

# Quasar 2,5

## 2,5kN Advanced Universal Testing Machines

TQ01.01

The 2,5 kN Quasar is the product of state of the art design, built to the highest quality levels and has many advanced technical features.

Programming tests and monitoring results can be controlled through our powerful and Intelligent Graphwork test software, which allow complete and accurate data management in accordance with European, North American and International Standard

This instrument is suitable for use both in production lines where the operator has to be fast and efficient and can accurately control the test with the optional remote control unit and also laboratory environments where the advanced software lets users analyse the test data. Graphwork allows full control of processing, filing, managing, and transmitting data to the company network, database, and performs many other functions.

This Quasar frame has a flexible and modular construction. It can be equipped with various grips and fixtures, as well as extensometers, additional load cells and many more accessories, for a wide range of applications (tensile, compression, flexure, etc.).

In addition, this user-friendly instrument can be fitted with additional load cells with lower capacities, providing the highest resolution and accuracy for micro-loads.

- Single-column rigid system with 2,5 kN maximum capacity
- Suitable for textile, plastics, composites and other materials
- Stylish design and advanced features
- One-Year Warranty
- Flexible and modular design for easy future expansion
- Key technical advantages include extremely high resolution of load and stroke readings, as well as minimum test speed of 0,0005mm/min, for the high performance and most accurate results
- Manufactured by an ISO 9001 certified company
- Excellent price-to-quality ratio

