

HIGH/LOW TEMPERATURE PNEUMATIC SIDE ACTION GRIPS

2 kN and 10 kN

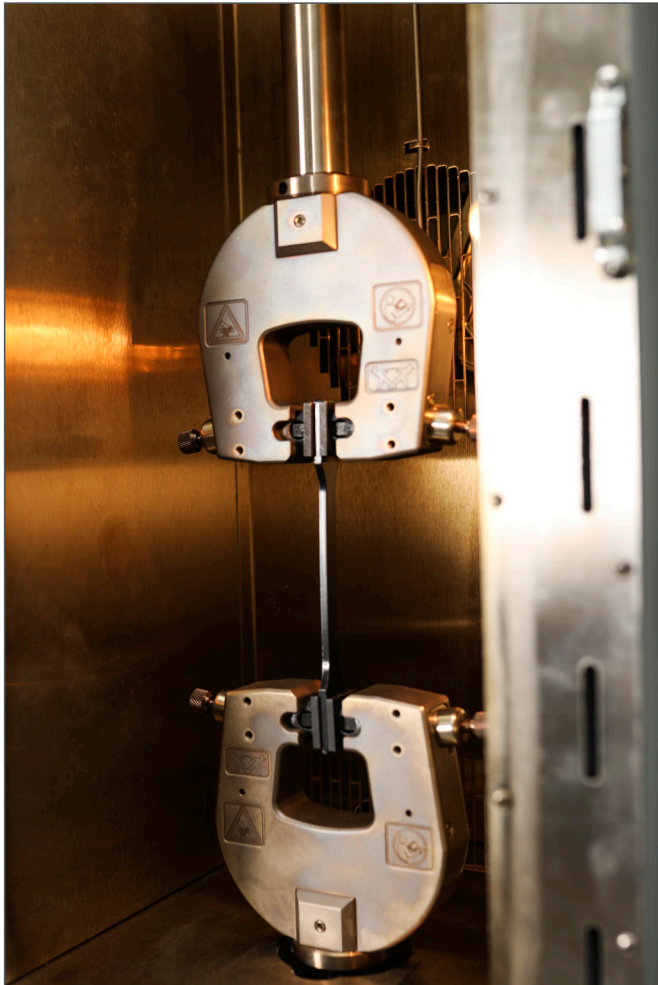


Pneumatic side-action grips offer a versatile gripping solution for a wide range of materials. Instron's 2 kN and 10 kN High/Low Temperature Pneumatic Grips provide the added ability to perform tests in non-ambient environments when performing testing in an environmental chamber. The grips are equipped with integrated pull-rods in order to properly fit in the chamber while allowing maximum specimen elongation and crosshead travel. This integrated pull rod design means that no additional pull rods are required. With a temperature range of -73°C to 316°C , these grips can test many types of specimens at both elevated and sub-ambient temperatures.

The gripping force is controlled by adjusting the inlet air pressure and remains 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. With an environmental chamber in mind, this means less time with the door open and increased safety for users.

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 2 kN and 10 kN model features jaw face adjustment to minimize the opening to the thickness of the specimen to further reduce the risk of pinching. The 10 kN model also features adjustable jaw face offset for irregular specimens, such as lap-shear or components. Jaw faces can be changed single-handedly in seconds without the use of tools or pins.

| | | CP122505 | CP124893 | CP125726 | CP126077 |
|--------------------------------|------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Force Capacity | kN | 2 | 2 | 2 | 10 |
| Frame Capability | | 596X-E2 | 596X-E2 | 5967-F2 or 5982-E1 F1 | 596X-E2 |
| Chamber Compatibility | | 3119-609 or 3119-606 | 3119-615 | 3119-616 | 3119-609 |
| Chamber Internal Height | mm | 660 or 560 | 860 | 900 | 660 |
| Grip Separation Inside Chamber | mm | 7-390 or 7-300 | 7-432 | 7-332 or 7-440 | 13-340 |
| Maximum Specimen Thickness | mm | 13 | 13 | 13 | 26 |
| Maximum Jaw Face Travel | mm | 13 | 13 | 13 | 8 |
| Upper Fitting | | 6 mm clevis pin, male | 6 mm clevis pin, male | 6 mm clevis pin, male | 0.5 inch clevis pin, male |
| Lower Fitting | | adapter plate to base of frame | adapter plate to base of frame | adapter plate to base of frame | adapter plate to base of frame |
| Maximum Air Pressure | bar psi | 6 90 | 6 90 | 6 90 | 6 90 |
| Gripping Force at 60/90 psi | kN | 1.5/2.3 | 1.5/2.3 | 1.5/2.3 | 15.9/23.9 |



2 kN High Temperature Pneumatic Grips in Chamber



10 kN High Temperature Pneumatic Grips in Chamber shown at sub-ambient temperature

Optional Accessories for Improved Productivity, Ease of Use, and Repeatability

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. Each grip is supplied with two sizes of jaw face shields.

