

## **MEASUREMENT AND ALIGNMENT SYSTEMS**

# **PRODUCT CATALOGUE**



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## WHAT THE PICTURES SHOW

System picture. Does only show the main parts of the system, not all items that are included. Always read the Part list for complete system specification.



Easy-Laser® E915 Flange Spin Part No: 12-0526

Measure flatness easily with spinning laser
This system is mainly for wind turbine tower producers who want to measure flatness of flanges. Similar applications can be e.g. slewin bearings. You can see the result as a true 3D image in the display u directly after measuring. Then evaluate the result easily with differ calculation settings, for example three point reference, best fit or a positive. This can also be done directly on site without having to st tog to a PC with separate analysis programs, which was the case previously. This makes production much more efficient.

The system includes laser transmitter D23 Spin with power rotating The system includes laser transmitter D23 spin with power rotating head. This is how it works in brief: The laser beam from the transm ter rotates constantly and creates a reference plane over the entire measurement object. Measurements are performed quicker as you not have to align the beam for each new measurement position. Ye place the detector at the desired measurement points and register reading by a push of a button. In principle, one person can perforn the measurement themselves. It is then possible to generate a PDI |D| |D550| |E| |XT|: Indicates which product range the part is compatible with. If no letter is present, the part fits all ranges.

|XT\*|: If there is an asterisk \*, the bracket will need an adaptor to fit.

Note: If there are other compatibility limitations these are mentioned for each product. For more information see next page.



**Detector E5** 

Part No: 12-0509 Description: Detector for the E [0.79"x0.79"]. Built-in 360° ele making it possible to connect t ly mounted on rods, but has m thanks to threads on two sides Note: With Dual Detection Tecl

fixed point laser and spinning la

Main product picture 1

#### Additional pictures 1

Can show the system/product in an application, a product function or another view.

#### NOTE!

20 m / 66'

We reserve the right to make modifications of the product design and technical specifications without prior notification.

<sup>1</sup>Be aware that these pictures may show items that are not included for the specific part number.

## STRAIGHTFORWARD BY ALL MEASURES

Easy-Laser® is one of the world's leading manufacturers and suppliers of laser measurement systems for all types of industry. We provide extreme accuracy and precision. But that's not what sets us apart. Today, when virtually anyone with a decent laser can do "straight", to get ahead, you need to be a bit more forward-thinking.

Because, in the long run, what really counts is neither the absolute straightness of an individual component nor the precise alignment of shafts. It's what these measures add up to: Increased productivity and the saving of resources. Those are the things we ultimately deliver. And from that perspective our most important task is to help you make the road leading there as free from bumps and bends as possible.

That means developing user-friendly measurement and alignment systems that are as easy to get your head around, as they are versatile and scalable. It also means shortening delivery times, extending warranties and optimizing training and support.

Moreover, you can always expect us, or any of our partners, to give you an honest opinion on which of our products are crucial to your operations and which you can do without. What really needs to be aligned and what not. So that what we offer you is a solution perfectly aligned with your needs — and your budget.

Regardless of whether you're a service technician, a purchaser or the CFO of a multinational industrial group, you'll find Easy-Laser® truly easy to deal with. Or as we like to put it – straightforward by all measures.



#### LONG WARRANTY

The systems come with a 3 year limited warranty. The manufacturing and quality systems are ISO9001 approved.



ISO 9001 CERTIFIED



#### **OUR SERVICE CONCEPT**

Our service department usually takes care of servicing or calibration within seven working days. All this makes Easy-Laser® a safer working partner for your operation. As an extra service, we provide a 48 hour express service for when accidents occur and time is of the essence. Contact us for further information about terms and conditions.





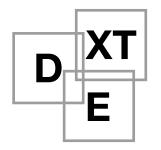
## COMPATIBILITY BETWEEN D, E AND XT

Easy-Laser® measurement systems are extremely versatile in their standard form. By using clever accessories, you can adapt the systems for your own needs, now and in the future as your measurement requirements change. You can also combine parts from one system with another. This is cost-effective! However, there are some differences you need to know:

**Note1:** The D-series, E-series and XT-series detectors and display units can only be used within its own product series. This is due to software communication. Laser transmitters are no problem, because they do not communicate with measurement software.

**Note2:** Brackets for D- and E-series has a rod C–C of 40 mm, XT-series rod C–C is 56 mm. The XT offset bracket (12-1008) function as an adaptor for these two measures, but doesn't fit all older brackets.

**Note3:** Brackets for D550Ex has a rod C–C of 70 mm. These brackets are marked |D550|. Please note that D550Ex is discontinued, and replaced by **XT**550Ex (rod C–C 56 mm).



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## LEARN MORE ABOUT A SPECIFIC MEASUREMENT SYSTEM OR APPLICATION

In our measurement system brochures you can find technical specifications and more information on the systems and products in this Product overview. Available for download in different languages from: www.easylaser.com



Easy-Laser® E980



Easy-Laser® E970/E975



Easy-Laser® E960



Easy-Laser® E950



Easy-Laser® E930



Easy-Laser® E920



Easy-Laser® E910/E915



Easy-Laser® E710/E720



Easy-Laser® E540



Easy-Laser® E420



Easy-Laser® XT770



Easy-Laser® XT660



Easy-Laser® XT550 Ex



Easy-Laser® XT440



Easy-Laser® E290



Easy-Laser® XT280

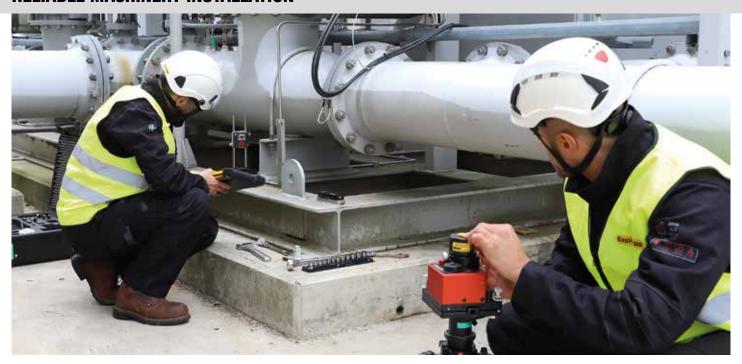


Easy-Laser® XT190



Easy-Laser® D90

## RELIABLE MACHINERY INSTALLATION



## Reliable machinery installation

"Reliable machinery installation" – it sounds like an obvious thing, don't you agree? But where does reliability actually start?

We all know that "the thing" starts with the design. The design stage decides what is going to be installed. Which equipment, and where. But there is no decision of Who is going to perform the installation, and How it is going to be installed. Most of the time those two departments are not cooperating, especially if they don't belong to the same organization. The installation teams must be involved in the design because they will provide their feedback for reliable machinery installation. They know exactly how the things work out there and how this needs to be done.

Every day I see on the social media tons of information regarding reliability maintenance, condition monitoring, sensors, cameras and all possible problem-solving technologies. All those technologies provide necessary information from our assets. Things we need to know in order to evaluate the condition of our assets. But what about the most crucial step? Machinery installation, anyone? I have been assembling and building skids and gas compression systems for gas and petrochemical industry for many years. My experience has shown me that "flatness and levelness" is one of the most critical issues when it comes to the assembly of rotating machinery.

#### **Designed for flatness and levelness**

All machinery is designed to work on a flat and levelled surface. Every manufacturer of pumps, compressors, blowers, electrical motors, gear boxes assume that their equipment is going to be installed correctly, meaning on flat and levelled surface. And they also provide their tolerances for this. There are standards for the installation, too. ANSI standards recommend foot flatness less than  $0.4\mu/mm$  [5 mils/ft]. And coplanarity less than  $50\mu m/mm$  [2 mils] between the machines and their drives for machines up to 400kW or 500 HP. ISO

standard for centrifugal pumps for petroleum, petrochemical and natural gas industries (ISO 13709:2009) say clearly that "Corresponding surfaces shall be in the same plane within  $150\mu\text{m/m}$ ". That is 0,15mm per meter. Levelness has the tolerances less than 0,8  $\mu\text{m/mm}$  [10 mils/ft]

#### Flatness and levelness affect everything

Checking the flatness of the foundation is essential. The foundation is the cornerstone for every single installation, irrespective of type. Mounting pads, soleplates, frames and tables. Everything you put on top of them is going to be affected. When the flatness is out of tolerances all rotating equipment is affected. Soft foot, misalignment, machine casing stress, pipe flange misalignment, and many other causes. But I want to mention specifically one, and that is strain in the bearings. The bearing is designed to rotate using the oil film lubrication. According to Swedish bearing manufacturer SKF, a free running bearing with the proper lubrication will rotate to infinity. When the bearing is squeezed, the lubrication film is forced out and contact metal-to-metal appear. Excess heat is generated, and your bearing is running into the failure. That simple. All other failures will be linked to it. And it often started with a flatness issue.

Levelness is another factor affecting heavily the equipment. Vertically installed bearings carry on horizontal loads and if you change their gravity point, the lubrication will move out of their race way. If you have not proper lubrication film, there will be metal to metal contact. If you have splash lubrication in your machine, and you have unlevelled installation, you will move the oil away from the oil slinger. That will be End of the story.

Why would you install your asset on bases which is not checked for proper flatness and levelness and face all the problems related to it? After reading this you can at least not claim "I didn't know it was important..."

#### Roman Megela Gazdova

Senior reliability engineer, Easy-Laser AB

USER STORIES Easy-Laser® Product overview



## **Bilfinger goes Ex**

Bilfinger Maintenance is Germany's leading maintenance service provider. They decided to make a leap into the future of laser alignment – the app based intrinsically safe XT550 Ex system.

#### The leading maintenance service provider

In the 'Industriepark Höchst' in Frankfurt/M. alone, the Bilfinger Machine and Drive Technology Division attend most of the manufacturing companies and a growing number of customers outside of the chemical park. When it comes to shaft alignment, experts from Bilfinger rely on the co-operation with the Swedish company Easy-Laser for nearly two decades. Shortly after Easy-Laser had officially launched their XT550 EX shaft alignment system at the Hannover trade show in April 2018, the innovative measurement system was delivered to Bilfinger, who was the first customer.

#### **Explosion protection is essential**

A big plus for the intrinsically safe XT550 EX is its ATEX and IECEx-certification: The system can be used in the explosive atmospheres of zone 1 and 2, without the customer needing a separate 'hot permit' and having to shut down his production, which always means significant financial and time-consuming expenditure. "Earlier, the entire facility would have to come to a complete standstill. Today, there are more and more only partial shutdowns of only one section while the adjacent production carries on running. This is a big advantage, saving considerable time for both us and the customer", says Mr. Karl-Heinz Bank, head of Machine Technology and Service Technicians at Bilfinger.

#### Smart documentation shortens downtime

With the XT alignment systems, the user is on-site to carry out measurements and then creates a measurement report within the system, including graphs in a PDF or Excel format, before sending it off electronically. "This saves a lot of time and makes it easier for the customer because he has the documentation on his desk straight away and can start operating the machine again straight away", says Bank.

This is a short version. Read the full story published on our web site, <u>www.easylaser.com</u>

Bilfinger is a leading international industrial service provider. With around 36,000 employees, in 2017, Bilfinger generated a sales revenue of around 4.044 billion euros. Learn more about Bilfinger services worldwide: <a href="https://www.bilfinger.com">www.bilfinger.com</a>

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Here are some direct links to click if you read this as a PDF:



#### Alignment tolerances guiding your work >>

Recently a new standard was published in the U.S. by the Acoustical Society of America (ASA) and the American National Standards Institute (ANSI) called ANSI/ASA S2.75-2017/Part 1. This new standard is a great thing for our industry and will help us with all of our installation work and more. It is written following the core technical components of Measure, Analyze, Correct and Documentation.



## Making the impossible possible >>

We got an urgent call from one of our long time contacts at a contracting company based in Brazil. They were on site, working on getting one out of four gas turbines quickly back online after an unscheduled shut down. This is the story of how a complicated alignment job was solved by a clever Easy-Laser® alignment technician.



## The challenges of on ship alignment >>

On Site Alignment is a Dutch company with a focus on alignment onboard ships. They offer high-end services, which doesn't prevent their work from being physically challenging, sometimes including complicated crawling through narrow and dirty areas. Alignment on ships comes with other challenges as well. There are a lot of parameters to take into consideration. A ship on the water is moving, and it has different loading and ballast conditions. On Site need to consider all of this to calculate the correct alignment targets.

**EASY-LASER®** 

# COMPLETE SYSTEMS















## Easy-Laser® E980 Sawmill

Part No: 12-0727

#### Measurement and alignment of sawmill machinery

Easy-Laser® E980 is a laser based measurement and alignment system that helps sawmills to make optimal use of their machines. By setting the machines up correctly it is possible to maintain a high rate of production with the highest quality end products hour after hour.

With Easy-Laser® E980 measuring and adjustment of reducers, counterholds, saw blades and discs become a simple and quick task. The laser line works as an absolutely straight ruler for 40 metres, and is very practical for the demanding and dusty environment of a sawmill. It replaces the long wire used traditionally, and gives many more possibilities for aligning the saw equipment. Thanks to the user friendliness of a laser measurement system the alignment work is properly done when necessary. The investment is quickly returned through fewer production stoppages and more even quality in the sawn timber. It can be used equally well for circular saws and band saws.

Benefits of using Easy-Laser® E980 are:

- Higher production speed
- · Less unplanned downtime
- Better product quality
- Longer lifetime for blades
- Longer lifetime for bearings
- · Less vibration
- Less waste material

There is a standard system configuration plus some useful accessories. Together with our Easy-Laser representative, the system is adapted to best fit your actual machinery.

Please note that the pictures show older design of case, index table and display unit.

#### A complete system contains:

| 12-0418 | 1 | Display unit E51 |
|---------|---|------------------|
|---------|---|------------------|

12-0168 1 Laser transmitter D23

12-0509 1 Detector E5

12-0436 1 Wireless unit

03-0833 2 Electronic target

12-0074 1 Cable 2 m

12-0045 1 Magnet base with turnable head

12-0016 1 Shaft bracket with chain

12-0624 2 Bracket for electronic target

12-0169 1 Rod bracket with turnable head

12-0485 1 Magnet bracket short, with turnable head

12-0484 1 Magnet bracket long, with turnable head

12-1087 1 Bracket for tilt table

12-1083 1 Index table 90°

12-0059 1 Set of Rods (4x60 mm)

12-0324 1 Set of Rods (8x120 mm)

01-0565 2 Large targets

05-0685 1 Manual (Note: Refers to English manual)

 $03\text{-}0842 \quad 1 \quad \text{Measuring tape 5 m}$ 

03-0914 1 USB memory stick with documentation

03-0822 1 USB cable

03-1243 1 Battery charger (100-240 V AC)

03-0967 1 Hexagon wrench set (incl. with 12-0168)

01-0048 1 Rod tightening tool 4 mm (incl. with 12-0168)

12-0495 1 Shoulder strap for Display unit

03-0878 1 Cleaning cloth for optics

12-1007 1 Transportation case, with wheels

#### **Examples of accessories:**

12-0022 1 Laser transmitter D22 (add or exchange the D23)

12-0509 1 Detector E5 (add an extra unit for more measurement possibilities)

12-1010 1 Sliding bracket (for vertical support rolls)

12-0013 1 Magnet base

12-0045 1 Magnet base with turnable head

12-0696 1 Small magnet base with turnable head

12-1053 1 XT190 BTA (belt transmission alignment tool)

Note: always check number of items included for each Part No. before ordering.

#### Complete system:

Weight: 15.0 kg [33.1 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]



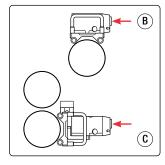












## Easy-Laser® E975 Roll Alignment

Part No: 12-0854

#### For fast exchange of rolls

System E975 is designed mainly for roll alignment. It is well suited when just one or two rolls are to be replaced or adjusted at the same time. For rolls with diameters 80–400 mm [3.1–15.8"], and a minimum length of 300 mm [11.8"]. The large roll kit (Accessory, Part No. 12-0885) makes it possible to measure diameters 400–1300 mm [15.7–51.2"]. Accessory brackets for other dimensions available on request.

Measurement distance between transmitter and detector up to 20 m (in each direction) [66 feet].

Thanks to the fact that the system is quick to set up on the machine it can be used during short stoppages to check and if necessary adjust or replace a roll. Where more advanced methods might require that the measuring service is scheduled some time in advance and use contracted personnel, with Easy-Laser® E975 you can do the job yourself.

The system can be expanded with other detectors and brackets for more geometric measurement possibilities.

Note: The E2 detector that is included reads angles, not positions. This means that if you want to take full advantage of the measurement program package of system E975, you will also need a positional detector like e.g. the E7.

A. With legs from Large Roll Kit mounted (accessory).

Alternative mounting of units:

B: Top attachment

C: Front attachment. If space on top is limited.

#### A complete system contains:

12-0418 1 Display unit E-series E51

12-0022 1 Laser transmitter D22 incl. tilt table

12-0845 1 Detector E2

12-0849 1 Roll bracket

12-0846 1 Digital Precision Level E290

12-0013 1 Magnet base

12-0874 1 Adapter plate for tilt table to magnet base

01-0044 2 Rods 240 mm

01-0873 2 Rods 120 mm 01-0043 2 Rods 60 mm

12-0915 1 Safety strap for laser transmitter

05-0685 1 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB memory stick with documentation

03-0822 1 USB cable

03-1243 1 Battery charger (100-240 V AC)

12-0989 1 DC charging cable

12-0751 1 DC to USB adapter

03-0967 1 Hexagon wrench set

12-0495 1 Shoulder strap for Display unit

03-0878 1 Cleaning cloth for optics

12-0870 1 Carrying case

#### Complete system:

Weight: 15.0 kg [33.1 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

#### **Examples of accessories:**

12-0885 1 Large Roll kit

12-0752 1 Detector E7 12-1053 1 XT190 BTA

12-1053 | XII90 BIA

12-0434 1 Measuring unit EM 12-0433 1 Measuring unit ES

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0597 1 Splitter box

03-1004 1 Thermal printer

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0510 1 Slide bracket Min. Ø300 mm

12-0269 1 Tripod

12-1136 1 Angular prism















## Easy-Laser® E970 Parallelism

Part No: 12-0853

#### For parallelism measurement

For parallelism measurement of rolls and other objects in numerous applications. The E970 is especially suitable when many objects are to be measured and aligned, and when the distances are long. This system use the traditional method where the laser beam (reference) is pointed alongside the machine, and then deflected 90° towards the detector on the measurement object by a penta prism. Measurement values for the horizontal position are registered in both ends of the object. The included precision level is used for the vertical position. Any chosen object or the baseline can be used as a reference. For rolls with diameter 40 mm [1.6"] and larger. Maximum measurement distance with a standard system is 80 metres [260 feet] (40 metres in each direction from the transmitter).

Easy-Laser® E970 is a very versatile system. You can also use it to measure level, straightness and flatness on wire sections (suction boxes), flatness on bases and straightness on rolls. With a few accessories you can also perform shaft alignment. This makes Easy-Laser® a very cost effective solution for your maintenance department.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
|---------|---|---------------------------|

Laser transmitter D22 incl. tilt table 12-0022

12-0752 **Detector E7** 1

12-0436 1 Wireless unit for E7

12-0846 E290 Digital Precision Level 1

12-0901 1 Extension Kit for E290

12-0074 Cable 2 m

12-0108 Cable 5 m. extension

12-1136 Angular prism (incl. laser alignment target)

Tripod adaptor for Angular prism 01-2232 1

12-0269 2 Tripod

12-0203 Parallelity kit

Set of Rods 4x240 mm 12-0060 1

12-0987 Set of Rods 4x120 mm

Set of Rods 4x60 mm 12-0059

12-0915 Safety strap for laser transmitter D22

12-0915 Safety strap for E290

Manual (Note: Refers to English manual) 05-0685 1

03-0842 Measuring tape 5 m

03-0914 USB memory stick with documentation 1

03-0822 **USB** cable

Battery charger (100-240 V AC) 03-1243 1

12-0989 1 DC charging cable

12-0751 1 DC to USB adapter

03-0967 1 Hexagon wrench set

12-0495 Shoulder strap for Display unit

03-0878 Cleaning cloth for optics 1

Carrying case 12-0869 1

## **Examples of accessories:**

XT190 BTA 12-1053

12-0856 Roll alignment Kit

12-0618 Battery pack with wireless technology

12-0434 Measuring unit EM

12-0433 Measuring unit ES 12-0016 V-bracket with chain

01-1165 Offset bracket 12-0597 Splitter box

03-1004 Thermal printer

12-0455 Slide bracket Min. Ø120 mm

12-0543 Slide bracket Min. Ø200 mm

12-0510 Slide bracket Min. Ø300 mm

12-0269 Tripod

Note: always check number of items included for each Part No. before ordering.

#### Complete system:

Weight: 19.5 kg [43.0 lbs]

WxHxD: 620x490x220 mm [24.4x19.3x8.7"]

Tripod:

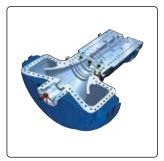
Weight: 7.9 kg [17.4 lbs]

Transport length: 1110 mm [44"]















## Easy-Laser® E960-A Turbine alignment

Part No: 12-0710

#### Reliability and precision

Easy-Laser® E960-A has a measuring probe with a stroke of 10 mm (Short stroke). The slidable tube makes it possible to measure several positions in a row without moving the bracket. Suitable for gas turbines and smaller steam turbines. Makes the measurement and adjustment work of diapraghms and bearings easier thanks to the wireless detector unit and measurement programs that guides you through the measurement process. All of the parts included in the systems are designed and built for even the most demanding workplace and for easy setup on any machinery. The versatile design solves the straightness measurement problems quickly and with precision for any kind of application. Objects up to 40 m [132 feet] can be measured. The detector reads measurement values with a resolution of 0.001 mm [0.05 mils]. Measures diameters 150-1700 mm [5.9-67"].

## Versatile programs

The straightness programs of system E960 are very versatile, and let you work in the way that suits every job best. You can add, remove and remeasure measurement points at any time during the measurement. Up to 999 points can be handled by the program. You can include both full bores and half bores in any possible combination in one measurement, the program will calculate the correct centre line in all cases. The measurement program includes many different methods for straightness measurement: 1-point measurement, 4-point measurement, Multipoint measurement (also ovality measurement), 3-point measurement, 3-point measurement with arbitrary angles. Optionally a reference detector can be used to monitor the laser transmitter position at long distances.

#### The measurement result

Thanks to the large colour display with clear graphs and measurement data you can evaluate the result directly on site. Any point can be set as reference and you can set an offset to which the centre line will be recalculated. You can also calculate waviness (short and long) and best-fit for the points. If you want, the result can also be checked against a tolerance value. The measurement system takes care of all these complicated calculations for you.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E5 |
|---------|---|--------------------------|
| 12-0075 | 1 | Laser transmitter D75    |
| 12-0752 | 1 | Detector E7              |
| 12-0436 | 1 | Wireless unit            |
|         |   |                          |

12-0074 1 Cable 2 m 12-0108 1 Cable 5 m, extension

12-0385 Laser transmitter bracket

Offset hub for Laser transmitter 12-0661 12-0438 **Detector bracket Short stroke** 

12-0443 Centering target 2

12-0495 Shoulder strap for Display unit

05-0685 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 **USB Memory stick with documentation** 

03-0822 **USB Cable** 1

03-1243 Battery charger (100-240 V AC)

03-0878 1 Cleaning cloth for optics 12-0724 1 Carrying case with wheels

Complete system:

Weight: 30.3 kg [66.8 lbs]

WxHxD: 1220x460x170 mm [48.0x18.1x6.7"]

#### **Examples of accessories:**

12-0805 Measuring probe ruby, diameter 5 mm

12-0801 Measuring probe ruby, diameter 2.5 mm

12-1047 Measuring probe cylindrical

12-1048 Measuring probe cylindrical, with magnet

12-0618 Battery pack with wireless technology

Offset hub arm kit for diameters 100-500 mm 12-0707

12-0752 E7 (as reference detector) 12-0434

Measuring unit M 12-0433 Measuring unit S

12-0016 V-bracket with chain

Offset bracket

01-1165

12-0187 Magnetic bracket for D75

12-0282 Set of extension arms

12-0597 Splitter box

03-1004 Thermal printer

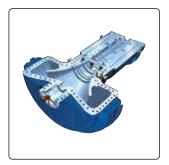
12-0022 Laser transmitter D22

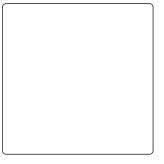
12-0706 Laser transmitter D25















## Easy-Laser® E960-B Turbine alignment

Part No: 12-0711

#### Reliability and precision

Easy-Laser® E960-B has a measuring probe with a stroke of 60 mm (Long stroke). Suitable for larger turbines. The system makes the measurement and adjustment work of diapraghms and bearings easier thanks to the wireless detector unit and measurement programs that guides you through the measurement process. All of the parts included in the systems are designed and built for even the most demanding workplace and for easy setup on any machinery. The versatile design solves the straightness measurement problems quickly and with precision for any kind of application. Objects up to 40 m [132 feet] can be measured. The detector reads measurement values with a resolution of 0.001 mm [0.05 mils]. Measures diameters 200–1700 mm [7.8–67"] as standard, and up to 4000 mm [157"] with accessory brackets.

#### Versatile programs

The straightness programs of system E960 are very versatile, and let you work in the way that suits every job best. You can add, remove and remeasure measurement points at any time during the measurement. Up to 999 points can be handled by the program. You can include both full bores and half bores in any possible combination in one measurement, the program will calculate the correct centre line in all cases. The measurement program includes many different methods for straightness measurement:

1-point measurement, 4-point measurement, Multipoint measurement (also ovality measurement), 3-point measurement, 3-point measurement with arbitrary angles. Optionally a reference detector can be used to monitor the laser transmitter position at long distances.

#### The measurement result

Thanks to the large colour display with clear graphs and measurement data you can evaluate the result directly on site. Any point can be set as reference and you can set an offset to which the centre line will be recalculated. You can also calculate waviness (short and long) and best-fit for the points. If you want, the result can also be checked against a tolerance value. The measurement system takes care of all these complicated calculations for you.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
| 12-0075 | 1 | Laser transmitter D75     |
| 12-0752 | 1 | Detector E7               |
| 12-0436 | 1 | Wireless unit             |

12-0385 1 Laser transmitter bracket 12-0661 1 Offset hub for Laser transmitter

12-0715 1 Detector bracket Long stroke

12-0443 2 Centering target

12-0495 1 Shoulder strap for Display unit

05-0685 1 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation

03-0822 1 USB Cable

03-1243 1 Battery charger (100-240 V AC)

03-0878 1 Cleaning cloth for optics

12-0724 1 Carrying case with wheels

#### Complete system:

Weight: 31.5 kg [69.4 lbs]

WxHxD: 1220x460x170 mm [48.0x18.1x6.7"]

#### **Examples of accessories:**

| 12-0805 | 1 | Measuring probe ruby, diameter 5 mm  |
|---------|---|--|
| 40 0004 | _ | Managed and the section of the secti |

12-0801 1 Measuring probe ruby, diameter 2.5 mm

12-1047 1 Measuring probe cylindrical

12-1048 1 Measuring probe cylindrical, with magnet

12-0618 1 Battery pack with wireless technology

12-0707 1 Offset hub arm kit for diameters 100–500 mm

12-0752 1 E7 (as reference detector)
12-0434 1 Measuring unit M

12-0434 1 Measuring unit M 12-0433 1 Measuring unit S

12-0016 1 V-bracket with chain

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0187 1 Magnetic bracket for D75

12-0282 1 Set of extension arms

12-0597 1 Splitter box

03-1004 1 Thermal printer

12-0022 1 Laser transmitter D22

12-0706 1 Laser transmitter D25















## Easy-Laser® E950-A Bore alignment

Part No: 12-0676

#### Bore alignment with the highest reliability and precision

Easy-Laser® E950-A is primarily designed for diesel engines (for example crank and camshaft bearings), gearboxes, compressors and similar applications. Positioning workpieces in machine tools is also an appropriate application.

