



DAI-ICHI SOKUHAN WORKS CO.



Bee-1

Bee-1 Tapped hole automatic inspection machine

Automatically inspects tapped holes

Inspecting all the tap holes manually with a thread gauge is difficult.

Before



After

Inspects one
tap hole approx.
2seconds

POINT

Automating the inspection for all units. Zero inspection misses.
Significant reduction in inspection time.

- Quick inspection.
 - Floating contribution (eccentricity, inclination)
 - Adjustable inspection torque.
 - High-reliability thread plug gauge.
 - System construction.
- (Option: capable of communication with external devices)



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Quick inspection.

Inspection takes approximately 2 seconds per hole. Significant reduction in inspection time. Capable of continuous inspection of threaded holes with different depths with up to 50 coordinates registered.

Floating contribution (eccentricity, inclination)

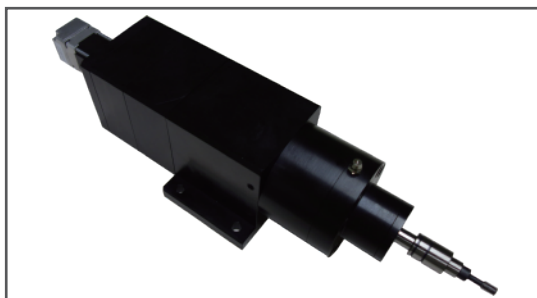
The accuracy of the hole positions in the product is not affected by the inclination, allowing for accurate threading. By monitoring the float amount with sensors, the thread depth can be inspected with high accuracy.

Adjustable inspection torque.

Automating the previous manual thread gauge inspection enables inspection with a more stable torque. It is possible to set the inspection (screwing) torque according to the product.

We can also handle the automatic inspection head and controller.

Please incorporate it into your equipment and use it



The photo shows the automatic inspection head with thread gauge attached.

Unique internal structure and sensors.

Precisely measure the depth of the threaded hole from the screwing rotation angle, enabling highly reliable depth acceptance/rejection judgment (also applicable for through-holes). Flexible adaptation to small pitch screws is also possible. Inspection can be conducted not only with a go plug gauge but also with a no-go plug gauge.



High-reliability screw plug gauge.

80 years of thread gauge manufacturing. Trustworthy ISSOKU thread plug gauge. Precision depth measurement is possible while maintaining screwing performance through removal of incomplete threads at the tip. No need for phase alignment or position adjustment settings when replacing the thread plug gauge, thanks to the dedicated gauge adoption. We can also manufacture special gauges according to your requirements. Note: Using anything other than the Bee-1 dedicated thread gauge may cause malfunctions.

System construction.

It is possible to register 50 coordinates for one workpiece. Up to 10 patterns of workpiece registration are possible. We can also assist with the design of conveying and positioning devices to suit your product. Communication functionality with external devices (I/O, RS-232C, Ethernet) is also available as an option.

Specifications

Inspection-capable screw size	M1.4 ~ M12(equivalent)
Screw pitch	Pitches ranging from 0.3 to 1.75 (84 to 16 threads per inch). The unit is replaceable for each screw pitch. Please consult us for special pitches.
Maximum screw hole depth	20mm
Inspection torque	0.01Nm ~ 0.1Nm
Rotation speed	60 ~ 2000rpm
Z-axis operating range	100mm
Floating	Eccentricity $\phi 0.3$, Angular deviation 5minutes
Screw hole depth measurement accuracy	0.1mm 0.01mm(High precision specification)
Inspection time	Approx. 2seconds(Rotation speed, depending on screw depth)
I/O control input	Measurement start, emergency stop, origin return, measurement stop, retreat, servo ON
I/O control output	During measurement, OK, NG, error, measurement completed, origin return completed, servo ON completed
Power supply	100 ~ 240V
Outer diameter dimensions	528(H)×316(D)×263(W)
Weight	Approx. 30kg

※The movable parts can be customized according to customer specifications.

※Specifications are subject to change without prior notice

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