TECHLASER

TECHLASER is an innovative technology company. We offer a wide range of instruments for laser shaft alignment, alignment of the geometric dimensions and vibration diagnostics of industrial equipment.
Our products are in demand by enterprises that use mechanisms with shaft: engines, turbines, pumps, gearboxes, compressors, fans, etc. This organization of the following fields: mechanical engineering, manufacturing, transport, fuel and energy (heat power plants, nuclear power plants, oil and gas processing), extractive industries, utilities, shipbuilding.

The products of our company provides:

Easy installation and configuration of industrial equipment; Fast and high quality shaft alignment; Reduce costs by reducing energy consumption; Reduced wear mechanisms, increasing the interval between repairs; Prevent downtime; Improving the quality of products.

Company «TECHLASER» has its own production and metrological base, as well as highly skilled engineering staff. This allows us to be independent and to be in the context of the most advanced technological developments.

shaft alignment

pulleys alignment

vibration sensor

AXIS

LASER SHAFT ALIGNMENT SYSTEM

modification 010-0-0
010-0-1

HTTP://TECHLASER.DE

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AXIS

TECHLASER AXIS - laser system for automatic control of shaft alignment of rotating machines.

TECHLASER BAT
Belt Alignment Tools

TECHLASER BAT allows regulate belt pulley with high accuracy, which leads to increased efficiency of the mechanism and increase its service life.

Laser head easily and securely fixed on the pulleys. The reconciliation process is not difficult and does not require special skills: moving pulleys should be aligned with the laser line with the mark on the scale of the opposite head.

Device TECHLASER BAT allows centering pulley with a minimum diameter of 70 mm, the maximum diameter is not limited. The distance between the centering pulleys 10 m.

TECHLASER VMU-14
vibration sensor

TECHLASER VMU-14 is the most compact in the world of wireless vibration sensor.

TECHLASER AXIS complete with a vibration sensor allows you to easily and quickly evaluate the technical condition of any production equipment. This makes it possible to determine the need for alignment, to assess the quality of the already completed alignment, measure the level of vibration and analyze the temporal and spectral realization of the vibration signal.

Vibration sensor TECHLASER VMU-14 uses for communication standard interface bluetooth, which allows the use it with any compatible devices.

For ease of installation on the mechanism of the vibration sensor is further provided with a magnetic mount.

the device allows you to see the results for planes, as well as total angular and parallel offset

easy navigation using the context menu allows you to adjust the alignment process, to control the device, to use the "help" and much more

active table of tolerances allows you to visually assess the state of machines with specific frequencies of rotation

curvature of axis of rotation is visually displayed, as well as compensation of thermal expansion and ascent of rotating machines rotors in the oil wedge

the device adapts to the actual position of the machine: it can automatically adapt to the vertical and horizontal machines, you can switch the moving and stationary machines

AXIS SHAFT ALIGNMENT SYSTEM

AXIS shaft alignment system has the characteristics of the world's leading level counterparts. During creation of device was taken into account the convenience of work on alignment mechanisms. The result is a system having a wireless measuring heads, wide area measurement and long battery life. Display unit and measuring heads housing is in a contemporary ergonomic design. Today, AXIS is the best in the industry.

TECHNICAL SPECIFICATION

	characteristic	value
1	Shaft diameter, mm	30 – 300
2	Measure distance, mm	up to 10000
3	Operation mode setup time, min.	1
4	Detector working length, мм	27
5	Detector length, mm	30
6	Measurement accuracy, mm	±0,01
7	Detector resolution, mm	0,001
8	Inclinometer accuracy, deg	± 0,1
9	Number of measurement channels	2
10	Diode laser wavelength, nm	650 ±15
11	Laser line divergence, mrad	≤ 0,7
12	Laser power, mW	< 1 (class 2)
13	Laser line fan angle, deg	±3
14	Output voltage of AC adapter, V	7–30
15	Operating time, hours	12
16	Environmental protection	Ip54
17	Dimensions, mm	420×350×170
18	Weight including all standard parts, kg	6,5

ALIGNMENT FUNCTIONS

	function	brief description
1	**Express analysis**	Analyze shaft misalignment of horizontal or vertical machines for the minimum set of input dimentions; compare results with tolerances
2	**Feet**	Input all dimentions for horizontal designed machine and determine the need to move it's feet in a horizontal / vertical plane in real time
3	**Flange**	Input all dimensions for vertically mounted machine and determine the necessary position adjustments for flange bolts in a horizontal / vertical direction in real time
4	**Machine train**	Determine the exact position of parts of the machine train, perform the overall alignment by defining the required movement of each mechanism in a horizontal / vertical plane
5	**«Soft foot»**	Determine defect of machine mounting in which one of its points of support is located outside the plane on which the machine is installed. Without elimination of this defect precision alignment is not possible
6	**Templates**	Save dimensions of machine in device memory for further reuse
7	**Readings**	Readings from the measuring units, which can be used for additional functions of the device, such as measuring straightness, flatness, as well as for checking device
8	**Tolerances**	Table of allowable values of the parallel and angular shaft misalignment depending on the rotational speed; possible introduction of additional user-defined parameters