Easy-Laser® E950 makes checking and aligning bearings and bearing journals easier thanks to wireless detectors and versatile brackets. A large colour display with clear graphics and software that guides the user through the entire measurement process contributes to simple operation. The system automatically calculates the bearing journals positions in relation to each other, both horizontally and vertically. You can then evaluate the results directly on-site with different calculation methods such as Best fit around zero and Waviness. It is also possible to analyse the different choices of reference points and set the offset and tolerance values.

A great feature is the check of ovality, for example, to analyse the wear rate. The measurement system takes care of all these complicated calculations for you. You measure and align both full and half bearing journals with equal simplicity. The wireless detector eliminates uncertain factors such as cable pull. All parts are designed for maximum accuracy and stability, and measure with a resolution of 0.001 mm [0.05 mils]. Measurement distance up to 40 m [130 feet]. Easy-Laser® E950 is suitable for use both in production and out in the field.

#### Also straightness of shafts and coupling alignment

With the systems, you can also measure the straightness of shafts, foundations, etc. without any additional accessories. With the measuring devices for shaft alignment (accessories), you have the most complete measurement system to align the entire drive train on the market. Programs for all types of measurements are included as standard, you then adapt the measurement system with brackets and detectors for your needs now and in the future.

## A complete system contains:

| 12-0418 | 1 | Display unit E-series E5 |
|---------|---|--------------------------|
| 12 0075 | 4 | Locar transmitter D75    |

12-0752 1 Detector F7

12-0436 1 Wireless unit

12-0074 1 Cable 2 m

12-0108 1 Cable 5 m, extension

12-0661 1 Offset hub for Laser transmitter

12-0384 1 Set of offset hub arms for diameters 100–500 mm

12-0154 1 Set of magnets for offset hub arms

12-0990 1 Adjustable magnet for offset hub arms

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0510 1 Slide bracket Min. Ø300 mm

12-0588 1 Large target E-series

12-0013 1 Magnet base

12-0059 1 Set of rods (4x60 mm)

01-0938 2 Rods 30 mm

01-0873 4 Rods 120 mm

01-0044 2 Rods 240 mm

12-0495 1 Shoulder strap for Display unit

05-0685 1 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation

03-0822 1 USB Cable

03-1243 1 Battery charger (100–240 V AC)

03-0967 1 Hexagon wrench set

03-0878 1 Cleaning cloth for optics

12-0684 1 Carrying case Linebore A

## Examples of accessories:

12-0618 1 Battery pack with wireless technology

12-0434 1 Measuring unit M

12-0433 1 Measuring unit S

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0187 1 Magnetic bracket for D75

12-0282 1 Set of extension arms

12-0580 1 Axial extension arms

12-0597 1 Splitter box

03-1004 1 Thermal printer

12-0022 1 Laser transmitter D22

Note: always check number of items included for each Part No. before ordering.

#### Complete system:

Weight: 14.0 kg [30.8 lbs], WxHxD: 550x450x210 mm [21.6x17.7x8.3"]















## Easy-Laser® E950-B Bore alignment

Part No: 12-0677

#### Bore alignment with the highest reliability and precision

Easy-Laser® E950-B is primarily designed for propeller shaft installations on ships with stern tubes, support bearings, gearboxes and engines.

Easy-Laser® E950 makes checking and aligning bearings and bearing journals easier thanks to wireless detectors and versatile brackets. A large colour display with clear graphics and software that guides the user through the entire measurement process contributes to simple operation. The system automatically calculates the bearing journals positions in relation to each other, both horizontally and vertically. You can then evaluate the results directly on-site with different calculation methods such as Best fit around zero and Waviness. It is also possible to analyse the different choices of reference points and set the offset and tolerance values.

A great feature is the check of ovality, for example, to analyse the wear rate. The measurement system takes care of all these complicated calculations for you. You measure and align both full and half bearing journals with equal simplicity. The wireless detector eliminates uncertain factors such as cable pull. All parts are designed for maximum accuracy and stability, and measure with a resolution of 0.001 mm [0.05 mils]. Measurement distance up to 40 m [130 feet]. The included aluminium beams for the laser transmitter bracket are 1100 mm [43.31"] (main beam) and 500 mm [19.86"] (vertical support beam). Easy-Laser® E950 is suitable for use both in production and out in the field.

#### Also straightness of shafts and coupling alignment

With the systems, you can also measure the straightness of shafts, foundations, etc. without any additional accessories. With the measuring devices for shaft alignment (accessories), you have the most complete measurement system to align the entire drive train on the market. Programs for all types of measurements are included as standard, you then adapt the measurement system with brackets and detectors for your needs now and in the future.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
| 10 0075 | 4 | Locar transmitter D7F     |

Laser transmitter D75 12-0075 12-0752 Detector F7 1

1

12-0436 Wireless unit 12-0074 Cable 2 m 1

Cable 5 m, extension 12-0108 1

12-0661 Offset hub for Laser transmitter

Laser transmitter bracket for sterntube 12-0385

12-0341 Self centering detector bracket for Ø300-500 mm

12-0588 Large target E-series

12-0013 Magnet base

12-0059 Set of rods (4x60 mm)

01-0938 Rods 30 mm 2

01-0873 Rods 120 mm

Rods 240 mm 01-0044 2

12-0495 Shoulder strap for Display unit

05-0685 Manual (Note: Refers to English manual)

03-0842 Measuring tape 5 m

03-0914 **USB Memory stick with documentation** 

**USB Cable** 03-0822 1

03-1243 Battery charger (100-240 V AC)

03-0967 Hexagon wrench set 1

03-0878 Cleaning cloth for optics

12-0685 1 Carrying case Linebore B

#### Complete system:

Weight: 27.0 kg [59.5 lbs]

WxHxD: 1220x460x170 mm [48.0x18.1x6.7"]

## **Examples of accessories:**

12-0618 Battery pack with wireless technology

12-0434 Measuring unit M

Measuring unit S 12-0433

12-0016 V-bracket with chain

01-1165 Offset bracket

Magnetic bracket for D75 12-0187

12-0282 Set of extension arms

12-0597 Splitter box

03-1004 Thermal printer 12-0022

Laser transmitter D22 12-0455 Slide bracket Min. Ø120 mm

12-0543 Slide bracket Min. Ø200 mm

12-0510 Slide bracket Min. Ø300 mm

03-0769 Aluminium extension beam L=500 mm

03-0770 Aluminium extension beam L=600 mm

03-0771 Aluminium extension beam L=1100 mm















## Easy-Laser® E950-C Bore alignment

Part No: 12-0772

#### Bore alignment with the highest reliability and precision

Easy-Laser® E950-**C** is primarily designed for diesel engines, compressors, gearboxes and similar applications. This system is much like the E950-A, but has for example instead the round detector E9. One of the brackets has a width of 25 mm [0.99"] to fit in narrow bearing journals. Measures bores diameter 80–500 mm [3.15–19.68"] as standard, and down to 50 mm [2.00"] with customized brackets.

Easy-Laser® E950 makes checking and aligning bearings and bearing journals easier thanks to wireless detectors and versatile brackets. A large colour display with clear graphics and software that guides the user through the entire measurement process contributes to simple operation. The system automatically calculates the bearing journals positions in relation to each other, both horizontally and vertically. You can then evaluate the results directly on-site with different calculation methods such as Best fit around zero and Waviness. It is also possible to analyse the different choices of reference points and set the offset and tolerance values.

A great feature is the check of ovality, for example, to analyse the wear rate. The measurement system takes care of all these complicated calculations for you. You measure and align both full and half bearing journals with equal simplicity. The wireless detector eliminates uncertain factors such as cable pull. All parts are designed for maximum accuracy and stability, and measure with a resolution of 0.001 mm [0.05 mils]. Measurement distance up to 40 m [130 feet]. Easy-Laser® E950 is suitable for use both in production and out in the field.

#### Also straightness of shafts and coupling alignment

With the systems, you can also measure the straightness of shafts, foundations, etc. without any additional accessories. With the measuring devices for shaft alignment (accessories), you have the most complete measurement system to align the entire drive train on the market. With additional accessories extruder machines can also be measured. Programs for all types of measurements are included as standard, you then adapt the measurement system with brackets and detectors for your needs now and in the future.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
| 40 0075 | _ | L to 14 D7F               |

12-0075 1 Laser transmitter D75

12-0759 1 Detector F9. 2-axis

12-0074 1 Cable 2 m

12-0108 1 Cable 5 m, extension

12-0661 1 Offset hub for Laser transmitter

12-0384 1 Set of offset hub arms for diameters 100-500 mm

12-0154 1 Set of magnets for offset hub arms

12-0990 1 Adjustable magnet for offset hub arms 12-0768 1 Slide bracket, Width 25 mm, Min. ∅80 mm

12-0767 1 Rod adapter with built in target

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0510 1 Slide bracket Min. Ø300 mm

12-0013 1 Magnet base

12-0059 1 Set of rods (4x60 mm)

01-0938 2 Rods 30 mm

01-0873 4 Rods 120 mm

01-0044 2 Rods 240 mm

12-0495 1 Shoulder strap for Display unit

05-0685 1 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation

03-0822 1 USB Cable

03-1243 1 Battery charger (100-240 V AC)

03-0967 1 Hexagon wrench set

03-0878 1 Cleaning cloth for optics

12-0782 1 Carrying case

## Examples of accessories:

12-0553 1 Bore bracket adapter plate

12-0314 1 Detector arms Linebore

12-0343 1 Slide bracket Min.  $\emptyset$ 100 mm

12-0752 1 Detector E7 reference detector

12-0436 1 Wireless unit

01-0777 1 Tube adapters (manufactured on request to specified diameter)

12-0214 1 Set of extension rods for Tube measurements

12-0434 1 Measuring unit EM

12-0433 1 Measuring unit ES

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0187 1 Magnetic bracket for D75

12-0282 1 Set of extension arms

12-0580 1 Axial extension arms

12-0597 1 Splitter box

03-1004 1 Thermal printer

12-0022 1 Laser transmitter D22

Note: always check number of items included for each Part No. before ordering.

#### **Complete system:**

Weight: 14.3 kg [31.5 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]















## Easy-Laser® E950-D Bore alignment

Part No: 12-0954

#### Bore alignment with the highest reliability and precision

Easy-Laser® E950-**D** is primarily designed for propeller shaft installations on ships with stern tubes, support bearings, gearboxes and engines.

Easy-Laser® E950 makes checking and aligning bearings and bearing journals easier thanks to wireless detectors and versatile brackets. A large colour display with clear graphics and software that guides the user through the entire measurement process contributes to simple operation. The system automatically calculates the bearing journals positions in relation to each other, both horizontally and vertically. You can then evaluate the results directly on-site with different calculation methods such as Best fit around zero and Waviness. It is also possible to analyse the different choices of reference points and set the offset and tolerance values.

A great feature is the check of ovality, for example, to analyse the wear rate. The measurement system takes care of all these complicated calculations for you. You measure and align both full and half bearing journals with equal simplicity. The wireless detector eliminates uncertain factors such as cable pull. All parts are designed for maximum accuracy and stability, and measure with a resolution of 0.001 mm [0.05 mils]. Measurement distance up to 40 m [130 feet]. Easy-Laser® E950 is suitable for use both in production and out in the field.

## Also straightness of shafts and coupling alignment

With the systems, you can also measure the straightness of shafts, foundations, etc. without any additional accessories. With the measuring devices for shaft alignment (accessories), you have the most complete measurement system to align the entire drive train on the market. Programs for all types of measurements are included as standard, you then adapt the measurement system with brackets and detectors for your needs now and in the future.

#### A complete system contains:

| _       |   | -    |         |        |          |
|---------|---|------|---------|--------|----------|
| 12-0418 | 1 | Disp | lay uni | t E-se | ries E51 |
|         |   |      |         |        |          |

12-0075 1 Laser transmitter D75

12-0752 1 Detector E7

12-0436 1 Wireless unit

12-0074 1 Cable 2 m

12-0661 1 Offset hub for Laser transmitter

12-0707 1 Arm kit with magnets

12-0990 1 Adjustable magnet for offset hub arms

12-0282 1 Extension arms Linebore

12-0341 1 Self centering detector bracket for Ø300-500 mm

12-0588 1 Large target E-series

12-0495 1 Shoulder strap for Display unit

05-0685 1 Manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation 03-0822 1 USB Cable

03-0022 I USD GADIE

03-1243 1 Battery charger (100-240 V AC)

03-0792 1 Toolbox

03-0967 1 Hexagon wrench set 03-0878 1 Cleaning cloth for optics

12-0986 1 Carrying case Linebore D

#### Complete system:

Weight: 18.3 kg [40.3 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

#### **Examples of accessories:**

12-0618 1 Battery pack with wireless technology

12-0823 1 E30 Long Range laser

12-0434 1 Measuring unit M

12-0433 1 Measuring unit S

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0187 1 Magnetic bracket for D75 12-0282 1 Set of extension arms

12-0597 1 Splitter box

03-1004 1 Thermal printer

12-0022 1 Laser transmitter D22

12-0455 1 Slide bracket Min. Ø120 mm

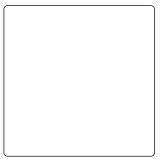
12-0543 1 Slide bracket Min. Ø200 mm 12-0510 1 Slide bracket Min. Ø300 mm

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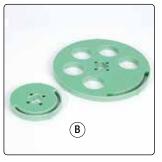














## Easy-Laser® E930 Extruder alignment

Part No: 12-0788

#### For aligning extrusion machines

Easy-Laser® E930 is designed to measure straightness and pointing direction, primarily on extruder barrels. Another application can be hydraulic pipes for example. With the system, barrels with diameters from 50 mm to 250 mm can be measured. The actual measurable length depends on the diameter and type of barrel, therefore always consult your Easy-Laser representative for further discussions. The transmitter's laser beam can be compared to an absolutely straight and weightless ruler, that is to say a perfect starting point for precision measurement.

During the alignment procedure both detector and spindle are rotated, thus self calibrating the system. This way you can determine how the centre line of the spindle is, relative to the tube's centre at the inlet end.

#### **Document your measurement results**

The detector's measurement value is transferred to the display unit wirelessly, which means that you can measure more freely. The measurement system has programs that guide you step-by-step, using clear graphics on a large 5.7" colour screen. You can also produce full documentation for your measurement job, with direct generation of PDF reports, and database programs for PC for example.

#### Complete system with all the measuring programs

Easy-Laser® E930 is a complete system in itself, with laser transmitter, detector and display unit. You can also add other parts from our extensive range to build a system that suits your specific needs and requirements, because all the measurement programs are included as standard. For example add shaft alignment equipment for other rotating machines, and lasers for flatness measurement.

- A. Detector with tube brackets mounted
- B. The brackets are manufactured on order to specified diameter
- C. Special brackets with metal points available on request.

#### A complete system contains:

- Display unit E-series E51 12-0418
- 12-0075 Laser transmitter D75
- 12-0759 Detector F9 1
- 12-0074 1 Cable 2 m
- 12-0108 Cable 5 m, extension 1
- 12-0187 1 Bracket for D75 with magnets
- 01-0777 (1) Set of brackets for detector (Single barrel)
- 01-2222 (1) Set of brackets for detector (Dual barrel)
- 12-0792 Set of extension rods for detector (6.3 m)
- 12-0810 Target for extruder 1
- 12-0495 Shoulder strap for Display unit
- 05-0685 Manual (Note: Refers to English manual)
- 03-0842 1 Measuring tape 5 m
- **USB Memory stick with documentation** 03-0914
- 03-0822 1 **USB Cable**
- 03-1243 Battery charger (100-240 V AC)
- 03-0967 Hexagon wrench set 1
- 03-0878 1 Cleaning cloth for optics
- 12-0811 1 Carrying case
- (1)=Included depending on customer choice.

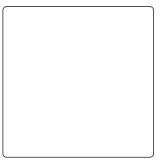
#### **Examples of accessories:**

- 12-0767 Rod adapter with built in target
- 12-0022 Laser transmitter D22
- 12-0436 Wireless unit
- 12-0434 Measuring unit EM
- 12-0433 Measuring unit ES
- 12-0016 V-bracket with chain
- 12-0013 Magnet base
- Magnetic bracket 12-1011
- 12-1012 Thin shaft bracket 12-1010 Sliding bracket
- Offset bracket
- 01-1165 12-0125 Cardan bracket
- 12-0553 Bore bracket adapter plate
- 12-0314 **Detector arms Linebore**
- 12-0597 Splitter box
- 03-1004 Thermal printer

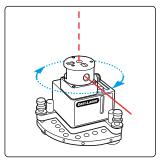














## Easy-Laser® E920 Geometric

Part No: 12-0771

#### Measurement system for all types of geometric measurement

This system can be used to carry out all the most common geometric measurements; straightness, flatness, squareness, plumb and level. Measurement is quick and precise. Displayed resolution is 0.001 mm [0.05 mils]. The laser transmitter is our well known big seller, the D22 with levelling table, strong magnetic feet, and a range of up to 40 m. The transmitter's laser beam can be compared to an absolutely straight and weightless ruler, that is to say a perfect starting point for precision measurement. The swivelling laser head gives a laser plane parallel to the measured object and can also angle the laser beam 90° to the sweep for squareness measurement.

The display unit has a large and clear 5.7" colour screen. The programs guide you step-by-step through the measuring process, which makes it easy even for inexperienced users. The system can provide full documentation, with direct generation of PDF reports, and database programs for PC for example. The detector transfers the measurement data to the display unit wirelessly, or by cable if required. The advantages of wireless are especially clear on mechanical constructions and objects where cables can snag or get in the way.

The most common method is to fix the laser transmitter to the measurement object using the mounting magnets, or mounting it on a tripod (accessory) to one side. A pin is also provided to secure the laser transmitter to a machine spindle or equivalent, to check straightness and spindle alignment for example.

Easy-Laser® E920 is a complete system in itself, with laser transmitter, detector and display unit. But it is also an excellent starting point for creating a measurement system that suits your specific needs and requirements, because all the measurement programs are included as standard! Add extra laser transmitters, measuring units and brackets as well as other accessories from the wide Easy-Laser® range. Now or in the future.

#### A complete system contains:

| 12-0418 | 1 | Display unit E51 |
|---------|---|------------------|
|---------|---|------------------|

12-0022 1 Laser transmitter D22 incl. tilt table

12-0752 1 Detector E7

12-0436 1 Wireless unit

12-0074 1 Cable 2 m

01-1333 1 Machine/magnet base pin for D22

12-0045 1 Magnet base with turnable head

12-0544 2 Targets for rough alignment

01-1165 1 Offset bracket

01-0043 6 Rods 60 mm

01-0873 6 Rods 120 mm

12-0915 1 Safety strap for laser transmitter

05-0685 1 Manual (Note: Refers to English manual)

03-0914 1 USB memory stick with documentation

03-0822 1 USB cable

03-1243 1 Battery charger (100-240 V AC)

03-0967 1 Hexagon wrench set

12-0495 1 Shoulder strap for Display unit

03-0878 1 Cleaning cloth for optics

12-0781 1 Carrying case

#### Complete system:

Weight: 12.3 kg [27.1 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

## Examples of accessories:

12-0759 1 Detector E9, 2-axis

12-1053 1 XT190 BTA

12-0618 1 Battery pack with wireless technology

12-0434 1 Measuring unit EM

12-0433 1 Measuring unit ES

12-0016 1 V-bracket with chain

01-1165 1 Offset bracket

12-0597 1 Splitter box 03-1004 1 Thermal printer

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0510 1 Slide bracket Min. Ø300 mm

12-0269 1 Tripod

12-1136 1 Angular prism

01-2232 1 Tripod adaptor for Angular prism





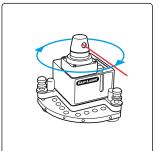














Sectional flatness program

## Easy-Laser® E915 Flange Spin

Part No: 12-0526

#### Measure flatness easily with spinning laser

This system is mainly for wind turbine tower producers who want to measure flatness of flanges. Similar applications can be e.g. slewing bearings. You can see the result as a true 3D image in the display unit directly after measuring. Then evaluate the result easily with different calculation settings, for example three point reference, best fit or all positive. This can also be done directly on site without having to stop to go to a PC with separate analysis programs, which was the case previously. This makes production much more efficient.

The system includes laser transmitter D23 Spin with power rotating head. This is how it works in brief: The laser beam from the transmitter rotates constantly and creates a reference plane over the entire measurement object. Measurements are performed quicker as you do not have to align the beam for each new measurement position. You place the detector at the desired measurement points and register the reading by a push of a button. In principle, one person can perform the measurement themselves. It is then possible to generate a PDF report containing graphs and measurement data directly from the measurement system's display unit. All information about the measurement object is documented.

Includes the sectional measurement flatness program\*. A tower section with diameter over 4 meters represents a significant weight. This weight causes the flanges to deform when the sections are manufactured. With sectional measurement program the flatness is measured in four sections which are mathematically merged into a full circle, which solves this measurement problem. The program also makes it possible to perform the complete measurement on ground. No climbing on ladders or skylift is therefore required. With traditional methods the operator has to work on hazardous high levels, and often more men are needed.

\*The sectional measurement flatness program is patented in Sweden, Germany, China and USA.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
|---------|---|---------------------------|

12-0168 1 Laser transmitter D23 incl. tilt table

12-0509 1 Detector E5

12-0436 1 Wireless unit

12-0074 1 Cable 2 m

12-0108 1 Cable 5 m, extension

12-0321 1 Cable support

12-0544 3 Targets for rough alignment

12-0045 1 Magnet base with turnable head

01-0043 6 Rods 60 mm

01-0873 6 Rods 120 mm

12-0495 1 Shoulder strap for Display unit

12-0915 1 Safety strap for laser transmitter

05-0400 1 Manual (Note: Refers to English manual)

05-0545 1 Quick manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation

03-0822 1 USB Cable

03-1243 1 Battery charger (100-240 V AC)

03-0967 1 Hexagon wrench set

03-0878 1 Cleaning cloth for optics

12-0781 1 Carrying case

#### **Examples of accessories:**

12-0618 1 Battery pack with wireless unit

12-0434 1 Measuring unit EM

12-0433 1 Measuring unit ES

12-0016 1 V-bracket with chain

03-1004 1 Thermal printer

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0510 1 Slide bracket Min. Ø300 mm

Note: always check number of items included for each Part No. before ordering.

#### Complete system:

Weight: 12.1 kg [26.7 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

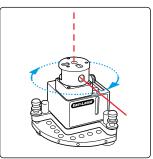


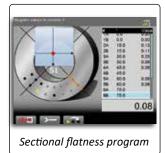












## Easy-Laser® E910 Flange

Part No: 12-0525

#### Measurement system for flange measurements

This system is mainly for wind turbine tower producers who want to measure flatness and parallelism of flanges. Similar applications can be e.g. slewing bearings. You can see the result as a true 3D image in the display unit directly after measuring. Then evaluate the result easily with different calculation settings, for example three point reference, best fit or all positive. This can also be done directly on site without having to stop to go to a PC with separate analysis programs, which was the case previously. This makes production much more efficient.

The system includes laser transmitter D22 with manual rotatable head, and with the option of deflecting the laser beam 90°. With a few more accessories the system can also be used to check the parallelism of the two tower flanges. In the measurement system's display unit it is possible to generate a PDF report containing graphs and measurement data. All information about the measurement object is documented.

Includes the sectional measurement flatness program\*. A tower section with diameter over 4 meters represents a significant weight. This weight causes the flanges to deform when the sections are manufactured. With sectional measurement program the flatness is measured in four sections which are mathematically merged into a full circle, which solves this measurement problem. The program also makes it possible to perform the complete measurement on ground. No climbing on ladders or skylift is therefore required. With traditional methods the operator has to work on hazardous high levels, and often more men are needed.

\*The sectional measurement flatness program is patented in Sweden, Germany, China and USA.

#### A complete system contains:

| 12-0418 | 1 | Display unit E-series E51 |
|---------|---|---------------------------|
|---------|---|---------------------------|

12-0022 1 Laser transmitter D22 incl. tilt table

12-0752 1 Detector E7

12-0436 1 Wireless unit 12-0074 1 Cable 2 m

12-0108 1 Cable 5 m, extension

12-0321 1 Cable support

12-0521 1 Cable support 12-0544 3 Targets for rough alignment

12-0045 1 Magnet base with turnable head

01-0043 6 Rods 60 mm

01-0873 6 Rods 120 mm

12-0495 1 Shoulder strap for Display unit

12-0915 1 Safety strap for laser transmitter

05-0400 1 Manual (Note: Refers to English manual)

05-0545 1 Quick manual (Note: Refers to English manual)

03-0842 1 Measuring tape 5 m

03-0914 1 USB Memory stick with documentation

03-0822 1 USB Cable

03-1243 1 Battery charger (100-240 V AC)

03-0967 1 Hexagon wrench set

03-0878 1 Cleaning cloth for optics

12-0781 1 Carrying case

#### **Examples of accessories:**

12-0618 1 Battery pack with wireless unit

12-0434 1 Measuring unit EM

12-0433 1 Measuring unit ES

12-0016 1 V-bracket with chain

03-1004 1 Thermal printer

12-0455 1 Slide bracket Min. Ø120 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0543 1 Slide bracket Min. Ø200 mm

12-0269 1 Tripod

12-1136 1 Angular prism

01-2232 1 Tripod adaptor for Angular prism

Note: always check number of items included for each Part No. before ordering.

#### Complete system:

Weight: 12.1 kg [26.7 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

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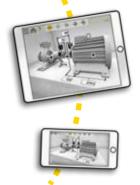
















Easy-Laser® XT11 was awarded the iF DESIGN AWARD 2017 and Red Dot 2018 for its design, ergonomics and innovative features.



## ALL XT PROGRAMS IN ONE FREE APP

All XT measurement programs in one straightforward application available for free. Functionality for iOS, Android and Easy-Laser® XT display units.



#### **NO LOCK-INS**

Buy with or without the user-friendly, shockproof and waterproof Easy-Laser® XT11 display unit. Awarded both the RedDot2018 and IF Design 2017 for its ergonomics, features and looks.



#### **MAXIMUM FLEXIBILITY AND TRAINABILITY!**

Purchase multiple systems with various capabilities, train once! The training costs are minimized significantly since the app interface and basic functionality is identical for all systems.



#### LONG OPERATING TIMES

The long operating times of up to 16 hours for the Display unit and 24 hours for the Measuring units mean even the toughest jobs will be finished on time with no interruptions.

XT770 XT660 XT550 XT440 XT280 XT190

























## System with display unit, Large case (Part No. 12-1095) Weight complete system: 11.9 kg [26.2 lbs]

## System with display unit and GEO Kit Large case GEO (Part No. 12-1127)

Weight complete system: 14.7 kg [32.4 lbs]





## Easy-Laser® XT770 Shaft

Part No: See below. Four combinations available.

#### Multi-platform alignment system

Easy-Laser® XT770 is a crossover multi-platform system. The system runs on your iOS and Android unit1. You can also choose a complete system with our ergonomic and rugged, IP66/67 approved shock proof Easy-Laser® XT11 display unit. As standard a 13 MP camera for documentation is built-in. You can also add an IR camera to the XT11; shoot a thermal image before and after alignment and include with the documentation! The measuring units are also rugged and IP66/67 approved, featuring wireless technology, an integrated rechargeable battery and large 20x20 mm [0.79"x 0.79"] 2 axis TruePSD detectors and dot type laser technology. A built-in OLED display shows battery status and the angular value of the unit for easy positioning. Thanks to high capacity rechargeable batteries the operating times are very long: Display unit: 16 h, Measuring units: 24 h.

#### All functions are available in one app

Programs for alignment of horizontal, vertical/flange mounted machines, machine trains and cardan/offset mounted machines\* plus EasyTrend for dynamic measurements\* are included. Functions for soft foot check, thermal growth compensation and tolerance check. The XT70-M/S units allow for multipoint and continuous sweep measurements. They also support the 360°LIVE move feature. With the Twist measurement program you easily check the base flatness. The very versatile Values program, together with the dot-type laser technology adds functionality for e.g. checking bearing clearance. The built-in Users Manual opens the relevant chapter depending on where in the process you are. (\*requires accessories)

#### Geometric measurements

With the GEO kit added to your XT770 you will, using the Values or Basic Flatness program, be able to do flatness and straightness measurements with the highest reliability and precision.

