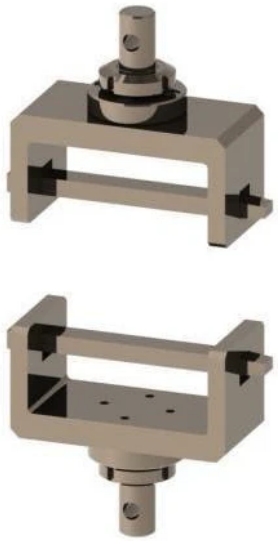
Specialized Grips and Fixtures for Tear, Peel, and Puncture Testing

Specialized Accessories for Unique and Complex Testing Applications



NextGen Material Testing Inc. provides a comprehensive selection of specialized grips and fixtures engineered for advanced testing applications that extend beyond traditional tensile and compression methods. Designed for seamless integration with our universal testing machines (UTM), these solutions enable testing of plastic films, non-woven materials, geotextiles, buckles, eyes, and other unique configurations requiring precise alignment and force application.

Our other grips and fixtures collection meets critical global testing standards, including ASTM D624, ASTM D1004, ISO 34, ISO 3303, and DIN equivalents. They allow reliable data collection for shear strength, puncture resistance, tear propagation, and peeling forces, among others.

GET A QUOTE

These accessories help laboratories, research institutions, and quality control departments expand the capabilities of their NextGen UTMs across numerous industries, from packaging to construction textiles.

NGB502A – Side Action Grip

The **NGB502A Side Action Grip** is designed for low-force tensile and tear tests, specifically targeting sponge samples and footwear components such as soles and uppers. Its adaptable jaw configuration allows for accurate gripping of various sample types. This compact grip is compatible with standard 10 mm pin-type universal testing machines and supports ambient condition testing for soft and elastic materials.

- **Application:** Tension test of sponge samples and tear test of shoe soles and uppers.
- **Maximum Capacity:** ≤ 500 N load.
- **Weight:** 1 kg (upper grip), 1 kg (lower grip).
- **Dimensions:** Height – 250 mm; Width – 100 mm.
- **Working Temperature:** Ambient.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Jaw Face Width (Sponge Specimen):** 30 mm.
- **Jaw Face Width (Shoe Upper):** 40 mm.

Technical Specifications – NGB502A Side Action Grip

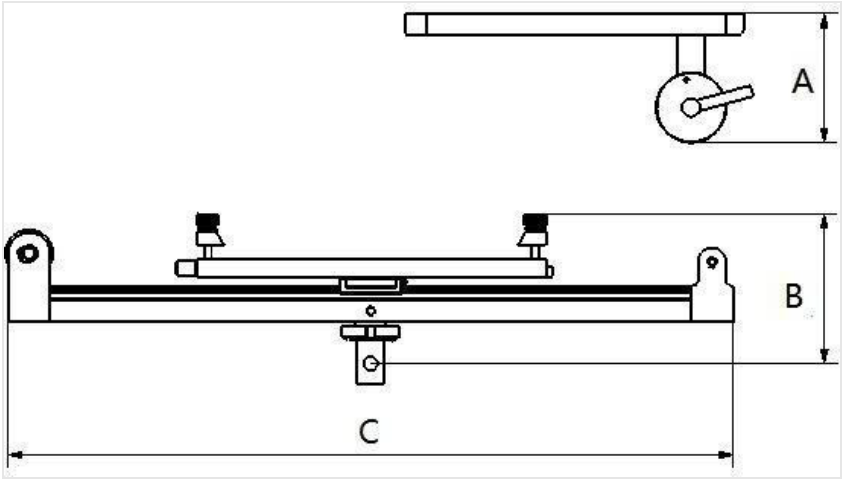
Parameter	Specification
Application	Tension test of sponge sample and tear test of sole and upper of shoe
Maximum Force Capacity	≤ 500 N
Weight	Upper Grip: 1 kg Lower Grip: 1 kg
Working Temperature	Ambient

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A)	250 mm
Width (B)	100 mm
Jaw Face Width (Sponge Specimen)	30 mm
Jaw Face Width (Shoe Upper)	40 mm

NGA502A – 90° Peeling Fixture

The **NGA502A 90° Peeling Fixture** is designed for the determination of peel adhesion strength of adhesive tapes. This fixture complies with GB/T 2792 and ISO 29862 standards and is suitable for low-force peel testing up to 500 N. It features a stable base and pin-mounted grips for accurate and repeatable adhesion measurements in ambient conditions.

