

OUR NEW MEASURING STANDARD.



2014/2015 catalogue

EXACTLY WHAT YOU NEED



Always precisely positioned.

Whether you are a professional or an ambitious DIYer, whether you are working on a construction site or in you own home: with the Ecoline series, geo-FENNEL offers the perfect solution for any working situation.

Whatever challenge awaits you, with Ecoline you will master any task, even the most difficult. Discover the advantages of the Ecoline series and convince yourself of the enormous strengths in precision and handling. It's time for new challenges. Seize it.



EL 609
Easy alignments and levelling indoors
Page 15



EcoDist Pro
Distance measurement, area and volume calculation
Page 9



EL 300
Easy and convenient distance measurement
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EL 503
Horizontal and vertical levelling indoors
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EL 515 Plus
Horizontal and vertical levelling indoors and outdoors, even over longer distances
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EL 607
Multi-line laser for extensive levelling indoors, e.g. with right angle
Page 16



EL 639
Multi-line laser for all applications e.g. in drywall construction - the top of the range
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ELT 220
Angle measurements and plumbing for civil engineering
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EL 821
Electronic slope and incline measurements
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Levelling, measurement of height differences
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Our motto: Robust and precise.

Ecoline products are tough, so dust and dirt have no chance against these robust measuring tools. With the Ecoline series, you can have a cost-effective alternative without having to do without high quality standards.

The Ecoline series measuring tools do not only look good, but also fit well in your hand. Find out the excellent ergonomics of these measuring tools and enjoy how comfortable they are to use. We guarantee precise measurement results with the highest degree of safety. We don't just give you our word, but also a 2-year warranty.

Warranty

We aim to provide professional users with measuring instruments that offer all the advantages that geo-FENNEL products are known for: These include ease of use, precise measurement results under virtually all conditions and the highest degree of safety. We'll give this to you in writing – we provide a 2-year warranty for all our instruments.

In the unlikely event of a problem, simply contact your dealer, who will make sure that the full functionality of your instrument is restored or replace it with a new one. Quickly and simply.



Practicality

Whatever challenges you are facing, you can carry out measurements on your own without outside help.



