

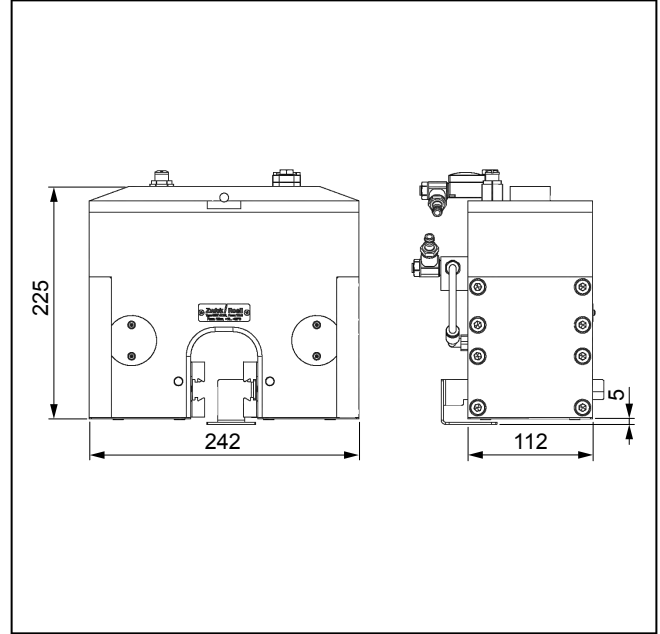
## Product Information

Type 8497 pneumatic grips,  $F_{max}$  20 kN, with high closing force

CTA: 39594 287966



Pneumatic grips type 8497,  $F_{max}$  20 kN, with high closing force



Pneumatic grips type 8497,  $F_{max}$  20 kN, with high closing force, overview

### Applications

- Specimen material:  
plastic, metal, paper, textile, elastomers, wood
- Specimen shape:  
Round and flat specimens
- Type of loading:  
Tensile, compression, alternating load

### Function description

Pneumatic grips are double acting and can be used for symmetrical gripping.

Pneumatic specimen grips are ideal for clamping-sensitive materials or if a high specimen throughput is required. The gripping force always remains constant, regardless of test load.

The gripping pressure for the specimen grip can be set steplessly and reproducibly via a pneumatic control unit and optionally via the testXpert III testing software. The specimen is held securely and jaw breaks are prevented during the test.

The specimen grip is opened and closed via buttons on the testing machine. The optional foot pedal unit or machine remote control can be used for additional operating convenience.

Double-actuator pneumatic grips always close symmetrically with respect to the tensile axis. This means the

specimen is clamped in a precise axial position. It is not necessary to set the specimen thickness.

The closing force is initialized via a centrally positioned pneumatic actuator. It transfers the closing movement via a steering lever to the symmetrical closing jaws.

A position-independent switching device is integrated into the specimen grips, which automatically switches the transmission ratio to apply the gripping force as soon as the jaws hit the specimen. It switches from a small transmission to a large transmission, thus, reaching very large gripping forces in instances in which sizes are compact. The gripping distance varies depending on specimen thickness and the current opening width. There is a resulting linear relationship (see diagram).

### Advantages and features

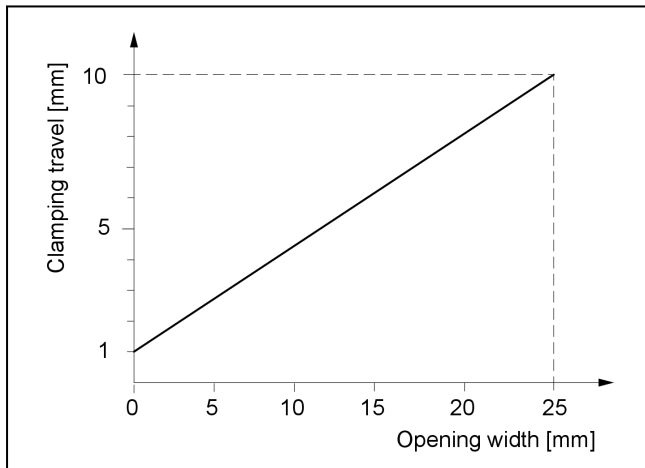
- The symmetrically closing jaws save time required for adjusting to varying specimen thicknesses and ensure that the specimen is held exactly in the test axis.
- The jaws can be changed quickly and easily for different applications - no tools required. The jaws are centered automatically.
- Precise test results combined with high number of cycles achieved through centric insertion of specimen using easily adjustable centering stop.
- Constant gripping force enables repeatable test results to be achieved.

