

Product Information

Temperature Chamber for 600 kN Materials Testing Machine – Composites

CTA: 248342 248343



Z600E with closed temperature chamber



Z600E with open temperature chamber

Applications

Material and components testing in a temperature range of -60°C to 350°C.

- Composites: tests with a wide variety of test tools



Reliable test results

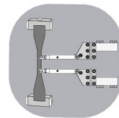
The chambers feature very low vibration, allowing optimum integration of the temperature chamber with ZwickRoell extensometry. Reliable test results are guaranteed, regardless of whether optical or contact-type measurement is used.



Cost and time savings

Test tools with low forces are easy to mount:

- Easy mounting via the adapter plate
- Use the special insertion aid to center your specimens quickly and precisely.



Perfect extensometer integration

These low-vibration temperature chambers provide optimal operating conditions for performing tests with extensometers. Due to them being mounted at the rear left, the temperature chamber can be easily accessed from the front, with a clear view into the test area via the window. You have the option to use a mechanical or an optical extensometer. To simplify installation a mechanical T-slotted module is available for sensor arms, together with an optical glass module for non-contact extensometers. This enables all extensometers available from ZwickRoell to be used with a temperature chamber.

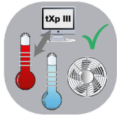


Maximum operating convenience

All system functions feature convenient, intuitive operation via the ZwickRoell testing software. The control layout adapts interactively to the test sequence and provides direct feedback. You can access all the data from your test series whenever you require. Reliable test results are guaranteed even with sensitive specimens. The optional safety door function guarantees operator protection in accordance with European safety regulations, with the chamber door acting as a safety door with guard locking.

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Precise temperature conditioning

Precision control guarantees stable temperatures with no overshooting. With the use of pre-configured control parameters the temperature is attained quickly and precisely. In conjunction with the ZwickRoell System Configuration Builder, specimen-specific control parameters can easily be loaded with the test program. The optional temperature sensor positioned near the specimen controls the temperature at the critical location, thereby optimizing your test results. The practical holder allows fast, precise sensor positioning. The homogeneous, extremely accurate temperature control ($\pm 3^{\circ}\text{C}$) ensures that your specimen is always tempered precisely.



Flexible in use

The modular concept allows optimum adaptation of the chamber to suit your needs. The large chamber volume provides additional test area space for component testing and a constant temperature in the area around the specimen. Future-proof: if you need to extend the range of application, all options can be retrofitted on-site as required.

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Item No.	081057	-	
Temperature range	RT +10°C ... +250 °C	RT +10°C ... +350 °C	
With LN ₂ cooling system (option)	-60 ... +250 °C	-60 ... +350 °C	
Connection LN ₂ (inner threads) ¹⁾	G 3/8	G 3/8	
Coolant operating pressure	1.5 +/- 0.1	1.5 +/- 0.1	bar
Temperature change speed at 400 kg			
Heating mode from RT to 250°C / 350°C	3	3	K/min
Corresponds to a warm-up time of:	85	17	min
Cooling mode from RT to -60 °C	2	5.5	K/min
Corresponds to a cool-off time of:	40	14	min
Temporal instability			
At 100°C	+/- 1	+/- 1	°C
At 250°C	+ 3	-	°C
Power supply	400	400	V, 3Ph/N/PE
Power frequency	50/60	50/60	Hz
Power consumption	8.25	8.25	kVA
Power supply cable	l = 4 m, with 5-pin CEE plug (16A)		
Interface	RS 232 (requires a COM port on the PC)		
Dimensions:			
Test area:			
Height	1200	1200	mm
Width	450	450	mm
Depth	620	620	mm
Inside of the door to the test axis	330	330	mm
Outer (distance to outer sides):			
Height	1350	1350	mm
Width	600	600	mm
Depth	1120	1120	mm
Weight, approx. (without options)	273	273	kg
Design	Arrangement of extensometer on the left rear side; door hinge to the left; condensation drain included in connection unit		

1) The supply line connection also includes a G 3/8"-UNF 3/4"-16 adapter

Accessories required

Installation components

Required: 1 x guide rails

Description	Item number
Guide rails	3009944
Sliding carriage	1086197

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Optional accessories

Safety door function

Description	Item number
Safety door function for operator protection Chamber door functions as a safety door with guard-locking, guaranteeing safety as per MRL. Detection of temperature chamber position and automatic selection of safety device (machine or temperature chamber).	1043841

Cooling

Description	Item number
Liquid nitrogen container Vacuum super insulation, 100 l, incl. connection line (Item number 1022235)	1022225

Temperature control near the specimen

Description	Item number
Temperature sensor near the specimen To control the temperature near the specimen incl. bracket to flexibly position the thermocouple	1022213

Heat protection gloves

Description	Item number
Heat protection gloves size M Consisting of para-aramid, carbon and wool High efficiency due to the possibility of wearing on both sides, leather cuff as additional forearm protection, contact heat up to 250 °C Food safety to EU 1935/2004	1022232
Heat protection gloves size L Consisting of para-aramid, carbon and wool High efficiency due to the possibility of wearing on both sides, leather cuff as additional forearm protection, contact heat up to 250 °C Food safety to EU 1935/2004	1022233