

# 2736 Series Manual Wedge Action Grips (High Temperature)

Catalog Number 2736-003

## Features

- 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
- Non-ambient testing capability
- Temperature range: -73 °C to +315 °C (-100 °F to +600 °F)

## Description

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 pre-load 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.

This grip is designed to operate under non-ambient temperature conditions.

## 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 pre-select 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, its frame is drawn up and the inclined sides push against the matching side of the faces which move laterally against the specimen. 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.

## 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.



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2736-003 wedge action grips

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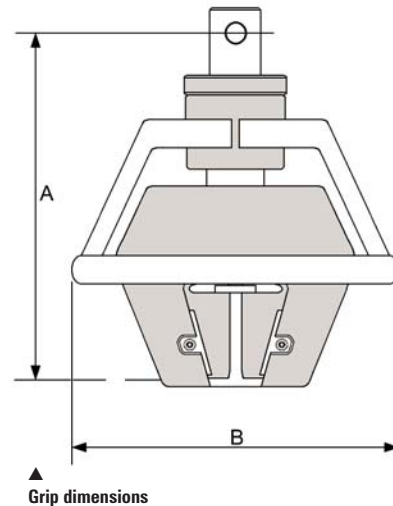
Catalog Number 2736-003

## Specifications

<b>Catalog Number</b>	<b>2732-003</b>
<b>Maximum Capacity</b>	100 N (10,000 kgf, 22,500 lbf)
<b>MECHANICAL CONNECTION</b>	
<b>Upper Fitting</b>	½ in clevis pin (Type Dm)
<b>Lower Fitting</b>	½ in clevis pin (Type Dm)
<b>EFFECTIVE LENGTH (A)</b>	
<b>Upper Grip</b>	250 mm (9.8 in)
<b>Lower Grip</b>	250 mm (9.8 in)
<b>Overall Width (B)</b>	185 mm (7.3 in)
<b>Weight (Faces)</b>	1.170 kg (2 lb, 9 oz)
<b>WEIGHT (NO FACES)</b>	
<b>Upper Grip</b>	13.6 kg (30 lb)
<b>Temperature Range</b>	-73 °C to +315 °C (-100 °F to +600 °F)
<b>Working Principal</b>	Manual wedge action
<b>Gripping Length</b>	57 mm (2.2 in)

### Notes:

1. Grip catalog number provides two grips
2. Grips may require a coupling to connect to load cell or machine base
3. Upper grip may require a flexible coupling for certain applications



Grip dimensions



Faces: Threaded opening, V-serrated, and flat serrated 1.5 mm (0.06 in)

## Faces

Catalog Number	Specimen Thickness	Surface	Clamping Area (WxH)	Application
2703-011	0 to 6.4 mm (0 to 0.25 in)	Diamond-serrated, pitch 1.5 mm (16-teeth per in)	50 mm x 57 mm (2 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-012	6.4 mm to 12.7 mm (0.25 to 0.5 in)	Diamond-serrated, pitch 1.5 mm (16-teeth per in)	50 mm x 57 mm (2 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-072	12 mm to 16 mm (0.25 to 0.63 in)	Round threaded, <sup>Note 3</sup> pitch 1.5 mm (16-teeth per in)	57 mm (2.2 in) on a 0.75-16 UNF-2B (threaded)	For gripping round specimen with or without shoulder tabs, and pipe/ tube with plugs
2703-073	16 mm to 19 mm (0.63 to 0.75 in)	Round threaded, <sup>Note 3</sup> pitch 1.5 mm (16-teeth per in)	57 mm (2.2 in) on a 0.875-16 UNF-2B (threaded)	For gripping round specimen with or without shoulder tabs, and pipe/ tube with plugs
2703-013	3.5 mm to 8 mm (0.13 to 0.31 in)	V-serrated, pitch 1.0 mm (25-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove	For gripping round specimen with or without shoulder tabs, and pipe/ tube with plugs
2703-014	7 mm to 12.7 mm (0.28 to 0.5 in)	V-serrated, pitch 1.0 mm (25-teeth per in)	57 mm (2.2 in) on a 120° included angle V-groove	For gripping round specimen with or without shoulder tabs, and pipe/ tube with plugs

### Notes:

1. Faces catalog number provides four faces
2. All faces are hardened Rc to 60-65, excluding rubber-coated and if otherwise specified
3. Threaded and Vee style faces are used for round specimens



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