

Product Information

Materials testing machine with hybrid drive Z600Y

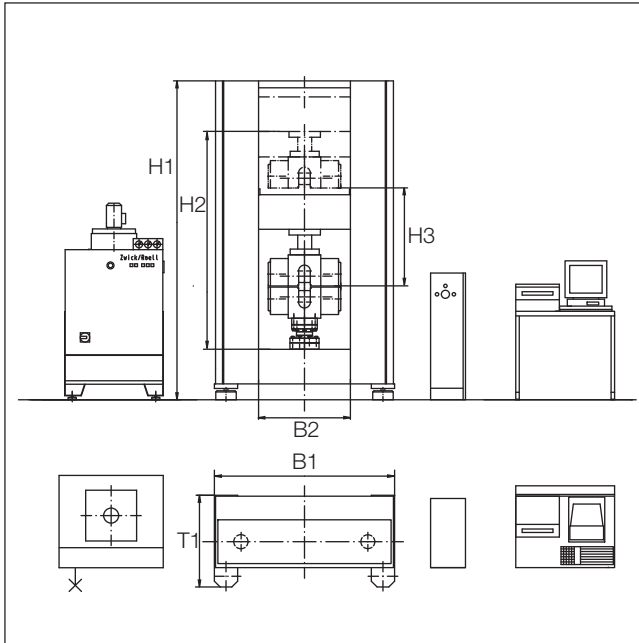


Figure: Drawing of Z600Y with hydraulic grips

Key benefits

- These patented materials testing machines are fitted with a hybrid drive and two hydraulic working cylinders, on each side of the test area.
- High-resolution, channel-synchronized measurement technology provides extremely precise, accurate determination of material characteristic values. No range-switching is necessary as load signal resolution is available over the whole range.
- Patented Zwick hybrid drive for large test loads covers the widest possible specimen range.
- Hybrid drive combines the advantages of hydraulic load application (simple load generation, robust, low wear) with mechanical precision (high positional accuracy of $\pm 1 \mu\text{m}$ under load).
- Hybrid drive concept separates load generation from drive control, allowing test conditions to be reproduced with a very high degree of accuracy.

Further advantages and features

- Wide measuring range allows precise determination of even small test loads without re-tooling.
- Long travel combined with comparatively low build-height ensures trouble-free specimen clamping and convenient testing over a wide range of specimen lengths.
- Standard tests using Zwick *testXpert*[®] software require only single-button operation.
- Modular design throughout the system allows the entire Zwick accessory range to be used, including a wide variety of extensometers, specimen grips and other test tools.
- Should new test requirements arise, additional test tools (e.g. calibration blocks) can very easily be installed by means of a T-slot or screw system.
- Can be tailored to customers' specific requirements (e.g. test devices, specimen grips, test speed ranges, testing software).

Product Information

Materials testing machine with hybrid drive Z600Y

Model	Z600Y
Fmax [kN]	600
[lb]	135000
Number of drive columns	2
Stiffness of load frame	
crosshead deflection and elongation of columns [kN/mm]	550
including load cell, hydraulic grips and drive [kN/mm]	260
Dimensions of load frame	
H1 – Height [mm]	2770
B1 – Width [mm]	1550
T1 – Depth [mm]	796
Dimensions of test area	
H2 – Height [mm]	1895
B2 – Width [mm]	790
Test stroke max.	
H3 – with hydraulic grips 8597 (including load cell) [mm]	850
Test speed [mm/min]	0.001 – 250
Weight	
without tools / specimen grips (with electronics) [kg]	2600
with specimen grips [kg]	3200
Specific floor loading [kg/cm ²]	5.0
Accuracy grade of load cell	
0,5 from ... on [kN]	6
1 from ... on [kN]	1.2
Resolution of crosshead travel [µm/Impuls]	0.05
Item no.	• 003092
	(BPC-F0600YN.R06)

Environmental conditions	
Operating temperature [°C]	+10 ... +35
Storage temperature [°C]	-25 ... +55
Humidity range (not condensing) [%]	≤ 90
Electrical connection	
Mains voltage 3 Ph/N/PE ^{1 2} [V]	400
Mains frequency [Hz]	50
Drive power [kVA]	8.5
Fuse [A]	25
Noise level in 1m distance [dB(A)]	67
Color coating of rack	RAL7011 (iron gray), RAL7038 (agate gray)

