INSTRON®

The difference is measurable®

PNEUMATIC SIDE-ACTION GRIPS

2712-05x

Instron® 2712-05x Series Pneumatic Side-Action Grips are packed with features to enhance gripping performance, usability, operator safety, and offer a versatile gripping solution for a wide range of materials.

The gripping force is controlled by adjusting the inlet air pressure while remaining constant even if the specimen thickness changes significantly during the test. The quick and easy operation of the grips improves productivity and usability compared to other types of gripping techniques. A pneumatic cylinder in the grip body actuates dual-lever arms that move the jaw faces together symmetrically in a self-centering action to clamp the specimen.

The grips are attached to the system by a simple clevis pin and incorporates ergonomically designed lock-nuts to eliminate backlash.The jaw faces can be easily changed single-handedly in seconds without the use of tools or pins.



FEATURES

- 50, 250 N options
- Robust design
- Dual-action gripping ensures the specimen self-centers
- Rotatable air inlet with air flow control improves hose runs and provides adjustable closing speed
- Unique locknut design removes backlash in the loadstring without the need for tools
- Jaw faces can be changed in seconds without the use of tools or pins
- Large space between the jaw faces and the grip body eases specimen insertion and reduces the risk of pinched fingers
- Excellent, repeatable gripping performance is assured by the robust, fully enclosed self-centering mechanism
- Enclosed design resists dirt and debris
- High-quality, low-maintenance components provide reliability and low cost of ownership
- Variety of jaw face sizes and surfaces
- Jaw face shields for the 250 N grip add another layer of protection for the operator, as well as designed with markings that help you to maintain proper specimen alignment
- The 250 N grip features an air valve to open/close the grips or there is an optional footswitch

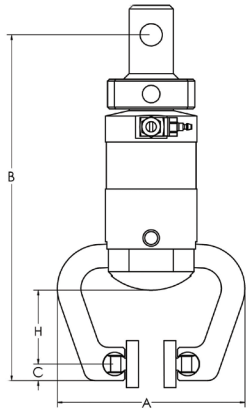
APPLICATION RANGE

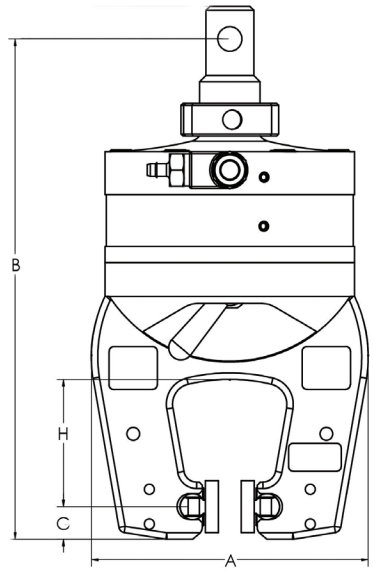
- Static tensile tests: Plastics, metals, textiles, paper, thin sheet, foil, and wire, film, monofilaments
- Type of loading: Tensile, static and tension-tension cyclic tests; not suitable for high-cycle dynamic fatigue tests
- Specimen shapes: Round (wires) and flat specimens with or without shoulder

SPECIFICATIONS









		2712-051	2712-052
Maximum Force Capacity	**N**	50	250[2]
Maximum Specimen Thickness		Refer to Jaw Face Table	Refer to Jaw Face Table
Upper Fitting		6 mm Clevis (Type Om)	6 mm Clevis (Type Om)
Lower Fitting		6 mm Clevis (Type Om)	6 mm Clevis (Type Om)
Overall Width (A)	**mm**	50.7	68.8
Effective Length (B)	**mm**	93.6	122.4
Jaw Center to Grip Edge (C)	**mm**	4.5	8.0
Single Grip Weight (less faces)	**g**	103	344
Temperature Range	**°C**	-20 to +100	-20 to +100
	°F	-4 to +212	-4 to +212
Maximum Air Pressure	**bar**	6	6
	psi	90	90
Gripping Force at 60/90 psi (4/6 bar) Air Pressure (mid-stroke)[1]	**N**	64/98	302/496

Notes:
1. Air supply should be clean and dry. Regulator to allow gripping force adjustment is highly recommended.
2. These grips can support loads up to 500 N but some specimens may slip at loads over 250 N. It is recommended to use serrated jaw faces for expected loads over 250 N.