- **Application:** Determination of peel adhesion properties for adhesive tapes.
- **Maximum Capacity:** ≤ 500 N load.
- **Weight:** 3.66 kg.
- **Working Temperature:** Ambient.
- **Standards:** GB/T 2792, ISO 29862.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 92 mm (upper grip), 106 mm (lower grip).
- **Base Dimensions:** Length – 520 mm; Width – 140 mm.



Technical Specifications – NGA502A 90° Peeling Fixture

Parameter	Specification
Application	Determination of peel adhesion properties for adhesive tapes
Maximum Force Capacity	≤ 500 N
Weight	3.66 kg
Working Temperature	Ambient
Standard	GB/T 2792, ISO 29862
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 92 mm Lower Grip: 106 mm
Base Length (C)	520 mm
Base Width (D)	140 mm

NGB103A – Peeling Fixture

The **NGB103A Peeling Fixture** is developed for conducting peeling tests on geogrid materials in accordance with the JTG E50 standard. With its dual-grip design and compatibility with Φ10 mm pin mounts, this fixture provides a stable platform for low-force peel tests up to 1 kN. It is ideal for quality control and research applications in geosynthetics testing environments.

- **Application:** Peeling test for geogrid materials.
- **Maximum Capacity:** ≤1 kN load.
- **Weight:** 2.23 kg (upper grip), 2.29 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** JTG E50.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 110 mm (upper grip), 106 mm (lower grip).
- **Grip Length:** 140 mm.
- **Width:** 124 mm (upper grip), 54 mm (lower grip).

Technical Specifications – NGB103A Peeling Fixture

Parameter	Specification
Application	Peeling test for geogrid
Maximum Force Capacity	≤1 kN
Weight	Upper Grip: 2.23 kg Lower Grip: 2.29 kg
Working Temperature	Ambient
Standard	JTG E50

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 110 mm Lower Grip: 106 mm
Grip Length (C)	140 mm
Width (D/E)	Upper Grip: 124 mm Lower Grip: 54 mm

NGG103A – Climbing Drum Peel Test Fixture

The **NGG103A Climbing Drum Peel Test Fixture** is used to determine the peel resistance of sandwich structures, especially those involving bonded joints. This fixture is compliant with GB/T 17748 and operates under low-force conditions in ambient environments. Its lightweight construction and Φ10 mm pin mounting make it suitable for small-scale, precise adhesion testing applications.

- **Application:** Determination of the peel resistance of sandwich structures.
- **Maximum Capacity:** ≤1 kN load.
- **Weight:** 0.8 kg (upper grip), 0.3 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 17748.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 67 mm (upper grip), 47.5 mm (lower grip).
- **Width:** 30 mm.

Technical Specifications – NGG103A Climbing Drum Peel Test Fixture

Parameter	Specification
Application	Determination of the peel resistance of sandwich structures
Maximum Force Capacity	≤1 kN
Weight	Upper Grip: 0.8 kg Lower Grip: 0.3 kg
Working Temperature	Ambient
Standard	GB/T 17748

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 67 mm Lower Grip: 47.5 mm
Width (C)	30 mm

NGA502A – Tear Fixture

The **NGA502A Tear Fixture** is designed for tear testing of waterproof roll materials in ambient conditions. Built according to GB/T 328.18 standards, this fixture supports low-force testing up to 500 N and provides reliable grip and alignment via standard Φ10 mm pin connections. Its durable dual-grip structure ensures consistent specimen holding and accurate tear strength evaluation.

- **Application:** Tear test for waterproof roll materials.
- **Maximum Capacity:** ≤ 500 N load.
- **Weight:** 2.1 kg (upper grip), 3.0 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 328.18.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 97 mm (upper grip), 145 mm (lower grip).
- **Width:** 140 mm.

