

## Tap Density Tester



### Snaplock™ Mechanism

- Two different cylinder holders with Snaplock™ mechanism designed to hold the 100 mL and 250 mL cylinders



### USP Method 1 and USP Method 2

- The instrument has 2 methods:
  - USP Method 1
  - USP Method 2
- The test can be performed in 2 different modes in both test methods
  - USP mode - test will run with set number of taps as per USP requirements
  - User mode - test will run with set number of taps as per user requirements



### Simultaneous Rotating and Tapping Motion

- Minimizes any possible separation of the mass during tapping down



### Free Drop of the Cylinder

- Virtually friction-free bearings ensure a free drop of the cylinder from required height



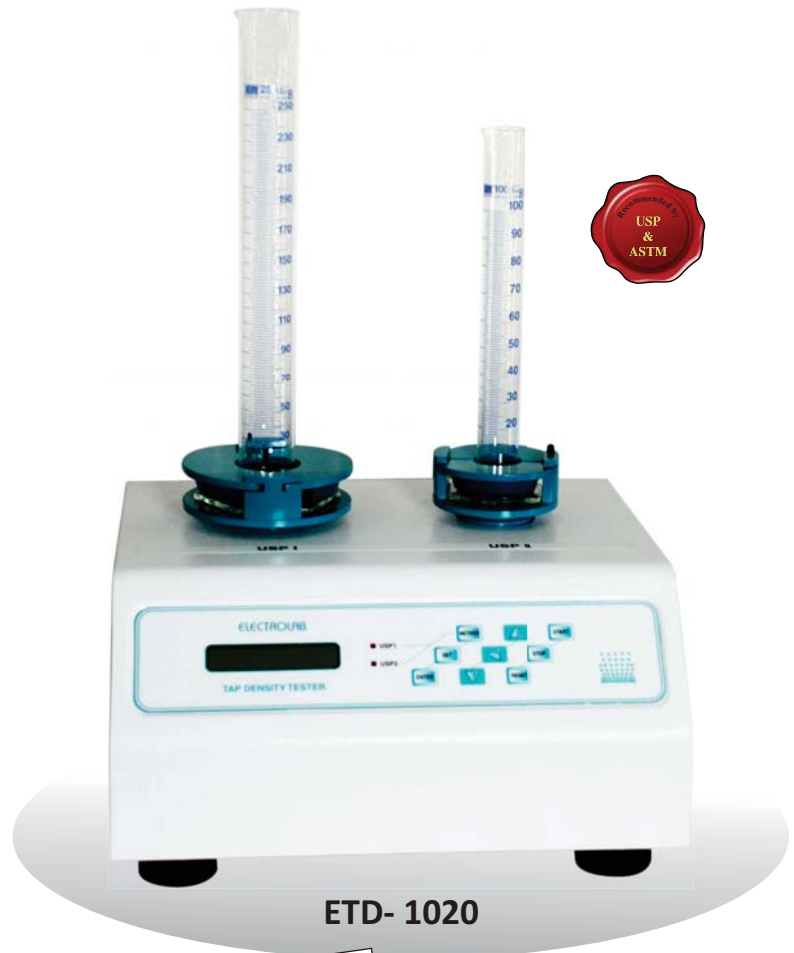
### Quality by Design

- Compliance with USP and ASTM specifications
- 24 x 2 alphanumeric LCD display
- Prompts on the LCD display during the test guides the user
- Online menus and status indicators
- Online validation of drops per minute
- Retention of programmed values in the memory of the instrument
- Power failure detection allows remaining test completion on power resumption
- At the end of the test, results like Tapped Density, Compressibility Index and Hausner Ratio are calculated and displayed
- RS-232 serial port can be connected for printing the test report on serial printer and can be transferred to the computer via optional LAN connectivity device



### Report

- Report includes:**
  - Test results like Tapped Density, Compressibility Index and Hausner Ratio
  - Time and date on which the test was performed
  - Serial number of the instrument
  - Entry fields for user name and product details



ETD- 1020

TAP DENSITY TEST REPORT

Model NO. : ETD 1020      Date : 19/11/2012  
 Version : 3.2      Time : 14:04:29  
 Serial No : 1210170      Instrument ID : ELECTROLAB  
 Weighing Scale : Manual Weighing

