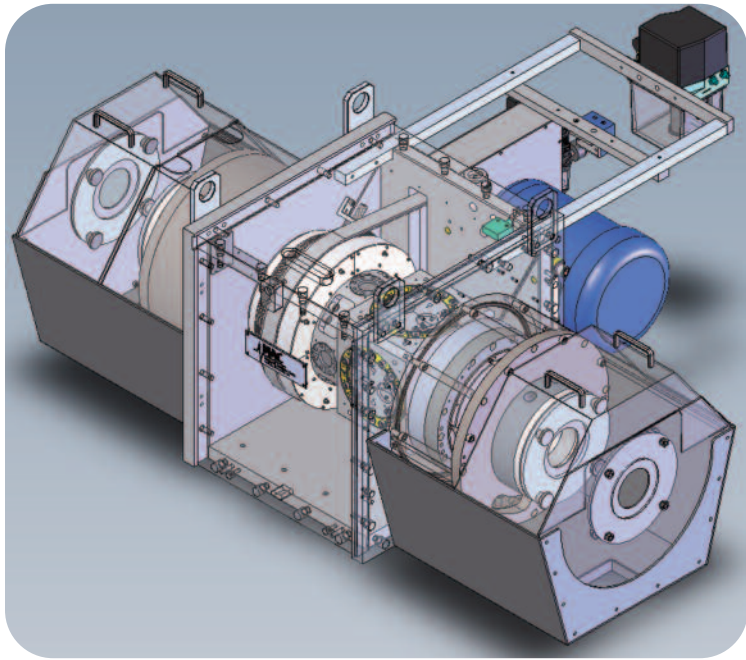


Echomac[®] 旋转体

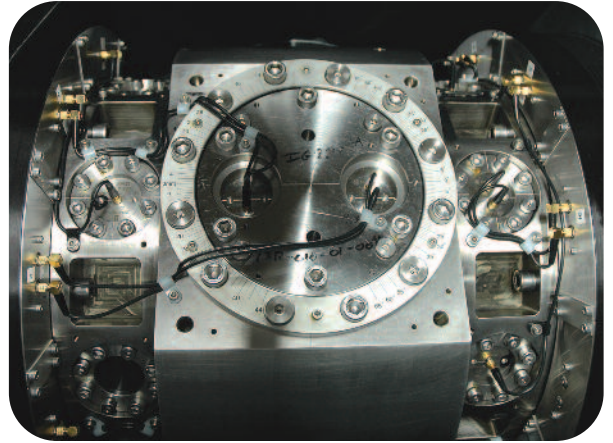
用于圆棒和管材高速检测的超声波旋转体装置



检测特点

优越的性能

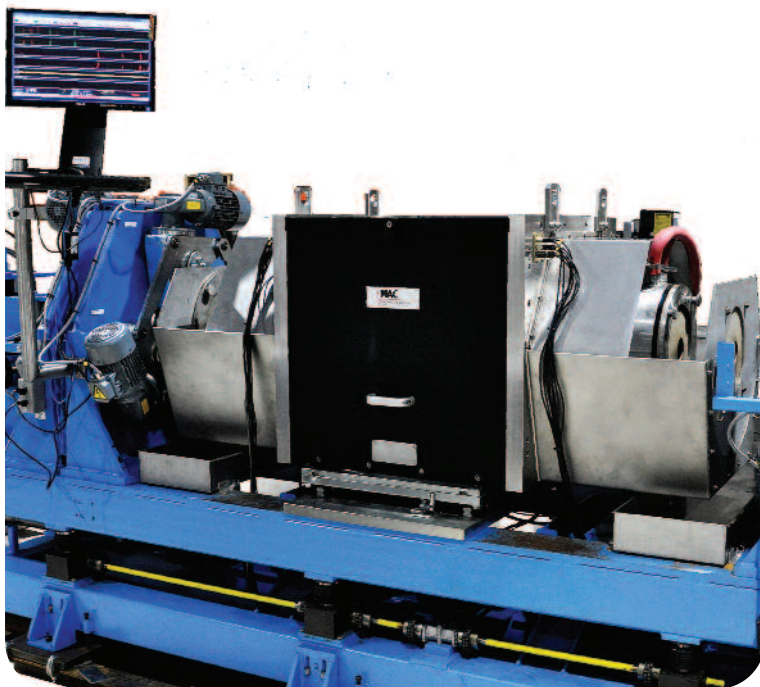
- ❑ 在较高生产速率下，可达到100%覆盖
- ❑ 10mm至500mm直径范围内各种型号可选
- ❑ 多路复用探头设计降低了噪声，且最多可配备48个探头晶片
- ❑ 独一无二的旋转变压器系统及旋转体内置的脉冲发生器/接收器提高灵敏度的同时降低了噪声
- ❑ 多个探头晶片可同时在不同的方向检测，如正向、反向、顺时针、逆时针，以及测厚和检测分层
- ❑ 所有与水接触的组件都采用了耐酸不锈钢设计
- ❑ 精密的检测
时精确的定位，即使在较高生产速率下
- ❑ 无密封设计减少砂砾和其他工厂污染物对旋转体损坏的可能性



带有多路复用探头固定盘的180mm Echomac 旋转体

Versatile, Intuitive Operation

- ❑ Set up multiple tests quickly and accurately for:
 - shear waves for transverse, longitudinal surface and subsurface defects
 - compression waves to detect internal defects and measure wall thickness, OD and ID.
- ❑ Reconfigure transducers for different diameter material with simple rotational adjustment of the transducer offset
- ❑ Quick access knobs for bushing and diaphragm changes
- ❑ Store and recall an unlimited number of setups.



