4-M									  
	●	○	PMC 46									  
Rotating lasers	●		PR2-HS									 
	●	○	PR 3									   
												* radial distance
Location and detection tools												
Detection / Localize	●	●	PX 10									Locate point through floors and walls before drilling
	●	●	PS 30									Ferrous and Non-Ferrous metal detection
	●	●	PS 250									Rebar detection, diameter check, analysis and documentation
● Optimal use ○ Possible use												
 Distance measuring  Horizontal alignment  Vertical alignment and plumb  90° layout  Slope												



Laser range meter PD 5



Key applications and advantages

- Measuring distances from 0.25 m - 100 m quickly and accurately
- Measuring heights where alternative measuring methods fail
- Measuring quickly and safely in places where access is difficult
- Simple and intuitive to use
- Single-button operation



PULSE POWER

Technical data

Accuracy	±1.5 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2008), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 55 (IEC 529)
Dimensions (LxWxH)	164 x 33 x 21 mm
Weight with batteries	100 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	8000 measurements
Measuring range	0.25 m - 100 m
Data memory	Last 2 measurements
Measuring functions	Single and continuous measurement

Ordering designation	Package contents	Sales pack quantity	Item number
PD 5	1x Laser range meter PD 5, 1x Battery AAA (2) alkaline, 1x Toolbag PDA 605	1 pc	2004788

Laser range meter PD-I



Key applications and advantages

- Measuring quickly and safely in places where access is difficult
- Checking parallels and offsets using the min/max function
- Determining the surface area of walls, ceilings and floors for painting etc.
- Built-in 360° tilt sensor for various application possibilities
- LEDs provide clear identification of the measuring reference and thus help avoid errors



PULSE POWER

Technical data

Accuracy	±1 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2007), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 65 (EN 60529)
Dimensions (LxWxH)	129 x 60 x 28 mm
Weight with batteries	165 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	5000 measurements
Measuring range	0 m - 100 m
Data memory	Last 30 measurements / calculation results with graphics
Calculation functions	Addition, Subtraction, Area, Volume, Painters area, Setting out, min/max, Timer, Offset, Memory (30x), Trapezoid (2x), Pythagoras (3x), Indirect measurement (3x)

Ordering designation	Package contents	Sales pack quantity	Item number
PD-I	1x Laser range meter PD-I, 1x Battery AAA (2) alkaline, 1x Hand strap, 1x Toolbag PDA 65	1 pc	2061407

Laser range meter PD-E



PULSE III POWER

Key applications and advantages





- Measuring quickly and safely in places where access is difficult
- Measuring surface areas for quotations in renovation work
- Determining the length or height of objects that cannot be directly accessed (remote measurement)
- Measures up to 200 m even under the toughest outdoor conditions
- The outdoor display can be read even in very bright sunlight

Technical data

Accuracy	±1 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2007), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 65 (EN 60529)
Dimensions (LxWxH)	129 x 60 x 28 mm
Weight with batteries	165 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	5000 measurements
Measuring range	0 m - 200 m
Data memory	Last 30 measurements / calculation results with graphics
Calculation functions	Addition, Subtraction, Area, Volume, Painters area, Setting out, min/max, Timer, Offset, Memory (30x), Trapezoid (2x), Pythagoras (3x), Indirect measurement (4x)

Ordering designation	Package contents	Sales pack quantity	Item number
PD-E	1x Laser range meter PD-E, 1x Battery AAA (2) alkaline, 1x Hand strap, 1x Toolbag PDA 65	1 pc	2062050

Accessories for Laser Range Meters

		PD 5	PD-I	PD-E	Sales pack quantity	Item number
Ordering designation						
Toolbag PDA 605		■			1 pc	2004840
Laser visibility glasses PP EY-GU R red Lens: PC material, thickness 2.1 mm, Supravision HC-AF coating, filter: 2C-1.2, impact energy: 45m/s, surface resistance to fine particles: K, antifog: N		■	■	■	1 pc	2065448
Target plate PDA 50 Increases measuring range over long distances and in unfavourable lighting conditions Dimensions: 130 x 120 mm, black		■	■	■	1 pc	282388
Toolbag PDA 65			■	■	1 pc	226877

