

## Non-threaded applications

Palnut self-threading nuts and Pushnut® fasteners are respectively turned on and pushed on non-threaded projections, or "studs." These fasteners eliminate the cost of cutting threads and the problems of cross-threading. They permit simpler, more economical and usually better designs.

With these fasteners, there is no thread to find and no binding from dirt or damaged threads. Because of their prevailing torque, the fasteners provide excellent vibration resistance.

Stud materials, which must be appreciably softer than that of the fasteners, include die cast zinc, aluminum, molded plastics, steel and brass.



Regular style self-threading nuts are run down on molded studs of CB radio panel.

Air conditioner grille has circular air-flow directors that are mounted on the unthreaded shank of a plastic knob with an arched round Pushnut fastener.



Capped Pushnut® fastener secures wheels of toy crane. Cap offers protection against scratching.

## Washer | Capped Washer Type Self-Threaders



Styles SD and SH



Style SF and SK



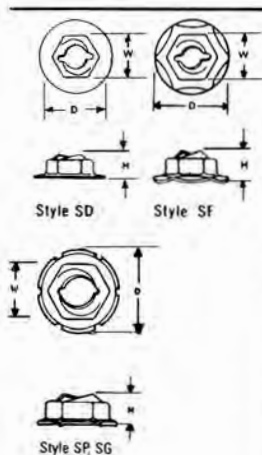
Style SP



Style SG

NOTE: Parts SP330012 and SP300016 are only for use on tough plastic such as ABS or polypropylene for which 45-50 in. lbs. torque develops approximate 100 lb. tension.

\*At the tooth-engagement point when the fastener is seated, stud tolerance is .003".



DIMENSIONS				Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE				Catalog Number
Steel Thick. (In.)	Hex Width W (In.)	Washer Diam. D (In.)	Overall Height H (In.)			Chrome-Plated Zinc Die Cast Studs		Steel Studs		
						Torque In. Lbs.	Tension Lbs.	Torque In. Lbs.	Tension Lbs.	
.017	5/16	7/16	.186	1.2	1/8 (.125)	15	90	26	130	SD 125007
.017	5/16	17/32	.194	1.5		17	80	30	110	SD 125085
.018	3/8	1/2	.217	1.7	3/16 (.188)	38	210	50	330	SD 188008
.018	3/8	5/8	.235	2.3		46	160	60	280	SD 188010
.021	7/16	19/32	.232	2.5	1/4 (.250)	65	260	95	370	SD 250095
.021	7/16	11/16	.247	3.1		75	200	90	300	SD 250011
.023	.495	.875	.309	5.2	5/16 (.312)	115	300	165	450	SF 312014
.021	.432	.594	.219	2.2	.250	65	260	95	300	SG 250095
.023	1/2	3/4	.290	4.0	.330	See Footnote Below				SP 330012
.023	1/2	1	.314	5.8						SP 300016

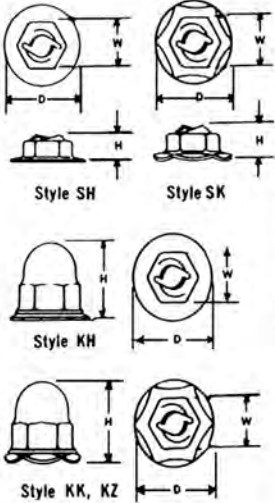
NOTE: Parts SP330012 and SP300016 are only for use on tough plastic such as ABS or polypropylene for which 45-50 in. lbs. torque develops approximate 100 lb. tension.

\*At the tooth-engagement point when the fastener is seated, stud tolerance is ±.003".

# Non-Threaded Applications

For studs with heavy plating of between 0.003" and 0.005" nickel-chrome on die cast zinc, the following styles are recommended.

