





HPFH SELF CLINCHING STUDS *have been designed to bring higher levels of performance to the PFH range of fasteners for applications that do not demand a flush head condition.*

ADVANTAGES

-  EASY ASSEMBLY WITH ANY SQUEEZE PRESS
-  HIGH TORQUE RESISTANCE
-  VISUAL PROOF OF SECURITY
-  MADE FROM THROUGH HARDENED STEEL FOR HIGH THREAD STRENGTH (EQUIVALENT TO GRADE 10.9)



DESIGN GUIDE

HOLE PREPARATION

It is recommended that the holes are formed using a punch operation, although drilled holes may be used. In all cases the holes must be free from burrs.

HOLE SIZE

Holes must be held to a tolerance of $-0.00 +0.13\text{mm}$.

INSTALLATION

This must always be carried out using a squeeze action to a depth of penetration controlled by the recess in the installation punch. (See page 25 for punch details)

HPFH studs are not designed to give a flush head condition.

SHEET THICKNESS

A countersunk bottom anvil is required for sheet thicknesses between the following ranges:

M4	0.80 - 1.19		
M5	0.90 - 1.29	10 unified	.036 - .049
M6	1.00 - 1.49	1/4 unified	.040 - .059
M8	1.50 - 1.99	5/16 unified	.060 - .074

A reduction in performance will be experienced when using thin sheet (see page 25).

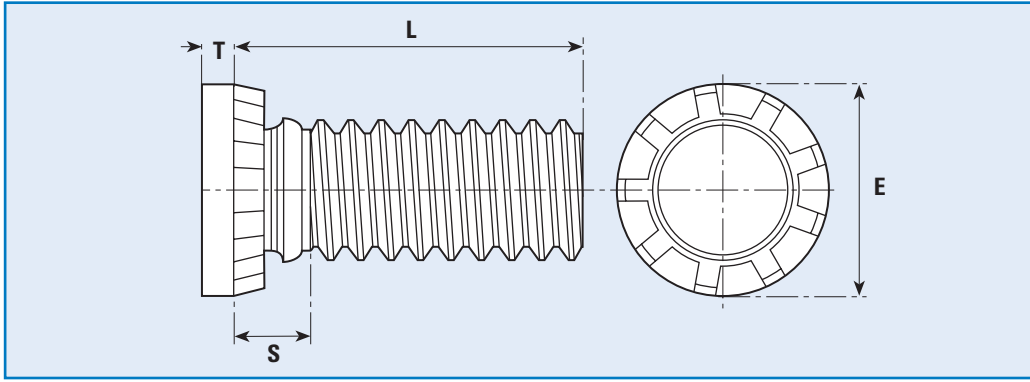
SHEET HARDNESS

This must be less than 150HV (80RB).

TECHNICAL DATA

HPFH TYPE

HPFH SELF CLINCHING STUD



STANDARD MATERIAL - Through Hardened Steel

STANDARD FINISH - Zinc Plated and Clear Passivated

DIMENSIONS

Thread Sizes	Head Diameter E	Maximum Head Height T	Maximum Unthreaded Length S	Minimum Sheet Thickness	Minimum distance centre line hole to sheet edge mm	Recommended Hole Size +0.00 -0.13 mm	Clearance Hole in Mating Part mm	Maximum Recommended Nut Tightening Torque Nm
ISO Metric	mm	mm	mm	mm	mm	mm	mm	Nm
4	6.16	1.00	2.20	0.8	8.00	4.00	5.0	3.5
5	7.80	1.14	2.40	0.9	10.70	5.00	6.5	4.4
6	9.40	1.27	2.80	1.0	11.50	6.00	7.5	10.0
8	12.50	1.78	3.50	1.5	12.70	8.00	9.5	22.0
10	15.70	2.30	6.20	2.3	13.70	10.00	11.5	37.0

Thread Sizes	Head Diameter E	Maximum Head Height	Maximum Unthreaded Length	Minimum Sheet Thickness	Minimum distance centre line hole to sheet edge ins	Recommended Hole Size +.005 -.000 ins	Clearance Hole in Mating Part ins	Maximum Recommended Nut Tightening Torque ft.lbs
Unified	ins	ins	ins	ins	ins	ins	ins	ft.lbs
10	.300	.040	.105	0.036	.415	0.190	0.250	3.25
1/4	.380	.050	.125	0.040	.460	0.250	0.312	8.00
5/16	.480	.070	.140	0.060	.500	0.312	0.375	16.00
3/8	.580	.085	.155	0.090	.530	0.375	0.437	27.00

HPFH - Standard Lengths (L) Other lengths possible upon request

ISO Metric	6	8	10	12	14	15	16	18	20	25	30	35	40	50	60	Unified	0.75"	1.00"	1.25"
4		•	•	•	•	•	•	•	•	•	•					10	•	•	•
5		•	•	•	•	•	•	•	•	•	•					1/4	•	•	•
6			•	•	•	•	•	•	•	•	•	•	•			5/16	•	•	•
8				•	•	•	•	•	•	•	•	•	•			3/8	•	•	•
10						•	•	•	•	•	•	•	•						

HOW TO SPECIFY

HPFH	
PRODUCT CODE	HPFH-M4-12-Z
THREAD SIZE	HPFH-M4-12-Z
LENGTH	HPFH-M4-12-Z
FINISH	HPFH-M4-12-Z