## **Leica Geosystems Catalogue** The right tools for any construction site



- when it has to be **right** 



## Swiss Technology Quality builds trust

#### Dedicated to Innovative Technology and Quality

Leica Geosystems is one of the world's leading providers of modern surveying solutions. Quality is not only our aspiration but our obligation. It is the result of over 200 years of tradition and of constant innovations based on intensive research.

To ensure our instruments meet the highest precision and quality demands, we manufacture them in state-of-the-art facilities around the world, where Swiss technology is combined with exceptional craftsmanship.







## Leica Geosystems Construction Tools - Robust and Reliable

Leica Geosystems construction tools are renowned for being robust and dependable on all construction sites; they provide the best reliability over many years, even in extreme environments. All Leica Geosystems construction tools undergo stringent mechanical and environmental tests before they leave our factories. Your benefit – Leica Geosystems construction tools provide you with the confidence you expect from your instrument.







#### **Extended Warranty**

For decades millions of users have placed their trust in Leica Geosystems products. The basis for this success is not only our power of innovation but also the great emphasis we place on the quality and reliability of our devices.

Since May 2008, Leica Geosystems offers a one year extended warranty period on many instruments. All construction instruments applicable for an extended warranty are available in this catalogue. All you have to do is simply register your instrument within 8 weeks from purchasing at www.leica-geosystems.com/registration.

What are the conditions to be fulfilled in order to obtain the warranty?

- The end customer must register the product on our website at www.leicageosystems.com/registration within 8 weeks of the date of purchase, otherwise the standard warranty period applies.
- The warranty relates to the date of purchase by the end customer (after 1.1.2008).
- An extended warranty is currently offered for the Leica DISTO<sup>™</sup> Family, Rugby 50/55, Rugby 260/270SG & 280DG, Rugby 320SG & 410/420DG, Piper 100/200, the Roteo Family and the NA700 series.

For more detailed information please refer to our homepage www.leica-geosystems.com

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### 04 Leica Geosystems Levels

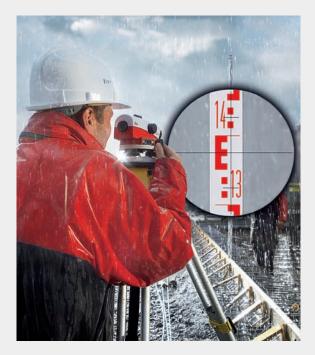
## **Level Overview**

#### Extreme robustness, high measurement precision and an extremely competitive price. All this makes the difference! Moreover, Leica Geosystems levels are so easy to use. No need to spend time in training.

Our ergonomic optics are probably the finest optics in the world. Banish tired eyes forever and ensure you're really aiming accurately at the target, even in extreme light conditions.

Leica Geosystems levels can be configured to suit your work and preferences. Horizontal angles can be read in either degrees or gons, with some levels.

Just in case – some of our Leica Geosystems levels are shock resistant. So the systems can continue to be used, even after a fall.



APPLICATIONS	Jogger Series	Runner 20/24	NA720	NA724	NA728	NA730	NA2/ NAK2
Daily levelling tasks: Site foremen, carpenters, construction companies, landscaping	х	х	х	х	х	х	-
Daily levelling tasks: with high demand for product robustness e.g. for construction of roads, railways and buildings	-	-	Х	Х	Х	Х	-
High accuracy levelling : even for building or engineering surveyors	-	-	-	-	Х	Х	x
Precision levelling: even for settlement determinations on building, deformation measurement and monitoring bridges	-	-	-	-	-	-	Х
FEATURES							
Water resistant	х	х	х	х	х	х	х
Waterproof (immersion) & dustproof	-	-	Х	х	Х	х	-
Shock resistant	-	-	Х	х	х	х	-
Rough/fine focus	-	-	-	-	х	х	-
Parallel-Plate micrometer for precise levelling (optional)	-	-	-	-	-	-	Х
Warranty	1 year	1 year	2 years + 1	3 years			





Levelling can be so easy with digital levels from Leica Geosystems. Push the button and heights, height differences and distances are automatically displayed. There will be no more misreading and interpretation errors in reading the staff.

It is also possible to use it as an optical level. But compared to a conventional level, the digital levels effortless, fast measurements could save your valuable time and reduce errors. Our digital levels even include additional error reducing functions such as built-in tilt sensors, preventing the system from measuring if the user operates outside the compensator range.

For high accuracy requirements, Leica Geosystems provides additional digital levels like Leica DNA03/10. For further information please visit our homepage www.leica-geosystems.com.



APPLICATIONS	Sprinter 50	Sprinter 150	Sprinter 150M	Sprinter 250M
Error-free levelling for all construction applications, e.g. for construction off-road, railways and buildings	Х	Х	Х	х
Error-free levelling for all construction applications with demand for data storage and transfer,e.g road & building construction	-	-	Х	Х
High accuracy levelling in all application areas, e.g. road & building construction, civil engineering,topography and cadastral	-	-	-	Х
High accuracy levelling in all areas with demand for data storage and transfer,e.g architecture and engineers survey	-	-	-	Х
FEATURES				
Optical staff reading	х	х	х	Х
Automatic staff reading	Х	Х	Х	Х
Inverse staff reading	Х	Х	Х	Х
Automatic calculation of heights & distances	Х	Х	х	Х
Delta Height	-	Х	Х	Х
Multilingual function	-	Х	Х	Х
Tracking	-	х	Х	Х
Cut & Fill and monitoring	-	-	Х	Х
Line Levelling	-	-	х	х
Data storage & USB	-	-	х	х
Warranty	1 year	2 years	2 years	2 years



### 06 Optical Levels

## Leica Jogger Series

#### Fit for Work

The Jogger Series are economical levels for any construction team – carpenters, supervisors, engineers & architects etc. These job site levels are always ready for fast setting up on tripod. Coarse aiming at target with large peep sight is easy & swift, increasing your levelling work efficiency.

They are easy to use and reliable in measurement for all levelling tasks around the job site.





1.5 kg

1.5 kg

**FEATURES** 

Magnification

Angle Measurement

Standard deviation (per km double-run)

Dust/ Water Protection

Working Temperature

Shortest focusing

distance

Weight





1.5 kg

1.5 kg

## Leica Runner 20/24

#### **Tough and Accurate**

Leica Runner 20 and 24 are two robust and value-priced, automatic builder's levels. Designed to work hard on the job site, they are quick to set up, simple to use and very reliable.

The automatic compensator and the quality optics speed up measurements on site and increase accuracy.

Runner is the ideal construction level for site foremen, engineers, architects, landscape gardeners and other professionals.







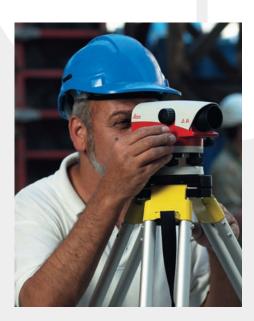
FEATURES	Runner 20	Runner 24
Magnification	20x	24x
Angle Measurement	360°	360°
Standard deviation (per km double-run)	2.5 mm	2.0 mm
Dust/ Water Protection	IP55	IP55
Working Temperature	-20°C to +50°C	-20°C to +50°C
Weight	2.0 kg	2.0 kg
Warranty	1 year	1 year

08 Optical Levels

## Leica NA700 Levels

## Built for Builders, Engineers and Surveyors

Nothing stops a Leica NA700 level. A short drop onto the ground, a fall into water, vibration from heavy machinery – with a Leica NA700 level you just carry on working. And, the 'best in class' optics enable you to always work as precisely as possible, even in twilight. The NA728 and NA730 have a rough/fine focus drive making your work even easier. What does this add up to? Reduced work downtime, translating into higher productivity, reliability and accuracy at an extremely reasonable price.



#### NA720, Automatic Level

20x telescopic magnification. The automatic level for all applications on the construction site

#### Order No: 641 982

#### NA724, Automatic Level

24x telescopic magnification for improved accuracy. Reliability and robustness for the demanding construction user

Order No: 641 983

#### NA728, Automatic Level

28x telescopic magnification, precision compensator. The all-rounder. For building or engineering surveys

Order No: 641 984

#### NA730, Automatic Level

30x telescopic magnification. The most precise. Meets the highest standards in construction, engineering and topographic surveys

Order No: 641 985

#### **CTP104 Aluminium Tripod**

Medium duty aluminium tripod with carrying strap and fast clamps (CTP104D Dome-Head - Order No: 767 711)

Order No: 767 710

#### CLR102, Telescopic Level Staff

5 m length, 4 sections, front side with E-graduation and back side with mm-graduation.

Order No: 727 588



NA720	NA724	NA728	NA730
20x	24x	28x	30x
360°/400gon	360°/400gon	360°/400gon	360°/400gon
2.5 mm	2.0 mm	1.5 mm	1.0 mm
IP57	IP57	IP57	IP57
-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
1.6 kg	1.6 kg	1.7 kg	1.7 kg
	20x 360°/400gon 2.5 mm IP57 -20°C to +50°C	20x      24x        360°/400gon      360°/400gon        2.5 mm      2.0 mm        IP57      IP57        -20°C to +50°C      -20°C to +50°C	20x      24x      28x        360°/400gon      360°/400gon      360°/400gon        2.5 mm      2.0 mm      1.5 mm        IP57      IP57      IP57        -20°C to +50°C      -20°C to +50°C      -20°C to +50°C

Warranty

2 years / 3 years when registerd within 8 weeks after purchase



## Leica NA2/NAK2

## The classical Level from Leica Geosystems

The Leica NA2 universal automatic level meets all requirements regarding precision, convenience and reliability. It was designed by surveyors and development engineers with years of experience, that know what a field instrument has to be able to do. The NA2 soon pays for itself, because it can be used for all types of surveying jobs; on building sites for routine levelling, in engineering projects and for geodetic control at all levels of accuracy.