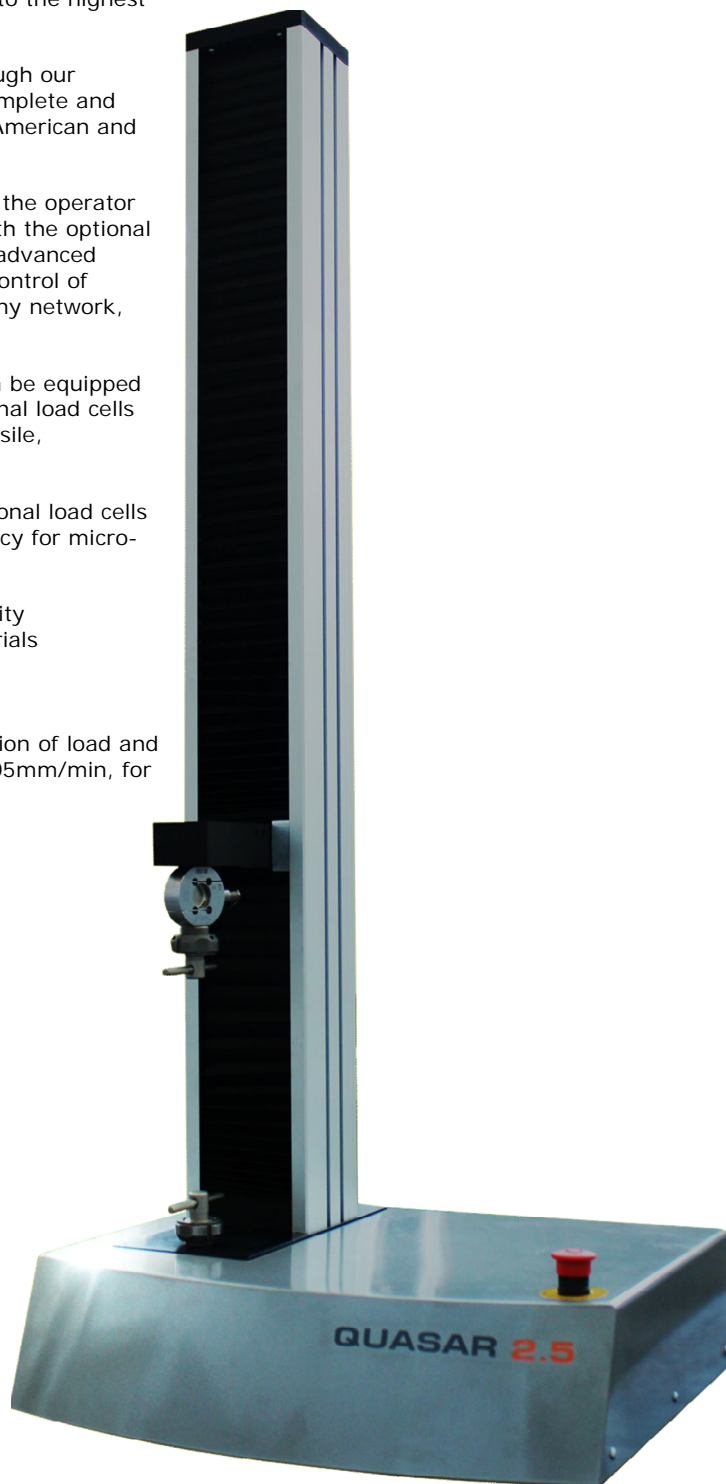


Photo: universal testing machine Quasar 2.5

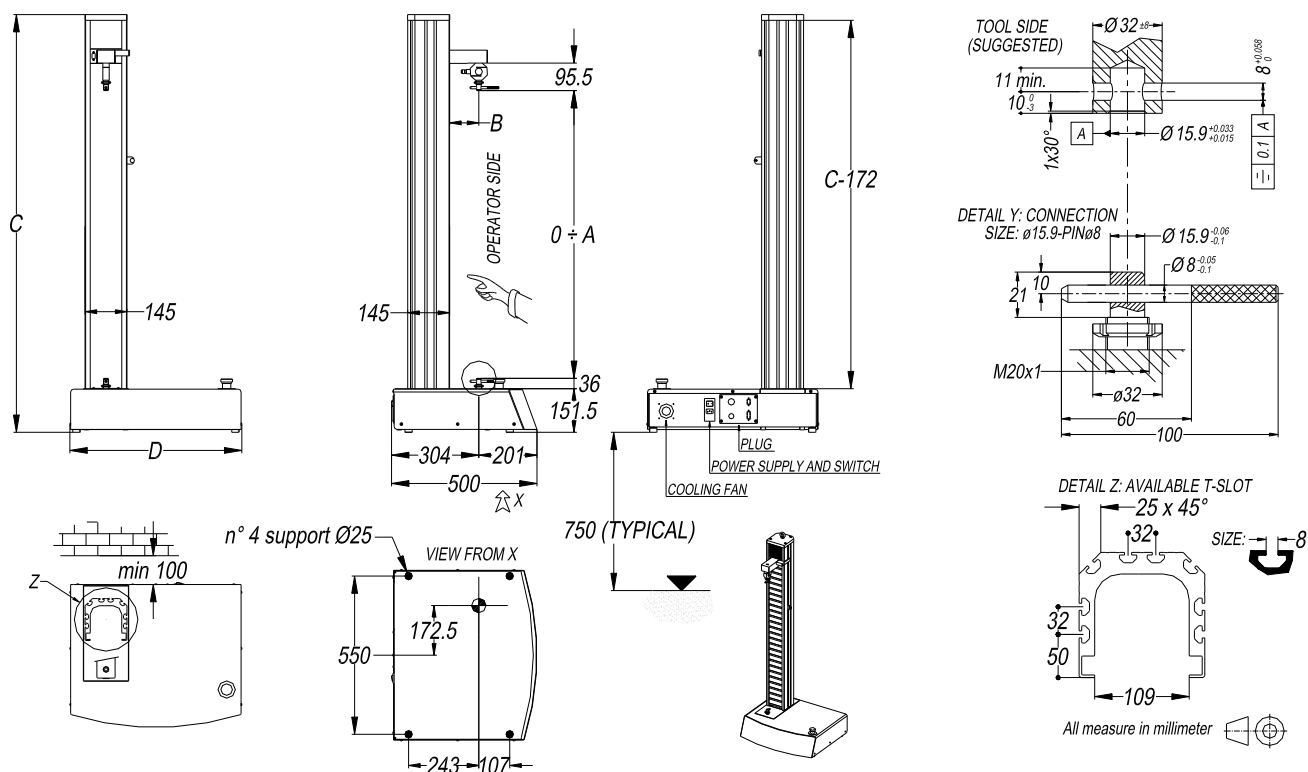
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TQ01.01 rev01-ENG





