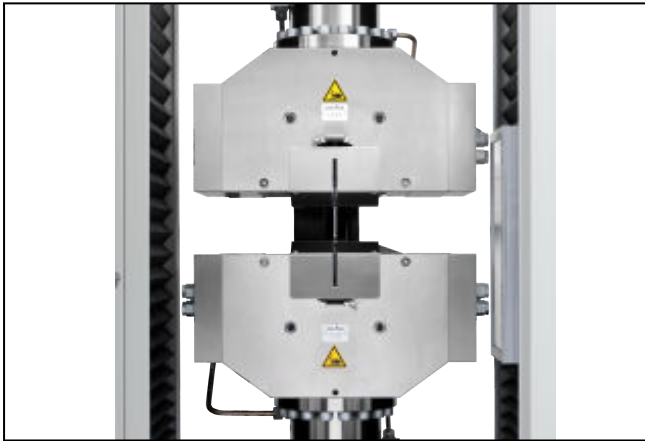


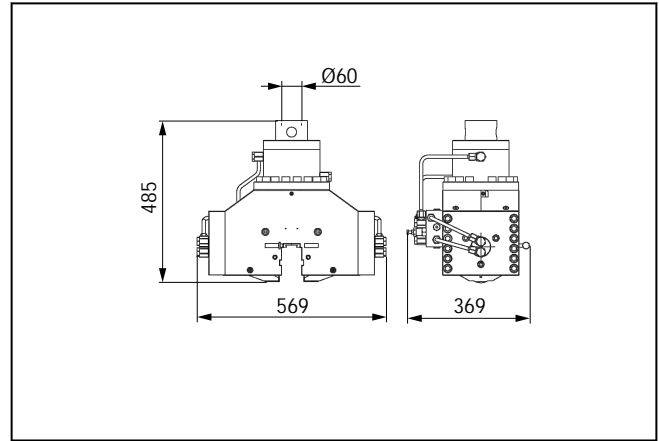
Product Information

Type 8589 hydraulic grips for short clamping lengths, F_{max} 150 / 250 kN

CTA: 39753 41428



Hydraulic grips Type 8589 for short clamping lengths, F_{max} 150 kN



Hydraulic grips Type 8589, F_{max} 150 kN, dimensions

Applications

- Specimen material:
Metals (also sintered metals, metal composites)
- Specimen shape:
Round and flat specimens (short clamping length)
- Type of loading:
Tensile, compression, alternating load

Function description

The hydraulic grip closes symmetrically.

The jaws are supported and held parallel via a third actuator. This patented process ensures that even specimens with short clamping lengths can be held securely.

Two different centering stops for aligning flat specimens to the tensile axis are included in the scope of delivery:

- Stop tup between the jaws for short clamping lengths
- Wide centering stop above the jaws

A horizontal notch is integrated in the specimen grip. It is used for mounting of the T-slotted system to accommodate smaller load cells and specimen grips.

The guided jaws enable reproducible gripping of the specimen. The symmetrical design and high degree of stiffness of the main body of the grips make them ideal for tests in which strict requirements are placed on the alignment of the specimen to the test axis.

Advantages and features

- The constant gripping force allows for repeatable test results.

- Reliable test results are guaranteed with the optimal interaction between the hydraulic power pack, the electronics, and the testing software. The force-zero control prevents unwanted forces on the specimen during the gripping process.
- Time is saved due to quick and easy adaptation of small specimen grips and test fixtures to large specimen grips via the T-slotted system. Precise alignment ensures reliable test results.
- The symmetrically closing jaws save time required for adjusting to varying specimen thicknesses and ensure that the specimen is held exactly in the test axis.
- The patented clamping principle is also suitable for short clamping lengths.
- Due to the vertically braced arrangement, the specimen grips are ideally suited for tests with alternating loads and strain rate control.
- Optical and mechanical extensometers can be used even for extremely short clamping lengths.
- Excellent reproducible grip position and specimen alignment to the test axis. Ideal for tests on specimens which are sensitive to transverse forces (repeat accuracy of grip position of ± 0.01 mm is possible)
- Fast and easy insertion of specimen due to the ergonomic and open design.
- An adjustable centering stop ensures precise test results, even with high specimen throughput rates.