FEATURES	NA2	NAK2
Magnification	32x	standard: 32x FOK73 eyepiece (optional): 40x
Angle Measurement	-	360°/400gon
Standard deviation (per km double-run)	0.7 mm/km (0.3 mm with parallel-plate micrometer)	0.7 mm/km (0.3 mm with parallel-plate micrometer)
Dust/ Water Protection	IP53	IP53
Working Temperature	-20°C to +50°C	-20°C to +50°C
Weight	2.4 kg	2.4 kg
Warranty	3 years	3 years

### 10 Digital Levels

## Leica Sprinter

#### Go ahead.... Push the button

#### Sprinter 50

The Leica Sprinter 50 is the perfect levelling tool for daily tasks and basic work on the construction site. The user just aims, focuses the staff like an optical level, and measures by pressing one single button. The data is displayed almost instantly. Misreadings are eliminated, and error reducing functions, such as the tilt sensor, prevent the system from measuring if the user operates outside the compensator range.

#### Sprinter 150 / 150M / 250M

For more complex construction tasks, the Sprinter 150 automatically determines delta height and reduced level. The Sprinter 150M and 250M, on the other hand, are the perfect tools for advanced construction levelling tasks. They can store up to 1'000 measurements, and the user can download and transfer these for further calculations to a PC with Excel® easier than ever before via USB. The Sprinter's onboard software, with functionalities such as Line Levelling and Cut & Fill as well as monitoring, facilitates all levelling jobs significantly. And best of all - it's available in your language!





Aim and Focus



Push the button



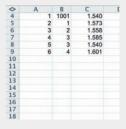
Read



Calculate



Memorise



Download

#### Sprinter 50

Electronic level, standard deviation 2.0 mm, includes container, strap, adjustment tools, user manual, leaflet, 4 AA batteries US Version Order No: 764 686

Order No: 762 628

#### Sprinter 150

Electronic level, standard deviation 1.5 mm, includes container, strap, adjustment tools, user manual, 4 AA batteries

Order No: 762 629

#### Sprinter 150M

Electronic level with internal memory, standard deviation 1.5 mm, includes container, strap, adjustment tools, user manual, 4 AA batteries, USB cable, CD

Order No: 762 630

#### Sprinter 250M

Electronic level with internal memory, standard deviation 1.0 mm, includes container, strap, adjustment tools, user manual, 4 AA batteries, USB cable, CD

Order No: 762 631

#### **Multilingual Function**

Mult

The Sprinter 150/150M/250M are featured with multiple languages onboard. This allows the user to choose the preferred language.

**GSS 111, Dual Face Telescopic Levelling Staff** 5 m, 4 sections, Sprinter barcode/E-Scale cm-graduation, with circular bubble, in transport bag (Std. version)

Order No: 741 882

GSS 111-2, Barcode/5mm-graduation (Japan) Order No: 741 885

GSS 112-3, Barcode/E-Scale cm-graduation (UK) Order No: 741 884

GSS 112-5, Barcode/2mm-graduation (Spain)

Order No: 741 886

#### **GSS113, Fibreglass dual face staff** 3 m, 1 section, Sprinter barcode/E-scale cmgraduation, with circular bubble, transport bag

Order No: 764 452

#### **CTP104 Aluminium Tripod**

Medium duty aluminium tripod with carrying strap and fast clamps (CTP104D Dome-Head - Order No: 767 711)

Order No: 767 710

#### CTP106 Aluminium tripod

3

Light-weight with shoulder strap  $\boldsymbol{\mathcal{E}}$  side clamp screws

Order No: 767 712







Technical Data	Sprinter 50	Sprinter 150/150M	Sprinter 250M				
Height accuracies	Standard deviation	Standard deviation height measurement per 1 km double run (ISO 17123-2)					
-Electronic measurement*	2.0 mm	1.5 mm	1.0/0.7* mm				
-Optical measurement	With sta	ndard aluminum E-scale/Numeral staft	: 2.5 mm				
-Single staff reading	Standard Deviat	ion: 0.6 mm (electronic) and 1.2 mm (	optical) at 30 m				
Distance accuracies	Standard deviation distance mea	surement 10 mm for D < 10 m and (Di	stance in m x 0.001) for D > 10 m				
Range		2 –100 m (electronic)					
Measuring modes		Single and Tracking					
Time for single measurement		<3 sec					
Compensator	Magnet da	mped pendulum compensator (range	+/- 10 min)				
Telescope		Magnification (optical) 24x					
Data storage		up to 1'000 points (only 150M)	up to 1'000 points				
Environmental conditions		IP55					
Power supply	AA dry cells (4 x LR6/AA/AM3 1.5 V)						
Weight		<2.5 kg					

\* 0.7 mm can be achieved with Sprinter fibre glass barcode staff

### 12 Line and Dot Lasers

## Leica Lino Family



#### Setup, Switch on, Ready!

Leica Linos project lines or points to millimeter accuracy, leaving your hands free to get on with the job. Making your work a lot easier!

They automatically compensate for minor angular misalignments by levelling themselves over a range of  $\pm 4^{\circ}$ . So you avoid errors. The top quality optics and proven Power Range Technology<sup>TM</sup> ensure that the projected laser lines and points are highly visible and accurate. So they are simple to understand and easy to operate.

#### Leica Lino P3

Target plate, magnetic multifunction adapter, alkaline batteries (type AA, 3  $\times$  1.5 V), pouch

Order No: 777 067

#### Leica Lino P5

Target plate, magnetic multifunction adapter, alkaline batteries (type AA, 3  $\times$  1.5 V), pouch

Order No: 777 068

Order No: 757 225

#### Leica Lino L2

Target plate, magnetic multifunction adapter, ball adapter for tripod, alkaline batteries (type AA,  $3 \times 1.5$  V), carrying pouch

#### Leica Lino L2+

Target plate, magnetic multifunction adapter, alkaline batteries (type AA, 4  $\times$  1.5 V), pouch

Order No: 783 711

#### Leica Lino L2P5

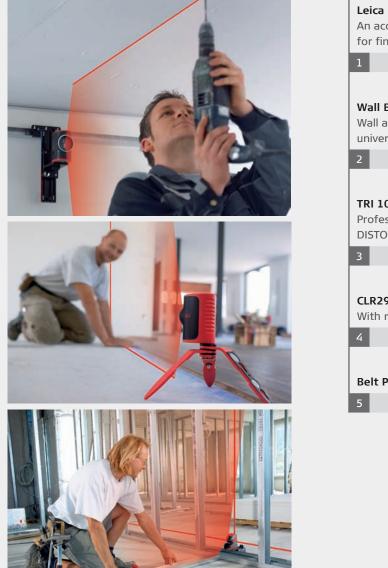
Target plate, magnetic multifunction adapter, alkaline batteries (type AA, 4  $\times$  1.5 V), pouch

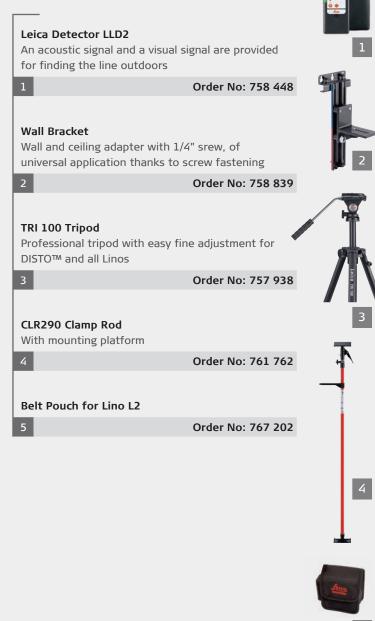






Order No: 777 069





Technical Data	Lino P3	Lino P5	Lino L2	Lino L2+	Lino L2P5
Range			up to 15 m*		
Levelling accuracy @ 5 m	± 1	L.5 mm	± 1	± 1.5 mm	
Self-levelling range			4° ± 0.5°		
Accuracy of plumb point @ 5 m	± 1	L.5 mm		-	± 1.5 mm
Accuracy of horizontal line @ 5 m		-		± 1.5 mm	
Vertical accuracy @ 3 m line length		-		± 0.75 mm	
Beam direction	up, down, forward	up, down, forward, right, left	vertical, horizontal	vertical, horizontal	vertical, horizontal, up, down, right, left
Laser type			635nm, laser class II		
Protection class splash water/dust-proof	IP54				
Battery types	type AA 3x1,5V type AA 4x1,5V				A 4x1,5V
Weight without batteries	310g	320g	321g	3	70g

\* depending on lighting conditions

2 years / 3 years when registerd within 8 weeks after purchase

### 14 Construction Lasers

## **Laser Overview**

#### Whether it's general construction, pipe laying, machine control, or interior walls and ceilings, our lasers are built to handle any environment.

All construction lasers are of high technology and high precision tools. Compare these features and you'll see why our construction lasers set the standard for durability and value. Leica Geosystems lasers are waterproof, that means all critical components are completely protected from all wet weather conditions. The aluminum base of the Rugby 100/100LR/200 withstands rough handling and is highly resistant to abrasion and fracture.

Construction-tough components have all undergone rigorous testing to assure long life under harsh conditions.



