

STANLEY®
Engineered Fastening

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POP® BLIND NUT SYSTEMS

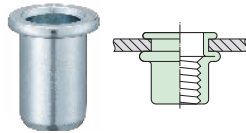
<http://www.popnpr.co.jp/>
NIPPON POP RIVETS AND FASTENERS LTD.

POP®

POP Nuts

Standard POP Nut

P7•8

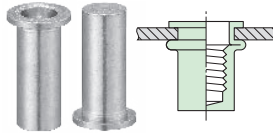


A basic POP nut for one-sided fastening.

- Thread size : M3 M4 M5 M6 M8 M10 M12
- Material : Steel, Aluminum, Stainless steel

Closed End POP Nut

P9•10

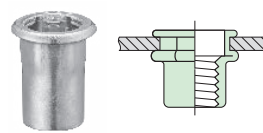


Ideal for use with sealed backsides and for protecting the interior of the material hole from the bolt point.

- Thread size : M3 M4 M5 M6 M8 M10
- Material : Steel, Aluminum, Stainless steel

Hex POP Nut

P11•12

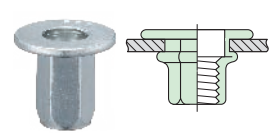


The hexagonal POP Nut body installed in a hexagonal work hole ensures highly stable strength.

- Thread size : M4 M5 M6 M8 M10
- Material : Steel, Aluminum, Stainless steel

All Hex POP Nut

P13

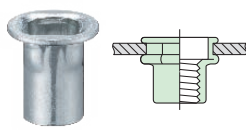


The full-hexagonal POP Nut body with sharp hex corners installed in a hexagonal work hole ensures higher stable strength.

- Thread size : M6
- Material : Steel

Tetra POP Nut

P13

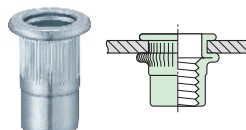


The square POP Nut body installed in a square work hole insures highly stable strength.

- Thread size : M4 M5 M6 M8
- Material : Steel

Roulette POP Nut

P14

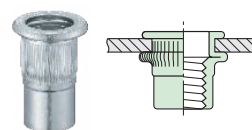


Ensures highly stable strength with a knurled POP Nut body that firmly engages with the work hole.

- Thread size : M4 M5 M6 M8
- Material : Steel

Soft Set POP Nut

P15

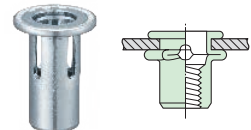


Can be fastened softly for use with pliable works such as PP and ABS.

- Thread size : M4 M5 M6
- Material : Steel

Slit Body POP Nut

P15

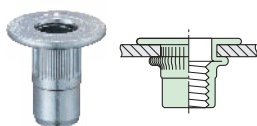


Appropriate for plastic and thin metal with 4 legs that expand during fastening.

- Thread size : M6
- Material : Steel

Large Flange POP Nut

P16

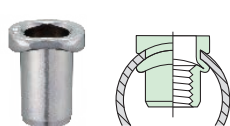


Effective with work holes on the mating plate that are a little larger.

- Thread size : M6 M8
- Material : Steel

Pipe POP Nut

P17

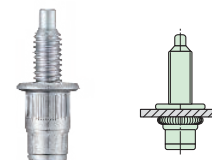


Designed to be installed in a pipe with the curved surface of a rear flange.

- Thread size : M6
- Material : Steel

HB Bolt

P18

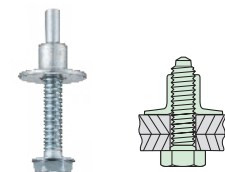


One-sided bolts can be used with plastic or metal works.

- Thread size : M6 M8
- Bolt material : Steel
- Body material : Steel

POP Bolt

P19



Bolt & collar two-piece fastener with collar that deforms to a hex shape when fastening for easy removal.

- Bolt material : Steel
- Body material : Steel

POP Nut Tools & Fastening Systems

P21-25

PNT210



- Length : 155mm
- Weight : 1.12kg
- Manual

PNT800A



- Length : 290mm
- Weight : 1.68kg
- Air hydraulic

PNT800L-PC



- Length : 290mm
- Weight : 1.82kg
- Air hydraulic

Nut Kwik

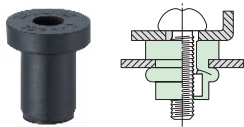


- Body Height : 500mm
- Body Weight : Approx. 32kg

WELL Nuts

Standard WELL Nut

P27

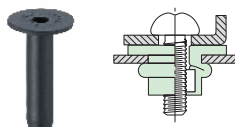


A one-sided rubber nut that reduces vibration, isolates conductivity and improves seal.

- Thread size : M3 M4 M5 M6 M8
- Material : Chloroprene rubber EPDM

Large Flange WELL Nut

P27

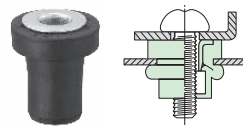


Provides additional support for fastening with a large flange.

- Thread size : M3 M4 M5 M6
- Material : Chloroprene rubber

Sleeve WELL Nut

P28

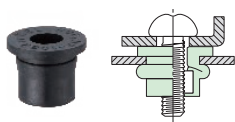


Allows the fastening screw to be fastened without torque control because the metal sleeve is attached to the WELL Nut.

- Thread size : M3 M4 M5 M6
- Material : Chloroprene rubber EPDM

Snap WELL Nuts

P28

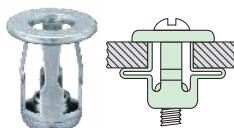


The snap under the WELL Nut flange prevents dropping from the works before fastening.

- Thread size : M4 M5
- Material : Chloroprene rubber

JACK Nut

P29



Can be installed in metal and plastic works with widely outward forming 3-4 legs.

- Thread size : M4 M5 M6
- Material : Steel

SC-123J



Tool for all sizes JACK Nuts

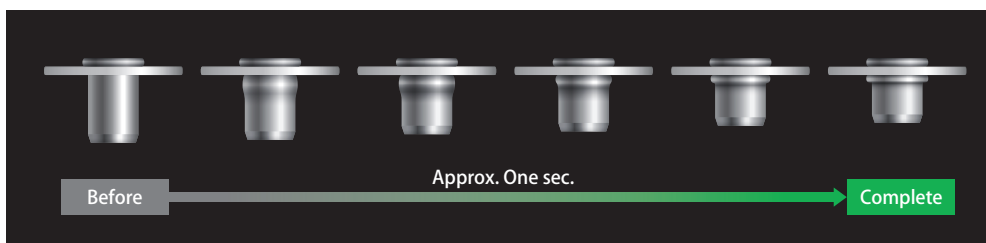
INDEX

POP Nut fastening	3
POP Nut selection	4
Stroke calculation	5
POP Nut specification table	6
Standard POP nut	7 ~ 8
Closed End POP Nut	9 ~ 10
Hex POP Nut	11 ~ 12
All Hex POP Nut	13
Tetra POP Nut	13
Roulette POP Nut	14
POP Nut for Plastic	15
Large Flange POP Nut	16
POP Nut for Pipe	17
Removable	18 ~ 19
Test Methods	20
Galvanic Corrosion	20
POP Nut Tools	21 ~ 22
Tool Parts List	23 ~ 24
Nut Kwik	25
Well Nut	26 ~ 28
Jack Nut	29
POP products	30
Certified ISO, TS	30

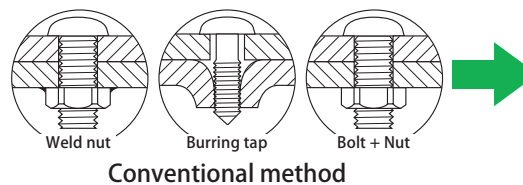
The POP Nut one-sided fastening method achieves precision and fast nut setting.

- POP Nut complies with RoHS Compliances.
- Do not relate to the category specified in Tables 1-1 to 1-15 of the Export Trade Control Order.
- One-sided POP Nut tools make setting precise and fast.
- POP Nut tools make fastening easy for low-skilled workers.
- Installation after surface treatment and in the later processes is possible because POP Nut does not damage the surface.
- One-sided POP Nut allows quick fastening, resulting in an overall cost-reduction advantage over welding.
- Ideal for automating assembly lines.

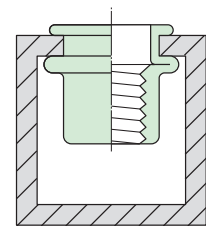
POP Nut fastening process



- Compared to welding nut, burring tap and bolt & nut methods, the one-sided POP nut method improves assembly speed, requires less training and contributes to the cost reduction.

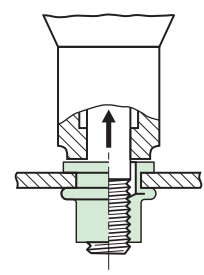
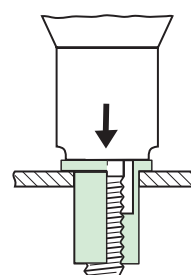
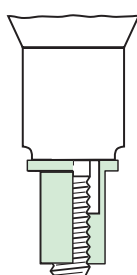
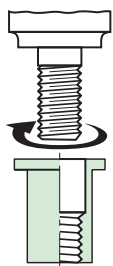


POP Nut method

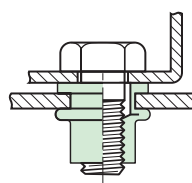
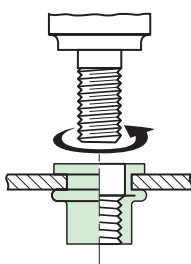


POP Nut installation method

- 1 Set POP Nut onto the POP Nut tool.
- 2 The mandrel of the tool rotates forward to screw in the nut.
- 3 Insert the POP Nut into the work hole.
- 4 Push the flange tightly into the work with the tool and pull the trigger to fasten the POP Nut to the work.



- 5 After fastening, the mandrel rotates in reverse and the tool exits from the POP Nut.
- 6 Install the screw to set the mating part to the POP Nut.



Whether POP Nuts relate to the category of cargo specified in Table 1 of the Export Trade Control Order

The products specified in this "POP Blind Nut Systems" catalog do not relate to the category specified in Tables 1-1 to 1-15 of the Export Trade Control Order. However, they relate to the category specified in Table 1-16. Therefore, please obtain an export license from the Ministry of Economy, Trade and Industry before exporting products falling under any category specified in "Ministerial Ordinance Specifying Cases where exported goods are likely to be used for the Development of Nuclear Weapons, etc." (As per the governmental, ministerial and other ordinances that came into effect on August 1, 2012.)

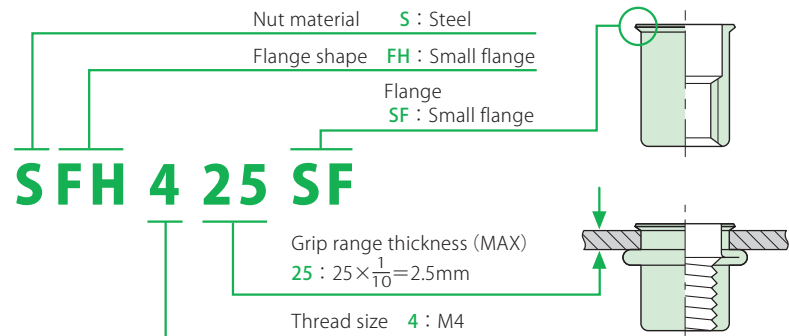
Choose the POP Nut suitable for your specific material and specifications.

For the proper fastening, please check the material, thickness and hole size of the work and choose the suitable nut strength, function and corrosion resistance.

POP Nut number

As shown to the right, each POP Nut name has a code showing the material of the nut body, the thread size, the grip range thickness and the flange shape.

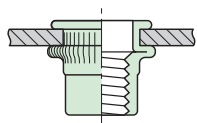
Example : SFH425SF



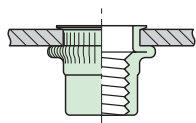
Nut shape

Open Type Nuts

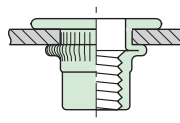
Flat head "PH"



Small flange "FH"

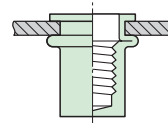


Large Flange "LF"

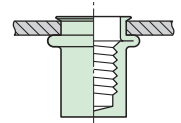


Closed Type Nuts

Flat head "PS"

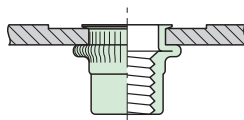
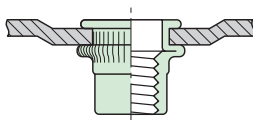


Small flange "FS"



Caution: When preparing the works which prevent nut flanges from protruding from the works

Example

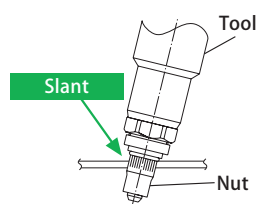


- ※Denting thickness to prevent form flange's protruding should not be thicker than the thickness of POP Nut flange; otherwise the failure setting will be occurred because the fastening tools cannot be set properly on this condition.
- ※When the POP Nut flange does not connect directly to the mating part, this cause POP nut and bolt turning together because of direct torque with fewer friction between the POP Nut flange and the mating part.
- ※High Torque Type POP Nuts such as RLT, HEX & Tetra should be recommended for applications with fewer friction between the POP Nut flange and the mating part.

Check points of fastening process

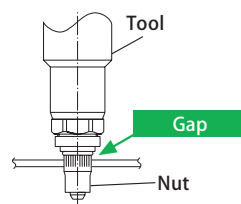
❶ Do not operate the tool under the conditions in figure (a), (b) and (c) shown below. Doing so causes incorrect fastening.

(a)



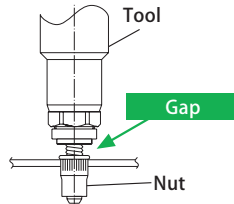
Tool not horizontal with the work.

(b)



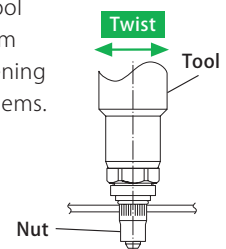
A gap between nut flange and the work.

(c)



A gap between nut flange and the tool.

❷ During operation, avoid twisting or slanting the tool to prevent from incorrect fastening and tool problems.



