



Know your machine from every angle.

Shaft Alignment **X7770** 







### **HIGHLIGHTS**

#### **MAXIMUM FLEXIBILITY**



#### **ALL XT PROGRAMS IN ONE FREE APP**

All XT measurement programs included in one straightforward application available for free.



#### **DISPLAY DATA ON MULTIPLE PLATFORMS**

Functionality for iOS, Android and Easy-Laser® XT display units.



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

Buy with or without the user-friendly Easy-Laser® XT12 display unit.



#### **MAXIMUM FLEXIBILITY**

Combine several measuring units with the display unit of your choice, or use different display units with one set of measuring units.

No license hassle!



#### **RUGGED DESIGN**

The XT products are rugged, rated both IP66 and IP67 water and dust proof. For superior durability in harsh environments.



#### 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.



#### **SEND THE REPORTS**

Share the reports via email. Possible on all platforms.

### **RUGGED DESIGN**



#### **IP66 AND IP67 APPROVED**

Easy-Laser® XT measuring units and display unit are waterproof, dustproof and shockproof. The units have been tested and approved to an Ingress Protection rating of IP66 and IP67, which means that they are dustproof and waterproof to a depth of 1 metre, and also protected against powerful water jets.





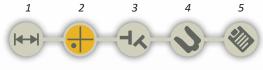


### THIS IS EASY ALIGNMENT

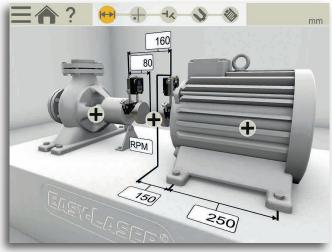
#### HORIZONTAL PROGRAM

The user interface is intuitive and guides you through the measurement process. It is animated and zooms in to the relevant element for each step. You can save the measurements

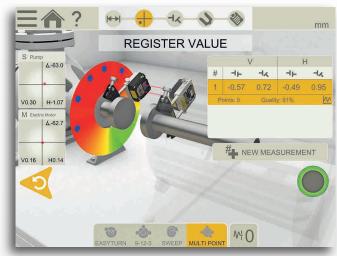
of a machine for As found and As left in the same file.



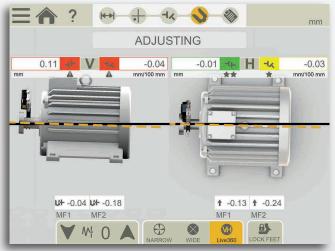
The interactive workflow indicator lets you easily jump to any part in the measurement process.



1. Enter dimensions



2. Measure (Five methods available, explained to the right)



3. View result, As found

4. Adjust



5. View report as it will look



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Details

Measurement Error Rotation Speed Values Quality

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Tolerance check (pre-set or custom)

Quality check view for measurements

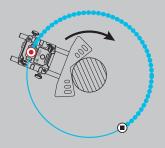
Soft Foot check on both machines

### **MEASUREMENT METHODS**

Measuring points

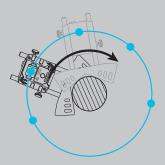






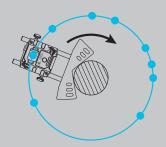
#### **CONTINUOUS SWEEP**

Automatic recording of measurement values during continuous sweeping of the shaft. The easiest and quickest way to obtain the alignment status on coupled machines. Hundreds of points are registered. Start recording, rotate, and stop at any angle and you get the results instantly. Quality check of measurement is provided (see example down left).



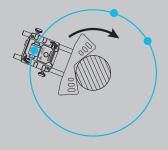
#### **UNCOUPLED SWEEP**

Used when the machines are uncoupled and when the rotation can be difficult to control. Rotate one shaft/unit at a time to pass with the beam over the other (stationary). Repeat alternately until enough measurement points are recorded. You can start and stop anywhere on the turn. Use it for big heavy machinery like gas turbines, wind turbines or gear boxes which can be difficult to rotate to a specific position.



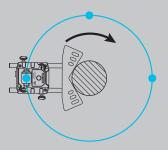
#### **MULTI POINT**

Multi point is basically the same as EasyTurn™, but instead you can record multiple points on the sector rotated. This will provide an optimized calculation basis. Perfect for e.g. turbine and sliding bearing applications.



