

MICRO-POISE MODEL 2897 DPRMA

DESCRIPTION

Micro-Poise Model 2897 DPRMA is a fully automatic, non-rotational (static), balance machine designed to balance, mill correct, and audit your disc rotors or drums. This machine is comprised of the following stations:

- Station #1: Entrance, Escapement
- Station #2: Centering
- Station #3: Isolated Stiff Pivot Balance
- Station #4: Orient and Radial Mill Correction
- Station #5: Isolated Stiff Pivot Audit
- Station #6: Stripper / Part Exit to End of Machine
- Station #7: Optional: Two Position Sorter



Model 2897 DPRMA

STANDARD FEATURES

Entrance Centering & Escapement Station

- Overhead centering mechanism; pneumatically powered; accommodates range of rotor ODs with no adjustment required
- Escapement - two sets of pneumatically powered stop pins

Transfer System

- In-line lift and carry transfer system
- A lifting elevator provides vertical motion; movable support bars on linear bearings provide horizontal transfer motion
- Rotor support fixtures are mounted on the movable support bars
- Transfer system is pneumatically driven

Isolated Balance Station

- Micro-Poise Stiff Pivot balance unit with LVDT's and Micro-Computer for imbalance measurements
- Adapter tooling designed to locate on the disc rotors pilot bore and square-up face

Orient and Radial Mill Correction

- Expanding multi-jawed tooling to position and secure the rotor for the milling operation
- AC servo motor is used to angularly position the disc rotor for correction of unbalance
- Variable mill correction arc using AC servo motor
- Mill cutter radial positioning accomplished with a precision ballscrew driven by an AC servo
- Chip removal system

Audit Station

- Identical to balance station

Sorter

- Two vertical positions, one "GOOD," one "REJECT"

Automatic Lubrication System

Standard Paint Colors

- Safety Guards are OSHA Safety Yellow
- Moving Parts are OSHA Alert Orange

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CONTROL FEATURES

Control System:

- Allen Bradley PLC 5 Programmable Control System for machine control.
- Micro-Computer for balance and correction data control.

Control Console:

- Contains the Micro-Computer. (Xycom)
- Contains the touch screen operator interface panel for machine control. All displays and operator prompts required for calibration and operation of the machine are included.

Micro-Computer:

XYCOM Model 4150 incorporates the following elements to provide a complete industrial PC/AT compatible workstation:

- A 12" monitor; SVGA color
- 4100-AT2 Industrial PC/AT Board
- A data-entry keypad & a function keypad
- External RS232 Printer Port
- External COM2 Port
- 1.44 megabyte 3 1/2" floppy disk drive

SPC Features:

- Data is stored in ASCII format; usable in other IBM-PC programs or machines
- Data can be loaded to floppy disk
- All charts and screens can be copied to a printer
- Manual or automatic setting of control limits
- Date and time tag on all data
- View and chart X bar, R, capability indices and histograms

Optional Features:

- Powered entrance conveyor
- Quick change spindle
- Part marking
- Cable trays
- Network communications

SYSTEM SPECIFICATIONS

Workpiece:

Typical passenger or light truck brake disc rotors & drums

Machine Performance:

- Balance Measurement

Range	8.50 oz-in
Resolution	.01 oz-in
Accuracy	± .01 oz-in
Repeatability	GRR ≤10%
- Correction Process - able to mill as much material as the dimensional limits of the brake rotor/drum allow
- System Capability: CpK ≥ 2.0 typical
- Cycle Times
 - Balance Measurement with No Correction required - 12.0 seconds approximately (300 pph)
 - Balance with full Mill Correction, maximum depth, maximum arc (120°) 18.0 seconds approximately (200 pph)

Electrical Power Requirements:

Main Service: 460 volt, 3 phase, 60 Hz.,
60 amps maximum
Control Voltage: 120 volt AC, 1 phase, 60Hz

Maximum Air Consumption: 5 SCFM @ 80 PSI

Operating Temperature: Proper functioning of the balance machine requires an ambient temperature range of 5°C to 40°C (40°F to 105°F)

Approximate Sizes:

Length	-	135 inches
Depth	-	74 inches
Height	-	75 inches

Control Panel: Nema 12, Floor mounted, 2-door with 31 inch door swing

Width	-	92 inches
Depth	-	24 inches
Height	-	84 inches

Control Console: Nema 12, Floor-mounted

Width	-	24 inches
Depth	-	24 inches
Height	-	70 inches

Gross Weight: 15,000 pounds