
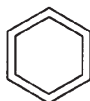
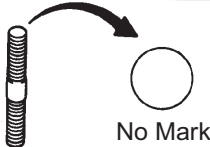
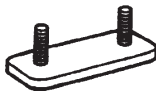
























STANDARD BOLT

HOW TO DETERMINE BOLT STRENGTH

Bolt Types				Class
Hexagonal Bolt		Stud Bolt	Welded Bolt	
Normal Recess Bolt	Deep Recess Bolt			
<div></div> <div>No Mark</div>	<div></div> <div>No Mark</div>	<div></div> <div>No Mark</div>	<div></div>	4T
<div></div> <div></div>	<div></div>			5T
<div></div> <div>w/ Washer</div>	<div></div> <div>w/ Washer</div>	<div></div>		6T
<div></div> <div></div>	<div></div> <div></div>			7T
<div></div>	<div></div>	<div></div> <div></div>		8T
<div></div>	<div></div>			9T
<div></div>	<div></div> <div></div>			10T
<div></div>	<div></div> <div></div>			11T



# SPECIFIED TORQUE FOR STANDARD BOLTS

## 1. SPECIFIED TORQUE

HINT:

The torque values listed below are the specifications for tightening unlubricated zinc-plated bolts.























Class	Diameter (mm)	Pitch (mm)	Specified Torque (Hexagon Head Bolt) (N*m [kgf*cm])	Hexagon Flange Bolt (N*m [kgf*cm])
4T	6	1.0	5{55}	6{60}
	8	1.25	12.5{130}	14{145}
	10	1.25	26{260}	29{290}
	12	1.25	47{480}	53{540}
	14	1.5	74{760}	84{850}
	16	1.5	115{1150}	127{1300}
5T	6	1.0	6.5{65}	7.5{75}
	8	1.25	15.5{160}	17.5{175}
	10	1.25	32{330}	36{360}
	12	1.25	59{600}	65{670}
	14	1.5	91{930}	100{1050}
	16	1.5	140{1400}	157{1600}
6T	6	1.0	8{80}	9{90}
	8	1.25	19{195}	21{210}
	10	1.25	39{400}	44{440}
	12	1.25	71{730}	80{810}
	14	1.5	110{1100}	125{1250}
	16	1.5	170{1750}	191{1950}
7T	6	1.0	10.5{110}	12{120}
	8	1.25	25{260}	28{290}
	10	1.25	52{530}	58{590}
	12	1.25	95{970}	105{1050}
	14	1.5	145{1500}	165{1700}
	16	1.5	230{2300}	255{2600}
8T	6	1.0	12{125}	14{145}
	8	1.25	29{300}	33{330}
	10	1.25	61{620}	68{690}
	12	1.25	110{1100}	120{1250}
	14	1.5	170{1750}	195{2000}
	16	1.5	260{2700}	299{3050}
9T	8	1.25	34{340}	37{380}
	10	1.25	70{710}	78{790}
	12	1.25	125{1300}	140{1450}
10T	8	1.25	38{390}	42{430}
	10	1.25	78{800}	88{890}
	12	1.25	140{1450}	155{1600}
11T	8	1.25	42{430}	47{480}
	10	1.25	87{890}	97{990}

SS

Class	Diameter (mm)	Pitch (mm)	Specified Torque (Hexagon Head Bolt) (N*m [kgf*cm])	Hexagon Flange Bolt (N*m [kgf*cm])
	12	1.25	155{1600}	175{1800}

# HOW TO DETERMINE NUT STRENGTH

**SS**

Nut Types			Class
Standard Hexagonal Bolt	Old Standard Hexagon Nut		
	Cold Forged Nut	Cutting Processed Nut	
 No Mark			4N
 No Mark (w/ Washer )	 No Mark (w/ Washer)	 No Mark	5N (4T)
  			6N
	 	 	7N (5T)
 			8N
 	 	 No Mark	10N (7T)
 			11N
 			12N

\*: More than one mark on the back of the nut

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## HINT:

When replacing a nut, use a nut with a nut strength classification that is equal or higher than the strength classification number of the opposing bolt.  
(Example: Bolt = 4 T, Nut = 4 N or more)

