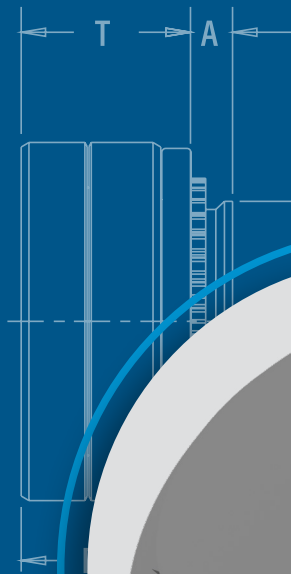
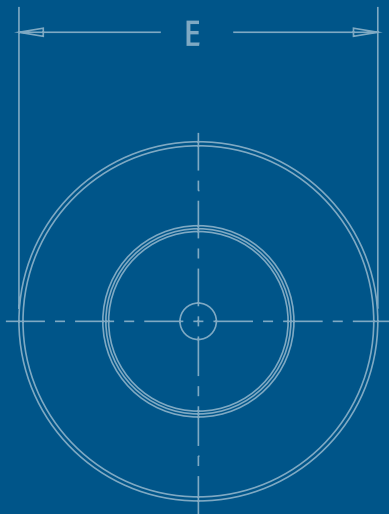




# PFTR™

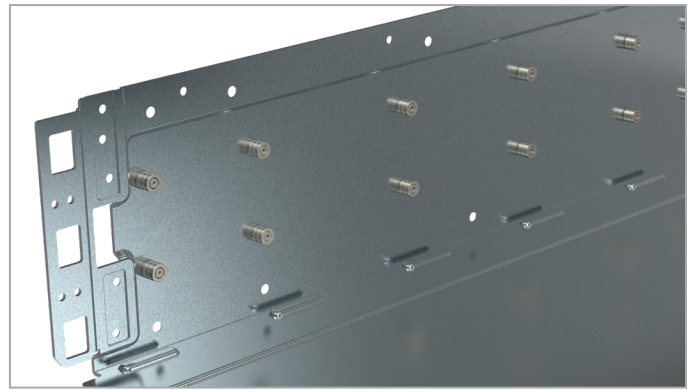
## ROLLER BEARING FASTENERS



PEM® roller bearing fasteners support loads while guiding and positioning component.

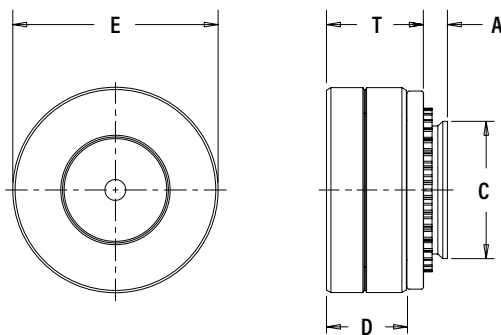
PEM® PFTRCS™ and PFTRFS™ roller bearing fasteners are easily installed, pre assembled low friction rollers, that give design engineers a more user-friendly option to the high friction of simple slide shelves without incurring the cost of expensive sliding rail assemblies.

- Low-profile bearing can be captivated with either a clinch or flare, creating a cost-effective tray slide method
- Simple installation and ease of design into limited footprint spacing applications
- Supports loads while guiding and positioning components
- Eliminate the need for oil lubricants and loose hardware typically used in drawer sliders
- Self clinching and flaring roller bearing fasteners are easily installed into pre punched or drilled holes in sheets as thin as .040" / 1mm



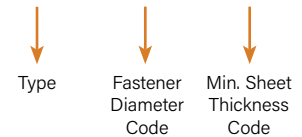
Fastener drawings and models are available at [www.pemnet.com](http://www.pemnet.com). Custom sizes are available on special order. [Contact us](#) for more information.

### PEM® PFTRCS™ Self Clinching Roller Bearing Fasteners



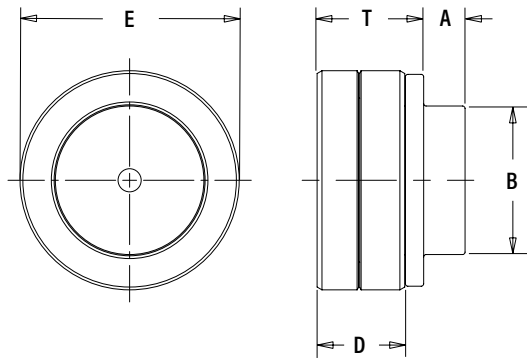
#### Part Number Designation

PFTRCS - 9.0 - 1.0



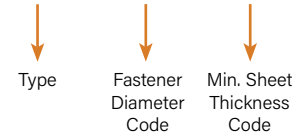
Type	Fastener Diameter Code	Min. Sheet Thickness Code	A (Shank) Max.		Min. Sheet Thickness		Hole Size in Sheet +.003" / +0.08mm		C Max.		D Nom.		E ±.006" / ±0.15mm		T Nom.		Min. Dist. Hole C/L to Edge	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
PFTRCS	5.0	1.0	.038	0.97	.040	1	.130	3.3	.129	3.28	.154	3.9	.197	5	.177	4.5	.177	4.5
PFTRCS	9.0	1.0	.038	0.97	.040	1	.240	6.1	.239	6.08	.154	3.9	.354	9	.177	4.5	.295	7.5