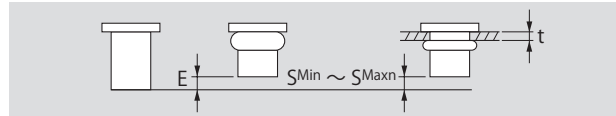
Stroke Adjustment for POP Nuts & HB Bolts

Stroke Calculation

- Confirm stroke (S_{max} , S_{min} , E) corresponding to POP Nut and the work thickness.

After stroke adjustment without the workpiece, adjust the POP Nut stroke between S_{min} - S_{max} with the real work or test workpiece.

POP Nut



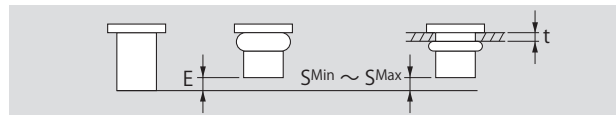
Stroke calculation

Thread size	Maximum stroke : S_{Max}	Minimum stroke : S_{Min}	Stroke without work : E
M3×0.5	$1.2 + (N-t)$	$S_{Max} - 0.2$	$S_{Max} + 0.1$
M4×0.7	$1.6 + (N-t)$	$S_{Max} - 0.3$	$S_{Max} + 0.1$
M5×0.8	$2.0 + (N-t)$	$S_{Max} - 0.3$	$S_{Max} + 0.1$
M6×1.0	$2.4 + (N-t)$	$S_{Max} - 0.4$	$S_{Max} + 0.2$
M8×1.25RLT	$2.4 + (N-t)$	$S_{Max} - 0.4$	$S_{Max} + 0.2$
M8×1.25	$2.8 + (N-t)$	$S_{Max} - 0.4$	$S_{Max} + 0.2$
M10×1.5	$3.0 + (N-t)$	$S_{Max} - 0.4$	$S_{Max} + 0.2$
M12×1.75	$3.2 + (N-t)$	$S_{Max} - 0.5$	$S_{Max} + 0.3$

M8×1.25 RLT shows M8 steel Roulette POP Nut. M4, M5 and M6 steel Roulette POP Nuts have the same stroke as standard POP Nuts.

t : Work thickness
 N : 1/10 of the last two digits of the part No.
 Ex. 625 : $25/10 = 2.5$

Slit Body POP Nut

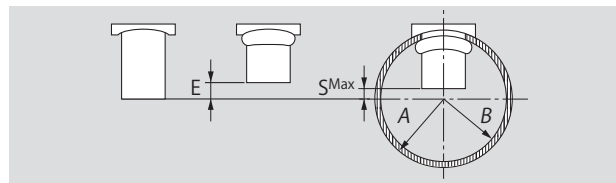


Stroke calculation

Thread size	Maximum stroke : S_{Max}	Minimum stroke : S_{Min}	Stroke without work : E
M6×1.0	$4.3 + (N-t)$	$S_{Max} - 0.3$	$S_{Max} + 0.2$

t : Work thickness
 N : 1/10 of the last two digits of the part No.
 Ex. 640 : $40/10 = 4.0$

Pipe POP Nut

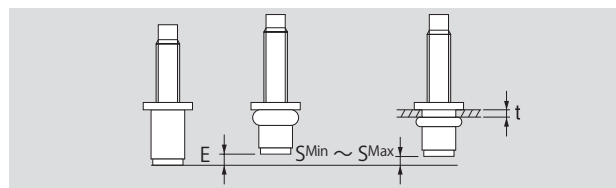


Stroke calculation

Thread size	Maximum stroke : S_{Max}	Minimum stroke : S_{Min}	Stroke without work : E
M6×1.0	$6.9 - A + \sqrt{B^2 - 20.25}$	$S_{Max} - 0.4$	$S_{Max} + 0.2$

A : Radius of the pipe outside diameter
 B : Radius of the pipe inside diameter

HB Bolt

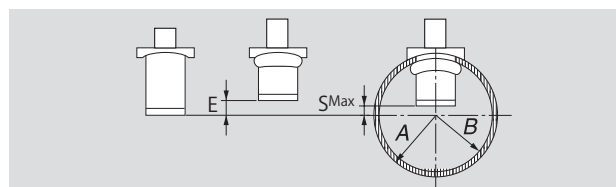


Stroke calculation

Thread size	Maximum stroke : S_{Max}	Minimum stroke : S_{Min}	Stroke without work : E
M6×1.0	$2.4 + (N-t)$	$S_{Max} - 0.4$	$S_{Max} + 0.2$

t : Work thickness
 N : 1/10 of the last two digits of the part No.
 Ex. 625 : $25/10 = 2.5$

HB Bolt for Pipe



Stroke calculation

Thread size	Maximum stroke : S_{Max}	Minimum stroke : S_{Min}	Stroke without work : E
M6×1.0	$6.9 - A + \sqrt{B^2 - 20.25}$	$S_{Max} - 0.4$	$S_{Max} + 0.2$
M8×1.25	$7.3 - A + \sqrt{B^2 - 30.25}$	$S_{Max} - 0.4$	$S_{Max} + 0.2$

A : Radius of the pipe outside diameter
 B : Radius of the pipe inside diameter

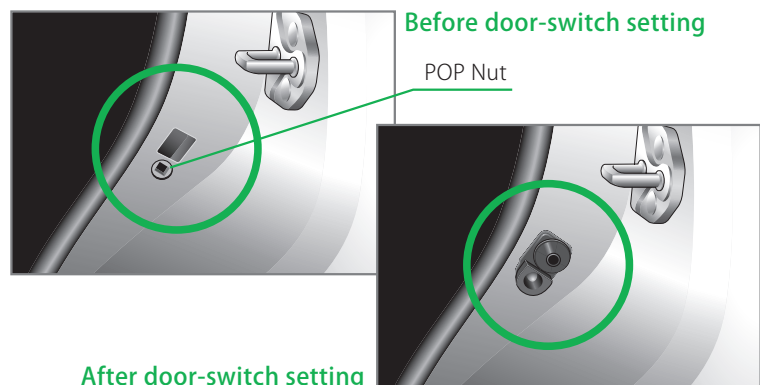
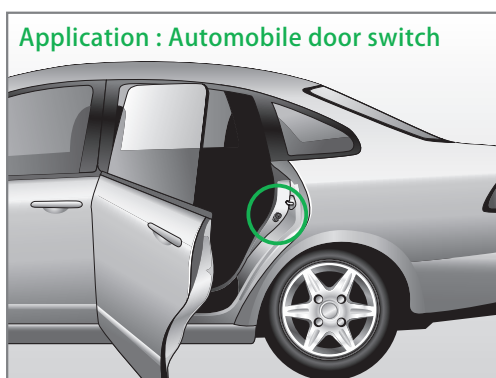
POP Nut Specification Table

	Type	Nut	Work		Nut Material			Thread Size							Page
			Hole	Material	Steel	Aluminum	Stainless steel	M3	M4	M5	M6	M8	M10	M12	
1	Standard		 Round	Metal	○	○	△	●	●	●	●	●	●	※1	7 8
2	Closed End		 Round	Metal	△	△	△		●	●	●	●	●		9 10
3	Hex		 Hexagonal	Metal	○	○	△		●	●	●	●	※2		11 12
4	All Hex		 Hexagonal	Metal	○						●				13
5	Tetra		 Square	Metal	○				●	●	●	●			13
6	Roulette		 Round	Metal	○				●	●	●	●			14
7	Soft Set		 Round	Plastic	○				●	●	●				15
8	Slit Body		 Round	Metal Plastic	○						●				15
9	Large Flange		 Round	Metal Plastic	○						●	●			16
10	Pipe		 Round	Round pipe	○						●				17
11	HB Bolt		 Round	Metal Plastic Round pipe	△						●	●			18
12	POP Bolt		 Round	Metal Plastic	○						●				19

△: Made to order ※1: Steel only for M12 ※2: Steel small flange only for M10

Application

POP Nuts have been adopted for many kinds of applications including transportation, electrical devices and building material.



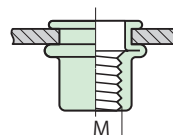
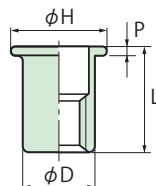
Standard POP Nut



	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■	Zinc plating trivalent chrome
	Aluminum	APH ■	—
	Stainless steel	SSPH ■	—

RoHS Compliance

SPH ■



Work hole

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.8	5.0	8.3	0.8	3.4	5.4
		325	1.5 - 2.5	9.8					
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.3	6.0	9.3	0.8	4.4	7.4
		425	1.5 - 2.5	11.3					
		435	2.5 - 3.5	12.3					
		445	3.5 - 4.5	13.3					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.5	7.0	10.3	1.0	10.8	10.8
		525	1.5 - 2.5	12.5					
		535	2.5 - 3.5	13.5					
		545	3.5 - 4.5	14.5					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	15.0	9.0	12.3	1.5	16.7	17.7
		640	2.5 - 4.0	16.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	16.5	11.0	14.3	1.5	27.5	25.5
		840	2.5 - 4.0	18.0					
M10×1.5	13.1 - 13.3	1025	1.0 - 2.5	17.0	13.0	16.3	1.5	58.8	29.4
		1040	2.5 - 4.0	18.5					
		1060	4.0 - 6.0	20.5					
M12×1.75	16.1 - 16.3	1240	1.6 - 4.0	20.2	15.9	21.3	1.7	100	34.3
		1260	4.0 - 6.0	22.2					

APH ■

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.8	5.0	8.3	0.8	1.9	2.9
		325	1.5 - 2.5	9.8					
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.3	6.0	9.3	0.8	3.4	4.9
		425	1.5 - 2.5	11.3					
		435	2.5 - 3.5	12.3					
		445	3.5 - 4.5	13.3					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.5	7.0	10.3	1.0	6.9	6.7
		525	1.5 - 2.5	12.5					
		535	2.5 - 3.5	13.5					
		545	3.5 - 4.5	14.5					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	15.0	9.0	12.3	1.5	13.7	10.8
		640	2.5 - 4.0	16.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	16.5	11.0	14.3	1.5	25.5	15.7
		840	2.5 - 4.0	18.0					
M10×1.5	13.1 - 13.3	1025	1.0 - 2.5	17.0	13.0	16.3	1.5	44.1	18.6
		1040	2.5 - 4.0	18.5					

SSPH ■

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.8	5.0	8.0	0.8	3.4	8.1
		415	0.5 - 1.5	10.3					
M4×0.7	6.1 - 6.2	425	1.5 - 2.5	11.3	6.0	9.3	0.8	6.4	11.1
		435	2.5 - 3.5	12.3					
		515	0.5 - 1.5	11.5					
M5×0.8	7.1 - 7.2	525	1.5 - 2.5	12.5	7.0	10.0	1.0	15.2	16.2
		535	2.5 - 3.5	13.5					
		545	3.5 - 4.5	14.5					
		625	0.5 - 2.5	15.0					
M6×1.0	9.1 - 9.3	640	2.5 - 4.0	16.5	9.0	12.3	1.5	20.7	26.6
		825	1.0 - 2.5	16.5					
M8×1.25	11.1 - 11.3	840	2.5 - 4.0	18.0	11.0	14.3	1.5	50.3	38.3
		840	2.5 - 4.0	18.0					

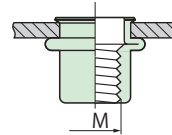
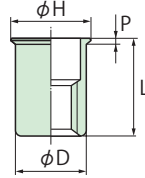
Standard POP Nut



	Material	Nut No.	Surface Treatment
Small flange	Steel	SFH ■ SF	Zinc plating trivalent chrome
	Aluminum	AFH ■ SF	—
	Stainless steel	SSFH ■ SF	—

RoHS Compliance

SFH ■ SF



Work hole

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.5	5.0	6.0	0.5	3.4	5.4
		325	1.5 - 2.5	9.5					
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.0	7.0	0.5	4.4	7.4
		425	1.5 - 2.5	11.0					
		435	2.5 - 3.5	12.0					
		445	3.5 - 4.5	13.0					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.0	8.0	0.5	10.8	10.8
		525	1.5 - 2.5	12.0					
		535	2.5 - 3.5	13.0					
		545	3.5 - 4.5	14.0					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.0	10.0	0.5	16.7	17.7
		640	2.5 - 4.0	15.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.0	12.0	0.5	27.5	25.5
		840	2.5 - 4.0	17.0					
M10×1.5	13.1 - 13.3	1025	1.0 - 2.5	16.0	13.0	14.0	0.5	58.8	29.4
		1040	2.5 - 4.0	17.5					

AFH ■ SF

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.5	5.0	6.0	0.5	1.9	2.9
		325	1.5 - 2.5	9.5					
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.0	7.0	0.5	3.4	4.9
		425	1.5 - 2.5	11.0					
		435	2.5 - 3.5	12.0					
		445	3.5 - 4.5	13.0					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.0	8.0	0.5	6.9	6.7
		525	1.5 - 2.5	12.0					
		535	2.5 - 3.5	13.0					
		545	3.5 - 4.5	14.0					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.0	10.0	0.5	13.7	10.8
		640	2.5 - 4.0	15.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.0	12.0	0.5	25.5	15.7
		840	2.5 - 4.0	17.0					
M10×1.5	13.1 - 13.3	1025	1.0 - 2.5	16.0	13.0	14.0	0.5	44.1	18.6
		1040	2.5 - 4.0	17.5					

SSFH ■ SF

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	8.5	5.0	6.0	0.5	3.4	8.1
		325	1.5 - 2.5	9.5					
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.0	7.0	0.5	6.4	11.1
		425	1.5 - 2.5	11.0					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.0	8.0	0.5	15.2	16.2
		525	1.5 - 2.5	12.0					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.0	10.0	0.5	20.7	26.6
		640	2.5 - 4.0	15.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.0	12.0	0.5	50.3	38.3
		840	2.5 - 4.0	17.0					

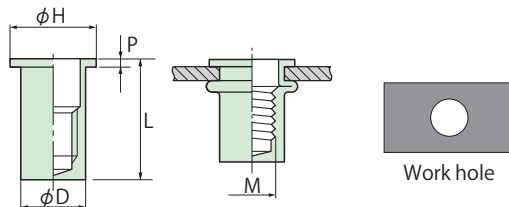
Closed End POP Nut



	Material	Nut No.	Surface Treatment
Flat head	Steel	SPS ■	Zinc plating trivalent chrome
	Aluminum	APS ■	—
	Stainless steel	SSPS ■	—

RoHS Compliance

● The bottom of the nut is closed, so this nut is ideal for use with sealed backsides and for protecting the interior of the material hole from the bolt point.



