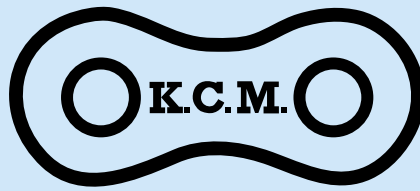


K.C.M.

CATALOG



KAGA INDUSTRIES CO., LTD.



KCM CHAIN

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IMPORTANT

The chains and sprockets, described in this bulletin, have been designed and manufactured with great care.

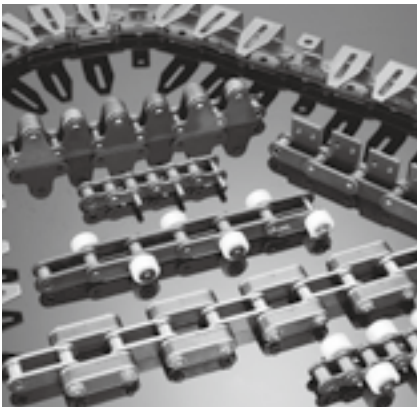
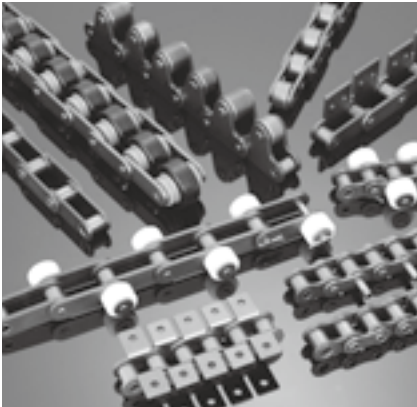
Improper selection, handling, maintenance will incur cutting or breakage of a chain, resulting in a serious trouble.





Please pay due attention to selection, handling, and maintenance of chains and sprockets with reference to design documents, selection criteria, handling manuals, and the like.

For more details, please contact us.

A Wide Variety of KCM Products, Provides

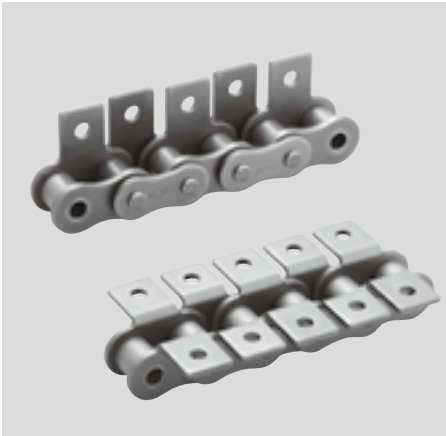



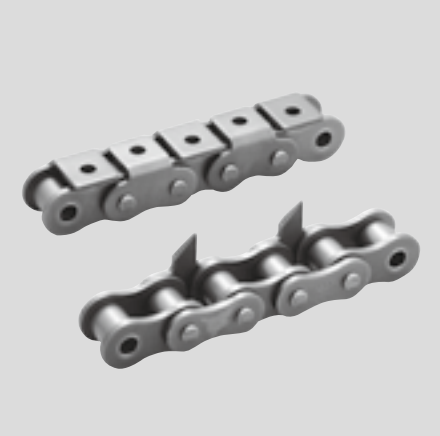
KCM, an exclusive chain maker, provides a complete line-up of chains, for power transmission, conveying, and specific purposes with special attachments. KCM products are designed and produced with various sizes, precision, shapes, materials, and heat treatment.



Transmission Chains (5P ~ 29P)	Leaf Chains (31P ~ 34P)
 <p>Various transmission chains, conforming to JIS, ANSI, and ISO, are available. Also, LL series high strength chains (with high resistance to fatigue and shock) and lubrication free type are available.</p>	 <p>Leaf chain, also called a balance chain, features a simple steel structure consisting of plates and pins. This chain is used for load lifting and balancing.</p>
Bicycle Chains (67P ~ 68P)	Chain Couplings (69P ~ 71P)
 <p>Bicycle chains are used not only for bicycles but for light machines using specific attachments for transmission, transferring, and relay transmission.</p>	 <p>The chain coupling, made of double-strand roller chains and two sprockets, features compactness and high power transmission efficiency. Chain coupling complete with drilled holes are also available.</p>

● All KCM chains are designed and manufactured with high precision, quality, and reliability. ● Various chains for all speeds, low to high, * For more details, contact KCM Sales Department.

Choice of the Optimum Chain for Your Application.

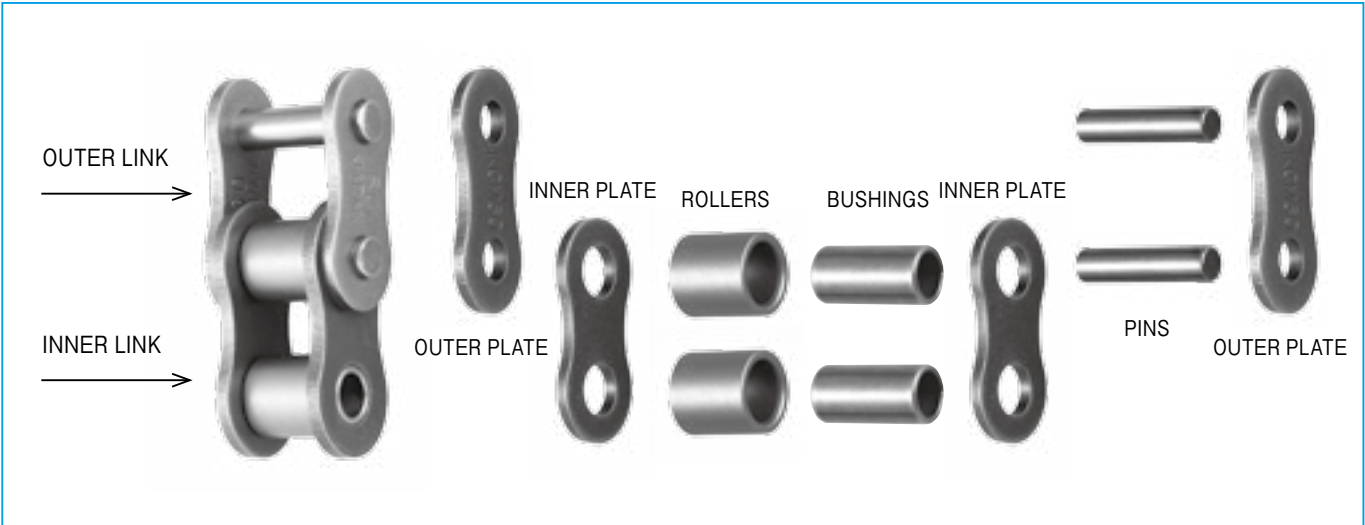
<p>Small Conveyor Chains (35P ~ 60P)</p>	<p>Agricultural Chains (61P ~ 64P)</p>	<p>Motorcycle Chains (65P ~ 66P)</p>
		
<p>Various small conveyor chains are available for your choice to meet your transferring items and environmental conditions.</p>	<p>Various farm machinery chains for conveying and transmission, designed for heavy-duty work, are available.</p>	<p>Motorcycle chains are developed with increased resistance to fatigue and wear, and manufactured with high precision using stringent quality control.</p>
<p>Sprockets (73P ~ 89P)</p>	<p>APPLICATIONS OF CHAINS/ ATTACHMENTS (91P ~ 100P)</p>	<p>Handling and Maintenance of Roller Chains (101P ~ 104P)</p>
		
<p>Wide line-up of sprockets suitable for standard roller chains are available. Sprocket complete with drilled holes are also available.</p>	<p>Various attachments can be designed and manufactured according to specific applications upon ordering.</p>	

are available. ● Chain made of optimum material can be selected to suit specific use. ● Special attachments can be designed and produced to order. ● KCM products are available from KCM sales network.

Wide Variation—K.C.M. CHAIN—

ROLLER CHAIN COMPONENT PARTS

Roller chains, indispensable drive and transfer components in modern industries, are completed to meet diversified needs of the times. Roller chains are composed of five component parts.



CHAIN PARTS

OUTER LINKS



Riveted type



Split Pin (Cotter) type
(KCM80~KCM200)

CONNECTING LINKS



Open type clip



Closed type clip



Split pin type (KCM80~KCM200)

OFFSET LINKS



One pitch offset link



Two pitch offset link
(For KCM25, KCM03, KCM04, and KCM05B, only two-pitch offset links are available.)

PIN TYPES



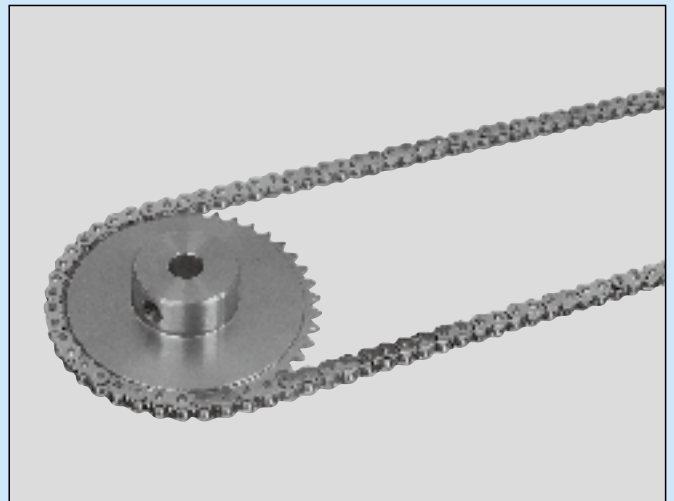
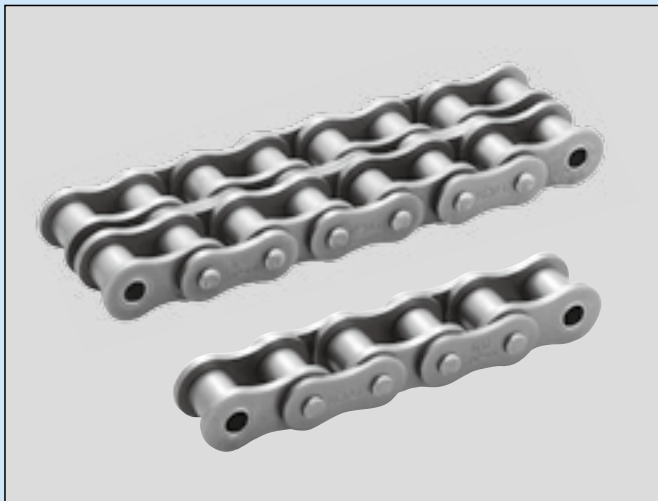
Riveted type



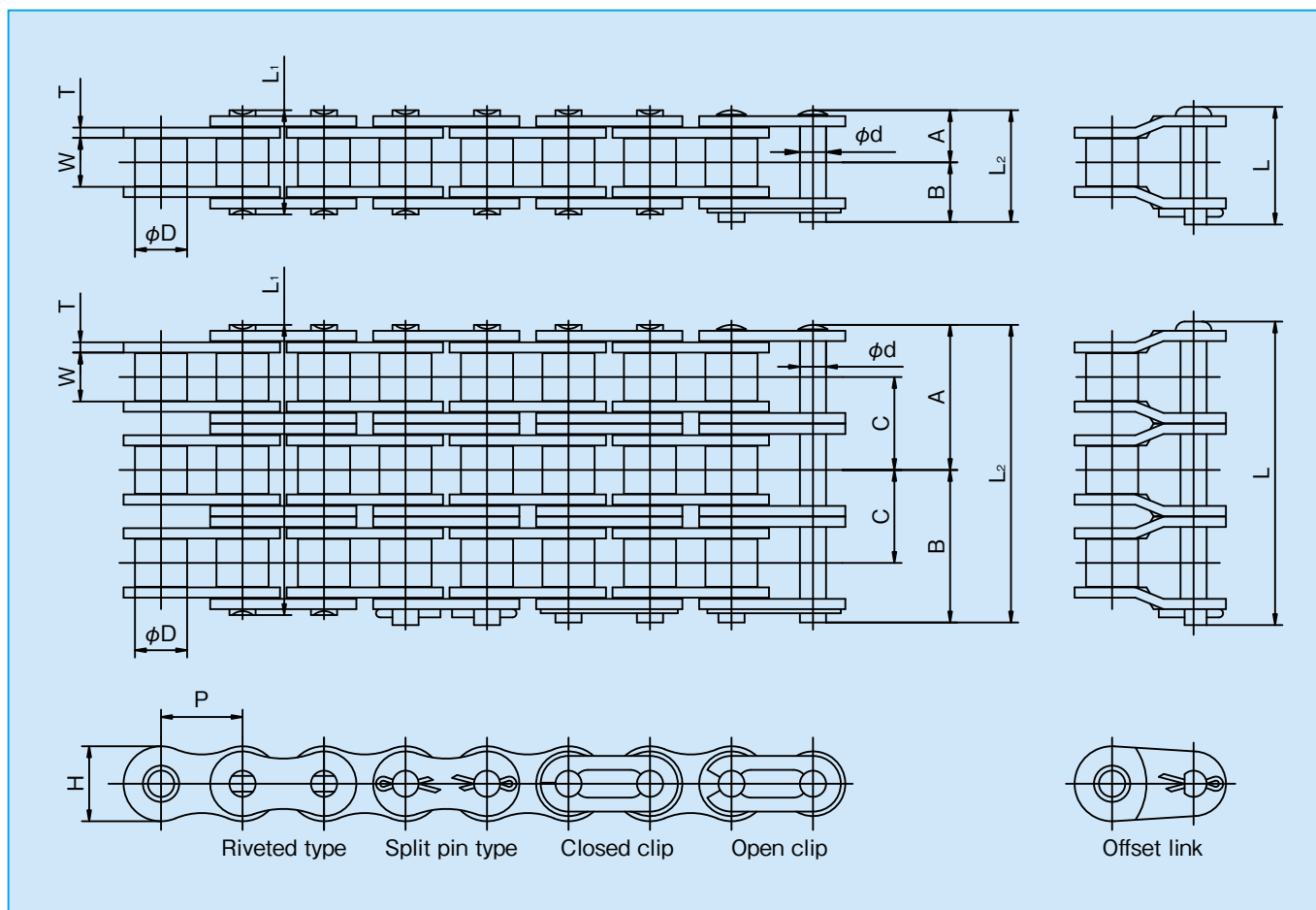
Split pin (cotter) type

TRANSMISSION CHAINS

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12 types of KCM standard roller chains, conforming to JIS and ANSI, are available.



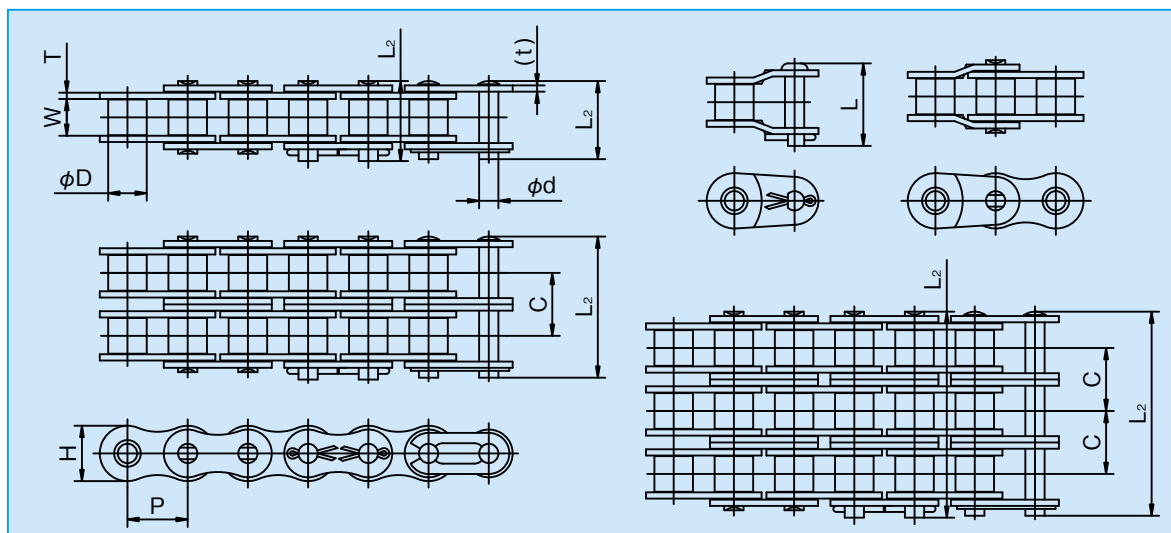
○ Dimensions

[Unit: mm]

Chain No. KCM	Pitch JIS & ANSI P	Width between Inner Plates W	Roller Dia. D	Pin							Link Plate		JIS Tensile strength kN (kgf)	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H						
25	25	6.35	3.18	*3.30	2.31	3.80	4.80	7.60	8.60	—	0.75	5.8	3.5(357)	4.4(450)	0.64(65)	0.13	480
35	35	9.525	4.78	*5.08	3.59	5.70	7.10	11.40	12.80	13.65	1.25	8.8	7.9(806)	10.8(1,100)	2.16(220)	0.33	320
41	41	12.70	6.38	7.77	3.59	6.52	7.93	13.05	14.45	14.95	1.25	9.5	6.7(683)	11.8(1,200)	2.26(230)	0.40	240
40	40	12.70	7.95	7.92	3.97	8.02	9.53	16.05	17.55	18.95	1.5	11.7	13.9(1,417)	18.1(1,850)	3.63(370)	0.61	240
50	50	15.875	9.53	10.16	5.09	10.15	11.60	20.30	21.75	23.00	2.0	14.6	21.8(2,223)	29.9(3,050)	6.37(650)	1.01	192
60	60	19.05	12.70	11.91	5.96	12.65	14.15	25.30	26.80	29.45	2.4	17.5	31.3(3,192)	41.2(4,200)	8.83(900)	1.49	160
80	80	25.40	15.88	15.88	7.94	16.10	19.20	32.15	35.25	36.90	3.2	23.0	55.6(5,670)	72.6(7,400)	14.71(1,500)	2.50	120
100	100	31.75	19.05	19.05	9.54	20.10	23.05	40.20	43.15	45.05	4.0	28.9	87.0(8,872)	112.8(11,500)	22.56(2,300)	3.85	96
120	120	38.10	25.40	22.23	11.11	25.20	28.60	50.40	53.80	55.90	4.8	35.0	125.0(12,746)	156.9(16,000)	30.40(3,100)	5.66	80
140	140	44.45	25.40	25.40	12.71	27.30	31.30	54.60	58.60	60.50	5.6	40.7	170.0(17,335)	210.8(21,500)	40.21(4,100)	7.19	68
160	160	50.80	31.75	28.58	14.29	32.45	37.15	64.90	69.60	71.85	6.4	46.7	223.0(22,740)	269.7(27,500)	52.96(5,400)	9.63	60
200	200	63.50	38.10	39.68	19.85	39.65	46.65	79.30	86.30	89.20	8.0	58.4	347.0(35,384)	470.7(48,000)	71.59(7,300)	15.97	48

NOTES: - KCM25 offset link is 2-pitch type.
 - Asterisk (*) implies bush diameter.
 - Connecting links of KCM25 to KCM60 are clip type (Both open and closed types are available for 40, 50, and 60).
 - Connecting links of KCM 80 or larger models are split pin type.

BS roller chains, conforming to ISO 606-B, are available to Europe-built equipment.



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Link Plate		Transverse Pitch C	ISO 606 Min. Tensile Strength kN (kgf)	KCM Min. Tensile Strength kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit			
				Dia. d	L ₂	Offset L	Thickness T (t)	Height H								
KCM 03	5.00	2.50	3.20	1.49	7.65	—	0.75	4.0	—	2.6 (270)	0.09	1000				
KCM 04	6.00	2.80	4.00	1.85	7.35	—	0.6	4.9	—	3.2 (330)	0.11	834				
KCM 05B	8.00	3.00	5.00	2.31	8.60	—	0.75	7.1	5.64	4.4 (449)	4.9 (500)	0.18	626			
KCM 05B-2					14.25	—								7.8 (800)	8.5 (870)	0.31
KCM 05B-3					19.90	—								11.1 (1,130)	12.2 (1,240)	0.46
KCM 06B	9.525	5.72	6.35	3.28	13.60	15.15	1.3 (1.0)	8.1	10.24	8.9 (910)	9.0 (920)	0.39	320			
KCM 06B-2					23.85	25.40								16.9 (1,720)	17.0 (1,730)	0.74
KCM 06B-3					34.10	35.65								24.9 (2,540)	24.9 (2,540)	1.10
KCM 08B	12.70	7.75	8.51	4.45	18.05	19.20	1.6	11.7	13.92	17.8 (1,820)	18.9 (1,930)	0.65	240			
KCM 08B-2					31.95	33.10								31.1 (3,170)	32.0 (3,260)	1.25
KCM 08B-3					45.90	47.05								44.5 (4,540)	47.5 (4,840)	1.85
KCM 10B	15.875	9.65	10.16	5.08	20.15	21.50	1.5	14.6	16.59	22.2 (2,260)	22.9 (2,340)	0.91	192			
KCM 10B-2					36.95	38.10								44.5 (4,540)	44.5 (4,540)	1.80
KCM 10B-3					53.35	54.70								66.7 (6,800)	66.8 (6,810)	2.70
KCM 12B	19.05	11.68	12.07	5.72	23.60	26.30	1.8	16.0	19.46	28.9 (2,950)	31.0 (3,160)	1.24	160			
KCM 12B-2					43.05	45.75								57.8 (5,890)	61.0 (6,220)	2.44
KCM 12B-3					62.50	65.20								86.7 (8,840)	92.2 (9,400)	3.65
KCM 16B	25.40	17.02	15.88	8.28	38.10	41.45	4.0 (3.2)	19.7	31.88	60 (6,120)	69.6 (7,100)	2.62	120			
KCM 16B-2					70.00	73.35								106 (10,810)	127.5 (13,000)	5.18
KCM 16B-3					101.90	105.25								160 (16,320)	192.2 (19,600)	7.74
KCM 20B	31.75	19.56	19.05	10.19	43.95	47.25	4.5 (3.5)	26.0	36.45	95 (9,690)	98.1 (10,000)	3.81	96			
KCM 20B-2					80.40	83.70								170 (17,340)	197.1 (20,100)	7.52
KCM 20B-3					116.85	120.15								250 (25,490)	295.2 (30,100)	11.24
KCM 24B	38.10	25.40	25.40	14.63	58.70	64.20	6.0 (5.0)	33.0	48.36	160 (16,320)	166.7 (17,000)	6.65	80			
KCM 24B-2					107.05	112.55								280 (28,550)	334.4 (34,100)	13.11
KCM 24B-3					155.40	160.90								425 (42,340)	500.1 (51,000)	19.57

NOTES: - Link plates for 06 models are F type (oval).

- Spring type connecting links are used to chains No. 03 to 12B. Split pin type connecting links are used to 16B to 24B.

- 2-pitch type offset links are used to 03, 04, and 05B.

- **Sprockets:** Special sprockets are available.

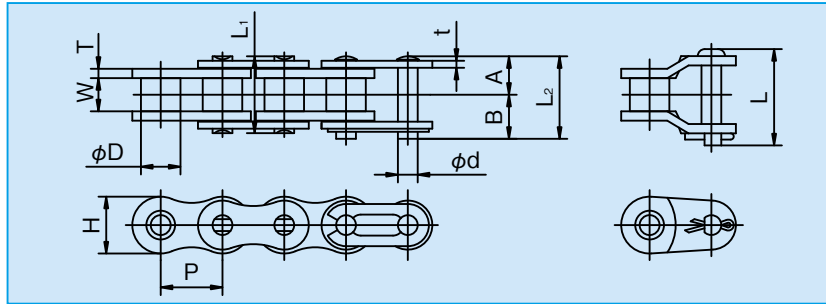
The KCM lubrication-free chain uses special oil-impregnated bushing for self-lubrication, achieving maintenance-free.

Use this chain when no lubrication is required or difficult lubrication in process is expected.

- Nickel-plated chain and chains associated with various attachments are available.
- Recommended chain speed: 150m/min or slower
- Ordinary operating temperature range of -10°C to +150°C

NL Roller Chains

Choose the optimum model from “Chain Power Transmission Table” on page 29. Do not use “Low Speed-Selection Method” .



○ Dimensions

[Unit: mm]

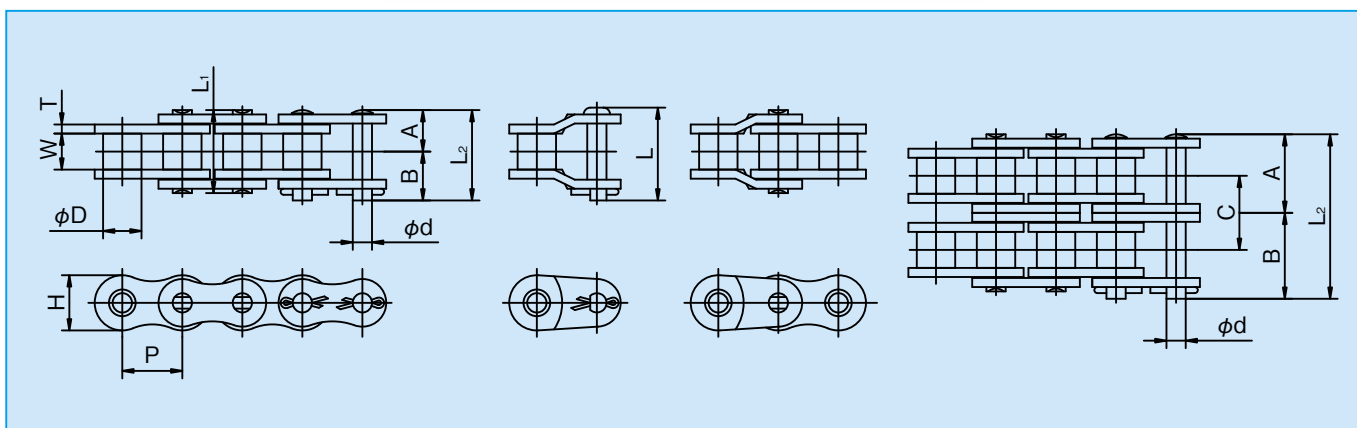
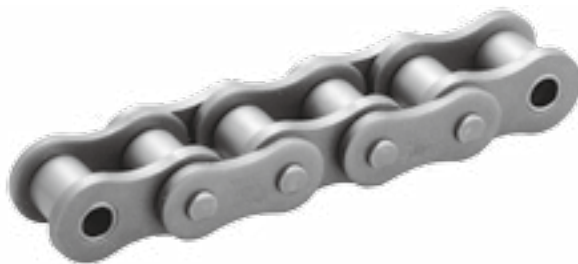
KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H				
KCM 40 NL	12.70	7.95	7.92	3.97	8.60	10.10	17.20	18.70	21.00	2.0	1.5	11.7	18.1 (1,850)	3.63 (370)	0.67	240
KCM 50 NL	15.875	9.53	10.16	5.09	10.60	12.05	21.20	22.65	24.65	2.4	2.0	14.6	29.9 (3,050)	6.37 (650)	1.08	192
KCM 60 NL	19.05	12.70	11.91	5.96	13.50	15.10	27.00	28.60	32.65	3.2	2.4	17.5	41.2 (4,200)	8.83 (900)	1.63	160
KCM 80 NL	25.40	15.88	15.88	7.94	16.90	20.00	33.80	36.90	40.15	4.0	3.2	23.0	72.6 (7,400)	14.7 (1,500)	2.76	120

- NOTES: - Pin is longer than that of standard chain because inner plate is thickened. Avoid interference with equipment.
 - In case of single strand chain, standard sprocket can be used. In case of multiple strand chain, exclusive sprocket is required.
 - Maximum allowable load is determined based on tensile breakage, not on strength of bushing.
 - Connecting link of 80NL is of split pin type.

Operating Notes to NL Chains

- In dusty environment, there is a possibility that premature wear can occur.
- If the chain is exposed to water, oil impregnated in bushing will come out, thus promoting wear.
- If oil comes out completely from bushing, rapid wear is caused, shortening service life.

KCM H-type roller chains are designed for increase in strength, compared to ANSI H-type, by thickening the link plates of standard roller chains and using high-strength pins.



○ Dimensions

[Unit: mm]

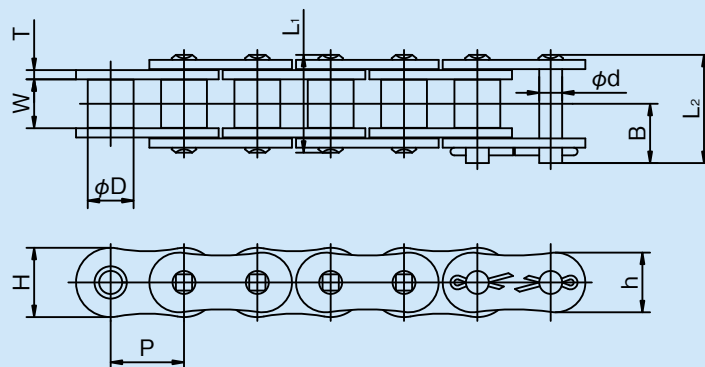
KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Transverse Pitch C	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H					
KCM 40H	12.70	7.95	7.92	3.97	9.05	10.55	18.10	19.60	21.00	2.0	11.7	16.4	23.5 (2,400)	3.92 (400)	0.73	240
KCM 40H-2					17.25	18.75	34.50	36.00	37.40				47.0 (4,800)	6.67 (680)	1.45	
KCM 50H	15.875	9.53	10.16	5.09	10.98	12.42	21.95	23.40	24.65	2.4	14.6	19.6	36.2 (3,700)	6.57 (670)	1.43	192
KCM 50H-2					20.78	22.22	41.55	43.00	44.25				72.5 (7,400)	11.18 (1,140)	2.83	
KCM 60H	19.05	12.70	11.91	5.96	14.35	15.75	28.70	30.00	32.65	3.2	17.5	26.1	50.0 (5,100)	9.60 (980)	1.77	160
KCM 60H-2					27.30	28.80	54.60	56.10	58.80				100.0 (10,200)	16.27 (1,660)	3.56	
KCM 80H	25.40	15.88	15.88	7.94	17.80	20.70	35.60	38.50	40.15	4.0	23.0	32.6	89.2 (9,100)	16.18 (1,650)	2.96	120
KCM 80H-2					34.00	37.10	68.00	71.10	72.80				178.5 (18,200)	27.45 (2,800)	5.84	
KCM 100H	31.75	19.05	19.05	9.54	21.80	24.60	43.60	46.40	48.30	4.8	28.9	39.1	128.5 (13,100)	24.50 (2,500)	4.17	96
KCM 100H-2					41.27	44.23	82.55	85.50	87.40				256.9 (26,200)	41.67 (4,250)	8.23	
KCM 120H	38.10	25.40	22.23	11.11	26.95	30.15	53.90	57.10	59.20	5.6	35.0	48.9	175.5 (17,900)	31.84 (3,350)	6.28	80
KCM 120H-2					51.30	54.70	102.60	106.00	108.10				351.1 (35,800)	55.78 (5,690)	12.45	
KCM 140H	44.45	25.40	25.40	12.71	28.95	32.95	57.90	61.90	63.80	6.4	40.7	52.2	229.5 (23,400)	43.13 (4,400)	7.83	68
KCM 140H-2					55.05	59.05	110.10	114.10	116.00				459.0 (46,800)	72.55 (7,400)	15.50	

NOTES: - Connecting links of KCM 40H to KCM 60H are clip type.

- Single strand chain can be used with KCM standard sprockets.

- Multiple strand chain is separately manufactured because the center-to-center distance of the rollers (transverse pitch) "C" is different from that of standard type.

KCM LL (Long Life) Series high fatigue strength roller chains, made of high-strength steel and using refined link plate shape, are designed for improved fatigue strength and extended service life.



○ Dimensions

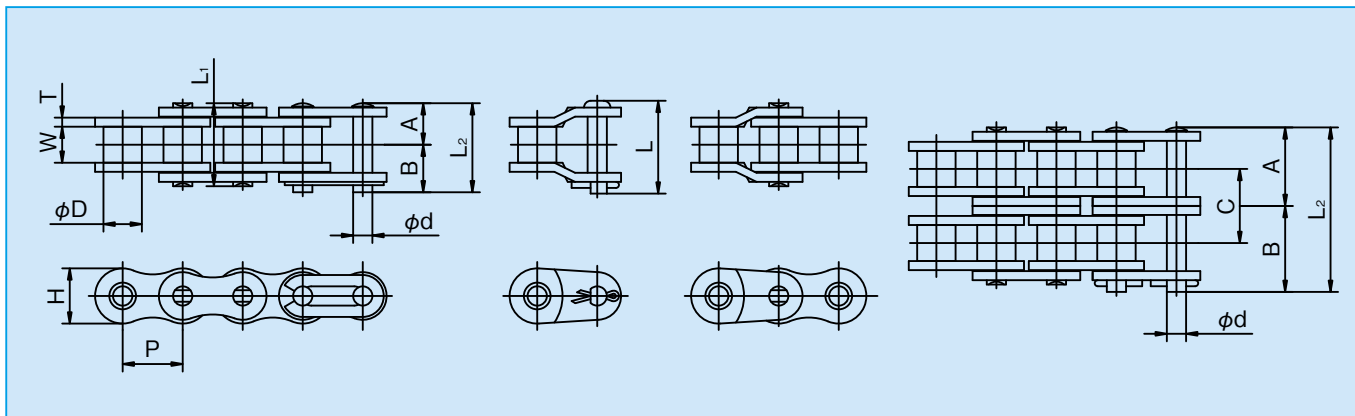
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin				Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	B	L ₁	L ₂	Thickness T	Height H	Height h				
KCM 80LL	25.40	15.88	15.88	7.94	19.30	32.40	35.50	3.2	24.0	20.6	84.3 (8,600)	18.63 (1,900)	2.81	120
KCM 100LL	31.75	19.05	19.05	9.54	23.17	40.45	43.40	4.0	30.0	25.8	127.5 (13,000)	30.40 (3,100)	4.26	96
KCM 120LL	38.10	25.40	22.23	11.11	28.62	50.45	53.85	4.8	36.0	31.0	191.2 (19,500)	39.23 (4,000)	6.30	80
KCM 60HLL	19.05	12.70	11.91	5.96	17.05	28.70	31.40	3.2	18.0	15.5	56.9 (5,800)	12.75 (1,300)	1.79	160
KCM 80HLL	25.40	15.88	15.88	7.94	20.90	35.60	38.70	4.0	24.0	20.6	98.1 (10,000)	20.59 (2,100)	3.29	120
KCM 100HLL	31.75	19.05	19.05	9.54	24.67	43.45	46.40	4.8	30.0	25.8	147.1 (15,000)	32.36 (3,300)	4.88	96
KCM 120HLL	38.10	25.40	22.23	11.11	30.25	53.70	57.10	5.6	36.0	31.0	196.1 (20,000)	42.17 (4,300)	6.94	80

NOTES: - Chains of LL Series are rivet type.
 - Connecting link plate is press-in type with split pin.
 - Offset link is not available.
 - **Sprockets:** LL series can be used with KCM standard sprocket.

All KCM stainless steel (SS) chains are made of SUS304(18Cr-8Ni) austenite stainless steel for use in operating environment requiring high thermal resistance (-20 to 400°C), corrosion resistance, and cleanliness. They can also be fitted with attachments for conveying purpose.

NOTE: The KCM stainless steel roller chains have slight magnetic property as a result of cold manufacturing.



JIS Roller Chains

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Transverse Pitch C	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit	
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T					Height H
KCM 25 SS KCM 25 SS-2	6.35	3.18	*3.30	2.31	3.82 7.03	4.83 8.02	7.65 14.05	8.65 15.05	—	0.75	5.8	6.4	0.12 (12) 0.21 (21)	0.14 0.26	480
KCM 35 SS KCM 35 SS-2	9.525	4.78	*5.08	3.59	5.77 10.82	7.13 12.18	11.55 21.65	12.90 23.00	13.85 23.95	1.25	8.8	10.1	0.26 (27) 0.45 (46)	0.33 0.65	320
KCM 40 SS KCM 40 SS-2	12.70	7.95	7.92	3.97	8.07 15.27	9.58 16.78	16.15 30.55	17.65 32.05	19.05 33.45	1.5	11.7	14.4	0.44 (45) 0.76 (77)	0.63 1.19	240
KCM 50 SS KCM 50 SS-2	15.875	9.53	10.16	5.09	10.20 19.25	11.60 20.68	20.40 38.50	21.80 39.90	23.05 41.15	2.0	14.6	18.1	0.69 (70) 1.17 (119)	1.04 2.01	192
KCM 60 SS KCM 60 SS-2	19.05	12.70	11.91	5.96	12.70 24.10	14.20 25.60	25.40 48.20	26.90 49.70	29.55 52.35	2.4	17.5	22.8	1.03 (105) 1.76 (179)	1.50 2.95	160
KCM 80 SS KCM 80 SS-2	25.40	15.88	15.88	7.94	16.15 30.80	19.25 33.90	32.30 61.60	35.40 64.70	37.10 66.40	3.2	23.0	29.3	1.77 (180) 3.00 (306)	2.62 5.12	120
KCM 100 SS KCM 100 SS-2	31.75	19.05	19.05	9.54	20.20 38.10	23.15 41.05	40.40 76.20	43.35 79.15	44.05 79.85	4.0	28.9	35.8	2.55 (260) 4.33 (442)	4.09 8.10	96

NOTES: - Figures marked with asterisk * imply bush diameter.
 - For the KCM25SS, only two-pitch offset links are available.
 - For dimensions of the attachments, refer to pages 36 to 37.
 - Connecting links of KCM80SS or larger models use split pins.

ISO-B (European Type) Stainless Roller Chains

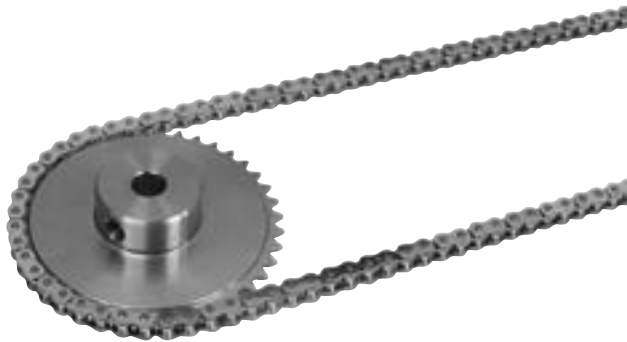
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Transverse Pitch C	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit	
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T					Height H
KCM 04 SS	6.00	2.80	4.00	1.85	3.23	4.12	6.45	7.35	—	0.6	4.9	—	0.06 (6)	0.11	834
KCM 05B SS KCM 05B SS-2	8.00	3.00	5.00	2.31	3.82 6.65	4.83 7.65	7.65 13.30	8.65 14.30	—	0.75	7.1	5.64	0.12 (12) 0.21 (21)	0.18 0.34	626
KCM 06B SS KCM 06B SS-2	9.525	5.72	6.35	3.28	6.10 11.22	7.50 12.63	12.20 22.45	13.60 23.85	15.15 25.40	1.3 (1.0)	8.1	10.24	0.26 (27) 0.45 (46)	0.39 0.77	320
KCM 08B SS KCM 08B SS-2	12.70	7.75	8.51	4.45	8.17 15.12	9.58 16.53	16.35 30.25	17.75 31.65	19.30 33.20	1.5	11.7	13.92	0.44 (45) 0.76 (77)	0.65 1.25	240
KCM 10B SS KCM 10B SS-2	15.875	9.65	10.16	5.08	9.58 17.87	11.02 19.33	19.15 35.75	20.60 37.20	21.95 38.55	1.65	14.6	16.59	0.70 (70) 1.17 (119)	0.94 1.84	192
KCM 12B SS KCM 12B SS-2	19.05	11.68	12.07	5.72	11.05 20.77	12.55 22.28	22.10 41.55	23.60 43.05	26.30 45.75	1.8	16.0	19.46	1.00 (105) 1.76 (179)	1.25 2.44	160
KCM 16B SS KCM 16B SS-2	25.40	17.02	15.88	8.28	17.60 33.55	20.70 36.65	35.20 67.10	38.30 70.20	41.65 73.55	4.0 (3.2)	19.7	31.88	1.77 (180) 3.00 (306)	2.63 5.19	120

NOTES: - For the KCM 04SS and 05BSS, only two-pitch offset links are available.
 - Connecting links of KCM 16BSS are of split pin type.



MICRO-PITCH STAINLESS CHAIN



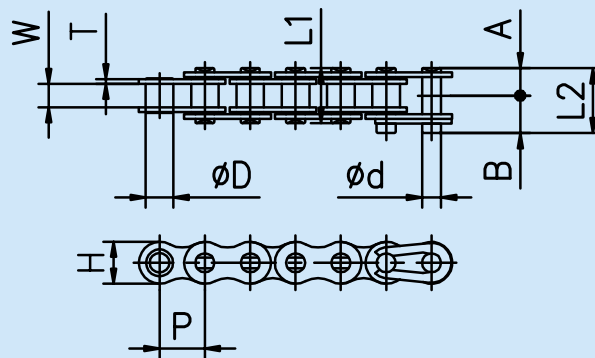
CHAIN PITCH 3.7465mm

11SS stainless chain are made of SUS304, high corrosion resistance.

<Use of 11SS stainless chain>

for medical, office equipment etc.

We can supply the sprocket for this chain.



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate			Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H	Height h			
11SS	3.7465	1.83	*2.285	1.57	2.28	3.1	4.56	5.38	0.38	3.5	3.5	0.05 (5)	0.052	134

- NOTES: - The dimension with an * shows as bush diameter.
 - Connecting link of 11SS is open clip type and both sides rivet.
 - We do not supply Offset link for 11SS.
 - 11 SS stainless chain is lubricated.



STRENGTHENED STAINLESS STEEL CHAINS (AS)

Pins and rollers of the AS chains are made of precipitation hardening stainless steel for increased allowable load.

Maximum allowable load is 1.5 times that of standard SS chain. If allowable load of SS chain is insufficient, please specify the AS chain.

Corrosion resistance of the AS chain is slightly lower than that of the SS chain. Operating range is -20°C to +400°C .

NOTE: The AS chain has magnetism of precipitation hardening stainless steel.



Chain No.	Max. Allowable Load kN (kgf)
KCM 40AS	0.69 (70)
KCM 50AS	1.03 (105)
KCM 60AS	1.57 (160)
KCM 80AS	2.65 (270)

- NOTES: - Dimension, weight, and connecting links are the same as those of the SS chain.
 - For offset link, only two-pitch type is available.
 - AS chain with attachment is available.

These surface-treated chains have attractive appearance and increased corrosion resistance. Select the optimum type from the surface-treated chains to suit your application.

Rustop (N)

All parts are plated with special nickel.

- Attractive nickel-plated appearance and corrosion resistance
- Maximum allowable load: About 15% lower than that of standard steel chain (see next page)
- Operating range: -10°C to +60°C
- Usable instead of most steel chains and chains with attachment
- When ordering, please put a suffix "N" to Chain No.

BC Coat (BC)

Special mechanical surface-treatment on all parts. Matte dark gray finish. Compliant to RoHS Directive

- Usable even when subject to seawater
- Maximum allowable load is the same as that of standard steel chain (see next page)
- Protective film has higher peeling resistance than that of DC coat chain.
- Ordinary operating temperature range of -10°C to +150°C
- Usable instead of most steel chains and chains with attachments
- When ordering, please put a suffix "BC" to Chain No.

DG COAT (DG)

Special coat and top coat on all parts. Compliant to RoHS Directive

- Usable even when subject to seawater
- Maximum allowable load is the same as that of standard steel chain (see next page)
- Operating range: -10°C to +60°C
- Usable instead of most steel chains and chains with attachments
- When ordering, please put a suffix "DG" to Chain No.