## Washer/Capped Washer Type (continued)



DIMENSIONS				Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE				Catalog Number
Steel Thick. (In.)	Hex Width W (In.)	Washer Diam. D (In.)	Overall Height H (In.)			Chrome-Plated Zinc Die Cast Studs		Steel Studs		
						Torque In. Lbs.	Tension Lbs.	Torque In. Lbs.	Tension Lbs.	
.020	3/8	5/8	.244	2.7	3/16 (.188)	46	160	60	280	SH 188010
.020	5/16	7/16	.189	1.3	1/8 (.125)	15	90	26	130	SK 125007
.020	3/8	1/2	.211	1.7	3/16 (.188)	44	210	60	330	SK 188008
.020	3/8	9/16	.229	2.1		46	180	60	300	SK 188009
.020	3/8	5/8	.239	2.4		55	160	72	280	SK 188010

\* At the tooth-engagement point when the fastener is seated, stud tolerance is +.003".

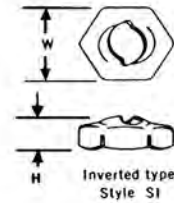
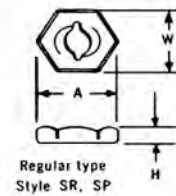
## • Acorn Type Self-Threaders



DIMENSIONS				Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE				Catalog Number
Steel Thick (In.)	Hex Width W (In.)	Across Corners A Max. (In.)	Height H (In.)			Chrome-Plated Zinc Die Cast Studs		Steel Studs		
						Torque In. Lbs.	Tension Lbs.	Torque In. Lbs.	Tension Lbs.	
.017	.360	5/16	.265	1.6	1/8 (.125)	11	65	18	130	SC 125
.021	.505	7/16	.380	3.7	3/16 (.188)	26	140	45	320	SC 188

## Non-Threaded Applications

### • Regular | Inverted Type Self-Threaders

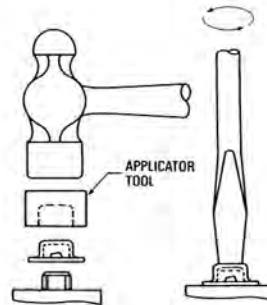
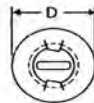
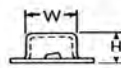


DIMENSIONS				Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE				Catalog Number
Steel Thick (In.)	Hex Width W (In.)	Across Corners A Max. (In.)	Height H (In.)			Chrome-Plated Zinc Die Cast Studs		Steel Studs		
						Torque In. Lbs.	Tension Lbs.	Torque In. Lbs.	Tension Lbs.	
.017	5/16	.360	.100	1.7	3/32 (.094)	5	40	8	80	SR 094005
.015	1/4	.289	.088	0.4	1/8 (.125)	8	50	10	110	SR 125004
.017	5/16	.360	.100	0.7	.148	11	65	16	130	SR 125
.017	11/32	.396	.110	0.8		—	—	17	160	SR 148
.017	11/32	.396	.110	0.9	5/32 (.156)	18	100	30	250	SR 156
.020	3/8	.433	.116	1.1	3/16 (.188)	26	140	32	280	SR 188006
.019	1/2	.577	.129	2.1	7/32 (.219)	30	140	38	250	SR 188
.016	7/16	.505	.118	1.2		For Use Only On Plastic Studs				SP 219
.026	1/2	.578	.140	2.5	1/4 (.250)	70	280	90	525	SR 250
.027	11/16	.794	.166	4.3	3/8 (.375)	—	—	120	500	SR 375011

\* At the tooth-engagement point when the fastener is seated, stud tolerance is  $\pm .003$

## Non-Threaded Applications

### Washer Cap Pushnut® Removable Type Fastener



DIMENSIONS				Weight Lbs./M	Stud Diameter (In.)	PERFORMANCE		Catalog Number
Steel Thickness (In.)	Height H (In.)	Cap Diameter W (In.)	Washer Diameter D (In.)			Pounds		
						Push-On Force	Minimum Holding Strength	
.025	.235	.317	.625	3.5	5/16	100	410	PWR 312010