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- Constant pneumatic pressure allows even specimens prone to shrinkage to be held securely.
- Save time by attaching small specimen grips and test fixtures to large specimen grips quickly and easily via T-slot systems. The precise alignment ensures reliable test results.
- Ergonomic, open design for fast, easy specimen insertion and clamping
- Extremely high gripping force guarantees secure specimen clamping.

CTA: 33606



Pneumatic grips type 8397/8497, ratio of opening width/gripping travel

## Product Information

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### Technical data

| Item No.                                                     | 1106799 <sup>1)</sup>                                             |          |
|--------------------------------------------------------------|-------------------------------------------------------------------|----------|
| Type                                                         | 8497                                                              |          |
| Test load F <sub>max</sub>                                   | 20                                                                | kN       |
| Operating pressure                                           | 1 ... 8                                                           | bar      |
| The operating pressure depends on the upstream components.   |                                                                   |          |
| Gripping force at 6 bar                                      | 50                                                                | kN       |
| Gripping force at 8 bar                                      | 68                                                                | kN       |
| Opening width with jaws, 5 mm thickness <sup>2)</sup>        | 20                                                                | mm       |
| Gripping travel of pneumatically operated side <sup>3)</sup> | 8                                                                 | mm       |
| Gripping of the specimen                                     | The specimen must be gripped with at least 1/2 of the jaw height. |          |
| Dimensions                                                   |                                                                   |          |
| Height                                                       | 225                                                               | mm       |
| Width                                                        | 242                                                               | mm       |
| Depth                                                        | 112                                                               | mm       |
| Depth with connection unit                                   | 162                                                               | mm       |
| Connection, hole                                             | Ø 36                                                              | mm       |
| Weight per specimen grip, approx.                            | 14                                                                | kg       |
| Ambient temperature                                          | +10 ... +35                                                       | °C       |
| Scope of delivery                                            | 2                                                                 | piece(s) |

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

2) The opening width is the result of using jaws with 5 mm jaw thickness.

3) See the diagram that depicts the correlation between the gripping stroke and the specimen thickness/opening width

### Accessories required

#### Pneumatic hoses (1x required)

| Description                                                                                               | ArticleNumber  |
|-----------------------------------------------------------------------------------------------------------|----------------|
| Set of pneumatic hoses for connecting a pair of pneumatic grips; including hose guiding for strain relief | <b>1112640</b> |

#### Pneumatic control unit

See section 4.6 Accessories

#### Jaws

Type 8487

### Optional accessories

#### Pressure amplifier

| Description                                                                                                                                                                                  | ArticleNumber |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Pressure amplifier for increasing operating pressure, max. input pressure 10 bar, pressure ratio 1:2, flow rate 900l/min, output pressure 2 - 10 bar. For installation in control unit line. | <b>315016</b> |
| Pressure amplifier for increasing operating pressure, max. input pressure 10 bar, pressure ratio 1:2, flow rate 400l/min, output pressure 2 - 20 bar. For installation in control unit line. | <b>315018</b> |

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### Mounting unit

| Description                                                                                                                                                                                                                                                                                                                                     | ArticleNumber |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Mounting unit for Types 8397 and 8497 pneumatic grips <ul style="list-style-type: none"><li>• Thread M28x1.5</li><li>• Bush, Ø 16 H7, for attaching smaller load cells (Fmax &lt; 30 kN), specimen grips or test fixtures (mounting stud and adapter required)</li></ul> Scope of delivery: 2 pieces<br>Jaw mounting required (Item No. 317615) | <b>317617</b> |