SPS ■

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	13.3	5.0	8.0	0.8	3.4	5.4
		415	0.5 - 1.5	15.3					
		425	1.5 - 2.5	16.3					
M4×0.7	6.1 - 6.2	435	2.5 - 3.5	17.3	6.0	9.0	0.8	4.4	7.4
		515	0.5 - 1.5	17.0					
		525	1.5 - 2.5	18.0					
M5×0.8	7.1 - 7.2	535	2.5 - 3.5	19.0	7.0	10.0	1.0	10.8	10.8
		625	0.5 - 2.5	21.5					
		640	2.5 - 4.0	23.0					
M6×1.0	9.1 - 9.3	825	1.0 - 2.5	24.0	9.0	12.0	1.5	16.7	17.7
		840	2.5 - 4.0	25.5					
M8×1.25	11.1 - 11.3	1025	1.0 - 2.5	25.5	11.0	14.0	1.5	27.5	25.5
		1040	2.5 - 4.0	27.0					
M10×1.5	13.1 - 13.3				13.0	16.0	1.5	58.8	29.4

APS ■

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	13.3	5.0	8.0	0.8	1.9	2.9
		415	0.5 - 1.5	15.3					
		425	1.5 - 2.5	16.3					
M4×0.7	6.1 - 6.2	435	2.5 - 3.5	17.3	6.0	9.0	0.8	3.4	4.9
		515	0.5 - 1.5	17.0					
		525	1.5 - 2.5	18.0					
M5×0.8	7.1 - 7.2	535	2.5 - 3.5	19.0	7.0	10.0	1.0	6.9	6.7
		625	0.5 - 2.5	21.5					
		640	2.5 - 4.0	23.0					
M6×1.0	9.1 - 9.3	825	1.0 - 2.5	24.0	9.0	12.0	1.5	13.7	10.8
		840	2.5 - 4.0	25.5					
M8×1.25	11.1 - 11.3	1025	1.0 - 2.5	25.5	11.0	14.0	1.5	25.5	15.7
		1040	2.5 - 4.0	27.0					
M10×1.5	13.1 - 13.3				13.0	16.0	1.5	44.1	18.6

SSPS ■

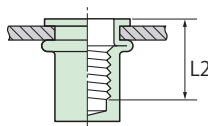
Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	15.3	6.0	9.0	0.8	6.4	11.1
		425	1.5 - 2.5	16.3					

● Please calculate the bolt length using the following “L2 dimension after setting” to prevent from bolt’s top faces the bottom of Closed End POP nut.

“L2 dimension after setting Closed End POP nut (Flat head)”

M3 : 6.5+N—S M6 : 12+N—S
M4 : 8.3+N—S M8 : 13.5+N—S
M5 : 9.5+N—S M10 : 14+N—S



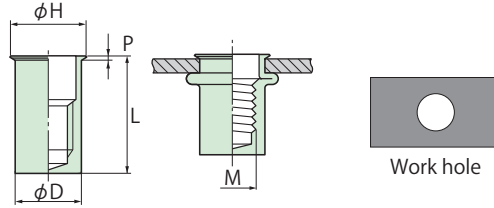
N : 1/10 of the last two digits of the part No.
S : Stroke. Please refer “Stroke Calculation” of Page 5.

Closed End POP Nut



	Material	Nut No.	Surface Treatment
Small flange	Steel	SFS ■ SF	Zinc plating trivalent chrome
	Aluminum	AFS ■ SF	—
	Stainless steel	SSFS ■ SF	—

RoHS Compliance



SFS ■ SF

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	13.0	5.0	6.0	0.5	3.4	5.4
		415	0.5 - 1.5	15.0	6.0	7.0	0.5	4.4	7.4
M4×0.7	6.1 - 6.2	425	1.5 - 2.5	16.0	6.0	7.0	0.5	4.4	7.4
		435	2.5 - 3.5	17.0	6.0	7.0	0.5	4.4	7.4
		515	0.5 - 1.5	16.5	7.0	8.0	0.5	10.8	10.8
M5×0.8	7.1 - 7.2	525	1.5 - 2.5	17.5	7.0	8.0	0.5	10.8	10.8
		535	2.5 - 3.5	18.5	7.0	8.0	0.5	10.8	10.8
		625	0.5 - 2.5	20.5	9.0	10.0	0.5	16.7	17.7
M6×1.0	9.1 - 9.3	640	2.5 - 4.0	22.0	9.0	10.0	0.5	16.7	17.7
		825	1.0 - 2.5	23.0	11.0	12.0	0.5	27.5	25.5
M8×1.25	11.1 - 11.3	840	2.5 - 4.0	24.5	11.0	12.0	0.5	27.5	25.5
		1025	1.0 - 2.5	24.5	13.0	14.0	0.5	58.8	29.4
M10×1.5	13.1 - 13.3	1040	2.5 - 4.0	26.0	13.0	14.0	0.5	58.8	29.4

AFS ■ SF

Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M3×0.5	5.1 - 5.2	315	0.5 - 1.5	13.0	5.0	6.0	0.5	1.9	2.9
		415	0.5 - 1.5	15.0	6.0	7.0	0.5	1.9	2.9
M4×0.7	6.1 - 6.2	425	1.5 - 2.5	16.0	6.0	7.0	0.5	3.4	4.9
		435	2.5 - 3.5	17.0	6.0	7.0	0.5	3.4	4.9
		515	0.5 - 1.5	16.5	7.0	8.0	0.5	6.9	6.7
M5×0.8	7.1 - 7.2	525	1.5 - 2.5	17.5	7.0	8.0	0.5	6.9	6.7
		535	2.5 - 3.5	18.5	7.0	8.0	0.5	6.9	6.7
		625	0.5 - 2.5	20.5	9.0	10.0	0.5	13.7	10.8
M6×1.0	9.1 - 9.3	640	2.5 - 4.0	22.0	9.0	10.0	0.5	13.7	10.8
		825	1.0 - 2.5	23.0	11.0	12.0	0.5	25.5	15.7
M8×1.25	11.1 - 11.3	840	2.5 - 4.0	24.5	11.0	12.0	0.5	25.5	15.7
		1025	1.0 - 2.5	24.5	13.0	14.0	0.5	44.1	18.6
M10×1.5	13.1 - 13.3	1040	2.5 - 4.0	26.0	13.0	14.0	0.5	44.1	18.6

SSFS ■ SF

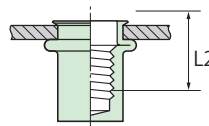
Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	15.0	6.0	7.0	0.5	6.4	11.1
		425	1.5 - 2.5	16.0	6.0	7.0	0.5	6.4	11.1
		435	2.5 - 3.5	17.0	6.0	7.0	0.5	6.4	11.1
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	16.5	7.0	8.0	0.5	15.2	16.2
		525	1.5 - 2.5	17.5	7.0	8.0	0.5	15.2	16.2

● Please calculate the bolt length using the following “L2 dimension after setting” to prevent from bolt’s top faces the bottom of Closed End POP nut.

“L2 dimension after setting Closed End POP nut (Small flange)”

M3 : 6.5+N-S M6 : 11+N-S
M4 : 8+N-S M8 : 12.5+N-S
M5 : 9+N-S M10 : 13+N-S



N : 1/10 of the last two digits of the part No.
S : Stroke. Please refer “Stroke Calculation” of Page 5.

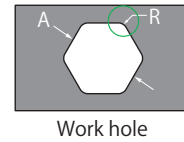
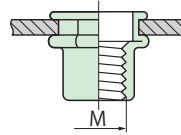
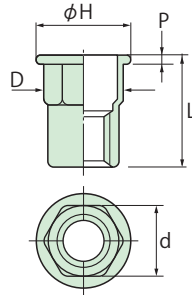
Hex POP Nut



	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■ HEX	Zinc plating trivalent chrome
	Aluminum	APH ■ HEX	—

RoHS Compliance

- The hexagonal POP Nut body installed in a hexagonal work hole ensures highly stable strength.



SPH ■ HEX

Thread size	Corner R
M4	R0.4Max
M5	R0.5Max
M6,M8	R1.5Max

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.3	6.4	6.0	9.3	0.8	4.4	7.4
		425	1.5 - 2.5	11.3						
		435	2.5 - 3.5	12.3						
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.5	7.5	7.0	10.3	1.0	10.8	10.8
		525	1.5 - 2.5	12.5						
		535	2.5 - 3.5	13.5						
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	15.0	9.6	9.0	12.3	1.5	16.7	17.7
		640	2.5 - 4.0	16.5						
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	16.5	11.9	11.0	14.3	1.5	27.5	25.5
		840	2.5 - 4.0	18.0						

APH ■ HEX

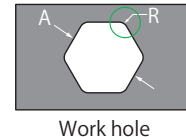
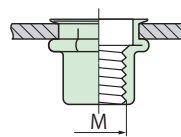
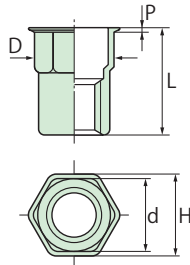
Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.3	6.4	6.0	9.3	0.8	3.4	4.9
		425	1.5 - 2.5	11.3						
		435	2.5 - 3.5	12.3						
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.5	7.5	7.0	10.3	1.0	6.9	6.7
		525	1.5 - 2.5	12.5						
		535	2.5 - 3.5	13.5						
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	15.0	9.6	9.0	12.3	1.5	13.7	10.8
		640	2.5 - 4.0	16.5						
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	16.5	11.9	11.0	14.3	1.5	25.5	15.7
		840	2.5 - 4.0	18.0						

Hex POP Nut



	Material	Nut No.	Surface Treatment
Small flange	Steel	SFH ■ SF-HEX	Zinc plating trivalent chrome
	Aluminum	AFH ■ SF-HEX	—
	Stainless steel	SSFH ■ SF-HEX	—

RoHS Compliance



Work hole

SFH ■ SF-HEX

Thread size	Corner R
M4	R0.4Max
M5	R0.5Max
M6,M8,M10	R1.5Max

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.4	6.0	7.0	0.5	4.4	7.4
		425	1.5 - 2.5	11.0						
		435	2.5 - 3.5	12.0						
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.5	7.0	8.0	0.5	10.8	10.8
		525	1.5 - 2.5	12.0						
		535	2.5 - 3.5	13.0						
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.6	9.0	10.0	0.5	16.7	17.7
		640	2.5 - 4.0	15.5						
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.9	11.0	12.0	0.5	27.5	25.5
		840	2.5 - 4.0	17.0						
M10×1.5	13.1 - 13.3	1025	1.0 - 2.5	16.0	13.0	11.5	14.5	0.5	58.8	29.4
		1040	2.5 - 4.0	17.5						

AFH ■ SF-HEX

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.4	6.0	7.0	0.5	3.4	4.9
		425	1.5 - 2.5	11.0						
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.5	7.0	8.0	0.5	6.9	6.7
		525	1.5 - 2.5	12.0						
		535	2.5 - 3.5	13.0						
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.6	9.0	10.0	0.5	13.7	10.8
		640	2.5 - 4.0	15.5						
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.9	11.0	12.0	0.5	25.5	15.7
		840	2.5 - 4.0	17.0						

SSFH ■ SF-HEX

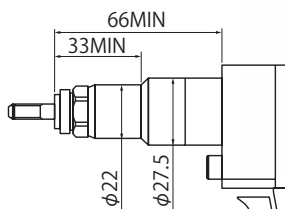
Made to order

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.4	6.0	7.0	0.5	6.4	11.1
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.6	9.0	10.0	0.5	20.7	26.6

Stainless steel HEX POP Nut
(M4, M6) Tool

PNT800A

- Length : 290mm
- Weight : 1.68kg
- Air pressure : 0.5~0.6Mpa



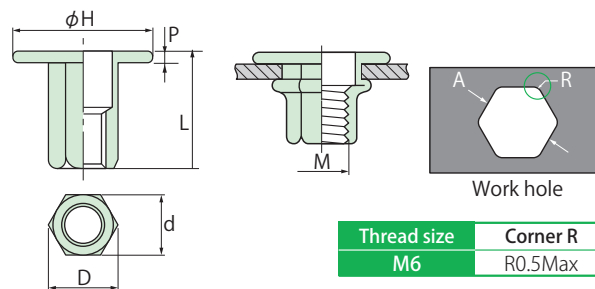
All Hex POP Nut



	Material	Nut No.	Surface Treatment
Large flange	Steel	SPH ■ AHEX-LF	Zinc plating trivalent chrome

RoHS Compliance

- The body of the nut has a full-hexagonal shape with sharp hex corners, so it provides higher stable strength when installed in a hexagonal work hole.



SPH ■ AHEX-LF

Thread size	Corner R
M6	R0.5Max

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	16.0	10.2	9.0	18.0	1.5	16.7	17.7

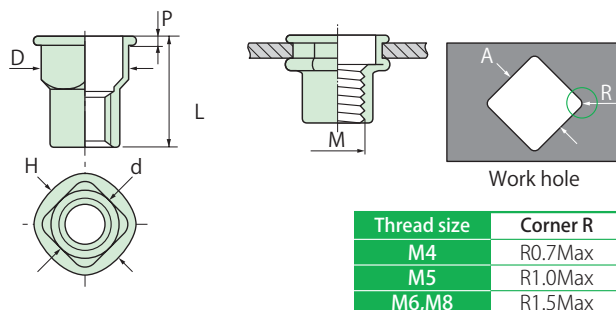
Tetra POP Nut



	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■ TETRA	Zinc plating trivalent chrome

RoHS Compliance

- The body of the nut is square, so it provides highly stable strength when installed in a square work hole.