# Non-Threaded Applications

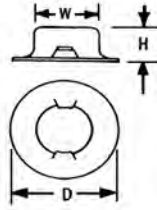
## • Washer Cap Type Pushnut® Fasteners



Style PW



Part PZ001143 Rivet effect

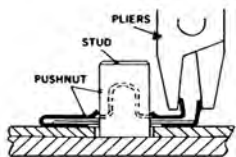


DIMENSIONS				Weight Lbs./M	Stud Diameter (In.)*	PERFORMANCE		Catalog Number
Steel Thickness (In.)	Height H (In.)	Cap Diameter W (In.)	Washer Diameter D (In.)			Pounds		
						Maximum Push-On Force	Minimum Holding Strength	
.015	.202	.220	7/16	1.1	3/16 (.188)	30	220	PW 188007
.021	.202	.230	7/16	1.3		35	230	PW 188907
.015	.202	.220	1/2	1.3		30	220	PW 188008
.015	.202	.220	1/2	1.3	1/4 (.250)	30	220	PZ 001587 rivet effect
.018	.205	.289	1/2	1.7		65	280	PW 250008
.018	.205	.289	9/16	2.0		65	360	PW 250009
.018	.205	.289	9/16	1.8	5/16 (.312)	65	360	PZ 001143 rivet effect
.020	.286	.358	9/16	2.8		80	320	PZ 001725
.020	.236	.358	5/8	2.7		90	460	PW 312010
.020	.234	.419	11/16	3.3	3/8 (.375)	70	380	PW 375011
.025	.270	.431	3/4	4.7		90	700	PW 375012
.030	.328	.504	7/8	7.5		150	960	PW 438014
.030	.328	.567	15/16	8.8	7/16 (.438)	150	960	PW 500015
.031	.413	.693	1-3/16	15.4	1/2 (.500)	150	800	PW 500015
.030	.413	.818	1-3/8	19.5	5/8 (.625)	230	1500	PW 625019
					3/4 (.750)	320	1500	PW 750000

\* Recommended diameter tolerance of stud is  $\pm .002''$  and  $\pm .003''$ . Surface hardness of stud must not exceed Rockwell 30T-78. Nickel-chrome plating or other hard finishes not recommended on steel studs.

## • Removable Type Pushnut Fasteners



	PERFORMANCE			Applicator Tool No.	Catalog Number
	Pounds				
	Stud Diameter (In.)*	Push-On Force (Max.) (Steel; ABS and acetal plastic)	Clamping Force (Steel; ABS and acetal plastic)		
.177/.182	20	8	22	WZ 001814	PZ 001791
.122/.128	30	8	22	WZ 001814	**PZ 001845
.172/.177	20	8	22	WZ 001814	PZ 001907
.185/.190	20	8	22	WZ 001814	PZ 001935

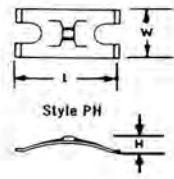
\* Nickel-chrome plating must not exceed  $.002''$  on studs for PO fasteners. At the point of barb engagement when a fastener is seated, stud diameter tolerance is  $\pm .003''$ .  
 \*\* With grounding barb

# Non-Threaded Applications

## • Arched Rectangular Type Pushnut Fasteners



Arched Rectangular Style PH

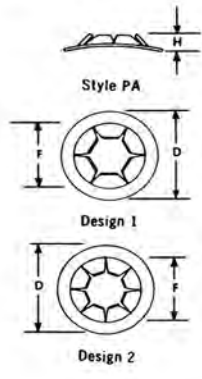


Steel Thick. (In.)	DIMENSIONS			Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE			Catalog Number
	Width W (In.)	Length L (In.)	Height H (In.)			Pounds			
						Push-On Force	Seat Force	Minimum Holding Strength	
.013	.281	.550	.096	0.5	1/16 (.062)	25	60	85	PH 062
.013	.328	.610	.104	0.7	3/32 (.094)	25	60	108	PH 094
.015	.375	.672	.116	1.0	1/8 (.125)	45	70	130	PH 125
.015	.375	.672	.126	0.9	5/32 (.152)	40	70	110	PH 156
.013	.375	.625	.107	0.8	3/16 (.188)	20	50	170	PZ 001250

## • Arched Round Type Pushnut Fasteners



Arched Round Style PA



Des. No.	DIMENSIONS				Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE			Catalog Number
	Steel Thick. (In.)	Total Height H (In.)	Washer Diameter				Pounds			
			Inside F (In.)	Outside D (In.)			Push-On Force	Seat Force	Minimum Holding Strength	
1	.009	.063	.228	3/8	0.3	1/8 (.125)	15	15	130	PA 126306
2	.010	.087	.320	7/16	0.4	3/16 (.188)	15	50	100	PA 188307
2	.015	.095	.320	7/16	0.5		15	100	400	PA 188007
2	.012	.095	.388	17/32	0.7	1/4 (.250)	25	60	400	PA 250385
2	.017	.103	.388	17/32	1.0		30	115	600	PA 250085
2	.021	.114	.456	5/8	1.5	5/16 (.312)	60	120	900	PA 312010

