

ETM SC series

ETM SC series single column testing system for tension and compression applications where loads less than 5kN.

- > Designed with strong linear motion guide and servo motor.
- > Increased lateral stiffness to ensure linear crosshead travel.
- > Servo motor equipped with precise planet-gear speed reducer providing higher efficiency and low noise.
- > Wide range of test accessories allows to meet test requirements of different standards and for different materials.
- > ETM SC series is suitable to test: plastics, wires, bars, biomaterials, adhesive materials, etc...

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| Model | | ETM 5 SC | ETM 2 SC | ETM 1 SC | ETM 0.5 SC |
|---------------------------------|---------|-------------------------|----------|----------|------------|
| Load cell | | | | | |
| Load capacity | kN | 5 | 2 | 1 | 0.5 |
| | kgf | 500 | 200 | 100 | 50 |
| Calibration standard | - | ISO 7500 | | | |
| Accuracy grade | % | 0.5 of reading | | | |
| Testing load accuracy | % | | | | |
| Deformation accuracy | % | | | | |
| Displacement accuracy | % | | | | |
| Force range | FS | | | | |
| Force resolution | FS | 1/500000 | | | |
| Force accuracy | % | 0.5 of reading | | | |
| Controller | | | | | |
| Sampling frequency | Hz | Up to 1000 | | | |
| Closed loop control frequency | Hz | Up to 1000 | | | |
| Resolution | bit | 20 | | | |
| Software | | | | | |
| Software | - | echoTestPilot | | | |
| Crosshead | | | | | |
| Position resolution | µm | 0.042 | | | |
| Crosshead speed | mm/min | 0.001-750 | | | |
| Crosshead speed accuracy | % | ±1.0/±0.5 of set speed | | | |
| Crosshead travel (without grip) | mm | 1000 | | | |
| Main frame | | | | | |
| Frame type | - | Bench top single column | | | |
| Front opening space | mm | 100 | | | |
| Fixture adapter | mm | ø20 | | | |
| Grip pin | mm | ø10 | | | |
| Motor power | kW | 0.2 | | | |
| Power supply | V-Hz-ph | 230-50/60-1 | | | |
| Dimensions | mm | 530x490x1590mm | | | |
| Weight | kg | 90 | | | |

ETM SC series

Accessories

Mechanical wedge action tensile grips

| Model | Description | Max. force applied | Grip pin | Application |
|---------|-------------------------------------------|--------------------|----------|----------------------------------|
| JW310B | Grip body | 10kN | ø10mm | For metal and non-metal specimen |
| JW310F1 | Tensile grip for flat specimens 0-20mm | | | |
| JW310R1 | Tensile grip for round specimens ø4-9mm | | | |
| JW310R2 | Tensile grip for round specimens ø9-14mm | | | |
| JW120B | Grip body | 20kN | ø10mm | For metal and non-metal specimen |
| JW120F1 | Tensile grip for flat specimens 0-6mm | | | |
| JW120F2 | Tensile grip for flat specimens 6-12mm | | | |
| JW120F3 | Tensile grip for file specimens 0-6mm | | | |
| JW120R1 | Tensile grip for round specimens ø4-9mm | | | |
| JW120R2 | Tensile grip for round specimens ø9-14mm | | | |
| JW130B | Grip body | 30kN | ø10mm | For metal and non-metal specimen |
| JW130F1 | Tensile grip for flat specimens 0-7mm | | | |
| JW130F2 | Tensile grip for flat specimens 7-14mm | | | |
| JW130F3 | Tensile grip for file specimens 14-21mm | | | |
| JW130R1 | Tensile grip for round specimens ø4-9mm | | | |
| JW130R2 | Tensile grip for round specimens ø9-14mm | | | |
| JW130R3 | Tensile grip for round specimens ø14-19mm | | | |

Pneumatic tensile grips

| Model | Description | Max. force applied | Grip pin | Application |
|---------|-----------------------------------------------------------------------------|--------------------|----------|------------------------------------------|
| PNJ3001 | Tensile grip for sample diameter ≤1mm | 500N | ø10mm | For low force test of non-metal specimen |
| PNJ3002 | Tensile grip for sample diameter ≤1mm (Nylon cord) | 500N | ø10mm | For nylon cord |
| PNJ3003 | Tensile grip with clamping width ≤25mm Sample thickness ≤6.5mm, no liner | 500N | ø10mm | For low force test of non-metal specimen |
| PNJ3005 | Tensile grip with clamping width ≤30mm Sample thickness ≤4mm, with liner | 500N | ø10mm | For low force test of non-metal specimen |
| PNJ3010 | Tensile grip with clamping width ≤150mm Sample thickness ≤7mm, no liner | 1kN | ø10mm | For low force test of non-metal specimen |
| PNJ3004 | Tensile grip with clamping width ≤25mm Sample thickness ≤6.5mm, no liner | 1kN | ø10mm | For low force test of non-metal specimen |
| PNJ3006 | Tensile grip for sample diameter ≤3mm | 2kN | ø10mm | For low force test of non-metal specimen |
| PNJ3008 | Tensile grip jaw 25x50mm Sample thickness ≤9mm with liner | 2kN | ø10mm | For low force test of non-metal specimen |
| PNJ3009 | Tensile grip for sample diameter ≤3mm | 3kN | ø10mm | For low force test of non-metal specimen |
| PNJ3011 | Tensile grip for flat specimens 0-4mm | 3kN | ø10mm | For glass fiber specimen |
| PNJ3007 | Tensile grip for flat specimens 0-10mm, width 50mm | 5kN | ø10mm | For low force test of non-metal specimen |
| PNJ3012 | Tensile grip with rubber coated jaw 25.4x25.4mm Sample thickness ≤14mm | 10kN | ø10mm | For textile tensile test |
| PNJ3013 | Tensile grip with rubber coated jaw 50.8x76.2mm Sample thickness ≤14mm | 10kN | ø10mm | For textile tensile test |
| PNJ3014 | Tensile grip with diamond jaw 25.4x25.8mm Sample thickness ≤14mm | 10kN | ø10mm | For textile tensile test |
| PNJ3015 | Tensile grip with diamond jaw 25.4x70mm Sample thickness ≤14mm | 10kN | ø10mm | For textile tensile test |