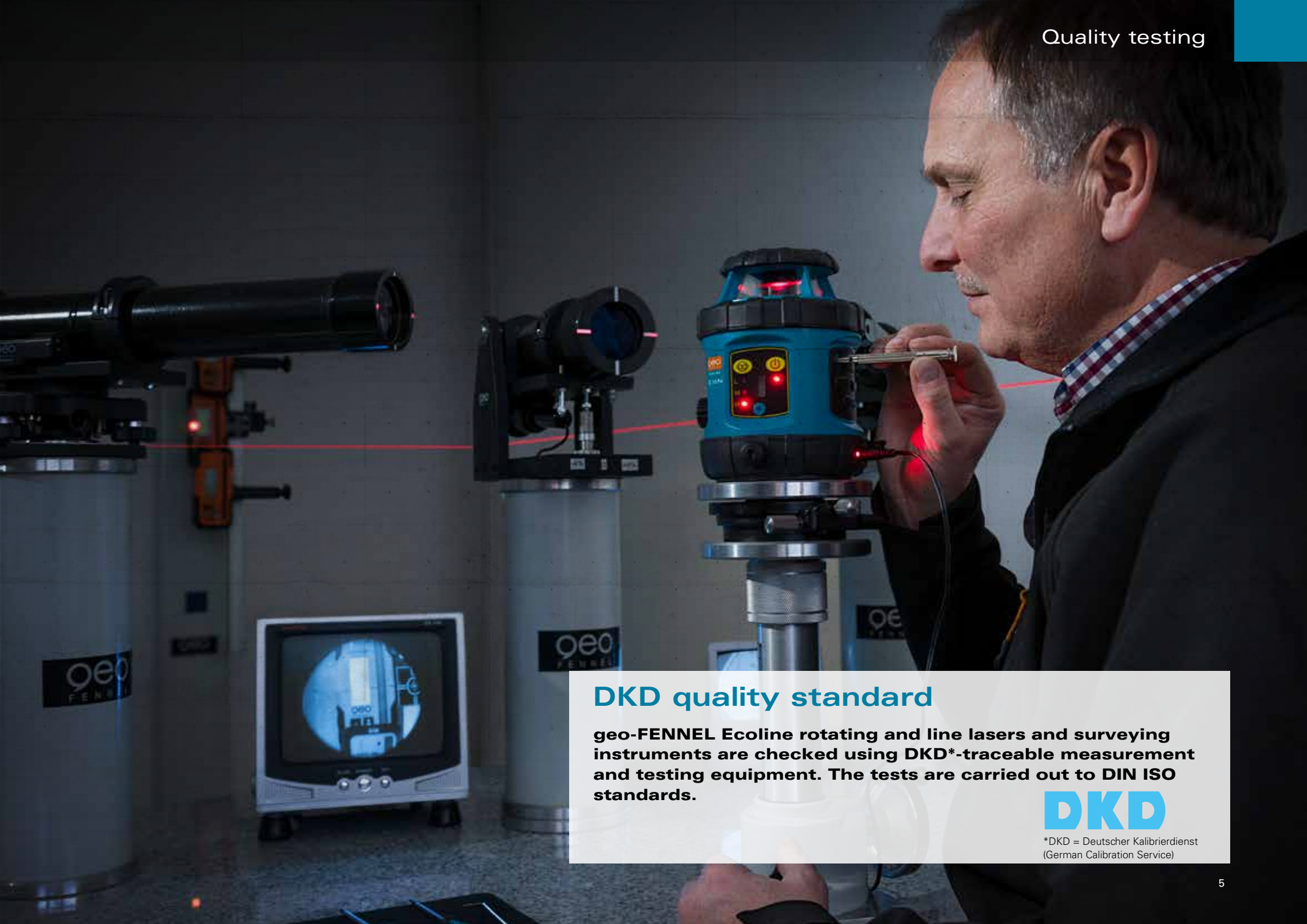
Safety

All Ecoline products satisfy the strictest safety guidelines and conform to laser class 2. If the laser beam accidentally hits your eye, your natural blink reflex will protect your eye.

A yellow triangular warning symbol with a black border and a black sunburst icon in the center, representing laser radiation.

Laser radiation
Do not look into the beam
Laser class 2
in accordance with DIN EN 60825-1:2001-11
 $p \leq 1 \text{ mW}$
 $\lambda = 635 - 670 \text{ nm}$

geo-FENNEL Ecoline laser products are classified as laser class 2. The laser class can be found in the technical data.



DKD quality standard

geo-FENNEL Ecoline rotating and line lasers and surveying instruments are checked using DKD*-traceable measurement and testing equipment. The tests are carried out to DIN ISO standards.

DKD

*DKD = Deutscher Kalibrierdienst
(German Calibration Service)



The benchmark for all trades.

We have the suitable instrument for every trade. You can find the products you need for your application more quickly using the product overview.

These are just examples. The potential applications extend over many more professions.

												
TRADE	TASK	ECODIST PRO	EL 300	EL 503	EL 515 SET	EL 609 SET	EL 607	EL 639	ELT 220	EL 821	EL 823	ELN 24
Floor covering	carpet, wood, hard tiles	■	■			■	■	■		■	■	
Electrical	conduit, trunking, switches, sockets			■	■	■	■	■		■	■	
	planning, controls	■	■							■	■	
Floor laying	height construction and control			■	■	■	■	■				
Tiling	floor, wall			■	■	■	■	■		■	■	
	quantity estimation	■	■							■	■	
Landscape gardening and architecture	paving, paths				■				■			■
	posts, fences, beams, structures			■	■				■			■
	balustrade, handrails, edging			■	■							■
	distance measurement		■									
Plumbing, heating and air condition	cables, pipes, radiators		■	■	■	■	■	■		■	■	
	distance measurement	■	■									
Building	foundations and concrete flooring				■				■			
	masonry, walls	■			■				■	■	■	■
	cutting checks			■	■							
	cladding, steel and concrete piling								■			
Shop fitting and kitchen construction	shelves, cupboards, floors	■	■	■	■	■	■	■		■	■	■
Painting and decorating	wall covering, borders, dado rails		■	■	■	■	■	■		■	■	
	quantity estimation	■	■							■	■	
Renovation	cupboards, shelves, pictures	■	■	■	■	■	■	■		■	■	
Interior design	pictures, curtain, lighting	■	■	■	■	■	■	■		■	■	
Carpenter	shelves, cut edges	■				■	■	■		■	■	
Dry mortarless construction	tracks, profiles	■			■	■	■	■		■	■	
	wall construction				■		■	■		■	■	
	suspended ceilings				■		■	■				
	wall covering				■	■	■	■		■	■	
	measurement, control	■	■							■	■	
PAGE		9	10	11	13 – 14	15	16	17	19	21	22	23

IT'S NOT JUST ABOUT THE SIZE, BUT HOW YOU USE IT.

