

# DABS

## OIL ABSORPTION BASIC SYSTEM

### Oil absorption basic system compliant to ASTM D2414 OAN and D3493 COAN for carbon black, ASTM D6854 for silica, as well as ISO 4656 & ISO 19246

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 further extended to satisfy increasing performance requirements.

The current version, released in 2021, is the result of more than 20 years of experience in testing carbon black structure.

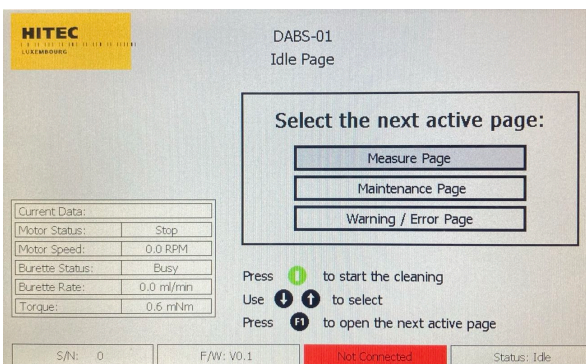
### Key features

- State-of-the-art design
- Improved safety and ergonomics
- Panel mounted 7" LCD screen
- Anodized aluminium frame and fully dust proof stainless steel electronic cabinet
- Compact table model – small footprint
- Voltage range 110-120 VAC or 220-240 VAC
- New Java-based software application
- Customizable test parameters

### 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](mailto:sales@hitec.lu)



Visit our online catalog for more information:  
[shop.hitec.lu/product/dabs/](http://shop.hitec.lu/product/dabs/)

**HITEC Luxembourg S.A.**  
49, rue du Baerendall | L-8212 Mamer  
T +352 49 84 78 -1 | F +352 40 13 03  
[info@hitec.lu](mailto:info@hitec.lu) | [www.hitec.lu](http://www.hitec.lu)

Follow us on

# DABS

## CHARACTERISTICS

**HITEC**  
LUXEMBOURG

---

### Measuring capabilities

- Carbon black OAN and COAN
- Silica oil absorption
- Oil absorption of multiple other powder materials
- Full recording of mixing torque vs. volume of oil used
- 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)
- Adjustable motor speed
- Adjustable dosing unit flow rate

---

### Maintenance

- Torque calibration
- Dosing unit flow rate check
- ASTM procedures (e.g. chamber pre-polish)
- Manual motor control
- Manual dosing unit control
- Pt-100 readout calibration

---

### 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)
- Silica and other powder materials

---

### Safety

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

---

### Hardware specifications

- Power supply: Voltage range 110-120 VAC or 220-240 VAC, 50/60 Hz
- Size: 44 x 70 x 95 cm (W x D x H)
- Net weight: 65 kg

---

### Interfaces

- RJ45 to standard PC serving as operator interface (software included with the instrument)
- Pt-100 temperature sensor input
- Dosing unit control interface
- Dosing unit power supply

---

### Software

- Menu guided Java-based application

---

### 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
- Operation of the basic functions directly on the device (no need to install the PC in the proximity of the DABS)
- Extensive logging capabilities (all activities in log files)
- Retrieve and visualization of previous data
- Data retrieval is possible with every PC as long as the software is installed
- Output data in .csv and .xlsx format, test report in .pdf format

---

### Options

- Mixing chamber cooling block: Maintain chamber at a stabilized temperature
- Temperature sensor: Monitor mixing bowl temperature
- Extension funnel: For testing of fluffy material
- Refrigerated circulator
- 20 Nm torque reading
- Control PC
- UPS unit

*All product, product specifications and data are subject to change without notice to improve reliability, function or design.*