

AUTOMATIC FLUORESCENT MAGNETIC PARTICLE INSPECTION TESTING SYSTEM CODE RBT-MPI20

CAN BE CUSTOMIZED ACCORDING
TO CUSTOMER NEEDS



- 6-axis industrial robot for high speed and precision, IP67, triple protection
- Automated loading and unloading via robotic arms, automatic magnetic particle testing, and real-time feedback of inspection results to the control system
- Control system Tcp/IP via bus communication, high speed, high efficiency and easy to extend

OPERATION PROCESS

Step 1: Place the workpiece manually on the positioning block in the loading area and position it on the right side against the edge.
 Step 2: Press the reset button to return the robot and cylinder to the initial position.
 Step 3: Press the start button, the system prompts whether the workpiece is correctly placed and click OK.
 Step 4: The robot grips the workpiece and places it in the transplanting station.
 Step 5: The workpiece is subjected to spray magnetization testing, followed by visual inspection and the automatic generation of a measurement report.
 Step 6: After demagnetizing the workpiece, the transplanting station moves to the outer handling station and the robot removes the workpiece.
 Step 7: The robot places the workpiece in the OK or NG station according to the test results.

SPECIFICATION

Robot	robot arm spreading	720mm
	Max working speed	4000mm/s
	Max weight of workpiece	8kg
	repeat positioning accuracy	±0.02mm
	number of control axis	6
	communication protocols	Ethernet Tcp/IP
	net weight	100kg
Magnetic particle inspection	circumferential magnetizing current	AC: 0~1000A
	longitudinal magnetization potential	AC: 0~12000AT
	electrode spacing	0~400mm adjustable (pneumatic/manual)
	magnetization sensitivity	15/50 clearly displayed on A sensitivity test piece
	duty cycle	≥25%, continuous magnetization time maximum 3s
	magnetization method	circumferential magnetization, longitudinal magnetization, compound magnetization
	clamping method	pneumatic clamping
	running mode	pneumatic/manual
	electrode plate	Ø100mm
	magnetizing coil	coil inner diameter Ø200mm 2pcs, coil turns 6 turns
	demagnetization	automatic attenuating demagnetization, residual magnetism≤0.3mT
	ultraviolet irradiance	≥3000μW/cm ² (calibration at a distance of 381mm)
	power supply	380V three-phase alternating current, 50Hz
	air supply	0.4~0.7MPa
	operation environment	temperature: -5~45°C, relative humidity: ≤90%
	dimension (L×W×H)	1900×800×1750mm
	net weight	700kg

STANDARD DELIVERY

Robotic system	robot body
	robot control cabinet
	programming guide
Electrical control system	1 pc
Magnetized particle system	2 pcs
Spray system	1 pc
Magnetic suspension recovery device	1 pc
Ultraviolet flaw detection lamp	1 pc
Demagnetization system	1 pc