PEM® PFTRFS™ Flaring Roller Bearing Fasteners



Part Number Designation

PFTRFS - 5.0 - 1.0



Type	Fastener Diameter Code	Min. Sheet Thickness Code	A (Shank) Nom.		Sheet Thickness Range		Hole Size in Sheet +.003" / +0.08mm		B Max.		D Nom.		E ±.006" / ±0.15mm		T Nom.	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
PFTRFS	5.0	1.0	.071	1.8	.040 - .047	1 - 1.2	.130	3.3	.129	3.28	.154	3.9	.197	5	.177	4.5
PFTRFS	9.0	1.0	.071	1.8	.040 - .047	1 - 1.2	.240	6.1	.239	6.08	.154	3.9	.354	9	.177	4.5

Material and Finish Specifications

Type		Component Material		Standard Finishes		For Use in Sheet Hardness HRB 80 / HB 150 or less (2)
		300 Series Stainless Steel	Through Hardened Carbon Steel	Passivated and/or Tested per ASTM A380	Semi-bright Electroless Nickel per ASTM B733 (1)	
PFTRCS	Roller Bearing	▪		▪		▪
	Retainer (3)		▪		▪	
PFTRFS	Roller Bearing	▪		▪		No limit
	Retainer (3)		▪		▪	
Part Number Code for Finishes				None	EN	

- (1) See PEM [Technical Support](#) section of our web site for related plating standards and specifications.
- (2) HRB - Hardness Rockwell "B" Scale. HB - Hardness Brinell.
- (3) Fastener retainer is waxed eliminating the need for lubrication.

Custom sizes are available on special order.  
[Contact us](#) for more information.

## Installation

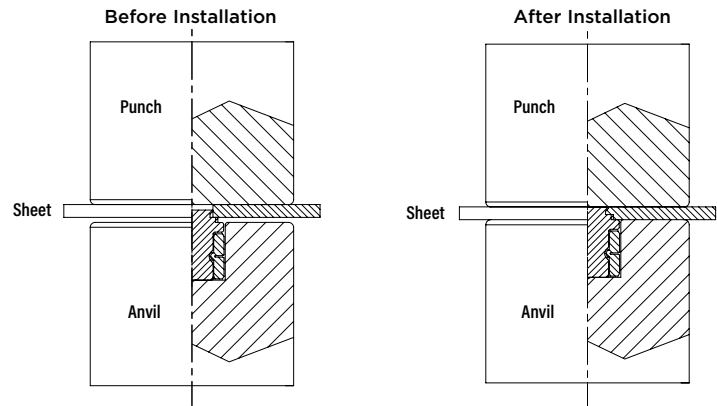
### Self Clinching Installation

1. Prepare properly sized mounting hole in sheet. Do not perform any secondary operations such as deburring.
2. Place fastener into the anvil hole and place the mounting hole (preferably the punch side) over the shank of the fastener.
3. With installation punch and anvil surfaces parallel, apply squeezing force until the head of the nut comes into contact with the sheet material.

### Installation tooling<sup>(1)</sup>

Fastener Dia. Code	HAEGER® Part Number		PEMSERTER® Part Number	
	Anvil	Punch	Anvil	Punch
5.0	H-330-5MM	H-108-0020L	8026559	975000048
9.0	H-330-9MM	H-108-0020L	8026560	975200048

(1) [Click here](#) for a quote on Haeger® custom installation tooling.



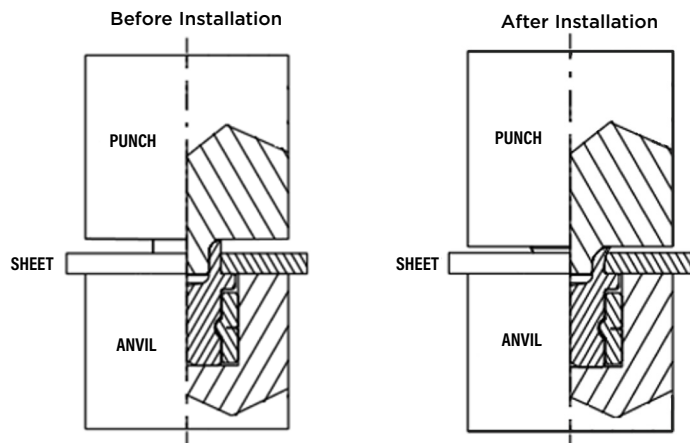
### Flaring Installation

1. Prepare properly sized straight through mounting hole in sheet.
2. Place fastener into the anvil hole and place the mounting hole over the shank of the fastener as shown in diagram.
3. Using a punch flaring tool and a recessed anvil, apply squeezing force until the shoulder of the fastener contacts the sheet. As the fastener seats itself in the proper position, the punch tool will flare the extended portion of the shank outward to complete the installation. If installing into a smooth panel, the fastener shank will protrude after installation. Flare may protrude up to 0.5mm Max.