Combilaser PMC 46



PULSE III POWER

Key applications and advantages

- Vertical alignment of pipes
- Leveling electric sockets, cable trays, radiators and pipe installations
- Leveling and aligning doors and windows
- Complete solution for interior measuring applications
- Everything you need for leveling, aligning, plumbing and squaring – in one tool

Technical data

Accuracy	±2 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2008), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 54 (IEC 529)
Dimensions (LxWxH)	107 x 65 x 96 mm
Weight with batteries	515 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	20 h
Self-levelling range at room temperature	±5 °
Out-of-level warning	Yes
Horizontal fan angle	110 °

Ordering designation	Package contents	Sales pack quantity	Item number
PMC 46 kit	1x Combilaser PMC 46, 2x Battery AA (2) alkaline, 1x Tripod PMA 20 small, 1x Universal adapter PMA 78, 1x Case, 1x Bag	1 pc	411210



Point laser PMP 45



PULSE III POWER

Key applications and advantages

- Vertical alignment of windows and doors
- Vertical alignment of steel and timber structures
- Transferring fastening points from floors to ceilings
- Five laser points for checking verticals, squaring, leveling and alignment
- Ideal shape and brightness of laser point

Technical data

Accuracy	±2 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2008), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 54 (IEC 529)
Dimensions (LxWxH)	107 x 65 x 96 mm
Weight with batteries	525 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	30 h
Self-levelling range at room temperature	±5 °
Out-of-level warning	Yes
Self-levelling time	3 s

Ordering designation	Package contents	Sales pack quantity	Item number
PMP 45	1x Point laser PMP 45, 2x Battery AA (2) alkaline, 1x Bag	1 pc	411279

Multi-line laser PM 4-M


PULSE **POWER**

Key applications and advantages







- Setting out drywall tracks on floor, ceiling and wall for partitioning
- Transferring reference heights
- Vertical alignment of pipes
- Projects clear, 3D vertical lines with a cross on the ceiling
- Rotates around the center point for fast, easy alignment

Technical data

Accuracy	±2 mm
Laser class	< 1 mW, 635 nm, Class 2 (IEC 60825-1:2008), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 54 (IEC 529)
Dimensions (LxWxH)	124 x 124 x 187 mm
Weight with batteries	990 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	8 h
Self-levelling range at room temperature	±3 °
Out-of-level warning	Yes
Horizontal fan angle	180 °

Ordering designation	Package contents	Sales pack quantity	Item number
PM 4-M	1x Multi line laser PM 4-M, 2x Battery AA (2) alkaline, 1x Tripod adapter PMW 30, 1x Case	1 pc	2047072

Accessories for Multi-Directional Lasers

		PMC 46	PMP 45	PM 4-M		
Ordering designation					Sales pack quantity	Item number
Laser receiver holder PRA 80 For mounting a receiver on a measuring rod		■		■	1 pc	360058
Laser receiver PMA 31 Laser receiver for detecting the laser beam easily in bright conditions		■		■	1 pc	411288
Target plate PRA 50 (CM) Significantly improves the visibility of the red laser beam The magnetic target plate attaches perfectly to the metal frame, freeing both hands for easy levelling of the suspended ceiling		■		■	1 pc	285415
Tripod PMA 20 Compact tripod with 1/4" thread, extendable up to 1.2 m, fits neatly in the PMA 62 case Allows the user to set up the system quickly anywhere on the jobsite		■	■	■	1 pc	411287
Universal adapter PMA 78 Universal adapter for mounting tools on various objects, e.g. on pipes, a nail on a wall or on a ceiling profile		■	■		1 pc	411286
Wall mount PMA 79 For mounting the tool on perimeter trim for suspended ceiling applications			■	■	1 pc	2068551

Rotating laser PR 3



PULSE POWER

Key applications and advantages

- Leveling (transferring heights, pouring concrete, excavation)
- Aligning (transferring building lines, aligning columns and walls)
- Slopes (ramps, parking lots, pipes)
- Versatile rotating laser for leveling, aligning, slopes and squaring - indoors and outdoors
- Easy power management with re-chargeable Li-ion battery pack

Technical data

Accuracy	±0.75 mm at 10 m
Laser class	< 4.85 mW, 635 nm, Class 2 (IEC 825-1:2008), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 56 (IEC 529)
Self-levelling range at room temperature	5 °
Dimensions (LxWxH)	252 x 252 x 201 mm
Weight with batteries	2400 g
Operating temperature range	-20 - 50 °C
Operating time with Li-ion battery	30 h
Operating range with laser receiver (diameter)	1 - 300 m
Operating distance range of remote control (diameter)	1 - 60 m

