

# STANDARD TIGHTENING TORQUE

STANDARD TIGHTENING TORQUE N·m

NOMINAL SIZE OF SCREW	T	0.5T	1.8T	2.4T
	N·m	N·m	N·m	N·m
M1	0.0195	0.0098	0.035	0.047
(M1.1)	0.027	0.0135	0.049	0.065
M1.2	0.037	0.0185	0.066	0.088
(M1.4)	0.058	0.029	0.104	0.140
M1.6	0.086	0.043	0.156	0.205
(M1.8)	0.0128	0.064	0.230	0.305
M2	0.176	0.088	0.315	0.42
(M2.2)	0.230	0.116	0.41	0.55
M2.5	0.36	0.180	0.65	0.86
M3	0.63	0.315	1.14	1.50
(M3.5)	1.00	0.50	1.80	2.40
M4	1.50	0.76	2.70	3.6
(M4.5)	2.15	1.08	3.9	5.2
M5	3.00	1.50	5.4	7.2
M6	5.2	2.60	9.2	12.2
(M7)	8.4	4.2	15.0	20.0
M8	12.5	6.2	22.0	29.5
M10	24.5	12.5	44	59
M12	42	21.0	76	100
M14	68	34	122	166
M16	106	53	190	255
(M18)	146	73	270	350
M20	204	102	370	490
(M22)	282	140	500	670
M24	360	180	650	860
(M27)	520	260	940	1240
M30	700	350	1260	1700
(M33)	960	480	1750	2300
M36	1240	620	2250	3000
(M39)	1600	800	2900	3800
M42	2000	1000	3600	4800
(M45)	2500	1260	4500	6000
M48	2950	1500	5300	7000
(M52)	3800	1900	6800	9200
M56	4800	2400	8600	11600
(M60)	5900	2950	10600	14000
M64	7200	3600	13000	17500
(M68)	8800	4400	16000	21000

Standard axial stress 210 N/mm<sup>2</sup> stress area of bolt(JIS 1082)  
 Note : This is not converted from standard tightening torque kgf·cm.

STANDARD TIGHTENING TORQUE kgf·cm

NOMINAL SIZE OF SCREW	T	0.5T	1.8T	2.4T
	kgf·cm	kgf·cm	kgf·cm	kgf·cm
M1	0.199	0.100	0.357	0.479
(M1.1)	0.275	0.138	0.500	0.663
M1.2	0.377	0.189	0.673	0.897
(M1.4)	0.591	0.296	1.06	1.43
M1.6	0.877	0.438	1.59	2.10
(M1.8)	1.31	0.653	2.35	3.11
M2	1.79	0.897	3.21	4.28
(M2.2)	2.35	1.17	4.18	5.61
M2.5	3.67	1.84	6.63	8.77
M3	6.42	3.21	11.6	15.3
(M3.5)	10.2	5.1	18.4	24.5
M4	15.3	7.6	27.5	36.7
(M4.5)	21.9	11.0	39.8	53.0
M5	29.4	14.7	53.0	70.6
M6	53.0	26.5	93.8	124
(M7)	85.7	42.8	153	204
M8	127	63.2	224	301
M10	250	127	449	602
M12	428	214	775	1020
M14	693	347	1240	1690
M16	1080	540	1940	2600
(M18)	1490	744	2750	3570
M20	2080	1040	3770	5000
(M22)	2880	1430	5100	6830
M24	3670	1840	6630	8770
(M27)	5300	2650	9590	12600
M30	7140	3570	12800	17300
(M33)	9790	4890	17800	23500
M36	12600	6320	22900	30600
(M39)	16300	8160	29600	38700
M42	20400	10200	36700	48900
(M45)	25500	12800	45900	61200
M48	30100	15300	54000	71400
(M52)	38700	19400	69300	93800
M56	48900	24500	87700	118000
(M60)	60200	30100	108000	143000
M64	73400	36700	133000	178000
(M68)	89700	44900	163000	214000

Note : This is converted from Standard tightening torque N·m.

## SCREWS AND APPLICABLE "T" SERIES

	Standard T series	0.5 T series	1.8 T series	2.4 T series
Screws (Strength) (Material)	4.6~6.6 SS SC	— CR(Brass) CB(Copper) AB(Aluminum)	8.8~12.9 SCr SNC SCM	10.9~12.9 SCr SNC SCM SNCM
Axial stress Standard value kgf/mm <sup>2</sup> (N/mm <sup>2</sup> ) Max.~Min.	25 (210) 36~19.0 (300~160)	12.5 (105) 18.0~9.5 (150~80)	45 (380) 64~35 (540~290)	60 (500) 86~46 (710~380)
Application	To be applied to ordinary screws, unless otherwise specified.	Male and female screws with copper, aluminum or plastic, for die-cast plastic products.	Durable screw joints made of special steel including those affected by additional dynamic loads.	Durable screw joints made of special steel including those bearing static loads only. (Friction clamping)
(Applicable products)	Ordinary products	Electronic products.	Vehicles, Engines	Construction products.