Technical Specifications – NGA502A Tear Fixture

Parameter	Specification
Application	Tear test for waterproof roll
Maximum Force Capacity	≤ 500 N
Weight	Upper Grip: 2.1 kg Lower Grip: 3.0 kg
Working Temperature	Ambient
Standard	GB/T 328.18

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 97 mm Lower Grip: 145 mm
Width (C)	140 mm

NGA204A – Tensile Grip of Eyes Open Buckle

The **NGA204A Tensile Grip of Eyes Open Buckle** is designed for tension testing of safety nets, including open-buckle eye loop configurations. Built in compliance with GB/T 5725-2009, this grip system handles forces up to 20 kN under ambient conditions. Its reinforced lower grip construction ensures stability for high-strength materials, while standard Φ10 mm pin connections enable easy integration with universal testing machines.

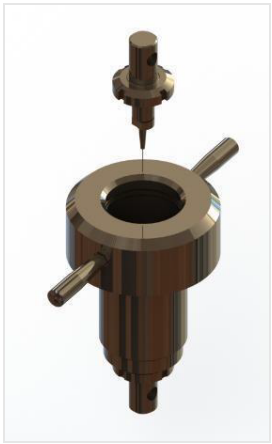
- **Application:** Tension test for safety nets.
- **Maximum Capacity:** ≤ 20 kN load.
- **Weight:** 1 kg (upper grip), 13 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 5725-2009.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 101 mm (upper grip), 125 mm (lower grip).
- **Width:** 125 mm.

Technical Specifications – NGA204A Tensile Grip of Eyes Open Buckle

Parameter	Specification
Application	Tension test for safety nets
Maximum Force Capacity	≤ 20 kN
Weight	Upper Grip: 1 kg Lower Grip: 13 kg
Working Temperature	Ambient
Standard	GB/T 5725-2009

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 101 mm Lower Grip: 125 mm
Width (C)	125 mm

NGP502A – Puncture Fixture of Plastic Film



The **NGP502A Puncture Fixture of Plastic Film** is designed for precise measurement of puncture resistance in plastic films. Compliant with GB/T 21302-2007, this fixture is optimized for low-force testing in ambient conditions. It features a 1 mm diameter probe and a 50 mm inner diameter ring to accurately simulate puncture conditions, providing highly repeatable test results for thin plastic specimens.

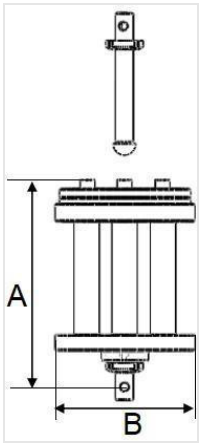
- **Application:** Determination of puncture resistance properties of plastic film.
- **Maximum Capacity:** ≤ 500 N load.
- **Weight:** 0.21 kg (upper grip), 3.07 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 21302-2007.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 100 mm (upper grip), 155 mm (lower grip).
- **Width:** 215 mm.
- **Inner Diameter:** Φ50 mm.
- **Probe Diameter:** Φ1 mm.

Technical Specifications – NGP502A Puncture Fixture of Plastic Film

Parameter	Specification
Application	Determination of puncture resistance properties of plastic film
Maximum Force Capacity	≤ 500 N
Weight	Upper Grip: 0.21 kg Lower Grip: 3.07 kg

Parameter	Specification
Working Temperature	Ambient
Standard	GB/T 21302-2007
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 100 mm Lower Grip: 155 mm
Width (C)	215 mm
Inner Diameter	Φ50 mm
Probe Diameter	Φ1 mm

NGP103A – Puncture Fixture of Non-Woven Fabric



The **NGP103A Puncture Fixture of Non-Woven Fabric** is designed to determine the bursting strength of textile materials, including non-woven fabrics. Conforming to GB/T 19976-2005, this fixture operates in ambient environments and supports loads up to 1 kN. It is equipped with interchangeable probes for multiple test scenarios and offers secure Φ10 mm pin connections for universal testing machine compatibility.

