ROPE GRIPS

Capstan Rope and Yarn Grips

Capstan grips for yarns, filaments, cords, fine wires and small ropes, 1 kN to 20 kN



OVERVIEW

Capstan grips for tensile tests on yarns, filaments, cords, narrow ribbons, fine wires and small ropes. The specimen is wound one or more times around the capstan before being fixed by clamping jaws, so tension is relieved gradually and breaks occur in the free length rather than at the jaws. Manual and pneumatic versions from 1 kN to 20 kN are available.

KEY FEATURES

- Capstan winding avoids jaw breaks in sensitive specimens
- Manual and pneumatic versions at 1, 5 and 20 kN
- Capstan diameters from 20 mm to 100 mm
- Blank, pyramid, rubber-coated and diamond-coated jaws
- Lightweight anodized aluminum bodies for low capacities
- Usable up to 180 °C on 5 kN and 20 kN versions

TECHNICAL SPECIFICATIONS

Max. load	1 kN, 5 kN or 20 kN
Specimen diameter	0-2 mm, 0-2.5 mm, 0-5 mm or 0-9 mm (by version)
Min. specimen length	240 mm to 1700 mm (by version)
Capstan diameter	20, 40, 93 or 100 mm
Body material	Aluminum, anodized (1 kN, 5 kN); steel, nickel-plated (20 kN, 100 mm capstan)
Coupling	Female clevis Ø 15.9 mm (5/8 in) or Ø 20 mm; others on request
Operation	Manual or pneumatic (M5 or 1/8 in port)
Temperature range	0 to 70 °C (1 kN); 0 to 180 °C (5 kN, 20 kN)
Weight	0.22 kg to 3.04 kg per grip without jaws

AVAILABLE VERSIONS

1 kN, capstan Ø 20 mm	Yarn, filament; Ø 0-2 mm; min. length 240 mm; 0.22 kg
1 kN, capstan Ø 100 mm	Yarn, filament; Ø 0-2.5 mm; min. length 1700 mm; 0.68 kg
5 kN, capstan Ø 40 mm	Cord, fine wire; Ø 0-5 mm; min. length 400 mm; 0.76 kg
20 kN, capstan Ø 93 mm	Ropes, fine wire; Ø 0-9 mm; min. length 800 mm; 2.72 kg
Pneumatic 1 kN	Capstan Ø 20 mm, upper grip with counterweight
Pneumatic 5 kN / 20 kN	Capstan Ø 40 mm / Ø 93 mm

APPLICATIONS

- Textile yarns and filaments
- Glass and technical fibers
- Cords and narrow ribbons
- Fine wires and small ropes

Ordering & customization: Specify the maximum load, specimen type and diameter, manual or pneumatic operation, jaw surface and the coupling of your testing machine.

Dimensional drawings
See page 2. Certified drawings and 3D models available on request.

Specifications are typical and may vary by configuration; confirm at time of quote. Custom versions, couplings and adapters available on request. Part ref. UGC-RP-030

