

HITEC

LUXEMBOURG

VOID VOLUME TESTING – PHYSICAL CHARACTERISATION TO ASTM D7854 AND MUCH MORE! FOR CARBON BLACK, SILICA OR OTHER GRANULATE, POWDER & POROUS MATERIALS

The CVST by HITEC Luxembourg is a void-volume tester, measuring void volume versus pressure of a sample. It meets the requirements of the ASTM D7854 "Standard Test Method for Carbon Black-Void Volume at Mean Pressure".

The three different configurations give to the end user the possibility to identify the right solution that fits the need in terms of performance and budget.

Extensive research by HITEC Luxembourg and its partners has shown that:

- A very detailed physical characterisation can be achieved, obtaining several independent material properties, beyond the basic results from ASTM D7854
- The test method can be equally applied to various granulate, powder and porous materials (.e.g. carbon black, silica, ceramics)

Beyond the void volume data related to structure, the CVST generates additional metrics that reflect the physical properties of the sample.

The fact that the CVST does not need any additives or consumables (like the oil in ASTM D2414 and D3493 methods for oil absorption numbers), not only makes void volume testing a very clean method, but it also results in outstanding repeatability.

From a practical point of view, the compression chamber has been designed to facilitate sample handling, while optimizing accuracy.

KEY FEATURES

Measurement of:

- Void volume vs. applied, transmitted & geometric mean pressure
- Residual void volume reflecting COAN structure
- Material friction losses
- Electrical conductivity of carbon black

Controlled compression and decompression - patent by HITEC Luxembourg

Compatible with various porous materials (tested with carbon black, silica, and ceramics)

No wear parts

Minimal maintenance

Option ½" or 1" cylinder





CUSTOMER SATISFACTION PROMISE

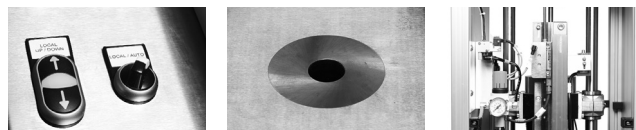
We offer worldwide installation and training services by our experienced engineers and technicians. Contact our sales & service team for more information: sales@hitec.lu

FEATURES OF CVST® SOLUTIONS

	CVST® BASIC	CVST® PLUS	CVST® R&D
Pressure limit	50 MPa	50 MPa	165/600 MPa (1" / ½")
Supported sample cylinder	½"	½" - 1"	½" - 1"
Precision paired - maintenance free cylinder/piston assembly	✓	✓	✓
Measurement of applied and transmitted pressure	✓	✓	✓
Geometric mean pressure calculated in real time	✓	✓	✓
Measuring accuracy	0.04% FR	0.04% FR	0.04% FR
Optical linear gauge specifics (travel drive / measuring resolution)	170 mm / 0.5 µm	170 mm / 0.5 µm	170 mm / 0.5 µm
Calibration mode (zero-thickness and equipment deflection)	✓	✓	✓
VV measure (pressure geometric mean mode)	✓	✓	✓
Normalization curve (ASTM D7854)	✓	✓	✓
Quality editor		✓	✓
Evaluation graphical VV compression curves directly on software and print Export XLSX/ CSV - Multiple XLSX - Print chart		✓	✓
Output table XLSX/ CSV	Basic	Plus	Full
Configurable report generation		✓	✓
Evaluation graphical VV compression curves vs El. conductivity			✓
Evaluation graphical VV decompression curves			✓
Scenario editor	Predefined	Predefined	✓
Printed report	Basic	Plus	Full
Operator interface (not included)	Standard PC	Standard PC	Standard PC
Interface	Serial port RS232	Serial port RS232	Serial port RS232
Software (menu guided application)	Basic	Plus	Full
Data retrieve	✓	✓	✓

HARDWARE SPECIFICATIONS

	Power supply	230/115 - 50/60 Hz 800 VA
	Compressed air	6 bar
	Dimensions (W x D x H) Including rolls	610 x 480 x 1310 mm
	Weight	150 kg



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