APPLICATIONS	Rugby 50	Rugby 100	Rugby 100LR	Roteo 35	Roteo 35G	Roteo 20HV	Roteo 25H	Rugby 55	Rugby 200
General construction: excavation, footing, concrete forming	х	х	х	-	-	-	-	х	х
Civil engineering: parking lots, runways, sports fields	-	-	Х	-	-	-	-	-	-
Interior construction	-	-	-	Х	х	х	х	х	х
Installing ceiling grids	-	-	-	Х	Х	Х	Х	Х	Х
Transferring points from floor to ceiling	-	-	-	х	Х	Х	Х	Х	х
Machine control of excavators, graders, dozers and similar equipment	х	х	Х	-	-	-	-	-	-
Agricultural applications such as land levelling or tiling	-	-	х	-	-	-	-	-	
Best visibility with green laser	-	-	-	-	х	-	-	-	-
FEATURES									
Waterproof and dustproof	IP55	IP56	IP56	IP54	IP54	IP54	IP54	IP55	IP56
Co-molded rubber bumpers	-	Х	Х	-	-	-	-	-	Х
Elevation alert	Х	Х	Х	Х	х	х	х	х	х
Working Range up to 750 m diameter	-	-	х	-	-	-	-	-	-
Scan Modes	-	-	-	х	Х	х	-	х	х
Remote Control	-	-	-	Х	Х	Х	Х	Х	Х
Grade entry with display	-	-	-	-	-	-	-	-	-
Manual Grade Capability	-	Х	Х	Х	х	х	х	х	х
Two-year plus knockdown warranty	-	х	х	-	-	-	-	-	х





#### Grade Laser

Leica Geosystems' Grade Lasers are the most accurate and reliable lasers for general construction, civil engineering and machine control applications that require precise grade. They can be used wherever level, single or dual grades are required and are compatible with the 2D and 3D Machine Control Systems of Leica Geosystems for ultimate grade control.



APPLICATIONS	Rugby 260SG	Rugby 270SG	Rugby 280DG	Rugby 320SG	Rugby 410DG	Rugby 420DG
General construction: excavation, footing, concrete forming	х	Х	х	х	х	х
Civil engineering: parking lots, runways, sports fields	-	-	-	Х	Х	Х
Installing septic and gravity flow pipe for drainage	х	Х	Х	Х	Х	Х
Machine control of excavators, graders, dozers and similar equipment	Х	х	х	х	х	х
Agricultural applications such as land levelling or tiling	-	-	-	Х	Х	х
FEATURES		-				
Waterproof and dustproof	IP67	IP67	IP67	IP57	IP57	IP57
High impact composite housing	х	х	х	х	х	х
Elevation alert	Х	Х	х	х	х	Х
Working Range up to diameter	600 m	700 m	700 m	900 m	800 m	1100 m
Scan Modes	-	-	х	-	-	-
Remote Control	-	-	х	-	х	Х
Grade entry with display	х	х	х	х	х	х
Dual Grade	-	-	х	-	х	х
Two-year warranty	х	х	х	х	х	х
Two-year plus knockdown warranty	х	Х	Х	-	-	-



16 General Construction Lasers

## Leica Rugby 50

#### The simple one-button Construction Laser

Designed for general construction, the Leica Rugby 50 is a tough, affordable laser; ready to work when the user is. The Leica Rugby 50 has only one button. Press the button, wait until it self-levels and the head starts rotating, then work can begin. It will continue to self-level over the course of the day to ensure that work is accomplished reliably and accurately. H.I. Alert features monitor the Leica Rugby 50 as it works and shuts it down if it senses a bump or movement of the tripod.





Features:

- Simple, one-button operation
- High impact composite housing
- Fully sealed with protected head
- Watertight for all conditions
- Long battery life
- H.I. (Elevation) Alert protection/ Out of level indication
- Low battery indicator



**Rugby 50 Package with Rod Eye Plus** Consisting of: Rugby 50 with Carrying Case, Rod Eye Plus receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3466)

Order No: 600 3467

**Rugby 50 Package with Rod Eye Basic** Consisting of: Rugby 50 with Carrying Case, Rod Eye Basic receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3468)

Order No: 600 3469

Universal Charger / Power Supply with seperate power cable

Order No: 727 165

**Alkaline Battery Holder** For Rugby 50/55 (without batteries)

Order No: 752 048



Order No: 752 049



## Leica Rugby 100/100LR

#### The rugged Family of Construction Lasers

The Leica Rugby 100 and Leica Rugby 100LR are automatic self-levelling rotating lasers for general construction and machine control. They are designed to be rugged yet easy to use. They can make quick work of concrete forming, pad placement and framework, setting foundations and footings, etc. The Rugby 100LR with its longer distance and increased accuracy is a perfect solution for level machine control applications.

The Leica Rugby 100 and 100LR have become the standard in general construction lasers. Ruggedness, accuracy and reliability are the key to the success of the Leica Rugby's.

#### Features:

- Waterproof and dust proof to work reliably in all weather and job site conditions
- Wide, stable aluminum base for maximum strength and stability
- The head is enclosed to protect the interior parts
- Rugged, high-impact housing
- Two-year plus knockdown warranty



#### Rugby 100 Package with Rod Eye Plus

Consisting of: Rugby 100 with Carrying Case, Rod Eye Plus receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3493)

Order No: 600 3496

## Rod Eye Receivers see page 42

#### Lasers at a glance Rugby 50 Rugby 100 Rugby 100LR Working Range (diameter) 300 m 300 m 750 m Accuracy ± 2.6 mm @ 30 m ± 1.5 mm @ 30 m ± 1.5 mm @ 30 m Self-levelling Horizontal Horizontal Horizontal Waterproof IP55 IP56 IP56 Manual grade operation No Yes Yes Yes\* Yes\*\* Yes\*\* Two-year warranty 2 1 Laser class 1

\* with registration

\*\* includes knockdown warranty

#### Rugby 100LR Package with Rod Eye Plus

Consisting of: Rugby 100LR with Carrying Case. Rod Eye Plus receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3499)

Order No: 600 3502

#### Rugby 100 Package with Rod Eye Digital Consisting of: Rugby 100 with Carrying

Case, Rod Eye Digital receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3492)

Order No: 600 3495

## Rugby 100LR Package with Rod Eye Digital

Consisting of: Rugby 100 with Carrying Case, Rod Eye Digital receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3498)

#### Order No: 600 3501

#### NiMH Battery Pack

2

Order No: 726 746

Universal Charger / Power Supply with seperate power cable

Order No: 727 165

Order No: 726 747

#### Alkaline Battery Holder

For Rugby 100/100LR/200/260SG 270SG/280DG (without batteries)





### 18 Interior Construction Lasers

## Leica Roteo Family



#### Strong performance on all levels

Leica Roteo rotating lasers are truly multi-talented performers. Whether on ceilings or walls, on the floor or on a tripod – they allow you to work precisely on many indoor and outdoor tasks in which levelling or aligning is required.

#### Featured with

- Self-levelling
- Simple and intuitive to operate
- Available in the right package for every application
- Now with a green laser for excellent visibility



Technical Data	Leica Roteo 35	Leica Roteo 35G	Leica Roteo 20HV	Leica Roteo 25H
Range		up to 150 m radius	with laser receiver	
Self-levelling accuracy		± 3 mm	at 30 m	
Automatic self-levelling laser		horizontal, vertical		horizontal
Self-levelling range		± 4	4.5°	
Rotation speed	var	iable 0, 150, 300, 450, 600	rpm	600 rpm
Scanning angle		variable between 2° and 36	0	n/a
Wall mount bracket	motorised	motorised	manual	n/a
Dimensions laser ( $H \times W \times D$ )		189 × 136 × 208 mm (wit	hout wall mount bracket)	
Weight with batteries		1.7	/ kg	
Battery types	Alkaline D cells, 2 × 1.5 V or rechargeable battery pack (NiMH)		Alkaline D cells, 2 × 1.5 V	Alka. D cells, 2 × 1.5 V or recharge. battery pack (NiMH)
Battery life	50 hours (rechargeable), up to 160 hours (alkaline batteries)	25 hours (rechargeable), up to 40 hours (alkaline batteries)	up to 160 hours (alkaline batteries)	50 hours (rechargeable), up to 160 hours (alkaline batteries)

2 years / 3 years when registerd within 8 weeks after purchase



### Leica Roteo 20HV

The basic model

The Leica Roteo 20HV is the ideal rotating laser for basic users. Its easy-to-understand keypad is intuitive to operate. The package includes a complete set of accessories for interior works with remote control, wall mount bracket and target plate.

#### Leica Roteo 25H Horizontal laser

The Leica Roteo 25H offers fully automatic horizontal selflevelling and even the possibility of inclining the levelling plane on the instrument.

The detector supplied in the set efficiently locates the laser beam over long distances: An appealing package for exterior works.

#### Leica Roteo 35

#### The all-in-one rotating laser

The Leica Roteo 35 impresses everyone with its powerful features and complete set of accessories for every application, especially for interior works. The wall mount bracket allows convenient motorised control of the laser beam height by the combined remote control/detector or by manual adjustment.

#### Leica Roteo 35G

#### The all-in-one rotating laser with a green beam

The Leica Roteo 35G has all the characteristics of the Leica Roteo 35. In addition, it has a green laser beam for better visibility in very bright conditions and over very long distances. The pioneering green laser beam is four times more visible to the human eye. So you have the best possible visibility.









### 20 Interior Construction Lasers



R250 Laser detector with clamp for Roteo 20HV/25H/35 For locating the red reference laser beam

Order No: 772 793

RRC350 Combined remote control/detector with clamp for Roteo 20HV/25H/35 For locating the red reference laser beam



**RC350 Remote Control** 

2

4

Order No: 762 770

Order No: 762 771

**CLR290 Clamp Rod** With mounting platform

Order No: 761 762

#### CTP106 Aluminium tripod

Light-weight with shoulder strap & side clamp screws

Order No: 767 712

#### CET103 Elevator tripod

with shoulder strap, fast clamps and bubble, min. working height 84 cm, max. extension 246 cm (incl. extendible center column), with mm-scale, exchangeable rubber feet

Order No: 768 033

**CTP104D Dome-head aluminium tripod** with shoulder strap and fast clamps, medium weight. Suitable for levels.

Order No: 767 711





#### Leica Roteo 20HV Package

Leica Roteo 20HV rotating laser, manual wall mount bracket, RC350 remote control, battery (AA) for the remote control, battery holder for alkaline batteries, red target plate, red laser glasses, batteries for laser

Order No: 772 789

#### Leica Roteo 25H Package

Leica Roteo 25H rotating laser, R250 detector with clamp, 9V battery for the detector, battery holder for alkaline batteries, rechargeable batteries, international charger, red target plate

Order No: 772 788

#### Leica Roteo 35

Leica Roteo 35WMR rotating laser, motorised wall mount, RRC350 combined remote control/ detector unit with clamp, 9V battery for the combined unit, battery holder for alkaline batteries, rechargeable batteries, international charger, red target plate, red laser glasses

Order No: 765 752

#### Leica Roteo 35G

Leica Roteo 35G rotating laser, motorised wall mount, RRC350G combined remote control/ detector unit with clamp, 9V battery for the combined unit, battery holder for alkaline batteries, rechargeable batteries, international charger, green target plate, green laser glasses

Order No: 772 787



## Leica Rugby 55



#### The multipurpose Construction Laser

Designed for interior construction, the Leica Rugby 55 is a tough, versatile laser. It provides today's contractors with the tools needed for virtually any levelling or alignment job. The Leica Rugby 55 features an easy to use keypad, a watertight seal, variable head speeds, selectable scanning modes, a bright red beam and an alkaline or rechargeable NiMH battery pack.