#### **EASYTURN**

Ideal method for coupled machines where you manually rotate the shafts to any position. The EasyTurn™ function allows you to begin the measurement process from anywhere on the turn. You can turn the shaft to any three positions with as little as 20° between each position to register the measurement values. An easier-to-use version of the three-point method (see 9–12–3).



#### 9-12-3

Measurement points are recorded at fixed points 9, 12 and 3 o'clock. This is the classic three-point method which can be used in most cases. The preferred method for situations where the machine to be aligned is mounted on a moving object, and it is not possible to use the inclinometers (e.g., on ships, cranes, wind turbines etc.)

### **SMART FUNCTIONS**



#### **THERMAL GROWTH**

Automatically compensate for thermal expansion of the machines.



#### **SWAP VIEW**

Understand adjustment directions more intuitively.



#### **CONTINUE SESSION**

Your latest measurement is always available, automatically saved.



#### **TEMPLATES**

Save measurement files as templates, with machine data and settings, to quickly start measurements.



#### **MEASUREMENT VALUE FILTER**

Improve readings when measuring conditions are poor.



#### **MULTIPLE SETS OF FEET**

Align machines with more than two pairs of feet.



#### **LOCKED FEET**

Lock any pair of feet on the machine. Used when aligning base-bound or bolt-bound machines.



#### WIDE LIVE ADJUSTMENT

Adjust with live values using expanded sensor position ranges in the H and V position



#### **360° LIVE ADJUSTMENT**

Adjust both vertically and horizontally at the same time with measuring units in any position.



#### **SELECT COUPLING TYPE**

Choose method depending on coupling type: short flex, spacer shaft.



#### **SELECT MACHINE IMAGE**

Choose from different 3D machines to portray your machinery on either side of coupling.



#### **ADJUSTMENT GUIDE**

The adjustment guide helps you decide optimum adjustment by simulating shimming and move. For programs Horizontal and Machine train.



#### **BUILT-IN HELP**

The app includes a searchable *Users Manual* which opens the relevant chapter depending where in the process you are. This makes it quick and easy to find the answer to your user questions.













































Customize your machine set up in Machine Train and Horizontal programs with corresponding 3D machine icons.



### **DOCUMENTATION**

#### SAVE!



#### **INTERNAL MEMORY**

Save your measurement files, photos and reports to the internal memory.



#### **VERSATILE FILE TYPES**

Both a PDF and an Excel file are generated.



#### **READ QR AND BAR CODES**

Assign a specific code to a specific machine, then use the built-in camera of your device to open assigned file and settings.

(Note: camera resolution requirements applicable.)





#### **PDF REPORT TEMPLATES**

Use one of the two formats included.



#### **ADD NOTES**

Explain it a little more.



#### SIGN REPORTS ELECTRONICALLY

Sign-on screen to verify your job. Signature is saved with the PDF file.



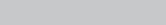
#### **ADD PHOTO**

Show what you mean.



#### **ADD THERMAL IMAGE**

See the difference after alignment. (Available only with XT12 Part No. 12-1292)



#### SHARE!



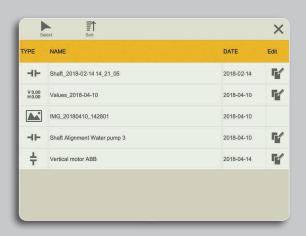
#### **SEND THE REPORTS**

Share the reports via email. Possible on all platforms.

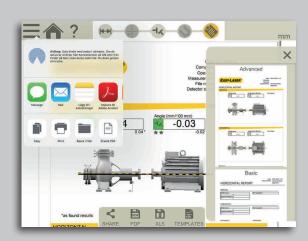


#### **SAVE TO USB**

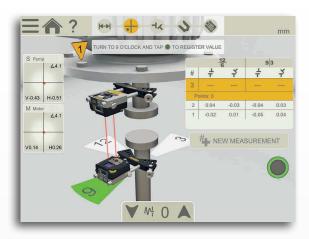
Save your files to USB stick and copy to other devices.







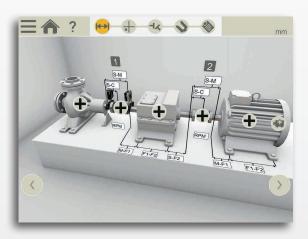
### **MORE POSSIBILITIES**



#### **VERTICAL/FLANGE MOUNTED MACHINES**



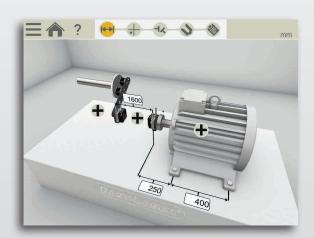
For measurement and alignment of vertically and flange mounted machines. Handles machines with 4, 6, 8 and 10 bolts.