## TECHNICAL SPECIFICATIONS:

ITEM		TQ01.01 <sup>(1)</sup>
Capacity of frame		2500 N (562 lbf)
Load cell nominal size (tensile & compression)		3000 N <sup>(1)</sup>
Load cell crash value		Min 9000 N (>300% of nominal size) <sup>(1)</sup>
Standards met or exceeded		ASTM E4, EN-ISO 7500-1 class 1 and other equivalent
Load cell reading resolution	Division Value	1/200000 of nominal size (0,015 N) <sup>(1)</sup>
Frame stiffness <sup>(2)</sup>	Average	3500 N/mm
	Deformation max at full load	0,7 mm
Stroke resolution		0,163 µm
Speed at maximum load (in test)		0,0005 ÷ 1000 mm/min.
Idle speed		1000 mm/min.
Accuracy of positioning repeatability		0,02 mm (20 µm)
Accuracy of the set crosshead speed		0,5% of setting speed <sup>(3)</sup>
Total stroke (Dimension A)		1000 mm (39,37 in.)
Distance from column (Dimension B)		100 mm (13,78 in.)
Testing area width		Unlimited <sup>(4)</sup>
Power Supply		230V/50Hz or 120V/60Hz (other on request)
Power Rating		250 W <sup>(5)</sup>
Machine weight (without accessories)		66 Kg (145 lb)
Finishing		Silver RAL 9006 / Black RAL 9011
Ambient temperature		From +5 to +40 °C
Air humidity (without condensing)		Max 80%
Internal data sampling rate		500 Hz
PC data transmission rate		50 Hz
PC interface		Ethercat (A dedicated Ethernet port on PC is required)
Dimension:	Height (Dimension C) ± 3 mm	1452 mm (57.2 in.)
	Width (Dimension D)	595 mm (23.4 in.)
	Depth <sup>(6)</sup>	500 mm (19.7 in.)
Dimension of international shipping box – approx <sup>(7)</sup>		700x800 H1700 mm
Noise level		< 72 db
Suggested light local level		300 lux

<sup>(1)</sup> Data of standard load cell. See below for other available main/auxiliary load cell

<sup>(2)</sup> Including load cell. This value is evaluated in compression, without any type of grip

<sup>(3)</sup> Average on 1 second or 0,01 mm of stroke (the longer in time) without or constant load.

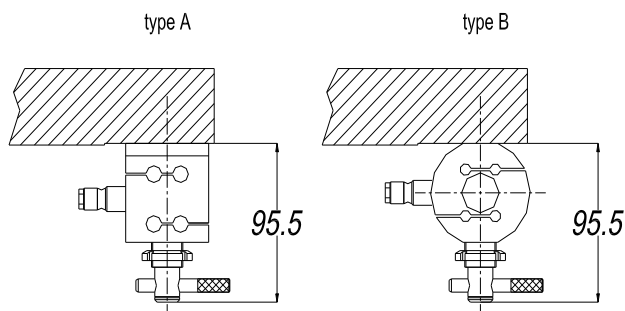
<sup>(4)</sup> Some type of extensometer or other device may reduce this value

<sup>(5)</sup> Some optional device need a compressed air line (5 bar)

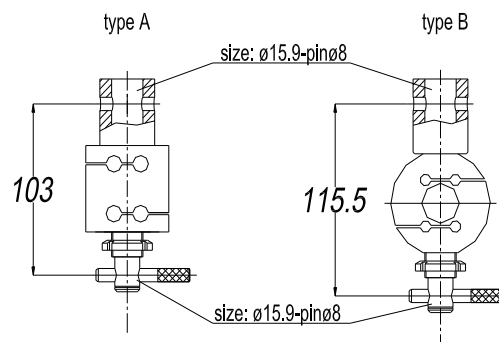
<sup>(6)</sup> Frame dimension. Electrical connectors on rear of the machine. See draw

<sup>(7)</sup> Machine is packed and travel in work position (not lying)

As main load cell (fixed, not removable)



As auxiliary load cell (removable)



### AVAILABLE MAIN / AUXILIARY LOAD CELL: <sup>(8)</sup>

ITEM		TQ03.04.01	TQ03.04.01.0A	On request	TQ03.04.02	TQ03.04.03	On request	TQ03.04.04	TQ03.04.05 (standard)
Nominal size		10 N	20 N	50 N	100 N	250 N	500 N	1 kN	3 kN
Crash value		>300% of nominal size							
Reading resolution	Division Value	0,00005 N	0,0001 N	0,00025 N	1/200000 of nominal size	0,0005 N	0,00125 N	0,0025 N	0,005 N
Stiffness(°)	Average	33 N/mm	67 N/mm	167 N/mm	333 N/mm	833 N/mm	2500 N/mm	5000 N/mm	15000N/mm
	Deformation at full load	Max. 0,3 mm					Max. 0,2 mm		
Type		A				B			
Kit for use as auxiliary cell (sold separately) <sup>(11)</sup>		TQ03.05.01 (generic code, correct load cell must be specified)							

<sup>(8)</sup> The main load cell must have a capacity greater than all auxiliary cell in use. Every machine can have until 2 auxiliary load cell to be used under the main one.

