

# Bionix® Accessories



## A complete selection of affordable and durable grips, fixtures platens and baths for mechanical testing of biomedical specimens



Bionix Accessories support a full spectrum of biomaterial, medical device component and medical packaging and consumables testing

- » Affordable and durable
- » Stainless steel - suitable for saline environmental baths
- » Broad selection for full spectrum of biomedical testing - biomaterials, medical device components and medical packaging and consumables
- » Universal adapter design and optional threaded frame adapters for easy installation
- » Anti-rotation features and integrated alignment pins for test accuracy and repeatability

MTS has expanded its Bionix Accessories family to include a new selection of affordable and extremely durable components for accurately replicating biomaterial and medical device service environments. Comprising a variety of grips, fixtures and compression platens, these new accessories provide Bionix electromechanical test system users with a complete set of tools for conducting a full spectrum monotonic

testing of biomaterials, medical device components and medical packaging and consumables.

MTS Bionix Accessories are engineered from the highest quality materials to deliver years of accurate and efficient monotonic testing. Built of durable stainless steel, they can be safely deployed within saline environmental baths. A universal adapter design facilitates easy installation onto both electromechanical and servohydraulic MTS load frame systems, as well as other electromechanical frames. Optional threaded frame adapters further enhance installation versatility. Integrated anti-rotation features and alignment pins ensure testing accuracy and repeatability.

Establishing a high quality interface with specimens is one of the challenges to performing meaningful monotonic testing of biomaterials and components. The addition of new Bionix grips, fixtures and platens provides labs with a wider choice of accessories to more effectively - and economically - engage a greater variety of specimens and better meet the requirements of specific tests.

Contact MTS today and learn how the Bionix family of affordable and durable grips, fixtures, platens, baths and environmental chambers can meet your demanding biomedical testing needs.



A universal adapter design broadens the utility of Bionix Accessories to include use on both MTS electromechanical and servohydraulic test systems.

### Bionix Vise Action Grips

Bionix Vise Action Grips are value-priced, miniature, medium and heavy-duty general purpose tensile grips that use a clamping screw to tighten a vise; each order includes a set of rubber faces. Available in a variety of load capacities and sizes, they are suitable for testing bandages, bio-textiles, diapers and plastic films at temperatures ranging from -10 to 50 C.

#### Features

- » Stainless steel – suitable for saline environmental bath
- » Set of rubber faces standard with each order
- » Universal adapter design
- » Optional threaded frame adapter
- » Anti-rotation features and integrated alignment pins
- » Temperature Range: -10 to 50 C
- » Applications: Bandages, Bio-textiles, diapers, plastic films

Model 2000/5000



Model 100

Model	Max Load	Face Profile	Max Specimen Thickness	Max Specimen Width	Weight (upper)	Height (from clevis center)	Part Number
100	100 N	Rubber	2 mm	10 mm	560 g	99 mm	100-186-411
2000	2 kN	Rubber	3.5 mm	63 mm	1000 g	95 mm	100-174-783
5000	5 kN	Rubber	10 mm	80 mm	3100 g	135 mm	100-186-413

### Bionix Scissors Action Grips

Bionix Scissors Action Grips are value-priced, self-tightening and self-aligning grips featuring diamond grip faces. They are suitable for testing irregular bio-materials, bone, cartilage, tendons and replacement bio-medical components at temperatures ranging from -130 to 250 C.

#### Features

- » Stainless steel – suitable for saline environmental bath
- » Self-tightening and self-aligning
- » Diamond grip faces
- » Universal adapter design
- » Optional threaded frame adapter

- » Anti-rotation features and integrated alignment pins
- » Temperature Range: -130 to 250 C
- » Applications: Irregular bio-material, bone, cartilage, tendons, replacement bio-medical components



Model	Max Load	Specimen Thickness	Max Specimen Width	Max Weight (upper)	Height (from clevis center)	Part Number
2000	1 kN	25 mm	10 mm	850 g	160 mm	100-181-625

### Bionix Manual Bollard Style Grips

Bionix Manual Bollard Grips are value-priced, “horn” style grips designed to reduce stress concentration on specimens and avoid grip-induced failures. They are suitable for testing cords, filaments, fibers, fine wire and yarns at temperatures ranging from -130 to 250 C.

