

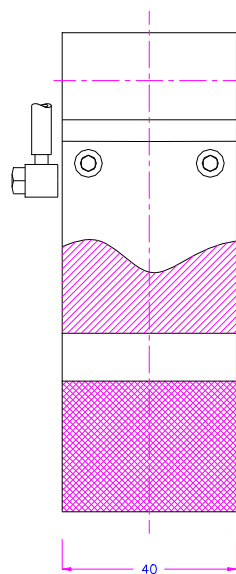
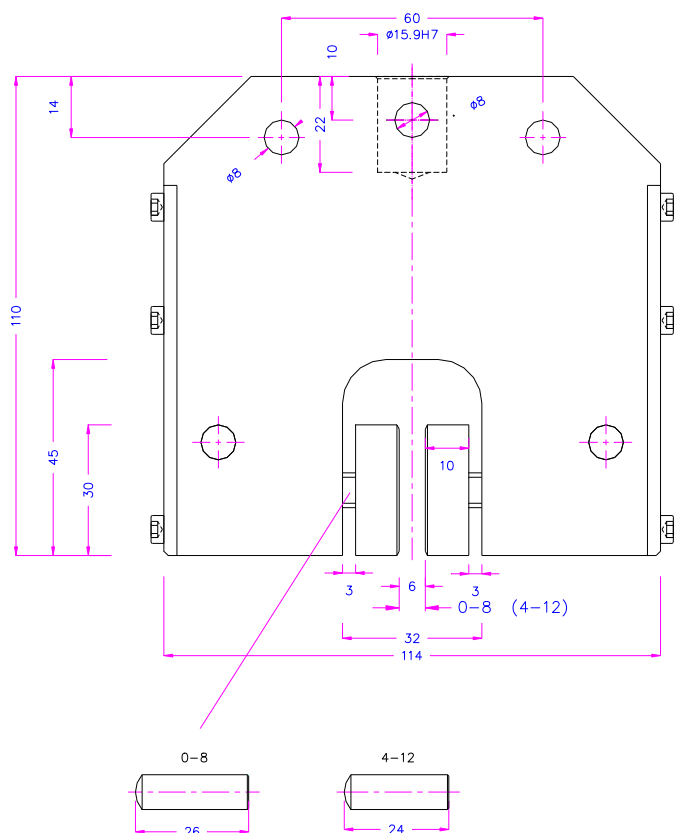
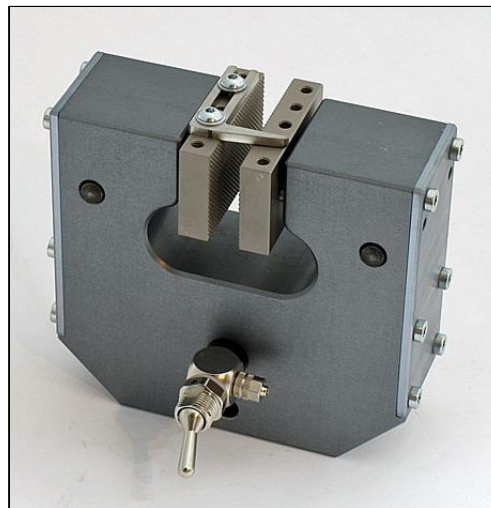
## G149 Pneumatic Grips

Rated to 2.4 kN (540 lb)

Model	G149
Thickness Ranges	0 to 6 mm (0.24") 3 to 9 mm (0.35") 6 to 12 mm (0.47")
Tare Weight	1.4 kg
Maximum Capacity	1200 N (270 lb)
Maximum Clamp Force	2400 N (540 lb)
Mechanical Interface	15.9 mm (5/8") cup with 8 mm pin

### Interchangeable Jaws or Faces

50 mm wide Jaw	
J149B50	Smooth Surface 30x50mm
J149BG50	Rubber Faced 30x50mm
J149BP50	Pyramid Serrated 1x45° 30x50mm
J149BW50	Wave 30x50mm
J149BV2	V Jaw- for round sample 1-2 mm Ø 30x50mm
J149BD50	Diamond Grit 30x50mm



**Applications** Pneumatic grips use air pressure to actuate cylinders to provide constant clamp loads to test specimens of a wide variety. They are best suited to the following mechanical testing needs:

- High volume tests where opening and closing actions are repetitive for operators.
- Sensitive or fragile test samples where clamping can cause failure or where multiple tests are performed. Many times, it can be desirable to test all samples under constant clamping conditions.
- High elongation tests where the samples shrink as they are pulled. If the sample stretches (e.g. plastics and rubber), the sample can pull out of mechanical action clamps. Air cylinders can adjust to the changing conditions and hold -- regardless of sample deformation.
- Testing materials such as
  - Textiles & Geotextiles
  - Sheets, Thin Films, Foils - Flat specimens
  - Thread, wire, rope – Round shapes
  - Soft materials
  - Lap Shear samples
  - Soft Tissues & Medical Devices
  - Peel and adhesion tests
  - Delicate films, polymers & woven fabrics

### General Notes

- Clamp Force Ratings are based on 7 bar (100 psi) air pressure
- Standard grips may be used in chambers from -40C to 70C. Optional seals are available to increase the range to 190C and 280C.
- Anti-corrosion coatings available on all grips and recommended in low temperature applications to protect grip from corrosion damage.

### Power Pack Accessories & Air Kits



**G205-1 Foot pedals without Lock Feature** The grip jaws open by pressing the foot pedal and then they close after removing the foot from the pedal.



**G205-2 Foot pedals WITH LOCK** The grip jaws open by pressing the foot pedal and remain opened after removing the foot from the pedal. The jaws close by pressing the pedal one more time.



**G205P Pressure regulator** - Optional for G205-1 or G205-2 - To adjust air pressure: 1-10 bar (140 psi)



**G205-3 Hand switches WITH LOCK** The grip jaws close by pulling the handle and remain closed. The jaws open by pushing the handle back.



**G205-4 Hand switches WITH LOCK** - The hand switches are directly mounted at the grips.



**G216 Super Quiet Compressor for laboratories, oil-lubricated**  
 Max pressure 16 bar (225 psi), 230V (110V optional), noise level: 38dB(A)/1m  
 Displacement ~5 l/min.

**Interchangeable Jaws or Faces** are available on all grips. All jaws are hardened steel (excluding rubber faced jaws or unless noted). Non-standard surfaces and sizes are made to order.

**Smooth Jaws** – for smooth surfaced materials.

**Serrated Jaws** – also called 'pyramid', 'diamond cut' or 'knurled' - for materials requiring a 'bite' such as paper, aluminum, copper, board, steel, wire and soft steels.

**Rubber Faced Jaws** – for relatively fragile samples weakened by pinching at the edge of the grip face - monofilaments, wire, film, single fibers, and aluminum.

**Diamond Grit** – aggressive surface for soft steels, rigid plastic and wood.

**Grab Tests** – for grabbing textiles, leather and fabrics per ASTM D2208, D5034, D1683 and D4632.

**Wave** – provide a deeper bite (5 mm typical) for testing 'slippery' test samples including tissues, textiles, and fabrics.

**V Jaws** – round test bars, wire, tubing and rod.

**Line Contact** – testing thin films (ASTM D882) and foils where a gage section is important.