MicroPoise
MEASUREMENT SYSTEMS LLC

Model VTW

TIRE AND WHEEL DYNAMIC BALANCE SYSTEM

- **Fast Cycle Time**
- **Best Accuracy and Repeatability**
- **Lowest Total Life-Cycle Cost**
- **Highly Reliable and Maintainable**
- **Fully Automatic**
- **Robust and Dependable**
- **Runs Passenger & Medium/Lt. Truck Tires & Wheels**

Model VTW

TIRE AND WHEEL DYNAMIC BALANCE SYSTEM

Standard Features

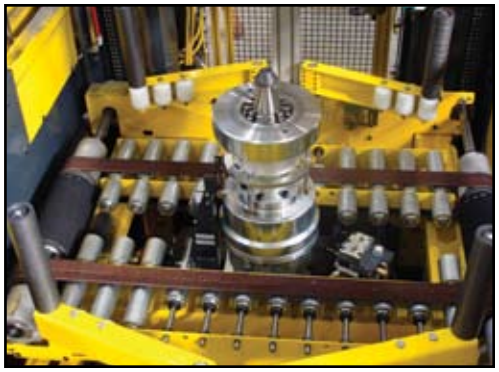
- Two-plane Hard Bearing measurement system
  - * Robust, durable suspension and sensors for more accurate “force measurement”
- “Single master” calibration capability
  - * Eliminates multiple masters; Hard bearing not susceptible to part weight
- Integral brushless DC spindle drive servo motor
  - * 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
- Windows®-based Micro-Poise WinMPX computer
- Automatic fixed upper/lower plane contact marking
- Precision balance tooling (collet or multi-jaw style)
- Mini-spare bypass
- Short-reach orient (true and high speed)
- Two-speed elevator with conveyor belt part transfer
- 12 month warranty

Balancer Options

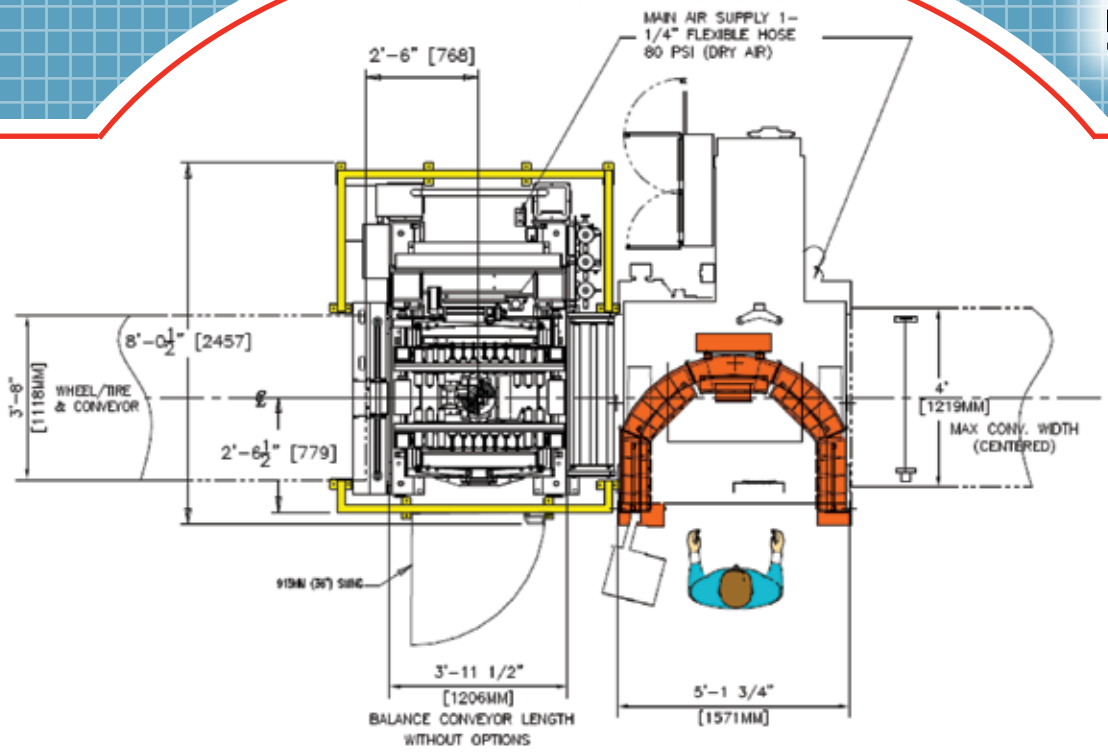
- Upper Marker Configuration Options (standard fixed upper):
  - * Auto 2-position radial upper marker positioner (4 consecutive part sizes)
  - * Auto 3-position radial upper marker positioner (6 consecutive part sizes)
  - * One-axis upper servo marker positioner
  - * High speed option (includes 2-axis upper marker servo 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

Isolated balance station hard-bearing measurement system.