<sup>1</sup>Please see our web site for a complete list of which tablets we recommend: easylaser.com > lifecycle support > software download

> System without display unit, Large case (Part No. 12-1096) Weight complete system: 10.4 kg [22.9 lbs]

System without display unit, with GEO Kit Large case GEO (Part No. 12-1128)

Weight complete system: 13.2 kg [29.1 lbs]



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Measuring unit XT70-M 12-1045 1

12-1046 Measuring unit XT70-S 1

12-0963 Shaft bracket with chain and rods

12-1008 2 Offset bracket for XT-series

12-0013 2 # Magnet bases

12-1161 Set of Rods 4x75 mm 1

12-0987 1 Rods (4x120 mm)

12-1060 Extension chain (2x900 mm) 1

Measuring tape 3 m 03-0824 1

03-0967 Hexagon wrench set

Battery charger (100-240 V AC) 03-1256 1

12-0989 DC split cable for charging

12-0751 DC to USB adapter, for charging 1

12-0997 (1) Shoulder strap for display unit

05-0913 Quick manual (Note: Refers to English manual) 03-0878 1

Cleaning cloth for optics

03-0914 USB memory stick with documentation

04-0307 Set of QR code stickers 1

12-0991 **Documentation folder** 

12-1049 (1) Carrying case Large (1) Carrying case Large GEO 12-1132

WxHxD: 565x455x210 mm [22.2x17.9x8.2"]

(1) = Included depending on system Part No.

## **GEO Kit for XT includes:**

12-0022 1 Laser transmitter D22

Magnet base with turnable head ( #replaces one of the regular magnet bases) 12-1133

12-0987 Rods (4x120 mm) 1

#### Options for XT11: (Note! Cannot be retrofitted.)

12-0968 1 IR Camera added to XT11

12-0985 1 Camera (and LED light) removed from XT11

#### **Examples of accessories for XT770:**

12-1151 Cardan bracket kit

12-1130 Dynamic measurement brackets (complete kit)

12-1147 Magnetic bracket for XT-series

12-1012 Thin shaft bracket for XT-series

12-1010 1 Sliding bracket for XT-series

12-1161 1 Rods (4x75 mm)

12-0324 Rods (8x120 mm) 1

Rods (4x240 mm) 12-0060

XT190 BTA Digital belt alignment tool 12-1053 1

12-1090 XT280 Vibrometer

Note: Always check number of items included for each Part No. before ordering. Accessories not included in the specified system weight above.

























## Easy-Laser® XT660 Shaft

Part No: See below. Four combinations available.

#### Multi-platform alignment system

Easy-Laser® XT660 is a crossover multi-platform system. The system runs on your iOS and Android unit1. You can also choose a complete system with our ergonomic and rugged, IP66/67 approved shock proof Easy-Laser® XT11 display unit. As standard a 13 MP camera for documentation is built-in, and you can also choose to add an IR camera to the XT11; shoot a thermal image before and after alignment and include with the documentation!

The measuring units are also rugged and IP66/67 approved, featuring wireless technology, an integrated rechargeable battery and large 20x20 mm [0.79"x 0.79"] 1 axis TruePSD detectors and dot type laser technology. A built-in OLED display shows battery status and the angular value of the unit for easy positioning. Thanks to high capacity rechargeable batteries the operating times are very long: Display unit: 16 h, Measuring units: 24 h.

#### All functions are available in one app

Programs for alignment of horizontal, vertical/flange mounted machines and machine trains (3 machines) are included. Added to that are functions for soft foot check, thermal growth compensation and tolerance check. The XT60-M/S units allow for multipoint and continuous sweep measurements. With the Twist measurement program you easily check the base flatness. As always, Easy-Laser® comes with the very versatile Values program, which together with the dot-type laser technology adds functionality for e.g. checking bearing clearance. The app has a built-in Users Manual, which opens the relevant chapter depending on where in the process you are.

<sup>1</sup>Please see our web site for a complete list of which tablets we recommend: easylaser.com > lifecycle support > software download

Note: the system can be delivered in two different carrying cases, model Large with space also for accessories. See pictures to the left.

#### System with display unit, Large case (Part No. 12-1052)

Weight complete system: 9.8 kg [21.6 lbs] (without accessories)



## System with display unit, Medium case (Part No. 12-1051)

Weight complete system: 7.2 kg [15.9 lbs]

12-0961 (1) Display unit XT11

12-1028 Measuring unit XT60-M

12-1029 Measuring unit XT60-S

12-0963 2 Shaft bracket with chain and rods

Set of Rods 4x75 mm 12-1161

12-1060 Extension chain (2x900 mm) 1

03-0824 Measuring tape 3 m 03-0967

Hexagon wrench set

03-1256 Battery charger (100-240 V AC)

12-0989 DC split cable for charging

12-0751 DC to USB adapter, for charging 12-0997 (1) Shoulder strap for display unit

05-0863 Quick manual (Note: Refers to English manual)

03-0878 Cleaning cloth for optics

03-0914 USB memory stick with documentation

Set of QR code stickers 04-0307 1

12-0991 1 **Documentation folder** 

12-0973 (1) Carrying case Medium

WxHxD: 460x350x175 mm [18.1x13.8x6.9"]

12-1049 (1) Carrying case Large

WxHxD: 565x455x210 mm [22.2x17.9x8.2"]

(1) = Included depending on system Part No.

System without display unit, Large case (Part No. 12-1059)

Weight complete system: 8.2 kg [18.1 lbs] (without accessories)

System without display unit,

Medium case (Part No. 12-1058)

Weight complete system: 5.8 kg [11.0 lbs]

Options for XT11: (Note! Cannot be retrofitted.)

IR Camera added to XT11

Camera (and LED light) removed from XT11

#### **Examples of accessories for XT660:**

Magnet base (Note: offset bracket also needed.) 12-0013 1

12-1008 Offset bracket for XT-series 12-1147 Magnetic bracket for XT-series

Thin shaft bracket for XT-series

12-1012 12-1010 Sliding bracket for XT-series

12-1161 Rods (4x75 mm)

12-0324 Rods (8x120 mm)

12-0060 Rods (4x240 mm)























#### System with ECOM display unit, Ex approved case (Part No. 12-1097) Weight complete system: 8.4 kg [18.5 lbs]



## Easy-Laser® XT550 Ex/ATEX Shaft

Part No: See below.

#### Intrinsically safe shaft alignment system

Easy-Laser® XT550 is designed for use in potentially explosive environments. You can choose a complete system with the zone 1 approved ECOM display unit. It has a 3 MP camera for documentation built-in. The XT Alignment app also runs on other iOS and Android units. <sup>12</sup> The measuring units are rugged and IP66/67 approved, featuring wireless technology, an integrated rechargeable battery and large 20x20 mm [0.79"x 0.79"] 1 axis TruePSD detectors and dot type laser technology. A built-in OLED display shows battery status and the angular value of the unit for easy positioning. Using high capacity rechargeable batteries the operating times are very long; 20 hours.

#### All functions are available in one app

Programs for alignment of horizontal, vertical/flange mounted machines and machine trains are included. Added to that are functions for soft foot check, thermal growth compensation and tolerance check. The XT50-M/S units allow for multipoint and continuous sweep measurements. With the Twist measurement program you easily check the base flatness. As always, Easy-Laser® comes with the very versatile Values program, which together with the dot-type laser technology adds functionality for eg. checking bearing clearance. The app has a built-in Users Manual, which opens the relevant chapter depending on where in the process you are.

Note: the system can be delivered with or without the ECOM tablet. For local purchase, find your ECOM reseller here:

https://www.ecom-ex.com/company/locations/

<sup>1</sup>Please see our web site for a complete list of which tablets we recommend: easylaser.com > lifecycle support > software download

<sup>2</sup>For use in potentially explosive environments, the display device you use has to be at least approved for the same level of Ex/ATEX requirements as your work zone. Note that the XT11 isn't ATEX approved.

#### System without display unit, EX approved case (Part No. 12-1031) Weight complete system: Weight: 6.9 kg [15.2 lbs]

#### 12-1086 (1) Display unit ECOM Tab-Ex-01

12-1026 1 Measuring unit XT50-M Ex/ATEX

12-1027 1 Measuring unit XT50-S Ex/ATEX

12-1040 2 Shaft bracket Ex/ATEX, with chain and rods

12-1161 1 Set of Rods 4x75 mm

01-0873 2 Rods 120 mm

12-1038 2 Extension chain (900 mm)

03-0824 1 Measuring tape 3 m

03-0967 1 Rod tool

03-1256 1 Battery charger (100-240 V AC)

12-0989 1 DC split cable for charging

05-0889 1 Quick manual (Note: Refers to English manual)

03-0878 1 Cleaning cloth for optics

03-0914 1 USB memory stick with documentation

04-0307 1 Set of QR code stickers

12-1063 1 Carrying case

WxHxD: 450x300x180 mm [17.7x11.8x7.1"]

(1) = Included depending on system Part No.

## **Examples of accessories for XT550:**

12-0013 1 Magnet base (Note: offset bracket also needed.)

12-1008 1 Offset bracket for XT-series

12-1147 1 Magnetic bracket for XT-series

12-1012 1 Thin shaft bracket for XT-series

12-1010 1 Sliding bracket for XT-series

12-1161 1 Rods (4x75 mm)

12-0324 1 Rods (8x120 mm)

12-0060 1 Rods (4x240 mm)

Note: always check number of items included for each Part No. before ordering.

CE

0470

0102

#### **CERTIFICATIONS:**

#### XT50 measuring units:

EX certificate number: Presafe 17 ATEX 10552X, IECEx PRE 17.0049X EX classification: 6 II 2 G Ex ib op is IIC T4 Gb, -10°C  $\leq$  Ta  $\leq$  +50°C

ecom display unit:

EX certificate number: Sira 15 ATEX 1205X, IECEX SIR 15.0075X

EX classification: 8 II 2 GD Ex db ia op is IIC T5 Gb, -20°C  $\leq$  Ta  $\leq$  +50°C

























## Easy-Laser® XT440 Shaft

Part No: 12-0967 (with Display unit XT11, in medium sized case)

Part No: 12-0966 (without Display unit, in small case)

#### Multi-platform alignment system

Easy-Laser® XT440 is a crossover multi-platform system. The system runs on your iOS and Android unit¹. You can also choose a complete system with our ergonomic and rugged, IP66/67 approved shock proof Easy-Laser® XT11 display unit. As standard a 13 MP camera for documentation is built-in, and you can also choose to add an IR camera to the XT11; shoot a thermal image before and after alignment and include with the documentation!

The measuring units are also rugged and IP66/67 approved, featuring wireless technology, an integrated rechargeable battery and large 30 mm [1.2"] TruePSD detectors. A built-in OLED display shows battery status and the angular value of the unit for easy positioning. Thanks to high capacity rechargeable batteries the operating times are very long: Display unit: 16 h, Measuring units: 24 h.

#### All functions are available in one app

Programs for alignment of both horizontal and vertical machines are included. Added to that are functions for soft foot check, thermal growth compensation and tolerance check. As always, Easy-Laser® comes with the very versatile Values program.

The app has a built-in Users Manual, which opens the relevant chapter depending on where in the process you are.

<sup>1</sup>Please see our web site for a complete list of which tablets we recommend: easylaser.com > lifecycle support > software download

Note: the system is delivered in different carrying cases depending on if the Display unit is included or not. See pictures to the left.

#### System with display unit (Part No. 12-0967):

12-0961 1 Display unit XT11

12-0943 1 Measuring unit XT40-M 12-0944 1 Measuring unit XT40-S

12-0963 2 Shaft bracket with chain and rods

12-1161 1 Set of Rods 4x75 mm

03-0824 1 Measuring tape 3 m

03-0967 1 Hexagon wrench set

03-1256 1 Battery charger (100–240 V AC)

12-0989 1 DC split cable for charging

12-0751 1 DC to USB adapter, for charging

12-0997 1 Shoulder strap for display unit

05-0833 1 Quick manual (Note: Refers to English manual)

03-0878 1 Cleaning cloth for optics

03-0914 1 USB memory stick with documentation

04-0307 1 Set of QR code stickers

12-0991 1 Documentation folder

12-0973 1 Carrying case Medium

Weight complete system: 7.2 kg [15.9 lbs] WxHxD: 460x350x175 mm [18.1x13.8x6.9"]

#### **Options for XT11:** (Note! Cannot be retrofitted.)

12-0968 1 IR Camera added to XT11

12-0985 1 Camera (and LED light) removed from XT11

#### System without display unit (Part No. 12-0966):

12-0943 1 Measuring unit XT40-M

12-0944 1 Measuring unit XT40-S

12-0963 2 Shaft bracket with chain and rods

12-1161 1 Set of Rods 4x75 mm

03-0824 1 Measuring tape 3 m

03-0967 1 Hexagon wrench set

03-1256 1 Battery charger (100–240 V AC) 12-0989 1 DC split cable for charging

12-0751 1 DC to USB adapter, for charging

05-0833 1 Quick manual (Note: Refers to English manual)

03-0878 1 Cleaning cloth for optics

03-0914 1 USB memory stick with documentation

12-0972 1 Carrying case Small

Weight complete system: 3.8 kg [8.4 lbs] WxHxD: 335x280x130 mm [13.2x11.0x5.1"]

#### **Examples of accessories for XT440:**

12-0013 1 Magnet base (Note: offset bracket also needed.)

12-1008 1 Offset bracket for XT-series

12-1147 1 Magnetic bracket for XT-series

12-1012 1 Thin shaft bracket for XT-series

12-1010 1 Sliding bracket for XT-series

12-1161 1 Rods (4x75 mm) 12-0324 1 Rods (8x120 mm)

12-0060 1 Rods (4x240 mm)

12-1060 1 Extension chain (2x900 mm). For diameters up to 450 mm [12.7"].

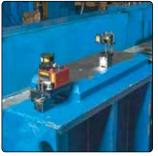














## Easy-Laser® E720 Shaft/Geo

Part No: 12-0955

#### The complete alignment solution

Easy-Laser® E720 gives you all the functions for shaft alignment plus the opportunity to check the machine base and any bearing play using the standard equipment. The system includes the very versatile lasertransmitter D22.

Programs for Horizontal machines, soft foot checks, Machine trains, vertical/flange mounted and cardan/offset mounted\* machines are included. Furthermore all geometry programs such as Straightness, Flatness/Twist and Parallelism measurement are included. Using accessories you can also align sheaves/pulleys with digital precision. No other system on the market can offer this flexibility!

The keys to the system flexibility and wide range of use are the measuring units with 2-axis TruePSD detectors and dual laser beams, and the laser transmitter D22. Together with the included measurement programs they make the Easy-Laser® E720 a Total Alignment Solution!

Large, clear colour screen, wireless measuring units (included as standard), long operating life and robust design give a measurement system that is both reliable and easy to use.

The measurement values can be registered with only 40° rotation of the shafts. You then align the machine "live" using the measuring units in any position around the shaft.

The display unit program is available in several different languages which facilitates use; English, German, French, Spanish, Portuguese, Swedish, Finnish, Russian, Polish, Dutch, Italian, Japanese, Korean and Chinese. Our unique Endurio<sup>™</sup> power management system gives up to 30 hours of operating time for the display unit. Expandable for more measurement applications.

The case is pre-cut for accessories: A. E290 Digital Precision Level

\*Cardan bracket is optional equipment.

#### A complete system contains:

| 12-0418 | 1 | Display unit E51     |
|---------|---|----------------------|
| 12-0433 | 1 | Measuring unit ES    |
| 12-0434 | 1 | Measuring unit EM    |
| 12-0436 | 2 | Wireless units       |
| 12-0022 | 1 | Laser transmitter D2 |
|         |   |                      |

12-0074 2 Cables 2 m Shaft bracket with chain 12-0016

Extension chain 12-0319 2 12-0013 Magnet base

Magnet base with turnable head 12-0045 1

01-1165 2 Offset bracket 12-1147 Magnetic bracket 2 Set of Rods 8x120 mm 12-0324 1 Set of Rods 4x60 mm 12-0059

Manual (Note: Refers to English manual) 05-0685 05-0486 Quick manual (Note: Refers to English manual)

03-0824 Measuring tape 3 m

USB memory stick with documentation 03-0914

**USB** cable 03-0822 03-1243 1

Battery charger (100-240 V AC) Toolbox

03-0792

12-0495 Shoulder strap for Display unit 1

03-0878 Cleaning cloth for optics

12-0981 1 Carrying case

#### Complete system:

Weight: 14.8 kg [32.6 lbs]

WxHxD: 550x450x210 mm [21.6x17.7x8.3"]

#### **Examples of accessories:**

E290 Digital Precision Level 12-0846

12-1053 XT190 BTA

12-1012 Thin shaft bracket

12-1010 1 Sliding bracket

12-0615 Cardan bracket 12-0585 Charger 12-36V

12-0617 Battery pack

Battery pack with wireless technology 12-0618

12-0597 Splitter box

Rods (4x60 mm) 12-0059 1

12-0324 Rods (8x120 mm)

12-0060 Rods (4x240 mm)

Extension chain (2x900 mm). For diameters up to 450 mm [12.7"]. 12-1060

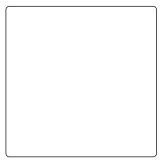


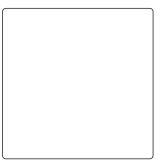












## Easy-Laser® E710 Shaft

Part No: 12-0440

#### The measurement system for all stages of machine set-up

Easy-Laser® E710 gives you all the functions for shaft alignment plus the opportunity to check the machine base and any bearing play using the standard equipment! Programs for Horizontal machines, soft foot checks, Machine trains, vertical/flange mounted and cardan/offset mounted\* machines are included. Furthermore programs for Straightness, Flatness/Twist and Parallelism measurement are included. Using accessories you can also align sheaves/pulleys with digital precision. No other system on the market can offer this flexibility! The keys to the system flexibility and wide range of use are the measuring units with 2-axis TruePSD detectors, and the dual laser beams. Together with the included measurement programs they make the Easy-Laser® E710 a Total Alignment Solution!

Large, clear colour screen, wireless measuring units (included as standard), long operating life and robust design give a measurement system that is both reliable and easy to use.

The measurement values can be registered with only 40° rotation of the shafts. You then align the machine "live" using the measuring units in any position around the shaft. The display unit program is available in several different languages which facilitates use; English, German, French, Spanish, Portuguese, Swedish, Finnish, Russian, Polish, Dutch, Italian, Japanese, Korean and Chinese. Our unique Endurio™ power management system gives up to 30 hours of operating time for the display unit. Expandable for more measurement applications.

\*Cardan bracket is optional equipment.

#### A complete system contains:

| 12-0418 | 1 | Display unit E51  |
|---------|---|-------------------|
| 12-0433 | 1 | Measuring unit ES |
| 12-0434 | 1 | Measuring unit EM |
| 12-0436 | 2 | Wireless units    |
| 12-0074 | 2 | Cables 2 m        |

12-00/4 2 Gables 2 III

12-0016 2 Shaft bracket with chain 12-0319 2 Extension chain 12-0013 2 Magnet base

01-1165 2 Offset bracket 01-0873 4 Rods 120 mm

01-0873 4 Rods 120 mm

12-0059 1 Set of Rods 4x60 mm

05-0461 1 Manual (Note: Refers to English manual) 05-0486 1 Quick manual (Note: Refers to English manual)

03-0824 1 Measuring tape 3 m

03-0914 1 USB memory stick with documentation

03-0822 1 USB cable

03-1243 1 Battery charger (100-240 V AC)

03-0792 2 Toolbox

12-0495 1 Shoulder strap for Display unit

03-0878 1 Cleaning cloth for optics

12-0442 1 Carrying case

#### Complete system:

Weight: 10.0 kg [22.0 lbs]

WxHxD: 500x400x200 mm [19.7x15.7x7.9"]

#### **Examples of accessories:**

12-1053 1 XT190 BTA
12-1147 1 Magnetic bracket
12-1012 1 Thin shaft bracket
12-1010 1 Sliding bracket
12-0615 1 Cardan bracket
12-0585 1 Charger 12-36V
12-0617 1 Battery pack

12-0618 1 Battery pack with wireless technology

12-0597 1 Splitter box 12-0059 1 Rods (4x60 mm) 12-0324 1 Rods (8x120 mm) 12-0060 1 Rods (4x240 mm)

12-1060 1 Extension chain (2x900 mm). For diameters up to 450 mm [12.7"].

12-0022 1 Laser transmitter D22





10 m / 33









## Easy-Laser® E540 Shaft

Part No: 12-0775, E540-B (with Large case) Part No: 12-1043, E540-A (with Small case)

#### Simple and efficient shaft alignment

Easy-Laser® E540 is a very powerful shaft alignment system, with the ideal balance between performance and price. The measuring units are incredibly compact featuring wireless technology, an integrated rechargeable battery and TruePSD detectors. This means that they are easy to install on most types of machines, even where there is limited space. The wireless technology gives you full freedom of movement around the machine that is to be aligned. Start with the measuring units positioned anywhere through 360° around the shaft, then take any three readings down to 20° in-between. Then adjust the machine with the live-values in both horizontal and vertical directions. Simple and efficient! Programs included: Horizontal, Vertical, 3-Machine train, Values, Belt transmission alignment.

#### Technology that gives the best performance

The shaft alignment system has a large 5.7", bright colour display. The measuring units have TruePSD-technology, which gives unlimited resolution. Twin laser beams, twin PSDs (30 mm [1.2"]) and twin inclinometers give you superb control of the measurement in all situations. Display unit, measuring units and fixtures are all very robust for the highest accuracy in demanding industrial environments.

#### Large expansion possibilities

It is possible to connect two very useful accessories to the system. Using XT190 BTA (Accessory) you can check and align sheaves and pulleys with digital precision.

#### The Large case (System E540-B) has pre-cut foam for accessories:

A. Magnetic brackets kit

B. Magnet bases (2 pcs)

C. XT190 BTA (transmitter and detector)

D. Offset brackets (2 pcs)

#### System E540-A (Part No. 12-1043):

| •,••••  |   |   |
|---------|---|---|
| 12-0700 | 1 | Display unit E52                              |
| 12-0777 | 1 | Measuring unit ELS40                          |
| 12-0776 | 1 | Measuring unit ELM40                          |
| 12-0016 | 2 | Shaft bracket with chain                      |
| 12-0319 | 2 | Extension chain                               |
| 01-0873 | 4 | Rods 120 mm [4.72"]                           |
| 12-0059 | 1 | Set of Rods 4x60 mm [2.36"]                   |
| 05-0689 | 1 | Quick manual (Note: Refers to English manual) |
| 03-0824 | 1 | Measuring tape 3 m                            |
| 03-0914 | 1 | USB Memory stick with documentation           |
| 03-0822 | 1 | USB cable                                     |
| 03-1243 | 1 | Battery charger (100–240 V AC)                |
| 12-0989 | 1 | DC charging cable                             |
| 12-0751 | 1 | DC to USB adapter                             |
| 12-0495 | 1 | Shoulder strap for Display unit               |
| 12-1025 | 1 | Carrying case Small                           |
|         |   |   |
| _       |   |   |

## Complete system:

Weight: 6.6 kg [14.5 lbs]

WxHxD: 460x350x175 mm [18.1x13.8x6.9"]

## System E540-B (Part No. 12-0775): Display unit E52

| 12-0/// | - 1 | Measuring unit ELS40                          | 12-00/4    | - 1  | υċ   |
|---------|-----|---|------------|------|------|
| 12-0776 | 1   | Measuring unit ELM40                          | 12-0013    | 1    | Ma   |
| 12-0016 | 2   | Shaft bracket with chain                      | 01-1165    | 1    | 0f   |
| 12-0319 | 2   | Extension chain                               | 12-1147    | 1    | Ma   |
| 01-0873 | 4   | Rods 120 mm [4.72"]                           | 12-1012    | 1    | Th   |
| 12-0059 | 1   | Set of Rods 4x60 mm [2.36"]                   | 12-1010    | 1    | SI   |
| 05-0689 | 1   | Quick manual (Note: Refers to English manual) | 12-0585    | 1    | Ch   |
| 03-0824 | 1   | Measuring tape 3 m                            | 12-0597    | 1    | Sp   |
| 03-0914 | 1   | USB Memory stick with documentation           | 12-0059    | 1    | Ro   |
| 03-0822 | 1   | USB cable                                     | 12-0324    | 1    | Ro   |
| 03-1243 | 1   | Battery charger (100-240 V AC)                | 12-0060    | 1    | Ro   |
| 12-0989 | 1   | DC charging cable                             | 12-0128    | 1    | Ex   |
| 12-0751 | 1   | DC to USB adapter                             |            |      |      |
| 12-0495 | 1   | Shoulder strap for Display unit               | Note: alwa | ays  | che  |
| 12-1020 | 1   | Carrying case Large                           | included 1 | or e | each |
|         |     |   |            |      |      |

## Complete system:

12-0700 1

Weight: 7.7 kg [17.0 lbs]

WxHxD: 500x400x200 mm [19.7x15.7x7.9"]

#### **Example of accessories:**

12-1053 1 XT190 BTA

|     | 12-0074 | 1 | Cable 2 m [78.7"]          |
|-----|---------|---|----------------------------|
|     | 12-0013 | 1 | Magnet base                |
|     | 01-1165 | 1 | Offset bracket             |
|     | 12-1147 | 1 | Magnetic bracket           |
|     | 12-1012 | 1 | Thin shaft bracket         |
|     | 12-1010 | 1 | Sliding bracket            |
| al) | 12-0585 | 1 | Charger 12-36V             |
|     | 12-0597 | 1 | Splitter box               |
|     | 12-0059 | 1 | Rods (4x60 mm)             |
|     | 12-0324 | 1 | Rods (8x120 mm)            |
|     | 12-0060 | 1 | Rods (4x240 mm)            |
|     | 12-0128 | 1 | Extension chain (2x900 mm) |
|     |         |   |                            |

eck number of items h Part No. before ordering.















## Easy-Laser® E420 Shaft

Part No: 12-0745

#### **Entry level redefined!**

The Easy-Laser® E420 has wireless measuring units, a large 5.7" colour display and an IP65-rated design that withstands harsh environments.

The measuring units are compact, featuring wireless technology, an integrated rechargeable battery and large 20 mm [0.78"] TruePSD detectors. This means that they are easy to install on most types of machines, even where there is limited space. The wireless technology gives you full freedom of movement around the machine that is to be aligned.

Programs for alignment of both horizontal and vertical machines are included. Added to that are functions for soft foot control, thermal growth compensation and tolerance control.

Pre-mounted units make it easy to install on the machine and the programs guide you step-by-step through the process. Start with the measuring units positioned anywhere on the shaft, recording three readings with as little as 20° of rotation between readings. Then adjust the machine with the live values, and save the measurements in the display unit memory. You can also transfer the results to the database EasyLink<sup>™</sup> program (included) for PC.

#### A complete system contains:

| 12-0748 | 1 | Display unit E53         |
|---------|---|--------------------------|
| 12-0747 | 1 | Measuring unit ELS20     |
| 12-0746 | 1 | Measuring unit ELM20     |
| 12-0016 | 2 | Shaft bracket with chain |
| 12-0319 | 2 | Extension chain          |
| 01-0873 | 4 | Rods 120 mm              |
| 12-0059 | 1 | Set of Rods 4x60 mm      |

05-0640 1 Quick manual (Note: Refers to English manual) 03-0914 1 USB memory stick with documentation

03-0824 1 Measuring tape 3 m 12-0989 1 DC charging cable 12-0751 1 DC to USB adapter

03-1243 1 Battery charger (100-240 V AC) for Display unit

03-1059 1 Carrying case

## Complete system:

Weight: 6.3 kg [13.9 lbs]

WxHxD: 500x415x170 mm [19.7x16.3x6.7"]

#### **Examples of accessories:**

| 12-0013 | 1 | Magnet base                |
|---------|---|----------------------------|
| 01-1165 | 1 | Offset bracket             |
| 12-1147 | 1 | Magnetic bracket           |
| 12-1012 | 1 | Thin shaft bracket         |
| 12-1010 | 1 | Sliding bracket            |
| 12-0585 | 1 | Charger 12-36V             |
| 12-0059 | 1 | Rods (4x60 mm)             |
| 12-0324 | 1 | Rods (8x120 mm)            |
| 12-0060 | 1 | Rods (4x240 mm)            |
| 12-0128 | 1 | Extension chain (2x900 mm) |
|         |   |                            |









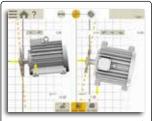




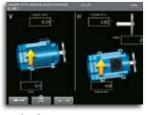








XT app for XT11 and iOS/ Android display units.