Ordering designation	Package contents	Sales pack quantity	Item number
PR 3	1x Rotating laser PR 3, 1x Battery pack PRA 84 assy, 1x Battery AA (2) alkaline, 1x Remote control PRA 2, 1x Target plate PRA 50 (CM), 1x Target plate PRA 51 (CM/IN), 1x Mains adapter PUA 81, 1x Case	1 pc	2007617



Rotating laser PR 2-HS



PULSE POWER

Key applications and advantages


















- Excavation
- Transferring and checking reference heights
- Leveling formwork and pouring concrete
- One button, one function makes the tool extremely easy to use
- Built to last - newly designed shock-absorbing handles and receiver holder as well as the rugged IP 66 protected housing provide the most reliable performance in the toughest jobsite environment (MIL-STD-810G)

Technical data






Accuracy	±0.5 mm at 10 m
Laser class	<4.85 mW, 620-690 nm, Class 2 (IEC 60825-1:2007), Class II (FDA CFR 21 art. 1040)
IP protection class	IP 66 (IEC 529)
Self-levelling range at room temperature	±5 °
Dimensions (LxWxH)	200 x 200 x 230 mm
Weight with batteries	2500 g
Operating temperature range	-20 - 50 °C
Operating time with Li-ion battery	30 h
Operating range with laser receiver (diameter)	2 - 600 m
Rotation speed	300 rpm

Ordering designation	Package contents	Sales pack quantity	Item number
PR 2-HS	1x Rotating laser PR 2-HS, 1x Battery pack PRA 84 assy, 1x Battery AA (2) alkaline, 1x Mains adapter PUA 81, 1x Laser receiver PRA 20, 1x Laser receiver holder PRA 83, 1x Case	1 pc	2071035

Accessories for Rotating Lasers

		PR 3	PR 2-HS	Sales pack quantity	Item number
Ordering designation					
Mains adapter PUA 81 For PSA 81 or PRA 84 batteries and PSA 100 monitor		■	■	1 pc	2006089
Batter board adapter PRA 750 For mounting the rotating laser on a batter board for effortless transfer of building control lines on construction sites		■		1 pc	435441
Batter board receiver holder PRA 751 For mounting the receiver on a batter board		■		1 pc	435442
Battery pack PRA 84 Li-ion battery		■	■	1 pc	360055
Crank tripod PA 921 Crank tripod with 5/8" thread and integrated circular bubble level Height can be adjusted between 0.76 m (2'3") and 1.63 m (4'9"), weight 4.8 kg (10.6 lb)		■	■	1 pc	378663
Crank tripod PA 931 (CM) 5/8" thread, combi tripod shoes, column with cm scale, tripod leg struts to central column, and integrated circular bubble level Height can be adjusted between 0.86 and 2.88 m, weight 8.0 kg		■		1 pc	315998
Facade adapter PRA 760 Flexible bracket for mounting the rotating laser in a vertical position Ensures quick and accurate levelling and aligning on facades		■		1 pc	435439
Height transfer device PRA 81 (MM) For transferring a reference height with a glass-fibre measuring tape Can be extended to up to 1 m		■	■	1 pc	368627
Kit PRA 90 + PRA 84 + PRA 85 + PRA 92		■		1 pc	2035309
Laser receiver holder PRA 80 For mounting a receiver on a measuring rod		■	■	1 pc	360058
Laser receiver PRA 20 Receiver with millimetre display for digital measurement allows easy, accurate detection of the rotating laser beam within a circular area up to 600 m in diameter			■	1 pc	2071120
Mains adapter PRA 85 For charging the PRA 84 battery in the tool or when removed		■	■	1 pc	360056
Measuring rod PUA 50 (CM) Made from aluminium, adjustable in height between 0.88 m and 4 m, magnetic nail holder makes it easy to drive nails on formwork, weight 1.46 kg		■	■	1 pc	400935
Measuring rod PUA 55 (CM) Made from aluminium, height can be adjusted between 1.31 and 2.42 m, with grid scale in cm		■	■	1 pc	435443
Remote control PRA 92 Remote control of the PRA 90 automatic tripod at up to 50 m (164.5 ft.)			■	1 pc	2017479
Slope adapter PRA 79 Place the adapter between the rotating laser and the tripod for setting out slopes manually up to 60%			■	1 pc	2071083
Target plate PRA 50 (CM) Significantly improves the visibility of the red laser beam The magnetic target plate attaches perfectly to the metal frame, freeing both hands for easy levelling of the suspended ceiling		■		1 pc	285415

