

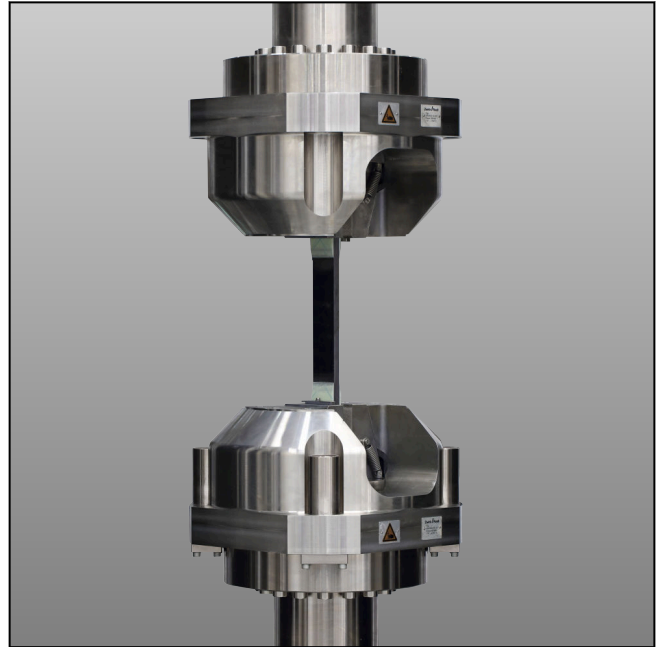
Product Information

600 kN BOW Hydraulic Wedge Grips

CTA: 248684 248685



BOW-600 hydraulic wedge grips with lateral guide



BOW-600 hydraulic wedge grips without lateral guide

Applications

These hydraulic wedge grips are used in materials testing machines to transmit tensile and compression loads to specimens. They are suitable for both static tensile and compression tests and for tests under alternating load. Depending on the jaw surface, specimens made of a wide range of materials can be gripped. A lateral guide on the specimen grip makes it possible to perform compression tests with high test loads, especially when testing fiber-reinforced composites.

Description of operation

The grips operate on the 'body over wedge' principle. During gripping the hydraulic pressure present causes an axial displacement of the body of the grips, producing a uniform lateral movement of the jaws towards the specimen. No axial displacements of any kind occur between specimen and jaws, eliminating unwanted axial forces.

The symmetrical design and accurate guidance of the jaws in the body housing enable accurate, central, reproducible alignment of the specimen to the tensile axis, minimizing possible flexural stresses.

Advantages and features

- Play-free zero crossing via hydraulically operated wedges, with parallel clamping effect on the specimen.
- Easy installation and removal of guide rods when performing compression tests with high test loads to ensure proper alignment (also to AITM 1-0008).
- Open-side design for fast, easy specimen and jaw changes.
- Versatile use for flat and round specimens with different dimensions.
- Wide clamping range requiring only a small selection of jaws.
- Jaws for tests on fiber-reinforced composites (also to AITM 1-0008).
- Secure, play-free gripping under any type of load.
- Easy operation via remote control.
- Symmetrical jaw guides for specimen self-centering.
- Easy mounting of the specimen grip in the testing machine by means of a flange connection. The centering disc guarantees alignment of the specimen grip.
- The temperature chamber version allows for testing in the $-60\text{ }^{\circ}\text{C}$ to $+350\text{ }^{\circ}\text{C}$ range (upon request).

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Technical data

Type Item No.	Hydraulic wedge grips 3011372	
Temperature range	-60 ... +350	°C
Design pressure	210	bar
Max. specimen thickness	40	mm
Specimen grip diameter	440	mm
Weight of one specimen grip	365 / 455	kg

- Specimen grips consist of 2 grip units.
- Set of jaws and hydraulic power pack additionally required.

Set of jaws for 600kN BOW hydraulic wedge grips

Specimen shape	Thickness/ Diameter	Jaw Width	Jaw Height	Serrations	Hardness HRC	Item No.
Flat	0 - 15 mm	100 mm	120 mm	Pyramid, 1.25 mm	56 - 58	3011373
Flat	10 - 25 mm	100 mm	120 mm	Pyramid, 1.25 mm	56 - 58	3011374
Flat	25 - 40 mm	100 mm	120 mm	Pyramid, 1.25 mm	56 - 58	3011375
Flat	0 - 15 mm	100 mm	150 mm ¹⁾	Pyramid, 1.25 mm	56 - 58	3011376
Flat	10 - 25 mm	100 mm	150 mm ¹⁾	Pyramid, 1.25 mm	56 - 58	3011377
Flat	25 - 40 mm	100 mm	150 mm ¹⁾	Pyramid, 1.25 mm	56 - 58	3011378

¹⁾ Design to Airbus standard AITM 1-0008

- A jaw set consists of four jaws.
- Jaws are wear parts.
- Parallel serrations are mainly used for steel and metal specimens, pyramid serrations for plastics and fiber composites.
- Jaws are available with different surface or in special versions upon request.

CTA: 248688, 248689



Standard jaws



Jaws (to Airbus standard AITM 1-0008)

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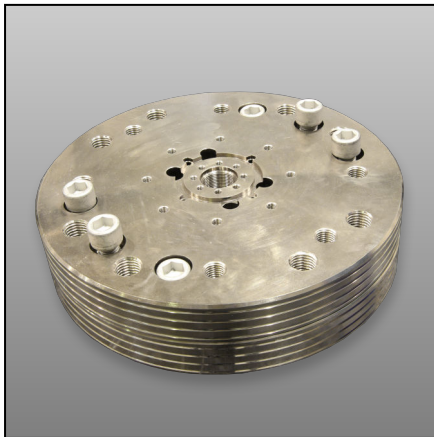
Accessories

The adapter flanges are screwed onto the specimen grip. Centering of the adapter flange is ensured by a circumferential groove in the grip. Test tools are attached via the existing threaded holes and pitch circles.

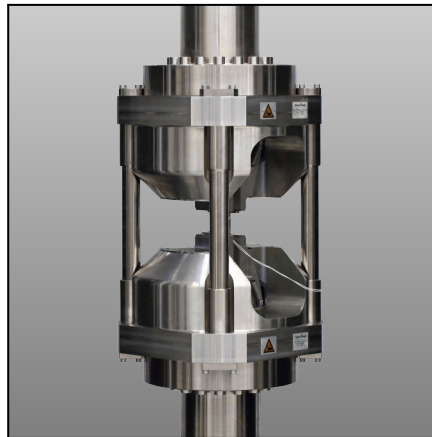
All standard test tools can be used.

Description	Item number
Adapter flange for attaching compression and flexure fixtures to BOW 600	080062
Lateral guide	076335
Compression test kit, 600 kN	080063
Centering device for compression test kit	082938

CTA: 147471 248687 248686



Adapter flange, 600kN



BOW specimen grip with lateral guide rods



BOW specimen grip with compression test kit and CAI test fixture