Large, clear screen

- » Clear and easy-to-read display of symbols and numbers
- » Measurements up to 50 m*

Ergonomic housing

- » Fits comfortably in the hand
- » Robust design



Ease of use

- » Measure distances quickly and easily

Intuitive keypad

- » Obvious and easy to use
- » Large keys

EcoDist Pro[®]

Laser distance meter

» Impressive and easy to use.

With professional features. Small and handy, with millimeter precision for distance measurements. Perfect for area and volume calculations. With continuous measurement function e.g. for staking out and indirect height measurement option (Pythagoras function).

EcoDist Pro[®] is beyond compare and represents the absolute peak of technical development. As well as the extended Pythagoras function, the instrument also offers - among other things - an ideal range for classic interior finishing.



TECHNICAL DATA	ECODIST PRO [®]	FEATURES	SUPPLIED WITH
			ART.-NO. D1760
Distance	typ. 40 m	· Minimum / maximum	· Holster
Distance with target plate	50 m	· Plus / minus	· Batteries
Accuracy	± 2,0 mm	· Area / volumes	
Dust / water protection	IP 40	· Permanent measurement	
Weight	110 g	· Pythagoras functions	
Laser class	2	· Reference front / rear	
		· mm, ft, inch	

EL 300

Measuring wheel

» The journey is the reward.

The measuring wheel EL 300 allows measurement of various distances with only one hand. The two-wheeled EL 300 with its telescopic handle is

comfortable and easy to use as it can be adjusted to every stature.



TECHNICAL DATA	EL 300	FEATURES	SUPPLIED WITH
Weight	1,53 kg	· Easy measurement · Comfortable operation · Robust construction · O-set lever · Telescopic handle · Kickstand	ART.-NO. D1510
Measuring range	0 - 99.999,99 m		· Carrying case
Measurement	forward / reverse		
Wheel circumference	35 cm		

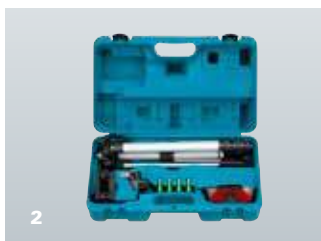
1 Supplied with kickstand

EL 503

Manual rotating laser

» Highs and lows.

For you, it's just a question of levelling. With this rotating laser you can carry out indoor horizontal and vertical measurements precisely and quickly. And quickly forget how different it once was.



TECHNICAL DATA	EL 503	FEATURES	SUPPLIED WITH
Accuracy	± 3 mm / 10 m	- For horizontal and vertical measurements - Easy setting with footscrews - Laser point mode	ART.-NO. D1050
Rotating speed rpm	0 – 500		· Elevating tripod
Working range without receiver Ø	20 m*		· Laser glasses
Laser class / Wave length	2 / 650 nm		· Set of batteries
Temperature range	-10 °C – +45 °C		· Carrying case
Power supply	4 x AAA Alkaline battery		
Operating time	12 h		
Weight (instrument only)	0,55 kg		
Size (instrument only)	120 x 120 x 150 mm		

* depending on room illumination

1 Also vertical application

2 Complete and stored safely

CUTS A FINE LINE, AND NOT JUST HORIZONTALLY

Stable rubber moulding

» Prevents damage when the inevitable bumps and knocks occur

Speed

» 3 rotation speeds



EL 515 Plus

Fully automatic rotating laser

» What's your line?

Whether you align dry walling, suspend ceilings or transfer levels – the robust and precise rotating laser is a must for horizontal and vertical measurement. It is also ideally suited for horticulture and landscape gardening. The standard receiver ensures a wide range of uses. Three rotation speeds and the instantaneous self-levelling for professional work guarantee that you can complete your measuring tasks quickly and accurately.

