Torque transmission capacity table

Reading the capacity table for indexing handler

The capacity table gives dynamic torque To and dynamic allowable load Wo by number of stops, life, and rotating speed. This table was calculated based on a life expectancy of 12,000 hours of normal operation including mounting, lubrication, and handling conditions. Adverse conditions and poor maintenance can affect the transmission capacity and life of the indexing handler.

Beside, if you misunderstand how to read the capacity table when you select a model, you are not able to select proper model. Please carefully pay attention below instructions.

Number of Stops S	Index Period θ_1 (deg)	Static Torque Ts (N·m)	Dynamic Torque To (N·m) Input Shaft Speed N(rpm) 100	150	200	250	300	400	500	600	Camshaft Frictional Torque Tx (N·m)
8	90	26.1	14.1	12.3	11.0	9.9	9.0	7.1	5.2		5.0
	120	30.9	14.2	12.4	11.2	10.3	9.5	8.1	6.8	5.4	
	150	34.3	14.0	12.3	11.2	10.3	9.6	8.4	7.4	6.3	
	180	36.6	13.7	12.1	11.0	10.2	9.5	8.5	7.6	6.7	
12	120	54.9	27.6	24.3							
	150	58.4	26.6								
	180	60.6									
	120										

1. Static torque(Ts) is the maximum available torque on output shaft.
2. Dynamic torque(To) is the number of maximum allowable consecutive output torque based on a life of 12,000 hours.
3. Dynamic allowable load(Wo) is the number of maximum allowable consecutive load based on a life of 12,000 hours.
4. Cam shaft friction torque(Tx) is the maximum frication torque of cam(input) shaft when

Number of stops

This is the number of stops the output makes during one revolution. If the number of stops is S, output shaft will rotate 360/S degrees for one index.

Index period

When are two or more index periods are given for the oscillating angle, number of stops, and lift, the smaller number is the minimum index periods. Cam can not be manufactured for index periods shorter than this minimum value.

When designing the timing, try to make the index period as large as possible.

Dynamic torque, dynamic allowable load, and rotating speeds

The dynamic torque and dynamic allowable loads given in each capacity table will vary according to the oscillating angle, number of stops, lift, and rotating speed. Always check the values according to actual using conditions.

Cam curves

The output displacement of indexing handler is produced by a modified sine curve (MS curve). If your application requires synchronized operation at equivalent speeds or special displacement specifications. Please consult Sankyo.

Lifting stroke

This is the different amount of lifting stroke output shaft moves.

Lift LT (mm)	Index Period θ_L (deg)	100
4	32	50.7
	70	73.5
	120	73.5

6FH

Torque capacity table of indexing motion

Table 6FH-1

Number of Stops S	Index Period θ_1 (deg)	Static Torque Ts (N·m)	Dynamic Torque To (N·m) Input Shaft Speed N(rpm) 100	150	200	250	300	400	500	600	Camshaft Frictional Torque Tx (N·m)
8	90	26.1	14.1	12.3	11.0	9.9	9.0	7.1	5.2		5.0
	120	30.9	14.2	12.4	11.2	10.3	9.5	8.1	6.8	5.4	
	150	34.3	14.0	12.3	11.2	10.3	9.6	8.4	7.4	6.3	
	180	36.6	13.7	12.1	11.0	10.2	9.5	8.5	7.6	6.7	
12	120	54.9	27.6	24.3	22.2	20.6	19.4	17.3	15.6	14.1	
	150	58.4	26.6	23.5	21.5	20.0	18.8	17.0	15.5	14.2	
	180	60.6	25.7	22.7	20.8	19.4	18.2	16.5	15.2	14.1	
16	120	46.7	23.1	20.4	18.7	17.3	16.3	14.6	13.2	12.0	
	150	48.3	22.0	19.5	17.8	16.6	15.6	14.1	12.9	11.9	
	180	49.3	21.1	18.6	17.1	15.9	15.0	13.6	12.5	11.6	

Carrying capacity table

Table 6FH-2

Lift LT (mm)	Index Period θ_L (deg)	Dynamic Allowable Load Wo (N) Input Shaft Speed N(rpm) 100	150	200	250	300	400	500	600
4	32	50.7	23.3	9.2					
	70	73.5	64.5	45.7	31.8	21.7	8.7		
	120	73.5	73.5	67.8	55.4	45.1	29.3	18.2	10.5
6	54	67.7	39.2	21.8	11.1				
	90	73.5	66.3	47.8	33.9	23.6	10.2		
	120	73.5	73.5	60.5	47.2	36.4	20.9	11.0	
8	81	73.5	51.8	33.5	21.0	12.4			
	100	73.5	62.7	44.5	31.0	21.1	8.4		
	120	73.5	70.8	53.4	39.9	29.4	14.9	6.2	
10	121	73.5	63.6	46.3	33.2	23.3	10.3		
	135	73.5	68.3	51.5	38.4	28.2	14.2	5.7	
	150	73.5	72.3	56.2	43.3	33.0	18.3	9.0	

Note : If the timing requires intermediate stop, above index period and number of torque may be differed.