All load cell can work in compression and tensile. If certification is required, every load cell needs a different one.

<sup>(9)</sup> Stiffness of the load cell only. The deformation under load is the sum frame + auxiliary cell

<sup>(10)</sup> Load cell must be ordered separately in any case (not included in the item of the frame machine)

<sup>(11)</sup> The kit include female and male connection, pin and locknut (as in draw). Every auxiliary load cell need 1 kit.

### MAIN OPTIONAL:

	ITEM
Bellows for dust protection of screws – kit of 4 pcs.	Standard
Kevlar ball screw covers – kit of 2 pcs.+ 2 normal bellows	*** Not available ***
Mobile pushbutton panel for machine control	TQ03.03
Silenced air compressor 0,75 Kw 1450 rpm 230V 50Hz 1A 192 litre/min	On request
Increased speed of crosshead	*** Not available ***
Internal piping with solenoid valves for use pneumatic device by keypad – compressed air line required (min 5 bar) <sup>(12)</sup>	TQ03.03.01
External piping for use pneumatic device with foot command – compressed air line with regulation required (~ 5 bar)	TQ08.11
Table for machine, PC and printer (width x depth x height mm 1750 x 750 x 740 300 Kg max) – white RAL 7035 with 6 black support	TQ03.07.01
Table for PC and printer only (width x depth x height mm 900 x 800 x 730) - grey	TQ03.07.03
Touch screen (~ 7 inch) colour monitor (to be use as keypad) <sup>(13)(14)</sup>	TQ03.02.00
Calibration certificate class 1 (opt. class 0,5) in range 1%-100% of capacity of the machine (or load cell if auxiliary)	TQ02.02.01
Extension of certification range class 1 in range 0,2%-1% of capacity of the machine (TQ02.02.01 required)	TQ03.06.01
PC <sup>(13)</sup>	TQ03.01.01
Touch PC all-in-one with support on column <sup>(13)(15)</sup>	TQ03.01.01.02
Colour printer A4	TQ03.01.02
USB Web cam <sup>(13)</sup> – use of camera for registration of test require the special software module TQ02.01.04	TQ03.01.03
Electronic power supply stabilizer	TQ03.08.01
Integral barrier - Aluminium profile and mm thickness polycarbonate panels - Split opening front and rear door , with electric interlock <sup>(16)</sup>	*** Not available ***
Extra price for reinforced structure and panels in polycarbonate 8 mm thickness	*** Not available ***
Analog input channel (strain gage type)	On request
Analog input channel (LVDT type)	On request
Second analog input channel (strain gage type)	*** Not available ***
Second analog input channel (LVDT type)	*** Not available ***

<sup>(12)</sup> Included filter+regulator+pressure indicator. Pushbutton item TQ03.03 already included in this option

<sup>(13)</sup> Characteristic of electronic device are constantly changing, type of supplied item may change with technology

<sup>(14)</sup> Item TQ03.03 and TQ03.02.00 may co-exist

<sup>(15)</sup> not usable for some external special device (e.g. special extensometer, digital I/O)

<sup>(16)</sup> Generic code. Dimension may change according installed device (e.g. special extensometer or grip)

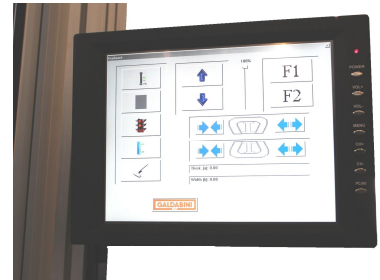
**IMPORTANT:** the machine can't work without special software! See the appropriate datasheet for base software and optional feature



TQ03.01.01.0



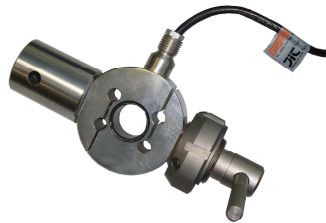
TQ03.03



TQ03.02.00



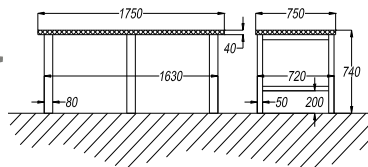
TQ08.11



TQ03.04.05 + TQ03.05.01



TQ03.07.03 + TQ03.01.01



TQ03.07.01



TQ03.01.03



On request

## ALSO AVAILABLE:



compression and flexure device



tensile device



extensometer