



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. The instrument is already approved in industrial productions and public test laboratories.

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 and with the greatest ease of operation. The system analyzes the rate of water flow through the specimen as a function of the hydraulic head difference - fully automatic and computer-controlled - in a two-cylinder-system with pressure sensor. Measurement data are acquired automatically and continually at optimized time intervals.

Further features:

Inside usable diameter is 67,8 mm (specimen diameter 75 mm)

The number of readings taken for an analysis is automatically limited according to the test duration.

Pumping and level balancing are performed automatically.

Components substantial for the measurement functions can be changed and easily cleaned by the user.

Software control:

The system's Windows[®] software ensures clear presentation of all measurements and results.

Specimen information and measurement data can be exported to peripheral equipment or a host computer via an interface port. A test can be repeated any number of times with one and the same water charge.

A safety routine interlocks all functions so as to exclude faulty operation. The user can observe the entire test process.

Performance Features:

- Falling head method, using two cylinder system and pressure sensor
- Very low water consumption (with a single charge, a test can be repeated any number of times)
- Computer-controlled determination of flow rate and velocity index by measurement of water pressure drop
- Automatic temperature compensation, zero correction and end value adjustment
- Display of the VI_{H50} index value acc. to EN ISO 11058, referenced to 20°C
- Fully automatic instrument control and data acquisition at optimized time intervals by PC and Windows[®] software
- Suitable for geotextiles, woven fabrics, fleeces, filter materials, sinter plates, perforated sheet metal, porous building materials in plate form and related products
- Documentation of the hydraulic altitude difference equation for the rms adjustment curve of $h(v)$
- $h(t)$ and $h(v)$ graphs are presented numerically and graphically
- Clearly laid-out test records including statistical analysis
- Automatic calculation of the flow velocity (v) depending on hydraulic difference of height (h)
- Immediate displaying of the measurement results (after water level balance)

Scope of supply:

- **GE-TE-FLOW**
Calibration disc, USB cable and Testing software

Specifications:

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

Range of specimen thickness:

0.1 ... 10 mm

Flow rate measuring range:

0,01 ... 0,5 m/s

Repeatability of measurements:

CV \leq 3 % at 0,1 m/s

Analyzable water head difference between cylinders:

333 ... 540 mm

Zero correction / End value adjustment:

automatic

Temperature display / accuracy of analysis:

0.1 K with automatic temperature compensation

Overall dimensions:

H x W x D
910 x 440 x 340
Weight: 28 kg

Power requirements:

230 VAC, 280 VA (inquire for other line voltages)

Data acquisition:

automatic display of the VI_{H50} index value acc. to EN ISO 11058 for $h = 50$ mm (referenced to 20°C)

h = height

v = velocity

t = time