

DTTM - Drum Tire Testing Machines

A powerful, modular test machine concept

A powerful, modular test machine concept according to valid regulations, customizable to meet your requirements. High precision measurement solutions and hydraulic systems, which were especially developed in-house for tire testing equipment, offer unique test stand solutions with extended life-time. The modularity offers easy extension and modification for changing requirements. The high quality standards assure good value for your investment.

- 1-; 2-; 4-Position test stands
- Rolling Resistance-Measurement
 - ISO 28580/ 16377/ 9948/ 1816
 - R 117, GB/T 29042-2012
 - SAE J2452/ J1269/ J1270
- Non Uniformity-Measurement
 - ISO 13328/ 23671,
 - SAE J2730/ J332/ J2731
- Force & Moment Measurement
 - SAE J1106/ J1107/ J1987
- High-Speed-/ Endurance-Testing
 - FMVSS 109/ 119/ 139
 - ISO 10231/ 10191
 - SAE J1561/ J1633
 - UN ECE R30/ R54/ R64/ R75/ R106/ R108/ R109
- Wear-Testing
- Cleat-Testing
- Motorcycle-, Passenger-, Light Truck-, Truck and Bus-, OTR-, Aircraft- tire testing
- Solid-tire testing
- Various drum diameters
- Hydraulic-, pneumatic-, electric loading
- Variable design concept
- Customized layouts, designs, measurements
- Camber and slip variation
- Economic operation with Altracon **Efficient Power Consumption Management – EPCM**
- Tire failure early detection and prediction with Altracon **Failure Detection System - FDS**
- Tire dynamic growth measurement
- Remote Service interface



Typical Technical Data

PARAMETER		Specification
Drum Module and Drive	Road Wheel Type	Steel welded (tbd)
	Material	Steel 1.0036 (DIN)
	Road wheel diameter	1.700/ 2.000/ 3.000/ 5.000mm
	Road wheel diameter accuracy	+0/ -0.2mm
	Road wheel Width	300 ... 1.200 mm
	Road Wheel Runout (radial and lateral)	< 0.2 mm
	Surface roughness	< 0.5 µm
	Road wheel balance	VDI 2060 Accuracy class Q 6.3
	Levelness road wheel axis	< 0,2mm/ 1000mm
	Tire axis vs. road wheel surface parallelism	< 0,3mm/ 1000mm
	Cleat fixation on road wheel surface	On request
	Max. Speed	≤ 500 km/h
	Speed Instrumentation Accuracy	+/- 0.01% FS
	Speed Control Accuracy	+/- 0.1 kmph
	Acceleration	20km/h in < 30 sec adjusted
	Operation Temperature	10 - 50° C
	Time measurement accuracy	1ms
	Hydraulic Power Unit	Rexroth
	Drive torque transmission	Pulley wheel/ direct drive
	Drive Unit Motor Power	AC servo Drive, power tbd.
	Voltage	400V 50/60Hz
Wheel Load Station	Tire Diameter / Loaded Radius (RL) Range	customization
	RL Accuracy	± 0.1 mm
	Effective Rolling Radius (Re) Range	no limits, calculated value
	Re Accuracy	± 0.1 mm
	Carriage Travel Speed Loading	standard 5 mm/s, fast gear 25mm/ s (customizable)
	Bead-/ rim diameter	11 ... 24"
	Rim width range	4 ... 15"
	Max. Section Width	Depending on drum width
	Load Range	0 ... 300 kN (30 t)
	Load Instrumentation accuracy	0,01% FS
	Load Control accuracy	± 3N
	Camber angle adjustment range	± 10°
	Camber angle measurement accuracy	< ± 0.05°
	Slip angle adjustment range	± 15°
	Slip angle measurement accuracy	< ± 0.1°
	Tire tread surface temperature measurement range	15 ... 150°C
	Tire tread surface temperature measurement accuracy	± 1°
	Inflation pressure (Pi) regulation range	0 ... 600 kPa/ ...1MPa/ ... 2MPa
	Pressure Instrumentation accuracy	± 0.1% FS
	Pi Control Accuracy	± 1.0 kPa
	Pi Control Capability	Cap & Control
	Test Standard	Customizable, technical specification according to valid regulations

Altracon HMI with workstation

The system is equipped with a state of the art Operator Workstation including a large LCD monitor for machine control and an additional LCD monitor for the optional monitoring system. The Workstation is the human machine interface (HMI) to fully control the machine function as well as test definition, execution and standard reporting guided by a graphical user interface (GUI).

Test recipes are stored in a database as well as all the measurement- and test data. The GUI design is customized as well as the standard test report. All data can be exported to be further treated with common analysis tools. The operator dialogue is switchable between multiple languages.

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Altracon Software package

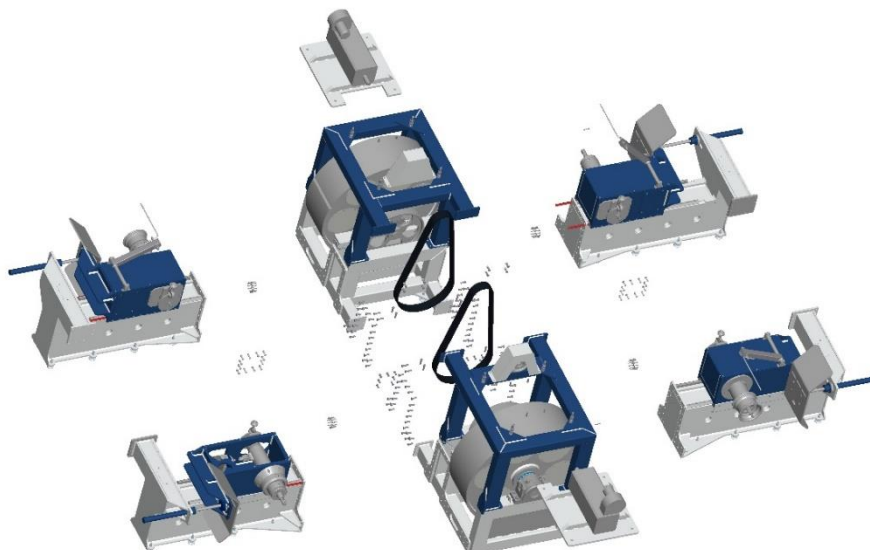
The main functions of the software package besides the base capabilities are

- Test Management
- Controller and Test-Setting Database operation
- Data post processing
- Extended Display of online signals
- Extended Data Reporting
- Sensor and component database support
- The test program is customizable

The operator dialogue is multi-lingual switchable.

The GUI design is customized as well as the standard test report. All data can be exported to be further treated with common analysis tools, i.e. to MS EXCEL. Test reports can be copied and pasted to MS WORD and allow a fast and easy to handle integration into customized reports.

Modular machine concept



Variable machine concept with standardized interfaces



20 tons 2 Pos. Test machine for Agricultural Tires with tire footprint plate (left station)



5 tons 4 Pos. Test machine for Passenger and Light Truck Tires

Contact us to learn more about **Altracon** ● *the solution provider*