A further highlight – unique in this class – is the fact that the rotor head only turns if self-levelling is activated. This prevents incorrect results. Your additional measuring certainty!



TECHNICAL DATA		EL 515 PLUS	FEATURES	SUPPLIED WITH EL 515 PLUS	
				ART.-NO. D1005	
Self-levelling range		± 3°	· Instant self-levelling · Horizontal self-levelling rotating laser; vertical levelling with one footscrew · Automatic shut-off and audible alarm when out of self-levelling range · Variable rotating speed · Permanent 90° beam to zenith · Rechargeable NiMH batteries with intelligent charger · Integrated floor/wall mount with adjustment screw	· Receiver EL 702 with clamp for levelling staff · NiMH batteries · Charger · Carrying case	
Accuracy		± 1,5 mm / 10 m			
Working range without receiver Ø		30 m*			
Working range with receiver Ø		400 m			
Rotating speed (rpm)		200, 400, 600			
Power supply		NiMH			
Operating time		20 h			
Dust/water protection		IP 54			
Laser diode / class		635 nm / 2			
Temperature range		-10°C to +45°C			
Weight (instrument with battery)		1,5 kg			
* depending on room illumination					
TECHNICAL DATA		RECEIVER ELR 702			
		ART.-NO. D1015			
Indication		2 x LCD			
2-step accuracy		± 2 mm, ± 1 mm			
Signal tones (can be switched off)		3			
Display illumination		yes			
Power supply		1 x 9V			



1



2



1 Receiver ELR 702 2 Supplied with

EL 515 Plus SET

Fully automatic rotating laser

» **Aligned to your needs.**

Ready to use and fully equipped for many applications: Either the elevating tripod or the wall mount can be used, depending on the situation. Target plate and laser glasses for improved visibility of the laser beam. Receiver and handy levelling staff for determining height differences. With rechargeable battery and charger, and the option of operating the device with alkaline batteries.

[illegible]

EL 609

EL 609 SET

Cross laser

» The universal laser for interior work.

Misaligned is a thing of the past with this line laser. Whatever your internal application – alignment of wall tiles, setting out for drilling holes, transfer of levels or precise levelling of doors and windows. Wherever you have something to measure – the result will convince you.

» EL 609 cross laser set including lightweight elevating tripod with a working range from 43 to 115 cm.



TECHNICAL DATA		EL 609	FEATURES	SUPPLIED WITH EL 609
				ART.-NO. D1205
Self-levelling range	± 3°	· 1 vertical and 1 horizontal line form 1 laser cross · Laser lines switchable separately · Visual alarm when out of self-levelling range · 1/4" tripod connection · Multifunctional mount (magnetic and with 1/4" tripod connection)	· 3 x AA Alkaline battery · Multifunctional mount · Padded carrying case	
Accuracy	± 5 mm / 10 m			
Working range without receiver	10 m* (radius)			
Power supply	3 x AA Alkaline			
Operating time (all lines switched on)	18 h			
Dust/water protection	IP 54			
Laser diode / class	635 nm / 2			
Temperature range	-10°C to +45°C			
Weight (instrument with battery)	0,4 kg			
			SUPPLIED WITH EL 609 SET	
			ART.-NO. D1207	
			· 3 x AA Alkaline battery · Multi-functional mount · Elevating tripod · Padded bag	

*depending on room illumination

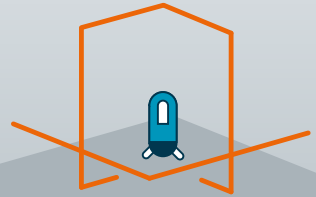
EL 607

Multi-line laser

» With it everything is kept straightly.

Two long vertical lines at a 90° angle to each other and a horizontal line for various indoor tasks. With the plumbing function points can be transferred between floor and ceiling. Excellent visibility of laser lines.



