

## 2716 SERIES MANUAL WEDGE ACTION GRIPS

Catalog Number 2716-002

The manual wedge action grip is designed for easy specimen loading, alignment and positioning. After initial face to specimen contact, gripping force will increase as the testing load increases. Virtually no preload is seen during specimen clamping due to Instron's design of moving grip bodies. This makes them particularly suitable for testing high strength materials, such as metals and composites, ensuring that specimen slippage is eliminated.

### PRINCIPLE OF OPERATION

The wedge action principle of these grips allows them to be tightened onto a specimen without altering the vertical position of the faces in relation to the specimen. This is accomplished by a design, which moves the grip body to close the faces. This feature makes it possible to preselect the exact point at which the specimen will be held with consistent gage length and no compressive force applied which may cause specimen buckling. A strong clamping force can be applied to materials that are difficult to hold through a high mechanical advantage achieved by the tightening mechanism. The grip faces are spring loaded against a shoe which is in a fixed position in respect to the testing frame holding mechanism, only a light initial gripping force needs to be applied to the specimen.

As the grip is tightened, it's frame is drawn up and the inclined sides push against the matching side of the faces which move laterally against the specimen. A shoe incorporated to the driving shaft prevents the faces from retracting.

The open front design of the grip frames allows faces to be easily interchanged as well as easy specimen loading. Because the faces are held in a fixed position, there is no recoil or loosening when the specimen ruptures, and if an extensometer is attached, it will remain in place.

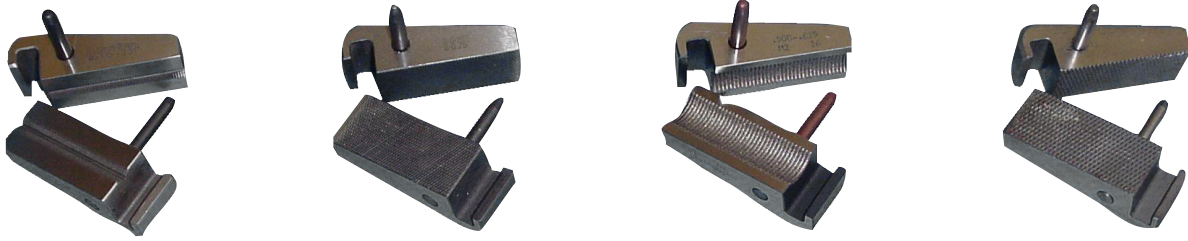
### FEATURES AND BENEFITS

- Rated capacity: 100 kN (10,000 kgf, 22,500 lbf)
- Quick set-up with rapid clamping and unclamping action
- Easy specimen loading for increased productivity
- Self-tightening wedge design eliminates slippage
- Interchangeable jaw faces for a range of specimen geometries and types
- Fixed faces and moving body during specimen loading
- Temperature range: -73 °C to +250 °C (-100 °F to +480 °F)



### APPLICATION RANGE

- Type of loading: Tension. Not suitable for through-zero/ reverse stress or fatigue testing.
- Specimen material: Wires, plastics, metals, elastomers.
- Specimen shapes: Flat, round.

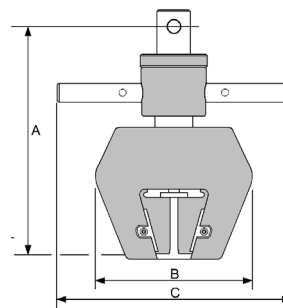


## JAW FACES

Catalog Number	Specimen Thickness		Surface	Clamping Area (W × H)		Application
	mm	in		mm	in	
2703-001	0 - 6.4	0 - 0.25	Diamond Serrated Pitch 1.5 mm (16-teeth per in)	25 × 57	1 × 2.2	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-002	6 - 12	0.25 - 0.5	Diamond Serrated Pitch 1.5 mm (16-teeth per in)	25 × 57	1 × 2.2	
2703-006	0 - 6.4	0.25 - 0.5	Diamond Serrated Pitch 1 mm (25-teeth per in)	25 × 57	1 × 2.2	
2703-007	6 - 12	0.25 - 0.5	Diamond Serrated Pitch 1 mm (25-teeth per in)	25 × 57	1 × 2.2	
2703-070	12 - 16	0.25 - 0.63	Round threaded <sup>3</sup> Pitch 1.5mm (16-teeth per in)	57 mm (2.2 in) on a 0.75-16 UNF-2B (threaded)		
2703-071	16 - 19	0.25 - 0.63	Round threaded Pitch 1.5 mm (16-teeth per in)	57 mm (2.2 in) on a 0.875-16 UNF-2B (threaded)		
2703-004	7 - 12.7	0.28 - 0.5	V-serrated <sup>3</sup> Pitch 1.5 mm (16-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove	For gripping round specimens with or without shoulder tabs and pipe/ tube plugs	
2703-008	3.5 - 8	0.13 - 0.31	V-serrated <sup>3</sup> Pitch 1 mm (25-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove		
2703-009	7 - 12.7	0.28 - 0.5	V-serrated Pitch 1 mm (25-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove		
2703-010	12.7 - 19	0.5 - 0.75	V-serrated Pitch 1 mm (25-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove		

## SPECIFICATIONS

Catalog Number	2716-002
Maximum Capacity	100kN (10,000 kgf, 22,500 lbf)
Upper Fitting	1/2 in clevis pin (Type Dm)
Lower Fitting	1/2 in Clevis pin (Type Dm)
Upper Grip	230 mm, (9.0 in)
Lower Grip	230 mm, (9.0 in)
Body Width (B)	144 mm, (5.67in)
Overall Width (C)	222 mm, (8.75)
Weight per Grip (No faces)	10 kg, (20lb)
Weight (Faces)	0.468 kg (1.0lb)
Temperature Range	-73 °C to +250 °C (-100 °F to +480 °F)
Working Principle	Manual wedge action
Gripping Length	57 mm (2.2 in)



### Notes:

1. Faces Catalog number provides four faces
2. All faces are hardened to 60 Rc, excluding rubber-coated and if otherwise specified
3. Threaded and V-style faces are used for round specimens
4. Grip Catalog number provides two grips.
5. Grips may require a coupling to connect to load cell or machine base.
6. Upper Grip may require a flexible coupling for certain applications

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