

# MANUAL BOLLARD GRIPS FOR TENSILE TESTS





<u>Grips MB-M series (1-20 kN)</u> - <u>Grips model MB-M/2.5 (2.5 kN)</u> <u>Grips model MBZ-M/5 (5 kN)</u> - <u>Grips modelo MB-M/50 (50 kN)</u> <u>Grips model MB-M/100 (100 kN)</u> - <u>Grips model MB-M/150 (150 kN)</u>

Disc/Bollard Grips, easy to use and applicable to perform **tensile tests** on samples of materials that are difficult to clamp (**ropes, tapes, straps, textiles, synthetics**...)

**TECHLAB**SYSTEMS



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## **Bollard Grips Tensile Tests MB-M series** (1-20 kN)

Disc / Bollard type grips, easy to use and applicable to perform **tensile tests** on samples of difficult to clamp materials (**ropes, tapes, strips, textiles, synthetics ...**)

#### **GENERAL INFORMATION**

Bollard type jaws are suitable for tensile testing of a wide range of samples, such as fiber, yarn, filament, yarn, rope, and packaging strapping.

The grips are designed so that the specimen can be wrapped around the bollard and clamped at one end by means of a manual grip with knurled or rubber coated faces, this helps to reduce specimen breaks that occur in the jaw itself at another type of grips and also the load is distributed during the test around the bollard by introducing friction to the sample. Depending on the coefficient of friction, the samples to be tested should be made one or more turns around the guide roller.



MODELS	MB-M/1	MB-M/5	MB-M/20
Suitable for	Yarns, Filaments, Narrow, Ribbons, etc.	Cord, Fine Wires, Narrow, Ribbons	Ropes, Fine Wires, Narrow ribbons
Maximum load:	1 kN	5 kN	20 kN
Specimen diameters:	0-22 mm Ø	0-5 mm Ø	0-9 mm Ø
Minimum sample length:	240 mm	400 mm	800 mm
Capstan (Bollard) Ø:	20 mm Ø	40 mm Ø	93 mm Ø
Body grips:	Aluminum, anodized	Aluminum, anodized	Steel, nickel plated
Temperature range:	0 a +70 °C	0 a +180 °C	0 a +180 °C
Weight: (each grip without jaws)	0,22 Kg	0,76 Kg	2,72 Kg
Scope of supply:	1 pair without jaws	1 pair without jaws	1 par without jaws

MODEL	MB-M/1 -D100
Suitable for	Yarns, Filaments, Narrow, Ribbons, etc.
Maximum load:	1 kN
Specimen diameters:	0-2,5 mm Ø
Minimum sample length:	1700 mm
Capstan (Bollard) Ø:	20 mm Ø
Temperature range:	0 a +70 °C*
Body grips:	Steel, nickel plated
<b>Weight:</b> (each grip without jaws)	0,68 Kg
Scope of supply:	1 pair without jaws

<sup>\*</sup> Other temperature ranges on request



### **Jaws for MB-M grips**: Scope of supply 1 Set = 2 Jaws

Model	Jaw surface	Clamping surface Alto x Ancho	Weight per pair
MDM/1-B	Blank jaws	20x10 mm	96 g
MDM/1-BP	Pyramid (serrated) jaws	20x10 mm	96 g
MDM/1-BG	Rubber coated jaws	20x10 mm	98 g
MDM/1-BD	Diamond coated jaws	20x10 mm	98 g
MDM/5-B	Blank jaws	30x12 mm	70 g
MDM/5-BP	Pyramid (serrated) jaws	30x12 mm	70 g
MDM/5-BG	Rubber coated jaws	30x12 mm	74 g
MDM/5-BD	Diamond coated jaws	30x12 mm	71 g
MDM/20-B	Blank jaws	30x15 mm	65 g
MDM/20-BP	Pyramid (serrated) jaws	30x15 mm	63 g
MDM/20-BG	Rubber coated jaws	30x15 mm	67 g
MDM/20-BD	Diamond coated jaws	30x15 mm	67 g