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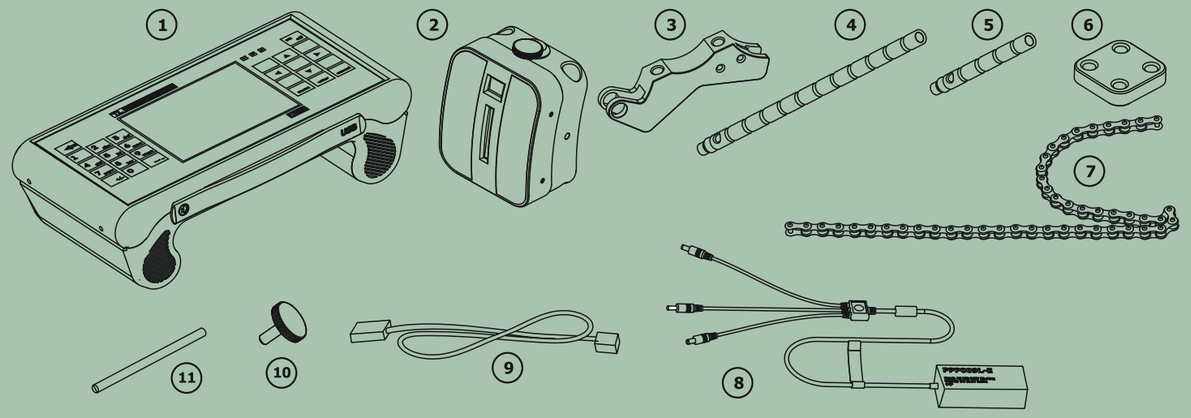
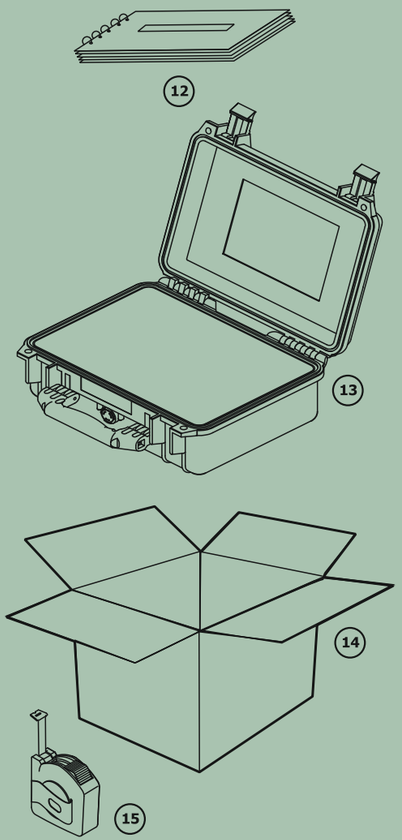
AXIS DELIVERING SET

AXIS comes with a set of assistive devices that allow to start alignment immediately after purchase. Includes user's manual with precise step by step explanation and that does not require additional training to work with shaft alignment system. The instrument and all related assets packaged into a special case, convenient for storage and transportation. Axis delivery set given in the table.





	name	units	quantity
1	Display unit	pcs.	1
2	Sensor unit	pcs.	2
3	Shaft bracket	pcs.	2
4	Rod big	pcs.	4
5	Rod small	pcs.	4
6	Rod holder	pcs.	1
7	Chain	pcs.	2
8	Power supply	pcs.	1
9	USB cable	pcs.	1
10	Fixing screw	pcs.	4
11	Tightening key	pcs.	1
12	User's manual	pcs.	1
13	Transport case	pcs.	1
14	Packing box	pcs.	1
15	Tape measure	pcs.	1