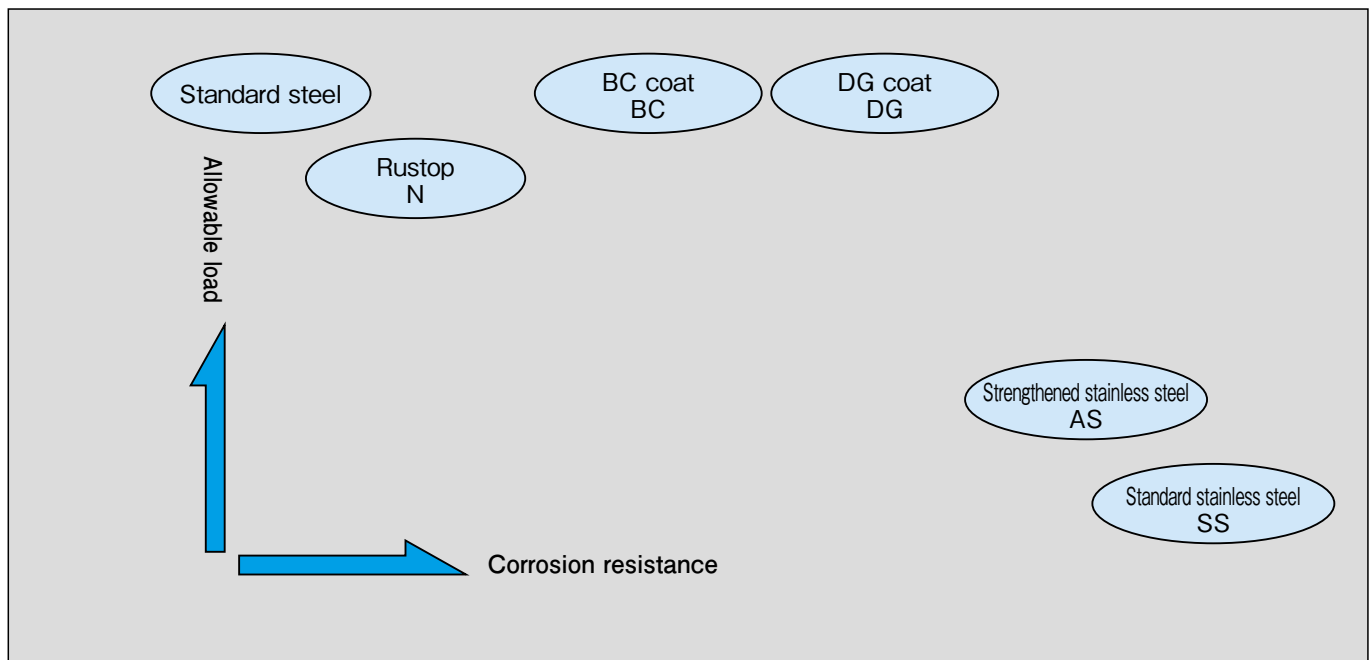
RoHS Directive refers to the European Union's Directive on the Restriction of use certain Hazardous Substances in electrical and electronic equipment.

Safety Precautions: Do not use surface-treated chain if chain directly contacts food or abrasion particles are mixed into food.

● Maximum Allowable Loads of Surface-Treated Chains

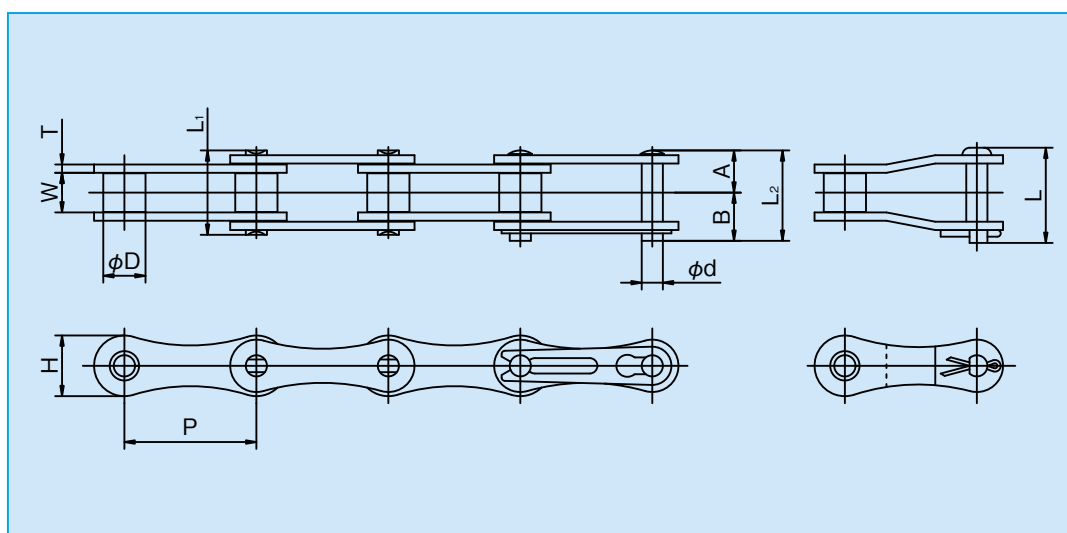
KCM Chain No.	Type	Max. Allowable Load of Surface-Treated Chains			Max. Allowable Load of SS Chains		Max. Allowable Load of Std steel Chains kN (kgf)
		Rustop "N" kN (kgf)	BC coat "BC" kN (kgf)	DG coat "DG" kN (kgf)	Standard "SS" kN (kgf)	Strengthened "AS" kN (kgf)	
KCM 40		3.04 (310)	3.63 (370)	3.63 (370)	0.44 (45)	0.69 (70)	3.63 (370)
KCM 50		5.39 (550)	6.37 (650)	6.37 (650)	0.69 (70)	1.03 (105)	6.37 (650)
KCM 60		7.26 (740)	8.83 (900)	8.83 (900)	1.03 (105)	1.57 (160)	8.83 (900)
KCM 80		12.70 (1,300)	14.71 (1,500)	14.71 (1,500)	1.77 (180)	2.65 (270)	14.71 (1,500)
KCM 100		19.12 (1,950)	22.56 (2,300)	22.56 (2,300)	2.55 (260)	—	22.56 (2,300)
KCM 2040		2.65 (270)	2.65 (270)	2.65 (270)	0.44 (45)	0.69 (70)	2.65 (270)
KCM 2050		4.31 (440)	4.31 (440)	4.31 (440)	0.69 (70)	1.03 (105)	4.31 (440)
KCM 2060		6.28 (640)	6.28 (640)	6.28 (640)	1.03 (105)	1.57 (160)	6.28 (640)
KCM 2060H		6.28 (640)	6.28 (640)	6.28 (640)	1.03 (105)	1.57 (160)	6.28 (640)
KCM 2080		10.69 (1,090)	10.69 (1,090)	10.69 (1,090)	1.77 (180)	2.65 (270)	10.69 (1,090)
KCM 2080H		10.69 (1,090)	10.69 (1,090)	10.69 (1,090)	1.77 (180)	2.65 (270)	10.69 (1,090)

NOTES: - Dimensions of surface-treated chains are the same as those of standard steel chains.
 - Connecting links of BC coat chains are split pin type.
 - Surface-treated chain can be used in place of most standard steel chains and chains with attachments.



NOTES: - This chart is graphical presentation, not showing actual ratios.
 - Corrosion resistance varies depending on operating conditions.

Double-pitch roller chain, whose pitch is doubled compared to standard roller chain, employs parts of standard roller chain except for link plate. Therefore, the length and strength are the same, but the number of parts is reduced to a half, reducing weight and improving economy. This roller chain is best suited for relative long power transmission at low speed.



○ Dimensions

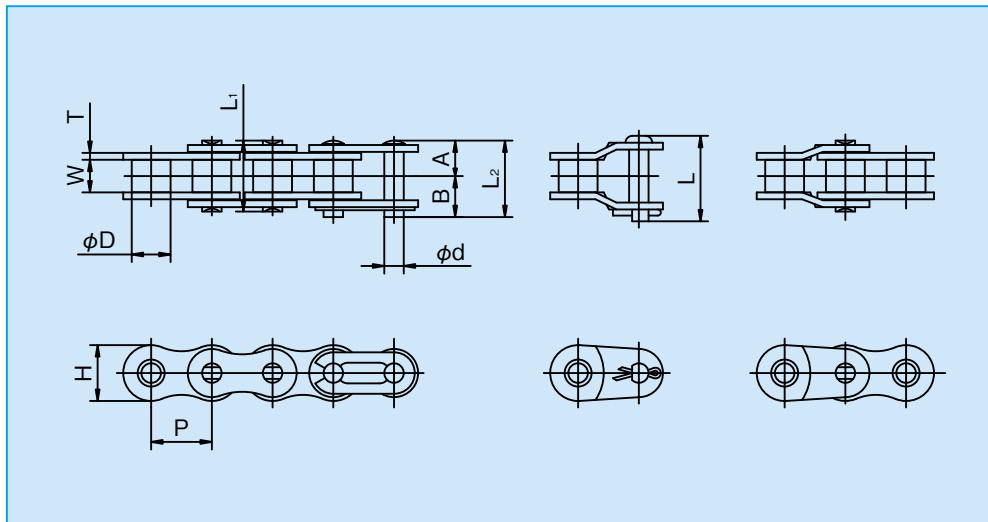
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H				
KCM A2040	25.40	7.95	7.92	3.97	8.02	9.53	16.05	17.55	18.95	1.5	11.7	17.2 (1,750)	2.65 (270)	0.40	120
KCM A2050	31.75	9.53	10.16	5.09	10.15	11.60	20.30	21.75	23.00	2.0	14.6	27.9 (2,850)	4.31 (440)	0.65	96
KCM A2060	38.10	12.70	11.91	5.96	12.65	14.15	25.30	26.80	29.45	2.4	17.5	39.5 (4,000)	6.28 (640)	0.95	80
KCM A2080	50.80	15.88	15.88	7.94	16.07	19.18	32.15	35.25	36.90	3.2	23.0	68.6 (7,000)	10.69 (1,090)	1.74	60

NOTES: - Connecting link for the A2080 is split pin type.

- **Sprocket:** For chains with teeth No. 29T (with 14 1/2 working teeth) or smaller, use the exclusively designed sprockets for double-pitch roller chains. For chains with teeth No. 30T (with 15 working teeth) or larger, use KCM standard sprockets.

Semi-standard roller chain has narrower width (L_1 and L_2), and smaller size than those of standard type. The semi-standard is suited for use in limited space.



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H				
KCM 415	12.70	4.76	7.75	3.64	5.50	6.90	11.00	12.40	12.95	1.1	9.9	9.81 (1,000)	2.16 (220)	0.34	240
KCM 415S	12.70	4.76	7.77	3.97	6.40	7.90	12.80	14.30	15.70	1.5	11.7	18.14 (1,850)	3.73 (380)	0.51	240
KCM 420	12.70	6.35	7.77	3.97	7.20	8.70	14.40	15.90	17.30	1.5	11.7	18.14 (1,850)	3.73 (380)	0.55	240
KCM 428	12.70	7.95	8.50	4.51	8.05	9.55	16.10	17.60	19.00	1.5	11.7	18.63 (1,900)	3.92 (400)	0.64	240
KCM 520	15.875	6.35	10.16	5.09	8.47	9.93	16.95	18.40	19.65	2.0	14.6	29.91 (3,050)	6.37 (650)	0.89	192

NOTE: Use the exclusively designed sprocket for these chains.

Chain Power Transmission Tables

Power Transmission capacities of the KCM products shown in this catalog are determined under the following conditions:

- 1) Operation at - 10°C to +60°C in the atmosphere free from abrasive dirt.
- 2) No corrosive gas and high humidity.
- 3) Two sprockets on which roller chain is mounted are properly aligned on parallel and level shafts.
- 4) Use of lubricant and lubrication method.
- 5) Less loading variations.

Multiple strand factor (Table 1)

Power transmission capacity of multiple strand roller chain is not equal to the number of strands times that of single strand roller chain, because the load is not evenly distributed to respective strands of roller chains. Therefore, power transmission capacity of multiple strand roller chain is determined by multiplying that of single strand roller chain by multiple strand factor.

Service factor (Table 2)

Actual power transmission capacity is adjusted according to the degree of loading variations, because the power transmission capacity tables are prepared on condition that loading variations are small.

Quick Selection Chart

How to Use:

EXAMPLE: Single strand roller chain with 5kW compensated chain drive power.

1. When smaller sprocket speed is 100 r/min

Find the intersection of 5kW vertical line of the compensated chain drive power and 100 r/min horizontal line of the smaller sprocket speed in the quick selection chart. You'll find that the chain is KCM80, and number of sprocket teeth is between 16T and 20T, judging as 17T from the exact location of the intersection.

2. When smaller sprocket speed is 300 r/min

1) Find the intersection in the same way as 1, you'll find that the chain is KCM60, and number of sprocket teeth is 13T to 18T, judging as 15T from the exact location of the intersection that is closed to 13T. Also, you'll find that there is KCM50-24T line (dotted) near this intersection. This means you can use either KCM60-15T and KCM50-24T.

After tentatively making quick selection with this chart confirm the selected sprocket is appropriate with reference to the power transmission capacity tables.

2) For power transmission capacity lines of 20T, 24T, and 30T, only its high speed portions are shown to simplify the quick selection chart. For lower speed portions, extend a line in parallel to the lines, just like a dotted line of KCM50-24T.

3) For chain speeds of 50 m/min or lower, it is economical to make selection by "Low speed selection method" described later.

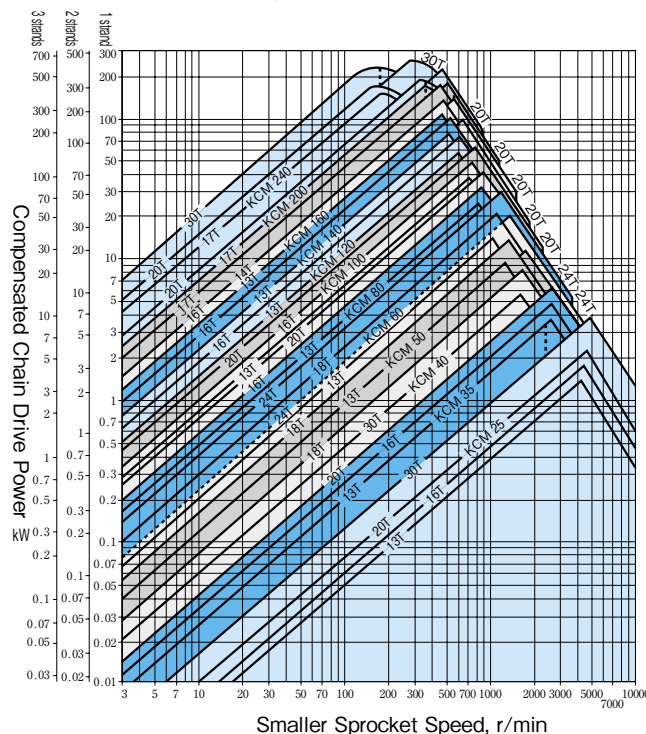
Table 1: Multiple Strand Factor

No. of Chain Strands	Multiple Strand factor
2 strands	1.7
3 strands	2.5
4 strands	3.3
5 strands	3.9
6 strands	4.6

Table 2: Service Factor

Load	Prime mover Driven machine	Motor turbine	Combustion engine	
			W/hyd. equipment	W/o hyd. equipment
Smooth loading	Belt conveyor, subjected to small loading variation, chain conveyor, centrifugal pump, centrifugal blower, textile machine and other machinery subjected to small loading variation.	1.0	1.0	1.2
With some shocks	Centrifugal compressor, marine propulsion system, conveyer subjected to some loading variations, automatic furnace, drier, crusher, machine tool, compressor, construction and civil engineering machinery, and papermaking machine	1.3	1.2	1.4
With heavy shocks	Press, crusher, mining machinery, vibratory machine, oil-well machinery, rubber mixer, roll, roll gang, and other machinery subjected to reversing load or heavy shock.	1.5	1.4	1.7

Table 3: Quick Selection Chart



General Roller Chain Selection Method

For roller chain transmission, it is important to select appropriate roller chain and sprockets.

- 1) Power to be transmitted
- 2) Compensated chain drive power

Determine the compensated chain drive power by multiplying the power to be transmitted by service factor shown in Table 2 according to the driven machine and prime mover. If the desired transmission power cannot be achieved with single strand chain, select multiple strand chain in this case. It is required to make compensation with multiple strand factor listed in Table 1 as follows.

- Single strand chain:
Compensated chain drive power = Power to be transmitted x Service factor
- Multiple strand chain:
Compensated chain drive power = $\frac{\text{Power to be transmitted} \times \text{Service factor}}{\text{Multiple strand factor}}$

- 3) Speeds of drive and driven shafts:

Determine appropriate roller chain and number of teeth of smaller sprocket from Table 3 “Quick Selection Chart” according to the speed (r/min) of higher-speed shaft (drive shaft in case of deceleration and driven shaft in acceleration) and compensated chain drive power.

In this case, it is recommended to select a chain with pitches as small as possible for smooth and quiet operation.

- 4) Shaft diameter and boss diameter:

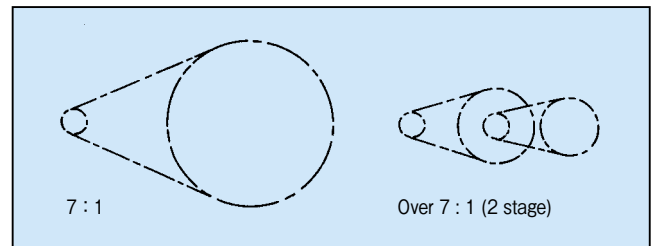
After determining the number of teeth of smaller sprocket, refer to Sprocket dimensions tables on pages 73 to 86 to find boss diameter and maximum bore diameter. If the bore diameter is less than the actual shaft diameter, reselect the increased number of teeth of smaller sprocket so that the bore diameter matches the actual shaft diameter.

- 5) Speed ratio of both shafts

Determine the number of teeth of larger sprocket by multiplying the number of teeth of smaller sprocket by the RPM ratio (speed ratio) of smaller sprocket to larger sprocket. Here, note that the number of teeth of smaller sprocket must be 17 or more, and that of larger sprocket must be 114 or less.

When uniform load is transferred at low speed, it is possible to select a sprocket whose number of teeth is down to 13.

In roller chain drive, the speed ratio of smaller sprocket to larger sprocket is normally 7 : 1 or less. If larger speed ratio is required, select two or more stages for speed change.



- 6) Shaft-to-shaft distance

It is ideal that shaft-to-shaft distance is 30 to 50 times chain pitch employed, although both shafts are positioned close to each other just before engagement of both sprockets. If subjected to pulsating load, shaft-to-shaft distance must be 20 or less times chain pitch employed.

Special Selection Method

Low Speed Roller Chain Selection Method

When the chain speed is 50 m/min or less, follow the “Low Speed Roller Chain Selection Method”, rather than “General Roller Chain Selection Method”, described above, for economical operation.

This low speed roller chain selection method is suitable for smooth power transmission with less frequent starts and stops. Working conditions such as operating environment, arrangement and lubrication are similar to those of general roller chain selection method.

- 1) Chain Speed

$$V = \frac{P \cdot N \cdot n}{1000}$$

V: Chain speed, m/min

P: Chain pitch, mm

N: Number of teeth of smaller sprocket

n: Number of r/min of smaller sprocket. r/min

- 2) Load acting on roller chain

$$F = \frac{6120 \cdot kW}{V}$$

F: Max. load acting on roller chain, kgf

kW: Transmission Power, kW

- 3) Max. acting load and max. allowable load

$$\text{Max. load acting on chain (kgf)} \times \text{Service factor (Table 2)} \times \text{Speed factor (Table 4)} \leq \text{Max. allowable load of roller chain (kgf)}$$

Table 4: Speed Factor

Chain Speed	Speed Factor
15m/min or less	1.0
15 to 30m/min	1.2
30 to 50m/min	1.4

If the foregoing equation is not satisfied, change the size of roller chain and the number of teeth of sprocket, and try to recheck if the equation is satisfied or not.

- 4) For low-speed application subjected to frequent starts and stops or braking and shocks, contact us.

Required Roller Chain Length

The required roller chain length (number of pitches) can be determined by the following equation, using center-to-center distance between shafts and number of teeth of sprocket.

$$L_P = \frac{N_1 + N_2}{2} + 2C_P + \frac{\{(N_2 - N_1) / 2\pi\}^2}{C_P}$$

L_P : Overall roller chain length (no. of pitches)

N_1 : Number of teeth of smaller sprocket

N_2 : Number of teeth of larger sprocket

C_P : Center-to-center distance between shafts (no. of pitches)

$\{(N_2 - N_1) / 2\pi\}^2$ can be found from the table below.

$N_2 - N_1$	$\{(N_2 - N_1) / 2\pi\}^2$	$N_2 - N_1$	$\{(N_2 - N_1) / 2\pi\}^2$	$N_2 - N_1$	$\{(N_2 - N_1) / 2\pi\}^2$
1	0.03	35	31.06	69	120.72
2	0.10	36	32.86	70	124.24
3	0.23	37	34.71	71	127.82
4	0.41	38	36.61	72	131.45
5	0.63	39	38.57	73	135.12
6	0.91	40	40.57	74	138.85
7	1.24	41	42.62	75	142.63
8	1.62	42	44.73	76	146.46
9	2.05	43	46.88	77	150.34
10	2.54	44	49.09	78	154.27
11	3.07	45	51.35	79	158.25
12	3.65	46	53.65	80	162.28
13	4.29	47	56.01	81	166.36
14	4.97	48	58.42	82	170.49
15	5.71	49	60.88	83	174.68
16	6.49	50	63.39	84	178.91
17	7.33	51	65.95	85	183.20
18	8.22	52	68.56	86	187.53
19	9.15	53	71.22	87	191.92
20	10.14	54	73.94	88	196.36
21	11.18	55	76.70	89	200.84
22	12.27	56	79.52	90	205.38
23	13.41	57	82.38	91	209.97
24	14.61	58	85.30	92	214.61
25	15.85	59	88.26	93	219.30
26	17.14	60	91.28	94	224.05
27	18.48	61	94.35	95	228.84
28	19.88	62	97.47	96	233.68
29	21.32	63	100.64	97	238.57
30	22.82	64	103.86	98	243.52
31	24.37	65	107.13	99	248.51
32	25.96	66	110.45	100	253.56
33	27.61	67	113.82		
34	29.31	68	117.25		

NOTE: L_P (number of pitches), determined by the equation above, is not integer, almost having fraction part. Therefore, it is necessary to round up the fraction part to obtain integer.

If the round-up integer is odd number, use an offset link, but even number is preferable.

Center-to-center Distance between Drive and Driven Shafts

The required roller chain length (number of pitches) determined at left is just approximation, which does not coincide with arbitrary center-to-center distance of drive and driven shafts. Therefore, it is required to obtain accurate center-to-center distance of drive and driven shafts by making calculation based on the required roller chain length equation.

$$C_P = \frac{1}{4} \left\{ L_P - \frac{N_1 + N_2}{2} + \sqrt{\left(L_P - \frac{N_1 + N_2}{2} \right)^2 - \frac{2}{\pi^2} (N_2 - N_1)^2} \right\}$$

C_P : Center-to-center distance between shafts (no. of pitches)

L_P : Overall roller chain length (no. of pitches)

N_1 : Number of teeth of smaller sprocket

N_2 : Number of teeth of larger sprocket

$\frac{2}{\pi^2} (N_2 - N_1)^2$ can be found from the table below.

$N_2 - N_1$	$\frac{2}{\pi^2} (N_2 - N_1)^2$	$N_2 - N_1$	$\frac{2}{\pi^2} (N_2 - N_1)^2$	$N_2 - N_1$	$\frac{2}{\pi^2} (N_2 - N_1)^2$
1	0.20	35	248.49	69	965.76
2	0.81	36	262.89	70	993.96
3	1.83	37	277.70	71	1022.56
4	3.25	38	292.91	72	1051.56
5	5.07	39	308.53	73	1080.98
6	7.30	40	324.56	74	1110.80
7	9.94	41	340.99	75	1141.19
8	12.98	42	357.82	76	1171.65
9	16.43	43	375.07	77	1202.69
10	20.28	44	392.71	78	1234.13
11	24.54	45	410.77	79	1265.97
12	29.21	46	429.23	80	1298.23
13	34.28	47	448.09	81	1330.88
14	39.76	48	467.36	82	1363.95
15	45.64	49	487.04	83	1397.42
16	51.93	50	507.12	84	1431.29
17	58.62	51	527.61	85	1465.58
18	65.72	52	548.50	86	1500.26
19	73.23	53	569.80	87	1535.36
20	81.14	54	591.50	88	1570.85
21	89.46	55	613.61	89	1606.76
22	98.18	56	636.13	90	1643.07
23	107.31	57	659.05	91	1679.78
24	116.84	58	682.38	92	1716.90
25	126.78	59	706.11	93	1754.43
26	137.13	60	730.25	94	1792.36
27	147.88	61	754.80	95	1830.70
28	159.03	62	779.75	96	1869.45
29	170.60	63	805.10	97	1908.60
30	182.56	64	830.86	98	1948.15
31	194.94	65	857.03	99	1988.11
32	207.92	66	883.61	100	2028.48
33	220.90	67	910.58		
34	234.49	68	937.97		

Use in Severe Working Conditions

1. Application at High Temperature

If the chain is heated, its strength and wear resistance are decreased.

Table 5: Atmospheric temperature and strength

Atmospheric temp. (°C)	Strength
Up to -30	Allowable tensile force described in catalog × 0.25
-30 to -20	∥ × 0.30
-10 to 150	∥ × 1
150 to 200	∥ × 0.75
200 to 250	∥ × 0.5

2. Use in Corrosive Atmosphere

For use in alkalic or acidic environment, it is required to use the chain made of material having high corrosion resistance, for instance, stainless steel. Note that corrosion resistance of stainless steel may be decreased significantly according to kinds of liquid and gas, and operating temperatures, similar to common chains.

Installation

(A) Arrangement of Shafts

Horizontal arrangement:

Even if both shafts are arranged horizontally, pay due attention to rotational direction of the shafts. In cases of Fig. (2) and (3), there is a fear that the chain, if elongated, cannot smoothly depart from the teeth of the sprockets and can be seized by sprockets. Particularly, in the case of fig. (3), there is a fear that the upper and lower chain parts make contact; use an idler at mid-span between shafts as shown.

Vertical arrangement:

The chain, if elongated, will be deflected as illustrated in Fig. (5). Particularly, if a smaller sprocket is located at the bottom side, there is a concern that the chain can disengage from the sprocket. To avoid disengagement, it is required that the line linking centers of both shafts is at 60° or less to horizontal line, as illustrated in Fig. (4). If this arrangement is not allowed due to limitation of mechanism or space, it is recommended to arrange a larger sprocket at the lower side, and an idler inside or outside the chain as illustrated in Fig. (6).

(B) Sag

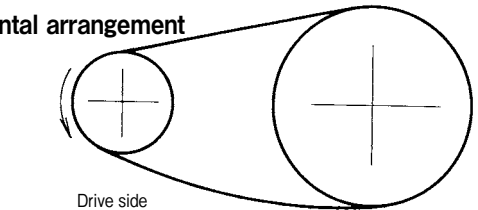
Sag of the chain is approximately 4% of shaft-to-shaft distance, and approximately 2% of that in the following cases.

- 1) Vertical arrangement or similar arrangement.
- 2) Shaft-to-shaft distance is 1 m or longer.
- 3) Frequent starts and stops under heavy load.
- 4) Reversing operation

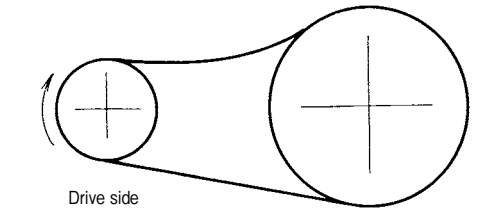
(C) Varying loads

It is required to place a tensioner on the tensed side or slackened side of the chain to give pre-tension. This eliminates vibration in operation and reduces noise.

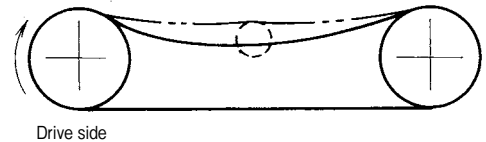
Horizontal arrangement



(1) Good

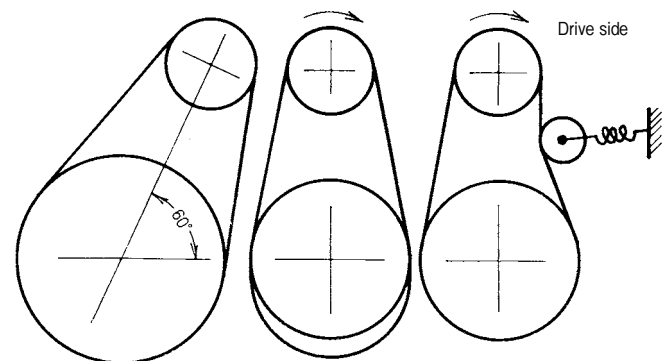


(2) Wrong



(3) Wrong (Change rotating direction or use an idler.)

Vertical arrangement:

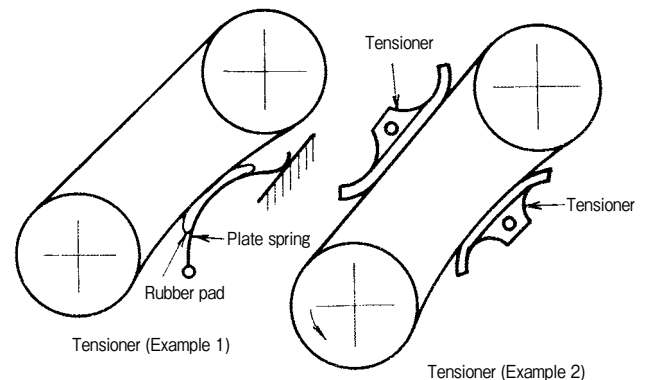


(4) Good

(5)

(6)

Examples of Tensioners



Tensioner (Example 1)

Tensioner (Example 2)

Lubrication is of prime importance for roller chains, because it greatly influences its service life, especially in modern high-speed chain drives. Therefore, the use of highly efficient lubrication is required.

Effect of Lubrication

When lubricant is applied clearances among pin, bush, and roller, oil film is formed to prevent wear on parts and serve as a cushion, and absorbs heat generated in chain.

Recommended lubricant is high-quality mineral oil.

Recommended lubricants

KCM Chain No.	A · B				C			
	Temp (°C)	-10 ~ 0	0 ~ 40	40 ~ 50	50 ~ 60	-10 ~ 0	0 ~ 40	40 ~ 50
KCM25 ~ 50	SAE10W	SAE20W	SAE30	SAE40	SAE10W	SAE20W	SAE30	SAE40
KCM60 ~ 80	SAE20W	SAE30	SAE40	SAE50				
KCM100					SAE20W	SAE30	SAE40	SAE50
KCM120 or higher	SAE30	SAE30	SAE50					

Lubrication Types (These also appear in Chain Power Transmission Tables)

Lubrication Type	Lubrication Method	Lubrication Intervals and Lubricant Amount	Remarks
A	Manual lubrication 	Periodic lubrication using oil feeder or brush at least once a day.	Feed lubricant to chain while turning it slowly. Here, continuously apply oil 3 to 4 times on full roller. Also, take care that your hand or cloth is not caught by chain drive. At start after lubrication, be careful that excessive oil will not splash.
	Drip lubrication 	Supply oil at 5 to 20 oil drops per minute.	It is recommended to provide simple casing against oil splash.
B	Oil bath lubrication 	Chain is submerged in oil at depth of 10mm.	Be careful to completely clean inside of container before use to remove foreign matter such as dirt. Also, pay attention to oil level not to increase.
	Rotating disc lubrication 	Rotating disc supplies oil on roller chain. Disc submerging depth is about 20mm and the circumferential speed is 200m/min or larger.	
C	Forced circulation lubrication Oil pump	It is required to maintain proper oil amount to avoid overheating.	Be careful to completely clean inside of container before use to remove foreign matter such as dirt.



Chain Power Transmission Table (kW)

K.C.M.41 (Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6000	7000	8000
9	0.01	0.04	0.07	0.14	0.27	0.38	0.49	0.60	0.82	1.03	1.13	0.95	0.75	0.61	0.51	0.41	0.34	0.28	0.24	0.19	0.16	0.11	0.08	0.07	0.05
10	0.02	0.04	0.08	0.16	0.30	0.43	0.55	0.68	0.92	1.15	1.27	1.11	0.88	0.72	0.60	0.48	0.40	0.33	0.28	0.22	0.18	0.13	0.10	0.08	0.06
11	0.02	0.05	0.10	0.18	0.33	0.48	0.61	0.75	1.02	1.28	1.40	1.28	1.01	0.83	0.69	0.55	0.46	0.38	0.32	0.25	0.21	0.15	0.11	0.09	0.07
12	0.03	0.05	0.10	0.19	0.37	0.52	0.68	0.83	1.12	1.40	1.54	1.45	1.16	0.95	0.79	0.63	0.51	0.43	0.37	0.29	0.24	0.17	0.13	0.10	0.08
13	0.03	0.06	0.11	0.21	0.40	0.57	0.74	0.90	1.22	1.53	1.68	1.64	1.31	1.07	0.90	0.71	0.58	0.48	0.42	0.33	0.27	0.19	0.15	0.12	0.10
14	0.03	0.07	0.12	0.23	0.43	0.62	0.80	0.98	1.32	1.66	1.82	1.84	1.45	1.19	1.00	0.79	0.65	0.54	0.46	0.37	0.30	0.22	0.16	0.13	0.10
15	0.03	0.07	0.13	0.25	0.46	0.66	0.86	1.05	1.42	1.78	1.96	2.04	1.62	1.32	1.11	0.88	0.72	0.60	0.51	0.41	0.34	0.24	0.18	0.14	0.12
16	0.03	0.07	0.14	0.27	0.49	0.71	0.93	1.13	1.53	1.92	2.10	2.25	1.78	1.45	1.22	0.97	0.79	0.66	0.57	0.45	0.37	0.26	0.20	0.16	0.13
17	0.04	0.08	0.15	0.28	0.53	0.76	0.98	1.20	1.63	2.04	2.25	2.45	1.95	1.60	1.34	1.06	0.87	0.73	0.62	0.49	0.40	0.29	0.22	0.17	0.14
18	0.04	0.09	0.16	0.30	0.56	0.81	1.04	1.28	1.73	2.17	2.39	2.68	2.13	1.74	1.45	1.16	0.95	0.79	0.68	0.54	0.44	0.31	0.24	0.19	0
19	0.04	0.09	0.17	0.32	0.60	0.86	1.11	1.36	1.84	2.31	2.54	2.90	2.31	1.89	1.58	1.25	1.03	0.86	0.73	0.58	0.48	0.34	0.26	0.21	0
20	0.04	0.10	0.18	0.34	0.63	0.90	1.17	1.43	1.94	2.43	2.68	3.13	2.48	2.04	1.71	1.35	1.11	0.93	0.79	0.63	0.51	0.37	0.28	0.22	0
21	0.04	0.10	0.19	0.36	0.66	0.95	1.24	1.51	2.04	2.57	2.82	3.33	2.68	2.19	1.84	1.45	1.19	1.00	0.85	0.68	0.55	0.40	0.30	0.24	0
22	0.04	0.10	0.20	0.37	0.69	1.01	1.30	1.59	2.16	2.70	2.97	3.50	2.87	2.35	1.97	1.56	1.28	1.07	0.92	0.72	0.60	0.43	0.32	0.25	0
23	0.04	0.11	0.21	0.40	0.73	1.05	1.37	1.67	2.26	2.83	3.11	3.67	3.07	2.51	2.10	1.67	1.37	1.15	0.98	0.78	0.63	0.46	0.34	0.28	0
24	0.05	0.12	0.22	0.41	0.77	1.10	1.43	1.75	2.36	2.96	3.26	3.84	3.27	2.68	2.25	1.78	1.45	1.22	1.04	0.83	0.68	0.48	0.37	0.29	0
25	0.05	0.13	0.23	0.43	0.80	1.16	1.49	1.83	2.47	3.10	3.41	4.01	3.48	2.84	2.39	1.89	1.55	1.30	1.11	0.88	0.72	0.51	0.40	0	0
26	0.05	0.13	0.24	0.45	0.84	1.20	1.56	1.90	2.58	3.23	3.55	4.19	3.69	3.02	2.53	2.01	1.64	1.38	1.18	0.93	0.76	0.54	0.42	0	0
28	0.06	0.14	0.26	0.48	0.90	1.31	1.69	2.07	2.79	3.50	3.85	4.54	4.12	3.37	2.83	2.25	1.84	1.54	1.31	1.04	0.85	0.61	0.46	0	0
30	0.06	0.15	0.28	0.52	0.98	1.40	1.82	2.22	3.01	3.77	4.15	4.89	4.57	3.74	3.13	2.48	2.04	1.70	1.45	1.16	0.95	0.68	0.51	0	0
32	0.07	0.16	0.30	0.56	1.04	1.51	1.95	2.39	3.23	4.04	4.45	5.24	5.04	4.12	3.45	2.74	2.25	1.88	1.60	1.28	1.04	0.75	0	0	0
35	0.07	0.18	0.33	0.62	1.15	1.66	2.15	2.63	3.55	4.45	4.90	5.77	5.76	4.71	3.95	3.13	2.57	2.15	1.84	1.45	1.19	0.85	0	0	0
40	0.09	0.20	0.38	0.72	1.33	1.92	2.48	3.04	4.10	5.15	5.66	6.67	7.03	5.76	4.83	3.83	3.13	2.63	2.25	1.78	1.45	1.04	0	0	0
45	0.10	0.23	0.43	0.81	1.51	2.18	2.82	3.45	4.66	5.85	6.43	7.61	8.43	6.87	5.76	4.57	3.74	3.13	2.68	2.13	1.74	0	0	0	0
Lubrication Type	A					B										C									

K.C.M.40 (Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6500	7000	8000
9	0.03	0.07	0.14	0.26	0.48	0.69	0.90	1.10	1.49	1.87	2.05	2.42	2.78	3.07	2.57	2.04	1.67	1.40	1.19	0.95	0.78	0.56	0.43	0.34	0.28
10	0.04	0.08	0.16	0.29	0.54	0.78	1.01	1.23	1.67	2.10	2.31	2.72	3.12	3.51	3.01	2.39	1.96	1.64	1.40	1.11	0.91	0.65	0.49	0.40	0.32
11	0.04	0.09	0.17	0.32	0.60	0.87	1.12	1.37	1.85	2.32	2.55	3.01	3.45	3.89	3.48	2.76	2.26	1.89	1.62	1.28	1.05	0.75	0.57	0.46	0.37
12	0.04	0.10	0.19	0.35	0.66	0.95	1.23	1.50	2.04	2.55	2.80	3.30	3.80	4.28	3.96	3.15	2.57	2.16	1.84	1.46	1.19	0.86	0.65	0.51	0.43
13	0.04	0.11	0.21	0.39	0.72	1.04	1.34	1.64	2.22	2.78	3.06	3.60	4.14	4.67	4.47	3.55	2.90	2.43	2.08	1.65	1.35	0.96	0.73	0.58	0.48
14	0.05	0.12	0.22	0.42	0.78	1.12	1.45	1.78	2.40	3.01	3.31	3.90	4.44	5.00	4.70	3.96	3.25	2.72	2.32	1.87	1.51	1.09	0.82	0.65	0.53
15	0.05	0.13	0.24	0.45	0.84	1.21	1.57	1.91	2.59	3.25	3.57	4.21	4.83	5.45	5.54	4.39	3.60	3.01	2.57	2.04	1.67	1.19	0.91	0.72	0.59
16	0.06	0.14	0.26	0.48	0.90	1.30	1.68	2.05	2.78	3.48	3.83	4.51	5.18	5.84	6.10	4.84	3.96	3.32	2.83	2.25	1.87	1.32	1.00	0.80	0.65
17	0.06	0.15	0.28	0.51	0.96	1.38	1.79	2.19	2.96	3.72	4.09	4.81	5.53	6.24	6.68	5.30	4.34	3.64	3.11	2.47	2.02	1.45	1.10	0.87	0.72
18	0.07	0.16	0.29	0.54	1.02	1.47	1.90	2.33	3.15	3.95	4.34	5.12	5.88	6.63	7.28	5.78	4.73	3.96	3.39	2.69	2.20	1.57	1.19	0.95	0
19	0.07	0.16	0.31	0.58	1.09	1.56	2.02	2.47	3.34	4.19	4.60	5.42	6.24	7.03	7.83	6.27	5.13	4.30	3.67	2.92	2.39	1.71	1.30	1.03	0
20	0.07	0.18	0.33	0.61	1.14	1.65	2.13	2.61	3.53	4.43	4.87	5.74	6.59	7.43	8.28	6.77	5.54	4.64	3.96	3.15	2.57	1.87	1.40	1.11	0
21	0.08	0.19	0.34	0.65	1.21	1.74	2.25	2.75	3.72	4.67	5.13	6.05	6.95	7.83	8.73	7.28	5.96	5.00	4.27	3.39	2.77	1.98	1.51	1.19	0
22	0.08	0.19	0.37	0.68	1.27	1.83	2.36	2.89	3.92	4.91	5.39	6.36	7.30	8.21	9.18	7.83	6.39	5.36	4.57	3.63	2.97	2.13	1.62	1.28	0
23	0.09	0.20	0.38	0.72	1.33	1.92	2.48	3.04	4.11	5.15	5.66	6.67	7.68	8.65	9.62	8.36	6.83	5.73	4.89	3.88	3.18	2.28	1.73	1.37	0
24	0.10	0.22	0.40	0.75	1.40	2.01	2.60	3.18	4.30	5.39	5.93	6.98	8.06	9.03	10.1	8.88	7.28	6.10	5.21	4.13	3.39	2.42	1.84	1.46	0
25	0.10	0.22	0.42	0.78	1.45	2.10	2.72	3.32	4.49	5.63	6.19	7.30	8.36	9.47	10.5	9.47	7.76	6.49	5.54	4.39	3.60	2.57	1.96	0	0
26	0.10	0.23	0.43	0.81	1.52	2.19	2.83	3.46	4.68	5.88	6.46	7.61	8.73	9.85	11.0	10.1	8.21	6.89	5.88	4.66	3.82	2.73	2.08	0	0
28	0.11	0.25	0.47	0.88	1.64	2.37	3.07	3.75	5.08	6.37	7.01	8.28	9.47	10.7	11.9	11.2	9.18	7.68	6.56	5.21	4.27	3.05	2.32	0	0
30	0.12	0.28	0.51	0.95	1.78	2.55	3.30	4.04	5.47	6.86	7.53	8.88	10.2	11.5	12.8	12.5	10.1	8.50	7.28	5.78	4.73	3.39	2.57	0	0
32	0.13	0.29	0.54	1.01	1.90	2.74	3.54	4.33	5.86	7.36	8.06	9.55	11.0	12.3	13.7	13.7	11.2	9.40	8.06	6.37	5.21	3.73	0	0	0
35	0.14	0.32	0.60	1.12	2.10	3.01	3.91	4.77	6.46	8.13	8.88	10.5	12.1	13.6	15.1	15.7	12.8	10.7	9.18	7.28	5.96	4.27	0	0	0
40	0.16	0.37	0.69	1.30	2.42	3.48	4.51	5.51	7.46	9.33	10.3	12.2	14.0	15.7	17.5	19.2	15.7	13.1	11.2	8.88	7.28	5.21	0	0	0
45	0.19	0.43	0.79	1.47	2.75	3.95	5.13	6.27	8.50	10.6	11.7	13.8	15.8	17.8	19.8	22.8	18.7	15.7	13.4	10.6	8.73	0	0	0	0
Lubrication Type	A					B										C									

Lubrication Type A: Lubrication - Manual Oil Drip

B: Lubrication - Oil Bath

C: Lubrication - Oil Pump

See Lubrication Instructions on page 25.

See pages 21 to 24 for details on selecting chains or multiple strand roller chains.



