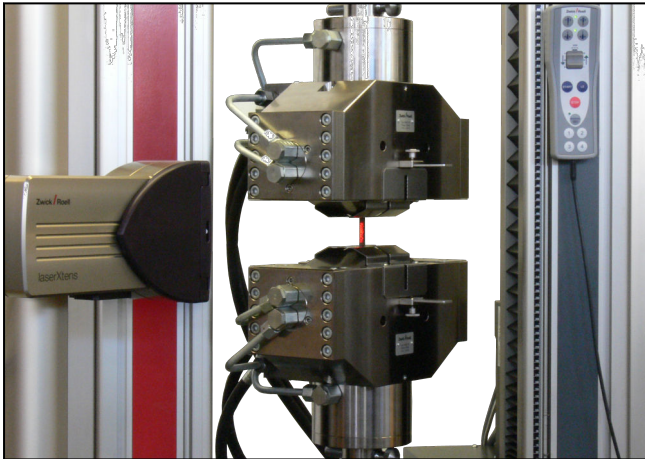


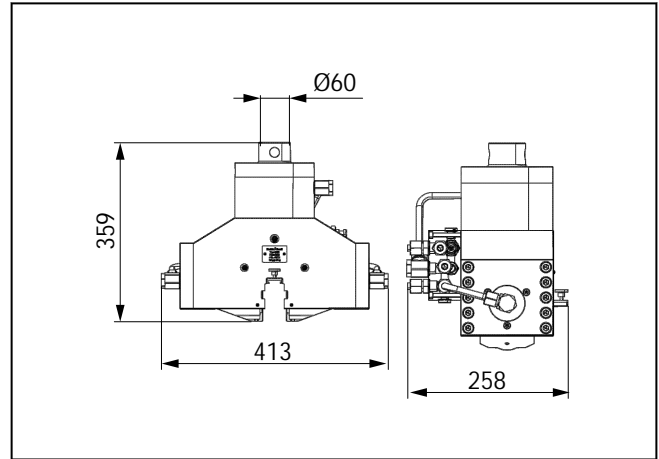
## Product Information

Type 8495 hydraulic grips for short clamping lengths, Fmax 50/70 kN

CTA: 43045 201354



Hydraulic grips Type 8495 for short clamping distances, Fmax 70 kN



Hydraulic grips Type 8495 for short clamping distances, Fmax 70 kN, overview

### 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.

Positively driven 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  $\pm 0.01$  mm is possible)
- Fast and easy insertion of specimen due to the ergonomic and open design.
- An adjustable centering stop ensures accurate test results, even with high cycle rates.

PI 753 0717

## Product Information

Type 8495 hydraulic grips for short clamping lengths, F<sub>max</sub> 50/70 kN

### Technical data

Item No.	032562 <sup>1)</sup>	032563 <sup>1)</sup>	
Type	8495	8495	
Operating principle/identification	Double-sided closing	Double-sided closing	
Test load F <sub>max</sub>	50	70	kN
Gripping force, max. at 300 bar	110	110	kN
Dimensions			
Height	316	349	mm
Width	413	413	mm
Depth	278	278	mm
Opening width, max. with jaws	34	34	mm
Permissible surface pressure on jaw, max.	1000	1000	N/mm <sup>2</sup>
Grip-to-grip separation, approx.	6	6	mm
Weight per specimen grip, approx.	69	69	kg
Connection	Ø 36	Ø 60	mm
Ambient temperature	+10 ... +35	+10 ... +35	°C
Scope of delivery	2	2	pieces

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

### Flat jaws

Scope of delivery: 1 set (= 4 pieces)

Application	Version	Specimen dimensions Flat specimen, thickness [mm]	Gripping area Diameter [mm]	Hardness	Item No.
Metal strips, CFRP/GFRP strips	Steel, smooth	34	60	61 HRC	032564
Metals, sintered metals	Pr <sup>1)</sup> 0.35 PM steel	34	60	68 HRC	032565
Metals, metal composites, reinforced plastics	Pr <sup>1)</sup> 0.35 steel	34	60	62 HRC	084604
Metals, sintered metals	Pr <sup>1)</sup> 0.75 PM steel	34	60	68 HRC	032566
Metals, metal composites, reinforced plastics	Pr <sup>1)</sup> 0.75 steel	34	60	62 HRC	084605
Metals, sintered metals	Pr <sup>1)</sup> 1.5 PM steel	34	60	68 HRC	032567
Hard metals (<1100 HV10), hardened steel	Pr <sup>1)</sup> 0.7 HM	34	60	1100 HV10	032568

1) Pr = pyramid grid

## Product Information

Type 8495 hydraulic grips for short clamping lengths, Fmax 50/70 kN

### Prism jaws

Scope of delivery: 1 set (= 4 pieces)

Application	Version	Specimen dimensions		Gripping area	Hardness	Item No.
		Round specimen, Ø [mm]	Diameter [mm]			
Round specimens with and without shoulder	St <sup>1)</sup> 1.5 steel	6 ... 15	Length V-slot 57	62 HRC	084608	
Round specimens with and without shoulder	St <sup>1)</sup> 1.5 steel	12 ... 25	Length V-slot 57	62 HRC	084609	

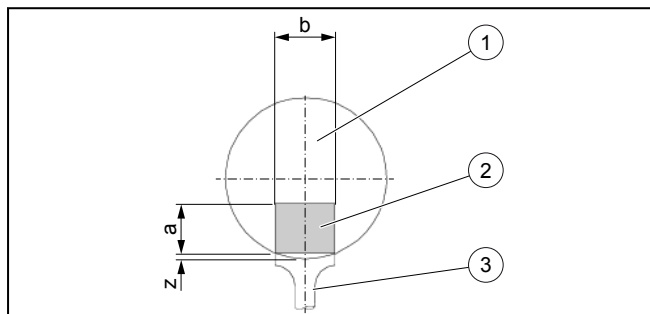
1) St= saw tooth

### T-slotted shoe connector

For connecting load cells, mounting studs or connection units without removing the specimen grips

Thread	Centering gauge	Pitch circle 40	Pitch circle 75	Scope of delivery	Item No.
M28 x 1.5	30H7	2 x M16	2 x M6	2 pieces	032570

CTA: 24951



Minimum clamping height required for round jaws (see calculation)

- 1** Jaw
- 2** Gripping area
- 3** Dumbbell specimen

Calculation of minimum clamping height a:  $a_{min} = 0.35 \cdot \text{Hydraulic pressure } P \text{ [bar]} / \text{Specimen width } b \text{ [mm]}$  0.35 = Constant 0.35 is a value resulting from the permissible jaw contact pressure of 1,000 n/mm<sup>2</sup> and the real clamping force determined by tests. A clamping length less than 6 mm must not be undercut. You always use the rectangular clamping surface (a \* b). For clamping add the height of the segment of circle (z) that results from the round jaws.