NTL50-1 NTL50-2

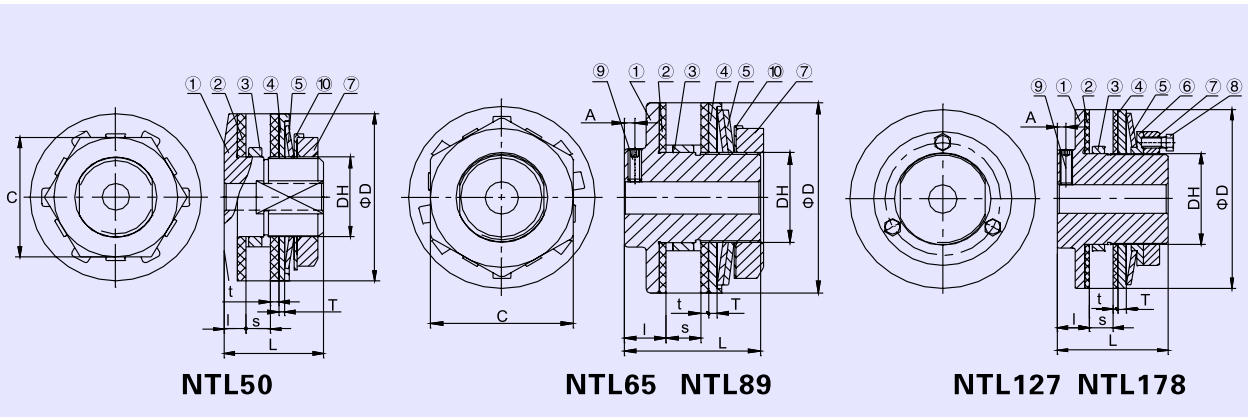
* Single Nut Adjustment
* Lock Washer to prevent the nut from loosening

NTL65-1 NTL65-2
NTL89-1 NTL89-2

* Single Nut Adjustment
* Lock Washer to prevent the nut from loosening

NTL127-1 NTL127-2
NTL178-1 NTL178-2

* Three Bolts Adjustment
* Torque preset by the three bolts (an adjustment nut to fix a pilot plate in place)



NTL50 NTL65 NTL89 NTL127 NTL178

Dimensions and Capacity for NTL50 to NTL178																			
规格 Size	Torque Range (kgf · m)	Plain Bore	Max. Bore	Bush Length	O.D. Of Bush	Bore for Center Member	D	DH	L	L	T	t	S (Max)	A	C	Adjust. Nut	Adjust. Bolt	Set Screw	Weight (kg)
NTL50-1	0.3 ~ 1.0	8	14	3.8 6	30 -0.020 -0.041	30 +0.033 0	50	24	29	6.5	1.6	2.5	7	-	36	M24 P1.0	-	-	0.248
NTL50-2	0.7 ~ 2.0																		0.256
NTL65-1	0.7 ~ 2.8	10	22	6 8	41 -0.025 -0.050	41 +0.039 0	65	35	48	16	4	3.2	9	4	50	M35 P1.5	-	M5	0.721
NTL65-2	1.4 ~ 5.5																		0.739
NTL89-1	2.0 ~ 7.6	17	25	6 8 9.5 14.5	49 -0.025 -0.050	49 +0.039 0	89	42	62	19	4	3.2	16	5	65	M42 P1.5	-	M6	2.417
NTL89-2	3.5 ~ 15.2																		2.477
NTL127-1	4.8 ~ 21.4	20	42	6 8 9.5 14.5	74 -0.030 -0.060	74 +0.046 0	127	65	76	22	6	3.2	16	6	-	M65 P1.5	M8 P1.0 3pcs	M8	3.692
NTL127-2	9.0 ~ 42.9																		3.858
NTL178-1	11.8 ~ 58.1	30	64	8 9.5 14.5 17 22	105 -0.036 -0.071	105 +0.054 0	178	95	98	24	7	3.2	29	6.5	-	M95 P1.5	M10 P1.25 3pcs	M10	9.033
NTL178-2	22.8 ~ 111																		9.436

Name of parts:

①Hub ②Friction Facing ③Bushing ④Pressure Plate ⑤Disc Spring
⑥Pilot Plate ⑦Adjustment Nut ⑧Adjustment Bolt ⑨Set Screw ⑩Lock Washer

1. Determine the required slip torque from the loading conditions or from the design strength of the machine. If the loading conditions of the machine are unknown, set the required slip torque of the torque limiter to 1.5 ~ 2 times the torque the motor produces on the shaft where the torque limiter is mounted.

2. Select a torque limiter that has enough torque range and bore range.

3. Determine the proper bushing length from the thickness of the center member to be inserted between the friction facings. Always choose the largest bushing which does not exceed the width of the center member being shown as “S max.” in the dimension table.

CENTER MEMBER

1. The center member should be machined on its rubbing surface to obtain the rated torque and be flat, parallel, square with bore, and free from rust, scale, and oil. Surface finish recommended is Ra 1.6. If the center member is not in accordance with these specifications, the slip torque will be erratic.

2. Bore of the center member to be machined is shown in the table below. Also, min. numbers of sprockets teeth to be used and bushing length to be chosen are listed in this table.