Chain Power Transmission Table (kW)

K.C.M.50(Single Strand Roller Chain)kW

No. of Teeth / Small Spk.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	4500	5000	5500	6000
9	0.07	0.14	0.27	0.50	0.94	1.35	1.75	2.14	2.90	3.64	4.00	4.71	4.49	3.67	3.08	2.44	2.00	1.68	1.43	1.13	0.93	0.78	0.66	0.57	0.51
10	0.07	0.16	0.31	0.57	1.05	1.51	1.69	2.40	3.25	4.07	4.48	5.28	5.26	4.30	3.60	2.86	2.34	1.96	1.68	1.33	1.09	0.91	0.78	0.67	0.59
11	0.08	0.18	0.34	0.63	1.16	1.68	2.18	2.66	3.60	4.52	4.97	5.86	6.06	4.96	4.16	3.30	2.70	2.27	1.93	1.54	1.25	1.05	0.90	0.78	0.69
12	0.09	0.19	0.37	0.69	1.28	1.84	2.39	2.92	3.96	4.96	5.45	6.43	6.91	5.65	4.74	3.76	3.08	2.58	2.20	1.75	1.43	1.20	1.02	0.89	0.78
13	0.10	0.22	0.40	0.75	1.40	2.01	2.61	3.19	4.31	5.41	5.95	7.01	7.76	6.38	5.34	4.24	3.47	2.91	2.48	1.97	1.61	1.35	1.16	1.00	0
14	0.10	0.23	0.43	0.81	1.51	2.18	2.83	3.45	4.68	5.86	6.45	7.61	8.73	7.12	5.98	4.74	3.88	3.25	2.76	2.20	1.81	1.51	1.29	1.12	0
15	0.11	0.25	0.47	0.87	1.63	2.35	3.04	3.72	5.04	6.32	6.95	8.21	9.40	7.91	6.62	5.26	4.30	3.60	3.08	2.44	2.00	1.68	1.43	1.24	0
16	0.12	0.27	0.50	0.94	1.75	2.52	3.26	3.99	5.40	6.77	7.45	8.80	10.1	8.73	7.30	5.79	4.74	3.97	3.39	2.69	2.20	1.84	1.57	1.37	0
17	0.13	0.29	0.54	1.00	1.87	2.69	3.48	4.26	5.77	7.23	7.98	9.40	10.7	9.55	7.98	6.34	5.19	4.35	3.72	2.95	2.41	2.02	1.72	1.50	0
18	0.13	0.31	0.57	1.07	1.98	2.86	3.71	4.53	6.13	7.68	8.43	10.0	11.4	10.4	8.73	6.91	5.65	4.74	4.04	3.21	2.63	2.20	1.88	1.64	0
19	0.14	0.32	0.60	1.13	2.10	3.04	3.93	4.80	6.51	8.13	8.95	10.6	12.2	11.3	9.47	7.46	6.13	5.14	4.39	3.48	2.85	2.39	2.04	1.78	0
20	0.15	0.34	0.64	1.19	2.22	3.21	4.16	5.07	6.87	8.58	9.47	11.2	12.8	12.2	10.2	8.06	6.62	5.55	4.74	3.76	3.08	2.58	2.20	1.94	0
21	0.16	0.36	0.67	1.26	2.34	3.38	4.38	5.35	7.24	9.10	10.0	11.8	13.5	13.1	11.0	8.73	7.12	5.98	5.10	4.04	3.31	2.78	2.37	2.07	0
22	0.16	0.38	0.71	1.37	2.47	3.55	4.60	5.62	7.61	9.55	10.5	12.4	14.2	14.0	11.8	9.33	7.61	6.41	5.47	4.34	3.55	2.98	2.54	2.21	0
23	0.17	0.40	0.75	1.39	2.59	3.73	4.83	5.90	7.98	10.0	11.0	13.0	14.9	15.0	12.6	10.0	8.21	6.85	5.85	4.64	3.80	3.19	2.76	2.42	0
24	0.19	0.42	0.78	1.45	2.71	3.90	5.06	6.18	8.36	10.5	11.6	13.6	15.6	16.0	13.4	10.7	8.73	7.30	6.23	4.95	4.04	3.39	2.94	2.59	0
25	0.19	0.43	0.81	1.51	2.83	4.08	5.28	6.46	8.73	11.0	12.1	14.2	16.3	17.0	14.2	11.3	9.25	7.76	6.62	5.26	4.30	3.60	3.15	2.78	0
26	0.20	0.46	0.85	1.58	2.95	4.25	5.51	6.74	9.10	11.4	12.6	14.8	17.0	18.1	15.1	12.0	9.85	8.21	7.03	5.57	4.57	3.83	3.31	2.91	0
28	0.22	0.49	0.92	1.72	3.20	4.61	5.98	7.30	9.85	12.4	13.7	16.0	18.4	20.1	16.9	13.4	11.0	9.18	7.83	6.23	5.10	4.27	3.73	3.28	0
30	0.23	0.53	0.99	1.85	3.45	4.97	6.44	7.83	10.7	13.5	14.7	17.3	19.8	22.4	18.7	14.8	12.2	10.2	8.73	6.91	5.65	4.64	3.91	3.43	0
32	0.25	0.57	1.06	1.98	3.70	5.33	6.90	8.43	11.4	14.3	15.7	18.6	21.3	24.0	20.7	16.4	13.4	11.3	9.62	7.61	6.23	5.07	4.31	3.83	0
35	0.28	0.63	1.17	2.19	4.07	5.86	7.61	9.33	12.6	15.7	17.3	20.4	23.5	26.5	23.6	18.7	15.4	12.8	11.0	8.73	7.12	5.94	5.07	4.59	0
40	0.32	0.72	1.35	2.52	4.71	6.77	8.80	10.7	14.5	18.2	20.0	23.6	27.1	30.6	28.9	22.9	18.7	15.7	13.4	10.7	9.0	7.62	6.56	5.82	0
45	0.36	0.82	1.54	2.86	5.34	7.68	10.0	12.2	16.5	20.7	22.8	26.8	30.8	34.6	34.4	27.3	22.4	18.7	16.0	13.4	11.3	9.62	8.27	7.31	0
Lubrication Type	A					B								C											

K.C.M.60(Single Strand Roller Chain)kW

No. of Teeth / Small Spk.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2500	3000	3500	4000	4500
9	0.11	0.25	0.46	0.87	1.25	1.61	1.86	3.01	3.69	4.34	4.98	5.62	6.25	6.87	7.45	6.54	5.19	4.25	3.56	3.04	2.18	1.66	1.31	1.07	0.90
10	0.12	0.28	0.52	0.97	1.40	1.81	2.33	3.38	4.13	4.86	5.59	6.30	7.00	7.68	8.36	7.68	6.08	4.98	4.17	3.56	2.55	1.94	1.54	1.26	1.05
11	0.13	0.31	0.57	1.07	1.54	2.01	2.89	3.74	4.57	5.39	6.19	6.98	7.76	8.50	9.33	8.88	7.02	5.74	4.81	4.11	2.94	2.24	1.78	1.45	1.22
12	0.15	0.34	0.63	1.18	1.70	2.20	3.17	4.11	5.03	5.92	6.80	7.68	8.50	9.40	10.2	10.1	7.98	6.54	5.48	4.68	3.35	2.55	2.02	1.66	1.39
13	0.16	0.37	0.69	1.29	1.86	2.40	3.46	4.48	5.48	6.45	7.42	8.36	9.33	10.2	11.1	11.3	9.03	7.38	6.18	5.28	3.77	2.87	2.28	1.87	0
14	0.18	0.40	0.75	1.40	2.01	2.60	3.74	4.86	5.94	6.99	8.06	9.03	10.1	11.0	12.1	12.7	10.1	8.28	6.91	5.90	4.22	3.22	2.55	2.09	0
15	0.19	0.43	0.81	1.50	2.16	2.80	4.04	5.28	6.39	7.53	8.65	9.77	10.8	11.9	13.0	14.0	11.2	9.18	7.68	6.54	4.68	3.56	2.83	2.31	0
16	0.20	0.46	0.87	1.61	2.32	3.01	4.33	5.61	6.86	8.06	9.25	10.4	11.6	12.8	14.0	15.1	12.3	10.1	8.43	7.21	5.15	3.92	3.11	2.55	0
17	0.22	0.49	0.93	1.72	2.48	3.21	4.63	5.99	7.32	8.65	9.92	11.2	12.5	13.7	14.8	16.1	13.5	11.0	9.25	7.91	5.65	4.30	3.41	2.79	0
18	0.23	0.52	0.98	1.83	2.63	3.42	4.92	6.37	7.76	9.18	10.5	11.9	13.2	14.5	15.8	17.1	14.7	12.0	10.1	8.58	6.15	4.68	3.72	3.04	0
19	0.25	0.56	1.04	1.94	2.79	3.62	5.21	6.75	8.28	9.70	11.2	12.6	14.0	15.4	16.8	18.1	16.0	13.1	10.9	9.33	6.68	5.08	4.03	3.30	0
20	0.26	0.59	1.10	2.05	2.95	3.83	5.51	7.14	8.73	10.3	11.8	13.4	14.8	16.3	17.8	19.2	17.2	14.1	11.8	10.1	7.21	5.48	4.35	3.60	0
21	0.27	0.62	1.16	2.16	3.11	4.03	5.80	7.53	9.18	10.8	12.5	14.0	15.6	17.2	18.7	20.2	18.5	15.1	12.7	10.8	7.76	5.90	4.68	4.01	0
22	0.28	0.65	1.22	2.28	3.27	4.24	6.11	7.91	9.70	11.4	13.1	14.8	16.4	18.1	19.7	21.3	19.8	16.3	13.6	11.6	8.28	6.33	5.02	4.34	0
23	0.30	0.69	1.28	2.38	3.43	4.45	6.41	8.28	10.1	11.9	13.7	15.5	17.2	18.9	20.7	22.3	21.2	17.4	14.5	12.5	8.88	6.77	5.36	4.68	0
24	0.31	0.72	1.34	2.50	3.60	4.66	6.71	8.65	10.6	12.5	14.4	16.2	18.1	19.8	21.6	23.3	22.6	18.5	15.5	13.3	9.47	7.21	5.72	5.10	0
25	0.33	0.75	1.40	2.61	3.76	4.86	7.01	9.10	11.1	13.1	15.0	16.9	18.9	20.7	22.6	24.4	24.0	19.7	16.5	14.1	10.1	7.68	6.08	5.50	0
26	0.34	0.78	1.45	2.72	3.92	5.08	7.31	9.47	11.6	13.7	15.7	17.7	19.7	21.6	23.6	25.4	25.5	20.9	17.5	14.9	10.7	8.13	6.45	5.87	0
28	0.37	0.84	1.58	2.95	4.24	5.50	7.91	10.3	12.5	14.8	17.0	19.2	21.3	23.4	25.5	27.6	28.5	23.3	19.5	16.7	11.9	9.10	8.01	7.29	0
30	0.40	0.91	1.70	3.18	4.57	5.92	8.50	11.0	13.5	16.0	18.3	20.7	23.0	25.2	27.5	29.7	31.6	25.9	21.7	18.5	13.3	10.1	9.04	8.32	0
32	0.43	0.98	1.83	3.40	4.90	6.36	9.18	11.9	14.5	17.1	19.6	22.2	24.6	27.1	29.5	31.9	34.8	28.5	23.9	20.4	14.6	11.1	10.0	9.31	0
35	0.47	1.07	2.01	3.75	5.40	7.00	10.1	13.1	16.0	18.8	21.6	24.4	27.1	29.8	32.5	35.1	39.8	32.6	27.3	23.3	16.7	12.7	11.7	11.0	0
40	0.54	1.25	2.32	4.33	6.24	8.06	11.6	15.1	18.4	21.7	25.0	28.1	31.3	34.4	37.5	40.6	46.6	39.8	33.3	28.5	20.4	15.0	13.7	12.6	0
45	0.62	1.41	2.63	4.92	7.09	9.18	13.2	17.2	21.0	24.7	28.3	32.0	35.6	39.1	42.6	46.0	52.9	47.5	39.8	34.0	24.3	18.0	15.4	14.4	0
Lubrication Type	A					B								C											

Lubrication Type A: Lubrication - Manual Oil Drip
 B: Lubrication - Oil Bath
 C: Lubrication - Oil Pump
 See Lubrication Instructions on page 25.

See pages 21 to 24 for details on selecting chains or multiple strand roller chains.



Chain Power Transmission Table (kW)

K.C.M.80(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																														
	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						
9	0.25	0.58	1.08	2.02	2.91	3.77	5.43	7.03	8.58	10.1	11.6	13.1	12.7	10.8	9.40	8.21	6.53	5.35	4.48	3.83	3.32	2.91	2.44	2.08	1.73						
10	0.28	0.65	1.22	2.26	3.26	4.22	6.09	7.91	9.62	11.3	13.1	14.7	14.8	12.7	11.0	9.62	7.68	6.27	5.25	4.48	3.89	3.41	2.86	2.44	2.02						
11	0.31	0.72	1.34	2.51	3.61	4.68	6.74	8.73	10.7	12.6	14.5	16.3	17.2	14.6	12.7	11.1	8.80	7.23	6.06	5.17	4.48	3.93	3.30	2.81	1.27						
12	0.35	0.79	1.48	2.75	3.97	5.14	7.41	9.62	11.7	13.8	15.9	17.9	19.5	16.6	14.5	12.7	10.1	8.21	6.90	5.89	5.11	4.48	3.76	3.21	0						
13	0.38	0.87	1.61	3.01	4.33	5.61	8.06	10.4	12.8	15.1	17.3	19.5	21.7	18.8	16.3	14.3	11.3	9.33	7.76	6.65	5.76	5.06	4.24	3.62	0						
14	0.41	0.93	1.75	3.25	4.69	6.07	8.73	11.3	13.9	16.3	18.7	21.2	23.5	21.0	18.2	16.0	12.7	10.4	8.73	7.43	6.44	5.65	4.74	4.04	0						
15	0.44	1.01	1.88	3.51	5.05	6.54	9.40	12.2	14.9	17.6	20.2	22.8	25.4	23.3	20.2	17.8	14.1	11.5	9.62	8.21	7.14	6.27	5.25	4.48	0						
16	0.47	1.08	2.01	3.76	5.42	7.02	10.1	13.1	16.0	18.9	21.6	24.5	27.2	25.7	22.2	19.5	15.5	12.7	10.6	9.10	7.83	6.90	5.79	4.94	0						
17	0.51	1.16	2.15	4.01	5.78	7.46	10.8	14.0	17.1	20.1	23.1	26.1	29.0	28.1	24.4	21.4	16.9	13.9	11.6	9.92	8.58	7.53	6.33	5.41	0						
18	0.54	1.22	2.29	4.27	6.15	7.98	11.5	14.8	18.2	21.4	24.6	27.8	30.9	30.7	26.6	23.3	18.5	15.1	12.7	10.8	9.40	8.21	6.90	5.89	0						
19	0.57	1.30	2.42	4.53	6.52	8.43	12.2	15.7	19.2	22.7	26.1	29.4	32.7	33.2	28.8	25.3	20.1	16.4	13.7	11.7	10.1	8.95	7.46	6.39	0						
20	0.60	1.37	2.57	4.78	6.89	8.95	12.8	16.6	20.4	24.0	27.6	31.1	34.5	35.9	31.1	27.3	21.6	17.8	14.8	12.7	11.0	9.62	8.06	0	0						
21	0.63	1.45	2.70	5.04	7.27	9.40	13.6	17.5	21.5	25.3	29.1	32.7	36.5	38.6	33.4	29.4	23.3	19.1	16.0	13.7	11.9	10.4	8.73	0	0						
22	0.67	1.52	2.84	5.30	7.61	9.92	14.2	18.5	22.6	26.6	30.6	34.5	38.3	41.4	35.9	31.5	25.0	20.4	17.2	14.6	12.7	11.1	9.33	0	0						
23	0.70	1.60	2.98	5.57	7.98	10.4	15.0	19.4	23.7	27.9	32.1	36.2	40.2	44.2	38.3	33.6	26.7	21.9	18.4	15.7	13.6	11.9	10.0	0	0						
24	0.73	1.67	3.13	5.83	8.43	10.9	15.7	20.3	24.8	29.2	33.6	37.9	42.1	46.3	40.9	35.9	28.5	23.3	19.5	16.6	14.5	12.7	10.6	0	0						
25	0.77	1.75	3.26	6.09	8.80	11.3	16.3	21.2	25.9	30.9	35.1	39.5	44.0	48.4	43.4	38.1	30.3	24.8	20.7	17.8	15.4	13.5	11.3	0	0						
26	0.80	1.83	3.40	6.36	9.18	11.9	17.1	22.2	27.0	31.9	36.6	41.3	45.9	50.4	46.1	40.4	32.1	26.3	22.0	18.8	16.3	14.3	12.0	0	0						
28	0.87	1.98	3.69	6.89	9.92	12.8	18.5	23.9	29.3	34.5	39.7	44.7	49.8	54.7	51.5	45.2	35.9	29.4	24.6	21.0	18.2	16.0	0	0	0						
30	0.93	2.13	3.98	7.42	10.7	13.8	19.9	25.8	31.6	37.2	42.7	48.2	53.6	58.9	57.1	50.1	39.8	32.5	27.3	23.3	20.2	17.8	0	0	0						
32	1.00	2.28	4.26	7.98	11.4	14.8	21.3	27.7	33.9	39.9	45.8	51.6	57.4	63.1	62.9	55.2	43.8	35.9	30.1	25.7	22.2	19.5	0	0	0						
35	1.10	2.51	4.69	8.73	12.6	16.3	23.6	30.5	37.3	43.9	50.4	56.9	63.3	69.6	72.0	63.2	50.1	41.0	34.4	29.4	25.4	0	0	0	0						
40	1.28	2.90	5.42	10.1	14.5	18.9	27.2	35.2	43.0	50.7	58.3	65.7	73.9	80.6	87.3	76.8	61.3	50.1	42.0	35.9	14.9	0	0	0	0						
45	1.45	3.30	6.15	11.5	16.6	21.4	30.9	40.0	48.9	57.6	66.2	74.6	82.8	91.0	99.2	91.8	73.1	59.8	50.1	40.3	0	0	0	0	0						
Lubrication Type	A		B					C																							

K.C.M.100(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																														
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	2200	2400	2600	2700						
9	0.48	1.11	2.07	3.87	5.57	7.22	10.4	13.5	16.5	19.4	22.1	18.1	15.1	13.0	11.2	9.85	8.73	7.83	6.39	5.36	4.57	3.97	3.48	3.09	0						
10	0.54	1.25	2.32	4.33	6.24	8.06	11.6	15.1	18.4	21.8	25.0	21.2	17.8	15.1	13.1	11.6	10.2	9.18	7.46	6.28	5.36	4.65	4.08	3.62	0						
11	0.60	1.38	2.57	4.80	6.92	8.95	12.9	16.7	20.4	24.1	27.7	24.5	20.5	17.5	15.1	13.3	11.8	10.6	8.65	7.24	6.19	5.36	4.71	0.96	0						
12	0.66	1.51	2.83	5.28	7.61	9.85	14.2	18.4	22.5	26.5	30.4	27.8	23.3	19.9	17.3	15.1	13.4	12.0	9.85	8.28	7.05	6.11	5.36	0	0						
13	0.72	1.66	3.08	5.76	8.28	10.7	15.4	20.1	24.5	28.9	33.2	31.4	26.3	22.5	19.5	17.1	15.1	13.6	11.1	9.33	7.91	6.89	6.04	0	0						
14	0.78	1.79	3.34	6.24	8.95	11.6	16.8	21.7	26.6	31.3	36.0	35.1	29.4	25.1	21.8	19.1	16.9	15.1	12.4	10.4	8.88	7.68	6.75	0	0						
15	0.84	1.93	3.60	6.72	9.70	12.5	18.1	23.4	28.6	33.7	38.7	38.9	32.6	27.8	24.2	21.2	18.8	16.8	13.7	11.6	9.85	8.50	7.46	0	0						
16	0.91	2.07	3.86	7.21	10.4	13.4	19.4	25.1	30.7	36.1	41.5	42.9	36.0	30.7	26.6	23.4	20.7	18.5	15.1	12.7	10.8	9.40	8.28	0	0						
17	0.97	2.21	4.12	7.68	11.0	14.3	20.7	26.8	32.7	38.6	44.3	47.0	39.4	33.6	29.1	25.6	22.7	20.3	16.6	14.0	11.9	10.3	0.59	0	0						
18	1.03	2.35	4.39	8.21	11.8	15.3	22.0	28.5	34.8	41.0	47.1	51.2	42.9	36.6	31.7	27.8	24.7	22.1	18.1	15.1	13.0	11.2	0	0	0						
19	1.09	2.49	4.65	8.65	12.5	16.2	23.3	30.2	36.9	43.5	50.0	55.5	46.5	39.7	34.4	30.2	26.8	23.9	19.6	16.4	14.0	12.2	0	0	0						
20	1.16	2.63	4.91	9.18	13.2	17.1	24.6	31.9	39.0	46.0	52.8	59.5	50.2	42.9	37.2	32.6	28.9	25.9	21.2	17.8	15.1	13.1	0	0	0						
21	1.22	2.78	5.18	9.70	14.0	18.1	26.0	33.6	41.1	48.5	55.7	62.8	54.0	46.1	40.0	35.1	31.1	27.8	22.8	19.1	16.3	14.2	0	0	0						
22	1.28	2.92	5.45	10.1	14.6	18.9	27.3	35.4	43.3	51.0	58.6	66.0	58.0	49.5	42.9	37.6	33.3	29.8	24.5	20.5	17.5	15.1	0	0	0						
23	1.34	3.06	5.71	10.7	15.4	19.9	28.6	37.2	45.4	53.5	61.4	69.2	61.9	52.9	45.8	40.2	35.7	31.9	26.1	21.9	18.7	5.77	0	0	0						
24	1.40	3.21	5.98	11.2	16.0	20.8	30.0	38.9	47.5	56.0	64.3	72.5	66.0	56.4	48.9	42.9	38.1	34.0	27.8	23.4	19.9	0	0	0	0						
25	1.47	3.35	6.25	11.6	16.8	21.8	31.3	40.6	49.7	58.5	67.2	76.1	70.2	59.9	51.9	45.6	40.4	36.2	29.6	24.8	21.2	0	0	0	0						
26	1.53	3.49	6.52	12.2	17.5	22.7	32.7	42.4	51.8	61.0	70.1	79.1	74.5	63.6	55.1	48.3	42.9	38.3	31.4	26.3	22.5	0	0	0	0						
28	1.66	3.78	7.06	13.2	19.0	24.6	35.4	45.9	56.1	66.1	76.1	85.8	83.6	71.0	61.6	54.0	47.9	42.9	35.1	29.4	25.1	0	0	0	0						
30	1.79	4.08	7.61	14.2	20.4	26.5	38.2	49.5	60.4	71.2	82.1	92.5	92.5	79.1	68.3	59.9	53.1	47.5	38.9	32.6	7.46	0	0	0	0						
32	1.92	4.37	8.13	15.2	21.9	28.4	41.0	53.0	64.8	76.1	88.0	99.2	101	86.5	75.3	66.0	58.6	52.4	42.9	33.7	0	0	0	0	0						
35	2.11	4.82	8.95	16.8	24.2	31.3	45.1	58.4	71.4	84.3	97.0	109	116	99	85.8	75.3	67.0	59.9	49.1	41.1	0	0	0	0	0						
40	2.44	5.57	10.4	19.4	27.9	36.2	52.1	67.4	82.8	97.0	112	126	140	122	105	92.5	82.1	73.2	59.9	0	0	0	0	0	0						
45	2.77	6.32	11.8	22.0	31.7	41.0	59.2	76.8	94.0	110	127	143	159	145	125	110	97.7	87.3	33.8	0	0	0	0	0	0						
Lubrication Type	A		B					C																							

Lubrication Type A: Lubrication - Manual Oil Dip
 B: Lubrication - Oil Bath
 C: Lubrication - Oil Pump
 See Lubrication Instructions on page 25.

See pages 21 to 24 for details on selecting chains or multiple strand roller chains.
 For optimum results, consult KCM Chain for drives operating in the SHADED ZONE.



Chain Power Transmission Table (kW)

K.C.M.120 (Single Strand Roller Chain) kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
9	0.82	1.88	3.50	6.53	9.40	12.2	17.5	22.8	27.8	32.2	25.6	21.0	17.5	15.0	13.0	11.4	10.1	9.03	8.13	7.40	6.76	6.20	5.72	5.30	4.92
10	0.93	2.10	3.92	7.32	10.5	13.7	19.7	25.5	31.2	36.7	29.9	24.5	20.5	17.5	15.2	13.4	11.9	10.6	9.55	8.65	7.91	7.27	6.70	6.20	5.77
11	1.02	2.33	4.35	8.13	11.7	15.1	21.8	28.3	34.5	40.7	34.5	28.3	23.7	20.2	17.5	15.4	13.7	12.2	11.0	10.0	9.10	8.36	7.76	7.16	0
12	1.12	2.56	4.77	8.88	12.8	16.6	23.9	31.0	38.0	44.7	39.4	32.2	27.0	23.1	20.0	17.5	15.6	14.0	12.5	11.4	10.4	9.55	8.80	8.13	0
13	1.22	2.79	5.21	9.70	14.0	18.1	26.1	33.9	41.4	48.7	44.4	36.3	30.4	26.0	22.5	19.8	17.5	15.7	14.2	12.8	11.7	10.7	9.92	9.18	0
14	1.33	3.02	5.64	10.5	17.2	19.6	28.3	36.6	44.8	52.8	49.6	40.6	34.0	29.1	25.2	22.1	19.6	17.5	15.8	14.3	13.1	12.0	11.1	6.67	0
15	1.42	3.26	6.08	11.3	16.3	21.2	30.5	39.5	48.3	56.9	55.1	45.1	37.8	32.2	27.9	24.5	21.7	19.5	17.5	15.9	14.5	13.4	12.3	0	0
16	1.53	3.49	6.52	12.2	17.5	22.7	32.7	42.4	51.8	61.0	60.6	49.6	41.6	35.5	30.8	27.0	23.9	21.4	19.3	17.5	16.0	14.7	13.6	0	0
17	1.63	3.73	6.96	13.0	18.7	24.2	34.9	45.2	55.3	65.1	66.4	54.3	45.5	38.9	33.7	29.5	26.3	23.5	21.2	19.2	17.5	16.1	14.8	0	0
18	1.74	3.97	7.40	13.8	19.9	25.8	37.2	48.1	58.8	69.3	72.4	59.2	49.6	42.4	36.7	32.2	28.6	25.6	23.1	21.0	19.1	17.5	8.43	0	0
19	1.84	4.21	7.83	14.6	21.1	27.3	39.4	51.0	62.4	73.5	78.3	64.2	53.8	46.0	39.8	34.9	31.0	27.8	25.0	22.7	20.7	19.0	0	0	0
20	1.95	4.45	8.28	15.4	22.3	28.9	41.6	53.9	65.9	77.6	85.0	69.3	58.1	49.6	43.0	37.8	33.5	29.9	27.0	24.5	22.4	20.5	0	0	0
21	2.05	4.68	8.73	16.3	23.5	30.4	43.9	56.8	69.5	82.1	91.0	74.6	62.5	53.4	46.3	40.6	36.0	32.2	29.1	26.4	24.1	22.1	0	0	0
22	2.16	4.92	9.18	17.2	24.7	32.0	46.1	59.8	73.0	85.8	97.7	79.8	67.1	57.2	49.6	43.6	38.6	34.5	31.2	28.3	25.8	12.4	0	0	0
23	2.27	5.17	9.62	18.0	26.0	33.6	48.4	62.7	76.8	90.3	104	85.8	71.7	61.2	53.0	46.6	41.3	36.9	33.3	30.2	27.6	0	0	0	0
24	2.37	5.41	10.1	18.9	27.2	35.1	50.7	65.6	80.6	94.7	109	91.0	76.1	65.2	56.6	49.6	44.0	39.4	35.5	32.2	29.4	0	0	0	0
25	2.48	5.65	10.5	19.7	28.3	36.8	53.0	68.6	83.6	98.5	113	97.0	81.3	69.3	60.1	52.7	46.8	41.9	37.8	34.2	30.8	0	0	0	0
26	2.59	5.90	11.0	20.5	29.6	38.3	55.2	71.5	87.3	103	119	103	85.8	73.6	63.7	56.0	49.6	44.4	40.1	36.3	19.8	0	0	0	0
28	2.80	6.39	11.9	22.2	32.1	41.6	59.8	77.6	94.7	112	128	115	96.2	82.1	71.3	62.5	55.4	49.6	44.8	40.6	0	0	0	0	0
30	3.02	6.89	12.8	23.9	34.5	44.8	64.5	83.6	102	120	138	128	107	91.0	79.1	69.3	61.5	55.1	49.6	31.6	0	0	0	0	0
32	3.24	7.39	13.8	25.7	37.0	48.0	69.1	90.0	110	129	148	140	118	101	87.3	76.1	67.7	60.7	54.9	0	0	0	0	0	0
35	3.57	8.13	15.1	28.3	40.8	52.9	76.1	98.5	121	142	163	160	134	115	99.2	87.3	77.6	69.3	35.6	0	0	0	0	0	0
40	4.12	9.40	17.5	32.7	47.1	61.0	88.0	114	140	164	189	196	164	140	122	107	94.7	44.4	0	0	0	0	0	0	0
45	4.68	10.7	19.9	37.2	53.5	69.3	100	129	158	187	214	234	196	167	145	128	59.7	0	0	0	0	0	0	0	0
Lubrication Type	A			B									C												

K.C.M.140 (Single Strand Roller Chain) kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
9	1.28	2.90	5.42	10.1	14.5	18.9	23.1	27.2	31.1	35.2	39.2	43.0	41.6	36.5	28.9	23.7	19.8	16.9	14.7	12.9	11.4	10.2	9.25	8.36	7.61
10	1.42	3.25	6.07	11.3	16.3	21.1	25.8	30.4	35.0	39.5	43.9	48.2	48.6	42.7	33.9	27.8	23.3	19.8	17.2	15.1	13.4	12.0	10.8	9.77	0
11	15.8	3.60	6.73	12.5	18.1	22.4	28.6	33.2	38.8	43.7	48.6	53.4	56.1	49.2	39.1	32.0	26.8	22.9	19.8	17.4	15.4	13.8	12.5	11.3	0
12	1.74	3.96	7.39	13.8	19.8	25.7	31.5	37.1	42.6	48.0	53.4	58.7	63.9	56.1	44.5	36.5	30.6	26.1	22.6	19.8	17.6	15.7	14.2	12.9	0
13	1.89	4.08	8.06	15.1	21.6	28.0	34.3	40.4	46.4	52.4	58.2	64.0	69.8	63.3	50.2	41.1	34.5	29.4	25.5	22.4	19.8	17.8	16.0	14.5	0
14	2.05	4.68	8.06	16.3	23.5	30.4	37.2	43.8	50.3	56.7	63.0	69.4	75.3	70.7	56.1	46.0	38.5	32.9	28.5	25.0	22.2	19.8	17.9	16.3	0
15	2.21	5.04	9.40	17.5	25.3	32.7	40.1	47.1	54.2	61.1	68.0	74.6	81.3	78.3	62.2	51.0	42.7	36.5	31.6	27.8	24.6	22.0	19.8	0	0
16	2.37	5.40	10.1	18.8	27.1	35.1	42.9	50.6	58.1	65.5	72.9	79.8	87.3	86.5	68.6	56.1	47.1	40.1	34.8	30.6	27.1	24.2	21.9	0	0
17	2.53	5.77	10.7	20.1	28.9	37.5	45.8	54.0	62.1	70.0	77.6	85.8	93.3	94.7	75.3	61.5	51.6	44.0	38.1	33.5	29.7	26.6	23.9	0	0
18	2.69	6.14	11.5	21.3	30.8	39.9	48.7	57.4	66.0	74.5	82.8	91.0	99.2	103	82.1	67.0	56.1	47.9	41.6	36.5	32.3	28.9	26.1	0	0
19	2.85	6.51	12.2	22.7	32.6	42.3	51.7	60.9	70.0	79.1	88.0	96.2	105	112	88.8	72.7	60.9	52.0	45.1	39.5	35.1	31.4	28.3	0	0
20	3.01	6.88	12.8	23.9	34.5	44.7	54.6	63.4	73.9	83.6	92.5	102	111	120	95.5	78.3	65.7	56.1	48.6	42.7	37.9	33.9	0	0	0
21	3.18	7.25	13.5	25.2	36.3	47.1	57.6	67.9	77.6	88.0	97.7	107	117	127	103	84.3	70.7	60.4	52.4	46.0	40.7	36.5	0	0	0
22	3.34	7.61	14.3	26.6	38.3	49.5	60.6	71.3	82.1	92.5	103	113	123	133	110	90.3	76.1	64.8	56.1	49.2	43.7	39.1	0	0	0
23	3.51	7.98	14.9	27.8	40.1	52.0	63.6	74.6	85.8	97.0	108	119	129	140	118	97.0	81.3	69.2	60.0	52.7	46.1	41.8	0	0	0
24	3.67	8.36	15.6	29.2	42.0	54.4	66.5	78.3	90.3	101	113	124	135	146	126	103	86.5	73.8	63.9	56.1	49.8	44.5	0	0	0
25	3.83	8.73	16.3	30.4	43.9	56.8	69.5	82.1	94.0	106	118	130	141	153	134	110	91.8	78.3	68.0	59.7	52.9	47.4	0	0	0
26	4.01	9.10	17.0	31.8	45.8	59.3	72.5	85.8	98.5	110	123	135	148	160	142	116	97.7	83.6	72.1	63.3	56.1	0	0	0	0
28	4.33	9.92	18.4	34.5	49.6	64.3	78.3	92.5	107	120	134	147	160	173	159	130	109	93.2	80.6	70.7	62.7	0	0	0	0
30	4.67	10.7	19.9	37.1	53.4	69.2	84.3	100	115	129	144	158	172	186	176	144	121	103	89.5	78.3	69.5	0	0	0	0
32	5.01	11.4	21.3	39.8	57.3	74.2	91.0	107	123	139	154	169	184	199	194	159	133	113	98.5	86.5	0	0	0	0	0
35	5.52	12.6	23.5	43.8	63.1	82.1	100	118	135	153	169	187	203	220	222	181	152	130	113	97.0	0	0	0	0	0
40	6.37	14.5	27.2	50.7	72.9	94.7	116	136	156	176	196	216	235	254	271	222	186	159	133	0	0	0	0	0	0
45	7.24	16.5	30.8	57.5	82.8	107	131	154	178	200	222	245	266	289	324	265	222	177	69.2	0	0	0	0	0	0
Lubrication Type	A			B									C												

Lubrication type: A: Lubrication - Manual Oil Drip

B: Lubrication - Oil Bath

C: Lubrication - Oil Pump

See Lubrication Instructions on page 25.

See pages 21 to 24 for details on selecting chains or multiple strand roller chains.

For optimum results, consult KCM Chain for drives operating in the SHADED ZONE.

K.C.M.160(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	10	25	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400
9	1.85	4.21	7.83	14.7	21.1	27.4	33.4	39.4	45.3	51.1	56.8	53.3	46.3	40.6	36.0	32.2	29.0	26.3	24.0	22.1	18.9	16.3	14.3	12.7	0
10	2.07	4.72	8.80	16.4	23.6	30.7	37.5	44.2	50.7	57.2	63.6	62.4	54.2	47.5	42.2	37.7	34.0	30.9	28.2	25.9	22.1	19.2	16.8	14.9	0
11	2.29	5.23	9.77	18.2	26.3	34.0	41.6	48.9	56.2	63.4	70.5	72.1	62.4	54.8	48.6	43.5	39.2	35.6	32.5	29.8	25.4	22.1	19.4	17.2	0
12	2.52	5.74	10.7	20.0	28.8	37.4	45.7	53.8	61.8	69.7	77.6	82.1	71.2	62.4	55.4	49.5	44.7	40.6	37.0	34.0	29.0	25.1	22.1	19.6	0
13	2.75	6.27	11.7	21.8	31.4	40.7	49.8	58.6	67.4	76.1	84.3	92.5	80.6	70.5	62.4	55.9	50.4	45.7	41.8	38.3	32.7	28.4	24.9	22.1	0
14	2.98	6.79	12.7	23.6	34.0	44.1	53.9	63.9	73.0	82.1	91.8	101	89.5	78.3	69.8	62.4	56.3	51.1	46.7	42.8	36.6	31.7	27.8	24.7	0
15	3.21	7.31	13.7	25.4	36.7	47.5	58.1	68.4	78.3	88.8	98.5	108	99.2	87.3	77.6	69.2	62.4	56.7	51.8	47.5	40.6	35.1	30.9	0	
16	3.44	7.83	14.6	27.3	39.3	51.0	62.3	73.4	84.3	94.7	106	116	110	96.2	85.0	76.1	68.8	62.4	57.0	52.4	44.7	38.7	34.0	0	
17	3.62	8.36	15.6	29.2	42.0	54.4	66.5	78.3	90.3	101	113	124	120	105	93.3	83.6	75.3	68.4	62.4	57.3	48.9	42.5	37.2	0	
18	3.90	8.88	16.6	31.0	44.7	57.9	70.7	83.6	95.5	108	120	132	131	115	101	91.0	82.1	74.5	68.0	62.4	53.3	46.3	40.6	0	
19	4.14	9.47	17.6	32.9	47.4	61.3	75.3	88.0	101	114	128	140	142	125	110	98.5	88.8	80.6	73.8	67.7	57.8	50.1	44.0	0	
20	4.37	10.0	18.7	34.8	50.0	64.8	79.1	93.3	107	121	134	148	153	134	119	107	96.2	87.3	79.8	73.2	62.4	54.2	47.5	0	
21	4.61	10.5	19.6	36.6	52.7	68.3	83.6	98.5	113	128	142	156	165	145	128	115	104	94.0	85.8	78.3	67.2	58.3	51.1	0	
22	4.85	11.0	20.7	38.5	55.5	71.8	88.0	104	119	134	149	164	177	155	137	123	111	101	91.8	84.3	72.1	62.4	0		
23	5.09	11.6	21.6	40.4	58.2	75.3	92.5	109	125	141	157	172	187	166	147	131	119	107	98.5	90.3	76.8	66.8	0		
24	5.33	12.2	22.7	42.3	60.9	79.1	96.2	113	131	147	164	180	196	177	157	140	126	115	104	96.2	82.1	71.2	0		
25	5.57	12.7	23.7	44.2	63.7	82.8	101	119	137	154	171	188	205	188	166	149	134	122	111	102	87.3	75.3	0		
26	5.80	13.3	24.7	46.1	66.5	85.8	105	124	142	160	178	196	214	199	177	158	143	129	118	108	92.5	80.6	0		
28	6.29	14.3	26.8	50.0	72.0	93.3	114	134	154	174	193	213	232	222	198	177	160	145	121	121	104	89.5	0		
30	6.77	15.4	28.9	53.9	77.6	101	123	145	166	187	208	229	251	247	219	196	177	160	146	134	115	0			
32	7.27	16.6	31.0	57.7	82.8	107	131	155	178	201	224	245	268	272	241	216	195	177	161	148	126	0			
35	7.98	18.3	34.1	63.6	91.8	119	145	171	196	222	246	271	295	311	276	247	222	202	184	169	134	0			
40	9.25	21.1	39.4	73.5	106	137	168	198	227	256	284	313	341	369	337	301	272	247	225	192	0				
45	10.5	23.9	44.7	83.6	120	156	190	225	257	290	323	355	387	419	402	360	312	260	202	141	0				
Lubrication Type	A			B						C															

K.C.M.200(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																			
	10	15	20	30	40	50	70	100	150	200	250	300	350	400	450	500	550	600	650	700
9	3.39	4.88	6.32	9.10	11.8	14.4	19.5	26.9	38.7	50.2	61.3	72.3	82.8	88.8	74.6	63.7	55.3	48.5	43.0	0
10	3.79	5.46	7.08	10.2	13.2	16.1	21.9	30.1	43.4	56.2	68.7	81.3	93.3	104	87.3	74.6	64.7	56.8	50.4	0
11	4.21	6.06	7.83	11.3	14.6	17.9	24.2	33.4	48.1	62.3	76.1	89.5	103	116	101	85.8	74.6	65.5	58.1	0
12	4.62	6.65	8.65	12.4	16.1	19.7	26.6	36.7	52.8	68.5	83.6	98.5	113	128	115	98.5	85.0	74.6	0	
13	5.04	7.25	9.40	13.5	17.5	21.4	29.0	40.0	57.6	74.6	91.0	107	124	140	130	110	96.2	84.3	0	
14	5.45	7.83	10.1	14.7	19.0	23.2	31.4	43.3	62.4	80.6	98.5	116	134	151	145	124	107	94.0	0	
15	5.88	8.43	11.0	15.8	20.4	25.0	33.9	46.7	67.2	87.3	107	125	144	163	160	137	119	104	0	
16	6.30	9.10	11.8	16.9	21.9	26.9	36.3	50.1	72.1	93.3	114	134	154	175	177	151	131	115	0	
17	6.73	9.70	12.5	18.1	23.4	28.6	38.8	53.4	76.8	100	122	144	165	186	194	166	143	126	0	
18	7.15	10.3	13.4	19.2	24.9	30.4	42.3	56.8	82.1	106	130	153	175	198	211	181	156	137	0	
19	7.61	10.9	14.2	20.4	26.4	32.3	43.7	60.3	86.5	113	137	162	186	210	229	195	169	148	0	
20	7.98	11.6	15.0	21.6	27.9	34.2	46.2	63.7	91.8	119	145	171	197	222	247	211	183	0		
21	8.43	12.2	15.7	22.8	29.5	36.0	48.7	67.1	97.0	125	153	181	207	233	260	228	197	0		
22	8.88	12.8	16.6	23.9	31.0	37.8	51.3	70.6	101	132	161	189	218	246	273	244	211	0		
23	9.33	13.4	17.4	25.1	32.5	39.7	53.7	74.1	107	138	169	199	229	258	286	260	226	0		
24	9.77	14.1	18.2	26.3	34.0	41.6	56.2	77.6	112	145	177	208	239	270	300	278	241	0		
25	10.2	14.7	19.0	27.5	35.5	43.4	58.8	81.3	116	151	185	218	250	282	314	295	256	0		
26	10.7	15.4	19.8	28.6	37.0	45.3	61.3	84.3	122	158	193	228	261	295	327	313	272	0		
Lubrication Type	A			B						C										

Lubrication Type A: Lubrication - Manual Oil Drip
 B: Lubrication - Oil Bath
 C: Lubrication - Oil Pump
 See Lubrication Instructions on page 25.

See pages 21 to 24 for details on selecting chains or multiple strand roller chains.
 For optimum results, consult KCM Chain for drives operating in the SHADED ZONE.

