



# Materials Testing Accessories Newsletter

## In this Issue: Precision Manual Wedge Grips

The new Instron® Precision Series Manual Wedge Grips provide  accurate, repeatable, reliable gripping for alignment-sensitive tensile testing applications. They are based on the proven "moving body" approach, where the grip faces move horizontally to ensure minimal induced loads and excellent repeatability. Suitable for testing in compression with the proper adapters, the grips can be used from -80 to +250 °C (-112 to +482 °F) without changing lubricants.

### Alignment

These 100 kN (22,000 lbf) and 250 kN (56,000 lbf) capacity grips are designed specifically for applications where alignment is paramount - such as those governed by Nadcap maximum bending requirements. They are machined to tight tolerances, are symmetrical side to side and front to back, include a "floating base" for X-Y alignment, and provide anti-rotation for highly repeatable testing. In the proper load frame with the proper accessories (check with the factory), these grips are guaranteed to meet Nadcap AC7101 (metals) or AC7122 (composites).

### Features

- Made for Alignment: The Precision Wedge Grips include a "floating base" that allows the user to align the upper and lower grips to each other by making small adjustments to the lower grip in the X-Y plane.

[Watch Now: Grip Alignment Video](#)

- Front Loading: Flat specimens are easily loaded from the front of the grips.
- Easy Clamping: A standard female 1/2" drive is provided on the front of the grip for opening and closing. An internal "worm gear" provides high torque magnification so only a small amount of torque is required to clamp/unclamp test specimens. Furthermore, the gear ratio is such that only one or two turns of the handle are required to clamp or unclamp each specimen.
- Removable Handle: The female drive socket allows the clamping/unclamping tool to be removed between each test. Therefore, for non-ambient testing, the handle is always at room temperature (outside the chamber), making grip operation much safer for high or low temperature testing.
- Compression Testing: Whereas the grips are designed for tensile testing, they can also be used for compression testing with the proper adapters. "Piggy-back" compression platens and adapters allow compression fixtures and lower force load cells to be attached in series, thus avoiding the need to remove these heavy grips between setups.



- High and Low Temperature: These grips can be used over the range of -80 to +250 °C (-112 to +482 °F) without changing lubricants.
- Debris Resistant: Special sealing is built-in to prevent carbon fiber or corrosion/surface materials to contaminate the gripping mechanism. Easy-to-clean surfaces make for a high-use, low-maintenance grip.
- Simple Jaw Face Changes: The 250 kN Precision Grips use jaw face carriers with spring-loaded pins to make changing faces easy.



- Specimen Stops: Heavy-duty, machined specimen stops are designed to ensure repeatable specimen positioning under the most demanding applications.

## More Information on Precision Manual Wedge Grips

### Additional Testing Capability

The adaptor plates and or compression platens allow you to test to the standards listed below and many other international standards by using [specific fixtures](#) placed between the grips.

- ASTM D3410 (IITRI)
- ASTM D6641 (CLC)
- ASTM C297 C273 (Shear)
- ASTM D5379 (Shear)
- ASTM D4255A (Shear)
- ASTM D7078 (Shear)
- ASTM D695 and 3846 (Anti-Buckling)
- Boeing BSS7260, SACMA SRM-1
- ASTM D6484 (Open Hole Compression)
- ASTM D7137 (Compression After Impact)
- ASTM 1-0010 (Compression After impact)

### Related Links

- [Sixth Edition of the Accessories Catalog](#) for Materials Testing is now available!
- Missed previous issues of the Accessories Newsletter? [Catch up at the Instron Library](#). Follow the link and select "Newsletter" as the Document Type
- Visit our [Testing Solutions](#) to find technical tips relevant to your testing application.



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