Complete
Instrumentation Solutions

ibertest
ADVANCED TESTING SOLUTIONS

Electromechanical Testing Machines
TESTCOM Series

Capacity: 5 - 100 kN

INTRODUCTION

New design of tabletop universal testing machines manufactured by IBERTEST. The TESTCOM series offers state-of-the-art performance combined with an ergonomic design and modern look.

Maintenance-free, electric servomotor drive for smooth and precise operation.

MODEL	CAPACITY
TESTCOM-5	5 kN
TESTCOM-10	10 kN
TESTCOM-25	25 kN
TESTCOM-50	50 kN
TESTCOM-100	100 kN

If you need machines with higher force capacity, please consult our range of electromechanical machines
EUROTEST (up to 2000 kN)

Advantages

› Its **compact and ergonomic** design saves space in the user's premises.

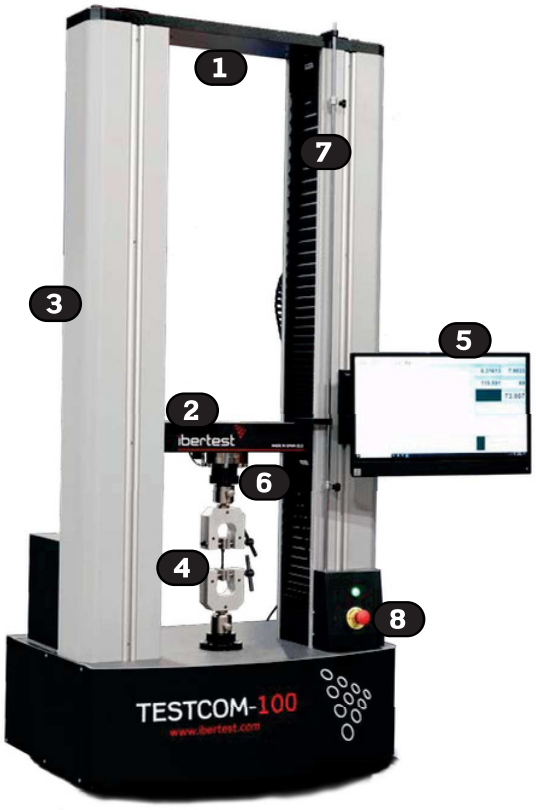
› Testing area **dimensions are adaptable** to specific customer requirements: scalable height, width and depth.

› **Specific** load cells, testing fixtures and transducers for each type of test.

Interface

User interface in an *All-In-One* computer with integrated touch screen, more modern, user-friendly and with improved performance.

The *All-In-One* computer is attached directly to the test frame by means of an orientable support, which allows to save a considerable amount of space in the laboratory and offers the user an ideal ergonomic position for operating both the WinTest software and the testing devices.



PARTS IDENTIFICATION

1. **Fixed upper crosshead**: to increase test frame stiffness.
2. **Mobile crosshead**: powered by the screw drivers, it transmits the load to the test specimen.
3. **Frame housing**: to host and protect the screw drivers and guiding columns.
4. **Tensile gripping heads**: other testing devices available for compression, bending...
5. **Control interface** through WinTest software and the *All-In-One* computer with touch screen.
6. **Universal load cell** (tensile-compression) for measurement of the applied force.
7. **Adjustable end of stroke**.
8. **Emergency stop**.

Accessory

Support frame. To place the machine and improve its ergonomics. Very robust, made of welded steel tube, with a shelf for storing devices and accessories.

It has 4 levelling feet.

Testing frame

Designed to perform out all type of static strength tests on materials, according to **EN standards**, **ASTM standards** and equivalent.

By means of interchangeable devices, it is possible to carry out tensile, compression, bending, folding, shear, punching... tests on all types of materials and finished products.

It is also possible to carry out **tests at high and low temperatures**, by using thermal chambers or furnaces, and the accessories corresponding to each application.

The base of the machine hosts the lower crosshead, as well as the servomotor and the ball screw transmission mechanisms.

Two **high-precision ball screws** and two guiding columns with rust-proof hard chrome coating ensure an even distribution of load and a **completely linear displacement** of the mobile crosshead.

Adjustable end of stroke detectors and, optionally, visual positioning ruler along the frame.

Displacement measurement

By means of the high resolution **digital transducer**:

- Position control resolution: **0.002 µm**.
- Speeds: 0.001 up to 1000.00 mm/min, depending on the model. Other speeds on demand.

The displacement data are used for two applications: test results and for closing the control loop (MDi control system).

Load measurement

Universal strain gauge load cell (tension-compression) which ensures high precision and repeatability. S-type or low profile available.

The high quality of the load cell guarantees Class 0.5 according to ISO 7500-1 within the measuring range (1% to 100% of the nominal capacity).

