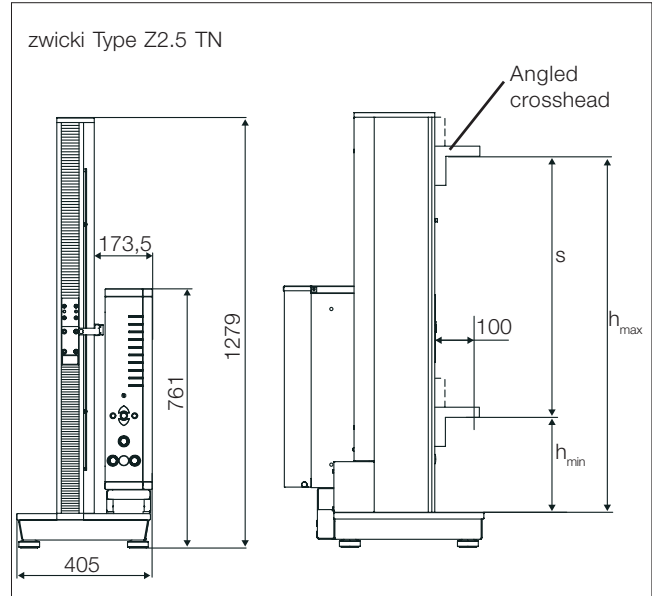


Product Information

zwicki-Line testing machines Z0.5 up to Z2.5



Range of application

The zwicki-Line is a stiff, flexible yet affordable solution for a very wide range of materials and component testing both in research and development environments as well as for routine quality control. Using alternative configurations it is possible to test plastics, elastomers, papers, cardboard, textiles, foam materials, wires, foodstuffs or components.

Advantages/Characteristics

- zwicki-Line, and its huge range of accessories and software, is designed, developed and manufactured in Zwick Roell's German production plant.
- Due to the internal know-how and support all components including mechanical, electronic and software can be integrated into a perfect solution. The zwicki-Line is a product which is manufactured to the highest quality standards.
- The zwicki-Line uses a digital controller, *testControl*, which is vertically mounted on the machine frame to prevent ingress of liquids, and conductive particles from test specimens coming into contact with the electronic systems.
- *testControl* technology allows the crosshead positioning of the testing machine to be corrected during the test to compensate for the system compliance.
- *testControl* incorporates an adaptive drive control system. This ensures that force or extension control is correctly maintained during the test.

- The space-saving design maximises the use of valuable laboratory bench space and the zwicki-Line can be easily transported, enabling tests to be carried out at different locations.
- The zwicki-Line operates with standard PCs or laptops as it requires no special interface cards.
- *testXpert*® II testing software provides a flexible configuration whilst maintaining remarkable ease of use.
- High quality industrial drive systems ensure the highest reliability and availability.
- Smart sensor technology recognises & calibrates all corrected sensors including their defined force limits.

Options

- The modular electronic system is equipped as standard with 2 slots and can be optionally expanded to 4. It is also possible to connect other other equipment such as extensometry or a multichannel input / output (I/O) module that provides additional analogue outputs, digital inputs and outputs.
- The stand alone option allows the zwicki-Line to be used without a PC if required. A colour display and data management system allows users to configure and run different test sequences.
- The throat depth can be extended to 205 mm.
- A fully interlocked safety shield protects the operator from specimen fragments.
- When required for special tests, the electronic control unit can be moved into alternative positions via an adjustable mounting bracket.

Product Information

zwicki-Line testing machines Z0.5 up to Z2.5

Data	Value
Load frame	
Finish	RAL 7038 agate grey and RAL 7037 dusty grey
Ambient temperature	+10 ... +35 °C
Air humidity	20 ... 90 %
Conformity	to ISO 9000 and CE
Measurement and control electronics	
Force measurement	Grade 0.5 / 1 see load cell, to DIN EN ISO 7500-1 (DIN 51220, DIN 51302), ISO R147, ASTM E4, BS 1610 Grade A, NF A 03-501
Measurement range	up to 165 % of F_N
Real resolution in tensile/compression direction	162.000 ... 912.000 Points
Recording rate, internal	500 Hz
Test data group transmission rate to the PC	100 (500 optional) Hz
Zero-point correction	automatic at start of measurement
Measurement signal runtime correction for all channels	yes
Output interface	RS232
Required PC connection (for PC operation)	COM 1
Power ratings	
Electrical connections adjustable	100...109 V (Ph,N,PE) 110...119 V (Ph,N,PE) 120...129 V (Ph,N,PE) 200...219 V (Ph,N,PE) 220...239 V (Ph,N,PE) 240...250 V (Ph,N,PE)
Power rating	0.44 kVA
Mains frequency	50/60 Hz