TECHNICAL DATA	EL 607	FEATURES	SUPPLIED WITH
Self-levelling range	± 3,5°	· 2 vertical lines at 90° to each other · 1 horizontal line · Plumb down beam · Laser lines switchable separately · Plumbing function · Self-levelling function can be switched off for manual use · Visual and audible alarm when out of self-levelling range · Integrated floor tripod · 360° circle · 5/8" connection at the instruments' bottom	ART.-NO. D1210
Accuracy	± 3 mm / 10 m		· Laser glasses · 3 x AA Alkaline battery · Hard case
Working range without receiver	20 m* (radius)		
Power supply	3 x AA Alkaline		
Operating time (all lines switched on)	8 h		
Dust/water protection	IP 54		
Laser diode / class	635 nm / 2		
Temperature range	-10°C to +45°C		
Weight (instrument with battery)	1,0 kg		

* depending on room illumination

EL 639

Multi-line laser

» **The all-rounder.**

Four vertical angles at 90°, a long horizontal line, plumbing function and the excellent visibility of the laser lines make the device the indispensable measuring tool for all interior levelling work.

[illegible]

* depending on room illumination

TO GET THE RIGHT ANGLE.

High visibility optics

» Generously sized telescope diameter makes work easier even in poor light conditions

Comfortable handle

» For easy transport to the construction site

Robust metal housing

» With side trim in durable plastic



ELT 220

Electronic theodolite

» Electronic theodolite – easy to use

For measuring horizontal, vertical and zenith angles.
For use in civil engineering for vertical alignment of formwork, prefabricated parts or pilings.

Particular attention has been paid to user-friendliness in the ELT 220: a large screen with easily legible values, a laser plumb for convenient positioning over the ground mark etc.



TECHNICAL DATA	ELT 220	FEATURES	SUPPLIED WITH
			ART.-NO. D3500
Magnification	30 x	· Large easy-to-read LCD	· Tribrach
Clear objective diameter	45 mm	· Laser plummet for easy set up over the ground point	· Rechargeable battery
Shortest focussing distance	1,5 m	· Illumination of LCD and field of view	· Charger
Angle measurement	absolute encoder	· Horizontal circle: Hold-Function, 0-set at any desired position, clockwise/anti-clockwise reading	· Battery compartment for alkaline batteries
Accuracy	20" (6 mgon)	· Vertical circle: reading in gon / degrees / percent	· Container
Minimum reading	10" (3 mgon)		
Measuring units	400 gon / 360°		
Laser plummet: spot size	Ø 2 mm at 1,5 m		
Laser plummet: laser class	2		
Operating time / power supply	18 h / NiMH		
Temperature range	-20°C - +50°C		
Dust / water protection	IP 54		
Weight (instrument only)	4,2 kg		

1 Large illuminated display

BLOWS THE COMPETITION OUT OF THE WATER.



Screen

» Easy-to-read screen and extremely simple to use

Housing

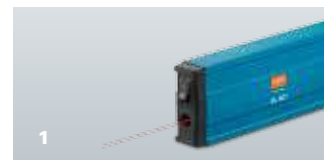
» Extremely robust design

EL 821

Electronic slope measurer

» For precise level and slope measurements.

For measuring gradients, slopes and levels. With built-in laser beam for an extended working range. Large LCD screen. Easy to use and gives precise results. Length 60 cm.



TECHNICAL DATA	EL 821	FEATURES	SUPPLIED WITH
Working range	4 x 90°	· Measuring slopes, inclinations and plane surfaces · Laser beam to extend the working range · Rotatable and easy reading in many positions · HOLD function · Signal tones at 0°, 45°, 90°	ART.-NO. D2000 · Carrying case · Set of batteries
Resolution	0,1° / 0,01 %		
Accuracy	0° and 90° = ± 0,1° 1° – 89° = ± 0,2°		
Working range laser	20 m		
Accuracy laser	± 1 mm / 1 m		
Wave length / Laser class	650 nm / 2		
Power supply	2 x AAA Alkaline batteries		
Working temperature	+5 °C – +40 °C		
Weight	0,70 kg incl. batteries		
Dimensions	600 x 22 x 57 mm		



1 With laser beam to extend the working range

EL 823

Digital angle measurer

» For precise angle measurements.

Easy measurement of angles and inclined surfaces with relative and absolute measurement.
The aluminium angle can be fixed in any position. 0-setting of the angle in any position. HOLD function to freeze measurement.



