



PNEUMATIC SYMMETRIC GRIPS TENSILE TESTS

Model MSN/1.2 (1.2 kN)

Symmetrical pneumatic clamping grips. Double action for the **self-centering** of the specimens, and device for aligning the specimens to be tested, which facilitates quick and easy loading.

Ideal for doing **tensile tests** on samples of Rubber, Plastic Film, Plastic Dumbbell type, Papers, Cardboards, Metallic Foils, Aluminum Foils, Fabrics, Cloth, Textiles, Composites ..., being incorporated into a Universal Testing Machine

GENERAL INFORMATION

Easy-to-use pneumatic grips, designed for tensile testing of sheet / sheet materials with low tensile strength up to **1.2 kN** at 7 Bar air pressure and **2.4 kN** at 16 Bar air pressure using the UN-210 compressor.

Ideal for all types of samples of flat materials, Rubber, Dumbbell-type Plastic, Metallic Foils, Aluminum Foils, Fabrics, Cloth, Textiles, Composites ..., being incorporated into a Universal Testing Machine.

All pneumatic grips can be operated with pedal or manual control integrated by manual micro-switch.

Symmetrical pneumatic clamping grips. Double action for self-centering of the sample which allows quick and easy loading.

Each grip is supplied with a sample alignment device, which can be mounted directly on the jaws.

TECHNICAL CHARACTERISTICS

• Load capacity:	1.2 kN at 7 Bar (2.4 kN at 16 Bar pressure with UN216 compressor)
• Clamping force:	2.2 kN at 7 Bar (5 kN at 16 Bar pressure with UN216 compressor)
• Pneumactical connection:	1/8 " internal thread
• Body:	Anodized Aluminium
• Jaws:	Nickel plated steel
• Temperature range:	0... + 70 ° C (depending on jaw type) Other ranges on request
• Standard coupling:	15,9 mm 5/8" (Other couplings on request)
• Weight each grip:	1,21 Kg (without jaws)
• Scope of delivery:	1 pair of Grips (without jaws)

Model	Surface finish	Clamping surface Height x width	Opening with rod Z6*	Opening with rod Z11*	Weight per pair
MSN/1.2-B	Blank jaws	30x50 mm	0-6 mm	4-11 mm	0.22 kg
MSN/1.2- BG	Rubber jaws	30x50 mm	0-4 mm	2-9 mm	0.22 kg
MSN/1.2- BP	Pyramid jaws	30x50 mm	0-6 mm	4-11 mm	0.22 kg
MSN/1.2- BV	V jaws	Clamping height 30 mm	4-6 mm Ø	7-11 mm Ø	0.18 kg
MSN/1.2- BW	Wave jaws	30x50 mm	0-6 mm	4-11 mm	0.20 kg
MSN/1.2- BD	Diamond jaws	30x50 mm	0-6 mm	4-11 mm	0.22 kg

* Z6 and Z11 stems are included in the standard grips price and supply.

Jaws with other dimensions and coated surfaces on request

Insert Jaws for MSN / 1.2 grips: Scope of supply 1 set = 4 Quick Insert Jaws.

Quick insert jaws require MSN / 1.2-GT carrier

Modelo	Surface finish	Clamping surface Height x width	Opening with rod Z6*	Opening with rod Z11*	Peso por par
MSN/1.2-GT	Insert Jaw Carrier				0.12 kg
MSN/1.2-EBB	Blank insert jaws	30x50 mm	0-4 mm	4-9 mm	0.14 kg
MSN/1.2-EBG	Rubber insert jaws	30x50 mm	0-2 mm	2-7 mm	0.14 kg
MSN/1.2-EBP	Pyramid insert jaws	30x50 mm	0-5 mm	4-9 mm	0.13 kg
MSN/1.2-EBV4	V insert jaws	Clamping height 30 mm	3-4 mm Ø	4-9 mm Ø	0.13 kg
MSN/1.2-EBW	Wave insert jaws	30x50 mm	0-4 mm	4-9 mm	0.12 kg
MSN/1.2-EBD	Diamond insert jaws	30x50 mm	0-4 mm	4-9 mm	0.14 kg

* Z6 and Z11 stems are included in the standard grips price and supply.