#### **MACHINE TRAIN**



Build your own machine train without limits. You can pick the reference machine manually, or let the program choose one that will minimize the need for adjustments.



#### **CARDAN/OFFSET MOUNTED MACHINES**



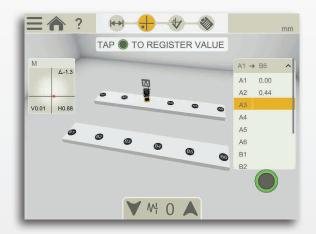
For alignment of cardan/offset mounted machinery. (Requires additional Cardan bracket Kit.)



#### TWIST MEASUREMENT OF MACHINE BASE



The twist measurement program allows you to check the flatness or twist of the machine foundation using only the measuring units in the system.

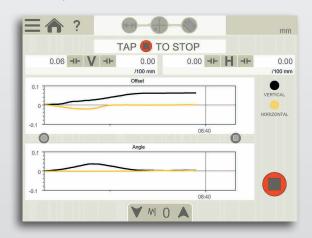


#### **BASIC FLATNESS**



With this program you can check the flatness of foundations and frames, using two rows of points, 2 to 8 points per row. Separate laser transmitter required. (Requires

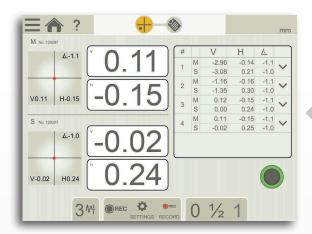
Geo Kit).



#### **EASYTREND**



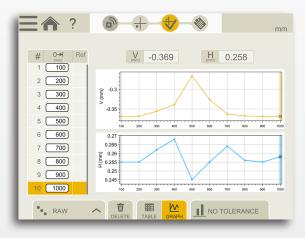
With EasyTrend you can keep track of machine movement over time. For example, you can check for thermal expansion and pipe strain issues. (Requires additional DM-brackets.)



#### **VALUES – DIGITAL DIAL INDICATOR**



With the Values program you measure as with dial gauges, but with laser precision and the possibility to document the measurement result.



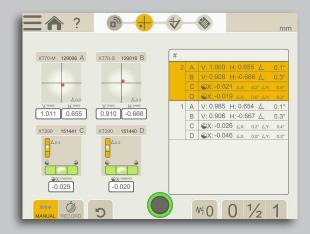
#### **STRAIGHTNESS**



With our program for measuring straightness, you can easily measure long shafts, rolls, bearing journals, bases, overhead rails, machine structures etc. You will be

able to get the result for both the horizontal and vertical alignment, graphically as well as digitally. The program automatically calculates different Best-fit results. (Requires Geo Kit).

### **VERSATILITY**



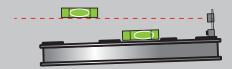
#### **COMBINED DISPLAY**

The Values interface can show up to four units at the same time. It can be both measuring units and digital levels, for example. Automatic recording possible (set the interval and duration). You can make individual notes for each measurement point.



#### **CHECK FOR PLAY AND MOVEMENTS**

Mount the M and S units on suitable places, then push/pull the object and check actual machine component play and movements, for example shaft radial play. Laser transmitter XT20/XT22 can also be used.



#### **GEOMETRICAL MEASUREMENTS**

Actually, the program can be used for most geometrical measurements (with suitable units and brackets). Perfect for the complete machine installation phase. For example, with the XT20/XT22 laser transmitter you can use the program to level machine foundations, align several objects co-planar etc.



#### **DYNAMIC MEASUREMENT**

Use Values to determine that foundations are rigid enough for the forces applied during running conditions. For measurements where the EasyTrend program is not suitable, or where a laser transmitter should be used instead.

### **MEASURING UNITS**

#### **XT70-M/S MEASURING UNITS**

The XT70 measuring units utilize dot-type laser and 2-axis square PSD surfaces. A state-of-the-art OLED display (D) shows the angle of the unit, making it easier to position it on the shaft.

The diagonally positioned locking knobs securely lock the unit on the rods. Rigid aluminium housing provide maximum stability. IP66 and 67, dust- water- and shockproof. Heavy-duty battery for very long operating times; up to 24 hours. Built-in wireless technology.

