

Porosity Test System

Instruments

- **Vacuum rate-of-rise porosity / leak measurement.**
- **Uses fundamental measurements of volume, pressure and time.**
- **Suitable for delicate samples.**
- **Extremely wide measurement range.**

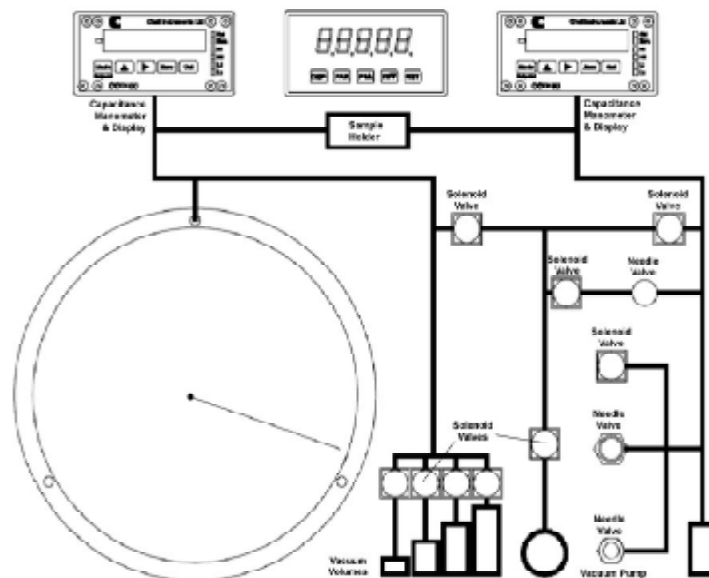


Description

The PTS100 is a floor standing, self contained test system designed to measure the porosity of prepared samples. It uses a rate-of-rise technique, measuring the porosity of the sample to air or another gas by 'leaking' gas through the sample into a volume. Flow through the sample is determined using fundamentals of volume, change in pressure and time.

The rig accurately measures the absolute pressure on both sides of the sample, and an electronic timer automatically measures the time between two pre-selected vacuum levels. In the example above the customer specified a mechanical pressure gauge be fitted to allow comparison with older equipment. However, the response time of this type of gauge introduces significant errors.

In operation the user can select different volumes or volume combinations to give good accuracy over a range of flows, and reduced inlet pressure can be used for delicate samples. An oil free vacuum pump is fitted to evacuate the volumes without the risk of contaminating samples, making the unit completely self contained.



Mechanical	
Package	Steel vented case
Size (enclosure)	22U 19" rack cabinet
Mounting	Floor standing
Weight	98 Kg
Power Supply	
Line Voltage	240 VAC or 120 VAC
Line frequency	50 - 60 Hz
Consumption	Less than 500 VA
Protection	T8A anti-surge fuse , 20 x 5mm
Operating Conditions	
Operating temperature range	+5°C to +50°C
Storage temperature range	-20°C to +70°C
Maximum relative humidity	95% at 50°C
Warm up time to full accuracy	2-3 Hours (assumes stabilised at ambient)
Measurement and control	
Electronic pressure measurement	±0.15% of reading precision
	0.01% of full scale resolution
Mechanical pressure dial	±0.3% of full scale precision
Electronic timer	±0.01% precision
	0.001 second resolution



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