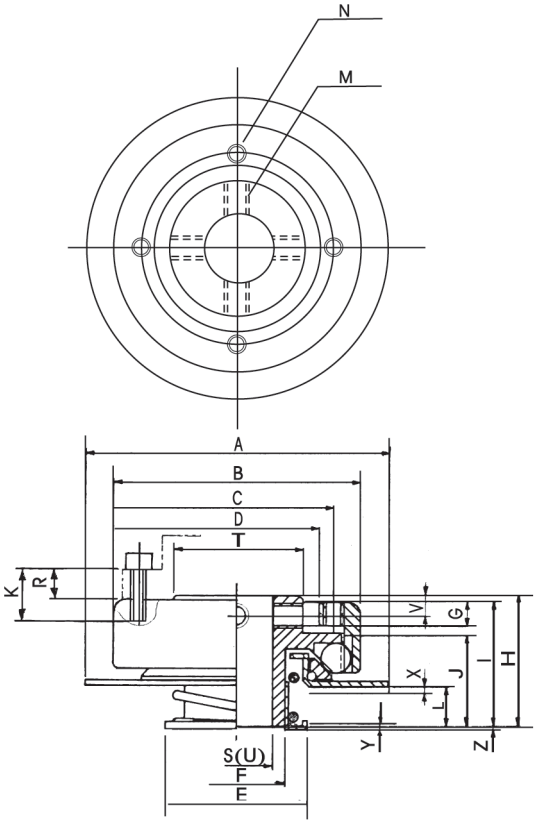
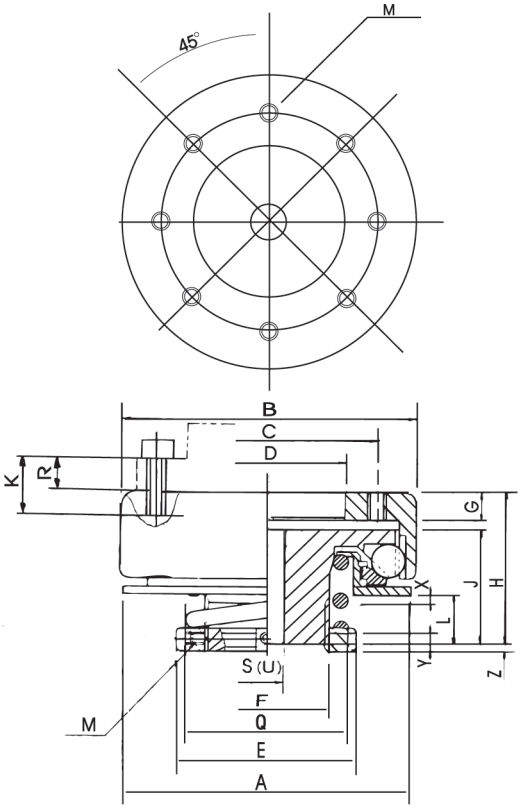
STC 精密定位型扭力限制器 / Accuracy Positioning Type