\*Recommended diameter tolerance of stud for PH fasteners is  $\pm .005''$ ; for PA fasteners,  $+.002''$  and  $-.003''$ . Surface hardness of stud must not exceed Rockwell 30T-78. Nickel-chrome plating on studs for PH fasteners must not exceed  $.001''$ . Nickel-chrome plating or other hard finishes not recommended on steel studs for PA fasteners.

# Non-Threaded Applications

## • Flat Round Type Pushnut Fasteners



Style PS



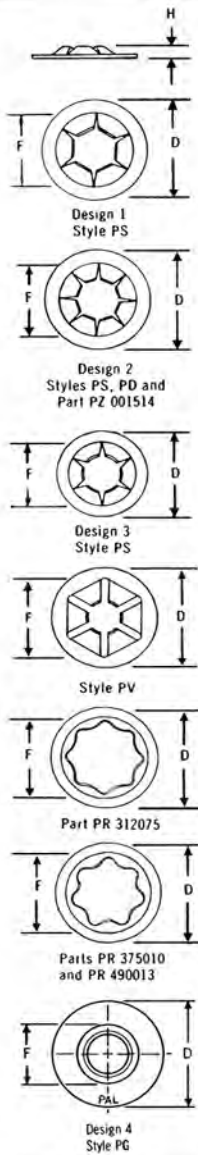
Style PV



Style PR



Style PG



Des. No.	Steel Thick. (In.)	Total Height H (In.)	Washer Diameter		Wgt. Lbs./M	Stud Diameter (In.)*	PERFORMANCE		Catalog Number
			Inside F (In.)	Outside D (In.)			Pounds		
							Push-On Force	Minimum Holding Strength	
3	.010	.038	.142	.195	0.1	1/16 (.062)	20	100	PS 062032
3	.010	.036	.142	.195	0.1	3/32 (.094)	25	180	PS 094032
1	.010	.045	.228	3/8	0.3	1/8 (.125)	15	130	PS 125306
1	.013	.052	.228	3/8	0.4		26	350	PS 125006
1	.012	.031	.183	1/4	0.1		35	250	PZ 001996
2	.010	.047	.320	7/16	0.4	5/32 (.156)	15	60	PD 156307
2	.013	.058	.320	7/16	0.5		25	180	PD 156007
2	.010	.056	.320	7/16	0.4	3/16 (.188)	15	200	PS 188307
2	.014	.064	.320	7/16	0.5		25	400	PS 188007
2	.012	.067	.388	17/32	0.7	7/32 (.219)	20	390	PD 219385
2	.021	.050	.420	3/4	2.5		.237	140	600
2	.017	.069	.388	17/32	0.9	.240	30	600	PS 240085
2	.012	.057	.388	17/32	0.6		1/4 (.250)	25	400
2	.016	.066	.388	17/32	1.0			45	600
4	.022	.055	.350	5/8	1.2		—	—	† PG 250010
	.015	.083	.750	15/16	2.6		14	100	PV 250015
	.013	.040	.385	15/32	0.4	5/16 (.312)	40	270	PR 312075
2	.014	.062	.456	5/8	1.1			40	650
2	.021	.070	.456	5/8	1.5		60	900	PS 312010
	.015	.097	.750	15/16	2.5		18	250	PV 312015
	.015	.056	.500	5/8	0.9	3/8 (.375)	50	370	PR 375010
2	.017	.061	.546	3/4	1.7			50	700
2	.026	.079	.546	3/4	2.1		85	1100	PS 375012
	.015	.093	.750	15/16	2.4		22	350	PV 375015
2	.030	.097	.638	7/8	4.1	7/16 (.438)	75	1500	PS 438014
	.015	.075	.750	15/16	2.3			30	500
2	.035	.112	.730	59/64	5.1	1/2 (.500)	160	1800	PZ 001752
2	.035	.112	.730	1	6.4			160	2000
	.015	.064	.750	15/16	2.1		33	500	PV 500015
2	.017	.073	.730	1	2.5	5/8 (.625)	50	1400	PZ 002015
	.017	.056	.228	.375	0.7	1/8 (.125)	55	400	PS 125906
1	.017	.066	.388	.531	0.7	1/4 (.250)	45	600	PZ 001880
2	.015	.053	.456	.625	1.7	5/16 (.312)	60	500	PZ 001824

