











## **PNEUMATICS GRIPS FOR TENSILE TESTS**



### **MDN Series from 0.1 to 20 kN Capacity**

Lightweight, easy-to-use pneumatic clamping grips applicable to perform tensile tests on samples of light sheet materials incorporated into a Universal Testing Machine.

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**Pneumatic Grips model MDN/0,1-V-Ko (1 piston) (100 N)**

**Pneumatic Grips model MDN/0,1-P-2Ko (2 pistons) (100 N)**

**Pneumatic Grips model MDNs/0,1-V-Ko (1 piston) (100 N)**

**Pneumatic Grips model MDNs/0,1-P-2Ko (2 pistons) (100 N)**



Very light grips with pneumatic tightening weight, easy to use and applicable to perform **tensile tests** on **small samples** of very light sheet materials incorporated into a Universal Testing Machine

### GENERAL INFORMATION

Easy-to-use pneumatic grips, designed for tensile testing of low-resistance sheet materials. In the standard supply, 4 jaws with a minced surface finish are included with the jaws, and depending on the material to be tested (paper - Cardboard - Film - Fabrics - Threads - Foils ...) these grips can be equipped with other types of jaws with other surface finishes on the faces to be able to test different types of materials.

#### Ultralight Penumatic Grips 100 N “MDN/0.1-V series”

2 jaws are supplied, including 4 jaws with rough face surfaces (pyramids)

MODEL	MINI MDN/0.1-V-Ko (1 piston)
• Load capacity:	<b>100 N</b>
• Clamping force:	140 N (at 7 Bar)
• Jaw clamping surface:	15 x 15 mm
• Jaw opening:	0-8 mm (depending on the jaw type)
• Female adapter:	8 mm cup and 3 mm pin
• Body:	Anodized Aluminium
• Jaws:	Hardened Steel 58 HRC
• Temperature range:	0... + 70 ° C Other ranges on request
• Weight per grip:	73 g (jaws included)
• Scope of supply:	1 pair (with pyramid jaws)



MODEL	MINI MDN/0.1-V-2Ko (2 pistons)
• Load capacity:	<b>100 N</b>
• Clamping force:	140 N (at 7 Bar)
• Jaw clamping surface:	15 x 15 mm
• Jaw opening:	0-8 mm (depending on the jaw type)
• Female adapter:	8 mm cup and 3 mm pin
• Body:	Anodized Aluminium
• Jaws:	Hardened Steel 58 HRC
• Temperature range:	0... + 70 ° C Other ranges on request
• Weight per grip:	87 g (jaws included)
• Scope of supply:	1 pair (including pyramid jaws)



MODEL	MINI MDNs/0.1-V-Ko (1 piston)
• Load capacity:	<b>100 N</b>
• Clamping force:	140 N (at 7 Bar)
• Jaw clamping surface:	15 x 15 mm
• Jaw opening:	0-8 mm (depending on the jaw type )
• Acoplamiento:	M5 thread Other couplings on request
• Body:	Anodized Aluminium
• Jaws:	Hardened Steel 58 HRC
• Temperature range:	0... + 70 ° C Further ranges on request
• Weight per grip:	56g (82 g with adapter of 15,9mm)
• Scope of supply:	1 pair (including pyramid jaws)



MODEL	MINI MDNs/0.1-V-2Ko (2 pistons)
• Load capacity:	<b>100 N</b>
• Clamping force:	140 N (at 7 Bar)
• Jaw clamping surface:	15 x 15 mm
• Jaw opening:	0-8 mm (depending on the jaw type )
• Acoplamiento:	M5 thread Other couplings on request
• Body:	Anodized Aluminium
• Jaws:	Hardened Steel 58 HRC
• Temperature range:	0... + 70 ° C Further ranges on request
• Weight per grip:	72g (97 g with adapter of 15,9mm)
• Scope of supply:	1 pair (including pyramid jaws)



**Jaws for the MDN/0.1-Ko and MDN/0.1-2Ko Grips: the supply of 1 set = 4 jaws**

Model	Surface finish	Clamping surface	Jaws opening	Weight per pair
<b>MDM/0.1-B</b>	Blank jaws	15x15 mm	0-8 mm	14 g
<b>MDM/0.1-BG</b>	Rubber jaws	15x15 mm	0-6 mm	16 g
<b>MDM/0.1-BP</b>	Pyramid jaws	15x15 mm	0-8 mm	14 g



MDM/0,1-B



MDM/0,1-BG



MDM/0,1-BP

## Pneumatic Grips model MDN/0,1 (100 N)

Very light weight pneumatic grips, easy to use and applicable to perform tensile tests on samples of very light sheet materials incorporated into a Universal Testing Machine.



### GENERAL INFORMATION

Lightweight, easy-to-use pneumatic grips designed for tensile testing of sheet materials with very low resistance up to **100 N**.

MODEL	MINI MDN/0,1
• <b>Load capacity:</b>	<b>100 N</b>
• <b>Clamping force:</b>	200 N (a 7 Bar)
• <b>Opening:</b>	0-20 mm (depending on jaws type)
• <b>Female adapter:</b>	8 mm cup and 3mm pin
• <b>Body:</b>	Anodized aluminum
• <b>Jaws:</b>	Herdened steel 58 HRC
• <b>Temperature range:</b>	0... + 70 ° C Other temperature ranges on request
• <b>Weight per grip:</b>	240 g
• <b>Scope of delivery:</b>	1 pair of grips (without jaws) they must be ordered separately

**Jaws for / MDN / 0.1:** Scope of supply: 1 SET = 4 JAWS

Model	Surface	Clamping surface Height x Width	Opening	Weight per pair
<b>MDM/0.1-B</b>	Blank jaws	25 x 25 mm	0 – 20 mm	53 g
<b>MDM/0.1 -BG</b>	Rubber coated jaws	25 x 25 mm	0 – 18 mm	56 g
<b>MDM/0.1 -BP</b>	Pyramid jaws	25 x 25 mm	0 – 20 mm	49 g
<b>MDM//0.1-BD</b>	Diamond jaws	25 x 25 mm	0 – 20 mm	54 g
<b>MDM/0.1-B50</b>	Blank jaws	25 x 50 mm	0 – 20 mm	111 g
<b>MDM/0.1 -BG50</b>	Rubber coated jaws	25 x 50 mm	0 – 18 mm	114 g
<b>MDM/0.1-BP50</b>	Pyramid jaws	25 x 50 mm	0 – 20 mm	104 g
<b>MDM/0.1-BW50</b>	Wave jaws	25 x 50 mm	0 – 16 mm	128 g
<b>MDM/0.1-BD50</b>	Diamond jaws	25 x 50 mm	0 – 20 mm	112 g
<b>MDM/0.2-B25,4X76,2</b>	Blank jaws	25.4 x 76.2 mm	0 – 16 mm	234 g
<b>MDM0.2-B-25,4X76,2-NI</b>	Blank nickel-plated jaws	25.4 x 76.2 mm	0 – 16 mm	234 g
<b>MDM/0.2-BG25,4X76,2</b>	Rubber coated jaws	25.4 x 76.2 mm	0 – 14 mm	240 g
<b>MDM/0.2-BP25,4X76,2</b>	Pyramid jaws	25.4 x 76.2 mm	0 – 16 mm	216 g

Jaws with other dimensions and surface coatings on request

#### Blank jaws

- Steel blanks
- Applicable for own further treatments



#### V jaws

- For round specimens
- Tooth pitch 1.2 mm
- 58HRC hardened steel
- Nickel plated



#### Rubber jaws

- 1mm rubber layer (NBR)
- Nickel plated



#### Wave jaws

- For Flexible Materials
- 5mm wave
- 58HRC Hardened Steel
- Nickel plated



#### Pyramid jaws

- 1.2 x 45 ° pyramids
- Hardened steel 58 HRC
- Nickel plated



#### Diamond jaws

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



**Pneumatics Grips model MDN/0,5 (500 N)**  
**Pneumatic Grips model MDN/0,5+Ko30 (1 kN)**

Lightweight, easy-to-use pneumatic clamping grips applicable to perform tensile tests on samples of light sheet materials incorporated into a Universal Testing Machine.

**GENERAL INFORMATION**

Lightweight, easy-to-use pneumatic grips designed for tensile testing of low-resistance sheet materials up to **500 N** and **1 kN**.



**MDN/0.5 (500N)**



**MDN/0.5+Ko30 (1kN)**

MODEL	MDN/0.5-Ko	MDN/0.5-Ko30
• <b>Load capacity:</b>	<b>500 N</b>	<b>1 kN</b>
• <b>Clamping force:</b>	1 kN (at 7 Bar)	2 kN (at 7 Bar)
• <b>Body:</b>	Aluminium, anodized	Aluminium, anodized
• <b>Temperature range:</b>	0... + 70 ° C Other ranges on request	0... + 70 ° C Other ranges on request
• <b>Pneumatic piston:</b>	20 mm Ø	0 mm Ø
• <b>Pneumatic connection</b>	M5 internal thread	M5 internal thread
• <b>Weight per grip:</b>	0,26 Kg (without jaws)	0,40 Kg (without jaws)
• <b>Scope of delivery:</b>	1 pair (without jaw)	1 pair (without jaw)



**MDN/0.5 (0,5kN)**

**Jaws for MDN / 0.5 and MDN / 1-Ko30 grips:** Scope of supply 1 set = 4 jaws

Model	Surface finish	Clamping area Height x Width	Opening	Weight per pair
<b>MDN/1-B25</b>	Blank jaws	10 x 25 mm	0 – 8 mm*	18 g
<b>MDN/1-BG25</b>	Rubber jaws	10 x 25 mm	0 – 6 mm	19 g
<b>MDN/1-BP25</b>	Pyramid jaws	10 x 25 mm	0 – 8 mm*	17 g
<b>MDN/1-BW25x25</b>	Wave jaws	25 x 25 mm	0 – 6 mm	48 g
<b>MDN/1-BD25</b>	Diamond jaws	10 x 25 mm	0 – 8 mm*	18 g
<b>MDN/1-B50</b>	Blank jaws	10 x 50 mm	0 – 6 mm	46 g
<b>MDN/1-BG50</b>	Rubber jaws	10 x 50 mm	0 – 4 mm	48 g
<b>MDN/1-BP50</b>	Pyramid jaws	10 x 50 mm	0 – 6 mm	43 g
<b>MDN/1-BW25x50</b>	Wave jaws	25 x 50 mm	0 – 6 mm	100 g
<b>MDN/1-BD50</b>	Diamond jaws	10 x 50 mm	0 – 6 mm	46 g
<b>MDN/1-B100</b>	Blank jaws	10 x 100 mm	0 – 6 mm	92 g
<b>MDN/1-BG100</b>	Rubber jaws	10 x 100 mm	0 – 4 mm	95 g
<b>MDN/1-BP100</b>	Pyramid jaws	10 x 100 mm	0 – 6 mm	86 g
<b>MDN/1-BD100</b>	Diamond jaws	10 x 100 mm	0 – 6 mm	92 g