Minimum Sprocket Teeth and Bushing Length

Sprocket Pitch and Number of Teeth													
9.525–06B		12.7–08B		15.875–10B		19.05–12B		25.4–16B		31.75–20B		38.1–24B	
Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)	Sprocket MinTeeth	Bush Length (mm)
20	3.8	16	6										
		20	6	17	8								
		26	6	21	8	18	9.5	15	14.5				
		35	6	29	8	25	9.5	19	14.5				
				39	8	33	9.5	26	14.5	21	17	18	22

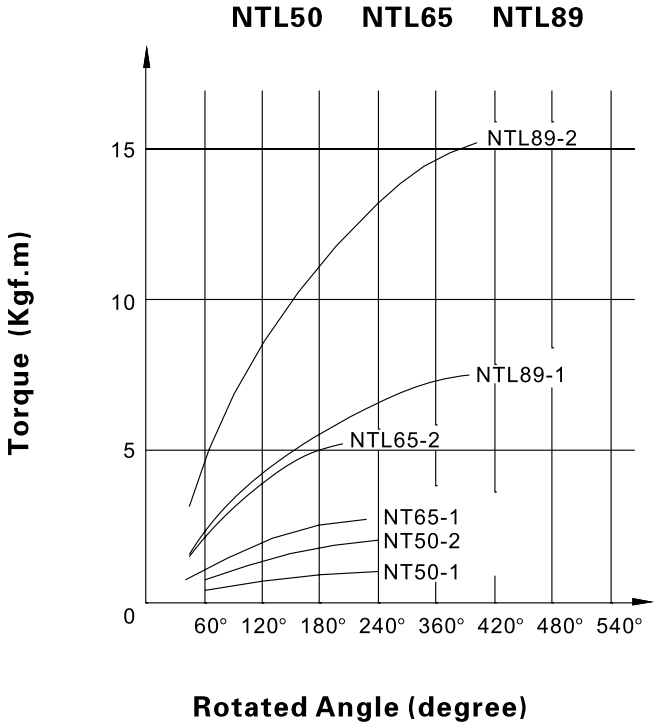
TORQUE SETTING

- Torque setting of the torque limiter is achieved by tightening or loosening the adjustment bolts and/or the adjustment nut. For torque adjustment of NTL50 through NTL89, an adjustment nut is provided, and for NTL127 through NTL178, adjustment bolts are provided.
- The torque setting can be made after mounting the torque limiter on the shaft. The process is:

- For NTL50 through NTL89,

  First, rotate the adjustment nut tightly by hand so that the disk spring can fit the plate. Then tentatively tighten the nut by about 60 degrees with a wrench.

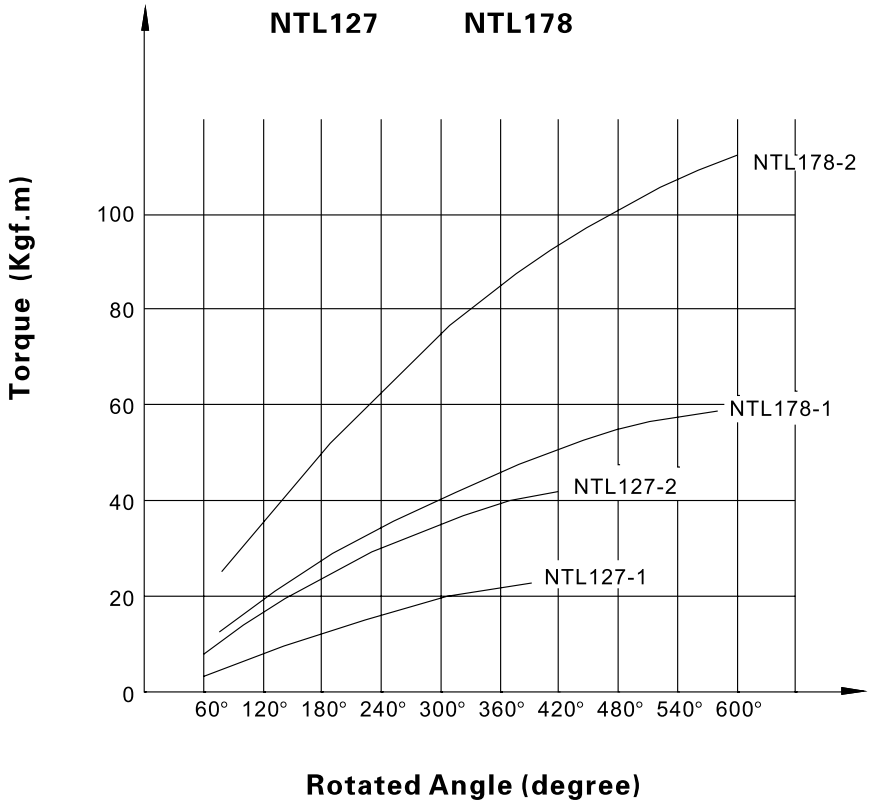
  Rotated Angle and Setting Torque



● For NTL127 through NTL178,

First, rotate the nut for fixing the disk spring to the plate, and then tighten each adjustment bolt by about 60 degrees. Then, if the torque limiter slips under normal loading conditions, tighten the nut (for NTL50 ~ NTL89) or the bolts (for NTL127 ~ NTL178) gradually until the torque limiter stops slipping. Always tighten (or loosen) the bolts equally. Try this adjustment several times to find the proper torque setting for the machine. For your guidance, the below chart shows the relation between the effective rotated angle and preset torque.

For precise torque setting, run–in of the torque limiter is recommended, for example, 500 revolution at 50 ~ 60 rpm with a rotated angle of 45 degrees of the adjustment nut or the bolts.


NTL127
NTL178
Torque (Kgf.m)
100
80
60
40
20
0
NTL178-2
NTL178-1
NTL127-2
NTL127-1
60° 120° 180° 240° 300° 360° 420° 480° 540° 600°
Rotated Angle (degree)