

30t / 2 Pos. Endurance Tire Testing Machine

Strong and reliable tire testing of Farm Tires

The **2 Pos. Farm Tire Endurance Testing Machine** made by Altracon is a heavy duty machine with multiple built in design- and functionality-features such as

- Rolling Resistance-
- Plunger-
- Footprint-Testing

capabilities, combined with incredible performance values. It is designed for 20t or optional 30t wheel load capability for up to 2.500mm diameter tires.

The test machine is equipped with a 3.000mm road-wheel/ drum. It is driven by a high performance AC servo motor with direct drive torque transmission. An optional emergency brake-/ lock- system may be applied to the drive spindle to stop and block the drum. The test-wheel axis is equipped with a spin lock-/ brake system. Different test rims are adapted with adapter rings available for each wheel spindle. Special machine rims are available on request.

The wheel load is applied and measured directly in the vertical wheel axis, which keeps the wheel carrier free from bending torque. High precision linear guides care for smooth motion of the wheel carriers and contribute to best control performance with highest accuracy.

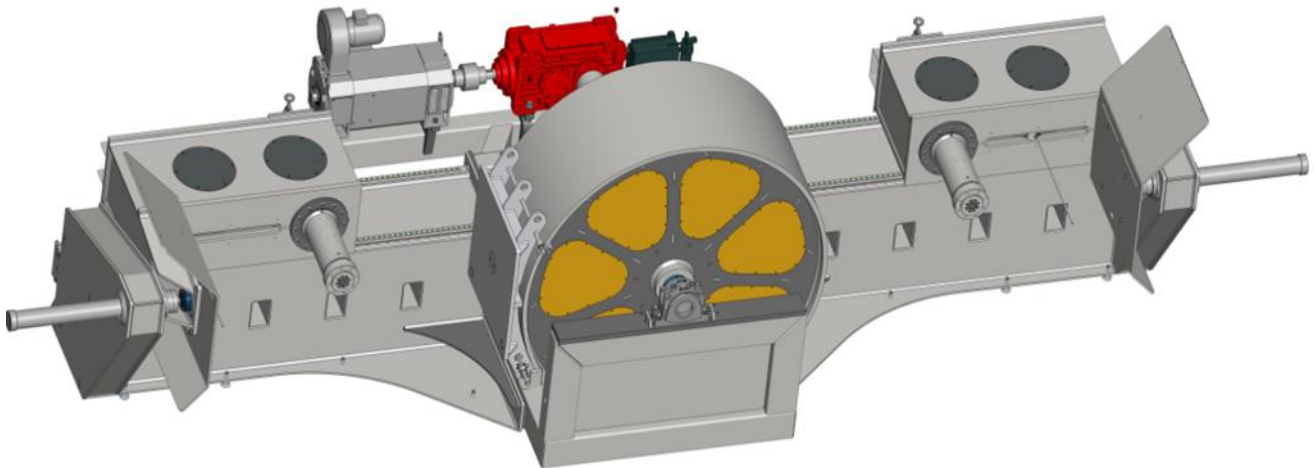
A bulge detector systems care for emergency unloading of the test position in case of a fault detection.

The test stand includes an inflation pressure control system including cap test function and may be optionally equipped with a tire inside air temperature measurement system with a rotary transducer or with a 3 channel RF wireless data transfer system.



A foldable platform for ink-footprint applications can be mounted at the center module and will be clamped to the drum, which is then locked for spinning. The platform offers a flat and vertically adjusted surface to load the wheel/ tire to take the footprints. Paper is kept in position with magnets. The same platform will be used to hold a plunger pin for plunger testing. The standardized length of the pin limits the maximum wheel diameter which can be tested, therefore is the wheel carrier optionally extended at the side where this test is foreseen to be performed.

Altracon machines are generally equipped with a TCP/ IP remote service connection to enable immediate access to the system by our specialists via customer controlled VPN tunnel in case of emergency, assistance or any other cases of urgency. The machine and its measurement equipment comply with the regulations for all valid standards in terms of set-up/ design and accuracy and supersede the set requirements in many cases.



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.

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. Test reports can be copied and pasted to MS WORD and allow a fast and easy to handle integration into customized reports.