\*Recommended diameter tolerance of stud is +.002" and -.003". Surface hardness of stud must not exceed Rockwell 30T-78. Nickel-chrome plating or other hard finishes not recommended on steel studs nor on studs smaller than 1/8". Plating is not recommended on studs for PV fasteners nor for the following: PS-125306, PD-156307, PD-219385, PS-312310 and PS-375312. On diecast studs, plating should not exceed .003".

### PG 250010 ASSY & HOLDING SPECIFICATIONS

Test Rod OD/ ± .002	Test Washer/Hole ID	Max Assy/Force (Lb.)	Min Holding/Strength (Lbs.)
.250	.261	250	1000

In addition to push-on and holding strength, the PG type parts must be tested for impact strength.

### IMPACT STRENGTH

Blow/Inch. Lbs.	Washer Action	Minimum # of Blows
18	Flat	10

# Non-Threaded Applications

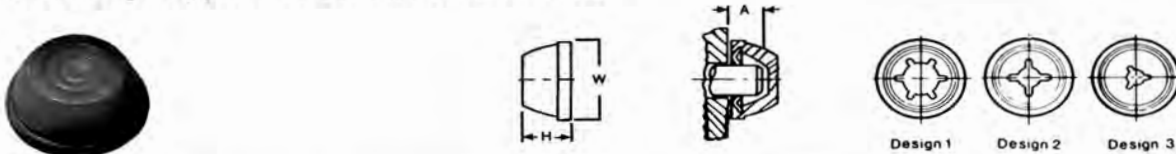
## • Acorn Type Pushnut Fasteners



Des. No.	DIMENSIONS				Wgt. Lbs./M	Rod Penet		Stud Diameter (In.)*	PERFORMANCE		Catalog Number
	Steel Thick. (In.)	Height H (In.)	Hex. Width W (In.)	Across Corners A Max. (In.)		Min. (In.)	Max. (In.)		Pounds		
									Push-On Force	Minimum Holding Strength	
2	.013	.261	5/16	.361	1.2	.13	.21	11 ga (.120)	40	234	PC 120
2	.012	.295	11/32	.397	1.5	.13	.24	9 ga (.148)	30	239	PC 148
2	.012	.295	11/32	.397	1.5	.13	.24	5/32 (.156)	32	300	PC 156
1	.015	.324	3/8	.433	2.2	.16	.26	3/16 (.188)	40	70	PC 188006
1	.021	.380	7/16	.505	3.8	.16	.30		50	185	PC 188
1	.017	.372	7/16	.505	3.2	.19	.28	1/4 (.250)	45	120	PC 250007
1	.021	.310	7/16	.505	3.8	.16	—	3/16 (.188)	50	185	PK 188
1	.024	.395	9/16	.650	7.2	.19	—	1/4 (.250)	45	220	PK 250

\*Recommended diameter tolerance of stud is +.002" and -.003". Surface hardness of stud must not exceed Rockwell 30T-78. Nickel-chrome plating or other hard finishes not recommended on steel studs for PK fasteners. Nickel-chrome plating on studs for PC fasteners, and on diecast studs for PK fasteners, must not exceed .002".