KCM 40NL Chain Power Transmission Table (Single Strand Transmission, kW)

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)											
	10	25	50	100	200	300	400	500	700	900	1000	1200
9	0.05	0.11	0.21	0.39	0.71	1.04	1.34	1.68	2.22	2.77	3.08	3.59
10	0.05	0.13	0.24	0.44	0.79	1.15	1.49	1.87	2.47	3.08	3.42	
11	0.06	0.15	0.26	0.48	0.87	1.27	1.64	2.05	2.72	3.39	3.80	
12	0.06	0.16	0.29	0.52	0.95	1.38	1.79	2.24	2.96	3.73		
13	0.07	0.18	0.31	0.57	1.03	1.50	1.94	2.43	3.27	4.05		
14	0.08	0.19	0.33	0.61	1.13	1.64	2.13	2.64	3.53			
15	0.08	0.20	0.36	0.65	1.21	1.76	2.29	2.83	3.78			
16	0.09	0.22	0.38	0.70	1.29	1.88	2.44	3.02	4.03			
17	0.09	0.23	0.41	0.74	1.37	2.00	2.59	3.21				
18	0.10	0.24	0.43	0.80	1.45	2.11	2.74	3.40				
19	0.10	0.26	0.45	0.86	1.57	2.28	2.95	3.65				
20	0.11	0.27	0.48	0.91	1.66	2.40	3.11	3.85				
21	0.11	0.28	0.50	0.95	1.74	2.52	3.26	4.04				
22	0.12	0.30	0.53	1.00	1.82	2.66	3.45	4.23				
23	0.12	0.31	0.55	1.04	1.92	2.81	3.61	4.42				
24	0.13	0.32	0.60	1.11	2.03	2.96	3.84					
25	0.13	0.34	0.63	1.15	2.11	3.08	4.00					
26	0.14	0.35	0.65	1.20	2.19	3.20	4.16					
27	0.15	0.36	0.68	1.25	2.28	3.33	4.32					
28	0.15	0.38	0.70	1.29	2.36	3.45	4.48					
30	0.16	0.40	0.75	1.40	2.53	3.70						
32	0.17	0.43	0.80	1.51	2.80	4.05						
35	0.19	0.47	0.88	1.65	3.06	4.43						
40	0.22	0.54	1.00	1.88	3.50							
45	0.24	0.61	1.13	2.12	3.94							

KCM 50NL Chain Power Transmission Table (Single Strand Transmission, kW)

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)											
	10	25	50	100	200	300	400	500	600	700	800	900
9	0.11	0.24	0.44	0.82	1.49	2.17	2.80	3.39	3.99	4.61	5.19	5.72
10	0.12	0.27	0.49	0.91	1.66	2.41	3.11	3.76	4.44	5.12	5.80	
11	0.14	0.29	0.54	1.00	1.83	2.65	3.42	4.14	4.88	5.63		
12	0.15	0.32	0.59	1.09	1.99	2.89	3.74	4.51	5.35	6.18		
13	0.16	0.35	0.64	1.18	2.16	3.14	4.07	4.91	5.80			
14	0.17	0.37	0.69	1.27	2.32	3.38	4.45	5.29	6.24			
15	0.19	0.40	0.74	1.36	2.49	3.62	4.76	5.67				
16	0.20	0.43	0.79	1.45	2.66	3.86	5.08	6.05				
17	0.21	0.45	0.84	1.54	2.82	4.10	5.40	6.43				
18	0.22	0.48	0.89	1.63	2.99	4.34	5.72					
19	0.24	0.51	0.97	1.79	3.31	4.81	6.21					
20	0.25	0.53	1.03	1.89	3.49	5.07	6.54					
21	0.26	0.56	1.08	1.98	3.66	5.32	6.86					
22	0.27	0.58	1.13	2.08	3.83	5.57						
23	0.29	0.61	1.18	2.17	4.01	5.83						
24	0.30	0.66	1.23	2.29	4.26	6.14						
25	0.31	0.68	1.28	2.38	4.44	6.39						
26	0.32	0.71	1.33	2.48	4.62	6.65						
27	0.34	0.74	1.38	2.57	4.80	6.90						
28	0.35	0.77	1.44	2.67	4.97	7.16						
30	0.37	0.82	1.54	2.86	5.33							
32	0.40	0.88	1.66	3.05	5.68							
35	0.44	0.97	1.81	3.34	6.22							
40	0.50	1.11	2.07	3.81	7.11							
45	0.56	1.24	2.33	4.29								

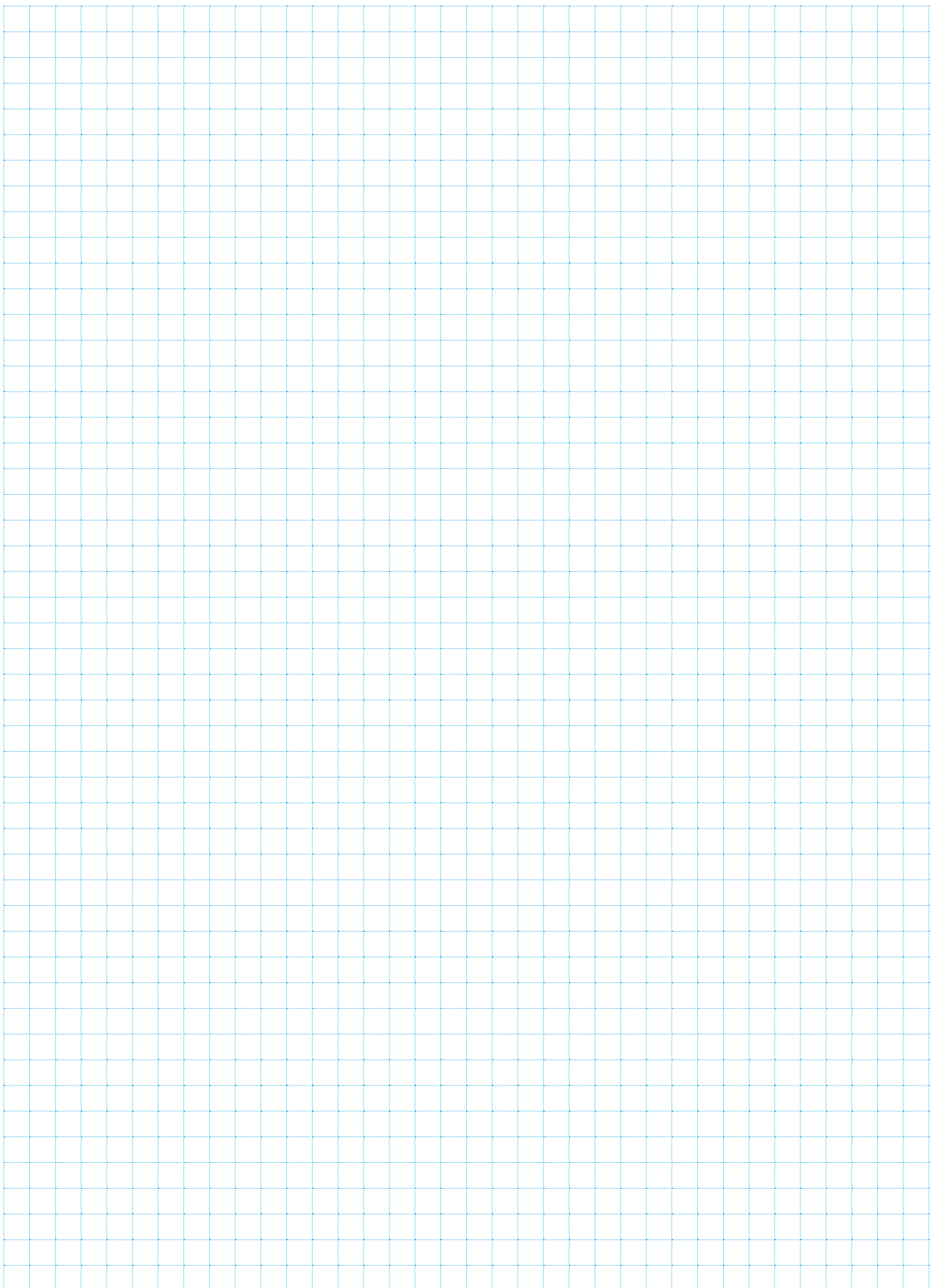
KCM 60NL Chain Power Transmission Table (Single Strand Transmission, kW)

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)											
	10	25	50	100	150	200	250	300	400	500	600	700
9	0.18	0.41	0.76	1.41	2.02	2.63	3.22	3.78	4.91	6.00	7.06	8.14
10	0.21	0.46	0.85	1.57	2.24	2.93	3.58	4.20	5.45	6.66	7.92	
11	0.23	0.51	0.93	1.73	2.47	3.22	3.94	4.62	6.00	7.33		
12	0.25	0.55	1.02	1.89	2.69	3.51	4.34	5.04	6.54	8.07		
13	0.27	0.60	1.10	2.04	2.97	3.88	4.75	5.46	7.23			
14	0.29	0.64	1.21	2.24	3.23	4.22	5.16	6.12	7.86			
15	0.31	0.69	1.30	2.41	3.46	4.52	5.53	6.56	8.43			
16	0.33	0.73	1.38	2.57	3.69	4.82	5.90	6.99				
17	0.35	0.78	1.47	2.73	3.92	5.12	6.27	7.43				
18	0.37	0.83	1.56	2.89	4.16	5.42	6.64	7.87				
19	0.39	0.89	1.69	3.17	4.51	5.89	7.21	8.46				
20	0.41	0.94	1.78	3.33	4.75	6.20	7.59	8.91				
21	0.43	0.98	1.87	3.50	4.99	6.51	7.97					
22	0.45	1.03	1.96	3.67	5.23	6.82	8.35					
23	0.47	1.08	2.05	3.83	5.46	7.13	8.73					
24	0.49	1.16	2.14	4.04	5.81	7.58	9.11					
25	0.51	1.21	2.23	4.20	6.05	7.90	9.67					
26	0.53	1.25	2.32	4.37	6.29	8.22						
28	0.58	1.35	2.49	4.71	6.78	8.85						
30	0.62	1.45	2.67	5.05	7.26	9.48						
32	0.66	1.56	2.93	5.53	7.96							
35	0.72	1.70	3.21	6.05	8.71							
40	0.82	1.95	3.66	6.92	9.95							
45	0.92	2.19	4.12	7.78								

KCM 80NL Chain Power Transmission Table (Single Strand Transmission, kW)

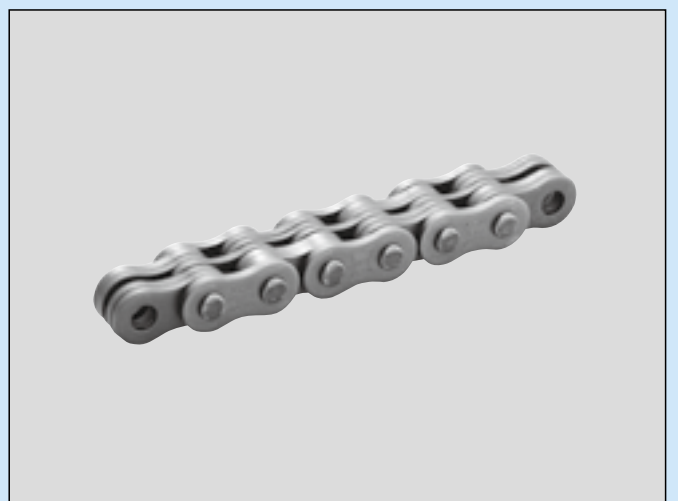
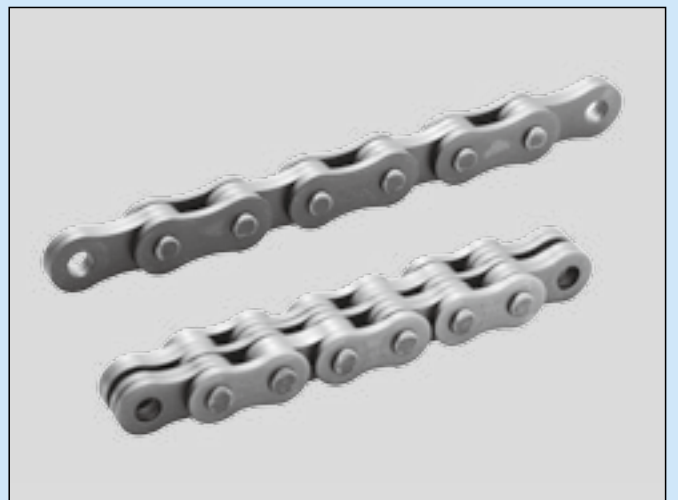
No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)												
	10	25	50	75	100	125	150	200	250	300	350		
9	0.40	0.91	1.68	2.44	3.14	3.83	4.54	5.90	7.19	8.46	9.74		
10	0.45	1.01	1.87	2.71	3.49	4.25	5.04	6.56	7.99	9.40	10.82		
11	0.49	1.11	2.05	2.98	3.83	4.68	5.55	7.21	8.79	10.34			
12	0.54	1.21	2.24	3.25	4.18	5.10	6.05	7.87	9.59				
13	0.58	1.31	2.43	3.52	4.53	5.53	6.56	8.52	10.39				
14	0.63	1.44	2.72	3.94	5.08	6.25	7.34	9.46	11.52				
15	0.67	1.57	2.91	4.22	5.44	6.70	7.87	10.13					
16	0.72	1.67	3.11	4.51	5.80	7.15	8.39	10.81					
17	0.76	1.78	3.30	4.79	6.16	7.59	8.92	11.48					
18	0.81	1.88	3.50	5.07	6.53	8.04	9.44						
19	0.85	2.01	3.73	5.45	7.09	8.65	10.06						
20	0.90	2.11	3.92	5.74	7.46	9.10	10.59						
21	0.94	2.22	4.12	6.03	7.83	9.56	11.12						
22	0.99	2.32	4.31	6.32	8.21	10.01	11.65						
23	1.03	2.43	4.51	6.60	8.58	10.47	12.18						
24	1.08	2.58	4.75	6.95	9.04	10.92							
25	1.12	2.69	4.95	7.24	9.41	11.38							
26	1.17	2.80	5.15	7.53	9.79	11.83							
28	1.26	3.02	5.54	8.11	10.54	12.75							
30	1.34	3.23	5.94	8.69	11.30								
32	1.43	3.51	6.51	9.53	12.05								
35	1.57	3.84	7.13	10.43	13.18								
40	1.79	4.39	8.14	11.92									
45	2.02	4.94	9.16	13.41									

NOTES: - Power transmission of chain with an offset link is 80% of the figures specified above.
 - Power transmission of SL chain is 60% of the figures specified above.



LEAF CHAINS

LEAF CHAINS (AL Series)	33
LEAF CHAINS (BL Series)	34



Leaf chain, also called a balance chain, features a simple steel structure consisting of plates and pins. This chain is used for load lifting and balancing.



Type

Leaf chain falls into two types; AL type for light loading and BL type for heavy loading.

AL type is used for applications without impact and with daily repetition of 100 times or less.

Selection

- Determine the following items according to operating conditions,
 - Chain speed
 - Daily repetition of power applications
 - Working load (attachment weight, inertia force, and impact force)
- Determine chain type.
 - BL type is recommended.
 - Use roller chain if speed exceeds 30m/min or number of daily repetition exceeds 1000.
- Determine chain size by the following equation.

$$\text{Working Load} \times \text{Service factor (Table 1)} \times \text{Safety Factor (Table 2)} \leq \text{Min. Tensile Strength}$$

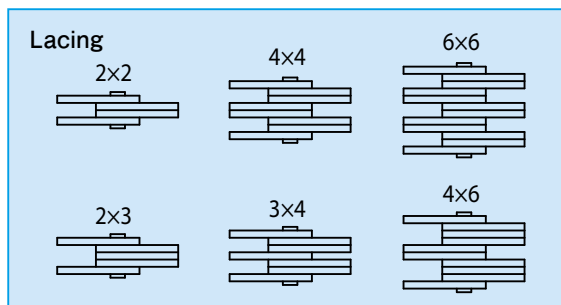


Table 1: Service factor

Type of impact	Service	Service factor
Smooth transmission	Smooth starts and stops, and moderate load change (i.e. lowering of balance-weight)	1.0
Impact to some extent	Frequent starts, stops, load changes and operations (i.e. fork lift)	1.3
Impact	Rapid starts, stops, load changes, and reversing operation (i.e. mining and construction machinery)	1.5

Table 2: Safety factor

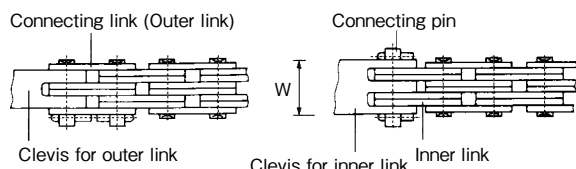
	Plate combination No. repetition	Safety factor	
		2×2, 3×4, 2×3, 4×4	4×6, 6×6
BL type	1,000 times or less/day	8 or more	9 or more
AL type	10 times or less/day	8 or more	9 or more
	100 times or less/day	11 or more	12 or more

Notes to Selection

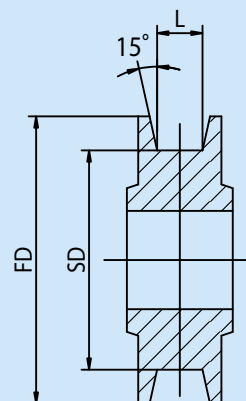
- Do not use a chain with low safety factor. Otherwise, pin will turn, resulting in dangerous chain failure.
- Perform periodic lubrication. Even when safety factor is satisfactory, insufficient lubrication will result in pin rotation.
- Safety factor of chain is defined by the related regulations, or by this bulletin, whichever is greater.

Attaching of Chains and Clevises

- When end is outer link or connecting link:
Outer link connector and connecting link (standard) are used.
- When end is inner link:
Inner link connector and connecting pin (with dimension "W") are used.



Sheave



SD (min. sheave dia.) = 5 x Chain pitch
 * L (min. groove width) = 1.05 x Pin length
 FD (flange dia.) = SD + Max. link plate width

(*) Connecting pin cannot be engaged with sheave.

Leaf Chain Operating Notes

1. Lubricate leaf chain periodically to avoid rotation of pin and reduce wear for extended service life.

Recommended oil: SAE30 - SAE40

Lubrication intervals: Determined to keep lubricant left on sliding portion between pin and inner link plate.

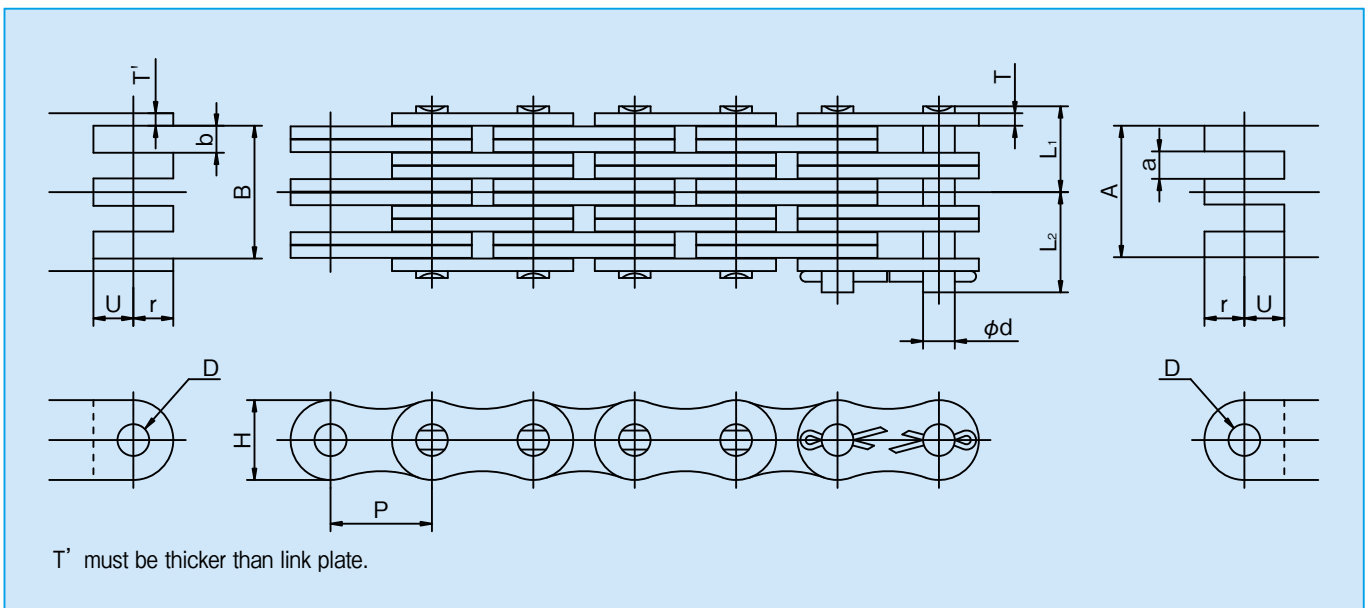
Lubrication method: Lubrication into space between link plates when chain is loosened.

2. Avoid use of chain in corrosive environment.

3. Measure chain length periodically to check for wear and elongation.

If elongation reaches its limit (3%), immediately replace chain.

AL Series



○ Dimensions

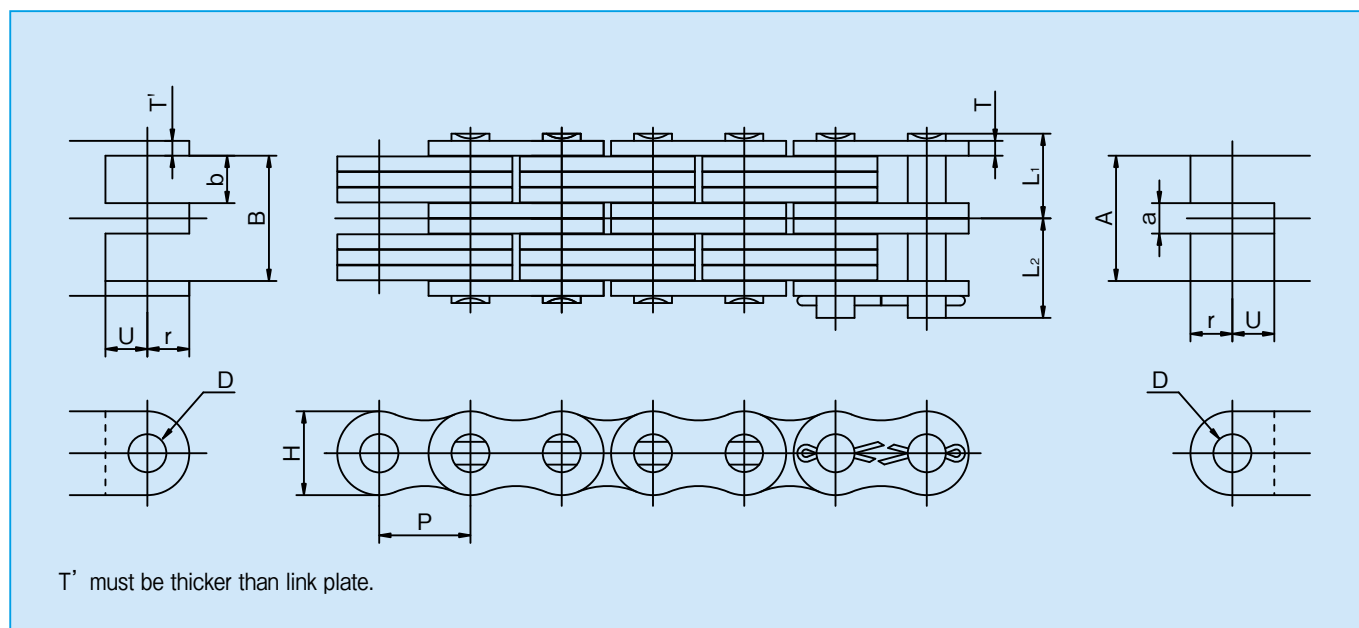
[Unit: mm]

KCM Chain No.	Pitch p	Plate			Pin			Min. Tensile Strength kN (kgf)	1-m chain weight (kg)	End connector						
		Lacing	Thickness T	Height H	Outside diameter ϕd	Caulked L_1	Pinned L_2			D Min.	r Max.	U Min.	A Max.	a Min.	B Min.	b Min.
KCM AL422	12.70	2×2	1.5	10.1	3.97	3.93	6.13	16.7 (1,700)	0.34	4.00	6.35	5.72	3.04	—	—	3.39
KCM AL444		4×4				6.98	9.18	33.3 (3,400)	0.68				9.47	3.39	9.82	
KCM AL466		6×6				10.05	12.25	50.0 (5,100)	1.03				15.90	16.25		
KCM AL522	15.875	2×2	2.0	12.6	5.09	5.2	7.15	27.5 (2,800)	0.61	5.11	7.92	7.14	4.03	—	—	4.44
KCM AL544		4×4				9.3	11.25	54.9 (5,600)	1.18				12.50	4.44	12.91	
KCM AL566		6×6				13.4	15.35	82.4 (8,400)	1.76				20.97	21.38		
KCM AL644	19.05	4×4	2.4	15.0	5.96	11.15	13.85	76.5 (7,800)	1.70	5.98	9.53	8.56	14.69	—	—	5.23
KCM AL666		6×6				16.13	18.83	114.7 (11,700)	2.53				24.65	5.23	25.15	
KCM AL844		4×4				14.43	17.53	129.4 (13,200)	2.92				19.80	7.00	20.40	
KCM AL866	6×6	20.93	24.35	194.2 (19,800)	4.35	33.20	33.80	7.00								
KCM AL1044	31.75	4×4	4.0	24.8	9.54	18.6	21.55	196.1 (20,000)	4.65	9.56	15.88	14.27	24.49	—	—	8.63
KCM AL1066		6×6				26.8	29.75	294.2 (30,000)	6.94				41.05	8.63	41.75	
KCM AL1244		4×4				18.6	21.55	282.4 (28,000)	6.70				29.30	30.10		
KCM AL1266	6×6	31.9	35.3	423.6 (43,200)	9.99	49.10	49.90	10.30								

NOTES: - Dimension "U", groove depth, excludes rounded area.

- It is required that end connector is made of alloy steel (SCM435, etc.) and properly heat treated to hardness of HRC 40 - 45.

BL Series



○ Dimensions

[Unit: mm]

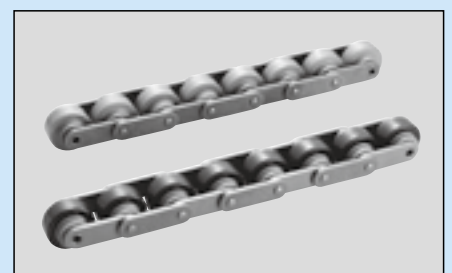
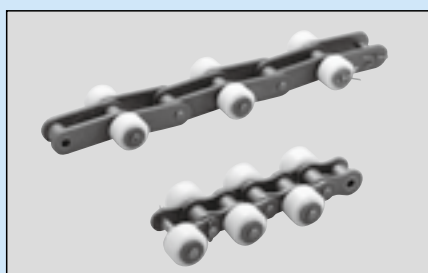
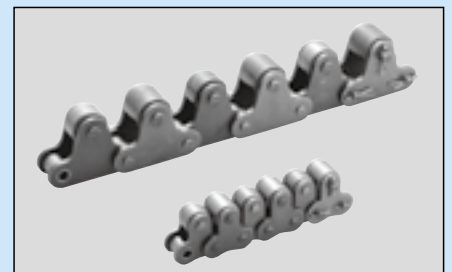
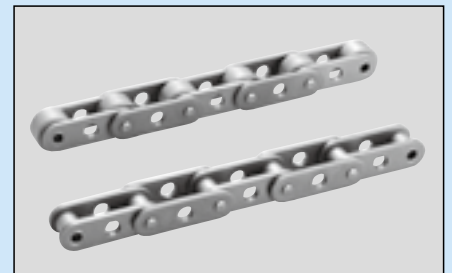
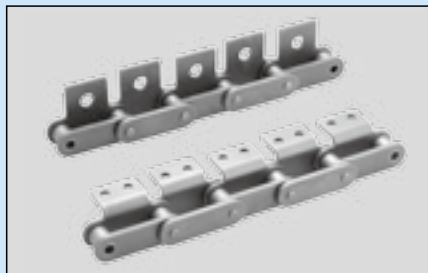
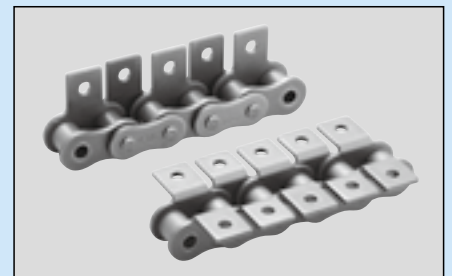
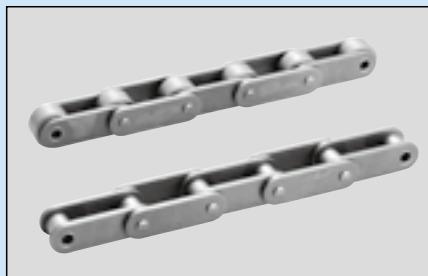
KCM Chain No.	Pitch P	Plate			Pin			Min. Tensile Strength kN (kgf)	1-m chain weight (kg)	End connector						
		Lacing	Thickness T	Height H	Outside diameter ϕd	Caulked L ₁	Pinned L ₂			D Min.	r Max.	U Min.	A Max.	a Min.	B Min.	b Min.
KCM BL423	12.7	2×3	2.0	11.7	5.09	6.22	8.18	23.50(2,400)	0.73	5.11	6.35	6.35	6.05	—	—	6.53
KCM BL434		3×4				8.27	10.23	35.30(3,600)	1.02				10.27	2.21	10.77	4.41
KCM BL446		4×6				11.35	13.30	47.10(4,800)	1.44				16.50	4.41	17.13	6.53
KCM BL523	15.875	2×3	2.4	14.6	5.96	7.42	10.13	39.20(4,000)	1.13	5.98	7.92	7.92	7.20	—	—	7.76
KCM BL534		3×4				9.92	12.63	58.80(6,000)	1.56				12.22	2.62	12.80	5.24
KCM BL546		4×6				13.62	16.33	78.50(8,000)	2.22				19.64	5.24	20.36	7.76
KCM BL623	19.05	2×3	3.2	17.5	7.94	9.55	12.65	63.70(6,500)	1.82	7.96	9.53	9.53	9.62	—	—	10.31
KCM BL634		3×4				12.80	15.90	95.60(9,750)	2.52				16.30	3.48	17.01	6.96
KCM BL646		4×6				17.67	20.78	127.50(13,000)	3.57				26.19	6.96	27.06	10.31
KCM BL823	25.4	2×3	4.0	23.0	9.54	12.45	15.40	103.00(10,500)	2.97	9.56	12.70	12.70	11.90	—	—	12.73
KCM BL834		3×4				16.55	19.50	154.90(15,800)	4.11				20.16	4.30	21.01	8.59
KCM BL846		4×6				22.70	25.65	205.90(21,000)	5.82				32.38	8.59	33.43	12.73
KCM BL1023	31.75	2×3	4.8	28.9	11.11	14.75	18.15	141.20(14,400)	4.43	11.14	15.88	15.88	14.22	—	—	15.21
KCM BL1034		3×4				19.65	23.05	215.70(22,000)	6.17				24.09	5.13	25.11	10.26
KCM BL1046		4×6				27.00	30.40	282.40(28,800)	8.78				38.70	10.26	39.96	15.21
KCM BL1223	38.1	2×3	5.6	35.0	12.71	17.25	21.25	186.30(19,000)	6.35	12.74	19.05	19.05	16.74	—	—	17.87
KCM BL1234		3×4				23.00	27.00	299.10(30,500)	8.71				28.35	6.03	29.51	12.05
KCM BL1246		4×6				31.62	35.63	372.70(38,000)	12.37				45.53	12.05	46.97	17.87

NOTES: - Dimension "U", groove depth, excludes rounded area.

- It is required that end connector is made of alloy steel (SCM435, etc.) and properly heat treated to hardness of HRC 40 - 45.

SMALL CONVEYOR CHAINS

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The double pitch roller chains for conveyor fall into two roller types: S-type (KCM Chain No. is suffixed with "0") and R-type (KCM Chain No. is suffixed with "2").

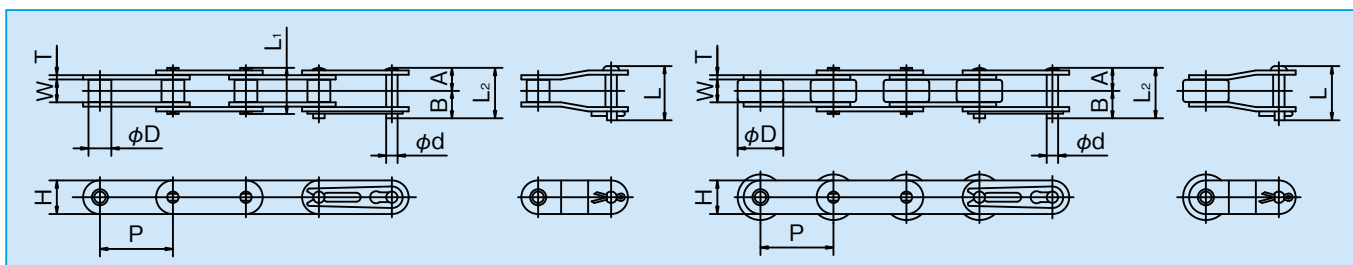
Using a variety of standard attachments, the double pitch roller chain can be used as a compact, high-precision conveyor.

Nickel plated models as well as stainless steel models are also available.

S Roller Type



R Roller Type



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H				
KCM C2040 KCM C2042	25.40	7.95	7.92 15.88	3.97	8.02	9.53	16.05	17.55	18.95	1.5	11.7	17.2(1,750)	2.65(270)	0.48 0.82	120
KCM C2050 KCM C2052	31.75	9.53	10.16 19.05	5.09	10.15	11.60	20.30	21.75	23.00	2.0	14.6	27.9(2,850)	4.31(440)	0.79 1.25	96
KCM C2060 KCM C2062	38.10	12.70	11.91 22.23	5.96	12.65	14.15	25.30	26.80	29.45	2.4	17.5	39.5(4,000)	6.28(640)	1.12 1.79	80
KCM C2060H KCM C2062H	38.10	12.70	11.91 22.23	5.96	14.25	15.75	28.50	30.00	32.65	3.2	17.5	39.5(4,000)	6.28(640)	1.43 2.11	80
KCM C2080 KCM C2082	50.80	15.88	15.88 28.58	7.94	16.07	19.18	32.15	35.25	36.90	3.2	23.0	68.6(7,000)	10.69(1,090)	1.88 2.92	60
KCM C2080H KCM C2082H	50.80	15.88	15.88 28.58	7.94	17.70	20.80	35.40	38.50	40.15	4.0	23.0	68.6(7,000)	10.69(1,090)	2.37 3.41	60
KCM C2100H KCM C2102H	63.50	19.05	19.05 39.67	9.54	21.72	24.68	43.45	46.40	48.30	4.8	28.9	106.9(10,900)	17.06(1,740)	3.53 5.68	48
KCM C2120H KCM C2122H	76.20	25.40	22.23 44.45	11.11	26.85	30.25	53.70	57.10	59.30	5.6	35.0	149.1(15,200)	23.93(2,440)	4.75 7.40	40

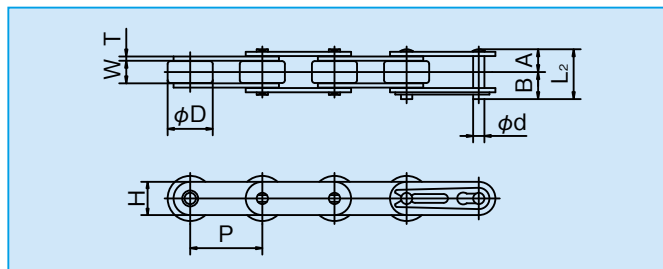
NOTES: - Connecting links for C2080 or larger models use split pins.

Sprockets: For S-roller type chains with teeth No. 29T (with 14 1/2 working teeth) or smaller, use the exclusively designed sprocket for double-pitch roller chains. For R-roller type chains, use the exclusively designed sprocket for R-roller type double pitch chains.

DL Type Double Pitch Roller Chain

DL type double pitch roller chain is another version of R type roller in which resin rollers are employed to reduce weight and travel noise. Nickel plated versions and stainless steel versions are also available. The DL type can be used with various attachments.

Resin Roller (DL)



○ Dimensions

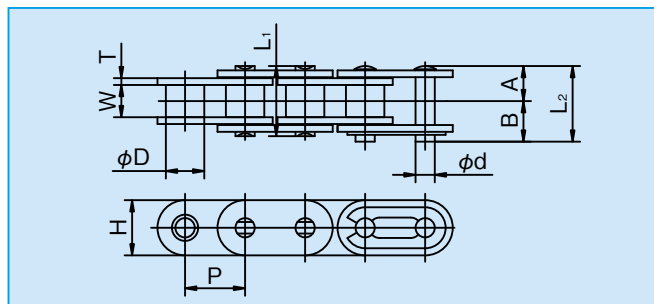
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Link Plate		Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H			
KCM C2042 DL	25.40	7.95	15.88	3.97	16.05	17.55	1.5	11.7	0.44 (45)	0.49	120
KCM C2052 DL	31.75	9.53	19.05	5.09	20.30	21.75	2.0	14.6	0.69 (70)	0.80	96
KCM C2062 DL	38.10	12.70	22.23	5.96	25.30	26.80	2.4	17.5	1.03(105)	1.10	80
KCM C2062H DL					28.50	30.00	3.2				
KCM C2082 DL	50.80	15.88	28.58	7.94	32.15	35.25	3.2	23.0	1.77(180)	1.83	60
KCM C2082H DL					35.40	38.50	4.0				
KCM C2102H DL	63.50	19.05	39.67	9.54	43.45	46.40	4.8	28.9	2.55(260)	3.42	48
KCM C2122H DL	76.20	25.40	44.45	11.11	53.70	57.10	5.6	35.0	3.82(390)	4.66	40

NOTES: - Connecting links for C2080 or larger models use split pins.

- **Sprockets:** For S-roller type chains with teeth No. 29T (with 14 1/2 working teeth) or smaller, use the exclusively designed sprocket for double-pitch roller chains. For R-roller type chains, use the exclusively designed sprocket for R-roller type double pitch chains.

The KCM F-type roller chains are standard roller chains using straight contour link plates, which are suitable for general power transmission, and conveying of materials placed directly on them.



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H				
KCM 40F	12.70	7.95	7.92	3.97	8.02	9.53	16.05	17.55	1.5	12.0	18.1 (1,850)	2.65 (270)	0.72	240
KCM 50F	15.875	9.53	10.16	5.09	10.15	11.60	20.30	21.75	2.0	14.6	29.9 (3,050)	4.31 (440)	1.20	192
KCM 60F	19.05	12.70	11.91	5.96	12.65	14.15	25.30	26.80	2.4	17.5	40.7 (4,200)	6.28 (640)	1.78	160
KCM 80F	25.40	15.88	15.88	7.94	16.07	19.18	32.15	35.25	3.2	23.0	72.6 (7,400)	10.70 (1,090)	2.97	120
KCM 100F	31.75	19.05	19.05	9.54	20.10	23.05	40.20	43.15	4.0	28.9	112.8 (11,500)	17.10 (1,740)	4.57	96

NOTES: - Offset links are not available.

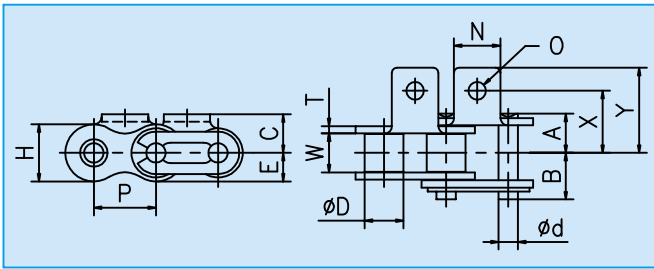
- **Sprockets:** KCM standard sprocket can be used.
Boss diameter must be reduced to avoid interference with link plate.

The roller chains fitted with high-precision attachments are best suited for compact conveyors with small pitches and high precision transferring capability.

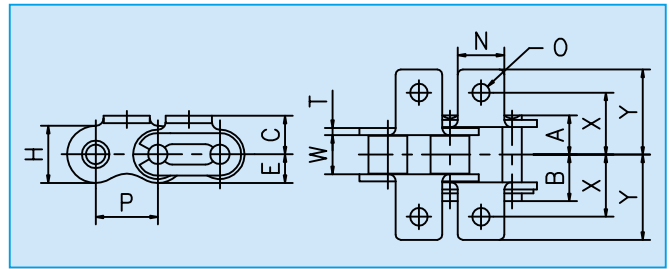
Standard Attachments



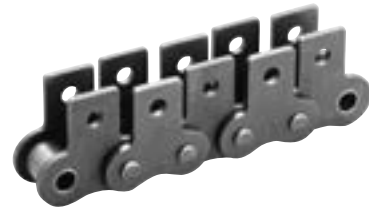
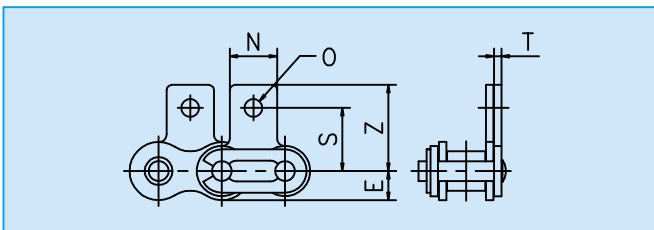
A-1 Attachments



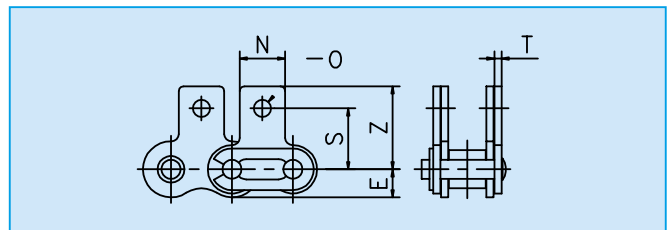
K-1 Attachments



SA-1 Attachments



SK-1 Attachments



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Link Plate		Standard/Rustop (N)			Stainless steel (SS)		Links of 1 unit
				Dia. d	A	B	Thickness T	Height H	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	
KCM 25	6.35	3.18	*3.30	2.31	3.80	4.40	0.75	5.8	4.1 (425)	0.64 (65)	0.15	0.12 (12)	0.16	480
KCM 35	9.525	4.78	*5.08	3.59	5.77	7.28	1.25	8.8	10.2 (1,040)	1.52 (155)	0.33	0.26 (27)	0.33	320
KCM 40	12.70	7.95	7.92	3.97	8.07	9.48	1.5	11.7	17.2 (1,750)	2.65 (270)	0.61	0.44 (45)	0.63	240
KCM 50	15.875	9.53	10.16	5.09	10.17	11.63	2.0	14.6	27.9 (2,850)	4.31 (440)	1.01	0.69 (70)	1.04	192
KCM 60	19.05	12.70	11.91	5.96	12.7	14.2	2.4	17.5	39.5 (4,000)	6.28 (640)	1.49	1.03 (105)	1.50	160
KCM 80	25.40	15.88	15.88	7.94	16.15	19.25	3.2	23.0	68.6 (7,000)	10.69 (1,090)	2.50	1.77 (180)	2.62	120
KCM 100	31.75	19.05	19.05	9.54	20.1	23.05	4.0	28.9	106.9 (10,900)	17.06 (1,740)	3.85	2.55 (260)	4.09	96
KCM 120	38.10	25.40	22.23	11.11	25.2	28.6	4.8	35.0	149.1 (15,200)	23.93 (2,440)	5.66	—	—	80

NOTE: Connecting links of KCM80 or larger models are of split pin type. Figures marked with asterisk * imply bush diameter.