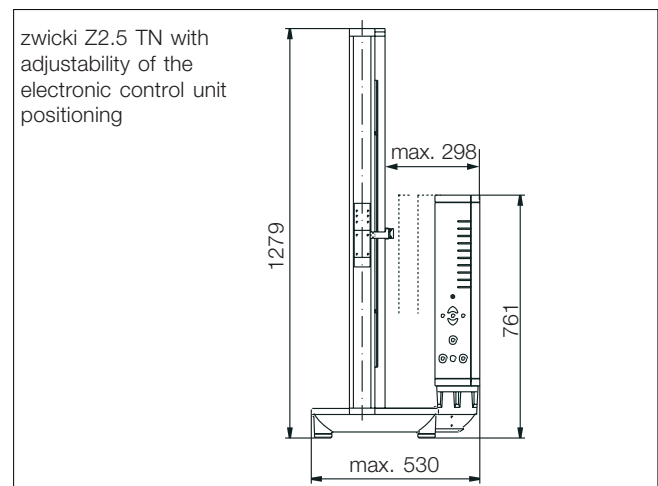
Options e.g.:

- Adjustability of the electronic control unit positioning
- 500 Hz online test data transmission
- Extension of the throat depth to 205 mm
- Increase of the speed to 3000 mm/min (only for type Z0.5)
- Extension of the Electronics to four slots (measuring channels)
- USB interface

Accessories e.g.:

- Additional upper crosshead
- Extensometer
- Specimen grips
- Test tools

We would be glad to give you information to further options and accessories on request.



Product Information

Zwicki-Line testing machines Z0.5 up to Z2.5

Type Item number	Z0.5 TS 004823	Z0.5 TN 004825	Z0.5 TH 004826	Z1.0 TS 004827	Z1.0 TN 004828	Z1.0 TH 004829	Z2.5 TS 004830	Z2.5 TN 004831	Z2.5 TH 004833	
Load frame										
Test load F_N in tensile/compression direction	0.5	0.5	0.5	1	1	1	2.5	2.5	2.5	kN
Height ca. ⁽¹⁾	779	1279	1579	779	1279	1579	779	1279	1579	mm
Width ⁽²⁾	405									mm
Depth (with electronics console)	489 (597)									mm
Overall weight approximately	57	66	71	57	66	71	57	66	71	kg
Height of the test area $h_{min} \dots h_{max}$: ⁽³⁾ angled moving crosshead mounted upwards	227 ...570	227 ...1070	227 ...1370	227 ...570	227 ...1070	227 ...1370	227 ...570	227 ...1070	227 ...1370	mm
angled moving crosshead rotated 180° (without accessories)	57 ...400	57 ...900	57 ...1200	57 ...400	57 ...900	57 ...1200	57 ...400	57 ...900	57 ...1203	mm
Maximum travel (s) of the mounting square:	if $E < h_{min}$:		$s = h_{max} - h_{min}$							
	if $E > h_{min}$:		$s = h_{max} - E$							
E = sum of the mounting dimensions of the complete testing equipment (load cell, specimen grips/testing device, mounting stud)										
Width of the test area	infinite									
Throat depth (Test axis to profile)	100	100	100	100	100	100	100	100	100	mm
Noise level measured at maximum speed	66	66	66	66	66	66	66	66	66	dB(A)
Drive system										
Crosshead speed $v_{min} \dots v_{nom}$	0.001 ...2000 ⁽⁴⁾	0.001 ...2000 ⁽⁴⁾	0.001 ...2000 ⁽⁴⁾	0.001 ...2000	0.001 ...2000	0.001 ...2000	0.001 ...1000	0.001 ...1000	0.001 ...1000	mm/min
Accuracy of the set speed	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	% of v_{nom}
Drive system's travel resolution	0.2453	0.2453	0.2453	0.2266	0.2266	0.2266	0.0996	0.0996	0.0996	µm
Positioning, repetition accuracy	± 2	± 2	± 2	± 2	± 2	± 2	± 2	± 2	± 2	µm

⁽¹⁾ with option „Additional crosshead“ height is increased by 9 mm

⁽²⁾ width with option „Adjustability of the electronic unit control positioning“: position of electronics console: normal position: 405 mm / first position: 467,5 mm / second position: 530 mm; for electronics with option „Stand Alone“ each single dimension is increased by 45 mm

⁽³⁾ See drawing on front page

⁽⁴⁾ with option the speed can be increased up to 3000 mm/min