

Passenger and Light Truck Tire Dynamic Balancing System

AkroDYNE™
TIRE DYNAMIC BALANCE MACHINE



The AkroDYNE™ Tire Dynamic Balancing System from Micro-Poise helps assure tire quality by measuring, grading, marking and sorting tires according to static, couple, and upper and lower plane imbalance.

▶ **Your Key Process Advantages**

- Lowest cost of ownership through the system lifecycle
- Operator friendly and efficient
- Fastest cycle time of any commercially available dynamic balance system

▶ **Your Key Technical Advantages**

- Best accuracy and precision due to the tight machining specifications of our spindle drive system
- Patented direct drive spindle
- Reliable tire inflation techniques
- Fully integrated with our Tire Geometry Inspection Systems (TGIS®)

Micro-Poise – critical finishing line solutions from the undisputed leader in supplying quality Measurement Systems to the Tire and Automotive Industry for more than 90 years.



Three Step Rim Adapter enhances production flexibility



Our ability to incorporate the Tire Geometry Inspection System (TGIS®) into the dynamic balancer station is unique



Spindle with measurement devices and transfer conveyor are the heart of the system



Convenient pendant station with simple, intuitive displays

Features and Benefits

The AkroDYNE™ Tire Dynamic Balance System is a fully automatic system used for 100% tire checking in production.

- ▶ Automatically adjusts to different tire widths and test conditions while process a variety of tires with various bead diameters (adapter dependent), outside diameters, section widths and weights.

All Micro-Poise® dynamic balancers utilize a “force measuring” imbalance-sensing system in conjunction with computer based software. There are several advantages to this system.

- ▶ The force measuring system accurately measures the imbalance in a wide variety of tires. This feature gives the tire manufacturer flexibility when using AkroDYNE in the finishing process and aids in maximizing production yields.
- ▶ The electronics are very stable and allow the machine to be set up for all types of production tires. Recalibration for varying tire sizes is not necessary.
- ▶ Tires are measured while inflated and rotating, simulating tire & wheel assembly conditions, and enabling bulge and dent detection by TGIS. Confidence of a quality measurement system for each tire tested is assured.

These features make the AkroDYNE Dynamic Balance System a high up-time, high-throughput and ergonomically friendly machine.

Technical Specifications

| Size and Range Specifications | Metric | US Customary |
|-------------------------------|-------------|----------------|
| Outside diameter (max/min) | 1100/500 mm | 43.3/19.6 inch |
| Bead diameter (max/min) | | 28/12 inch |
| Bead width (max/min) | 406/51 mm* | 16/2.0 inch* |
| Section width (max/min) | 457/135 mm | 18/5.3 inch |
| Inflation Pressure (max) | 4 bar** | 60 psi** |
| Tire Weight (max) | 55 kg | 120 lb |

* In 1/2 inch (12.7 mm) increments.

** Availability limited to specific inflation limits and dimensions.

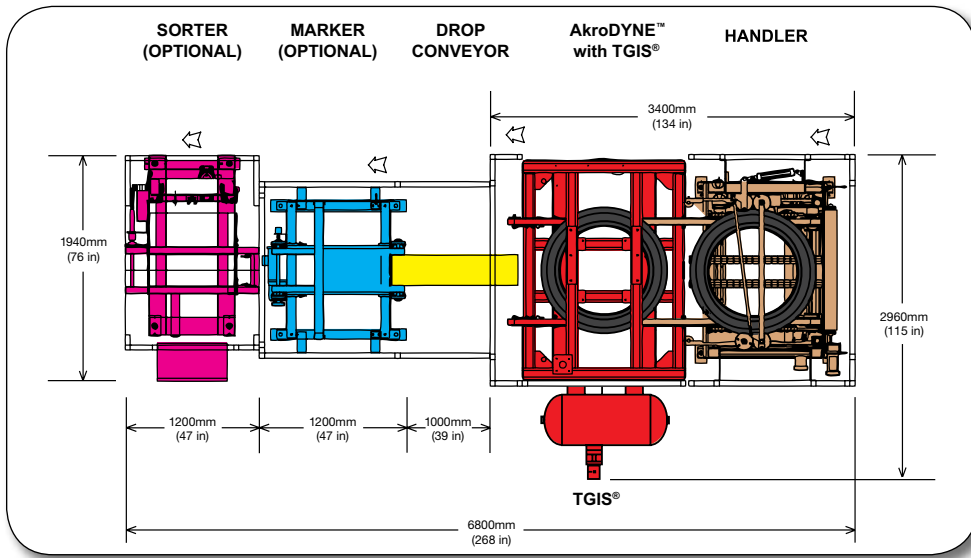
| Balance Measurement Range | Metric | US Customary |
|---------------------------|------------------|----------------------|
| Range | 30 g-m per plane | 40.0 oz-in per plane |
| Resolution | 0.013 g-m | 0.013 oz-in |

| Measurement Accuracy | Metric | US Customary |
|----------------------|-------------|----------------|
| Static | ≤ 8.6 g-cm | ≤ 0.12 oz-inch |
| Couple | ≤ 10.8 g-cm | ≤ 0.15 oz-inch |
| Planes | ≤ 10.8 g-cm | ≤ 0.15 oz-inch |

| Cycle Times | 30 psi balance | 4 bar geometry / 30 psi balance |
|--|----------------|---------------------------------|
| Time for complete cycle plus one orient for external marking preparation | 18 seconds | 22 seconds |

* Cycle times are specified using a P235/55R17 tire. Cycle time varies with tire size.