¹ Three phase AC motor (L1, L2, L3), neutral wire N, protective earth PE

² < ± 10 % related to the mains voltage

Product Information

Materials testing machine with hybrid drive Z1200Y



Figure: Zwick Z1200Y with hydraulic grips

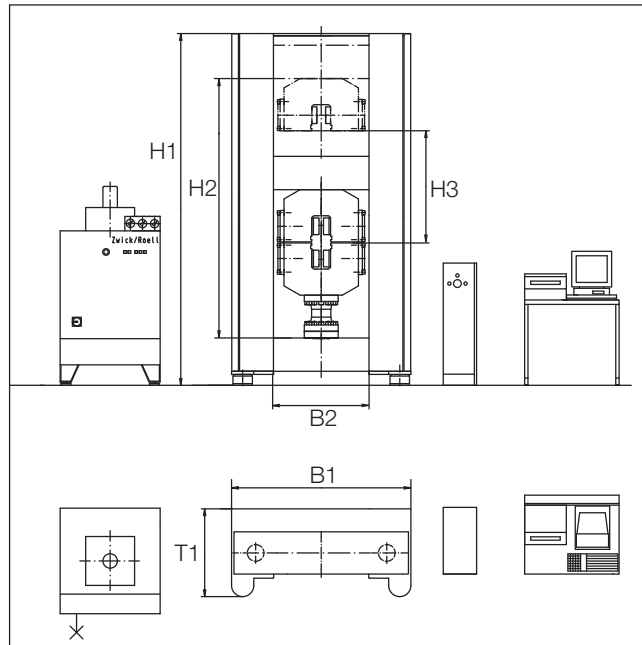


Figure: Drawing of Zwick Z1200Y with hydraulic grips

Key benefits

- These patented materials testing machines are fitted with a hybrid drive and two hydraulic working cylinders, on each side of the test area.
- High-resolution, channel-synchronized measurement technology provides extremely precise, accurate determination of material characteristic values. No range-switching is necessary as load signal resolution is available over the whole range.
- Patented Zwick hybrid drive for large test loads covers the widest possible specimen range.
- Hybrid drive combines the advantages of hydraulic load application (simple load generation, robust, low wear) with mechanical precision (high positional accuracy of $\pm 1 \mu\text{m}$ under load).
- Hybrid drive concept separates load generation from drive control, allowing test conditions to be reproduced with a very high degree of accuracy.

Further advantages and features

- Wide measuring range allows precise determination of even small test loads without re-tooling.
- Long travel combined with comparatively low build-height ensures trouble-free specimen clamping and convenient testing over a wide range of specimen lengths.
- Standard tests using Zwick *testXpert*[®] software require only single-button operation.
- Modular design throughout the system allows the entire Zwick accessory range to be used, including a wide variety of extensometers, specimen grips and other test tools.
- Should new test requirements arise, additional test tools (e.g. calibration blocks) can very easily be installed by means of a T-slot or screw system.
- Can be tailored to customers' specific requirements (e.g. test devices, specimen grips, test speed ranges, testing software).

Product Information

Materials testing machine with hybrid drive Z1200Y

Model	Z1200Y
Fmax [kN]	1200
[lb]	270000
Number of drive columns	2
Stiffness of load frame	
crosshead deflection and elongation of columns [kN/mm]	1400
including load cell, hydraulic grips and drive [kN/mm]	770
Dimensions of load frame	
H1 – Height [mm]	3166
B1 – Width [mm]	1614
T1 – Depth [mm]	790
Dimensions of test area	
H2 – Height [mm]	2330
B2 – Width [mm]	860
Test stroke max.	
H3 – with hydraulic grips (including load cell) [mm]	1000
Test speed [mm/min]	0.001 – 250
Weight	
without tools / specimen grips (with electronics) [kg]	5000
including pair of specimen grips [kg]	6300
Specific floor loading [kg/cm ²]	9
Accuracy grade of load cell	
0,5 from ... on [kN]	12
1 from ... on [kN]	2.4
Resolution of crosshead travel [µm/Impuls]	0.05
Item no.	• 358429
	(BPC-F1200YN.R11)

Environmental conditions	
Operating temperature [°C]	+10 ... +35
Storage temperature [°C]	-25 ... +55
Humidity range (not condensing) [%]	≤ 90
Electrical connection	
Mains voltage 3 Ph/N/PE ^{1 2} [V]	400
Mains frequency [Hz]	50
Drive power [kVA]	15
Fuse [A]	32
Noise level in 1m distance [dB(A)]	67
Color coating of rack	RAL7011 (iron gray), RAL7038 (agate gray)