SPH ■ TETRA

Thread size	Corner R
M4	R0.7Max
M5	R1.0Max
M6,M8	R1.5Max

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	d (mm)	H (mm)	P (mm)	Reference Strength	
									Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.2 - 6.3	415	0.5 - 1.5	10.0	7.2	6.0	9.5	0.5	4.4	7.4
		425	1.5 - 2.5	11.0						
		435	2.5 - 3.5	12.0						
M5×0.8	7.2 - 7.3	515	0.5 - 1.5	11.0	8.4	7.0	10.5	0.5	10.8	10.8
		525	1.5 - 2.5	12.0						
		535	2.5 - 3.5	13.0						
M6×1.0	9.2 - 9.4	625	0.5 - 2.5	14.3	10.7	9.0	14.0	0.8	16.7	17.7
		640	2.5 - 4.0	15.8						
M8×1.25	11.2 - 11.4	840	2.5 - 4.0	17.5	12.7	11.0	17.0	1.0	27.5	25.5

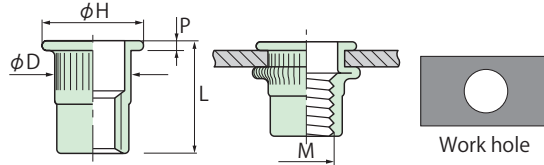
Roulette POP Nut



- The outer surface of the nut body is knurled, so it provides highly stable strength with a body which firmly engages in the work hole.

	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■ RLT	Zinc plating trivalent chrome

RoHS Compliance



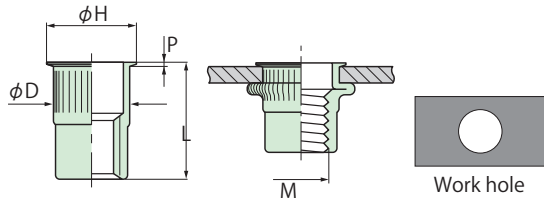
SPH ■ RLT

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.3	6.0	9.3	0.8	6.3	9.8
		425	1.5 - 2.5	11.3					
		435	2.5 - 3.5	12.3					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.5	7.0	10.3	1.0	14.7	14.2
		525	1.5 - 2.5	12.5					
		535	2.5 - 3.5	13.5					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	15.0	9.0	12.3	1.5	20.6	21.6
		640	2.5 - 4.0	16.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	16.5	11.0	14.3	1.5	34.3	29.4
		840	2.5 - 4.0	18.0					



	Material	Nut No.	Surface Treatment
Small flange	Steel	SFH ■ SF-RLT	Zinc plating trivalent chrome

RoHS Compliance



SFH ■ SF-RLT

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.1 - 6.2	415	0.5 - 1.5	10.0	6.0	7.0	0.5	6.3	9.8
		425	1.5 - 2.5	11.0					
		435	2.5 - 3.5	12.0					
M5×0.8	7.1 - 7.2	515	0.5 - 1.5	11.0	7.0	8.0	0.5	14.7	14.2
		525	1.5 - 2.5	12.0					
		535	2.5 - 3.5	13.0					
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	14.0	9.0	10.0	0.5	20.6	21.6
		640	2.5 - 4.0	15.5					
M8×1.25	11.1 - 11.3	825	1.0 - 2.5	15.5	11.0	12.0	0.5	34.3	29.4
		840	2.5 - 4.0	17.0					

For Plastic Works

Soft Set POP Nut

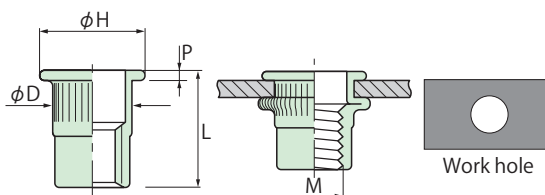


- Specially designed for soft works, so effective for plastic works such as PP and ABS.

SPH ■ R-WB

	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■ R-WB	Zinc plating trivalent chrome

RoHS Compliance



Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M4×0.7	6.6 - 6.7	450	2.5 - 4.0	13.8	6.5	9.5	0.8	4.4	7.4
M5×0.8	7.6 - 7.7	550	2.5 - 4.0	14.7	7.5	10.5	1.0	10.8	10.8
M6×1.0	9.7 - 9.9	650	2.5 - 4.5	17.5	9.6	12.7	1.5	16.7	17.7

Note: Depending on the plastic grade, works might show whitening and cracks when fastening the nut. Be sure to check after fastening.

Shape comparison

Install in plastic works is possible because the damping part of the Soft SET POP Nut keeps away from the flange side in order to reduce the fastening impact on the works.

Soft Set
POP Nut



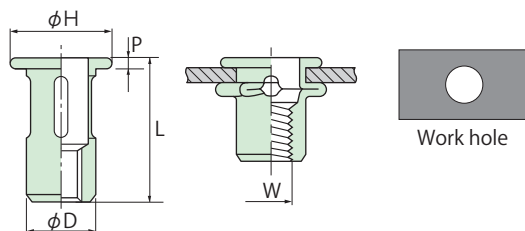
Roulette
POP Nut



Slit Body POP Nut



- This POP Nut can be installed in plastic and thin metal works with the 4 legs that expand when fastening.



SPH ■ SLIT

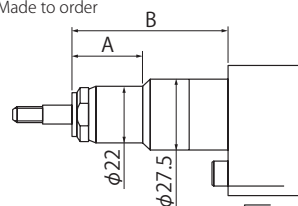
	Material	Nut No.	Surface Treatment
Flat head	Steel	SPH ■ SLIT	Zinc plating trivalent chrome

RoHS Compliance

Slit Body POP Nut
Tool

PNT800L-SLIT

- Length : 290mm
 - Weight : 1.68kg
 - Air pressure : 0.5-0.6Mpa
- Made to order



Nosepiece	A	B
PTN600-02-64SLT-S	30.5	63.5
PTN600-02-67SLT-S	27.5	60.5

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M6×1.0	9.9 - 10.1	640 670	0.5 - 4.0 3.5 - 7.0	21.0 24.0	9.8	15.5	1.5	16.7	17.6

Parts for PNT800L-SLIT Made to order

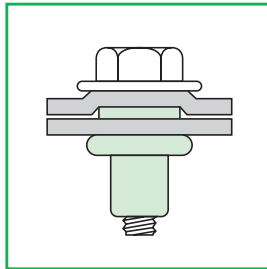
Slit Body POP Nut		Mandrel		Sleeve			Nosepiece	
Thread size	Nut No.	Part No.	Diameter	Part No.	Hole	Diameter	Part No.	Hole
M6×1.0	SPH640-SLIT	PNT600-01-6P	φ6.0	ENS-M6SV-S	φ6.0	φ7.3	PNT600-02-64SLT-S	φ7.5
	SPH670-SLIT						PNT600-02-67SLT-S	

Large Flange POP Nut

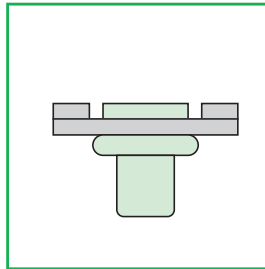
- In case the material of the mating plate is soft, the mating plate around the POP Nut flange might be deformed when the bolt is fastened. The large Flange POP Nut reduces mating plate deformation.
- When the mating plate cannot be fixed with a standard POP Nut Flange properly to the bigger hole, the Large Flange POP Nut is effective with a mating surface that has a work hole with a little larger diameter.

Shape comparison

Standard

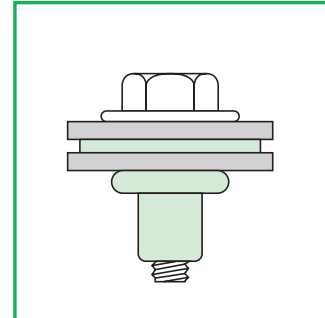


■ The soft mating plate might be deformed when tightening the bolt.



■ The mating plate cannot be set properly to the flange when the hole of the mating plate is large.

Large flange



■ Reduce the mating plate deformation.
■ Set the mating plate properly.



For metal works

- The flange provides a wide surface.

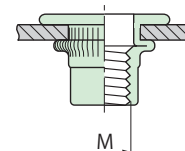
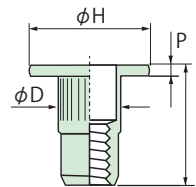
SPH ■ RLT-LF

	Material	Nut No.	Surface Treatment
Large flange	Steel	SPH ■ RLT-LF	Zinc plating trivalent chrome

RoHS Compliance



Knurled body



Work hole

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M6×1.0	9.1 - 9.3	625	0.5 - 2.5	16.5	9.0	18.0	1.5	20.6	21.6
		640	2.5 - 4.0	18.0					
M8×1.25	11.1 - 11.3	825	0.5 - 2.5	18.0	11.0	22.0	1.5	34.3	29.4
		840	2.5 - 4.0	19.5					



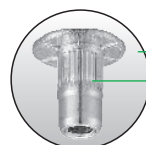
For plastic (including glass) works

- Effective with plastic works with hole sizes that are a little larger. Can be installed in plastic and glass works firmly with the under-flange protrusion and knurled body.

SPH ■ R-100D-LF-SL

	Material	Nut No.	Surface Treatment
Large flange	Steel	SPH ■ R-LF-SL	Zinc plating trivalent chrome

RoHS Compliance



Protrusion

Knurled body

Thread Size M	Hole Size (mm)	Nut No. ■	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	Reference Strength	
								Thread Torque (N·m)	Thread Shear (kN)
M6×1.0	10.1 - 10.3	640	3.0 - 4.0	19.8	10.0	20.0	1.5	16.7	17.7

Made to order

Note: Depending on the plastic grade, works might show whitening and cracks when fastening the nut. Be sure to check after fastening.

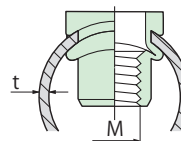
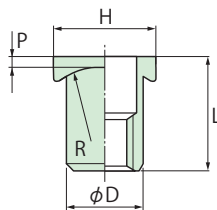
Pipe POP Nut For curved surface of pipe



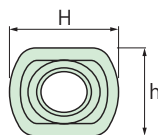
	Material	Nut No.	Surface Treatment
Flat head	Steel	SRH- ■ -K2	Zinc plating trivalent chrome

RoHS Compliance

● A horizontal surface is obtained when the curved surface of the rear flange is installed in the pipe. The direction check is easy because of the oval-shape flange.



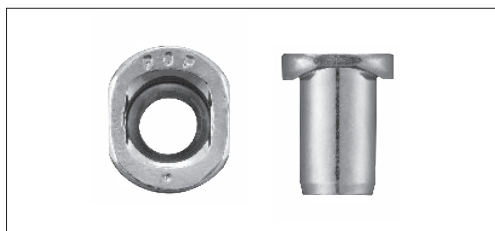
Work hole



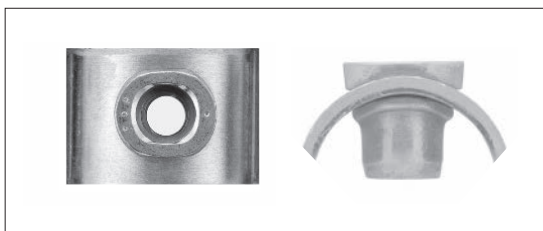
SRH-■-K2

Thread Size M	Hole Size (mm)	Nut No. ■ - ■	Grip Range t (mm)	Pipe Diameter (mm)	L (mm)	D (mm)	H (mm)	h (mm)	P (mm)	R (mm)	Reference Strength	
											Thread Torque (N.m)	Thread Shear (kN)
M6×1.0	9.1 - 9.3	630 - 191	1.5 - 2.0	19.1	16.5	9.0	13.0	11.0	1.5	9.55	16.7	17.7
		630 - 254	1.5 - 3.0	22.2 - 25.4						12.7		
		630 - 318	1.5 - 3.0	28.6 - 31.8						15.9		
		630 - 480	1.5 - 3.0	44.8 - 48.0						24.0		

Flange shape



Install in the curved surface pipe

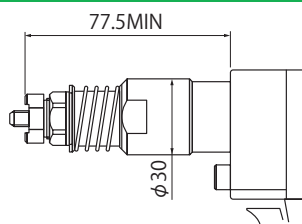


■ Direction check is easy because of the oval-shape flange.

Pipe POP Nut Tool

PNT800A-PIPE

- Length : 290mm
 - Weight : 1.68kg
 - Air pressure : 0.5-0.6Mpa
- Made to order



Parts for PNT800A-PIPE Made to order

Pipe POP Nut		Mandrel		Nosepiece	
Thread size	Nut No.	Part No.	Diameter	Part No.	Hole
M6×1.0	SRH630- ■ -K2	PNT600-01-6P	φ6.0	PNT600-02-6NP	φ6.1

HB Bolt

For metal works



● One-sided bolts can be used with metal works without welding bolts.

For plastic works

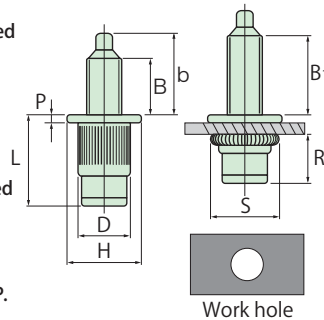


● One-sided bolts can be used with plastic works without insert bolts.
It can be used with soft plastics such as ABS and PP.

SPB

		Material	Surface Treatment
HB Bolt	Bolt	Steel	Zinc plating trivalent chrome
	Body	Steel	Zinc plating trivalent chrome

RoHS Compliance

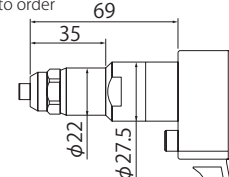


HB Bolt Tool

PNT800A-HB

● Length : 270mm ● Weight : 1.68kg
● Air pressure : 0.5-0.6Mpa

Made to order



Thread Size M	Hole Size (mm)	HB Bolt No. ■	Grip Range (mm)	D (mm)	H (mm)	L (mm)	P (mm)	B (mm)	b (mm)	※B1 (mm)	※R (mm)	※S (mm)	Reference Strength		
													Workpiece	Thread Torque (N.m)	Tensile (kN)
M6×1.0	9.7 - 9.9	650R-WB For plastic work	2.5 - 4.0	9.6	12.7	15.8	1.5	8.4	13.9	12.7	7.0	12.8	ABS t3.0mm	16.0	1.8
M6×1.0	9.1 - 9.3	625RLT For metal work	0.5 - 2.5	9.0	12.3	15.3	1.5	8.9	14.4	12.7	9.0	11.7	SPCC t1.0mm	16.0	2.9

● Actual specs may differ depending on hole size, thickness, and other work conditions.

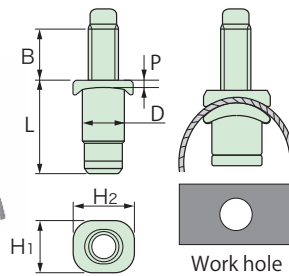
※ These dimensions are measured for the above workpiece piece conditions.

