



The **GE-TE-FLOW** Permeameter is a fully automatic, computer-controlled instrument for testing the water permeability of geotextiles, fleeces and related materials. In conformity with EN ISO 11058, it operates by the falling head method, measuring normal to the specimen plane and without a load applied.

Its performance features make the **GE-TE-FLOW** ideal for quality assurance tests and dependable routine inspections. By means of the **GE-TE-FLOW** permeameter, you

measure the  $VI_{H50}$  velocity index of the material to be tested - conforming to the relevant standard. The system analyzes the rate of water flow through the specimen as a function of the hydraulic head difference - fully automatic and computer-controlled - by means of a two-cylinder system with pressure sensor. Measurement data are acquired automatically and continually at optimized time intervals. **GE-TE-FLOW** features easy operation, low water consumption and minimized, compact design.

### Scope:

Computer controlled, automatic and reproducible laboratory instrument for standardized determination of the water permeability of geotextiles and similar materials such as sinter sheets, metal hole plates and porous building materials. **GE-TE-FLOW** comply with EN ISO 11058.

### Method:

**GE-TE-FLOW** features standardized water permeability testing according to the falling head method. A water column is automatically built up until a preset column height is obtained, at which the test starts. Thereafter, the flow rate of the falling water passing through the sample is continuously measured and registered by means of measuring the water pressure drop with a highly sensitive pressure sensor.

### Results:

Measurement results are presented numerically and graphically in the **GE-TE-FLOW** software, including key figures such as the  $VI_{H50}$  index, which is the velocity at a hydraulic height difference of 50 mm. During the measurement, a graph of the changes in water level depending on time is displayed (h(t)). At the end of the measurement, a curve of the flow velocity depending on the hydraulic difference in height is obtained (h(v)). Optionally, values of the permittivity according to ASTM D4491 are calculated.

### Measurement principle:

Falling head method (without load applied) with vertical flow

Diameter of specimen area tested:  
67.8 mm

Overall diameter of specimen:  
75 mm

Flow rate measuring range:  
1 - 100 mm/sec

Repeatability of measurements:  
 $CV \leq 3\%$  at 20 mm/sec

Analyzable water head difference between cylinders:  
Individual via user terminal;  
333 - 540 mm

Zero correction/end value adjustment:  
Automatic

Temperature display/accuracy of analysis:  
0.1 K with automatic temperature compensation

Power supply:  
230/115 VAC  $\pm 10\%$   
50/60 Hz

### Dimensions:

Height: 860 mm  
Width: 440 mm  
Depth: 340 mm  
Weight: 28 kg

### Data acquisition:

Automatic display of the  $VI_{H50}$  index value acc. to EN ISO 11058 for h = 50 mm (referenced to 20 °C) optional permittivity acc. to ASTM D 4491

### Optionally available:

- OPC UA interface

Technical data and pictures are subject to change.