Blank jaws Smooth steel without cover



**Pyramid jaws** Pyramids of 1.2 x 45°



**Rubber coated jaws** Imm rubber coat (NBR)



**Diamond coated jaws** Clamping area coated with synthetic diamond



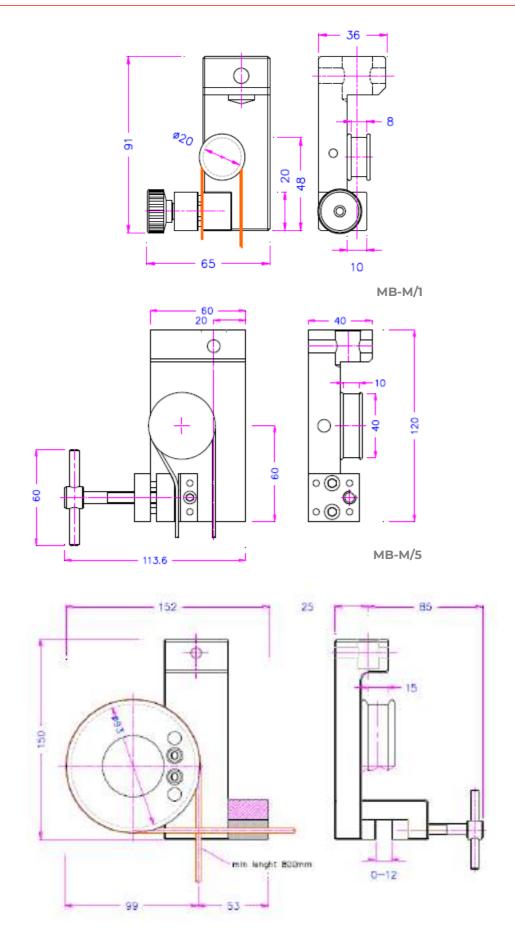
Special version of MB-M/1 grips



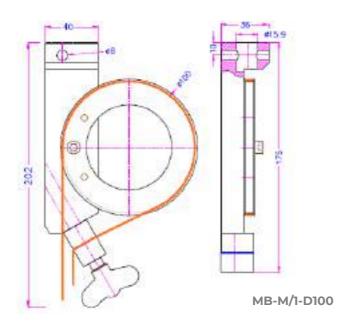
Pneumatic version











### **SPECIAL VERSIONS IN 20 kN capacity:**





Manual grips version, capacity 50 kN







# Bollard Grips Tensile Tests model MB-M/2.5 2.5 kN capacity

Disc/Bollard Grips, easy to use and applicable to perform **tensile tests** on samples of difficult to grip materials such as **fine wires, thin ropes and narrow bands..** 

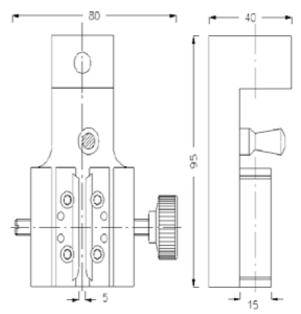
#### **GENERAL INFORMATION**

Bollard grips are suitable for tensile testing of a wide range of samples, such as **fine wires, thin ropes and narrow bands**. When testing fine wires the best option is to use synthetic diamond coated jaws.



The grips are designed so that the specimen can be wrapped around the bollard and clamped at one end by means of a manual grip with smooth or synthetic diamond coated faces, this helps to reduce specimen breakage that occurs on the own jaw in other types of grips and also distributes the load during the test around the bollard by introducing friction to the sample. Depending on the coefficient of friction, the samples to be tested should be made one or more turns around the guide roller.

MODEL	MB-M/2.5
Suitable for:	Fine wires, thin ropes and narrow bands
Maximum load:	2,5 kN
Jaws opening:	0-5 mm
Jaw Surfaces: Available (not included)	Blank (EB) Diamond coated (BD)
Clamping surface: (height x width)	37 x 15 mm
Guide roller diameter:	20 mm Ø
Temperature range:	0 a +70 °C
Body grips:	Anodized aluminum
Weight:	0,38 Kg each grip



**Scope of supply:** 1 Pair of Jaws with **Jaw Carriers MB-M/2.5 + GT**, but WITHOUT jaws, these must be selected and ordered separately:

MB-M / 2.5 + EB Blank Insert Jaws MB-M / 2.5 + EBD Diamond Insert Jaws





**Blank jaws** Smooth steel without cover

**Diamond jaws**Coated clamping area
with synthetic diamond



Carrier for insert jaws

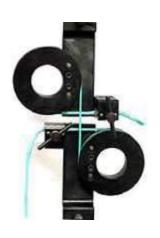
Jaw Carrier with Blank and Diamond Insert Jaws Side loading way



Special versión of MB-M/1 grips



Pneumatic version





# **Bollard Grips Tensile Tests model MBZ-M/5** 5 kN capacity

Disc/Bollard Grips, easy to use and applicable to perform tensile tests on samples of materials that are generally difficult to clamp (they are applicable to fine wires, thin ropes and narrow bands...)

