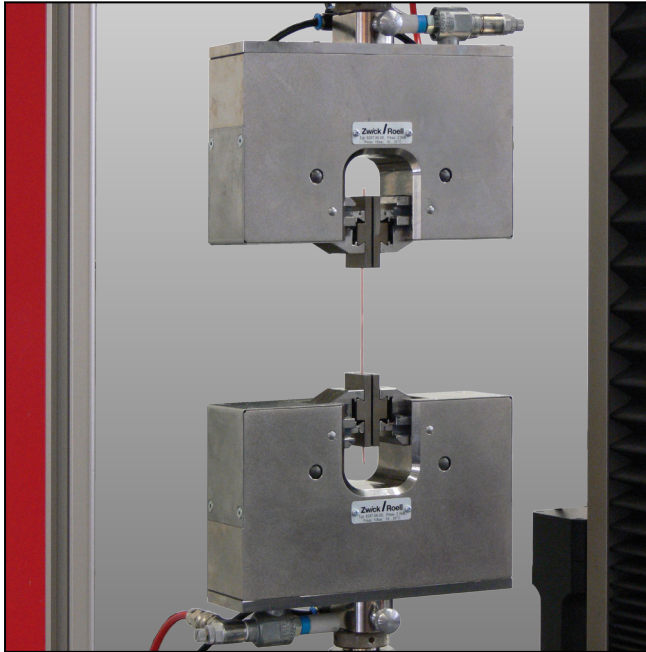


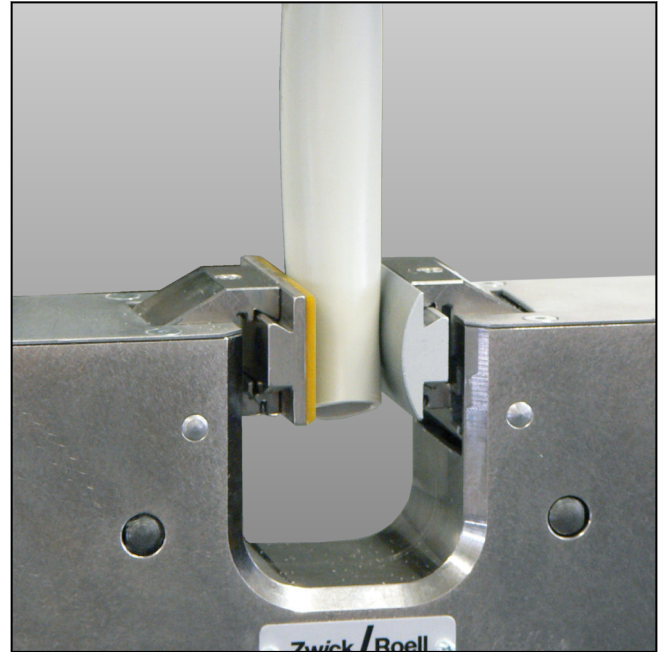
Product Information

Pneumatic grips type 8297 / F8297, Fmax 2.5 kN

CTA: 39566 39565



Type 8297 pneumatic grips, Fmax 2.5 kN, jaw height 50 mm



Type 8297 pneumatic grips, Fmax 2.5 kN, jaw height 30 mm

Applications

- Specimen material:
plastics, paper, textiles, elastomers, wood, insulating materials
- 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 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.

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.
- Constant pneumatic pressure allows even specimens prone to shrinkage to be held securely.
- Ergonomic, open design for fast, easy specimen insertion and clamping
- The projecting jaws enable a clear view and access for optical and mechanical extensometers, even with short gauge lengths.

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Product Information

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Differentiation in two versions

Pneumatic closing and gripping

- For specimen grips that close with pure pneumatic actuation, the closing motion only occurs as long as the closing button is activated. If the button is released during the closing process, the specimen grip automatically switches back to the safe, open position. The position is only held after the specimen grips are fully closed. The preset gripping pressure is only applied once the test starts. All pneumatic grips are available in this version.

Spring-closing and pneumatic gripping

- Spring-closing specimen grips feature a technological difference between closing and gripping. With a brief touch of the closing button, the built-in spring closes the specimen grips very quickly with a low force of < 150 N. The specimen is therefore quickly clamped and operating times are reduced. The preselected gripping pressure is applied when the test starts. Seven selected specimen grips in a force range ≤ 2.5 kN are available in this version.

Technical data

Item No.	1106794	1106831	
Type	8297	F8297	
Test load F _{max}	2.5	2.5	kN
Operating pressure The operating pressure depends on the upstream components.	1.5 ... 10	1.5 ... 10	bar
Gripping force at 6 bar	6.5	6.5	kN
Gripping force at 10 bar	10.5	10.5	kN
Opening width with jaws, 5 mm thickness ¹⁾	20	20	mm
Gripping of the specimen	The specimen must be gripped with at least 2/3 of the jaw height.		
Dimensions			
Height	170	170	mm
Height with centering stop	182		mm
Width	210	210	mm
Depth	60	60	mm
Depth with connection unit	110	110	mm
Height with centering stop		182	
Connection, hole	Ø 20	Ø 20	mm
Weight per specimen grip, approx.	4.7	4.7	kg
Ambient temperature	+10 ... +35	+10 ... +35	°C
Scope of delivery	2	2	piece(s)

¹⁾ The opening width is the result of using jaws with 5 mm jaw thickness.

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	1112640

Pneumatic control unit

See section 4.6 Accessories

Jaws

Type 8287 or type 8487

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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.	315016
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.	315018

The insertion aid can only be used in combination with the following double-acting pneumatic grips:

- Pneumatic grips type 8187, Fmax 200 N (ArticleNumber 1106792) and type 8287, Fmax 1 kN (ArticleNumber 1106793)
- Pneumatic grips for temperature chambers type 8287, Fmax 1 kN (ArticleNumber 1106804)
- Pneumatic grips type 8297, Fmax 2.5 kN (ArticleNumber 1106794) and type F8297, Fmax 2.5 kN (ArticleNumber 1106831)

Insertion aid for foil/film specimens, 1x required

For optimal alignment and secure insertion of thin flexible foils/films made of metal or plastic into the specimen grip.

Description	ArticleNumber
Insertion aid for foil/film specimens; width: 10...25.4 mm, length: 210 mm, L0: 100 mm	1115929
Insertion aid for foil/film specimens; width: 10...25.4 mm, length: 160 mm, L0: 50 mm	1127183

Insertion station for foil/film specimens, 1x required

For attaching the insertion aid for quick and easy insertion of the foil/film specimen into the insertion aid.

Description	ArticleNumber
Insertion station for foil/film specimens; width: 10...25.4 mm, length: 210 mm, L0: 100 mm	1115928
Insertion station for foil/film specimens; width: 10...25.4 mm, length: 160 mm, L0: 50 mm	1127181

Adapter, 1x required

Description	ArticleNumber
Adapter for optimal alignment and quick insertion of the insertion aid.	1115930

Insertion aid distance block for adapter, 1x required

Determines the distance between the specimen center and test axis center and is attached to the adapter.

Description	ArticleNumber
Insertion aid distance block for 10 mm specimen width	1127184
Insertion aid distance block for 12.5/12.7 mm specimen width	1127185
Insertion aid distance block for 15 mm specimen widths	1127186
Insertion aid distance block for 20 mm specimen width	1127187
Insertion aid distance block for 25/25.4 mm specimen width	1127188

Transport frame

Description	ArticleNumber
Transport frame for depositing five insertion aids.	1127189