#### **SHAFT BRACKET**

The V-bracket is light yet rigid, with two rods for maximum stability in all directions. Pre-mounted chain for quick setup on the machine.



- A. PSD aperture
- B. Laser aperture
- C. Laser angle adjustment
- D. OLED display: battery status/unit angle
- E. Chain tightening knob

- F. Charaer connector
- G. Extendable stainless steel rods
- H. Locking knob
- I. Slidable target/dust cover

#### **DOT-TYPE LASER TECHNOLOGY**



The dot laser technology makes it possible to measure larger machines and longer spans than line laser systems. It also provides higher accuracy when backlash in

the coupling is present. In addition, dot laser allows you to check more things when installing a machine, e.g. twist of foundation and bearing clearance. With 2-axis PSD you can read off and record values for both vertical and horizontal directions.

#### **DUAL LASERS, PSD, INCLINOMETERS**



With electronic inclinometers in both measuring units the system knows exactly how they are posi-**TECH** tioned. This also makes it very easy to align uncoupled shafts. The so-called reversed measurement

method with two laser beams and two PSD makes it possible to also measure grossly misaligned machines when the lasers fall outside the measuring range of the detectors. This is particularly good for new installations, where the machines are not yet in the correct position. With the Dual Technology, measurement accuracy is retained even over longer distances.

## **SHAFT BRACKETS**















- A. Offset bracket, 2 pcs included
- B. Magnetic bracket\*
- C. Magnet base, 2 pcs included
- D. Sliding bracket, Part No. 12-1010\*
- E. Thin shaft bracket, Width 12 mm [0.5"], Part No. 12-1012\*
- F. DM-bracket. For dynamic measurements. Complete kit with 2 brackets, Part No.12-1130\*
- G. Cardan bracket kit, Part No. 12-1151\* (Note: not all parts included shown on picture.)
- H. Extension rods (not pictured):

Length 30 mm [1.18"], (x1) Part No. 01-0938 Length 75 mm [2.95"], (x4) Part No. 12-1161 Length 120 mm [4.72"], (x8) Part No. 12-0324

Length 240 mm [9.44"], (x4) Part No. 12-0060

\*Accessories

### **DISPLAY UNIT**

#### **XT12 DISPLAY UNIT**

Rugged, robust, industrial grade tablet with wear resistant rubberized protective coating. IP66 and 67, dust- water- and shockproof. As standard a 13 MP camera for documentation is built-in, but you can also choose a model with IR camera added. With this you can shoot a thermal image before and after alignment and include with the documentation!

A large 8", glove-enabled touch-screen makes the information clear and the app easy to use. You can check battery status also when the unit is turned off.

Heavy-duty rechargeable battery for very long operating times; up to 16 hours. Fas-

tening points for shoulder strap (included).



- A. Ergonomically, rubber coated housing
- B. Battery status-check button
- C. Battery status indicators
- D. Dust cover and protection for connectors (Note: connectors are dust and waterproof)
- E. Proximity sensor
- F. Display brightness sensor
- G. Large and clear 8" glove-enabled touch-screen
- H. Enter button



#### A. Charger

- B. USB C / USB A / AV connector (HDMI)
- C. IR Camera (optional)
- D. 13 Mp Camera
- E. LED Light
- F. Fastening points for shoulder strap (x2)
- G. Loudspeakers



#### THERMAL CAMERA

The Easy-Laser® XT12 can be delivered with a thermal imaging camera (IR) along with the standard 13 MP digital camera. Shoot a thermal image before and after alignment and include with the documentation!



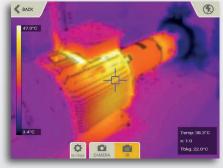
#### **13 MP CAMERA**

Take pictures to identify your machines and include with your report.



#### LED LIGHT

Light up the work area when ambient light is not enough.





#### **AV CONNECTOR**

As standard the XT12 is equipped with a HDMI connector, making it possible to share the display screen direct on a TV monitor or projector screen without any additional software. Useful for training purposes with large groups.

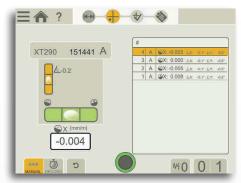
### **PRECISION LEVEL**

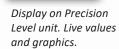
#### FOR GENERAL MACHINERY SET-UP

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XT290 Digital Precision Level is the musthave addition to your shaft system. Installing machinery level is very often a requirement for them to work as intended. Use

the XT290 as a separate tool, or with the XT Alignment App. When connected to the XT Alignment App on your iOS or Android device, or the XT12 display unit, you can read off the alignment "live" at the position on the machine where the actual alignment is made, and make PDF reports.