Accessories for Rotating Lasers

Ordering designation		PR 3	PR 2-HS	Sales pack quantity	Item number
Tripod bag PUA 40 Tripod bag for one tripod and one measuring rod		■	■	1 pc	377847
Tripod PUA 20 Tripod with 5/8" thread, height can be adjusted between 1.06 m (41.7 in) and 1.70 m (67 in), metal tripod head, self-locking tripod legs, weight 4.1 kg (9 lb)		■	■	1 pc	400934
Tripod star PUA 41 For setting up tripods on smooth surfaces		■		1 pc	435444
Vertical angle PRA 770 For mounting the rotating laser vertically on a tripod		■		1 pc	435440
Wall mount PRA 70 (CM) For mounting Hilti rotating lasers on walls, tripods, columns or ceiling profiles		■		1 pc	285314

Inside insight

DETECTION OF OBJECTS FOR MORE EFFICIENT AND SAFE DRILLING.

Hilti detectors can save you a great deal of time and money every day locating concealed objects precisely and thus help you avoid costly damage or lost time.

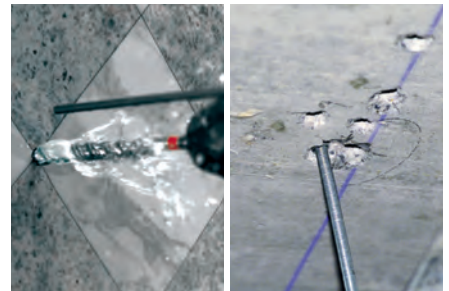


Avoid costly mistakes! Save time and money.

On average, an object is hit or drilled through in almost every second hole! Objects are everywhere beneath the surface of concrete and masonry – with the safety of the worker at stake on the one hand and the risk of costly damage and delays in completion of the project on the other.

Detection tools from Hilti give you more insight. They tell you where problems can be expected and where you can drill or cut safely.

- Fewer rebar hits
- Less drill bit wear
- No costly repairs to damaged pipes or cables



More insight, fewer surprises. Detection with Hilti: easy, accurate, versatile



Easy: Drill and cut safely.
The Hilti PS 30 detects rebars and pipes simply at the touch of a button.



Accurate: Set anchors and post-installed rebar connections precisely.
Find the position and depth of reinforcing bars the easy way with the PS 250 Ferrodetect – for more efficient anchor fastening.



Versatile: Detect everything easily.
In addition to locating metal objects, the PS 50 Multidetector locates non-metal objects such as plastic pipe and conduit, electric cables, and timber substructures.

PULSE  POWER



The right Hilti detector for you.

PS 30 Ferrodetector

Detects and locates:

- Steel reinforcement
- Metal studs, objects
- Copper pipes
- Aluminum pipes



PS 50 Multidetector

Detects and locates:

- Steel reinforcement
- Metal studs, objects
- Copper pipes
- Aluminum pipes
- Electric cables
- Plastic pipes, conduits
- Wood studs, beams



From point detection to large area scans.

All the insights you need.



Determine the drill bit exit point, transfer the drilling starting point to the opposite side of the wall or floor, or simply measure the necessary drill bit length and angle of the hole to be drilled – it's easy with the Hilti PX 10 Transpointer.

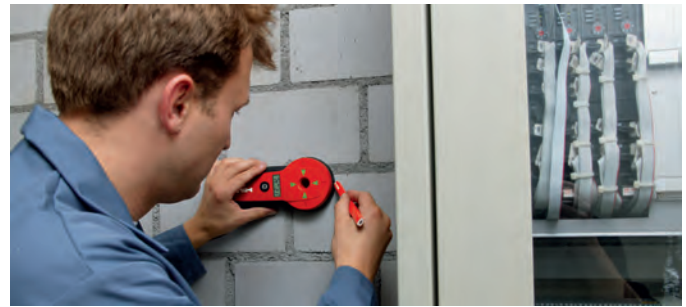


Hilti PS 250 Ferrosan is the leading portable detection system for reinforcement verification and large-area depth of cover measurement scans the device has the possibility of on-the-spot analysis or data transfer to a PC for subsequent analysis.