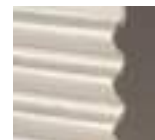
**Blank jaws**

- Applicable for additional treatments
- Plain uncoated steel



**Wave jaws**

- For Flexible Materials
- 5 mm wave
- Hardened Steel 58 HRC
- Nickel plated



**Rubber jaws**

- 1mm Rubber coating(NBR)
- Nickel plated



**Diamond jaws**

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



**Pyramid jaws**

- 1.2 x 45 ° pyramids
- Hardened steel 58 HRC
- Nickel plated



**Jaws Contact line**

- Radius 3 mm
- Nickel plated





## **Pneumatic Grip model MPN/1 (1 kN) (Pincer type)**

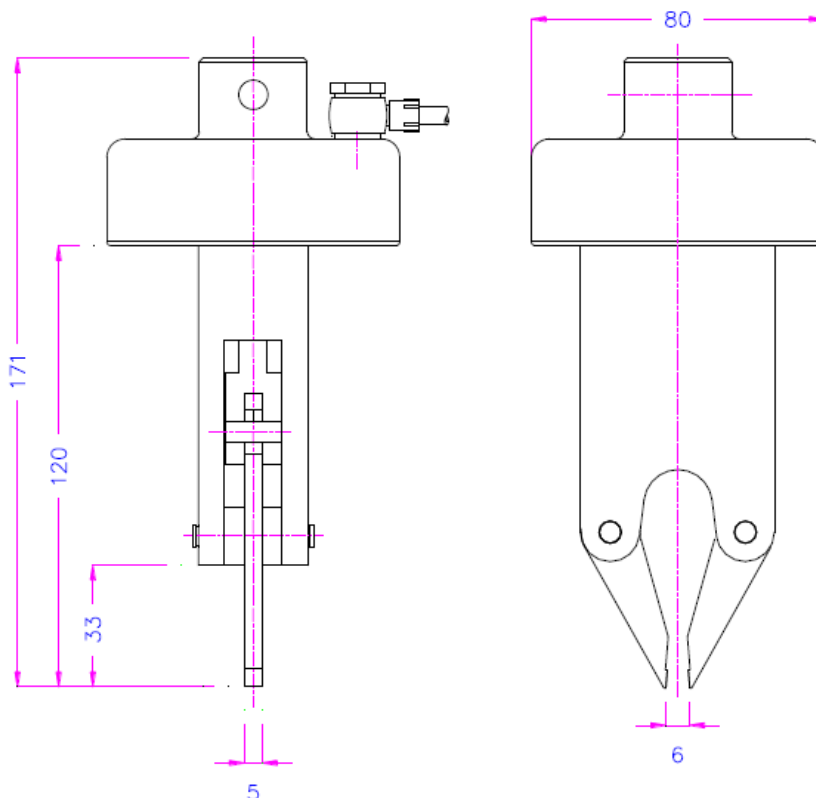
Pneumatic clamping grip, light in weight, easy to use and applicable to perform **extraction tests** on elements that are difficult to access, or using 2 grips, **tensile tests** can be carried out on very small specimens, being incorporated into a Universal Testing Machine.



### **GENERAL INFORMATION**

Lightweight, easy-to-use pneumatic grip designed for the extraction tests of elements in difficult accesses or (using 2 grips) to perform the classic tensile tests of specimens or very small and low-resistance sheet materials up to **1 kN**.

MODEL	MPN/1
• Load capacity:	<b>1 kN</b>
• Clamping force:	<b>2 kN</b> horizontal (at 7 Bar)
• Opening:	0-6 mm
• Body:	Anodized Aluminium
• Temperature range:	0... + 70 ° C Other ranges on request
• Clamping surface:	5 x 5 mm
• Pneumatic connection	1/8 "internal thread
• Weight per grip:	0,80 Kg (with jaws)
• Scope of delivery	1 grip (withot jaws) Order separately



**Jaws for Grip MPN/1:** Scope of delivery 1 set = 2 jaws

Model	Surface finish	Clamping surface Height x width	Opening
<b>MPN/1-B</b>	Blank jaws	5 x 5 mm	0 – 6 mm
<b>MPN/1-BP</b>	Pyramid jaws	5 x 5 mm	0 – 6 mm
<b>MPN/1-BD</b>	Diamond jaws	5 x 5 mm	0 – 6 mm



Blank jaw



Pyramid jaw 0.3x45°



Diamond jaw



Welded Joints Tests



TitanNitride coated jaws

**Similar grips:**



MTP/100-6-K-MB



MCL



MTP/20



MMP/2

## **Pneumatic Grips model MDN/0,6 (0,6 kN)**

Lightweight grips, with pneumatic tightening, easy to use and applicable to perform **tensile tests** on samples of very light sheet materials such as foils, textiles, paper..., being incorporated into a Universal Testing Machine

### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of sheet materials with low resistance to breakage up to a capacity of **0.6 kN** at 7 Bar.

### **GRIPS MDN/0.6-Ko (1 pneumatic piston)**

### **GRIPS MDN/0.6-2Ko (2 pneumatic pistons)**

Common to the 2 models of Grips:

#### **COMMON CHARACTERISTICS TO THE 2 MODELS OF GRIPS**

• <b>Load capacity:</b>	<b>0.6 kN</b>
• <b>Clamping force:</b>	1,2 kN a 7 Bar
• <b>Opening jaws:</b>	0-10 mm (Depending on the jaw type it varies, with rubber -2 mm)
• <b>Pneumatic connection:</b>	Internal thread M5
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15.9 mm o 20 mm (other couplings on request)
• <b>Weight each grip:</b> (without jaws)	1.02 kg (Ko version with 1 Piston ) 1.42 kg ( 2Ko version with 2 pistons )
• <b>Scope of delivery:</b>	1 pair of Grips (without jaws)



**Jaws for MDM / 0.6- (Ko and 2Ko) grips:** Supply 1 Set = 4 jaws

Model	Surface Finish	Clamping surface H x W	Opening	Weight per pair
<b>MDM/1-B</b>	Blank jaws	30 x 30 mm	0 – 10 mm	0.13 kg
<b>MDM/1-BG</b>	Rubber jaws	30 x 30 mm	0 – 8 mm	0.13 kg
<b>MDM/1-BP</b>	Pyramid jaws	30 x 30 mm	0 – 10 mm	0.12 kg
<b>MDM/1-BV2</b>	V jaws	30 x 30 mm	2 – 10 mm Ø	0.13 kg
<b>MDM/1-BV3</b>	V jaws	30 x 30 mm	3 – 10 mm Ø	0.13 kg
<b>MDM/1-BW</b>	Wave jaws	30 x 30 mm	0 – 10 mm	0.12 kg
<b>MDM/1-BD</b>	Diamond jaws	30 x 30 mm	0 – 10 mm	0.13 kg
<b>MDM/1-BLC</b>	Line Contact jaws	30 x 30 mm	0 – 6 mm	0.13 kg

Jaws with other dimensions and coated surfaces on request

**Blank jaws**

- Applicable for additional treatments
- Plain uncoated steel



**V2 jaws**

- For round specimens
- Tooth pitch 0.8 mm
- 58HRC hardened steel
- Nickel plated



**Rubber jaws**

- 1mm rubber layer (NBR)
- Nickel plated



**V3 jaws**

- For round specimens
- Tooth pitch 1 mm
- 58HRC hardened steel
- Nickel plated



**Pyramid jaws**

- 1.2 x 45 ° pyramids
- Hardened steel 58 HRC
- Nickel plated



**Wave jaws**

- For Flexible Materials
- 5mm wave
- 58HRC Hardened Steel
- Nickel plated



**Line Contact jaws**

- Radius 3 mm
- Nickel plated



**Diamond jaws**

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



**Insert Jaws for grips MDM / 0.6:** Scope of supply 1 Set = 4 jaws

For quick change of jaws, the **insert jaws** require the carrier (MDM / 0.6-GT) and the jaw openings are reduced by 3 mm.

Model	Surface finish	Clamping surface H x W	Opening	Weight per pair
<b>MDM/1-GT30</b>	<b>Carrier of jaws</b>			0.09 Kg
<b>MDM/1-EB</b>	Blank insert jaws	30 x 30 mm	0 – 7 mm	0.05 kg
<b>MDM/1-EBG</b>	Rubber insert jaws	30 x 30 mm	0 – 5 mm	0.06 kg
<b>MDM/1-EBP</b>	Pyramid insert jaws	30 x 30 mm	0 – 7 mm	0.05 kg
<b>MDM/1-EBW</b>	Wave insert jaws	30 x 30 mm	0 – 7 mm	0.05 kg
<b>MDM/1-EBD</b>	Diamond insert jaws	30 x 30 mm	0 – 7 mm	0.06 kg

Jaws with other dimensions and coated surfaces on request

Carrier for the insertable jaws GT30+  
Blank insert jaw



**Examples of customized solutions:**



**MDN/1-BG20x20**



**MDN/1-BP0.5x45**  
Fine serrated 0.5 mm



**MDN/1-BP20x30**



**MDN/1-BTe**  
Teflon coating

## **Pneumatic Grips model MDN/0,6-GA (0,6 kN)**

Light-weight grips, with pneumatic tightening, easy to use and applicable to perform **tensile tests** on samples of light materials in sheets of **great thickness** and incorporated into a Universal Testing Machine.



### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of sheet materials with low resistance to breakage up to **0.6 kN** (at 7 Bar) and **1.2 kN** (at 15 Bar with the UN216 compressor), on samples of a lot of thickness.