¹ Three phase AC motor (L1, L2, L3), neutral wire N, protective earth PE

² < ± 10 % related to the mains voltage

Product Information

Materials testing machines with hybrid drive Z1600Y and Z2000Y

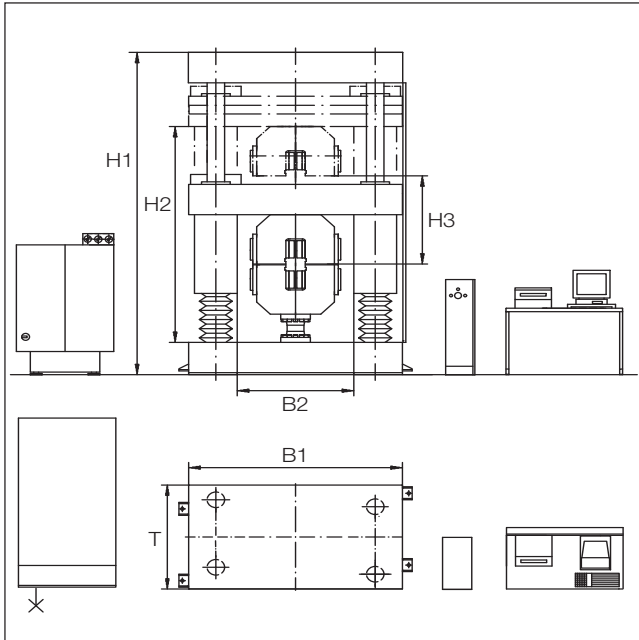


Figure: Zwick Z1600Y with hydraulic grips

Key benefits

- These patented materials testing machines are fitted with a hybrid drive and two hydraulic working cylinders, on each side of the test area.
- High-resolution, channel-synchronized measurement technology provides extremely precise, accurate determination of material characteristic values. No range-switching is necessary as load signal resolution is available over the whole range.
- Patented Zwick hybrid drive for large test loads covers the widest possible specimen range.
- Hybrid drive combines the advantages of hydraulic load application (simple load generation, robust, low wear) with mechanical precision (high positional accuracy of $\pm 1 \mu\text{m}$ under load).
- Hybrid drive concept separates load generation from drive control, allowing test conditions to be reproduced with a very high degree of accuracy.

Further advantages and features

- Wide measuring range allows precise determination of even small test loads without re-tooling.
- Long travel combined with comparatively low build-height ensures trouble-free specimen clamping and convenient testing over a wide range of specimen lengths.
- Standard tests using Zwick *testXpert*[®] software require only single-button operation.
- Modular design throughout the system allows the entire Zwick accessory range to be used, including a wide variety of extensometers, specimen grips and other test tools.
- Should new test requirements arise, additional test tools (e.g. calibration blocks) can very easily be installed by means of a T-slot or screw system.
- Can be tailored to customers' specific requirements (e.g. test devices, specimen grips, test speed ranges, testing software).

Product Information

Materials testing machines with hybrid drive Z1600Y and Z2000Y

Model	Z1600Y	Z2000Y
Fmax [kN]	1600	2000
[lb]	360000	450000
Number of drive columns	2	2
Stiffness of load frame		
crosshead deflection and elongation of columns [kN/mm]	2200	2200
Dimensions of load frame		
H1 – Height [mm]	3725	3725
B1 – Width [mm]	2400	2400
T1 – Depth [mm]	1200	1200
Dimensions of test area		
H2 – Height [mm]	2495	2495
B2 – Width [mm]	1200	1200
Test stroke max.		
H3 – with hydraulic grips (including load cell) [mm]	1020	1020
Test speed [mm/min]	0.001 – 250	0.001 – 250
Weight		
without tools / specimen grips (with electronics) [kg]	19750	19750
including pair of specimen grips [kg]	22000	22000
Specific floor loading [kg/cm ²]	4.4	4.4
Accuracy grade of load cell		
0,5 from ... on [kN]	16	20
1 from ... on [kN]	3.2	4
Resolution of crosshead travel [µm/Impuls]	0.04	0.04
Item no.	• 016138	• 640276
	(BXC-F1600YN.R45-001)	(EXC-F2000YN.R45-001)

Environmental conditions		
Operating temperature [°C]	+10 ... +35	+10 ... +35
Storage temperature [°C]	-25 ... +55	-25 ... +55
Humidity range (not condensing) [%]	≤ 90	≤ 90
Electrical connection		
Mains voltage 3 Ph/N/PE ^{1 2} [V]	400	400
Mains frequency [Hz]	50	50
Drive power [kVA]	24	24
Fuse [A]	40	40
Noise level in 1m distance [dB(A)]	76	76
Color coating of rack	RAL7011 (iron gray), RAL7038 (agate gray)	

¹ Three phase AC motor (L1, L2, L3), neutral wire N, protective earth PE

² $\pm 10\%$ related to the mains voltage