

GALDABINI

1890

Datasheet

Quasar 400

400 kN Advanced Universal Testing Machine

TQ01.09/S

The 400 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 Labtest 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. Labtest 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.

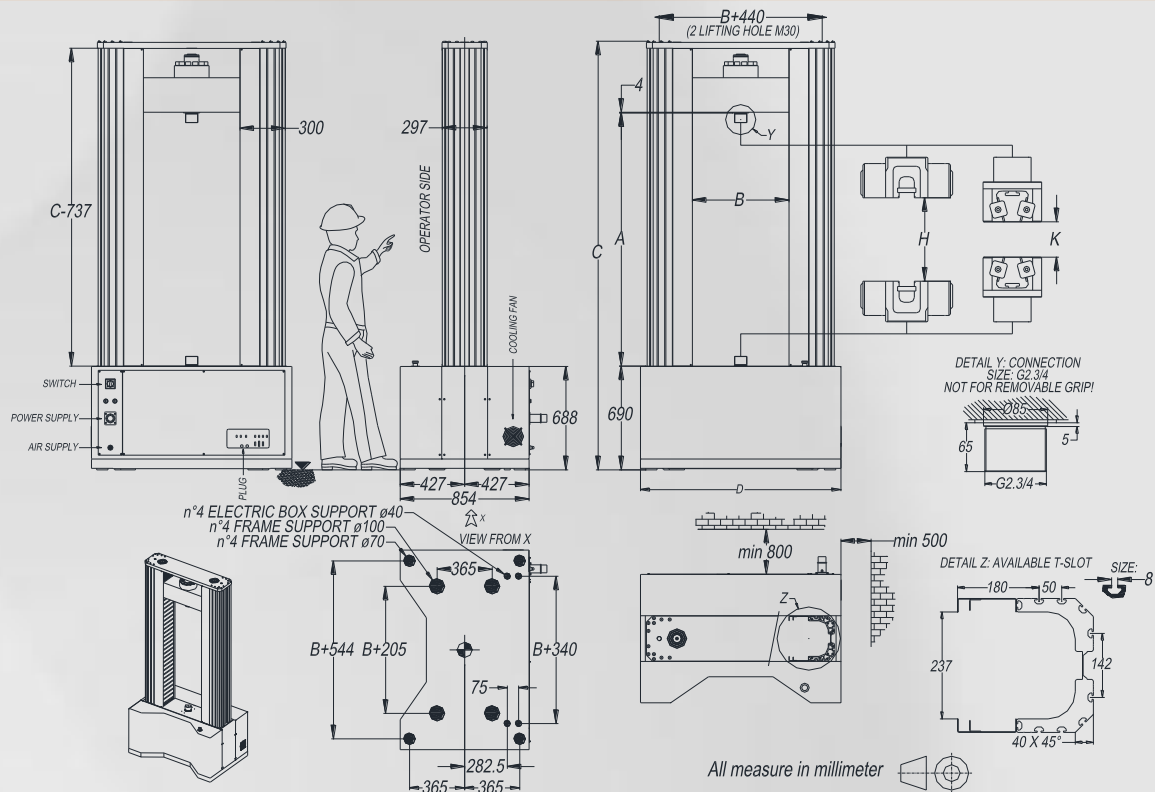
- Two-column rigid system with 400 kN maximum capacity
- Suitable for metals, composites and other materials
- Stylish design and advanced features; 4.0 instrument
- Flexible and modular design for easy future development
- Key technical advantages include extremely high resolution of load and stroke readings, as well as minimum test speed of 0.0005 mm/min, for the high performance and most accurate results
- Manufactured by ISO 9001 Certified Company
- Excellent price-to-quality ratio



Ethernet connection



Universal testing machine Quasar 400
With pneumatic wedge grip



TECHNICAL SPECIFICATIONS

ITEM	TQ01.09/S ⁽¹⁾
Capacity of frame and max admissible load	400 kN (89,924 lbf)
Max accidental overload ⁽¹⁾ / 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)
Stroke resolution	0.017 μ m (0.034 μ m 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 μ m)
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 \pm 10% 50/60Hz or 120V \pm 10% 50/60Hz (other on request)
Power Rating	3,500 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) \pm 5 mm	2,852 mm (112.28 in.)
Width (Dimension D)	1,328 mm (52.28 in.)
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 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.

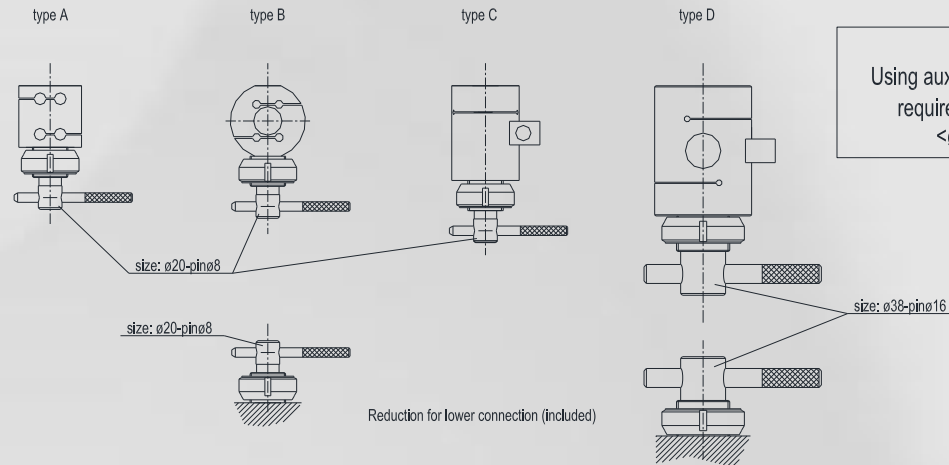
⁽⁵⁾ Some optional device need a compressed air line (5 bar)

⁽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 extensometer or other device may reduce this value

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



IMPORTANT WARNING:
Using auxiliary load cell in this size of machine
require grip with different size connection
<ø20 pin ø8> or <ø38 pin ø16>

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 the standard 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 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...)

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