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

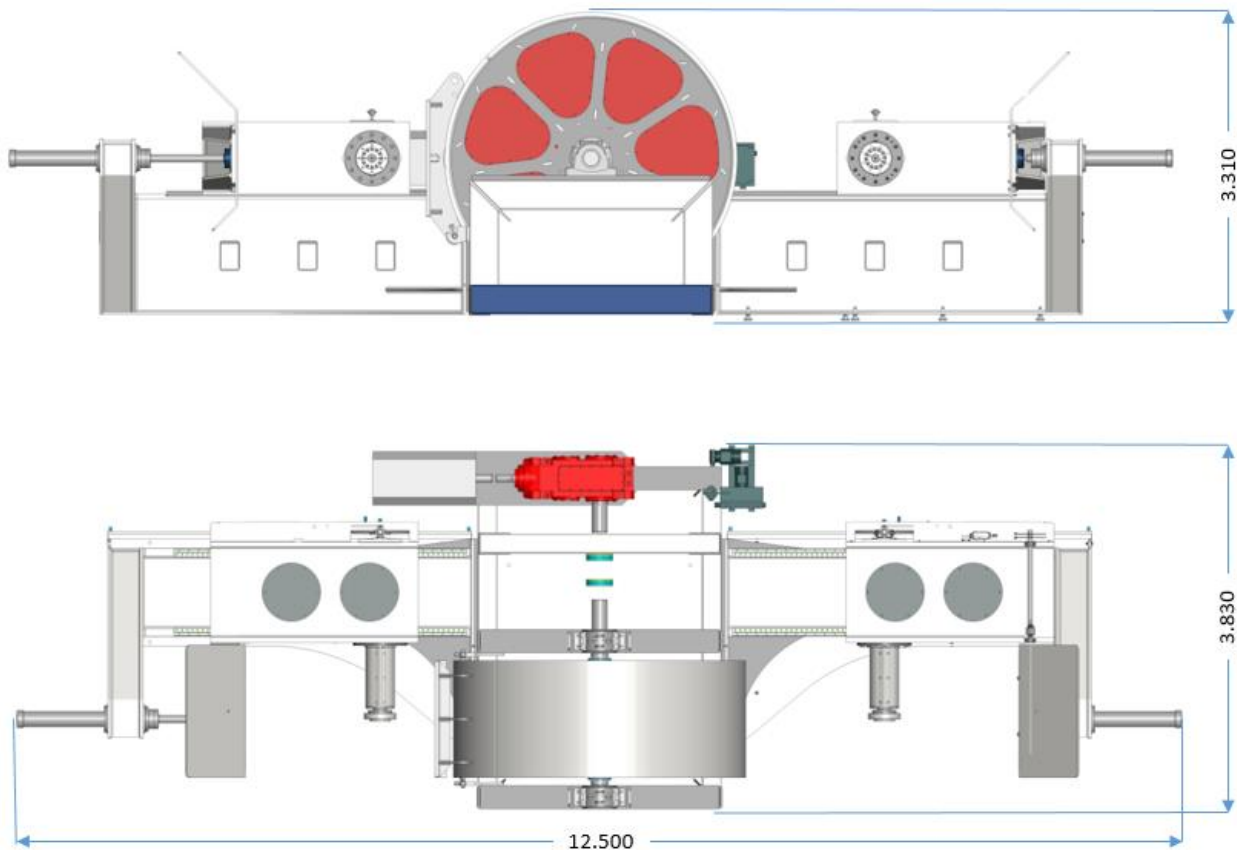
The operator dialogue is multi-lingual switchable.

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.

Technical Data of the 2 Pos. Farm Tire Endurance Tire Test Machine

PARAMETER	Specification	Remarks
General		
No. of Loading Positions	2	
Tire Class	Farm / OTR	
No. of road wheels	1	
Drum module and drive		
Road Wheel Type	Steel welded (tbd)	
Material	Steel 1.0036 (DIN)	
Road wheel diameter	3.000mm	Up to 5.000mm available
Road wheel diameter accuracy	+0/ -0.2mm	
Road wheel Width	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	none	
Max. Speed	≤ 120 km/h	
Speed Instrumentation Accuracy	+/- 0.05 kmph	
Speed Control Accuracy	+/- 0.1 kmph	
Acceleration	20km/h in < 30 sec	
Operation Temperature	10 - 50° C	
Time measurement accuracy	1ms	
Hydraulic Power Unit	Rexroth	
Drive torque transmission	Direct drive (gear-box)	
Drive Unit Motor Power	AC servo Drive, power ~260 kW	
Voltage	400V 50/60Hz	
Wheel load station		
Tire Diameter Range	600 ... 2.500 mm	
Loaded Radius (RL) Range	250 ... 1.250 mm	
RL Accuracy	± 0.1 mm	
Effective Rolling Radius (Re) Range	no limits, calculated value	
Re Accuracy	± 0.1 mm	
Carriage Travel Speed Loading	≤ 20mm/s adjustable, multi-level storage	
Bead-/ rim diameter	15 ... 52"	
Max. Section Width	1.200 mm	
Load Range	0 ... 200 kN (20.000 kg)	optional 0 ... 300 kN
Load Instrumentation accuracy	1/32.000 FS	
Load Control accuracy	± 100N/ 1.5% FS With 200 kN load capability	± 150N/ 1.5% FS with 300 kN load capability

PARAMETER	Specification	Remarks
Inflation pressure (Pi) regulation range	0 ... 12.5 bar/ 0 ... 1.250 kPa (measuring range 0...1.600 kPa)	Range 1) 0...500 kPa/ Range 2) ≥ 500...1.250 kPa
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
Optional Measurement Equipment		
Rolling Resistance (RR)-measurement range	0 ... 8.000 N (with 200 kN max. load)	0 ... 12.000 N (with 300 kN max. load)
RR instrumentation accuracy	0.2% (10 kNm)	0.2% (15 kNm)
RR repeatability	0.03% (10 kNm)	0.03% (15 kNm)
RR Drift	0.03% (10 kNm)	0.03% (15 kNm)



Altracon Farm Tire Endurance and Rolling Resistance test stand with 3m drum diameter and foldable platform for ink-footprint and plunger testing

Contact us to get your customized test stand! **Altracon**  the solution provider

www.altracon.com