Align in live mode, document result with PDF. (XT Alignment app Values/Level application.)

SYSTEM XT290 LEVEL PART NO. 12-1244



### **BELT ALIGNMENT TOOL**

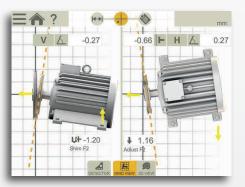
#### FOR RADIALLY MOUNTED DRIVES

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With the Belt alignment tool XT190 BTA you can align most types of radially mounted drives. The transmitter and detector attaches magnetically to the sheave

edge. A digital display unit gives the advantage of checking against belt manufacturer tolerances.

When connected to the *XT Alignment App* on your iOS or Android device, or the XT12, you can also read off the alignment "live" at the position on the machine where the actual alignment is made. You get adjustment values for both horizontal and vertical direction (shim value), resulting in a more accurate alignment in a shorter time.



0.6 mm 0.35 °H 0.45 °V

OLED display on detector unit. Live values.

Align machine in live mode, document result with PDF. (XT Alignment app Belt application.)

SYSTEM XT190 BTA PART NO. 12-1053





### VIBROMETER TOOL

#### FOR QUICK VIBRATION ANALYSIS



Easy-to-use vibration analyser that quickly diagnose vibration level, unbalance, misalignment and looseness. The direct readout of 1×, 2×, 3× RPM, total level as

well as bearing condition provide necessary information during installation and alignment.

The XT280 connects to the XT Alignment App, making it possible to document the result as PDF.



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Last reading ISO (mm/s)	2	0.036	0.5	2	0.3	0.0	0.0	1500	~
	3	0.036	0.0	3	0.0	0.0	0.0	1500	V
0.0	✓ vertical reading								
	4	0.034	0.0	2	0.0	0.0	0.0	1500	^
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7.5	ISO mm/s		
23	0.4		
BDU	g		

Display on vibrometer unit. Live values.

Register values with notes for each point, add photo of machine, document result with PDF.

SYSTEM XT280 VIB PART NO. 12-1090

### **GEOMETRIC MEASUREMENTS**

#### **GEOMETRIC MEASUREMENTS KIT**

GEO

With XT770 GEO you will be able to measure flatness and straightness according to established standards like ISO and ANSI. Choose between laser transmitter XT20

or XT22. The kit also includes a magnet base with rotatable top for geo measurements.

#### **SMART TECHNOLOGY**

Both transmitters have a 360° rotatable laser head. XT22 can in addition also point the laser beam vertically. Their unique digital precision levels mean the accuracy will not be affected by user interpretation or possible bad work light conditions.

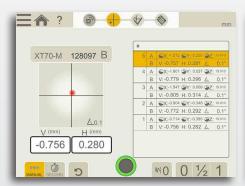
The transmitters connect to the XT Alignment App, making them very easy-to-use. For example you are guided on-screen when calibrating the electronic levels. This makes the procedure easy also for users less experienced of flatness measurement. You can of course also measure with an object as reference instead of the level. The Straightness and Flatness programs then also guide you and make optimized calculations of best-fit for you. Actually, with the Values program you can perform almost any kind of geometrical measurement, although you might need to do some manual calculations.



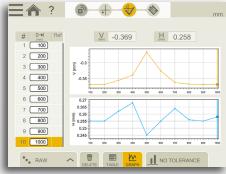




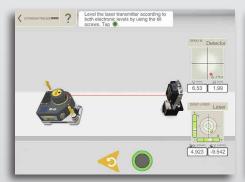
**XT20 LASER TRANSMITTER** 



Values program. Gives you absolute values for maximum flexibility.



Straightness program. With both H and V values. Add reference points, calculate best-fit, etc.



Calibrating the electronic precision levels is super easy with the step-by-step guidance provided by the software.



Basic flatness measurement program. Perfect for machine foundations, compressor housings etc.



