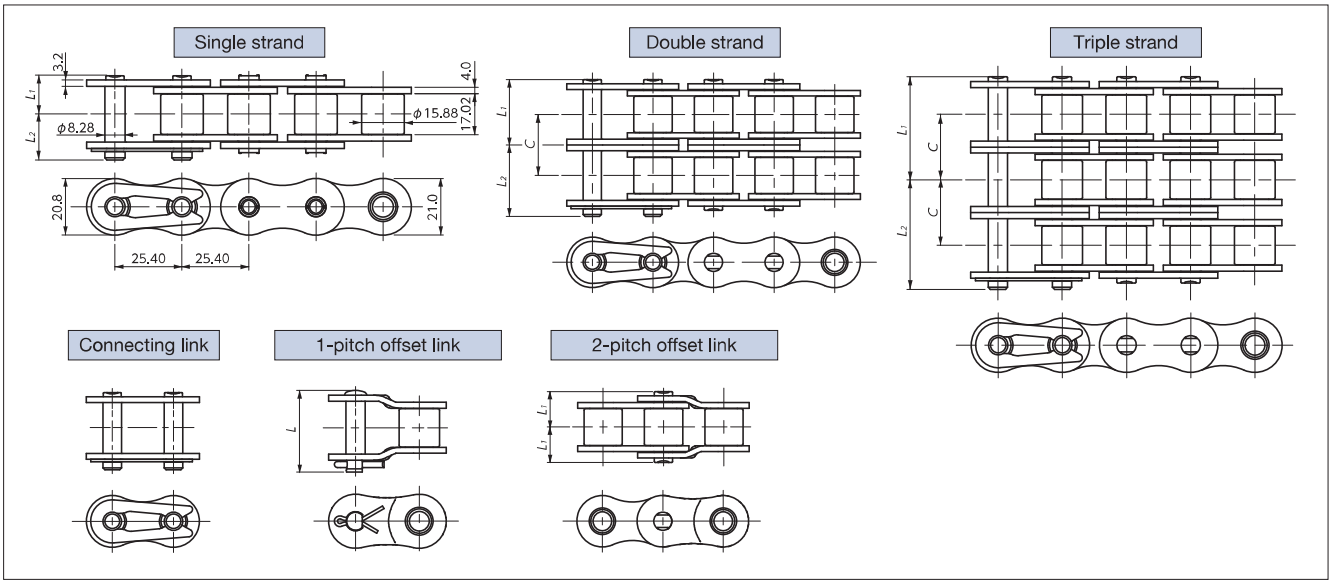
Standard Roller Chains and Sprockets

RS Roller Chain RS16B

BS/DIN Standards
(JIS identification no. 16B)



Specifications

Size	Number of strands	Dimensions L_1	Dimensions L_2	Offset pin length L	Transverse pitch C	Min. tensile strength kN{kgf}	ISO "B" tensile strength kN{kgf}	Max. allowable load kN{kgf}	Approx. mass kg/m
RS16B	**1**	17.75	19.95	41.1	31.88	70.0 {7100}	60.0 {6120}	13.1 {1340}	2.70
	2	33.55	35.75	75.2		128 {13000}	106 {10800}	22.3 {2270}	5.40
	3	49.5	51.7	107.1		192 {19600}	160 {16300}	32.8 {3340}	8.00

Note: 1. Specially shaped pins and a center-sink rivet on chains allow for easy chain cutting without grinding the rivet.
2. Maximum allowable load when using one-pitch and two-pitch offset links is 60% of the above.
3. Number of links per unit = 120. Items in bold are stocked in units.

RS16B Maximum kilowatt ratings table (kW ratings for single strand chain)