- **Application:** Determination of bursting strength of textiles and non-woven fabric materials.
- **Maximum Capacity:** ≤1 kN load.
- **Weight:** 10 kg.
- **Working Temperature:** Ambient.
- **Standard:** GB/T 19976-2005.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 250 mm.
- **Width:** 160 mm.
- **Probe Options:** Φ25 mm, Φ38 mm.

Technical Specifications – NGP103A Puncture Fixture of Non-Woven Fabric

Parameter	Specification
Application	Determination of bursting strength of textiles
Maximum Force Capacity	≤1 kN
Weight	10 kg
Working Temperature	Ambient

Parameter	Specification
Standard	GB/T 19976-2005
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A)	250 mm
Width (B)	160 mm
Probe Diameter	Φ25 mm, Φ38 mm

NGP503A – Puncture Fixture of Geotextiles

The **NGP503A Puncture Fixture of Geotextiles** is designed for the accurate determination of puncture resistance properties in geotextile materials. Compliant with GB/T 14800-2010 and ISO 12236, this fixture supports up to 5 kN of load and operates in ambient conditions. With dual plunger and inner diameter options, it enables standardized testing for a wide range of geotextile product types.

- **Application:** Determination of puncture resistance properties of geotextiles.
- **Maximum Capacity:** ≤ 5 kN load.
- **Weight:** 2.4 kg (upper grip), 15 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standards:** GB/T 14800-2010, ISO 12236.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 175 mm (upper grip), 290 mm (lower grip).
- **Width:** 282 mm.
- **Inner Diameter Options:** Φ150 mm, Φ50 mm.
- **Plunger Options:** Φ50 mm, Φ8 mm.

Technical Specifications – NGP503A Puncture Fixture of Geotextiles

Parameter	Specification
Application	Determination of puncture resistance properties of geotextiles
Maximum Force Capacity	≤ 5 kN
Weight	Upper Grip: 2.4 kg Lower Grip: 15 kg

Parameter	Specification
Working Temperature	Ambient
Standard	GB/T 14800-2010, ISO 12236
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 175 mm Lower Grip: 290 mm
Width (C)	282 mm
Inner Diameter	Φ150 mm, Φ50 mm
Plunger Diameter	Φ50 mm, Φ8 mm

NGA203A – Shear Fixture

The **NGA203A Shear Fixture** is designed for evaluating the shear performance of silicone sealants under controlled conditions. Built to meet the JGT 475-2015 standard, the fixture accommodates medium-force testing up to 2 kN and offers a wide working temperature range for reliable results in both cold and hot environments. Its dual Φ10 mm pin connections ensure secure integration with universal testing machines.

- **Application:** Shear test for silicone sealants.
- **Maximum Capacity:** ≤ 2 kN load.
- **Weight:** 1 kg (upper grip), 2 kg (lower grip).
- **Working Temperature:** -20°C to +80°C.
- **Standard:** JGT 475-2015.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 168 mm (upper grip), 184 mm (lower grip).
- **Width:** 111 mm.

Technical Specifications – NGA203A Shear Fixture

Parameter	Specification
Application	Shear test for silicone sealants
Maximum Force Capacity	≤ 2 kN
Weight	Upper Grip: 1 kg Lower Grip: 2 kg
Working Temperature	-20°C to +80°C
Standard	JGT 475-2015

Parameter	Specification
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 168 mm Lower Grip: 184 mm
Width (C)	111 mm

NGA203D – Tensile Grip

The **NGA203D Tensile Grip** is specifically designed for tension testing of welded joints in steel wire, following GB/T 33281-2016 and GB/T 26941.3 standards. Compact and lightweight, it operates under ambient conditions and supports forces up to 2 kN. The grip is ideal for small-diameter specimens ranging from Φ0.5 mm to Φ5 mm, offering reliable alignment and precision holding for consistent test results.