### **GRIPS MDN-0.6/10- Ko (1 pneumatic piston)**

#### **GRIPS MDN-0.6/10-2Ko (2 pneumatic pistons)**

- Opening: **0 - 10mm** (Depending on the type of jaw it varies, with rubber -2 mm)
- Weight of each grip (without jaws): 0.40 kg (Ko 1 Piston version)
- Weight of each grip (without jaws): 0.60 kg (2Ko 2 Pistons version)

### **GRIPS MDN-0.6/20- Ko (1 pneumatic piston)**

#### **GRIPS MDN-0.6/20-2Ko (2 pneumatic pistons)**

- Opening: **0 - 20mm** (Depending on the type of jaw it varies, with rubber -2 mm)
- Weight of each grip (without jaws): 0.50 kg (Ko 1 Piston version)
- Weight of each grip (without jaws): 0.70 kg (2Ko 2 Pistons version)

### **GRIPS MDN-0.6/30- Ko (1 pneumatic piston)**

#### **GRIPS MDN-0.6/30-2Ko (2 pneumatic pistons)**

- Opening: **0 - 30mm** (Depending on the type of jaw it varies, with rubber -2 mm)
- Weight of each grip (without jaws): 0.54 kg (Ko 1 Piston version)
- Weight of each grip (without jaws): 0.74 kg (2Ko 2 Pistons version)

### **GRIPS MDN-0.6/50- Ko (1 pneumatic piston)**

#### **GRIPS MDN-0.6/50-2Ko (2 pneumatic pistons)**

- Opening: **0 - 50mm** (Depending on the type of jaw it varies, with rubber -2 mm)
- Weight of each grip (without jaws): 0.80 kg (Ko 1 Piston version)
- Weight of each grip (without jaws): 1.00 kg (2Ko 2 Pistons version)

### **Common to the 8 models of Grips:**

<b>COMMON CHARACTERISTICS TO THE 8 MODELS OF GRIPS</b>	
• <b>Load capacity:</b>	<b>0.6 kN</b> at 7 Bar ( <b>1.2 kN</b> at 16 Bar with UN216 Compressor)
• <b>Clamping force:</b>	1.2 kN at 7 Bar (2.5 kN at 16 Bar with UN216 Compressor)
• <b>Pneumactical connection:</b>	Internal thread M5
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Estándar coupling:</b>	15.9 mm or 20 mm ( other couplings on request )
• <b>Scope of supply:</b>	1 pair of Grips (without jaws)

**Pneumatic Grips model MDN-0,6/10-Ko (1 pneumatic piston)**



**Pneumatic Grips model MDN-0,6/10-2Ko (2 pneumatic pistons)**



**Pneumatic Grips model MDN-0,6/20- Ko (1 pneumatic piston)**



**Pneumatic Grips model MDN-0,6/20-2Ko (2 pneumatic pistons)**



**Pneumatic Grips model MDN-0,6/30- Ko (1 pneumatic piston)**



**Pneumatic Grips model MDN-0,6/30-2Ko (2 pneumatic pistons)**



**Pneumatic Grips model MDN-0,6/50- Ko (1 pneumatic piston)**



**Pneumatic Grips model MDN-0,6/50-2Ko (2 pneumatic pistons)**



**Jaws for MDM0,6-GA Grips (Ko and 2Ko): Supply 1 Set = 4 jaws**

Model	Finish Superficial	Clamping Surface H x W	Opening MDN-1.2/10	Opening MDN-1.2/20	Opening MDN-1.2/30	Opening MDN-1.2/50	Weight per pair
<b>MDM/1-2.5-B25x25</b>	Blank jaws	25 x 25 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.09 kg
<b>MDM/1-2.5- BG25x25</b>	Rubber jaws	25 x 25 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.12 kg
<b>MDM/1-2.5- BP25x25</b>	Pyramid jaws	25 x 25 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.08 kg
<b>MDM/1-2.5- 25.4x25.4</b>	Blank jaws	25.4 x 25.4 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.09 kg
<b>MDM/1-2.5- P25.4x25.4</b>	Pyramid jaws	25.4 x 25.4 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.08 kg
<b>MDM/1-2.5- G25x75</b>	Rubber jaws	25 x 75 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.29 kg
<b>MDM/1-2.5-B</b>	Blank jaws	30 x 30 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.13 kg
<b>MDM/1-2.5-BG</b>	Rubber jaws	30 x 30 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.13 kg
<b>MDM/1-2.5-BP</b>	Pyramid jaws	30 x 30 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.12 kg
<b>MDM/1-2.5-BV2</b>	V jaws	30 x 30 mm	∅ 2 – 9 mm	∅ 2 - 20 mm	2 - 30 mm ∅	∅ 2 – 52 mm	0.12 kg
<b>MDM/1-2.5-BV3</b>	V jaws	30 x 30 mm	∅ 3 – 9 mm	∅ 3 – 20 mm	3 - 30 mm ∅	∅ 3 – 52 mm	0.13 kg
<b>MDM/1-2.5-BW</b>	Wave jaws	30 x 30 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.12 kg
<b>MDM/1-2.5-BD</b>	Diamond jaws	30 x 30 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.13 kg
<b>MDM/1-2.5-BLC</b>	Contact Line jaws	30 x 30 mm	0 – 6 mm	0 – 16 mm	0 – 26 mm	0 – 48 mm	0.13 kg
<b>MDM/1-2.5-B50</b>	Blank jaws	30 x 50 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.22 kg
<b>MDM/1-2.5-BG50</b>	Rubber jaws	30 x 50 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.23 kg
<b>MDM/1-2.5-BP50</b>	Pyramid jaws	30 x 50 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.21 kg
<b>MDM/1-2.5-BW50</b>	Wave jaws	30 x 50 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.20 kg
<b>MDM/1-2.5-BD50</b>	Diamond jaws	30 x 50 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.22 kg
<b>MDM/1-2.5-B80</b>	Blank jaws	30 x 80 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.36 kg
<b>MDM/1-2.5-BG80</b>	Rubber jaws	30 x 80 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.37 kg
<b>MDM/1-2.5-BP80</b>	Pyramid jaws	30 x 80 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.35 kg
<b>MDM/1-2.5-BW80</b>	Wave jaws	30 x 80 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.32 kg
<b>MDM/1-2.5-BD80</b>	Diamond jaws	30 x 80 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.36 kg
<b>MDM/1-2.5-B100</b>	Blank jaws	30 x 100 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.45 kg
<b>MDM/1-2.5-BG100</b>	Rubber jaws	30 x 100 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.46 kg
<b>MDM/1-2.5-BP100</b>	Pyramid jaws	30 x 100 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.45 kg
<b>MDM/1-2.5-BP100- A4</b>	Pyramid jaws Stainless Steel	30 x 100 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.45 kg
<b>MDM/1-2.5-BW100</b>	Wave jaws	30 x 100 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.51 kg
<b>MDM/1-2.5-BD100</b>	Diamond jaws	0 x 100 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.45 kg
<b>MDM/1-2.5-B50</b>	Blank jaws	50 x 50 mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.23 kg
<b>MDM/1-2.5- B50.8x50.8</b>	Blank jaws	50.8 x 50.8mm	0 – 10 mm	0 - 20 mm	0 – 30 mm	0 – 52 mm	0.24 kg

Jaws with other dimensions and coated surfaces on request

**Blank jaws**

- Applicable for additional treatments
- Plain uncoated steel



**V2 jaws**

- For round specimens
- Tooth pitch 0.8 mm
- 58HRC hardened steel
- Nickel plated



**Rubber jaws**

- 1mm rubber layer (NBR)
- Nickel plated



**V3 jaws**

- For round specimens
- Tooth pitch 1 mm
- 58HRC hardened steel
- Nickel plated



**Pyramid jaws**

- 1.2 x 45° pyramids
- Hardened steel 58 HRC
- Nickel plated



**Wave jaws**

- For Flexible Materials
- 5mm wave
- 58HRC Hardened Steel
- Nickel plated



**Line Contact jaws**

- Radius 3 mm
- Nickel plated



**Diamond jaws**

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



**SPECIAL APPLICATIONS:**



**Pneumatic grips equipped with manual microswitch**



**Special Application Pneumatic Grips with Large Wavy Jaws**



**Insert Jaws for MDM / 1-2.5:** Scope of supply 1 Set = 4 jaws

For quick change of jaws, the **insert jaws** require the magazine (MDM / 1-2,5-GT) and with this the indicated openings are reduced by 6 mm

**Chargers for the insertable jaws:**

Model		Weight per pair
<b>MDM/1-2.5-GT30</b>	<b>Carrier for insert jaws 30x30 mm, 30x50 mm</b>	0.09 kg
<b>MDM/1-2.5-GT50</b>	<b>Carrier for insert jaws 30x30 mm, 30x100 mm</b>	0.18 kg