Sample Name : \_\_\_\_\_  
 A.R. Number : \_\_\_\_\_  
 Batch Number : \_\_\_\_\_

TEST PARAMETERS :

Method : USP 1 : 100.00 gm      Tap Count 1 : 10  
 Drops/Min : 300 +/- 15 : 100.00 ml      Tap Count 2 : 500  
 Drop Height : 14 mm +/- 2 : \_\_\_\_\_      Tap Count 3 : 1250

TEST READINGS :

Weight of sample (W) : 95.0 ml  
 Initial volume (Vo) : 90.0 ml  
 Volume with Tap Count1 (V1) 60.0 ml  
 Volume with Tap Count2 (V2) 20.0 ml  
 Volume with Tap Count3 (V3) \_\_\_\_\_  
 Diff. (V2-V3) \_\_\_\_\_  
 Volume with Tap Count4 (V4a) \_\_\_\_\_  
 Diff. (V3-V4a) \_\_\_\_\_

TEST READINGS :

Total vol. of Drops : 2510  
 Final Volume (Vf) : 60.0 ml  
 Tapped Density (W/Vf) : 1.667 gm/ml  
 Initial Density (W/Vo) : 1.000 gm/ml  
 Compressibility Index ((Vo-Vf)/Vo) x 100 : 40.000%  
 Hausner Ratio (Vo/Vf) : 1.667

Comments : \_\_\_\_\_      Checked by : \_\_\_\_\_  
 Analyzed by : \_\_\_\_\_      Date : \_\_\_\_\_  
 Date : \_\_\_\_\_

Test Report



User Friendly Operation



Results



LAN (optional)



Print

USP 1 (ETD-10) &  
 USP 2 (ETD-20)  
 also available

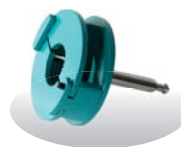
## Standard Accessories



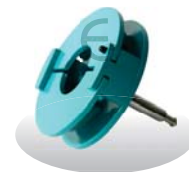
Measuring cylinder 100 mL class 'A'  
with certificate  
Part no - 0301A00001



Measuring cylinder 250 mL class 'A'  
with certificate  
Part no - 0301A00003



Cylinder holder for 100 mL  
Part no - 0301A00017



Cylinder holder for 250 mL  
Part no - 0301A00018

## Optional Accessories



Acoustic cabinet  
Part no - 0301A00014



Adapter for 10 mL  
Measuring cylinder  
Part no - 0301A00012



Adapter for 50 mL  
Measuring cylinder  
Part no - 0301A00011

Reduces the sound level to 71 dB  
to meet laboratory standards

## Specifications

Model	ETD-1020	
	230 Volts	110 Volts
Product code	M.S. : 0320300 S.S. : 0340300	M.S. : 0330300 S.S. : 0310300
Test methods	USP 1 and USP 2, ASTM (optional)	
No. of station	2	
Tap height	USP 1 : 14 mm ± 2 mm / 3 mm ± 0.2 mm, USP 2 : 3 mm ± 0.2 mm	
Taps / minute	USP 1 : 300 ± 15 / 250 ± 15, USP 2 : 250 ± 15	
No. of tap counts	10, 500, 1250	
No. of taps (user mode)	1 to 9999	
Display	24 x 2 alphanumeric LCD	
Type of drive	Direct drive with stepper motor	
Printer interface	Serial port	
PC connectivity	Standard : Serial Optional : External LAN	
Electrical power	220/230 V AC ± 10%, 50/60 Hz, 44 VA 110 V AC ± 10%, 50/60 Hz, 44 VA	
Dimensions (W x H x D)	36 cm x 20 cm x 32 cm	
Weight	17 Kgs	



## Cares & Maintenance

- It is advised to lock the cylinder holder properly before starting the test. Not doing so could lead to accidents & breakage of glasswares.

Please ask Electrolab's Service Engineer / Sales Person, to confirm whether your existing Tap Density is compliant to current USP Criteria

## Our Products

- Complete range of Dissolution Testers • Dissolution Media Preparator • Disintegration Testers • Friability Testers • Tablet Hardness Testers
- Electromagnetic Sieve Shakers • Bulk Density Tester • Powder Flow Tester • Leak Testers • Peristaltic Pumps



The information contained in this document is believed to be correct but **ELECTROLAB** accepts no liability for any errors and reserves the right to alter specifications without notice  
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