



QUANTUM 100

100 kN Advanced Universal Testing Machine

The Quantum 100 kN is a cutting-edge product designed with the highest quality standards and incorporating numerous advanced technical features.

Our LabTest software is a powerful tool for programming tests and monitoring results, ensuring precise data management in compliance with European, North American, and International Standards.

This instrument is suitable for use in both production lines, where speed and efficiency are crucial, and in laboratory settings, where the sophisticated software enables in-depth analysis of test data.

LabTest offers comprehensive control over data processing, storage, management, and transmission to company networks and databases, among other functions.

The Quantum frame is highly adaptable and can be customized with various grips, fixtures, extensometers, additional load cells, temperature chambers, and other accessories to cater to a wide range of applications such as tensile, compression, and flexure testing.

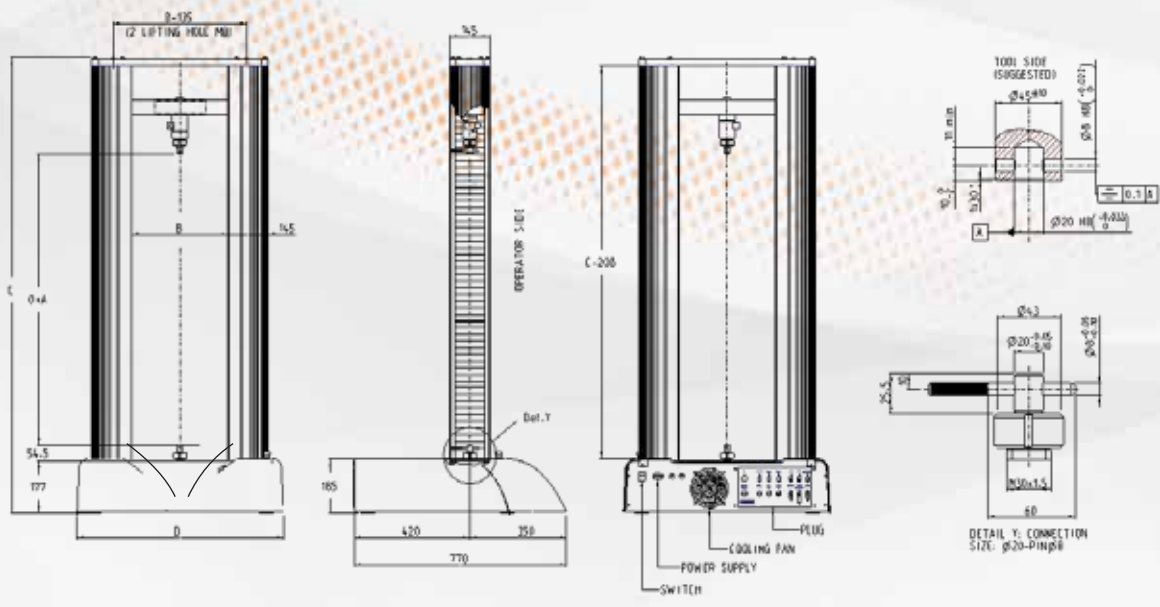
Furthermore, this user-friendly instrument can be enhanced with additional load cells of lower capacities to achieve the highest resolution and accuracy for micro-loads.

Features:

- Dual-column rigid structure with a maximum capacity of 100 kN
- Ideal for metals, plastics, composites, and various other materials
- Sleek and user-friendly design with advanced functionalities
- Adaptable and modular structure for convenient future enhancements
- Exceptionally precise load and stroke readings with a minimum test speed of 0.0005 mm/min, ensuring top-notch performance and precise results
- Produced by an ISO 9001 Certified Company
- Outstanding price-to-quality value



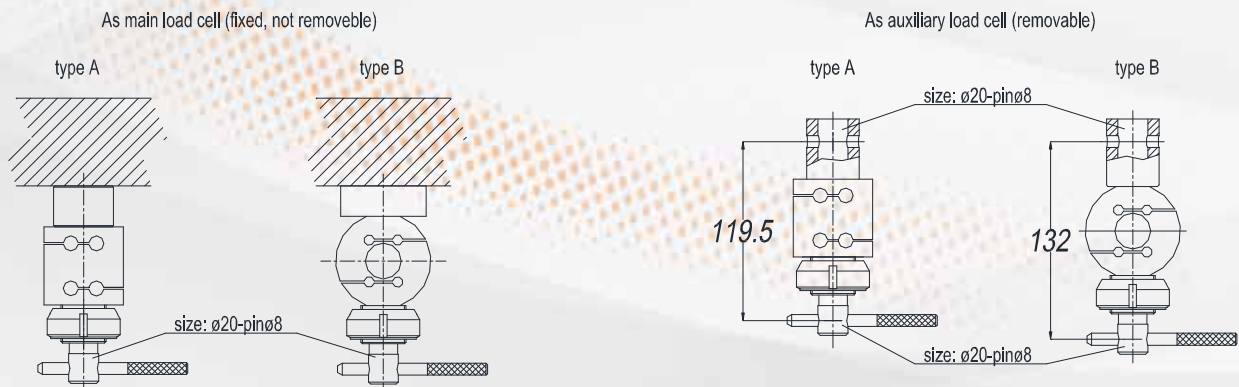
Universal testing machine Quantum 100 with Micron extensometer



