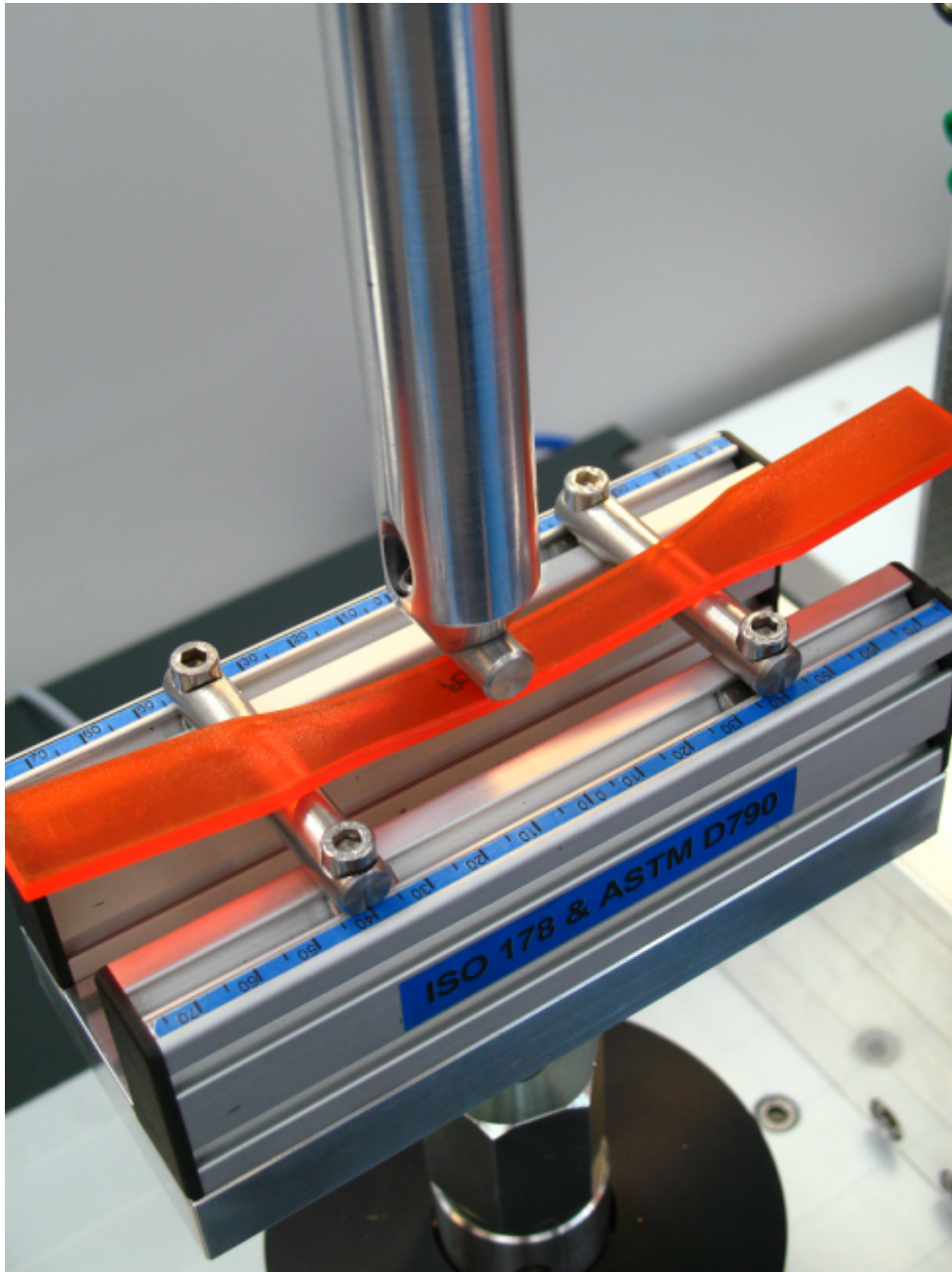


# GRIPS FOR TENSILE TESTER

GIBITRE PRODUCES A WIDE RANGE OF CLAMPS FOR TESTS ON STANDARD SPECIMENS OR MANUFACTURED ARTICLES.