TOF-40 weight application station.



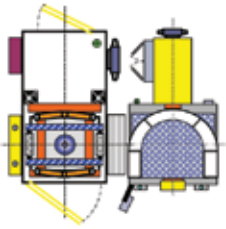
Precision multi-jaw tooling.



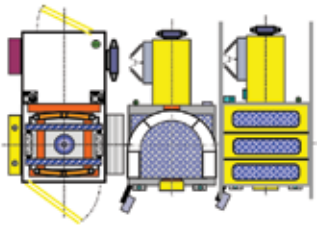
VTW-235 TOF-40

Typical Balance System Configurations[1]

One-man Operation

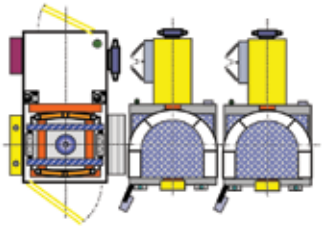


225-300 Avg. PPH



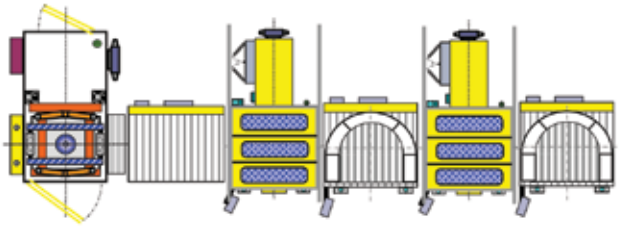
225-325 Avg. PPH

One-man or Two-man Operation



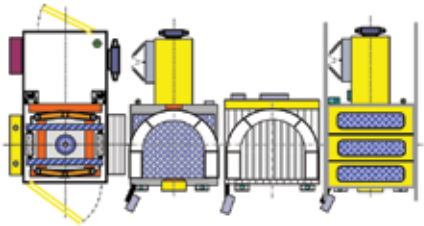
225-360 Avg. PPH

Two-man Operation



225-360 Avg. PPH

One-man or Two-man Operation



225-360 Avg. PPH

Balancer

Weight Apply / Turnover Fixture

Turnover Fixture with Guard

Weight Apply / Correction Station

Weight Bins & Lights

Buffer Conveyor with Stop Pins

1 Configurations reflect weight apply layouts and system throughput rates using one-piece pound-on weights. Stick-on or two-piece weight application will reduce system throughput and may require a different system layout (not shown).

Model VTW

TIRE AND WHEEL DYNAMIC BALANCE SYSTEM

Cycle Time: Passenger Tire & Wheel (VTW-229)

Typical Application	Avg. Cycle Time @ 80 psi[1]	Bore Dia. Range (max)	Assy. Weight (max)	Assy O.D. (min/max)	Wheel Bead Dia. (min/max)[2]
Standard machine	12 seconds with knock-on weights 12-13.5 seconds with mid plane marking orient[3] for stick-on weights 10 seconds for average audit-only cycle	19 mm	34 kg	500-735 mm	13-20 inch
High Speed Option	10 seconds with knock-on weights 12-13.5 seconds with mid plane marking orient[3] for stick-on weights 10 seconds for average audit-only cycle	3/4 inch	75 lbs	19.6-29 inch	

Cycle Time: Light & Medium Truck Tire & Wheel (VTW-235)

Typical Application	Avg. Cycle Time @ 80 psi[1]	Bore Dia. Range (max)	Assy. Weight (max)	Assy O.D. (min/max)	Wheel Bead Dia. (min/max)[2]
Standard machine	14 seconds with knock-on weights 14-15.5 seconds with mid plane marking orient[3] for stick-on weights 12 seconds for average audit-only cycle	57 mm	54.5 kg	500-890 mm	14-24 inch
High Speed Option	12 seconds with knock-on weights 14-15.5 seconds with mid plane marking orient[3] for knock-on weights 12 seconds for average audit-only cycle	2 1/2 inch	120 lbs	19.6 - 35 inch	

Optional Equipment: Weight Application & Turnover

Model	Typical Application	Average Cycle Time[4]	Assembly OD (min/max)	Assembly Weight (max)	Modes of Operation
Turnover Fixture (TOF-40)	Passenger car Light & Medium truck	10 seconds 12 seconds	500-890 mm 19.6-35 inch	34kg / 75 lbs 54.5kg / 120 lbs	Operator-initiated, hands-off part turnover & transfer. Automatic part turnover & transfer
Correction Station (CS)	Passenger car Light & Medium truck	≤10 seconds	500-890 mm 19.6-35 inch	54.5kg / 120 lbs	Single-plane weight apply and powered transfer at weight apply station

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 throughout.

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-man weight apply is recommended for 10 second (360 parts per hour) or shorter cycle time.

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