TECHNICAL SPECIFICATIONS

ITEM ⁽¹⁰⁾	TQ01.06	TQ01.06.01 ⁽¹⁾	TQ01.06.02 ⁽²⁾			
Capacity of frame and max allowed load		100 kN (22,481 lbf)				
Load cell nominal size (tensile & compression)		100,000 N ⁽³⁾				
Max accidental overload ⁽¹¹⁾ / breaking load (with above load cell)		150 kN / 300kN ⁽³⁾				
Standards met or exceeded	ISO 7500-1, ASTM E4, EN 10002-2, JIS B7721, GB/T 16825.1, DIN51221, BS 1610 and other equivalent					
Load cell reading resolution		Over 3 million division (24 bit A/D converter)				
Stroke resolution		0.041 µm				
Speed at maximum load (during test)		0.0001± 500 mm/min				
Idle speed		500 mm/min				
Accuracy of positioning repeatability		0.02 mm(20 µm)				
Accuracy of the set crosshead speed		0.5% of setting speed ⁽⁴⁾				
Total stroke (Dimension A) [mm/in.]	1,000 / 39.37	1,500 / 59.05	1,750 / 68.90			
Daylight between columns (Dimension B) [mm/in.]		410 / 14.16				
Testing area depth		Unlimited ⁽⁵⁾				
Power supply	To be chosen: 220V ± 10% 50/60 Hz or 120 V ± 10% 50/60 Hz - (others on request) ⁽⁶⁾					
Power rating		1400 W ⁽⁶⁾				
Machine weight (without accessories)	360 kg (794 lb)	390 kg (860 lb)	415 kg (915 lb)			
Finishing	Silver RAL 9006 / Black RAL 9011					
Room temperature		From +5 to +40°C				
Air humidity (without condensing)		Max 80%				
Internal data sampling rate		1,000 Hz				
PC data transmission rate		500 Hz				
PC interface	Ethernet (A dedicated Ethernet port on PC is required)					
Dimensions: [mm/in.]	Height (Dimension C) ± 3 mm	1,548 / 61	2,098 / 82.6	2,348 / 92.5	1,548 / 61	2,348 / 92.5
	Width (Dimension D)			750 / 29.5		
	Depth ⁽⁷⁾			770		
Size when packed - approx ⁽⁸⁾ [mm]	900x900 h 1,800	900x900 h 2,400	900x2,650 h 1,000	1150x900 h 1,800	1150x2,650 h 1,000	
Noise level		< 72 db				
Suggested local light level		300 lux				

(1) Load limit (only in tensile) of TQ01.16.01 is set to 12.5 kN if crosshead position (Dimension A) is greater than 1,000 mm
 (2) Load limit (only in tensile) of TQ01.16.02 and TQ01.16.04 is set to 10 kN if crosshead position (Dimension A) is greater than 1,000 mm
 (3) Data of standard 25 kN load cell. See below for other available main/auxiliary load cell
 (4) Some type of extensometers or other devices may reduce this value
 (5) Some optional devices need a compressed air line (5 bar) or different power supply
 (6) Frame dimension. Electrical connectors on the rear of the machine. See drawing
 (7) TQ01.16.02 and TQ01.16.04 are packed and travel in lying position



AVAILABLE MAIN / AUXILIARY LOAD CELL ⁽⁹⁾

ITEM	TQ03.04.08 Standard ⁽¹⁰⁾	TQ03.04.01	TQ03.04.01.0A	TQ03.04.01.0B	TQ03.04.02	TQ03.04.03	TQ03.04.03.0A	TQ03.04.04	TQ03.04.05
Nominal size	5 kN	10 N	20 N	50 N	100 N	250 N	500 N	1 kN	2,5 kN
Max accidental overload ⁽¹¹⁾ /breaking load	150% of nominal size / 300% of nominal size								
Type (see drawing)	Standard ⁽¹⁰⁾	A				B			
Kit for use aux. cell (sold separately) ⁽¹²⁾	-	TQ03.05.01 (generic code, correct load cell must be specified)							

⁽⁹⁾ The main load cell must have a capacity greater than all auxiliary cell in use. No limit in number of load cell. All load cell can work in compression and tensile and comes with connection. If certification is required, every load cell needs a different one.

⁽¹⁰⁾ Standard 5 kN load cell must be ordered separately in any case (not included in the item of the frame machine)

⁽¹¹⁾ A new calibration of the load cell may be necessary if "max accidental overload" is exceeded.

The kit include female and male connection, pin and locknut (as in draw). Every auxiliary load cell need 1 kit.



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