

Quasar 600

600kN Advanced Universal Testing Machines

The 600 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 allows complete and accurate data management in accordance with European, North American and International Standards.

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.

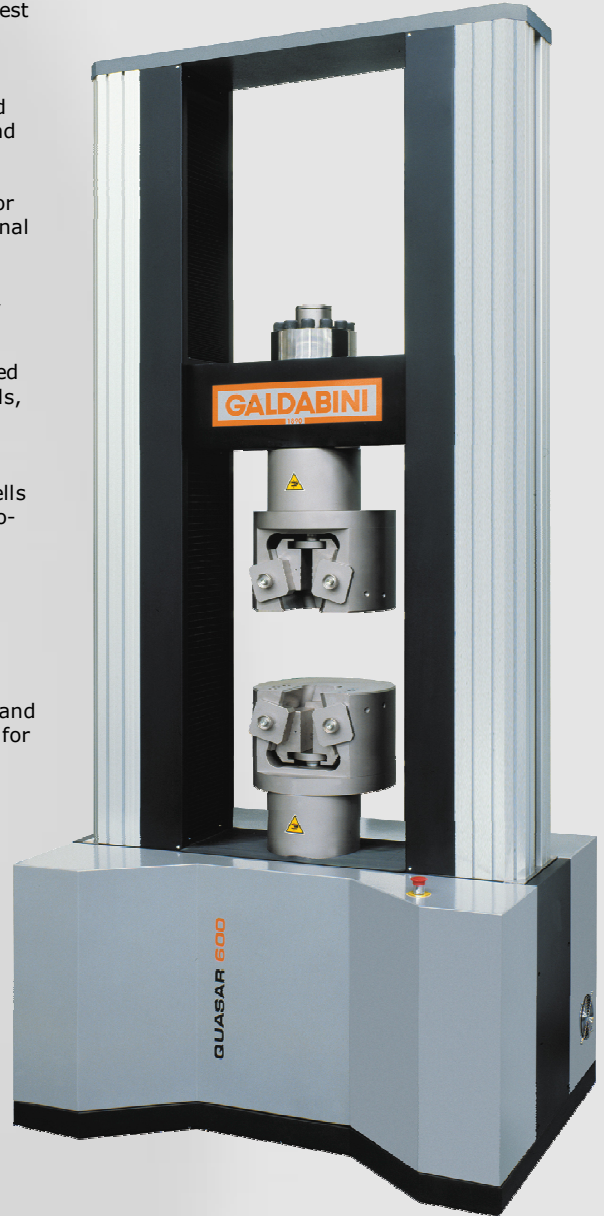
This Quasar frame has a flexible and modular construction. It can be equipped with various grips and fixtures, as well as extensometers, additional load cells, temperature chambers and many more accessories, for a wide range of applications (tensile, compression, flexure, etc.).

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.

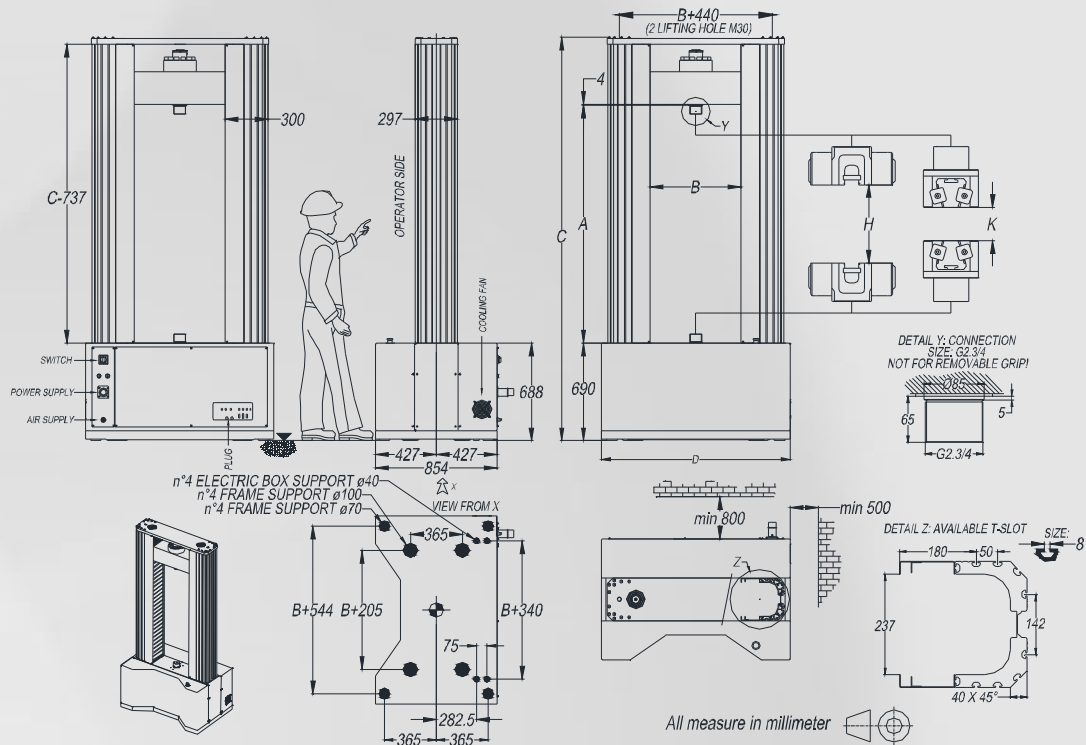
- Two-column rigid system with 600 kN maximum capacity
- Suitable for metals, composites and other materials
- Stylish design and advanced features
- One-Year Warranty
- Flexible and modular design for easy future expansion
- Key technical advantages include extremely high resolution of load and stroke 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