Lubrication / Small sprocket no. of teeth	Small sprocket max rpm																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2700	3000	3400
	A I				A II			B										C							
9	0.35	0.81	1.51	2.82	4.06	5.25	7.57	9.81	12.0	14.1	16.2	15.1	12.7	10.8	9.39	8.24	6.54	5.35	4.48	3.83	3.32	2.91	2.44	2.08	1.73
10	0.40	0.91	1.69	3.16	4.54	5.89	8.48	11.0	13.4	15.8	18.2	17.7	14.9	12.7	11.0	9.65	7.66	6.27	5.25	4.48	3.89	3.41	2.86	2.44	2.02
11	0.44	1.00	1.87	3.50	5.04	6.53	9.40	12.2	14.9	17.5	20.2	20.4	17.1	14.6	12.7	11.1	8.83	7.23	6.06	5.17	4.48	3.94	3.30	2.82	2.33
12	0.48	1.10	2.06	3.84	5.53	7.17	10.3	13.4	16.4	19.3	22.1	23.3	19.5	16.7	14.5	12.7	10.1	8.24	6.90	5.89	5.11	4.48	3.76	3.21	2.66
13	0.53	1.20	2.24	4.19	6.03	7.82	11.3	14.6	17.8	21.0	24.1	26.3	22.0	18.8	16.3	14.3	11.3	9.29	7.78	6.65	5.76	5.06	4.24	3.62	3.00
14	0.57	1.30	2.43	4.54	6.54	8.47	12.2	15.8	19.3	22.8	26.1	29.4	24.6	21.0	18.2	16.0	12.7	10.4	8.70	7.43	6.44	5.65	4.74	4.04	3.35
15	0.62	1.40	2.62	4.89	7.04	9.12	13.1	17.0	20.8	24.5	28.2	31.8	27.3	23.3	20.2	17.7	14.1	11.5	9.65	8.24	7.14	6.27	5.25	4.48	3.72
16	0.66	1.51	2.81	5.24	7.55	9.78	14.1	18.3	22.3	26.3	30.2	34.1	30.1	25.7	22.2	19.5	15.5	12.7	10.6	9.08	7.87	6.90	5.79	4.94	4.09
17	0.70	1.61	3.00	5.60	8.06	10.4	15.0	19.5	23.8	28.1	32.2	36.4	32.9	28.1	24.4	21.4	17.0	13.9	11.6	9.94	8.62	7.56	6.34	5.41	0.01
18	0.75	1.71	3.19	5.95	8.57	11.1	16.0	20.7	25.3	29.9	34.3	38.7	35.9	30.6	26.5	23.3	18.5	15.1	12.7	10.8	9.39	8.24	6.90	5.89	
19	0.79	1.81	3.38	6.31	9.09	11.8	17.0	22.0	26.9	31.7	36.4	41.0	38.9	33.2	28.8	25.3	20.1	16.4	13.8	11.7	10.2	8.93	7.49	6.39	
20	0.84	1.92	3.57	6.67	9.61	12.4	17.9	23.2	28.4	33.5	38.4	43.3	42.0	35.9	31.1	27.3	21.7	17.7	14.9	12.7	11.0	9.65	8.09	6.90	
21	0.89	2.02	3.77	7.03	10.1	13.1	18.9	24.5	29.9	35.3	40.5	45.7	45.2	38.6	33.5	29.4	23.3	19.1	16.0	13.6	11.8	10.4	8.70	7.43	
22	0.93	2.12	3.96	7.39	10.6	13.8	19.9	25.7	31.5	37.1	42.6	48.0	48.5	41.4	35.9	31.5	25.0	20.4	17.1	14.6	12.7	11.1	9.33	7.96	
23	0.98	2.23	4.16	7.76	11.2	14.5	20.8	27.0	33.0	38.9	44.7	50.4	51.8	44.2	38.3	33.7	26.7	21.9	18.3	15.6	13.6	11.9	9.97	8.51	
24	1.02	2.33	4.35	8.12	11.7	15.2	21.8	28.3	34.6	40.7	46.8	52.8	55.2	47.2	40.9	35.9	28.5	23.3	19.5	16.7	14.5	12.7	10.6	9.08	
25	1.07	2.44	4.55	8.49	12.2	15.8	22.8	29.6	36.1	42.6	48.9	55.2	58.7	50.1	43.5	38.1	30.3	24.8	20.8	17.7	15.4	13.5	11.3	6.15	
26	1.11	2.54	4.75	8.85	12.8	16.5	23.8	30.8	37.7	44.4	51.0	57.5	62.3	53.2	46.1	40.5	32.1	26.3	22.0	18.8	16.3	14.3	12.0		
28	1.21	2.75	5.14	9.59	13.8	17.9	25.8	33.4	40.8	48.1	55.3	62.3	69.3	59.4	51.5	45.2	35.9	29.4	24.6	21.0	18.2	16.0	13.4		
30	1.30	2.97	5.54	10.3	14.9	19.3	27.8	36.0	44.0	51.8	59.6	67.2	74.7	65.9	57.1	50.1	39.8	32.6	27.3	23.3	20.2	17.7	14.9		
32	1.40	3.18	5.94	11.1	16.0	20.7	29.8	38.6	47.2	55.6	63.9	72.0	80.1	72.6	62.9	55.2	43.8	35.9	30.1	25.7	22.2	19.5	9.65		
35	1.54	3.51	6.54	12.2	17.6	22.8	32.8	42.5	52.0	61.2	70.3	79.3	88.2	83.0	72.0	63.2	50.1	41.0	34.4	29.4	25.5	22.3			
40	1.78	4.05	7.56	14.1	20.3	26.3	37.9	49.1	60.0	70.7	81.3	91.6	102	101	87.9	77.2	61.3	50.1	42.0	35.9	31.1	11.5			
45	2.02	4.60	8.58	16.0	23.1	29.9	43.0	55.8	68.2	80.3	92.3	104	116	121	105	92.1	73.1	59.8	50.1	42.8	25.6				