Overview detector systems



	PX 10	PS 30	PS 50	PS 250
	Transpointer	Ferrodetector	Multidetector	Ferrosan
Functionalities				
Locates:				
Ferrous metals		■	■	■
Non-ferrous metals		■	■	
Plastic			■	
Wood			■	
Electric cables			■	
Multiple layers			■	
Measures:				
Depth of cover			■	■
Rebar diameter			■	■
Transfers:				
Drilling positions	■			
Technology	Magnetic induction	Magnetic induction	Radar, magnetic induction and AC sensor	Magnetic induction
Software				■
Applications				
	Drill bit exit position finding	Reliable and accurate detection of metal objects	Reliable and accurate detection of metal objects with precise depth measurement	Reinforcement analysis and verification
	Transferring drilling starting points for through-holes in walls and ceilings	Works irrespective of rebar orientation (e.g. horizontal or vertical) and type of base material	Works irrespective of rebar orientation (e.g. horizontal or vertical) and type of base material	Large-area depth of cover measurement in renovation work
	Measurement of wall thickness for easy determination of drill bit length required		Various measuring modes selectable	Acceptance inspections



Transpointer PX 10



Key applications and advantages

- Transferring the starting point for drilling through-holes
- Wall and ceiling thickness measurement for easy selection of the right drill bit or core bit length
- Determining the drill bit exit position and transferring drilling positions when drilling through walls and ceilings in concrete and masonry
- Allows drilling to be carried out quickly and efficiently
- No need for time-consuming procedures such as drilling pilot holes, measuring out manually or "trial and error"

Technical data

Measuring range	0.05 m - 1.35 m
Accuracy wall thickness measurement	±5 %
IP protection class	IP 56 (IEC 529)
Dimensions (transmitter)	160 x 95 x 33 mm
Dimensions (receiver)	210 x 95 x 33 mm
Weight (transmitter) (incl. battery)	240 g
Weight (receiver) (incl. battery)	275 g
Operating temperature range	-20 - 55 °C
Operating time with alkaline battery	17 h
Automatic power-off (receiver)	Yes



Ordering designation	Package contents	Sales pack quantity	Item number
PX 10 kit	2x Battery 9V Block alkaline, 1x Receiver PX 10 R, 1x Transmitter PX 10 T, 1x Adhesive putty PUA 91, 1x Adhesive strip PUA 92, 2x Hand strap, 1x Slope adapter PXA 70, 1x Marker pen PUA 70 set, 1x Case	1 pc	273126

Ferrodetector PS 30



Key applications and advantages

- Locating reinforcement, copper or aluminium pipes in concrete
- Locating copper or aluminium pipes in brick walls
- Minimizes damage to rebar, copper and aluminium pipes when drilling
- Avoiding hitting rebar increases drill bit lifetime

Technical data

Max. detection depth for rebar	120 mm
Max. detection depth for non-ferrous metal objects¹⁾	80 mm
IP protection class	IP 54 (IEC 529)
Dimensions (LxWxH)	230 x 100 x 45 mm
Weight with batteries	420 g
Operating temperature range	-15 - 50 °C
Operating time with alkaline battery	10 h
Automatic switch-off	Yes
Localisation accuracy¹⁾	±10 mm
Low battery indication	Yes

¹⁾ Performance and accuracy can be significantly affected by site conditions. See operating instructions.



PULSE POWER

Ordering designation	Package contents	Sales pack quantity	Item number
PS 30	1x Ferrodetector PS 30, 2x Battery AAA (2) alkaline, 1x Marker pen, 1x Hand strap, 1x Toolbag PSA 66	1 pc	407920

Multidetector PS 50



Key applications and advantages

- Detecting metal, wood or plastic objects and electrical conduits at depths up to 150 mm
- Quickly and easily locate objects under the surface of structures prior to drilling, coring, sawing or slitting
- Drilling anchor holes or through penetrations for pipe and cable installations with minimal risk of hitting concealed objects
- Helps you drill right first time – knowing where to drill helps avoid costly repairs, saves time and drill bits
- A real problem solver that brings peace of mind in anchoring or coring applications when plans are no longer available, e.g. in renovation projects

Technical data

Minimum distance between two neighbouring objects	40 mm
Accuracy of depth indication ¹⁾	±10 mm
IP protection class	IP 54 (IEC 529)
Dimensions (LxWxH)	195 x 90 x 75 mm
Weight with batteries	700 g
Operating temperature range	-10 - 50 °C
Operating time with alkaline battery	5 h
Automatic switch-off	Yes
Localisation accuracy ¹⁾	±5 mm
Low battery indication	Yes

¹⁾ Performance and accuracy can be significantly affected by site conditions. See operating instructions.