**gibitre**<sup>®</sup>  
INSTRUMENTS

## Available Grips

The list of grips shown on this page is not exhaustive.

Numerous clamp models have been produced for specific applications. For specific needs about non-standard test procedures, please contact us.

## Mounting the grips on the instrument

All clamps are applied to the Tensor-Check tensile tester using the standard Gibitre fastener.

The clamp can be replaced in a few seconds by inserting the clamp shank into the housing seat and closing the fixing handwheel.

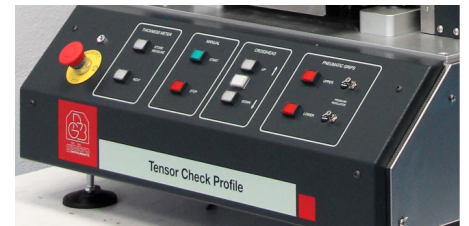
The fastening device blocks the clamp avoiding play or movement both when a force is applied in tension or in compression. This feature makes the device optimal even for complex test cycles requiring the alternating application of tensile and compression forces.



## Characteristics of Pneumatic Grips

The pneumatic clamps produced by Gibitre allow to adjust the closing pressure to adapt it to the type of product to be tested. The two pressure gauges on the front panel of the instrument allow checking the applied pressure.

The connection of the clamp to the compressed air is carried out in a few seconds using the quick connectors. Opening the clamp when the specimen is broken can be done automatically to speed up the preparation of the next test.



## Pneumatic Grips (Closure 2000N)

Couple of pneumatically actuated vice grip with tightening closure regulation and maximum closure force 2000 N.

Several types of Jaws are available.

Maximum sample width: 80 mm

Maximum sample thickness: 14 mm

Maximum closure force: 2000 N

Application: General purpose grips for tensile testing of rubber, plastics, textiles and other materials where self-tightening is required.

Installation Requirements:  
Compressed air Supply (6 bar)

Note: Those grips are not suitable for Environmental Chamber.



## Pneumatic Grips (Closure 600N)

Couple of pneumatically actuated vice grip with tightening closure regulation and maximum closure force 600 N. The grips are provided with standard jaws. A range of optional cross cut, plain and rubber jaw faces are available.

Maximum sample width: 35 mm

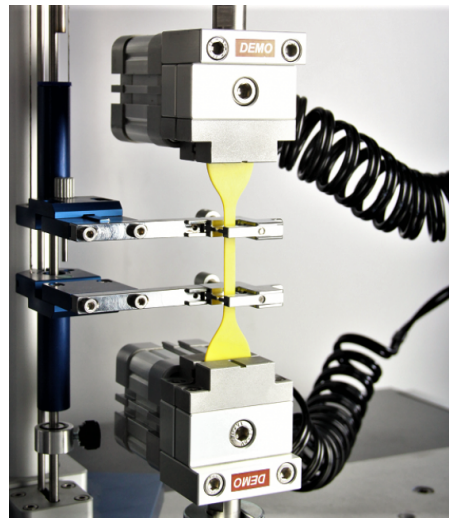
Maximum sample thickness: 8 mm

Maximum closure force: 600 N

Application: General purpose grips for tensile testing of rubber, plastics, textiles and other materials where self-tightening is required.

Installation Requirements:  
Compressed air Supply (6 bar)

Note:  
Those grips are not suitable for Environmental Chamber.



## Pneumatic Bollard Grips for Wires

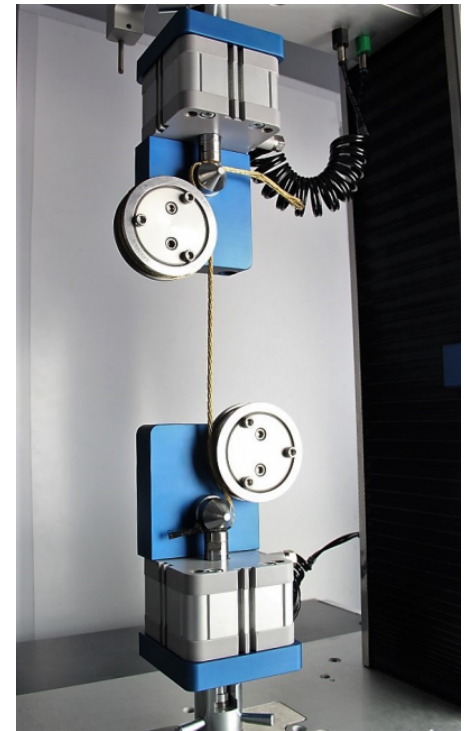
Couple of Bollard grip with pneumatic clamp for metal wire, yarns and threads. The sample is wrapped around the bollard and the free end clamped firmly using a pneumatic clamp. Grip stresses in the specimen are distributed in the material in contact with the bollard circumference.