ST4C - ST5C



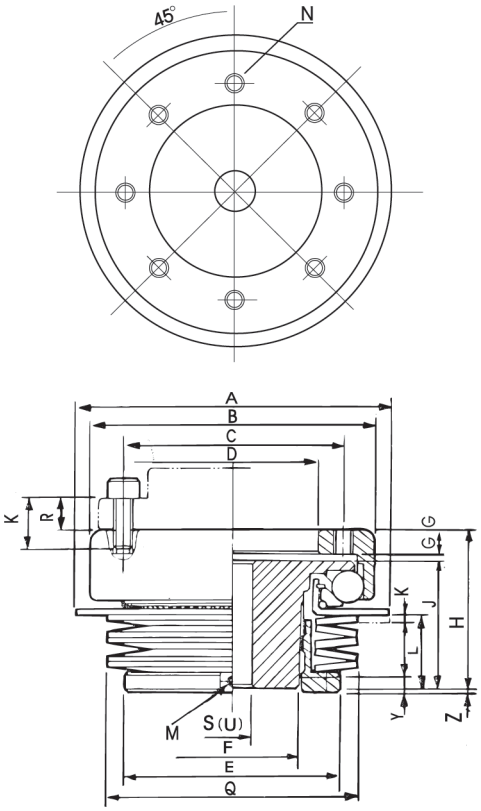
ST6C

◆尺寸 / Dimension

尺寸單位：mm

規 格 No.	扭力 T kg.m	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Q	S	U	V	T	X	(Z)
ST4C-007C	0.03~0.07	64	52	PCD 40	34 H7	30	M20 P1	5	28	27	20.5	R+5	7.6	4.M5 P0.8	4-M4 P0.7 深4.7		7	15	4.5	27	0.7	0.6
ST4C-010C	0.04~0.10												8.0								1.1	0.2
ST4C-030C	0.01~0.30												7.6								0.7	0.6
ST4C-045C	0.15~0.45												8.0								1.1	0.2
ST5C-030C	0.08~0.30	82	71	PCD 55	46 H7	44	M30 P1.5	7	40	39	30	R+7	13.1	4.M6 P1	4-M4 P0.7 深5.7		9	22	5.5	36	0.6	0.3
ST5C-060C	0.15~0.60												13.7								1.2	-0.3
ST5C-100C	0.20~1.00												13.1								0.6	0.3
ST5C-180C	0.40~1.80												13.7								1.2	-0.3
ST6C-06C	0.2~0.6	93	95	PCD 70	50 H7	58	M40 P1.5	9	52		40	R+8	18.5	2.M5 P0.8	8-M6 P1 深9		12.5	27			1.4	3.2
ST6C-1C	0.3~1.0												19.0								2.2	2.8
ST6C-3C	1.0~3.0												18.5								1.4	3.2
ST6C-5C	1.5~5.0												19.0								2.2	2.8
ST7C-6A	2~6	128	116	PCD 90	70 H7	88	55	10	65		52	R+9	30.0	2.M5 P0.8	8-M8 P1.25 深10	102	16.5	35			1.6	2.0
ST7C-10A	3~10												31.0								2.4	0.9
ST7C-20B	6~20												30.0								1.6	1.7
ST7C-35B	10~35												31.0								2.6	0.6
ST8C-12A	4~12	164	142	PCD 110	90 H7	108	75	12	75		60	R+11	35.0	2.M5 P0.8	8-M8 P1.25 深12	130	16.5	51			1.7	2.5
ST8C-15A	6~12												36.0								2.7	1.6
ST8C-35B	10~35												35.0								1.7	1.8
ST8C-45B	12~45												36.0								2.7	0.9
ST11C-20A	7~20	198	176	PCD 130	110 H7	134	96	16	90		70	R+15	41.5	2.M5 P0.8	8-M10 P1.5 深16	160	16.5	65			2.0	2.4
ST11C-35A	10~35												43.0								3.2	1.0
ST11C-65B	20~65												41.5								2.0	0
ST11C-100B	30~100												43.0								3.2	-1.5
ST14C-30A	10~30	236	208	PCD 160	130 H7	158	120	16	100		80	R+15	44.0	2.M5 P0.75	8-M12 P1.75 深16	186	16.5	90			2.7	4.5
ST14C-45A	15~45												44.0								4.3	4.5
ST14C-130B	50~130												44.0								2.7	3.5
ST14C-200B	80~20												44.0								4.3	3.5
ST18C-160A	70~160	285	285	PCD 220	170 H7	220	170	18	130		108	R+17	59.0	2.M5 P0.75	8-M16 P2 深18	236	50	130			3.7	4.8
ST18C-250A	100~250												59.0								6.2	5.0
ST18C-380B	160~380												59.0								3.7	5.0
ST18C-500B	300~500												59.0								6.2	5.2