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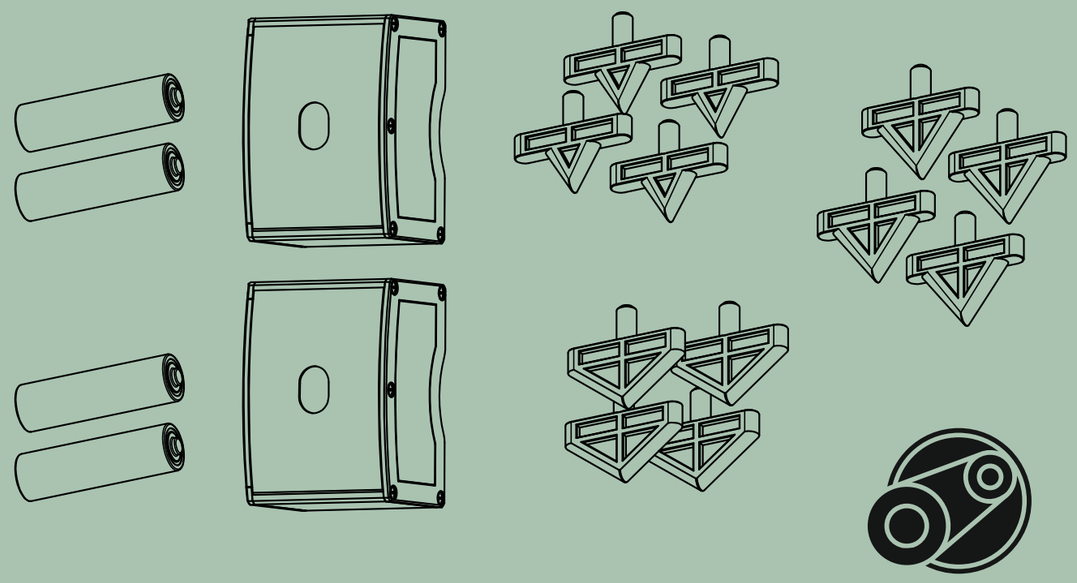
TECHLASER

TECHLASER BAT

TECHNICAL SPECIFICATION BAT

housing material	Aluminium
dimensions, mm	47 × 65 × 38
weight per unit, g	200
power supply	(AA) 1,5V
operating time, hour	20
measurement distance, mm	70-10000
accuracy	0,5 mm or 0,2º
pulley diameter, mm	minimal – 70 maximal – not limited
pulley belt groove width, mm	5-35
laser class	2
laser line fan angle, deg	8
laser power, mW	< 1
laser wavelength, nm	630-675



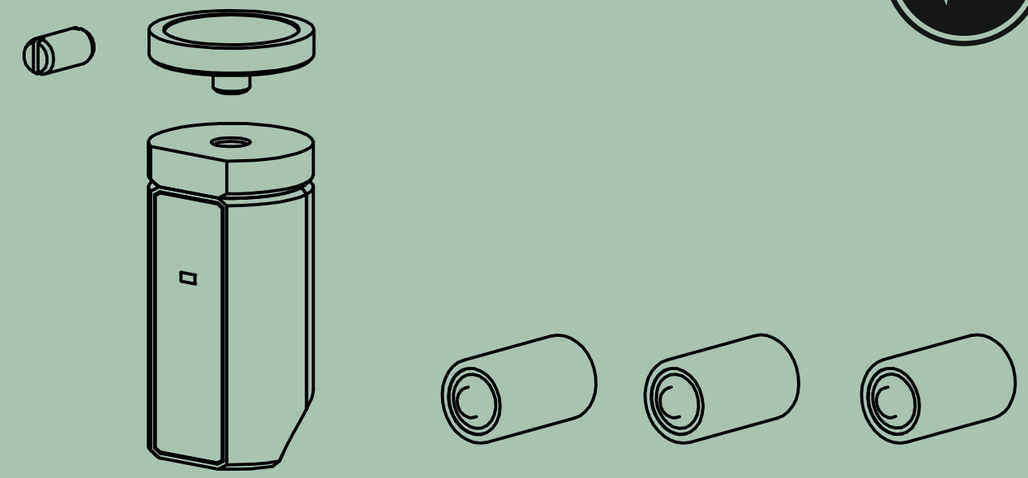
DELIVERY SET BAT

laser transmitter, pcs	2
battery, pcs	4
self-centering elements a, pcs	4
self-centering elements b, pcs	4
self-centering elements c, pcs	4
user's manual, pcs	1
package, pcs	1

TECHLASER VMU-14

TECHNICAL SPECIFICATION VMU-14

dimentions, mm	52 × 27 × 27
weight, g	55
power supply	½ aa (14250, 3.6V)
operating time, hour	8
measurement ranges: vibration acceleration m/s2 vibration velocity, mm/s vibration displacement, um	 0,05-300 0,05-1000 0,05-10000
measurement bands, Hz:	2-200, 2-1000, 10-1000
maximum bandpass flatness, %:	± 5



DELIVERY SET VMU-14

wireless vibration sensor, pcs	1
battery, pcs	3
mounting magnet, pcs	1
mounting stud, pcs	1
user's manual, pcs	1
package, pcs	1

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