Belt alignment program for E51 and E52.

## Easy-Laser® XT190 BTA digital Wireless

Part No: 12-1053

#### "Live" digital read outs on clear OLED display

The detector reads off the position in relation to the laser plane and digitally displays the parallel and angular misalignment "live" on the clear built-in OLED display. The accuracy of the reading means that you can be within the prescribed alignment tolerances and rely upon the result. With this system there is no need to move the detector to read horizontal respectively vertical values, which saves time and makes things easier. Suitable for most types of drive, such as V-belt, timing belt, flat belt and chain drives.

If you connect the detector wirelessly to a separate display unit, e.g. one of our shaft alignment systems, you can read and follow the alignment from where you are standing and making adjustments, instead of only where the detector is mounted. Then you can also set a tolerance and document the result of the alignment.

(Note 1: The XT190 detector unit connects to both the E- and XT-series display units. You can also use it with your iOS and Android phone/tablet. Please see our web site for compatible models.)

(Note2: There is no separate display unit included. The detector connects wireless to the E51, E52 and XT11 display units with Belt alignment program.)

#### A complete system contains:

12-0309 1 Laser transmitter

12-1054 1 Detector unit with built-in display, wireless

12-0394 2 Targets

03-1243  $\,$  1  $\,$  Charger (100-240 V AC) and cable

03-0247 1 Battery R6 (AA) 1.5 V

 ${\tt 03-0914} \quad {\tt 1} \quad {\tt USB \ memory \ stick \ with \ documentation}$ 

05-0865 1 Quick manual (Note: Refers to English manual)

12-0804 1 Carrying case



# 3m / 10'

## Easy-Laser® D90 BTA

**Part No:** 12-0415

#### For quick and easy alignment of sheaves/pulleys

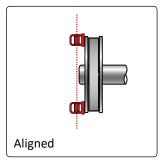
Easy-Laser® D90 is installed in a few seconds, and the laser line that is projected on the targets clearly shows how to adjust the machines. The tool has targets that can be read out "visually" and which give excellent degrees of accuracy that are sufficient for most users. If, in the future, you wish to have the option of digital readouts with the corresponding advantages, you can add a digital detector (see system XT190).

D90 BTA is compact and light. Suitable for most types of drive, such as V-belt, timing belt, flat belt and chain drives.









#### A complete system contains:

12-0309 1 Laser transmitter

12-0394 2 Target

05-0352 1 Manual

03-0247 1 Battery R6 (AA) 1.5 V

03-0591 1 Padded cover

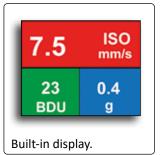
















XT app for XT11 and iOS/ Android display units.



#### XT280 Vibrometer

Part No: 12-1090

#### FOR QUICK VIBRATION ANALYSIS

Easy-Laser® XT280 is an easy-to-use vibration monitoring and analysis tool that allows easy display of vibration signals. The XT280 automatically performs vibration analysis functions based on machine running speed to help diagnose faults such as unbalance, misalignment and looseness. The system is designed to enable you to take vibration measurements from assets like pumps, motors, fans and bearings. The unit displays vibration frequency plots and allows vibration severity and bearing condition to be monitored.

For documentation purpose, you can connect the XT280 to the XT Alignment App. Run the app on your phone or tablet\*, or the XT11 display unit.

\* Please see our web site for compatible models.

#### A complete system contains:

12-1050 1 Vibrometer (with short tip)

05-0934 1 Quick manual

03-0914 1 USB memory stick with documentation

03-1336 1 Padded case

#### **Examples of accessories:**

03-1327 1 Accelerometer magnet

03-1326 1 Stinger (100 mm)

SPECIAL SYSTEMS

Easy-Laser® Product overview













## Shaft alignment system for Vestas wind turbines

Part No: 12-1143 (Vestas 5/VT20025637)
Part No: 12-1142 (Vestas 6/VT20025635)
Part No: 12-1183 (Installation Kit Upgrade)

#### For shaft alignment with the rotor locked.

Large forces are in action in a wind turbine. The safety of the maintenance technicians is therefore of the utmost importance. With the Easy-Laser® shaft alignment system the generator and gearbox can be aligned with the coupling dismounted and the brake locked.

The Easy-Laser® Vestas shaft alignment systems consist of one general installation kit, one supplement kit for use on more turbines, plus one upgrade kit (or just the bushings, see below).

Installation kit, Wireless, Vestas 5.

Supplement Service kit, Vestas 6.

#### Installation Kit Upgrade

If you have an older system Vestas 4 you can upgrade this for use at MK3E.

#### A Vestas 5 system contains:

| 12-0700 | 1 | Display unit E52 |
|---------|---|------------------|
|---------|---|------------------|

01-1379 1 Protective case for display unit E52

12-0777 1 Measuring unit ELS40, PSD 30 mm, inclinometer

12-0776 1 Measuring unit ELM40, PSD 30 mm, inclinometer

12-0712 5 Nut to adapters with magnet M6 V112

12-0714 4 Screw to Adapters V112, L=75mm

12-0713 2 Fixture Kit for V112

01-1520 4 Adaptor for fixture V112

03-0613 1 Distance gauge incl. adaptor, incl. fastening screw L=35mm

03-1034 1 Distance gauge incl. adaptor, incl. fastening screw L=55mm

01-2163 1 Bushings for MK3E / V150

01-2142 1 Bushings for MK3E / V150

01-2143 2 Washer for MK3E / V150

12-1140 2 Screw to bushings V150 L=45mm

12-0495 1 Strap to display unit

03-0914 1 USB memory stick 4GB

 $03\mbox{-}1243 \quad 1 \quad \mbox{Battery charger (100-240 V AC) Lev. 6}$ 

12-0989 1 DC split cable for charging

12-0751 1 DC to USB adapter, for charging

03-1004 1 Printer Seiko DPU-S445, including charger, cable and USB

 $03\text{-}0824 \quad 1 \quad \text{Measurement tape 3m}$ 

05-0954 1 Manual E540 Vestas

12-1164 1 Carrying Case Vestas 5

Weight: 28 kg [61.7 lbs]

WxHxD: 670x600x220 mm [26.4x23.6x8.7]

#### A Vestas 6 system contains:

12-0703 1 Detector-fixture Generator flange

12-0297 2 Screw knob to Generator fixture M12

12-0298 2 Screw knob to Generator fixture M16

12-0718 1 Detector-fixture Gearbox flange

01-0815 3 Adapter for Gearbox fixture 25 mm

01-0816 3 Adapter for Gearbox fixture 24 mm

01-0817 3 Adapter for Gearbox fixtrure 22 mm

01-0818 3 Adapter for Gearbox fixture 17 mm

12-0296 3 Screw to adapters

12-0299 4 Nut to adapters with magnet M6

12-1165 1 Carrying case Vestas 6

Weight: 12.3 kg [27.1 lbs

WxHxD: 570x470x220 mm [22.4x18.5x8.7]

#### A Vestas Laser Installation Upgrade Kit contains:

12-1154 1 Bushings for MK3E, set of 2 (VT20025636)

12-1164 1 Carrying case Vestas 5

12-1165 1 Carrying case Vestas 6

SPECIAL SYSTEMS

Easy-Laser® Product overview



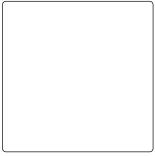












## Shaft alignment system GA1 for wind turbines

Part No: 12-1118 (Includes 12-1113+12-1114)

## For shaft alignment with the rotor locked.

Large forces are in action in a wind turbine. The safety of the maintenance technicians is therefore of the utmost importance. With the Easy-Laser® shaft alignment system the generator and gearbox can be aligned with the coupling dismounted or in place. This system is designed especially for Gamesa turbines, and fits all their turbine sizes. The measurement programs are easy to learn and to use, and there are numerous options for documenting and saving the result of the work.

#### NOTE:

Complete system GA1, Part No. 12-1118 consist of Part No. 12-1113+12-1114, but still come in two separate carrying cases. 12-1113 and 12-1114 also sold separately.



#### System 12-1113 contains:

01-1379 1 Protective case for display unit

12-0777 1 Measuring unit ELS40

12-0776 1 Measuring unit ELM40

12-0016 1 Shaft bracket with chain

12-0626 1 Chain 900 mm complete

12-0059 1 Rods Ø10x60 mm, set of 4 pcs

01-0873 4 Rods Ø10x120 mm

12-0987 1 Rods Ø10x120 mm, set of 4 pcs

12-1147 1 Magnetbracket thin

01-1165 1 Offset bracket

03-0045 1 Screw MC6S M6x16 mm

05-0689 1 Quick manual

05-0809 1 Manual GA1

03-0824 1 Measuring tape 3.0 m

03-0914 1 USB memory stick 2GB

03-1243 1 Battery charger (100-240 V AC)

12-0750 1 DC Split cable, for charging

12-0751 1 DC to USB adapter, for charging

03-0792 1 Toolbox

03-0967 1 Hexagon wrench set

01-0048 1 Rod tightening tool, 4 mm

12-0495 1 Strap to display unit

12-1020 1 Plastic carrying case for 12-1113

Weight: 8.0 kg [17.6 lbs]

WxHxD: 500x400x200 mm [19.7x15.7x7.9"]

## System 12-1114 contains:

12-0975 1 Detector-fixture Generator flange GA1

01-1889 2 Adapters to Generator flange GA1 M24

01-1892 2 Adapters to Generator flange GA1 Ø40

01-1891 2 Adapters to Generator flange GA1 Ø31

01-1890 2 Adapters to Generator flange GA1 Ø25

12-0974 2 Screw to Adapters L=120mm

12-0712 2 Nut to adapters with magnet M6

12-0976 1 Detector-fixture Gearbox flange GA1

12-0977 3 Screw M24 for Gearbox fixture

12-0978 3 Screw M30 for Gearbox fixture

01-1884 3 Adapters for M24 Screw to Gearbox fixture

01-1885 3 Adapters for M30 Screw to Gearbox fixture

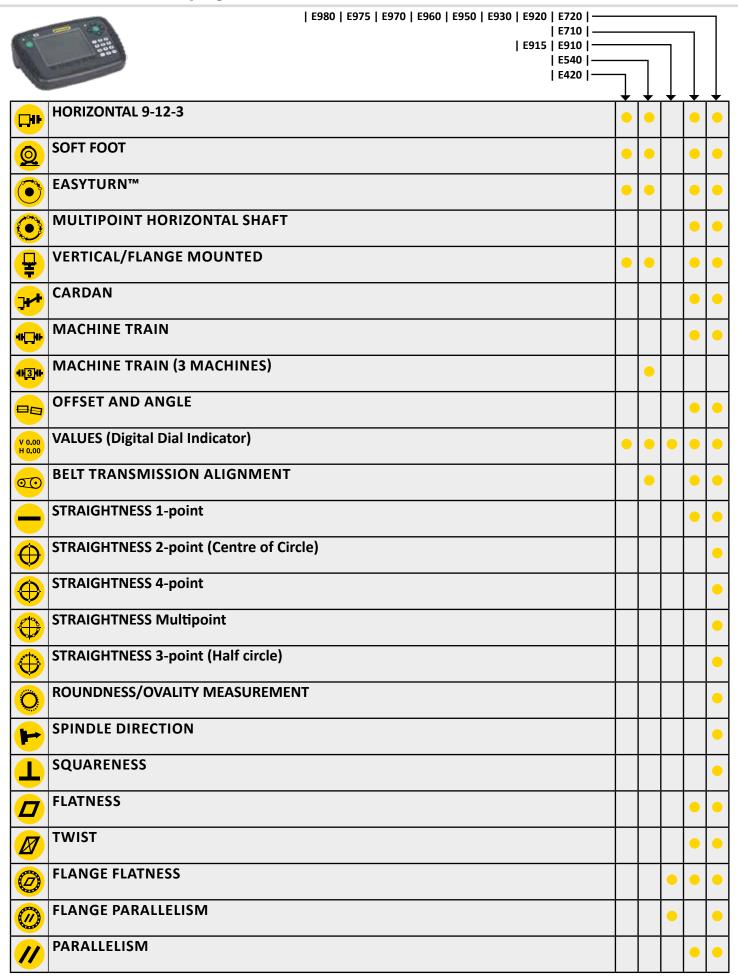
03-0613 1 Distance Gauge (coupling flanges), incl. adapter

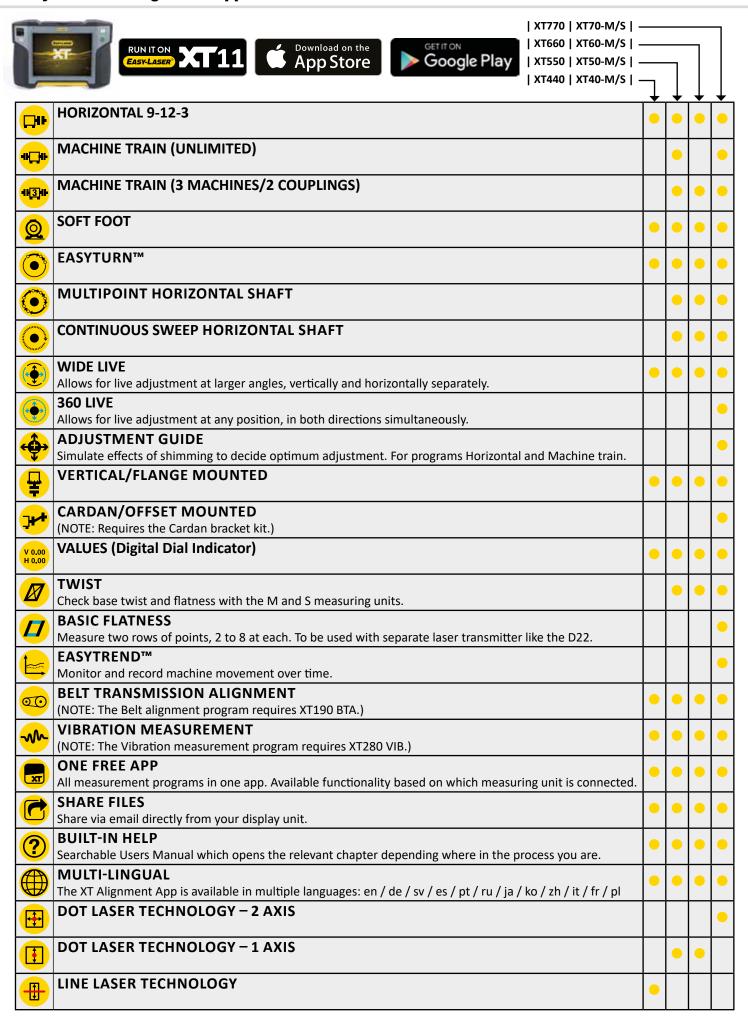
03-1034 2 Ext. adapter distances gauge

12-1116 1 Plastic carrying case for 12-1114

Weight: 17.0 kg [37.5 lbs]

WxHxD: 565x455x210 mm [22.2x17.9x8.2"]





## **EASYLINK™ PROGRAM**

With EasyLink™ 3.0 you can save and organise all your measurements in one place, produce reports with both data and images and export to your maintenance systems. You can customise what your Excel reports should look like and what data should be visible and where it should be positioned. The program has a clear folder structure, where you drag and drop files from the display unit to the database, or vice versa if you wish to prepare a measurement before going out into the field to take measurements. Create your own structure with folders for manufacturer, department or machine type for example. With everything in one location you have a better overview of what actions have been carried out. The database can also be located on a common server and shared with other users. For extra safety you can use EasyLink™ to make backups of what you have saved in the E-series' display unit. You can also simulate adjustments and test corrective actions in the program without any risk of losing the original data.



The program is supplied with all our measurement systems, but can also be downloaded by anyone for free.

**System requirements:** Windows® XP, Vista, 7, 8, 10. For the export function, Excel 2003 or newer must also be installed on the computer. EasyLink™ 3.0 functions with both the D and E series in Easy-Laser®. Not with the XT series.

Download the program free of charge from www.easylaser.com.

## **Easy-Laser® Precision Level App for E290**









| E290 |



#### **PRECISION LEVEL**

**Export formats:** Excel, XML.

Use your iPhone, iPod or iPad as display! With our free app Precision Level for the E290 you can follow the alignment from the place where you adjust the machine, and document your measurement.

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## **EASY-LASER®**

# **PARTS**

DISPLAY UNITS

Easy-Laser® Product overview





## XT11 – Display unit for Generation XT

Part No: 12-0961

**Description:** Wireless display unit for Generation XT. Rugged design, shock proof, IP66 and IP67. Glove enabled touch screen. Water and dust proof connectors: USB A, USB B, HDMI, Charger.

Options: IR Camera (Part No. 12-0968), Camera removed for security

reasons (Part No. 12-0985).

**Note:** Options cannot be retrofitted. Not approved for Ex/ATEX areas.









## ECOM Tab-Ex® – Display unit for Generation XT Intrinsically safe, EX/ATEX approved

Part No: 12-1086

**Description:** Wireless display unit for Generation XT, especially the XT50-M/S Ex/ATEX approved shaft alignment measuring units. Rugged design, with glove enabled touch screen.

**Note:** For more detailed information, please see the ecom web site:

https://www.ecom-ex.com





#### Display unit E-series: E51

Part No: 12-0418

**Description:** Available in different measurement program configurations. Which programs are available depends on in which system the display unit is included. Connectors: USB A, USB B, Easy-Laser® equipment. Charger

**Note:** Dust and splash guard for connectors open on picture to the right. The look of the display unit keyboard can vary depending on market.





#### Display unit E-series: E52

Part No: 12-0700

**Description:** Available in different measurement program configurations. Which programs are available depends on in which system the display unit is included. Connectors: USB A, USB B, Easy-Laser® equipment, charger.

**Note:** Dust and splash guard for connectors removed on upper right picture.





#### Display unit E-series: E53

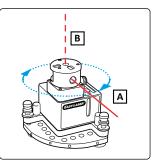
Part No: 12-0748

**Description:** All wireless display unit for shaft alignment system. The unit can temporarily power measuring units ELS20/ELM20 via the USB connector as backup. Connectors: USB A, charger.

**Note:** Dust and splash guard for connectors removed on upper right

picture. No connector for "red cable" equipment.





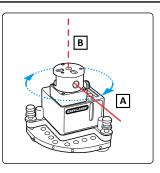
#### Laser transmitter D26 Swivel

Part No: 12-1064

**Description:** Laser transmitter D26 can be used to measure flatness, straightness, squareness and parallelism. Mainly for use in machine tool applications. The laser beam can sweep 360° with a measurement distance of up to 30 metres [100′] in radius. For specifications, please see *Technical specifications* at the end of this catalogue.

**Note:** Option A. The laser beam is used for a 360° sweep. Option B. The laser beam is angled at 90° to the sweep.





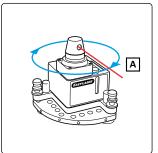
#### **Laser transmitter D22 Swivel**

Part No: 12-0022

**Description:** Laser transmitter D22 can be used to measure flatness, straightness, squareness and parallelism. The laser beam can sweep 360° with a measurement distance of up to 40 metres [130′] in radius. For specifications, please see *Technical specifications* at the end of this catalogue.

**Note:** Option A. The laser beam is used for a 360° sweep. Option B. The laser beam is angled at 90° to the sweep.





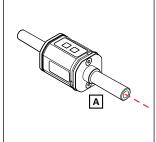
#### **Laser transmitter D23 Spin**

Part No: 12-0168

**Description:** Laser transmitter D23 has a motor driven, rotating head that gives a 360° laser plane. Because the laser beam sweeps across the surface you do not need to align the beam for every detector position. Tilt table included.

Measurement distance up to 20 metres [65'] in radius. **Note:** A. The laser beam is used for a 360° sweep.





#### **Laser transmitter D146 Spindle**

Part No: 12-0146

**Description:** For measuring spindle direction and straightness. Can be used in a rotating spindle (max. 2000 rpm). Measurement distance 20 metres [65']. Mounting pin  $\emptyset$ 20 mm [0.79"].

**Note:** A. An extra mounting pin (Part No. 12-0568) can be fitted at the laser aperture side (A), making it possible to align, for example, bar feeders. (Be aware that the standard mounting pin displayed on the left image cannot be detached from the transmitter.)





#### Laser transmitter D75

Part No: 12-0075

**Description:** For measuring straightness and spindle direction. M6 threads on ends and sides offer alternative mounting options. Mea-

surement distance 40 m [130'].

**Note:** With tilting screws for laser beam adjustment.





#### Laser transmitter D25

Part No: 12-0594

**Description:** For measuring straightness primarily in turbine applications. Measurement distance 40 m [130']. The laser beam can sweep 360°, and can be angled 90° to the sweep.

**Note:** Battery adaptor included. Brackets, arms and/or offset hub may also be needed, but are not included. See also 12-0706.

Option A. The laser beam is used for a 360° sweep. Option B. The laser beam is angled at 90° to the sweep.





#### Laser transmitter D25 with offset hub

Part No: 12-0706

**Description:** For measuring straightness primarily in turbine applications. Measurement distance 40 m [130']. The laser beam can be angled 90° to the sweep, within 0.01 mm/m [0.5 mils/INCH]. **Note:** Battery adaptor (not pictured) and offset hub included. Brackets/arms may also be needed, but are not included. See also 12-0594.

A. Transmitter mounted to point laser through hub.

B. Transmitter mounted to point laser in opposite direction.





#### **Laser transmitter E30 Long Range**

Part No: 12-0823

**Description:** For measuring straightness on long distances. Measurement distance 100 m [328'] with a 20 mm PSD, >200 m [656'] with 30 mm PSD. M6 threads on front and bottom offer alternative mounting options. Built-in rechargeable battery and Oled display.

**Note:** Coordinate table or tilt table needed for accurate functionality. No charger or bracketing included (compare with Part No. 12-0858).





#### Laser transmitter E30 Long Range, with tilt table

Part No: 12-0858

**Description:** For measuring straightness on long distances. Measurement distance 100 m [328'] with a 20 mm PSD, >200 m [656'] with 30 mm PSD. M6 threads on front and bottom offer alternative mounting options. Built-in rechargeable battery and Oled display.

**Note:** With tilt table (12-0864), which can be used with magnets or mounted on tripod, Battery charger 100–240 V AC (03-1243), USB memory stick with documentation, and Carrying case (12-0872).





#### Laser transmitter for sheave alignment systems

Part No: 12-0309

Description: Laser transmitter producing a laser line parallel to the

object it is mounted to.

Note: Only transmitter as pictured, no targets included. (Complete

system, see Part No. 12-0415 and 12-1053.)





#### **Detector E9, 2-axis PSD**

Part No: 12-0759

**Description:** Detector diameter 45 mm [1.77"]. 2 axis PSD, 20x20 mm [0.79"x0.79"]. Built-in 360° electronic inclinometer. Built-in wireless communication and rechargeable battery. There is also a connector on the back side for standard "red cable" (charging and data transfer). Mounting threads on both ends, for tube adapters (01-0777) or other suitable brackets (e.g. 12-0767 and 12-0553).

**Note:** Make sure you have a suitable bracket!





#### **Detector E7H, HyperPSD™**

Part No: 12-0824

**Description:** Detector for the E-series. 2 axis PSD, 20x20 mm [0.79″x0.79″]. With HyperPSD™ technology, which allows for a displayed resolution of 0.0001 mm [0.000005″/0.005 mils]. Built-in 360° electronic inclinometer. Two connectors for making it possible to connect two detectors or more in series. Normally mounted on rods, but has many additional mounting possibilities thanks to threads on two sides. **Note:** Optimised for fixed laser/does not detect a spinning laser.





#### **Detector E7**

Part No: 12-0752

**Description:** Detector for the E-series. 2 axis PSD, 20x20 mm [0.79"x0.79"]. Built-in 360° electronic inclinometer. Two connectors for making it possible to connect two detectors or more in series. Normally mounted on rods, but has many additional mounting possibilities thanks to threads on two sides.

**Note:** Optimised for fixed point laser/does not detect a spinning laser.





#### **Detector E5**

Part No: 12-0509

**Description:** Detector for the E-series. 2 axis PSD, 20x20 mm [0.79"x0.79"]. Built-in 360° electronic inclinometer. Two connectors for making it possible to connect two detectors or more in series. Normally mounted on rods, but has many additional mounting possibilities thanks to threads on two sides.

**Note:** With Dual Detection Technology, making it possible to read both fixed point laser and spinning laser, but is optimised for spinning laser.





#### **Detector E3**

Part No: 12-0799

**Description:** Detector for the E-series. 2 axis PSD, 30x30 mm [1.18"x1.18"]. Built-in wireless communication. Battery status indicator. Built-in 360° electronic inclinometer. One connector on top side. Normally mounted on rods, but also has additional mounting threads on back side.

**Note:** Target/Dust cover for PSD included. Does not detect a spinning laser.





#### Angle detector E2

Part No: 12-0845

**Description:** Detector for angle measurements, e.g. roll parallelism measurement. Built-in OLED display and rechargeable battery. **Note:** The E2 detector reads angles, not positions. This means that if you want to take full advantage of the measurement program package of some geometric systems, you will also need a positional detector like e.g. the E7.





## **Digital Precision Level E290**

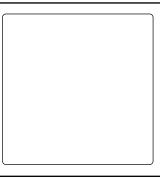
Part No: 12-0846

Description: Digital precision level. Built-in OLED display and recharge-

able battery.

Note: For complete kit, see Part No. 12-0857 below.





#### Digital Precision Level E290, complete kit

Part No: 12-0857

**Description:** Digital precision level (12-0846), complete kit with Battery charger 100–240 V AC (03-1243), safety strap (12-0915) and USB

memory stick with documentation (03-0914). **Note:** Delivered in plastic case (12-0873).





## Roll alignment kit

Part No: 12-0856

**Description:** Includes roll bracket (12-0849), detector E2 (12-0845), digital level E290 (12-0846), adapter plate (12-0874), charger (03-1243), DC charging cable (12-0989), DC to USB adapter (12-0751), USB memory stick with documentation (03-0914).

**Note:** Delivered in plastic case (12-0871). As standard for roll diameters up to 400 mm. For larger roll diameters, please see Part No. 12-0885, Large Roll Kit.





#### **XT & E-series wireless Detector for belt alignment**

Part No: 12-1054

**Description:** Detector that reads off the sheaves position in two directions (horizontal+vertical) at the same time. With built-in display showing offset and angular values. Note: Laser transmitter also needed. **Note:** Also for wireless connection to separate display units E51 and E52 which have the BTA digital program. Or connect it to the XT Alignment App on your iOS/Android display, or Easy-Laser XT11. A. Super magnets x 4, for attachment to sheave side.





## Measuring unit EMH, PSD 20x20 mm

Part No: 12-0790

**Description:** Laser diode and PSD detector in one housing. Built-in electronic 360° inclinometer. Mainly for shaft alignment. PSD 20x20 mm [0.79″x0.79″]. With HyperPSD™ technology, which allows for a displayed resolution of 0.0001 mm [0.000005″/0.005 mils].

Note: To be used in pair with S unit 12-0789. E-series measuring unit.





#### Measuring unit ESH, PSD 20x20 mm

Part No: 12-0789

**Description:** Laser diode and PSD detector in one housing. Built-in electronic 360° inclinometer. Mainly for shaft alignment. PSD 20x20 mm [0.79″x0.79″]. With HyperPSD™ technology, which allows for a displayed resolution of 0.0001 mm [0.000005″/0.005 mils].

Note: To be used in pair with M unit 12-0790. E-series measuring unit.





#### Measuring unit EM, PSD 20x20 mm

Part No: 12-0434

**Description:** Laser diode and PSD detector in one housing. Built-in electronic 360° inclinometer. Mainly for shaft alignment. PSD 20x20 mm [0.79"x0.79"].

