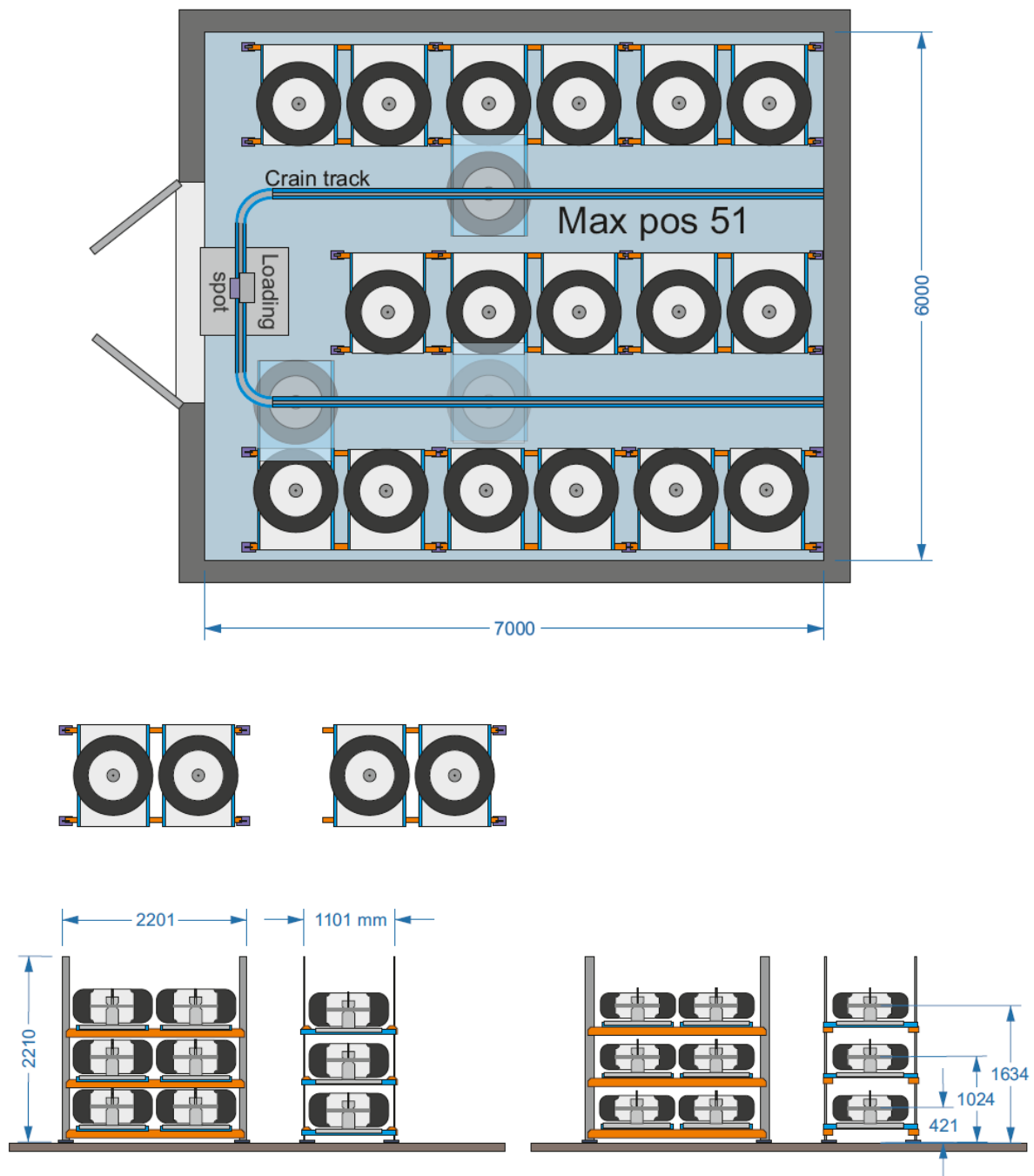


ART – Air Retention Test Facility

Rate of inflation pressure loss testing

Rate of inflation pressure loss testing is deemed to being a mandatory material test according to ASTM F 1112-06a standards. Altracon offers a turnkey solution for a fully equipped test room, customized in terms of the number of tires to be tested.



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The tires are horizontally stored in a three story rack system. In the exemplary set-up shown on the sketches, three rack lines are positioned longline within the test room. They will keep up to 51 tires, whereof 36 stations are prepared for PCR and 15 for LTR tires. However, any other configuration is possible for customization. Stations for PCR and LTR differ through their compartment height which is adaptable at the time of installation. A mono-rail system between the racks allows easy loading and unloading with a handling crane which is moved by hand.

Each position is equipped with an extractable base to enable easy feeding from the top, assisted by the handling crane. The tires are mounted on rims which are not part of the offer. The assembly will be positioned on cones for testing.

The tire is ready for testing after the sensor has been mounted to the valve of the probe with a Y-adapter, which also allows inflating through a by-pass. The HMI is the control PC which is located external of the testing room. Alternatively each positions condition may be also displayed on a WIFI connected handheld Display (Tablet PC). This is also foreseen to be used as operators interface and remote control inside of the testing room. It shows all specific data and testing parameters for each testing position. Recording of the DOT number is possible either manually or by reading the barcode information with the in-built camera of the Tablet PC.

The inflation of the tire is done automatically through a temporarily connected, central inflation pipe/ tube, commanded by the Tablet PC. The target inflation will be addressed individually for each specific station. Relevant testing data of the tire and its environment, such as inflation pressure, room temperature, humidity and atmospheric pressure, will be recorded in free configurable time intervals during the test. The data storage is done on a permanent memory of the PLC control.

The physical separation of the operating PC and the data recording as well as a battery back-up system (UPS) ensure best reliability of operation even if there should be a breakdown of power supply or the requirement of a re-start. An interruption of the network or of the control PC will with this not lead to a loss of data.

The software allows a window-supervision of the specific measuring data, which generates an alarm and a log-information if previously defined limits are exceeded.

The sensors specification meets ASTM F 1112-06a requirements in any case. The provision of sensors that offer even higher precision is possible.

Key Features

- Multi-level rack storage
- Adjustable compartments for PLT / TBR tires
- Extractable base system
- Easy feeding with handheld crane
- PLC controlled inflation pressure setting and measurement
- HMI with handheld PC for remote operation
- Precision inflation pressure sensors
- Non-dissipative tube connections

- Tire diameter max. 1100mm
- Tire width max 800mm
- Inflation pressure max. 10 bar
- Accuracy +/- 0,03% FS



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