**Carrier for Insert Jaws MDM/1-2,5-GT30+  
MDM/1,2,5-EB Blank Insert Jaw**



**Insert jaws:**

Model	A surface finish of insertable jaws	Clamping surface H x W	Opening 10 mm reduced:	Opening 20 mm reduced:	Opening 30 mm reduced:	Opening 50 mm reduced:	Weight per pair
<b>MDM/1-2.5-EB</b>	Blank insert jaws	30 x 30 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.05 kg
<b>MDM/1-2.5-EBC</b>	Rubber insert jaws	30 x 30 mm	0 – 6 mm	0 - 16 mm	0 – 26 mm	0 – 48 mm	0.06 kg
<b>MDM/1-2.5-EBP</b>	Pyramid insert jaws	30 x 30 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.05 kg
<b>MDM/1-2.5-EBW</b>	Wave insert jaws	30 x 30 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.05 kg
<b>MDM/1-2.5-EBD</b>	Diamond insert jaws	30 x 30 mm	0 – 8 mm	0 - 18 mm	0 – 28 mm	0 – 50 mm	0.06 kg
<b>MDM/1-2.5-EB50</b>	Blank insert jaws	30 x 50 mm	0 – 4 mm	0 – 14 mm	0 – 24 mm	0 – 46 mm	0.14 kg
<b>MDM/1-2.5-EBC50</b>	Rubber insert jaws	30 x 50 mm	0 – 2 mm	0 – 12 mm	0 – 22 mm	0 – 44 mm	0.14 kg
<b>MDM/1-2.5-EBP50</b>	Pyramid insert jaws	30 x 50 mm	0 – 4 mm	0 – 14 mm	0 – 24 mm	0 – 46 mm	0.13 kg
<b>MDM/1-2.5-EBV3</b>	V insert jaws	30 x 50 mm	Ø 3 – 4 mm	Ø 3 – 14 mm	Ø 3 – 24 mm	Ø 3 – 46 mm	0.13 kg
<b>MDM/1-2.5-EBW50</b>	Wave insert jaws	30 x 50 mm	0 – 4 mm	0 – 14 mm	0 – 24 mm	0 – 46 mm	0.12 kg
<b>MDM/1-2.5-EBD50</b>	Diamond insert jaws	30 x 50 mm	0 – 4 mm	0 – 14 mm	0 – 24 mm	0 – 46 mm	0.14 kg
<b>MDM/1-2.5-EB100</b>	Blank insert jaws	30 x 100 mm	-	0 – 6 mm	0 – 16 mm	0 – 38 mm	0.37 kg
<b>MDM/1-2.5-EBC100</b>	Rubber insert jaws	30 x 100 mm	-	0 – 4 mm	0 – 14 mm	0 – 36 mm	0.38 kg
<b>MDM/1-2.5-EBP100</b>	Pyramid insert jaws	30 x 100 mm	-	0 – 6 mm	0 – 16 mm	0 – 38 mm	0.34 kg
<b>MDM/1-2.5-EBW100</b>	Wave insert jaws	30 x 100 mm	-	0 – 6 mm	0 – 16 mm	0 – 38 mm	0.34 kg
<b>MDM/1-2.5-EBD100</b>	Diamond insert jaws	30 x 100 mm	-	0 – 6 mm	0 – 16 mm	0 – 38 mm	0.37 kg

## **Pneumatic Grips model MSN/1,2 (1,2 kN) Symmetrical**

**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**

• <b>Load capacity:</b>	<b>1.2 kN</b> at 7 Bar ( <b>2.4 kN</b> at 16 Bar pressure with UN216 compressor)
• <b>Clamping force:</b>	<b>2.2 kN</b> at 7 Bar ( <b>5 kN</b> at 16 Bar pressure with UN216 compressor)
• <b>Pneumatical connection:</b>	1/8 " internal thread
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15,9 mm 5/8" (Other couplings on request)
• <b>Weight each grip:</b>	1,21 Kg (without jaws)
• <b>Scope of delivery:</b>	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
<b>MSN/1.2- B</b>	Blank jaws	30x50 mm	0-6 mm	4-11 mm	0.22 kg
<b>MSN/1.2- BG</b>	Rubber jaws	30x50 mm	0-4 mm	2-9 mm	0.22 kg
<b>MSN/1.2- BP</b>	Pyramid jaws	30x50 mm	0-6 mm	4-11 mm	0.22 kg
<b>MSN/1.2- BV</b>	V jaws	Clamping height 30 mm	4-6 mm Ø	7-11 mm Ø	0.18 kg
<b>MSN/1.2- BW</b>	Wave jaws	30x50 mm	0-6 mm	4-11 mm	0.20 kg
<b>MSN/1.2- BD</b>	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
<b>MSN/1.2-GT</b>	<b>Insert Jaw Carrier</b>				0.12 kG
<b>MSN/1.2-EBB</b>	Blank insert jaws	30x50 mm	0-4 mm	4-9 mm	0.14 kg
<b>MSN/1.2-EBG</b>	Rubber insert jaws	30x50 mm	0-2 mm	2-7 mm	0.14 kg
<b>MSN/1.2-EBP</b>	Pyramid insert jaws	30x50 mm	0-5 mm	4-9 mm	0.13 kg
<b>MSN/1.2-EBV4</b>	V insert jaws	Clamping height 30 mm	3-4 mm Ø	4-9 mm Ø	0.13 kg
<b>MSN/1.2-EBW</b>	Wave insert jaws	30x50 mm	0-4 mm	4-9 mm	0.12 kg
<b>MSN/1.2-EBD</b>	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 Grips MDN/1,3 series (1,3 kN)**

Pneumatic tightening grips, easy to use and applicable to perform **tensile tests** on samples of very light sheet materials such as foils, textiles, paper..., being incorporated into a Universal Testing Machine

### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of sheet materials with medium tensile strength up to **1.3 kN** at an air pressure of 7 Bar, and which can achieve **2.6 kN** at a pressure higher than 16 bar using compressor UN216.

### **GRIPS MDN / 1,3-Ko (1 pneumatic piston)**

### **GRIPS MDN / 1,3-2Ko (2 pneumatic pistons)**

- Opening: **0 -14mm**  
(Depending on the jaw type it varies, with rubber -2 mm)



### **GRIPS MDN / 1,3-H200-Ko (1 pneumatic piston)**

### **GRIPS MDN / 1,3-H200-2Ko (2 pneumatic pistons)**

- Opening: **0 -42mm**  
(Depending on the jaw type it varies, with rubber -2 mm)
- With 200 mm high extension



**Común a los 4 modelos de Mordazas:**

### **COMMON CHARACTERISTICS TO THE 4 MODELS OF GRIPS**

• <b>Load capacity:</b>	<b>1,3 kN</b>
• <b>Clamping force:</b>	<b>2,6 kN</b> at an air pressure of 7 Bar
• <b>Pneumatical connection:</b>	Internal thread 1/8 "
• <b>Pneumatic cylinder :</b>	70mm Ø
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15,9 mm or 20 mm (Other couplings on request)
• <b>Scope of delivery</b>	1 pair of Grips (without jaws), must be ordered separately

Jaws available for all 4 models of MDN / 1.3 series grips

Model	Surface finish	Clamping surface Alto x Ancho	Opening jaws MDN/1.3	Opening jaws MDN/1.3-200	Weight per pair
<b>MDM/5-B</b>	Blank jaws	30x50 mm	0-14 mm	0-42 mm	0.13 kg
<b>MDM/5-BG</b>	Rubber jaws	30x50 mm	0-12 mm	0-40 mm	0.13 kg
<b>MDM/5-BP</b>	MPyramid jaws	30x50 mm	0-14 mm	0-42 mm	0.12 kg
<b>MDM/5-BV2</b>	V jaws	30x50 mm	2-14 mm Ø	2-42 mm Ø	0.13 kg
<b>MDM/5-BV5</b>	V jaws	30x50 mm	5-14 mm Ø	5-42 mm Ø	0.13 kg
<b>MDM/5-BW</b>	Wave jaws	30x50 mm	0-14 mm	0-42 mm	0.12 kg
<b>MDM/5-BD</b>	Diamond jaws	30x50 mm	0-14 mm	0-42 mm	0.13 kg

\* 2 rods required: for 0-20mm opening and 22-42mm opening

\* Jaws with other dimensions and surface coatings on request



**B Blank**  
**Blank jaws**

- Applicable for additional treatments
- Plain uncoated steel



**BP serrated (pyramids)**  
**Pyramid jaws**

- 1.2 x 45 ° pyramids
- Hardened steel 58 HRC
- Nickel plated



**BV f/ round samples**  
**V jaws**

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



**BW Wave jaws**  
**Wave jaws**

- For Flexible Materials
- 5mm wave
- 58HRC Hardened Steel
- Nickel plated



**MDM/5-BV2**

\* BV5 jaws are well suited for samples with larger diameters



**MDM/5-BV5**



**Diamond jaws**

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



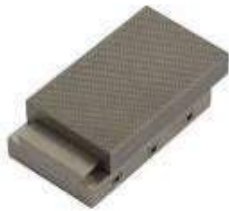
**Rubber jaws**

- 1mm rubber layer (NBR)
- Nickel plated

**Insertion jaws for MDN / 1.3-Ko and MDN / 1.3 + 2Ko grips:** Scope of supply 1 set = 4 Quick insert jaws. Quick insert jaws require MDN / 5-GT magazine

Model	Surface finish	Clamping surface Alto x Ancho	Clamping surface MDN/1.3	Opening jaws MDN/1.3-200	Weight per pair
<b>MDM/5-GT</b>	<b>Insert Jaw Carrier</b>				0,09 Kg
<b>MDM/5-EB</b>	Blank Insert jaws	30x50 mm	0-4 mm	0-32 mm	0,05 kg
<b>MDM/5-EBG</b>	Rubber Insert jaws	30x50 mm	0-2 mm	0-30 mm	0,06 kg
<b>MDM/5-EBP</b>	Pyramid Insert jaws	30x50 mm	0-4 mm	0-32 mm	0,05 kg
<b>MDM/5-EBW</b>	Wave Insert jaws	30x50 mm	0-4 mm	0-32 mm	0,05 kg
<b>MDM/5-EBD</b>	Diamond Insert jaws	30x50 mm	0-4 mm	0-32 mm	0,06 kg

\* Jaws with other dimensions and surface coatings on request



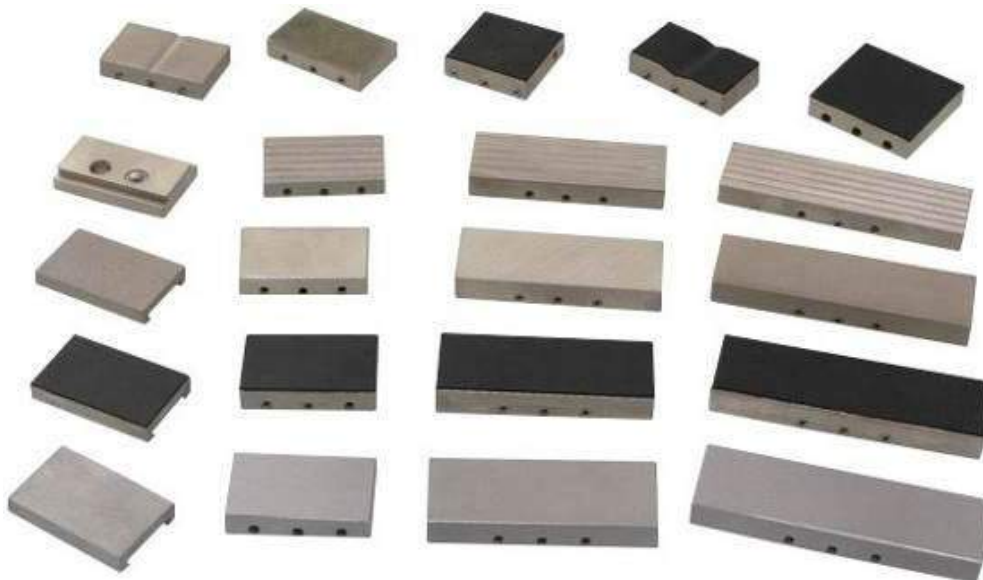
**MDM/1.3-GT  
+ MDM/5-EBP**  
Carrier GT Pyramid jaws



**MDM/1.3-EB**  
Blank jaws



**Carrier GT+ EBP + EBG + EB**



## **Pneumatic Grips MDN/1,3-GA series (1,3 kN) Large Opening**

Light-weight grips, with pneumatic tightening, easy to use and applicable to perform **tensile tests** on samples of light materials in sheets of **great thickness** and incorporated into a Universal



### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of sheet materials with low resistance to breakage up to **1.3 kN** (at 7 Bar) and **2.6 kN** (at 15 Bar with the UN216 compressor), on samples of a lot of thickness.

