

AUTOMATIC FLUORESCENT MAGNETIC PARTICLE INSPECTION TESTING SYSTEM

PART No. RBT-MPI20-U

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	28.35"
	Max working speed	157.48"/s
	Max weight of workpiece	17.64lb
	repeat positioning accuracy	±.0008"
	number of control axis	6
	communication protocols	Ethernet Tcp/IP
	net weight	220.46lb
Magnetic particle inspection	circumferential magnetizing current	AC: 0~1000A
	longitudinal magnetization potential	AC: 0~12000AT
	electrode spacing	0~15.75" 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	3.94"DIA
	magnetizing coil	coil inner diameter 7.87"DIA 2pcs, coil turns 6 turns
	demagnetization	automatic attenuating demagnetization, residual magnetism≤0.3mT
	ultraviolet irradiance	≥3000μW/cm ² (calibration at a distance of 15")
	power supply	480V three-phase alternating current, 60Hz
	air supply	0.4~0.7MPa
	operation environment	temperature: 23°F~113°F, relative humidity: ≤90%
	dimension (L×W×H)	74.80×31.50×68.90"
	net weight	1543lb

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