### Installation tooling<sup>(1)</sup>

Fastener Dia. Code	HAEGER® Part Number		PEMSERTER® Part Number	
	Anvil	Punch	Anvil	Flaring Punch
5.0	H-330-5MM	H-193-5.0-1.0	8026559	8026557
9.0	H-330-9MM	H-193-9.0-1.0	8026560	8026558

(1) [Click here](#) for a quote on Haeger® custom installation tooling.

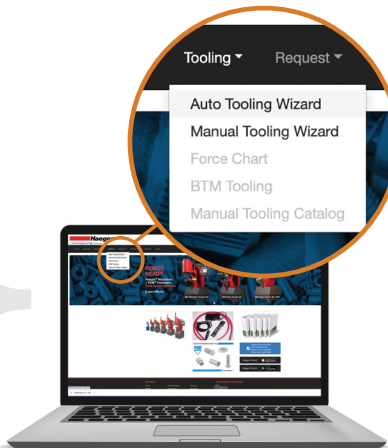


# For Additional HAEGER® and PEMSERTER® Tooling Information / Part Numbers



HAEGER® MANUAL TOOLING CATALOG

HAEGER® AUTO TOOLING CATALOG



Go to [haeger.com](http://haeger.com) to access the Auto and Manual Tooling Wizards



PEMSERTER® MANUAL TOOLING CATALOG

PEMSERTER® AUTO TOOLING CATALOG



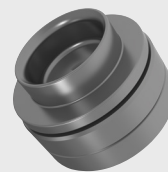
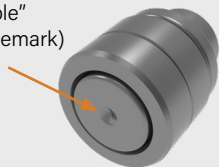
Or download the HAEGER WIZZARD Phone App

OneTouch 4e XYZ-R

Tooling Wizard

BTM Tooling

PEM® "Dimple"  
(Registered Trademark)



Fastener drawings and models are available at [www.pemnet.com](http://www.pemnet.com)

PFTRCS™ Performance Data<sup>(1)</sup>

Fastener Diameter Code	Test Sheet Thickness		Test Sheet Material					
			Cold-Rolled Steel HRB 53					
			Installation		Pushout		Side-Load	
(in.)	(mm)	(lbs.)	(kN)	(lbs.)	(N)	(lbs.)	(N)	
5.0	.040	1	1416	6.3	100	445	45	200
9.0	.040	1	2316	10.3	150	670	85	380

Part Number	Max. Number of Traveling Cycles at 200mm/s <sup>(2)</sup>	Bearing Load Max.	
		(lbs.)	(N)
PFTRCS-5.0-1.0	100	45	200
PFTRCS-9.0-1.0	210	45	200

PFTRFS™ Performance Data<sup>(1)</sup>

Fastener Diameter Code	Test Sheet Thickness		Test Sheet Material											
			Cold-Rolled Steel HRB 65						Cold-Rolled Steel HRB 60					
			Installation		Pushout		Side-Load		Installation		Pushout		Side-Load	
(in.)	(mm)	(lbs.)	(kN)	(lbs.)	(N)	(lbs.)	(N)	(lbs.)	(kN)	(lbs.)	(N)	(lbs.)	(N)	
5.0	.040	1	2517	11.2	287	1280	83	370	2517	11.2	—	—	—	—
	.047	1.2			—	—	—	—			326	1450	105	470
9.0	.040	1	3215	14.3	342	1520	130	580	3215	14.3	—	—	—	—
	.047	1.2			—	—	—	—			388	1730	139	620

Part Number	Max. Number of Traveling Cycles at 200mm/s <sup>(2)</sup>	Bearing Load Max.	
		(lbs.)	(N)
PFTRFS-5.0-1.0	100	45	200
PFTRFS-9.0-1.0	210	45	200

(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.

(2) The maximum number of traveling cycles is tested at 200mm/s under 200N load.

All PEM® products meet our stringent quality standards. If you require additional industry or other specific [quality certifications](#), special procedures and/or part numbers are required. Please contact your local sales office or representative for further information.

Regulatory [compliance information](#) is available in Technical Support section of our website. Specifications subject to change without notice. See our website for the most current version of this bulletin.



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