Double function: measuring the forces applied on the specimen (kN) and sending the return for closed-loop control (MDi control system).

Additional load cells can be installed to extend the measurement range or for special applications.

Automatic load cell recognition system. The system detects the installed load cell and auto-configures the control based on the capacity and calibration of the load cell. This saves time for the user and improves safety against human configuration errors (avoiding possible overloads).

Compression test with square plates. IBERTEST supplies circular, square and rectangular plates for any specimen size.

Single load bending/flexural test. Two-point load test can be carried out with a double roller loading fixture.

Tensile test with a long-travel extensometer: to determine the yield strength and elongation at break of materials with a high percentage of elongation.

Technical specifications

MODEL	TESTCOM-5	TESTCOM-10
Capacity	5 kN	10 kN
Force measurement	Universal load cell (tension - compression), extensometric bands Additional load cells can be mounted	
Precision according to ISO 7500-1	Class 0.5	Class 0.5
Measuring range	1% to 100% of nominal capacity 50 to 5 000 N	100 to 10 000 N
Force resolution	24 bits	24 bits
Mobile crosshead	Driven by the ball screws and guided by the columns Automatic return to initial test position, defined by software	
Motor drive	Synchronous servomotor (brushless) with integrated reduction gears. Enables closed-loop control (servocontrol) in load (kN/s) and displacement (mm/min)	
Transmission	Via HTD precision teeth belt. Adjustable belt-tightening system	
Crosshead position measurement	High resolution digital transducer	
Position control resolution	0.002 µm	0.002 µm
Movement speed range	0.01 to 1000.00 mm/min [2]	0.01 to 1000.00 mm/min [2]
Load speed range	Programmable between 1/1000 and 1/10 of capacity, in kN/s [2] 0.0005 to 0.5 kN/s [2]	0.001 to 1 kN/s [2]
Columns	2 chrome-plated and grounded steel columns	
Ball screws	2 high-precision ball screws with scrappers	
Test zones	One (single space)	One (single space)
Horizontal free distance	420 mm [1]	420 mm [1]
Vertical free light with load cell (without testing devices)	0 - 1200 mm [1]	0 - 1200 mm [1]
Dimensions (height x width x depth)	1750 x 830 x 660 mm	1750 x 830 x 660 mm
Power supply	Single phase 220V with ground, 50/60 Hz (to be specified)	
Total power	500 W	500 W
Weight without testing devices	250 kg	250 kg
Safety	Emergency stop button on the front of the test frame, adjustable end of stroke, overvoltage protection, EMC filters... Complies with european safety standards, such as European Directive 2006/42/EC	

Technical specifications

MODEL	TESTCOM-25	TESTCOM-50	TESTCOM-100
Capacity	25 kN	50 kN	100 kN
Force measurement	Universal load cell (tension - compression), extensometric bands Additional load cells can be mounted		
Precision according to ISO 7500-1	Class 0.5	Class 0.5	Class 0.5
Measuring range	1% to 100% of nominal capacity 250 to 25 000 N	500 to 50 000 N	1 000 to 100 000 N
Force resolution	24 bits	24 bits	24 bits
Mobile crosshead	Driven by the ball screws and guided by the columns Automatic return to initial test position, defined by software		
Motor drive	Synchronous servomotor (brushless) with integrated reduction gears. Enables closed-loop control (servocontrol) in load (kN/s) and displacement (mm/min)		
Transmission	Via HTD precision teeth belt. Adjustable belt-tightening system		
Crosshead position measurement	High resolution digital transducer		
Position control resolution	0.002 µm	0.002 µm	0.002 µm
Movement speed range	0.001 a 500.00 mm/min (2)	0.001 a 500.00 mm/min (2)	0.001 a 500.00 mm/min (2)
Load speed range	Programmable between 1/1000 and 1/10 of capacity, in kN/s (2) 0.0025 to 2.5 kN/s (2)	0.005 to 5 kN/s (2)	0.01 to 10 kN/s (2)
Columns	2 chrome-plated and grounded steel columns		
Ball screws	2 high-precision ball screws with scrappers		
Test zones	One (single space)	One (single space)	One (single space)
Horizontal free distance	450 mm (1)	450 mm (1)	450 mm (1)
Vertical free light with load cell (without testing devices)	0 - 1200 mm (1)	0 - 1200 mm (1)	0 - 1300 mm (1)
Dimensions (height x width x depth)	1900 x 900 x 685 mm	1900 x 900 x 685 mm	2015 x 900 x 705 mm
Power supply	Single phase 220V with ground, 50/60 Hz (to be specified)		
Total power	500 W	500 W	750 W
Weight without testing devices	375 kg	375 kg	525 kg
Safety	Emergency stop button on the front of the test frame, adjustable end of stroke, overvoltage protection, EMC filters... Complies with european safety standards, such as European Directive 2006/42/EC		

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