



**BANBROS ENGINEERING PVT. LTD.**

The Precision Measurement People

# SINGLE COLUMN DIGITAL DISPLAY ELECTRONIC UNIVERSAL TESTING MACHINE

- *VALUE*
- *VERSATILITY*
- *PERFORMANCE*



## **BSDUM-SERIES**

**APPLICATION: -**

It is applicable for wide range of material for tension, compression, bending, shearing and low cycle test. Suitable for metal, rubber, plastic, spring, textile, and components testing. It is widely used in the corresponding industries, research and development, test institutes and training centers etc.

**STANDARDS: -**

ASTMA370, ASTM E4, ASTM E8, ASTM E9, ISO6892, ISO7438, ISO7500-1, EN10002-4,

**SAFETY DEVICE: -**

1. Stroke protection: double protection, prevent over preset.
2. Force protection: system setting.
3. Emergency stop device: handling emergencies.

**TECHNICAL SPECIFICATION: -**

Model No.		BSDUM-SERIES							
		BSDUM 0.1	BSDUM 0.2	BSDUM 0.3	BSDUM 0.5	BSDUM 1	BSDUM 2	BSDUM 3	BSDUM 5
Capacity	KN	0.1 KN	0.2 KN	0.3 KN	0.5 KN	1 KN	2 KN	3 KN	5 KN
	KG	10 Kg	20 Kg	30 Kg	50 Kg	100 Kg	200 Kg	300 Kg	500 Kg
Structure		Single column double spaces							
Max. Load(kN)		0.1, 0.2, 0.3, 0.5, 1, 2, 3, 5							
Material		All aluminium alloy surface spray painting shell							
Load accuracy		ISO 7500Class1							
Load range		2%~100%F·S							
Load resolution		1/ 50000							
Resolution of displacement		0.01mm							
Test speed(mm/min)		1-500stepless arbitrary setting							
Speed accuracy		within ±1% set speed							
E-Tensile space(mm)		600 (can be customized)							
E-Compression space(mm)		600 (can be customized)							
D-Test width(mm)		100							
F-Beam travel distance(mm)		772							
H-Workbench thickness(mm)		26							



<b>G-Base height(mm)</b>	158
<b>Power supply</b>	AC220V±10%, 50Hz/60Hz (can be customized)

**STANDARD ACCESSORIES**

ACCESSORIES	OPTIONAL CONFIGURATIONS
Host	
High strength main unit	
Aarc synchronous deceleration system	
ABBA High precision ball screw	
motor	Panasonic AC Servo motor
Compression Grip	Other Fixture
Platen Φ100mm	Bending Fixture
Tensile fixture	
Test control system	Optional
Sensor	
High precision load sensor	US Celtron spoke load sensor
LCD controller	Touch screen display

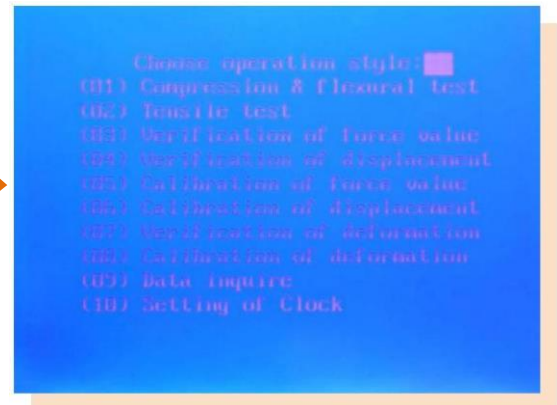
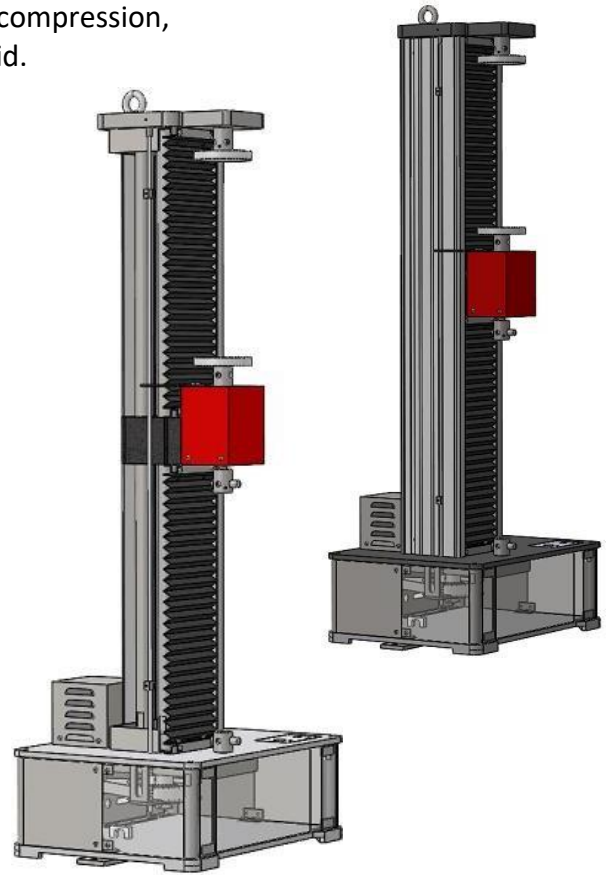
**Clamps Can Be Customized****Machine production standards and inspection before leaving factory:**

ISO6892, ASTM A370, ASTM E8, JIS Z2241, JIS Z2201,



**MAIN FRAME: -**

1. Adopt single column structure, lower for tensile, upper for compression, double space. The beam is stepping less lifting, light but rigid.
2. Adopting ball screw drive, realize no clearance transmission, make sure the precision control of the test force and deformation speed.
3. The photoelectric encoder is the displacement sensor, with high resolution, strong anti-interference ability.
4. The shield plate with limit mechanism used to control the beam moving range, in order to avoid sensor damaged due to the moving distance is too large.
5. The table, moving beams is made of high-quality precision machining steel plate, not only reduce the vibration generated by specimen fracture, but also improve the stiffness
6. The motor tail is upwards, above the work surface, this design makes the main unit lower space narrowing, the whole machine is more coordinating, and more easy to spread out the heat generated by the motor rotation, extend electrical components life.
7. Three columns of mandatory orientation, make the main unit rigidity much improved, to further ensure the repeatability of measurement.
8. Adopt bolt type grip
9. installation, make the grip replace easier.





### CONTROLLER FUNCTION FEATURES: -

1. Automatic calibration: system can automatically realize the accuracy of the calibration value.
2. After the sample broken, automatic stop.
3. Automatic display: Real-time display testing force, displacement, testing speed, peak value, testing status on oneLCD.
4. Automatic return: beam automatic return to initial position when testing finished.
5. Breakage judgment: sample after fracture, beam automatic stop moving
6. Limiting protection: Program control and Mechanical limiting protection.
7. Overload protection: When more than 3 ~ 5% of the rated load device automatically stop working.
8. Automatic calculation: automatic calculation area after input sample diameter (round); Width, thickness (flat),sample gauge etc.

### GUARANTEED PROJECT AND ASSESSMENT STANDARDS: -

In the contract factory will pass the empty loading test and loading test to verify the function and property of each test item. Assessment as follows:

1. Load sensor: at least 125% overload protection (no deformation and mechanical damage)
2. Load accuracy:  $\pm 0.5\%$
3. Displacement accuracy:  $\pm 0.5\%$
4. Speed accuracy:  $\pm 0.5\%$
5. Noise:  $< 50$  dB
6. EACH function of the equipment is operating normally without abnormal as termination
7. Equipment safety protection: Force protection, displacement limit protection