LANBO

Automated Inspection Equipment for Machined Parts

Professional Product Introduction | 2026

LANBO automated inspection equipment is designed for high-volume machined parts and motor components that require stable dimensional control, leak testing, automatic go/no-go judgment, fast sorting and production data traceability. According to part geometry and tolerance requirements, the inspection method can combine go/no-go gauges, CCD vision, displacement sensors, laser sensors, contact probes and air leak test modules. The system can be configured for nuts, sleeves, cylindrical parts, shaft-type products and motor housings, with measurement accuracy controlled within 0.005 mm under defined measuring conditions.

0.005 mm	OK / NG	SPC	Custom
measurement accuracy	automatic sorting	data output	fixture and station design

Product Range at a Glance

Application	Inspection Items	Typical Configuration	Output
Nut inspection	Thread go/no-go, height, presence and orientation check	Vibration bowl, servo index table, go/no-go gauge, CCD/sensor station	OK/NG sorting and count
Sleeve inspection	Inner diameter go/no-go, height, end-face condition	Automatic feeding, internal plug gauge, displacement/laser height sensor	Pass/fail judgment
Cylindrical parts	Height, outer diameter, circular feature detection	Rotary or linear transfer, CCD, contact probe or laser sensor modules	Dimension record and sorting
Shaft-type parts	Outer diameter, runout, length	Dual-center support or V-block, CCD/laser OD station, runout probe, length stop	SPC data and traceability
Motor air leak test	Oil circuit leak test, chamber leak test, sealing and safety check	Guarded frame, leak tester, fixture, touch screen, safety door and control buttons	Leak rate judgment and traceability

Product Details

AIM-N Series | Nut Thread Go/No-Go and Height Inspection Equipment

Designed for high-volume nut and threaded component inspection where thread pass/fail judgment and dimensional consistency must be verified before packaging or assembly.

Inspection focus	Thread go/no-go, nut height, presence, orientation and optional surface, chamfer or appearance check.
Core modules	Vibration bowl or linear feeder, servo indexing, automatic go/no-go gauge insertion, CCD presence/orientation check, height sensor station, OK/NG sorting and count display.
Customer value	Reduces manual gauge labor, improves judgment consistency and records production quantity and rejection reasons.
Accuracy target	Measurement accuracy can be controlled within 0.005 mm with calibrated gauges/sensors, stable fixture positioning and controlled measuring conditions.

Equipment photo

AIM-S Series | Sleeve Inner Diameter Go/No-Go and Height Inspection Equipment

Designed for sleeve, bushing and tubular machined parts that require fast internal diameter go/no-go inspection and stable height verification.

Inspection focus	Inner diameter go/no-go, sleeve height, end-face position and optional missing-feature inspection.
Core modules	Automatic loading, precision plug-gauge mechanism, CCD end-face check, contact/displacement/laser height sensor, pneumatic/servo rejection and HMI data display.
Customer value	Improves internal bore inspection efficiency and provides stable pass/fail control before assembly.
Accuracy target	Measurement accuracy can be controlled within 0.005 mm with calibrated gauges/sensors, stable fixture positioning and controlled measuring conditions.

Equipment photo

AIM-C Series | Cylindrical Part Height and Outer Diameter Inspection Equipment

Designed for cylindrical machined parts requiring automatic height and outer diameter measurement before downstream assembly or packing.

Inspection focus	Height, outer diameter, round feature consistency and optional orientation or appearance verification.
Core modules	Rotary table or linear transfer, precision positioning fixture, CCD vision, contact probe, laser displacement sensor or OD measuring sensor, automatic sorting and data logging.
Customer value	Supports fast dimensional screening and helps prevent mixed-size or out-of-tolerance parts from entering the next process.
Accuracy target	Measurement accuracy can be controlled within 0.005 mm with calibrated gauges/sensors, stable fixture positioning and controlled measuring conditions.

Equipment photo

AIM-SH Series | Shaft Outer Diameter, Runout and Length Inspection Equipment

Designed for shaft-type parts where multiple dimensions must be checked in one automated station to improve final inspection reliability.

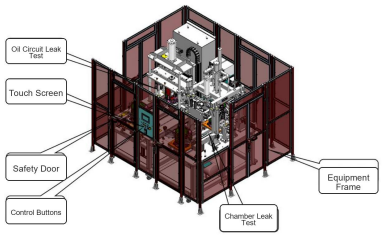
Inspection focus	Outer diameter, radial runout, total length, end-face position and optional groove or step dimension check.
Core modules	V-block or dual-center support, rotary drive, runout gauge/probe, CCD or laser OD measuring station, length stop sensor, automatic OK/NG classification and SPC output.
Customer value	Combines multiple manual checks into one controlled inspection process and improves traceability for shaft production.
Accuracy target	Measurement accuracy can be controlled within 0.005 mm with calibrated gauges/sensors, stable fixture positioning and controlled measuring conditions.

Equipment photo

AIM-M Series | Motor Air Leak Test Equipment

Designed for motor housings, oil passages, chambers and assembled motor components that require controlled sealing verification before final assembly or shipment.

Inspection focus	Oil circuit leak test, chamber leak test, sealing surface verification, safety-door status and optional part presence confirmation.
Core modules	Guarded equipment frame, dedicated sealing fixture, air leak tester, pressure regulation module, touch screen HMI, safety door, control buttons and optional CCD/sensor confirmation.
Customer value	Improves air-tightness judgment consistency, reduces manual leak-test variation and records test pressure, leak rate, pass/fail result and rejection reason.
Accuracy target	Measurement accuracy can be controlled within 0.005 mm with calibrated gauges/sensors, stable fixture positioning and controlled measuring conditions.



Equipment photo

System Capabilities

Capability	Description
Measurement	Go/no-go gauges, contact probes, CCD vision, displacement sensors, laser sensors or vision modules can be selected according to part geometry and tolerance requirements.
Automation	Vibration bowl, linear feeder, robot loading, servo rotary table, chain transfer or customized fixture transfer can be configured.
Judgment	OK/NG logic, missing-part detection, orientation verification, tolerance judgment and automatic rejection are integrated into the control system.
Data	Measurement values, inspection result, batch count, NG reason and time stamp can be exported for SPC, MES or customer traceability requirements.
Integration	Equipment can be connected with upstream machining, cleaning, heat treatment, packaging or warehouse processes.

How to Specify the Right Model

For quotation and technical configuration, please prepare the following information:

- Part drawing with tolerance requirements and critical dimensions.
- Part material, surface condition, oil/water status and burr condition.
- Required inspection items, target cycle time and daily production volume.
- Feeding method: bulk feeding, tray loading, robot loading or manual loading.
- Required OK/NG sorting method and traceability level.
- Factory utilities, available floor space, communication protocol and safety requirements.

Customization and Compliance

- Equipment can be customized according to nut, sleeve, cylindrical part and shaft product drawings.
- Fixtures, go/no-go gauges, CCD cameras, sensors, HMI language, data output format and station sequence can be configured.
- The system can support automatic feeding, automatic inspection, automatic rejection and production data recording.
- Design can be aligned with CE-oriented electrical, guarding and safety requirements according to project scope.
- LANBO can recommend a solution according to tolerance, cycle time, part stability, measuring method and factory layout.

Contact

For project evaluation, quotation or customized specifications, please contact:

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