Diameter of the Bollard: 78 mm

Application: tensile testing of high resistance wire, yarns and threads

Installation Requirements:  
Compressed air Supply (6 bar)

Note:  
Those grips are not suitable for Environmental Chamber





## Mechanical Wedge Action Grips

Couple of general purpose manually operated self-tightening sliding wedge grips. The grips are provided with serrated jaw faces.

Maximum sample width: 32 mm

Maximum sample thickness: 13 mm

Maximum closure force: 20 kN

Application: tensile testing of plastics and composite materials where self-tightening is required.



## Rotating Grips for O-Rings (ASTM D1414, PV 3973) and Ring Samples (ISO 37-A)

Couple of supports for tensile test of O-Rings conforming to ASTM D1414 and PV 3973 standards and Ring Samples conforming to ISO 37 Standard.

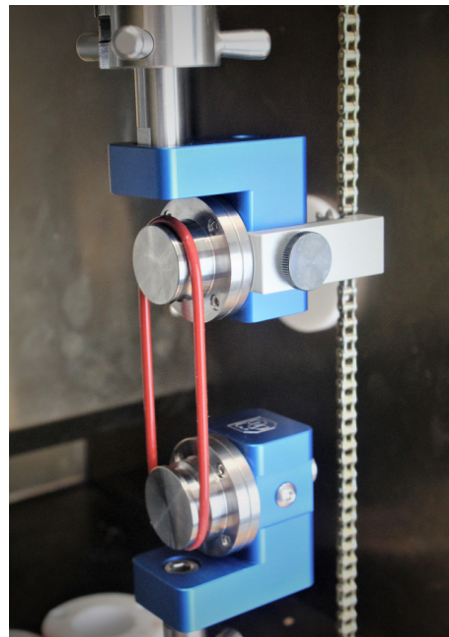
- According to the standards, the device permits to elongate and rotate the O-Ring in the pulleys at the same time.
- The Pulleys are interchangeable. The dimensions need to be selected in accordance with the dimension of the o-ring to be tested.

Standard available pulleys have the following dimensions:

- Diameter 2 mm Width 2.7 mm: for testing O-rings with Internal diameter between 6.7 and 18 mm and Cross-section up to 2.65 mm
- Diameter 9 mm Width 5.4 mm: for testing O-rings with Internal diameter between 14 and 43.7 mm and Cross-section up to 5.3 mm
- Diameter 25 mm Width 4.3 mm: for testing O-rings with Internal diameter between 45 and 400 mm and Cross-section up to 3.55 mm

Different dimension on request.

Grips suitable for environmental chamber.



## Self-Tightening Bollard Grips (L 60mm)

Couple of self-tightening bollard grips. The sample is mounted over the bollard and positioned between the bollard and the grip shank. The fine serrated finishing of the parts in contact with the sample helps to prevent slippage.

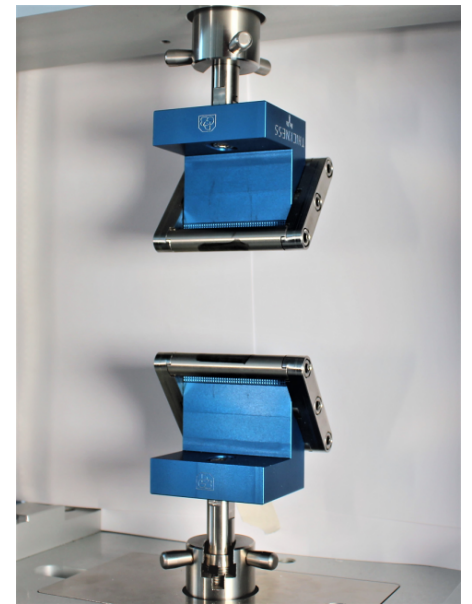
Maximum sample width: 60 mm

Maximum sample thickness: 6 mm

Capacity: 10 kN

Application: tensile testing of textile, rubber pipes, etc.

