

# U-Nuts® / Double Locking Nuts

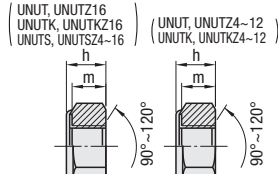
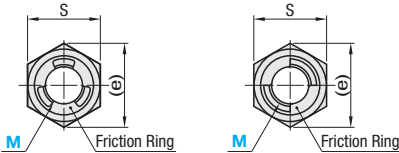
## Hard Lock Nuts®



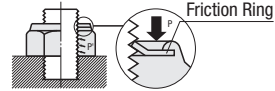
Type		Body Material	Friction Ring Material	Surface Treatment	Screw Precision
Single Item	Pkg.				
UNUTZ	PACK-UNUT	SS400 or Equivalent	SUS301	Trivalent Bright Chromate Plating	JIS6H (Class 2)
UNUTKZ	PACK-UNUTK	SS400 or Equivalent	SUS301	Trivalent Chromate	JIS6H (Class 2)
UNUTSZ	PACK-UNUTS	SUS304 or Equivalent	SUS301	-	JIS6H (Class 2)

(M6 or Less)

(M8 or More)



As shown in the figure below, stress P is caused by the spring effect when Friction Ring contacts the thread. The reaction force P' together with P presses hard upon the threads, which creates friction torque (prevailing torque) to prevent any free motion.



U-Nuts® is a trademark of Fuji Seimitsu Co. Ltd.

Part Number	Type	M	UNUTZ	UNUTKZ	UNUTSZ
			Unit Price Volume Discount Rate	Unit Price Volume Discount Rate	Unit Price Volume Discount Rate
UNUTZ UNUTKZ UNUTSZ	4		1 - 9 pc(s), 10 - 500 pcs.	1 - 9 pc(s), 10 - 500 pcs.	1 - 9 pc(s), 10 - 500 pcs.
	5				
	6				
	8				
	10				
	12				
	16				

Part Number	Type	M	Qty. /1 pkg.	PACK-UNUT	PACK-UNUTK	PACK-UNUTS
				Unit Price Volume Discount Rate	Unit Price Volume Discount Rate	Unit Price Volume Discount Rate
PACK-UNUT PACK-UNUTK PACK-UNUTS	4		100	1 - 9 pc(s), 10 pkgs.	1 - 9 pc(s), 10 pkgs.	1 - 9 pc(s), 10 pkgs.
	5		100			
	6		100			
	8		100			
	10		50			
	12		50			
	16		50			

For orders larger than indicated quantity, please check with WOS.

100 pcs./pkg. for M4 - 8; 50 pcs./pkg. for M10 - 16.

For orders larger than indicated quantity, please check with WOS.

M	Pitch	S		h		m	(e)	Tightening Torque N·m (kg·cm)		
		Reference Dim.	Tolerance	Reference Dim.	Tolerance			UNUT, UNUTK	UNUTS	
4	0.7	7		3.8		3	8.1	2.2(22)		1.9(19)
5	0.8	8	0	4.6	±0.3	3.9	9.2	4.4(45)		3.8(39)
6	1.0	10	-0.2	5.1		4.2	11.5	7.4(75)		6.5(66)
8	1.25	13	0	7.3		6.1	15	18(180)		16(160)
10	1.5	17	-0.25	8.3	±0.4	7.1	19.6	36(370)		31(320)
12	1.75	19	0	10.5		9	21.9	62(630)		55(560)
16	2.0	24	-0.35	14.5	±0.5	13	27.7	155(1600)		135(1400)



Ordering Example  
Part Number  
UNUTZ4  
PACK-UNUT12

### Features of U-Nuts

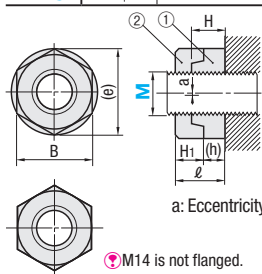
- Capable of stable anti-loosening effect. Prevents screws from falling off even when declines in axial tension.
- Being a solid metal product, the nuts are highly resistant to heat and cold.
- Simplified fastening task makes work management easier.
- Easy parts management prevents inappropriate installation.
- Reusable.

