

AI VISION TECH

K2TECH MACHINE VISION

Automatic optical inspection machine
for surface defects





COMPANY PROFILE

Qogori (K2) is the second highest peak in the world but the most difficult mountain in the world to climb.

Founded in Hangzhou in 2009, K2 Tech focuses on the research and application of machine vision, artificial intelligence and robotics, covering new energy, auto parts, bearings, consumer goods and intelligent agriculture. Driven by continuous innovation, K2 Tech is deeply cultivated in the global market and is committed to becoming a leader in the segment, adhering to the mission of creating life-changing lives and building a future where the machines are as intelligent as human.

CORE ABILITY

ARTIFICIAL INTELLIGENCE

Based on deep learning, through the image acquisition of industrial camera, AI vision software integrates annotation, machine training and model optimization, and is used to solve the problems of complex defect inspection, classification and positioning.

MACHINE VISION

Using camera and computer instead of eyes to recognize, track and measure the target, and further do graphics processing, computer processing becomes more suitable for eyes to observe or transmit to the instrument inspection image.

ROBOT CONTROL

According to the real environment, the robot arm motion path can be automatically generated, and the obstacle avoidance functions can be realized in the movement, which is suitable for the mainstream robot arm at home and abroad.

HARDWARE DESIGN & MANUFACTURE

Customized optical mechanical and electrical system design realizes loading and circulation mechanism system workflow control and independent factory provides one-stop solution.

PRODUCT



AOI Machine for SRB Roller Appearance Defects

Raceway Appearance Defects

Less Grinded, Grinding Marks, Excess Grinding, Smashed, Rust, Scratch, Crack and etc.

Both Ends&Chamfers Appearance Defects

Defects such as end face abrasion, underwear, cracks, scrap, chamfers dents, missing materials, and collisions.

Inspection Range \varnothing 12~60mm, L 12~80mm (Grading Detection)

Inspection Speed 900~1,800pcs/h



AOI Robot for Big Roller Appearance Defects

Raceway Appearance Defects

Less Grinded, Grinding Marks, Excess Grinding, Smashed, Rust, Scratch, Crack and etc.

Both Ends & Chamfers Appearance Defects

Defects such as end face abrasion, underwear, cracks, scrap, chamfers dents, missing materials, and collisions.

Inspection Range \varnothing 20~80mm, L 20~120mm (Quick Model Change)

Inspection Speed 1,000~2,000pcs/h



AOI Robot for Wind Power Roller Appearance Defects

Raceway Appearance Defects

Less Grinded, Grinding Marks, Excess Grinding, Smashed, Rust, Scratch, Crack and etc.

Both Ends & Chamfers Appearance Defects

Defects such as end face abrasion, underwear, cracks, scrap, chamfers dents, missing materials, and collisions.

Inspection Range \varnothing 40~160mm, L 40~300mm (Quick Model Change)

Inspection Speed 60~120Pcs/h



AOI Machine for Needle Roller/Quill Roller Appearance Defects

Inspection Items

Grinding marks on raceway, marks like knives, rusty spots, short shots, flat end, over-grinding, crack, length measurement, out of roundness measurement

Inspection Range \varnothing 2~4mm, L 10~30mm

Inspection Speed 60,000Pcs/h



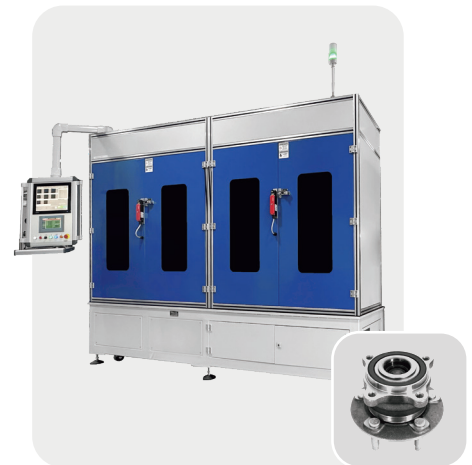
AOI Machine for Small Ring Appearance Defects

Raceway Appearance Defects

Scratches, dents, scratches, black spots, white spots, cracks, edge defects, material defects, chamfer defects, etc.

Inspection Range \varnothing 15~25mm, L 4.5~12mm (Grading Detection)

Inspection Speed 3,600~4,500pcs/h



AOI Machine for Wheel Hub 3 Appearance Defects

Inspection Items

Thread leakage process, foreign objects; bearing inner hole spline, missing teeth, etc. process damage; black spot, burns, and sanding wheel damage, etc.

Inspection Range \varnothing 100~200mm, L 80~180mm

Inspection Speed 8~12 S / Pcs



Automatic Roller Feeding Machine



Automatic Roller Washing Machine



Automatic Inspection Machine for Roller Appearance Defects



Automatic Roller Oiling Machine



Automatic Roller Inspection & Packing Line

Automatic Roller Inspection & Packing Line

Equipment Definition

Automatic Roller Inspection & Packing Line for medium and small bearing roller on-line cleaning, drying, detection, atomization oiling and Packing.

Detection Speed Up to 12,000 pcs per hour

Inspection Items

360° inspection of appearance defects, including rolling surface material injury, lack of material, dent, crush, spots, rust, scratches, crack and other defects; Chamfer and End defects including material injury, lack of angle, abrasion, less-grinding, dent, lacking of chamfer, chamfer over grinding, chamfer injury and other appearance defects.



AOI Machine for Steel Ball Appearance Defects

Inspection Items

Chipping, black spots, crack, pressing mark and other surface defects.

Inspection Range

Ø 6-25mm

Inspection Speed

Ø 6 -10mm 10,500-9,700pcs/h
 Ø 10-14mm 9,700-7,000pcs/h
 Ø 14-19mm 7,000-5,100pcs/h
 Ø 19-25mm 5,100-4,050pcs/h



AOI Machine for Bearing Ring Appearance Defects

Inspection Items

Character, Rust, Grinding Marks, Pitting, Scratch, Mix up, Roughness Turning tool thread, chatter mark, leakage of superfinishing, and defective superfinishing, etc

Inspection Range

Ø 10~160mm, H5~50mm
 (Grading Detection)

Inspection Speed

900~7,200pcs/h



AOI Machine for Bearing Appearance Defects

Inspection Items

Inspect top and bottom face of bearing; detect OD surface defects; detect missing components (balls, cages, rivets); detect defects on cages.

Inspection Range

Ø 20 - 200 mm

Inspection Speed

720-5,000 Pcs/h

CUSTOMER REFERENCE



Company honor



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