PULSE POWER

Ordering designation	Package contents	Sales pack quantity	Item number
PS 50	1x Multidetector PS 50, 1x Battery AA (2) alkaline, 1x Marker pen PUA 70 set, 1x Hand strap, 1x Toolbag PSA 67, 1x Case	1 pc	2075559



Ferrosan system PS 250



Key applications and advantages

- Rebar verification and analysis
- Checking concrete cover over large areas for structural repair work
- Building acceptance inspections and quality control
- Provides accurate depth of cover measurements for reinforcement at depths of up to 100 mm
- Displays a clear 2D image of the reinforcement on the monitor for on-the-spot structural analysis and depth of cover assessment

Technical data

Rebar diameter range	6 - 36 mm
Max. detection depth for rebar	180 mm (at 36 mm rebar diameter)
Max. depth for determining rebar diameter ¹⁾	60 mm
IP protection class	IP 54 (IEC 529)
Dimensions (scanner)	260 x 132 x 132 mm
Weight (scanner) (incl. battery)	1.4 kg
Data memory (scanner)	9 Imagescans plus up to 30 m (100 ft) Quicks-can recordings
Operating temperature range	-10 - 50 °C
Operating time with NiMH battery	8 h
Dimensions (monitor)	292 x 208 x 65 mm

¹⁾ Performance and accuracy can be significantly affected by site conditions - see operating instructions



Ordering designation	Package contents	Sales pack quantity	Item number
PS 250	1x Scanner PS 200 S, 1x Battery pack PSA 80, 1x Battery pack PSA 82, 1x Battery charger PUA 80, 1x Battery AA (2) alkaline, 5x Reference grid PSA 10 (MM), 1x Monitor PSA 100, 1x Hand strap, 1x Mains adapter PUA 81, 1x Supply cord EU, 1x Infrared adapter PSA 55, 1x Concrete adhesive tape PUA 90, 1x Marker pen PUA 70 set, 1x Toolbag PSA 60, 1x Toolbag PSA 61, 1x Case	1 pc	2044434
PS 200 S	1x Scanner PS 200 S, 1x Battery pack PSA 80, 1x Hand strap, 1x Toolbag PSA 60	1 pc	377646

X-Scan system PS 1000



Key applications and advantages

- Locating rebars, tendons, metal and plastic conduits, glass-fibre cables, voids and wood in dry concrete structures at depths of up to 300 mm
- Minimizing the risk of hitting concealed objects when drilling anchor holes or through holes, breaking out openings and in diamond coring and sawing work
- Rebar extension (post-installed rebar connections) in structural applications
- Provides a real-time view of the inside of concrete structures and generates true images automatically for direct on-site evaluation of scan data by the user - no expert skills required
- Features three scan modes for specific applications: Quickscan Detection, Quickscan Recording and Imagescan (2-D and 3-D data visualization with top view and cross sectional views)


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Technical data

Minimum distance between two neighbouring objects	40 mm
Accuracy of depth indication¹⁾	<100 mm: ±10 mm;>100 mm: ±15 %
IP protection class	IP 54 (IEC 529), Battery IP 56
Dimensions (scanner)	318 x 190 x 143 mm
Weight (scanner) (incl. battery)	2.5 kg
Data memory (scanner)	Approx. 200 scans (SD) approx. 10 scans (internal flash memory)
Operating temperature range	-15 - 50 °C
Operating time with Li-ion battery	4 h
Operating time with Li-ion battery (scanner)	4 h
Dimensions (monitor)	292 x 208 x 65 mm

¹⁾ Performance and accuracy can be significantly affected by site conditions. See operating instructions.