**XT22 LASER TRANSMITTER** 

### **CHOOSE YOUR SYSTEM!**

**XT**770

**PART NO. 12-1096** 

Weight: 13.0 kg [28.7 lbs] Dimension WxHxD: 580x460x295 mm [22.8x18.1x11.6"] **XT770** GEO with XT20

**PART NO. 12-1128** 

Weight: 16.0 kg [35.3 lbs] Dimension WxHxD: 580x460x295 mm [22.8x18.1x11.6"]

### **770** GEO with XT22

**PART NO. 12-1334** 

Weight: 16.2 kg [35.7 lbs] Dimension WxHxD: 580x460x295 mm [22.8x18.1x11.6"]



C. Magnet base with rotatable top#

D. Multi-bracket for XT20/XT22

E. XT20 or XT22 Laser transmitter

F. XT12 Display unit\*

\*Accessories, not included as standard. #Replaces one of the regular magnet bases.

#### All Easy-Laser® XT770 systems include:

A. Offset brackets

D. XT280 VIB\*

E. XT190 BTA\*

B. Magnetic brackets\* C. Magnet bases

F. XT12 Display unit\*

- Measuring unit XT70-M
- Measuring unit XT70-S
- Shaft brackets with chains and rods 120 mm [4.72"]

\*Accessories, not included as standard.

- Rods 75 mm [2.95"] 4
- Rods 120 mm [4.72"] 4
- 2 Magnet bases
- Offset brackets
- Extension chain 900 mm [35.4"]
- Measuring tape 3 m [9.8']
- Hexagon wrench set
- Charger (100-240 V AC)
- DC split cable for charging
- DC to USB adapter, for charging
- Quick reference manual
- Cleaning cloth for optics
- USB memory with manuals
- Documentation folder
- Carrying case Large (or Large Geo)

With wheels and an extendable handle.

#### Part No. 12-1128 and 12-1334 also include:

- 1 Laser transmitter XT20 or XT22
- Magnet base with turnable head (replaces one of the regular magnet bases)
- Rods 120 mm [4.72"]
- Multi-bracket for XT20/XT22

#### Add display unit XT12:

Part No. 12-1292 XT12 with IR Camera

Part No. 12-1291 XT12

Both are delivered with shoulder strap Part No. 12-0997

Weight: 1490 g [52.5 oz]