**Note:** To be used in pair with S unit 12-0433. E-series measuring unit.





#### Measuring unit ES, PSD 20x20 mm

Part No: 12-0433

**Description:** Laser diode and PSD detector in one housing. Built-in electronic 360° inclinometer. Mainly for shaft alignment. PSD 20x20

mm [0.79"x0.79"].

Note: To be used in pair with M unit 12-0434. E-series measuring unit.





#### Measuring unit ELM40, PSD 30 mm

Part No: 12-0776

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. Battery status indicator. Built-in electronic 360° inclinometer. For shaft alignment. PSD 30 mm [1.18"].

**Note:** To be used in pair with S unit 12-0777. E-series measuring unit.





#### Measuring unit ELS40, PSD 30 mm

Part No: 12-0777

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. Battery status indicator. Built-in electronic 360° inclinometer. For shaft alignment. PSD 30 mm [1.18"].

Note: To be used in pair with M unit 12-0776. E-series measuring unit.





## Measuring unit ELM20, PSD 20 mm

Part No: 12-0746

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. Battery status indicator. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 20 mm [0.79"]. **Note:** To be used in pair with S unit 12-0747. E-series measuring unit.





#### Measuring unit ELS20, PSD 20 mm

Part No: 12-0747

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. Battery status indicator. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 20 mm [0.79"]. **Note:** To be used in pair with M unit 12-0746. E-series measuring unit.





## Measuring unit XT40-M, line laser, PSD 30 mm

Part No: 12-0943

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 30 mm [1.18"].

Note: To be used in pair with S unit 12-0944. XT-series measuring unit.





#### Measuring unit XT40-S, line laser, PSD 30 mm

Part No: 12-0944

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 30 mm [1.18"].

**Note:** To be used in pair with M unit 12-0943. XT-series measuring unit.





## Measuring unit XT60-M, dot laser, PSD 20x20 mm

Part No: 12-1028

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 20x20 mm [0.79x0.79"].

**Note:** To be used in pair with S unit 12-1029. XT-series measuring unit.





## Measuring unit XT60-S, dot laser, PSD 20x20 mm

Part No: 12-1029

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 20x20 mm [0.79x0.79"].

**Note:** To be used in pair with M unit 12-1028. XT-series measuring unit.

MEASURING UNITS

Easy-Laser® Product overview





## Measuring unit XT50-M, EX/ATEX, dot laser, PSD 20x20 mm

Part No: 12-1026

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft

alignment. 1 axis PSD 20x20 mm [0.79x0.79"].

**Note:** Intrinsically safe design. To be used in pair with S unit 12-1027.

XT-series measuring unit.





## Measuring unit XT50-S, Ex/ATEX, dot laser, PSD 20x20 mm

Part No: 12-1027

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft alignment. 1 axis PSD 20x20 mm [0.79x0.79"].

**Note:** Intrinsically safe design. To be used in pair with M unit 12-1026.

XT-series measuring unit.





## Measuring unit XT70-M, dot laser, PSD 20x20 mm, 2-axis

Part No: 12-1045

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft

alignment. 2 axis PSD 20x20 mm [0.79x0.79"].

Note: To be used in pair with S unit 12-1046. XT-series measuring unit.





## Measuring unit XT70-S, dot laser, PSD 20x20 mm, 2-axis

Part No: 12-1046

**Description:** Laser diode and PSD detector in one housing. Built-in wireless communication. OLED display shows battery status and angle of the unit on shaft. Built-in electronic 360° inclinometer. For shaft

alignment. 2 axis PSD 20x20 mm [0.79x0.79"].

Note: To be used in pair with M unit 12-1045. XT-series measuring unit.





## Magnet base

Part No: 12-0013

**Description:** Versatile magnet base with On/Off function and many

optional rod mounting possibilities. Holding power 800N.

Note: Three sides are magnetic. \*For use with XT-series offset bracket

12-1008 is also needed.





#### Magnet base with turnable head

Part No: 12-0045

Description: Versatile magnet base with On/Off function and 360°

turnable head with two rod mounting possibilities.

Note: \*For use with XT-series offset bracket 12-1008 is also needed.





### Magnet base with turnable head

Part No: 12-1133

**Description:** Versatile magnet base with On/Off function and 360° turnable head with two rod mounting possibilities, for both C–C40 mm and C–C56 mm. It has a screw and washer with which you can lock the top rotation, and therefore still use it for jobs like shaft alignment.

Note: -





## Tilt table with magnet base

Part No: 12-0742

**Description:** Tilt table for use with an ES-unit as transmitter, e.g. with the Twist measurement program. This tilt table simplifies and makes the rough alignment of the laser beam quicker. Use the EM-unit as

detector, mounted on a regular magnet base.

Note: Magnet base and rods included as pictured.





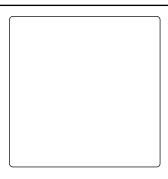
## Rotating detector bracket for rods

Part No: 12-0169

Description: Allows for 360° swivel.

Note: -





## Small magnet base with turnable head

Part No: 12-0696

**Description:** With On/Off function and 360° turnable head.

Note: Includes 2 rods 60 mm [2.36"].





### **Small magnet base**

Part No: 12-1092

**Description:** To be used when a low and small magnet base is needed.

**Note:** Can be used with D, E and XT series units.





#### Magnet base with linear digital scale

Part No: 12-0230 Description: -

Note: The length of the linear guide can be adapted. Detector not

included.





#### Height adjustment bracket for detector

Part No: 12-0937

**Description:** For fine adjustment of detector on rods.

Note: -





#### Radial support for magnet base

Part No: 12-0508

**Description:** Can be used for supporting the magnet base in many different ways. Makes it easier to position the detector correctly. Espe-

cially useful on flywheels.

Note: -





#### Magnet base with adapter for D550

Part No: 12-0579

Description: For e.g. straightness measurement with the D550 mea-

suring units.

Note: Magnet base, adapter, screws and two rods 140 mm included.





#### Pointing bracket on magnet base

Part No: 12-0583

Description: For wind tower flanges. Makes it possible to measure

near the edge of a surface.

Note: Probe does not touch surface. Rods and detector not included.





### **Magnetic bracket**

Part No: 12-1147

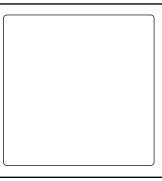
Description: For axial mounting on flanges or shafts. With M6 screws

working as radial supports, and four super magnets.

Note1: For rod C-C 40 and 56 mm.

Note2: Older design of bracket on rightmost picture.





#### Magnetic brackets and rods, kit

Part No: 12-1017

Description: 2 magnetic brackets and 4pcs rods 120 mm [4.72"] in

small case Note: -





#### V-bracket with chain

Part No: 12-0016

**Description:** For mounting on shaft or coupling. The V-bracket fits shafts with diameters 20–450 mm [0.8–17.7"]. The standard chain included can be used on shaft diameters up to 150 mm [6"].

Bracket width 18 mm [0.7"].

Note: Extension chains available for shafts larger than diameter 150

mm [6"]. Does not fit the XT series.





#### V-bracket with chain and rods

Part No: 12-0963

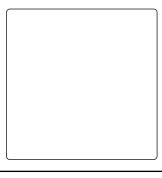
**Description:** For mounting on shaft or coupling. The V-bracket fits shafts with diameters 20–450 mm [0.8–17.7"]. The standard chain included can be used on shaft diameters up to 150 mm [6"]. Chain is pre-mounted. Bracket width 18 mm [0.7"].

pre-mounted. Bracket width 18 mm [0.7].

**Note:** Only for XT series. 2 pcs rods 120 mm [4.72"] included. Extension chains available [Part No. 12-1060] for shafts larger than diameter

150 mm [6"].





#### V-bracket with stainless steel chain and rods

Part No: 12-1040

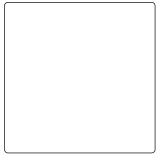
**Description:** For mounting on shaft or coupling. The V-bracket fits shafts with diameters 20–450 mm [0.8–17.7"]. The standard chain included can be used on shaft diameters up to 150 mm [6"]. Chain is

pre-mounted. Bracket width 18 mm [0.7"].

**Note:** Only for XT series. 2 pcs rods 120 mm [4.72"] included. Extension chains available [Part No. 12-1038] for shafts larger than diameter

150 mm [6"].





#### Standard chains

Part No: 12-0625

**Description:** Standard chains for shaft alignment brackets.

Note: 2 pcs. Includes plastic box.





## Extension chain, set

Part No: 12-0128

Description: For standard chains. For shaft diameters 150-450 mm

[5.9–17.7"].

Note: 2 pcs. included, with plastic box. This one fits best in the system

cases for E420 and D-series.





#### Extension chain, set

Part No: 12-1060

**Description:** For standard chains. For shaft diameters 150–450 mm

[5.9–17.7"].

Note: 2 pcs. included, with plastic box. This one fits best in XT and E

system cases, except E420.





#### Extension chain stainless steel, set

Part No: 12-1038

Description: For extension of stainless steel chains. For shaft diam-

eters 150–450 mm [5.9–17.7"].

Note: 2 pcs. included, with plastic box.





#### Thin chain bracket

Part No: 12-1012

**Description:** For use for example when the space between coupling and machine is limited. Width: 12 mm [0.5"]. For shaft diameters

20-450 mm [0.8-17.7"].

Note: Includes thin chain and tightening tool. Photos show old thread-

ings, but are otherwise correct.



## Shaft bracket with chain, stainless steel

Part No: 12-0337

**Description:** Bracket mainly for use with the D550 system which has a rod C–C of 70 mm. Pre-mounted chain and rods. For shaft diameters 20–150 mm [0.8–5.9"].

Note: -



## Extension chain, stainless steel

Part No: 12-0363

**Description:** For use together with 12-0337. For shaft diameters 150–320 mm [5.9–12.6"]. Two extension

chains: -500 mm [-19.6"]

Note: 1 pc. included. Does not fit

with standard chains.





#### Offset bracket

Part No: 01-1165

**Description:** Allows axial displacement between measuring units to be able to rotate past projecting machine parts. For both E and D series. **Note:** 2 screws M6x16 also needed (Part No. 03-0045). V-bracket and

rods not included.





#### Offset bracket

Part No: 12-1008

**Description:** Allows axial displacement between measuring units to be able to rotate past projecting machine parts. Also works as a converter between rod C–C 40 mm (D and E series) and C–C 56 mm (XT series) so older brackets can be used.

Note: 2 screws M6x16 included.





#### DM Bracket, complete set

Part No: 12-1130

**Description:** For measuring dynamic movements. Includes 2 pcs DM brackets, 4 pcs mounting plates, glue Locktite 4070, 4 pcs screw

M6x20, hexagon wrench 5 mm. Delivered in plastic case.

Note: -





#### **DM Bracket**

Part No: 12-1125

Description: For measuring dynamic movements. For complete set,

please see Part No. 12-1130 instead. **Note:** Measuring unit not included.





#### **DM Bracket extension**

Part No: 12-1129

**Description:** Extension for bracket 12-1125. For complete set, please

see Part No. 12-1130 instead.

Note: Parts included as pictured on leftmost picture.





## **Sliding bracket**

Part No: 12-1010

**Description:** For shaft alignment. The spherical feet can be placed in two different positions for adaption to small or large shaft diameters.

Min./Max. diameters 90–600 mm [3.5–23.6"].

Used when the shafts cannot be rotated. Mounted with standard  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

chains (not included).

Note: Photos show old threadings, but are otherwise correct.





## Sliding bracket with magnets

Part No: 12-0303

**Description:** The spherical feet can be placed in two different positions for adaption to small or large shaft diameters. With attachment magnets. Can also be mounted with standard chains (not included).





## Sliding bracket with magnets and probe

Part No: 12-0138

**Description:** For plumb measurement of e.g. generator shafts. The spherical feet can be placed in two different positions for adaption to small or large shaft diameters. With attachment magnets. Can also be mounted with standard chains (not included).

Note: -





#### Sliding bracket with turnable head

Part No: 12-0137

**Description:** For roll parallelism measurement. The spherical feet can be placed in two different positions for adaption to small or large roll diameters. With attachment magnets. Can also be mounted with standard chains (not included).

Note: -



#### Cardan bracket set

Part No: 12-0125

**Description:** For alignment of cardan/offset mounted machines. Offset range 0–900 mm.

**Note:** Delivered in plastic case.

For D-series.



#### **Cardan bracket set**

Part No: 12-0615

**Description:** For alignment of cardan/offset mounted machines. Offset range 0–900 mm.

**Note:** Delivered in plastic case.

For E-series.





#### Cardan bracket set

Part No: 12-1151

**Description:** For alignment of cardan/offset mounted machines. Offset

range 0–900 mm.

**Note:** Delivered in plastic carrying case. For XT- and E-series. Please see rightmost picture for example of attachment for E or XT unit. Weight: 8 kg [17.6 lbs], WxHxD: 500x380x140 [19.7x15.0x5.5"]



Rod, 30 mm [1.18"]

Part No: 01-0938

**Description:** Stainless steel. Diameter 10 mm. Extendable.

Note: 1 pcs.



### Rods, 60 mm [2.36"]

Part No: 12-0059

**Description:** Stainless steel. Diameter 10 mm. Extendable. Plastic holder included.

Note: 4 pcs.



Rods, 75 mm [2.95"]

**Part No:** 12-1161

**Description:** Stainless steel. Diameter 10 mm. Extendable. Plastic holder included.

Note: 4 pcs.



#### Rods, 120 mm [4.72"]

Part No: 12-0987

**Description:** Stainless steel. Diameter 10 mm. Extendable. Plastic holder included.

Note: 4 pcs.



Rods, 120 mm [4.72"]

Part No: 12-0324

**Description:** Stainless steel. Diameter 10 mm. Extendable. Plastic holder included.

Note: 8 pcs.



### Rods, 240 mm [9.44"]

Part No: 12-0060

**Description:** Stainless steel. Diameter 10 mm. Extendable. Plastic holder included.

Note: 4 pcs.





#### **Tube adapters for detector E9**

Part No: 01-0777

**Description:** Adapters mainly for mounting of detector when used for

extruder measurements. For use in single barrels.

**Note:** Manufactured on request to your specified diameter up to 250 mm [9.84"]. 2 pcs included. Includes items as pictured leftmost. Can

also fit on detector D157 (discontinued).





### Tube adapters for detector E9, for dual barrels

Part No: 01-2222

**Description:** Adapters mainly for mounting of detector when used for extruder measurements. These adapters are designed specifically for use in dual barrels.

**Note:** Manufactured on request to your specified diameter up to 250 mm [9.84"]. 2 pcs included. Includes items as pictured leftmost. Can

also fit on detector D157 (discontinued).





#### Tube adapters with metal points

Part No: -

**Description:** Adapters mainly for mounting of detector E9 and used for extruder measurements. With metal points of your choice and adapted for your application.

**Note:** Manufactured on request to your specified diameter. 2 pcs

included. Can also fit on detctor D157 (discontinued).



#### **Roll bracket**

Part No: 12-0849

**Description:** For use with detector E2 and precision level E290 when

aligning rolls. **Note:** -



## **Angle bracket**

Part No: 01-1768

**Description:** For use with roll

bracket 12-0849.

Note: -





## Large roll kit

Part No: 12-0885

**Description:** Accessories for roll diameter 400–1300 mm [15.7–51.2"].

Note: Only legs as on picture to the left included.





## **Extension Kit for E290 for large diameters**

Part No: 12-0901

**Description:** For using the E290 Precision Level on diameters 55–800

mm [2.16-31.50"].

Note: Includes 2 legs, 4 magnets and mounting screws.





#### Slide bracket Width 25 mm [0.99"]

Part No: 12-0768

**Description:** Bracket for straightness measurement of bores with a width of down to 25 mm [0.99"]. For bores Ø80− mm [3.15"−]. Magnetic feet holds the bracket safely also upside down. With positioning guide (extended on picture to the right). Guide can be removed. **Note:** Designed to fit with rod adapter 12-0767 and detectors E8/E9. If used with other detectors and adapters, it is those which determines the minimum measurable diameter.





#### Rod adapter with built in target

Part No: 12-0767

**Description:** For detector E8/E9. With slidable target. For mounting of the detector on regular rods with 40 mm centre-to-centre distance. Can be used on Slide bracket 12-0768 or any other suitable bracket.

Note: Detector not included.





## Slide bracket min. Ø100 mm [3.94"]

Part No: 12-0343

Description: For bore straightness measurement. Hard anodised sur-

face. For bores Ø100–200 mm [3.94"–7,88"].

Note: -





#### Slide bracket min. Ø120 mm [4.72"]

Part No: 12-0455

**Description:** For bore straightness measurement. With magnetic feet. For bores Ø120–250 mm [4.72"–9.84"], width Min. 60 mm [2.36"].

Note: -



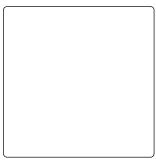


#### Slide bracket min. $\emptyset$ 200 [7.87"]

Part No: 12-0543

**Description:** For bore straightness measurement. With magnetic feet. For bores Ø200–350 mm [7.87"–13.78"], width Min. 80 mm [3.15"].





## Slide bracket min. ∅300 mm [11.81"]

Part No: 12-0510

**Description:** For bore straightness measurement. With magnetic feet. For bores  $\varnothing 300-500$  mm [11.81"-19.68"], width Min. 100 mm

[3.94"]. **Note:** -





#### Bore bracket adapter plate

Part No: 12-0553

Description: Bracket for use with detector D5, D157 or E9.

Note: Detector and arm set not included. Suitable Arm set is Part No.

12-0314. Detector D5 and D157 is discontinued.





#### **Rod adapter for D157**

Part No: 12-0320

**Description:** For mounting of detector D157 on standard rods. **Note:** Includes items as pictured leftmost (adapter, hexagon wrench

and screws). Magnet base, rods and detector not included.





#### **Detector arms Linebore**

Part No: 12-0314

**Description:** For bracket 12-0553. For bores  $\varnothing$ 100–500 mm [3.94"–19.68"], with the possibility to use the longest three arms as extension

arms

Note: Also includes Foot set 12-0134 and 12-0143 (the rightmost

picture).



## Foot set for linebore arms

Part No: 12-0134

**Description:** For use with linebore detector arms. Included in 12-0314.

Note:



## Foot set for ∅100–150 mm

Part No: 12-0143

**Description:** For use with linebore detector 12-0032 and bracket 12-0553. Included in 12-0314.

Note: -





#### Offset hub with counterlock

**Part No:** 12-0661

**Description:** For laser transmitter 12-0075.





### Offset hub with counterlock and tilt function

Part No: 12-0537

Description: For laser transmitter 12-0594.

Note: -





## Offset hub with counterlock and tilt function for transmitter E30

Part No: 12-0828

**Description:** For laser transmitter E30, Part No. 12-0823.

Note: -





#### Pin for hub

Part No: 12-1039

**Description:** This pin is mounted on the hubs 12-0661, 12-0537 or 12-0828. The hub can then be mounted in a machine spindle or similar. Clamping diameter 20 mm [0.79"]. The pin is hollow so laser beam can

be pointed also through it.

Note: 4 screws M5x8 also included.



## Arm kit with magnets

Part No: 12-0707

**Description:** For offset hub 12-0661 and 12-0537. Arms for bores Ø100−500 mm [3.94−19.68"].

Note: -



#### Offset hub arms

Part No: 12-0384

**Description:** For offset hub 12-0661 and 12-0537. For bores  $\emptyset$ 100–500 mm [3.94–19.68"]. Also includes

centering plug.

Note: -



#### **Extension arms Linebore**

Part No: 12-0282

**Description:** For extension of the Linebore offset hub arms. For bores Ø500−1000 mm [19.68−39.36"]

Note: -



## Magnets for offset hub

arms

Part No: 12-0154

Description: For arms 12-0384.

With plastic holder.

Note: -





## Adjustable magnet for offset hub arms

**Part No:** 12-0990

**Description:** To use when the mounting surfaces for the hub arms aren't in same level. Adjustable 0–14mm [0–0.55"] compared to stan-

dard magnet level.





#### **Axial extension arms, Linebore**

Part No: 12-0580

Description: Used for making it possible to reach the Linebore detec-

tor from the same side of the bore as the transmitter.

**Note:** 3 arms with magnets etc. as pictured on the left picture.





#### Laser transmitter bracket Turbine/Bore alignment

Part No: 12-0385

**Description:** For use with offset hub 12-0661 and laser transmitter D75. Included in system E950-B, E960-A, E960-B. 2 aluminium beams,

length 1100 mm and 500 mm.

Note: Transmitter and hub not included.





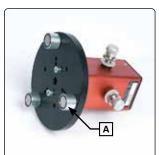
#### **Rod bracket for laser D75**

Part No: 12-0149

**Description:** For mounting of laser transmitter D75 on standard rods. Laser beam can point from the bracket or through the bracket.

Note: -





#### **Bracket for laser D75**

Part No: 12-0187

Description: To use on shaft ends, flywheels etc. Laser beam can point

from the bracket or through the bracket.

Note: A. 3 super magnets.





#### Adapter plate for tilt table to magnet base

Part No: 12-0874

**Description:** For mounting D22 laser transmitter on a magnet base, or

a magnet base with turnable head.

Note: 4 screws M6x16 also needed (not included).





#### Tilt table

Part No: 12-0110

**Description:** Tilt table mainly for transmitter D26, D22 and D23, but

can also be used together with transmitter D75, for example.

Note: Tool kit also included (12-0622).





#### Tilt table, turnable

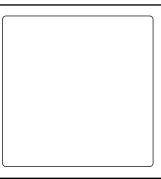
Part No: 12-0864

**Description:** Tilt table mainly for transmitter E30 Long Range. For fine adjustment of horizontal and vertical angle. Can be used with magnets

or mounted on tripod.

Note: -





#### Tool kit for tilt table

Part No: 12-0622

**Description:** Safety strap (12-0915), Machine/magnet base pin (01-0139), set of Hexagon wrenches, Rod tightening tool (03-0048), Feet

with flat points (3 pcs).

Note: Tool kit included in Tilt table, Part No. 12-0110.





#### Handheld detector bracket

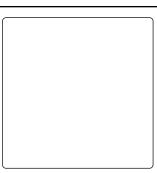
Part No: 12-0603

**Description:** For use on non-magnetic surfaces.

Note: Use with rods (not included). Includes 2 screws M6x10 and rod

tightening tool.





#### Bar bracket

Part No: 12-0988

Description: For alignment of e.g. bar feeders. With super magnet.

Note: Rotational centre of magnet is centre for PSD.





### Spindle bracket for measuring unit

Part No: 12-0787

**Description:** Bracket for use with an ES-unit as laser transmitter. Clamping pin  $\emptyset$  20 mm [0.79"], clamping length 40 mm [1.57"]. It is also possible to turn the measuring unit to point the laser beam through the pin. This is for example useful when aligning bar feeders.

Note: Rods and measuring unit not included.





### Angular adapter for detector, 90°

Part No: 12-1018

**Description:** Adapter positions detector exactly 90° to other direction.

Mainly used for machine tool applications.





## Machine/magnet base pin for D22 and D26, short

Part No: 01-0139

**Description:** For mounting the transmitter in a spindle or on a magnet base, for example. Clamping pin  $\varnothing$  16 mm[0.63"], clamping length 30

Note: This pin is included in the tilt table tool kit.





#### Machine/magnet base pin for D22 and D26, Long

Part No: 01-1333

**Description:** For mounting the transmitter in a spindle (or on a magnet base), for example. Clamping pin  $\emptyset$  20 mm[0.79"], clamping length 60

Note: -





#### Mounting pin for D146

Part No: 12-0568

**Description:** Accessory mounting pin for laser transmitter D146. Makes it possible to point the laser beam into e.g. the chuck. Clamping  $\emptyset$ 20 mm [0.79"].

Note: -





#### Self centering bracket, Linebore

Part No: 12-0341

**Description:** For sterntube measurement. Smallest diameter 300 mm [11.81"]. Includes extension beams and rods for diameters up to 1200

mm [47.24"].

Note: Includes items as pictured leftmost. No detector included.





#### Detector bracket "short stroke", Turbine

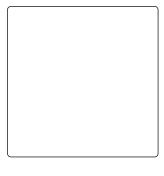
Part No: 12-0438

**Description:** With slidable beam. Makes it possible to reach several measurement positions without moving the entire bracket. One aluminium beam 1100 and one 600 mm included. For  $\varnothing$  150–1700mm

[5.9"-66.9"].

Note: Detector not included.





## **Detector bracket "long stroke", Turbine**

Part No: 12-0715

Description: Measures diameters 200–1700 mm [7.8"–67"] as stan-

dard. Stroke: 60 mm [2.36"].

Two aluminium beams 1100 mm [43.3"], one 600 mm [23.6"], rods 5x240 mm [9.44"], 4x120 mm [4.72"], 2x60 mm [2.36"], 1x30 mm [1.18"] included. For  $\emptyset$  200–1700mm [7.8"–66.9"].

Note: Detector not included.





## **Upgrade kit Long stroke**

Part No: 12-0855

**Description:** This kit is for upgrading of the long stroke brackets used in D650 with self center bracket, D660 Turbine, E950-B and E960-B. Makes it easier to adjust for different diameters, since the probe rod no longer has to be changed, instead the two other rods are extended when necessary.

**Note:** Only parts pictured on the left image included.





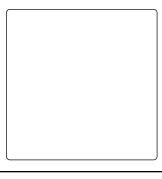
#### **Tube bracket**

Part No: 12-0814

Description: Included with Part No. 12-0438 and 12-0715.

Note: -





### Titanium rods, set of 3

Part No: 12-1019

**Description:** Very light, titanium rods. Mainly for use with the probe in turbine applications and similar. Diameter 10 mm. Extendable. **Note:** 3 lengths included: 1000 mm [39.37"] weight 150 g [5.29 oz], 700 mm [27.56"] weight 110 g [3.88 oz], 400 mm [15.75"] weight 64 g

[2.26 oz]



## Aluminium beam, 500 mm [19.68"]

**Part No:** 03-0769

**Description:** Cross section measures 44x44 mm [1.73x1.73"].

Note: -



## Aluminium beam, 600 mm [23.62"]

**Part No:** 03-0770

**Description:** Cross section

measures 44x44 mm [1.73x1.73"].

Note: -



## Aluminium beam, 1100 mm [43.31"]

Part No: 03-0771

Description: Cross section

measures 44x44 mm [1.73x1.73"].

Note: -



## Ball top probe

Part No: 12-0439

**Description:** Probe for turbine

measurement.

Note: -



## Short ball top probe

**Part No:** 12-0490

**Description:** Probe for turbine

measurement.

Note: -



## **Measuring probe Ruby**

 $\varnothing$ 5 mm

Part No: 12-0805

**Description:** Probe for turbine measurement. With ruby top.



Measuring probe Ruby

**2.5 mm** Part No: 12-0801

**Description:** Probe for turbine measurement. With ruby top.

Note: -



## **Gauge block**

Part No: 03-1291

**Description:** For use mainly in

turbine applications.

Note: -



## Measuring probe, cylindrical

**Part No:** 12-1047

**Description:** For use in turbine

applications.

Note: -



## Measuring probe, cylindrical, with magnet

**Part No: 12-1048** 

**Description:** For use in turbine

applications.

Note: With neodym magnet in the

cylinder probe.





## **Centering target, Turbine**

Part No: 12-0443

**Description:** For rough alignment of laser beam. 1 m + 0.5 m exten-

sion. Note: -





## Side support for E5, E7 and other detectors

Part No: 12-0188

**Description:** For straightness measurement of engine bed plate. For

use together with 12-0189.

Note: -





### Side support for D75

Part No: 12-0189

**Description:** For straightness measurement of engine bed plate. For

use together with 12-0188.

Note: -





#### Tripod

Part No: 12-0269

**Description:** For use with e.g. D22 and Angular prism. Min./Max.

height 500-2730 mm [ 19.7-107.5"]





## **Parallelity kit**

Part No: 12-0203

**Description:** For parallelism measurement of rolls. Includes Magnet base D45, Sliding bracket 12-0137, Sliding table 12-0202, 2 x Large

target base line. Delivered in plastic case.