○ Dimensions

[Unit: mm]

KCM Chain No.	Attachments									Additional Weight per Attachment (kg)	
	N	O	E	C	X	Y	S	Z	A, SA-1	K, SK-1	
KCM 25	5.6	3.4	2.9	4.75	7.15	10.7	7.95	11.9	0.0003	0.0006	
KCM 35	7.9	3.4	4.4	6.35	9.5	13.8	9.5	14.25	0.0009	0.0018	
KCM 40	9.5	3.6	5.8	7.9	12.7	17.4	12.7	17.3	0.0014	0.0028	
KCM 50	12.7	5.2	7.3	10.3	15.9	22.3	15.9	22.3	0.0032	0.0062	
KCM 60	15.9	5.2	8.8	11.9	19.05	27.2	18.3	26.3	0.0056	0.012	
KCM 80	19.1	6.8	11.5	15.9	25.4	35.2	24.6	34.2	0.013	0.026	
KCM 100	25.4	8.7	14.4	19.8	31.75	44.7	31.8	44.1	0.025	0.050	
KCM 120	28.6	10.3	17.5	23.0	38.1	52.5	36.55	50.9	0.038	0.076	

NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

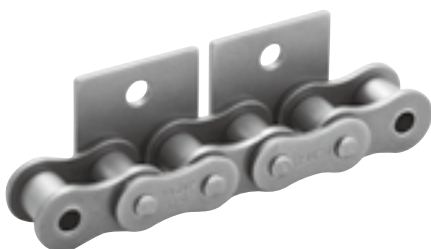
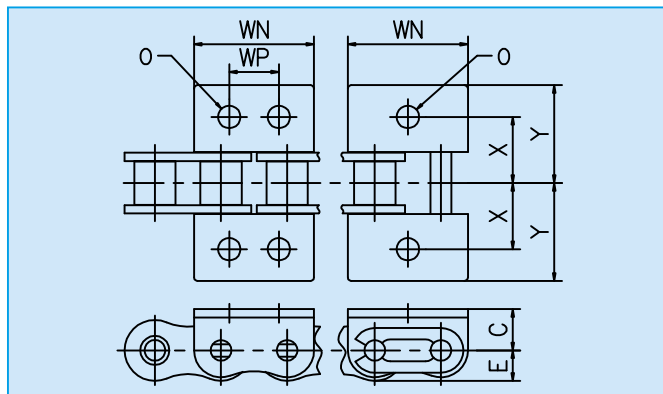
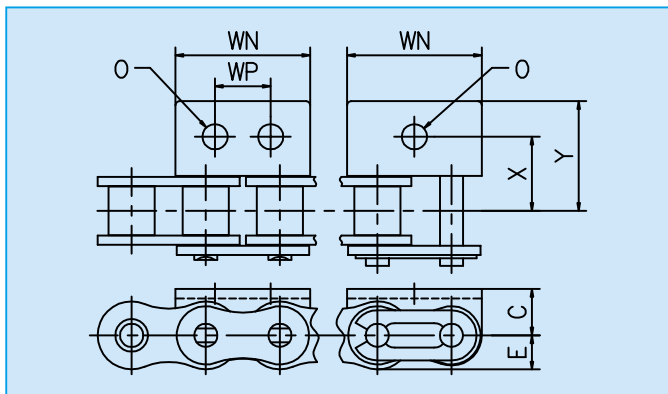
These attachments are a widened version of the standard attachments, which are suitable for large slat and metal pieces.

Wide Attachments



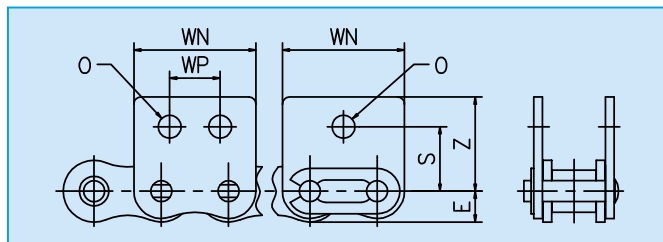
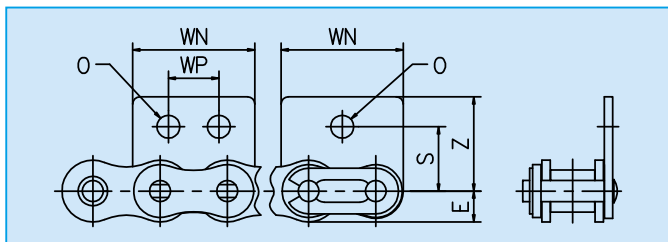
WA-1, WA-2 Attachments

WK-1, WK-2 Attachments



WSA-1, WSA-2 Attachments

WSK-1, WSK-2 Attachments



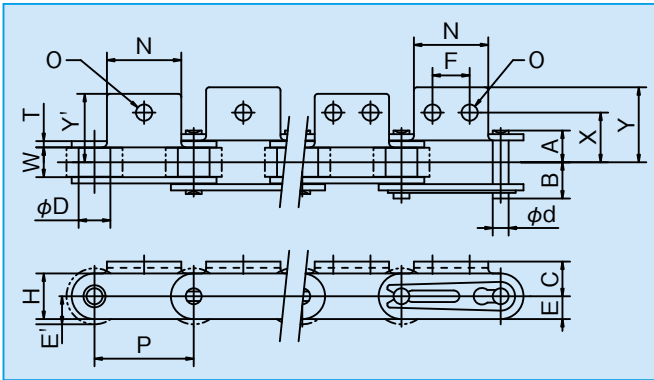
○ Dimensions

[Unit: mm]

KCM Chain No.	Attachments										Additional Weight per Attachment (kg)		Inner Link WN
	WN	WP	O	E	C	X	Y	S	Z	WA, WSA	WK, WSK		
KCM 40	23.0	9.5	4.5	5.05	7.9	12.7	17.4	12.5	17.3	0.003	0.006	24.4	
KCM 50	28.8	11.9	5.5	7.3	10.3	15.9	23.0	15.9	22.6	0.007	0.014	30.475	
KCM 60	34.6	14.3	6.6	8.8	11.9	19.05	28.2	18.3	26.7	0.013	0.026	36.55	
KCM 80	46.1	19.1	9.0	10.35	15.9	25.4	36.6	24.6	35.4	0.030	0.060	48.4	

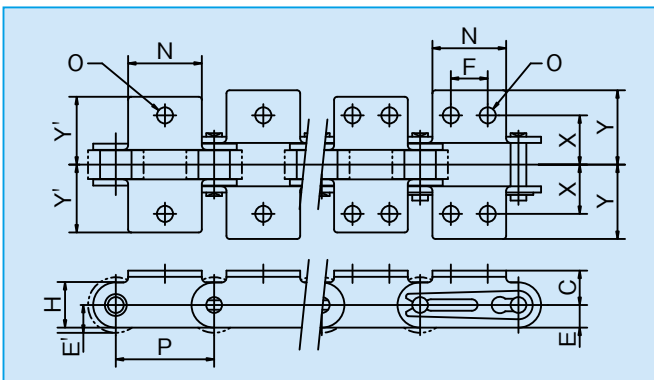
NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

Standard Attachments



A-1 Attachments

K-1 Attachments



A-2 Attachments

K-2 Attachments



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Link Plate		Standard/Rustop (N)			Stainless steel (SS)		Links of 1 unit
				Dia. d	A	B	Thickness T	Height H	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	
KCM C2040 KCM C2042	25.40	7.95	7.92 15.88	3.97	8.05	9.6	1.5	11.7	17.2 (1,750)	2.63 (270)	0.48 0.82	0.44 (45)	0.49 0.83	120
KCM C2050 KCM C2052	31.75	9.53	10.16 19.05	5.09	10.15	11.65	2.0	14.6	27.9 (2,850)	4.31 (440)	0.79 1.25	0.69 (70)	0.83 1.28	96
KCM C2060 KCM C2062	38.10	12.70	11.91 22.23	5.96	12.70	15.40	2.4	17.5	39.5 (4,000)	6.28 (640)	1.12 1.79	1.03 (105)	1.19 1.88	80
KCM C2060H KCM C2062H	38.10	12.70	11.91 22.23	5.96	14.25	15.75	3.2	17.5	39.5 (4,000)	6.28 (640)	1.43 2.11	1.03 (105)	1.46 2.14	80
KCM C2080 KCM C2082	50.80	15.88	15.88 28.58	7.94	16.15	19.25	3.2	23.0	68.6 (7,000)	10.69 (1,090)	1.88 2.92	1.77 (180)	2.08 3.13	60
KCM C2080H KCM C2082H	50.80	15.88	15.88 28.58	7.94	17.70	20.80	4.0	23.0	68.6 (7,000)	10.69 (1,090)	2.37 3.41	1.77 (180)	2.44 3.50	60
KCM C2100H KCM C2102H	63.50	19.05	19.05 39.67	9.54	21.75	24.70	4.8	28.9	106.9 (10,900)	17.06 (1,740)	3.53 5.68	2.55 (260)	3.74 5.98	48

NOTE: Connecting links for the KCM C2080 or larger models use split pins.

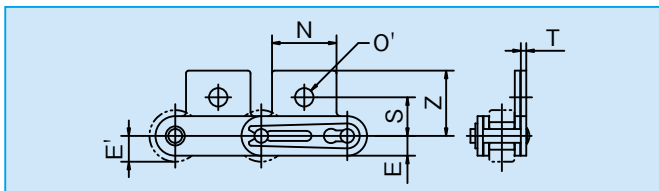
○ Dimensions

[Unit: mm]

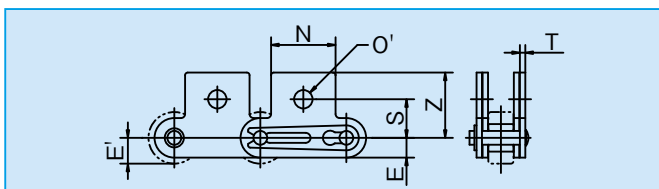
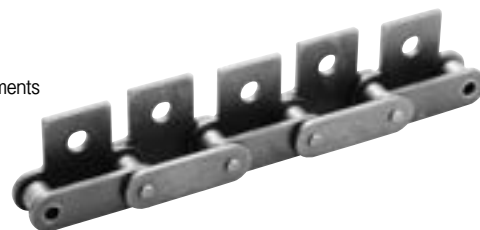
KCM Chain No.	Attachments									Additional Weight per Attachment (kg)	
	N	O	C	E(E')	X	PL side Y	RL side Y'	F	A-1, A-2	K-1, K-2	
KCM C2040 KCM C2042	19.1	3.6	9.1	5.9 (7.9)	12.7	19.0	17.4	9.5	0.003	0.006	
KCM C2050 KCM C2052	23.8	5.2	11.1	7.3 (9.5)	15.9	24.0	21.9	11.9	0.007	0.014	
KCM C2060 KCM C2062	28.6	5.2	14.7	8.8 (11.1)	21.45	29.6	27.0	14.3	0.013	0.026	
KCM C2060H KCM C2062H	28.6	5.2	14.7	8.8 (11.1)	21.45	31.8	28.4	14.3	0.016	0.032	
KCM C2080 KCM C2082	38.1	6.8	19.1	11.5 (14.3)	27.8	41.1	37.0	19.1	0.028	0.056	
KCM C2080H KCM C2082H	38.1	6.8	19.1	11.5 (14.3)	27.8	41.1	37.0	19.1	0.033	0.066	
KCM C2100H KCM C2102H	47.6	8.7	23.4	14.5 (19.8)	33.3	50.0	45.0	23.8	0.063	0.126	

NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

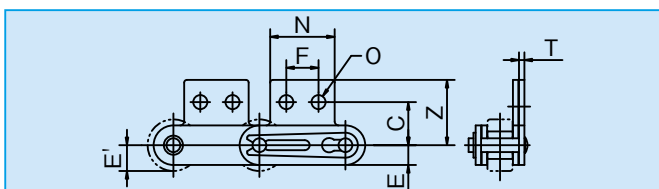
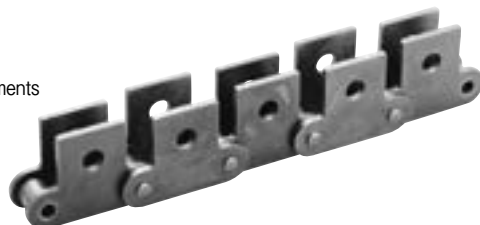
Standard Attachments



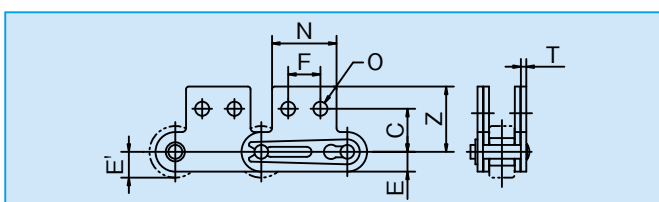
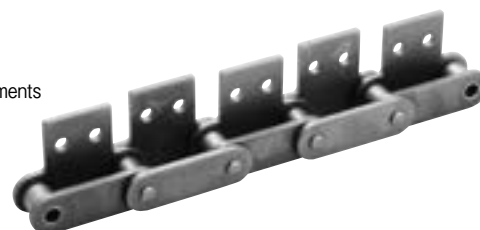
SA-1 Attachments



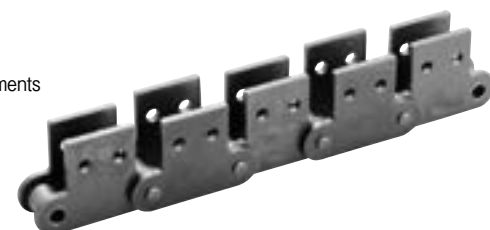
SK-1 Attachments



SA-2 Attachments



SK-2 Attachments



○ Dimensions

[Unit: mm]

KCM Chain No.	Attachments								Additional Weight per Attachment (kg)	
	N	O	O'	C	S	E(E')	Z	F	SA-1, SA-2	SK-1, SK-2
KCM C2040 KCM C2042	19.1	3.6	5.2	13.5	11.1	5.9 (7.9)	19.75	9.5	0.003	0.006
KCM C2050 KCM C2052	23.8	5.2	6.8	15.9	14.3	7.3 (9.5)	24.55	11.9	0.006	0.012
KCM C2060 KCM C2062	28.6	5.2	8.7	19.05	17.5	8.8 (11.1)	31.05	14.3	0.013	0.026
KCM C2060H KCM C2062H	28.6	5.2	8.7	19.05	17.5	8.8 (11.1)	31.05	14.3	0.016	0.032
KCM C2080 KCM C2082	38.1	6.8	10.3	25.4	22.2	11.5 (14.3)	40.8	19.1	0.027	0.055
KCM C2080H KCM C2082H	38.1	6.8	10.3	25.4	22.2	11.5 (14.3)	40.8	19.1	0.031	0.062
KCM C2100H KCM C2102H	47.6	8.7	13.5	31.75	28.6	14.5 (19.8)	50.8	23.8	0.053	0.106

NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

EP Attachments

These EP roller chain attachments are attachments with extra extended pins.

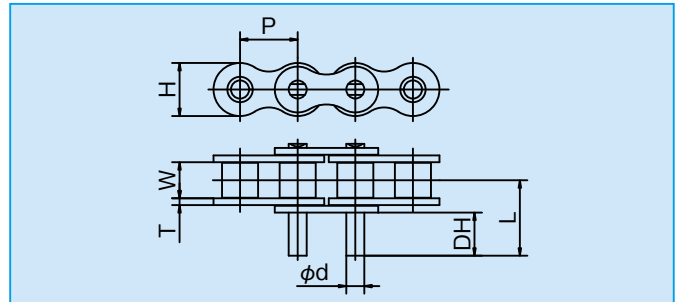
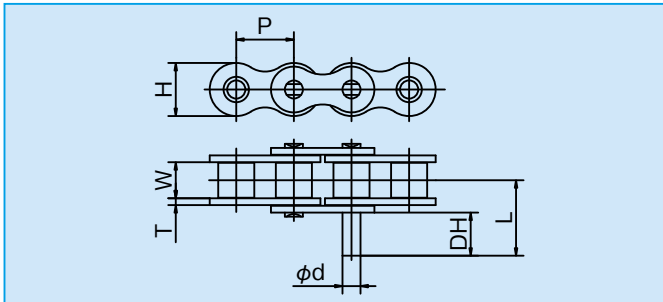
Two roller chains with EP attachments are arranged in parallel so that their extended pins faced to each other to carry pipes, metal pieces, etc.



2P EP Attachments



1P EP Attachments



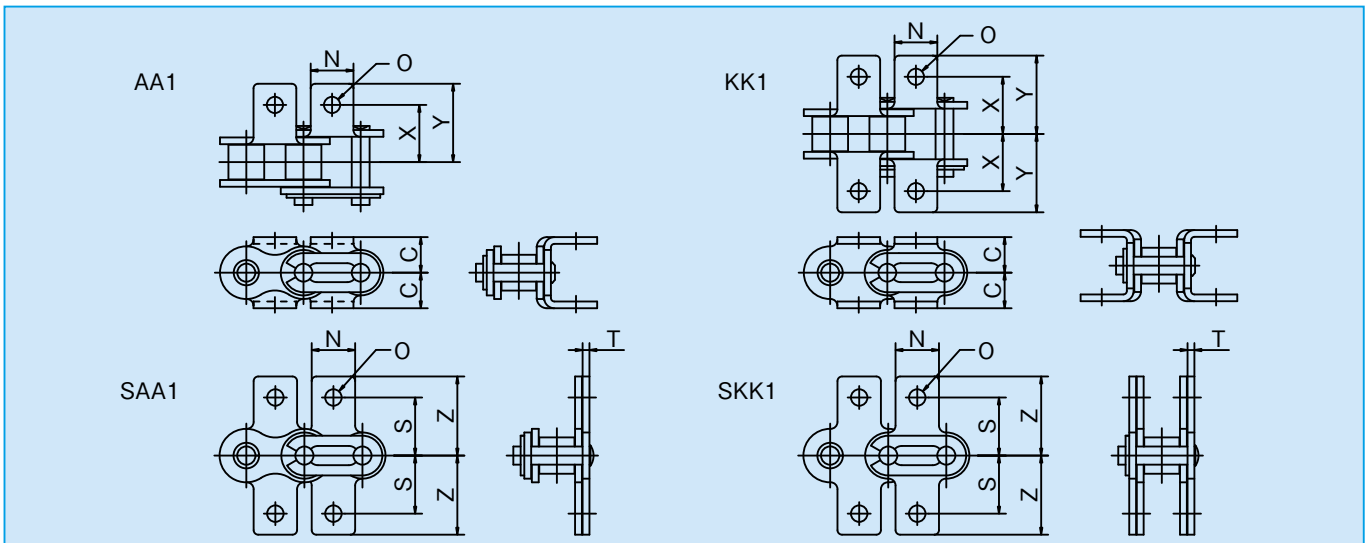
○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates		Roller Dia. D	Pin			Link Plate		Attachments		Additional Weight per Attachment (kg)		Links of 1 unit
		W	D		Dia. d	A	B	Thickness T	Height H	DH	L	2P EP	1P EP	
KCM 35	9.525	4.78	*5.08	3.59	5.70	7.10	1.25	8.8	9.5	14.5	0.0007	0.0014	320	
KCM 40	12.70	7.95	7.92	3.97	8.05	9.55	1.5	11.7	9.5	16.65	0.0009	0.0018	240	
KCM 50	15.875	9.53	10.16	5.09	10.15	11.60	2.0	14.6	11.9	20.9	0.0017	0.0034	192	
KCM 60	19.05	12.70	11.91	5.96	12.65	14.15	2.4	17.5	14.3	25.65	0.0034	0.006	160	
KCM 80	25.40	15.88	15.88	7.94	16.10	19.20	3.2	23.0	19.0	33.6	0.007	0.014	120	
KCM 100	31.75	19.05	19.05	9.54	20.10	23.05	4.0	28.9	23.8	41.6	0.012	0.024	96	
KCM 120	38.10	25.40	22.23	11.11	25.20	28.60	4.8	35.0	28.6	51.2	0.020	0.040	80	
KCM 140	44.45	25.40	25.40	12.71	27.30	31.30	5.6	40.7	33.3	57.6	0.030	0.060	68	
KCM 160	50.80	31.75	28.58	14.29	32.45	37.15	6.4	46.7	38.1	67.3	0.044	0.080	60	

NOTES: - KCM attachment chains are available in stainless steel in the same dimensions. Asterisk (*) implies bush diameter.
- Connecting links for the KCM80 or larger models use split pins.

Other Attachments



○ Dimensions

[Unit: mm]

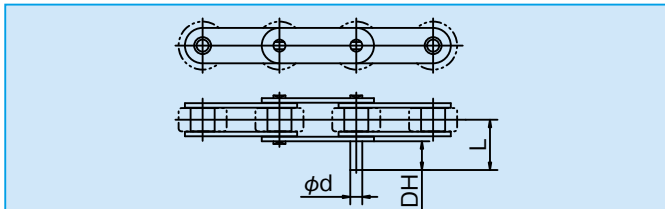
KCM Chain No.	Attachments								Additional Weight per Attachment (kg)	
	N	O	C	X	Y	S	Z	AA, SAA	KK, SKK	
KCM 40	9.5	4.5	7.9	12.7	17.4	12.7	17.3	0.003	0.006	
KCM 50	12.7	5.5	10.3	15.9	22.3	15.9	22.3	0.006	0.012	
KCM 60	15.9	6.6	11.9	19.05	27.2	18.25	26.3	0.010	0.020	
KCM 80	19.1	9.0	15.9	25.4	35.2	24.6	34.2	0.024	0.048	
KCM 100	25.4	11.0	19.85	31.75	44.7	31.75	44.6	0.050	0.100	

NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

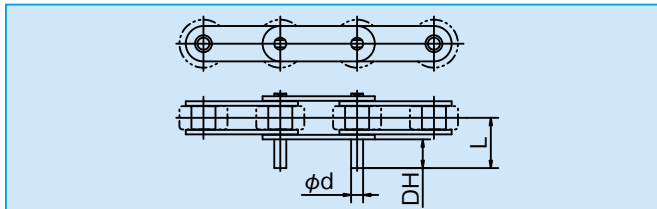
EP Attachments



2P EP Attachments



1P EP Attachments

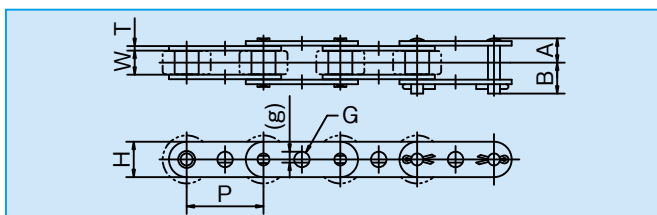
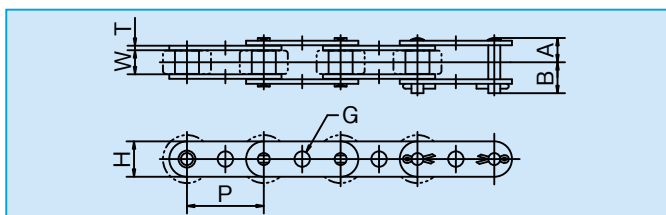


G Attachments

The G attachment is a link plate having a hole at midpoint.

Two roller chains with G-type attachments are arranged wide in parallel, using pins or bars engaged in the midpoint holes.

(NOTE: When used with the R-type roller chains, pay attention to the sprockets.)



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Link Plate		Standard/Rustop (N)		Stainless steel (SS)		Links of 1 unit	
				Dia. d	A	B	Thickness T	Height H	Ave. Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Max. Allowable Load kN (kgf)		Approx. Weight (kg/m)
KCM C2040 KCM C2042	25.40	7.95	7.92 15.88	3.97	8.05	9.60	1.5	11.7	17.2(1,750)	2.65(270)	0.48 0.82	0.44(45)	0.49 0.83	120
KCM C2050 KCM C2052	31.75	9.53	10.16 19.05	5.09	10.15	11.65	2.0	14.6	27.9(2,850)	4.31(440)	0.79 1.25	0.69(70)	0.83 1.28	96
KCM C2060 KCM C2062	38.10	12.70	11.91 22.23	5.96	12.70	15.40	2.4	17.5	39.5(4,000)	6.28(640)	1.12 1.79	1.03(105)	1.19 1.88	80
KCM C2060H KCM C2062H	38.10	12.70	11.91 22.23	5.96	14.25	15.75	3.2	17.5	39.5(4,000)	6.28(640)	1.43 2.11	1.03(105)	1.46 2.14	80
KCM C2080 KCM C2082	50.80	15.88	15.88 28.58	7.94	16.15	19.25	3.2	23.0	68.6(7,000)	10.69(1,090)	1.88 2.92	1.77(180)	2.08 3.13	60
KCM C2080H KCM C2082H	50.80	15.88	15.88 28.58	7.94	17.70	20.80	4.0	23.0	68.6(7,000)	10.69(1,090)	2.37 3.41	1.77(180)	2.44 3.50	60
KCM C2100H KCM C2102H	63.50	19.05	19.05 39.67	9.54	21.75	24.70	4.8	28.9	106.9(10,900)	17.06(1,740)	3.53 5.68	2.55(260)	3.74 5.98	48
KCM C2120H KCM C2122H	76.20	25.40	22.23 44.45	11.11	26.85	30.25	5.6	35.0	149.1(15,200)	23.93(2,440)	4.75 7.40	—	—	40

NOTE: Connecting links for the C2080 or larger models use split pins.

○ Dimensions

[Unit: mm]

KCM Chain No.	D Attachments		G Attachments				Additional Weight per Attachment (kg)	
	DH	L	G (g)				2P EP	1P EP
KCM C2040 KCM C2042	9.5	16.65	4.1	5.1	6.1	6.5(5.5)	0.0009	0.0018
KCM C2050 KCM C2052	11.9	20.95	5.1(4.1)	6.1(5.1)	6.5	8.1(7.1)	0.0017	0.0034
KCM C2060 KCM C2062	14.3	25.65					0.003	0.006
KCM C2060H KCM C2062H	14.3	27.25	4.1	6.1(5.1)	7.9	8.1(7.1)	0.003	0.006
KCM C2080 KCM C2082	19.0	33.6					0.007	0.014
KCM C2080H KCM C2082H	19.0	35.2	8.1(7.1)	9.1(8.1)	10.1(8.6)	12.1(10.3)	0.007	0.014
KCM C2100H KCM C2102H	23.8	43.25	12.2(10.2)				0.012	0.024
KCM C2120H KCM C2122H	28.6	52.85	16.2(14.2)				0.020	0.040

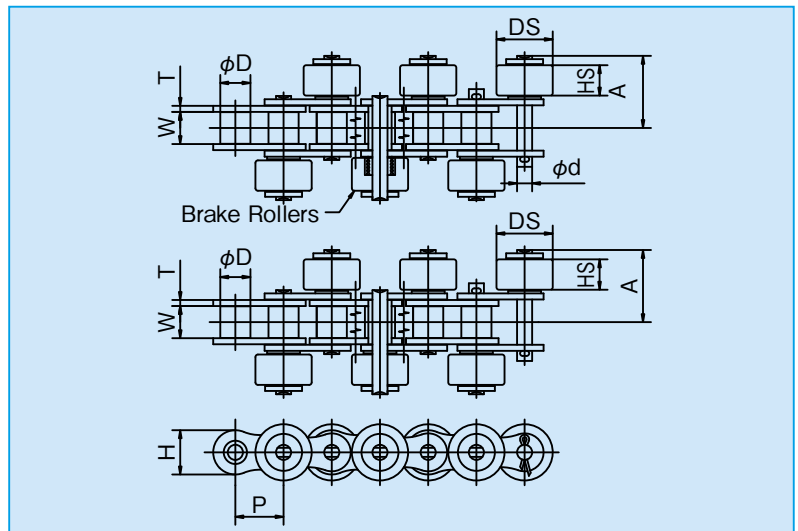
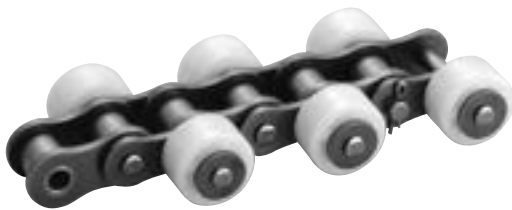
NOTE: KCM attachment chains are available in stainless steel in the same dimensions.

The standard roller chain is fitted with side rollers for free flow to quickly carry or accumulate materials on them.

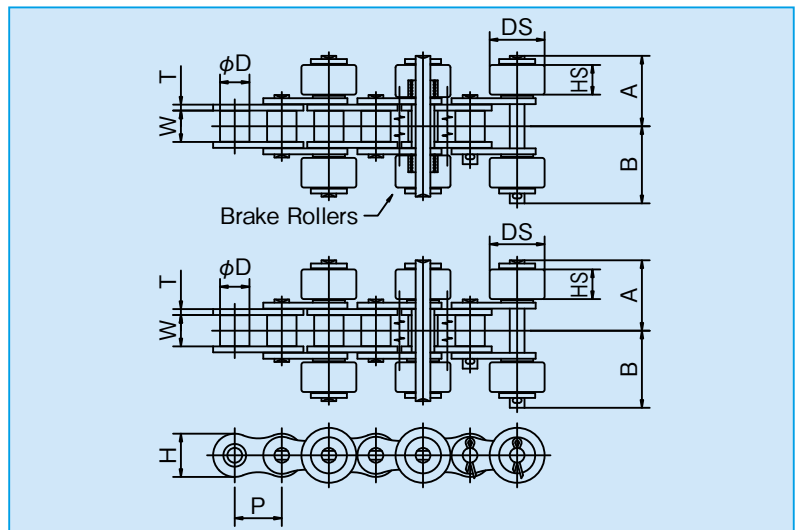
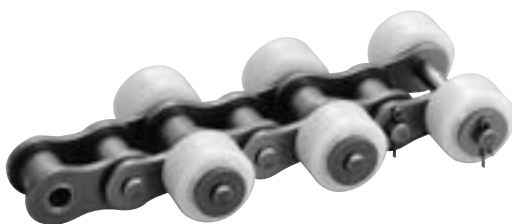
Return line layout is also simple and compact.

Side rollers made of steel, plastics, and rubber are available. Select them according to the kinds of transferred goods.

1P Alternate Side Type



2P Both Side Type



Please specify the interval between brakes.

○ Dimensions

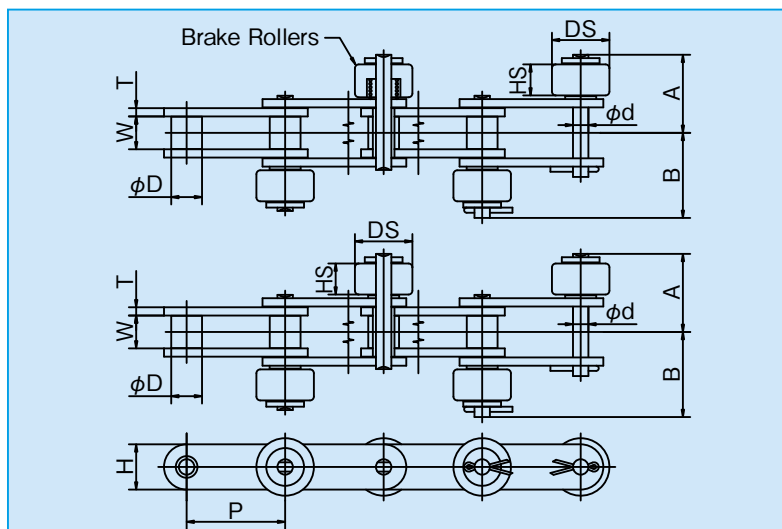
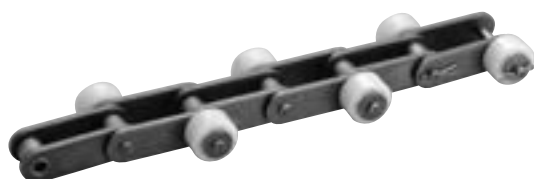
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Side Roller		Additional Weight per Side Roller (kg)		
				Dia. d	A	B	DS	HS	Steel	Plastic	Rubber
KCM 40	12.70	7.95	7.92	3.97	18.475	20.675	15.88	7.8	0.014	0.004	0.007
KCM 50	15.875	9.53	10.16	5.09	22.5	24.5	19.05	9.4	0.024	0.006	0.012
KCM 60	19.05	12.70	11.91	5.96	28.5	31.2	22.23	12.6	0.043	0.010	0.025
KCM 80	25.40	15.88	15.88	7.94	36.25	39.35	28.58	15.7	0.086	0.025	0.045
KCM 100	31.75	19.05	19.05	9.54	44.1	47.05	39.69	18.8	0.195	0.055	0.092

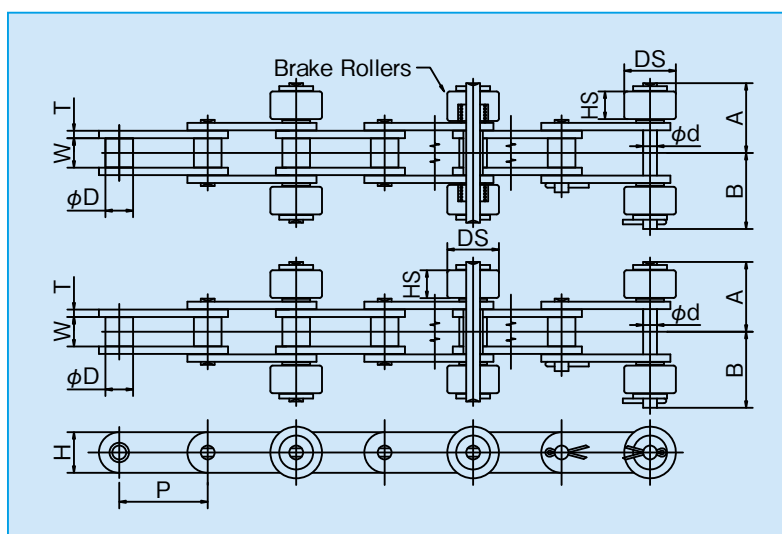
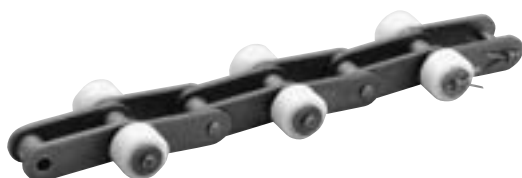
Sprocket: When KCM Standard "B Type" sprockets are used, side rollers may contact with or climb up on boss sprockets. Attention to the bosses for KCM 40 with up to 23T, KCM 50 with up to 18T, KCM 60 with up to 13T, KCM 80 with 9T, 13T, and 15T, and KCM 100 with up to 13T.

R-type roller chains, made of standard steel, plastics, and rubber, are available, similar to side rollers.
 Select them according to the transferred goods and environmental conditions.

1P Alternate Side Type



2P Both Side Type



Please specify the interval between brakes.

○ Dimensions

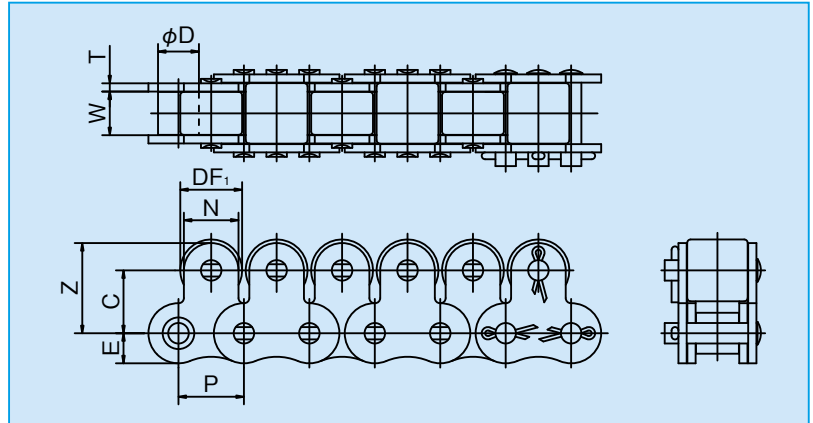
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Side Roller		Additional Weight per Side Roller (kg)		
				Dia. d	A	B	DS	HS	Steel	Plastic	Rubber
KCM C2040	25.40	7.95	7.92	3.97	18.475	20.675	15.88	7.8	0.014	0.004	0.007
KCM C2042			15.88				23.0		0.029	0.007	0.016
KCM C2050	31.75	9.53	10.16	5.09	22.5	24.5	19.05	9.4	0.024	0.006	0.012
KCM C2052			19.05				27.0		0.050	0.013	0.030
KCM C2060H	38.10	12.70	11.91	5.96	30.1	32.8	22.23	12.6	0.043	0.010	0.025
KCM C2062H			22.23				30.0		0.077	0.019	0.049
KCM C2080H	50.80	15.88	15.88	7.94	37.85	40.95	28.58	15.7	0.086	0.025	0.045
KCM C2082H			28.58				38.1		0.150	0.038	0.095
KCM C2100H	63.50	19.05	19.05	9.54	45.725	48.675	39.69	18.8	0.195	0.055	0.092
KCM C2102H			39.67				50.8		0.320	0.072	0.205

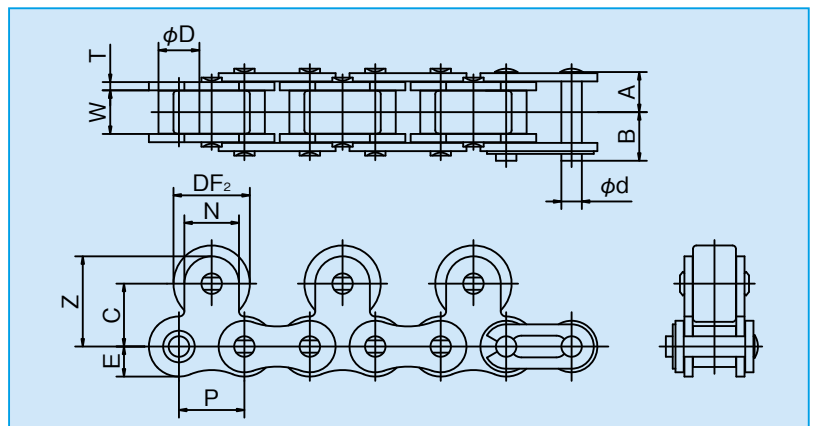
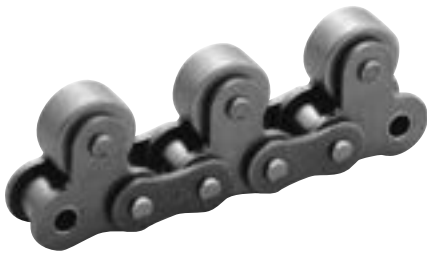
Sprocket: Standard and exclusively designed sprockets can be used.

The roller chains are provided with raised carrying rollers at midpoint of chain pitch for quick carrying and accumulating of materials. Top rollers, made of steel, plastic, and rubber, are available.

Top Roller Arrangement in Single Pitch



Top Roller Arrangement in Double Pitch



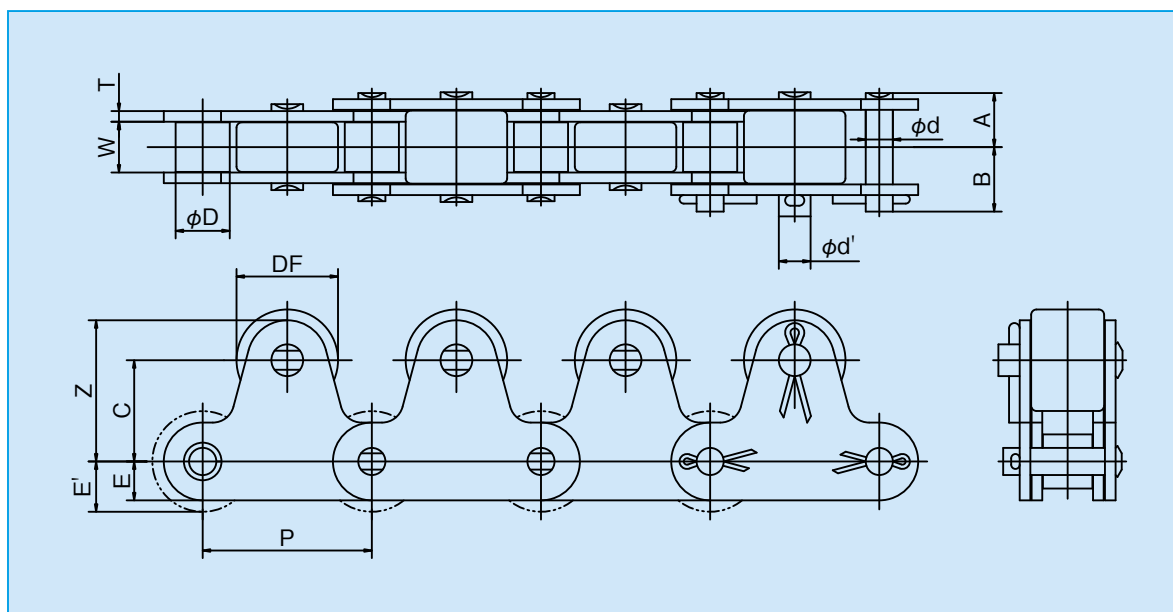
○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Attachments						Approx. Weight (kg/m)			
				Dia. d	A	B	Top rollers		C	Z	N	E	Steel		Plastic	
							DF ₁	DF ₂					1P	2P	1P	2P
KCM 40	12.70	7.95	7.92	3.97	8.07	9.48	11.0	15.88	12.7	17.45	9.5	5.9	1.83	1.41	0.92	0.85
KCM 50	15.875	9.53	10.16	5.09	10.17	11.63	15.0	19.05	15.9	22.25	12.7	7.3	2.39	2.18	1.56	1.38
KCM 60	19.05	12.70	11.91	5.96	12.70	14.20	18.0	22.23	18.3	26.25	15.9	8.8	3.60	3.18	2.30	2.03
KCM 80	25.40	15.88	15.88	7.94	16.15	19.25	24.0	28.58	24.6	34.15	19.1	11.5	6.09	5.27	3.90	3.44
KCM 100	31.75	19.05	19.05	9.54	20.10	23.05	30.0	39.69	31.8	44.50	25.4	14.5	9.30	8.85	6.06	5.41

NOTES: - For allowable load of top roller, see page 54.

- Connecting links for the KCM80 or larger models use split pins.



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin			Attachments				Additional Weight per Attachment (kg)
				Dia. d (d')	A (A')	B (B')	DF	C	Z	E (E')	
KCM C2040	25.40	7.95	7.92	3.97	8.02	9.53	15.88	15.0	21.0	5.9	0.021
KCM C2042			15.88	(5.09)	(8.3)	(10.2)				(7.9)	
KCM C2050	31.75	9.53	10.16	5.09	10.15	11.60	19.05	19.0	26.5	7.3	0.038
KCM C2052			19.05	(5.96)	(10.35)	(13.05)				(9.5)	
KCM C2060H	38.10	12.70	11.91	5.96	14.25	15.75	22.23	23.0	32.0	8.8	0.080
KCM C2062H			22.23	(7.94)	(14.4)	(17.55)				(11.1)	
KCM C2080H	50.80	15.88	15.88	7.94	17.7	20.8	28.58	29.0	40.5	11.5	0.165
KCM C2082H			28.58	(11.11)	(17.9)	(22.2)				(14.3)	
KCM C2100H	63.50	19.05	19.05	9.54	21.72	24.68	39.69	35.4	49.7	14.5	0.340
KCM C2102H			39.67	(14.28)	(22.02)	(27.43)				(19.8)	

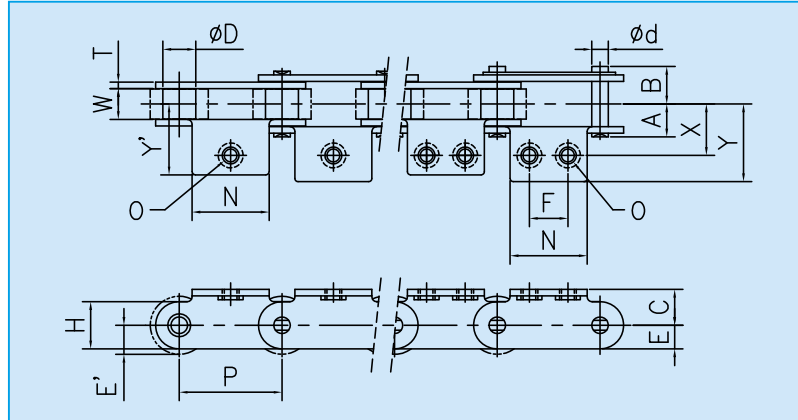
NOTES: - When used with the R-type roller chains, pay attention to the sprockets.

- For allowable load of top roller, see page 54.