### **GENERAL INFORMATION**

Bollard grips are suitable for tensile strength testing of a wide range of samples, such as small tapes, ropes, threads, etc.

Winch (bollard) rollers provide slow, notch-free strain relief to prevent specimen breakage in clamping área.

MODEL	MBZ-M/5
Suitable for:	Light ropes, Cords, Yarn, etc.
Gripping force:	5 kN
Sample sizes:	Ropes between 0-3 mm Ø Tapes with a maximum width of 20 mm
Temperature Range *	0 to +70 °C
Grip Body: Anodized Aluminum	Aluminium
Bollard:	Steel
Coupling:	Ø. 15,9 mm
<b>Grip Weight:</b> (Including Jaws)	2.2 Kg (with counterweight) 1.3 Kg (without counterweight)
Scope of supply:	1 Pair of Grips without Jaws (to be ordered separately)

<sup>\*</sup> Other temperature ranges, please request

#### Jaws available for MBZ-M / 5 grips

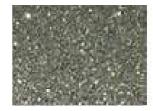
Model	Jaw surface	Clamping surface Height x Width	Weight per pair
MBZ/5-BB	Blank jaws	30 x 20 mm	60 g
MBZ/5-BP	Serrated Jaws (pyramids)	30 x 20 mm	60 g
MBZ/5-BD	Diamond jaws	30 x 20 mm	60 g



**Blank jaws** Smooth steel without cover



Serrated jaws Pyramids clamping area



Diamond jaws Coated clamping area with synthetic diamond



## Bollard Grips Tensile Tests model MB-M/50 of 50 kN capacity

Disc/Bollard Grips, easy to use and applicable to perform **tensile tests** on samples of difficult-to-grasp materials such as **ropes**.

#### **GENERAL INFORMATION**

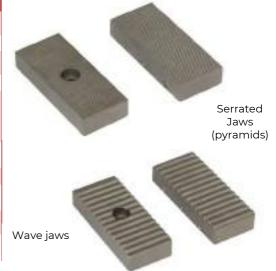
Bollard type grips are suitable for testing rope tensile strength.

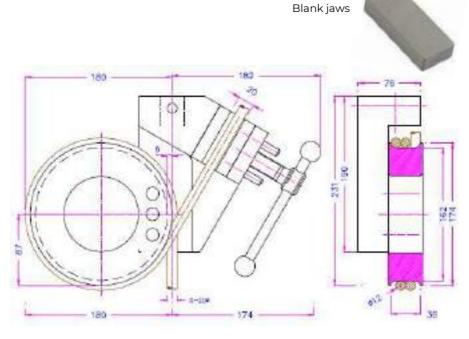
The grips are designed so that the specimen can be placed wrapped around the bollard and clamped at one end by means of a manual grip with knurled faces, this helps to reduce specimen breaks that occur in the jaw itself in another type grips and also distributes the load during the test around the bollard by introducing friction to the sample.

To calculate the deformations produced in the sample, the ideal is to use a contact extensometer to calculate the real deformation in the sample.



MODELO	MB-M/50
Maximum load:	50 kN
Coupling:	Af30 or 31.8 mm Ø
Recommended rope Ø:	Max. 20 mm Ø
Minimal specimen length:	1500 mm
Jaws surfaces: (available, NOT included)	- Blank Jaws - Wave Jaws - Serrated Jaws (Pyramids 1,2x45° 58 HRC)
Jaws clamping surface HxW:	70 x 30 mm
Bollard Ø:	270 mm Ø
Temperature range:	0 a +70 °C (other ranges on request)
Weight:	13,90 Kg each grip
Scope of supply:	2 Grips (without jaws, already to be ordered separately)









# Bollard Grips Tensile Tests model MB-M/100 of 100 kN capacity

Disc/Bollard Grips, easy to use and applicable to perform **tensile tests** on samples of difficult-to-grasp materials such as **ropes**.

