

**MARPOSS**

**M31**

## **MULTIDIMENSIONAL GAUGING SYSTEM FOR CONRODS**

### **POWERFUL**

The Marposs M31 is a shopfloor gauge providing sophisticated measurements for connecting rods.

### **ERGONOMIC**

The gauge is compact, easy-to-use, robust and engineered to survive the harshest production environments.

### **RETOOLABLE**

The Marposs M31 gauge can be tailored to inspect a single part type or configured to be easily retooled for different part types. Retooling facilities cover Crank and Pin Bore diameter variations, as well as Thickness and differences in Center Distance.

### **MANUAL OR PNEUMATIC WORKPIECE MANAGEMENT**

In a basic configuration the parts are manually loaded onto an elevator which carries the conrods within the nosepieces housing the measuring transducers. If additional measurements of Squareness or Tickness are required, the elevator is provided with a wobble plate which functions to correctly seat the parts onto reference pads. As an option the elevator can be provided with pneumatic actuation to provide a semi-automatic cycle.



## VERSIONS AND COMPONENTS

The Marposs M31 gauge can be comprised of the following:

- Elevator device, manually or pneumatically actuated
- Optional wobble plate, manually or pneumatically actuated, for Bore Squareness or Thickness measurements
- Pin bore measuring plug with 2 measuring sections, each with 4 contacts placed 90° apart
- Crank bore measuring plug with 2 measuring sections, each with 4 contacts placed 90° apart
- Thickness / Squareness measurement assembly
- Ambient thermal probe

## TYPICAL MEASUREMENTS

The Marposs M31 gauge performs the dimensional and geometric checks listed below :

- Pin and crank bore internal diameters
- Thickness
- Ovality
- Taper
- Center distance
- Squareness of bores to faces
- Pin and crank bores parallelism, commonly called twist and bend

## STANDARD APPLICATION RANGE FOR AUTOMOTIVE CONRODS

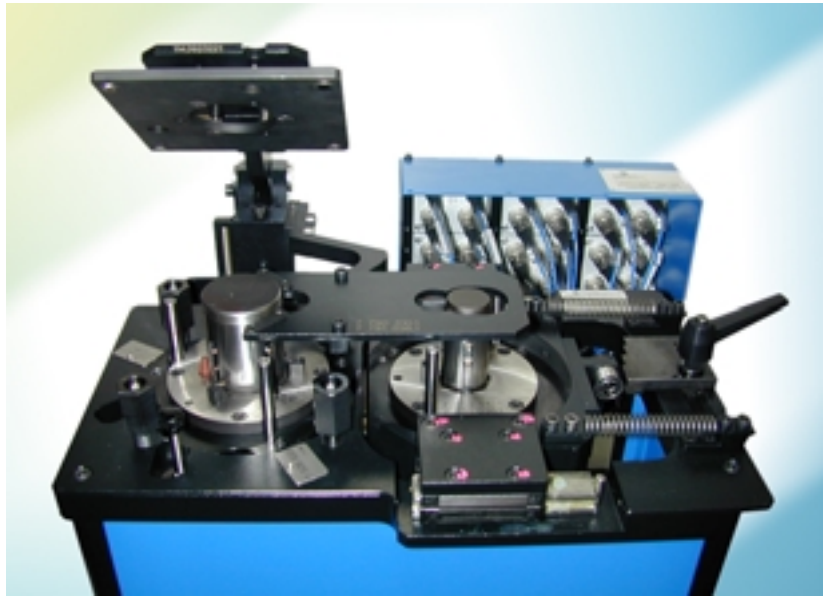
Pin bore diameter - from 13 to 45 mm (from .51" to 1.77")

Crank bore diameter - from 21 to 72 mm (from .83" to 2.83")

Center distance - from 107 to 200 mm (from 4.21" to 7.87")

Conrod thickness - from 15 to 40 mm (from .59" to 1.57")

Inspection of parts outside the above ranges can be quoted upon request.



## THE APPLICATION

The Marposs M31 gauge is connected to the E9066™ industrial computer specifically designed for the shopfloor environment. The electronic unit is equipped with Marposs Quick SPC software package, which provides a simple yet powerful tool for displaying the M31 gauging results :

- Measurements (displays, graphic summary, bar-graphs, counters, status of transducers, mastering summary, optional harmonics graphic displays, part synoptic)
- Process statistical control (X&R and X&S charts, mobile mean, histograms)
- Process statistical analysis (process and machine capability, Pareto analysis)
- Gauge capability
- Off-line statistical analysis

Advanced functions also allow the automatic compensation of the machine tool, multiple part types easily stored and retrieved, local networking (LAN) and user created or editing of the gauging application program.

DIMENSIONS	STANDARD M31 GAUGE WITH		
	1-TRANSDUCER PLUGS	2-TRANSDUCER PLUGS	3-TRANSDUCER PLUGS
Length	370 mm ( 14.6" )	464 mm ( 18.3" )	464 mm ( 18.3" )
Width	325 mm ( 12.8" )	325 mm ( 12.8" )	325 mm ( 12.8" )
Height	300 mm ( 11.8" )	365 mm ( 14.4" )	365 mm ( 14.4" )
Weight	45 Kg ( 99 lbs )	55 Kg ( 121 lbs )	60 Kg ( 132 lbs )



**MARPOSS**  
www.marposs.com

For a full list of address locations, please consult the Marposs official website

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