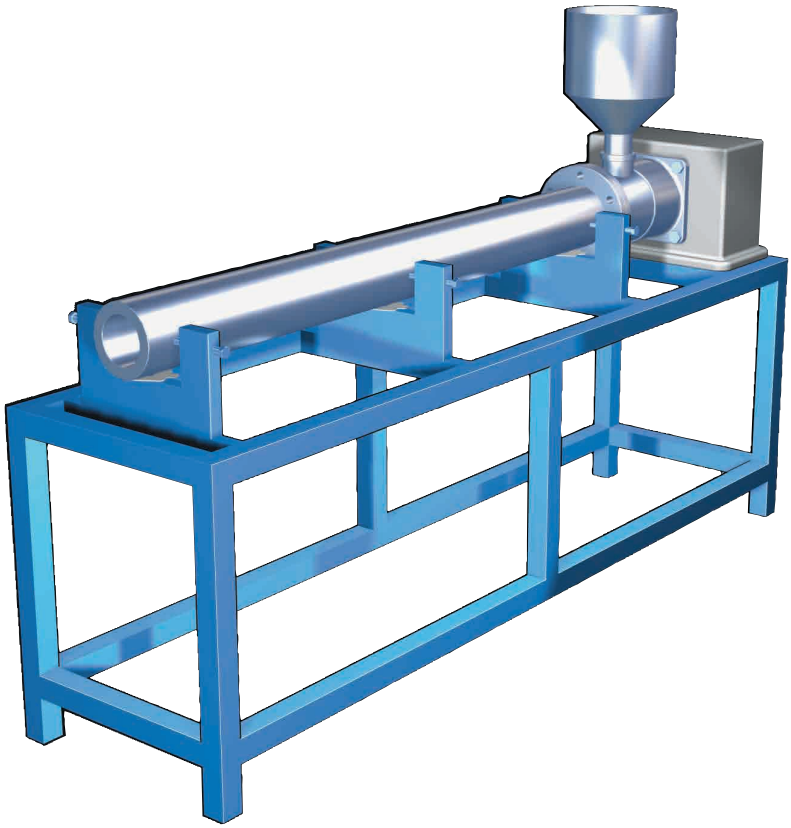
IT'S ALL ABOUT STRAIGHTNESS

The gearbox shaft centre must coincide with the centre line of the extruder tube. Otherwise the screw at the inlet's end will be pressed against the tube, which will lead to abnormal wear of both screw and tube along with an increased energy consumption. This wear can also result in metal fragments in the produced material. During the alignment procedure we rotate both detector and spindle. This way we can read how the centre line of the spindle is compared to the tube's centre at the inlet end.

It is important that the extruder tube is straight so that the screw does not rest against the tube in any part, which can result in abnormal wear and fragments of metal in produced material. We will also get a more even temperature of produced material which in the end results in a better product.

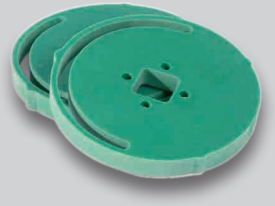


AN ALIGNED EXTRUSION MACHINE LEADS TO:

- Less wear on the extruder screw and tube.
- Even quality on the produced material.
- Lower energy consumption.
- Lower consumption of spare parts.
- Increased availability on machine time.

Detector with adapters in the tube.

Laser transmitter on the gearbox spindle.



Tube adapters for detector (manufactured to order to fit the actual diameter).

Extruder alignment

E930

QUICK AND ACCURATE MEASUREMENT

The Extruder system E930 is designed to measure straightness and pointing direction, primarily on extruder pipes. Another application can be hydraulic pipes for example. The well-thought-out design of the system ensures that the measurement procedure is quick and accurate. Diameters down to 50 mm [1.97"] can be measured. Working range is up to 40 m [130']. The programs guides you through the measuring procedure, which speeds up the work.

THE FOUR STEPS OF ALIGNMENT

• Alignment of motor – gearbox

The alignment of the transmission between motor and gearbox is performed with for example Easy-Laser® Shaft alignment measuring units (accessories).

• Alignment of the gearbox shaft centre – extruder tube inlet

Alignment of the gearbox shaft centre compared to the centre line of the extruder tube at inlet. Performed with Easy-Laser® Extruder system.

• Alignment of the gearbox shaft centre – extruder tube outlet

Alignment of the gearbox shaft centre compared to the centre line of the extruder tube at outlet. Performed with Easy-Laser® Extruder system.

• Straightness measurement of the extruder tube

Performed with Easy-Laser® Extruder system.

DOCUMENTATION

You have many possibilities for documentation of the results:

- Save in the Display unit. A PDF is automatically produced.
- Send data to PC. Data base program EasyLink™ for PC is included.
- Print outs (printer is accessory).

EXPANDABLE

Since all programs are included in the software of the display unit, the Easy-Laser® E930 system can be expanded to suit your special needs, both now and in the future. You just add the appropriate accessories such as lasers, measuring units for shaft alignment and other fixtures. For detailed information, please see our other brochures.

Laser transmitter	
Type of laser	Diode laser
Laser wavelength	635–670 nm, visible red light
Laser Safety Class	Class 2
Output	< 1 mW
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	2 ways ±2° (± 35 mm/m)
Housing material	Anodized aluminum
Dimensions	WxHxD: 60x60x120 mm [2.36x2.36x4.72"]
Weight	700 g [24.7 oz]

Detector	
Type of detector	2 axis PSD 20x20 mm [0.78" sq]
Resolution	0.001 mm [0.05 mils]
Measurement error	± 1% +1 digit
Inclinometers	0.1° resolution
Thermal sensors	± 1° C accuracy
Environmental protection	IP Class 67
Communication	BT wireless technology and cable
Operating temperature	-10–50 °C
Internal battery	Li Ion
Housing material	Anodized aluminum
Dimensions	∅ 45 mm, L=100 mm [∅ 1.77", L=3.94"]
Weight (excl. rod adapter)	180 g [6.3 oz]

Display unit	
Type of display/size	VGA 5.7" colour screen, backlit LED
Displayed resolution	0.001 mm / 0.05 thou
Internal battery (fixed)	Heavy duty Li Ion chargeable
Operating time	Approx. 30 hours (at typical user cycle)
Temperature range	-10–50 °C
Connections	USB A, USB B, Easy-Laser® units
Communication	BT wireless technology and cable
Internal memory	>100 000 measurements can be saved
Help functions	Calculator, Unit converter
Environmental protection	IP class 65
Housing material	PC/ABS + TPE
Dimensions	WxHxD: 250x175x63 mm [9.8x6.9x2.5"]
Weight (without batteries)	1080 g [2.4 lbs]

A complete system contains	
1	Display unit E51
1	Laser transmitter D75
1	Detector E9
1	Cable 6.5' [2 m]
1	Cable 16.4' [5 m], extension
1	Bracket for D75 with magnets
1	Set of brackets for detector
1	Set of extension rods for detector
1	Target for extruder
1	Manual
1	Measuring tape 16.4' [5 m]
1	USB memory stick with EasyLink™ software
1	USB cable
1	Battery charger (100–240 V AC)
1	Hexagon wrench set
1	Shoulder strap for Display unit
1	Cleaning cloth for optics
1	Carrying case

System Easy-Laser® E930, Part No. 12-0788

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LASER 2 | CE | ISO 9001 CERTIFIED | 3 YEAR WARRANTY | GLOBAL SUPPORT