## • Colored Cap Type Pushnut Fasteners



Stud, Rod, or Wire Shaft Diameter (In.)	DIMENSIONS			Steel Thickness (In.)	PERFORMANCE			Catalog Number
	Cap Outside Diameter W (In.)	Height Overall H (In.)	Minimum Shaft Extension A (In.)		Pounds			
					Tooth Design	Maximum Push-On Force	Minimum Holding Strength	
1/8	.656	.344	.150	.012	3	25 Lbs.	140 Lbs.	KPS125105
5/32	.656	.344	.150	.012	3	30 Lbs.	200 Lbs.	KPS156105
3/16	.656	.344	.150	.012	3	35 Lbs.	220 Lbs.	KPS188105
1/4	.656	.344	.150	.012	2	40 Lbs.	400 Lbs.	KPS250105
1/4	.835	.440	.175	.015	2	45 Lbs.	600 Lbs.	KPS250135
19/64	.835	.440	.175	.015	1	50 Lbs.	750 Lbs.	KPS298135
5/16	.835	.440	.175	.015	1	60 Lbs.	700 Lbs.	KPS312135
3/8	.835	.440	.175	.015	1	85 Lbs.	700 Lbs.	KPS375135
7/16	1.300	.645	.200	.018	1	110 Lbs.	700 Lbs.	KPS438210
3/8	1.300	.645	.200	.018	1	85 Lbs.	1200 Lbs.	KPS375210
1/2	1.300	.645	.200	.018	1	90 Lbs.	1200 Lbs.	KPS500210
5/8	1.300	.645	.200	.018	1	90 Lbs.	1200 Lbs.	KPS625210
3/4	1.300	.645	.200	.018	1	95 Lbs.	1200 Lbs.	KPS750210
8mm	21.2	11.2	4.4	.38	1	267 N	3115 N	KPS008215
9mm	21.2	11.2	4.4	.38	1	334 N	3115 N	KPS009215

# Non-Threaded Applications

## • Blind Type Pushnut Fasteners



DIMENSIONS					Stud Diameter (In.)*	PERFORMANCE			Catalog Number
Panel		Steel Thick. (In.)	Fastener			Pounds Force Required			
Thick. Plus Recess Depth (See Note) (In.)	Hole Diameter (In.)		Length (In.)	Weight Lbs./M		Push Onto Stud	Snap Assy. Into Panel	Remove Assy. From Panel	
.065-.075	.136/.142	.011	.296	0.3	3/32 (.094)	5	45	15	<b>PB 094070</b>
.065-.075	.184/.190	.014	.312	0.4	1/8 (.125)	5	60	22	<b>PB 125070</b>
.065-.075	.246/.252	.014	.344	0.6	3/16 (.188)	5	65	22	<b>PB 188070</b>
.036-.044	.184/.190	.014	.290	0.4	1/8 (.125)	25	35	35	<b>PO 125040</b>
.035-.100	.184/.190	.014	.324	0.5	1.8 (.125)	15	60	22	<b>PZ 001781</b>
.036-.044	.246/.252	.015	.325	0.7	3/16 (.188)	25	15	15	<b>PZ 001842</b>

NOTE: With no recess around the stud base, the column headed PANEL THICK., PLUS RECESS DEPTH, represents the actual panel thickness. Style PO parts are also available with integral sealer of clear PVC.

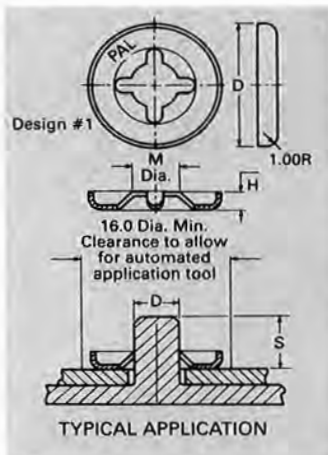
## • Zip Twist Nuts



Style	Stud Diameter (In.)*	Steel Thick. (In.)	Height H (In.)	Hex Width W (In.)	Washer Diameter D (In.)	Weight Lbs./M	Catalog Number
Style BR	1/8 (.125)	.011	.095	3/8	None	1.5	<b>BR 125</b>
		.011	.095	5/16	None	1.4	<b>BR 125005</b>
		.010	.210	3/8	9/16	1.2	<b>BD 125009</b>
		.013	.211	3/8	3/4	2.1	<b>BZ 001620</b>
Style BD	5/32 (.156)	.015	.211	3/8	3/4	2.4	<b>BZ 001678</b>
		.015	.247	3/8	5/8	2.0	<b>BF 188610</b>
Style BF	3/16 (.188)	.013	.105	3/8	None	0.8	<b>BR 188006</b>
		.015	.232	—	.843	2.1	<b>JZ 002102</b>
Style JZ	1/4 (.250)	.015	.123	1/2	None	1.3	<b>BR 250</b>
		.015	.232	—	.843	2.1	<b>JZ 001663</b>

\* Recommended stud diameter tolerance is  $\pm .003$ ". Surface hardness of stud must not exceed Rockwell B-80. Nickel-chrome plating or other hard finishes not recommended.

