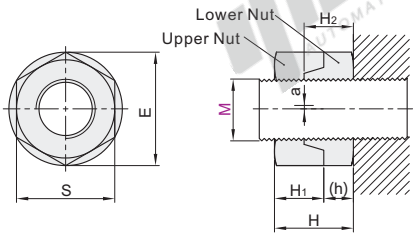
Double Locking Nuts

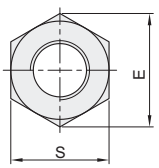
Code	Type	Material	Surface Treatment
TBL90	Double Locking Nuts	SS400	Trivalent Chromate
TBL91		SUS304	—

M6~12 with flanged



a: Eccentricity

M14/16 is not flanged



Structure and Function of Double Locking Nuts

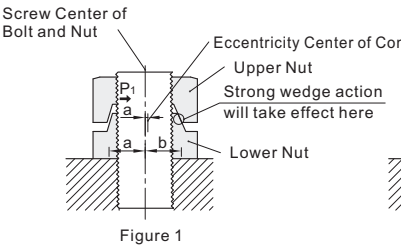


Figure 1 Figure 2

Cautions

- Screws or shafts should be made to JIS6g (Grade 2) in thread precision, or Hard Lock Nuts may not fit well. Although outer diameter 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.
- (Figure 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.
- (Figure 2): After nuts are tightened, internal stress remains distributed as composite stress of $P_1+P_2+P_3$ to resist external impact.

The first perspective

Part Number		Pitch	S	E	Upper Nut		Lower Nut		Pair Height H	(h)	Weight per Set (g)
Code	M				H_1	Tolerance	H_2	Tolerance			
TBL90 TBL91	6	1.0	10	11.5	5	0 -0.32	5	0 -0.32	8	3	5
	8	1.25	13	15	6.5		6.5		10.6	4.1	9
	10	1.5	17	19.6	8	0 -0.6	8	0 -0.6	13.2	5.2	18
	12	1.75	19	21.9	9.3		10		16	7	26
	14	2.0	22	25.4	11	0 -0.7	11	0 -0.7	18.5	7.5	39
	16		24	27.7			13		22.5	9.5	53

Tightening Torque Chart(Referance Value)

M	Lower Nut					Upper Nut
	Tightening Torque Chart(Referance Value)(N·m)					All Materials
	SS400	S45C	SCM435	SUS304		Tightening Torque
	4.8(320N/mm²)	8.8(640N/mm²)	10.9(900N/mm²)	50(210N/mm²)	70(450N/mm²)	(N·m)
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

Please order as shown

Part Number	
Code	M
TBL90	6
TBL91	8
	10

TBL90 — M8

Discount price

Per	1~19	20~
Price	100%	Additional quotation

Delivery 12