

microPEM® TackPin® Fasteners

For installation into stainless steel and higher strength aluminum alloy sheets

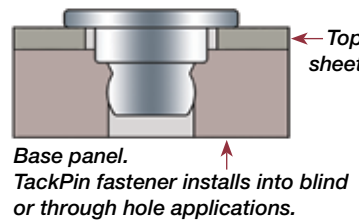
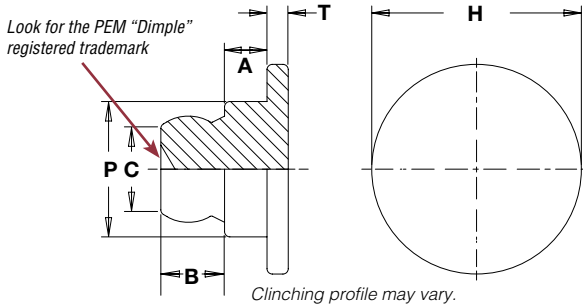


New self-clinching microPEM® TackPin® (Type T4™) fasteners are ideal for installation into stainless steel and higher strength aluminum alloy sheets. They are for use in compact electronic assemblies enabling sheet-to-sheet attachment, replacing costly screw installation in applications where disassembly is not required. TackPin® fasteners eliminate typical screw-related issues (including tapping, cross-threading, torque control, and vibration back-out) and ultimately promotes quick and easy installation with minimal hardware. TackPin® fasteners can provide a good alternative to welds or adhesives.

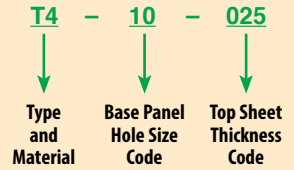


FEATURES AND BENEFITS

- Advantages over micro screws: eliminates costly tapping, cross threading, torque control, vibration back-out and installation time.
- Interference fit minimizes hole tolerance issues.
- Tapered tip assists location.
- Low-profile head provides space savings.
- Can be installed automatically.
- For use in stainless steel and higher strength aluminum alloy sheets.



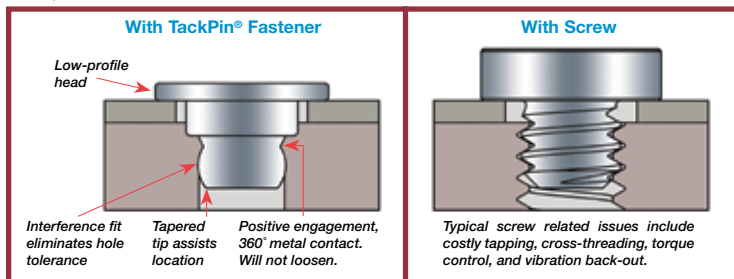
Part Number Designation



Type	Base Panel Hole Size Code	Top Sheet Thickness Code	Top Sheet Thickness		Base Panel Min. Sheet Thickness (1)		Top Sheet Hole Size ±0.05 mm / ±.002"		Base Panel Hole Size -0.05 mm / -.002"		A ±0.025 mm / ±.001"		B ±0.075 mm / ±.003"		C Max.		H ±0.1 mm / ±.004"		P ±0.05 mm / ±.002"		T ±0.1 mm / ±.004"		Min. Dist. Hole Ø To Edge	
			mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.		
T4	10	025	0.2-0.28	.008-.011	0.89	.035	1.47	.058	1.02	.040	0.406	.016	0.610	.024	0.89	.035	2	.079	1.3	.051	0.2	.008	1	.039
T4	10	050	0.48-0.56	.019-.022	0.89	.035	1.47	.058	1.02	.040	0.686	.027	0.610	.024	0.89	.035	2	.079	1.3	.051	0.2	.008	1	.039

(1) 0.89 mm / .035" for blind holes and 0.5 mm / .020" for through holes.

Comparison of TackPin® fastener to screw installation.



Material and Finish Specifications

Material: Hardened 400 Series Stainless Steel
Finish: Passivated and/or tested per ASTM A380
For use in sheet hardness: HRB 88 or less (Hardness Rockwell "B" Scale) HB 183 or less (Hardness Brinell)

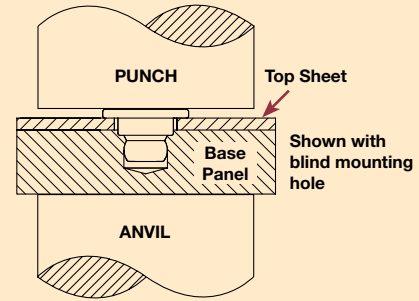


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INSTALLATION

1. Prepare properly sized mounting hole in sheet and base panel. Base panel mounting hole can be through or blind.
2. Place top sheet and base panel in proper position.
3. Place fastener through hole in top sheet and into mounting hole of base panel.
4. With punch and anvil surfaces parallel, apply squeezing force until the head of the fastener contacts the top sheet.

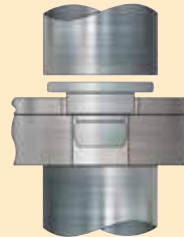


PEMSERTER® Installation Tooling

Size	Punch Part Number	Anvil Part Number
T4-10-025	8014167	975200046
T4-10-050		

microPEM® TackPin® fasteners can be installed automatically in high volume applications. Contact your nearest PennEngineering representative for more information.

BEFORE PRESSING



AFTER PRESSING



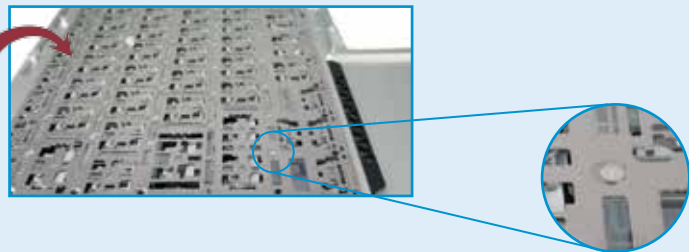
Shown with through mounting hole

PERFORMANCE DATA⁽¹⁾

Type	Stainless Steel HRB 88			
	Installation		Pullout	
	N	lbs.	N	lbs.
T4-10-025	2020	455	200	45
T4-10-050				

(1) Published installation forces are for general reference. Actual set-up and confirmation of complete installation should be made by observing proper seating of fastener as described in the installation steps. Other performance values reported are averages when all proper installation parameters and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure may affect performance. Performance testing this product in your application is recommended. We will be happy to provide technical assistance and/or samples for this purpose.

In one notable application, TackPin® fasteners have been specified to replace screws to attach a super-thin membrane to a very thin substrate in keyboards. The switch to TackPin® fasteners significantly reduced assembly costs.



Look for the PEM® "Dimple" registered trademark.



Regulatory compliance information is available in Technical Support section of our website. © 2015 PennEngineering.

Specifications subject to change without notice. See our website for the most current version of this bulletin.

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