PERFORMANCE MEASUREMENT TECHNOLOGY **DYNAMOMETERS**

MSR 500/1 CAR
VP 230035

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The MSR 500/1 single roller dynamometer is used in workshops for designers and tuners as well as in educational institutions. It is especially suitable for performance measurements, tuning and diagnostic work on particularly powerful vehicles. With test speeds of up to 300 km/h, it is used for dynamic and static power measurement. The MSR 500/1 CAR guarantees optimum measurement accuracy and reproducibility through the active measurement of the towing power.

PRODUCT DETAILS/ACCESSORIES

Description:
- Single-axle single roller dynamometer for cars with axle load of up to 2.4 t, eddy-current brake included, ideally suited for performance measurements, tuning and diagnostic work in powerful vehicles

- Test speeds of up to 300 km/h
- Tyre rolling action as it would be on the road
- Tyres are preserved as a result of limited flexing action
- Simple restraining mechanism for quick vehicle fixation

High level of flexibility in use due to extensive variety of operating modes, covering all fields of application:
- Static power measurement at constant RPM
- Static power measurement at constant speed
- Static power measurement at constant tractive force
- Dynamic power measurement with adjustable acceleration
- MAHA towing power measurement guarantees the highest degree of accuracy when measuring power: Precision calculation of the parasitic losses of the dynamometer, of the vehicle's drive train and the tyre to roller friction and flex losses
- Tachometer testing with up to ten freely selectable test points
- Distance measurement included
- Stopwatch function for measurement of acceleration between optional speed markers as standard
- Optional load simulation with freely programmable load profile
- Optional driving simulation with freely programmable speed profile
- Option of storing programmed profiles in database

Professional, intuitive-use software for the highestexpert standards with:
- continuous graphic display and recording of up to 16 freely selectable parameters per performance measurement cycle on one measurement screen.
- In addition to the current performance measurement cycle, fade-in of up to three stored cycles on the measurement screen for optimum comparability during calibration work
- Two circular dial displays for RPM and speed as well as current oil temperature display, ensuring constant control of key parameters during performance measurement
- Determination of wheel power, power dissipation, engine power and torque
- Standardised extrapolation of motor power in line with DIN 70020, EEC 80/1269, ISO 1585, JIS D 1001 and SAE J 1349 (configuration-dependent)

- Circular dial display of motor power, RPM, speed and tractive force during simulation cycles
- Colour-highlighted user prompts integrated within the circular dial facilitate the accurate reproductionof simulation cycles
- With radio remote control as standard for complete control of the dynamometer from within the vehicle.
- Radio remote control with long-life battery and charging station
- Cooling fan switched on and off eitherat the control console or with the radio remote control

- With interface box including stand and long connection cable as standard for optimum placement at the dynamometer with MAHA plug-in CAN-DRZ module card for connecting RPM

sensor.
- Interface box optionally upgradeable with MAHA plug-in card for comprehensive recording of external Ambient data such as air temperature, air pressure, rel. humidity and intake temperature
- Interface box optionally upgradeable with MAHA plug-in analogue input module card with 4 sensor inputs for temperature and pressure sensors or lambda sensors.
- Optional connection of MAHA MGT 5, MDO 2 LON and MET SERIES emission testers
- Optional connection of Krupp/AIC fuel consumption measuring instruments for petrol- and diesel engines

MCD 2000 Communication Desk Description
- Robust and multifunctional metal encasement
- Integrated switch cabinet for housing electronic components
- Lockable drawer for keypad and PC mouse and storage compartment for small items of equipment
- VESA standard bracket for holding the all-in-one PC or PC monitor
- Can be extended with optional PC storage compartment or side shelves
- Varnished with high-quality powder coating: window grey, RAL 7040 (switch cabinet) anthracite grey, RAL 7016, (side faces)

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MCD 2000 Standard Delivery
- MCD 2000 Communication Desk
- interface box 1 including stand and connection cable with plug-in environment module (CAN-PTH module) card for recording air temperature, air pressure, humidity with plug-in RPM module (CAN-DRZ module) card for RPM recording via trigger clamp, light signal sensor, piezo clamp, clamp W and TDC sensor (insertion of max. 4 modules per box possible)
- Radio remote control for dynamometer operation with battery and charging station
- Cooling fan control
- Measuring program

Roller Set Standard Delivery:
- Robust self-supporting, closed roller set with an eddy-current brake
- Varnished with high-quality powder coating: Anthracite Grey, RAL 7016