Compression fixtures

| Model | Description | Max. force applied | Grip pin | Application |
|--------|---------------|--------------------|----------|----------------------|
| CP1200 | Platen ø100mm | 20kN | ø10mm | For compression test |
| CP1201 | Platen ø200mm | 20kN | ø10mm | For compression test |

Bending fixtures

| Model | Description | Max. force applied | Grip pin | Application |
|--------|----------------------------------------------|--------------------|----------|------------------|
| BD2002 | Bending nose R5mm | 10kN | ø10mm | For bending test |
| | Support roller R2mm | | | |
| | Maximum span 160mm, adjustable | | | |
| | 3-point bending, support roller exchangeable | | | |
| BD2003 | Bending nose R3mm | 10kN | ø10mm | For bending test |
| | Upper span 110mm adjustable | | | |
| | Lower span maximum 220mm adjustable | | | |
| | 4-point bending, support roller fixed | | | |
| BD2004 | Bending nose R5mm | 20kN | ø10mm | For bending test |
| | Support roller R2mm | | | |
| | Maximum span 200mm, adjustable | | | |
| | 3-point bending, support roller exchangeable | | | |
| BD2005 | Bending nose R5mm | 20kN | ø10mm | For bending test |
| | Support roller R2mm | | | |
| | Maximum span 200mm, adjustable | | | |
| | 3-point bending, support roller exchangeable | | | |
| | Micrometer included | | | |

Lever grips

| Model | Description | Max. force applied | Grip pin | Application |
|--------|--------------------------------------|--------------------|----------|-------------------------|
| LVG021 | Lever grip with clamping width <22mm | 2kN | ø10mm | For rubber tensile test |
| | Max. opening 10mm | | | |
| LVG022 | Lever grip with clamping width <40mm | 2kN | ø10mm | For rubber tensile test |
| | Max. opening 7mm | | | |
| LVG023 | Lever grip with clamping width <40mm | 5kN | ø10mm | For rubber tensile test |
| | Max. opening 12mm | | | |

Peeling grips

| Model | Description | Max. force applied | Grip pin | Application |
|--------|---------------------------------------------------------------------------------|--------------------|----------|-------------------------------------------------|
| PLG971 | Grip for stainless steel composite pipe ID-OD 12-16; 16-20; 20-25; 26-32; 33-40 | 2kN | ø10mm | For stainless steel composite pipe peeling test |
| PLG972 | Grip for metal bond sample width <20mm | 3kN | ø10mm | For metal bond specimen 90° peeling test |

Vice grips

| Model | Description | Max. force applied | Grip pin | Application |
|--------|-------------------------------------|--------------------|----------|------------------------------------------------------|
| VG3201 | Sample thickness ≤8mm | 500N | ø10mm | For plastic and film tensile and peeling test |
| | Vice grip with clamping width <32mm | | | |
| VG3202 | Sample thickness ≤13.5mm | 1kN | ø10mm | For wire, foil, film, fiber, rubber tensile test |
| | Vice grip with clamping width <25mm | | | |
| VG3203 | Sample thickness ≤12mm | 5kN | ø10mm | For sheet metal, fiber, plastic, rubber tensile test |
| | Vice grip with clamping width <70mm | | | |

Wire, cord tensile grip

| Model | Description | Max. force applied | Grip pin | Application |
|--------|--------------------------------------|--------------------|----------|-----------------------|
| CWG021 | Wire grip for sample diameter ≤1mm | 500N | ø10mm | For wire tensile test |
| CWG022 | Wire grip for sample diameter ≤0.5mm | 500N | ø10mm | For wire tensile test |
| CWG023 | Wire grip for sample diameter ≤1.5mm | 2kN | ø10mm | For wire tensile test |
| CWG024 | Wire grip for sample diameter ≤1.5mm | 5kN | ø10mm | For wire tensile test |

Other special grips are available on request

Computer System

| | | |
|-----------------|---------|---------------|
| Computer System | EHOCS01 | Computer |
| | EHOCS02 | Monitor |
| | EHOCS03 | Color printer |
| | EHOCS04 | Mouse |
| | EHOCS05 | Keyboard |

Optional accessories

| | |
|----------|-------------------------|
| 01ETM001 | Front protection shield |
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