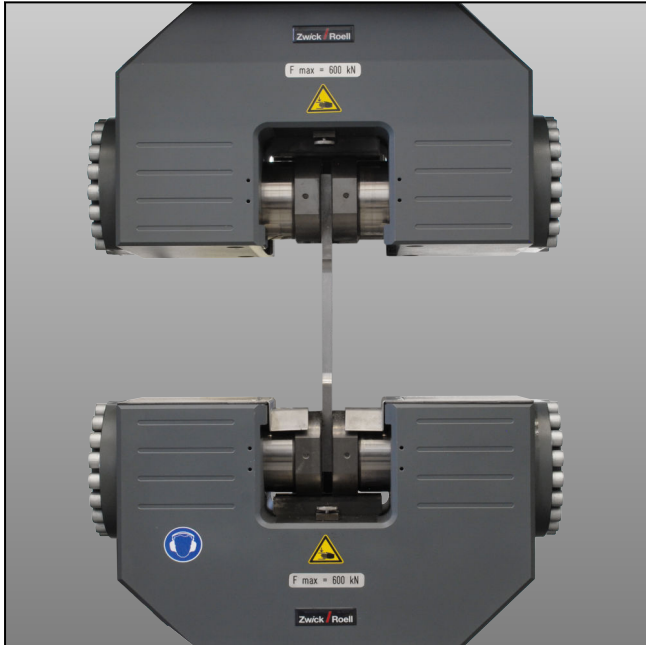


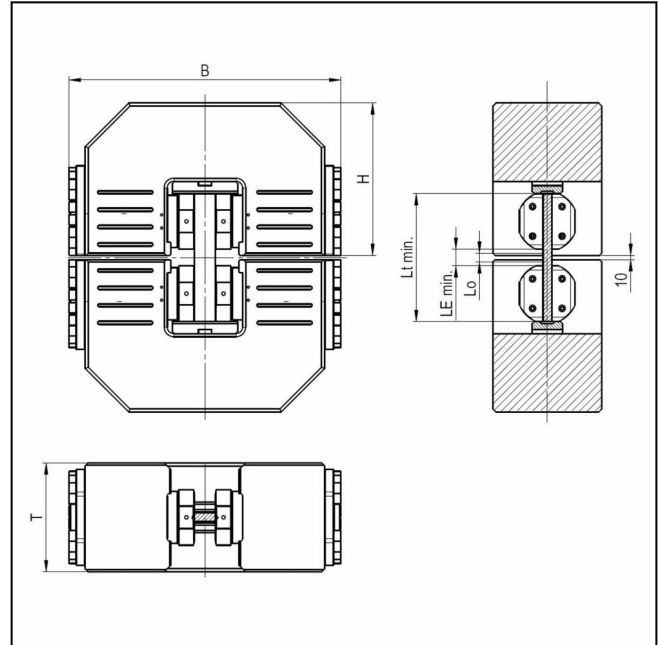
Product Information

Hydraulic grips 330 kN to 2500 kN

CTA: 74961 74969



Hydraulic grips (330 kN to 2500 kN)



Drawing: hydraulic grips (330 kN to 2500 kN)

Advantages and features

Modern design

- The robust body unit is designed for high clamping forces combined with minimal widening. The open-fronted design allows easy manual or automated specimen feeding.
- The double-acting eccentric hydraulic actuator provides optimum transmission of the gripping force to the specimen, while the design enables clamping of short specimens with small gage lengths.
- A comprehensive range of jaws and jaw mountings, together with a mounting system using T-slots and adapter plates ensures versatility in use.
- Optional zero-point clamping enables alternating loads in the tensile and compression directions.

Highly convenient operation

- Jaws, fixtures and devices can be changed quickly and easily, while test times can be reduced via mechanically adjustable stroke limiting.
- The specimen limit stop switch ensures reliable positioning of the specimen in the test axis.
- Optional stroke-limiter reduces piston travel during opening and closing of the jaws, reducing test times.
- Anti-scale protection reduces cleaning times and downtime and extends service life.

Innovative control

- Hydraulic synchronization via flow control valves, together with proportional pressure control, guarantees perfect specimen alignment with the test axis.
- Different clamping modes such as cyclic clamping, continuous clamping and test-load-dependent clamping allow a wide range of specimen types to be gripped.

Optimum safety standards

- Only the latest safety technology and proven industrial components are used. A high degree of protection for user, test results, specimen material and testing system is guaranteed.

Future-proof

- Even after a product has been discontinued, spare parts continue to be available for a minimum of 10 years.