**Scan-90** Scanning or stationary beam can be quickly positioned in 90° increments.



Beam Down Mode

To position the beam over a reference point.



**Sleep Mode** Conserve battery life without disturbing your setup.

#### Rugby 55 Package with Rod Eye Basic

Consisting of: Rugby 55 with standard carry case, Rod Eye Basic receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3484)

Order No: 600 3485

#### Rugby 55 Package with Rod Eye Plus

Consisting of: Rugby 55 with standard carry case, Rod Eye Plus receiver and rechargeable NiMH batteries. (Alkaline version - Order No: 600 3482)

Order No: 600 3483

#### **Rugby 55 Interior Package**

Consisting of: Rugby 55 with Interior carry case, IR Remote Control, Wall Mount Bracket, Ceiling Grid Targets (2) and rechargeable NiMH batteries. (Alkaline version - Order No: 600 0726)

Order No: 600 0727

### Ceiling Grid Target, Magnetic Order No: 732 791 Wallmount Bracket Order No: 733 073 **IR Remote Control** 3 Order No: 755 008 **NiMH Battery Pack** For Rugby 50/55 Order No: 752 049 **Alkaline Battery Holder** For Rugby 50/55 (without batteries) Order No: 752 048 Universal Charger / Power Supply with seperate power cable Order No: 727 165













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### 22 Interior Construction Lasers

## Leica Rugby 200

#### **Tough Inside and Out**

The Leica Rugby 200 is a heavy-duty, horizontal and vertical self-levelling laser. Completely sealed, the Rugby 200 is ideal, inside and out, for both general and interior construction applications. Similar to the Rugby 100/100LR it is featured with a knockdown warranty. You can use it for installing ceiling grids and laying out walls, installing raised access floors as well as exterior site preparation.



#### Features:

- 10" accuracy
- Fully automatic self-levelling
- Variable head speeds
- Selectable scan modes
- Manual with cross-axis self-levelling
- Automatic H.I. elevation alert
- Plumb reference point feature
- Sealed and waterproof
- Two-year plus knockdown warranty





#### Rugby 200 Interior Package

Consisting of: Rugby 200 with Interior Carrying Case, IR Remote Control, Wall Mount Bracket, Ceiling Grid Targets (2) and rechargeable NiMH Batteries. (Alkaline version - Order No: 747 764)

Order No: 747 765



Lasers at a glance	Rugby 55	Rugby 200
Working Range (diameter)	300 m	300 m
Accuracy	± 2.6 mm @ 30 m	± 1.5 mm @ 30 m
Self-levelling	Horizontal + Vertical	Horizontal + Vertical
Waterproof	IP55	IP56
Scan function	Yes	Yes
Remote control	Yes	Yes
Two-year warranty	Yes*	Yes**

\* with registration \*\* including knockdown warranty

#### Grade Lasers

## Leica Rugby 260SG, 270SG, 280DG



#### Leica Rugby 260SG A highly accurate, general construction laser with single grade capability.

The Rugby 260SG is a rugged general construction laser with ten arc second accuracy, LCD grade readout and semi-automatic grade with bump alert.

#### Leica Rugby 270SG

#### A fully automatic, single grade laser.

The Rugby 270SG is a fully automatic, single grade laser for the general construction contractor that needs a level or single slope for flat work, site preparation, septic installation, trenching and more.

#### Leica Rugby 280DG

## Multipurpose Plus – A horizontal, vertical and dual grade laser for any exterior or interior application.

The Rugby 280DG is a multipurpose laser "Plus" with fully automatic, dual grade capability. It has a bright red beam, plumb beam, scan mode, horizontal and vertical self-levelling, plus dual grade up to 15% in both axes. Available with a two-way remote control.





**Rugby 260SG Package with Rod Eye Plus** Rugby 260SG with Carrying Case, Rod Eye Plus receiver and rechargeable NiMH Batteries

Order No: 600 3537

**Rugby 270SG Package with Rod Eye Plus** Rugby 270SG with Carrying Case, Rod Eye Plus receiver and rechargeable NiMH Batteries

Order No: 600 3543

Rugby 280DG Package with Rod Eye Plus Rugby 280DG with Carrying Case, Rod Eye Plus receiver, Laydown Bracket and rechargeable NiMH Batteries

Order No: 600 3550

## Rugby 280DG Package with Rod Eye Plus and Remote Control

Rugby 280DG with Carrying Case, Rod Eye Plus receiver, Remote Control, Laydown Bracket and rechargeable NiMH Batteries

Order No: 600 3551

RF Remote Control, Rugby MR (for Rugby 280DG)

Order No: 768 543

Lasers at a glance	Rugby 260SG	Rugby 270SG	Rugby 280DG
Working Range (diameter)	600 m	700 m	700 m
Horizontal leveling accuracy	± 1.5 mm @ 30 meter	± 1.5 mm @ 30 meter	± 1.5 mm @ 30 meter
Self-leveling	Horizontal	Horizontal / Grade	Horizontal / Vertical / Grade
Grade Capability	± 10% (x-axis)	± 15% (x-axis)	± 15% (both axes)
Environmental	IP67	IP67	IP67
Operating Temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Two-year plus knockdown warranty	Yes	Yes	Yes

### 24 Grade Lasers

## Leica Rugby 320SG & 410/420DG



#### Rugby, the toughest players on any field.

Making the grade is what the Leica Rugby is all about. Whether your work requires level, single or dual grades and high accuracy over a long distance range, the Leica Rugby's extensive features will ensure both material and labour savings, keeping you on target to increase your bottom line.

The Leica Rugby Grade Lasers are automatic and self-levelling for jobs of any size, large or small. They can be used for any application involving precise grade control such as:

- Building pads, parking lots and runways
- Precise depth control for sub-base and fine grade excavation
- Agricultural applications such as land leveling or tiling
- Concrete forming and framework
- Retention ponds and batters
- Setting foundations and footings
- Absolute compatibility with the widest range of machine control solutions





Lasers at a glance	Rugby 320SG	Rugby 410/420DG		
Working Range (diameter)	900 m	800 m (410DG), 1100 m (420DG)		
Accuracy	± 1.5 mm @ 30 m	± 1.5 mm @ 30 m		
Self-levelling	Horizontal + Grade	Horizontal + Grade		
Grade Capability	-5 to +25% in one axis	-5 to + 25% in either axis -5 to +15% in both axis		
Waterproof	IP57	IP57		
Operating Temperature	-20° C to +50° C	-20° C to +50° C		
Weight	5 kg	5 kg		
Warranty	2 years / +3 years extension available on request			

### **Pipe Lasers**

## Leica Piper 100/200

#### Rock solid Construction, outstanding Performance in a compact Package

Built with a rugged aluminum housing, these pipe lasers perform powerfully even in tough jobsite conditions. The Leica Piper is the only pipe laser that fits inside a 100 mm (four inch) pipe.

- Automatic grade compensation
- Long battery life
- Bright, powerful beam
- Large, easy to read display
- Alignmaster™ Automatic target recognition (Piper 200)



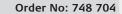
#### ... in the manhole



... in the pipe



#### **Piper 100 with Remote, Target and Li-Ion Battery** Piper 100 with Carrying Case, IR Remote Control, Target Assembly, Lithium-Ion Battery (GEB221), 4Ah, Charger Li-Ion (GKL211), incl. AC adapter, car adapter



## Piper 200 with Alignmaster™, Remote, Target and Li-Ion Battery

Piper 200 with Carrying Case, IR Remote Control, Target Assembly, Lithium-Ion Battery (GEB221), Charger Li-Ion (GKL211, incl. AC adapter and car adapter)

Order No: 748 710

Order No: 746 158

#### Target Assembly

Order No: 725 858

Trivet Assembly

IR Remote Control

Order No: 746 157

#### Target Assembly, 4"/100 mm

Order No: 748 775



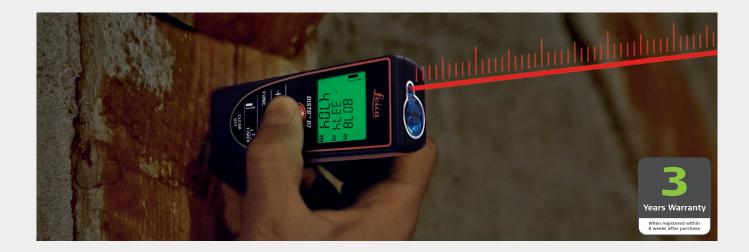






### 26 Laser Distance Meters

## Leica DISTO™ Family



#### Simple, quick and accurate!

Quick and efficient

You can measure distances at the touch of a button, in just a few seconds – even when working on your own. Saving you time and money.

- Precise and reliable
  The laser makes it possible for you to measure distances precisely to the millimetre.
- Safe and modern

You can avoid dangerous measurement situations and potential associated accidents. Use the modern technology of today.