Grips suitable for Environmental Chamber





## Screw Action Grips

Couple of manual operated vice action grips.

Maximum sample width: 100 mm

Maximum sample thickness: 10 mm

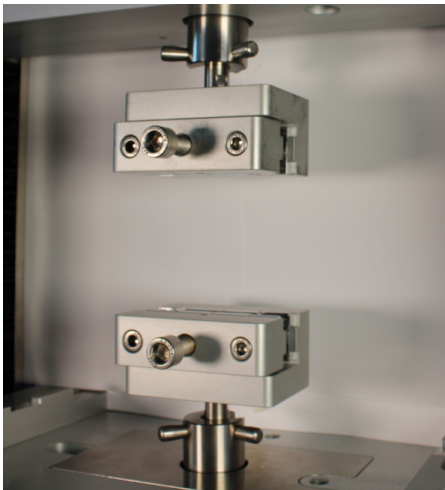
Maximum closure force: 5 kN

The grips are supplied with jaws with Diamond serrated (crossed V serrated) finishing (Cod. 8-D17-11-000-0)

Jaws with different finishing are available under request.

Application: tensile test of rubber, leather, textiles.

Grips suitable for Environmental Chamber



## Self-Tightening Manual Grips (L 60 mm)

Couple of Eccentric Roller Grips - 60 mm wide

General purpose self-tightening grips ideal for dumbbell and flat specimens.

The roller operates using a basic cam jamming principle. The rollers have a fine serrated finish that helps to prevent slipping.

Maximum sample width: 60 mm.

Maximum sample thickness: 5 mm (0.2 in).

Capacity: 5 kN

Applications: Ideal for tensile testing sheet materials including polymers and rubber.

Additional use: the grips are suitable for the execution of tensile tests with environmental chamber.

Grips suitable for Environmental Chamber



## Self-Tightening Manual Grips

Couple of Eccentric Roller Grips - 25 mm wide

General purpose self-tightening grips ideal for dumbbell and flat specimens.

The roller operates using a basic cam jamming principle. The rollers have a fine serrated finish that helps to prevent slipping.

Maximum sample width: 25 mm.

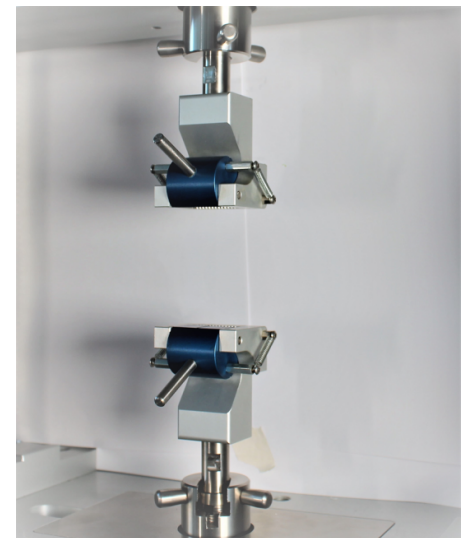
Maximum sample thickness: 5 mm (0.2 in).

Capacity: 1 kN

Applications: Ideal for tensile testing sheet materials including polymers and rubber.

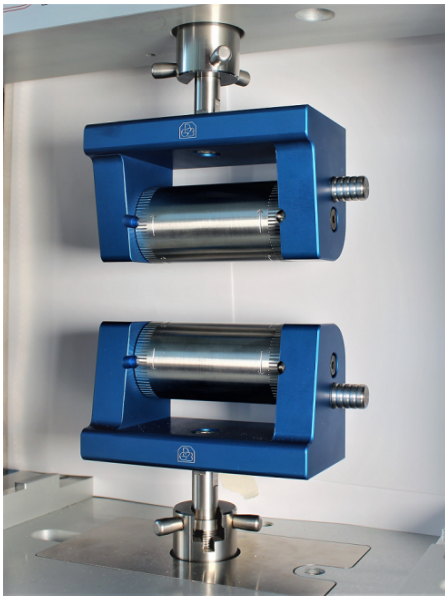
Additional use: the grips are suitable for the execution of tensile tests with environmental chamber.