Jaws with other dimensions and coated surfaces on request



MSN/1.2-GT

Carrier Interchangeable jaws

MSN/1.2-EBP

Pyramid Inset jaw



**B Blank
Blank jaws**

- Applicable for additional treatments
- Plain uncoated steel



BP serrated (pyramids)

- Pyramids 1.2x45 °
- Hardened steel 58 HRC
- Nickel plated



BW Wave jaws

- For Flexible Materials
- 5mm waves
- 58HRC hardened steel
- Nickel plated



BW Rubber coated jaws

- 1mm rubber layer (NBR)
- Nickel plated



**BV f/ round samples
V jaws**

- For all types of round specimen
- Tooth pitch 1.2 mm
- 58HRC hardened steel
- Nickel plated



BD Diamond jaws

- Clamping area covered with synthetic diamond D91 (170/200 mesh)
- Nickel plated

APPLICATIONS

Pneumatic grips use air pressure to actuate cylinders to provide constant clamp loads to test specimens of a wide variety. They are best suited to the following mechanical testing needs:

- **High volume tests** where opening and closing actions are repetitive for operators.
- **Sensitive or fragile test samples** where clamping can cause failure or where multiple tests are performed. Many times, it can be desirable to test all samples under constant clamping conditions.
- **High elongation tests** where the samples shrink as they are pulled. If the sample stretches (e.g. plastics and rubber), the sample can pull out of mechanical action clamps. Air cylinders can adjust to the changing conditions and hold -- regardless of sample deformation.

Testing materials such as

- Textiles & Geotextiles
- Sheets, Thin Films, Foils - Flat samples
- Thread, wire, rope – Round shapes
- Soft materials
- Lap Shear samples
- Soft Tissues & Medical Devices
- Peel and adhesion tests
- Films, polymers & woven fabrics

General Notes

- Clamp Force Ratings are based on 7 bar (100 psi) air pressure
- Standard grips may be used in chambers from -40C to 70C. Optional seals are available to increase the range to 190C and 280C.
- Anti-corrosion coatings available on all grips and recommended in low temperature applications to protect grip from corrosion damage.

AIR GRIP ACCESSORIES

Interchangeable Jaws or Faces are available on all grips. All jaws are hardened steel (excluding rubber faced jaws or unless noted). Non-standard surfaces and sizes are made to order.

Blank Jaws – for smooth surfaced materials.

Pyramid (serrated) Jaws – also called ‘pyramid’, ‘diamond cut’ or ‘knurled’ - for materials requiring a ‘bite’ such as paper, aluminum, copper, board, steel, wire and soft steels.

Rubber Faced Jaws – for relatively fragile samples weakened by pinching at the edge of the grip face - monofilaments, wire, film, single fibers, and aluminum.