#### Leica DISTO™ DXT

The robust one: tested with drop tests from a height of 2 m, jet water protected and dust-proof with IP65: this device is made for measurements under extreme conditions. Whether measuring out of corners, slots or from edges, with the multifunctional end-piece you are prepared for all measuring situations. The instrument detects the position of the end-piece automatically, which helps you to avoid expensive measuring errors.

#### 1

Order No: 774 697

#### Leica DISTO™ D2

The compact and handy base model was specifically designed for indoor applications. Shortcut keys for addition, subtraction, area and volume calculation make measuring fast and very reliable. The comprehensive measurement results are clearly displayed on three lines. Easily readable, even in the dark, thanks to the illuminated display.

Order No: 762 200







SNALLEST LASER DISTANCE METER IN THE WORLD!



#### Leica DISTO™ D3a

The Leica distance meter with Smart Horizontal Mode<sup>™</sup> for absolute precise measurements. The combination of distance and tilt measurements opens up a variety of new measuring options, such as horizontal distances or indirect heights and widths. The Leica DISTO<sup>™</sup> D3a can calculate rectangular and triangular areas, volumes, room dimensions and various types of Pythagoras functions. A time delay release and enough memory for up to 20 measurements round off the instrument's wide range of functions. The results are displayed on the large (2"), clearly arranged and high contrast display. At the touch of a button, the display shows supplementary information about the measurement taken.

Order No: 776 748

Order No: 776 747

#### Leica DISTO™ D3a BT

Has all characteristics of the DISTO<sup>™</sup> 3a and in additon it offers the convenience of wireless, error-free data transfer to PCs and Pocket PCs. Transfer your measurement data directly and avoid expensive typing errors. Using the navigation keys on the DISTO<sup>™</sup> you can control the cursor on your Pocket PC or PC. The data transfer software "Leica DISTO<sup>™</sup> Transfer" is included – simple to install and with automatic updates.

2

#### Leica DISTO™ D5

Strong outdoor performer: The integrated digital Pointfinder with 4x zoom makes aiming at long distances much easier. You can even carry out measurements in glaring sunlight. Easy to read: Measurement results and supplementary information are shown on the large colour display. The high image resolution provides a clear, sharp picture in the digital pointfinder.

Integrated tilt sensor: Using the tilt sensor you can also take indirect measurements. From this the horizontal distance can be derived inspite of obstructions.

Order No: 764 550

#### Leica DISTO™ D8

360° tilt sensor: The combination of precise angle and distance measurements allows you to determine distances where conventional methods fail.

Error-free data transfer: Bluetooth® and the supplied "Leica DISTO™ Transfer" software ensure that data transfer to pocket PCs and PCs is quick and error-free. The simple way to enter your results into Excel®, Word®, AutoCAD® and other programs for further processing.

Strong outdoor performer: Measure long distances simply and quickly thanks to the digital pointfinder with its 4x zoom and high resolution colour display.

Order No: 764 555





### 😵 Bluetooth

2





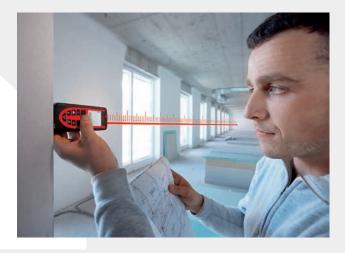


### <table-of-contents> Bluetooth

## 28 Laser Distance Meters

## Leica DISTO™ Family

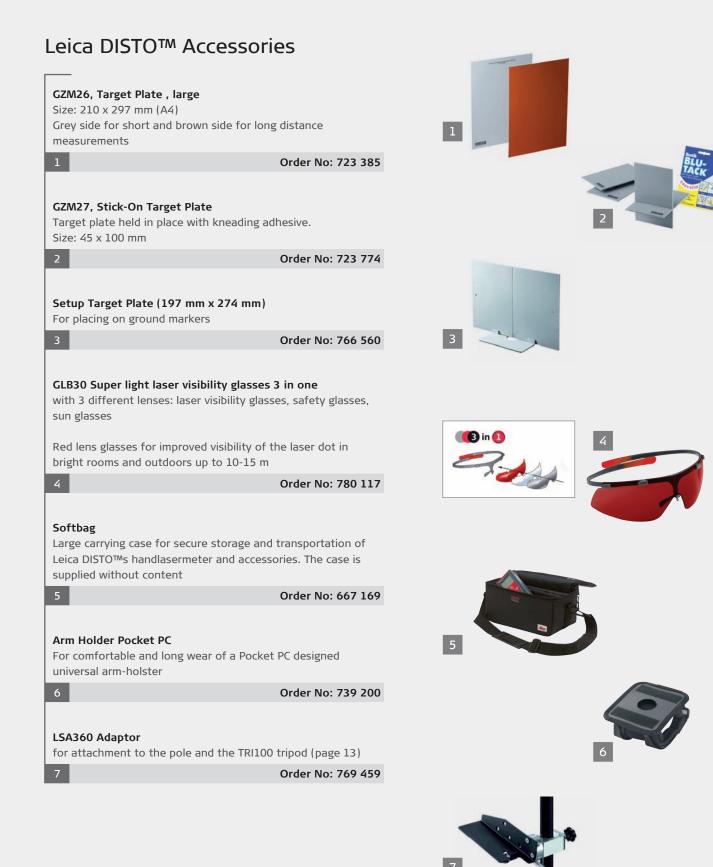




Functions	DXT	D2	D3a	D3a BT	D5	D8
Minimum / maximum measurements	•	•	•	•	•	•
Continuous measurement	•	•	•	•	•	•
Addition / subtraction	•	•	•	•	•	•
Area / volume measurements	•	•	•	•	•	•
Room dimensions	•		•	•	•	•
Indirect measurement with Pythagoras	•	•	•	•	•	•
Smart Horizontal Mode™			•	•		
Trapezium measurements					•	•
Indirect measurement with tilt sensor					•	•

Technical Data	DXT	D2	D3a	D3a BT	D5	D8	
Typical measuring accuracy	± 1.5	5 mm	± 1.0 mm				
Range	0.05 to 70 m	0.05 to 60 m	0.05 to	o 100 m	0.05 to	o 200 m	
Power Range Technology™			•	•	•	•	
Distance in m / Ø laser-spot in mm		-	10, 50, 100 m	/ 6, 30, 60 mm		_	
Tilt sensor Measurement range Accuracy to laser beam Accuracy to housing				± 45° ± 0,3° ± 0,3°		360° - 0,1°/+ 0,2° ± 0,1°	
Units in tilt sensor		-	0,0°,	0,00%		0.00% n, in/ft	
4-fold digital pointfinder				•			
Store constant value	-	1					
Recall last values	1	.0		20	20		
Time delay release (timer)		•	•	•	•	•	
Display illumination	•	•	•	•	•	•	
Measuring units		m, f	t, in		m, ft	, in, yd	
Free Software				•		•	
Data interface				BLUETOOTH® (Class 2)		BLUETOOTH® (Class 2)	
Measurements per battery set		up to 5,000		up to 5.000*	up to 5.000	up to 5.000*	
Multifunctional end piece with automatic detection	automatic	manual	manual automatic				
Tripod mounting thread			metal				
Batteries		Тур ААА, 2 х 1,5 V Т			Тур АА,	2 x 1,5 V	
Spray proof / dust protected	IP65	IP54					
Dimensions	122x55x28 mm	m 111x42x23 mm 127x49x27 mm 143,5x!			143,5x5	5x30 mm	
Weight with batteries	159 g	90 g	149 g	150 g	195 g	205 g	
Warranty		2 years / 3 yea	ars when register	d within 8 weeks	after purchase		

\* Reduced in BLUETOOTH® mode



### 30 Underground Service Locators

## Leica Digisystem

#### Safe and fast Location of Underground Services

Every year, site workers are injured due to inadvertently striking buried electricity cables or gas pipelines. With the Digisystem operators can locate, trace and mark underground services precisely and reliably prior to excavation.

Several unique vital safety features are built into the Digicat 500i and 550i models.

#### Features:

- State-of-the-art digital signal processing for precision service locating
- Automatic controls making the product easy to use, requiring minimal user experience
- Starts in Power Mode detecting current carrying services first for maximum operator safty
- Hazard Zone the new feature which indicates the presence of a shallow buried service in power mode, (Within approximately 30 cm) alerting to the increased risk
- Digicat 550i model has the added benefit of service depth estimation to 3 m for additional survey information
- Highly visible digital LCD display with built-in light sensor, automatically enabling the backlight in dark conditions
- Robust, light weight design, specifically engineered for tough site conditions
- Warranty: 1 year standard





#### The Digicat 500i & 550i operate in 5 selectable modes:



AutoMode - unique detection mode which combines power and radio modes, providing a more comprehensive location mode making cable detection easier and safer!



33 kHz Mode - detects a 33 kHz applied to a service produced from the Digitex signal generator.



8 kHz Mode - detects an 8 kHz applied to a service produced from the Digitex signal generator.



Radio Mode - detects signals originating from distant radio transmitters. These radio signals penetrate the ground and are re-radiated by buried metallic cables and pipes.



Power Mode - detects power signals radiated by energised (current carrying) services.