#### Features

- » “Horn” style design
- » Universal adapter design
- » Optional threaded frame adapter
- » Anti-rotation features and integrated alignment pins
- » Temperature Range: -130 to 250 C
- » Applications: Cords, filaments, fibers, fine wire, yarns



Model	1000
Maximum Load	1 kN
Maximum Specimen Diameter	3 mm
Weight (upper)	1028 g
Height (each from clevis center)	124 mm
Part Number	100-185-264

### Bionix Roller Action Grips

Versatile Bionix Roller Action Grips are value-priced, quick-loading and self-tightening roller grips suitable for testing bandages, bio-textiles, diapers, synthetics and flexible polymers at temperatures ranging from -10 to 50 C for the 1 kN grips, and -130 to 250 C for the 2kN and 5 kN grips.

### Features

- » Quick-loading, self-tightening
- » Universal adapter design
- » Optional threaded frame adapter
- » Anti-rotation features and integrated alignment pins
- » Temperature Range: -10 to 50 C for 1 kN; -130 to 250 C for 2 and 5 kN
- » Applications: Bandages, Bio-textiles, diapers, synthetics, flexible polymers

Model	Max Load	Max Specimen Thickness	Max Specimen Width	Weight (upper)	Height (from clevis center)	Temperature Range	Part Number
1000	1 kN	3 mm	50 mm	1300 g	124 mm	-10 to 50 C	100-185-262
2000	2 kN	4 mm	50 mm	1425 g	111 mm	-130 to 250	100-184-839
5000	5 kN	7 mm	75 mm	2260 g	121 mm	-130 to 250	100-184-841

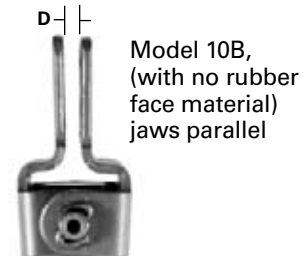
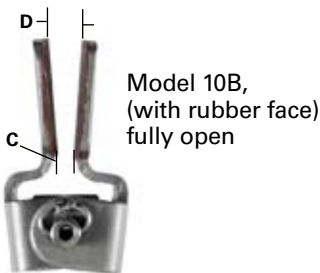
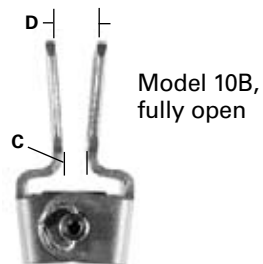
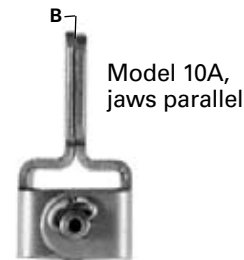
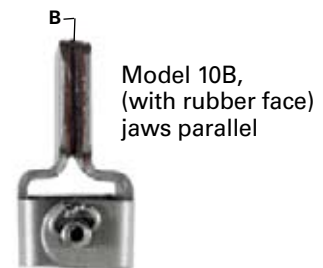
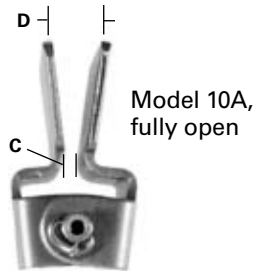


### Bionix Spring Action Grips

Bionix Spring Action Grips are a reliable and economical choice for low-force biomedical testing applications. Available with a variety of mounting threads and jaw surfaces, these lightweight grips are suitable for testing films, papers and textiles at temperatures ranging from -75 to 200 C. All Bionix Spring Action Grip sets include two grip assemblies, two spare springs, two spare wires for link pin retainers, experimental jaw pad materials and shipping case.