Grips suitable for Environmental Chamber



## Manual Grips for Textile

Couple of manual grips for textile. The sample is mounted around the cylinders and the fixed to the structure of the grips. Maximum sample width: 70 mm  
Maximum sample thickness: 0.5-2.5 mm Capacity: 10 kN Grips suitable for Environmental Chamber



## Platens for Compression Tests

The lower platen is fitted with ball joint to ensure parallelism between the planes during the test.



## Grip for Burst Test according to ASTM D751 & ISO 12236 standards

Special grips to perform: - Bursting Test (ASTM D751) - Static Puncture test - Method CBR (ISO 12236) using Gibitre Tensile Tester The supply includes: - lower support in accordance to the dimensions indicated in the standard - punch with dimensions according to the requested standard (to be specified) - test method for tensile tester software according to standard

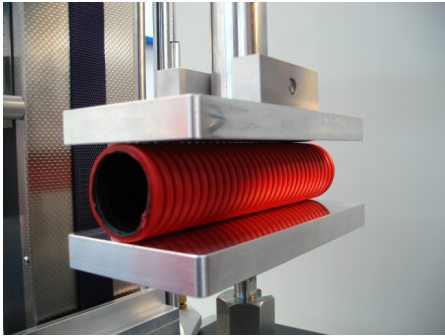


### Platens for Compression test according to EN 50086-2-4 Standard

Couple of rectangular platens for compression tests with dimensions 220x100 mm.

The upper platen is fitted with articulated joint to ensure parallelism between the planes during the test.

Application: compression Tests on corrugated pipes according to EN 50086-2-4. Compression tests on foam and expanded products.



### Spiral-shape grips for wire testing

Couple of Involute-shaped grips for tests on wires

The sample is wrapped around the bollard and the free end is clamped firmly using a screw operated vice. The grips are ideal for the tensile testing of wires, small pipes or cable sheath.

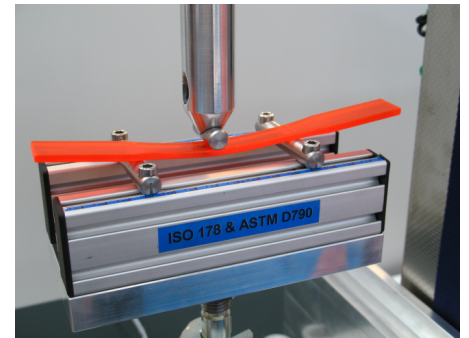


### Grips for Bending Test (ISO 178 and ASTM D 790)

Grips for three points-bending-tests according to ISO 178 and ASTM D 790 standards.

The lower grip permits to set the distance between the contact points. Maximum distance of the contact points: 140 mm

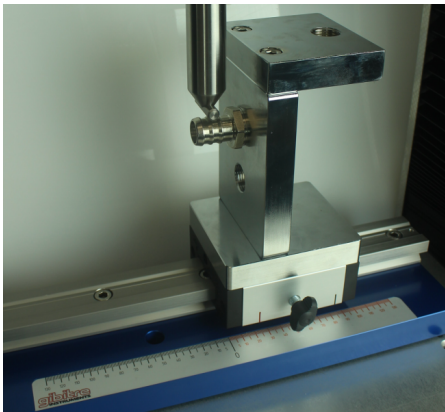
Maximum sample width: 30 mm





## Support for bending test on water connections according to UNI EN 13618

Grip to test the Bending Resistance in accordance to the EN 13618 standard. The grip must be used in combination with Gibitre Tensor Check instrument. The supply includes: - support with dimensions according to the standard - test method for Tensile Tester software according to standard