COMMUNICATION DESK TECHNICAL DATA

Desk dimensions (W x H x D)	860 x 1500 x 420 mm
Power supply	3/N/PE 400 V 50 Hz
gG fuse	63 A
Weight including packaging	approx. 150 kg
Converter cabinet (W x H x D)	800 x 1000 x 400 mm
Axle load	2500 kg
Weight	approx. 1300 kg
Rotating mass per roller set	approx. 280 kg
Min. track	700 mm
Max. track	2200 mm
Roller diameter	504 mm
Roller set dimensions (L x W x H)	1095 x 3324 x 512mm
Max. air pressure	7 bar
Max. test speed	300 km/h
Max. (static) wheel power	260 kW
(dynamic) peak	> 1000 kW
Max. tractive force	6 kN
Measurement accuracy	
Wheel power measurement	+/- 2% from measured value
Roller superelevation	5 mm
Electricmotor with drive power (optional)	22 kW

ACCESSORIES

VZ 910208	Industrial PC Compact with Windows 11 -NET PRICE
VZ 955275	Holder for Compact/Performance PC, suitable for placement inside MCD 2000 desk
VZ 910052	PC Keyboard and Mouse -NET PRICE
VZ 910091	A4 Ink jet colour printer (incl. printer cable) -NET PRICE-
VZ 910200	PC Flat screen 24 VGA/DVI/HDMI, (TFT standard) -NET PRICE-
VZ 910192	LED simultaneous display unit 43 incl. pedestal, HDMI -NET PRICE-
VZ 955244	Rotatable & Folding Wall Holder f. TFT Industrial- or TV Flat Screens (up to 47)
VZ 910179	HDMI Cable 15 m -NET PRICE-
VZ 910180	HDMI Cable 30 m -NET PRICE-
VZ 910181	HDMI Splitter, 4-port incl. 2 m cable -NET PRICE
VZ 955274	Side Shelf for Comm. Desk EUROSYSTEM MCD 2000

VZ 955277	External PC Storage Shelf for Communication Desk EUROSYSTEM MCD 2000
VZ 990275	Interface Box 2
VZ 911145	Pressure Temperature Module (CAN P2T2 Module)
VZ 911240	Analogue Input Module (CAN-AIN4 Module)
VZ 990438	Analog Outputs at Terminal Strip (4 pcs), f. LPS 3000/MSR
VZ 990221	RPM Light Signal Sensor w. reflective spots, 6 m connection cable and holder
VZ 990211	Trigger Clamp for MGT 5, LPS 3000 with Cable (6 m)
VZ 990225	MDO2-LON, MDS-1, MGT5,LPS 3000 Oil Temperature Sensor f. Cars l 100 - 1500 mm, w. 6 m cable
VZ 990276	TEMP Exhaust Temperature Sensor, max. 1000 degrees C, manu factured on customer's request
VZ 911150	Software Module Emission 1 driving cycle, (load adaption)
VZ 911151	Software Module Emission 2 lug-down incl. release diesel emission testing under load
VZ 990278	Board for Krupp/AIC Fuel Consumption Testers (DT Module)
VP 994013	Fuel Consumption Meter for Cars MODEL: AIC-1204 HR 2000
VZ 975498	Connecting Kit for PetrolPowered Cars, pressure control valve for AIC-1204 HR 2000
VZ 975499	Connecting Kit f. DieselPowered Cars, Adapter for AIC-1204 HR 2000
VZ 994014	Carrying Case for AIC-1204 and Accessories
VZ 990427	Wideband Lambda/AFR kit for lambda value or AFR display in test stand software
VZ 911152	Connection Package Petrol Emissions for test chamber connection,
VZ 911153	Connection Package Diesel Emissions for Connection of Test Chamber
VZ 911154	Connect. Package Diesel Emissions Hand Termin. f. connect. of MDO2/MDO2LON hand terminal
VZ 911155	Connection Package External PC-Measur. Station Emissions
VZ 935266	Set of Anchor Rails for Vehicle Restraint System
VZ 935268	Set of Ground Sleeves 140 mm for Vehicle Restraint System
VZ 935267	Set of Ground Sleeves 190 mm for Vehicle Restraint System
VZ 935191	Standard Vehicle Restraint System
VZ 935230	Attachment Points for Anchor Rails (4 pcs)
VZ 935215	Ni/Cr Coating for Running Rollers (4WD Dynamometer requires 2x VZ 935215)
VZ 935219	Preparation for Additional Eddy Current Brake for MSR 500/1 Car
VZ 935216	Additional Eddy Current Brake for Retrofitting Dynamometers of the MSR Series
VZ 950062	Converter Cabinet for Control of Drive Motors (only in conj. with MSR 500/1 Car)
VZ 975652	Calibration Device LPS R50/R100/R 200 universal (Telma CC 160, CC 330)

SUPPLEMENTARY CHARGES

VT 998179	Internal transport -SOUTHMSR Car One-axle
VT 998180	Internal transport -NORTHMSR Car One-axle
VM 996165	Installation costs MSR with initial start-up and basic instruction -at cost-
VM 996066	Installation costs for Fuel consumption meter model: Krupp/AIC