Capstan Rope and Yarn Grips

DIMENSIONAL DRAWINGS

FIG. 1

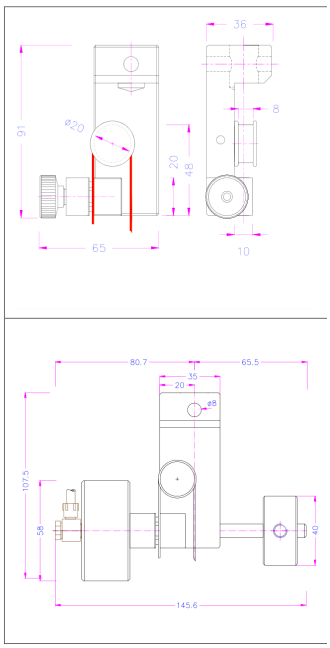


FIG. 2

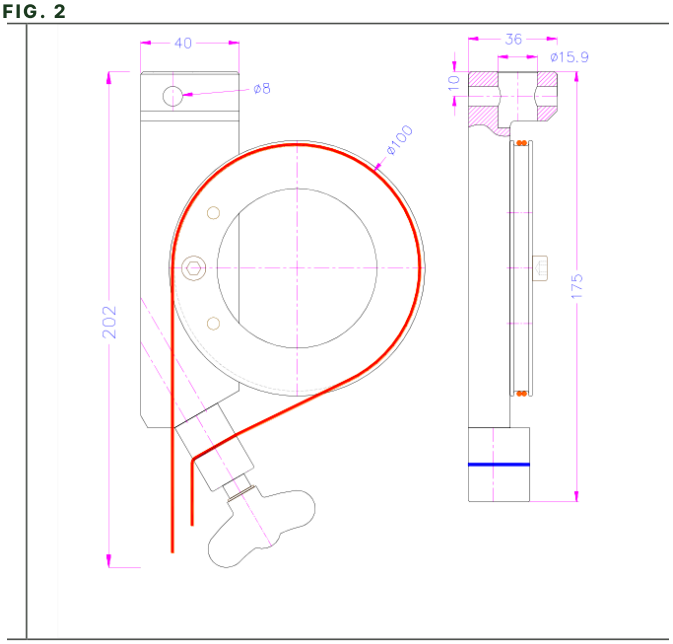


FIG. 3

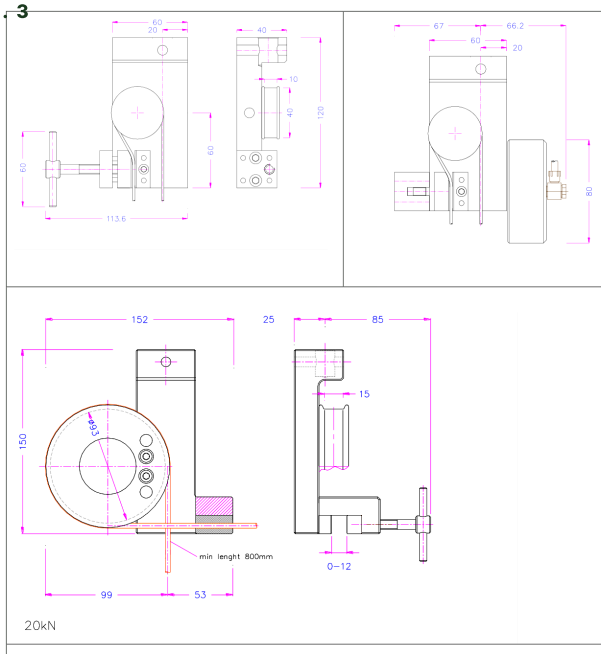
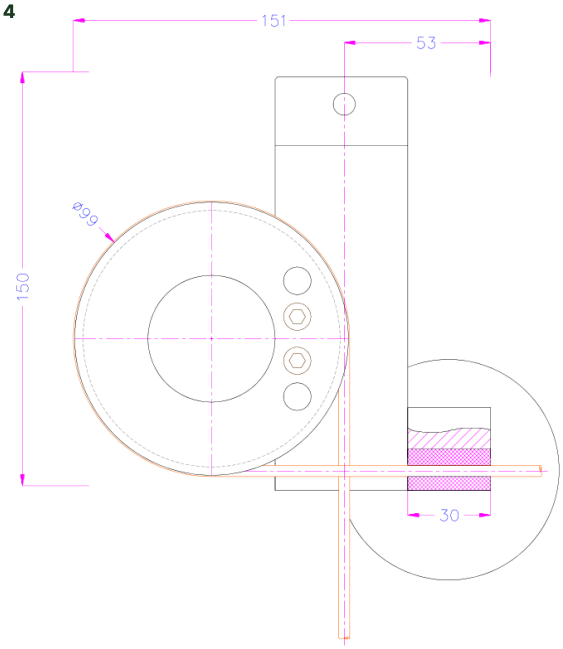


FIG. 4



Dimensions in mm. Drawings are representative of the product family and may show optional versions or accessories; dimensions are for reference only and may change without notice. Certified dimensional drawings and 3D models are available on request.