

# Type FHP™ Flush-head Studs

- High hardness for proper installation into stainless steel sheets
- High corrosion resistance for demanding environments

Type FHP self-clinching, flush-head studs for use in thin stainless steel sheets provide the ideal solution for attachment applications where demanding requirements for corrosion resistance and thinner, lighter designs must be satisfied. They typically are specified for assemblies performing in challenging environments, including the medical, foodservice, and marine industries.



Type FHP studs are formed from specialty stainless steel, are for use in sheet hardness of 92 or less on the Rockwell "B" scale, and can be installed in stainless steel sheets as thin as .040" / 1mm, becoming integral parts of the assembly.

Contact your local PEM representative for more information.



Stud head is flush on back side of sheet.



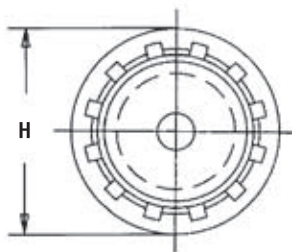
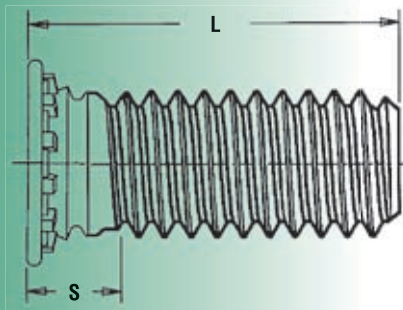
## Features and Benefits

- ▶ Permanent installation into stainless steel sheets as thin as .040" / 1mm and greater.
- ▶ High corrosion resistance.
- ▶ High torque-out and pushout resistance.
- ▶ Replace weld studs with easier installation at lower costs.
- ▶ Ideal for medical, foodservice, and marine applications.
- ▶ For use in sheet hardness of 92 or less on the Rockwell "B" scale.
- ▶ RoHS compliant.

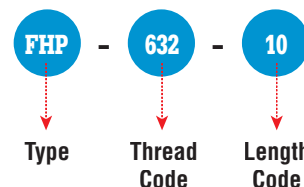
## Compare PEM Stainless Stud Types

PEM Type	Stainless Type	Installs Into HRB	Corrosion Resistance
FH4	400 Series	92 or less	Limited
FHP	Precipitation Hardening	92 or less	High
FHS	300 Series	70 or less	High

# Type FHP™ Flush-head Studs



## Part Number Designation



All dimensions are in inches.

UNIFIED	Thread Size	Type	Thread Code	Length Code "L" ±0.15 (Length code in 16ths of an inch)									Sheet Thickness	Hole Size in Sheet +.003 -.000	Max. Hole in Attach. Parts	H ±.015	S Max.	Min. Dist. Hole C/L to Edge	
				.250	.312	.375	.500	.625	.750	.875	1.00	1.25							1.50
	.112-40 (#4-40)	FHP	440	4	5	6	8	10	12	14	16	NA	NA	.040-.095	.111	.135	.176	.085	.219
	.138-32 (#6-32)	FHP	632	4	5	6 <sup>(1)</sup>	8 <sup>(1)</sup>	10	12	14	16	20	24	.040-.095	.137	.160	.206	.090	.250
	.164-32 (#8-32)	FHP	832	4	5	6 <sup>(1)</sup>	8 <sup>(1)</sup>	10	12	14	16	20	24	.040-.095	.163	.185	.237	.090	.281
	.190-32 (#10-32)	FHP	032	NA	5	6	8	10	12	14	16	20	24	.040-.095	.189	.210	.256	.100	.281

(1) Developmental parts presently available for evaluation

All dimensions are in millimeters.

METRIC	Thread Size x Pitch	Type	Thread Code	Length Code "L" ±0.4 (Length code in millimeters)									Sheet Thickness	Hole Size in Sheet +0.08	Max. Hole in Attach. Parts	H ±0.4	S Max.	Min. Dist. Hole C/L to Edge	
				6	8	10	12	15	18	20	25	30							35
	M3 x 0.5	FHP	M3	6	8	10	12	15	18	20	25	NA	NA	1 - 2.4	3	3.6	4.6	2.1	5.6
	M4 x 0.7	FHP	M4	6	8	10	12	15	18	20	25	30	35	1 - 2.4	4	4.6	5.9	2.4	7.2
	M5 x 0.8	FHP	M5	NA	8	10 <sup>(1)</sup>	12	15 <sup>(1)</sup>	18	20	25	30	35	1 - 2.4	5	5.6	6.5	2.7	7.2

(1) Developmental parts presently available for evaluation

NA - Not Available.

## Performance Data <sup>(1)</sup>

UNIFIED	Thread Code	Max. Nut Tightening Torque (in. lbs.)	Test Sheet Thickness and Material	Sheet Hardness HRB Max.	Installation (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.)	Pull Thru (lbs.)
	632	11	.045" Stainless Steel	92	9500	670	19.5	940
	832	21	.045" Stainless Steel	92	11200	785	37.5	1415

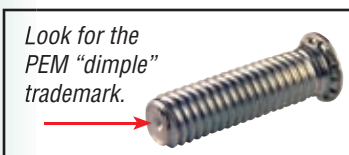
METRIC	Thread Code	Max. Nut Tightening Torque (N•m)	Test Sheet Thickness and Material	Sheet Hardness HRB Max.	Installation (kN)	Pushout (N)	Torque-out (N•m)	Pull Thru (N)
	M5	4.3	1.14 mm Stainless Steel	92	53	3890	7.35	7320

## Material & Finish Specifications

**Fastener Material:** Precipitation Hardening Grade Stainless Steel  
**Finish:** Passivated and/or tested per ASTM A380  
**For Use In Sheet Hardness:** 92 or less on the Rockwell "B" Scale

Installation tooling is identical to Type FH4. Information can be found on page FH-16 of PEM Bulletin FH.

(1) Installation, pushout, torque-out, and pull thru values reported are averages when all installation specifications and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure will affect this data. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose.



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