- **Application:** Tension test for welded joints of steel wire.
- **Maximum Capacity:** ≤ 2 kN load.
- **Weight:** 1 kg (upper grip), 1 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standards:** GB/T 33281-2016, GB/T 26941.3.
- **Height:** 150 mm (A), 40 mm (B).
- **Specimen Diameter Compatibility:** Φ0.5–Φ5 mm.

Technical Specifications – NGA203D Tensile Grip

Parameter	Specification
Application	Tension test for welded joint of steel wire
Maximum Force Capacity	≤ 2 kN
Weight	Upper Grip: 1 kg Lower Grip: 1 kg
Working Temperature	Ambient
Standard	GB/T 33281-2016, GB/T 26941.3

Parameter	Specification
Height (A)	150 mm
Height (B)	40 mm
Specimen Diameter	Φ0.5–Φ5 mm

NGB104A – Shear Fixture

The **NGB104A Shear Fixture** is developed for conducting shear strength testing on aluminum-plastic composite panels. Built in accordance with GB/T 17748, it is optimized for low- to mid-force applications up to 10 kN under ambient conditions. This fixture supports precise clamping and is suitable for specimens with longitudinal lengths under 100 mm, making it ideal for construction and façade material evaluation.

- **Application:** Shear test for aluminium-plastic composite panels.
- **Maximum Capacity:** ≤10 kN load.
- **Weight:** 3.9 kg.
- **Working Temperature:** Ambient.
- **Standard:** GB/T 17748.
- **Height:** 107 mm (A), 102 mm (B).
- **Specimen Size:** Longitudinal length ≤100 mm.

Technical Specifications – NGB104A Shear Fixture

Parameter	Specification
Application	Shear test for aluminium-plastic composite panel
Maximum Force Capacity	≤10 kN
Weight	3.9 kg
Working Temperature	Ambient
Standard	GB/T 17748

Parameter	Specification
Height (A)	107 mm
Height (B)	102 mm
Specimen Size	Longitudinal length ≤100 mm

NGB104B – Compression Shear Fixture

The **NGB104B Compression Shear Fixture** is designed for evaluating the shear strength of adhesives used in ceramic tile applications. Built in accordance with JC/T547-2005, this fixture handles forces up to 10 kN in ambient conditions. Its solid lower grip and lightweight upper component ensure stable performance for material bonding evaluation. The fixture integrates easily with standard universal testing machines via Φ10 mm pin mounts.

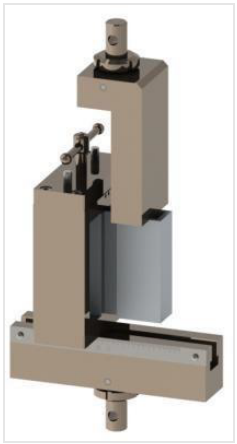
- **Application:** Compression shear test for adhesives of ceramic tiles.
- **Maximum Capacity:** ≤10 kN load.
- **Weight:** 0.8 kg (upper grip), 7 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** JC/T547-2005.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 55 mm (upper grip), 145 mm (lower grip).
- **Width:** 180 mm.

Technical Specifications – NGB104B Compression Shear Fixture

Parameter	Specification
Application	Compression shear test for adhesives of ceramic tiles
Maximum Force Capacity	≤10 kN
Weight	Upper Grip: 0.8 kg Lower Grip: 7 kg
Working Temperature	Ambient

Parameter	Specification
Standard	JC/T547-2005
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 55 mm Lower Grip: 145 mm
Width (C)	180 mm

NGB204A – Longitudinal Shear Fixture



The **NGB204A Longitudinal Shear Fixture** is engineered for testing the shear strength of aluminum alloy thermal barrier profiles. Built according to GB/T 28289-2012, it supports forces up to 20 kN and is ideal for quality control and structural performance evaluation in ambient environments. The fixture features robust pin connections and accommodates specimens with longitudinal lengths up to 100 mm.

- **Application:** Shear test for aluminum alloy thermal barrier profiles.
- **Maximum Capacity:** ≤ 20 kN load.
- **Weight:** 3 kg (upper grip), 6.5 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 28289-2012.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 168 mm (upper grip), 269 mm (lower grip).
- **Width:** 190 mm.
- **Specimen Size:** Longitudinal length ≤ 100 mm.