Ethernet connection



Universal testing machine Quasar 600
With pneumatic wedge grip



TECHNICAL SPECIFICATIONS:

ITEM	TQ01.09 ⁽¹⁰⁾
Capacity of frame and max admissible load	600 kN (134,885 lbf)
Load cell nominal size (tensile & compression)	750 kN ⁽¹⁾
Max accidental overload ⁽¹¹⁾ / breaking load	1,125 kN / 2,250 kN ⁽¹⁾
Standards met or exceeded	ISO 7500-1, ASTM E4, EN 10002-2, JIS B7721, GB/T 16825.1, DIN 51221, BS 1610 and other equivalent
Load cell reading resolution	Over 3 million division (24 bit A/D converter)
Frame stiffness ⁽²⁾	330 kN/mm
Average Deformation max at full load	1.8 mm
Stroke resolution	0.017 μm (0.034 μm with optional item TQ02.02)
Speed at maximum load (in test)	0.0005 ÷ 200 mm/min. (0.0005 ÷ 400 mm/min. with optional item TQ02.02)
Idle speed	200 mm/min. (400 mm/min. with optional item TQ02.02)
Accuracy of positioning repeatability	0.02 mm (20 μm)
Accuracy of the set crosshead speed	0.5% of setting speed ⁽³⁾
Distance between connection (Dimension A)	400 ÷ 1,685 mm (15.75 ÷ 66.34 in.)
Distance between standard hydraulic parallel closing grip (Dim. H)	1,145 mm (45.08 in.)
Distance between standard pneumatic wedge grip (Dimension K)	825 mm (32.48 in.)
Daylight between columns (Dimension B)	640 mm (25.19 in.)
Testing area depth	Unlimited ⁽⁴⁾
Power Supply	To be chosen: 220V±10% 50/60Hz or 120V±10% 50/60Hz (other on request) ⁽⁵⁾ (400V/50Hz three phases with optional item TQ02.02)
Power Rating	3,000 W ⁽⁵⁾ (7,000 W with optional item TQ02.02)
Machine weight (without accessories)	2,000 Kg (4,400 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	1,000 Hz
PC data transmission rate	500 Hz
PC interface	Ethercat (A dedicated Ethernet port on PC is required)
Dimension: Height (Dimension C) ± 5 mm	2,852 mm (112.28 in.)
Dimension: Width (Dimension D)	1,328 mm (52.28 in.)
Dimension: Depth ⁽⁶⁾	854 mm (33.62 in.)
Size when packed – approx ⁽⁷⁾ mm	3,900x1,750 H1,350 mm
Noise level	< 72 db
Suggested light local level	300 lux

⁽¹⁾ Data of standard 750 kN load cell. See below for other available auxiliary load cell

⁽³⁾ Average on 1 second or 0.01 mm of stroke (the longer in time) without or constant load.

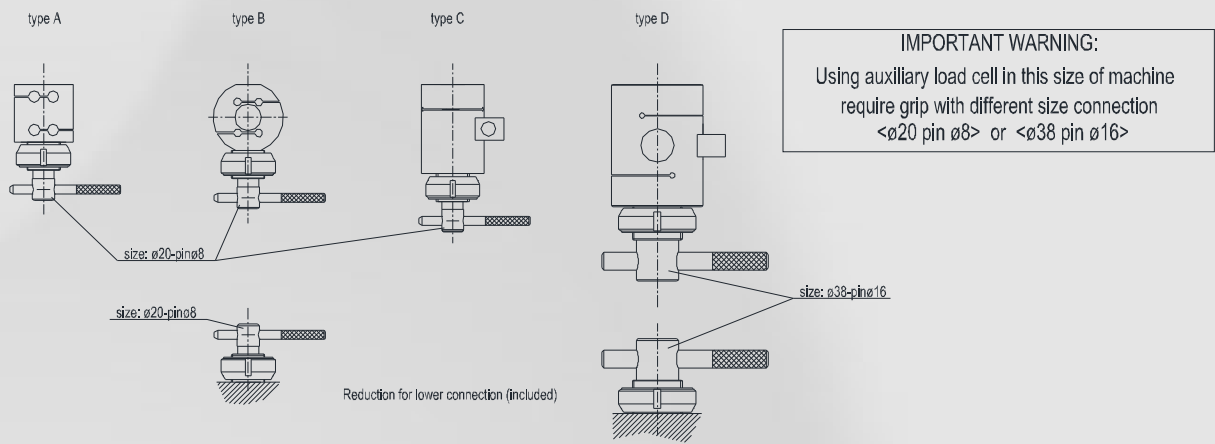
⁽⁵⁾ Some optional devices need a compressed air line (5 bar) or different power supply

