

## PNEUMATIC SIDE ACTION GRIPS

### Description

These grips can be equipped with a selection of interchangeable grip jaw faces in various sizes and choice of surfaces including smooth ground, rubber coated and serrated. Line contact, wave profile and other special coated faces are also available.

Grip control may incorporate a footswitch allowing hands free operation for speed, simplicity-of-use and accuracy of specimen alignment within the grips. In addition, grip opening and closing can be controlled from the testing machine, providing features such as automatic pre-tension and grip release on specimen break.

### Principle of Operation

Pneumatic action grips clamp the specimen through a dual lever arm, actuated by air cylinders built into the grip body. The gripping force can be increased with air pressure to accommodate materials that are often difficult to hold. This constant gripping force is maintained on the specimen, and provides the ultimate in follow-up action to compensate for any decay in the gripping force. The grips are closed or opened by a pneumatic footswitch for hands-free operation. An automatic air kit is also available for both hands-free and automated testing via software or system default settings. The interchangeable jaw faces are mounted in such a manner that one face is free to swivel on a horizontal axis and the other on a vertical axis. This action allows for alignment to compensate for variations in sample thickness.



Pneumatic side action grip

### Application Range

- Type of loading: Tensile, static, tension-tension cyclic tests. Not suitable for high cycle fatigue tests
- Specimen material: Thin sheets, films, foils, threads, plastic tapes, fine wires and soft materials
- Specimen shapes: Round (wires) and flat specimen with/ without shoulder tab ends

# PNEUMATIC SIDE ACTION GRIPS



## Pneumatic Side Action

Catalog Number	Capacity	Upper Fitting	Lower Fitting	Upper Effective Length	Lower Effective Length	Accessory Width	Specimen Thickness	Temperature Rating	Accessory Weight
2712-001	0.005 kN (0.5 kgf, 1 lbf)	3/16 clevis pin (Type Bm)	1/2 clevis pin (Type Dm)	90 mm (3.5 in)	125 mm (5 in)	60 mm (2.4 in)	0 to 4 mm (0 to 0.161 in)	-29 °C to +82 °C (-20 °F to +180 °F)	0.095 kg (0.2 lb)
2712-002	0.250 kN (25 kgf, 50 lbf)	3/16 clevis pin (Type Bm)	1/2 clevis pin (Type Dm)	109 mm (4.3 in)	125 mm (5 in)	102 mm (4 in)	0 to 3.5 mm (0 to 0.125 in)	-29 °C to +82 °C (-20 °F to +180 °F)	0.280 kg (0.6 lb)
2712-003	1 kN (100 kgf, 225 lbf)	1/4 clevis pin (Type Cm)	1/2 clevis pin (Type Dm)	164 mm (6.5 in)	189 mm (7.5 in)	136 mm (5.3 in)	0 to 6.3 mm (0 to 0.25 in)	-29 °C to +82 °C (-20 °F to +180 °F)	1.4 kg (3 lb)
2712-004	1 kN (100 kgf, 225 lbf)	1/4 clevis pin (Type Cm)	1/2 clevis pin (Type Dm)	164 mm (6.5 in)	189 mm (7.5 in)	136 mm (5.3 in)	0 to 12.7 mm (0 to 0.5 in)	-29 °C to +82 °C (-20 °F to +180 °F)	1.4 kg (3 lb)
2712-012	10 kN (1,000 kgf, 2,250 lbf)	1/2 clevis pin (Type Dm)	1/2 clevis pin (Type Dm)	296 mm (11.6 in)	296 mm (11.6 in)	260 mm (9.8 in)	0 - 20 mm (0 to 0.78 in)	-29 °C to +82 °C (-20 °F to +180 °F)	12 kg (26.4 lb)
2712-013	0.005 kN (0.5 kgf, 1 lbf)	6 mm clevis pin (Type Om)	6 mm clevis pin (Type Om)	90 mm (3.5 in)	90 mm (3.5 in)	60 mm (2.4 in)	0 to 4 mm (0 to 0.161 in)	-29 °C to +82 °C (-20 °F to +180 °F)	0.095 kg (0.2 lb)
2712-014	0.250 kN (25 kgf, 50 lbf)	6 mm clevis pin (Type Om)	6 mm clevis pin (Type Om)	164 mm (6.5 in)	164 mm (6.5 in)	136 mm (5.3 in)	0 to 12.7 mm (0 to 0.5 in)	-29 °C to +82 °C (-20 °F to +180 °F)	1.4 kg (3 lb)
2712-015	1 kN (100 kgf, 225 lbf)	6 mm clevis pin (Type Om)	6 mm clevis pin (Type Om)	164 mm (6.5 in)	164 mm (6.5 in)	136 mm (5.3 in)	0 to 6.3 mm (0 to 0.25 in)	-29 °C to +82 °C (-20 °F to +180 °F)	1.4 kg (3 lb)
2712-016	2 kN (200 kgf, 450 lbf)	1/4 clevis pin (Type Cm)	1/2 clevis pin (Type Dm)	230 mm (9 in)	240 mm (9.5 in)	166 mm (6.5 in)	0 to 12.7 mm (0 to 12.7 in)	-29 °C to +82 °C (-20 °F to +180 °F)	4.2 kg (5.3 lb)
2712-017	5 kN (500 kgf, 1,125 lbf)	1/2 clevis pin (Type Dm)	1/2 clevis pin (Type Dm)	214 mm (8.4 in)	214 mm (8.4 in)	249 mm (9.8 in)	0 to 20 mm (0 to 0.78 in)	-29 °C to +82 °C (-20 °F to +180 °F)	6 kg (13.2 lb)