STC 精密定位型扭力限制器 / Accuracy Positioning Type



ST7C -ST18C

◆注意事項 / Note

T：使用扭力的調整範圍 / Adjustment Range of Applied Torque
S：預鑽孔尺寸 / Bore Size
U：最大加工孔徑尺寸 / Max. Machined Bore Size
Kmax：固定螺絲最大長度(請配合N值使用)
Max. Fixing Screw Length (in compliance with N value)
X：過負荷作用時，過負荷檢出盤移動距離，請使用近接開關於迴轉 驅動機構上
Moving Range of Overload Detector in the event of overload. The proximity sensor can be applied to the rotation mechanism.
Z：扭力彈簧自由長時，驅動輪端面和壓緊螺帽 端面的段差尺寸，使用此尺寸，算出設定扭力的基準值
The hight between the surface of driving wheel and nut surface when torsion spring is at free length. The gap can be the reference to set torque.
M：固定壓緊螺帽的固定螺絲外徑與節距調整後請務必將固定螺絲鎖好
Fixig nut by the outer diameter and pitch of screw, be sure of locking the fixing screw after adjustment.
Tmax：最大傳達扭力 / Max. Transmissible Torque
Ymax：最大調整量 / Max. Adjustment Range
P：壓緊螺帽的螺紋節距 / Thread pitch for locking nut
θ：偏角誤差的最大吸收量 / Max. Accommodation of Angularity Error
α：隙縫誤差的最大吸收量 / Max. Accommodation of Clearance Error
Nmax：最大容許回轉數 / Allowable Max. Rotational Frequency
GD：扭力限制器的慣性距 / Moment of Inertia of Torque Limiter
註(1) / Note 1：
隙縫誤差 α 的值是以組立尺寸H為基準的軸方向移動容許時請務必留意尺寸H
Clearance Error α is based on axial movement of Assembly Size H, be cautious of Assembly Size H
註(2) / Note 2:
平行誤差 β 的值是扭力限制器的扭力傳達用滾珠的位置最大吸收量
Parallel Error β is the maximum accommodation of transmissible ball in torque limiter.
註(3) / Note 3:
使用回轉數超過Nmax時，請先敝公司洽談
Please contact with us when the applied rotational frequency is greater than Nmax.

◆特性表 / Specification

規 格 No.	Tmax kg.m	Ymax mm	p mm	a kgf	b kgf	c kgf.m	Nmax rpm	GD² kgf.m²	W kgf
ST4C-007C	0.07	4.0	1	1	±1.0	0.1	2000	3.6×10^{-4}	0.25
ST4C-010C	0.10	2.7							
ST4C-030C	0.30	4.0							
ST4C-045C	0.45	3.3							
ST5C-030C	0.30	4.2	1.5	1	±1.0	0.1	1600	1.6×10^{-4}	0.68
ST5C-060C	0.60	5.9							
ST5C-100C	1.00	6.8							
ST5C-180C	1.80	7.5							
ST6C-06C	0.6	11.0	1.5	1.5	±1.5	0.1	1000	6.7×10^{-3}	1.5
ST6C-1C	1	11.0							
ST6C-3C	3	11.0							
ST6C-5C	5	11.0							
ST7C-6A	6	9.0	2	1.2	±1.8	0.1	700	2.3×10^{-2}	3.2
ST7C-10A	10	8.0							
ST7C-20B	20	9.0							
ST7C-35B	35	7.5							
ST8C-12A	12	11.0	2	1.2	±2	0.1	500	5.5×10^{-2}	5.3
ST8C-15A	15	10.0							
ST8C-35B	35	10.5							
ST8C-45B	45	9.5							
ST11C-20A	20	13.5	2	1	±2.5	0.1	400	0.14	10.8
ST11C-35A	35	12.0							
ST11C-65B	85	9.0							
ST11C-100B	100	7.5							
ST14C-30A	30	12.0	2	0.7	±3.5	0.1	300	0.37	20
ST14C-45A	45	12.0							
ST14C-130B	130	13.5							
ST14C-200B	200	13.5							
ST18C-160A	160	16.0	3	1	±3.5	0.1	200	1.6	45
ST18C-250A	250	16.0							
ST18C-380B	380	15.0							
ST18C-500B	500	15.0							