TECHNICAL DATA	EL 823	FEATURES	SUPPLIED WITH
Resolution	0,05°	- Adjustable aluminium arm - High resolution - Large easy to read LCD	ART.-NO. D2100
Accuracy	± 0,1°		- Set of batteries - Carrying case
Measuring range	0 – 360°		
Operating temperature	+5 °C – +45 °C		
Power supply	1 x 3 V lithium battery		
Operating time	2000 h		
Weight	0,34 kg incl. batteries		
Dimensions	250 x 25 x 50 mm		

ELN 24

Levelling set

» Raise the bar.

Levelling set with aluminium tripod and levelling staff
– easy to use, reliable and robust



TECHNICAL DATA	ELN 24	FEATURES	SUPPLIED WITH
Mean error 1 km double levelling	± 2 mm	- Robust metal housing - Supplied in carton comprising ELN 24 level, 5 m levelling staff and tripod for convenient storage and delivery	400 GON ART.-NO. D3000 360° ART.-NO. D3010
Telescope magnification	24 x		- ELN 24 level with carrying case - Aluminium tripod 5 m levelling staff - Set carton
Objective diameter	36 mm		
Shortest focussing distance	0,3 m		
Horizontal circle	400 gon / 360°		
Weight	1,5 kg		

ELR 701

Receiver for rotating lasers



ELR 702

Receiver for rotating lasers



» At long sight better.

- In bright surroundings and over long distances the visibility of the laser line may decrease. By means of the receiver the laser beam can be displayed visually.
- The receiver can be attached to levelling rods by means of the clamp which is supplied with.
- The receiver has an energy-saving function.
- Built-in vial.
- Can be used with EL 503 and EL 515 Plus.
- The exact level is displayed by 3 coloured LEDs and an audio signal.

TECHNICAL DATA	RECEIVER ELR 701	SUPPLIED WITH
		ART.-NO. D1010
Indication	3 x LED (front)	· Set of batteries · Clamp for levelling staff
Accuracy	± 1,5 mm	
Signal tones	2	
Illumination	Yes	
Power supply	2 x AAA Alkaline	
Auto-shut-off	Yes	
Weight	0,106 kg	
Dimensions	117 x 68 x 23 mm	

- The exact level is displayed by symbols on the front and back of the receiver. Additional indication by audible signals.

TECHNICAL DATA	RECEIVER ELR 702	SUPPLIED WITH
		ART.-NO. D1015
Indication	2 x LED (front, back)	· Set of batteries · Clamp for levelling staff
2-step accuracy	± 2mm, ± 1 mm	
Signal tones (mutable)	3	
Illumination	Yes	
Power supply	1 x 9 V	
Auto-shut-off	Yes	
Weight	0,42 kg	
Dimensions	170 x 76 x 29 mm	

EFS 10

Elevating tripod



FEATURES

ART.-NO. D1420

- Rotating head
- 67 – 188 cm (incl. 30 cm centre column)
- 2,3 kg
- Lightweight elevating tripod made of aluminium for instruments with 5/8" thread
- Incorporated circular bubble
- Incl. bag

EFS 15

Aluminium tripod



FEATURES

ART.-NO. D1150

- Aluminium tripod for instruments with 5/8" thread
- Working range 85 to 150 cm
- Quick clamp system
- Shoulder carrying strap
- Weight 3,5 kg
- Ideal for use with EL 515 Plus, ELT 220, ELN 24

EKS 3

Floor-to-ceiling pillar



FEATURES

ART.-NO. D1400

- Floor-to-ceiling pillar (1-leg tripod) to be fixed between floor and ceiling
- Solid construction
- 5 sections with metal thread
- Maximal length 3,40 m
- 5/8" and 1/4" adapter
- Supplied with carrying bag
- The individual poles are equipped with 5/8" threads. This enables them to be screwed onto tripods, if no ceiling surface is available.

The all-around carefree package.

Customer service is of utmost importance for us. Sticking to this principle, we have put together an all-inclusive package for you. From comprehensive warranty coverage of all our products, to 24-hour online availability, to an exemplary spare parts service, we offer you all our services in one package. So you can rely on a comprehensive customer service even long after you have purchased your Ecoline products.

It's not possible to know everything. Our qualified specialists will provide you with advice at any time, so you are guaranteed to get the right answer to your questions. Talk to us.

