



PMST

Pelletized Powder Mass Strength Test

KEY FEATURES

State-of-the-art design
Force measure by load cell
Motorized plunger with position feedback of sample height
Single supply: wide range mains 90 to 240 VAC
Table model: 610 x 440 x 900 mm (W x D x H)

The PMST by HITEC Luxembourg is a small press with up to 500 N compression force. It is equipped with a load cell to hold a compression plunger. The plunger and load cell holder are mounted on a motor driven carriage with a travel range of 255 mm. The plunger immerses into a compression cylinder, which bottom has a removal slide door. The design allows compressing a powder under controlled conditions and to observe its flowability after such a compacting.

TEST EQUIPMENT TO DETERMINE THE MASS STRENGTH OF PELLETTED CARBON BLACK AS PER ASTM D1937

The test method ASTM D1937 "... is designed to determine the force required to pack a cylindrical column with pelleted carbon black. The results of this test are believed to relate to the ability of the carbon black to flow in bulk handling systems." ... "Mass strength gives an indication of the flowability in bulk handling. It is affected by pellet properties such as hardness, size, shape, and especially fines content."*

* Excerpts from chapter 1 resp. 4, of ASTM D1937-13

- Motor controlled accurate load application
- Linear carriage with load cell, stepper motor driven up to 30 mm/s and with position reading
- Programmable controller with 5.7" display, 640x480 px
- 4 robust push buttons for "dirty" operations
- Anodized aluminum frame and fully dust proof stainless steel electronic cabinet
- Software guided measurement sequence according to ASTM D1937
- Software guided load cell calibration
- Compact table model – small footprint
- AC mains supply only (no compressed air)



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SYSTEM CHARACTERISTICS: POWDER MASS STRENGTH TESTER - PMST

FORCE MEASURING SPECIFICS

Force reading range:	500 N
Force reading resolution:	0.1 N
Force reading accuracy absolute:	0.2% of actual value + 1 N

TRAVEL DRIVE & MEASURING SPECIFICS

Position relative to slide door (position 0 mm)	
Position reading resolution:	0.1 mm
Position reading accuracy:	+/- 0.8 mm
Travel range:	255 mm

SAMPLE CYLINDER / PISTON ASSEMBLY

ASTM D1937 compliant compression chamber	
Material:	stainless steel
Cylinder diameter:	52.39 mm
Cylinder height:	95.25 mm (3 ¾")
Plunger diameter:	50.8 mm (2")
Other cylinder / piston dimensions are possible	

CALIBRATION

Software supported load cell calibration by means of certified masses (included in delivery)

Automatic zeroing of force reading before each test

Automatic zero thickness position at power up of tester

DIMENSIONS & SUPPLY

Table model:	61 x 44 x 90 cm (W x D x H)
Weight:	67 kg (plus 3 each calibration weights of 10 kg)
Power supply:	90 .. 240 VAC, 50/60 Hz 300 VA

INTERFACES

RS232 for future use (option for connection to PC)

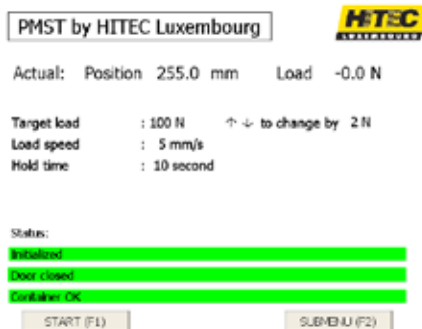
SOFTWARE

- Stand-alone measuring application
 - Menu guided on built-in display
- Software assisted measurement sequence according to ASTM D1937:
- display of list of the different load steps with result OK respectively NOK
 - memorizes history of up to 50 tests with date & time and list of load steps

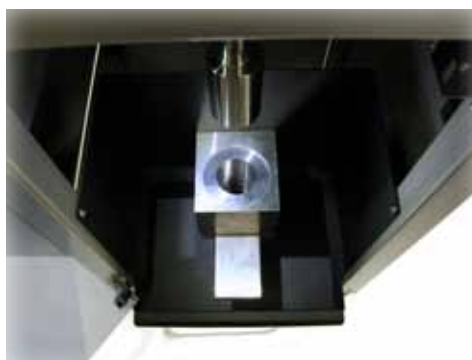
Software assisted load cell calibration by means of standard weights:

- gain calculation and linearity verification
- memorizes history of up to 50 calibrations

Settings menu for various parameters



menu guided testing



easy accessible evaluation



customer qualified calibration

CONTACT

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