

## Chassis Dynamometer for heavy & special vehicles

October 2007

In addition to the standard range of chassis dynamometers developed primarily for passenger car and light commercial vehicles, MAHA-AIP also provide a range of specialized systems that are custom designed and manufactured to meet with the exacting requirements demanded from our clients.

These include heavy-duty chassis dynamometers for testing commercial trucks, multi-axle vehicles and buses. These specialized machines bring a number of unique design challenges that MAHA-AIP have successfully met across emissions, endurance, low noise and climatic applications.

Structural Solutions Private Limited exclusively represents MAHA -AIP Inc., GEERMANY in India. Structural Solutions Private Limited is a professional engineering company engaged in offering highend technology intensive products to various Indian automobile industries

### Funktion-Performance Roller Test Stand FRP 8x8

The FRP 8x8 has been specially designed for conducting end of line quality and final check-out tests on commercial vehicles with 2-, 3- and 4 axle



Vehicle component diagnosis by using a variety of selectable test programs

Warm-up, through all gear steps in either speed- or traction regulation

- Speedometer test
- Standard- and automatic transmission
- Converter gear clutch
- Distribution gear box
- ASR-, TCS tests
- Differential locking tests
- Emergency steering pump tests
- Grinding of the vehicle brakes
- Speed- / cruise control tests
- ABS tests

### Testlane for Tractors



Specially designed for end-line quality- and check-out tests. Two vehicles can be tested simultaneously on the combination „two-axle function roller test stand and brake roller test stand

- High efficiency and cost reduction
- Short test intervals
- Max axle; load 13 tons

### Brake-Performance-Roller Test Stand for Forklifts BL

The BL test stand is a combined brake-performance roller test stand especially designed for model-, quality tests



Brake test examples

- Service brakes, parking brakes
- Single wheel switch
- Measurement values: brake force left / right
- imbalance, roller resistance
- pedal force left / right

## Stationary Function-Performance Test Stand LPS ST2AC

Roller test stand (4-motor units, one per roller pair) e.g. for the drive system development for heavy duty special purpose vehicles



Expensive test drives on the road are no longer needed, but can be simulated on a test stand providing reproducible results independent of weather conditions.

Determination of the wheel traction for the the total vehicle. (All components are already installed). The roll and flex losses are then compensated.

The test stand consists of 4 roller pairs, (roller sets) each non-positively connected to a AC motor unit. The roller sets are synchronized via a so-called "electrical shaft".

Each motor unit can be actively driven or braked.

## Stationary Function-Performance Test Stand LPS ST2AC

For in-house testing of special purpose vehicles (e.g. combine harvesters, construction machines, aircraft tractors, etc.) in the area of vehicle development or vehicle production

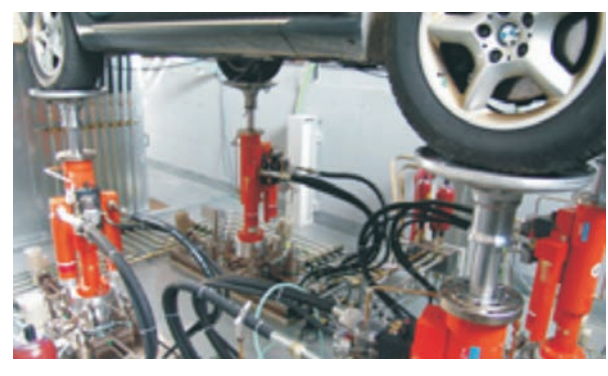


The test stand essentially consists of two self-aligning AC motor units.

Each motor unit can actively drive or brake and is connected via a gear and cardan shaft to the wheel hub of the driven vehicle axle

## Hydraulic Road Simulators

Hydraulic road simulators are used mainly in development, research and test departments. Real and/or synthetically created road conditions are initiated in vehicles with road simulators



## Applications

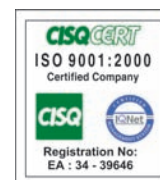
- Research of endurance stability/signs of fatigue
- Noise analysis of total systems and individual components
- Serviceability analysis
- Optimization of spring and damping prop

For further product & application details please contact

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