# **TECHNICAL DATA**

Measuring units XT70-M / XT70 Type of detector		XT20 and XT22 Laser transmitte	
Type of detector	2 axis TruePSD 20x20 mm [0.79x0.79"]	Type of laser	XT20: Diode laser
Communication	BT wireless technology		XT22: Fiber-coupled diode laser
Battery type	Heavy duty Li Ion chargeable	Laser wavelength	630–680 nm
Operating time	Up to 24 h continuously	Laser Safety Class	Class 2
Resolution	0.001 mm [0.05 mils]	Output power	< 1 mW
Measurement accuracy	±1µm ±1%	Beam diameter	XT20: 6 mm [0.24"] at aperture, 10 mm [0.39"] at 20
Measurement range	Up to 20 m [66 feet]		m [66']
Type of laser	Diode laser		XT22: 6 mm [0.24"] at aperture, 13 mm [0.51"] at 40
Laser wavelength	630–680 nm		m [132']
Laser class	Safety class 2	Working range	XT20: 20 m radius [66']
Laser output	<1 mW		XT22: 40 m radius [132']
Electronic inclinometer	0.1° resolution	Communication	BT Wireless technology
Environmental protection	IP class 66 and 67	Warning indications	Tempearature drift and shake/vibration
Operating temperature	-10–50 °C [14–122 °F]	Connections	Charger
		Type of battery	Heavy duty Li-lon chargeable
Storage temperature	-20–50 °C [-4–122 °F]	Operating time	Up to 30 hours continuous use
Relative humidity	10–95%	Warmup time	15 min
OLED display	128x64 pixels	Operating temperature	-10–50 °C [14–122 °F]
Housing material	Anodized aluminium + PC/ABS + TPE		
Dimensions	WxHxD: 76x76.7x45.9 mm [3.0x3.0x1.8"]	Charging temperature (battery)	0-50 °C [32-122 °F]
Weight	272 g [9.6 oz]	Storage temperature	-20-50 °C [-4-122 °F]
		Relative humidity	10–95% non-condensing
XT12 Display unit		Number of precision levels	XT20: 2 pcs Horizontal
Type of display/size	8" LCD capacitive multi-touch colour display		XT22: 2 pcs Horizontal, 1 pc Vertical
Battery type	Heavy duty Li Ion rechargeable	Precision level range	± 10 mm/m [± 10 mils/inch]
Operating time	Up to 16 h continuously	Precision level accuracy	± 0.02 mm/m ±1% [± 0.02 mils/inch ±1%]
Connections	USB A, USB C, Charger, AV	Precision level sensitivity	0.001 mm/m [0.001 mils/inch]
		Laser plane flatness	± 0.01 mm/m [± 0.01 mils/inch]
Communication	Wireless technology, WiFi	Squareness between laser beams	XT20: N/A
Camera, with LED diode	13 Mp autofocus	oqual on ood between laser bealing	XT22: ± 0.01 mm/m [± 0.01 mils/inch]
R camera (optional)	FLIR LEPTON® (0–400 °C, 32–752 °F)	Lacar haad fine turning	•
Languages	en / de / sv / es / pt / ru / ja / ko / zh / it / fr / pl / fi	Laser head fine turning	XT20: 1:132 gear ratio
Help functions	Built-in manual	F	XT22: 1:1320 gear ratio
Environmental protection	IP66/67. Designed for outdoor use (pollution degree 4)	Environmental protection	XT20: IP55, designed for outdoor use (pollution deg. 4)
Operating temperature	-10-50 °C [14-122 °F]		XT22: N/A, designed for industrial use (pollution deg. 3)
Storage temperature	-20-50 °C [-4-122 °F]	TFT display	240x240 pixels, RGB colour
Relative humidity	10-95%	Housing material	Anodized aluminium + PC/ABS + TPU
Loudspeakers	Built-in, rear-facing	Dimensions	XT20: WxHxD: 147x126x152 mm [5.79x4.97x5.98"]
Charger	15 V		XT22: WxHxD: 147x136x152 mm [5.79x5.35x5.98"]
•		Weight	XT20: 2065 g [72.86 oz]
Housing material	PC/TPE or PC/TPU	3	XT22: 2264 g [79.86 oz]
Dimensions	WxHxD: 269.0x190.0x49.4 mm [10.59x7.48x1.95"]		X122. 220 1 g [10.00 02]
Weight	1400 g [49.4 oz]	XT280 Vibration meter	
		Frequency range	2 Hz to 1kHz (ISO) 1 kHz to 10 kHz (BDU)
Cable			
Charging cable (splitter cable)	Length 1 m [39.4"]	Max frequency resolution	1.25 Hz @ 800 lines FFT setting
		Displayed amplitude units	Acceleration in g
Brackets etc.			Velocity in mm/s (or inch/s)
Shaft brackets	Type: V-bracket for chain, width 18 mm [0.7"].		Bearing noise in BDU (bearing damage units)
	Shaft diameters: 20-150 mm [0.8-6.0"]	Displayed Frequency Units	Hertz (Hz), RPM or CPM
	With extension chain, diameters up to 450 mm [17.7"]	Input range	User selectable with accelerometer sensitivity
	Material: anodised aluminium	Dynamic range	96 dB (0.01g resolution)
Rods	Length: 120 mm, 75 mm [4.72", 2.95"] (extendable)	VA diagnostic bands	Unbalance 1x RPM
nous	, , , , ,	(RPM=run speed)	Alignment 2x RPM
	Material: Stainless steel	` ,	Looseness 3x RPM
		Operating temperature	0°C to 50°C
XT190 Belt Laser transmitter		Storage temperature	-20°C to 70°C
Sheave diameters	Ø60 mm [2.5"] and larger	'	
Laser class	2	Battery type	2 x AA batteries
Output power (average)	< 0.6 mW (LOW power mode)	Battery operation	20 hours continuously (depending on brightness setting
	< 4.8 mW (HIGH power mode)	Environmental protection	IP67
Laser wavelength	630–680 nm	Material	ABS plastics / Hard anodized aluminium
Beam angle	60°	Dimensions	WxHxD: 200 mm x 60mm x 26mm [7.8 x 2.4 x 1.0"]
Accuracy	Laser plane – Reference plane:	Weight	280 g [9.8 oz]
	Parallelity: < 0.05°, Offset < 0.2 mm [0.008"]		
Rattery type		XT290 Digital Precision Level	
Battery type	1xR6 (AA) 1.5 V	Displayed resolution	0.1, 0.01, 0.001 mm/m [mils/inch]
Battery operation	Up to 12 hours continuously	Siopia, ou rodolution	0.001, 0.0001 init/fit [mins/men]