Ordering designation	Package contents	Sales pack quantity	Item number
PS 1000	1x Scanner PS 1000, 2x Battery pack PSA 81, 1x Battery pack PSA 82, 5x Reference grid PSA 12, 2x Reference grid PSA 14, 1x Torque wrench PSW 1000-3, 1x Monitor PSA 100, 1x Hand strap, 2x Mains adapter PUA 81, 1x Memory card PSA 95, 1x Adapter PSA 96, 1x Concrete adhesive tape PUA 90, 1x Marker pen PUA 70 set, 1x Trolley PS 1000 assy, 1x Toolbag PSA 64	1 pc	2007503

Accessories for Detection Systems

		PS 250	PS 1000	Sales pack quantity	Item number
Ordering designation					
Monitor PSA 100 For viewing and evaluating scan data		■	■	1 pc	2006082
Battery charger PUA 80 Replacement or additional charger for charging the PSA 80 battery pack		■		1 pc	377457
Battery pack PSA 80 Battery for PS 200 S scanner or PS 200 M monitor		■		1 pc	377472
Concrete adhesive tape PUA 90 For fastening the reference grid to concrete surfaces		■	■	1 pc	319362
Data cable PSA 92 USB-B Length 2 m, USB data transfer cable for transferring data between PSA 100 or PS 200 M monitors and a PC		■	■	1 pc	305142
Headset PSA 93 For voice recordings and playback on the monitor		■	■	1 pc	305143
Mains adapter PUA 81 For PSA 81 or PRA 84 batteries and PSA 100 monitor		■	■	1 pc	2006089
Reference grid PSA 10 (MM) Semi-transparent plastic grid in metric units, for 600 x 600 mm Imagescan, pack of 5		■		5 pc	377654

Optical level POL 10



Key applications and advantages

- Measuring, checking and transferring heights
- Checking concrete pouring heights and levels
- Checking and adjust formwork
- High-quality optics for excellent staff readings
- High-quality mechanisms for smooth, easy operation

Technical data

Height accuracy (single measurement)	±2.0 mm at 30 m
Magnification	20 x
Standard deviation (1 km double levelling)	3 mm
Compensator type	Air-damping
Setting accuracy of compensator	0.5 "
IP protection class	IP 55 (IEC 529)
Weight	1.8 kg
Dimensions (LxWxH)	190 x 130 x 136 mm
Operating temperature range	-20 - 50 °C
Shortest target distance	0.65 m

Ordering designation	Package contents	Sales pack quantity	Item number
POL 10	1x Optical level POL 10, 1x Adjustment wrench POA 10, 1x Case	1 pc	429473

Optical level POL 15



Key applications and advantages

- Measuring, checking and transferring heights
- Checking concrete pouring heights and levels
- Checking and adjusting formwork props
- High-quality optics for excellent staff readings
- High-quality mechanisms for smooth, easy operation

Technical data

Height accuracy (single measurement)	±1.5 mm at 30 m
Magnification	28 x
Standard deviation (1 km double levelling)	2 mm
Compensator type	Air-damping
Setting accuracy of compensator	0.5 "
IP protection class	IP 55 (IEC 529)
Weight	1.8 kg
Dimensions (LxWxH)	190 x 130 x 136 mm
Operating temperature range	-20 - 50 °C
Shortest target distance	0.65 m

Ordering designation	Package contents	Sales pack quantity	Item number
POL 15	1x Optical level POL 15, 1x Adjustment wrench POA 10, 1x Case	1 pc	429474

Theodolite POT 10



Key applications and advantages

- Checking and aligning structural components and formwork
- Setting out slopes and angles
- Transferring control lines to batter boards
- Laser plummet for fast, easy setting up over a point
- Fine drive with locking system

Technical data

Angle measurement accuracy (DIN 18723)	5 "
Laser class	<4.75 mW, 630-680 nm, Class 3R (EN: 60825-1), Class IIIa (FDA CFR 21 art. 1040)
Laser plummet accuracy	1.5 mm at 1.5 m
Magnification	30 x
Compensator type	1-axis, Liquid
Setting accuracy of compensator	5 "
IP protection class	IP 55 (IEC 529)
Weight	4.6 kg
Dimensions (LxWxH)	164 x 154 x 340 mm
Operating temperature range	-20 - 50 °C

