

BendXtract technology

Powering BendingStudio XT, the leading software for tube and wire measurement

Effective in speed, accuracy and flexibility

BendingStudio XT is the world's most powerful bending measurement software platform. It can quickly and simply calculate the precise geometries of bent tubes and wires to an incredibly high degree of accuracy using camera-based instantaneous measurement, laser scanning, infrared non-contact probing or touch probing.

At the centre of this high-performance inspection capability is BendXtract technology – the set of algorithms that allows BendingStudio XT to quickly collect measurement data, interpret that data intelligently and turn it into actionable customised reporting.

Free scanning

BendXtract technology means easy data acquisition – collect complete tube geometries with just the click of a button, a few scan passes or a handful of probe points.



Free scanning

Automatic extraction

Automatic extraction

BendXtract takes collected measurement data and immediately calculates full tube geometries and centerlines with minimised user interaction.

Smart results

BendXtract powers the transformation of data into useable results, automatically compiled into a detailed measurement report as required.

Smart results



Absolute Arm with laser scanning or tube probe



TubelInspect P8.2



TubelInspect P16.2 HRC

BendingStudio XT

Discover the benefits of the leading tube and wire analysis platform

Easy to learn

- Intuitive operation workflow based on pictograms, preconfigured templates and inspection plans
- Simple measurement methods allow for full operation by even beginner operators
- Just a few minutes' training required for inspecting defined parts

Automation ready

- Minimised user interaction even for manual operation, with measurement jobs allowing batch inspection
- Automated measurement, for example with collaborative robots
- Fully integratable within automatic production cells

Deflection compensation

- Most advanced technology for measuring elastic tubes
- Applicable to any flexible tubes and wires, such as long and thin brake lines
- Effectively used by well-known automotive and aerospace companies

Result processing

- Simple OK/NOK decision displayed by thumb up/down pictogram
- Comprehensive result presentation, including tables and 3D visualisations
- Reports in multiple languages
- Configurable automatic result transfer

Complete measuring solution

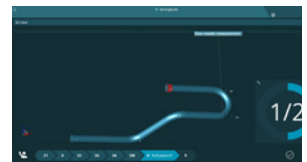
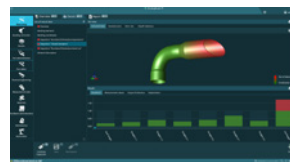
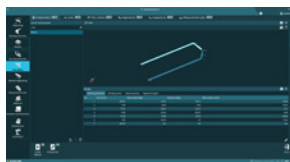
- For all materials and geometries of bent parts, including freeform, bend-in-bend and rectangular cross-section measurement
- Supports multiple Hexagon measurement systems
- Reverse engineering in just a few steps
- Integrated merging of long part measurements by simply repositioning
- Interfaces to all major benders already included

Unmatched repeatability

- Most repeatable results approved in many GR&R capability studies
- Results not affected by operator influence
- Highest accuracy for centerline – complete geometry is measured
- Independent from the scanning method – points and images

Beyond tubes and wires

- No extra measurement required for formed tube ends and other features
- Holders and fittings measured without mechanical tools through unique CAD-Adaptor functionality
- Diameter change detection, allows for example protection hose position identification
- Easy measurement of bevel cuts and branched tubes



Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

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