⁽⁷⁾ Machine is packed and travel in lying position (not standing)

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

⁽⁴⁾ Some type of extensometers or other devices may reduce this value

⁽⁶⁾ Frame dimension. Electrical connectors on the rear of the machine. See drawing



AVAILABLE MAIN / AUXILIARY LOAD CELL: ⁽⁸⁾

ITEM	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	TQ03.04.06	TQ03.04.07	TQ03.04.08	On request	On request
Nominal size	10 N	20 N	50 N	100 N	250 N	500 N	1 kN	3kN ⁽¹²⁾	5 kN	10 kN	25 kN	50 kN	100 kN
Max accidental overload ⁽¹¹⁾ / breaking load	150% of nominal size / 300% of nominal size												
Stiffness ⁽⁹⁾ Average [N/mm]	33	67	167	333	833	2,500	5,000	15,000	16,500	33,000	83,500	166,500	335,000
Deformation at full load	Max. 0.3 mm			Max. 0.2 mm				Max. 0.3 mm		Max. 0.3 mm			
Type (see drawing)	A			B				C		D			
Kit for use as auxiliary cell (sold separately) ⁽¹³⁾	On request (depending on the configuration)												

⁽⁸⁾ The main load cell is always a 750 kN size. No limit in number of 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 (included main one) needs a different one.

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

⁽¹⁰⁾ Standard 750kN load cell is 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.

⁽¹²⁾ Max load of TQ03.04.05 load cell is software limited to 2.5 kN.

⁽¹³⁾ The kit include female and male connection, pin and locknut (as in draw). Every auxiliary load cell need 1 kit. Using auxiliary cell need grip with correct connection. The kit depending from grip permanently assembled on machine (wedge, shoulder, hydraulic...)

MAIN OPTIONAL:

	ITEM
Kevlar ball screw covers – (couple)	TQ11.02.03
Mobile pushbutton panel for machine control	TQ03.03
Silenced air compressor 0,75 Kw 1450 rpm 230V 50Hz 1A 98 litre/min	TQ03.08.04
Increased speed of crosshead	TQ02.02
Internal piping with solenoid valves for use pneumatic device by keypad – compressed air line required (min 5 bar) ⁽¹⁴⁾	Standard
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) ⁽¹⁵⁾⁽¹⁶⁾	TQ03.02.00
Calibration certificate class 1 in range 1%-100% of full load	TQ02.02.01
Calibration certificate class 0.5 in range 1%-100% of full load	TQ02.02.01.A
Extension of certification class 1 in range 0,2%-1% of full load (TQ02.02.01 or TQ02.02.01.A required)	TQ03.06.01
PC ⁽¹⁵⁾ multi-language	TQ03.01.03
Touch PC all-in-one with support on column ⁽¹⁵⁾⁽¹⁷⁾	TQ03.01.01.02
Colour printer A4	TQ03.01.02
USB Web cam ⁽¹⁵⁾ – use of camera for registration of test require the special software module TQ02.01.04	TQ03.01.03
Electronic power supply stabilizer	TQ03.08.03
Integral barrier - Aluminium profile and mm thickness polycarbonate panels - Split opening front and rear door , with electric interlock ⁽¹⁸⁾	TQ11.01.02
Extra price for reinforced structure and panels in polycarbonate 8 mm thickness	TQ11.02.01
Analogic input channel (strain gage type) for longitudinal deformation	Standard
Analogic input channel (LVDT type) for longitudinal deformation	Standard
Second analogic input channel (strain gage type) for transversal deformation	TQ02.01.17
Second analogic input channel (LVDT type) for transversal deformation	Standard

⁽¹⁴⁾ Included filter+regulator+pressure indicator

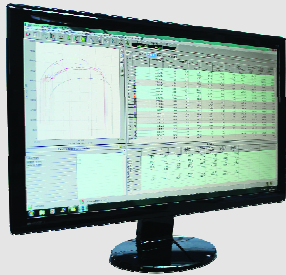
⁽¹⁵⁾ Characteristic of electronic device are constantly changing, type of supplied item may change with technology

⁽¹⁶⁾ Item TQ03.03 and TQ03.02.00 may co-exist

⁽¹⁷⁾ not usable for some external special device (e.g. special extensometer, digital I/O)

⁽¹⁸⁾ Generic code. Dimension may change according installed device (e.g. special extensometer or grip)

NOTE: the machine needs a Windows® based PC and special software.





TQ03.01.01.0



TQ03.03



TQ03.02.00



TQ03.08.04



TQ08.11



TQ03.07.03 + TQ03.01.03



TQ03.01.03

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Specification are subject to change without prior notice