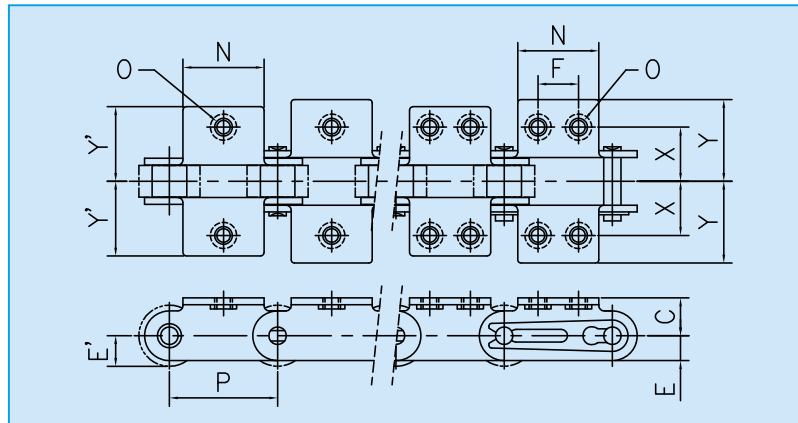
- Connecting links for the C2080 or larger models use split pins.

This is a double-pitch chain fitted with attachment burred and tapped. The installation such as slats is easy.

A-1, A-2 Burring Attachments



K-1, K-2 Burring Attachments



○ Dimensions

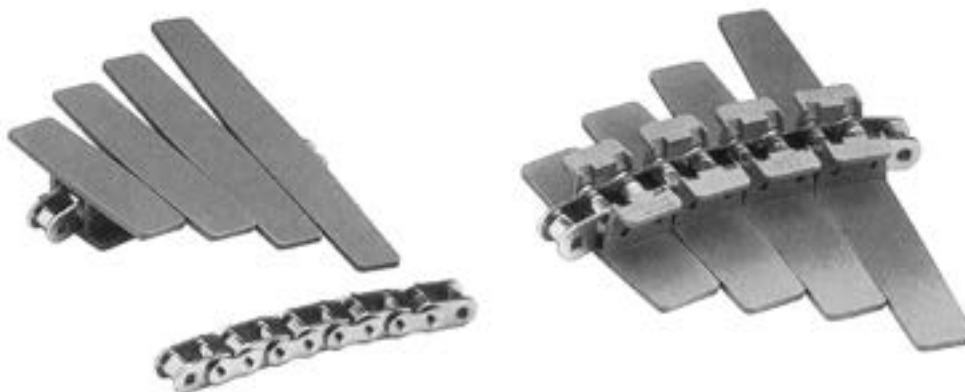
[Unit: mm]

KCM Chain No.	Attachments								Additional Weight per Attachment (kg)	
	N	O	C	E(E')	X	PL side Y	RL side Y'	F	A-1,A-2	K-1,K-2
KCM C2040	19.1	M4	9.1	5.9(7.9)	12.7	19.0	17.4	9.5	0.003	0.006
KCM C2042										
KCM C2050	23.8	M5	11.1	7.3(9.5)	15.9	24.0	21.9	11.9	0.007	0.014
KCM C2052										
KCM C2060H	28.6	M6	14.7	8.8(11.1)	21.45	31.8	28.4	14.3	0.016	0.032
KCM C2062H										
KCM C2080H	38.1	M8	19.1	11.5(14.3)	27.8	41.1	37.0	19.1	0.033	0.066
KCM C2082H										

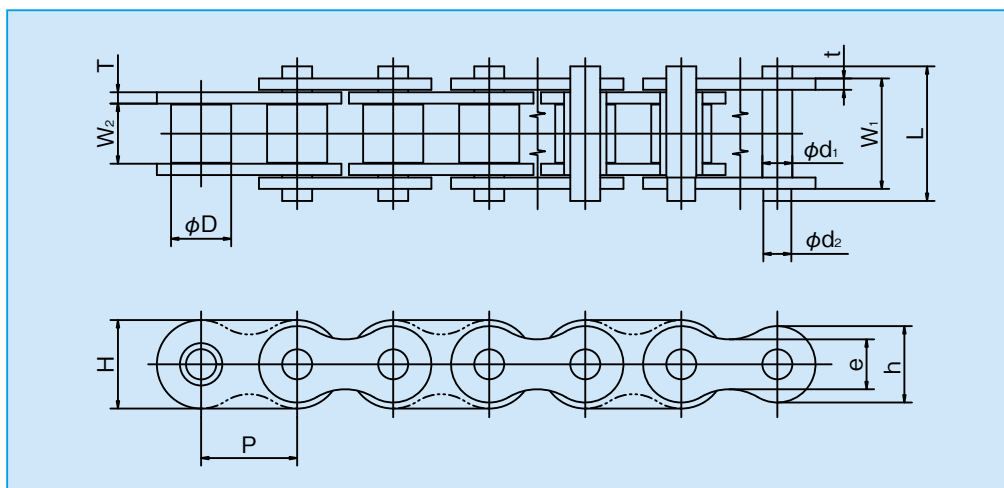
Plastic top plates can be snapped on the roller chains to easily form slat conveyor. The SUC type can be bent to allow curved travel.

NOTE: It is required to design the return portion, bearing in mind that the amount of back bend is limited.

SUC Type



SU Type



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W ₂	Width between Outer Plates W ₁	Roller Dia. D	Pin			Link Plate					Min. Horizontal Bending Radius R	Approx. Weight (kg/m)	Links of 1 unit
					d ₁	d ₂	L	H	h	e	T	t			
※KCM 40 SU	12.70	7.95	14.6	7.92	3.97	3.70	17.80	11.7	10.1	6.6	1.5	1.5	—	0.65	240
KCM 60 SU	19.05	12.7	22.7	11.91	5.96	5.80	28.80	17.5	15.0	11.7	2.4	2.4	—	1.51	160
KCM 60 SUC	19.05	12.7	22.8	11.91	5.09	4.80	28.80	17.5	15.0	11.7	2.4	2.0	500	1.37	160

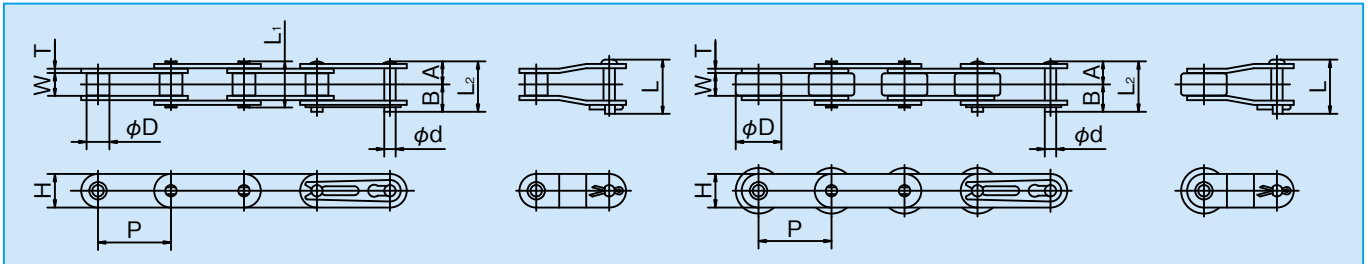
NOTE: Only inner link plates of the KCM40SU are of gourd shape.

The KCM lubrication-free chain uses special oil-impregnated bushing for self-lubrication, achieving maintenance-free.

Use this chain when no lubrication is required or difficult lubrication in process is expected.

- Nickel-plated chain and chains associated with various attachments are available.
- Recommended chain speed: 150m/min or slower
- Ordinary operating temperature range of -10°C to +150°C

NL Double-Pitch Roller Chain



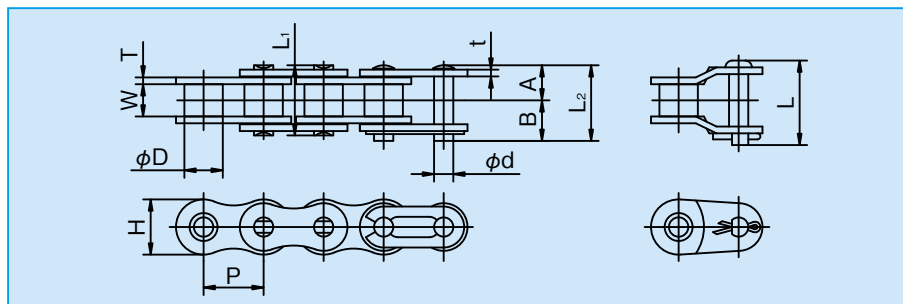
○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H				
KCM C2040 NL KCM C2042 NL	25.40	7.95	7.92 15.88	3.97	8.02	9.53	16.05	17.55	18.95	1.5	1.5	11.7	15.7(1,600)	2.65(270)	0.49 0.77	120
KCM C2050 NL KCM C2052 NL	31.75	9.53	10.16 19.05	5.09	10.15	11.60	20.30	21.75	23.00	2.0	2.0	14.6	25.5(2,600)	4.31(440)	0.80 1.21	96
KCM C2060 NL KCM C2062 NL	38.10	12.70	11.91 22.23	5.96	14.25	15.75	28.50	30.00	32.65	3.2	3.2	17.5	37.3(3,800)	6.28(640)	1.18 1.76	80
KCM C2080 NL KCM C2082 NL	50.80	15.88	15.88 28.58	7.94	17.70	20.80	35.40	38.50	40.15	4.0	4.0	23.0	63.7(6,500)	10.7 (1,090)	2.00 3.04	60

NOTES: - Connecting links of 2080NL are of split pin type.
- R-rollers can be replaced with plastic ones.

NL Roller Chain



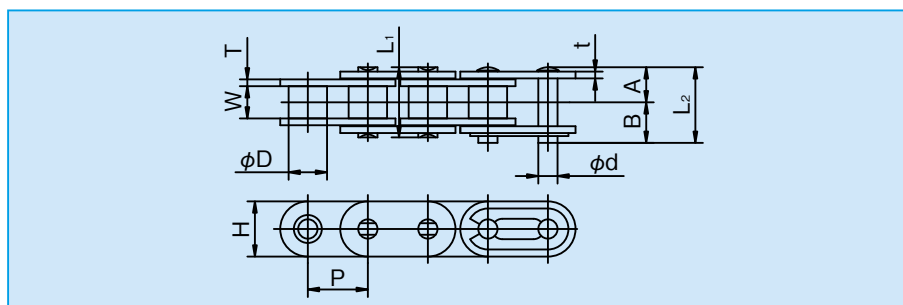
○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H				
KCM C40 NL	12.70	7.95	7.92	3.97	8.02	9.53	16.05	17.55	18.95	1.5	1.5	11.7	15.7(1,600)	2.65(270)	0.63	240
KCM C50 NL	15.875	9.53	10.16	5.09	10.15	11.60	20.30	21.75	23.00	2.0	2.0	14.6	25.5(2,600)	4.31(440)	1.03	192
KCM C60 NL	19.05	12.70	11.91	5.96	12.65	14.15	25.30	26.80	29.45	2.4	2.4	17.5	37.3(3,800)	6.28(640)	1.51	160
KCM C80 NL	25.40	15.88	15.88	7.94	16.07	19.20	32.15	35.25	36.90	3.2	3.2	23.0	63.7(6,500)	10.69(1,090)	2.56	120

NOTE: Connecting links of C80NL are of split pin type.

NL Oval Roller Chain



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H				
KCM C40 FNL	12.70	7.95	7.92	3.97	8.02	9.53	16.05	17.55	18.95	1.5	1.5	12.0	15.7(1,600)	2.65(270)	0.72	240
KCM C50 FNL	15.875	9.53	10.16	5.09	10.15	11.60	20.30	21.75	23.00	2.0	2.0	14.6	25.5(2,600)	4.31(440)	1.16	192
KCM C60 FNL	19.05	12.70	11.91	5.96	12.65	14.15	25.30	26.80	29.45	2.4	2.4	17.5	37.3(3,800)	6.28(640)	1.70	160
KCM C80 FNL	25.40	15.88	15.88	7.94	16.07	19.20	32.15	35.25	36.90	3.2	3.2	23.0	63.7(6,500)	10.69(1,090)	2.88	120

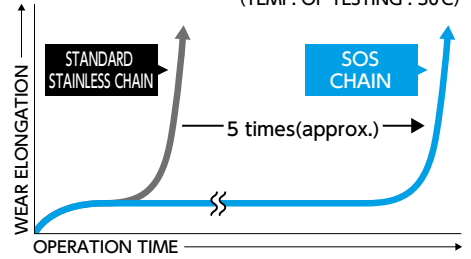
NOTE: Connecting links of C80FNL are of split pin type.

1. Lube-free. This eliminates contamination of oil from additional lubrication and contributes to a cleaner workplace. (*1) (*2)
2. Using lubricant NSF-H1 registration (which is possible to use in the place may touch foods accidentally), no problem for using for the food machines. Also produce SOS chain with bushes impregnated industrial lubricant.
3. Compatible with standard roller chains, and the installation of the standard attachment is possible.
4. Single and also multiple strand chain can use standard sprockets.
5. Available from low to high temperature (-20°C to +400°C) environment. (*3)

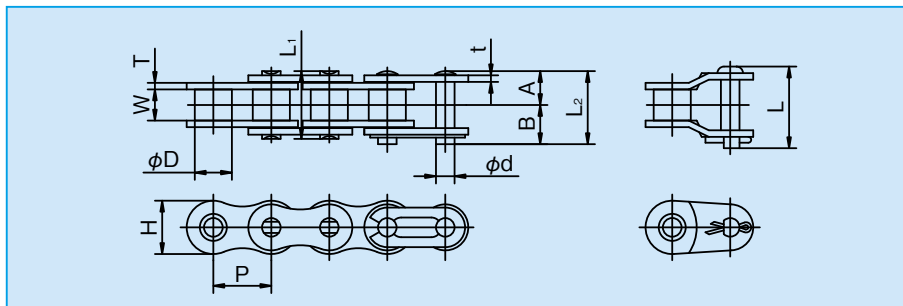
Note : *1. Please lubricate your chain before use, except when chains are to be used submerged in or in contact with water.
 : *2. Do not use under complete oil-free condition.
 : *3. It is better to use between -10°C to +150°C for oil impregnated bushes performance.

※Dust in the bush accelerates wear. Wet or high temperature environments can cause the oil in the oil-impregnated bush to leak, decreasing wear resistance.

COMPARISON OF WEAR ELONGATION BY OPERATION TIME
 (TEMP. OF TESTING : 30°C)



LUBRICATION FREE STAINLESS STEEL CHAINS

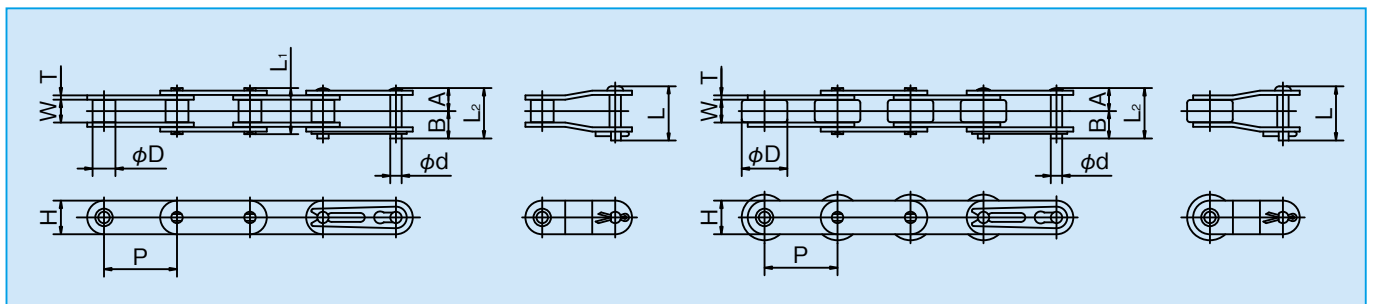


○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H			
C40 SOS	12.70	7.95	7.92	3.97	8.07	9.58	16.15	17.65	19.05	1.5	1.5	11.7	0.44 (45)	0.63	240
C50 SOS	15.875	9.53	10.16	5.09	10.20	11.60	20.40	21.80	23.05	2.0	2.0	14.6	0.69 (70)	1.04	192
C60 SOS	19.05	12.70	11.91	5.96	12.70	14.20	25.40	26.90	29.55	2.4	2.4	17.5	1.03 (105)	1.50	160
C80 SOS	25.40	15.88	15.88	7.94	16.15	19.25	32.30	35.40	37.10	3.2	3.2	23.0	1.77 (180)	2.62	120

LUBRICATION FREE STAINLESS STEEL DOUBLE PITCH CHAINS



○ Dimensions

[Unit: mm]

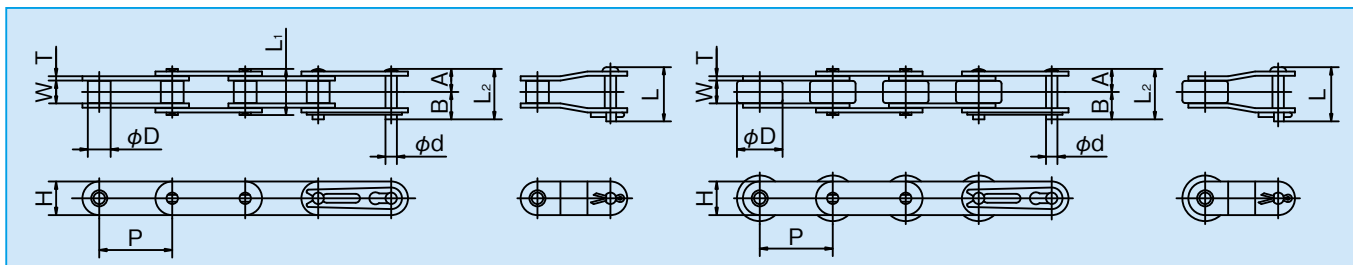
KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate			Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	L ₁	L ₂	L	Thickness T	Thickness t	Height H			
C2040 SOS	25.40	7.95	7.92	3.97	8.07	9.58	16.15	17.65	19.05	1.5	1.5	11.7	0.44 (45)	0.49	120
C2042 SOS			15.88						19.05						
C2050 SOS	31.75	9.53	10.16	5.09	10.20	11.60	20.40	21.80	23.05	2.0	2.0	14.6	0.69 (70)	0.83	96
C2052 SOS			19.05						23.05						
C2060 SOS	38.10	12.70	11.91	5.96	14.35	15.85	28.70	30.20	32.85	3.2	3.2	17.5	1.03 (105)	1.46	80
C2062 SOS			22.23						32.85						
C2080 SOS	50.80	15.88	15.88	7.94	17.80	20.90	35.60	38.70	40.40	4.0	4.0	23.0	1.77 (180)	2.44	60
C2082 SOS			28.58						40.40						

Note : The materials of R roller can be replaced to resin roller.

These chains are fitted with parts all made of SUS304(18Cr-8Ni) austenite stainless steel for use in operating environment requiring high thermal resistance (-20 to 400°C), corrosion resistance, and cleanliness.

NOTE: The KCM stainless steel roller chains have slight magnetic property as a result of cold manufacturing.

Double-Pitch Chains



○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T	Height H			
KCM C2040 SS	25.40	7.95	7.92	3.97	8.07	9.58	16.15	17.65	19.05	1.5	11.7	0.44 (45)	0.49	120
KCM C2042 SS			15.88										0.83	
KCM C2050 SS	31.75	9.53	10.16	5.09	10.20	11.60	20.40	21.80	23.05	2.0	14.6	0.69 (70)	0.83	96
KCM C2052 SS			19.05										1.28	
KCM C2060 SS	38.10	12.70	11.91	5.96	12.70	14.20	25.40	26.90	29.55	2.4	17.5	1.03(105)	1.19	80
KCM C2062 SS			22.23										1.88	
KCM C2060H SS	38.10	12.70	11.91	5.96	14.35	15.85	28.70	30.20	32.85	3.2	17.5	1.03(105)	1.46	80
KCM C2062H SS			22.23										2.14	
KCM C2080 SS	50.80	15.88	15.88	7.94	16.15	19.25	32.30	35.40	37.10	3.2	23.0	1.77 (180)	2.08	60
KCM C2082 SS			28.58										3.13	
KCM C2080H SS	50.80	15.88	15.88	7.94	17.80	20.90	35.60	38.70	40.40	4.0	23.0	1.77 (180)	2.44	60
KCM C2082H SS			28.58										3.50	
KCM C2100H SS	63.5	19.05	19.05	9.54	21.82	24.78	43.65	46.6	47.7	4.8	28.9	2.55(260)	3.74	48
KCM C2102H SS			39.67										5.98	

NOTE: For dimensions of the attachment, refer to pages 38 to 39.

Pins and rollers of the AS chains are made of precipitation hardening stainless steel for increased allowable load, instead of those of the SS chains. Maximum allowable load is 1.5 times that of standard SS chain. If allowable load of SS chain is insufficient, please specify the AS chain. Corrosion resistance of the AS chain is slightly lower than that of the SS chain. Operating range is -20°C to +400°C.

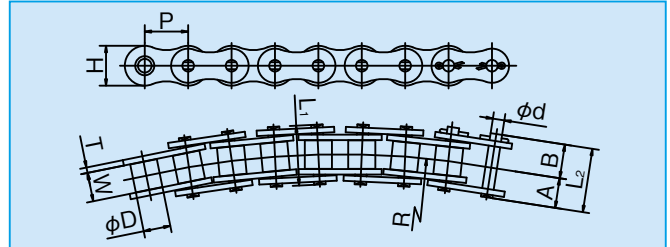
NOTE: The AS chain has magnetism of precipitation hardening stainless steel.

Chain No.	Max. Allowable Load kN (kgf)
KCM C2040 AS	0.69 (70)
KCM C2050 AS	1.03(105)
KCM C2060 AS	1.57(160)
KCM C2060H AS	1.57(160)
KCM C2080 AS	2.65(270)
KCM C2080H AS	2.65(270)

NOTE: - Dimensions, weight, and connecting links are the same as those of the SS chain.
 - For offset link, only 2-pitch type is available.
 - AS chains with attachments are available.

The side bow chain may be laterally curved for easily curved movement, using standard sprockets. Also, this chain can be used with attachments to form a curved conveyor, etc.

Roller Chain Type



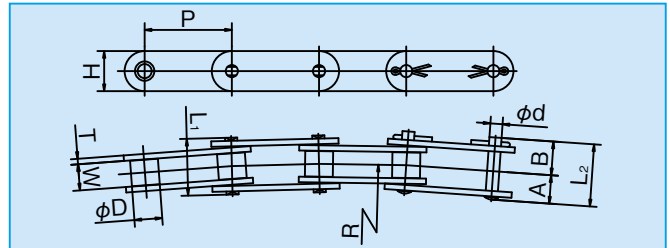
○ Dimensions

[Unit: mm]

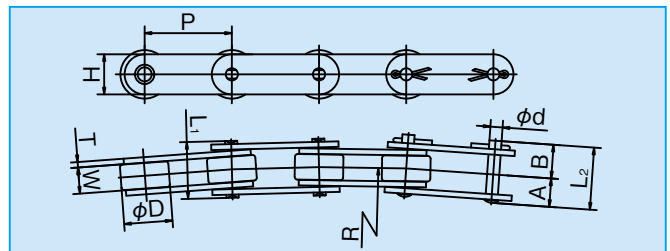
KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Min. Horizontal Bending Radius R	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)
				Dia. d	A	B	(A+A) _{L₁}	(A+B) _{L₂}	Thickness T	Height H				
KCM 40 SB	12.70	7.95	7.92	3.59	8.20	9.70	16.4	17.90	1.5	11.7	350	11.8 (1,200)	1.86 (190)	0.60
KCM 50 SB	15.875	9.53	10.16	4.51	10.35	12.30	20.7	22.65	2.0	14.6	400	20.6 (2,100)	2.84 (290)	0.98
KCM 60 SB	19.05	12.70	11.91	5.09	12.95	14.75	25.9	27.70	2.4	17.5	500	28.0 (2,860)	4.02 (410)	1.38
KCM 80 SB	25.40	15.88	15.88	5.96	16.40	18.90	32.8	35.30	3.2	23.0	600	39.2 (4,000)	6.96 (710)	2.53

Double Pitch Chain Type

S Roller Type



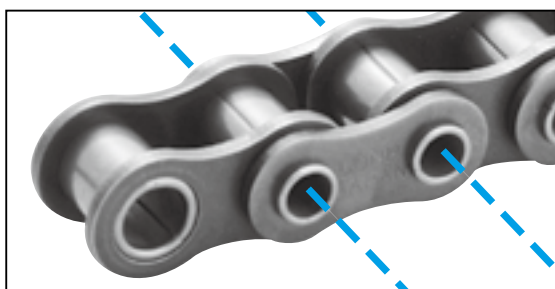
R Roller Type



○ Dimensions

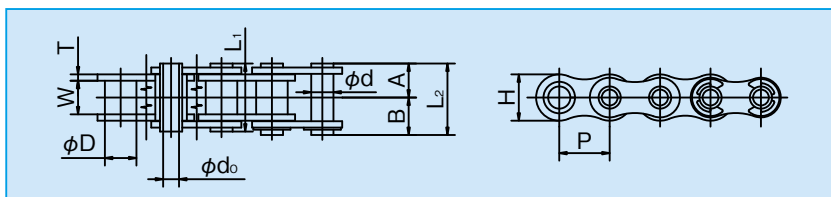
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Min. Horizontal Bending Radius R	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)
				Dia. d	A	B	(A+A) _{L₁}	(A+B) _{L₂}	Thickness T	Height H				
KCM C2040 SB	25.40	7.95	7.92	3.59	8.20	9.70	16.4	17.90	1.5	11.7	700	11.8 (1,200)	1.86 (190)	0.45
KCM C2042 SB			15.88											
KCM C2050 SB	31.75	9.53	10.16	4.51	10.35	12.30	20.7	22.65	2.0	14.6	800	20.6 (2,100)	2.84 (290)	0.74
KCM C2052 SB			19.05											
KCM C2060 SB	38.10	12.70	11.91	5.09	12.95	14.75	25.9	27.70	2.4	17.5	1000	28.0 (2,860)	4.02 (410)	1.00
KCM C2062 SB			22.23											
KCM C2060HSB	38.10	12.70	11.91	5.09	14.45	16.25	28.9	30.70	3.2	17.5	1000	28.0 (2,860)	4.02 (410)	1.29
KCM C2062HSB			22.23											
KCM C2080 SB	50.80	15.88	15.88	5.96	16.40	18.90	32.8	35.3	3.2	23.0	1200	39.2 (4,000)	6.96 (710)	1.74
KCM C2082 SB			28.58											
KCM C2080HSB	50.80	15.88	15.88	5.96	18.00	20.50	36.0	38.5	4.0	23.0	1200	39.2 (4,000)	6.96 (710)	2.17
KCM C2082HSB			28.58											

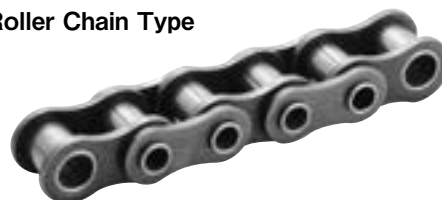


This chain uses hollow pins to which various attachments can easily be fixed.

Stainless steel version and surface treated version are available.
Standard and double pitch sprockets are available.



Roller Chain Type



○ Dimensions

[Unit: mm]

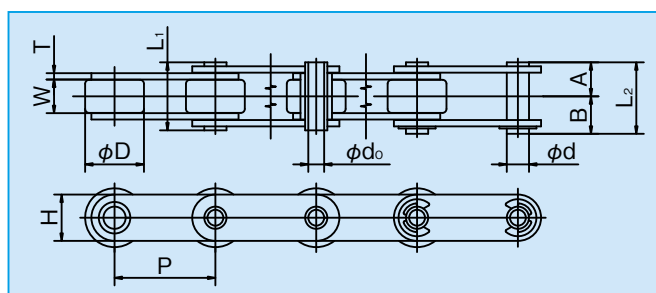
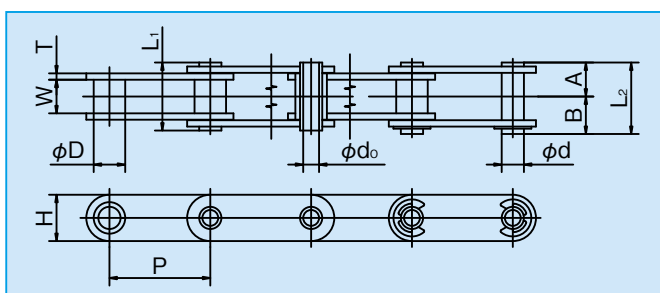
KCM Chain No.	Pitch P	Width between Inner Plates W	Bush diameter D	Pin						Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Outside diameter d	Inside diameter d _o (min)	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H				
KCM 40 HP	12.70	7.95	7.92	5.69	4.00	8.12	9.43	16.25	17.55	1.5	11.7	13.2 (1,350)	1.77 (180)	0.51	240
KCM 50 HP	15.875	9.53	10.16	7.24	5.12	10.3	11.7	20.6	22.0	2.0	14.6	20.6 (2,100)	3.14 (320)	0.83	192
KCM 60 HP	19.05	12.70	11.91	8.39	5.99	12.9	14.3	25.8	27.2	2.4	17.5	31.4 (3,200)	4.22 (430)	1.24	160
KCM 80 HP	25.40	15.88	15.88	11.24	8.02	16.07	18.03	32.15	34.1	3.2	23.0	53.0 (5,400)	7.65 (780)	2.32	120

Double Pitch Chain Type

S Roller Type (bushed)



R Roller Type



○ Dimensions

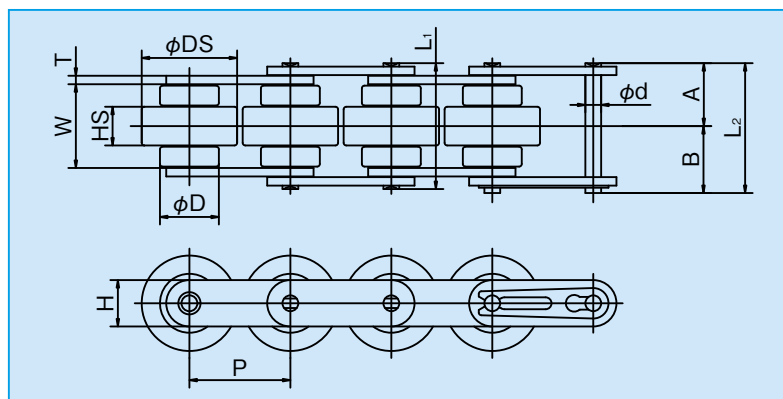
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Bush diameter D	Pin						Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Outside diameter d	Inside diameter d _o (min)	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H				
KCM C2040 HP	25.40	7.95	* 7.92	5.69	4.00	8.12	9.43	16.25	17.55	1.5	11.7	13.2 (1,350)	1.77 (180)	0.46	120
KCM C2042 HP			15.88												
KCM C2050 HP	31.75	9.53	* 10.16	7.24	5.12	10.3	11.7	20.6	22.0	2.0	14.6	20.6 (2,100)	3.14 (320)	0.76	96
KCM C2052 HP			19.05												
KCM C2060 HP	38.10	12.70	* 11.91	8.39	5.99	12.9	14.3	25.8	27.2	2.4	17.5	31.4 (3,200)	4.22 (430)	1.12	80
KCM C2062 HP			22.23												
KCM C2080 HP	50.80	15.88	* 15.88	11.24	8.02	16.07	18.03	32.15	34.1	3.2	23.0	53.0 (5,400)	7.65 (780)	1.98	60
KCM C2082 HP			28.58												

NOTE: Asterisk (*) indicates bush diameter.

The carrier roller chain is fitted with large carrier rollers at pins to carry the loads, allowing more smooth and stable loading transferring than those of the roller chain with top rollers.

Select a proper one of the rollers, made of steel and plastic, according to loading conditions.



Roller Specifications	Roller type	Main roller color	Aux. roller color
General type	DN	Blue	Blue
Conduction type	DNC	Black	Blue

○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller			Pin					Link Plate	
			DS	D	HS	d	A	B	L ₁	L ₂	T	H
KCM CY2030-**	19.05	15.75	18.30	11.91	7.0	3.28	11.23	12.95	22.45	24.15	1.2	8.8
KCM CY2040-**	25.40	22.30	24.80	15.88	9.0	3.97	15.20	16.75	30.40	31.95	1.5	11.7
KCM CY2050-**	31.75	28.20	30.00	19.05	11.4	5.09	19.45	20.90	38.90	40.35	2.0	14.6
KCM CY2060-**	38.10	31.80	36.00	22.23	15.0	5.96	23.75	25.25	47.50	49.00	3.2	17.5

NOTE: For models marked with **, select the type of roller.

○ Carrier Chains Specifications

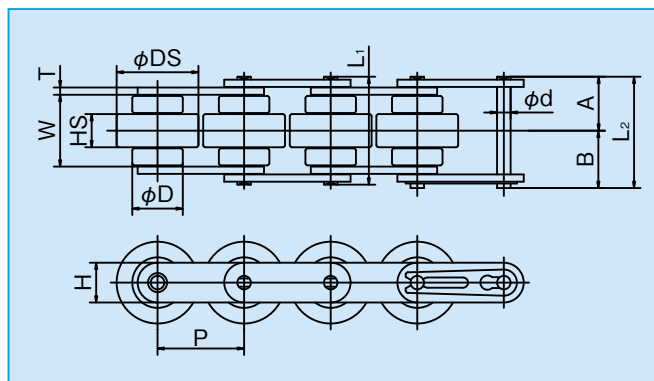
Type	KCM chain number	Roller material	Allowable Load (kgf)	Allowable load of roller (kgf/roller)	Operating temp. (°C)	Approx. Weight (kg/m)	Speed Ratio
3-type carrier chains	KCM CY2030-DN	Plastic	56	0.5	-10 ~ + 80	0.4	1:1
	KCM CY2030-DNC	Conductive plastic					
	KCM CY2030-HS	Steel					
4-type carrier chain	KCM CY2040-DN	Plastic	90	1	-10 ~ + 80	0.8	
	KCM CY2040-DNC	Conductive plastic					
	KCM CY2040-HS	Steel					
5-type carrier chain	KCM CY2050-DN	Plastic	140	1.7	-10 ~ + 80	1.3	
	KCM CY2050-DNC	Conductive plastic					
	KCM CY2050-HS	Steel					
6-type carrier chain	KCM CY2060-DN	Plastic	200	2.9	-10 ~ + 80	2.2	
	KCM CY2060-DNC	Conductive plastic					
	KCM CY2060-HS	Steel					
			640	7.6	-10 ~ +150	5.4	

Max. chain speed Vmax= 15m/min.

Sprocket: Use the exclusively designed sprocket.

Using the special roller structure, the roller chain speed is merely about 1/2.5 of the pallet speed, reducing operating noise which is suitable for the line requiring quiet operation. Also, this chain features excellent starting responsibility after accumulation, not given by general free flow chains, which is suitable for assembly line requiring repetitive starts and stops.

Select roller materials according to loading conditions, similar to the carrier chain.



Roller Specifications	Roller type	Main roller color	Aux. roller color
General type	DP	Gray	Black
Conduction type	DPC	Black	Black
General type	DN	Gray	Gray
Conduction type	DNC	Black	Gray

○ Dimensions

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller			Pin					Link Plate	
			DS	D	HS	d	A	B	L ₁	L ₂	T	H
KCM CZ2030-**	19.05	15.75	18.30	11.91	7.0	3.28	11.23	12.95	22.45	24.15	1.2	8.8
KCM CZ2040-**	25.40	22.30	24.80	15.88	9.0	3.97	15.20	16.75	30.40	31.95	1.5	11.7
KCM CZ2050-**	31.75	28.20	30.00	19.05	11.4	5.09	19.45	20.90	38.90	40.35	2.0	14.6
KCM CZ2060-**	38.10	31.80	36.00	22.23	15.0	5.96	23.75	25.25	47.50	49.00	3.2	17.5

NOTES: - For models marked with **, select the type of roller.
 - For allowable load of the main roller, refer to page 54.

○ Triple Speed Chain Specifications

Type		Roller material	KCM Chain No.	Allowable Load (kgf)	Allowable Load of roller (kgf/roller)	Operating temp. (°C)	Approx. Weight (kg/m)	Speed Ratio (Pallet speed/Chain speed)
3-type Triple speed chain	Low load	Normal	Plastic	CZ2030-DP	28	-10 ~ + 80	0.4	2.53
		Conductive	Conductive plastic	CZ2030-DPC				
	Medium load	Normal	Plastic	CZ2030-DN	56			
		Conductive	Conductive plastic	CZ2030-DNC				
High load	High strength	Steel	CZ2030-HS	150	1.2	-10 ~ +150	1.1	
4-type carrier chain	Low load	Normal	Plastic	CZ2040-DP	45	-10 ~ + 80	0.8	2.55
		Conductive	Conductive plastic	CZ2040-DPC				
	Medium load	Normal	Plastic	CZ2040-DN	90			
		Conductive	Conductive	CZ2040-DNC				
High load	High strength	Steel	CZ2040-HS	270	2.8	-10 ~ +150	2.2	
5-type carrier chain	Low load	Normal	Plastic	CZ2050-DP	70	-10 ~ + 80	1.3	2.57
		Conductive	Conductive plastic	CZ2050-DPC				
	Medium load	Normal	Plastic	CZ2050-DN	140			
		Conductive	Conductive plastic	CZ2050-DNC				
High load	High strength	Steel	CZ2050-HS	440	4.8	-10 ~ +150	3.7	
6-type carrier chain	Low load	Normal	Plastic	CZ2060-DP	140	-10 ~ + 80	2.2	2.62
		Conductive	Conductive plastic	CZ2060-DPC				
	Medium load	Normal	Plastic	CZ2060-DN	210			
		Conductive	Conductive plastic	CZ2060-DNC				
High load	High strength	Steel	CZ2060-HS	640	7.6	-10 ~ +150	5.6	

Max. chain speed Vmax= is 15m/min.

Sprocket: Use the exclusively designed sprocket.

Selection

Selection of small sized conveyor chains can be made in the following steps, except for some particular cases.

- (1) Preliminarily determining the type of conveyor chain
- (2) Confirming allowable load to rollers
- (3) Determining maximum tensile force acting on chain
- (4) Confirming conveying conditions
- (5) Determining the size of conveyor chain

Confirming Conveying conditions

- (1) Type of conveyor chain (slat, top roller, carrier, etc.)
- (2) Conveying direction (horizontal, vertical, slope, etc.)
- (3) Weight and dimensions of material conveyed
- (4) Total amount of material conveyed, and frequency of conveying
- (5) Speed of conveyor
- (6) Length of conveyor
- (7) Lubrication
- (8) Operating conditions of conveyor, such as temperature and humidity

Preliminarily Determining the Type of Conveyor Chain

$$T \text{ (kgf)} = W_T \times f \times K$$

T : Maximum static tensile force acting to chain

W_T : Weight of materials conveyed, except for chain (kgf)

f : Coefficient of friction (see Table 4)

K : Coefficient of speed (see Table 1)

When two conveyor chains are arranged in parallel, temporarily determine the type and size of the conveyor chain of which maximum allowable tensile force is less than that determined by $T \times 0.6$.

Table 1: Speed Factor

Conveyor Chain Speed (m/min)	Speed Factor K
15 or less	1.0
15 ~ 30	1.2
30 ~ 50	1.4
50 ~ 70	1.6
70 ~ 90	2.2
90 ~ 110	2.8
110 ~ 120	3.2

Confirming Allowable Load to Roller

Allowable load-carrying rollers of the conveyor chain shall not exceed those listed in Table 2 and Table 3.

Table 2: Allowable Loads to Main Rollers

KCM Chain No.	Plastic Roller R-Roller	Steel Roller	
		S-Roller	R-Roller
40, 2040, 2042	20	15	65
50, 2050, 2052	30	20	100
60, 2060, 2062	50	30	160
80, 2080, 2082	90	55	270
100, 2100, 2102	130	80	400

Unit: kgf/roller

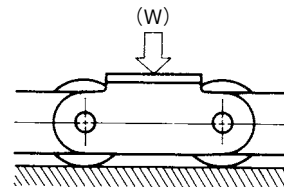
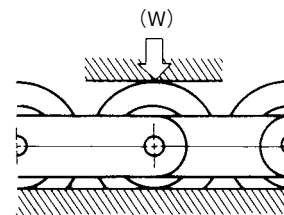


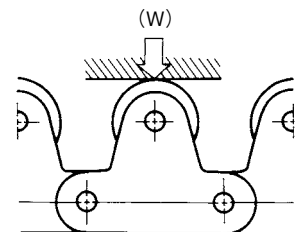
Table 3: Allowable Load to Load-carrying Roller

KCM Chain No.	Triple Speed Chain Roller	Side Rollers		Top Rollers	
		Plastic	Steel	Plastic	Steel
3-type carrier chain, Triple speed chain	6	—	—	—	—
40, 2040, 2042, 4-type Triple speed chain	14	5	15	5	15
50, 2050, 2052, 5-type Triple speed chain	22	7	20	7	20
60, 2060, 2062, 6-type Triple speed chain	36	10	30	10	30
80, 2080, 2082	—	18	55	18	55
100, 2100, 2102	—	30	80	30	80

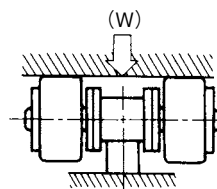
Unit: kgf/roller



Triple Speed Chain Roller



Top Roller



Side Roller

Determining Maximum Tensile Force Acting on Chain

Horizontal conveying

Normal conveying	$T = (W + 2.1m \cdot C) f_1$ $kW = \frac{T \cdot V}{5565} \cdot \frac{1}{\eta}$	
Accumulated conveying (Free flow conveyor)	$T = (w_1 + m) L_1 \cdot f_1 + w_2 \cdot L_2 \cdot f_2 + (w_2 + m) L_2 \cdot f_3 + 1.1m(L_1 + L_2) f_1$ $kW = \frac{T \cdot V}{5565} \cdot \frac{1}{\eta}$	

Determining the Size of Conveyor Chain

Finally determine the size of the conveyor chain of which maximum allowable tensile force of conveyor chain satisfies the following formula, by calculating the product of the maximum tensile force (T) acting on the conveyor chain and the speed factor K (Table 1).

$$T \times K \leq \text{Max. allowable tensile force of conveyor chain}$$

When two conveyor chains are arranged in parallel, the maximum tensile force acting on the chain is determined by $T \times 0.6$.

