

## PRIDE OF AUTOMOTIVE TESTING

November 2007

MAHA-AIP has a long tradition in planning and producing Chassis Dynamometers. They are covering all important application areas like emissions, performance, climatic and NVH. The systems have standard interfaces to the All & Other emission systems and therefore MAHA-AIP can provide a complete test facility out of hand.

Structural Solutions Private Limited exclusively represents MAHA -AIP Inc., GEERMANY in India. Structural Solutions Private Limited is a professional engineering company engaged in offering high-end technology intensive products to various Indian automobile industries. Their automation systems in combination with the long lasting and low maintenance dynamometers MAHA-AIP is once more ahead with an outstanding technology

Dynamometer, "dyno" is a machine used to measure torque and rotational speed (rpm) from which power produced by an engine, Dynamometers are used to provide simulated road loading of either the engine (using an engine dynamometer) or full power train (using a chassis dynamometer)

### Emission Chassis Dyno ECDM 48L / 4x4



48" Emission Chassis Dyno (motor-in-the-middle principle) for rear-, front- and/or 4WD-vehicles

### Emission Chassis Dyno ECDM 20L / 4x4



20" Emission Chassis Dyno (double rollers) for rear-, front- and 4WD Vehicles

### Performance features

- Precise, reproducible mass-simulation inertia range 1.000 ... 6.000 lbs (standard)
- Accuracy exceeds EPA-requirements
- Excellent 4WD-synchronization
- Low wear and low maintenance
- Intelligent bearing concept  
no test stand 'warm-up' required
- Fast data availability  
simple, comfortable test stand setup and operation
- Roller width 90" (EPA-standard = 86") .

### Mileage Accumulation Chassis Dynos CDM 48L/M and CDM 62.6 L/M

For endurance-tests of complete vehicles, vehicle components or vehicle lubricants



Roll diameter 48" or 62,6"

- Inline-design
- Motor-in-the-middle design (mim)
- Interface to Throttle actuator or drive robot systems
- Multi channel data logger (test stand automation)
- Vehicle cooling fan
- Automatic fueling systems
- Test speed up to 250 km/h (modular packages)
- Noise absorption features

## Function- and Performance Chassis Dyno CDM 72 (Wind tunnel, Climatic-Chamber)

for the reproducible road simulation for cars, vans, truck And special vehicles



Roll diameter e.g. 48" or 62,6"

## Function- and Performance Chassis Dyno (multi motor)



Roll diameter e.g. 72", 62,6" or 48"

### Features

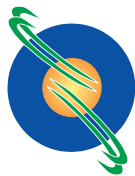
Each roll can has its individual motor, electrically synchronized by the MAHA ,syncrodrive'module.

- Inline-design
- Multi-motor-design
- Motor-in-the-middle design (mim)
- Special vehicle restraint system
- Test speed 260 km/h and more
- Especially designed test stand decking for the use in wind tunnels or test cells with rain- or snowfall simulation
- Optional various performance- and temperature range packages available
- Optional integrated tyre cooling

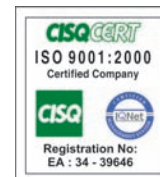
All of us at SSPL are committed to a high level of customer satisfaction and hope you will give us an opportunity to serve you

For further product & application details please contact

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## Acoustics Chassis Dyno CDM 75L / NVH



Roll diameter 48" or 75"

For the measuring and analysis of

- External noises & Internal noises
- Inline-design
- 4-motor-design (individual drive motors for ea. roll)
- Motor-in-the-middle design (mim)
- Different roller surface concepts
- Special roll insulation to avoid ,bell effects'
- Water cooled drive motors
- Integrated lifting platforms or vehicle lifts
- Special vehicle restraint system
- Drive motors, rolls and test stand decking are isolated to reduce the background noise level to a minimum 41 dbA at 50 km/h
- Test speed up to 250 km/h
- Various power- and environmental packages available (options)

## EMC Chassis Dynamometer CDM 37,5L / EMC



Roll diameter 37,5"

- Special MAHA-AIP motor design to avoid emission of electro magnetic disturbance
- 4-motor-design (individual drive motors for ea. roll) rolls can be controlled individually,
- Option: pneumatic brake, - clutch actuator as well as steering wheel actuator designed for EMC test
- Option: turn table, integrated in the test stand decking, to align the test vehicle into different angle position towards the EM-antenna while driving the vehicle on the rolling road
- Test speed up to 200 km/h (other configurations upon request)