Note: 1. kW ratings when using offset links are 80% of the above.
2. Please contact a Tsubaki representative prior to use of kW ratings in the shaded area of the table.

Multi-strand factors

Number of chain strands	Two strands	Three strands
Multi-strand factor	1.7	2.5

Lubrication systems and methods

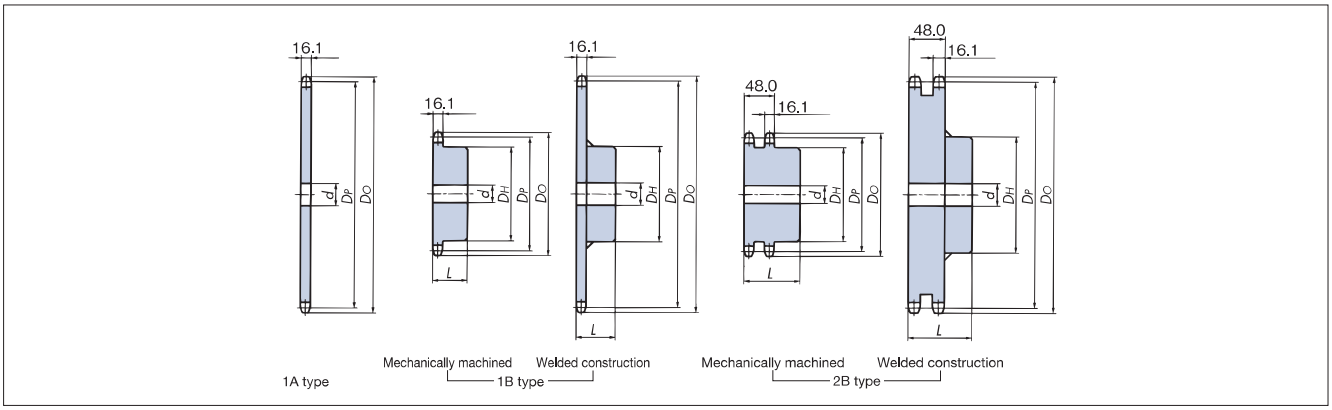
Lubrication system	AI	A II	B	C	Details on pg. 216
Method	Manual lubrication	Drip lubrication	Oil bath or slinger disc lubrication	Forced pump lubrication	

