UNO

TECHNICAL SPECIFICATION

COMPLETE HIGH PRECISION PIPE MEASURING AND INSPECTION SYSTEM FOR SMOOTH PIPES WITH LASER SCANNER, ALIGNMENT AND RANGEFINDER

FEATURES

- Non-contact laser measurement
- laser alignment
- laser rangefinder
- Self-crawling

Measurable parameters

The system allows for measurement of :

- Non-straightness
- Inner diameter
- Ovality
- Out-of-roundness
- Length measurement

APPLICATION

The system scans profile of inner surface and performs:

- Surface anomalies detection
- Calculation of the deviation from the shape

Quality and geometric dimensions high precision check during production as well as periodic inspection of components and assemblies.

The system is equipped with non-straightness module to perform laser-alignment using integrated PSD sensor and external laser emitter

- Smooth Pipes
- Precise Cylinders

DESCRIPTION

The Complete Pipe Measuring and Inspection system for smooth diameters (Probius™ UNO) is the unit with the most precise sensors available. It measures a few different parameters (inner diameter, ovality, out-of-roundness, non-straightness) using three different measurement channels (high precision laser array 2D scanner, rangefinder and PSD sensor) and combines this data to calculate the full 360˚cross-sectional profile of the pipe. Based on the exceptional number of precisely measured points and diameters (width, height, irregularity) are calculated. Cross-section measurement results are then supplemented by probe positions from the distance rangefinder and inclinometer data.

The laser distance rangefinder measures the distance from the probe to the pipe end to bind measured results to the probe position. The probe is moved along the barrel by means of the instrument motor. The data can be transferred by wire or Wi-Fi connection.

Pipe-Extender allows to measure the bores very first beginning when Probius enters the hole edge. Also good for dead end-holes.

Non-straightness measurement is performed with an integrated warpage sensor and the external laser module that measures deviation from a determined axis.

Measurement results are a displayed on a PC in real time using custom software. Measurement data can be displayed and archived according to user requirements.

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SPECIFICATION

Profile measurement accuracy, mm	+/- 0.01
Non-straightness measurement accuracy, mm	+/- 0.01
Probe position, mm	+/- 1
Diameter Range, mm	from 80
Pipe length, mm	up to 30000
Movement method	Self-crawling
Connection "probe"-"computer"	Wired | Wireless WiFi
Battery life (for wireless devices), hrs	Up to 8
Power	220 V 50 Hz 200 W via power supply

OPTIONS

- Wireless data transfer and battery module
- Pipe-Extender

OVERALL DIMENSIONS