

sotax

TD 1 Tap Density Tester

Full compliance with all USP, EP, ASTM and DIN EN ISO requirements One single cylinder station for all measurement methods Simple handling with "easy to lock" cylinders and SingleButton[™] operation Automatic calculation and print-out of test results Professional reporting and data management

TD 1

The flexible TD 1 tap density tester with one single measurement station excels in user-friendly operation while complying with all USP, EP, ASTM and DIN EN ISO requirements. The TD 1 has been designed for optimized and efficient operation. Easy operation allows tests to be run using a pre-defined EP / USP method – reducing setup time to a minimum while ensuring that tests are performed according to specifications.

Operating the TD 1 is simple: The SingleButton[™] navigation allows users to quickly start tests and navigate through the menu. Method parameters such as strokes per minute and number of taps can be defined individually or easily set to comply with different standards. Weight measurements before a test are either transferred automatically from a connected standard laboratory balance or alternatively entered manually. To ensure ease of regulatory compliance, the TD 1 automatically compares the test results with regulatory requirements (e.g. acceptance criteria) and automatically guides the user through the complete test procedure. Test reports including starting volume and tapped volume are conveniently printed directly from the tester.



Full regulatory compliance

The TD 1 tap density tester complies with all relevant regulatory requirements:

- USP 1 / 2 (chapter <616>)
- EP 1 / 2 (chapter 2.9.34.)
- ASTM B 527
- DIN EN ISO norm 787-11 and ISO 3953

To ensure ease of regulatory compliance, the device is equipped with various automatic detection, calculation and reporting features.



→ Single measurement station with "easy to lock" cylinder

Professional reporting and data management

The TD 1 compiles the results automatically, including method parameters, calculation as Tapped Density, Compressibility index and Hausner ratio. The last 20 reports are saved in the instrument memory and can be printed out either on a local or network printer. Test data can also be managed professionally with q-doc (optional), a userfriendly PC software for reporting and data management in full compliance with 21 CFR Part 11 requirements. All test data can be stored in a database enabling harmonized and detailed reporting of individual test runs as well as batch results for trend observation. Comprehensive test and batch reports including statistical analysis are automatically generated in formats that are readily accepted by regulatory authorities. All test results are stored electronically in an SQL database - locally or in a networked environment - and can be retrieved flexibly at any time.

User-friendly handling

The TD 1 is equipped with only one cylinder station for all test methods – different cylinders can be loaded onto the "easy to lock" holders which allow for free rotation of the cylinders and, hence, horizontal powder surface for clear reading precision. The device also features a builtin sensor that can detect the presence of an adapter piece (spacer) which automatically sets the device to comply with the correct test method (e.g. with adapter \rightarrow USP 2; without adapter \rightarrow USP 1).

Operating the TD 1 with the SingleButton[™] feature is extremely user-friendly – tests can be started very quickly and navigating through the menu is simple.



 $\rightarrow \mathsf{User-friendly} \ \mathsf{SingleButton^{\mathsf{TM}}} \ \mathsf{navigation}$

Easy validation and qualification

The qualification procedure is fully menu-guided, stepby-step, and finished off with a printed validation report. The user can also define and set the validation intervals in the TD 1 firmware.

The built-in validation platform simplifies and guarantees a reliable qualification process.

Qualification results are automatically saved in the device and are printable at any time.

Technical Specifications

Test methods		USP 1 / EP 1, USP 2 / EP 2 / ASTM, DIN EN ISO
		or user-defined
No. of stations		1 station (suitable for different size glass cylinders)
Strokes / min.		 300 strokes (for USP 1 / EP 1) 250 strokes (for USP 2 / EP 2 / ASTM) 50 - 300 strokes for user-defined methods
Stroke height		 14 mm ± 2 (for USP 1 / EP 1) 3 mm ± 0.2 (for USP 2 / EP 2 / ASTM)
No. of taps		1 – 3'000 taps
Balance connection		Yes (with optional balance)
Balance interface		RS-232
Printed test report		Yes (with optional printer)
Printer interface		RS-232, Ethernet LAN
PC software		q-doc (optional)
Qualification		Menu-guided, incl. report
Noise-absorbing cabinet		Optional (to reduce noise emission)
Level of noise emission	With noise-absorbing cabinet	58 dB (A)
	Without noise-absorbing cabinet	78 dB (A)
Voltage		110 – 230 V, 50 – 60 Hz
Dimensions	TD 1	Width 230 mm Depth 300 mm Height 270 mm
	Noise-absorbing cabinet	Width 540mm Depth 500mm Height 790mm
Weight	TD 1	9 kg
	Noise-absorbing cabinet	22 kg

Technical specifications are subject to change without prior notice. Products illustrated in this brochure may include iptoions or modifications not fitte as standard. No liablitly for errors and omissions.



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