HB Bolt for the curved surface pipe

● Bolts can be fixed vertically on the curved surface of pipe with the curved surface of the rear flange.



SRB- ■ -K2

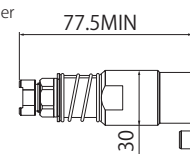


Pipe HB Bolt Tool

PNT800 A-PIPE-HB

● Length : 285mm ● Weight : 1.68kg
● Air pressure : 0.5-0.6Mpa

Made to order



Made to order

Thread Size M	Hole Size (mm)	HB Bolt No. ■ - ■	Grip Range (mm)	Pipe Diameter (mm)	D (mm)	H1 (mm)	H2 (mm)	L (mm)	P (mm)	B (mm)	Reference Strength	
											Workpiece	Thread Torque(N.m)
M6×1.0	9.1 - 9.3	630 - 191	1.5 - 2.0	19.1	9.0	11.0	13.0	16.3	1.5	11.4	Steel t1.6mm	16.0
		630 - 254	1.5 - 3.0	22.2 - 25.4								
		630 - 318	1.5 - 3.0	28.6 - 31.8								
		630 - 480	1.5 - 3.0	44.8 - 48.0								
M8×1.25	11.1 - 11.3	830 - 480	1.5 - 3.0	44.8 - 48.0	11.0	13.5	16.0	17.5	1.5	13.0	Steel t1.6mm	28.0

※ These dimensions are measured for the above workpiece piece conditions.

Parts for PNT800A-HB PNT800A-PIPE-HB

■ PNT800A-HB Made to order

HB Bolt		Tool	Socket		Nosepiece	
Thread size	Part No.		Part No.	Diameter	Part No.	Hole
M6×1.0	SPB650R-WB	PNT800A-6HB-WB PNT800A-6HB	PNT600-01-6HB-WB	φ7.8	PNT600-02-6HB-WB	φ7.9
	SPB625RLT		PNT600-01-6HB	φ7.4	PNT600-02-6HB	φ7.5

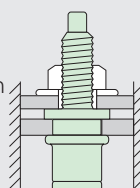
■ PNT800A-PIPE-HB Made to order

Pipe HB Bolt		Tool	Socket		Nosepiece	
Thread size	Part No.		Part No.	Diameter	Part No.	Hole
M6×1.0	SRB630- ■ -K2	PNT800A-PIPE-6HB	PNT800A-01-PIPE-6HB	φ7.4	PNT800A-02-PIPE-6HB	φ7.5
M8×1.25	SRB830- ■ -K2	PNT800A-PIPE-8HB	PNT800A-01-PIPE-8HB	φ9.3	PNT800A-02-PIPE-8HB	φ9.5

Test Method (Reference)

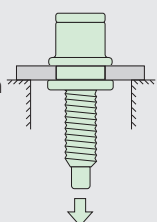
TORQUE

● Workpieces : For resin ABS t3.0mm
: For base metal SPCC t1.0mm
● Attachment : SK3 (over HRC40)
● Nut : Hexagonal nut
● Washer : Stainless steel
Measure the maximum torque until the bolts are destroyed or spin around when turned by a wrench.



TENSILE STRENGTH

● Workpieces : For resin ABS t3.0mm
: For base metal SPCC t1.0mm
● Jig inner diameter: Body diameter × 2.5:
With a machine for measuring tensile strength, measure the maximum load until the HB bolts come out, deforming the workpieces.



Removable

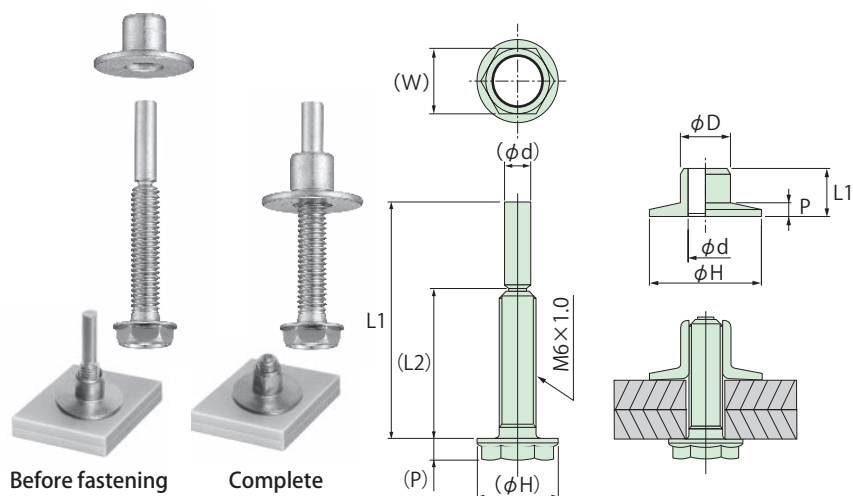
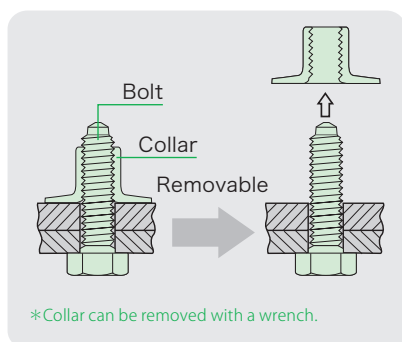
POP Bolt

- The POP Bolt is a "bolt & collar" two-piece fastener which can be removed after fastening with a wrench because the collar's shape deforms into a hex when fastening.

The M6 bolt is JIS 4T (4.6).

		Material	Surface Treatment
POP Bolt	Bolt	Steel	Zinc plating trivalent chrome
	Collar	Steel	Zinc plating trivalent chrome

RoHS Compliance



Made to order

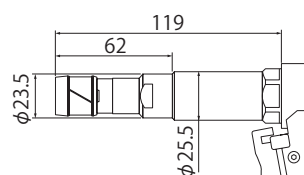
	Part No.	Hole Size (mm)	Grip Range (mm)	L1 (mm)	L2 (mm)	D (mm)	d (mm)	H (mm)	P (mm)	W (mm)
Bolt	PB-HEX-F-M6×44-28-M5B	6.1 - 7.0	9.5 - 16.5	44.0	28.0	—	4.35	13.0	4.0	10.0
Collar	ST-M6-20F (POP-3106)	—	—	10.0	—	8.77	6.3	20.0	2.8	—

POP Bolt Tool

PSL2500CJ-HEX

- Length : 324mm
- Weight : 1.24kg
- Air pressure : 0.5-0.6Mpa

Made to order



Parts for PSL2500CJ-HEX

Made to order

POP Bolt		Nosepiece	Jaws	Jaw opener assembly	Chuck	Chuck spring
Thread size	Part No.					
M6×1.0	Bolt : PB-HEX-F-M6×44-28-M5B	PSL600CJ-70A	PSL600CJ-59/12L	PSL600CJ-78A/ST	PSL600CJ-72	PSL600CJ-74
	Collar : ST-M6-20F (POP-3106)					

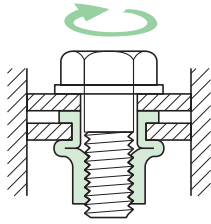
Test Methods / Galvanic Corrosion

Strength Testing Methods for POP Nuts

Thread Torque

Test conditions

- Workpiece: SPCC, maximum thickness
- Fixing plate: SK3 (HRC40 or above)
- Bolt: Hex bolt or cap screw (10.9 or greater)
- Washer: Stainless steel, small round type

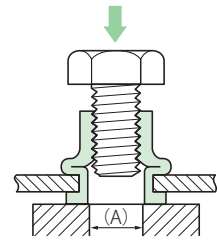


Apply torque to the bolt using torque wrench and measure the maximum torque at which the threading of the POP Nut or the bolt breaks.

Thread Shear

Test conditions

- Workpiece: SPCC, maximum thickness
- Bolt: Hex bolt or cap screw (10.9 or greater)
- Jig hole diameter (A): Nominal thread size + 1 mm



Apply compressive load to the bolt using a tensile tester and measure the maximum load at which the threads or backside flange part of the POP Nut fails.

Surface Treatment of POP Nuts for Use on Aluminum Materials

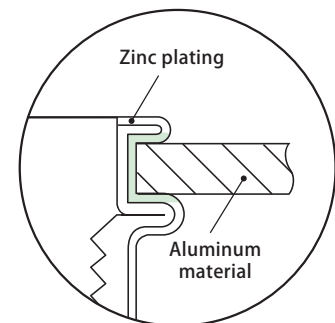
Steel (Zinc plating) POP Nuts and Aluminum Materials

Zinc on the POP Nut corrodes in the area contacting the aluminum material. Once the POP Nut corrodes, the aluminum material will also corrode. Although the degree of corrosion is small and the combination of steel POP Nuts and aluminum materials is feasible in an indoor environment, caution must be exercised in an outdoor environment.

Corrosion of the aluminum material can be reduced by changing the surface treatment of the POP Nut.

[Surface Treatments for Use with Aluminum Materials]

- Alloy plating + resin coating
- Other surface treatments are also possible.



Steel POP Nut

Galvanic Corrosion(Corrosion due to contact between different metals)

- If different metals are immersed in a conductive liquid in a condition whereby they contact each other, the metal of the lower potential (base metal) will become the anode, while the metal of the higher potential (nobler metal) will become the cathode. The resulting "local battery" will cause the anode metal to ionize and dissolve (corrode). This form of corrosion is called galvanic corrosion or electrochemical corrosion, or more generally electrolytic corrosion.

Conditions That Promote Galvanic Corrosion(General Environment)

- (1) Metals have a large potential difference
- (2) High temperature, high humidity, high acidity
- (3) Small area of plating on the anode metal
- (4) Air containing salt

Allowable Combinations of Different Metals

The MIL-STD-171A can be used only based on limited metal combinations as shown in the table below. Generally, the electrode potential of the mating metal should ideally be 0.1 V or higher.

Permissible Combination of Different Metals (MIL-STD-171A)

	Metal	Electrode potential (V)	Allowable combination
1	Ni, Ni plating, Ni-Cu-P (monel)	−0.15	
	Cu-Ni alloy, Ti		
	Cu, Cu plating		
2	Ni-Cr alloy	−0.20	
	Austenite SS (SUS304, etc.)		
3	Brass (C2600, etc.), bronze (C5101, etc.)	−0.25	
4	Brass (C2600, etc.), bronze (C5101, etc.)	−0.30	
5	18% SS (SUS430, etc.)	−0.35	
6	Cr plating, 12% SS (SUS410, etc.)	−0.45	
7	Sn plating, solder plating	−0.50	
8	Pb, Pb plating, high-Pb alloy	−0.55	
9	Duralumin AL (A2000 type, 7000 type)	−0.60	
10	Carbon steel, low-alloy steel	−0.70	
11	Non-duralumin AL (A5000 type, etc.)	−0.75	
12	Non-Si AL (A1000 type, etc.)	−0.80	
	Cd plating		
13	Molten Zn plating	−1.05	
14	Zn die-cast alloy	−1.10	
	Zn plating		
15	Mg, Mg alloy	−1.60	

○Noble ●Disnoble Combinations of metals connected with lines are permissible.

Countermeasures to Galvanic Corrosion

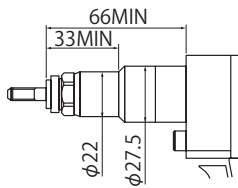
- Select nut of material whose electric potential is lower or whose potential difference from the mating material is small.
- Coat either nut or base material with the same material as the base material or nut or a metal whose potential difference from the other material is small (plating, etc.).
- Insulate nut and base material by coating.
- Insert an insulating material, such as resin, between the nut and base material (coating, bush, etc.).
- Insert a metal having an intermediate potential difference between nut and base material in between (plating, coating, bush, etc.).
- Make the nut the nobler metal.

POP Nut Tools

PNT800A (Stroke control)

- Length : 290mm
- Weight : 1.68kg
- Air pressure : 0.5-0.6Mpa

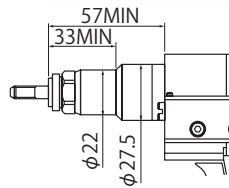
Air hydraulic



PNT800A-PC (Pressure control)

- Length : 290mm
- Weight : 1.82kg
- Air pressure : 0.5-0.6Mpa

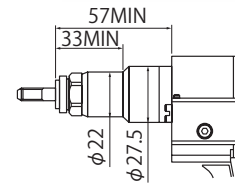
Air hydraulic Made to order



PNT800L-PC (Pressure control)

- Length : 290mm
- Weight : 1.82kg
- Air pressure : 0.5-0.6Mpa

Air hydraulic



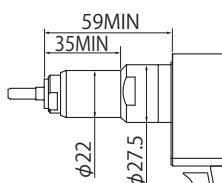
Nut tools	Standard			Closed End			Hex
	Steel	Aluminum	Stainless steel	Steel	Aluminum	Stainless steel	Steel
	SPH ■ SFH ■ SF	APH ■ AFH ■ SF	SSPH ■ SSFH ■ SF	SPS ■ SFS ■ SF	APS ■ AFS ■ SF	SSPS ■ SSFs ■ SF	SPH ■ HEX SFH ■ SF-HEX
PNT800A	M3 ~ M10	M3 ~ M10	M4 ~ M8	M4 ~ M10	M4 ~ M10	M4 ~ M8	M4 ~ M10
PNT800A-PC	M6 ~ M10	M8 ~ M10	M6 ~ M8	M6 ~ M10	M8 ~ M10	M6 ~ M8	M6 ~ M10
PNT800L-PC	M5 ~ M10	M6 ~ M10	M4 ~ M8 (#1)	M5 ~ M10	M6 ~ M10	M4 ~ M8 (#1)	M5 ~ M10
PNT800A-FSM	M3 ~ M10	M3 ~ M10	M4 ~ M8	M4 ~ M10	M4 ~ M10	M4 ~ M8	M4 ~ M10
PNT1000L	M6 ~ M12	M6 ~ M10	M6 ~ M10 (#2)	M6 ~ M10	M6 ~ M10	M6 ~ M10 (#2)	M6 ~ M10
PNT1000L-PC	M6 ~ M12	M8 ~ M10	M6 ~ M10 (#2)	M6 ~ M10	M8 ~ M10	M6 ~ M10 (#2)	M6 ~ M10
AN500A	M3 ~ M5	M3 ~ M5	M4 ~ M5	M4 ~ M5	M4 ~ M5	M4 ~ M5	M4 ~ M5
EN600A	M3 ~ M6	M3 ~ M6	M4 ~ M6	M4 ~ M6	M4 ~ M6	M4 ~ M6	M4 ~ M6
EN1000A	M3 ~ M10	M3 ~ M10	M4 ~ M10	M4 ~ M10	M4 ~ M10	M4 ~ M10	M4 ~ M10
MN10A-S/L	M3 ~ M10	M3 ~ M10	M4 ~ M8	M4 ~ M10	M4 ~ M10	M4 ~ M8	M4 ~ M10
PNT110	M3 ~ M5	M3 ~ M6	M4 ~ M5	M4 ~ M5	M4 ~ M6	M4 ~ M5	M4 ~ M5
PNT210	M4 ~ M12	M4 ~ M10	M4 ~ M8	M4 ~ M10	M4 ~ M10	M4 ~ M8	M4 ~ M10

#1: Air pressure over 0.55 Mpa is necessary for setting M8. #2: Air pressure over 0.55 Mpa is necessary for setting M10. #3: Check the workpiece for whitening and cracking after fastening.