220mm Echomac Rotary mounted on triple drive roll bench

Echomac Rotary Test Systems

Echomac® Electronics

MAC's Echomac- FD series instruments operating with a UT rotary provide optimum performance. Together, they make up a complete system to test, analyze and control the inspection operation.



150mm triple guide rolls

Precision Handling Mechanics

To achieve consistently accurate test results, precision mechanics are needed for proper centering, stability, and consistent speed of the tube or bar passing through the rotary. MAC can provide the right mechanics for the best system to fit your needs and budget:

- ❑ Triple guide roll benches with one point adjustment of the table height and diameter of the 3 point drive and centering guides, for the ultimate in automation and rapid size changeovers.
- ❑ V-Roll drive benches with AC frequency controlled drive motor and top pinch rolls, plumbing for water supply and drain, and provision for vertical alignment of the UT rotary.

Controls

Sophisticated controls manage the water system, variable frequency drive speed of the UT rotary and the drive bench, defect marking, sorting, and data archiving.

Optional Conductor provides comprehensive control of the entire test system, including unified tube status reporting for installations with multiple test stations.

Water Packages

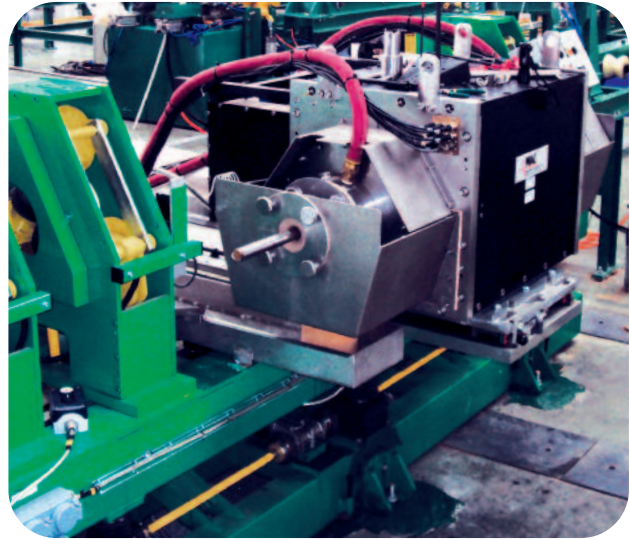
Ultrasonic testing using a rotary requires clean, temperature controlled water to provide the couplant for transmission of the ultrasonic waves between the transducers and the product under test. MAC offers a range of recirculating water packages, sized for the rotary that is being used.



Recirculating water package

Rotary UT Applications

- Oil country tubular goods - test to API 5CT and 5L standards
- Seamless and welded tube
- Heat exchanger tube
- Hydraulic boiler tube
- Umbilical tube for off shore installations
- Large round billets during early stages of production
- Hot rolled bar
- Small diameter highly finished bar and wire
- Specialty steel bars



Echomac Rotary for inspecting Titanium Bar

ECHOMAC ROTARY MECHANISM SPECIFICATIONS

English Series	Size Range		Maximum RPM	Maximum Active Transducers
100 Series	1/4" - 1"	(6.35 - 25.4 mm)	3600/4500	2
150 Series	1/4" - 1 1/2"	(6.35 - 38.1mm)	4000	3
Metric Series				
50mm	10 - 50mm	(.375" - 2")	3600	8 -16 or 16 -32
75mm	15 - 75mm	(.625" - 3")	2400	8 -16 or 16 -32
100mm	20 - 100mm	(.875" - 4")	2400	8 -16 or 16 -32
125mm	25 - 125mm	(1" - 5")	1800	8 -16 or 16 -32
150mm	30 - 150mm	(1.18" - 6")	1800	8 -16 or 16 -32
180mm	35 - 180mm	(1.4" - 7")	1200	16 - 32
220mm	40 - 220mm	(1.5" - 8.6")	850	16 - 32
360mm	100 - 360mm	(4" - 14.2")	300	16 - 32
500mm	100 - 500mm	(4" - 19.7")	600	24 - 48

Maximum RPM & Transducer numbers are suggested ranges. The max number in the Transducer range is achieved using multiplex. Additional options are available for specific applications, upon request.

Utility Requirements

Electrical	240/480V, 60 Hz, 3 phase alternating current, 20 - 150 amps; and 120V, 60 Hz, single phase, 20 amps (International voltages and frequencies are available if specified at time of order)
Water	45 psi, quantity of gpm is dependent on the series selected.
Air	100 psi, 690 kPa, 6.9Bar
Drain	3" capacity gravity feed for 15 gpm, up to 6" capacity gravity feed for 100 gpm, depending on series selected.