Torque transmission capacity table

Reading carrying capacity tables for parts handlers

The carrying capacity table gives dynamic allowable load Wo by stroke and rotating speeds.

This table was calculated based on a parts handler that has been mounted and lubricated according to specifications and is being operated under normal condition.

Stroke I STI (mm)	Minimum Index Period θ_I (deg)	Dynamic Allowable Load Wo (N) Input Shaft Speed N(rpm)						
		10	20	30	40	50	60	70	80
5	30	46.0	37.2	32.3	28.4	27.4	24.5	24.5	23.5
10	41	37.2	28.4	24.5	23.5	22.5	20.5	19.6	19.6
15	48	32.3	25.4	22.5	19.6	18.6	18.6	16.6	16.6
20	52	28.4	23.5	19.6	18.6				14.7
	56	25.4	22.5	18.6					
		24.5	19.6						

Index periods

Two or more index periods are given for each stroke range. The smallest index period is the minimum index period for that amount of stroke. Cams cannot be manufactured for index periods below this minimum value. When designing the timing, try to make the index period as large as possible.

Adverse transmission capacities and life of the parts handler. Note, when selecting models it is important that the torque transmission capacity table be read correctly in order to make the proper selection. Always make sure to read and understand the following explanations.

Dynamic allowable load and rotating speeds

The dynamic allowable load given in the carrying capacity table will vary according to the stroke. Index period, and rotating speed. The dynamic allowable load may also vary by the mounting position due to the internal load of the parts handler. The allowable rotating speed varies according to the direction of the stroke. Therefore, always check the values according to actual operating conditions.

Cam curves

The output displacement of the parts 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.

8GYII

Carrying capacity table of stroke I

Table 8GYII-1

Stroke I STI (mm)	Minimum Index Period θ_I (deg)	Dynamic Allowable Load Wo (N) Input Shaft Speed N(rpm)						Camshaft Frictional Torque Tx (N·m)
		10	20	30	40	50	60	
10	22	100.0	84.3	73.5	62.7	45.1	31.9	
20	30	83.3	70.6	64.7	49.0	41.2	28.0	
30	36	72.5	60.8	55.9	47.0	37.2	26.8	
40	42	65.7	54.9	51.0	44.1	33.3	26.8	
50	47	60.8	51.0	47.0	41.2	31.4	26.8	(24.5)
60	52	56.8	48.0	44.1	39.2	29.4	26.8	
70	57	53.9	45.1	41.2	37.2	27.4	20.6	
80	62	51.0	43.1	39.2	34.3	26.5	20.6	
90	67	49.0	41.2	37.2	34.3	24.5	20.6	
100	75	47.0	39.2	36.3	33.3	23.5	20.6	

Carrying capacity table of stroke II

Table 8GYII-2

Stroke II STII (mm)	Minimum Index Period θ_{II} (deg)	Static Allowable Load Ws (N)	Dynamic Allowable Load Wo (N) Input Shaft Speed N(rpm)						Camshaft Frictional Torque Tx (N·m)
			10	20	30	40	50	60	
10	15	124.3	100.0	84.3	52.9	38.2	35.3	20.0	
20	20	119.4	83.3	70.6	46.1	31.4	21.6	15.3	
30	25	116.2	72.5	60.8	48.0	32.3	22.5	16.5	
40	29	112.1	65.7	54.9	48.0	32.3	23.5	17.6	
50	33	110.0	60.8	51.0	47.0	34.3	24.5	18.8	
60	36	106.9	56.8	48.0	44.1	34.3	23.5	17.6	
70	39	104.8	53.9	45.1	41.2	33.3	23.5	17.6	
80	42	101.7	51.0	43.1	39.2	33.3	23.5	17.6	
90	45	100.7	49.0	41.2	37.2	34.3	24.5	17.6	
100	47	97.6	47.0	39.2	36.3	32.3	23.5	17.6	
110	51	94.4	45.1	38.2	35.3	31.4	24.5	18.8	
120	54	93.4	44.1	36.3	33.3	28.4	23.5	18.8	
130	57	91.3	42.1	35.3	32.3	28.4	23.5	20.0	
140	59	89.2	41.2	34.3	31.4	27.4	25.5	18.8	
150	62	87.2	40.2	33.3	30.4	28.4	25.5	18.8	(24.5)
160	64	84.5	39.2	32.3	30.4	26.5	25.5	18.8	
170	67	82.0	38.2	31.4	29.4	27.4	24.5	20.0	
180	69	79.5	37.2	31.4	28.4	26.5	24.5	17.6	
190	71	77.1	36.3	30.4	28.4	25.5	22.5	18.6	
200	73	74.8	35.3	29.4	27.4	24.5	22.5	15.3	
210	78	72.6	34.3	29.4	26.5	23.5	23.5	17.6	
220	95	70.4	34.3	28.4	26.5	25.5	23.5	18.6	
230	99	68.3	33.3	27.4	25.5	24.5	23.5	19.6	
240	105	66.2	32.3	26.5	25.5	24.5	22.5	19.6	
250	110	64.3	32.3	26.5	24.5	23.5	21.6	19.6	
260	117	62.3	31.4	26.5	24.5	23.5	21.6	20.6	
270	121	60.5	31.4	26.5	23.5	22.5	21.6	19.6	
280	126	58.6	30.4	25.5	23.5	22.5	20.6	18.6	
290	131	56.9	30.4	25.5	23.5	22.5	19.6	18.6	
300	137	55.2	29.4	24.5	22.5	21.6	19.6	17.6	