

# 50 kN AND 100 kN PNEUMATIC WEDGE-ACTION GRIPS

Catalog No. CP137834 and CP137835

The Instron® 50 kN and 100 kN pneumatic wedge action grips are engineered for static materials testing and offer flexible specimen handling through interchangeable jaw faces—supporting both flat and round geometries. Their compact design optimizes the available test space, making them ideal for use with Instron table model and floor model systems.

## PRINCIPLE OF OPERATION

Each grip operates independently and is actuated by an external pneumatic pressure supply. When activated, the jaw faces move vertically to engage or release the specimen. During testing, the wedge mechanism enhances clamping force as load increases, minimizing specimen slippage and ensuring consistent, repeatable results.

## APPLICATION RANGE

- Type of loading: tension only  
(Not suitable for compression or through-zero/reverse stress loading)
- Specimen material: metal, plastic, composites
- Specimen geometries: rounds (not buttonhead) or flat specimens  
(with or without shoulder tabs)

## FEATURES

- Rated capacity: 50 kN (11 kips) / 100 kN (22 kips)
- Side-entry design with full access for easy specimen insertion
- Interchangeable jaw faces suitable for gripping various material types
- Suitable for a wide range of specimen thicknesses without the need to change jaw faces
- Jaw faces for flat and round specimen geometries
- Optional adjustable specimen stops on flat faces provide repeatable and accurate specimen centering
- Operated via a stand-alone grip controller
- M6 accessory mounting holes (50 kN only)
- Temperature range: 4 °C to 65 °C (39 °F to 149 °F)
- Compatible with a wide range of Instron accessories including most clip-on extensometers, AutoX750, AutoXBiax, AVE2, AVE3, and environmental chambers in the rear position on roller mounting brackets

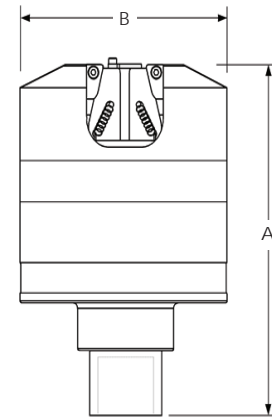


## SPECIFICATIONS

Static Load Capacity	kN	50	100
	kip	11.24	22.48
Gripping Force	kN	75	150
	kip	16.86	33.72
Pneumatic Pressure Range	bar	0 to 8.27	0 to 8.27
	psi	0 to 120	0 to 120
Overall Height (A) - Jaws Closed	mm	239.6	250.1
	in	9.43	9.846
Overall Height (A) - Jaws Open	mm	224.2	234.7
	in	8.83	9.24
Overall Diameter (B)	mm	142	199.6
	in	5.59	7.86
Attachment Type		Df	Df
Construction		Machined Steel with an Electroless Nickel Finish	Machined Steel with an Electroless Nickel Finish
Weight (Per Grip, Without Jaw Faces)	kg	16.5	35
	lb	36.38	77.16
Temperature Range	°C	4 to 65	4 to 65
	°F	39 to 149	39 to 149
Operating Principle		Double Acting Piston, Wedge	Double Acting Piston, Wedge

## ACCESSORIES

<b>CP135054</b>	Durable specimen stops.
<b>CP137831</b>	Pneumatic grip control kit. Includes hoses for connection to the grips.
<b>2701-260</b>	Wedge adapter type Df static rating 100 kN. Adapter provides connection for mounting accessories without removing hydraulic grips. One adapter per catalog number. A low profile version (2701-258) is also available.



## JAW FACES

Catalog Number	Jaw Face Type	Specimen Thickness		Surface	Clamping Area (W × H)	
		mm	in		mm	in
2704-521	Flat	0 to 7.8	0 to 0.31	Serrated, 1 mm Pitch	50 × 57	2.0 × 2.25
2704-522	Flat	7.1 to 15.7	0.28 to 0.62	Serrated, 1 mm Pitch	50 × 57	2.0 × 2.25
2704-527	Flat	16.5 to 25.14	0.65 to 0.99	Serrated, 1 mm Pitch	50 × 57	2.0 × 2.25
2704-529	Flat	15.16 to 20.8	0.59 to 0.82	Serrated, 1 mm Pitch	50 × 57	2.0 × 2.25
2704-525	Flat	0 to 7.8	0 to 0.31	Carbide Coated	50 × 57	2.0 × 2.25
2704-526	Flat	7.1 to 15.7	0.28 to 0.62	Carbide Coated	50 × 57	2.0 × 2.25
2704-523	Vee	6.1 to 11.9	0.24 to 0.47	V - Serrated	57	2
2704-524	Vee	9.9 to 16.0	0.39 to 0.63	V - Serrated	57	2
2704-528	Vee	16.0 to 20.0	0.63 to 0.78	V - Serrated	57	2

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