

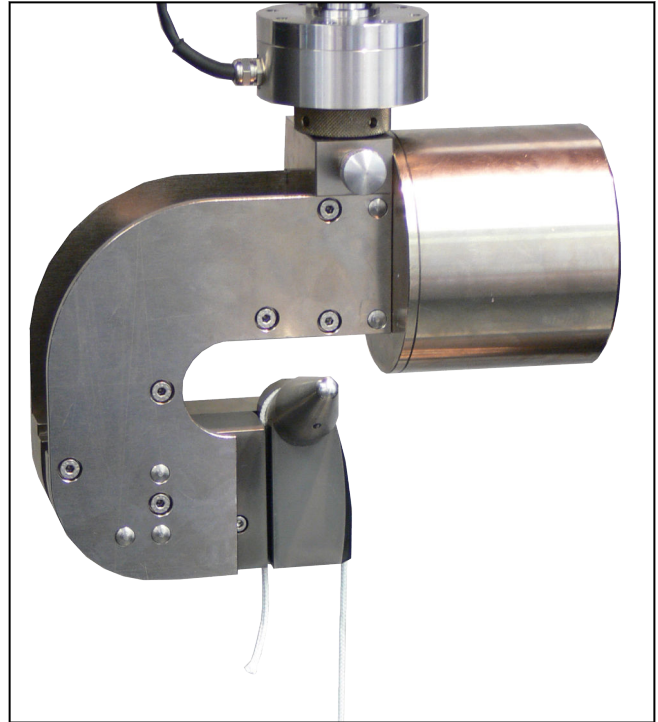
Product Information

Capstan grips type 8297 / F8297, Fmax 2.5 kN, pneumatic

CTA: 40112 40112



Capstan grips for high-strength plastic yarns type 8297, Fmax 2.5 kN



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Applications

- Specimen material:
textiles, plastics
- Specimen shape:
high-strength yarn, multifilaments, cord
- Type of loading:
tensile

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.

An insertion aid and depth limit stop ensure quick, easy specimen insertion.

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.
- The symmetrical weight distribution of the grips ensures accurate force measurement.

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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.	1106815	1106833	
Type	8297	F8297	
Operating principle/identification	Pneumatic, single action	Pneumatic, single action	
Test load F _{max}	2.5	2.5	kN
Operating pressure	1 ... 10	1 ... 10	bar
The operating pressure depends on the upstream components.			
Gripping force at 6 bar	11	11	kN
Gripping force at 10 bar	18	18	kN
Opening width	4	4	mm
Dimensions			
Height	187	183	mm
Width	237	232	mm
Depth	110	100	mm
Depth with insertion aid	121		mm
Depth with insertion aid and connection unit	146		mm
Width with pneumatic connection		267	
Depth with insertion aid		116	
Depth with insertion aid and connection unit		126	
Connection, hole	Ø 20	Ø 20	mm
Weight per specimen grip, approx.	6.2	6.1	kg
Ambient temperature	+10 ... +35	+15 ... +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

Scope of delivery: 1 set = 2 pieces

Surface	Deflection [°]	Length per load reduction curve [mm]	Hardness	Ambient temperature [°C]	Weight, approx. [kg]	Item No.
Polished, rust-proof version	180	100	52HRC	+10 ... +35	0.6	070258

Flat jaws

Scope of delivery: 1 set = 2 pieces

Version	Hardness	Clamping surface		Item No.
		Height [mm]	Width [mm]	
Polished, rust-proof	52 HRC	60	14	070260