### **GRIPS MDN/1.3-GA-Ko (1 pneumatic piston)**

- Opening: **0-18mm** (Depending on the jaw type, it varies with rubber -2 mm)
- Weight each grip (without jaws): 1.55 kg (Ko 1 Piston version)

### **GRIPS MDN/1.3-GA-2Ko (2 pneumatic pistons)**

- Opening: **0-19mm** (Depending on the jaw type, it varies with rubber -2 mm)
- Weight of each grip (without jaws): 1.93 kg (2Ko 2 Pistons version)

### **Common to the 2 models of Grips:**

<b>COMMON CHARACTERISTICS TO THE 2 MODELS OF GRIPS</b>	
• <b>Load capacity:</b>	<b>1.3 kN</b> at 7 Bar ( <b>2.6 kN</b> at 16 Bar with UN216 compressor 2.6 kN )
• <b>Clamping force:</b>	<b>2.6 kN</b> at 7 Bar (pressure max. 16 Bar with UN216 Compressor)
• <b>Pneumatical connection:</b>	1/8 "internal thread
• <b>Pneumatic cylinder :</b>	70 mm Ø
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Estándar coupling:</b>	15.9 mm or 20 mm ( other couplings on request )
• <b>Scope of supply:</b>	1 pair of Grips (without jaws), must be ordered separately



Model	Surface	Clamping surface H x W	Jaw opening with rod L 56.5 mm	Jaw opening with rod L 51.5 mm	Weight per pair
<b>MDM/5-B</b>	Blank jaws	30x50 mm	0-18 mm	10-28 mm	0.22 kg
<b>MDM/5-BG</b>	Rubber jaws	30x50 mm	0-16 mm	8-26 mm	0.22 kg
<b>MDM/5-BP</b>	Pyramid jaws	30x50 mm	0-18 mm	10-28 mm	0.21 kg
<b>MDM/5-BV2</b>	V jaws	30x50 mm	2-18 mm Ø	12-28 mm Ø	0.22 kg
<b>MDM/5-BV5</b>	V jaws	30x50 mm	5-18 mm Ø	15-28 mm Ø	0.25 kg
<b>MDM/5-BW</b>	Wave jaws	30x50 mm	0-18 mm	10-28 mm	0.20 kg
<b>MDM/5-BD</b>	Diamond jaws	30x50 mm	0-18 mm	10-28 mm	0.22 kg
<b>MDM/5-B80</b>	Blank jaws	30x80 mm	0-18 mm	10-28 mm	0.36 kg
<b>MDM/5-BG80</b>	Rubber jaws	30x80 mm	0-16 mm	8-26 mm	0.37 kg
<b>MDM/5-BP80</b>	Pyramid jaws	30x80 mm	0-18 mm	10-28 mm	0.34 kg
<b>MDM/5-BW80</b>	Wave jaws	30x80 mm	0-18 mm	10-28 mm	0.33 kg
<b>MDM/5-BD80</b>	Diamond jaws	30x80 mm	0-18 mm	10-28 mm	0.37 kg
<b>MDM/5-B100</b>	Blank jaws	30x100 mm	0-20 mm	10-28 mm	0.46 kg
<b>MDM/5-BG100</b>	Rubber jaws	30x100 mm	0-18 mm	8-26 mm	0.47 kg
<b>MDM/5-BP100</b>	Pyramid jaws	30x100 mm	0-20 mm	10-28 mm	0.44 kg
<b>MDM/5-BW1</b>	Wave jaws	30x100 mm	0-20 mm	10-28 mm	0.42 kg
<b>MDM/5-BD100</b>	Diamond jaws	30x100 mm	0-20 mm	10-28 mm	0.46 kg

\* NOTE: The L51.5 pneumatic rod is not included in the scope of supply and must be ordered separately. Article number: MDN / 2.6-GA-Ko-09-L51.5.



**B Blank  
Blank jaws**

- Uncoated smooth polished steel



**BP serrated (pyramids)  
Pyramid jaws**

- 1.2 x 45 ° pyramids
- Hardened steel 58 HRC
- Nickel plated



**BV f/round samples  
V jaws**

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



**BW Wave jaws  
Wave jaws**

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



**MDM/5-BV2**

- \* BV5 grips are well suited for samples with larger diameters



**MDM/5-BV5**



**Diamond jaws**

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

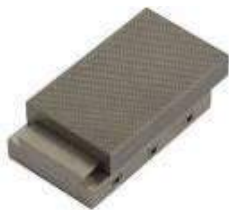


**Rubber jaws**

- 1mm rubber layer (NBR)
- Nickel plated

**Insert jaws for MDN / 1.3-GA + Ko and MDN / 1.3-GA + 2Ko grips:** Scope of supply 1 set = 4  
Quick insert jaws. Quick insert jaws require MDM / 5-GT carrier

Model	Surface finish	Clamping surface Hx W	Opening	Weight per pair
<b>MDM/5-GT</b>	<b>Insert Jaws Carrier</b>		-	0.18 kg
<b>MDM/5-EB</b>	Blank insert jaws	30 x 50 mm	0 – 14 mm	0.14 kg
<b>MDM/5-EBG</b>	Rubber insert jaws	30 x 50 mm	0 – 12 mm	0.14 kg
<b>MDM/5-EBP</b>	Pyramid insert jaws	30 x 50 mm	0 – 14 mm	0.13 kg
<b>MDM/5-EBV</b>	V insert jaws	Alto 30 mm	∅ 3 – 14 mm	0.13 kg
<b>MDM/5-EBW</b>	Wave insert jaws	30 x 50 mm	0 – 14 mm	0.12 kg
<b>MDM/5-EBD</b>	Diamond insert jaws	30 x 50 mm	0 – 14 mm	0.14 kg
<b>MDM/5-EB100</b>	Blank insert jaws	30 x 100 mm	0 – 10 mm	0.37 kg
<b>MDM/5-EBG100</b>	Rubber insert jaws	30 x 100 mm	0 – 8 mm	0.38 kg
<b>MDM/5-EBP100</b>	Pyramid insert jaws	30 x 100 mm	0 – 10 mm	0.35 kg
<b>MDM/5-EBW100</b>	Wave insert jaws	30 x 100 mm	0 – 10 mm	0.34 kg
<b>MDM/5-EBD100</b>	Diamond insert jaws	30 x 100 mm	0 – 10 mm	0.38 kg



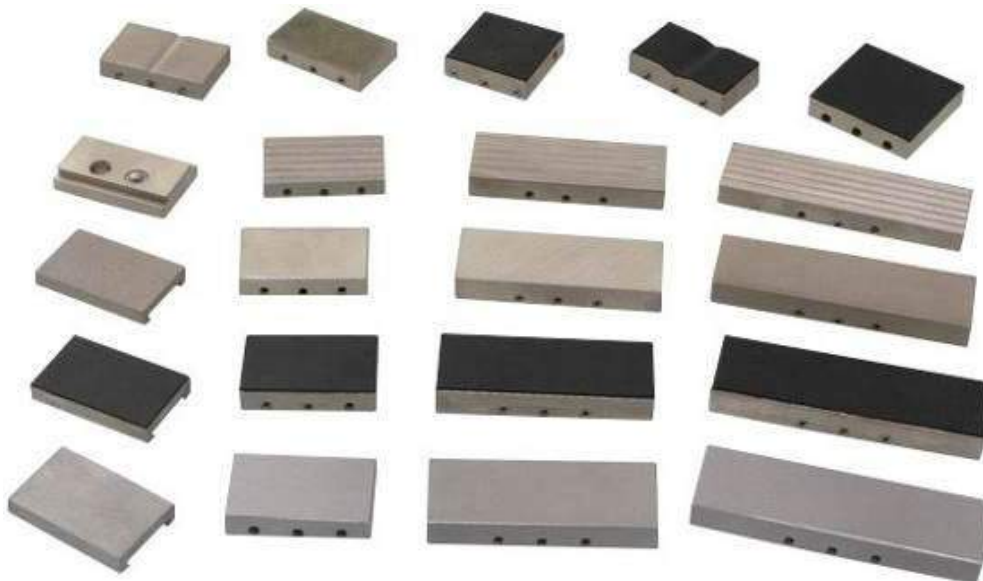
**MDM/5-GT**  
**+ MDM/5-EBP**  
Carrier GT + Pyramid insert jaws



**MDM/5-EB**  
Blank insert jaws



**Carrier GT+ EBP + EBG + EB**



Jaws with other dimensions and coated surfaces on request

## Pneumatic Grips model MDN/1,7-GA (1,7 kN) Large Opening

Light-weight grips, with pneumatic tightening, easy to use and applicable to perform **tensile tests** on samples of light materials in sheets of **great thickness** and incorporated into a Universal



### GENERAL INFORMATION

Easy-to-use pneumatic grips, designed for tensile testing of sheet materials with low resistance to breakage up to **1.7 kN** (at 7 Bar) and **3.5 kN** (at 10 Bar with the UN216 compressor), on samples of a lot of thickness.