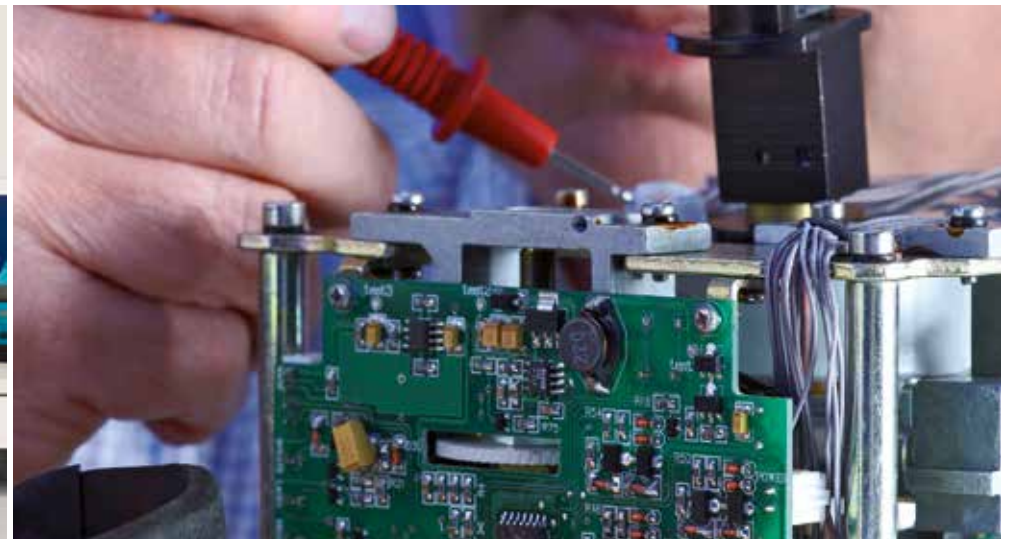
Your contact partner on site

We're setting standards for advice too. Our advisers are always there for your needs.



Customer service

Use our comprehensive services and benefit from a professional repair service.



» Tailor-made information

You know best which special requirements you have for our surveying equipment. For further details, data concerning our products, catalogue downloads and all the latest news and information, please visit our website.

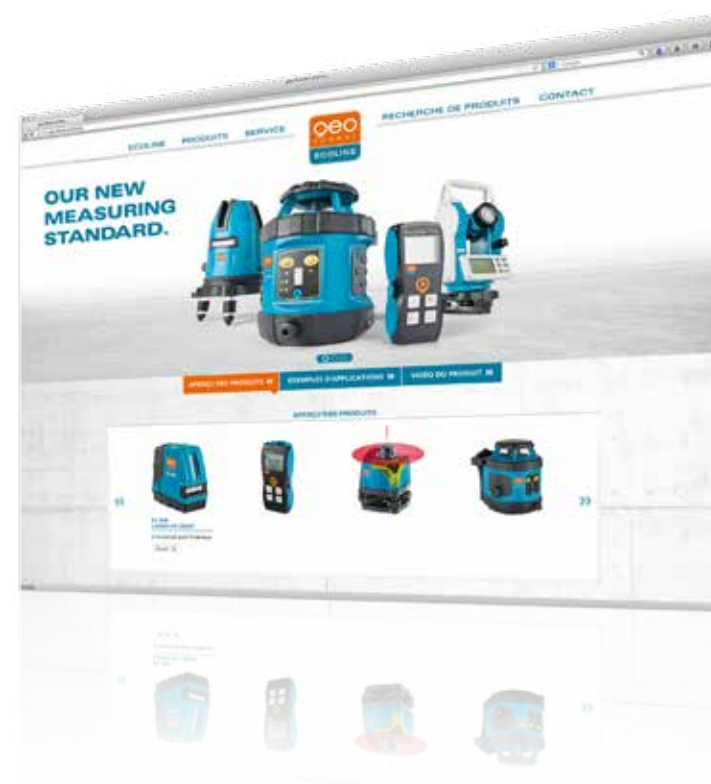
As advanced as the Internet. Our products.

We're setting standards on the Internet too. We have widened our product range with the Ecoline web page. Here you can find all the details and data on our Ecoline products. And while you are there our website lets you know all the news. In this way we can maximize the utilization of potentials and as a result can guarantee you full customer service - and in the future as well.

Optimised for your computer, tablet or smartphone. Keep up to date – even when you're out and about.



www.geo-fennel-ecoline.com



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EXACTLY WHAT YOU NEED