Note: Detector not included.





#### Sliding table for tripod

Part No: 12-0202

**Description:** Sliding table to mount on a tripod. For laser transmitters

and angular prism. Mounted using 5/8-11 UNC thread.

Allows for 150 mm [5.9"] slide of the unit, for example to point the laser beam to a detector on a rod or flange without moving the tripod.

Note: -





#### Angular prism

Part No: 12-1136

**Description:** Angular prism with built-in penta prism which deflects the beam 90°. With the rotatable angular prism you can reach a detector at any height on a flange or a roll when measuring parallelity. **Note:** Angular prism has a rod C–C of 40 mm. Items as pictured leftmost included (prism, bracket for detector unit, laser transmitter alignment target). The rightmost picture shows setup with detector, on tripod with sliding table 12-0202, and tripod adaptor 01-2232.





#### Angular prism, kit

Part No: 12-1221

Description: Angular prism kit in rugged carrying case.

**Note:** Carrying case plus items as pictured leftmost included (prism, bracket for detector unit, laser transmitter alignment target, magnet base, 4 pcs rods 120 mm [4.72"]). Interior precut to also fit 2 pcs 12-1200 (accessories). Case measures WxHxD: 335x280x140

[13.2x11.0x5.5"], kit weight 3.8 kg [8.4 lbs].





## **Tripod adaptor for Angular prism**

Part No: 01-2232

**Description:** To be used for mounting of Angular prism on tripod. Directly mounted as pictured here, or preferably on sliding table 12-

0202 as pictured at Part No. 12-1136 above.

Note: Item as pictured leftmost included. Can be used for other ap-

plications if suitable. Rod C-C 40 and 56 mm.





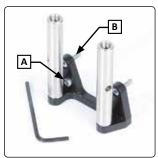
## Sliding table for magnet base

Part No: 12-1200

**Description:** For precision adjustment, mainly of angular prism. For

rod C–C 40 mm. To be mounted on magnet base 12-0013. **Note:** Includes 4 pcs screws. Magnet base not included.





## Measuring unit holder for Angular prism D46

Part No: 12-0709

Description: Makes it possible to mount a measuring unit in front of the angular prism D46. Used for precision aligning the prism.

Note: A. Support screws, only used with some detectors to put the

PSD at the correct height/centre in front of the prism.

B. Screws for mounting on the D46.

Hexagon wrench and two rods 60 mm also included as pictured.

C. Does not fit 12-1136. Prism D46 (12-0046) is discontinued.





#### Sun visor E-series

Part No: 12-0587

Description: To use in very sunny conditions when light causes unstable values. Fits detector 12-0509, 12-0752, 12-0824 and measuring

units 12-0433/12-0434. With magnet attachment.

Note: -





#### Sun visor for XT40

Part No: 12-1205

**Description:** To use in very sunny conditions when light causes unstable values. Fits measuring units XT40-M/S (12-0943/12-0944).

Note: -



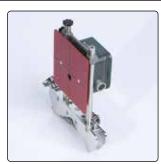


#### Target 100x100 mm

Part No: 12-0544

Description: Rough alignment target for flatness measurement. Adjustable height (to align with either D22 or D23) and magnet base.





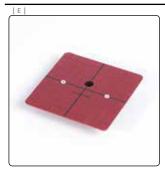
#### Target D550 cardan

Part No: 12-0402

**Description:** Large target for use when aligning cardan/offset mounted machines. The target clamps onto the front of the D550 measuring

units.

Note: -





#### **Large target E-series**

Part No: 12-0588

Description: The target is mounted with magnet attachment onto the front of detectors 12-0509, 12-0752 and 12-0702, as well as measur-

ing units 12-0433 and 12-0434.





## Target E-series 20 x 20

Part No: 12-0794

Description: Rough alignment target for measuring units ES/EM, detectors E4, E5 and E7. Can be mounted to cover laser opening, functioning as dust cover and protection. With reflective centre point. Note: Only one target included per Part No., i.e. if you order targets

for a pair of measuring units, you will need two 12-0794.





#### Large target extruder

Part No: 12-0810

Description: Transparent target with adjustable magnets for mounting

on tube end. Splits in two, to fit in the transportation case.

Note: -





#### Target cardan

Part No: 12-0139

Description: Large target for use when aligning cardan/offset mounted machines. The target clamps onto the front of the D-series measuring

units. Note: -





#### Wireless unit

Part No: 12-0436

Description: The unit for wireless communication is inserted into the connector on the detector or measuring unit. No internal battery. Note: Fits both E-series detector and measuring units which have an internal battery; 12-0509, 12-0702, 12-0752, 12-0434 and 12-0433.





### Battery pack with built-in wireless unit

Part No: 12-0618

Description: Chargeable battery pack which gives extra operating time. With battery status indicator and On/Off button. Built-in unit for

wireless measurement data transfer to the display unit.

Note: Only for the E-series. Includes "red cable" 0.16 m [6.3"].





## Batterypack with wireless technology, Kit

Part No: 12-0740

**Description:** Kit including two Batterypack units with wireless technol-

ogy (12-0618) and one splitter cable B (12-0725).

Note: The cable cannot be used for data transfer, only for charging.





## Splitter cable B, for charging

Part No: 12-0725

**Description:** To connect two Easy-Laser® units when charging.

Note: Only for charging, the cable cannot be used to transfer any mea-

surement data. Not for use with 12-0738.





#### Splitter cable A, for charging two 12-0738

Part No: 12-0728

**Description:** For charging two wireless units with battery, Part No.

**Note:** Only for charging 12-0738, the cable cannot be used to transfer

any measurement data.





## DC cable extension 1.5 m [59"]

Part No: 03-1203

Description: For extension of the DC split cables Part No. 12-0989 and

12-0750. Note: -





#### DC to USB adapter

Part No: 12-0751

Description: Adaptor to be used with cable 12-0989 and 12-0750.

Note: Cannot transfer any measurement data.



## **Splitter box**

Part No: 12-0597

**Description:** Used for connection of up to four Easy-Laser® units when

charging them.

Note: Standard "red" cables also

needed.



## DC split cable for charging

Part No: 12-0989

**Description:** Cable for charging the units of system E420, E540 and

XT440, XT550, XT660.

Note: This cable cannot transfer

any measurement data.





## "Red cable", 2.0 m [78.7"]

Part No: 12-0074

**Description:** For connecting Easy-Laser® measurement equipment.

With Push-Pull connectors.



"Red cable", 0.16 m [6.3"]

Part No: 12-0494

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors.

Note: -



## "Red cable", 0.4 m [15.7"]

Part No: 12-0289

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors.

Note: -



## "Red cable", 1.0 m [39.3"]

Part No: 12-0179

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors.

Note: -



## "Red cable", extension, 0.5 m [1.6']

Part No: 12-0762

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors.

Note: Extension cable.



## "Red cable", extension, 5.0 m [16.4']

Part No: 12-0108

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors. **Note:** Extension cable.



## "Red cable", extension, 10.0 m [32.8']

Part No: 12-0180

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connectors.

Note: Extension cable.





## "Red cable", 2.0 m [78.7"] with angled connector

Part No: 12-0735

**Description:** For connecting Easy-Laser® measurement equipment. With Push-Pull connector on one end, and angled connector on the other. For use when there is limited space for the cable, e.g. small bore diameters.

Note: -





### **Cable support**

Part No: 12-0321

**Description:** If the cable is accidentially pulled with great force, this support will prevent the connector from damage. It will also minimise

the risk of moving the detector out of position.

Note: -



#### **Printer cable**

Part No: 03-0241

**Description:** For connection of the thermal printers 03-0341 and 03-0032 to display unit D279.

Note: -



## PC cable ("null modem")

**Part No:** 03-0333

**Description:** Length 1.8 m [71"]



**USB/RS232** adaptor

Part No: 03-0722

Description: Adaptor and cable

extension.

Note: Requires internet connection

and Windows update.



#### USB A - USB B cable

Part No: 03-0822

Description: Cable with USB A to

USB B connectors.

Note: -



## **USB** cable for Streaming values

Part No: 03-1043

**Description:** Null modem cable for use with E-series display units to stream values directly to a PC.

Note: -



## **Charger for E-series** display unit

Part No: 03-1243 Description: -

Note: Wall socket connection cable also needed, choose part depend-

ing on country of use.



## **Charger for XT-series**

Part No: 03-1256 Description: -

Note: Wall socket connection cable also needed, choose part depend-

ing on country of use.



## Charger cable, EUR

Part No: 03-0892 Description: -

Note: Charger unit also needed.



## Charger cable, USA

Part No: 03-0893 Description: -

Note: Charger unit also needed.



### Charger cable, UK

Part No: 03-0894 Description: -

Note: Charger unit also needed.



## **Charger cable, AUS**

Part No: 03-0895 Description: -

Note: Charger unit also needed.



#### **HDMI** to **HDMI** cable

Part No: 03-0901 Description: Length 3 m.

Note: -



#### VGA to VGA cable

Part No: 03-0902 Description: Length 3 m.

Note: -



#### Barcode reader

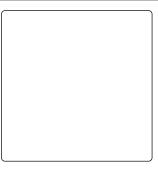
Part No: 12-0619

**Description:** For registration of machine data. Connected to the

USB port.

Note: Barcode stickers are no more available from Easy-Laser, but any other type can be used instead.





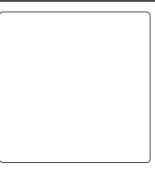
## VGA/HDMI kit, for serial number 94177 and newer

Part No: 12-0840

**Description:** Makes it possible to show the display unit screen on a TV or projector. Includes cable 03-0901 (HDMI), cable 03-0902 (VGA), converter and VGA circuit board.

**Note:** Only for Display unit 12-0418 (E51) with serial number 94177 and higher. The VGA kit (the circuit board) must be ordered at system purchase for factory installation, it cannot be mounted afterwards.





#### **Printer for E-series**

Part No: 03-1004

**Description:** Battery operated thermal printer. With USB cable and 110–220V charger. For connection to all systems with E-series display

units.

Note: 1 paper roll included. Spare rolls, Part No. 03-0041.





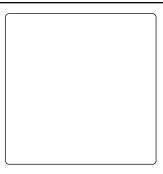
#### **Printer for D-series**

Part No: 03-1323

**Description:** Battery operated thermal printer. With cable and 110-220V charger. For connection to all systems with display unit D279. **Note:** Cable D-Sub 9-pole included. 1 paper roll included. Spare rolls,

Part No. 03-0041.





#### Carrying case Small for system XT440

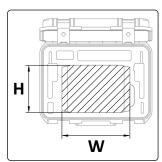
Part No: 12-0972

**Description:** Carrying case with pre-shaped interior for system XT440.

Note: No place for display unit.

Note 2: No system name sticker is included if not asked for.





## Carrying case Medium for system XT440/XT660

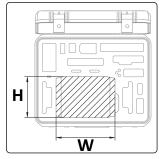
Part No: 12-0973

**Description:** Carrying case with pre-shaped interior for system XT440 and XT660.

**Note:** The interior has space for display unit XT11. If other display unit is to be placed in the case, please note the shape and dimension of the cutout (picture to the left). W=280 mm [11"], H= 195 mm [7.6"].

**Note 2:** No system name sticker is included if not asked for.





## Carrying case Large for XT440/XT660/XT770

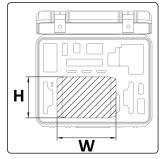
Part No: 12-1049

**Description:** Carrying case with pre-shaped interior for system XT440, XT660 and XT770. This case also carries some accessories, please see system XT660 and XT770 brochures for more information.

**Note:** The interior has space for display unit XT11. If other display unit is to be placed in the case, please note the shape and dimension of the cutout (picture to the left). W=280 mm [11"], H= 195 mm [7.6"].

Note 2: No system name sticker is included if not asked for.





### Carrying case Large for XT770 with D22

Part No: 12-1132

**Description:** Carrying case with pre-shaped interior for system XT770 with laser transmitter D22. Please note: No pre-cut space for BTA or VIB accessories, but the general space under the XT11 might be used. **Note:** The interior has space for display unit XT11. If other display unit is to be placed in the case, please note the shape and dimension of the cutout (picture to the left). W=280 mm [11"], H= 195 mm [7.6"]. **Note 2:** No system name sticker is included if not asked for.



## Carrying case for system E710

Part No: 12-0442

**Description:** Carrying case with preshaped interior for system E710.

Note: -



## Transportation case, Cardan

Part No: 12-0237

**Description:** Rigid case for Cardan bracket set, or other accessories. To use e.g. when there isn't place in

the system case.

Note: The foam is cut for Cardan

brackets.





### **Carrying case Large for system E540**

Part No: 12-1020

**Description:** Carrying case with interior for system E540.

Note: Pre-cut also for accessories, just remove foam blocks (blocks

removed on picture).





#### **Carrying case Small for system E540**

Part No: 12-1025

**Description:** Carrying case with interior for system E540.

Note: -





## Carrying case for system E420

Part No: 03-1059

Description: Carrying case with interior for system E420. Only lower

compartment as pictured.

Note: -





#### Transportation case for system E180 and XT190

Part No: 12-0804

**Description:** Carrying case with interior for belt alignment units. **Note:** No system name sticker is included if not asked for.





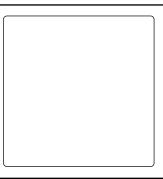
## Plastic case for small items

Part No: 03-0792

**Description:** Transportation case with foam interior.

Note: This is the standard case included with Easy-Laser systems.





#### **Transportation case**

Part No: 03-0909

Description: Rigid case for D22 or D23, or other accessories. To use

e.g. when there isn't place in the system case.

Note: The foam is cut to order. Specify what the case will be used for.

Otherwise it will be delivered with foam uncut.





## Luggage trolley

Part No: 03-1046

**Description:** Luggage trolley for easier transportation of system cases. **Note:** Max. load 75 kg [165 lbs]. Dimensions WxHxD: 500x1070x455 mm [19.7x42.1x17.9"]. Dimensions folded WxHxD: 485x790x70

[19.1x31.1x2.8]. Weight 4.4 kg [9.7 lbs].





### Protective case for display unit E51, E52 and E53

Part No: 01-1379

**Description:** With strap.

Note: -



Shoulder strap for display unit E-series

Part No: 12-0495 Description: -

Note: -



Safety strap

Part No: 12-0915

**Description:** For use with laser transmitter D22, D23 and Digital

Level E290.

Note: -



Measuring tape, 3 m [9.8']

Part No: 03-0824

Description: Fits the cases for the

E- and XT-systems.

Note: -



## Measuring tape, 5 m [16.4']

Part No: 03-0842

Description: Fits the cases for the

E-series systems.





#### **Demo unit Shaft**

Part No: 12-0416

Description: For shaft alignment training. Can simulate both coupled

and uncoupled shafts. With two shims 1.00 mm included. Dimensions: appr. 400x200x200 mm [ 15.7x7,8x7.8"].

**Note:** To simulate an actual alignment, shims (Type A) of different thicknesses can be used. Measuring units and brackets not included.





#### Demo unit Shaft, steel

Part No: 03-1332

**Description:** For shaft alignment training. Can simulate both coupled and uncoupled shafts. Two units or more can be connected in series to

simulate machine train. With two shims 1.00 mm included. Dimensions: appr. 400x200x200 mm [ 15.7x7,8x7.8"].

**Note:** To simulate an actual alignment, shims (Type A) of different thicknesses can be used. Measuring units and brackets not included.





#### **Demo unit Sheave**

Part No: 12-0236

**Description:** Can be placed standing or lying down.

WxHxD: 660x200x100 mm. Weight: 8 kg. **Note:** BTA and targets not included.





## Hexagon wrench set

Part No: 03-0967

Description: Hexagon wrench set with dimensions 1.27, 1.5, 2, 2.5, 3,

4, 5 and 6 mm. Ball end.

Note: -





### Stinger for XT280

Part No: 03-1326

**Description:** Accessory probe for the XT280 Vibrometer.

Note: Length 100 mm.





#### **Accelerometer magnet for XT280**

Part No: 03-1327

**Description:** Accessory probe for the XT280 Vibrometer.



**Battery lid for display** unit D279

Part No: 12-0354 Description: -Note: -



**Battery lid for display** unit D336

Part No: 12-0546 Description: -Note: -



Side part for display unit D279

Part No: 01-0752 Description: -Note: -



Top for D23

Part No: 01-0618 + 03-0505 **Description:** For protection of the rotating head.

Note: Top and screw are separate

articles.



Target for BTA, 18 mm

Part No: 12-0394

**Description:** Suitable for laser transmitter 12-0309 and 12-0390.

Note: 1 pc.





Part No: 12-0213

Description: Suitable for Easy-

Laser® D80. Note: 1 pc.





**Barrel** nut

Part No: 01-0045

**Description:** For the standard

chain. Note: -



Nut

Part No: 01-0042

**Description:** For the standard

chain. Note: -



Standard chain

Part No: 12-0033 Description: -Note: -



Chain, stainless steel

Part No: 12-0386

**Description:** For use with 12-0337. Note: Does not fit with standard

chains.



V-bracket

Part No: 12-0130

**Description:** For mounting on shaft

or coupling.

Note: Just bracket, no chain.



Screw M6x14

Part No: 03-0061 Description: -



Rod tightening tool, 4 mm Part No: 01-0048

Description: -Note: -



**Locking screw** 

Part No: 01-0039

**Description:** Fits measuring units; 12-0001, 12-0002, 12-0119, 12-0120, 12-0114, 12-0116, 12-0776, 12-0777, 12-0698, 12-0697, 12-0746, 12-0747. Detectors; 12-0005, 12-0201, 12-0255.

Note: -



**Locking screw** 

Part No: 01-1953

**Description:** Fits measuring units; 12-0434, 12-0433. Detectors; 12-0702, 12-0509, 12-0752.

Note: -



**Locking screw** 

Part No: 01-1866

**Description:** Fits measuring units; 12-0943, 12-0944, 12-1028, 12-1029, 12-1026, 12-1027.

Note: -



# Spare locks for carrying cases

Part No: -

Description: Spare locks for different models of Easy-Laser® carrying

cases.

Note: Ask us for more details on pricing and availability. Always measure width before ordering!



### Padded case for BTA

Part No: 03-0591

**Description:** Padded case with belt

strap. Note: -



### Case for BTA Ex

Part No: 03-0736

Description: Case for Ex environments. Made of antistatic material.

With belt strap.

Note: -



# Protective case for older display units

Part No: 03-0042 Description: With strap.

Note: -





# Protective case for display unit D279

Part No: 03-0592 Description: With strap.

Note: -



# **Protective case for** display unit D336 Part No: 03-0799

**Description:** Made of antistatic

materials. With strap.

Note: -



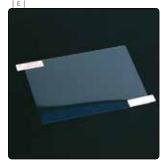


# Cleaning cloth

**Part No:** 03-0878

**Description:** For cleaning of optical surfaces such as laser aperture and PSD window.

Note: -



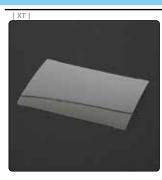
# LCD display protection film for E51/E52/E53

Part No: 03-0972

**Description:** Thin film for scratch protection of the LCD display.

Note: -

**SPARE PARTS** Easy-Laser® Product overview



# LCD display protection film for XT11

Part No: 01-1945

**Description:** Thin film for scratch protection of the LCD display.

Note: -



### Thermo paper roll

Part No: 03-0041

**Description:** Paper roll for printer

03-0032 and 03-0341.

Note: -



### **Batteries**

**Description:** 

A. 3.6 V, Lithium (for BTA Ex), Part Nr 03-0730 B. 1.5 V, LR6 Alkaline, Part Nr 03-0247 C. 1.5 V, LR14 Alkaline, Part Nr 03-0242 D. 9V, 6LR61 Alkaline, Part Nr 03-0642



### White Vaseline

Part No: 03-1193

**Description:** Protects metals against rust and corrosion. Note: Weight 40 g.



# Vapor capsule **Zerust VC2-2**

Part No: 03-1184

**Description:** Protects metals against rust and corrosion. Estimat-

ed life span 2 years.

Note: For use in system cases. With

adhesive backing.



# Sticker "This machine is aligned with"

Part No: 04-0053

Description: To stick on aligned machines. With writable surface for date and operator signature.

Note: 25 stickers.



### QR code sticker

Part No: 04-0307

**Description:** To stick on machines. Read it from within the XT app for easy access to machine data etc. Note: 10 stickers with unique

numbers.



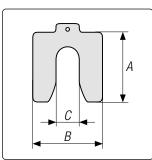
# Tool kit for system D550, complete

Part No: 12-0360

Description: With 4 rods 120 mm, 4 extension chains, rod tightening

tool and hexagon tool. Note: Antistatic fabric.





### Shims case 1, 180 shims

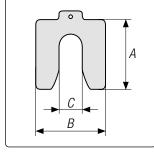
Part No: 12-0258

Description: 180 shims, 10 pcs of each shim included. Weight 3.9 kg.

Shims type 1, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm. Shims type 2, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm. Shims type 3, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm.

Note: Shims type 1, A: 55 mm, B: 50 mm, C: 15 mm Shims type 2, A: 75 mm, B: 70 mm, C: 23 mm Shims type 3, A: 90 mm, B: 80 mm, C: 32 mm





### Shims case 2, 360 shims

Part No: 12-0259

**Description:** 360 shims, 20 pcs of each shim included. Weight 6.1 kg.

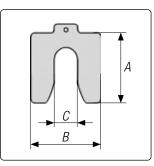
Shims type 1, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm. Shims type 2, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm. Shims type 3, thickness 0.05, 0.10, 0.20, 0.50, 0.70, 1.00 mm.

Note: Shims type 1, A: 55 mm, B: 50 mm, C: 15 mm Shims type 2, A: 75 mm, B: 70 mm, C: 23 mm Shims type 3, A: 90 mm, B: 80 mm, C: 32 mm

SPARE PARTS

Easy-Laser® Product overview





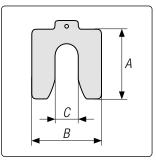
# Shims case 3, shims of your choice

Part No: 12-0743

**Description:** For this case you choose number of shims yourself, from type 1, 2, 3, 4. We recommend minimum 10pcs/model. Please see price list for dimensions. Weight, case without shims 3.2 kg.

**Note:** Shims type 1, A: 55 mm, B: 50 mm, C: 15 mm Shims type 2, A: 75 mm, B: 70 mm, C: 23 mm Shims type 3, A: 90 mm, B: 80 mm, C: 32 mm Shims type 4, A: 125 mm, B: 105 mm, C: 44 mm





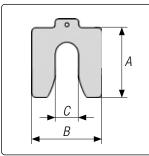
### Shims case 4, shims of your choice

Part No: 12-0755

**Description:** For this case you choose number of shims yourself, from type 2, 3, 4, 5. We recommend minimum 10pcs/model. Please see price list for dimensions. Weight, case without shims 3.2 kg.

**Note:** Shims type 2, A: 75 mm, B: 70 mm, C: 23 mm Shims type 3, A: 90 mm, B: 80 mm, C: 32 mm Shims type 4, A: 125 mm, B: 105 mm, C: 44 mm Shims type 5, A: 200 mm, B: 200 mm, C: 85 mm





### Shims

Part No: See price list.

Description: Blister packs of 10 pcs/size.

Type 1, thickness [mm] 0.05, 0.10, 0.20, 0.40, 0.50, 0.70, 1.00, 2.00, 3.00.

Type 2, thickness [mm] 0.05, 0.10, 0.20, 0.40, 0.50, 0.70, 1.00, 2.00, 3.00.

Type 3, thickness [mm] 0.05, 0.10, 0.20, 0.40, 0.50, 0.70, 1.00, 2.00, 3.00.

Type 4, thickness [mm] 0.05, 0.10, 0.20, 0.40, 0.50, 0.70, 1.00, 2.00, 3.00.

Type 5, thickness [mm] 0.05, 0.10, 0.20, 0.40, 0.50, 0.70, 0.80, 1.00, 2.00, 3.00.

**Dimensions [mm]:** Type 1, *A: 55, B: 50, C: 15*. Type 2, *A: 75, B: 70, C: 23*. Shims type 3, *A: 90, B: 80, C: 32*. Type 4, *A: 125, B: 105, C: 44*. Type 5, *A: 200, B: 200, C: 85*.



### Cap

Part No: 13-0004

**Description:** Cap made of 100% cotton. Easy-Laser® embroidery on front. With strap for size adjust-

ment.

Note: Not always in stock. Price

upon request.



### **USB** memory

Part No: 03-0914

**Description:** 4 GB memory stick USB. Easy-Laser® logo engraved on

one side as on picture. Note: Price upon request.



### Pen

Part No: 13-0006

Description: With blue ink. Easy-Laser® logo as pictured. Good

quality pen.

Note: Not always in stock. Price

upon request.



### **Key holder**

Part No: 01-1095

**Description:** With snap-hook and

string for mobile phone. Note: Not always in stock. Price

upon request.



### Logo sticker

Part No: 04-0125 (small), 04-0124

**Description:** Durable sticker with strong adhesive. Same sticker as on the system cases. Available in two sizes: 200x44 mm [7.87x1.73"] and 305x67 mm [12.01x2.64"].

**Note:** Price upon request.



## Easy-Laser® logo stickers

Part No: 04-0252

**Description:** Sheet with laminated logo stickers with the following lengths: 100 mm (2 pcs), 85 mm (2 pcs), 60 mm (3 pcs) and 40 mm (4 pcs) / [3.94" (2 pcs), 3.35" (2 pcs), 2.36" (3 pcs), 1.57" (4 pcs)]

Note: -



### **Keychain with spirit level**

Part No: 13-0013

**Description:** Keychain with spirit level (plastic block 40x15x15 mm). Easy-Laser® logo as pictured. For give-away purpose/not calibrated. Note: Not always in stock. Price

upon request.



### A5 Notes

Part No: 13-0012

Description: 25 note papers, glued

with cardboard back.

Note: -





### **Playing cards**

Part No: 13-0007

**Description:** Deck of cards. International symbols. Easy-Laser® logo and web address "www.easylaser.com" printed as on picture.

Note: Not always in stock. Price upon request.





### Notebook for the technician

Part No: 05-0792

Description: Notebook measuring 90x140 mm that fits easily into a pocket in your work clothes, with an insert comprising 38 pages of graph paper and conversion tables on the inside of the cover. Laser facts on back cover.

Note: Not always in stock. Price upon request.



**Laser transmitter D246** 

(Discontinued)

Part No: 12-0246 Description: -

Note: This product is discontinued

and replaced by 12-0706.



Offset hub for D75

(Discontinued)

Part No: 12-0132 Description: -

Note: This product is discontinued

and replaced by 12-0661.



Detector Extruder, diameter 20 mm [0.79"]

(Discontinued)

Part No: 12-0538



Offset hub with arms

(Discontinued)

Part No: 12-0364 Description: -

Note: Replaced by 12-0707 + 12-



**Detector Linebore** (Discontinued) Part No: 12-0032



**Detector D6** (Discontinued) Part No: 12-0201



**Detector bracket "long** stroke", Turbine (Discontinued)

Part No: 12-0248

Note: Replaced by 12-0715.



Magnet base bracket for **Linebore detector** 

(Discontinued)

Part No: 12-0329



[ NO PICTURE AVAILABLE ]

**System D670 Parallelism** (Discontinued)

Part No: 12-0224

Note: Please see system E970

instead.



System D800 Machine Spin (Discontinued)

Part No: 12-0220

Note: Please see system E915

instead.



# (Discontinued)

**Part No:** 12-0185

Note: Please see system E960

**System D660 Turbine** 

instead.



# **System D662 Turbine** (Discontinued)

Part No: 12-0662

Note: Please see system E960

| D |

[ NO PICTURE AVAILABLE ]

## **System D663 Turbine**

### (Discontinued)

Part No: 12-0663

**Note:** Please see system E960

instead.



# System D664 Turbine

### (Discontinued)

Part No: 12-0664

**Note:** Please see system E960

instead.



# System D630 Extruder

(Discontinued)

Part No: 12-0193

Note: Please see system E930

instead.



# System D640 Machine tool (Discontinued)

Part No: 12-0552

**Note:** Please see system E940

instead.



