

**TCA-M 20<sup>4x4</sup>**  
up to **TCA-M 50<sup>10x10</sup>**

## Automotive Test Equipment



### Multi-axle tester for end of line testing of trucks and buses

**Motor and auxiliary brake power, brake and ABS testing all in one tester, resulting in minimum footprint**  
**Simultaneous testing with individual AC drive units per wheel to establish a short test time**  
**Flexible, modular (TCA-M) design for future extension from 1 up to 5 axles**  
**Adjustable ground clearance and contact angle resulting in optimal flexibility and safety**  
**Position-controlled retaining rollers (Fit-to-tire) to adapt to vehicle specifications**

#### TECHNICAL SPECIFICATIONS

Main rollers	Ø 500 x 1060 mm
Roller surface sprayed	Tungsten carbide, plasma
Friction coefficient tire to roller ( $\mu$ )	1,0 – 0,8
LH & RH roller distance (inside / outside)	840 / 2960 mm
LH & RH side roller distance (outside effective)	2800 mm
Distance between roller centrelines within roller pair (adjustable roller pitch)	520-900 mm
Bogie axle range	1100 - 1530 mm
	Wheel base range front and second rear axle
	Rotating mass equivalent

inertia approx. 1100 kg / roller pair  
 Maximum axle load 13.000 kg

#### Performance

Maximum speed	120 km/h
Maximum speed (limited time)	140 km/h
Brake / ABS tests	
Tractive force all wheels simultaneously, speed range 0-8 km/h (max. 30 sec):	15 kN / wheel
Power test (truck drive the roller)	
- Power range (max. 60 sec at constant speed)	up to 400 kW (550 kW peak)
- Speed range	70-90 km/h

*Auxiliary power test (roller bench drives the truck)*  
 - Power range (max. 60 sec at constant speed) up to 325 kW  
 - Speed range up to 70 km/h

**Drive motor (2 per axle) Nominal power** 160 kW AC

*Power requirement*  
 400 V, 50Hz, 3 phase, earth 400 A nominal, 700 A peak  
 230 V, 50 Hz, 16 A

*AFE power supply* Siemens

*The power supply for the drive motors is equipped with an Active Front End, AFE features:*

- Regenerative feedback into the line supply with power factor ( $\cos\phi$ )  $\approx$  1
- Sinusoidal line currents - low harmonics are fed back into the line supply.
- No commutation faults even when power fails during regenerative operation.

*Depending on the power-supply company, the operating cost can be lower due to the minimised reactive power.*

*ambient temperature range* 0 °C to +40 °C  
*relative humidity* < 90% at +18 °C (non condensing)

**Pit dimensions (L x W x D) approx.** 15 x 6,3 x 2,5 m  
*(suitable for upgrade up to 5 axles)*