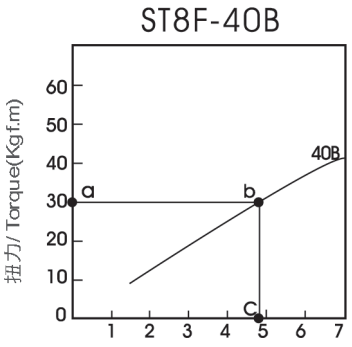
扭力限制器調整 / Adjusting Torque Limiter

使用扭力是指負荷超過此扭力時，入力側和出力側的傳達被脫離，STF、STC兩種機種具有調整扭力的機能，只要轉動兩機種的鎖緊螺帽就能簡單調整，但是無法表示出調整後的扭力值，所以請參考下圖可以推算出使用扭力，如果需要更正確的數值請使用扭力測定器等測定。
Torque limiting disengages power input side and power output side when overload is greater than the applied torque. Both STF and STC provide the feature of torque adjustment by merely tightening or loosening the adjusting bolt on them. As to the applied torque value, please refer to the below charts. If you require the accurate torque value, please use the torque meter to obtain the torque measure.

扭力值調整使用例 / Torque Adjustment Guide

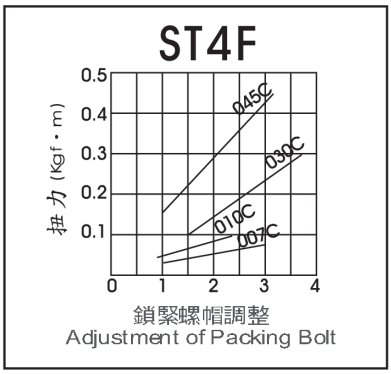
使用扭力和扭力彈簧調整量的關係，依據機種逐一表示。例如，需求使用扭力為30Kgfm，選定本公司的扭力限制器ST8F-40B，於圖A求出扭力彈簧的鎖緊螺帽調整量。T=30Kgf.m.(點a)將點a水平延伸到ST8F-40B的曲線交點，作為點b。從點b再垂直往下求出點C，得到y=4.9mm(點c)，鎖緊螺帽的螺紋節距從STF型特性表可求出，所以扭力彈簧的鎖緊調整量Y除以螺紋節距P，可以求出鎖緊螺帽的調整迴轉量，換言之螺紋節距P=2mm時，鎖緊螺帽的調整回轉量是從扭力彈簧變形量為零時位置開始大約轉2.4轉。

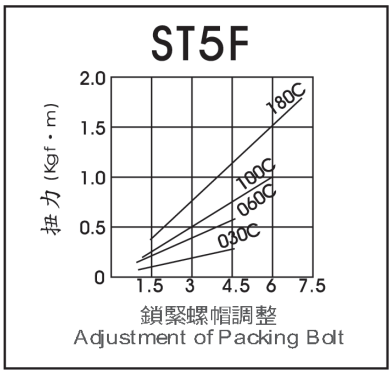
The relation between applied torque and torque spring adjustment of each model is presented respectedly below. The required torque is 30 kgf.m, and the selected torque limiter is ST8F-40B. please see figure A, finding out the adjustment of packing bolt of torque spring. Torque = 30kgf.m (point a); parallel line from point a intersects with the curve line of ST8F-40B at point b; then vertical line from point b intersects with parallel axis at point c, y=4.9mm (point c), the thread pitch of packing bolt can be derived from the specification of STF type. Thus, Dividing Y, tightening adjustment of torque spring by P, thread pitch can get the roatational adjustment of packing bolt. In other words, if the thread pitch P is equal to 2mm, the rotational adjustment of packing bolt is that rotate the bolt 2.4 screw when the load on torque spring is zero.

