

# ±10 kN ±100 Nm Linear-Torsion Mechanical Wedge-Action Grips

2742-316

Designed to suit the ElectroPuls® E10000 Linear-Torsion, the 2742-316 mechanical wedge-action grips are suitable for tension, compression, reverse-stress, and torsion testing on a wide range of specimens and materials. The grips are mechanically operated and the open-fronted design provides easy specimen insertion, positioning, and clamping.

## PRINCIPLE OF OPERATION

The single-acting wedge action principle of these grips is designed to clamp a specimen without applying a compressive load, which could cause a specimen to buckle.

The retracting movement of the grip bodies helps to reduce compressive loads that are normally caused when clamping specimens.

The open front design permits quick and easy changing of specimens and jaw faces. Jaw faces optimize gripping performance whilst the serrated faces are designed to minimize damage to the specimen surface.

## APPLICATION RANGE

- Type of loading: Linear and Torsion tension, compression or reverse-stress testing
- Specimen material: Metallics, plastics, composites
- Specimen geometries: Flat or round specimens
- Temperature range: -70 to +350°C (-94 to 662°F)



±10 kN (2250 lbf) linear-torsion mechanical wedge-action grips

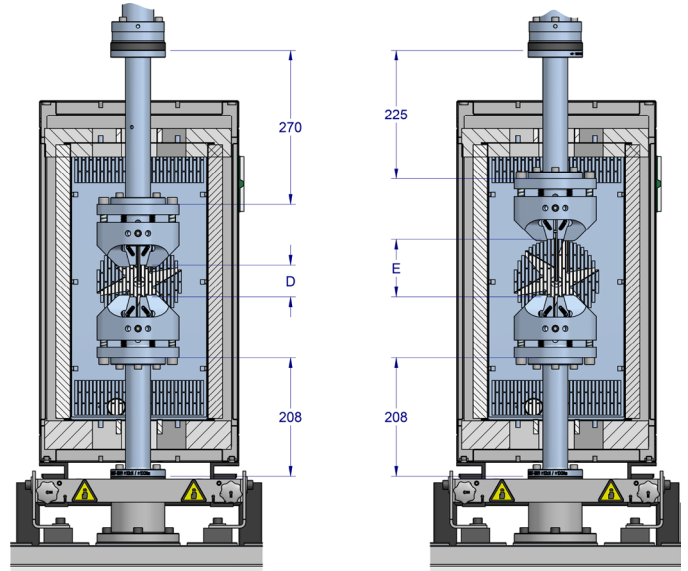
## FEATURES

- Fatigue-rated capacity: ±10 kN (linear), ±100 Nm (torsion)
- Suitable for both linear and torsion tension and compression testing, including full reverse-stress dynamic tests
- Open-fronted design for quick and easy specimen insertion
- Interchangeable jaw faces for gripping different materials and specimen sizes
- Requires no attachment kits when mounting to ElectroPuls E10000 Linear-Torsion

## SPECIFICATIONS

Catalogue Number	2742-316	
Maximum Force Capacity	kN	±10
	lbf	±2250
Maximum Torque Capacity	Nm	±100
	lbf.in	±880
Grip Mass	kg	5.4
	lbs	11.9
A	mm	144
	in	5.7
B	mm	118.5
	in	4.67
C	mm	104
	in	4.1
Operating Temperature	°C	-70 to +350
	°F	-94 to +662
Mechanical Interface	6 x M8 threaded holes on 75 mm PCD	

Scope of supply: Grip catalogue number provides two grips



3117-080 Pullrods in 3119-605 Environmental Chamber

### 3117-080 Linear-Torsion Pullrods

Catalogue Number	3117-080
Maximum Capacity	±10 kN (Linear)
	±100 Nm (torsion)
Grip Separation (D)	8 - 86 mm (0.3 - 3.4 in)
Grip Separation (E)	53 - 119 mm (2.1 - 4.7 in)
Mechanical Interface	3 x M8 threaded holes on 75 mm PCD
Operating Temperature	-70 to +350°C (-94 to 662°F)

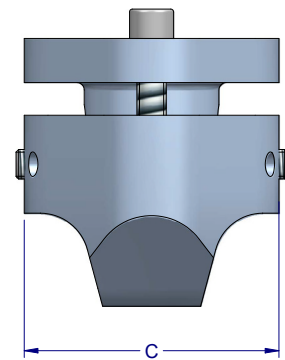
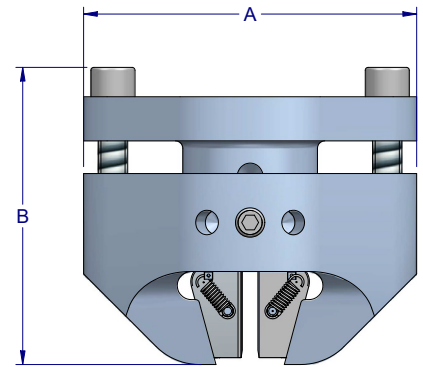
## ACCESSORIES

3117-080	Flange Mounted Pullrods
3119-605	Environmental Chamber

## JAW FACES

Catalog Number	Specimen Type	Specimen Thickness		Clamping Area (W x H)
		mm	in	
2703-801	Flat	0 to 6.3	0 to 0.25	25 mm x 38 mm (1.0 in x 1.5 in)
2703-802	Flat	6.3 to 12.7	0.25 to 0.50	25 mm x 38 mm (1.0 in x 1.5 in)
2703-803	Round	Ø 3.0 to 7.8	0.12 to 0.31	25 mm x 38 mm (1.0 in x 1.5 in)
2703-804	Round	Ø 7.1 to 12.7	0.28 to 0.50	25 mm x 38 mm (1.0 in x 1.5 in)
2703-807	Round	Ø 12.4 to 18.0	0.49 to 0.71	25 mm x 38 mm (1.0 in x 1.5 in)

- Notes: 1. Jaw face catalogue number provides four faces  
 2. Jaw faces are hardened to 48 to 52 Rc, unless otherwise specified  
 3. All faces are diamond serrated 45°



Grip Dimensions

[www.instron.com](http://www.instron.com)



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