



PennEngineering

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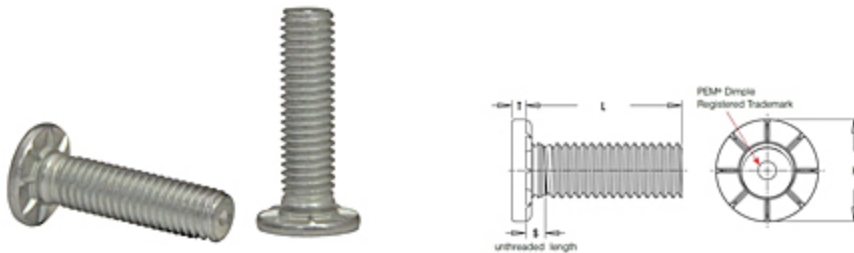
Website: www.pemnet.com

Part # HFLH-0420-20ZI, Type HFLH™ Hard Panel Studs - Unified

- Installs into thinner, harder, high strength steel materials (high strength steel sheets up to 700 MPa maximum ultimate tensile)
- Allows overall weight reduction for all vehicles
- Provides lower installed cost

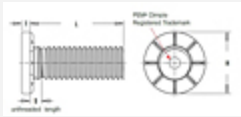
Compare to other thin sheet fastening devices:

- Addresses environmental concerns
- Lighter weight
- Close to edge of panel mounting
- No embossing required
- Hardened stud material provides stronger thread strength
- Can be installed automatically using press or in-die technology



Specifications

| | |
|-------------|------------------|
| Thread Size | .250-20 (1/4-20) |
| Thread Code | 0420 |
| Length Code | 20 |

| | |
|--|---|
| Min. Sheet Thickness | .040 in |
| Hole Size in Sheet + .005 - .000 | .250 in |
| L - Length ± .015 | 1.25 in |
| |  |
| H ± .01 | .462 in |
| S Max.¹ | .118 in |
| T Max. | .060 in |
| Max. Hole in Attached Parts | .340 in |
| Min. Dist. Hole C/L to Edge | .470 in |
| Tensile strength | 120 ksi |
| For Use in Sheet Hardness² | HRB 96 / HB 216 or Less |
| Thread Specification | External, ASME B1.13M, 6g B1.1, 2A / ASME |
| Fastener Material | Heat-Treated Alloy Steel |
| Standard Finish | Zinc plated per SC1 (5µm), Type ASTM B633, III, colorless |
| CAD Supplier | PennEngineering® (PEM®) |

¹ Threads are gageable to within 2 pitches of the "S" Max. dimension. A class 3B/5H maximum material commercial nut shall pass up to the "S" Max. dimension.

² HRB - Hardness Rockwell "B" Scale. HB - Hardness Brinell