RTL50-1 RTL50-2

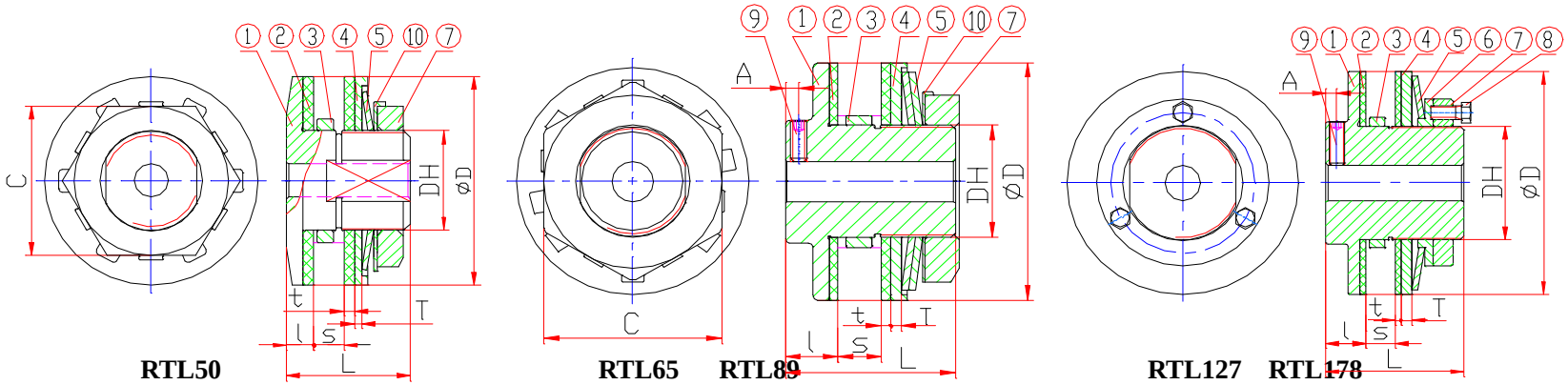
*** Single Nut Adjustment**
*** Lock Washer to prevent the nut from loosening**

RTL65-1 RTL65-2
RTL89-1 RTL89-2

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

RTL127-1 RTL127-2
RTL178-1 RTL178-2

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



Dimensions and Capacity for RTL50 to RTL178																			
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)
RTL50-1	0.3 ~ 1.0	8	14	3.8	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
RTL50-2	0.7 ~ 2.0			6															0.256
RTL65-1	0.7 ~ 2.8	10	22	6	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
RTL65-2	1.4 ~ 5.5			8															0.739
RTL89-1	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
RTL89-2	3.5 ~ 15.2																		2.477
RTL127-1	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
RTL127-2	9.0 ~ 42.9																		3.858
RTL178-1	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
RTL178-2	22.8 ~ 111																		9.436

Name of parts:

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

SECTION

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 that 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 is 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 Ra1.6. If the center member is not in accordance with these specifications, the slip torque will
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 RTL50 through RTL89, an adjustment nut is provided, and for RTL127 through RTL178, adjustment bolts are provided.

The torque setting can be made after mounting the torque limiter on the shaft. The process is:

For RTL50 through RTL89,

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

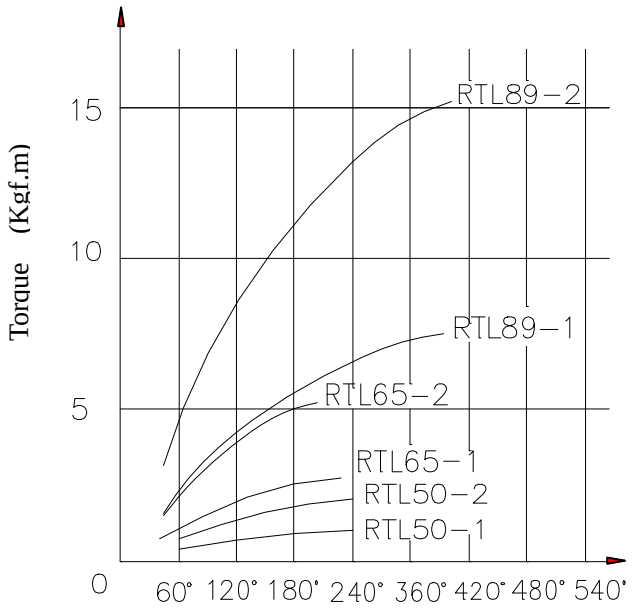
For RTL127 through RTL178,

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 RTL50 ~ RTL89) or the bolts (for RTL127 ~ RTL178) 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

Rotated Angle and Setting Torque

RTL50 RTL65 RTL89



RTL127 RTL178