

Torque Off Fasteners

Avoid Using Impact Drivers

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Many hanger manufacturers express reservations and concerns regarding the use of impact drivers to tighten and secure torque off fasteners. These manufacturers counsel against this usage because they believe impact driver mechanics conflict with proper torque off fastener application.

I agree that impact drivers produce inconsistencies in torque off fastener application. They take the “human mind” out of the process and mechanics of fastener application. Substituting robotic leverage in lieu of the accuracy produced by “feel and touch” is not desirable, nor conservative. The resultant erroneous values for torque negatively impact the NFPA 13 hangers listed performance.

Some phenomena of potential concern regarding a hangers listing:

Compounding effect on tightening and thread engagement produced by speed induced momentum of rotation.

Over rotation compounds torsion which produces excess axial torque values that are unquantifiable.

Over rotation can increase leverage within hanger component architecture, thus weakening listed design.

Over rotation compromises the fasteners tightness and thus its potential grip or hold.

The interface of the fastener with the geometry of the hanger and the building structure is an important feature to the listing and performance of the hanger. Proper fastener engagement produces uniform hold and mounting characteristics corresponding to NFPA 13 mechanics required by the hangers listing.



Kraig Kirschner is a third generation fire sprinkler contractor and a journeyman fitter. He is a Principal Member of NFPA 13 - Hanging and Bracing Technical Committee and serves on Standard Technical Panels of UL 203, UL 203A and FM 1950. Kraig is a Life Member of the National Fire Protection Association and was named Person of the Year in 2009 Fire Protection Contractor Magazine. He holds dozens of patents that enhance the installation and application of hangers and sway braces.