Ordering designation	Package contents	Sales pack quantity	Item number
POT 10	1x Theodolite POT 10, 1x Battery POA 80, 1x Adjustment wrench POW 10, 1x Mains adapter POA 81, 1x Mains adapter POA 82, 1x Case	1 pc	435295

Total station POS 15



Key applications and advantages

- Laying out positions and levels for excavations and formwork or fastening points on floors and ceilings
- Marking fastening points in the vertical plane on facades and walls
- Precise measurement of offsets and slopes
- Accurate — measures distances to surfaces without need for reflectors
- Practical — the guide light helps the rod operator self-align when laying out

Technical data

Angle measurement accuracy (DIN 18723)	5 "
Laser class	<4.75 mW, 630-680 nm, Class 3R (EN: 60825-1), Class IIIa (FDA CFR 21 art. 1040)
Laser plummet accuracy	1.5 mm at 1.5 m
Magnification	30 x
Measuring range	1.5 m - 340 m
Compensator type	2-axis, Liquid
Setting accuracy of compensator	2 "
IP protection class	IP 56 (IEC 529)
Weight	4 kg
Dimensions (LxWxH)	149 x 145 x 306 mm

Ordering designation	Package contents	Sales pack quantity	Item number
POS 15	1x Total station POS 15, 2x Battery POA 80, 1x Adjustment wrench POW 10, 1x Reflector foil POAW-4 set, 1x Mains adapter POA 81, 1x Mains adapter POA 82	1 pc	435259

Total station POS 18



Key applications and advantages










- Laying out positions and levels for excavations and formwork or fastening points on floors and ceilings
- Marking fastening points in the vertical plane on facades and walls
- Precise measurement of offsets and slopes
- Accurate - measures distances to surfaces without need for reflectors
- Practical - the guide light helps the rod operator self-align when laying out

Technical data

Angle measurement accuracy (DIN 18723)	3 "
Laser class	< 2.5 mW, 685 nm, Class 3R (EN 60825-1:2008), Class IIIa (FDA CFR 21 art. 1040)
Laser plummet accuracy	1.5 mm at 1.5 m
Magnification	30 x
Measuring range	1.5 m - 340 m
Compensator type	2-axis, Liquid
Setting accuracy of compensator	2 "
IP protection class	IP 56 (IEC 529)
Weight	4 kg
Dimensions (LxWxH)	149 x 145 x 306 mm

Ordering designation	Package contents	Sales pack quantity	Item number
POS 18	1x Total station POS 18, 2x Battery POA 80, 1x Adjustment wrench POW 10, 1x Reflector foil POAW-4 set, 1x Mains adapter POA 81, 1x Mains adapter POA 82	1 pc	435271

Accessories for Optical Tools

		POL 10	POL 15	POT 10	POS 15	POS 18		
Ordering designation							Sales pack quantity	Item number
Battery charger POA 82 For charging POA 80 batteries The POA 81 mains adapter is required for connecting POS 15/18 mechanical total stations to a power outlet				■	■	■	1 pc	435298
Battery pack POA 80 Li-ion battery for the POC 100 controller and POS 15/18 mechanical total stations				■	■	■	1 pc	435296
Bubble level PUA 42 For checking that the measuring rod is perfectly vertical - in order to avoid errors		■	■				1 pc	428688
Mains adapter POA 81 For charging the POC 100 controller or POS 15/18 mechanical total stations (POS 15/18 requires the additional POA 82 charger)				■	■	■	1 pc	435297
Measuring rod PUA 51 CM E-T Made from aluminium, height can be adjusted between 0.88 m and 4 m, E-scale increments, magnetic nail holder makes it easy to drive nails on formwork		■	■				1 pc	428684
Reflector rod POA 50 Reflector rod for precise targeting to the point (metric)				■	■	■	1 pc	435287
Tribrach POAW 70 Attachment plate for surveying instrument				■	■	■	1 pc	435283
Tripod PUA 20 Tripod with 5/8" thread, height can be adjusted between 1.06 m (41.7 in) and 1.70 m (67 in), metal tripod head, self-locking tripod legs, weight 4.1 kg (9 lb)		■	■				1 pc	400934
Tripod PUA 35 Wooden tripod with 5/8" thread, height can be adjusted between 1.06 and 1.70 m, metal tripod head, self-locking tripod legs, weight 6.13 kg				■	■	■	1 pc	428683