### Cautions

- Make 2 or more pitches of the thread protrude from the friction ring.
- When tightening the nut, refer to the Tightening Torque Chart.
- Use chamfered tipped screws of JIS6g (Class 2) in thread precision.
- Use appropriate lubricant if seizure or scuffing occurs when screwing or unscrewing the nut onto threads.
- Cannot be screwed in from the friction ring side.
- Discontinue the use if abnormal deformation occurs in the friction ring or the clamp.

### Double Locking Nuts

Type	Material	Surface Treatment
HLN	SS400 Equivalent	Trivalent Chromate
HLNS	SUS304 Equivalent	-



a: Eccentricity

RoHS 10

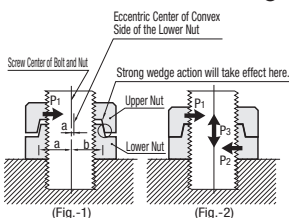
M14 is not flanged.

Part Number	Type	M	MxPitch	B	(e)	Lower Nut		Upper Nut		Pair Height ±Tolerance	(h)	Weight per Set (g)	Unit Price	
						H	Tolerance	H1	Tolerance				HLN	HLNS
HLN HLNS (Stainless Steel)	6		6x1.0	10	11.5	5	±0.3	5	-0.3	8	3	4		
	8		8x1.25	13	15	6.5		6.5	0	10.6	4.1	8.9		
	10		10x1.5	17	19.6	8	0	8	-0.58	13.2	5.2	18		
	12		12x1.75	19	21.9	10		9.3		16	7.0	26		
	14		14x2.0	22	25.4	11	0	11	0	18.5	7.5	39		
	16		16x2.0	24	27.7	13	-0.7	11	-0.7	20	9	46		

### Tightening Torque Chart (Reference Value)

M	Lower Nut					Upper Nut	
	By Material: Tightening Torque Reference Value Chart (N·m)					All Materials	
	SS400 or Equivalent	S45C or Equivalent	SCM435 or Equivalent	SUS304, 316 or Equivalent	SUS304, 316 or Equivalent	Tightening Torque (N·m)	
	4.8(320N/mm <sup>2</sup> )	8.8(640N/mm <sup>2</sup> )	10.9(900N/mm <sup>2</sup> )	50(210N/mm <sup>2</sup> )	70(450N/mm <sup>2</sup> )		
6	2.3-6	-	-	1.5-4	3.3-9		4-5
8	5.6-15	11.2-30	15.8-42	3.7-10	7.9-21		9-13
10	11-30	22-59	31-84	7-20	16-42		18-24
12	19-52	39-104	55-146	13-34	27-73		27-39
14	31-82	62-165	87-232	20-54	44-116		40-58
16	48-129	97-257	136-362	32-84	68-181		70-100

### Structure and Function of Hard Lock Nuts®



Hard Lock Nuts® is a registered trademark of Hard Lock Industry Co., Ltd.

### Cautions

Screws or shafts should be machined in accordance with JIS6g (Class 2) for thread precision. Nuts may not fit well due to different thread precision. Although O.D. of the upper nut and the lower nut may become eccentric or clearance may occur during assembling caused by its structure, it does not affect the operation.

\* Fig.-1: When upper nut is tightened, stress is automatically applied in P1 arrow direction. Horizontal stress continues to increase with tightening until upper nut closely contacts lower nut as shown in Fig.-2. The nuts are fully locked by the wedge effect.

\*\* Fig.-2: After nuts are tightened, internal stress remains distributed as composite stress of P1+P2+P3 to resist external impact.



Part Number  
HLNS