THE PMI AUTOMATED GAS PYCNOMETER

PYC-G100A-BSL
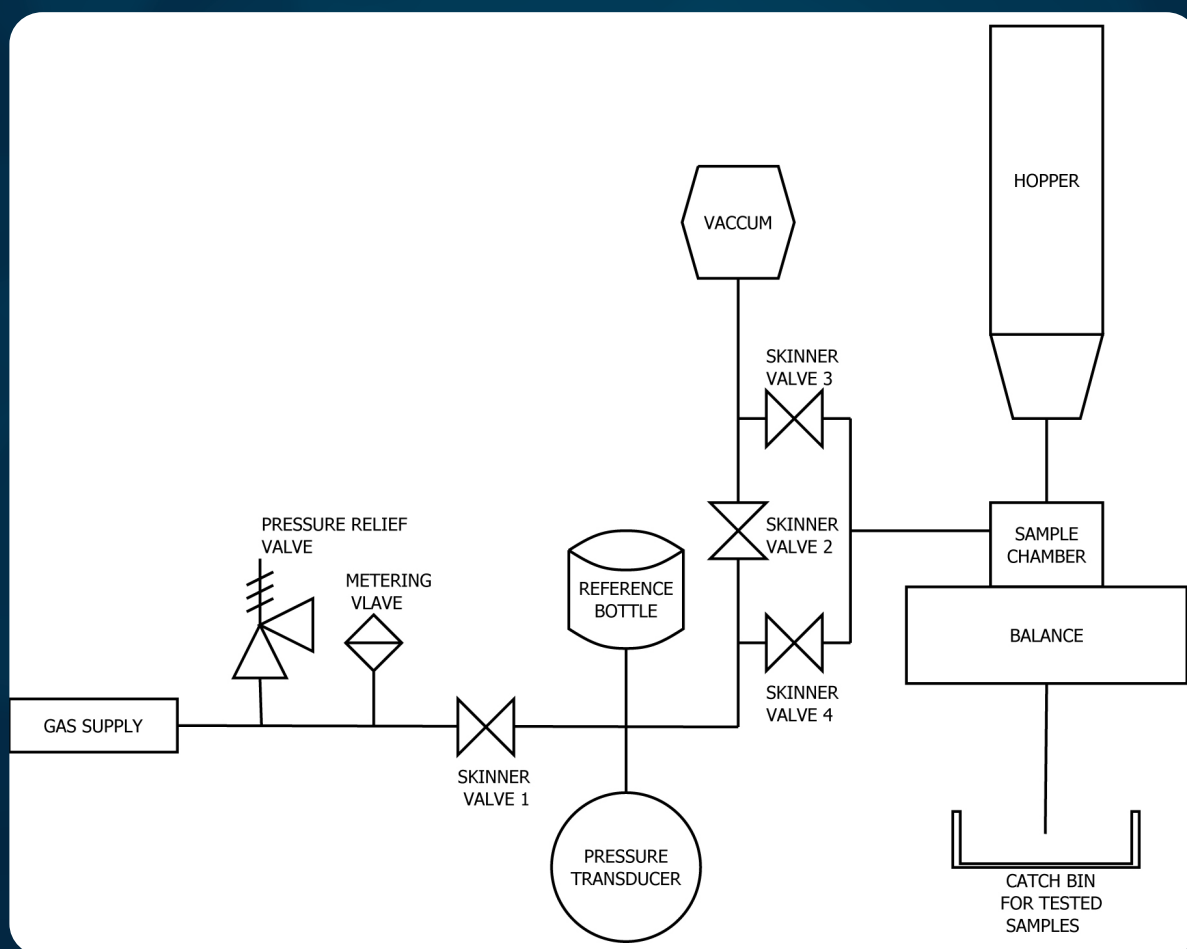
Not just products...Solutions!

Applications

Gas pycnometery measures the true volume and density of samples like coal, char and ash particles, etc.

Operating Procedure

PMI's Automated Gas Pycnometer is used to determine the true volume and true density of powders and bulk solids using high-precision volume measurements and density calculations. The true volume of a solid is calculated from the measured drop in pressure when a known amount of gas is allowed to expand into a chamber containing the sample. Thus, the true volume obtained by pycnometry includes any pore volume accessible to the gas. The Gas Pycnometer measures the true volume and density of solid powders such as calcined petroleum coke.

HOPPER

VACCUM

SKINNER VALVE 3

PRESSURE RELIEF VALVE

METERING VLAVE

REFERENCE BOTTLE

SKINNER VALVE 2

SAMPLE CHAMBER

BALANCE

GAS SUPPLY

SKINNER VALVE 1

SKINNER VALVE 4

PRESSURE TRANSDUCER

CATCH BIN FOR TESTED SAMPLES

Operating Mode

The Gas Pycnometer can be operated via personal computer (PC) in either automatic or manual modes.

Data Acquisition

The Gas Pycnometer provides data display acquisition analysis.

Features

- Confirms to EN 15150 Standards
- Automated Control
- Non-destructive measurement
- Stainless steel embodiment
- Fully automated and simple to use
- Highly reproducible & accurate results
- Low required pressures; works with compressed air
- No need for liquid nitrogen
- Mercury-free, non-toxic wetting liquids reduces disposal related costs
- Compatible PC & software to be supplied along with the machine
- Samples are conditioned to remove any trapped air and contaminants
- Option to purge by a suitable method
- Sample size: 25 cc to 100cc
- Pressure: 15 psi
- Accuracy: at least 0.01 %
- Resolution: 1 in 60,000
- Repeatibility : upto 0.01 %
- Power Requirements: 220 VAC, 50-60 Hz
- Number of sample chambers: 1-5
- Weight: 30 kg
- Includes adapter to run sample size: 5-100 cc
- 1 m³ Pycnometer

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GAS PYCNOMETRY ANALYSIS

Test Type: VACUUM
Test Date: 06-22-2001

Sample ID: Polypropylene resin
Mass: 10.481 gm

Reference Volume: 11.31 cc
Sample Chamber Volume: 24.96 cc

PFO PSIA	PIO PSIA	PI PSIA	PF PSIA	VOLUME (cc)	DENSITY (gm/cc)
00.003	00.003	09.798	04.399	11.073	00.947
-00.003	-00.002	09.802	04.394	11.051	00.948
-00.003	-00.002	09.796	04.392	11.055	00.948
-00.003	-00.003	09.792	04.394	11.076	00.946
-00.003	-00.003	09.796	04.393	11.060	00.948

Average Volume : 11.063 cc
Average Density : 0.947 +/- 0.001

Software Features

- Automatic repeat measurements
- Data acquisition under user selected tolerances
- Graphic presentation of the data for quick data viewing
- Graphic files export to window based word / excel processing files
- Provision for off-line data processing
- Integrated detailed help system

Accessories

- User Manuals: hard copy included
- Computer, printer and operating program

Sales & Services

Our sales team is dedicated to helping our customers find which machine is right for their situation. We also offer custom machines for customers with unique needs. To find out what we can do for you, contact us. We are committed to customer support including specific service products, short response times & customer specific solutions. To quickly & flexibly meet our customer's requirement, we oller a comprehensive range of services.

Customize your machine today!

The most advanced, accurate, easy to use and reproducable Pycnometers in the world.

Celebrating

35

years

of solutions