

# Western Instruments

www.westerninstrument.com

Established 1965

## *Contact Point Extension (N88-X)*

All of Western Instruments Pit Gauges have a range of just slightly over 12.7mm or 0.500", with any one of our 3 types of Contact Points. However, during some inspections, this range is simply not enough. To increase the range of our Pit Gauges, Western offers a Contact Point Extension (N88-X). These Extensions are machined to extend the depth of the Contact Point by 12.7mm or 0.50", thus a properly zeroed Pit Gauge will have a range of 12.7mm to 25.4mm or 0.50" to 1.00".



The picture to the right shows 3 identical Reaching Pit Gauges (with Imperial Dial Indicators) or N88-5. The top Gauge is fitted with a #1 or Standard Contact Point, the middle Gauge is fitted with a single Extension (and a #1 Contact Point), while the bottom Gauge is identical but fitted with two Extensions. Where ever extra range is required, the operator simply adds a Contact Point Extension. The operator must be mindful to add the length of an Extension to his overall depth measurement and if he doesn't he will have an identical error equal to the length of the extension(s) used.

Like any machined part, there are differences from one to another. This is why our literature states that there could be an error to the Contact Point Extensions of  $\pm 0.05\text{mm}$  or  $0.002"$ . Greater errors may also be introduced by not tightening either a Contact Point, or Contact Point Extension, enough. Further, using two or more Contact Point Extensions will add (or subtract) error. Therefore, it is always important to re-zero a Pit Gauge that has had a Contact Point, and/or a Contact Point Extension, added or removed.

Mostly operators must be mindful when using Contact Point Extensions and the importance of holding the Gauge Normal" (or perpendicular) to the work piece. Due to the use of the knife edge, on the majority of our Pit Gauges, zeroing on a surface is rather forgiving in that the end of the Contact Point remains in the Centerline of the Blade. This is basically illustrated to the right, even though the camera was not lined up to the blade, where the contact point remains in contact with the surface even when the gauge is 15 to 20° off normal.

While Contact Point Extensions are a handy accessory to any of Western's Pit Gauges. This write-up serves as instructions for the operator, when using Extensions but also just for general use of a Pit Gauge.

