

Tap Density Tester

Pharma Alliance Group-Optimal Instrument



Salient Features

- ❑ Complies with USP and ASTM specifications
- ❑ Supports both USP I, USP II test methods
- ❑ Two cylinder holders with snap-lock mechanism for 100 ml and 250 ml cylinders
- ❑ Simultaneous rotating and tapping motion assures an evenly packed surface
- ❑ 24 x 2 alphanumeric LCD display
- ❑ User friendly operation with menus, and current status indicators
- ❑ Calculation of Test results like Tapped Density, Compressibility Index and Hausner Ratio
- ❑ Printer port for documenting test results as per GMP/GLP standards.

CE

The Optimal Instrument microcontroller based Tap Density Tester TD-1-2 complies with USP and ASTM specifications. The unit offers a simple and standard means of measuring the tapped density of powders, granules, pellets, flakes and other bulk substances.

The TD-1-2 is a two station tap density tester supporting both USP I and USP II methods of testing. The unit allows any one test to be performed at a time. The test can also be performed as per ASTM standards using the optional adapter for cylinder holders. Two different cylinder holders with snap-lock mechanism are designed to hold the 100 ml and 250 ml cylinders.

To ensure a free drop of the cylinder from the required height, the two stations are provided with virtually friction-free bearings. Each station is directly driven by independent motors to ensure a maintenance-free drive. A simultaneous rotating and tapping motion minimises any possible separation of the mass during tapping down.

The test can be performed in two different modes USP mode and USER mode in both test methods. In USP mode, test will run in selected method with set number of taps. At the end of the test, results like Tapped Density, Compressibility Index and Hausner Ratio are calculated and displayed.

A validation report can be printed at the end of the test as per GMP/GLP requirements which includes the test parameters, test results and actual time and date on which the test was performed. It also includes serial number of the instrument along with the entry fields for user name and product details.

In User mode the number of drops can be programmed from 1 to 9999. The test can be performed in either of the methods i.e. USP I or USP II.

During the test the user is guided through a series of prompts on the LCD display. The on-line menus and status indicators make the operation of the instrument user friendly. The drops / minute is validated on-line and displayed by the instrument.

The value once programmed is retained in the memory of the instrument. The unit has a power failure detection facility which allows the user to complete the remaining test after the power supply is resumed.

Optional Accessories

100ml cylinders (set of 6), 250ml cylinders (set of 6), Adapter for ASTM method for models TD-1020 and TD-20, Cylinder holders, Acoustic cabinet, Printer, RS 232 serial port

TAP DENSITY TEST REPORT			
Model No	: TD-1-2	Date	: 08/21/04
Sr. No	: TD-3020	Time	: 11 : 27
User	:		
Product Name	:		
Product Number	:		
Batch Number	:		
Comments	:		
TEST PARAMETERS			
Method	: USP I	Tap Count 1	: 0500
Drops / Min.	: About 300	Tap Count 2	: 0750
Drop Height	: 14 mm +/- 2	Tap Count 3	: 1250
TEST READINGS			
Weight of Sample (W)	:	100.26 gm	
Initial Volume (Vo)	:	0200 ml	
Total No. of Drops	:	1250	
Final Volume (Vf)	:	0186 ml	
Difference of last two Volume Measurements	:		
RESULTS			
Tap Density (W/Vf)	:	0.540 gm/ml	
Initial Density (W/Vo)	:	0.502 gm/ml	
Compressibility Index [(W-Vf)/Vo*] 100	:	07.000%	
Hausner Ratio	:		

Test Report printout



The acoustic cabinet reduces the sound level to 71dB to meet laboratory standards.

Specifications

MODEL	
	TD-1-2
Test Methods	USP I and USP II, ASTM (optional)
No. of Stations	2
Drops / Min.	300 (USP I), 250 (USP II)
Drop Height (mm)	14 ± 2 (USP I) & 3 ± 0.3 (USP II/ASTM)
Tap Count Range	1 - 9999
Standard Accessories	
Cylinders	100 & 250 ml (1 each)
Cylinder Holders	For 100 & 250 ml 1 each
Type of Drive	Direct drive with Stepper motor
Display	24 x 2 Alphanumeric Dot Matrix backlit LCD
Printer Interface	Centronics parallel port
Printers Supported	80 column Dot Matrix, HP DeskJet, HP LaserJet
Power Supply	220/230 V AC, 50/60 Hz, 55 VA; 100/110 V AC, 50/60 Hz, 55 VA (on request)
Dimensions (mm)	360 L x 320 W x 200 H (Approx.) without the cylinders
Weight	Nett — 17 kgs Gross — 25 kgs (Approx.)

Our Other Products —

- ◆ Dissolution Testers
- ◆ Disintegration Testers
- ◆ Friabilators
- ◆ Peristaltic Pumps
- ◆ Tablet Hardness Tester
- ◆ Electromagnetic Sieve Shaker

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