

# TECH SHEET

## PEM® REF/ NUT FOR HARD PANELS

### SUBJECT: SELF-CLINCHING NUT FOR USE IN HIGH STRENGTH (HSLA) STEELS



Installs into s700 HSLA sheets up to 950MPa (hardness up to 25HRC) and as thin as 0.8mm. Thread sizes include M6, M8, M10, 1/4-20, 5/16-18, 3/8-16 and 7/16-20.

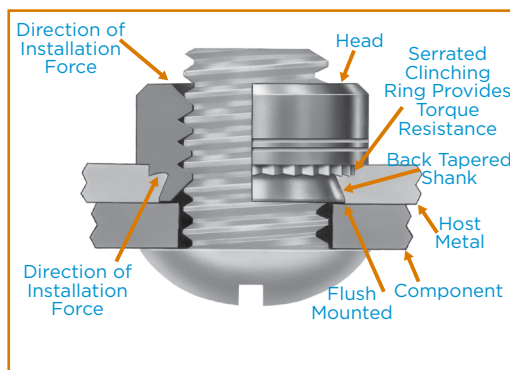
#### Hard panel nuts specifically designed to meet the challenges of today's automotive assembly and design:

- Installs into thinner, harder, high strength steel materials
- Allows overall weight reduction for all vehicles
- Addresses environmental / recycle concerns
- Provides lower installed cost
- Allows component standardization



#### Compare to other thin sheet fastening devices:

- Smaller outer diameter
- Lighter weight
- Flush on reverse side of panel
- Close to edge of panel mounting
- No embossing required
- Hardened nut material provides stronger thread strength
- Can be installed automatically using press or in-die technology



#### Basics of self-clinching:

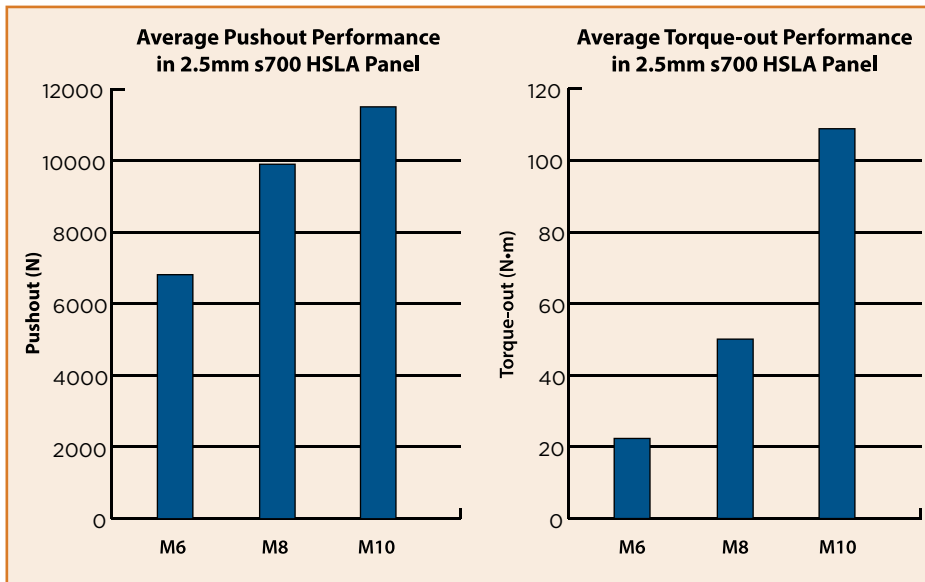
- Reduction of loose hardware
- Installed permanently by simple pressing into properly sized mounting hole
- No embossing or secondary operations are necessary
- Panel can be prefinished
- No weld issues or concerns

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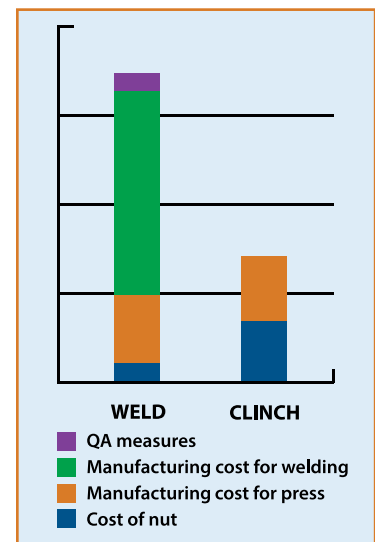
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### Performance data for PEM® hard panel self-clinching nut (1)



### Process cost saving using in-die installation



(1) This is not a specification. Performance testing of this product in your application is recommended.

### PennEngineering manufactures a wide range of autoPEM® parts for the automotive industry