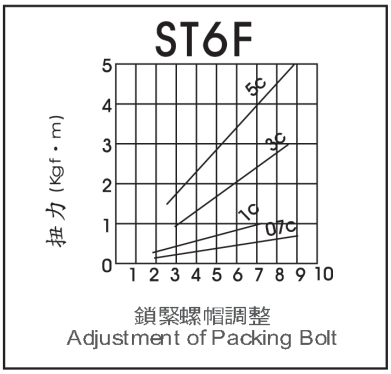


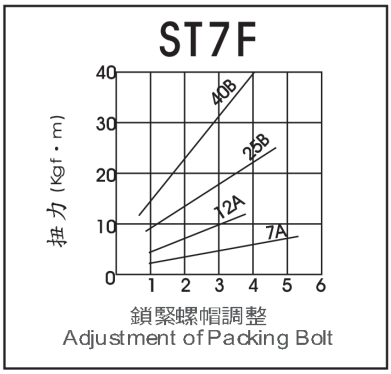
STF 型 / STF series

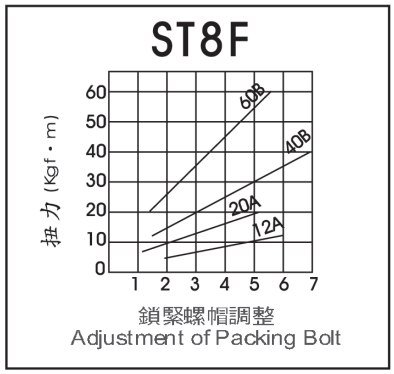
扭力值與鎖緊螺帽調整關係
Guide for Torque and Packing Bolt

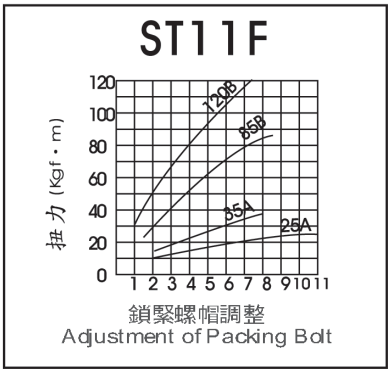


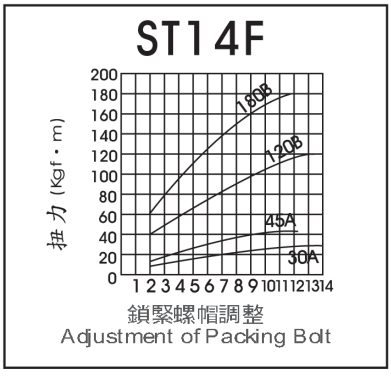


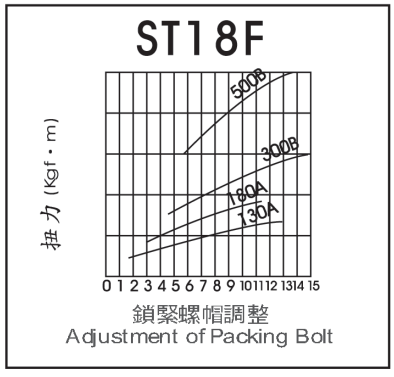




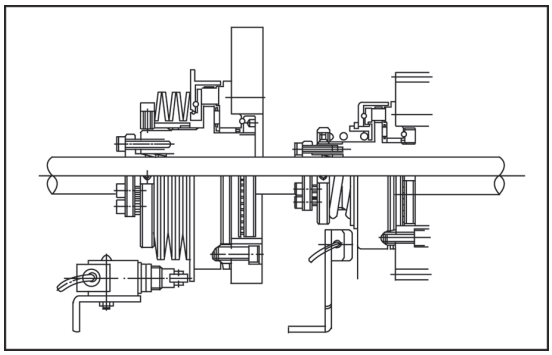




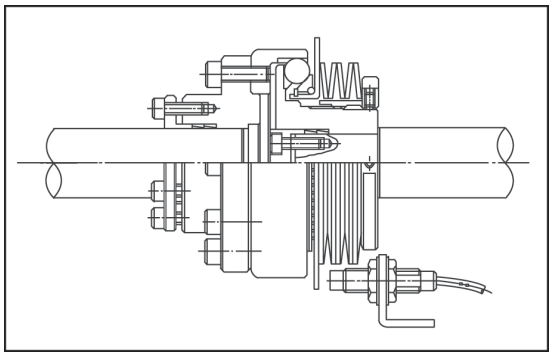




扭力限制器應用例 / Application for Torque Limiter



STF 安裝範例
Installation for STF series



STC 安裝範例
Installation for STC series

STC 型 / STC series

扭力值與鎖緊螺帽調整關係
Guide for Torque and Packing Bolt