



VTW Tire and Wheel Dynamic Balance System



The Model VTW Dynamic Balance System assures tire & wheel quality associated with vehicle ride comfort. It measures and marks assemblies according to static, couple and upper and lower plane imbalance. Then, corrective weights may be applied. The VTW is capable of testing passenger and light truck tire and wheel assemblies.

Key advantages of the VTW Dynamic Balance System include:

- Fastest Cycle Time of any commercially available system to meet throughput requirements.
- Best Accuracy and Repeatability. This is a "must" to achieve the ride quality that automotive customers demand.
- Lowest Total Life Cycle Cost. Highly Reliable and Maintainable, Robust and Dependable.
- The system is ruggedly designed to provide years of service with minimal maintenance

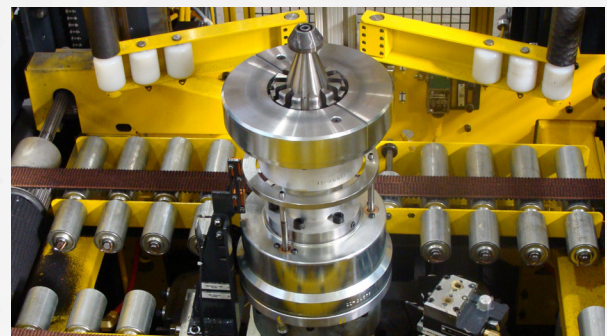


Standard Features:

- Two-plane Hard Bearing measurement system
 - * Robust, durable suspension and sensors for more accurate “force measurement”
- “Single master” calibration capability
 - * Eliminates multiple masters; Hard bearing not susceptible to part weight
- Integral brushless DC spindle drive servo motor
 - * Superior, maintenance-free drive system without generating forces that distort imbalance data
- Isolated balance station
 - * Separates balance station from outside vibrations that could distort imbalance data
 - * Mid-plane eight correction calculation for adhesive (stick-on) weights
- Fully-automatic single station operation
- PLC Machine Sequence control
- PLC part tracking code information
- Part Identification Input
 - * PC input via N-Command
 - * PLC input via part tracking
 - * Operator code forcing
- Operator interface color touch screen
- Micro-Tech Machine Controller with Windows[®] 10
- Automatic fixed upper/lower plane contact marking
- Precision balance tooling (collet or multi-jaw style)
- Mini-spare bypass
- Short-reach orient for one plane only (true and high speed)
- Two-speed elevator with conveyor belt part transfer
- 12 month warranty

Balancer Options:

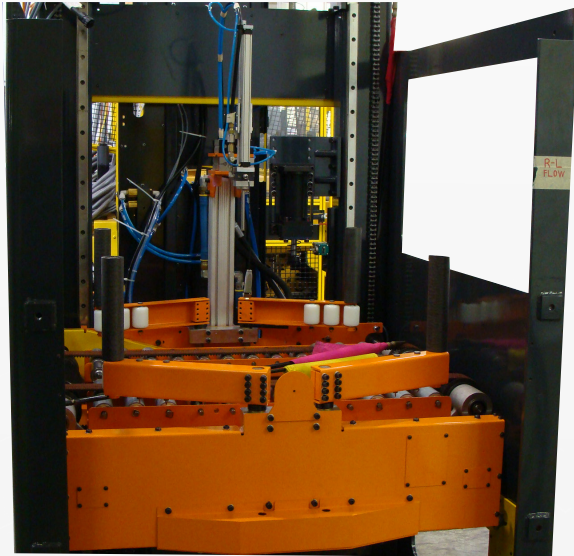
- Upper Marker Configuration Options (standard fixed upper):
 - * Auto 2-position radial upper marker positioner (4 consecutive part sizes)
 - * Auto 3-position radial upper marker positioner (6 consecutive part sizes)
 - * One-axis upper servo marker positioner
- Lower Marker Configuration Options (standard fixed lower marker):
 - * Auto 2-position radial lower/mid-plane marker positioner (4 consecutive part sizes)
 - * Auto 3-position radial lower/mid-plane marker positioner (6 consecutive part sizes)
 - * One-axis lower servo marker positioner
- Mid-plane marker configuration option
- Balance/Audit function (software, horn, light)
- In/Out audit feature
- Vision Part Identification System
- Entrance stop pins
- Calibration assembly



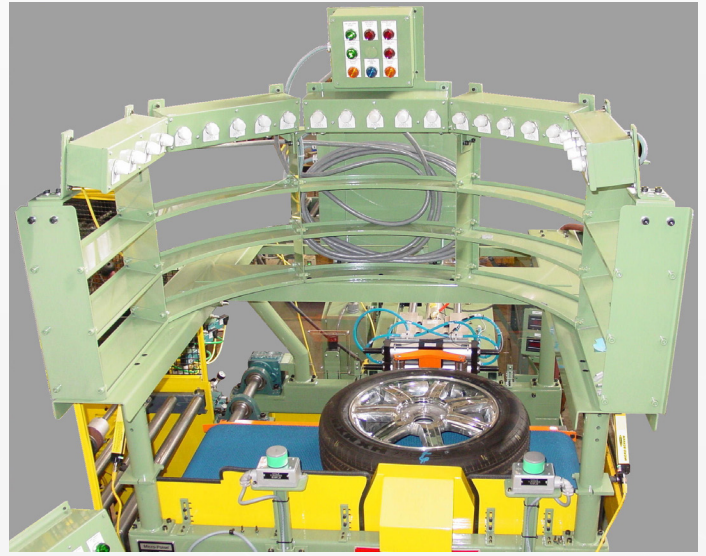
Precision multi-jaw tooling



Tire and Wheel Dynamic Balance System Applications



Balancer Test Station



TOF-40 Weight Application Station

VTW Technical Data

Average Cycle Time @ 80 psi ¹	8.5 to 15 secs (depends on configuration)
Max Assembly Weight	54.5 kg max (120.1 lbs)
Assembly Outer Diameter (min/max)	500-890 mm (14-24 inch)
Wheel Bead Diameter (min/max) ²	355.5-609.6 mm (14-24 inch)
Modes of Operation	Operator-initiated, hands-off part turnover & transfer/automatic part turnover & transfer

*VTW marker able to mark up to 22 inches

Notes:

1. System throughput assumes the use of one-piece pound-on weights without short-reach orient. Adhesive stick-on or two-piece clip-on weights will reduce system throughput.
2. Multiple part sizes and wheel bead diameters can be processed based on marking options and part identification system. A review of the customer's part drawings is necessary to confirm the actual range of parts that can be run as well as options to be recommended.
3. Mid plane mark in front of operator.
4. Weight application times are operator dependent and can vary. Two-men weight apply is recommended for 10 second (360 parts per hour) or shorter cycle times.



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MP USA

Tel: +1-330-541-9100
Fax: +1-330-541-9111

MP Europe

Tel: +49-451-89096-0
Fax: +49-451-89096-24

MP Korea

Tel: +82-31-888-5259
Fax: +82-31-888-5228

MP China

Tel: +86-20-8363-4768 Ext 108
Fax: +86-20-8363-3701

MP India

Tel: +91-44-6699-5700
Fax: +91-44-6699-5721