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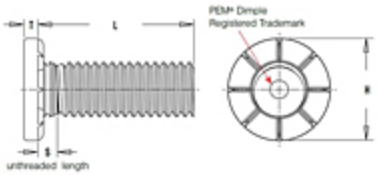
Part # HFLH-M5-15X, Type HFLH™ Hard Panel Studs - Metric

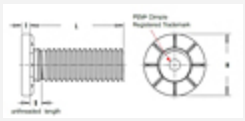
- Installs into thinner, harder, high strength steel materials (high strength steel sheets up to 700 MPa maximum ultimate tensile)
- Allows overall weight reduction for all vehicles
- Provides lower installed cost

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 x Pitch	M5 x 0.8
Thread Code	M5
Length Code	15
Min. Sheet Thickness	1.0 mm

Hole Size in Sheet + 0.13	5 mm
L - Length ± 0.4	15 mm 
H ± 0.25	9.6 mm
S Max.[1]	2.6 mm
T Max.	1.35 mm
Max. Hole in Attached Parts	7.3 mm
Min. Dist. Hole C/L to Edge	10 mm
Tensile strength	900 MPa
For Use in Sheet Hardness[2]	HRB 96 / HB 216 or Less
Thread Specification	External, ASME B1.1, 2A / ASME B1.13M, 6g
Fastener Material	Heat-Treated Alloy Steel
Optional Finish[3]	No Finish (with Rust Preventative Oil)
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

[3] “X” suffix studs may have pitch diameters and major diameters below 2A “Basic”, per ANSI B1.1, Section 7, and B1.13M, Section 8 to allow for minimum of 0.0002” / 0.0051 mm of plating.