

AIR / GAS PYCNOMETER

FOR DETERMINING PORE VOLUME, SOLID VOLUME, AND DENSITY
(DRY BULK DENSITY) IN THE LABORATORY

- Use as an air pycnometer or a gas pycnometer
- Pore volume as a key factor in evaluating soil for water balance analysis, soil management, or soil remediation
- Air and water conductivity, as well as water and nutrient retention capacity, are directly related to pore volume
- Large measurement chamber (~2,100 cm³), suitable for large samples; volume can be reduced using filling volumes
- Manual operation, making it more cost-effective compared to automated systems
- Digital pressure gauge
- Sampling is possible with or without a soil sample ring
- Includes an Excel workbook, an external gas supply hose, a locking clamp with a clamping screw, a sample chamber lid, a sealing ring, and a power cord
- No additional equipment required
- Calibration volumes: You can use your own volumes or those offered by UGT



APPLICATIONS

- Suitable for undisturbed soil samples and bulk materials (e.g., sand, gravel, planting granules)
- As an air pycnometer, it is particularly suitable for soils with coarse and medium pores
- As a gas pycnometer, it is particularly suitable for fine-grained soils (e.g., clay); helium, for example, reduces measurement errors caused by gas adsorption on fine particles



TECHNICAL DATA

PARAMETER	SPECIFICATIONS
MEASURING CHAMBER	
Height, Diameter	12 cm, Ø15 cm
Volume	≈ 2,120 cm ³
Maximum pressure	4 bars
PRESSURE VESSEL ADDITIONAL VOLUME	
Volume	≈ 1,000 cm ³
Connection	G1/4"
HOUSING	
Power supply	230 V
Protection CEI529	IP65
Width x Length	46 x 39 cm
Height with lid and clamp	52 cm
Height without lid and clamp	38 cm
Weight with lid and clamp	15.3 kg
Weight lid	1.7 kg
Weight clamp	2 kg
Operating temperature	+5 ... 40 °C
DIGITAL MANOMETER	
Measuring range	-1 ... 3 bar absolute pressure
Measurement resolution	1 mbar
Overpressure	10 bars
Accuracy (at room temperature)	<0.1 %FS
Total error range	<0.2 %FS
Storage / Operating temperature	-20 ... 70 °C / 0 ... 50 °C
Temperature range (Compensated)	0 ... 50 °C
Energy supply	3 V Battery, CR 2430
Battery life	- 1,000 hours of continuous use in Mano mode - 150 hours of continuous use in Peak mode
SUPPLY HOSE	
Features	- PVC pressure hose with fabric reinforcement - Øi 6 mm, Øo 12 mm - standard length 1 m - with a matching connector plug for the connector socket on the pycnometer