### Features

- » Stainless steel – suitable for saline environmental bath
- » Available with a variety of mounting threads and jaw surfaces
- » Spring action follow-through accommodates specimen neckdown
- » Faces pivot for self alignment and reduced likelihood of breakage at the specimen/face contact
- » Temperature Range: -75 to 200 C
- » Applications: Films, papers, textiles



Model	Mounting Thread	Span "B"	Span "C"	Span "D"	Jaw Surface	Part Number
10A	M6 x 1 mm	0.0	1.0 mm	2.6 mm	Flat Smooth	056-077-501
10A	1/4 in -28UNF	0.0	1.0 mm	2.6 mm	Flat Smooth	056-077-502
10B	M6 x 1 mm	0.0	1.0 mm	2.6 mm	Rubber Face	056-077-503
10B	1/4 in -28UNF	0.0	1.0 mm	2.6 mm	Rubber Face	056-077-504
10B	M6 x 1 mm	1.6 mm	2.6 mm	4.2 mm	Flat Smooth	056-077-503
10B	1/4 in -28UNF	1.6 mm	2.6 mm	4.2 mm	Flat Smooth	056-077-504

## Bionix Stainless Steel Compression Platens

Bionix Stainless Steel Compression Platens are value-priced, compression platens with precision-ground, hardened surfaces. Available in a variety of sizes, they are suitable for testing bio-materials, bone, cartilage, tendons and replacement bio-medical components at temperatures ranging from -130 to 250 C.

### Features

- » Stainless steel – suitable for saline environmental bath
- » Precision-ground, hardened surface
- » Universal adapter design
- » Optional threaded frame adapter
- » Specimen centering grooves
- » Anti-rotation features and integrated alignment pins
- » Temperature Range: -130 to 250 C
- » Applications: Irregular bio-material, bone, cartilage, tendons, replacement bio-medical components

Model	Max Load	Max Specimen Diameter	Min. Specimen Diameter at Max Load	Weight (upper)	Height (from clevis center)	Part Number
50	10 kN	50 mm	8 mm	681 g	64 mm	100-182-229
100	10 kN	100 mm	8 mm	1820 g	64 mm	100-182-227
150	10 kN	150 mm	8 mm	3725 g	64 mm	100-182-226



## Bionix EnviroBath

Versatile and easy-to-use, MTS' new Bionix EnviroBath facilitates the efficient and accurate mechanical testing of biomedical and general material specimens in fluids heated to body temperatures. Designed to streamline biomaterial and component test operations, the EnviroBath features convenient, leak-proof front and back access panels enabling easy installation and change out of grips, fixtures and test specimens. Filling and draining

the EnviroBath is both controlled and quick, and easy disassembly simplifies cleaning and regular maintenance. A highly reliable fluid temperature control system ensures that specimen temperatures remain constant throughout the duration of the test. The versatile EnviroBath is available in a variety of volume configurations to accommodate a wide range of test requirements and specimen sizes. A universal adapter design ensures full compatibility with MTS electromechanical and servohydraulic load frames, a wide variety of Bionix grips and fixtures and even electromechanical test systems from other manufacturers.

### Features

- » Available in 1, 6 and 10 liter volume configurations
- » Compatible with a broad selection of Bionix grips and fixtures
- » Compatible with electromechanical and servohydraulic test systems
- » Supports saline (standard) and protein-based (optional) fluids
- » Reliable fluid temperature control system
- » Optional horizontal configuration
- » Optional bath-mounted digital temperature monitor
- » Compatible with video or laser extensometers
- » Optional mister/spray



Volume	Axial Force	Torsional Force	Internal Dimensions WxHxD	External Dimensions WxHxD
1 liter	2.4 kN	28 N-m	100 x 200 x 56 mm 4 x 8 x 2.2 in	180 x 295 x 95 mm 7 x 11.5 x 3.65 in
6 liter	2.4 kN	28 N-m	130 x 480 x 100 mm 5 x 19 x 3.9 in	205 x 575 x 140 mm 8 x 22.5 x 5.5 in
10 liter	10 kN	100 N-m	215 x 305 x 150 mm 8.5 x 12 x 5.8 in	295 x 395 x 190 mm 11.5 x 15.5 x 7.4 in

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