Technical Specifications – NGB204A Longitudinal Shear Fixture

Parameter	Specification
Application	Shear test for aluminum alloy thermal barrier profiles
Maximum Force Capacity	≤ 20 kN
Weight	Upper Grip: 3 kg Lower Grip: 6.5 kg
Working Temperature	Ambient

Parameter	Specification
Standard	GB/T 28289-2012
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A/B)	Upper Grip: 168 mm Lower Grip: 269 mm
Width (C)	190 mm
Specimen Size	Longitudinal length ≤100 mm

NGB105A – Shear Fixture

The **NGB105A Shear Fixture** is designed for high-force shear testing of steel wire and rope. With a maximum force capacity of 100 kN, this robust fixture is suitable for industrial applications requiring precise evaluation of wire and rope shear performance. Compatible with Φ10 mm pin connections, it supports a range of specimen diameters including Φ4, Φ5, Φ6, and Φ8 mm under ambient conditions.

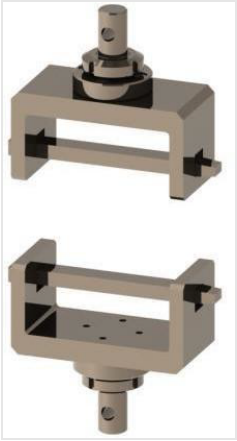
- **Application:** Shear test for steel wire and rope.
- **Maximum Capacity:** ≤100 kN load.
- **Weight:** 1.69 kg (upper grip), 10.63 kg (lower grip).
- **Working Temperature:** Ambient.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 97 mm (upper grip), 145 mm (lower grip).
- **Width:** 150 mm.
- **Specimen Size Compatibility:** Φ4, Φ5, Φ6, Φ8 mm.

Technical Specifications – NGB105A Shear Fixture

Parameter	Specification
Application	Shear test for steel wire and rope
Maximum Force Capacity	≤100 kN
Weight	Upper Grip: 1.69 kg Lower Grip: 10.63 kg
Working Temperature	Ambient
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin

Parameter	Specification
Height (A/B)	Upper Grip: 97 mm Lower Grip: 145 mm
Width (C)	150 mm
Specimen Size	Φ4, Φ5, Φ6, Φ8 mm

NGA204A – Tensile Fixture



The **NGA204A Tensile Fixture** is designed for performing tension tests on aluminum alloy profiles. Built to comply with GB/T 28289-2012 standards, it supports tensile forces up to 20 kN and is optimized for reliable performance under ambient conditions. The fixture uses standard Φ10 mm pin connections and provides stable clamping with symmetrical grip weights and dimensions.

- **Application:** Tension test for aluminum alloy profiles.
- **Maximum Capacity:** ≤ 20 kN load.
- **Weight:** 1.8 kg (upper grip), 1.8 kg (lower grip).
- **Working Temperature:** Ambient.
- **Standard:** GB/T 28289-2012.
- **Connection Type:** Φ10 mm pin (upper and lower grips).
- **Height:** 105 mm.
- **Test Width:** 104 mm.
- **Grip Width:** 148 mm.

Technical Specifications – NGA204A Tensile Fixture

Parameter	Specification
Application	Tension test for aluminum alloy profiles
Maximum Force Capacity	≤ 20 kN
Weight	Upper Grip: 1.8 kg Lower Grip: 1.8 kg
Working Temperature	Ambient

Parameter	Specification
Standard	GB/T 28289-2012
Connection Type	Upper Grip: Φ10 mm pin Lower Grip: Φ10 mm pin
Height (A)	105 mm
Test Width (B)	104 mm
Grip Width (C)	148 mm

NextGen's other grips and fixtures are tailored for precise, non-standard testing scenarios across various material types, ensuring full compliance with ASTM, ISO, and DIN testing protocols. Whether you're evaluating peel strength, puncture resistance, or shear performance, these accessories expand your UTM's capabilities and allow for deeper insights into material behavior.

Contact our technical team today to integrate these solutions into your existing universal testing equipment.

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