Application
The air permeability tester ToniPERM II is designed for the determination of the specific surface of powders, especially suitable for the permanent control of manufacturing characteristics in the daily laboratory work. This measuring procedure serves as practice oriented alternative for the standard procedures according to EN 196 as well as ASTM C 204.

Advantages
- 5,7" color display with touch screen operation for intuitive and user-friendly operation
- an alternating operation with two measuring cells enables higher test frequency (two measuring cells are included in the standard delivery)
- height adjustable optical sensors for adjustment of the test time of different types of material
- integration of the environmental temperature into the calculation of the specific surface
- density, initial weight and porosity selectable acc. to the specific samples
- calibration using reference materials feasible
- integrated space for storage of consumables and reference material
- any number of K-factors can be stored
- runtime indication resolution: 0.1 sec
- calculation of the specific surface based on any number of single measurements on one powder bed
- integrated data base for storage of up to 300 measuring results including all test parameters
- integrated data base for storage of materials with different density and porosity
- possibility to connect a printer for automatic raw data print out
- USB interface for easy and fast export of test results including the test parameters to a data carrier in CSV format
- possibility to connect a dial gauge for automated compensation of compaction deviations
- increased accuracy, as the result can be determined by any number of measurements on a sample
- pre-stroke function (measurement run without consideration of the results) causes a self-compression of the sample to avoid measurement errors
- two integrated windows for monitoring the level and degree of contamination of the manometer fluid
- ability to subsequently change the correction factor (K-factor) for an extended result evaluation
- improved comparability of the measurement results by separately calibratable measuring cells (compensation of minimum volume differences of the measuring cells)

Design / Operating Principle
Using the plunger the powder will be compacted within the permeability cell to a defined volume. After the selection of the test material from the material data base and the entry of the test-specific parameters, the test is carried out fully automatically. Via a U-tube manometer, which is equipped with adjustable light barriers, a negative pressure is generated by means of a solenoid valve and a diaphragm pump. This negative pressure is compensated by an amount of air flowing through the powder bed in the measuring cell. Then the ToniPERM II automatically evaluates the test, displays the result and stores the result including the test parameters in the database.
Optional Accessories

Electronic dial gauge, model 6575.003  
for automated compensation of compaction deviations

Anti-twisting device, model 6575.004  
for fixing the plunger against turning

Manometer fluid, model 6500.050  
light mineral oil / 3 bottles of 30 ml each

Reference material, model 7207.012  
fineness approx. 2800 cm²/g, officially certified

Reference material, model 7207.013  
fineness approx. 4000 cm²/g, officially certified

Reference material, model 7207.016  
fineness approx. 6000 cm²/g, officially certified

Reference material, model 7207.017  
fineness approx. 9000 cm²/g, officially certified

Further reference materials are available on request.

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Technical Data

<table>
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<tr>
<th>Feature</th>
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<td>- voltage</td>
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<tr>
<td>- frequency</td>
<td>Hz</td>
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<tr>
<td>- power consumption</td>
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<td>Frequency</td>
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<td>- depth</td>
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<td>- height</td>
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<td>Weight gross/net</td>
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All data at ambient temperature. Subject to technical modification.