Universal type grips for tensile testing of materials such as paper, plastics, rubber, fabrics, wood ...

### TECHNICAL CHARACTERISTICS

- **Load capacity:** **1,7 kN at 7 Bar (3,5 kN** at 10 Bar using compressor UN216)
- **Clamping force:** **3,5 kN** at 7 Bar ( 5kN at 10 Bar pressure))
- **Pneumatical connection:** 1/8 "internal thread
- **Opening:** up to 30mm (- 2mm with rubber sheet coated jaws)
- **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 or 20 mm (Other couplings on request)
- **Weight each grip:** 1,3 Kg (without jaws)
- **Scope of delivery:** 1 pair of Grips (without jaws)

### Jaws available for model MDN / 1.7-GA grip

Model	Surface finish	Clamping surface Height x width	Jaw Opening	Weight per pair
<b>MDN/1.7-GA-B</b>	Blank jaws	50x50 mm	0-30 mm	0.38 kg
<b>MDN/1.7-GA-BG</b>	Rubber jaws	50x50 mm	0-28 mm	0.38 kg
<b>MDN/1.7-GA-BV4</b>	V jaws	Altura sujeción 50 mm	4-26 mm Ø	0.45 kg
<b>MDN/1.7-GA-BP</b>	Pyramid jaws	50x50 mm	0-30 mm	0.36 kg
<b>MDN/1.7-GA-BW</b>	Wave jaws	50x50 mm	0-30 mm	0.34 kg
<b>MDN/1.7-GA-BD</b>	Diamond jaws	50x50 mm	0-30 mm	0.38 kg
<b>MDN/1.7-GA-B80</b>	Blank jaws	50x100 mm	0-30 mm	0.76 kg
<b>MDN/1.7-GA-BG80</b>	Rubber jaws	50x100 mm	0-28 mm	0.78 kg
<b>MDN/1.7-GA-BP80</b>	Pyramid jaws	50x100 mm	0-30 mm	0.72 kg
<b>MDN/1.7-GA-BW80</b>	Wave jaws	50x100 mm	0-30 mm	0.69 kg
<b>MDN/1.7-GA-BD80</b>	Diamond jaws	50x100 mm	0-30 mm	0.76 kg

Jaws with other dimensions and coated surfaces on request

**Insertion jaws for MDN / 3,5-GA grips:** Scope of supply 1 set = 4 Quick insert jaws. Quick insert jaws require MDN / 1.7-GA-GT carrier

Model	Surface finish	Clamping surface H x W	Opening	Weight per pair
<b>MDN/1.7-GA-GT</b>	<b>Insert Jaw Carrier</b>		-	0.32 kg
<b>MDN/1.7-GA-EB</b>	Blank insert jaws	50 x 50 mm	0 – 16 mm	0.32 kg
<b>MDN/1.7-GA-EBG</b>	Rubber insert jaws	50 x 50 mm	0 – 14 mm	0.33 kg
<b>MDN/1.7-GA-EBP</b>	Pyramid insert jaws	50 x 50 mm	0 – 16 mm	0.29 kg
<b>MDN/1.7-GA-EBD</b>	Diamond insert jaws	50 x 50 mm	0 – 16 mm	0.30 kg



**B Blank  
Blank jaws**  
- Applicable for additional treatments  
- Plain uncoated steel



**BP (pyramid)  
Pyramid jaws**  
- 1.2 x 45° pyramids  
- Hardened steel 58 HRC  
- Nickel plated  
-



**BV4 f/round samples  
V jaws**  
- For all types of round specimens  
- Tooth pitch 1.2 mm  
- 58HRC hardened steel  
- Nickel plated



**BW Wave jaws**  
- For Flexible Materials  
- 5mm wave  
- 58HRC Hardened Steel  
- Nickel plated



**Carrier MDN/1.7-GA-GT + MDN/1,7-GA-EBP  
+ Pyramid insert jaws**



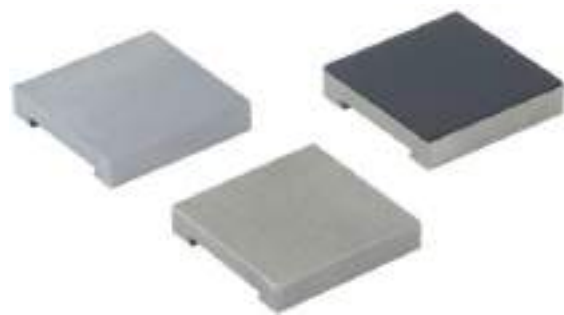
**Diamond jaws**  
- Clamping area covered with synthetic diamond  
D91 (170/200 mesh)  
- Nickel plated



**Mandíbulas con Caucho**  
- 1mm rubber layer (NBR)  
- Nickel plated



**Grips MDN/1.7-GA-BW100**  
- For Flexible Materials  
- 5mm wave  
- 58HRC Hardened Steel  
- Nickel plated



**Insert jaws:**  
- EB Blank  
- EBG Rubber coated  
- EBP Pyramids (serrated)

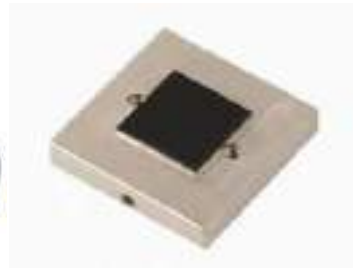
**Grip MDN/1.7-GA with insert jaws EBC  
rubber coated**  
- 1mm rubber layer (NBR)  
- Nickel plated



**Customized solutions:**



**MDN/1.7-GA-S90**  
Opening up to 90 mm, asymmetrical



**MDN/1.7-GA-BG25x25**



**MDN/1.7-GA-BP0.8x45**  
(small pyramids)

## **Pneumatic Grips model MDN/3.5 (3.5 kN)**

Pneumatic clamping grips, **single actuator** and with one side manually adjustable to align samples displaced in shear or asymmetrically, easy to use and applicable to perform **tensile tests** on samples of light sheet materials such as Rubber, Plastic Film, Plastic Dumbbell type, Papers, Cardboards, Metallic Foils, Aluminum Foils, Fabrics, Fabrics, 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 medium breaking strength up to **3.5 kN** with an air pressure of 7 Bar and can be expandable to **7 kN** with a pressure of 16 Bar using the UN216 compressor.

Universal type grips with **simple pneumatic actuator** with one side manually adjustable by means of a butterfly head screw. These grips are suitable to be able to align displaced samples in shear tests or in asymmetric shapes.

Ideal for all kinds of samples of flat materials, Rubber, Dumbbell-type Plastic, Metallic Foils, Aluminum Foils, Fabrics, Fabrics, Textiles, Composites ... All pneumatic grips can be operated with a pedal or manual control integrated by manual micro-switch.

### **TECHNICAL CHARACTERISTICS**

• <b>Load capacity:</b>	<b>3.5 kN</b> at an air pressure of 7 Bar and <b>7 kN</b> at 16 Bar with UN216 comp
• <b>Clamping force:</b>	<b>7 kN</b> at 7 Bar ( <b>14 kN</b> at 16 Bar using UN216 compressor)
• <b>Pneumatical connection:</b>	1/8 " internal thread
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15,9 mm 5/8" (Other couplings on request)
• <b>Weight each grip:</b>	5,18 Kg (without jaws)
• <b>Scope of delivery:</b>	1 pair of Grips (without jaws)

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Temperature range	Weight per pair
<b>MDN/3.5--B</b>	Blank jaws	40x60 mm	0-10 mm	+20°C a +180°C	0.35 kg
<b>MDN/3.5- BG</b>	Rubber jaws	40x60 mm	0-8 mm	-70°C a +70°C	0.36 kg
<b>MDN/3.5- BP</b>	Pyramid jaws	40x60 mm	0-10 mm	-70°C a +180°C	0.33 kg
<b>MDN/3.5- BV4</b>	V jaws	Clamping height 40 mm	4-10 mm Ø	-70°C a +180°C	0.35 kg
<b>MDN/3.5- BV5</b>	V jaws	Clamping height 40 mm	6-10 mm Ø	-70°C a +180°C	0.34 kg
<b>MDN/3.5- BW</b>	Wave jaws	40x60 mm	0-10 mm	-70°C a +180°C	0.40 kg
<b>MDN/3.5- BD</b>	Mand.Diamantadas	40x60 mm	0-10 mm	-70°C a +180°C	0.35 kg
<b>MDN/3.5- B100</b>	Blank jaws	40x100 mm	0-10 mm	+20°C a +180°C	0.72 kg
<b>MDN/3.5- BG100</b>	Rubber jaws	40x100 mm	0-3 mm	-70°C a +70°C	0.74 kg
<b>MDN/3.5- BP100</b>	Pyramid jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.69 kg
<b>MDN/3.5-BW100</b>	Wave jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.66 kg
<b>MDN/3.5-BD100</b>	Diamond jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.72 kg
<b>MDN/3.5-BP200</b>	Pyramid jaws	60x200 mm	0-10 mm	-70°C a +180°C	3.00 kg
<b>MDN/3.5-BG200</b>	Rubber jaws	60x200 mm	0-5 mm**	-70°C a +70°C	3.06 kg
<b>MDN/3.5-BW200</b>	Wave jaws	60x200 mm	0-10 mm	-70°C a +180°C	3.00 kg

Jaws with other dimensions and coated surfaces on request

\* Pneumatic rods for openings from 10 to 20 mm and 20 to 30 mm are included in the scope of supply of the grips.