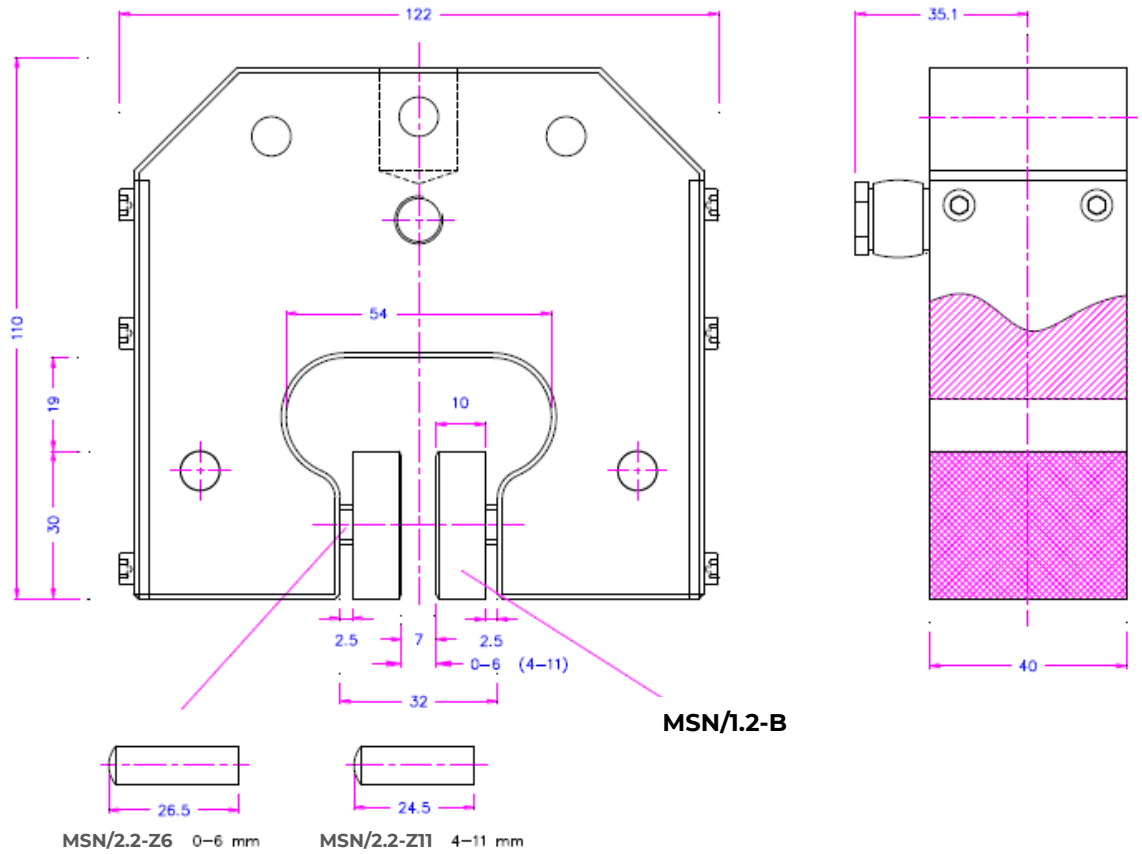
Diamond Jaws – aggressive surface for soft steels, rigid plastic and wood.

Grab Tests – for grabbing textiles, leather and fabrics per ASTM D2208, D5034, D1683 and D4632.

Wave Jaws – provide a deeper bite (5 mm typical) for testing ‘slippery’ test samples including tissues, textiles, and fabrics.

V-Jaws – round test bars, wire, tubing and rod.

Line Contact – testing thin films (ASTM D882) and foils where a gage section is important.



PNEUMATIC ACCESSORIES:



UN205-1 Foot pedals

None-locking: The grip jaws open by pressing the foot pedal and close after removing the foot from the pedal.

Scope of delivery: 1 pair of foot switches including tubes and fittings



UN205-2 Foot pedal

With locking function: The grip jaws open by pressing the foot pedal and remain opened after removing the foot from the pedal. The jaws close by pressing the pedal one more time.

Scope of delivery: 1 pair of foot switches including tubes and fittings



UN205-+PR16bar Pressure regulator

Optional for UN205-1 o UN-205-2

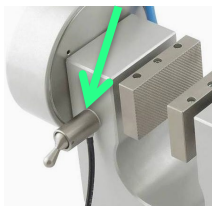
To adjust air pressure: 1-16 bar



UN205-3 Hand switches

With locking function: The jaws of the grip close by pulling the handle and remain closed. The jaws open by pushing the handle back.

Scope of delivery: 1 unit of hand switches including tubes and fittings



UN205-4-M5 Handheld Micro-Switches

Pneumatic manual microswitches, tubes and fittings, M5 pneumatic connection

With lockout feature: Manual switches mount directly to handles (1/8" couplings only), 3/2 directional valve. Only for single action rods with spring inside.

Scope of supply: 2 manual switches including tubes and accessories



UN216 Silent compressor for laboratories, oil-lubricated, with pressure reducer

Max pressure 16 bar; 230 V/50 HZ; noise level: 38 dB(A)

Motor: 0.13 kW; displacement: 17 l/min; tank size 3.5 l Dimensions: 340x290x340 mm (L x W x H); weight 18 kg

Different voltages on demand