Leica Digicat 500i		
Rugged cable avoidance tool designed to locate and trace		
buried conductive services which radiate electromagnetic		
signals. Available with Bluetooth to integrate service		
detection within the survey mapping process. (50Hz*)	النبا ا	
Digicat 500i with Bluetooth - Order No: 780 228	Leica	Leica
1 Order No: 780 225	6	ö
		DIGICAT 550
Leica Digicat 550i	S	5
In addition, the 550i offers service depth estimation, when used in combination with the Digitex signal generator in 8 or	E	
33 kHz mode. Available with Bluetooth to integrate service	DIGICAT	9
detection within the survey mapping process. (50Hz*)		
detection within the survey hispping process. (Sonz 7		11 0H1
Digicat 550i with Bluetooth - Order No: 780 234		2
2 Order No: 780 231		
Digitex 8/33 kHz Signal Generator		
Improves buried service detection by applying a traceable		
signal to conductive services where no signal is present. (incl.		
batteries, connection cable set, earth spike & user manual)	S. SIVIC	
3 Order No: 731 049		
01dei 110. 751 049	and and	0
Digitrace Service Tracer, 30 m		
Allows tracing of plastic ducts, clay drains and other non-		
metallic conduits.	3	0
Digitrace 50 m - No: 731 051 / Digitrace 80 m - No: 731 052		
4 Order No: 731 050		. 4
Signal Clamp		
Provides a safe direct connection from the Digitex to		
communications or power cables that are in service or electrically live (max. 100 mm outside diameter)	$\sim$	
5 Order No: 731 056		
	5	4
Digimouse (8 kHz & 33 kHz)		
38 mm diameter signal transmitter used to trace drains, sewers and other non-conductive services. Can be attached		
to drain rods, boring tools, inspection cameras, etc.		
		6
6 Order No: 731 053		
Property Connection Cable Cat (FU)	No. of Concession, No. of Conces	
Property Connection Cable Set (EU) Cable Set to apply a signal from Digitex onto property power		
cables, European-Version		
7 Order No: 731 668		
Digisystem Carry Bag**		
Carries the main components of the System Digisystem.	-	
(Digicat 500i and Digitex 8/33) and accessories		
8 Order No: 740 307		
* For 60Hz models please refere to your sales person * Content is not included		8

\*\* Content is not included

## Leica RedLine

#### **Tailor Made Site Solutions**

Leica RedLine brings industry leading performance and technology to you in a simple, easy to use, versatile package. Specifically designed for the construction site and the construction user in mind Leica RedLine can be tailored to fulfill all of your construction site positioning needs.



#### Save time and money

- By using highly versatile site positioning sensors allowing you to reduce your investment to only the equipment you really need
- By using the same components cross the entire site
- By minimising operator downtime and enabling operators to work without depending on surveyors

#### Improve your performance and productivity

- By working to higher accuracies
- By increasing operator flexibility
- By eliminating rework

#### Hit the ground running

- Learned in minutes
- Simple, guided "Level and Go" concept
- Uses the same interface across all RedLine sensors



#### SBG Geo Construction Office

#### The ultimate data preparation software

- Maintain data integrity by entering and designing data they way you want. Compatible with any type of design model: Alignments, cross section, 3D stringlines, digital terrain models etc.
- Import and export data from a wide range of industry standards
- Export to a wide variety of Machine Control Software
- Easy to learn interface with built in AutoCAD engine to open and edit native AutoCAD drawings
   Order No. 762591 – Geo Construction
   Order No. 762594 – Geo Construction Volumes







#### The perfect precision tool as simple as can be

- Designed specifically with the construction user in mind, simply level and go
- No keyboard on board and an extremely intuitive user interface
- Highly accurate robotic tracking performance
- With reflectorless mode up to 250 m
- Use for machine control or full one man robotic measuring tasks
- Warranty: up to 3 years with valid CCP

Order No. 6001516 1man kit w/o controller Order No. 6001553 MCP950c controller for 1 man

#### From office to field and back again

the Leica Redline product range has the perfect solution for all your construction site design and positioning needs. The unique modular system design allows the same components to be used across the entire construction site.

## Leica PowerAntenna

#### The worlds most versatile GPS/GNSS system

- Use the same components on and off machine applications
- Versatile and upgradable to suit all construction measuring tasks machine, rover or base
- Leica Geosystems cutting edge technology in a scalable design that grows with your needs
- Warranty: up to 3 years with valid CCP

Order No. 6001646 PA BaseStation Order No. 6001647 PA Rover Order No. 6001648 PA Base and Rover Order No. 6002440 PA for Dual GPS

#### Leica PowerBox

#### A new dimension in site positioning

- Designed for the toughest machine control and construction measurement tasks
- For position and orientation simply add a PowerAntenna or second PowerBox
- Use the same component for all on and off machine applications
- Warranty: up to 3 years with valid CCP

#### Order No. 6001645 PB BaseStation Order No. 6001643

PB Machine Order No. 6001611 Controller for PB

#### SBG GeoPAD Construction Field software for all your construction needs

- Use the same simple interface for all sensors (GPS/TPS)
- Stakeout the same way the project was designed to eliminate errors using stringlines, cross-sections or road alignments, DTM's
- Learn in minutes with full functionality. Gradecheck, stakeout, inst/base set-up has never been so simple
- Warranty: up to 3 years with valid CCP

Order No. 762598 SW only





### 34 Machine Control

## Leica Depthmaster

#### Low Cost Depth Indication System

Together with a rotating laser the excavator receiver Leica Depthmaster provides accurate elevation control and a unique, patented, built-in vertical plumb indicator for consistent accuracy. Constant Accuracy Band (C.A.B.) technology used in the Depthmaster receives the laser signal and electronically maintains consistent accuracy over distance.

#### Depthmaster Excavator Receiver with Clamp-on Brackets

Package includes Depthmaster with Carrying Case, Battery Pack Ni-Cad for Depthmaster, Clamp-on Bracket(2x), Charger 220V and User Manual

#### Order No: 742 438

## Depthmaster Excavator Receiver with Magnetic Bracket

Package includes Depthmaster with Carrying Case, Battery Pack Ni-Cad for Depthmaster, Magnetic Bracket, Charger 220V and User Manual

Order No: 742 440



#### Main Features at a Glance

- Constant Accuracy Band (CAB) Maintains 'on-grade' accuracy regardless of operating distances spot size, or rotating laser type, either ±1/6" (4 mm) or ±1/2" (12 mm) depending on jobsite requirements.
- Patented Plumb Indicator -Monitors the excavator's dipper arm vertically for consistent and accurate grade readings.
- Magnetic Mount The Depthmaster is extremely convenient with its powerful magnetic mount. It takes seconds to attach to the machine. No drilling or welding is required.
- Shake to Wake The unique 'Shake to Wake' system turns off non-essential electronics after 5 minutes of non-use. It automatically turns back on when your machine begins to move again.
- Pole Mount When used with the optional clamp-on assemblies, the Depthmaster can be mounted on any machine.
- Memory When the Depthmaster is out of the range of the lasers a LED will blink indicating which way to move the receiver to reacquire the laser.
- Warranty: 1 year standard



### Total Stations

## Leica Builder Series

#### Discover the Leica Builder for your task

Still using a measuring tape or an optical theodolite? Do you need a tool that fulfils all measuring tasks on your construction site with ease, regardless of your profession? The Leica Builder does it all for you - troublefree, accurately and much quicker. Simply discover the Leica Builder for your task



Setup with Control Line or coordinates Existing axis form the reference line for the Builder



#### Data exchange via USB Stick or Bluetooth



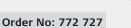
#### Your Builder is Ready to go

No matter which Builder you choose, you will always get a complete set you can start your job with

#### Builder 109 Set

Theodolite with laser plummet, 1 keyboard, tribrach, Li-Ion batterie, charger, user manual and carry case

(Builder 106 Set - Order Nr: 772 728)



#### Builder 209 Set

Total Station with EDM, serial RS232 interface, laser plummet, 1 keyboard, tribrach, Li-Ion batterie, charger, flat prism, reflector pole, user manual and carry case

(Builder 206 Set - Order Nr: 772 730)



#### Builder 309 Set

Total Station with EDM, internal memory, serial RS232 interface, USB compartment, laser plummet, 1 keyboard, tribrach, Li-Ion battery, charger, flat prism, reflector pole, USB to Mini-USB transfer cable, user manual and carry case

(Builder 306 Set - Order Nr: 772 732)

Order No: 772 731



#### Builder 409 Set

Total Station with EDM, internal memory, serial RS232 interface, USB compartment, laser plummet, 1 alphanumeric keyboard, tribrach, Li-Ion battery, charger, TrueZero prism, reflector pole, USB to Mini-USB transfer cable, user manual and carry case

(Builder 405 Set - Order Nr: 772 734)

Order No: 772 733

#### Builder 509 Set

Total Station with multifunctional EDM, internal memory, serial RS232 interface, USB compartment, Bluetooth, laser plummet, 1 alphanumeric keyboard, tribrach, Li-Ion battery, charger, TrueZero prism, reflector pole, USB to Mini-USB transfer cable, user manual and carry case

(Builder 505 Set - Order Nr: 772 736)

Order No: 772 735

#### Connect Leica DX10 field controller

Load your preferred Software tool and keep working as usual

Order No: 765 815









### 36 Total Stations

## Leica Builder Series



#### Profile Boards

Builder does it all: Setting out boards, transfer alignments to/from boards or simply storing all board data in the builder.



#### Volumes

How much m<sup>3</sup> did you really move today? Cutting to formation, mass haul, cut/fills, stockpile monitoring – keep right on top of your earthworks progress with Builder.



#### Area

How many roof tiles are needed? Want to be doubly-sure how much asphalt to order for the parking lot? Will those windows fit? Builder has the answer in m<sup>2</sup>.



#### Line Layout

Columns, formwork, greenhouses, racking, fencing lines, structures or terraces. Builder takes reference lines, alignment and curves in its stride.



#### As-Built

Carpenters, landscapers, stage builders, architects, utilities companies, steel and facade constructors – all use Builder to record as-builts quickly and accurately.



#### Height Transfer

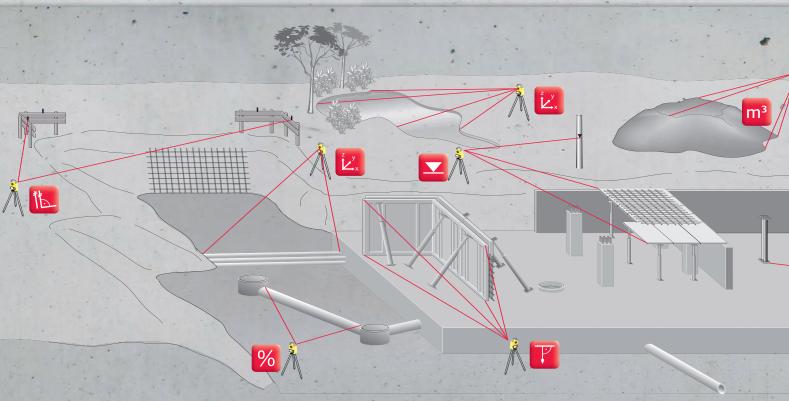
Transfer of reference heights, define datum lines, marking ground floor elevations, checking remote heights – also vertically the Builder is powerful.