\*\* With rod for openings of 10 - 20 mm

**Insertion jaws for MDN/3.5 grips:** Scope of supply 1 set = 4 Quick insert jaws.

**Quick insert jaws require MDN/3.5-GT carrier**

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Temperature range	Weight per pair
<b>MDN/3.5-GT</b>	<b>Insert Jaw Carrier</b>			-70°C a +180°C	0.33 kG
<b>MDN/3.5-EBB</b>	Blank insert jaws	50x60 mm	0-9 mm	+20°C a +180°C	0.29 kg
<b>MDN/3.5-EBG</b>	Rubber insert jaws	50x60 mm	0-7 mm	-70°C a +70°C	0.30 kg
<b>MDN/3.5-EBP</b>	Pyramid insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.28 kg
<b>MDN/3.5-EBV4</b>	V insert jaws	Clamping height 50 mm	4-9 mm Ø	-70°C a +180°C	0.29 kg
<b>MDN/3.5-EBW</b>	Wave insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.26 kg
<b>MDN/3.5-EBD</b>	Diamond insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.29 kg
<b>MDN/3.5-GT100</b>	<b>Insert Jaw Carrier</b>				0.69 kG
<b>MDN/3.5-EB100</b>	Blank insert jaws	50x100 mm	0-9 mm	+20°C a +180°C	0.63 kg
<b>MDN/3.5-EBG100</b>	Rubber insert jaws	50x100 mm	0-3 mm	-70°C a +70°C	0.65 kg
<b>MDN/3.5-EBP100</b>	Pyramid insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.60 kg
<b>MDN/3.5-EBW100</b>	Wave insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.57 kg
<b>MDN/3.5-EBD100</b>	Diamond insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.63 kg

Jaws with other dimensions and coated surfaces on request

**MDN/3.5-GT+MDN/3,5-EBG**  
Carrier Interchangeable jaws  
+ Rubber insert 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

## **Pneumatic Grips model MDN/5.5 (5.5 kN)**

Pneumatic clamping grips, easy to use and applicable to perform tensile tests on samples of sheet materials incorporated into a Universal Testing Machine.



### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of medium-strength sheet materials up to **5.5 kN** at an air pressure of 7 Bar and being able to reach **11 kN** at 16 Bar using the UN216 air compressor.

MODEL	MDN/5,5 (1 piston)
• <b>Load capacity:</b>	<b>5,5 kN</b> (at 7 Bar)
• <b>Clamping force:</b>	<b>11 kN</b> (at 7 Bar)
• <b>Clamping surface:</b>	60 x 100 mm
• <b>Opening:</b>	0-30 mm
• <b>Standard coupling:</b>	15,9 mm or 20 mm
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Hardened steel 58 HRC
• <b>Temperature range:</b>	0... +70 ° C Other ranges on request
• <b>Weinght per grip:</b>	3,6 Kg (without jaws)
• <b>Scope of delivery:</b>	1 par (without jaws) they must be ordered separately



**Jaws for grips MDM/5,5:** Scope of supply: 1 SET = 4 JAWS

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Weight per pair
<b>MDM/5.5 -BP</b>	Pyramid jaws	60 x 100 mm	0 – 30 mm	2 Kg
<b>Wave jaws</b>	Mandíbulas Onduladas	60 x 100 mm	0 – 30 mm	2 Kg

\* Grips with more openings and other dimensions and surfaces possible on request.





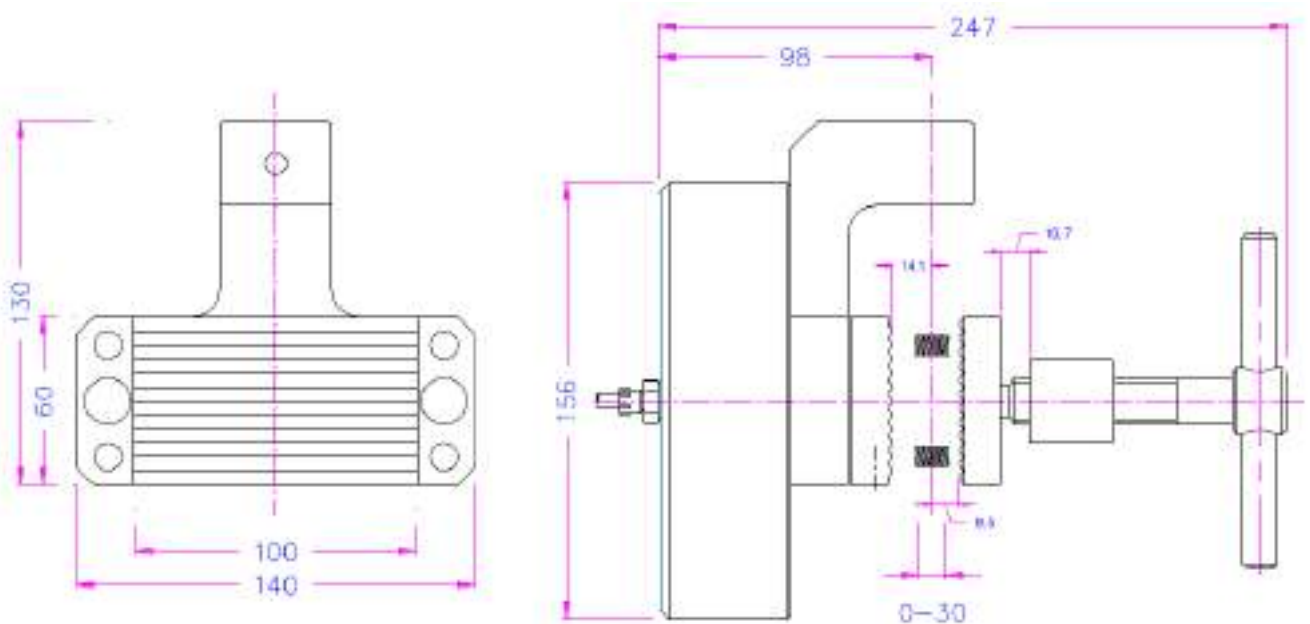
**BP Serrated (piramids)**

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



**BW Wave jaws**

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



**Pneumatic Grips model MDN/8-Ko (8 kN) (1 Piston)**  
**Pneumatic Grips model MDN/8-2Ko (8 kN) (2 Pistons)**

Pneumatic clamping grips, with **1 or 2 pneumatic rods**, easy to use and applicable to perform **tensile tests** on samples of sheet materials such as Rubber, Dumbnell-type Plastic, Metal Sheets, Aluminum Sheets, Fabrics, 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 medium resistance to breakage up to **8 kN** at an air pressure of 7 Bar, being able to reach **16 kN** at 16 Bar using the UN216 compressor.

Universal type grips with:

1/ **Simple pneumatic actuator** with one side manually adjustable by a thumb screw. These jaws are suitable to be able to align displaced samples in shear tests or samples asymmetrically.

2/ **Double pneumatic actuator** with automatic centering of the samples to be tested.

Ideal for all kinds of samples of flat materials, Rubber, Plastic Dumbbells, Metallic Foils, Aluminum Foils, Fabrics, Textiles, Composites ...

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

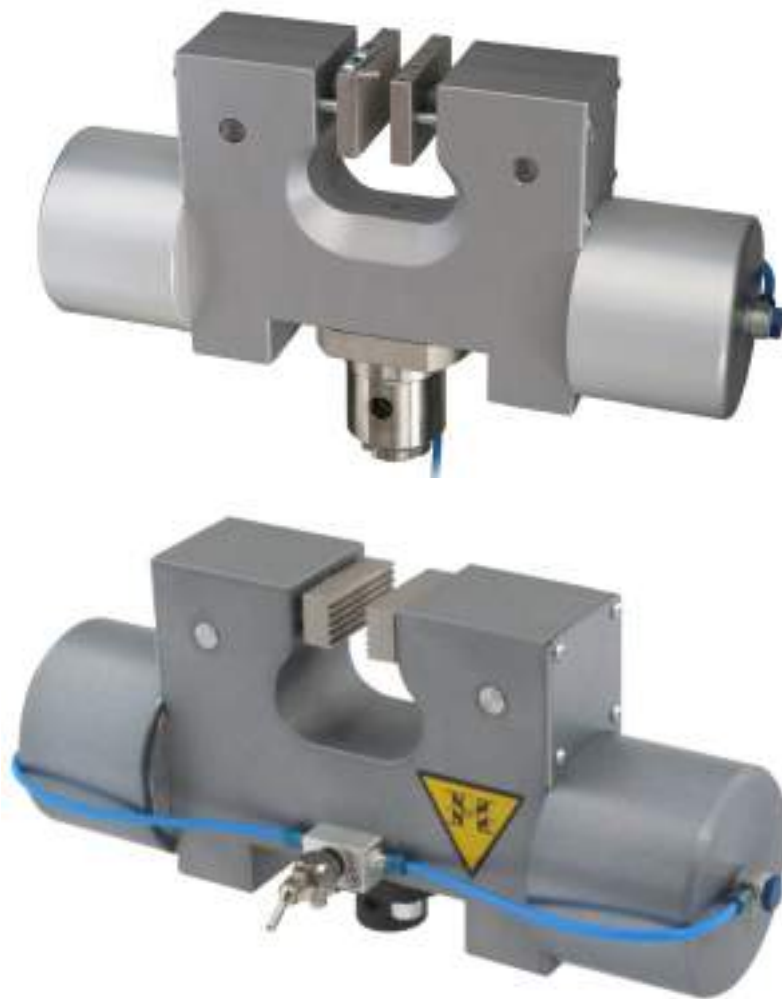
**TECHNICAL CHARACTERISTICS Model MDN / 8-Ko (1 Pneumatic piston)**

• <b>Load capacity:</b>	<b>8 kN</b> (at 7 Bar) and ( <b>32 kN</b> at 16 Bar using the UN216 compressor)
• <b>Clamping force:</b>	<b>16 kN</b> at 7 Bar ( <b>32 kN</b> at 16 Bar with UN216 unit)
• <b>Adjustable jaw openings</b>	0-10 mm, 10-20 mm, 20-30 mm
• <b>Pneumatical connection:</b>	1/8 " internal thread
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15,9 mm 5/8" (Other couplings on request)
• <b>Weight each grip:</b>	4,5 Kg (without jaws)
• <b>Scope of delivery:</b>	1 pair of Grips (without jaws)



**TECHNICAL CHARACTERISTICS MODEL MDN / 8-2Ko (2 pneumatic pistons)**

- **Load capacity:** **8 kN** (at 7 Bar) and (**32 kN** at 16 Bar using the UN216 compressor)
- **Clamping force:** **16 kN** at 7 Bar (**32 kN** at 16 Bar with UN216 unit)
- **Adjustable jaw openings** 0-10 mm, 10-20 mm, 20-30 mm
- **Pneumatical 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:** 5,18 Kg (without jaws)
- **Scope of delivery:** 1 pair of Grips (without jaws)



