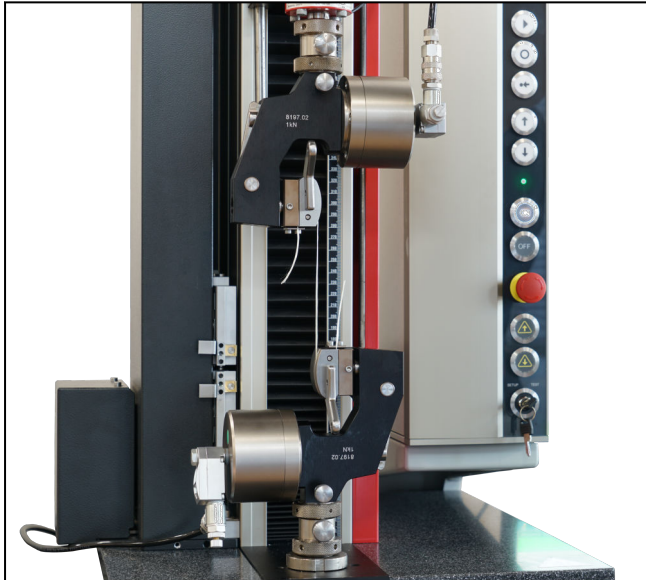


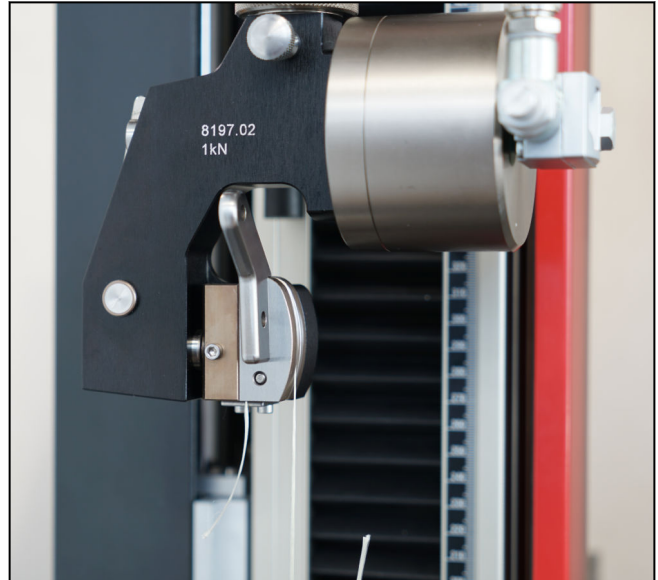
Product Information

Capstan grips type 8197 / F8197, Fmax 1 kN, pneumatic

CTA: 196631 196632



Capstan grips type 8197 Fmax 1 kN, pneumatic



Capstan grips type 8197 Fmax 1 kN pneumatic, detail

Applications

- Specimen material:
textiles, plastics
- Specimen shape:
single and ply yarn, twine, multifilaments
- Type of loading:
tensile
- Standard:
tire cord to ASTM D885, single and ply yarn to ISO 2062, BISFA 2002

Function description

These pneumatic grips for yarn and tire cord are single-actuator grips for clamping fibrous or filamentary tensile specimens.

The load-reduction curve with 180° deflection gently reduces the tensile force before the clamping point. Pneumatic clamping ensures constant gripping force with easy, reproducible adjustment. The specimen is held securely and jaw breaks during the test are avoided.

The force reduction curve with 180° deflection allows a defined grip-to-grip separation to be assumed, eliminating the need for an extensometer.

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. This ensures safe clamping of a variety of materials. 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.

Advantages and features

- Secure holding of the specimen ensures reliable test results, even with specimens prone to shrinkage.
- High specimen throughput thanks to quick specimen insertion and exact centering with insertion aid and guide groove.
- Fast, easy two-handed specimen change - grips operated via foot control unit.
- The load-reduction curve ensures gentle gripping with no jaw breaks.

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. Type	1106811 8197	1106832 F8197	
Operating principle/identification	For tire cords; pneumatic end clamping	For tire cords; pneumatic end clamping	
Test load F_{max}	1	1	kN
Operating pressure The operating pressure depends on the upstream components.	1 ... 10	1 ... 10	bar
Piston area, standardized	86.49	86.49	cm ²
Gripping force at 6 bar	5.2	5.2	kN
Gripping force at 10 bar	8.5	8.5	kN
Opening width with jaws	3	3	mm
Dimensions			
Height	160	160	mm
Width	187	187	mm
Depth	75	75	mm
DepthWith specimen feed and connection unit	90		mm
Free curve length	54	54	mm
Depthwith guide mandrel and connection unit		90	
Connection, hole	Ø 20	Ø 20	mm
Weight per specimen grip, approx.	1.6	1.6	kg
Ambient temperature	+10 ... +35	+10 ... +35	°C
Scope of delivery	2	2	piece(s)

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

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Load reduction curve (1 x required)

1 set = 2 pieces

Surface	Deflection [°]	Length per load reduction curve [mm]	Hardness	Item No.
Polished, rust-proof version	180	54	52 HRC	1040334

Flat jaws

Scope of delivery: 1 set (= 2 pieces)

Version	Clamping surface Height [mm]	Width [mm]	Ambient temperature [°C]	Hardness	Item No.
Polished, rust-proof	38	16	+10 ... +35	52 HRC	1040335

Optional accessories

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

- Pneumatic grips type 8187, Fmax 200 N and type 8287, Fmax 1 kN
- Pneumatic grips for temperature chambers type 8287, Fmax 1 kN

- Pneumatic grips type 8297 / F8297, Fmax 2.5 kN
- Capstan grips type 8197 / F8197 Fmax 1 kN, pneumatic

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 adapter	1127184
Insertion aid distance block for 12.5/12.7 mm adapter	1127185
Insertion aid distance block for 15 mm adapter	1127186
Insertion aid distance block for 20 mm adapter	1127187
Insertion aid distance block for 25/25.4 mm adapter	1127188

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Transport frame

Description	ArticleNumber
Transport frame for depositing five insertion aids.	1127189