#### Checks

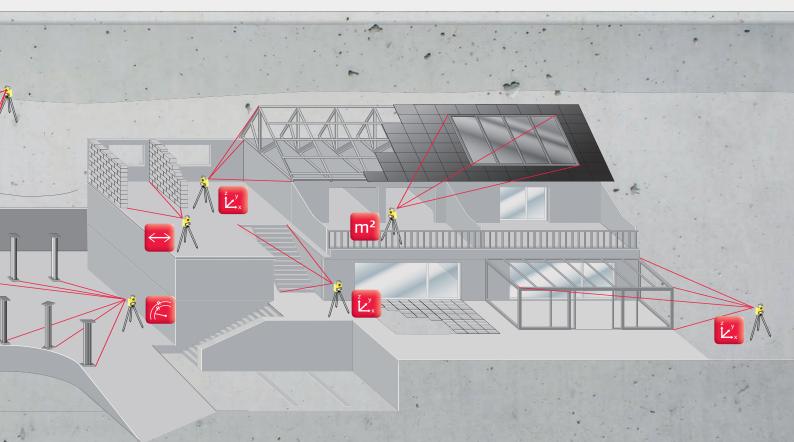
Is that formwork vertical? Sufficient clearance between crane and roof? Are those walls parallel? Is the drainage at the right grade? Are this true 90°?





Technical Data	Leica Builder 100	Leica Builder 200	Leica Builder 300	Leica Builder 400	Leica Builder 500		
Full Power Site Software					Х		
Wireless Communication					Х		
Full RedDot range		•			Х		
Prism Measurement Mode		-		Х	Х		
MEAS / REC Switch Key				Х	Х		
Cell-phone style use				Х	Х		
Industrial USB Memory Stick		-	Х	Х	Х		
Volumes Calculation			Х	Х	Х		
Data Im/ Export to USB Stick		•	Х	Х	Х		
Direct DXF download		•	Х	Х	Х		
1-Person Station		Х	Х	Х	Х		
Tracking Mode		Х	Х	Х	Х		
PC / Handheld Interface		Х	Х	Х	Х		
Laser Distance Measure		Х	Х	Х	Х		
Control Line Setup		Х	Х	Х	Х		
Theft Protection	Х	Х	Х	Х	Х		
3 Languages	Х	Х	Х	Х	Х		
Leveling Aid	Х	Х	Х	Х	Х		
Dual Axis Compensator	Х	Х	Х	Х	Х		
Laser Plummet	Х	Х	Х	Х	Х		
Data Storage / Communication					_		
Internal Memory [points]	-	-	15'000	50'000	50'000		
Angle Measurement		_			_		
Accuracy/Option	9"/6"	9"/6"	9"/6"	9"/5"	9"/5"/3"		
Distance Measurement							
to glass prism				500 m (3'500 m)	500 m (3'500 m)		
without reflector (90% reflective)	-	80 m	120 m	15 m	250 m		
to reflective tape (60 x 60 mm)	-	250 m	250 m	15 m	250 m		
Battery Type/Life	Li-ion/approx. 20 hours <sup>1</sup>						
Environmental			IP55				
Warranty		1 yea	r / up to 3 years with v	alid CCP			

<sup>1</sup> Single Meaurement every 30 second at 25°C with GEb221. Battery time may be shorter if battery is not new



## Accessories

### Tripods

#### GST20, Wooden Tripod

Heavy duty tripod with plumb bob, carrying strap and side clamp screws. Packaged length 110 cm (3.61ft), extendible to 180 cm (5.91ft), weight 6.4 kg (14.1lb).

#### Order No: 296 632

#### GST40, Wooden Tripod

Heavy tripod with rigid legs, suitable for precision levelling. Length 170 cm (5.58ft).

Order No: 328 422

LAT 195, Crankable Laser Tripod, 195 cm

Order No: 663 099

LAT 265, Crankable Laser Tripod, 265 cm

Order No: 663 100

Heavy Duty Elevator tripod, 149-330 cm

Order No: 733 803

#### GST05L, Aluminium Tripod

Light tripod with shoulder strap. Light-weight and long lasting making it suitable for levels and targets.

Order No: 563 630

**GST4, Tripod Star** To set up tripods on hard and slippery surfaces

Order No: 332 200

#### GST101, Wooden tripod

Heavy tripod with carrying straps and side clamp screws. A low cost alternative for TPS set-ups.

Order No: 726 831

#### GST103, Aluminium Tripod

with carrying straps and side clamp screws. A lowcost alternative for levels, lasers and targets.

Order No: 726 833

#### GST05, Wooden Tripod

Light tripod with water-tight plastic wrap for complete protection. Suitable for GPS and target stations with long set-up periods.

Order No: 399 244

### Tribrachs

#### GDF121, Tribrach w/o Plummet

High accuracy, maintenance-free tribrach. Guaranteed to effect TPS accuracy by less than 1". Suitable for all high angular accuracy requirements. Torsional stiffness <1".

Order No: 667 304

GDF111-1, Tribrach w/o Plummet

Suitable for TPS instruments with an angular accuracy of greater than  $3^{"}$ . Torsional stiffness  $<3^{"}$ .

Order No: 748 888

### Carriers

#### GZR103, Carrier with Optical Plummet

Rotatable carrier with longitudinal bubble for use in tribrachs without plummet. Reflector centring accuracy 1.0 mm, plummet accuracy 0.5 mm at 1.5 m.

Order No: 725 566

#### GRT144, Carrier with Stub

Simple carrier for use in tribrachs with optical plummet. Suitable for reflectors with stub fitting. Centring accuracy 1.0 mm.

Order No: 667 313

### SNLL121, Precision Carrier with Laser Plummet

Can be pointed in either the zenith or nadir direction. Reflector centring accuracy 0.3 mm, plummet accuracy 1.0 mm at 1.5 m.

Order No: 667 316



### Poles

#### GLS11, Telescopic Pole

Reflector pole with quick release clamp. Extendible to 2.15 m (7.05ft), weight 940 g (2.07lb).

Order No: 385 500

#### GLS111, Telescopic Pole

Heavy duty reflector pole with red/white markings for high visibility. Twist lock for secure tightening. Extendible to 2.60 m (8.53ft), weight 1.48 kg (3.26lb).

Order No: 667 309

#### GLS105, Telescopic Pole

Reflector pole with twist- and snap locks. With 1/4" thread for mounting of GMP111 and CPR105 reflectors. Extendible to 2.11 m (6.92ft), weight 890 g (1.96lb).

Order No: 748 967

### Reflectors

#### GPR113, Circular Prism with Holder

Circular prism mounted in red polymer holder. Suitable for fitting of the 362823 GZT4 target plate. Centring accuracy 2.0 mm, max. range with IR of 2500 m.

Order No: 753 492

#### GPR121, Circular Prism with Holder

Precision circular prism with anti-reflection coating, mounted in metal holder. Supplied with removable target plate. Centring accuracy 1.0 mm, max. range with IR of 3500 m.

2

Order No: 641 617

#### GPR111, Circular Prism with Holder

Circular prism, sealed in red polymer holder. Integrated target plate. Centring accuracy 2.0mm, max. range with IR of 2500 m.

3

Order No: 641 618

#### GMP111, Mini Prism with Holder

Mini prism mounted in polymer holder with 1/4" thread fittings. Includes circular bubble, GLS115 four-section pole and point. Prism constant of +17.5 mm, max. IR range of 2000 m.

Order No: 641 615

#### GMP104, Mini Prism with L-bar

Mini monitoring prism mounted in metal holder. Supplied with L-bar for fixed installations. The prism offset is dependant on the mounting position. Max. IR range of 2000 m (7000ft).

### Chargers

Universal Charger / Power Supply For Rugby 320SG/410DG/420DG (incl. separate power cable)

Order No: 741 349

Universal Charger / Power Supply with seperate power cable

Order No: 727 165

### GKL211, Battery Charger

Simple, low cost charger for GEB221 and GEB211 Li-Ion batteries. Includes car adapter cable.

Order No: 734 752

#### Car Adapter Cable

Rugby 320SG, 410DG, 420DG, 1 m

Order No: 738 242





40 Accessories

## Accessories

### **Batteries**

NiMH Battery Pack For Rugby 320SG, 410DG, 420DG

Order No: 739 855

**GEB171, External NiMH Battery** High output battery for set-ups over long periods, 12V / 9.0Ah. With 5-pin charging socket.

Order No: 727 367

**GEB221, Li-Ion Battery** High output battery for all Builder instruments and Piper 100/200, 7.4V / 4.4Ah.

Order No: 733 270

GEB211, Li-Ion Battery High output battery for RX1200 controller, 7.4V / 2.2Ah.

Order No: 733 269

### Cables

**GEV52, Power Cable** For connection of GEB171 battery to instrument.

Order No: 409 678

**GEV102, Data transfer cable** Lemo to RS232 connector to connect PC, laptop etc.

Order No: 563 625

**GEV189, Data transfer cable** Lemo to USB connector (incl. USB electronics), 2.0 m. Connects TPS/DNA to PC for data transfer. PC driver and user manual included on CD.