# Pushnut® Auto Feed



P/N	Stud/Rod Dia.	Inside Tooth Dia.		Matl Thk		Holding Push-On Strength Force	
PN125007	0.125	0.112	0.118	0.011	0.009	130	15
PN156007	0.156	0.137	0.143	0.011	0.009	150	15
PN188007	0.188	0.172	0.180	0.011	0.009	200	20
PN250007	0.250	0.232	0.240	0.011	0.011	350	28
	in	in	in	in	in	lbs	lbs

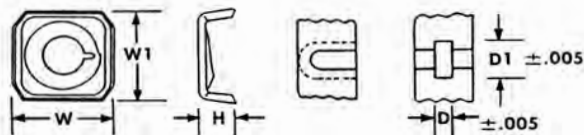
- Optimum performance depends on adherence to these stud, rod or wire specifications:
1. Material may be mild steel, aluminum, zinc or other malleable metals.
  2. Surface hardness must not exceed Rockwell 30T 78.
  3. Recommended diameter tolerance  $\pm .05$
  4. Ends must be free of distortion or burrs. Chamfer 0.8 x 45° for easier assembly.
  5. Nickel, chromium or other hard finishes on steel are not recommended.
  6. Nickel-chromium plating on die cast studs must not exceed .08 thickness.

## Lock Nuts – Miscellaneous Types

### Self-Retaining Types



Flared sides flex inward as parts are pressed into cavities of the dimensions shown. Spring action holds them in cavity, providing greater convenience in handling and assembly.

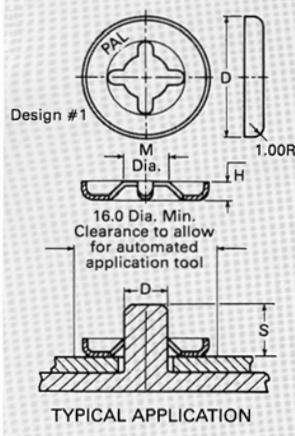


Thread Size	PALNUT Part No.	Width (Slides)		Height H	Cavity	
		W	W1		D	DI
#6-32	YO 001394	.375"	<sup>23</sup> / <sub>64</sub> "	.122"	.135"	.355"
#8-32	YO 001095	.390	<sup>23</sup> / <sub>64</sub> "	.140	.165	.370
#6-32	YO 001694	.300	<sup>1</sup> / <sub>4</sub> "	.070	.083	.276



Self-Retaining Nuts (YO 001394), used as miniature wing nuts.

# Pushnut® Auto Feed

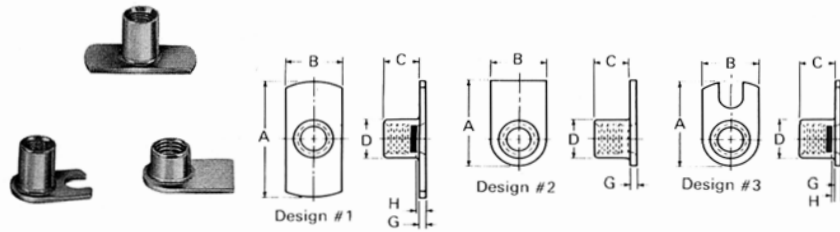


Stud, Rod or Wire Dia. d	TRW Part No.	Design Type	Overall Shell Height H	Outside Shell Diameter D	Inside Tooth Diameter M	Material Thickness T	Stud Height S
4	PN040011	1	1.78/1.40	11.30/11.00	3.61/3.76	0.28/0.23	3.60/25.40
5	PN050011	1	1.78/1.40	11.30/11.00	4.62/4.78	0.38/0.33	3.60/25.40
6	PN060011	1	1.78/1.40	11.30/11.00	5.74/5.59	0.49/0.43	3.60/25.40

- Optimum performance depends on adherence to these stud, rod or wire specifications:
1. Material may be mild steel, aluminum, zinc or other malleable metals.
  2. Surface hardness must not exceed Rockwell 30T 78.
  3. Recommended diameter tolerance  $\pm .001$ .
  4. Ends must be free of distortion or burrs. Chamfer  $0.8 \times 45^\circ$  for easier assembly.
  5. Nickel, chromium or other hard finishes on steel are not recommended.
  6. Nickel-chromium plating on die cast studs must not exceed .08 thickness.