Layout Options



AkroDYNE™ Handler & Luber with tire centering



For tire grade marking, the optional AkroMARK™ hot stamp marker with support mechanism

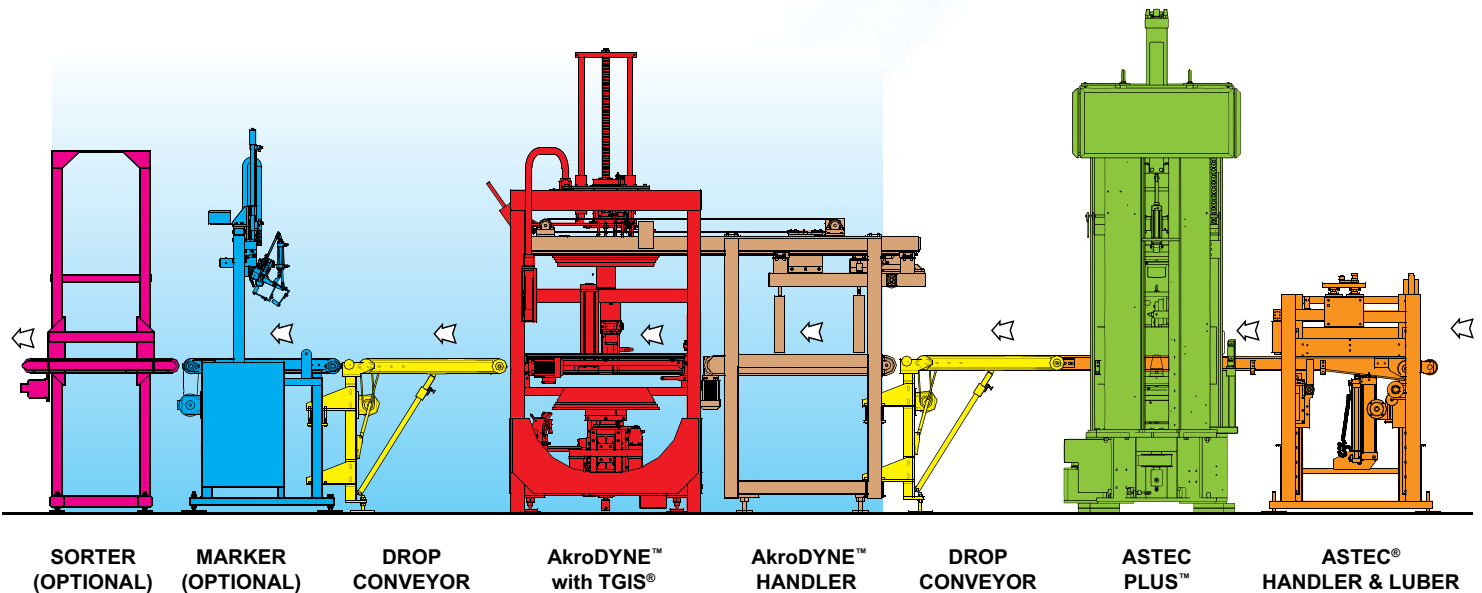
Layout showing base AkroDYNE™ with entrance conveyor and integrated tire geometry inspection system (TGIS®). This illustration also shows the exit drop conveyor for ease-of-access during maintenance, optional remote marking station and optional sorter.

Modular Tire Measurement Systems

AkroDYNE™ is a critical component of our Modular Tire Measurement Systems (MTMS), designed to optimize the tire measurement process for uniformity and dynamic balance measurements.

MTMS combines tire uniformity, dynamic balance measurement and tire geometry inspection into a single process. In its most efficient configuration, the total system cycle time is the fastest in the industry. In addition, each individual measurement station insures the best measurement precision and accuracy.

Auxiliary features include manufacturing operations communications (Level II), bar code reading, tire spotting and much more.



SORTER (OPTIONAL) MARKER (OPTIONAL) DROP CONVEYOR AkroDYNE™ with TGIS® AkroDYNE™ HANDLER DROP CONVEYOR ASTEC PLUS™ ASTEC® HANDLER & LUBER



Aftermarket **Products & Services**

To protect and maximize your investment, Micro-Poise has an established global Aftermarket Products & Services network that is unsurpassed in the industry. Our responsive and knowledgeable group will exceed your expectations for cost savings, performance and reliability.

- ▶ Technical services for start-up, on-going maintenance, preventative maintenance and training
- ▶ Parts and tooling, kits and repairs
- ▶ Machine modernization and full refurbish/rebuild capabilities

Worldwide Support



For a complete listing of all representatives, please visit our website at www.micropoise.com



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