#### **GENERAL INFORMATION**

Bollard type grips are suitable for testing rope tensile strength.

The grips are designed so that the specimen can be placed wrapped around the bollard and clamped at one end by means of a manual grip with knurled faces, this helps to reduce specimen breaks that occur in the jaw itself in another type grips and also distributes the load during the test around the bollard by introducing friction to the sample.

To calculate the deformations produced in the sample, the ideal is to use a contact extensometer to calculate the real deformation in the sample.

\* Pneumatic and hydraulic versions are available with capacities 150kN, 200kN, 250kN

MODEL	MB-M/100
Maximum load:	100 kN
Coupling:	Af40 mm
Recommended rope Ø:	Max. 25 mm Ø
Minimal specimen length:	2600 mm
Jaws surfaces: (available, NOT included)	<ul><li>Blank Jaws</li><li>Wave Jaws</li><li>Serrated Jaws</li><li>(Pyramids 1,2x45° 58 HRC)</li></ul>
Jaws clamping surface HxW:	120 x 50 mm
Bollard Ø:	270 mm Ø
Temperature range:	0 a +70 °C (other ranges on request)
Weight:	50 Kg each grip
Scope of supply:	2 Grips (without jaws, already to be ordered separately)
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## **Bollard Grips Tensile Tests model MB-M/150 of 150 kN capacity**

Disc/Bollard Grips, easy to use and applicable to perform tensile tests on samples of difficult-to-grasp materials such as ropes.

### **GENERAL INFORMATION**

Bollard type grips are suitable for testing rope tensile strength.

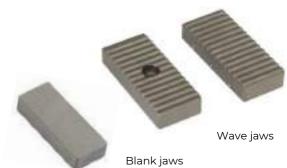
The grips are designed so that the specimen can be placed wrapped around the bollard and clamped at one end by means of a manual grip with knurled faces, this helps to reduce specimen breaks that occur in the jaw itself in another type grips and also distributes the load during the test around the bollard by introducing friction to the sample.

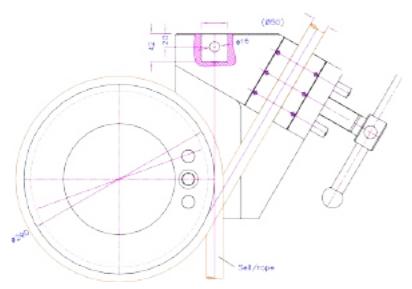
To calculate the deformations produced in the sample, the ideal is to use a contact extensometer to calculate the real deformation in the sample.



MODEL	MB-M/150
Maximum load:	150 kN
Coupling:	Af50 mm Ø
Recommended rope Ø:	Max. 25 mm Ø
Minimal specimen length:	2600 mm
Jaws surfaces: (available, NOT included)	- Blank Jaws - Wave Jaws - Serrated Jaws (Pyramids 1,2x45° 58 HRC)
Jaws clamping surface HxW:	120 x 50 mm
Bollard Ø:	270 mm Ø
Temperature range:	0 a +70 °C (other ranges on request)
Weight:	50 Kg each grip
Scope of supply:	2 Grips (without jaws, already to be ordered separately)













Hydraulic grips version capacity 150 kN

Hydraulic grips version capacity 250 kN





Hydraulic grips version capacity 100 kN

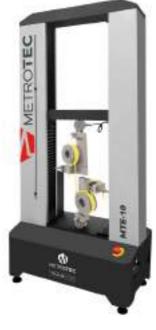


Roller diameter 296 mm and width of 60 mm



## **Recommended Testing Machines:**









MTE-5 (to 5 kN)

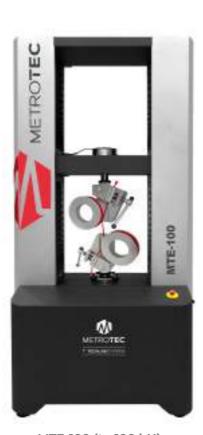
MTE-10 (to 10 kN)

MTE-25 (to 25 kN)

MTE-50 (to 50 kN)







MTE-100 (to 100 kN)



MTE-200 (to 200 kN)