PNT800A-FSM (Stroke control)

- Length : 288mm
- Weight : 1.75kg
- Air pressure : 0.5~0.6Mpa

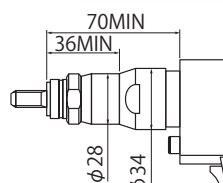
Air hydraulic Made to order



PNT1000L (Stroke control)

- Length : 320mm
- Weight : 2.50kg
- Air pressure : 0.5-0.6Mpa

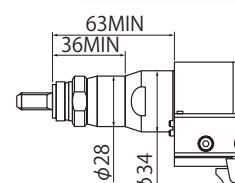
Air hydraulic



PNT1000L-PC (Pressure control)

- Length : 320mm
- Weight : 2.65kg
- Air pressure : 0.5-0.6Mpa

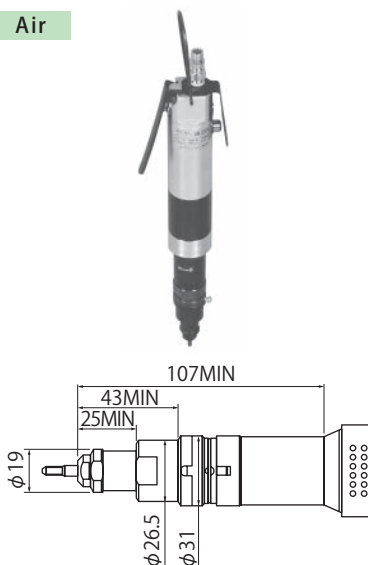
Air hydraulic



AN500A (Stroke control)

- Length : 315mm
- Weight : 1.35kg
- Air pressure : 0.5-0.6Mpa

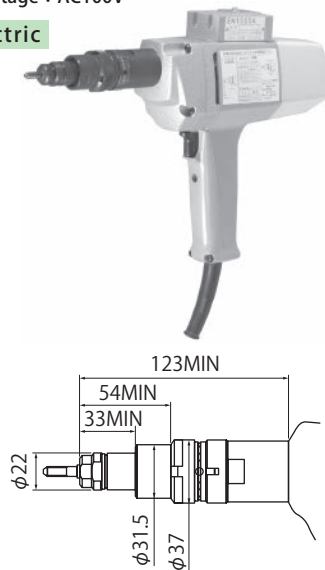
Air



EN600A (Stroke control)

- Length : 340mm
- Weight : 2.20kg
- Voltage : AC100V

Electric



EN1000A (Stroke control)

- Length : 340mm
- Weight : 2.20kg
- Voltage : AC100V

Electric



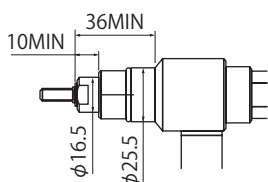
Nut tools	Hex	All Hex	Tetra	Roulette	Large Flange		Soft Set
	Aluminum	Steel	Steel	Steel	Steel	Steel	Steel
	APH ■ HEX AFH ■ SF-HEX	SPH ■ AHX-LF	SPH ■ TETRA	SPH ■ RLT SPH ■ SF-RLT	SPH ■ RLT-LF	SFH ■ R- 100D-LF-SL	SPH ■ R-WB
PNT800A	M4 ~ M8	M6	M4 ~ M8	M4 ~ M8	M6 ~ M8	M6	M4 ~ M6
PNT800A-PC	M8	M6	M6 ~ M8	M6 ~ M8	M6 ~ M8	M6 (#3)	M6 (#3)
PNT800L-PC	M6 ~ M8	M6	M5 ~ M8	M4 ~ M8 (#1)	M6 ~ M8 (#1)	M6 (#3)	M5 ~ M6 (#3)
PNT800A-FSM	M4 ~ M8	M6	M4 ~ M8	M4 ~ M8	M6 ~ M8	M6	M4 ~ M6
PNT1000L	M6 ~ M8	M6	M6 ~ M8	M6 ~ M8	M6 ~ M8	M6	M6
PNT1000L-PC	M8	M6	M6 ~ M8	M6 ~ M8	M6 ~ M8	M6 (#3)	M6 (#3)
AN500A	M4 ~ M5	—	M4 ~ M5	M4 ~ M5	—	—	M4 ~ M5
EN600A	M4 ~ M6	M6	M4 ~ M6	M4 ~ M6	M6	M6	M4 ~ M6
EN1000A	M4 ~ M8	M6	M4 ~ M8	M4 ~ M8	M6 ~ M8	M6	M4 ~ M6
MN10A-S/L	M4 ~ M8	M6	M4 ~ M8	M4 ~ M8	M6 ~ M8	M6	M4 ~ M6
PNT110	M4 ~ M6	—	M4 ~ M5	M4 ~ M5	—	—	M4 ~ M5
PNT210	M4 ~ M8	M6	M4 ~ M8	M4 ~ M8	M6 ~ M8	M6	M4 ~ M6

#1: Air pressure over 0.55 Mpa is necessary for setting M8. #2: Air pressure over 0.55 Mpa is necessary for setting M10. #3: Check the workpiece for whitening and cracking after fastening.

MN10A-S/L

- Length : 220mm
- Weight : 0.63kg

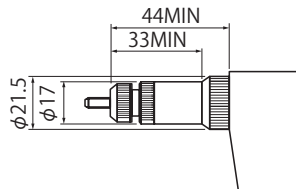
Manual



PNT110

- Length : 135mm
- Weight : 0.68kg

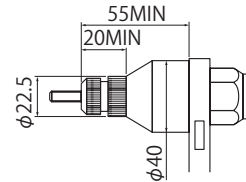
Manual



PNT210

- Length : 155mm
- Weight : 1.12kg

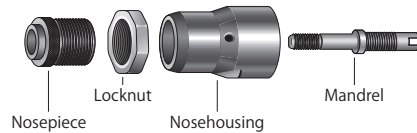
Manual



POP Nut Tool Parts List

Marked * : Option

PNT800A/PNT800A-PC/PNT800L-PC



PNT800A

Thread Size	Mandrel		Nosepiece	
	Part No.	Diameter	Part No.	Hole
M3×0.5	*PNT600-01-3	φ3.0	*PNT600-02-3	φ4.0
M4×0.7	PNT600-01-4	φ4.0	PNT600-02-4	φ4.5
M5×0.8	PNT600-01-5P	φ5.0	PNT600-02-5	φ5.1
M6×1.0	PNT600-01-6P	φ6.0	PNT600-02-6	φ6.1
M8×1.25	PNT600-01-8	φ8.0	PNT600-02-8	φ8.1
M10×1.5	*PNT600-01-10A	φ10.0	*PNT600-02-10	φ10.1

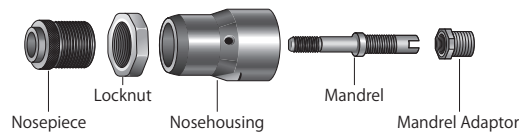
PNT800A-PC

POP Nut		Mandrel		Nosepiece		Spring (for pressure control valve)
Thread Size	Type	Part No.	Diameter	Part No.	Hole	Part No.
M6×1.0	Steel	PNT600-01-6P	φ6.0	PNT600-02-6	φ6.1	DPN901-023
	Stainless steel					
	Roulette					
M8×1.25	Aluminum	PNT600-01-8	φ8.0	PNT600-02-8	φ8.1	DPN901-024
	Steel					
	Stainless steel					
M10×1.5	Roulette	*PNT600-01-10A	φ10.0	*PNT600-02-10	φ10.1	DPN901-023
	Aluminum					
	Steel					DPN901-024

PNT800L-PC

POP Nut		Mandrel		Nosepiece		Spring (for pressure control valve)
Thread Size	Type	Part No.	Diameter	Part No.	Hole	Part No.
M4×0.7	Stainless steel	PNT600-01-4	φ4.0	PNT600-02-4	φ4.5	DPN901-023
	Roulette					
M5×0.8	Steel	PNT600-01-5P	φ5.0	PNT600-02-5	φ5.1	DPN901-023
	Stainless steel					
M6×1.0	Aluminum	PNT600-01-6P	φ6.0	PNT600-02-6	φ6.1	DPN901-024
	Steel					
	Stainless steel					
M8×1.25	Roulette	PNT600-01-8	φ8.0	PNT600-02-8	φ8.1	DPN901-023
	Aluminum					
	Steel					
M10×1.5	Stainless steel	*PNT600-01-10A	φ10.0	*PNT600-02-10	φ10.1	DPN901-024
	Roulette					
	Aluminum					DPN901-023
	Steel					DPN901-024

PNT1000L/PNT1000L-PC



PNT1000L

Thread Size	Mandrel		Mandrel Adaptor		Nosepiece	
	Part No.	Diameter	Part No.	Part No.	Part No.	Hole
M6×1.0	*PNT600-01-6P	φ6.0	PNT1000-58		*PNT1000-02-6	φ6.1
M8×1.25	PNT600-01-8	φ8.0			PNT1000-02-8	φ8.1
M10×1.5	PNT1000-01-10A	φ10.0	—		PNT1000-02-10	φ10.1
M12×1.75	*PNT1000-01-12A	φ12.0	—		*PNT1000-02-12	φ12.1

PNT1000L-PC

POP Nut		Mandrel		Mandrel Adaptor	Nosepiece		Spring (for pressure control valve)
Thread Size	Type	Part No.	Diameter	Part No.	Part No.	Hole	Part No.
M6×1.0	Steel	*PNT600-01-6P	φ6.0	PNT1000-58	*PNT1000-02-6	φ6.1	DPN901-023
	Stainless steel						
	Roulette						
M8×1.25	Aluminum	PNT600-01-8	φ8.0	PNT1000-58	PNT1000-02-8	φ8.1	DPN901-023
	Steel						
	Stainless steel						
M10×1.5	Roulette	PNT1000-01-10A	φ10.0	—	PNT1000-02-10	φ10.1	DPN901-023
	Aluminum						
M12×1.75	Steel	*PNT1000-01-12A	φ12.0	—	*PNT1000-02-12	φ12.1	DPN901-023
	Stainless steel						

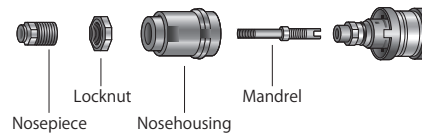
POP Nut Tool Parts List

Marked * : Option

AN500A

AN500A

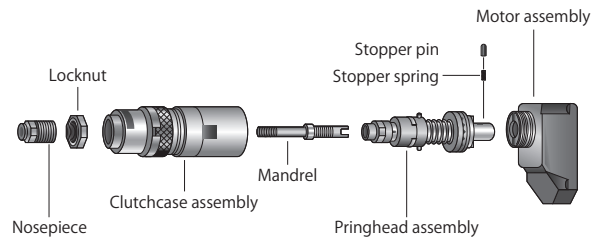
Thread Size	Mandrel		Nosepiece	
	Part No.	Diameter	Part No.	Hole
M3×0.5	AN500A-04-3	φ3.0	AN500A-05-3H	φ4.0
M4×0.7	AN500A-04-4	φ4.0	AN500A-05-4H	φ4.5
M5×0.8	AN500A-04-5	φ5.0	AN500A-05-5H	φ5.1



EN600A/EN1000A

EN600A

Thread Size	Mandrel		Nosepiece	
	Part No.	Diameter	Part No.	Hole
M3×0.5	*ENS-M3	φ3.0	*ENS-M3HNP	φ4.0
M4×0.7	ENS-M4	φ4.0	ENS-M4HNP	φ4.5
M5×0.8	ENS-M5	φ5.0	ENS-M5HNP	φ5.1
M6×0.8	ENS-M6	φ6.0	ENS-M6HNP	φ6.1



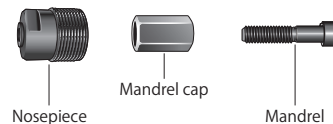
EN1000A

Thread Size	Mandrel		Nosepiece		Stopper spring	
	Part No.	Diameter	Part No.	Hole	Part No.	Coil
M3×0.5	*ENS-M3	φ3.0	*ENS-M3HNP	φ4.0	*EN-1000A-26	6
M4×0.7	*ENS-M4	φ4.0	*ENS-M4HNP	φ4.5		
M5×0.8	*ENS-M5	φ5.0	*ENS-M5HNP	φ5.1		
M6×1.0	ENS-M6	φ6.0	ENS-M6HNP	φ6.1		
M8×1.25	ENS-M8	φ8.0	ENS-M8HNP	φ8.1	AN500A-25	5
M10×1.5	ENS-M10	φ10.0	ENS-M10HNP	φ10.1		

MN10A-S

MN10A-S

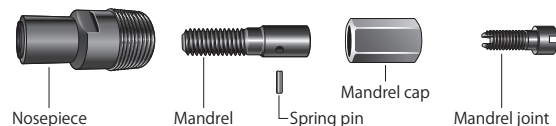
Thread Size	Mandrel		Mandrel joint	Spring pin	Nosepiece	
	Part No.	Diameter			Part No.	Hole
M3×0.5	*MN10-04-3A	φ3.0	—	—	*MN10-05-3	φ3.1
M4×0.7	MN10-04-4A	φ4.0			MN10-05-4	φ4.1
M5×0.8	MN10-04-5	φ5.0			MN10-05-5	φ5.1
M6×1.0	MN10-04-6	φ6.0			MN10-05-6	φ6.1
M8×1.25	*MN10-04-81	φ8.0	*MN10-04-82	*MN10-04-83	*MN10-05-8	φ8.1
M10×1.5	*MN10-04-101	φ10.0			*MN10-05-10	φ10.1