# System D652 Linebore (Discontinued)

Part No: 12-0652

**Note:** Please see system E950

instead.



# System D650 Linebore

(Discontinued)

Part No: 12-0034

**Note:** Please see system E950

instead.



# **System D600 Machine**

(Discontinued)

Part No: 12-0133

Note: Please see system E920

instead.



### System D525 Shaft

### (Discontinued)

Part No: 12-0231

Note: Please see system E710

instead.



# System D525 B Shaft

(Discontinued)

Part No: 12-0235

Note:Please see system E710

instead.



## System D505 Shaft

## (Discontinued)

Part No: 12-0207

Note: Please see system E540 or

E710 instead.



# System D480 Shaft

(Discontinued)

Part No: 12-0422

Note: Please see system E540 or

E710 instead.



# System D450 Shaft

(Discontinued)

Part No: 12-0300

**Note:** Please see system E420



System E530 Shaft

(Discontinued)
Part No: 12-0695

Note: Please see system E710 or

E540 instead.



Easy-Laser® D550 Extreme™ Ex/ATEX/IECEx

(Discontinued)

Part No: 12-0340



Easy-Laser® D130 BTA Ex (Discontinued)

Part No: 12-0400



System D150 BTA digital

(Discontinued)

Part No: 12-0310

**Note:** Please see system XT190

instead.



System D160 BTA (Discontinued)

Part No: 12-0411

Note: Please see system XT190

instead.



# System E170 BTA

(Discontinued)

Part No: 12-0659

**Note:** Please see system XT190

instead.



System E180 BTA

(Discontinued)

Part No: 12-0796 + (12-0850: system without laser transmitter)
Note: Please see system XT190

instead.



# Laser transmitter Ex for sheave/pulley alignment

(Discontinued)

Part No: 12-0390



# Detector for sheave/pulley alignment

(Discontinued)

Part No: 12-0308

Note: Please see system XT190

instead.



# D-series Detector for belt alignment

(Discontinued)

Part No: 12-0403

Note: Please see system XT190

instead.



# E-series Detector for belt alignment

(Discontinued)

Part No: 12-0657

Note: Please see system XT190

instead.



# E-series wireless Detector for belt alignment

(Discontinued)

Part No: 12-0791

Note: Please see system XT190



Measuring unit M, PSD 10x10 mm (Discontinued) Part No: 12-0001



Measuring unit M, PSD 10x10 mm (Discontinued) Part No: 12-0002



Measuring unit M, PSD 18x18 mm, inclinometer (Discontinued) Part No: 12-0119



Measuring unit S, PSD 18x18 mm, inclinometer (Discontinued) Part No: 12-0120



Measuring unit M, PSD 10x10 mm, inclinometer (Discontinued) Part No: 12-0423



Measuring unit M, PSD 10x10 mm, inclinometer (Discontinued) Part No: 12-0424



Measuring unit S, PSD 30x30 mm, inclinometer (Discontinued) Part No: 12-0260



Measuring unit M, PSD 30x30 mm, inclinometer (Discontinued)
Part No: 12-0256



Measuring unit M, 2 axis, PSD 18x18 mm, inclinometer (Discontinued) Part No: 12-0116



Detector 30 mm,
D-series (Discontinued)
Part No: 12-0255



Detector D5 (Discontinued) Part No: 12-0005



Detector E4 (Discontinued) Part No: 12-0702

Note: Please see Detector E5 or E7



Measuring unit ELS30, PSD 30 mm (Discontinued) Part No: 12-0697



Measuring unit ELS30, PSD 30 mm (Discontinued) Part No: 12-0698



Detector D157 (Discontinued) Part No: 12-0157



Detector E8, 1-axis PSD (Discontinued)
Part No: 12-0758
Note: Please see Detector E9 instead.



Measuring unit M, Extreme<sup>™</sup> (Discontinued)
Part No: 12-0334



Measuring unit M, Extreme<sup>™</sup> (Discontinued)
Part No: 12-0335



Display unit Extreme™ EX: D336 (Discontinued) Part No: 12-0336



Display unit D-series: D279 (Discontinued) Part No: 12-0279



AC adaptor for Display unit D279 (Discontinued)
Part No: 12-0590



Display unit for sheave/ pulley alignment (Discontinued) Part No: 12-0404



Magnetic bracket (Discontinued) Part No: 12-0413 Note: Replaced by 12-1147.



Magnetic bracket (Discontinued) Part No: 12-1011 Note: Replaced by 12-1147.



Offset bracket (Discontinued) Part No: 01-0076 Note: Please see 01-1165 instead.



AC adaptor for D22 and **D75 (Discontinued)** Part No: 12-0205



**AC adaptor for D23** (Discontinued) Part No: 12-0294



**Extension chain** (Discontinued) Part No: 12-0319 Note: Please see 12-0128 instead.



**Height adjustment** bracket for D6 (Discontinued) Part No: 12-0417



Sun visor for D6 (Discontinued) Part No: 01-1352



Large target extruder (Discontinued) Part No: 12-0199 Note: Please see 12-0810 instead.



Measuring tape, 2 m [6.5'] (Discontinued) Part No: 12-0012



**Carrying case for system** E540 and E530 (Discontinued) Part No: 03-1007

Note: Replaced by cases 12-1020 and 12-1025.



**CD** (Discontinued) Part No: 06-0001



**Transportation case Ex Large (Discontinued)** Part No: 12-0456



Printer 220 V (Discontinued) Part No: 03-0032 Note: Replaced by 03-1323.



Printer 110 V (Discontinued) Part No: 03-0341 Note: Replaced by 03-1323.



**Sliding bracket** (Discontinued)

Part No: 12-0039

Note: Please see 12-1010 instead.



**Back Pack System Large** (Discontinued) Part No: 03-1044 Note: -



**Back Pack System Large** (Discontinued) Part No: 03-1045 Note: -



**E-series Vibrometer** probe E285 (Discontinued) Part No: 12-0656 Note: -



**D-series Vibrometer** probe D283 (Discontinued) Part No: 12-0283

Note: -



Wireless units kit for E530 (Discontinued) Part No: 12-0739 Note: -



Wireless unit for E530 (Discontinued) Part No: 12-0738 Note: -



Adapter bracket for 40 mm rod distance (Discontinued) Part No: 12-0815 Note: -



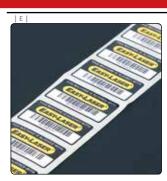
Magnet base with turnable head, for D157 (Discontinued) Part No: 12-0608 Note: -



Cam shaft bracket (Discontinued) **Part No: 12-0476** Note: -



Sun visor D550 (Discontinued) Part No: 12-0592 Note: -



Barcode sticker (Discontinued)

Part No: 04-0147

Note: Please see Part No. 04-0307

instead.



# Large extruder adapter/bracket (Discontinued)

Part No: -

**Note:** Maximum size for extruder

brackets is 200 mm.



# Angular prism D46

(Discontinued)

Part No: 12-0046

**Description:** Angular prism with built-in penta prism which deflects

the beam 90°.

Note: Replaced by 12-1136.



# Charger 12–36V for car (Discontinued)

Part No: 12-0585



# Bracket for non-magnetic flanges, with handheld detector bracket

(Discontinued)

Part No: 12-0628



# Battery pack (Discontinued)

Part No: 12-0617

Note: Please see 12-0618 instead.



Cable tester (Discontinued)

**Part No:** 12-0362



# VGA/HDMI kit

(Discontinued)

**Part No:** 12-0573



System E940 Machine tool (Discontinued)

Part No: 12-0761

**Note:** Ask your local distributor for possible replacement solutions.



# Shaft alignment system for Vestas (Discontinued)

Part No: 12-0797 (Vestas 4)
Part No: 12-0825 (Vestas 3)
Note: Replaced by 12-1143, 12-

1142 and 12-1183.

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**EASY-LASER®** 

# TECHNICAL SPECIFICATIONS

### **READ THIS INFORMATION CAREFULLY**

- On the following pages technical specifications for the most common units can be found. We will not list all products here.
- You should always also read the complete product description to find out about compatibility with other Easy-Laser® products.
- Please note that the measurement range for laser transmitters is the maximum range, and in reality depends on the detector used and the application.
- Operating times also depends on the actual application, therefore it is not specified for all products. See system specifications in each brochure for more detailed information.
- The drawings show the most important measures. Because of limited space we cannot always place the projections according to Europen drawing projection, but that is otherwise the method used.
- Specifications are quoted to 95% confidence level (coverage factor k=2).



### COMPATIBILITY BETWEEN D, E AND XT

- The D-series, E-series and XT-series detectors and display units can only be used within its own product series.
  - Note! One exception is the sheave alignment detector 12-1054, which can be connected to XT11, E51 and E52.
- Brackets for D- and E-series has a rod C–C of 40 mm, XT-series rod C–C is 56 mm.
  The new XT offset bracket (12-1008) function as an adaptor for these two measures, but doesn't fit all older brackets. We will of course continue the developement and adaptation of brackets.

Note! The discontinued system D550 has a rod C-C of 70 mm.

### Software communication







**Brackets** 





### SPECIFICATIONS FOR BUILT-IN RECHARGEABLE BATTERIES:

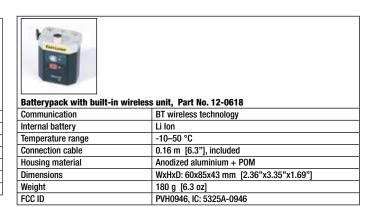
| Easy-Laser | Туре   | Voltage | Output   | Capacity  | Included in Part No.                         |
|------------|--------|---------|----------|-----------|--|
| Part No.   |        |         |          |           |  |
| 03-0757    | Li-lon | 3.65 V  | 41.61 Wh | 10400 mAh | 12-0418, 12-0700, 12-0748                    |
| 03-0765    | Li-lon | 3.7 V   | 2.5 Wh   | 660 mAh   | 12-0433, 12-0434, 12-0509, 12-0688, 12-0702, |
|            |        |         |          |           | 12-0738, 12-0752, 12-0759, 12-0758, 12-0799, |
|            |        |         |          |           | 12-0824, 12-0846                             |
| 03-0971    | Li-lon | 3.6 V   | 9.36 Wh  | 2600 mAh  | 12-0617, 12-0618, 12-0823, 12-0845           |
| 03-1052    | Li-lon | 3.7 V   | 1.22 Wh  | 330 mAh   | 12-0746, 12-0747, 12-0776, 12-0777, 12-0791, |
|            |        |         |          |           | 12-1054                                      |
| 12-0953    | Li-lon | 3.7 V   | 7.4 Wh   | 2000 mAh  | 12-0944, 12-0943, 12-1028, 12-1029           |
| 12-0952    | Li-lon | 7.3 V   | 41.61 Wh | 5700 mAh  | 12-0961 (2 pcs)                              |
| 12-0983    | Li-lon | 3.7 V   | 7.4 Wh   | 2000 mAh  | 12-1026, 12-1027                             |
| N/A        | Li-lon | 3.8 V   | 16.91 Wh | 4450 mAh  | 12-1086                                      |



### Miscellaneous

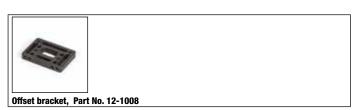


| Wireless unit, Part No. 12-0436 |                                     |
|---------------------------------|-------------------------------------|
| Communication                   | BT wireless technology              |
| Temperature range               | -10–50 °C                           |
| Environmental protection        | IP class 66 and 67                  |
| Housing material                | ABS                                 |
| Dimensions                      | WxHxD: 53x32x24 mm [2.1"x1.2"x0.9"] |
| Weight                          | 25 g [0.9 oz]                       |
| FCC ID                          | PVH0946, IC: 5325A-0946             |





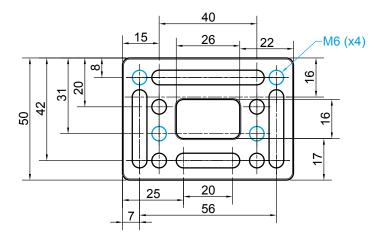
| Vibrometer probe XT280, Part N | o. 12-1090 (system)                                     |
|--------------------------------|---|
| Frequency range                | 2 Hz to 1kHz (ISO) 1 kHz to 10 kHz (BDU)                |
| Max frequency resolution       | 1.25 Hz @ 800 lines FFT setting                         |
| Displayed amplitude units      | Acceleration in g                                       |
|                                | Velocity in mm/s (or inch/s)                            |
|                                | Bearing noise in BDU (bearing damage units)             |
| Displayed Frequency Units      | Hertz (Hz), RPM or CPM                                  |
| Input range                    | User selectable with accelerometer sensitivity          |
| Dynamic range                  | 96 dB (0.01g resolution)                                |
| VA diagnostic bands            |   |
| (RPM=run speed)                | Unbalance 1x RPM  |
|                                | Alignment 2x RPM  |
|                                | Looseness 3x RPM  |
| Operating temperature          | 0°C to 50°C   |
| Storage temperature            | -20°c to 70°C   |
| Battery type                   | 2 x AA batteries  |
| Battery operation              | 20 hours continuously (depending on brightness setting) |
| Environmental protection       | IP67  |
| Material                       | ABS plastics / Hard anodized aluminium                  |
| Dimensions                     | WxHxD: 200 mm x 60mm x 26mm [7.8 x 2.4 x 1.0"]          |
| Weight                         | 280 g [9.8 oz]  |
| FCC ID                         | FCC ID: QOQBT121  |



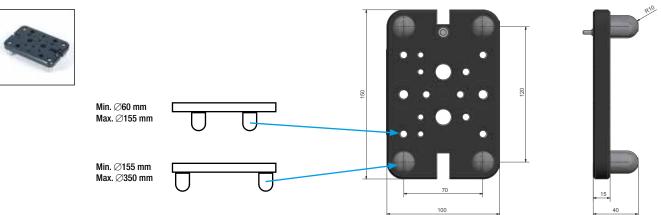
Blue circles are threaded holes.

mm

70 7 56 40 M6 (x4)



# Sliding bracket, Part No. 12-1010

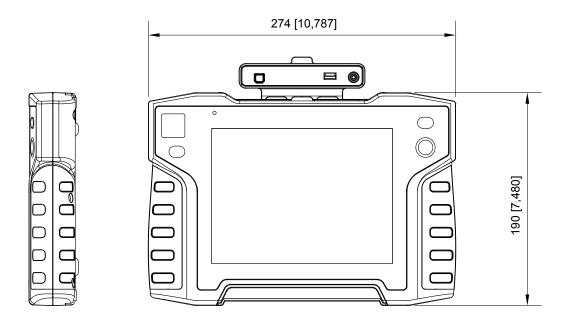


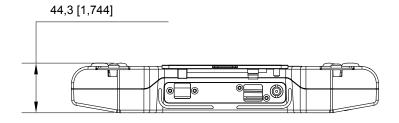


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# Display unit XT11, Part No. 12-0961

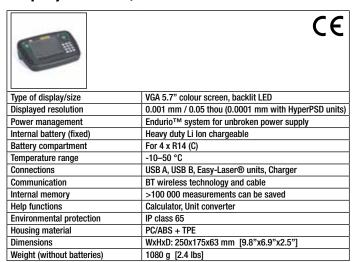
|                          | C€   |
|--------------------------|--|
| Type of display/size     | SVGA 8" colour screen, backlit LED, multitouch |
| Battery type             | Heavy duty Li Ion chargeable                   |
| Operating time           | Up to16 h continuously                         |
| Connections              | USB A, USB B, Charger, AV (HDMI)               |
| Communication            | Wireless technology, WiFi                      |
| Camera, with diode lamp  | 13 Mp  |
| IR camera (optional)     | FLIR LEPTON® 0-450° [32-842°F]                 |
| Help functions           | Built-in manual                                |
| Environmental protection | IP class 66 and 67                             |
| Operating temperature    | -10–50 °C                                      |
| Storage temperature      | -20–50 °C                                      |
| Relative humidity        | 10-95%   |
| OLED display             | 96x96 pixels                                   |
| Housing material         | PC/ABS + TPE                                   |
| Dimensions               | WxHxD: 274x190x44 mm [10.8x7.5x1.7"]           |
| Weight                   | 1450 g [3.2 lbs]                               |



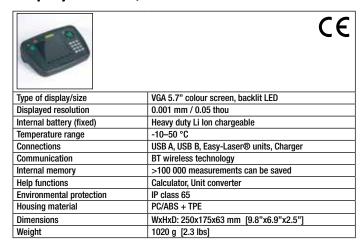




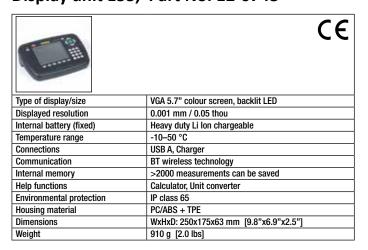
## Display unit E51, Part No. 12-0418

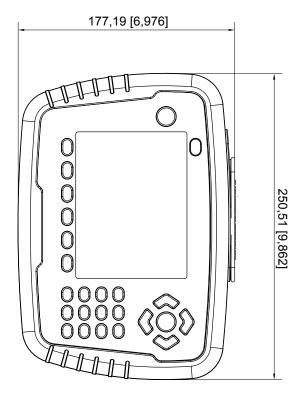


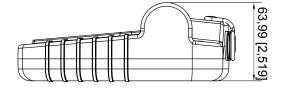
### Display unit E52, Part No. 12-0700



### Display unit E53, Part No. 12-0748

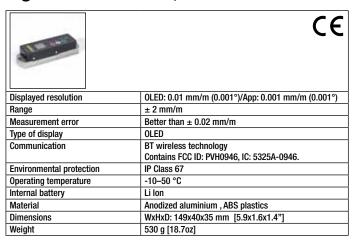




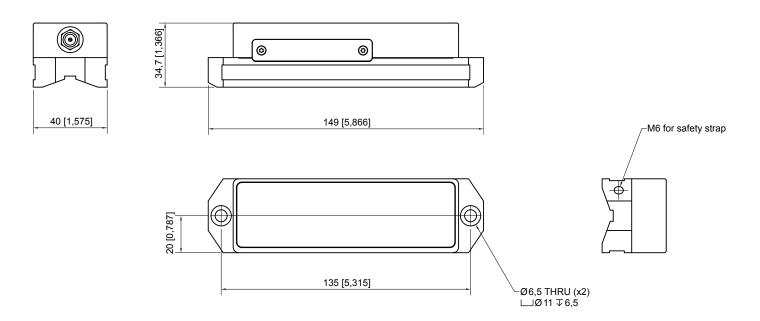




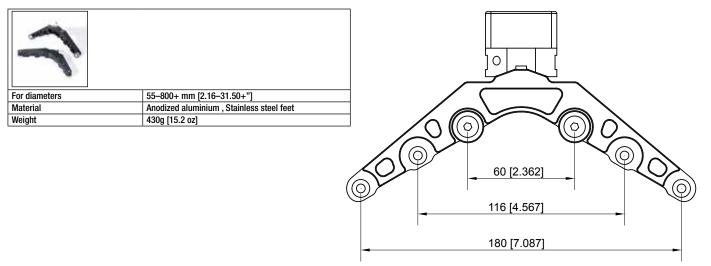
## Digital Precision Level, Part No. 12-0846



mm [inch]



# Extension kit for Precision Level, Part No. 12-0901



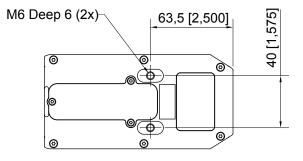


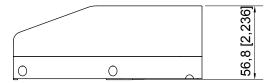
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## Laser transmitter E30 Long range, Part No. 12-0823



mm [inch]



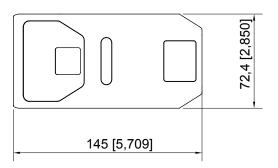


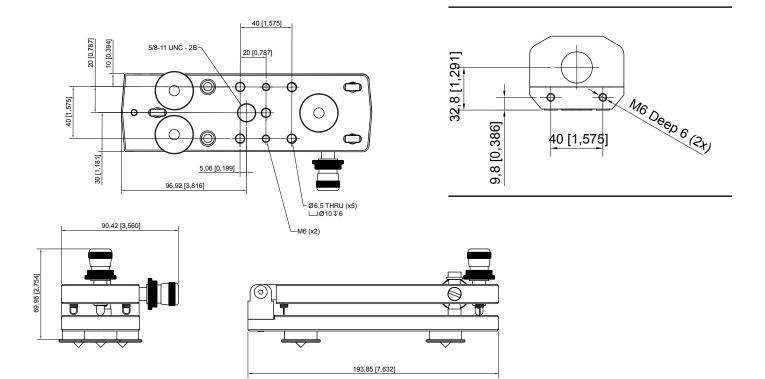
# Laser transmitter E30 Long range, with tilt table, Part No. 12-0858

Weight



620g [21.7 oz]



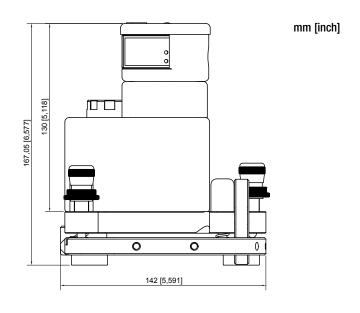


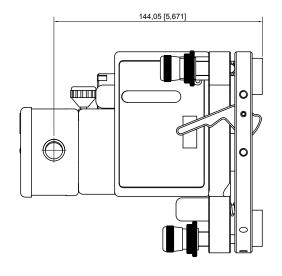


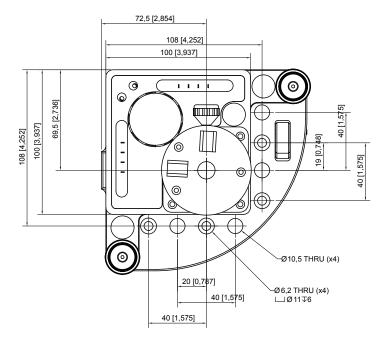
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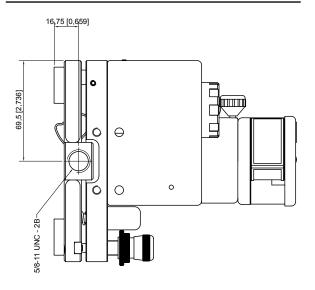
### Laser transmitter D22, Part No. 12-0022

|                                       | CAUTION LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT            |
|---------------------------------------|---|
| Type of laser                         | Diode laser   |
| Laser wavelength                      | 630–680 nm  |
| Laser Safety Class                    | Class 2   |
| Output power                          | AVERAGE POWER $<$ 0.6 mW. PULSE ENERGY $<$ 20 nJ. PULSE DURATION 10-17 $\mu$ s. |
| Beam diameter                         | 6 mm [1/4"] at aperture   |
| Working area, range                   | 40-metre radius [130"]  |
| Type of battery                       | 1 x R14 (C)   |
| Operating time/battery                | approx. 24 hours  |
| Levelling range                       | ± 30 mm/m [± 1.7°]  |
| 3 x spirit vials' scaling             | 0.02 mm/m   |
| Squareness between laser beams        | ±0.01 mm/m [±0.01 mils/inch] [2 arc sec.]                                       |
| Flatness of sweep                     | ±0.01 mm/m  |
| Fine turning of laser head            | ±0.1 mm/m [20 arc sec.]   |
| 2 x spirit vials for rotation of head | ±5 mm/m   |
| Housing material                      | Aluminium   |
| Dimensions                            | WxHxD: 139x169x139 mm [5.47x6.64x5.47"]   |
| Weight                                | 2650 g [5.8 lbs]  |











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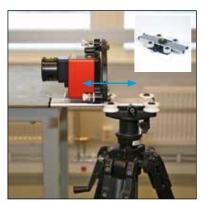
### Laser transmitter D22, Part No. 12-0022

### **Examples of use**

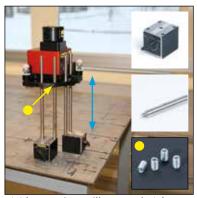
The D22 can be mounted in various ways. Below are just some examples. The important thing is to always tighten rods, screws and magnets firmly. Also be sure the surface where the magnets are attached is clean. If possible use the safety strap.



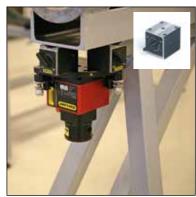
On tripod (Part No. 12-0269).



On sliding table for tripod Part No. 12-0202. For easy alignment to detector.



Rigid mounting, still easy to height adjust. Use rods of suitable length.



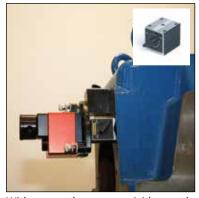
With magnet bases, very rigid mounting.



With super magnets on tilt table (included) directly on surface.



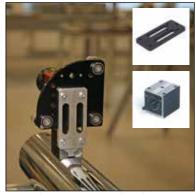
In a machine spindle. Spindle/magnet base pin Part No. 01-1333.



With magnet bases, very rigid mounting.



Feet with points (included), on non magnetic surface.



Vertical mounting on roll. Adapter plate Part No. 12-0874.



Rigid mounting, horizontal sweep.

