

TECHNICKÁ SPECIFIKACE

PASCAL 140 + 440 EVO

Pascal 140+440 EVO - kompletní sestava porozimetrů se softwarem SOLID, 2 dilatometry a vybavení pro nakládání se rtutí

Pascal 140 + 440

Funkce **140** automatické odplynění, plnění rtutí, porozimetrie za nízkého tlaku
440 porozimetrie vysokotlaká

Detekce tlaku

Měřicí rozsah 0,01 kPa – 400 MPa
Rozlišení Pascal 140: 0,01 kPa do 0,1 kPa, 0,1 kPa do 400 kPa
Pascal 440: 0,01 MPa do 100 MPa, 0,1 MPa do 400 MPa
Přesnost lepší než 0,1 % při konst. teplotě

Měřicí rozsahy

Velikost pórů (průměr) Pascal 140: 116 μm až 3,8 μm
Pascal 440: 15 μm až 0,0036 μm
Velikost částic (průměr) Pascal 140: 330 μm až 15 μm
Pascal 440: 40 μm až 0,01 μm

Detekce objemu

Detekční systém kapacitní
Přesnost lepší než 0,1 %
Objem pórů Pascal 140: 2 000 mm³
Pascal 440: 500 mm³)
Maximální velikost částic 40x12 mm (25x25 mm)
Maximální detekční objem 0,5 cm³ (2 cm³)
Rozlišení 0,0001 cm³ (0,0005 cm³)

Parametry měření

Maximální počet bodů 2500 pro PASCAL 140 a 20 000 pro PASCAL 440
Ovládání softwarem SOLID
Připojení k PC USB (440)

Součásti dodávky

PASCAL 140 + 440 EVO
2 dilatometry
2 nerezové podložky pod porozimerty
Počítač + monitor
Balíček SW SOLID



Macropore Model Pascal 140 EVO - Sample Preparation and Low Pressure Unit

Fully automatic porosimeter and filling station for determination of pore volume and pore size-distribution up to the pressure of 400 KPa.

Automatic vertical Mercury filling of the dilatometer under continuous vacuum and the correction of hydrostatic pressure depending from the height of the mercury column.

Automatic double run for de-agglomeration of powders and determination of the

particle size-distribution calculated from the space between the particles of a powder.

Calculation of the envelope, pressure dependent bulk and apparent density.



Measuring ranges:

Pore diameter	from 116 μm	up to 3.8 μm
(depending on contact angle of sample)		
Particle diameter	from 330 μm	up to 15 μm
Pore volume		max. 2.000 mm^3
max. data points		2.500 points
Accuracy better than		0.1% (at constant temperature)
Hysteresis better than		0.1% (at constant temperature)
Transducer Resolution	0.01 up to 0.1 Kpa and 0.1 up to 400 KPa	
Number of data points up to	20.000	

Dimensions:

Weight 55kg

High Pressure Porosimeter Model Pascal 440 EVO

Fully automatic porosimeter for determination of pore volume and pore size distribution

Up to a pressure of 400 MPa

The new automatic detection system of the penetration steps decreases the total measuring

time without any lost of resolution down to 25 minutes.

The 9 different speeds for analysis allow the correction of the instrument-constant, mercury compressibility and temperature effects.

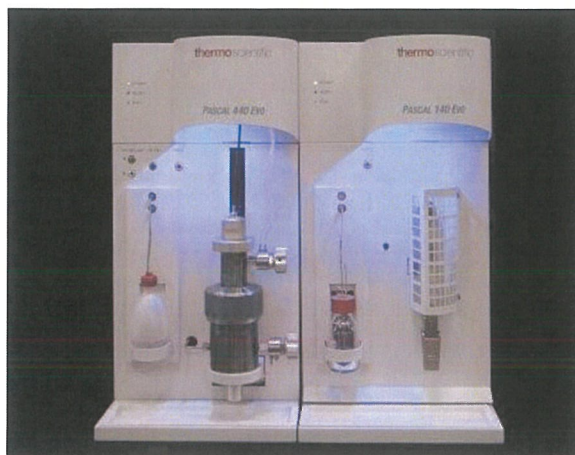
The speed 9 is not controlled by the Pascal method, it proceed up to the maximum selected pressure at the maximum speed allowed by the pressure system. This means less then 10 minutes for a complete run in PQ.



Measuring ranges:

Pore diameter	from 15 μm	up to 0.0036 μm
(depending on contact angle of sample)		
Particle diameter	from 40 μm	up to 0.01 μm
Pore volume		max. 500 mm^3
Resolution		0,1 mm^3
max. data points		20,000 points
Accuracy better than		0.1% (at constant temperature)
Hysteresis better than		0.1% (at constant temperature)
Transducer Resolution	0.01 up to 100 MPa and 0.1 up to 400 MPa	
A/D Converter	4 channels, 24 bit	
USB port		
Sample holder	10ccm, and 15ccm	

Package PASCAL 140 + 240 EVO Series



Up to four instruments can run parallel with one PC.
The delivery includes a sufficient support of consumable parts + 2 Dilatometer

Some features of the new 2017 PASCAL EVO Bench Top Porosimeters

1. New generation of PASCAL EVO porosimeters with increased acquisition of up to 20000 data points due to higher resolution. Simplified user friendly operation with 4 buttons on the instrument.
2. Wet samples can be measured without change of materials moisture content only with the PASCAL System. Due to the vertical filling the degassing pressure can be set to the corresponding water vapour pressure (see also ISO 15901-1 regarding pre-treatment depending on materials nature).
3. The high pressure autoclaves comply with the European Directive for high pressure devices (97/23 CE –PED).
4. The PASCAL porosimeters work independently or PC controlled. One PC can control four instruments
5. The instruments are equipped with serial interface RS232 for computer connection
6. PASCAL porosimeters work without any liquid nitrogen or other gas
7. PASCAL porosimeters work with dilatometers.
8. PASCAL means “Pressurization by Automatic Speed-up and Continuous Adjustment Logic”, which simply optimises automatically the measurement by the samples nature without any pre-knowledge of the operator.
9. Data saving additionally in CSV for export in EXCEL, data report with free choice of results.
10. Software consisting also of Pore Tortuosity, Permeability, Sample Compressibility und Fractal Dimension.
11. Comes with 3D- PoreXpert Software free trial for 6 months.