MN10A-L

MN10A-L

Thread Size	Mandrel		Mandrel joint	Spring pin	Nosepiece	
	Part No.	Diameter			Part No.	Hole
M3×0.5	*MN10-04-3A	φ3.0	—	—	*MN10-05-3	φ3.1
M4×0.7	*MN10-04-4A	φ4.0			*MN10-05-4	φ4.1
M5×0.8	*MN10-04-5	φ5.0			*MN10-05-5	φ5.1
M6×1.0	MN10-04-6	φ6.0			MN10-05-6	φ6.1
M8×1.25	MN10-04-81	φ8.0	MN10-04-82	MN10-04-83	MN10-05-8	φ8.1
M10×1.5	MN10-04-101	φ10.0			MN10-05-10	φ10.1



PNT110

PNT110

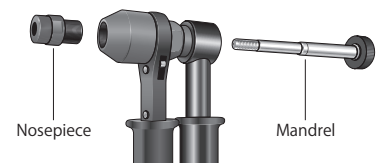
Thread Size	Mandrel		Nosepiece	
	Part No.	Diameter	Part No.	Hole
M3×0.5	FAM400-284	φ3.0	FAM400-288	φ3.2
M4×0.7	FAM400-285	φ4.0	FAM400-289	φ4.2
M5×0.8	FAM400-286	φ5.0	FAM400-290	φ5.2
M6×1.0	FAM400-287	φ6.0	FAM400-291	φ6.2



PNT210

PNT210

Thread Size	Mandrel		Nosepiece	
	Part No.	Diameter	Part No.	Hole
M4×0.7	*FAM400-225	φ4.0	*FAM400-228	φ4.2
M5×0.8	*FAM400-224	φ5.0	*FAM400-171	φ5.2
M6×1.8	FAM400-213	φ6.0	FAM400-173	φ6.2
M8×1.25	FAM400-214	φ8.0	FAM400-176	φ8.2
M10×1.5	FAM400-215	φ10.0	FAM400-178	φ10.3
M12×1.75	FAM400-216	φ12.0	FAM400-208	φ12.3



Nut Kwik (Nut supply machine) Made to order

■ Merit

POP Nuts can be set into the nosepiece of the Nut tool automatically, soon after setting the Nut tool into the receptacle of Nut Kwik.

Since the POP Nuts can be set into the tool nosepiece while preparing the works with the other hand, Nut Kwik reduces work time. Because of its stable supply cycle, Nut Kwik can be easily used by low-skilled workers.

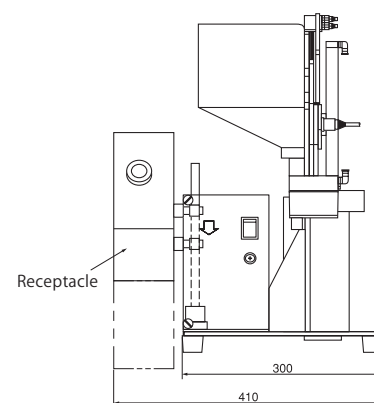
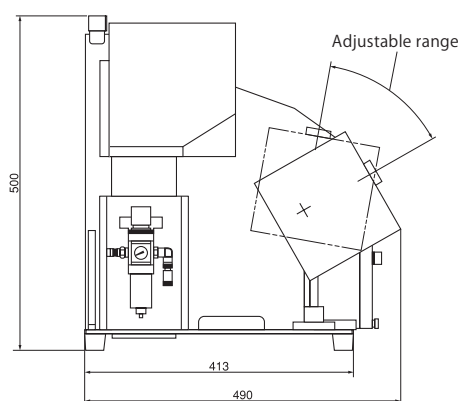
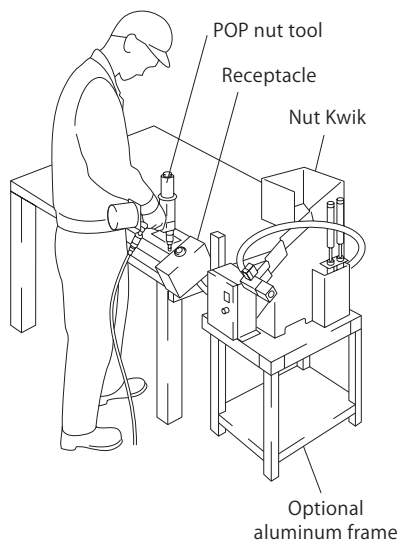
(Remark) Aluminum frame is option.

■ Spec

Voltage : AC100V 50/60Hz
Air pressure : 0.45 ~ 0.55 Mpa
Capacity 20-30 pcs./min
Weight : Approx. 32kg

【List】

Nut size	Nut tool
M6	PNT800A
	PNT800A-PC
	PNT800L-PC
	PNT1000L
	PNT1000L-PC



Note: Except Small flange, Hex, Tetra and Pipe
● Specifications subject to change without notice.

Nut Kwik-PF (Nut supply machine parts feeder model) Made to order

■ Merit

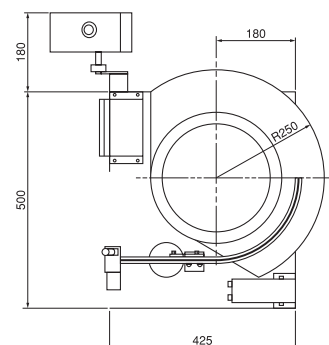
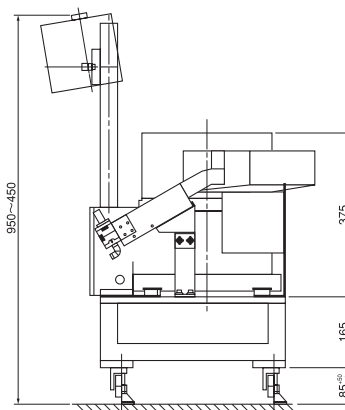
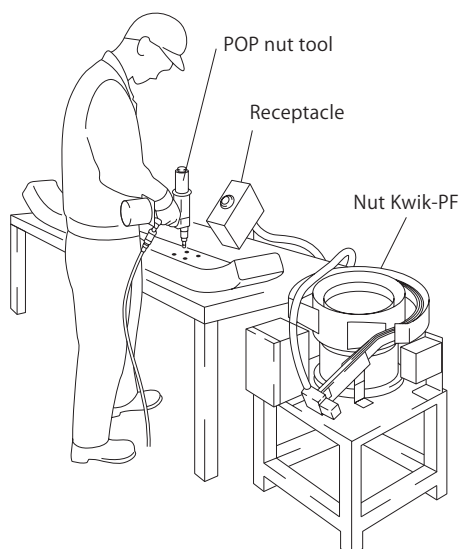
POP Nuts can be set into the nosepiece of the Nut tool automatically, soon after setting the Nut tool into the receptacle of Nut Kwik.

Nut Kwik-PF is designed for situations where your fastening nut cannot be used by Nut Kwik.

As shown in the left drawing, the receptacle can be separated from the parts feeder.

■ Spec

Voltage : AC100V 50/60Hz
Air pressure : 0.45 ~ 0.55 Mpa
Capacity 20-30 pcs./min
Weight : Approx. 70kg

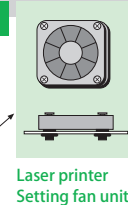
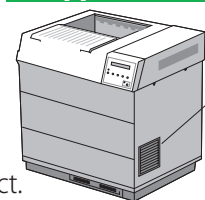


Note: Please let us know your nut size and we will check to see if Nut Kwik can be adjusted for it.
● Specifications subject to change without notice.

WELL Nut

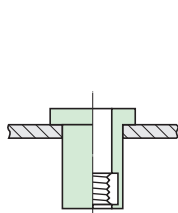
- WELL Nuts are rubber blind nuts which can be fastened by one-sided work through anti-vibration, isolating conductivity and seal effect.
- WELL Nuts can be installed easily with a one-sided screwdriver.
- WELL Nuts can be fastened softly on thin metal works and glasses, etc.
- Especially effective for noise reduction of the fan unit through anti-vibration effect.

Application

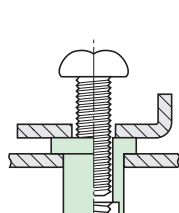


Laser printer
Setting fan unit

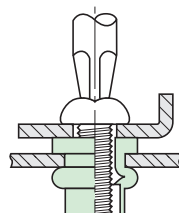
WELL Nut installation method ■ WELL Nuts can be installed easily with one screwdriver.



1 Set the WELL Nut on the work.

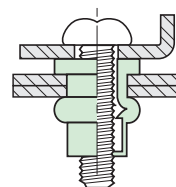


2 Set the fixing plate and bolt to the WELL Nut.

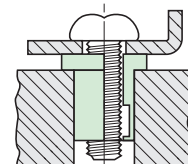


3 Fasten the WELL Nut using a screwdriver, etc.*

*Fasten the bolt within the optimum torque.



● Can be installed in plural works.

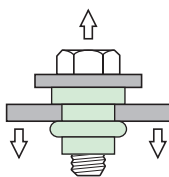


● Can be installed in deep blind holes.

WELL Nut Test Conditions

Tightening Conditions ● Prepared hole diameter : Minimum hole diameter ● Tightening torque : Minimum torque ● Tightening direction : Insert the nut from the stamped surface. ● Tightening tool : Screwdriver (manual type) ● Tightening temperature : Room temperature (20°C)

Tensile

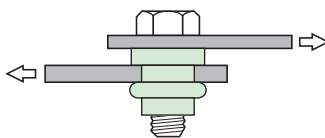


Test Conditions

- Workpiece : SPCC (intermediate thickness)
- Bolt : Hex bolt (4.8 or smaller)
- Mounting plate : Steel washer (large, round)

Apply tensile loads in the directions of arrows using a tensile tester and measure the maximum load at which the characteristic limit strength (allowable strength) of the buckle rubber is reached and the buckle rubber fails.

Shear

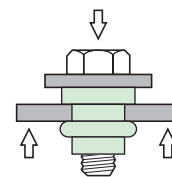


Test Conditions

- Workpiece : SPCC (intermediate thickness)
- Bolt : Hex bolt (4.8 or smaller)
- Mounting plate : Quenched steel plate (t: 2-mm)

Apply shear loads in the directions of arrows using a tensile tester and measure the characteristic limit strength (allowable strength) of the body rubber.

Compression



Test Conditions

- Workpiece : SPCC (intermediate thickness)
- Bolt : Hex bolt (4.8 or smaller)
- Mounting plate : Steel washer (large, round)

Apply compressive loads in the directions of arrows using a tensile tester and measure the characteristic limit strength (allowable strength) of the flange rubber.

Beneficial Characteristics of WELL Nuts

○ Vibration-isolating Effect

WELL Nuts provide an excellent vibration-isolating effect to absorb vibration and noise.

■ Vibration-isolating Characteristics (Forced Vibration Frequency vs. Supporting Load)

To obtain an optimal vibration-isolating effect, select a WELL Nut that meets the supporting load vs. vibration frequency condition of your particular application.

The graph to the right illustrates the vibration-isolating characteristics of WELL Nuts specifically, the relationship of vibration frequency and supporting load when the vibration transmission rate is 33.3%.

Note1: This graph represents average characteristics. The specific characteristics will vary depending on the size, tightening torque, material thickness, etc.

Note2: Determine an appropriate supporting load within the allowable range specified in the catalog.

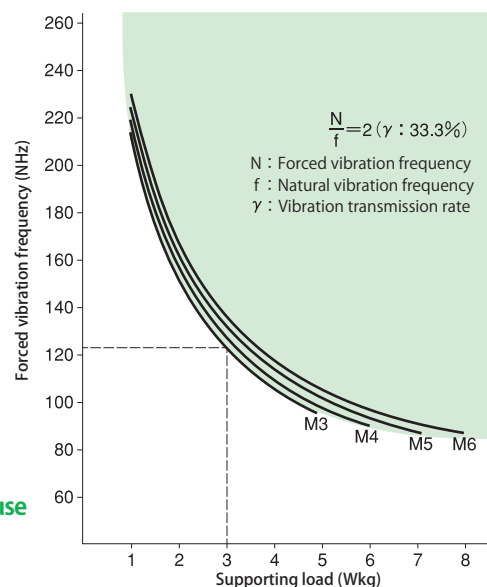
○ Sealing Effect

WELL Nuts are able to seal liquids and gasses. They are particularly suited for use in a low-pressure environment.

○ Insulating Effect

WELL nuts exhibit excellent electrical insulation properties.

★WELL nuts are available in a chloroprene-rubber or EPDM body. Chloroprene rubber offers stable strength and exhibits average levels of all beneficial properties. EPDM is particularly suitable in an outdoor environment where the nut must provide weather resistance, ozone resistance, etc.



【How to read the graph】 (Example) If a 12-kg motor is installed using four M3 WELL nuts, the supporting load is 3 kg. Therefore, excellent vibration-isolating effect can be achieved at a vibration frequency of 125 Hz or above.

Standard WELL Nut

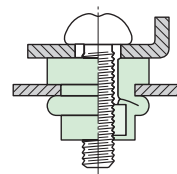
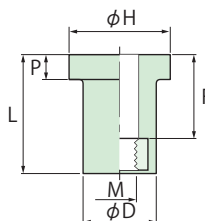


	Material	Surface Treatment
Body	Chloroprene rubber, EPDM	—
Nut	Brass	—

- Effective for anti-vibration, isolating conductivity and seal effect with one-sided fastening rubber nuts.