Table 4: Coefficient of Rolling Friction

Roller Type	Steel Roller		Plastic Roller
	Not Lubricated	Lubricated	
R-Roller	0.12	0.08	0.08
S-Roller	0.21	0.14	0.12

Coefficient of Sliding Friction (Link Plate)

Not Lubricated	Lubricated
0.3	0.2

Table 5: f₁: Coefficient of friction between chain and rail during conveying

KCM Chain Type	Type of Main Roller	Lubricated	Not lubricated	
Triple speed chain	Normal/High Load	—	0.08	
Chain w/ side rollers	Plastic Roller	S-Roller	0.12	
		R-Roller	0.08	
	Steel Roller	S-Roller	0.14	0.21
		R-Roller	0.08	0.12
Chain w/ top rollers	Steel Roller	S-Roller	0.14	0.21
		R-Roller	0.08	0.12

■ Symbols and Definitions

- T = Max. static tensile force acting on chain (kgf)
- V = Conveying speed (chain speed) (m/min)
- C = Center-to-center distance between sprockets (m)
- W = Max. total weight of conveyed materials on conveyor (kgf)
In case of separated materials: W= C/Conveying interval x Weight of conveyed material (kgf/piece)
- L₁ = Length of conveying portion (m)
- w₁ = Weight of conveyed material on conveying portion (kgf/m)
- L₂ = Length of accumulating portion (m)
- w₂ = Weight of conveyed material on accumulating portion (kgf/m)
- m = Weight of conveying portion, including chain (kgf/m)
- η = Mechanical transmission efficiency for drive unit, kW: Required power
- f₁ = Coefficient of friction between chain and rail when conveying (see Table 5)
- f₂ = Coefficient of friction between chain and conveyed material when accumulating (see Table 6)
- f₃ = Coefficient of friction between chain and rail when accumulating (see Table 7)

Table 6: f₂: Coefficient of friction between chain and conveyed material when accumulating

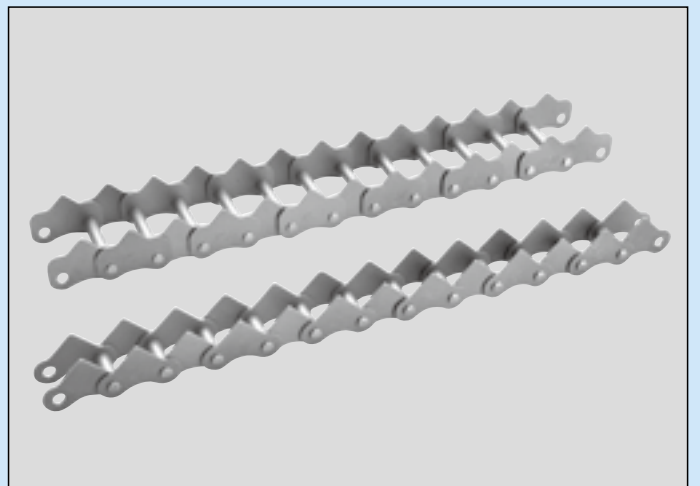
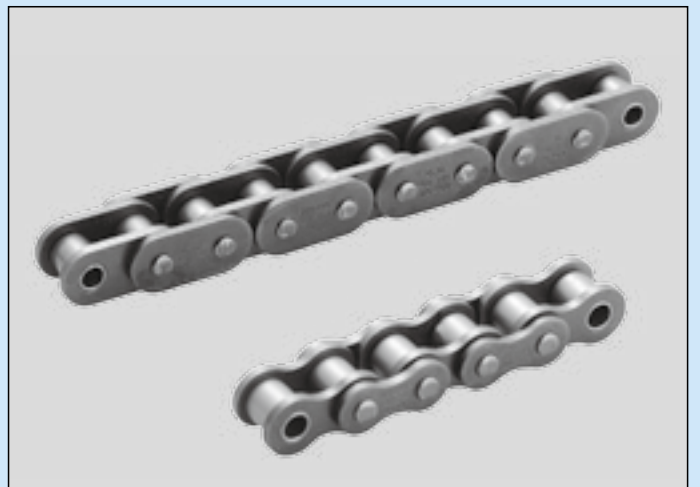
KCM Chain Type	Type of Carrying Roller	Lubricated	Not lubricated
Triple speed chain	Normal	—	0.08
	High load	—	0.14
Chain w/ top rollers	Plastic roller	—	0.06
	Steel roller	0.06	0.09
Chain w/ top rollers	Plastic roller	—	0.06
	Steel roller	0.06	0.09

Table 7: f₃: Coefficient of friction between chain and rail when accumulating

KCM Chain Type	Type of Main Roller	Not Lubricated
Triple speed chain	General type	0.16
	High load	0.2

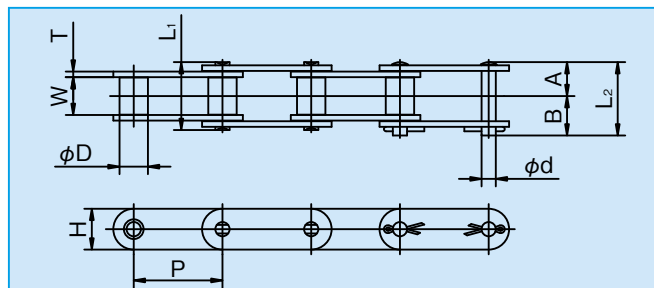
NOTE: f₃=f₁, except for triple speed chain

AGRICULTURAL CHAINS



The KCM CA-type roller chains are mainly employed for power transmission over relative long shaft-to-shaft distance at low speed and used with attachments, especially in large-sized farm machines.

CA Type



○ Dimensions

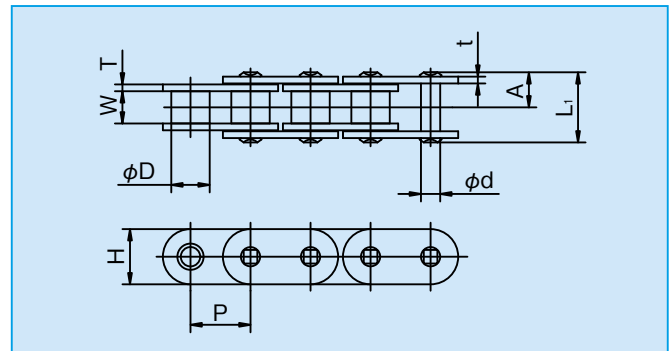
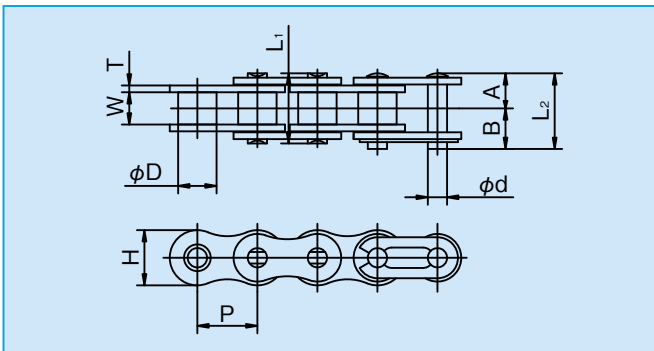
[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T	Height H			
KCM CA550	41.40	20.40	16.66	7.13	17.0	20.55	34.0	37.55	2.6	19.0	42.7 (4,350)	6.08 (620)	1.86
KCM CA557	41.40	20.40	17.78	8.00	18.7	21.55	37.4	40.25	3.1	22.0	60.8 (6,200)	8.63 (880)	2.41
KCM CA620	42.01	25.20	17.68	7.13	20.5	24.05	41.0	44.55	3.1	19.0	51.0 (5,200)	7.26 (740)	2.28

The KCM roller chains for farm machines are used for a wide range of applications, from power transmission to conveying, thus contributing mechanization and energy-savings of agricultural work. "FR" and "HLL" models are specially designed for heavy-duty power transmission in the farm machine destined to work in severe working conditions.



FR and FHR Type

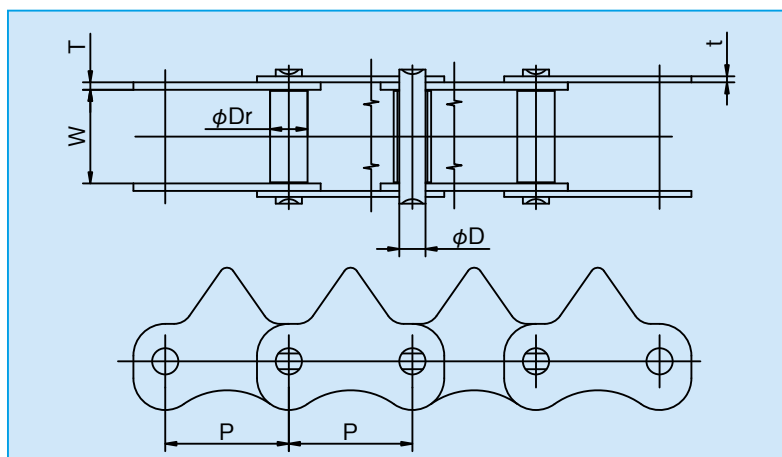


○ Dimensions

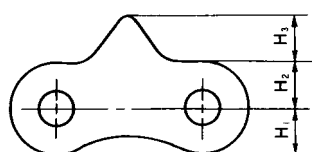
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KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Average Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)
				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Thickness T (t)	Height H			
KCM 415	12.70	4.76	7.75	3.64	5.5	6.9	11.00	12.4	1.1	9.5	9.8 (1,000)	2.16 (220)	0.34
KCM 415 S		4.76	7.77	3.97	6.4	7.9	12.80	14.3	1.5	11.7	18.1 (1,850)	3.73 (380)	0.51
KCM 420		6.35	7.77	3.97	7.2	8.7	14.40	15.9	1.5	11.7	18.1 (1,850)	3.73 (380)	0.55
KCM 40		7.95	7.92	3.97	8.02	9.53	16.05	17.55	1.5	11.7	18.1 (1,850)	3.63 (370)	0.61
KCM 40 FHR		7.95	7.92	3.97	—	—	18.10	—	2.0	12.0	26.5 (2,700)	4.42 (450)	0.88
KCM 428		7.95	8.50	4.51	8.05	9.55	16.10	17.60	1.5	11.7	18.6 (1,900)	3.92 (400)	0.64
KCM 428 H		7.95	8.50	4.51	9.05	10.55	18.10	19.6	2.0	11.7	22.6 (2,300)	4.42 (450)	0.77
KCM 520		15.875	6.35	10.16	5.09	8.47	9.93	16.95	18.4	2.0	14.6	29.9 (3,050)	6.37 (650)
KCM 530	9.53		10.15			11.60	20.30	21.75	2.0	14.6	29.9 (3,050)	6.37 (650)	1.01
KCM 50	9.53		10.15			11.6	20.30	21.75	2.0	14.6	29.9 (3,050)	6.37 (650)	1.01
KCM 50 FHR	9.53		—			—	21.95	—	2.4	15.0	39.7 (4,050)	7.94 (810)	1.37
KCM S 80 FHR	25.40	15.88	15.88	7.94	—	—	35.60	—	4.0	24.0	119.6 (12,200)	20.10 (2,050)	3.51
KCM 100 HLL	31.75	19.05	19.05	9.54	—	—	43.45	—	4.8	30.0	147.1 (15,000)	32.36 (3,300)	4.88
KCM 120 HLL	38.10	25.40	22.23	11.11	—	—	53.70	—	5.6	36.0	196.1 (20,000)	42.17 (4,300)	6.94

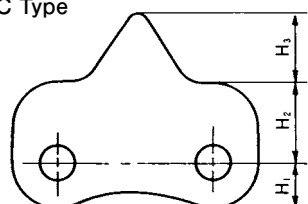
The KCM feed chains for auto thresher are now used in combines and harvester. A variety of feed chains, including 20 types (four shapes) conforming to JIS B 9204 and nonstandard types.



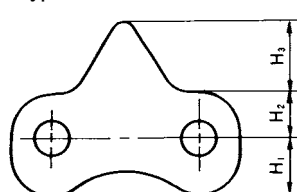
A Type



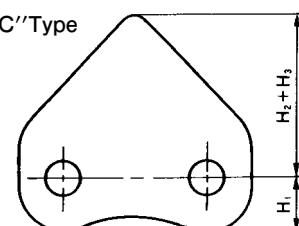
C Type



C' Type



C'' Type

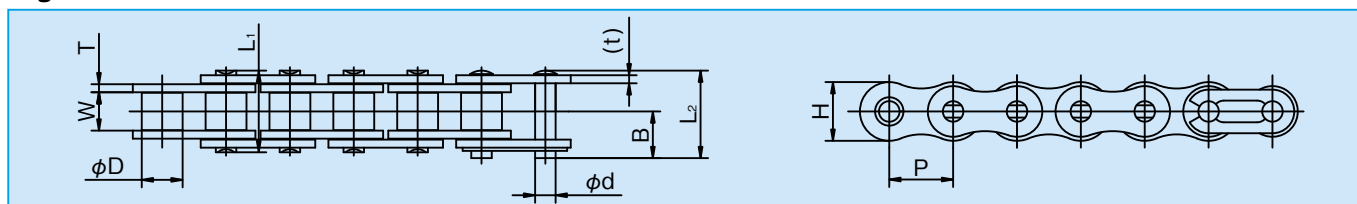


MOTORCYCLE CHAINS



The KCM motorcycle chains are developed to improve fatigue strength and wear resistance, and manufactured under stringent quality control.

Engine Mechanism Chains



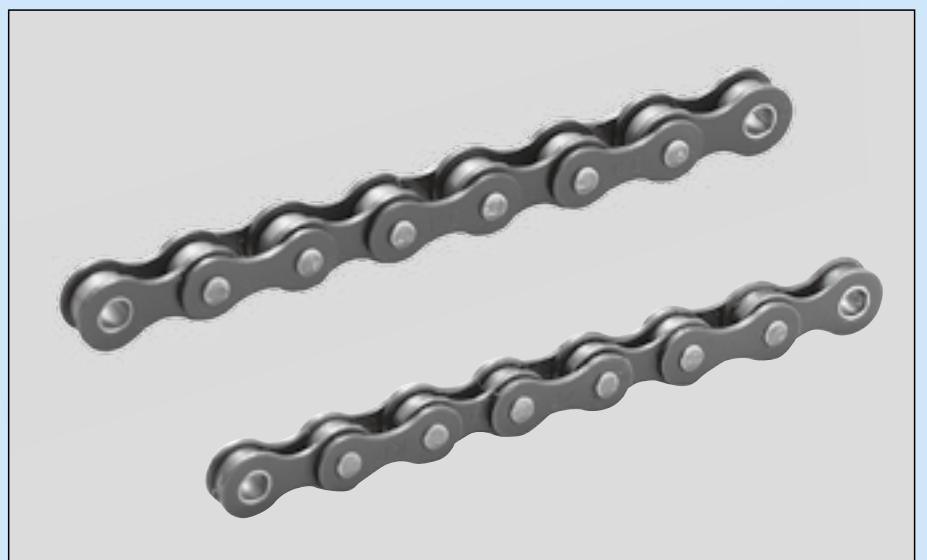
○ Dimensions

[Unit: mm]

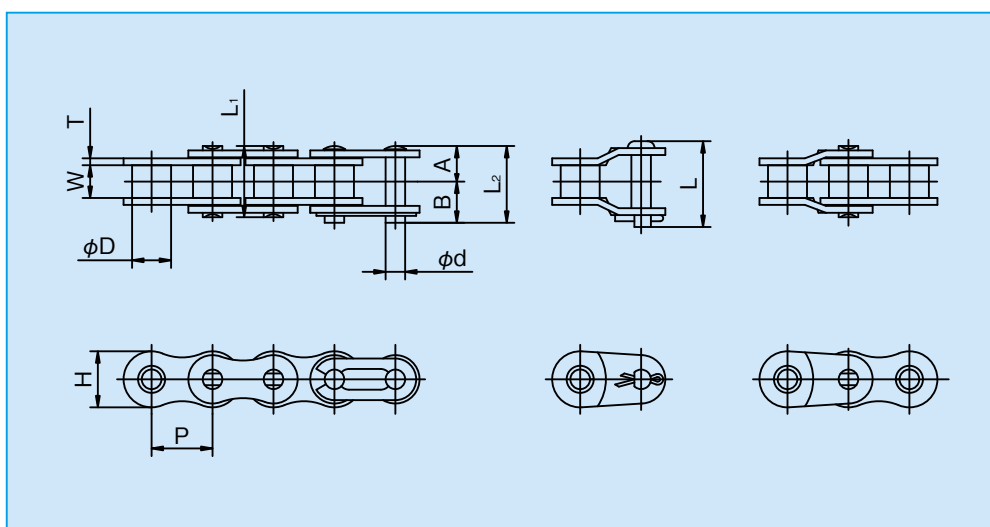
KCM Chain No.	Pitch P	Width between Inner Plates W	Bush Outside Dia. D	Pin				Link Plate		Transverse Pitch	Ave. Tensile Strength kN (kgf)	Fatigue Strength kN (kgf)	Approx. Weight (kg/m)
				Outside Dia. d	B	L ₁	L ₂	Thickness T (t)	Height H				
KCM 210	6.35	3.18	3.30	2.31	4.80	7.60	8.60	0.75	5.8	—	4.7 (480)	0.74 (75)	0.13
KCM 210H	6.35	3.18	3.30	2.31	5.35	8.70	9.70	1.0 (1.2)	5.8	—	5.9 (600)	0.98 (100)	0.16
KCM 219F	7.774	5.00	4.59	3.15	—	11.00	—	1.3 (1.0)	7.4	—	8.8 (900)	1.86 (190)	0.32
KCM 05T	8.00	4.70	4.73	3.05	—	11.00	—	1.3 (1.0)	7.6	—	9.0 (920)	1.96 (200)	0.37
KCM 270H	8.50	4.76	5.00	3.28	—	12.95	—	1.8 (1.4)	8.4	—	11.3 (1,150)	2.26 (230)	0.43
KCM 06B	9.525	5.72	*6.35	3.28	7.5	12.20	13.60	1.3 (1.0)	8.1	—	9.8 (1,000)	2.65 (270)	0.39
KCM 06B-2	9.525	5.72	*6.35	3.28	12.63	22.40	23.85	1.3 (1.0)	8.1	10.24	18.6 (1,900)	4.41 (450)	0.74

NOTES: - Fatigue strength is not applied to joint.
- Figure marked with * imply roller diameter.

BICYCLE CHAINS



KCM 410 and KCM 475 roller chains are mainly used for bicycles, but, fitted with special attachment, applicable to light-duty use such as for power transmission, transfer and relayed transmission in vending machines, etc.



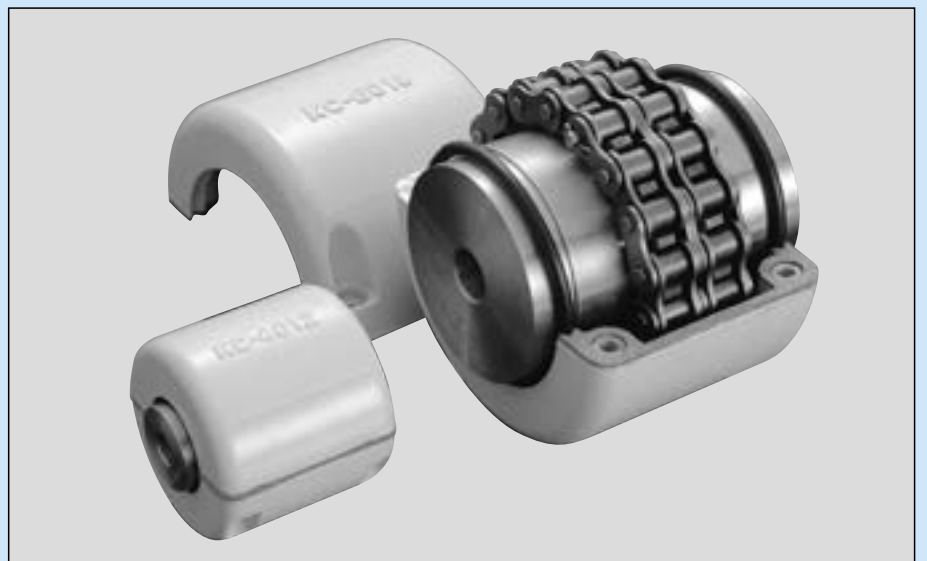
○ Dimensions

[Unit: mm]

Chain No.		Pitch P	Width between Inner Plates W	Roller Dia. D	Pin					Link Plate		Ave. Tensile Strength kN (kgf)	Approx. Weight (kg/m)	
KCM	JIS				Dia. d	A	B	(A+A) L ₁	(A+B) L ₂	Offset L	Thickness T			Height H
KCM 475	1/2×3/32	12.70	2.40	7.75	3.64	3.98	—	7.95	—	11.25	1.0	9.5	9.81 (1,000)	0.25
KCM 410	1/2×1/8		3.40			4.70	6.10	9.40	10.80					

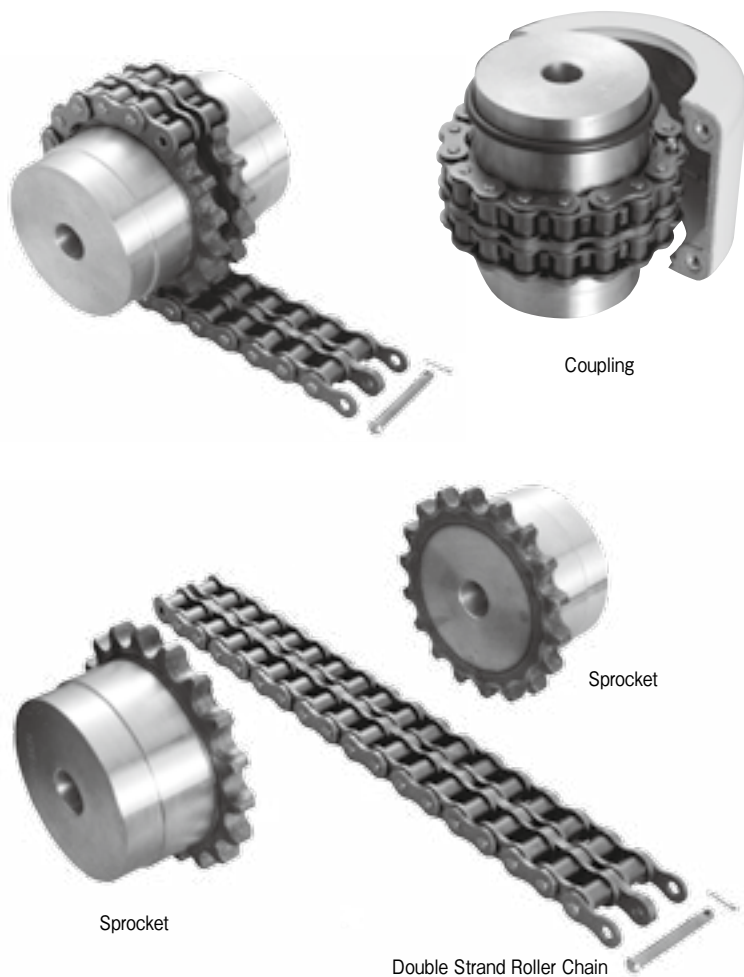
NOTE: Connecting link and offset link for KCM475 are not available.

CHAIN COUPLINGS



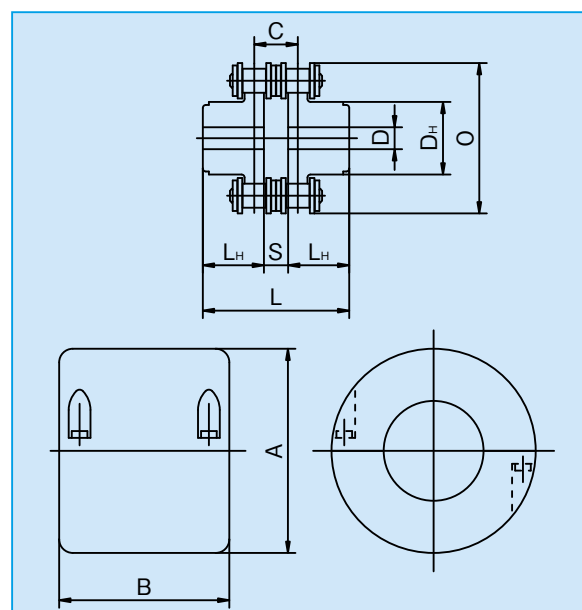
The KCM chain coupling, composed of two-strand roller chains and two sprocket wheels, features simple and compact structure, and high flexibility, power transmission capability and durability.

What's more, the chain coupling allows simple connection/disconnection of shafts each other, and the use of the housing enhances safety and durability.



Casing

Make sure to use the housing for high-speed operation, and for use in dusty or corrosive environment.



○ Dimensions

[Unit: mm]

KCM Coupling No.	Chain pitch	Coupling										Casing		
		Drill Hole D	Shaft diam.		O	L	D _H	L _H	S	C	Approx. Weight (kg)	A	B	Approx. Weight (kg)
			Min.	Max.										
3012	9.525	12	13.5	16	45	65	27.2	29.5	6.0	10.2	0.31	69	63	0.22
4012	12.70	12	14	22	62	79.4	36	36	7.4	14.4	0.73	77	72	0.30
4014		12	14	28	69	79.4	45	36			1.12	84	75	0.31
4016		14.5	16	32	77	87.4	55	40			1.50	92	75	0.35
5014	15.875	14.0	17	35	86	99.7	56	45	9.7	18.1	2.15	101	85	0.47
5016		16.0	18	40	96	99.7	63	45			2.75	111	85	0.50
5018		16.0	18	45	106	99.7	73	45			3.60	122	85	0.60
6018	19.05	20	22	56	127	123.5	88	56	11.5	22.8	6.55	142	106	1.2
6020		20	24	60	139	123.5	102.5	56			8.38	158	105	1.2
6022		20	28	71	151	123.5	115	56			10.4	168	117	1.2
8018	25.40	20	32	80	169	141.2	115	63	15.2	29.3	13.2	190	129	1.9
8020		20	36	90	185	149.2	125	67			16.2	210	137	2.5
8022		20	40	100	202	157.2	142	71			21.8	226	137	2.7
10020	31.75	25	45	110	233	178.8	162	80	18.8	35.8	32.4	281	153	4.1
12018	38.10	35	50	125	256	202.7	173	90	22.7	45.4	43.2	307	181	5.2
12022		35	56	140	304	222.7	213	100			69.1	357	181	6.7

NOTE: The left two or three digits of the KCM Coupling No. imply Chain No. and the two succeeded digits imply the number of teeth.

Selection

1. Operating Conditions

- A) Operating hours/day
- B) Types of load and prime mover
- C) Transmission power (kW) and speed (rpm) of coupling
- D) Diameters of both shafts

2. Selection Method

- A) Find service factor from the Service Factor Table according to operating conditions a) and b).
- B) Determine the compensated chain drive power (kW) by multiplying the transmission power kW by the service factor above.
- C) Find a proper coupling, which meets the compensated chain drive power, from the Chain Power Transmission Table below according to the operating speed of the coupling.
- D) If the maximum allowable shaft diameter specified for the selected coupling is smaller than the actual shaft diameter, reselect the larger coupling with proper allowable shaft diameter.
- E) When using standard key at a low speed, the pressure acting on the key surface will be increased excessively in some cases. Therefore, it is required to calculate the pressure acting on the key surface to find whether the use of special key or spline is necessary.

● Service Factors

Operating Conditions	Operating Hours/Day			
	8 h	8 to 16 h	8 h	8 to 16 h
Small load variation, small impact, light load, no reversing operation	1.0	1.5	2.0	2.5
Medium load variation, medium impact, no reversing operation (in general case)	1.5	2.0	2.5	3.0
Large load variation, large impact, reversing operation while loaded	2.0	2.5	3.0	3.5
Type of prime mover	Motor, turbine		Combustion engine	

NOTE: In case of 16 operating hours/day or larger, add 1.0 to the service factor of the relevant 8 operating hours/day, except that the service factor for the relevant 8 operating hours/day is applied for operating at 50 rpm or less.

● Chain Power Transmission Table

KCM Coupling No.	Max. Shaft Dia. (mm)	Allowable Transmission Torque at 50r/min or less (kgf·m)	Coupling Speed (r/min)																							
			1	5	10	25	50	100	200	300	400	500	600	800	1000	1200	1500	1800	2000	2500	3000	3600	4000	4800	5200	6000
3012	16	10.2	0.01	0.05	0.11	0.26	0.52	0.79	1.21	1.58	1.89	2.26	2.58	3.19	3.88	4.41	5.35	6.25	6.73	8.12	9.44	11.0	12.0	14.0	14.8	16.7
4012	22	22.2	0.02	0.11	0.22	0.58	1.15	1.73	2.63	3.46	4.15	4.96	5.67	7.01	8.53	9.68	11.6	13.7	14.8	17.9	20.7	24.1	26.3	30.8		
4014	28	30.2	0.03	0.16	0.32	0.79	1.58	2.36	3.59	4.72	5.66	6.77	7.72	9.56	11.64	13.21	15.8	18.7	20.2	24.4	28.3	32.9	35.9	42.1		
4016	32	39.4	0.04	0.21	0.41	1.03	2.06	3.09	4.69	6.17	7.41	8.85	10.1	12.5	15.3	17.3	21.0	24.4	26.3	31.9	37.0	43.0	46.9	54.9		
5014	35	57.4	0.06	0.30	0.60	1.50	3.00	4.48	6.80	8.95	10.7	12.8	14.7	18.1	22.1	25.1	30.0	35.4	38.3	46.2	53.6	62.4				
5016	40	75.0	0.08	0.39	0.78	1.95	3.91	5.86	8.92	11.7	14.1	16.8	19.2	23.8	28.9	32.9	39.9	46.4	50.0	60.6	70.4	81.6				
5018	45	95.0	0.10	0.50	0.99	2.48	4.95	7.43	11.3	14.9	17.8	21.3	24.4	30.1	36.6	41.6	50.5	58.8	63.4	76.8	89.2					
6018	56	179	0.18	0.93	1.87	4.67	9.33	14.0	21.3	28.0	33.6	40.1	45.9	56.8	69.1	78.4	95.2	111	120	145						
6022	71	242	0.25	1.25	2.51	6.31	12.5	18.8	28.6	37.7	45.3	54.1	61.9	76.5	93.1	105	128	149	161	195						
8018	80	396	0.41	2.07	4.14	10.3	20.7	31.0	47.2	62.1	74.5	89.0	101	126	153	174	211	246	265							
8022	100	570	0.59	2.96	5.93	14.8	29.6	44.5	67.2	89.0	106	127	146	180	219	249	302	352	379							
10020	110	896	0.93	4.66	9.33	23.3	46.6	70.0	106	140	168	200	229	283	345	392	476	554								
12018	125	1,350	1.40	7.02	14.0	35.1	70.2	105	160	210	252	302	345	426	519	590	716									
12022	140	1,750	1.81	9.07	18.1	45.3	90.7	136	206	272	326	390	446	551	671	762										
Lubrication Type			A						B						C											

NOTE: Be sure to use the casing with the coupling in the case of Lubrication Type C. For details on Lubrication Type A and B, refer to "Lubrication" section.

Lubrication

There are three methods to lubricate chain couplings, according to operating speed (see Chain Power Transmission Table).

Lubrication Type A: Greasing monthly

Lubrication Type B: Greasing weekly or filling grease in the casing attached.

Lubrication Type C: Filling grease in the casing attached.

NOTE: When attaching the casing, use high-quality grease because the grease is pressed to the inside wall of the casing due to centrifugal force, deteriorating lubricating ability of the grease. It is recommended to change the grease periodically to maintain high performance and durability of the coupling.

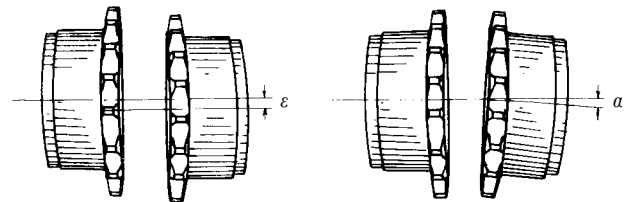
● Grease Change Intervals (with casing attached)

Operating conditions	Grease change intervals	
	First change	Second and later changes
Operation at 1/2 max. speed or higher	1000 hours	2000 hours
Operation at 1/2 max. speed or lower	2000 hours	4000 hours

● Grease Filling Quantity

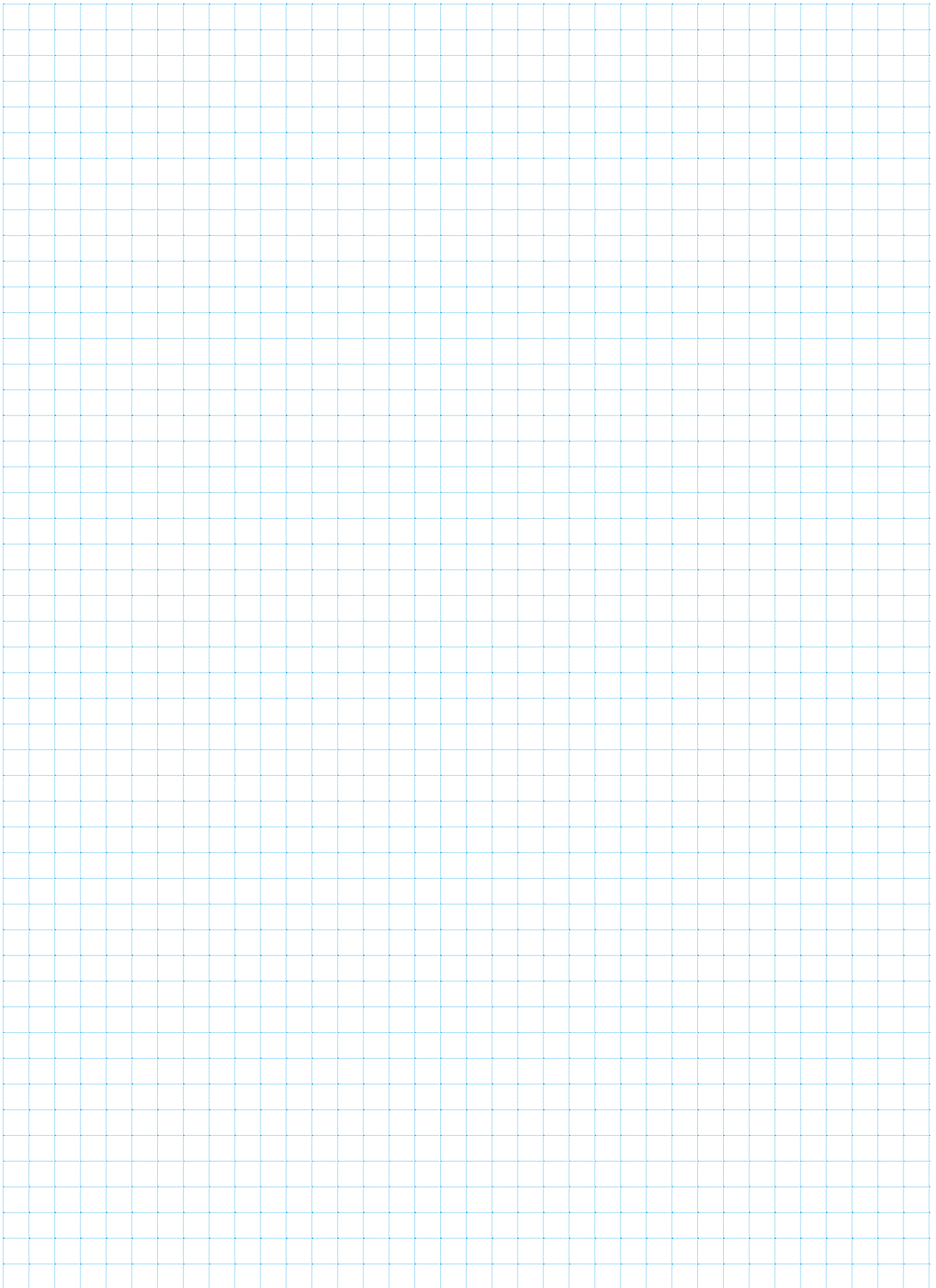
KCM Coupling No.	Filling Quantity (kg)	KCM Coupling No.	Filling Quantity (kg)
3012	0.08	6020	0.44
4012	0.12	6022	0.48
4014	0.16	8018	0.79
4016	0.17	8020	0.86
5014	0.24	8022	1.0
5016	0.25	10020	1.7
5018	0.26	12018	3.5
6018	0.42	12022	4.5

Coupling allowance (Shaft deviation and misalignment)



Allowable errors: $\left\{ \begin{array}{l} \epsilon = 2\% \text{ or less of pitch of roller chain used} \\ \alpha = 1^\circ \text{ or less} \end{array} \right.$

In case of high-speed operation, shaft deviation and misalignment must be up to 1/2 allowable errors.



SPROCKETS



Types and Materials


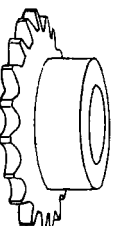
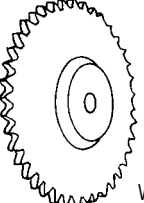
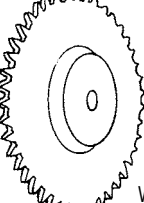
Correct engagement between roller chain and sprocket is required for smooth transmission of roller chain.

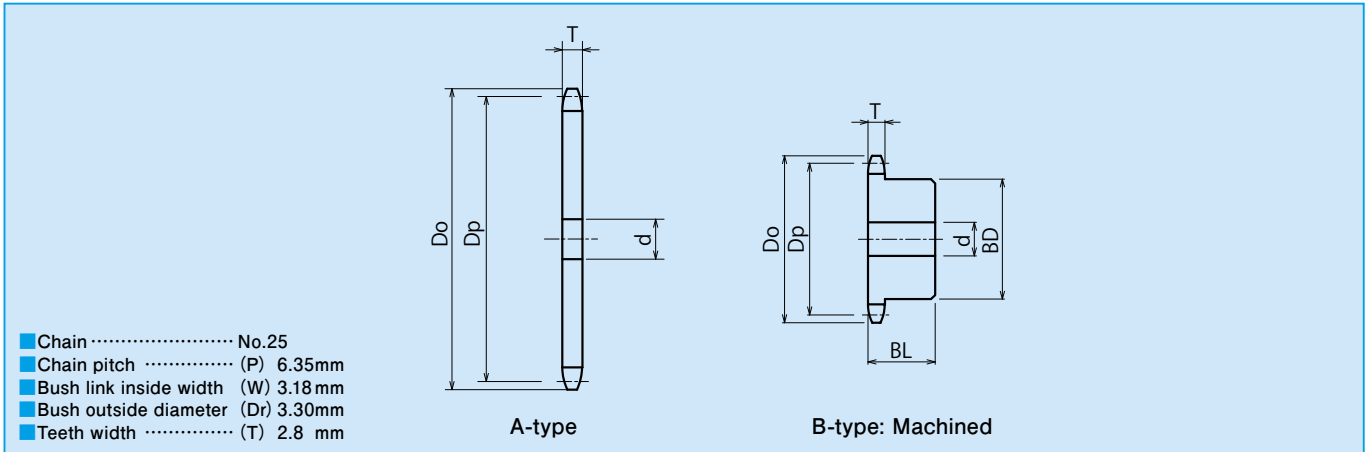
Appropriate selection of number of teeth (speed ratio), center-to-center distance, and arrangement of sprockets is crucial for service life of a roller chain and a sprocket. Pay due consideration to the selection of sprockets to avoid decreasing smooth rotation and transmission efficiency.

Finished Sprockets

FBN (finished for new JIS key) and FB (finished for old JIS key) sprockets are a version, finished with shaft bore, key groove, and set screw, of KCM standard sprocket B-type.

Centralized production system is employed to ensure high precision and stable quality of products which are manufactured in the excellent facilities under stringent quality control. A thousand kinds of line-ups in total allows to satisfy user's needs and reduce the total cost.

Type		Material
A-type	 <p>Steel plate sprocket</p>	<ul style="list-style-type: none"> ◦ Carbon steel for machine structural use ▫ Common steel
B-type	 <p>Machined</p> <p>Sprocket for chains with a small number of teeth, provided with standard hub diameter and hub width for the diameter of shaft employed</p>	<ul style="list-style-type: none"> ◦ Carbon steel for machine structural use ▫ Common steel
	 <p>Welded</p> <p>Sprocket with hub welded</p>	<ul style="list-style-type: none"> ◦ Carbon steel for machine structural use ▫ Common steel
C-type	 <p>Welded</p> <p>Sprocket with hubs welded on both sides</p>	<ul style="list-style-type: none"> ▫ Common steel



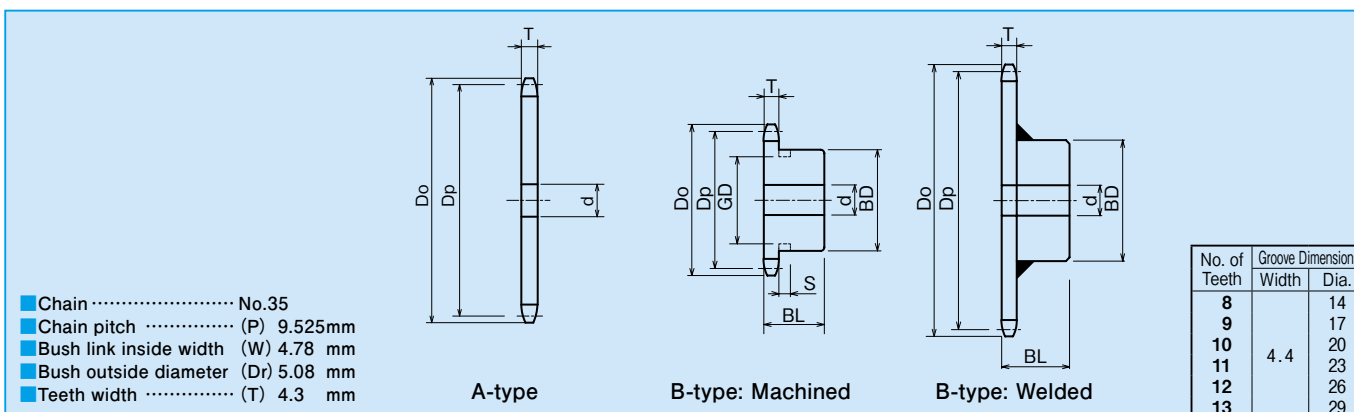
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
25A	10	23	20.55	6	7	0.01
	12	28	24.53	7	8	0.01
	13	30	26.53	7	8	0.01
	14	32	28.54	7	8	0.01
	15	34	30.54	7	8	0.02
	16	36	32.55	9	10	0.02
	17	38	34.56	9	10	0.02
	18	40	36.57	9	10	0.02
	20	44	40.59	9	10	0.03
	24	52	48.65	9	10	0.04
	25	54	50.66	9	10	0.04
	27	58	54.70	9	10	0.05
	28	60	56.71	9	10	0.06
	29	62	58.73	9	10	0.06
	30	64	60.75	9	10	0.06
	32	68	64.78	10	11	0.07
	33	70	66.80	10	11	0.08
	35	74	70.84	10	11	0.09
	36	76	72.86	10	11	0.09
	37	78	74.88	10	11	0.10
38	80	76.90	10	11	0.10	
40	84	80.93	10	11	0.11	
42	89	84.97	11	12	0.12	
45	95	91.03	11	12	0.14	
50	105	101.13	11	12	0.18	
55	115	111.23	11	12	0.21	
60	125	121.33	11	12	0.25	
70	145	141.54	11	12	0.34	
75	155	151.64	11	12	0.40	
80	165	161.74	11	12	0.45	

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
25B	10	23	20.55	6	7	8.5	14	15	0.03	Machined	Carbon steel for machine structural use
	11	25	22.54	7	8	8.5	15	15	0.03		
	12	28	24.53	7	8	9.5	15	15	0.03		
	13	30	26.53	7	8	10	18	15	0.05		
	14	32	28.54	7	8	10	20	15	0.05		
	15	34	30.54	7	8	10	20	15	0.05		
	16	36	32.55	9	10	12	25	15	0.06		
	17	38	34.56	9	10	12	25	15	0.07		
	18	40	36.57	9	10	12	25	15	0.07		
	19	42	38.58	9	10	16	28	15	0.08		
	20	44	40.59	9	10	16	28	15	0.08		
	21	46	42.61	9	10	16	28	15	0.09		
	22	48	44.62	9	10	16	30	15	0.10		
	23	50	46.63	9	10	16	30	15	0.11		
	24	52	48.65	9	10	16	30	15	0.12		
	25	54	50.66	9	10	20	35	15	0.14		
	26	56	52.68	9	10	20	35	15	0.14		
	27	58	54.70	9	10	20	35	15	0.15		
	28	60	56.71	9	10	20	35	15	0.15		
	29	62	58.73	9	10	20	35	15	0.16		
30	64	60.75	9	10	20	35	15	0.16			
31	66	62.77	10	11	22	40	20	0.20			
32	68	64.78	10	11	22	40	20	0.20			
33	70	66.80	10	11	22	40	20	0.21			
34	72	68.82	10	11	22	40	20	0.21			
35	74	70.84	10	11	22	40	20	0.21			
36	76	72.86	10	11	22	40	20	0.22			
37	78	74.88	10	11	22	40	20	0.26			
38	80	76.90	10	11	22	40	20	0.26			
39	82	78.91	10	11	22	40	20	0.27			
40	84	80.93	10	11	22	40	20	0.27			
41	87	82.95	11	12	30	50	20	0.32			
42	89	84.97	11	12	30	50	20	0.32			
43	91	86.99	11	12	30	50	20	0.40			
44	93	89.01	11	12	30	50	20	0.41			
45	95	91.03	11	12	30	50	20	0.41			
48	101	97.09	11	12	30	50	20	0.43			
50	105	101.13	11	12	30	50	20	0.46			
54	113	109.21	11	12	30	50	20	0.47			
60	125	121.33	11	12	30	50	20	0.52			
65	135	131.43	12	13	30	50	30	0.72			
70	145	141.54	12	13	30	50	30	0.77			
75	155	151.64	12	13	30	50	30	0.82			
80	165	161.74	12	13	30	50	30	0.88			

NOTES: - Material of A-type is all common steel.
 - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.



