HAMAR LASER®

GEOMETRIC ALIGNMENT AND MEASUREMENT SYSTEM

MICROPLAN

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HAMAR LASER GEOMETRIC ALIGNMENT AND MEASUREMENT SYSTEM

The setting of the machine-tools geometry and generally speaking of other production machines has always been complex and very important, directly related to the machine dimensions. If the geometry setting would be done by several instruments, it can easily happen that the sum of the measuring errors could harm the final accuracy; moreover the time that the setting takes is often very long.

The HAMAR LASER alignment system operates in very short time and in extremely easy way all the geometrical controls needed, with micrometric resolutions for distances up to 60 m with an high repeatability; in the bargain the wireless connections allow to manage the system very easily avoiding long cables handling troubles.

All system components are powered by rechargeable batteries (except for laser scanner). The Measuring principle is based on an emission of a rotating laser beam, which produces one or more reference laser planes (depending on the model), perpendicular among themselves up to 1 arc/second.
One or more targets properly positioned on the machine axis, provide to a digital indicator the position deviation related to the reference plane/planes; in one, two or three directions (X, Y, Z).

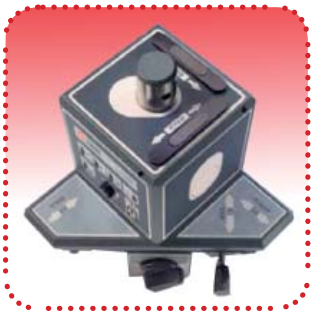
For a machine-tool, a geometric control of motion-straightness, surfaces-flatness, axis-perpendicularity and guides-parallelism (ex. Gantry-machine) is reachable much faster that with any other traditional instruments used. The total accuracy, using the most precise model, is 2,5 µm/m.

Laser scanner fits into a small, portable shipping case with wheels, with its accessories (targets, “V” magnetic support, calibrated bars with extensions, battery charger and visual systems (digital readout, data display, PC interface).

The HAMAR LASER alignment system is delivered with N.I.S.T. certificate.

MODELS, COMPONENTS, ACCESSORIES

L 730



- Level Scan Laser
  (1 Laser plane) – Beam up to 30 m, 60 m total.
- Adjustment base on magnetic “V” support with rolling and pitching gross/fine adjustment.
- 2 reference plane adjusting lighted leveling bubbles of 2” arc seconds.
- AC powered
- Accuracy 0,01 mm/m

L 732

- Dual Scan Laser
  (2 vertical or 1 vertical/1 horizontal laser planes - 2 axis)
- Features as model L 730. Perpendicularity between planes of 2” arc seconds.

L 733

- Triple Scan Laser (3 laser planes – 3 axis)
- Features as model L 732.

L 740

- Ultra precision Level Scan Laser (1 Laser Plane)-Laser beam up to 30 m.
- Adjustment base on magnetic “V” support with rolling and pitching gross/fine adjustment.
- 2 reference plane adjusting lighted leveling bubbles of 1” arc seconds.
- AC powered
- Accuracy 0,0025 mm/m

L 742

- Ultra precision Dual Scan Laser
  (2 vertical or 1 Vertical / 1 horizontal laser planes – 2 axis)
- Features as model L 740. Perpendicularity between planes of 1” arc second.

L 743

- Ultra Precision Triple Scan Laser (3 laser planes – 3 axis)
- Features as model L 742

A 1519

- Single Axis Wireless Target 2,4 Ghz with 25 mm range and 1 mm resolution.
- Accuracy 2,5 µm
- Battery operating

A 1520

- Single Axis Wireless Target 2,4 Ghz with 10 mm range and 0,5 mm resolution.
- Accuracy 1 µm
- Battery operating

Depending on the visual display, targets can operate singularly or together in changeable number.

R 1310

- Handheld Radio Readout 2,4 Ghz with Software Read 9 and operating system Microsoft Windows Mobile 5.0
- Fit for Targets A 1519 and A 1520
- With handheld and radio receiver battery charger.

R 1308

- Single axis readout to be connected directly to Target A 1519.

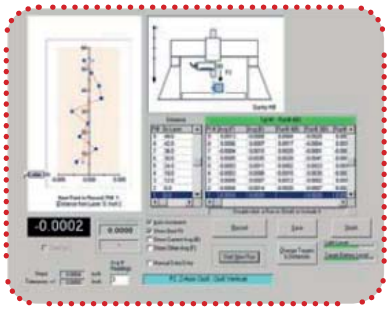
A 910

- Radio interface to connection on PC through USB gate 2,4 Ghz.

S 1381

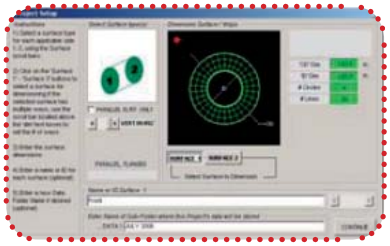
- Software for data capture on PC through interface A 910 USB gate

S 1387



- Geometrical alignment software for machine tools with scan laser, fit for Windows 95/98/ME/XP operating systems.

S 1388



- Flatness control software with Scan laser, fit for Windows 95/98/ME/XP operating systems.

A 809 XL

- portable shipping case on wheels for HAMAR LASER alignment system.

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