● Part number

Body : C - Chloroprene rubber
E - EPDM
Thread size : M4
C-4-40L-5
Hardness : None=70 5=50
Flange thickness : L - Large, None - Standard
Maximum fastening thickness : 4.0mm



Work hole

Thread Size M	Hole Size +0.3 -0 (mm)	Part No.	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	F (mm)	Hardness (HsA)	Weight (g)	Torque N.m	Reference Strength			
												Tensile N		Shear N	Compress N
												Permissible	Destructive	Permissible	Permissible
M3×0.5	6.6	C-330L	0.5 - 3.0	13.0	6.5	10.0	3.0	9.0	70	1.0	0.10~0.15	20	390	20	39
	8.0	★E-632	0.4 - 4.0	12.7	7.9	11.5	1.6	8.5	60	1.5	0.25~0.49	29	540	29	59
M4×0.7	8.0	C-440	0.5 - 4.0	12.2	7.9	11.0	1.2	7.7	70	1.3	0.25~0.39	34	665	34	69
		C-440L		14.5		12.0	3.5	10.0	50	1.5	0.20~0.29	29	625	29	49
		C-440L-5									0.10~0.15		380		
		C-550		14.2		12.7	1.2	9.0	70	2.2	0.34~0.49	44	610	44	78
M5×0.8	9.6	C-550L	0.5 - 5.0	17.0	9.5	14.0	4.0	11.8	70	2.8	0.25~0.39		530		
		★Q-1032	0.9 - 5.9	16.9			1.0	11.4	60	2.3	0.30~0.69		390		
		★H-1032	7.9 - 11.4	21.5		14.3	0.9	16.0	70	2.7	0.49~0.88		1270		
		★10-SL	8.0 - 16.0	26.7			1.3	21.3	60	3.2	0.30~0.69		1370		
		★10-XL	20.0 - 29.0	39.4				33.7		3.5	0.59~0.98		785		
		C-630	0.5 - 3.0	16.0		16.0	1.3	9.8	70	4.5	0.88~1.18	59	1370	59	110
M6×1.0	12.8	C-650L	0.5 - 5.0	21.0	12.7	17.8	4.5	14.8		5.9	0.79~1.08		980		
		E-650L								5.0			880		
		★W-1420	4.8 - 8.7	20.3		16.0	1.3	14.5		4.9	0.59~0.98		2160		
		★J-1420	6.4 - 11.6	26.7				20.7		5.7	0.79~0.98		2160		
		E-820	0.5 - 2.0							8.3		98	640	98	145
M8×1.25	15.9	★E-51618	0.8 - 4.7	18.4	15.7	22.2	3.2	9.8	60	9.1	0.98~1.47		1180		

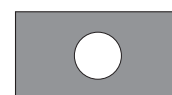
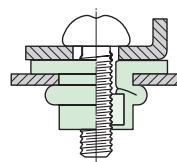
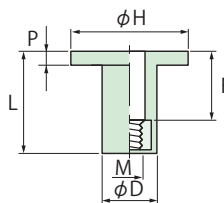
Note : The above explanation of "Part number" does not apply to WELL Nuts marked ★. Material marked ★ is Chloroprene rubber (body) and brass (nut).

Large Flange WELL Nut



	Material	Surface Treatment
Body	Chloroprene rubber	—
Nut	Brass	—

- Provides an additional support for the fastening piece with the large flange.



Work hole

Thread Size M	Hole Size +0.3 -0 (mm)	Part No.	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	F (mm)	Hardness (HsA)	Weight (g)	Torque N.m	Reference Strength			
												Tensile N		Shear N	Compress N
												Permissible	Destructive	Permissible	Permissible
M3×0.5	6.3	C-632	11.0 - 13.0	25.0	6.1	14.1	0.9	18.8	70	1.2	0.20~0.29	20	290	20	39
M4×0.7	8.0	C-832	0.4 - 4.4	14.2	7.9	19.1	1.5	10.0	70	1.7	0.25~0.39	34	490	34	69
M5×0.8	9.6	J-1032	0.8 - 5.8	17.8	9.5	19.1	2.0	12.2	60	2.9	0.39~0.69	44	590	44	78
		G-1032		20.5			4.7	14.8		3.8	0.39~0.69	44	440	44	78
M6×1.0	12.8	D-1420	0.8 - 4.7	21.1	12.7	18.8	4.7	14.8	60	5.7	0.79~0.98	59	1470	59	110

■ Permissible strength indicates the strength limit based on the characteristic of WELL Nuts.

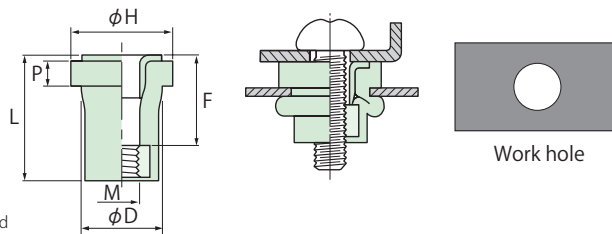
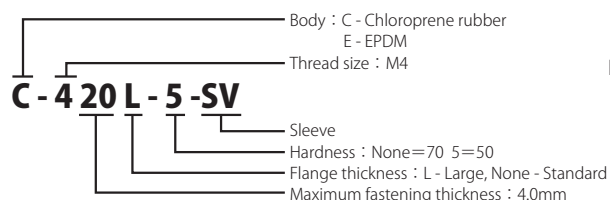
■ Destructive strength indicates the load where the WELL Nut breaks, meaning the breaking of the chloroprene rubber and EPDM, or separation of the brass nut.

Sleeve WELL Nut



- Allows the fastening screw to be tightened without torque control because of the metal sleeve attached in the WELL Nut.

● Part number



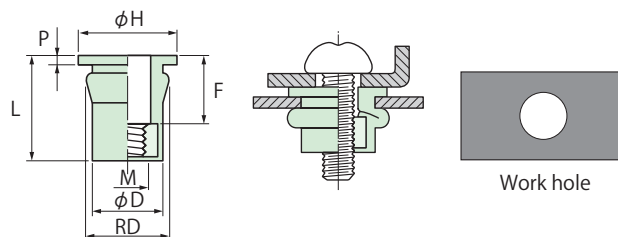
Thread Size M	Hole Size +0.3 −0 (mm)	Part No.	Grip Range (mm)	L (mm)	D (mm)	H (mm)	P (mm)	F (mm)	Hardness (HsA)	Weight (g)	Torque N.m	Reference Strength			
												Tensile N		Shear N	Compress N
												Permissible	Destructive	Permissible	Permissible
M3×0.5	7.1	C-320L-SV	0.5 - 2.0	13.5	7.0	10.5	3.0	9.5	70	1.3	0.10~0.98	20	390	20	39
M4×0.7	8.5	C-420-SV		12.7	8.4	11.5	1.2	8.2	70	1.7	0.25~1.96	34	665	34	69
		C-420L-SV		15.0		12.5	3.5	10.5		2.2			625		
		C-420L-5-SV			50	2.1	0.10~1.96	29	380	29	49				
M5×0.8	10.6	C-520-SV		14.9	10.5	13.5	1.2	9.7	70	3.0	0.34~2.94	44	610	44	78
		C-520L-SV		17.7		14.8	4.0	12.5		3.8	0.25~2.94		530		
M6×1.0	13.9	C-620L-SV		22.0	13.8	18.9	4.5	15.8	70	7.6	0.78~11.76	59	980	59	110
		E-620L-SV								6.7			880		

Snap WELL Nut



- Ideal for preventing dropping from the works before fastening with the snap under the WELL Nut flange.

	Material	Surface Treatment
Body	Chloroprene rubber	—
Nut	Brass	—



Thread Size M	Hole Size +0.3 -0 (mm)	Part No.	Grip Range (mm)	L (mm)	D (mm)	RD (mm)	H (mm)	P (mm)	F (mm)	Hardness (HsA)	Weight (g)	Torque N.m	Reference Strength			
													Tensile N		Shear N	
													Permissible	Destructive	Permissible	Permissible
M4×0.7	8.4	2D-832	0.4~1.3	10.9	7.9	9.3	12.7	1.3	6.5	70	1.3	0.35~0.49	34	440	34	69
M5×0.8	9.6	NP-1032	0.4~1.3	10.2	9.5	10.1	13.0	1.5	5.9	70	1.7	0.35~0.49	44	540	44	78

■ Permissible strength indicates the strength limit based on the characteristic of WELL Nuts.

■ Destructive strength indicates the load where the WELL Nut breaks, meaning the breaking of the chloroprene rubber and EPDM, or separation of the brass nut.

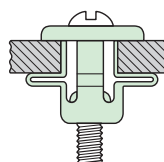
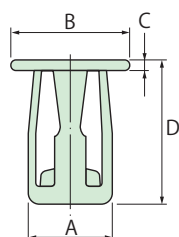
JACK Nut

- JACK Nut one-sided fastening method achieves easy and strong nut setting.
- Can be installed into not only metal works, but also fragile works made of plastic and glass.
- When the surface of the work is not flat, the legs of the JACK Nut open according to the shape to securely hold the work.



	Material	Surface Treatment
JACK Nut	Steel	Zinc plating trivalent chrome

RoHS Compliance

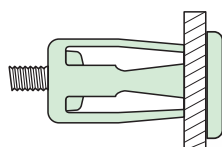


Work hole

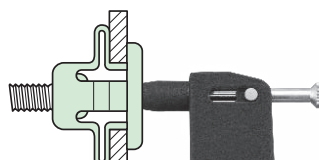
Thread Size M	Work Hole (mm)	Part No.	Grip Range (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Maximum Bolt Tightening Torque N
M4×0.7	8.0-8.4	M4SN	0.4 - 4.7	8.0	11.9	1.8	16.5	1.35
		M4LN	4.7 - 9.5					
M5×0.8	9.7-10.1	M5SN	0.4 - 4.7	9.7	13.5	1.8	18.2	2.25
		M5LN	4.7 - 9.5					
M6×1.0	11.1-11.5	M6SN	0.4 - 4.7	11.1	15.9	1.8	18.6	3.60
		M6LN	4.7 - 9.5					

※The torques are recommended values assuming fastening to the steel plates.

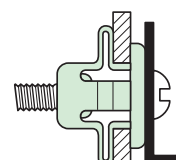
JACK Nut installation method



Set the JACK Nut onto the JACK Nut tool and insert into the hole of the work.



Push the flange into the work and pull the trigger to fasten the JACK Nut.

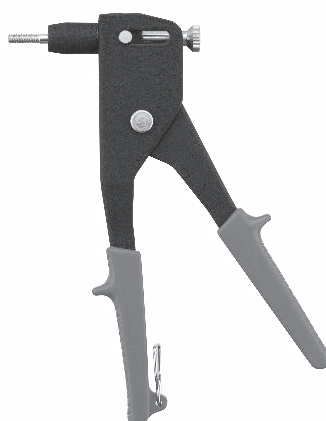


Set the mating plate to the fastened JACK Nut with the screw.

JACK Nut tools

SC-123J

A handy manual tool for easy fastening of JACK Nuts. All sizes of mandrels for JACK Nuts are attached.



Certified ISO

NPR's high quality and precision products are manufactured at our advanced production lines. Our comprehensive QC facilities and strict quality control system allows us continue to supply high-quality products. NPR is certified ISO9001/TS16949, ISO14001.

Certified ISO 19001 / TS 16949

[Products]

POP rivets, POP nuts, Inserts fasteners, Welding studs, Plastic fasteners

[Register]

Toyohashi Plant of NIPPON POP RIVETS AND FASTENERS LTD.

[Policy]

- 1) In remembering to be imaginative and creative, we continue to commercialize a series of innovative, cost-efficient fastening systems in an attempt to make a difference for our customers and society.
- 2) Thanks to the dedicated teamwork of our production, marketing, and engineering personnel, we continue our attempts to improve productivity, thereby meeting the various requirements of our customers.
- 3) Through all of our processes (production, marketing, and engineering), we aim to become an industrial fastener manufacturer that gives top priority to quality and the environment.



Certified ISO 14001

[Register]

Toyohashi Plant of NIPPON POP RIVETS AND FASTENERS LTD.

[Policy]

Under the corporate policy of "contributing to society by helping to innovate production engineering with our junction technology" as an industrial fastener manufacturer, the Toyohashi Plant of NIPPON POP RIVETS AND FASTENERS LTD. works to combine conservation of the global environment with its business through company operations under its corporate policy, in an attempt to be useful to the international community. Regarding the environmental impact of its business, the company primarily promotes its environmental conservation under the following guidelines:

- 1) In all operations, promote the conservation of resources, recycling, waste reduction, and energy conservation.
- 2) Promote eco-friendly designs and production processes.
- 3) Set and work to achieve environmental objectives and targets, and strive to accomplish continuous improvement.
- 4) Observe relevant environmental legal requirements and other requirements that we support, establish voluntary management regulations as necessary, and work on further environmental conservation.
- 5) Strive to conserve the environment in the community and promote beautification as a member of the community.
- 6) Ensure that these environmental principles are made known to all personnel working in our factories and open to the public.



Product line-ups of NIPPON POP RIVETS AND FASTENERS LTD.

POP® X Avdel® Blind Rivets

One side fastening method realizing precision & fast assembling lines

■ Sizes : $\phi 2.0$ $\phi 2.4$ $\phi 2.5$ $\phi 3.0$ $\phi 3.2$ $\phi 4.0$
 $\phi 4.8$ $\phi 6.4$ $\phi 10.2$

■ Materials : Aluminum,
Steel, Stainless steel,
Copper



Plastic Clips

Design and fabrication based on responding to the customer's specifications

Plastic Clips : Insulator clip / Molding clip /
Screw grommet / Carpet clip / Harness clip /
Push clip / Pipe clip / Trim clip



X Avdel® Speed Fasteners

Rivet supply tape tool system

NeoSpeed® / Rivscrew®

■ Sizes : $\phi 2.4$ $\phi 2.8$ $\phi 3.0$
 $\phi 3.2$ $\phi 4.0$ $\phi 4.8$

■ Materials : Aluminum,
Steel, Stainless steel



Stud Welding Systems

Realizing stabilized stud welding of the drawn arc type



POP® X Avdel® Blind Nuts

Nuts can be set to thin metal or plastic workpieces by one-sided operation

■ Sizes : M3 M4 M5 M6 M8
M10 M12

■ Materials : Aluminum,
Steel, Stainless steel



Self Piercing Riveting Systems

Most advanced joining method to replace spot welding



KALEI® Press Fastener series

Press-fitting nuts into metal workpieces unsuitable for welding

■ Kalei nut screw sizes : M2.0 M2.5 M2.6
M3 M4 M5 M6 M8 M10 M12 M16 M20

■ Kalei nut materials : Steel,
Stainless steel



X Avdel® Blind Sealing Plugs Avseal®

One sided attaching sealing plugs

■ Sizes : M4 M5 M6 M7 M8
M9 M10 M11 M12

■ Size : Aluminum(rivet) / Steel(stem)



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