

MANUAL WEDGE ACTION GRIPS

2716-00x and 2736-00x Series



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 the design of the 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, its 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, and offers 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

- Options for 100 kN (10,000 kgf, 22,500 lbf) and 150 kN (15,000 kgf, 33,700 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
- Variety of jaw face sizes and surfaces available
- Options for testing conditions up to 315 (600 °F)
- 2736-00X series grips contain a ring handle to allow for easy operation inside of an environmental chamber

APPLICATION RANGE

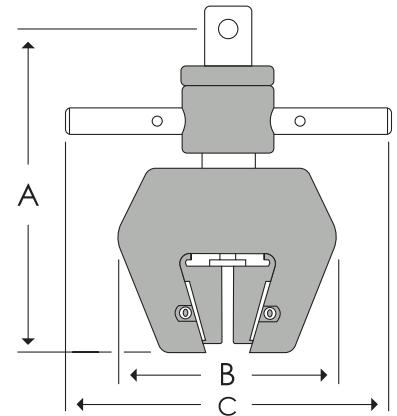
- Type of loading: Tension (Not suitable for through-zero/reverse stress or fatigue testing)
- Specimen material: Plastic, metals, elastomers, and composites
- Specimen shapes: Flat or round specimens with or without shoulder tab ends



SPECIFICATIONS

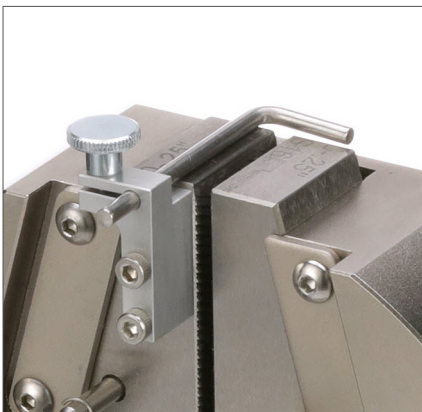
		2716-002	2716-003	2736-004	2736-005	2716-008
Maximum Force Capacity	kN	100	100	100	100	150
	kgf	10,000	10,000	10,000	10,000	15,000
	lbf	22,500	22,500	22,500	22,500	33,700
Temperature Range	°C	-73 to +250	-73 to +250	-73 to +315	-73 to +315	-73 to +250
	°F	-100 to +480	-100 to +480	-100 to +600	-100 to +600	-100 to +480
Upper and Lower Fitting		1/2 inch clevis pin (Type Dm)	1/2 inch clevis pin (Type Dm)	1/2 inch clevis pin (Type Dm)	1/2 inch clevis pin (Type Dm)	M48 × 2 LH (Type II)
Jaw Face Dimension (W × L)	mm	25 × 57	50 × 57	25 × 57	50 × 57	50 × 57
	in	1 × 2.2	2 × 2.2	1 × 2.2	2 × 2.2	2 × 2.2
Grip Length (A)	mm	230	250	230	250	250
	in	9	9.80	9	9.80	9.80
Grip Body Width (B)	mm	144	168	-	-	178
	in	5.67	6.63	-	-	7
Grip Width (C)	mm	222	191	185	185	235
	in	8.75	7.50	7.30	7.30	9.25
Grip Weight (without faces)	kg	10	14	9	13.6	15.4
	lb	22	31	20	30	34

- Notes:
1. Catalog numbers for jaw faces provide a set of 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. The 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



ACCESSORIES FOR GRIPS

2716-012	Specimen Centering Device for use with 2716-003, 2716-008, 2736-003, 2736-005 Wedge Action Grips.
-----------------	---



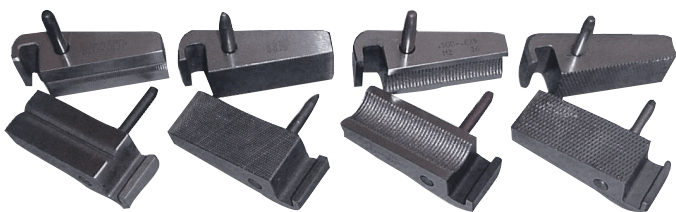
2716-012 Specimen Centering Device



2716-002 Wedge Action Grip



2716-003 or 2716-008 Wedge Action Grip



Jaw Faces for 2716-002 and 2736-004 (1 inch wide)



Jaw Faces for 2716-003, 008, and 2736-005 (2 inch wide)

JAW FACES FOR 2716-002 AND 2736-004

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

JAW FACES FOR 2716-003, 008 AND 2736-005

Catalog Number	Specimen Thickness		Type	Pitch	Teeth	Clamping Area (W × H)		Application
	mm	in				mm	in	
2703-011	0 - 6.4	0 - 0.25	Diamond Serrated	1.5	16	50 × 57	2 × 2.2	For gripping metal, plastic, and fiber reinforced plastic with or without shoulder tab ends
2703-012	6.4 - 12.7	0.25 - 0.5	Diamond Serrated	1.5	16	50 × 57	2 × 2.2	
2703-072	12.7 - 16	0.5 - 0.63	Round Threaded	1.5	16	57 mm (2.2 in) on a 0.75-16 UNF-2B (threaded)		For gripping round specimens with or without shoulder tabs and pipe/tube plugs
2703-073	16 - 19	0.63 - 0.75	Round Threaded	1.5	16	57 mm (2.2 in) on a 0.875-16 included angle V-groove		
2703-013	3.5 - 8	0.13 - 0.31	V-Serrated Pitch	1	25	57 mm (2.2 in) on a 120° included angle V-groove		
2703-014	7 - 12.7	0.28 - 0.5	V-Serrated Pitch	1	25	57 mm (2.2 in) on a 120° included angle V-groove		
2703-015	12.7 - 19	0.5 - 0.75	V-Serrated Pitch	1	25	57 mm (2.2 in) on a 120° included angle V-groove		

www.instron.com



Worldwide Headquarters
825 University Ave, Norwood, MA 02062-2643, USA
Tel: +1 800 564 8378 or +1 781 575 5000

European Headquarters
Coronation Road, High Wycombe, Bucks HP12 3SY, UK
Tel: +44 1494 464646