Model numbering example **RS16B -1 -RP + 110L -MCJR**

Note: Standard roller chains do not

RS Sprocket RS16B

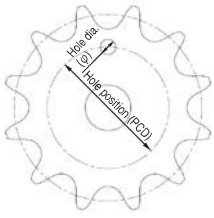
BS/DIN Standards



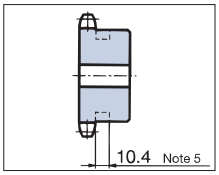
Number of teeth	Note 4 Outer dia. D_O	Pitch circle dia. D_P	1A type Pilot bore d	1A type Approx. mass kg	1A type Construction/ material	1B type Bore dia. d Pilot bore	1B type Bore dia. d Max.	1B type Hub Dia. D_H	1B type Hub Length L	1B type Approx. mass kg	1B type Construction/ material	2B type Bore dia. d Pilot bore	2B type Bore dia. d Max.	2B type Hub Dia. D_H	2B type Hub Length L	2B type Approx. mass kg	2B type Construction/ material	Number of teeth
9	84	74.26			Mechanically machined: structural carbon steel	15.9	34	57	40	0.87	* Note 5						Mechanically machined: machine-structural carbon steel	**9**
10	92	82.20				15.9	32	52	40	0.97								**10**
11	100	90.16				15.9	38	60	40	1.2								**11**
12	108	98.14	23	0.82		19.05	45	67	40	1.5		19.05	46	67	63	2.5		**12**
13	116	106.14	23	0.93		19.05	50	77	40	1.9		19.05	50	77	63	3.1		**13**
14	124	114.15	23	1.1		19.05	50	77	40	2.0		19.05	58	86	63	3.7		**14**
15	132	122.17	23	1.2		19.05	63	93	40	2.6		19.05	64	94	63	4.3		**15**
16	140	130.20	23	1.4		19.05	63	93	40	2.8		19.05	70	102	71	5.5		**16**
17	148	138.23	23	1.6		19.05	63	93	40	3.0		19.05	76	110	71	6.4		**17**
18	156	146.27	23	1.8		19.05	63	93	40	3.2		23	66	98	71	6.4		**18**
19	164	154.32	23	2.0		23	63	93	40	3.4		23	66	98	71	7.0		**19**
20	172	162.37	23	2.2		23	63	93	40	3.6		23	75	107	71	7.9		**20**
21	180	170.42	23	2.5		23	63	93	40	3.8		23	75	107	71	8.6		**21**
22	188	178.48	28	2.7		28	75	107	45	4.8		28	80	117	71	9.6		**22**
23	196	186.54	28	2.9		28	75	107	45	5.1		28	80	117	71	10.3		**23**
24	205	194.60	28	3.2		28	75	107	45	5.4		28	80	117	80	11.8	Welded construction	**24**
25	213	202.66	28	3.5		28	75	107	45	5.6		28	80	117	80	12.6		**25**
26	221	210.72	28	3.8		28	75	107	45	5.9		28	80	117	80	13.5		**26**
27	229	218.79	28	4.0		28	75	107	45	6.1		28	80	117	80	14.4		**27**
28	237	226.86	28	4.3		28	75	107	45	6.5		28	80	117	80	15.3		**28**
30	253	243.00	28	5.0		28	75	107	45	7.1		28	80	117	80	17.2		**30**
32	269	259.14	28	5.8		28	75	107	45	7.8		28	80	117	80	19.3		**32**
34	285	275.28	28	6.4		28	75	107	45	8.5		28	80	117	80	21.5		**34**
35	293	283.36	28	6.9		28	75	107	45	8.9		28	80	117	80	22.7		**35**
36	301	291.43	33	7.3		33	80	117	50	10.1		28	80	117	80	23.9		**36**
38	318	307.58	33	8.0		33	80	117	50	10.9		28	80	117	80	26.4		**38**
40	334	323.74	33	9.0		33	80	117	50	11.8		33	89	127	90	30.4		**40**
42	350	339.89	33	9.8		33	80	117	50	12.7		33	89	127	90	33.2		**42**
45	374	364.12	33	11.0		33	80	117	50	14.2		33	89	127	90	37.6		**45**
48	398	388.36	33	13.0		33	80	117	50	15.8		33	89	127	90	42.3		**48**
50	414	404.52	33	14.0		33	80	117	50	16.8		33	89	127	90	45.7		**50**
54	447	436.84	33	16.0		33	80	117	50	19.2		33	89	127	90	52.8		**54**
60	495	485.33	33	20.0		33	80	117	50	23.1	Note 6	33	89	127	90	64.5	Note 6	**60**

Note: 1. Maximum bore diameters shown are standard figures. Determine bore diameter and key bearing pressure based on general mechanical design.
2. Models in shaded areas have hardened teeth.
3. Models with unhardened teeth as standard can be manufactured with hardened teeth.
4. The outer diameters shown above are for 1B. The outer diameters for other models may differ.
5. Models marked with an * above have a groove around the periphery of the hub (shown in the diagram on the right). Groove outer diameter is 44 for 9T.
6. Welded construction: Carbon steel for machine structural use (teeth and hub).
7. Models in the dimensional chart whose approximate mass is in bold font have one hanging hole. See the diagram on the right for more information.
8. Made-to-order.

Hanging hole dimensions



The phase relationship between the hanging hole and teeth may vary.



No. of teeth	2B/2C bore dia. (ϕ30) Hole position (PCD)
40	242
42	258
45	283
48	307
50	323
54	355
60	404

Model numbering example

RS16B -1 B 22T

Size — Number of — Number

Hardened teeth model numbering example

RS16B -1 B 9T Q

Size — Number of — Number — Hardened teeth