MICROTRAC
a VERDER company

GAS PYCNOMETER

BELPYCNO L

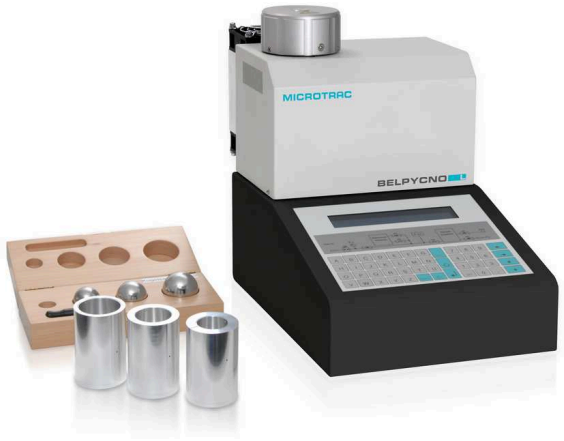
BELPYCNO L is a fully automated gas pycnometer for the determination of volume and skeleton density of powders, granulates, porous materials, mixtures, pastes and liquids. The combination of an internal temperature control and an absolute pressure transducer compensates any influences from ambient temperature and pressure fluctuations.

The gas pycnometer replaces the classical method of liquid displacement, utilizing a probing gas such as Helium which can reach even the smallest pores with less than one nanometer in diameter. Thus, the density of powders and porous materials can be determined exactly.

The gas pycnometer works as a standalone instrument or by connecting it to a computer. The included software is easy to use and offers full control and a wide array of functions, from programming the computer to the report and storage of analytical data and results. Additonally, the computed volume and density are displayed in-situ for each measurement step.

GAS PYCNOMETER BELPYCNO L

- Built-in linearized absolute pressure transducer
- Sample cell and reference volumes are separated from the electronics
- Built-in accurate ATC (Automatic Temperature Control)
- Short measurement time and fast system stabilization
- Unrivalled reproducibility of results



GAS PYCNOMETER BELPYCNO L

ACCURATE DENSITY DETERMINATION FOR VARIOUS APPLICATIONS

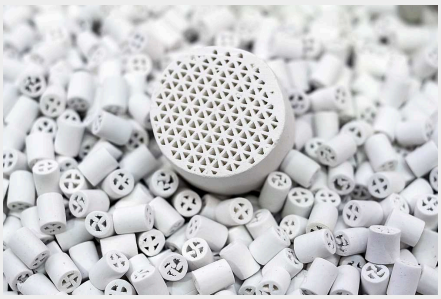
The BELPYCNO L gas pycnometer is equipped with up to 3 reference chamber volumes (20, 40 and 60 cm^3) in order to give the best performance in combination with the chosen sample chamber (4, 20, 40, 60, 112 and 150 cm^3). Independent of ambient temperature and pressure variations, the pycnometer allows density measurements which are not limited by time consuming calibration procedures.

Once calibrated the gas pycnometer carries out the analysis without any concerns. No contamination risks due to gas loading from reference chamber (high pressure) into sample chamber (low pressure), supported by programmable discharge restriction and easy use of paper filters. Variable loading pressure permits the analysis of foams and compressible samples.

The gas pycnometer BELPYCNO L is suitable for the density measurement of a wide range of applications: powders, wood, building materials, catalysts, liquids and pastes, activated carbon, food, pharmaceuticals, ... and many others!

wood chips

powders



ceramics

To find the best solution for your particle characterization needs, visit our application database

GAS PYCNOMETER BELPYCNO L

TECHNICAL DATA

Reference chamber volumes	Approx. 20 cm^3, 40 cm^3 and 60 cm^3
Sample chamber volumes	Approx. 4 cm^3, 20 cm^3, 40 cm^3, 60 cm^3, 112 cm^3 and 150 cm^3
Probe gas	Helium (other inert gases possible)
Control	Integrated micro processor
Keyboard	Alphanumeric foil
Display	4-line 40 characters LCD-display with back light
Pre-treatment	Flow, programmable purge cycles optional with vacuum preparation
Temperature	14° C to 40° C (optional 60° C with external oven) resolution: ± 0.01° C
Pressure transducer	0.001 kPa displayed resolution
AD-Converter	19 Bit
Accuracy	0.01 %F.S + 0.02%R
Reproducibility	0.02 %F.S
Vacuum connector	KF-10
Interfaces	2 x serial (ext. balance, PC-data transfer) 1x parallel (printer)
Sensor (optional)	Humidity

www.microtrac.com/belpycno-l