Product Information

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Type	330	400	600	1000	kN
Item No.	1014893	1014894	084473	1038051	
Maximum tensile force (F_{max})	330	400	600	1000	kN
Maximum gripping force	588	588	965	1380	kN
Flat specimens					
Clamping range	0 to 80	0 to 80	0 to 100	0 to 100	mm
Max. thickness	80	80	100	100	mm
Max. width	95	95	128	162	mm
Round specimens					
Clamping range	5.5 to 80	5.5 to 80	5.5 to 100	5.5 to 100	mm
Max. system pressure	480	480	480	480	bar
Dimensions					
Height (H)	280	280	350	459	mm
Width (W)	550	550	630	790	mm
Depth (D)	220	220	250	320	mm
Weight (each)	205	205	320	700	kg

Type	1200	1600	2000	2500	kN
Item No.	1015113	1022439	084466	611432	
Maximum tensile force (F_{max})	1200	1600	2000	2500	kN
Maximum gripping force	1600	2750	2750	3850	kN
Flat specimens					
Clamping range	0 to 100	0 ... 80	0 ... 100	0 ... 100	mm
Max. thickness	100	80	100	100	mm
Max. width	162	210	205	210	mm
Round specimens					
Clamping range	5.5 to 100	5.5 ... 80	5.5 ... 100	5.5 ... 100	mm
Max. system pressure	480	480	480	480	bar
Dimensions					
Height (H)	459	603	603	650	mm
Width (W)	790	940	940	1090	mm
Depth (D)	320	390	390	430	mm
Weight (each)	700	1085	1325	1765	kg

Type of grip	330	400	600	1000	kN
Minimum grip separation [a]	10	10	10	10	mm
Minimum specimen length [$L_{t\ min}$] ¹⁾	169	169	204	288	mm
Recommended specimen length [L_t] ²⁾	196	196	238	330	mm
Max. specimen length at $L_{E\ min}$ [$L_{t\ max}$] ³⁾	234	234	294	402	mm
Grip-to-grip separation [$L_{E\ min}$]	44	44	44	78	mm

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Type of grip	330	400	600	1000	kN
Max. initial gauge length [L_e] ⁴⁾	29	29	23	63	mm
Jaw height [h]	95	95	128	162	mm

- 1) In order to reduce wear, the minimum specimen length should only be used in isolated cases (for individual tests).
- 2) To reduce wear to a minimum, specimen engagement $\geq 80\%$ should be used for testing.
- 3) The value $L_{t\ max}$ corresponds to the maximum specimen length at minimum jaw/specimen grip separation. This corresponds to 100% specimen engagement, and is recommended to achieve optimal jaw life.
- 4) When using a makroXtens or multiXtens extensometer. When special sensors are used, the max. initial gauge length is increased by 10 mm.

Type of grip	1200	1600	2000	2500	kN
Minimum grip separation [a]	10	10	10	10	mm
Minimum specimen length [$L_{t\ min}$] ¹⁾	288	354	390	500	mm
Recommended specimen length [L_t] ²⁾	330	410	452	556	mm
Max. specimen length at $L_{E\ min}$ [$L_{t\ max}$] ³⁾	402	500	585	640	mm
Grip-to-grip separation [$L_{E\ min}$]	78	80	115	220	mm
Max. initial gauge length [L_e] ⁴⁾	63	65	85	205	mm
Jaw height [h]	162	210	235	210	mm

- 1) In order to reduce wear, the minimum specimen length should only be used in isolated cases (for individual tests).
- 2) To reduce wear to a minimum, specimen engagement $\geq 80\%$ should be used for testing.
- 3) The value $L_{t\ max}$ corresponds to the maximum specimen length at minimum jaw/specimen grip separation. This corresponds to 100% specimen engagement, and is recommended to achieve optimal jaw life.
- 4) When using a makroXtens or multiXtens extensometer. When special sensors are used, the max. initial gauge length is increased by 10 mm.

Options

Description	Item-No.			
Specimen grips	330 kN	400 kN	600 kN	1000 kN
Stroke limiter	1014912	1014912	1014178	1018083
T-slotted shoe connector up to 50 kN	1014907	1014907	1022547	1018079
Connecting plate up to 250 kN	1014910	1014910	1021782	1018080
Connecting plate up to 600 kN	-	-	1014174	1020386
Connecting plate up to F_{max}	1020922	1020922	1014174	1020387
Calibration adapter	1014906	1014906	1014173	1016411
Zero-point clamping	1014911	1014911	1014177	1018082

Options

Description	Item-No.			
Specimen grips	1200 kN	1600 kN	2000 kN	2500 kN
Stroke limiter	1018083	1081056	1022536	1)
T-slotted shoe connector up to 50 kN	1018079	-	1)	1)
Connecting plate up to 250 kN	1018080	1)	1022538	609876
Connecting plate up to 600 kN	1020386	1)	1022539	1)
Connecting plate up to F_{max}	1020387	1)	1)	1)

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Description	Item-No.			
Calibration adapter	1016411	1081057	1022541	613524
Zero-point clamping	1018082	1081058	1022542	1)

1) On request