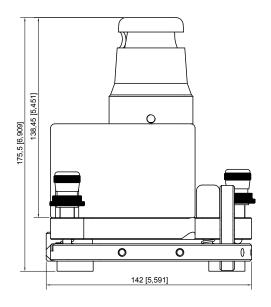


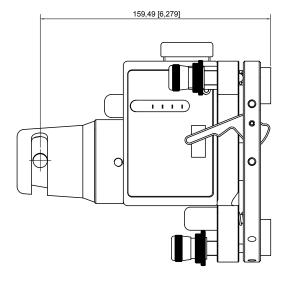


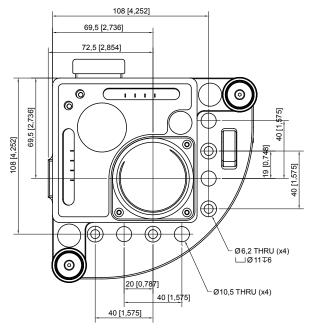
mm [inch]

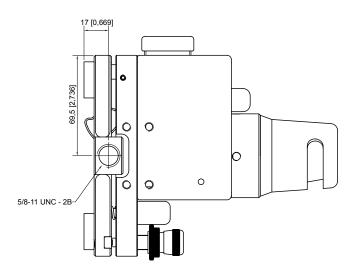
## Laser transmitter D23 Spin, Part No. 12-0168







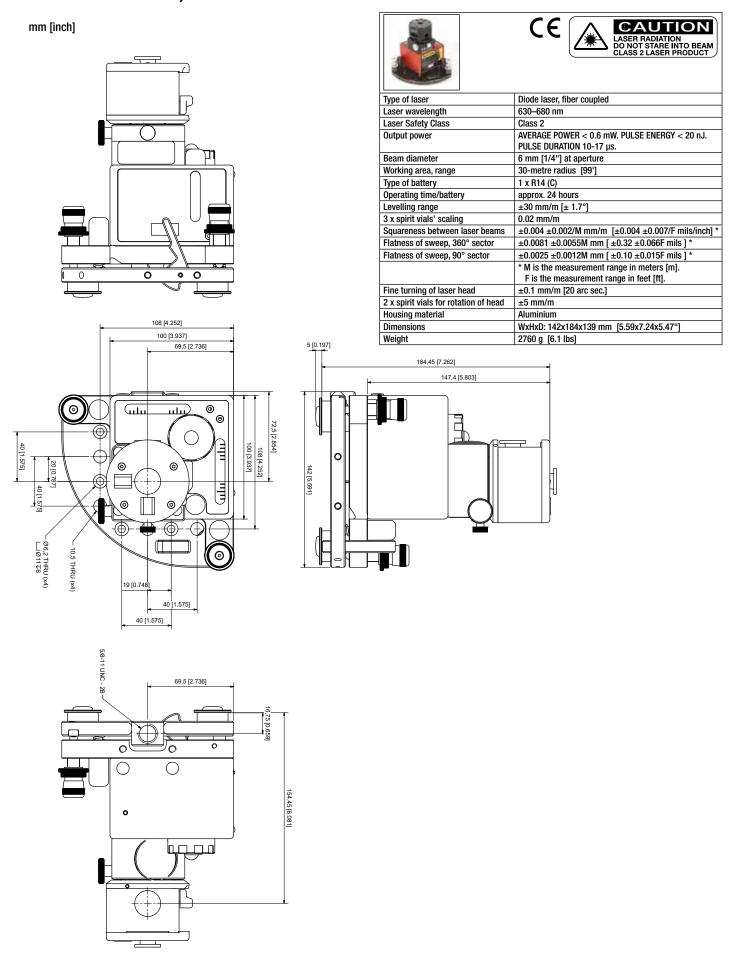






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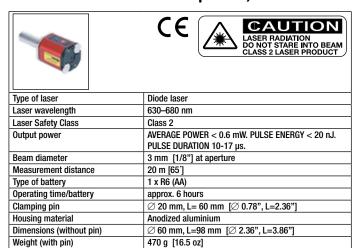
### Laser transmitter D26, Part No. 12-1064

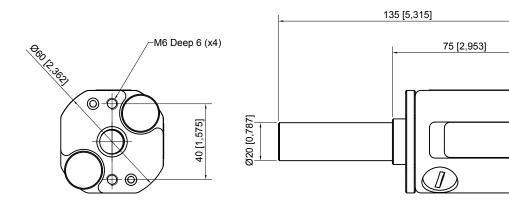


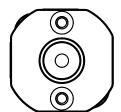
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## Laser transmitter D146 Spindle, Part No. 12-0146



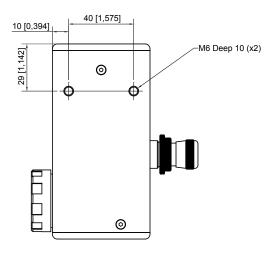


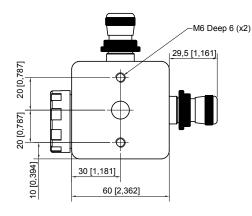


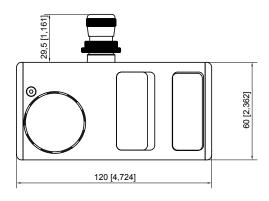


### Laser transmitter D75, Part No. 12-0075

Type of laser Diode laser 630-680 nm Laser wavelength Laser Safety Class Class 2 AVERAGE POWER < 0.6 mW. PULSE ENERGY < 20 nJ. Output power PULSE DURATION 10-17 µs. Beam diameter 6 mm [1/4"] at aperture Working distance 40-metre [130'] Type of battery 1 x R14 (C) Operating time/battery approx. 15 hours Operating temperature 0-50 °C Laser adjustment D75: 2 ways ±2° (± 35 mm/m) Housing material Aluminium Dimensions D75 WxHxD: 60x60x120 mm [2.36x2.36x4.72"] Weight 780 g [27.5 oz]









M6

mm [inch]

# Laser transmitter D25 with offset hub, Part No. 12-0706

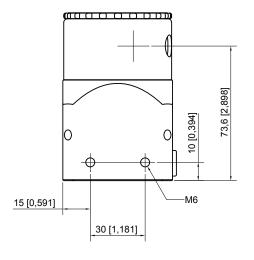


49 [1,929] 49 [1,929] Ø4 -10 DEEP

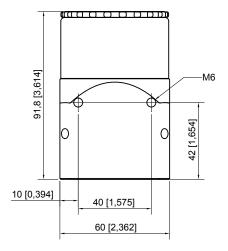
20 [0,787]

## Laser transmitter D25, Part No. 12-0594



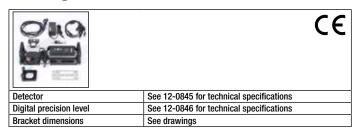


40 [1,575]

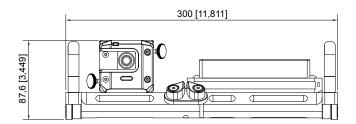




## Roll alignment kit, Part No. 12-0856

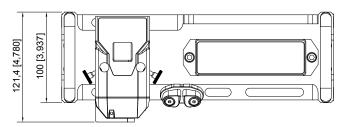


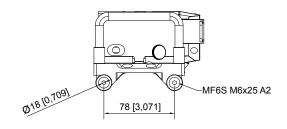
### mm [inch]



# Roll bracket, Part No. 12-0849

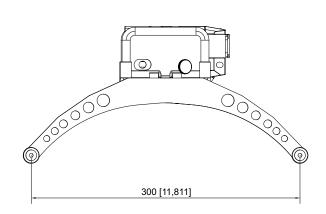




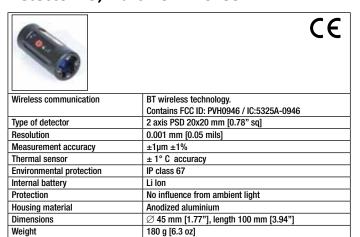


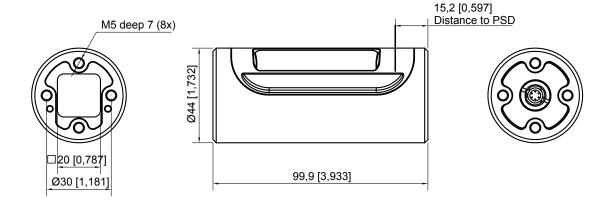
# Large roll kit, Part No. 12-0885





### Detector E9, Part No. 12-0759



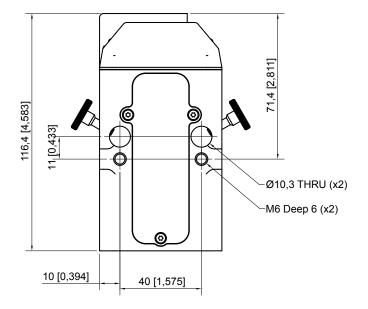


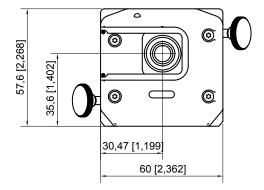


# Angle detector E2, Part No. 12-0845

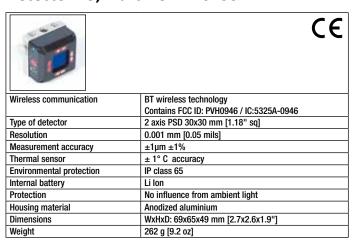


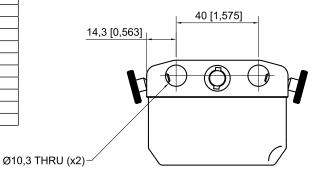
| Type of detector         | 2 axis PSD 20x20 mm [0.78" sq]           |
|--------------------------|--|
| Type of display          | OLED                                     |
| Wireless communication   | BT wireless technology                   |
|                          | Contains FCC ID: PVH0946 / IC:5325A-0946 |
| Internal battery         | Li lon                                   |
| Resolution               | 0.01 mm/m (0.001°)                       |
| Measurement accuracy     | Better than ± 0.02 mm/m                  |
| Inclinometers            | 0.1° resolution                          |
| Environmental protection | IP Class 67                              |
| Operating temperature    | -10–50 °C                                |
| Housing material         | Anodized aluminium                       |
| Dimensions               | WxHxD: 116x60x57 mm [4.6x2.4x2.2"]       |
| Weight                   | 530 g [18.7oz]                           |

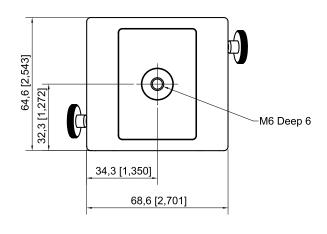


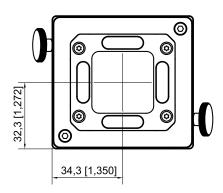


### Detector E3, Part No. 12-0799

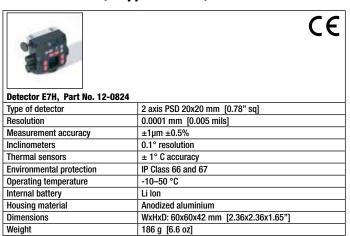




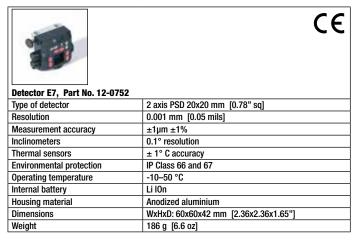




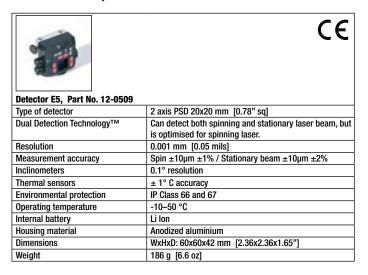
## Detector E7H, HyperPSD™, Part No. 12-0824

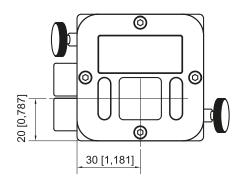


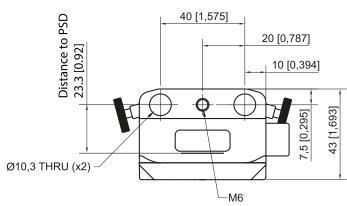
# Detector E7, Part No. 12-0752

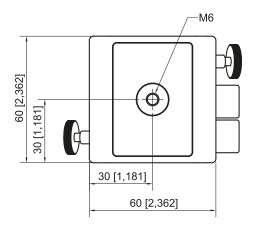


### Detector E5, Part No. 12-0509









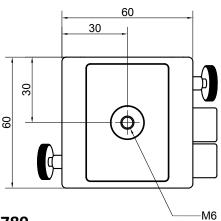
mm [inch]

# Measuring unit EM/ES, Part No. 12-0434 / 12-0433



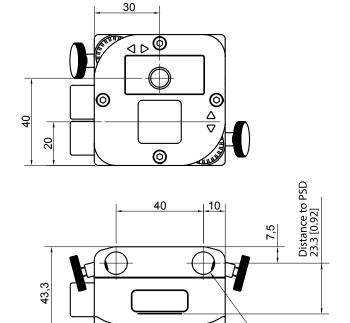


| Measuring unit PSD 20x20 mm. | EM: Part No. 12-0434, ES: Part No. 12-0433    |
|------------------------------|---|
| Type of detector             | 2-axis PSD 20x20 mm [0.78" sq]                |
| Resolution                   | 0.001 mm [0.05 mils]                          |
| Measurement accuracy         | ±1µm ±1%                                      |
| Measurement range            | Up to 20 m [66 feet]                          |
| Type of laser                | Diode laser                                   |
| Laser wavelength             | 630–680 nm                                    |
| Laser class                  | Safety class 2                                |
| Laser output                 | AVERAGE POWER < 0.6 mW. PULSE ENERGY < 20 nJ. |
|                              | PULSE DURATION 10-17 µs.                      |
| Electronic inclinometer      | 0,1° resolution                               |
| Thermal sensors              | ± 1° C accuracy                               |
| Environmental protection     | IP class 66 and 67                            |
| Temperature range            | -10–50 °C                                     |
| Internal battery             | Li Ion  |
| Housing material             | Anodized aluminium                            |
| Dimensions                   | WxHxD: 60x60x42 mm [2.36"x2.36"x1.65"]        |
| Weight                       | 202 g [7.1 oz]                                |



# Measuring unit EMH/ESH, Part No. 12-0790 / 12-0789





Ø10,3 THRU (x2)

шшш

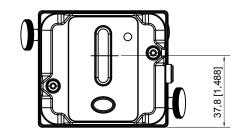


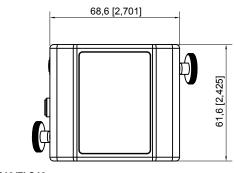
### Measuring unit ELM40 / ELS40, Part No. 12-0776 / 12-0777



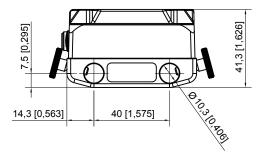


mm [inch]





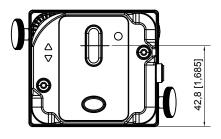
ELM40/ELS40 ELM20/ELS20



## Measuring unit ELM20 / ELS20, Part No. 12-0746 / 12-0747



### ELM20/ELS20



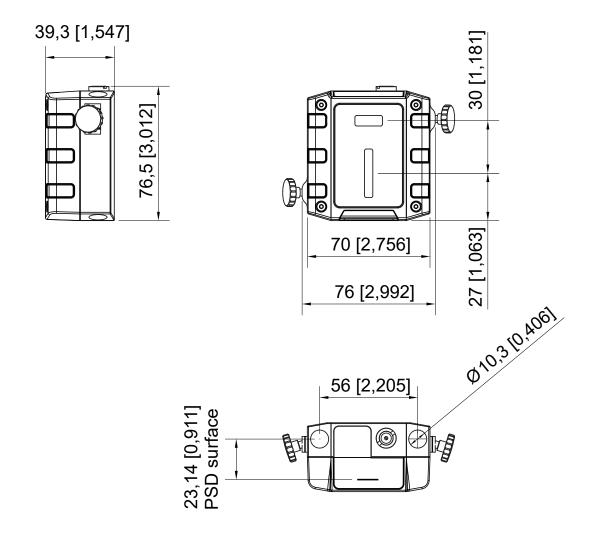


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# Measuring unit XT40-M, XT40-S, Part No. 12-0943 / 12-0944

mm [inch]

| Measuring unit PSD 30 mm. XT40 | LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT CE  -M: Part No. 12-0943, XT40-S: Part No. 12-0944 |  |
|--------------------------------|---|--|
| Type of detector               | TruePSD 30 mm [1.2"]  |  |
| Communication                  | BT wireless technology  |  |
|                                | Contains FCC ID: QOQBGM111 / IC:5123A-BGM111  |  |
| Battery type                   | Heavy duty Li Ion chargeable  |  |
| Operating time                 | Up to 24 h continuously   |  |
| Resolution                     | 0.001 mm [0.05 mils]  |  |
| Measurement accuracy           | ±5µm ±1%  |  |
| Measurement range              | Up to 10 m [33 feet]  |  |
| Type of laser                  | Diode laser   |  |
| Laser wavelength               | 630–680 nm  |  |
| Laser class                    | Safety class 2  |  |
| Laser output                   | AVERAGE POWER < 0.6 mW. PULSE ENERGY < 8 nJ.  |  |
|                                | PULSE DURATION 4-6 µs.  |  |
| Electronic inclinometer        | 0.1° resolution   |  |
| Environmental protection       | IP class 66 and 67  |  |
| Operating temperature          | -10–50 °C   |  |
| Storage temperature            | -20–50 °C   |  |
| Relative humidity              | 10–95%  |  |
| OLED display                   | 128x64 pixels   |  |
| Housing material               | Anodized aluminium + PC/ABS + TPE   |  |
| Dimensions                     | WxHxD: 76x76.5x39.3 mm [3.0x3.0x1.5"]   |  |
| Weight                         | 245 g [8.6 oz]  |  |





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mm [inch]

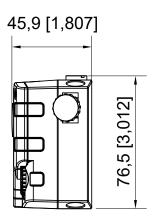
## Measuring unit XT60-M, XT60-S, Part No. 12-1028 / 12-1029







| Measuring unit PSD 20x20 mm | n. XT60-M: Part No. 12-1028, XT60-S: Part No. 12-1029 |
|-----------------------------|---|
| Type of detector            | 1-axis TruePSD 20x20 mm [0.79x0.79"]                  |
| Communication               | BT wireless technology                                |
|                             | Contains FCC ID: QOQBGM111 / IC:5123A-BGM111          |
| Battery type                | Heavy duty Li Ion chargeable                          |
| Operating time              | Up to 24 h continuously                               |
| Resolution                  | 0.001 mm [0.05 mils]                                  |
| Measurement accuracy        | ±1µm ±1%  |
| Measurement range           | Up to 20 m [66 feet]                                  |
| Type of laser               | Diode laser   |
| Laser wavelength            | 630–680 nm  |
| Laser class                 | Safety class 2  |
| Laser output                | AVERAGE POWER < 0.6 mW. PULSE ENERGY < 20 nJ.         |
|                             | PULSE DURATION 10-17 µs. WAVELENGTH 630-680 nm.       |
| Electronic inclinometer     | 0.1° resolution                                       |
| Environmental protection    | IP class 66 and 67                                    |
| Operating temperature       | -10–50 °C   |
| Storage temperature         | -20–50 °C   |
| Relative humidity           | 10–95%  |
| OLED display                | 128x64 pixels   |
| Housing material            | Anodized aluminium + PC/ABS + TPE                     |
| Dimensions                  | WxHxD: 76x76.5x45.9 mm [3.0x3.0x1.8"]                 |
| Weight                      | 272 g [9.6 oz]  |



# Measuring unit XT70-M, XT70-S, Part No. 12-1045 / 12-1046

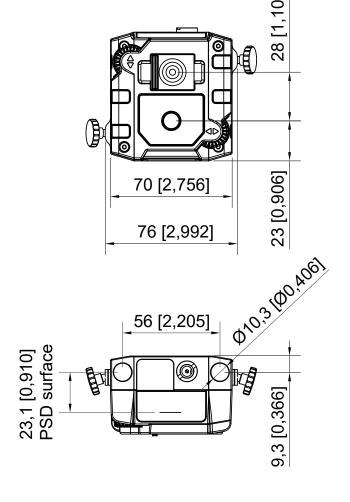








|                                | CE  |
|--------------------------------|---|
| Measuring unit PSD 20x20 mm. X | T70-M: Part No. 12-1045, XT70-S: Part No. 12-1046 |
| Type of detector               | 2-axis TruePSD 20x20 mm [0.79x0.79"]              |
| Communication                  | BT wireless technology                            |
|                                | Contains FCC ID: QOQBGM111 / IC:5123A-BGM111      |
| Battery type                   | Heavy duty Li Ion chargeable                      |
| Operating time                 | Up to 24 h continuously                           |
| Resolution                     | 0.001 mm [0.05 mils]                              |
| Measurement accuracy           | ±1µm ±1%  |
| Measurement range              | Up to 20 m [66 feet]                              |
| Type of laser                  | Diode laser                                       |
| Laser wavelength               | 630–680 nm  |
| Laser class                    | Safety class 2                                    |
| Laser output                   | AVERAGE POWER < 0.6 mW. PULSE ENERGY < 20 nJ.     |
|                                | PULSE DURATION 10-17 µs. WAVELENGTH 630-680 nm.   |
| Electronic inclinometer        | 0.1° resolution                                   |
| Environmental protection       | IP class 66 and 67                                |
| Operating temperature          | -10–50 °C   |
| Storage temperature            | -20-50 °C   |
| Relative humidity              | 10–95%  |
| OLED display                   | 128x64 pixels                                     |
| Housing material               | Anodized aluminium + PC/ABS + TPE                 |
| Dimensions                     | WxHxD: 76x76.5x45.9 mm [3.0x3.0x1.8"]             |
| Weight                         | 272 g [9.6 oz]                                    |





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### Measuring unit XT50-M, XT50-S, Part No. 12-1026 / 12-1027











mm [inch]

| Easy-Laser® XT50 measuring units are approved in accordance with the |
|--|
| latest ATEX directive.   |

EX certificate number: Presafe 17 ATEX 10552X, IECEx PRE 17.0049X ATEX code: II 2 G

EX classification: Ex ib op is IIC T4 Gb.  $-10^{\circ}$ C  $\leq$  Ta  $\leq$   $+50^{\circ}$ C

II=Indicates that the instrument is approved for all areas except mines

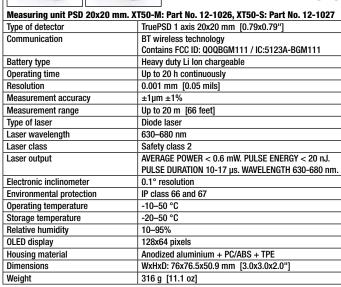
2=Unit category. Intrinsically safe equipment for zones 1 and 2 (likely occurrence of explosive atmosphere)

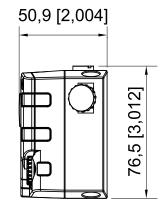
G=Indicates atmosphere: Gas, Vapours, Mists

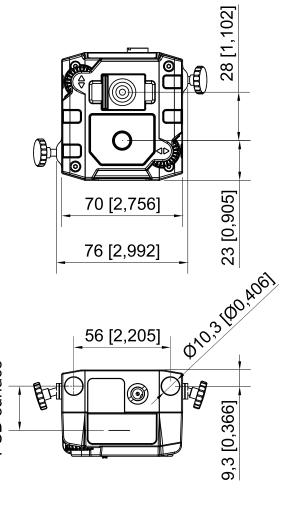
ib=Type of protection from an explosion

IIC=Explosion group

T4=Temperature class





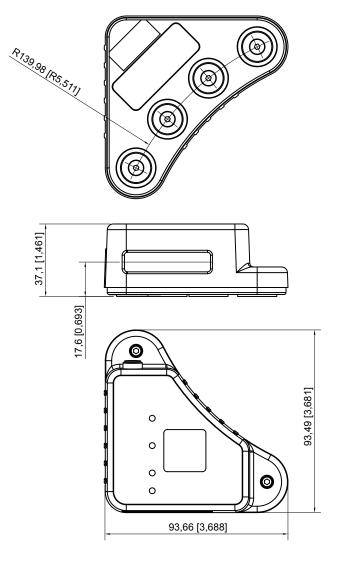




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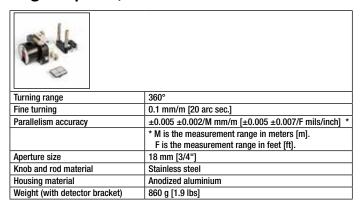
# E- and XT-series wireless detector for BTA, Part No. 12-1054

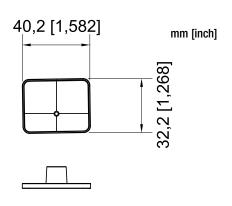


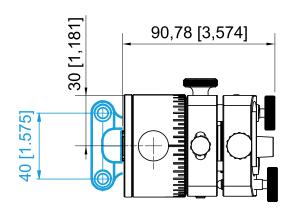


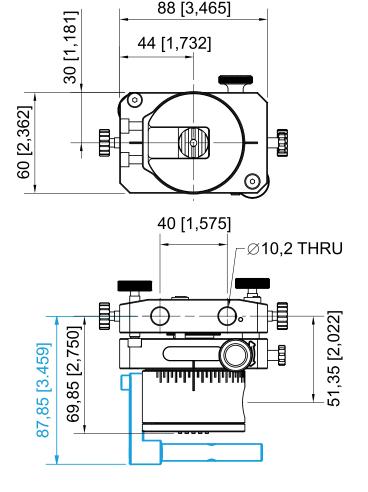


### Angular prism, Part No. 12-1136



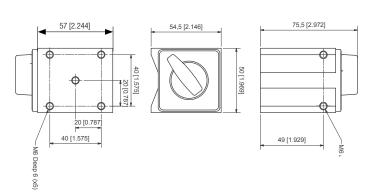


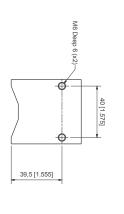




## Magnet base, Part No. 12-0013



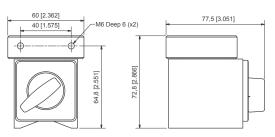


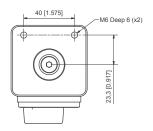


mm [inch]

# Magnet base with turnable head, Part No. 12-0045

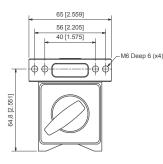


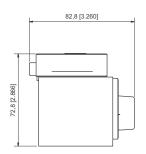


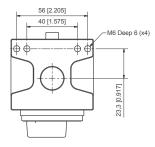


### Magnet base with turnable head, Part No. 12-1133



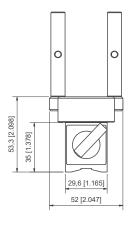


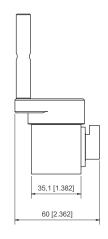


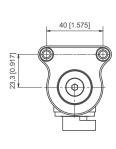


# Small magnet base with turnable head, Part No. 12-0696









# **PART NUMBERS PAGE LIST**

| David Na | Description                             | Da   | 03-1323                   | Drinter for D. carios                              | co |
|----------|---|------|---------------------------|--|----|
| Part No. |   | Page |                           | Printer for D-series                               |    |
| 01-0039  | Locking screw                           |      | 03-1326                   | Stinger for XT280                                  |    |
| 01-0042  | Nut (for chain)                         |      | 03-1327                   | Accelerometer magnet for XT280                     |    |
| 01-0045  | Barrel nut                              |      | 03-1332                   | Demo unit, steel                                   | 72 |
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| 01-0139  | Machine/Magnet base pin for D22, short  | 60   | 04-0124                   | Easy-Laser® logo sticker, large                    | 77 |
| 01-0618  | Top for D23                             |      | 04-0125                   | Easy-Laser® logo sticker, small                    |    |
| 01-0752  | Side part for display unit D279         |      | 04-0147                   | Bar code sticker                                   |    |
| 01-0777  | Tube adapters for E9 and D157           |      | 04-0252                   | Easy-Laser® logo stickers on sheet                 |    |
|          | ·                                       |      | 04-0232<br><b>04-0307</b> |  |    |
| 01-0847  | Shim remover                            |      | 04-0307                   | QR code sticker                                    | 75 |
| 01-0938  | Rod, 30 mm                              |      |                           |  |    |
| 01-1095  | Key holder                              |      | 05-0792                   | Notebook for the technician                        | // |
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| 01-1333  | Machine/Magnet base pin for D22, long   | 60   | 06-0001                   | CD   | 83 |
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| 01-1000  |   |      |                           |  |    |
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| 01-1952  | Replaced by 12-1039                     |      | 12-0013                   | Magnet base  |    |
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| 01-2222  | Tube adapters for dual barrels          |      | 12-0022                   | Laser transmitter D22                              |    |
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| 03-0042  | Screw M6x14                             |      | 12-0045                   | Angular prism D46                                  |    |
|          |   |      |                           |  |    |
| 03-0241  | Printer cable                           |      | 12-0059                   | Rods, 60 mm [2.36"]                                |    |
| 03-0341  | Printer 110 V                           |      | 12-0060                   | Rods, 240 mm [9.44"]                               |    |
| 03-0333  | PC cable                                |      | 12-0074                   | Red cable 2.0 m [78.7"]                            |    |
| 03-0505  | Screw for D23 top cover                 | 73   | 12-0075                   | Laser transmitter D75                              |    |
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|          |   |      |                           |  |    |
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| 03-0822  | USB A – USB B cable                     | 68   | 12-0137                   | Sliding bracket with turnable head                 | 53 |
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| 03-0893  | Charger cable, USA                      |      | 12-0149                   | Rod bracket for laser D75                          |    |
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| 03-0895  | Charger cable, AUS                      |      | 12-0157                   | Detector D157                                      |    |
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| 03-1045  |   |      | 12-0201                   | Sliding table for tripod                           |    |
| 03-1046  | Luggage trolley                         |      | 12-0202                   |  |    |
|          | Carrying case for system E420           |      |                           | Parallelity kit                                    |    |
| 03-1184  | Vapor capsule                           |      | 12-0205                   | AC adaptor for D22 and D75                         |    |
| 03-1193  | White Vaseline                          |      | 12-0207                   | System D505 Shaft                                  |    |
| 03-1203  | DC cable extension 1.5 m                |      | 12-0213                   | Target for BTA, 15 mm                              |    |
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| 12-0209            | AC adaptor for D23                             |      | 12-0579            | Magnet base with adapter Ex                   |          |
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| 12-0300            | Sliding bracket with magnets                   |      | 12-0583            |   |          |
|                    | •  |      |                    | Pointing bracket on magnet base               |          |
| 12-0308<br>12-0309 | Detector/display unit for belt alignment       |      | 12-0585            | Charger 12–36 V for car                       |          |
|                    | Laser transmitter for sheave alignment systems |      | 12-0587<br>12-0588 | Sun visor for E-series                        |          |
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| 12-0354            | Battery lid for display unit D279              |      | 12-0652            | System D652 Linebore                          |          |
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Note: New products in rev20 marked with **Bold** letters.





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