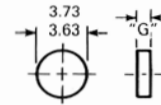
TYPICAL APPLICATION

## Mold Insert Nuts

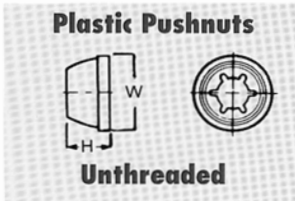


Thread Size	TRW Part No.	Design Type	Plug	"A" Base Length	"B" Base Width	"C" Barrel Ht.	"D" Barrel O.D.	"E" Slot Width	"F" Slot Depth	"G" $\pm .10$ Steel Thk.	"H" Plug Depth
M4x0.7	MI040412	2	NO	11.68/11.44	7.62/7.11	4.36/3.86	5.25/5.13	—	—	.89	—
M4x0.7	MI040612	3	NO	11.81/11.43	7.62/7.11	6.25/5.75	5.26/5.13	3.42/2.92	4.06/3.56	.89	1.30/7
M4x0.7	MI040712	3	YES	11.81/11.43	7.62/7.11	7.39/6.89	5.26/5.13	3.42/2.92	4.06/3.56	.89	1.30/7
M4x0.7	MI040916	1	NO	16.13/15.63	7.62/7.11	4.85/4.35	5.26/5.13	—	—	.89	1.30/7
M4x0.7	MI040916	1	NO	16.13/15.63	7.62/7.11	5.80/5.30	5.26/5.13	—	—	.89	1.30/7
M4x0.7	MI040916	1	YES	16.13/15.63	7.62/7.11	7.39/6.89	5.26/5.13	—	—	.89	1.30/7
M4x0.7	MI040716	1	NO	16.13/15.63	7.62/7.11	7.39/6.89	5.26/5.13	—	—	.89	1.30/7
M4x0.7	MI040716	1	YES	16.13/15.63	7.62/7.11	7.39/6.89	5.26/5.13	—	—	.89	1.30/7

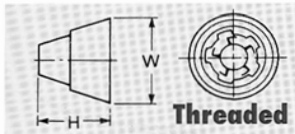
### Barrel Plug



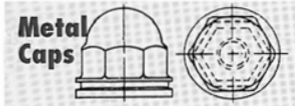
## Plastic and Metal Caps



Stud Rod or Wire Shaft	Outside Dia. W mm	Overall Height H mm	Shaft Extension		Steel Thick mm	Tooth Design	Performance		Part No.
			Min A mm	Max Cap Penetration B mm			Max Push-On Force *N	Min Holding Strength *N	
4	16.7	8.7	3.8	6.4	.30	3	134	890	KPS 004167
8	21.2	11.2	4.4	8.9	.38	1	267	3115	KPS 008215
9	21.2	11.2	4.4	8.9	.38	1	334	3115	KPS 009215
16	32.6	16.4	5.1	13.3	.46	1	400	8900	KPS 016325



Thread Dia.	Outside Dia. - D mm	Overall Height - H mm	Bolt Extension		Steel Thick. mm	Performance		Part No.
			Min A mm	Max B mm		Max Push-On Force *N	Min Holding Strength *N	
8	24.5	19.45	11.9	18.0	0.33	155	900	KPTZ 080245
8	24.5	16.45	8.9	15.0	0.33	155	900	KTP 080245



Thread Size mm	Pitch mm	Washer Dia. mm	Hex Size mm	Overall Height	Steel Thickness		Part No.
					Cap mm	Nut mm	
4	0.7	13.59/13.38	11	12.75	.61	.89	KMF 040014

Available now   Planned, not yet designed or tooled  
 \*N – Newtons = 9.8 Kgm    \*Nm – Newton meters = 980 Kgm-Cm