**MDN/8-2Ko with manual switch integrated in the grips themselves**

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Temperature range	Weight per pair
<b>MDN/8--B</b>	Blank jaws	40x60 mm	0-10 mm	+20°C a +180°C	0.35 kg
<b>MDN/8- BG</b>	Rubber jaws	40x60 mm	0-8 mm	-70°C a +70°C	0.6 kg
<b>MDN/8- BP</b>	Pyramid jaws	40x60 mm	0-10 mm	-70°C a +180°C	0.33 kg
<b>MDN/8- BV4</b>	V jaws	Clamping height 40 mm	4-10 mm Ø	-70°C a +180°C	0.35 kg
<b>MDN/8- BV6</b>	V jaws	Clamping height 40 mm	6-10 mm Ø	-70°C a +180°C	0.34 kg
<b>MDN/8- BW</b>	Wave jaws	40x60 mm	0-10 mm	-70°C a +180°C	0.40 kg
<b>MDN/8- BD</b>	Mand.Diamantadas	40x60 mm	0-10 mm	-70°C a +180°C	0.35 kg
<b>MDN/8- B100</b>	Blank jaws	40x100 mm	0-10 mm	+20°C a +180°C	0.72 kg
<b>MDN/8- BG100</b>	Rubber jaws	40x100 mm	0-3 mm	-70°C a +70°C	0.74 kg
<b>MDN/8- BP100</b>	Pyramid jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.69 kg
<b>MDN/8-BW100</b>	Wave jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.66 kg
<b>MDN/8-BD100</b>	Diamond jaws	40x100 mm	0-10 mm	-70°C a +180°C	0.72 kg
<b>MDN/8-BP200</b>	Pyramid jaws	60x200 mm	0-10 mm	-70°C a +180°C	3.00 kg
<b>MDN/8-BG200</b>	Rubber jaws	60x200 mm	0-5 mm**	-70°C a +70°C	3.06 kg
<b>MDN/8-BW200</b>	Wave jaws	60x200 mm	0-10 mm	-70°C a +180°C	3.00 kg

Jaws with other dimensions and coated surfaces on request

\* Pneumatic rods for openings from 10 to 20 mm and 20 to 30 mm are included in the scope of supply of the grips.

\*\* With rod for openings of 10 - 20 mm

**Insertion jaws for MDN/8 grips:** Scope of supply 1 set = 4 Quick insert jaws.

**Quick insert jaws require MDN/8-GT carrier**

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Temperature range	Weight per pair
<b>MDN/8-GT</b>	<b>Insert Jaw Carrier</b>			-70°C a +180°C	0.33 kg
<b>MDN/8-EBB</b>	Blank Insert jaws	50x60 mm	0-9 mm	+20°C a +180°C	0.29 kg
<b>MDN/8- EBG</b>	Rubber Insert jaws	50x60 mm	0-7 mm	-70°C a +70°C	0.30 kg
<b>MDN/8- EBP</b>	Pyramid Insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.28 kg
<b>MDN/8- EBV4</b>	V Insert jaws	Clamping height 50 mm	4-9 mm Ø	-70°C a +180°C	0.29 kg
<b>MDN/8- EBW</b>	Wave Insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.26 kg
<b>MDN/8- EBD</b>	Diamond Insert jaws	50x60 mm	0-9 mm	-70°C a +180°C	0.29 kg
<b>MDN/8-GT100</b>	<b>Insert Jaw Carrier</b>				0.69 kg
<b>MDN/8- EB100</b>	Blank Insert jaws	50x100 mm	0-9 mm	+20°C a +180°C	0.63 kg
<b>MDN/8- EBG100</b>	Rubber Insert jaws	50x100 mm	0-3 mm	-70°C a +70°C	0.65 kg
<b>MDN/8- EBP100</b>	Pyramid Insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.60 kg
<b>MDN/8-EBW100</b>	Wave Insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.57 kg
<b>MDN/8-EBD100</b>	Diamond Insert jaws	50x100 mm	0-9 mm	-70°C a +180°C	0.63 kg

Jaws with other dimensions and coated surfaces on request

**MDN/8-GT+MDN/8-EBG**  
Carrier Interchangeable jaws  
+ Rubber 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 specim  
- 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

## **Pneumatic Grips model MDN/20 (20 kN)**

Pneumatic clamping grips, with **1 Simple pneumatic actuator** with one side manually adjustable by means of a thumb screw. These grips are suitable to be able to align displaced samples in shear tests or asymmetric samples. easy to use and applicable to perform **tensile tests** on samples of sheet materials such as Rubber, Dumbbell-type Plastic, Metallic Sheets, Aluminum Sheets, Fabrics, Textiles, Composites ..., being incorporated into a Universal Testing Machine



### **GENERAL INFORMATION**

Easy-to-use pneumatic grips, designed for tensile testing of sheet / sheet materials of medium breaking strength up to **20 kN** at 7 Bar air pressure and **40 kN** can be reached at 16 Bar pressure using the unit compression UN216.

Universal type grips with **simple pneumatic actuator** with one side manually adjustable by means of a butterfly head screw. These grips are suitable to be able to align displaced samples in shear tests or in asymmetric samples.

Ideal for all kinds of samples of flat materials, Rubber, Plastic Dumbbells, Metallic Foils, Aluminum Foils, Fabrics, Textiles, Composites ...

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

### **CARÁCTERÍSTICAS TÉCNICAS**

• <b>Load capacity:</b>	<b>20 kN</b> at 7 Bar ( <b>40 kN</b> at a pressure of 15 Bar with UN216 compressor)
• <b>Clamping force:</b>	<b>30 kN</b> at 7 Bar (60 kN at 16 Bar with UN216 unit)
• <b>Pneumatic connection:</b>	1/8 " internal thread
• <b>Body:</b>	Anodized Aluminium
• <b>Jaws:</b>	Nickel plated steel
• <b>Temperature range:</b>	0... + 70 ° C (depending on jaw type) Other ranges on request
• <b>Standard coupling:</b>	15,9 mm 5/8" (Other couplings on request)
• <b>Weight each grip:</b>	10 Kg (without jaws)
• <b>Scope of delivery:</b>	1 pair of Grips (without jaws)

Model	Surface finish	Clamping surface Height x width	Opening Jaws	Temperature range	Weight per pair
<b>MDN/20--B</b>	Blank jaws	40x120 mm	0-12 mm	+20°C a +180°C	1.08 kg
<b>MDN/20- BG</b>	Rubber jaws	40x120 mm	0-10mm	-70°C a +70°C	1.09 kg
<b>MDN/20- BP</b>	Pyramid jaws	40x60 mm	0-12 mm	-70°C a +180°C	1.04 kg
<b>MDN/20- BV6</b>	V jaws	Clamping height 40 mm	6-17 mm Ø	-70°C a +180°C	0.83 kg
<b>MDN/20- BW</b>	Wave jaws	40x120 mm	0-12 mm	-70°C a +180°C	1.02 kg
<b>MDN/20- BD</b>	Diamond jaws	40x60 mm	0-12 mm	-70°C a +180°C	1.08 kg
<b>MDN/20-BW200</b>	Wave jaws	50x200 mm	0-8 mm	-70°C a +180°C	3.61 kg
<b>MDN/20-BW210</b>	Wave jaws	60x210 mm	0-8 mm	-70°C a +180°C	3.76 kg

Jaw opening can be modified to customer's requirements in 1 mm increments depending on jaw type.

Please indicate this in your order.

Jaws with other dimensions and surfaces are possible on request.



**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 specim
- 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

**Examples of other custom-made jaw designs:**



MDN/20-BP20x120

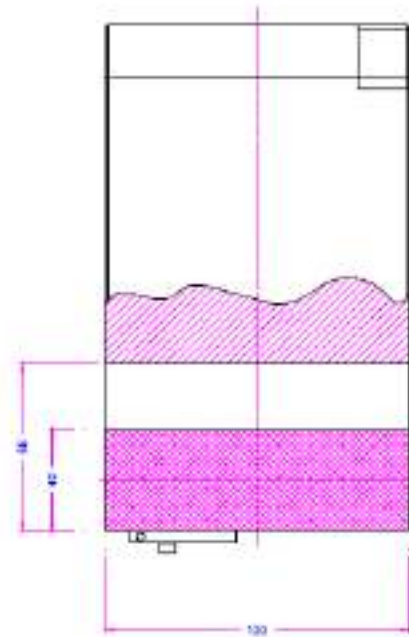
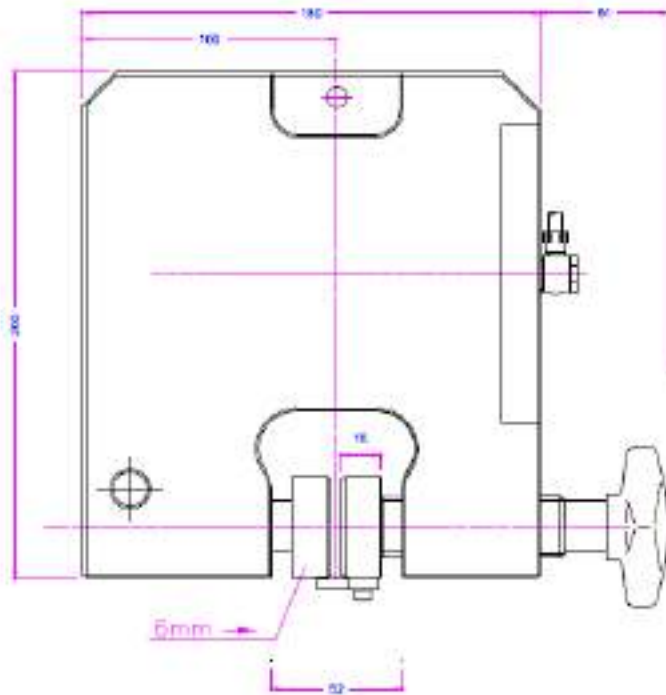


MDN/20-80x250-NK (Nadel-Backen)

MDN/20-GT +jaws MDN/20-EB and MDN/20-EBP



Carrier MDN/7 -GT



**MDN/20+BW200:** Wave Jaws 60 x 200 mm,  
testing a carpet / rug sample



**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

Recommended Testing Machines:



MTE-1 (to 1 kN)



MTE-5 (to 5 kN)



MTE-25 (to 25 kN)