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### Items for Use with 2712-002, 2712-014

Catalog Number	Description	Page Number
2702-010	Jaw faces for flats (line contact, 25 mm)	229
2702-002	Jaw faces for flats (rubber-coated, 12 mm x 25 mm)	229
2702-005	Jaw faces for flats (rubber-coated, 25 mm x 25 mm)	229
S1-11613-1	Jaw faces for flats (rubber-coated, 100 mm x 25 mm)	229
2702-008	Jaw faces for flats (rubber-coated, 50 mm x 25 mm)	229
2702-003	Jaw faces for flats (serrated, 12 mm x 25 mm)	229
2702-006	Jaw faces for flats (serrated, 25 mm x 25 mm)	229
2702-009	Jaw faces for flats (serrated, 50 mm x 25 mm)	229
2702-001	Jaw faces for flats (smooth, 12 mm x 25 mm)	229
2702-004	Jaw faces for flats (smooth, 25 mm x 25 mm)	229
2702-007	Jaw faces for flats (smooth, 50 mm x 25 mm)	229
S1-11613-2	Jaw faces for flats (smooth, 100 mm x 25 mm)	229
2702-042	Jaw faces for flats (compound, 25 mm x 25 mm)	229
2702-043	Jaw faces for flats (compound, 50 mm x 25 mm)	229

### Items for Use with 2712-003, 2712-004, 2712-015, 2712-016

Catalog Number	Description	Page Number
2702-020	Jaw faces for flats (line contact, 25 mm)	230
2702-062	Jaw faces for flats (line contact, 75 mm)	230
2702-012	Jaw faces for flats (rubber-coated, 12 mm x 38 mm)	230
2702-032	Jaw faces for flats (rubber-coated, 25 mm x 25 mm)	230
2702-015	Jaw faces for flats (rubber-coated, 38 mm x 25 mm)	230
2702-018	Jaw faces for flats (rubber-coated, 50 mm x 38 mm)	230
2702-035	Jaw faces for flats (rubber-coated, 75 mm x 25 mm)	230
2702-013	Jaw faces for flats (serrated, 12 mm x 38 mm)	230
2702-033	Jaw faces for flats (serrated, 25 mm x 25 mm)	230
2702-016	Jaw faces for flats (serrated, 38 mm x 25 mm)	230
2702-019	Jaw faces for flats (serrated, 50 mm x 38 mm)	230
2702-059	Jaw faces for flats (serrated, 75 mm x 25 mm)	230
2702-011	Jaw faces for flats (smooth, 12 mm x 38 mm)	230
2702-031	Jaw faces for flats (smooth, 25 mm x 25 mm)	230
2702-014	Jaw faces for flats (smooth, 38 mm x 25 mm)	230
2702-017	Jaw faces for flats (smooth, 50 mm x 38 mm)	230
2702-034	Jaw faces for flats (smooth, 75 mm x 25 mm)	230
2702-044	Jaw faces for flats (compound, 38 mm x 25 mm)	230
2702-045	Jaw faces for flats (compound, 50 mm x 38 mm)	230



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Items for Use with 2712-012, 2712-017 ✓

Catalog Number	Description	Page Number
2702-107	Jaw faces for flats (rubber-coated, 25 mm x 25 mm)	231
2702-110	Jaw faces for flats (rubber-coated, 50 mm x 25 mm)	231
2702-098	Jaw faces for flats (rubber-coated, 50 mm x 50 mm)	231
2702-101	Jaw faces for flats (rubber-coated, 75 mm x 50 mm)	231
S1-12651-3	Jaw faces for flats (rubber-coated, 25 mm x 75 mm)	231
2702-104	Jaw faces for flats (rubber-coated, 150 mm x 50 mm)	231
2702-108	Jaw faces for flats (serrated, 25 mm x 25 mm)	231
2702-111	Jaw faces for flats (serrated, 50 mm x 25 mm)	231
2702-099	Jaw faces for flats (serrated, 50 mm x 50 mm)	231
2702-102	Jaw faces for flats (serrated, 75 mm x 50 mm)	231
S1-12651-2	Jaw faces for flats (serrated, 75 mm x 25 mm)	231
2702-105	Jaw faces for flats (serrated, 150 mm x 50 mm)	231
2702-106	Jaw faces for flats (smooth, 25 mm x 25 mm)	231
2702-109	Jaw faces for flats (smooth, 50 mm x 25 mm)	231
2702-097	Jaw faces for flats (smooth, 50 mm x 50 mm)	231
2702-100	Jaw faces for flats (smooth, 75 mm x 50 mm)	231
S1-12651-1	Jaw faces for flats (smooth, 75 mm x 25 mm)	231
2702-103	Jaw faces for flats (smooth, 150 mm x 50 mm)	231
2702-112	Jaw faces for flats (waved profile, 50 mm x 50 mm)	231
2702-113	Jaw faces for flats (waved profile, 75 mm x 50 mm)	231
2702-114	Jaw faces for flats (compound set, 70 mm diameter)	231
2702-118	Jaw faces for flats (compound/ soft, 70 mm diameter)	231
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