Order No: 734 700

### **USB-Stick**

MS1 USB-Stick, 1 GB, Industrial-Standard

Order No: 765 199

### Other Laser Accessories

**GLB10, Laser Glasses** Red lens glasses for improved visibility of the laser dot in bright rooms and outdoors up to 10-15 m

Order No: 723 777

Mounting Bracket for Piper 100/200

Order No: 746 159

Scope and Mount Assembly for Piper

Order No: 746 160

Foot, 6" / 150 mm Piper

Order No: 746 161

Foot, 8" / 200 mm Piper

Order No: 746 162

Foot, 9" / 225 mm Piper

Order No: 746 163

Foot, 10" / 250 mm Piper

Order No: 746 164

Foot, 12" / 300 mm Piper

Order No: 746 165

Batter Board Clamp For Rugby 55

Order No: 758 343



### Staffs

#### CLR102, Telescopic Level Staff

5 m length, 4 sections, front side with E-graduation and back side with mm-graduation.

Order No: 727 588

**CLR103, Telescopic Level Staff** 4 m length, 4 sections, Dual face V-graduation and mm-graduation

Order No: 731 123

#### CLR104, Telescopic Level Staff

5 m length, 5 sections, Dual face E-graduation and mm-graduation

Order No: 743 420

#### BTL5D, Aluminium Telescopic Level Staff

Extendable to 5 m, with cm-graduation on front and mm-graduation for internal dimensions on rear, with circular bubble, in transport bag

BTL4D, Aluminium Telescopic Level Staff
billeb, Aluminium relescopic Level Stari

Extendable to 4 m, with cm-graduation on front and mm-graduation for internal dimensions on rear, with circular bubble, in transport bag

4

Order No: 663 130

Order No: 663 131

## **GPLE2N, Nedo Invar Levelling Staff** 2 m length, with circular bubble

engin, with circular bubble

Order No: 555 636

#### GPLE3N, Nedo Invar Levelling Staff

3 m length, with circular bubble

Order No: 555 637

#### GPLE3N, Nedo Invar Levelling Staff

3 m length, with circular bubble, with expansion coefficient certificate and length calibration certificate

Order No: 560 172

#### GWL92N, Industrial Levelling Staff

92 cm length, Cm- graduation, invar staff with circular bubble and 2 interchangeable bases

Order No: 559 615

#### **GWL182N, Industrial Levelling Staff** Cm- graduation, 182 cm, invar staff with circular bubble and 2 interchangeable bases

Order No: 559 616

**GLUS1, Ground Plate** For level staffs

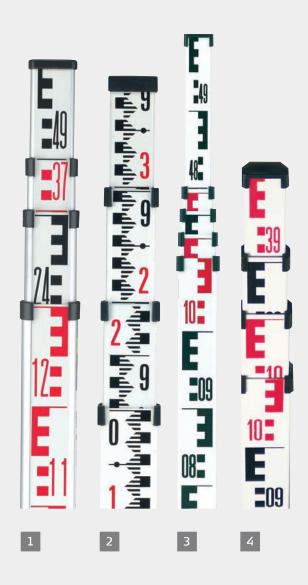
Order No: 197 000

**GSL3, Pair of Struts** For GPLE3N staff

Order No: 555 638

GLI20N, Nedo Staff Level For BTL4/BTL5 levelling staffs

Order No: 555 639



### 42 Accessories

## Accessories

### **Rod Eye Receivers**

The Rod Eye family offers solutions for any general construction and interior application, and is ideally matched to work with the Rugby laser family. They are construction-tough, designed to work in harsh, loud environments, and provide precise and repeatable accuracy. The Rod Eye receivers emit three selectable beeper sounds (rapid, slow, and continuous), when high, low, and on-grade,

**The Rod Eye Digital** is the top of the line receiver with digital readout, 0.5 mm accuracy, and strobe rejection. The Digital has a 127 mm (5 inch) pickup window which is the result of truly unique technology and provides the Digital with the best accuracy in the industry.

**The Rod Eye Plus** is a full featured receiver with proven performance in the field. Three bright LED's, nine channel arrow display and audio output provide the user with all the information needed to lock on the laser beam and get the job done right.

Additionally, the double-beep beam finder, last beam strike memory, laser low battery indication and the reversible clamp for rectangular or oval rods put the Digital and Plus at the top of the list for today's contractor.

**The Rod Eye Basic** is a great receiver for those looking for value at a low price. Offering two accuracy settings, high/low audio output and a 150 m range, the Rod Eye Basic is a quality receiver that is ready to work for you. Rod Eye Digital with Bracket Digital technology that expands your options

Order No: 769 809

**Rod Eye Plus with Bracket** Exceptional quality - great features

Order No: 769 810

Rod Eye Basic with Bracket Value for all general construction applications

Order No: 769 811



Receivers at a glance	Rod Eye Digital	Rod Eye Plus	Rod Eye Basic	
Working Radius	450 m	450 m	150 m	
Detection Height	127 mm	50 mm	36 mm	
Detection Accuracies	Five	Three	Тwo	
Audio Volumes	Three	Тwo	Тwo	
Arrow Display	Twenty-one channels	Nine channels	Five channels	
LED Display	Yes, five channels	Yes, five channels	No	
Warranty	Three years	Two years	One year	

## Leica Geosystems - Nothing is really closer

Head Office Leica Geosystems AG Heinrich-Wild-Strasse CH - 9435 Heerbrugg Phone +41 71 727 3131 Fax +41 71 727 4674

**Australia** CR Kennedy & Company Pty Ltd. Melbourne Phone +61 3 9823 1555 Fax +61 3 9827 7216

Austria Leica Geosystems Austria GmbH Vienna Phone +43 1 981 22 0 Fax +43 1 981 22 50

Belgium Leica Geosystems NV Diegem Phone +32 2 2090700 Fax +32 2 2090701

**Brazil** Comercial e Importadora WILD Ltda. São Paulo Phone +55 11 3142-8866 Fax +55 11 3142-8886

**Canada** Leica Geosystems Ltd. Willowdale Phone +1 416 497 2460 Fax +1 416 497 8516

China P.R. Leica Geosystems Trade (Bijing) Co., Ltd. Phone +86 10 8569 1818 Fax +86 10 8525 1836 **Denmark** Leica Geosystems A/S Herlev Phone +45 44 54 02 02 Fax +45 44 45 02 22

Finland Leica Geosystems OY Espoo Phone +358 9 415 40 200 Fax +358 9 415 40 299

France Leica Geosystems Sarl Le Pecq Cedex Phone +33 1 30 09 17 00 Fax +33 1 30 09 17 01

**Germany** Leica Geosystems GmbH Vertrieb Munich Phone +49 89 14 98 10 0 Fax +49 89 14 98 10 33

Hungary Leica Geosystems Hungary Kft. Budapest Phone +36 1 814 3420 Fax +36 1 814 3423

India Elcome Technologies Private Ltd. Gurgaon (Haryana) Phone +91 124 4122222 Fax +91 124 4122200

Italy Leica Geosystems S.p.A. Cornegliano Laudense Phone +39 0371 69731

Fax +39 0371 697333

#### Japan

Leica Geosystems K.K Tokyo Phone +81 3 5940 3011 Fax +81 3 5940 3012 Korea (Republic of) Leica Geosystems K.K. Seoul Phone +82 2 598 1919 Fax +82 2 598 9686

**Mexico** Leica Geosystems S.A. de C.V. Mexico D.F. Phone +525 563 5011 Fax +525 611 3243

Netherlands Leica Geosystems B.V. Wateringen Phone +31 88 001 80 00 Fax +31 88 001 80 88

Norway

Leica Geosystems AS Oslo Phone +47 22 88 60 80 Fax + 47 22 88 60 81

Poland Leica Geosystems Sp. z o.o. Warsaw Phone +48 22 260 50 00 Fax +48 22 260 50 10

Portugal Leica Geosystems, Lda. Moscavide Phone +351 214 480 930 Fax +351 214 480 931

Singapore Leica Geosystems Techn.Pte.Ltd. Singapore Phone +65 6511 6511 Fax +65 6511 6500 South Africa Hexagon Geosystems Pty.Ltd Douglasdale Phone +27 1146 77082 Fax +27 1146 53710

**Spain** Leica Geosystems, S.L. Barcelona Phone +34 934 949 440 Fax +34 934 942 442

Sweden Leica Geosystems AB

Sollentuna Phone +46 8 625 30 00 Fax +46 8 625 30 10

Switzerland Leica Geosystems AG Glattbrugg Phone +41 44 809 3311 Fax +41 44 810 7937

**UAE** Leica Geosystems c/o Hexagon Dubai Phone +971 4 299 5513 Fax +971 4 299 1966

**United Kingdom** Leica Geosystems Ltd. Milton Keynes Phone +44 1908 256 500 Fax +44 1908 256 509

USA Leica Geosystems Inc. Norcross Phone +1 770 326 9500 Fax +1 770 447 0710

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	Power Tracker	Builder Series	Piper	Lino P3/P5/L2 L2+/L2P5	Roteo 35/35G 20HV/25H	Rugby 100 260/270 320/420	Rugby 55/200/280	Rugby 50/100LR/410	DISTO™ D2/D3a/D3aBT D5/D8/DXT
Laser class 3R in accordance with IEC 60825-1 and EN 60825-1	• Distance meter (RL Mode)	• Distance meter (Red Dot)	•		•		• stationary beam		
Laser class 2 in accordance with IEC 60825-1 and EN 60825-1	Laser plummet	• Laser plummet		•		•	• rotating/ scanning	· · · · ·	•
Laser class 1 in accordance with IEC 60825-1 and EN 60825-1	Distance meter (IR, ATR, PS Mode)							•	

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Whether you have to layout a construction site precisely, perform control measurements, collect height and angle data, align concrete forms, install ceilings and partitions, lay gravity flow pipe, locate underground services or complete site preparation and earthworks – Leica Geosystems offers the right instrument, construction laser or machine control installation specifically designed for your construction application.

Easy-to-use, jobsite tough, accurate and reliable – Leica Geosystems instruments and lasers ensure the efficient use of your materials and resources. High quality products, such as optical and electronic levels, construction lasers, total stations and machine automation systems, provide fast results, keep you working and increase your profitability.

#### When it has to be right.

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