

2716 Series Manual Wedge Action Grips

Catalog Number 2716-015

Features

- Rated capacity: 30 kN (3,000 kgf, 6,700 lbf)
- Quick set-up with rapid clamping and unclamping action
- 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
- Slack-free connection to test instrument
- Quickly change faces without tools
- Optional specimen centering device
- Temperature range: -73 °C to +250 °C (-100 °F to +480 °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. Due to Instron's design of moving grip bodies, virtually no preload is seen during specimen clamping. This makes them particularly suitable for testing high strength materials, such as metals and composites, ensuring that specimen slippage is eliminated.

A centering device is also available, enabling quick and accurate placement of the specimen and keeping the central loading axis lined with the load string.

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 gauge length and no compressive force applied which may cause specimen buckling.

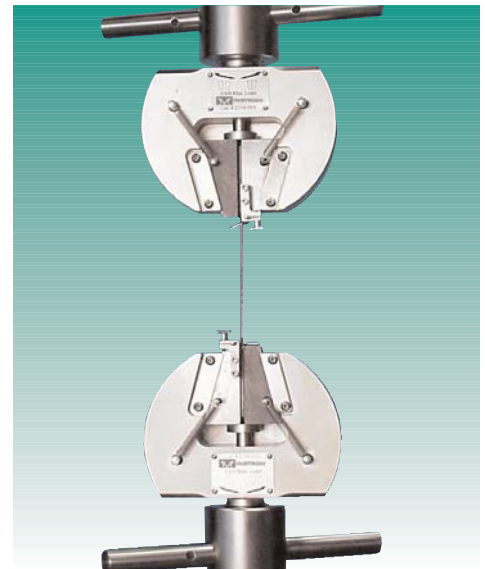
A strong clamping force can be applied to materials that are difficult to hold through a high mechanical advantage achieved by the tightening mechanism. The grip faces are spring loaded against a shoe which is in a fixed position in respect to the testing frame holding mechanism, only a light initial 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.

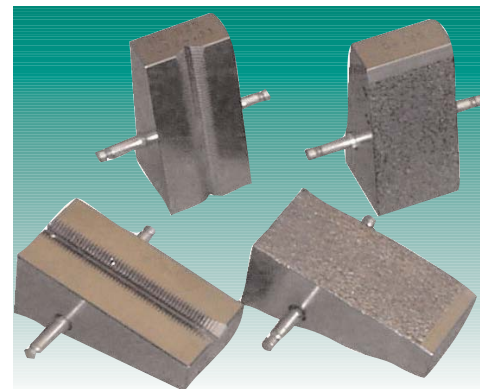
With the optional specimen centering device, a specimen can be easily placed on center of the faces. This device is adjustable from front to back and locked on with thumb screws.

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.



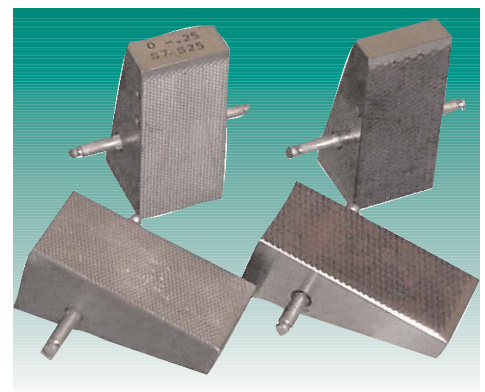
▲ 2716-015 wedge action grips



▲ Faces: V-serrated and surfalloy



▲ 2716-011 specimen centering device



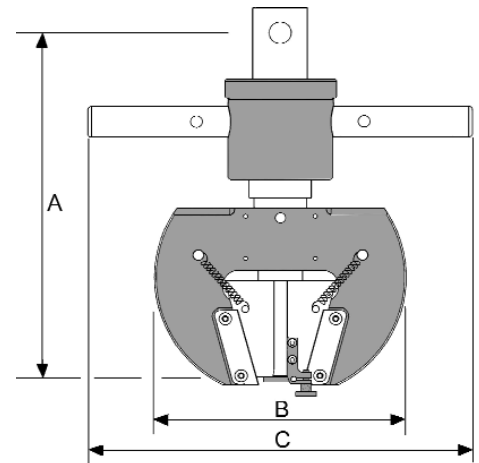
▲ Faces: Flat serrated (1.0 mm) and flat serrated (1.5 mm)

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Catalog Number 2716-015

Specifications

Catalog Number	2716-015
Maximum Capacity	30 kN (3,000 kgf, 6,700 lbf)
MECHANICAL CONNECTION	
Upper Fitting	½ in clevis pin (Type Dm)
Lower Fitting	½ in clevis pin (Type Dm)
EFFECTIVE LENGTH (A)	
Upper Grip	203 mm (8 in)
Lower Grip	203 mm (8 in)
Body Width (B)	144 mm (5.67 in)
Overall Width (C)	220 mm (8.66 in)
Weight per Grip (No Faces)	5.25 kg (11 lb 9 oz)
Weight (Faces)	450 g (1 lb)
Temperature Range	-73 °C to +250 °C (-100 °F to +480 °F)
Working Principal	Manual wedge action
Gripping Length	57 mm (2.2 in)
Maximum Face Movement	13 mm (0.5 in)



▲ Grip dimensions

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.

Accessories

Catalog Number	Description
2716-011	Specimen centering device

Jaw Faces

Catalog Number	Specimen Thickness	Surface	Clamping Area (W x H)	Application
2703-151	0 to 6.4 mm (0 to 0.25 in)	Diamond serrated Pitch 1.5 mm (16-teeth per in)	25 mm x 57 mm (1 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-152	6.4 mm to 12.6 mm (0.25 in to 0.5 in)	Diamond serrated Pitch 1.5 mm (16-teeth per in)	25 mm x 57 mm (1 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-155	0 to 6.4 mm (0 to 0.25 in)	Diamond serrated Pitch 1 mm (25-teeth per in)	25 mm x 57 mm (1 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-156	6.4 mm to 12.6 mm (0.25 in to 0.5 in)	Diamond serrated Pitch 1 mm (25-teeth per in)	25 mm x 57 mm (1 in x 2.2 in)	For gripping metal, plastic, and fiber reinforced plastic specimens with or without shoulder tab ends
2703-160	0 to 6.4 mm (0 to 0.25 in)	Rubber-coated	25 mm x 57 mm (1 in x 2.2 in)	For gripping fabrics, plastic tape and fine wires
2703-157	0 to 6.4 mm (0 to 0.25 in)	Surfalloxy coated (emery grit of 100)	25 mm x 57 mm (1 in x 2.2 in)	For gripping fiber reinforced plastic specimens without tabbed ends
2703-158	6.4 mm to 12.6 mm (0.25 in to 0.5 in)	Surfalloxy coated (emery grit of 100)	25 mm x 57 mm (1 in x 2.2 in)	For gripping fiber reinforced plastic specimens without tabbed ends
2703-153	3.5 mm to 7.8 mm (0.125 in to 0.3 in)	V-serrated ³ Pitch 1 mm (25-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
2703-154	7.1 mm to 12.5 mm (0.25 in to 0.5 in)	V-serrated Pitch 1 mm (25-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

Notes:

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



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