## Device for Friction Test

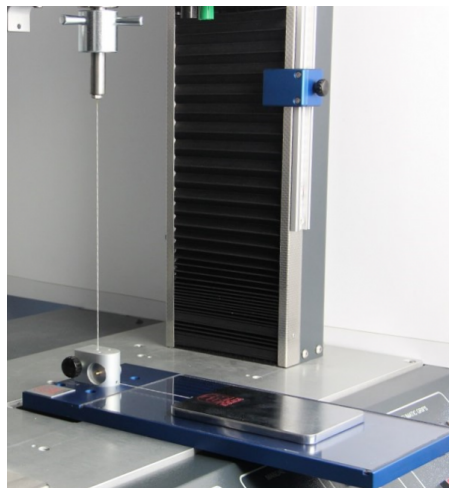
The device, to be applied to Gibitre Tensile Tester, permits to perform friction tests according to ASTM D 1894, ISO 8295, ATE N 553 59 25 and similar standards.

The device consists of:

- A glass plane with dimension 150 x 300 mm,
- A Sled with 10 N weight (or different on request), which is fixed to the crosshead of the tensile tester with a wire
- A low friction pulley .

The test is performed by fixing the sample to the sled, placing the sled on the glass plane and activating the displacement of the crosshead of the tensile tester.

The test procedure integrated in the software of the tensile tester permits to display the resistance force of the sample and to calculate the static and dynamic friction coefficients.



## Grip for 90° peel test on Rigid Substrate

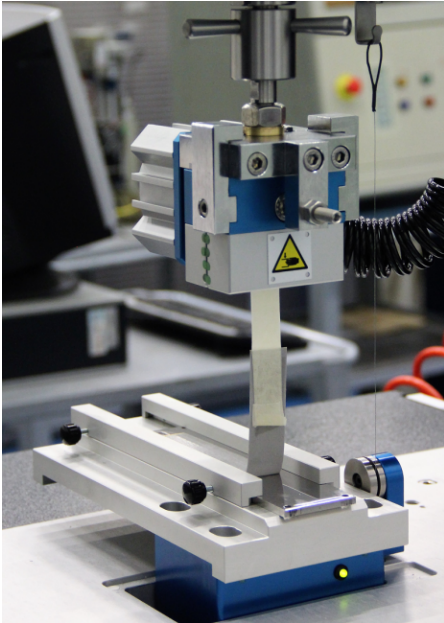
Grip for determination of adhesion to a rigid substrate (90° peel method) complying with following standards: ISO 813 and ASTM 429 - Method B.

The grip permits to fix the metal plate. A ball joint ensures the perpendicularity between the metal plate and the free end of the rubber strip during the test. Note: a standard grip is required for clamping the free end of the rubber strip.



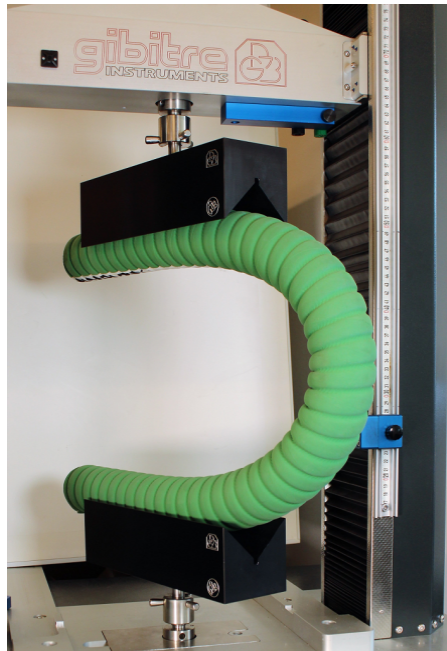
## Sliding System for 90° Peeling Test

Sliding system for the performance of peeling test at 90° according to AFERA 5001, GTF 6004 and equivalent. The sliding system slides automatically during the performance of the test in order to keep the sample at 90° with respect to the upper grip. The support for the application of the tape is made of stainless steel and is removable. Supports made of different materials are available on request.



## Grips for Bending Test of Rubber Hoses

Pair of clamps for bending test according to ISO 10619. The clamps are designed to house pipes with an external diameter up to 100 mm. The test procedure installed in the default database allows you to carry out measurements according to the requirements of the standard.





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