Desktop laser scanner for small pipes, stators and cylinders

CE

Specification

Automatic desktop scanner for check of internal surface of small pipes, stators and other objects with a form of cylinder

FEATURES

- Non-contact optical measurement
- Accuracy ± 0,01 mm
- Rotary conveyor for pipe loading/unloading
- High performance
- Inner diameter from 20 mm
- Pipe auto-centring
- Self-diagnostic and safety algorithm
- Pairing with external robots for loading/unloading
- Manual and automatic mode
- Light safety barriers by PILZ



MEASURABLE PARAMETERS

Measurement in horizontal and vertical cross-sections of:

- Internal diameters
- Ovality
- Height
- Distance between peaks and troughs of the profile
- Deviation from the form

APPLICATION

Check of geometry and quality of internal surface of stators, pipes, couplings and cylinders during manufacturing or final tests.

- Comparison with a reference model (dxf - file or tolerance table)
- Statistics on batch quality

- Operation in continuous mode 24/7.
- Working in harsh conditions.
- Measuring process is synchronized with the robots.

DESCRIPTION

The scanner quickly and with a high accuracy measures geometrical parameters of the internal surface profile. Measurements can be made in as many cross-sections as necessary in both manual and automatical modes.

Having a high performance, the system secures 100% check of the pipes, enables to inspect up to 1500 objects in an 8-hours shift. High performance is achieved by two-position rotary conveyor. An operator loads an object into the system. The object is auto-centred and fixed. Pressing the pedal moves the part to the inspection zone. During inspection, the operator can insert the next object in the second loading position of the rotary table.

The internal surface is checked by the optical triangulation gauge. The gauge scans needed cross-sections according to a chosen scenario.

Emergency stop button launches the safety algorithm in case of any troubles.

The scanner meets the high requirements of European standards of personnel safety. The light barrier eliminates any risk of access to the rotary table area during the conveyor rotation.

The system can be adapted to your type of cylindrical parts.

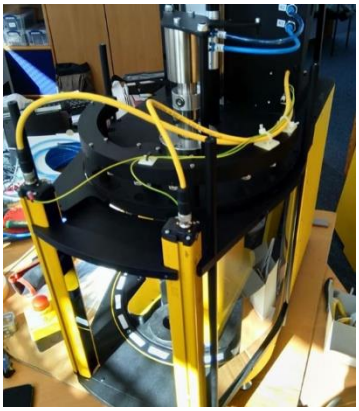
Desktop laser scanner for small pipes, stators and cylinders

Specification – page 2

SPECIFICATION

Inner pipe diameter, mm	20 … 65 (optionally 12-250)
Outer pipe diameter, mm	75 … 90
Pipe Height, mm	20 … 275
Vertical resolution, mm	0,5
Angle resolution, degree	0,1
Diameter measurement accuracy, mm	± 0,01
Compressed air, bar	4 … 8
PC requirements	Windows 7 64x and higher, USB plug
External interfaces	Ethernet, TCP/IP, Wi-Fi
Environmental conditions	
• ambient temperature, ^{0}C	- 20 … + 65
• air humidity	less 98 %
• atmospheric pressure	450 … 780
Power	220 V 50 Hz 200 W
Overall dimensions, mm	660 x 350 x 1100
Weight, kg	200

Warranty 2 years



The system equipped with PILS light safety barriers is available as well.

Desktop laser scanner for small pipes, stators and cylinders

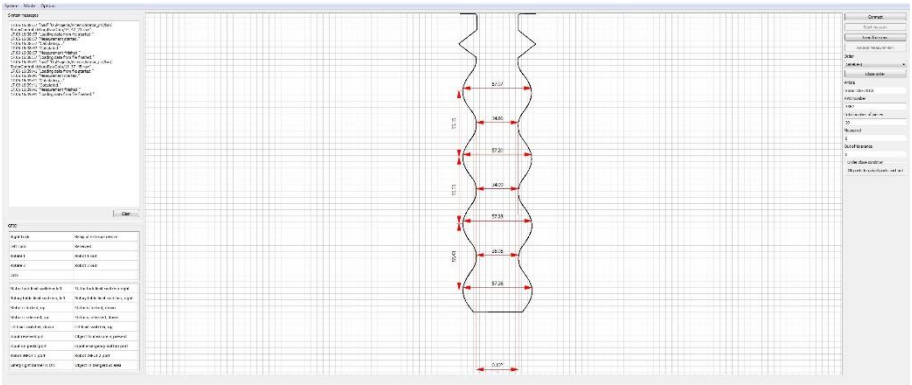
Specification – page 3

Supply includes

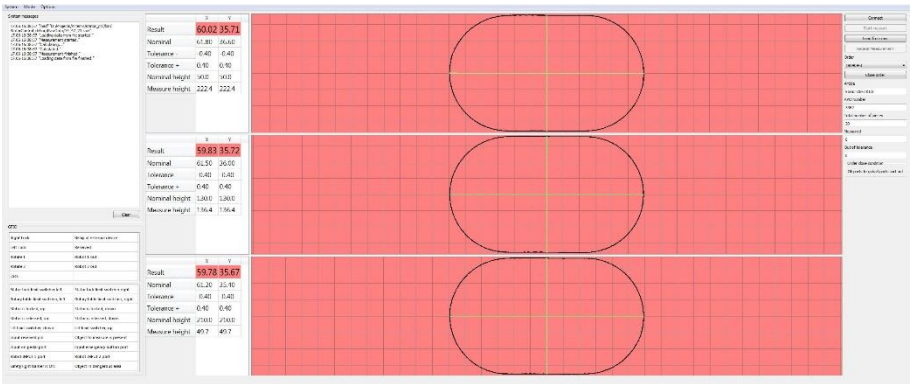
- Desktop scanner
- Foot pedal
- Emergency stop buttom
- Reference ring
- PC or laptop (option) / industrial PC in IP54 enclosure (option)
- Cables
- Software
- User manual, Maintenance papers, Troubleshooting, Spare parts papers

Software features

- Operator identification
- Measurement cycle control
- Reference database control
- Readings visualisation in a table or 3D graph way



- Reports
- Local database: view, export, backup
- Current status indication, self-diagnostic



Desktop laser scanner for small pipes, stators and cylinders

Specification – page 4

DESIGNATION

DSCAN – IN min / max – OUT min / max – L min / max – C – D – R – M

Symbol	Description
IN min / max	Min and max inner diameters (inner diameter range)
OUT min / max	Min and max outer diameters (outer diameter range)
L min / max	Min and max pipe heights
C	Measurement table typer: C0 – One-position table without rotation, C1 – Two-position rotary table.
D	Operator console: M0 – pairing with customer's PC; M1 – desktop PC or laptop is included; M2 – desktop PC + additional screen for indication M3 – industrial IP54 enclosure with PC
R	Interaction with External Robots R0 - no R1 - yes.

Software interface and manuals are available in English, German and Russian.

FOR NOTES