Rotatable air inlet allows tidy hose runs and also features airflow adjustment



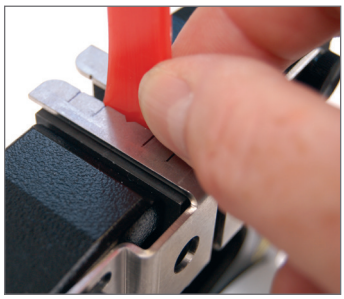
Airflow Adjustment valve on 50 N grip



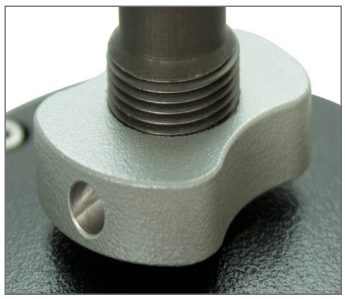
Integral air valve on 250 N allows use without footswitch if desired



Large throat size allows for easy specimen insertion



Jaw face shields on 250 N grips reduce pinch hazard and feature graduations to aid specimen placement



Unique check-nut design is quick and comfortable to use



Enclosed mechanism resists dirt and debris



Jaw face changes require no tools or pins

OPTIONAL ACCESSORIES FOR IMPROVED PRODUCTIVITY, EASE OF USE, AND REPEATABILITY

JAW FACES

Catalog Number	Type	W × H (mm)	Maximum Specimen Thickness (mm)		Weight per Face (g)
			2712-051	2712-052	
2702-360	Rubber-Coated	10 × 10	5.16	3.94	2.96
2702-361	Rubber-Coated	12 × 25	5.16	3.94	9.22
2702-362	Rubber-Coated	25 × 25	5.16	3.94	18.44
2702-363	Rubber-Coated	50 × 25	5.16	3.94	36.95
2702-365	Serrated	10 × 10	7.04	5.82	2.40
2702-366	Serrated	12 × 25	7.04	5.82	7.70
2702-367	Serrated	25 × 25	7.04	5.82	15.3
2702-368	Serrated	50 × 25	7.04	5.82	30.60
2702-370	Smooth	10 × 10	7.04	5.82	2.40
2702-371	Smooth	12 × 25	7.04	5.82	7.70
2702-372	Smooth	25 × 25	7.04	5.82	15.3
2702-373	Smooth	50 × 25	7.04	5.82	30.6
2702-375	Brake-Lining (HFC)	25 × 25	5.16	3.94	19
2702-376	Brake-Lining (HFC)	50 × 25	5.16	3.94	37
2702-377	Line-Contact / Smooth	25 / 25 × 25	7.04	5.82	3.99 / 15.3



RUBBER

For gripping threads, fabrics, plastic tapes, and materials where a compliant surface is beneficial.



SERRATED

For gripping plastics, metals, fabric, and soft materials, such as elastomers.



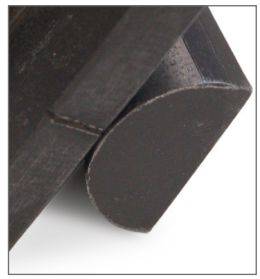
SMOOTH

For gripping films, foils, fine wires, thin sheets, and tapes.



BRAKE LINING

For gripping composite tows and other hard, but easily damaged, materials.



LINE CONTACT

For gripping paper and elasticated fabrics.

2701-20X JAW FACE SHIELDS

Jaw face shields reduce the possibility of getting fingers pinched during grip closure. They can be adjusted horizontally to suit the specimen thickness, which helps to centralize the specimen prior to grip closure. Each shield has graduations to assist in aligning the specimen vertically and a central notch that can be used to align wires and other small diameter specimens.

OPTIONAL ITEMS FOR USE WITH 2712-051[1]

2701-004	Pneumatic Footswitch[2]
2701-065	Automatic Distribution kit[3]
2701-095	Smart Close Air Kit

OPTIONAL ITEMS FOR USE WITH 2712-052[4]

2701-215	Jaw faces shields for faces 25 W × 25 H[4]
2701-042	Air distribution kit
2701-004	Pneumatic Footswitch[2]
2701-065	Automatic Distribution kit[3]
2701-095	Smart Close Air Kit

Notes:
1. Requires one of these options.
2. Not compatible with 3400 or 6800 systems
3. Compatible with 3300, 4400 (except 4411), 5500, 5800, 5900 series load frames and UPDATE Retrofits (excluding 4400/5500 retrofits to 113X Series, 4500 Series, and 6000 Series).
4. One set is included with grip.
5. At least one 2701-042, 004, or 065 is required for 2712-052



Jaw Face Shields reduce pinch hazards and have useful specimen alignment features



2701-065 Automatic Electrical Air Control Kit



2701-095 Smart Close Air Kit with Footswitch



2701-042 Universal Air Distribution Kit

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