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Technical data

Item No.	046496 ¹⁾²⁾³⁾⁴⁾	046873 ¹⁾⁵⁾³⁾⁴⁾	
Type	8589	8589	
Operating principle/identification	Short clamping	Short clamping	
Test load F _{max}	150	250	kN
Operating principle	Two-sided closing	Double actuator	
Gripping force, max.	275	420	kN
Operating pressure, max.	300	400	bar
Grip-to-grip separation, min.	15	15	mm
Dimensions			
Height	490	490	mm
Width	570	570	mm
Depth	445	445	mm
Opening width with jaws	59	59	mm
Weight per specimen grip, approx.	215	215	kg
Connection	Ø 60	Ø 60	mm
Ambient temperature	+10 ... +35	+10 ... +35	°C
Scope of delivery	2	2	pieces

1) Not possible in connection with Z100 THW, Z150 TL and Z250 RED

2) Recommended and approved for strain rate control to standards DIN EN ISO6892-1:2009 and ASTM E8-09.

3)

4) Only in connection with the **AllroundLine** materials testing machine

5) Recommended and approved for strain rate control compliant to standards DIN EN ISO 6892-1:2009 and ASTM E8-09.

Accessories required

Hydraulic power pack

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Description	Value	
Type	GripControl for short gripping length specimen grips ¹⁾	
Item No.	087283	
Dimensions		
Height	584	mm
Width	502	mm
Depth	817	mm
Weight with oil, approx.	90	kg
Operating pressure	40 ... 460 ²⁾	bar
Flow rate	3.6	l/min
Ambient temperature	+10 ... +35	°C
Power input specifications		
Permissible voltage fluctuation	± 10	%
Power consumption (full load), approx.	1.6	kVA
Power frequency	50	Hz
Also required		
Hydraulic hoses	Yes	
Remote control	Yes	

1) Only in connection with the AllroundLine materials testing machine

2) Refers to the power pack only. It is possible that a lower maximum pressure (see maximum specimen grip pressure) results in conjunction with a specimen grip

Prism jaws

Scope of delivery: 1 set (= 4 pieces)

Application	Version	Specimen dimensions Round specimen, Ø [mm]	Clamping height [mm]	Hardness	Item No.
Round specimens with and without shoulder	Steel, V-slot, St ¹⁾ 1.5	6 ... 15	77	62 HRC	084613
Round specimens with and without shoulder	Steel, V-slot, St ¹⁾ 1.5	12 ... 30	77	62 HRC	084614
Round specimens with and without shoulder	Steel, V-slot, St ¹⁾ 1.5	25 ... 59	76	62 HRC	084616

1) St= saw tooth

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Flat jaws

Scope of delivery: 1 set (= 4 pieces)

Application	Version	Specimen dimensions Flat specimen, thickness [mm]	Clamping surface Diameter [mm]	Hardness	Item No.
Metal strips, CFRP/GFRP strips	Steel, smooth	59	80	61 HRC	046889
Metals, sintered metals	Pr ¹⁾ 0.35 PM steel	59	80	68 HRC	046887
Metals, metal composites, reinforced plastics	Pr ¹⁾ 0.35 steel	59	80	62 HRC	084610
Metals, sintered metals	Pr ¹⁾ 0.75 PM steel	59	80	68 HRC	046890
Metals, metal composites, reinforced plastics	Pr ¹⁾ 0.75 steel	59	80	62 HRC	084611
Metals, sintered metals	Pr ¹⁾ 1.5 PM steel	59	80	68 HRC	046891
Metals, metal composites, reinforced plastics	Pr ¹⁾ 1.5 steel	59	80	62 HRC	084612
Hard metals (<1100 HV10), hardened steel	Pr ¹⁾ 0.7 HM	59	80	1100 HV10	046892

1) Pr = pyramid grid

Optional accessories

T-slotted shoe connector

Description	ArticleNumber
T-slotted shoe connector for connecting load cells, mounting studs or connection units without removing the specimen grips M28x1.5, centering gauge 30H7, pitch circle 40 2xM6, pitch circle 75 6xM16, scope of delivery: 2 pieces	046893
T-slotted shoe connector for calibrating load cell Fmax 250 kN, hole Ø 64/33 mm via spacer ring 35/24, Scope of delivery: 2 pieces	066537