OPTIONAL ITEMS FOR USE WITH 2712-04X SERIES

| | |
|-----------------|-----------------------------------------------------------------------------------------------------|
| 2701-201 | Jaw face shields for faces 38 W × 25 H on 1 and 2 kN grips ¹ |
| 2701-202 | Jaw face shields for faces 50 W × 38 H on 1 and 2 kN grips ¹ |
| 2701-203 | Jaw face shields for faces 75 W × 25 H on 1 and 2 kN grips |
| 2701-210 | Jaw face shields for faces 50 W × 50 H on 1 and 2 kN grips |
| 2701-207 | Jaw face shields for faces 50 W × 25 H on 10 kN grips 2712-046 ² |
| 2701-208 | Jaw face shields for faces 75 W × 50 H on 10 kN grips 2712-046 ² |
| 2701-209 | Jaw face shields for faces 75 W × 25 H on 10 kN grips 2712-046 |
| 2701-221 | Specimen holders with integral specimen alignment device for 2712-041 and 2712-042 Pneumatic Grips. |
| 2701-222 | Specimen holders with integral specimen alignment device for 2712-045 and 2712-046 Pneumatic Grips. |
| 2701-042 | Air Distribution Kit |
| 2701-004 | Pneumatic Footswitch |
| 2701-065 | Automatic Air Control Kit ³ |
| 2701-095 | Smart Close Air Kit ⁴ |

Notes:

1. Included with 2 kN capacity grips
2. Included with 10 kN capacity grips
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. Compatible with 3400 and 6800 series load frames

Jaw Face Surfaces

Each jaw face has a center mark on all four sides that helps you easily align your specimen.



Brake Lining

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



Line Contact

For gripping paper and elasticated fabrics.



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.



Vee Serrated

For gripping larger diameter rounds, such as thicker metal wires, tubes, and hard plastic.

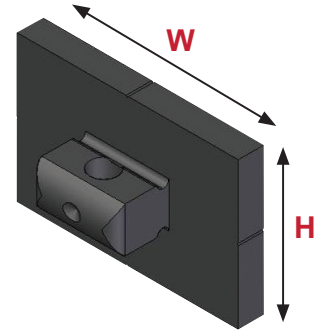


Wave Profile

For gripping coated fabrics, tough foils and engineering textiles.

JAW FACES

| Catalog Number | Type | W × H (mm) | Maximum Specimen Thickness (mm) | |
|----------------|--------------------|---------------|---------------------------------|-------------|
| | | | 2 kN Grips | 10 kN Grips |
| 2702-300 | Rubber-coated | 25 × 25 | 11 | 24 |
| 2702-301 | Rubber-coated | 25 × 38 | 11 | 24 |
| 2702-302 | Rubber-coated | 25 × 50 | 11 | 24 |
| 2702-303 | Rubber-coated | 38 × 12 | 11 | 24 |
| 2702-304 | Rubber-coated | 38 × 25 | 11 | 24 |
| 2702-305 | Rubber-coated | 38 × 50 | 11 | 24 |
| 2702-306 | Rubber-coated | 50 × 25 | 11 | 24 |
| 2702-307 | Rubber-coated | 50 × 38 | 11 | 24 |
| 2702-308 | Rubber-coated | 50 × 50 | 11 | 24 |
| 2702-309 | Rubber-coated | 75 × 25 | 11 | 24 |
| 2702-310 | Rubber-coated | 75 × 50 | 6 | 19 |
| 2702-311 | Rubber-coated | 150 × 50 | 6 | 19 |
| 2702-315 | Serrated | 25 × 25 | 13 | 26 |
| 2702-316 | Serrated | 25 × 38 | 13 | 26 |
| 2702-357 | Serrated | 25 × 50 | 13 | 26 |
| 2702-318 | Serrated | 38 × 12 | 13 | 26 |
| 2702-319 | Serrated | 38 × 25 | 13 | 26 |
| 2702-320 | Serrated | 38 × 50 | 13 | 26 |
| 2702-321 | Serrated | 50 × 25 | 13 | 26 |
| 2702-322 | Serrated | 50 × 38 | 13 | 26 |
| 2702-323 | Serrated | 50 × 50 | 13 | 26 |
| 2702-324 | Serrated | 75 × 25 | 13 | 26 |
| 2702-325 | Serrated | 75 × 50 | 8 | 21 |
| 2702-326 | Serrated | 150 × 50 | 8 | 21 |
| 2702-330 | Smooth-ground | 25 × 25 | 13 | 26 |
| 2702-331 | Smooth-ground | 25 × 38 | 13 | 26 |
| 2702-332 | Smooth-ground | 25 × 50 | 13 | 26 |
| 2702-333 | Smooth-ground | 38 × 12 | 13 | 26 |
| 2702-334 | Smooth-ground | 38 × 25 | 13 | 26 |
| 2702-335 | Smooth-ground | 38 × 50 | 13 | 26 |
| 2702-336 | Smooth-ground | 50 × 25 | 13 | 26 |
| 2702-337 | Smooth-ground | 50 × 38 | 13 | 26 |
| 2702-338 | Smooth-ground | 50 × 50 | 13 | 26 |
| 2702-339 | Smooth-ground | 75 × 25 | 13 | 26 |
| 2702-340 | Smooth-ground | 75 × 50 | 8 | 21 |
| 2702-341 | Smooth-ground | 150 × 50 | 8 | 21 |
| 2702-345 | Brake-lining (HFC) | 25 × 38 | 10 | 23 |
| 2702-346 | Brake-lining (HFC) | 38 × 25 | 10 | 23 |
| 2702-347 | Brake-lining (HFC) | 50 × 38 | 10 | 23 |
| 2702-350 | Line-contact | 25 | 13 | 26 |
| 2702-351 | Line-contact | 75 | 13 | 26 |
| 2702-352 | Wave-profile | 50 × 50 | Not Compatible | 12.5 |
| 2702-353 | Wave-profile | 75 × 50 | Not Compatible | 12.5 |
| 2702-354 | Vee-serrated | 3 - 6.5 × 25 | 6.5 | 6.5 |
| 2702-355 | Vee-serrated | 6 - 18.5 × 25 | 7 | 18.5 |



Notes:

1. Catalog number provides four faces
2. Surfaces are hardened to 50 to 55 Rc (excluding rubber and brake lining surfaces)
3. Line contact faces are provide with a smooth-ground opposing face
4. Rubber-coated jaw faces have a temperature range of -20 °C to 115 °C (-4 °F to 240 °F)

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