

DABS

OIL ABSORPTION BASIC SYSTEM



HITEC

LUXEMBOURG



OIL ABSORPTION DATA SYSTEM COMPLIANT TO ASTM D2414 OAN AND D3493 COAN FOR CARBON BLACK AS WELL AS ISO 4656.

DABS is an oil absorption system to characterize the structure of carbon black and silica, as well as oil absorption of other powder material, also known as DPB absorption, DBP number or DOP number.

The data treatment for recording of a full mixing curve was initially developed by HITEC Luxembourg and is since then constantly further extended to satisfy increasing performance requirements. The curve fitting by a polynomial of 3rd order was a result of this initial development and has been introduced as "procedure B" in ASTM D2414.

The overall instrument comprises a data acquisition terminal and the absorptometer system.

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KEY FEATURES

Compact design with small table footprint

Fits standard mixing chambers, while safety cage allows for easy access to chamber for filling and cleaning

Configurable rotor speed and oil debit rate

Connects to standard PC via serial port RS232

Supports several burette models

Pt-100 sensor for monitoring chamber temperature

Dimensions:
400 x 500 x 950 mm (W x D x H)

Weight: 60 kg

CUSTOMER SATISFACTION PROMISE

We offer worldwide installation and maintenance services by our experienced engineers and technicians.

Contact our sales & service team for more information: sales@hitec.lu

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MEASURING CAPABILITIES

Carbon black OAN and COAN
 Silica oil absorption
 Oil absorption of multiple other powder material
 Full recording of mixing torque vs. oil debit
 Applies normalization to raw data, based on reference material and its target values (e.g. carbon black SRBs)
 Torque up to 15 Nm (option for 20 Nm)
 Variable motor speed
 Variable burette rate

MAINTENANCE

Torque calibration
 Burette debit control
 ASTM procedures (e.g. chamber pre-polish)

MEASURING MODES

ASTM D2414 Standard Test Method for Carbon Black Oil Absorption Number (OAN)
 ASTM D3493 Standard Test Method for Carbon Black - Compressed Oil Absorption Number (COAN) *

SAFETY & SECURITY

Safety cage around mixing chamber Opens 180 degrees - easy filling of samples and comfortable cleaning at end of test
 Certifications CE marking
 SGS-USTC certified

DIMENSIONS & SUPPLY

⚡ Power Supply 230/115 VAC, 50/60 Hz, 400 VA
 📏 Size 40 x 50 x 95 cm (W x D x H)
 ⚖️ Net weight 60 kg

INTERFACES

Serial port (RS232) to standard PC serving as operator interface (software included with the instrument)
 Pt-100 temperature sensor input
 Burette control connector

SOFTWARE

Menu guided application
 Microsoft Windows® 32/64 bit
 XP/W7/W8

FEATURES

Torque smoothing by polynomial fit in significant part of mixing curve
 Calculates oil absorption as per fixed torque level and as per % level of maximum torque (70% being standard)
 Full management of TLS and Normalization as per ASTM D2414:

- separate data sets for hard and soft grades (tread and carcass)
- separate data sets for COAN

 Test sequence management allows for remote installation of control PC
 Extended data treatment
 Integrated electronic manual
 Extended maintenance support
 Extensive logging capabilities (all activities in log files)
 Up to 4 testers per PC (IPHT and or DADS / DABS)
 Multilingual (English, German, French)
 Retrieve and visualization of previous data
 Software can be installed for retrieve only on any PC having access to the files

OPTIONS

Mixing Chamber	Maintain chamber at a stabilized temperature
Cooling Block	
Temperature Sensor	Monitor mixing bowl temperature
Extension Funnel	For testing of fluffy material
Refrigerated circulator	High heating and cooling capacities



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