

eclatorq

eclatorQ 智慧型數位扭力扳手

套筒對照表

套筒使用對照表

規格	適 用 螺 帽				
6	M 3		W 1/8		
8	M 4	M 5	W 5/32	W 3/16	
10	M 6		W 1/4		
12	M 8		W 5/16		
13	M 8				
14	M 8	M 10	W 3/8		W 5/16 (大)
17	M 10		W 7/16		W 3/8 (大)
19	M 12		W 1/2		W 7/16 (大)
21					W 1/2 (大)
22	M 14				
23			W 5/8		
24	M 16				
26			W 3/4		W 5/8 (大)
27	M 18				
30	M 20				
32	M 22		W 7/8		W 3/4 (大)
35					W 7/8 (大)
36	M 24				
38			W 1"		
41	M 27				W 1" (大)
46	M 30				
50	M 33				

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六角凸頭使用對照表

規格	有頭內六角螺絲			無頭止付螺絲		皿頭 CAP	半圓頭 CAP	塞頭
1.2				M 3				
2				M 4		M 3	M 3	
2.5	M 3			M 5		M 4	M 4	
3	M 4			M 6	W 1/4	M 5	M 5	
4	M 5	W 3/16		M 8	W 5/16	M 6	M 6	1/16 PT
5	M 6	W 1/4		M 10	W 3/8	M 8	M 8	1/8 PT
6	M 8	W 5/16		M 12	W 1/2	M 10	M 10	1/4 PT
8	M 10	W 3/8	W 7/16	M 16	W 5/8			3/8 PT
10	M 12	W 1/2		M 20	W 3/4			1/2 PT
12	M 14							
14	M 16	W 5/8	W 3/4					3/4 PT
17	M 20							

螺絲扭力值對照表 STANDARD TORQUE

STANDARD TIGHTENING TORQUE N.m (牛頓單位)

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	0.14
M1.6	0.086	0.043	0.156	0.205
(M1.8)	0.0128	0.064	0.23	0.305
M2	0.176	0.088	0.315	0.42
(M2.2)	0.23	0.116	0.41	0.55
M2.5	0.36	0.18	0.65	0.86
M3	0.63	0.315	1.14	1.5
(M3.5)	1	0.5	1.8	2.4
M4	1.5	0.76	2.7	3.6
(M4.5)	2.15	1.08	3.9	5.2
M5	3	1.5	5.4	7.2
M6	5.2	2.6	9.2	12.2
(M7)	8.4	4.2	15	20
M8	12.5	6.2	22	29.5
M10	24.5	12.5	44	59
M12	42	21	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/mm² stress area of bolt(JIS 1082)

Note This is not converted from standard tightening torque kgf.cm

STANDARD TIGHTENING TORQUE kgf.cm (公制單位)

NOMINAL SIZE OF SCREW	T	0.5T	1.8T	2.4T
	kgf.cm	kgf.cm	kgf.cm	kgf.cm
M1	0.199	0.1	0.357	0.479
(M1.1)	0.275	0.138	0.5	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	2.1
(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	39.8	53
M5	29.4	14.7	53	70.6
M6	53	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

This is converted from Standard tightening torque N.m

Screws and applicable T series

	Standard T series 標準品	0.5 T series 電子產品	1.8 T series 鋁,鎂,鈷鋼	2.4 T series 建築鋼構
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/mm2(N/mm2) 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 (Applicable products)	To be applied to ordinary screws. unless otherwise specified. 一般螺絲 Ordinary products	Male and female screws with copper. aluminum or plastic. for die-cast plastic products. 電子零件 Electronic products	Durable screw joints made of special steel including those affected by additional dynamic loads. Vehicles,Engines	Durable screw joints made of special steel including those bearing static loads only(Friction clamping) Construction products

UNIT OF TORQUE AND CONVERSION VALUE

To measure the tightening torque for screws, kgf.cm has often been used in the past.

This becomes N.m in terms of SI units. Therefore, their relationship is given as:

$$1\text{N.m}=10.1972\text{kgf.cm} \doteq 10.2\text{kgf.cm}$$

$$1\text{kgf.cm}=0.0980665\text{N.m} \doteq 0.098\text{N.m}$$

	SI Unit System			Metric Unit System			English Unit System		
	mN.m	cN.m (N.cm)	N.m	gf.cm	kgf.cm	kgf.m	ozf.in	lbf.in	lbf.ft
1mN.m=	1	0.1	0.001	10.2	0.0102	0.000102	0.142	0.00885	0.000738
1cN.m=	10	1	0.01	102	0.102	0.00102	1.42	0.0885	0.00738
1N.m=	1000	100	1	10200	10.2	0.102	142	8.85	0.738
1gf.cm=	0.0981	0.00981	0.0000981	1	0.001	0.00001	0.0139	0.000868	0.0000723
1kgf.cm=	98.1	9.81	0.0981	1000	1	0.01	13.9	0.868	0.0723
1kgf.m=	9810	981	9.81	100000	100	1	1390	86.8	7.23
1ozf.in=	7.06	0.706	0.00706	72	0.072	0.00072	1	0.0625	0.00521
1lbf.in=	113	11.3	0.113	1150	1.15	0.0115	16	1	0.0833
1lbf.ft	1360	136	1.36	13800	13.8	0.138	192	12	1

On above table effective number is treated as 3 figures

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