Material	ABS plastics / Hard anodized aluminium		
Dimensions	WxHxD: 145x86x30 mm [5.7x3.4x1.2"]		10, 1, 0.1 arcsec
Weight	265 g [9.35 oz]	Description 1	0.01, 0.001, 0.0001 degree
weight		Precision level range	±20 mm/m [±20 mils/inch] (pitch)
weight		Precision level accuracy	±0.02 mm/m ±1% [±0.02 mils/inch ±1%]
•			
XT190 Detector unit	40 mm to 3 m [1.6" to 10'] (laser LOW power mode)	Precision level sensitivity	0.001 mm/m [0.001 mils/inch]
XT190 Detector unit			0.001 mm/m [0.001 mils/inch] ±180° (pitch and roll)
XT190 Detector unit Measurement distance	0.5 m to 10 m [20" to 33'] (laser HIGH power mode)	Precision level sensitivity	
KT190 Detector unit Measurement distance Measurement range	0.5 m to 10 m [20" to 33'] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8°	Precision level sensitivity Inclinometer range Inclinometer accuracy	$\pm 180^{\circ}$ (pitch and roll) $\pm 0.2^{\circ}$ (within range $\pm 5^{\circ}$ ), $\pm 1^{\circ}$ (within range $\pm 180^{\circ}$ )
KT190 Detector unit Measurement distance Measurement range Display type	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour
(T190 Detector unit Measurement distance Measurement range Display type Connection	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range
(T190 Detector unit Measurement distance Measurement range Display type Connection Battery type	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67
KT190 Detector unit Measurement distance Measurement range Display type Connection Battery type Battery operation	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon 5 hours continuously	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration
(T190 Detector unit Measurement distance Measurement range Display type Connection Battery type Battery operation	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors Operating temperature	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration -10-50 °C [14-122 °F]
XT190 Detector unit Measurement distance Measurement range Display type Connection Battery type Battery operation Material	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon 5 hours continuously	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors Operating temperature Storage temperature	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration -10-50 °C [14-122 °F] -20-50 °C [-4-122 °F]
Acasurement distance  Measurement distance  Measurement range  Display type  Connection  Sattery type  Sattery operation  Material  Dimensions	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon 5 hours continuously ABS plastics / Anodized aluminium	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors Operating temperature Storage temperature Operating time	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration -10-50 °C [14-122 °F] -20-50 °C [-4-122 °F] Up to 20 h continuously
KT190 Detector unit Measurement distance Measurement range Display type Connection Battery type Battery operation Material Dimensions	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon 5 hours continuously ABS plastics / Anodized aluminium WxHxD: 95x95x36 mm [3.7x3.7x1.4"]	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors Operating temperature Storage temperature	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration -10-50 °C [14-122 °F] -20-50 °C [-4-122 °F]
XT190 Detector unit Measurement distance Measurement range Display type Connection Battery type Battery operation Material Dimensions Weight	0.5 m to 10 m [20" to 33"] (laser HIGH power mode) Axial offset: ±3 mm [0.12"]. Angular value: ±8° Yellow OLED 96x96 pixels BT wireless technology Li-lon 5 hours continuously ABS plastics / Anodized aluminium WxHxD: 95x95x36 mm [3.7x3.7x1.4"]	Precision level sensitivity Inclinometer range Inclinometer accuracy Type of display Communication Environmental protection Warning sensors Operating temperature Storage temperature Operating time	±180° (pitch and roll) ±0.2° (within range ±5°), ±1° (within range ±180°) TFT 240x240 pixels, RGB colour BT wireless technology, 20 m [65'] range IP Class 66/67 Temperature change and vibration -10-50 °C [14-122 °F] -20-50 °C [-4-122 °F] Up to 20 h continuously

WxHxD: 149.0x37.3x47.1 mm [5.87x1.47x1.85"]

548 g [19.3 oz]

Weight (precision level unit)





# Sustainable, Consistent and Reliable

If consistency means having a long-term perspective on things, that is very true about Easy-Laser® and Generation XT. The products are designed to last. They are water and dust proof, as well as sturdy and rugged. They also come with a built-in adaptability. Our systems are easy to upgrade and expand, now or

in the future. In combination with our commitment to support and service, this means sustainability – for the investment made, and for the environment. We support the user through the whole product lifecycle. Sustainable, consistent and reliable – Generation XT from Easy-Laser.

### Straightforward by all measures™

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LASER 2





9001 CERTIFIED COMPANY