No. of Teeth	Groove Dimensions	
	Width	Dia.
8	4.4	14
9		17
10		20
11		23
12		26
13		29

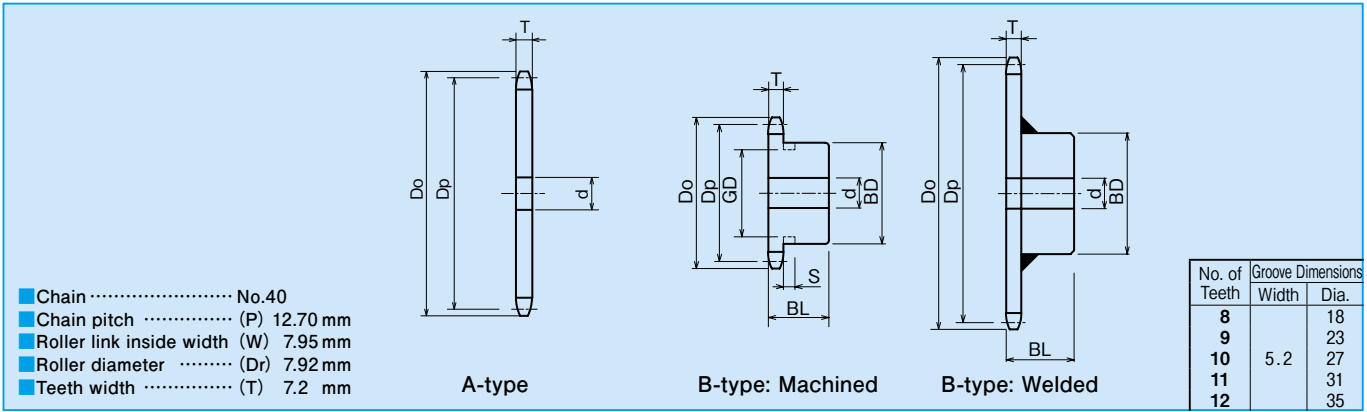
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight(kg)
				Drill Hole	Min.	
35A	10	35	30.82	8	9	0.02
	11	38	33.81	8	9	0.03
	12	41	36.80	9	10	0.03
	13	44	39.80	9	10	0.04
	14	47	42.81	9	10	0.04
	15	51	45.81	9	10	0.05
	16	54	48.82	9	10	0.05
	17	57	51.84	11	12	0.07
	18	60	54.85	11	12	0.07
	19	63	57.87	11	12	0.09
	20	66	60.89	11	12	0.09
	21	69	63.91	11	12	0.11
	22	72	66.93	11	12	0.11
	23	75	69.95	11	12	0.11
	24	78	72.97	11	12	0.14
	25	81	76.00	11	12	0.16
	26	84	79.02	11	12	0.16
	27	87	82.05	11	12	0.17
	28	90	85.07	11	12	0.18
	30	96	91.12	11	12	0.23
	32	102	97.18	11	12	0.27
	33	105	100.20	11	12	0.28
	34	109	103.23	11	12	0.29
	35	112	106.26	11	12	0.30
	36	115	109.29	12	13	0.32
	38	121	115.34	12	13	0.37
	40	127	121.40	12	13	0.40
	42	133	127.46	14	15	0.43
	45	142	136.55	14	15	0.49
	46	145	139.58	14	15	0.51
	48	151	145.64	14	15	0.55
	50	157	151.70	14	15	0.60
54	169	163.81	14	15	0.70	
55	172	166.85	14	15	0.71	
60	187	182.00	14	15	0.80	
65	203	197.15	16	17	1.02	
70	218	212.30	16	17	1.18	
80	248	242.61	16	17	1.50	

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
35B	8	29	24.89	8	9	10	★18.5	20	0.06	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	9	32	27.85	8	9	11	★21.5	20	0.06		
	10	35	30.82	8	9	12	★24.5	20	0.08		
	11	38	33.81	8	9	14	★27	20	0.09		
	12	41	36.80	9	10	16	★30.5	20	0.12		
	13	44	39.80	9	10	18	★32	20	0.12		
	14	47	42.81	9	10	18	32	20	0.12		
	15	51	45.81	9	10	20	35	20	0.16		
	16	54	48.82	9	10	20	37	20	0.19		
	17	57	51.84	11	12	25	41	20	0.22		
	18	60	54.85	11	12	25	44	20	0.25		
	19	63	57.87	11	12	28	47	20	0.28		
	20	66	60.89	11	12	30	50	20	0.32		
	21	69	63.91	11	12	32	53	20	0.36		
	22	72	66.93	11	12	35	56	20	0.37		
	23	75	69.95	11	12	38	60	20	0.38		
	24	78	72.97	11	12	32	53	22	0.43		
	25	81	76.00	11	12	32	53	22	0.44		
	26	84	79.02	11	12	32	53	22	0.45		
	27	87	82.05	11	12	32	53	22	0.46		
	28	90	85.07	11	12	32	53	22	0.48		
	29	93	88.10	11	12	32	53	22	0.49		
	30	96	91.12	11	12	32	53	22	0.51		
	31	99	94.15	11	12	32	53	22	0.53		
	32	102	97.18	11	12	32	53	22	0.54		
	33	105	100.20	11	12	32	53	22	0.56		
	34	109	103.23	11	12	32	53	22	0.57		
	35	112	106.26	11	12	32	53	22	0.59		
	36	115	109.29	12	13	32	53	22	0.61		
	37	118	112.31	12	13	42	63	25	0.80		
	38	121	115.34	12	13	42	63	25	0.82		
	39	124	118.37	12	13	42	63	25	0.84		
	40	127	121.40	12	13	42	63	25	0.85		
	41	130	124.43	14	15	42	63	25	0.91		
	42	133	127.46	14	15	42	63	25	0.93		
	43	136	130.49	14	15	42	63	25	0.95		
	44	139	133.52	14	15	42	63	25	0.97		
	45	142	136.55	14	15	42	63	25	1.00		
	46	145	139.58	14	15	42	63	25	1.01		
	47	148	142.61	14	15	42	63	25	1.03		
48	151	145.64	14	15	42	63	25	1.05			
50	157	151.70	14	15	42	63	25	1.07			
53	166	160.78	14	15	42	63	25	1.09			
54	169	163.81	14	15	42	63	25	1.10			
55	172	166.85	14	15	42	63	25	1.25			
60	187	182.00	14	15	42	63	25	1.30			
64	200	194.12	16	17	42	63	25	1.46			
65	203	197.15	16	17	45	68	25	1.67			
70	218	212.30	16	17	45	68	25	1.80			
75	233	227.46	16	17	45	68	25	1.90			
80	248	242.61	16	17	45	68	25	2.40			

NOTES: - Material of A-type is all common steel.
 - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.



No. of Teeth	Groove Dimensions	
	Width	Dia.
8	5.2	18
9		23
10		27
11		31
12		35

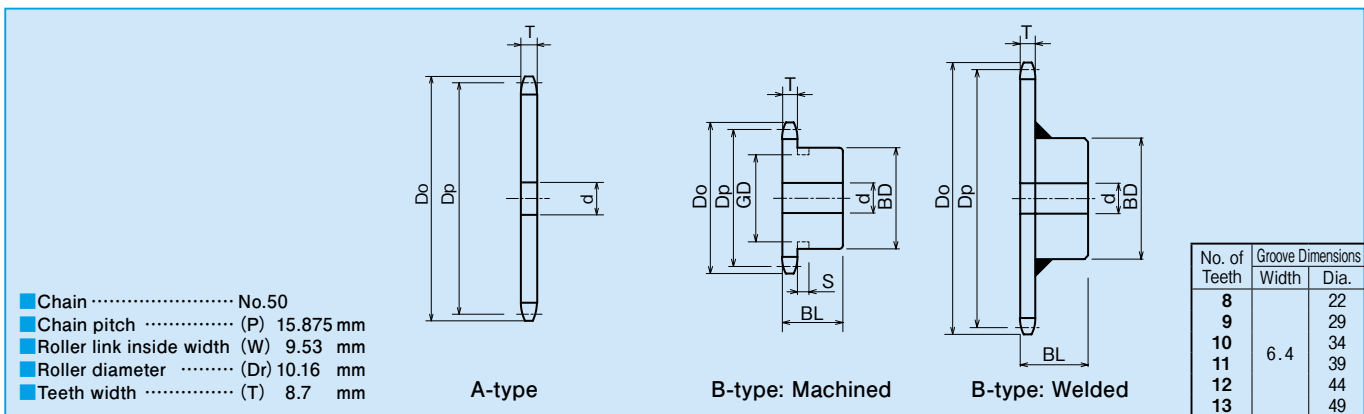
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
40A	10	47	41.10	9	10	0.05
	11	51	45.08	10	11	0.09
	12	55	49.07	10	11	0.10
	13	59	53.07	12	13	0.12
	14	63	57.07	12	13	0.14
	15	67	61.08	12	13	0.16
	16	71	65.10	13	14	0.18
	17	76	69.12	13	14	0.20
	18	80	73.14	13	14	0.23
	19	84	77.16	14	15	0.26
	20	88	81.18	14	15	0.29
	21	92	85.21	14	15	0.30
	22	96	89.24	14	15	0.35
	23	100	93.27	14	15	0.38
	24	104	97.30	14	15	0.40
	25	108	101.33	14	15	0.45
	26	112	105.36	14	15	0.49
	27	116	109.40	14	15	0.50
	28	120	113.43	14	15	0.56
	29	124	117.46	14	15	0.60
	30	128	121.50	14	15	0.63
	31	133	125.53	14	15	0.65
	32	137	129.57	14	15	0.70
	33	141	133.61	14	15	0.75
	34	145	137.64	14	15	0.80
	35	149	141.68	14	15	0.85
	36	153	145.72	16	17	0.90
	37	157	149.75	16	17	0.99
	38	161	153.79	16	17	1.00
	39	165	157.83	16	17	1.15
	40	169	161.87	16	17	1.20
	41	173	165.91	16	17	1.20
	42	177	169.95	16	17	1.25
	43	181	173.98	16	17	1.30
	44	185	178.02	16	17	1.35
	45	189	182.06	16	17	1.40
	46	193	186.10	16	17	1.49
	47	197	190.14	16	17	1.58
	48	201	194.18	16	17	1.63
	49	205	198.22	16	17	1.73
50	209	202.26	16	17	1.80	
51	214	206.30	16	17	1.88	
52	218	210.34	16	17	1.93	
53	222	214.38	16	17	1.98	
54	226	218.42	16	17	2.00	
55	230	222.46	16	17	2.18	
56	234	226.50	16	17	2.26	
58	242	234.58	16	17	2.43	
59	246	238.62	16	17	2.51	
60	250	242.66	16	17	2.60	
62	258	250.74	16	17	2.77	
64	266	258.83	16	17	2.90	
65	270	262.87	16	17	3.00	
68	282	274.99	16	17	3.35	
70	290	283.07	16	17	3.50	
72	299	291.16	20	21	3.70	
75	311	303.28	20	21	4.00	
80	331	323.49	20	21	4.60	
85	351	343.69	20	21	5.20	
90	371	363.90	20	21	5.80	

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
40B	8	39	33.19	9	10	14	★24	22	0.10	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	9	43	37.13	9	10	16	★28	22	0.11		
	10	47	41.10	9	10	18	★32	22	0.14		
	11	51	45.08	10	11	20	★36	22	0.19		
	12	55	49.07	10	11	22	★40	22	0.22		
	13	59	53.07	12	13	20	37	22	0.23		
	14	63	57.07	12	13	25	42	22	0.28		
	15	67	61.08	12	13	28	46	22	0.34		
	16	71	65.10	13	14	30	50	22	0.40		
	17	76	69.12	13	14	32	54	22	0.46		
	18	80	73.14	13	14	35	57	22	0.51		
	19	84	77.16	14	15	40	62	22	0.59		
	20	88	81.18	14	15	45	67	25	0.76		
	21	92	85.21	14	15	48	71	25	0.85		
	22	96	89.24	14	15	51	75	25	0.95		
	23	100	93.27	14	15	51	77	25	1.00		
	24	104	97.30	14	15	42	63	25	0.84		
	25	108	101.33	14	15	42	63	25	0.88		
	26	112	105.36	14	15	42	63	25	0.92		
	27	116	109.40	14	15	42	63	25	0.96		
	28	120	113.43	14	15	42	63	25	1.00		
	29	124	117.46	14	15	42	63	25	1.00		
	30	128	121.50	14	15	42	63	25	1.10		
	31	133	125.53	14	15	45	68	28	1.20		
	32	137	129.57	14	15	45	68	28	1.30		
	33	141	133.61	14	15	45	68	28	1.30		
	34	145	137.64	14	15	45	68	28	1.30		
	35	149	141.68	14	15	45	68	28	1.40		
	36	153	145.72	16	17	45	68	28	1.50		
	37	157	149.75	16	17	45	68	28	1.55		
	38	161	153.79	16	17	45	68	28	1.60		
	39	165	157.83	16	17	45	68	28	1.65		
	40	169	161.87	16	17	45	68	28	1.70		
	41	173	165.91	16	17	48	73	32	2.00		
	42	177	169.95	16	17	48	73	32	2.05		
	43	181	173.98	16	17	48	73	32	2.10		
	44	185	178.02	16	17	48	73	32	2.17		
	45	189	182.06	16	17	48	73	32	2.25		
	46	193	186.10	16	17	48	73	32	2.30		
	47	197	190.14	16	17	48	73	32	2.37		
48	201	194.18	16	17	48	73	32	2.45			
49	205	198.22	16	17	48	73	32	2.51			
50	209	202.26	16	17	48	73	32	2.60			
51	214	206.30	16	17	48	73	32	2.65			
52	218	210.34	16	17	48	73	32	2.72			
53	222	214.38	16	17	48	73	32	2.80			
54	226	218.42	16	17	48	73	32	2.90			
55	230	222.46	16	17	48	73	32	2.96			
56	234	226.50	16	17	48	73	32	3.04			
60	250	242.66	16	17	48	73	32	3.40			
64	266	258.83	16	17	48	73	32	3.73			
65	270	262.87	16	17	55	83	32	4.10			
68	282	274.99	16	17	55	83	32	4.35			
70	290	283.07	16	17	55	83	32	4.57			
72	299	291.16	20	21	55	83	32	4.80			
75	311	303.28	20	21	55	83	32	5.10			
80	331	323.49	20	21	60	88	35	5.90			
85	351	343.69	20	21	60	88	35	6.50			
90	371	363.90	20	21	60	88	35	7.15			

NOTES: - Material of A-type is all common steel.
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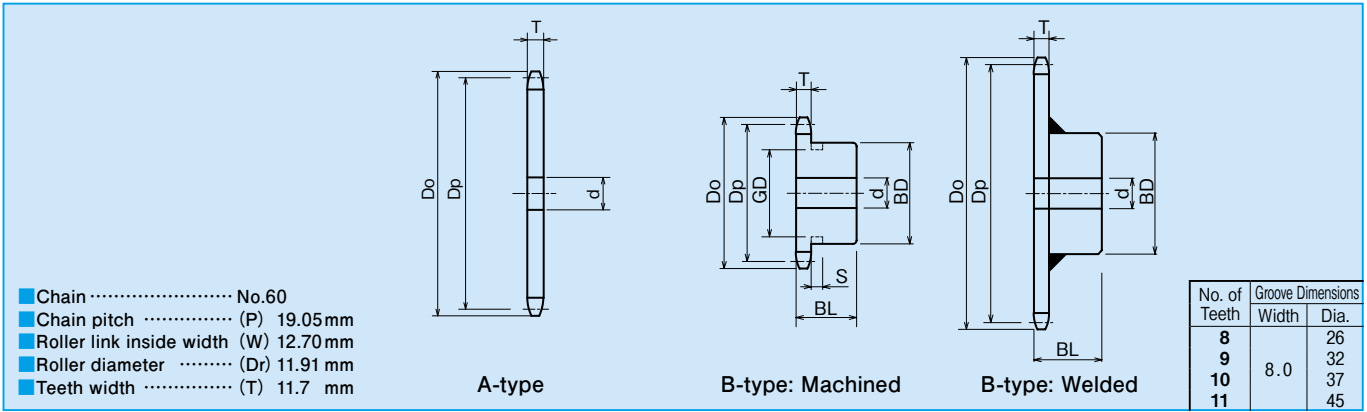
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
	10	58	51.37	10	11	0.14
	11	64	56.35	12	13	0.17
	12	69	61.34	12	13	0.20
	13	74	66.34	12	13	0.23
	14	79	71.34	12	13	0.27
	15	84	76.35	12	13	0.30
	16	89	81.37	14	15	0.35
	17	94	86.39	14	15	0.40
	18	100	91.42	14	15	0.45
	19	105	96.45	14	15	0.48
	20	110	101.48	14	15	0.50
	21	115	106.51	14	15	0.60
	22	120	111.55	16	17	0.66
	23	125	116.58	16	17	0.72
	24	130	121.62	16	17	0.78
	25	135	126.66	16	17	0.85
	26	140	131.70	16	17	0.90
	27	145	136.74	16	17	1.00
	28	150	141.79	16	17	1.05
	29	155	146.83	16	17	1.12
	30	161	151.87	16	17	1.20
	31	166	156.92	16	17	1.30
	32	171	161.96	16	17	1.35
	33	176	167.01	16	17	1.45
	34	181	172.05	16	17	1.55
	35	186	177.10	16	17	1.65
	36	191	182.14	19	20	1.75
	37	196	187.19	19	20	1.85
	38	201	192.24	19	20	1.95
	39	206	197.29	19	20	2.05
50A	40	211	202.33	19	20	2.15
	41	216	207.38	19	20	2.25
	42	221	212.43	19	20	2.40
	43	226	217.48	19	20	2.50
	44	231	222.53	19	20	2.60
	45	237	227.58	19	20	2.70
	46	242	232.63	19	20	2.88
	47	247	237.68	19	20	3.01
	48	252	242.73	19	20	3.10
	49	257	247.78	19	20	3.27
	50	262	252.83	19	20	3.40
	51	267	257.88	19	20	3.55
	52	272	262.92	19	20	3.69
	53	277	267.97	19	20	3.83
	54	282	273.02	19	20	3.95
	55	287	278.08	19	20	4.13
	56	292	283.13	19	20	4.28
	57	297	288.18	19	20	4.44
	58	302	293.23	19	20	4.59
	59	307	298.28	19	20	4.75
	60	312	303.33	19	20	4.90
	64	333	323.53	20	21	5.60
	65	338	328.58	20	21	5.75
	68	353	343.74	20	21	6.32
	70	363	353.84	20	21	6.70
	72	373	363.94	20	21	7.05
	75	388	379.10	20	21	7.70
	80	414	404.36	20	21	8.70
	90	464	454.88	20	21	11.00

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
	8	48	41.48	10	11	13.5	★30	25	0.12	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	9	53	46.42	10	11	18	★34	25	0.20		
	10	58	51.37	10	11	22	★40	25	0.27		
	11	64	56.35	12	13	28	★45.5	25	0.33		
	12	69	61.34	12	13	30	★50	25	0.41		
	13	74	66.34	12	13	32	★51	25	0.46		
	14	79	71.34	12	13	32	52	25	0.52		
	15	84	76.35	12	13	35	57	25	0.62		
	16	89	81.37	14	15	40	62	25	0.72		
	17	94	86.39	14	15	45	67	25	0.83		
	18	100	91.42	14	15	48	72	28	1.00		
	19	105	96.45	14	15	48	73	28	1.10		
	20	110	101.48	14	15	48	73	28	1.20		
	21	115	106.51	14	15	48	73	28	1.20		
	22	120	111.55	16	17	48	73	28	1.30		
	23	125	116.58	16	17	48	73	28	1.30		
	24	130	121.62	16	17	48	73	28	1.40		
	25	135	126.66	16	17	48	73	28	1.50		
	26	140	131.70	16	17	48	73	28	1.50		
	27	145	136.74	16	17	48	73	28	1.50		
	28	150	141.79	16	17	48	73	28	1.60		
	29	155	146.83	16	17	48	73	28	1.70		
	30	161	151.87	16	17	48	73	28	1.80		
	31	166	156.92	16	17	48	73	28	1.85		
	32	171	161.96	16	17	48	73	28	1.90		
	33	176	167.01	16	17	48	73	28	2.00		
	34	181	172.05	16	17	48	73	28	2.10		
	35	186	177.10	16	17	48	73	28	2.20		
50B	36	191	182.14	19	20	55	83	35	2.85	Machined	Common steel
	37	196	187.19	19	20	55	83	35	2.95		
	38	201	192.24	19	20	55	83	35	3.05		
	39	206	197.29	19	20	55	83	35	3.15		
	40	211	202.33	19	20	55	83	35	3.25		
	41	216	207.38	19	20	55	83	35	3.40		
	42	221	212.43	19	20	55	83	35	3.50		
	43	226	217.48	19	20	55	83	35	3.60		
	44	231	222.53	19	20	55	83	35	3.70		
	45	237	227.58	19	20	55	83	35	3.85		
	46	242	232.63	19	20	55	83	35	3.96	Welded	Common steel
	47	247	237.68	19	20	55	83	35	4.09		
	48	252	242.73	19	20	55	83	35	4.20		
	49	257	247.78	19	20	55	83	35	4.35		
	50	262	252.83	19	20	55	83	35	4.50		
	51	267	257.88	19	20	55	83	35	4.62		
	52	272	262.92	19	20	55	83	35	4.76		
	53	277	267.97	19	20	55	83	35	4.91		
	54	282	273.02	19	20	55	83	35	5.05		
	55	287	278.08	19	20	55	83	35	5.20		
	56	292	283.13	19	20	55	83	35	5.36		
	57	297	288.18	19	20	55	83	35	5.51		
	58	302	293.23	19	20	55	83	35	5.67		
	59	307	298.28	19	20	55	83	35	6.00		
	60	312	303.33	19	20	55	83	35	6.00		
	64	333	323.53	20	21	63	93	40	7.40		
	65	338	328.58	20	21	63	93	40	7.40		
	68	353	343.74	20	21	63	93	40	7.94		
	70	363	353.84	20	21	63	93	40	8.30		
	75	388	379.10	20	21	66	98	45	9.35		
	80	414	404.36	20	21	66	98	45	10.50		
	85	439	429.62	20	21	66	98	45	12.00		
	90	464	454.88	20	21	66	98	45	13.20		

NOTES: - Material of A-type is all common steel.
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 - Sprockets other than those listed above are also manufactured. Contact us.
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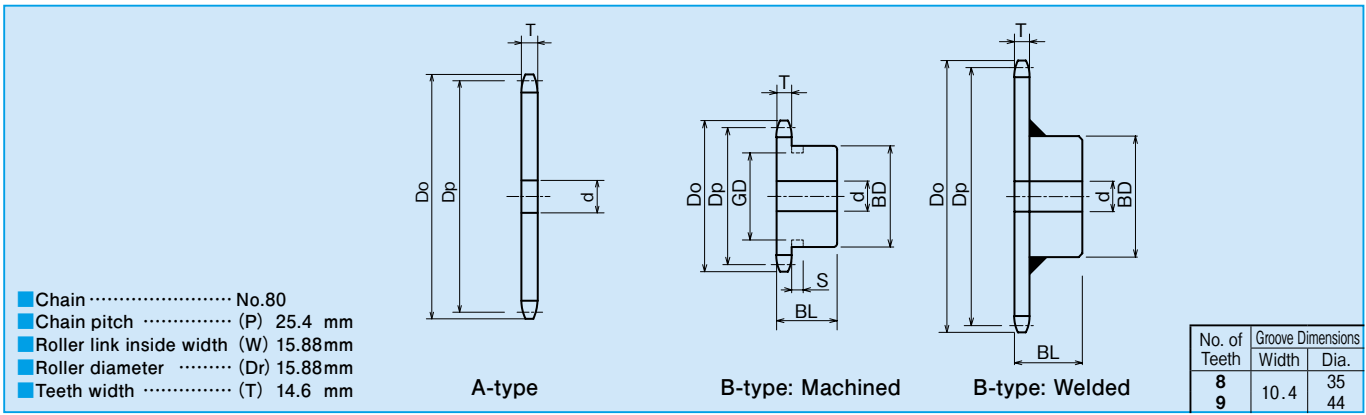
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
60A	10	70	61.65	14	15	0.27
	11	76	67.62	14	15	0.30
	12	83	73.60	14	15	0.38
	13	89	79.60	14	15	0.45
	14	95	85.61	16	17	0.50
	15	101	91.62	16	17	0.60
	16	107	97.65	16	17	0.65
	17	113	103.67	16	17	0.75
	18	119	109.71	16	17	0.84
	19	126	115.74	16	17	0.93
	20	132	121.78	16	17	1.05
	21	138	127.82	16	17	1.15
	22	144	133.86	16	17	1.25
	23	150	139.90	16	17	1.40
	24	156	145.95	18	19	1.50
	25	162	151.99	18	19	1.62
	26	168	158.04	18	19	1.78
	27	174	164.09	18	19	1.90
	28	180	170.14	18	19	2.05
	29	187	176.20	18	19	2.20
	30	193	182.25	18	19	2.35
	31	199	188.30	20	21	2.50
	32	205	194.35	20	21	2.68
	33	211	200.41	20	21	2.85
	34	217	206.46	20	21	3.02
	35	223	212.52	20	21	3.25
	36	229	218.57	20	21	3.40
	37	235	224.63	20	21	3.60
	38	241	230.69	20	21	3.80
	39	247	236.74	20	21	4.00
40	253	242.80	20	21	4.20	
41	260	248.86	20	21	4.45	
42	266	254.92	20	21	4.63	
43	272	260.98	20	21	4.85	
44	278	267.03	20	21	5.10	
45	284	273.09	20	21	5.30	
46	290	279.15	20	21	5.59	
47	296	285.21	20	21	5.83	
48	302	291.27	20	21	6.10	
49	308	297.33	20	21	6.34	
50	314	303.39	20	21	6.60	
51	320	309.45	20	21	6.87	
52	326	315.51	20	21	7.15	
53	332	321.57	20	21	7.44	
54	338	327.63	20	21	7.70	
55	345	333.69	20	21	8.00	
57	357	345.81	20	21	8.59	
58	363	351.87	20	21	8.90	
60	375	363.99	20	21	9.50	
65	405	394.30	26	27	11.20	
70	436	424.61	26	27	13.00	
72	448	436.73	26	27	13.70	
75	466	454.92	26	27	14.90	
80	496	485.23	26	27	16.90	
90	557	545.85	26	27	21.40	

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
60B	8	58	49.78	12	13	20	★34	32	0.30	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	9	64	55.70	12	13	25	★43	32	0.40		
	10	70	61.65	14	15	30	★49	32	0.49		
	11	76	67.62	14	15	32	★51	32	0.60		
	12	83	73.60	14	15	32	51	32	0.69		
	13	89	79.60	14	15	35	57	32	0.81		
	14	95	85.61	16	17	40	62	32	0.96		
	15	101	91.62	16	17	45	68	32	1.10		
	16	107	97.65	16	17	48	73	32	1.30		
	17	113	103.67	16	17	48	73	32	1.40		
	18	119	109.71	16	17	55	83	40	2.00		
	19	126	115.74	16	17	55	83	40	2.10		
	20	132	121.78	16	17	55	83	40	2.20		
	21	138	127.82	16	17	55	83	40	2.30		
	22	144	133.86	16	17	55	83	40	2.50		
	23	150	139.90	16	17	55	83	40	2.50		
	24	156	145.95	18	19	55	83	40	2.60		
	25	162	151.99	18	19	55	83	40	2.70		
	26	168	158.04	18	19	55	83	40	2.90		
	27	174	164.09	18	19	55	83	40	3.00		
	28	180	170.14	18	19	55	83	40	3.10		
	29	187	176.20	18	19	55	83	40	3.30		
	30	193	182.25	18	19	55	83	40	3.40		
	31	199	188.30	20	21	55	83	40	3.60		
	32	205	194.35	20	21	55	83	40	3.80		
	33	211	200.41	20	21	55	83	40	4.00		
	34	217	206.46	20	21	55	83	40	4.15		
	35	223	212.52	20	21	55	83	40	4.33		
	36	229	218.57	20	21	55	83	40	4.52		
	37	235	224.63	20	21	55	83	40	4.70		
38	241	230.69	20	21	55	83	40	4.90			
39	247	236.74	20	21	55	83	40	5.10			
40	253	242.80	20	21	55	83	40	5.30			
41	260	248.86	20	21	63	93	45	6.00			
42	266	254.92	20	21	63	93	45	6.40			
43	272	260.98	20	21	63	93	45	6.60			
44	278	267.03	20	21	63	93	45	6.88			
45	284	273.09	20	21	63	93	45	7.10			
46	290	279.15	20	21	63	93	45	7.28			
47	296	285.21	20	21	63	93	45	7.53			
48	302	291.27	20	21	63	93	45	7.85			
49	308	297.33	20	21	63	93	45	8.04			
50	314	303.39	20	21	63	93	45	8.40			
51	320	309.45	20	21	63	93	45	8.57			
52	326	315.51	20	21	63	93	45	8.84			
54	338	327.63	20	21	63	93	45	9.50			
55	345	333.69	20	21	63	93	45	9.69			
56	351	339.75	20	21	63	93	45	9.99			
58	363	351.87	20	21	63	93	45	10.59			
60	375	363.99	20	21	63	93	45	11.30			
64	399	388.24	26	27	63	93	45	12.50			
65	405	394.30	26	27	75	107	45	13.50			
70	436	424.61	26	27	75	107	45	15.30			
75	466	454.92	26	27	75	107	45	17.20			
80	496	485.23	26	27	80	117	50	20.00			
85	527	515.54	26	27	80	117	50	22.30			
90	557	545.85	26	27	80	117	50	24.60			
										Welded	Common steel

NOTES: - Material of A-type is all common steel.
 - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.



○ Dimensions

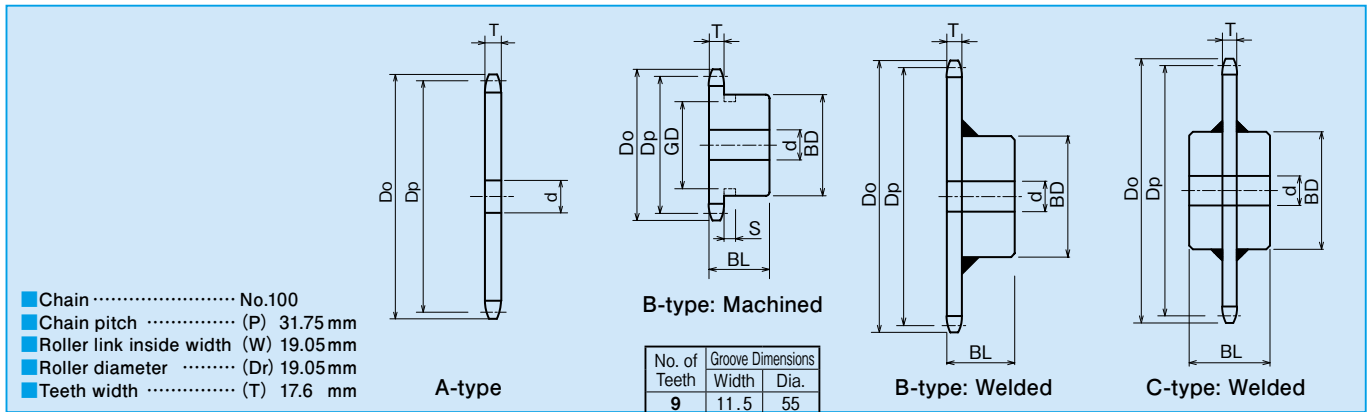
[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
80A	10	93	82.19	15	16	0.60
	11	102	90.16	15	16	0.73
	12	110	98.14	15	16	0.83
	13	118	106.14	16	17	1.00
	14	127	114.15	16	17	1.16
	15	135	122.17	20	21	1.30
	16	143	130.20	20	21	1.50
	17	151	138.23	20	21	1.70
	18	159	146.27	20	21	1.90
	19	167	154.32	20	21	2.10
	20	176	162.37	20	21	2.35
	21	184	170.42	20	21	2.57
	22	192	178.48	26	27	2.82
	23	200	186.54	26	27	3.10
	24	208	194.60	26	27	3.35
	25	216	202.66	26	27	3.65
	26	224	210.72	26	27	3.95
	27	233	218.79	26	27	4.25
	28	241	226.86	26	27	4.60
	29	249	234.93	26	27	4.93
	30	257	243.00	26	27	5.30
	31	265	251.07	26	27	5.63
	32	273	259.14	26	27	6.00
	33	281	267.21	26	27	6.40
	34	289	275.29	26	27	6.80
	35	297	283.36	26	27	7.20
	36	306	291.43	26	27	7.60
	37	314	299.51	26	27	8.00
	38	322	307.58	26	27	8.50
	39	330	315.66	26	27	8.90
	40	338	323.74	26	27	9.40
	41	346	331.81	26	27	9.90
	42	354	339.89	26	27	10.30
	43	362	347.97	26	27	10.80
	44	370	356.04	26	27	11.40
	45	378	364.12	26	27	11.90
	46	387	372.20	26	27	12.40
	47	395	380.28	26	27	12.95
	48	403	388.36	26	27	13.50
49	411	396.44	26	27	14.08	
50	419	404.52	26	27	14.70	
52	435	420.68	26	27	15.86	
53	443	428.76	26	27	16.48	
54	451	436.84	26	27	17.10	
55	459	444.92	26	27	17.75	
56	468	453.00	26	27	18.40	
57	476	461.08	26	27	19.07	
58	484	469.16	26	27	19.75	
60	500	485.33	26	27	21.10	
64	532	517.65	26	27	24.05	
65	540	525.73	26	27	24.80	
66	548	533.82	26	27	25.58	
70	581	566.15	26	27	28.80	
75	621	606.56	26	27	33.10	
80	662	646.97	26	27	37.60	
90	743	727.80	26	27	47.60	

TYPE (B-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
80B	8	77	66.37	14	15	22	★49	40	0.70	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	9	85	74.27	14	15	35	★58	40	0.87		
	10	93	82.19	15	16	32	52	40	1.02		
	11	102	90.16	15	16	38	60	40	1.25		
	12	110	98.14	15	16	45	67	40	1.60		
	13	118	106.14	16	17	51	77	40	1.90		
	14	127	114.15	16	17	51	77	40	2.15		
	15	135	122.17	20	21	63	93	40	2.30		
	16	143	130.20	20	21	63	93	40	2.50		
	17	151	138.23	20	21	63	93	40	2.95		
	18	159	146.27	20	21	63	93	40	3.15		
	19	167	154.32	20	21	63	93	40	3.40		
	20	176	162.37	20	21	63	93	40	3.60		
	21	184	170.42	20	21	63	93	40	3.85		
	22	192	178.48	26	27	75	107	45	5.00		
	23	200	186.54	26	27	75	107	45	5.23		
	24	208	194.60	26	27	75	107	45	5.50		
	25	216	202.66	26	27	75	107	45	5.80		
	26	224	210.72	26	27	75	107	45	6.10		
	27	233	218.79	26	27	75	107	45	6.40		
	28	241	226.86	26	27	75	107	45	6.75		
	29	249	234.93	26	27	75	107	45	7.10		
	30	257	243.00	26	27	75	107	45	7.40		
	31	265	251.07	26	27	75	107	45	7.80		
	32	273	259.14	26	27	75	107	45	8.15		
	33	281	267.21	26	27	75	107	45	8.50		
	34	289	275.29	26	27	75	107	45	8.90		
	35	297	283.36	26	27	75	107	45	9.30		
	36	306	291.43	26	27	80	117	50	10.60		
	37	314	299.51	26	27	80	117	50	11.00		
	38	322	307.58	26	27	80	117	50	11.40		
	39	330	315.66	26	27	80	117	50	11.90		
	40	338	323.74	26	27	80	117	50	12.40		
	41	346	331.81	26	27	80	117	50	12.80		
	42	354	339.89	26	27	80	117	50	13.30		
	43	362	347.97	26	27	80	117	50	13.80		
	44	370	356.04	26	27	80	117	50	14.30		
	45	378	364.12	26	27	80	117	50	14.90		
	46	387	372.20	26	27	80	117	50	15.30		
47	395	380.28	26	27	80	117	50	15.70			
48	403	388.36	26	27	80	117	50	15.80			
50	419	404.52	26	27	80	117	50	17.65			
52	435	420.68	26	27	80	117	50	18.70			
53	443	428.76	26	27	80	117	50	19.30			
54	451	436.84	26	27	80	117	50	20.00			
55	459	444.92	26	27	80	117	50	20.60			
56	468	453.00	26	27	80	117	50	21.30			
58	484	469.16	26	27	80	117	50	22.55			
59	492	477.24	26	27	80	117	50	22.50			
60	500	485.33	26	27	80	117	50	23.10			
65	540	525.73	26	27	89	127	63	29.40			
70	581	566.15	26	27	89	127	63	32.10			
75	621	606.56	26	27	89	127	63	36.20			
80	662	646.97	26	27	95	137	71	42.90			
90	743	727.80	26	27	95	137	71	53.00			

NOTES: - Material of A-type is all common steel.

- Shaft bore, key, tap, and the like will be processed to meet your request.
- Sprockets other than those listed above are also manufactured. Contact us.
- Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.



No. of Teeth	Groove Dimensions	
	Width	Dia.
9	11.5	55

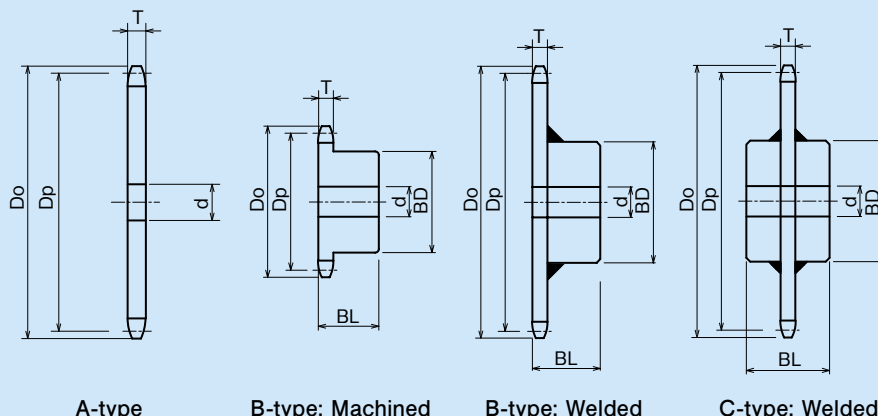
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
100A	10	117	102.74	20	21	1.10
	11	127	112.70	20	21	1.30
	12	138	122.67	20	21	1.60
	13	148	132.67	20	21	1.90
	14	158	142.68	20	21	2.15
	15	168	152.71	20	21	2.50
	16	179	162.74	20	21	2.83
	17	189	172.79	20	21	3.20
	18	199	182.84	20	21	3.60
	19	209	192.90	20	21	4.00
	20	220	202.96	20	21	4.40
	21	230	213.03	20	21	4.90
	22	240	223.10	26	27	5.35
	23	250	233.17	26	27	5.80
	24	260	243.25	26	27	6.40
	25	270	253.32	26	27	6.90
	26	281	263.40	26	27	7.50
	27	291	273.49	26	27	8.10
	28	301	283.57	26	27	8.70
	29	311	293.66	26	27	9.30
	30	321	303.75	26	27	10.00
	31	331	313.83	26	27	10.63
	32	341	323.92	26	27	11.35
	33	352	334.01	26	27	12.00
	34	362	344.11	26	27	12.80
	35	372	354.20	26	27	13.50
	36	382	364.29	26	27	14.40
	37	392	374.38	26	27	15.10
	38	402	384.48	26	27	16.00
	39	412	394.57	26	27	16.80
	40	422	404.67	26	27	17.70
	41	433	414.77	26	27	18.60
	42	443	424.86	26	27	19.50
	43	453	434.96	26	27	20.50
44	463	445.06	26	27	21.45	
45	473	455.16	26	27	22.40	
46	483	465.25	26	27	23.40	
48	503	485.45	26	27	25.50	
50	524	505.65	26	27	27.70	
52	544	525.85	26	27	29.90	
54	564	546.05	26	27	32.30	
60	625	606.66	26	27	39.90	
65	675	657.17	26	27	46.80	
70	726	707.68	26	27	54.30	
75	777	758.20	30	31	62.30	
80	827	808.71	30	31	70.90	
90	928	909.75	30	31	89.58	

TYPE (B-type, C-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material		
				Drill Hole	Min.	Max.							
100B	9	106	92.84	20	21	40	★70	50	1.6	Machined	Carbon steel for machine structural use / Induction hardened tooth end		
	10	117	102.74	20	21	45	65	50	1.9				
	11	127	112.70	20	21	51	75	50	2.3				
	12	138	122.67	20	21	57	86	50	2.9				
	13	148	132.67	20	21	63	94	50	3.1				
	14	158	142.68	20	21	66	98	50	3.6				
	15	168	152.71	20	21	66	98	50	4.2				
	16	179	162.74	20	21	66	98	50	4.6				
	17	189	172.79	20	21	75	107	50	5.3				
	18	199	182.84	20	21	75	107	50	5.7				
	19	209	192.90	20	21	75	107	50	6.1				
	20	220	202.96	20	21	75	107	50	6.5				
	21	230	213.03	20	21	75	107	50	7.0				
	22	240	223.10	26	27	80	117	56	7.9			Machined	
	23	250	233.17	26	27	80	117	56	8.5				
	24	260	243.25	26	27	80	117	56	8.8				
	25	270	253.32	26	27	80	117	56	9.3				
	26	281	263.40	26	27	80	117	56	9.8				
	27	291	273.49	26	27	80	117	56	10.3				
	28	301	283.57	26	27	80	117	56	10.9	Welded	Common steel		
	29	311	293.66	26	27	80	117	56	11.5				
	30	321	303.75	26	27	80	117	56	12.1				
	32	341	323.92	26	27	80	117	56	14.5				
	33	352	334.01	26	27	80	117	56	16.1				
	34	362	344.11	26	27	80	117	56	16.6				
	35	372	354.20	26	27	89	127	63	17.5				
	36	382	364.29	26	27	89	127	63	18.0				
	37	392	374.38	26	27	89	127	63	18.9				
	38	402	384.48	26	27	89	127	63	19.5				
	39	412	394.57	26	27	89	127	63	20.0				
	40	422	404.67	26	27	89	127	63	20.4				
	41	433	414.77	26	27	89	127	63	21.5				
	42	443	424.86	26	27	89	127	63	22.6				
	45	473	455.16	26	27	89	127	63	24.7				
47	493	475.35	26	27	89	127	63	26.7					
48	503	485.45	26	27	89	127	63	27.5					
50	524	505.65	26	27	89	127	63	30.0					
54	564	546.05	26	27	103	147	80	37.4					
55	574	556.15	26	27	103	147	80	41.6					
60	625	606.66	26	27	103	147	80	44.3					
65	675	657.17	26	27	103	147	80	54.5					
100C	70	726	707.68	26	27	103	147	100	64.7				
	75	777	758.20	30	31	103	147	100	72.7				

NOTES: - Material of A-type is all common steel.
 - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.



- Chain No.120
- Chain pitch (P) 38.10mm
- Roller link inside width (W) 25.40mm
- Roller diameter (Dr) 22.23mm
- Teeth width (T) 23.5 mm

○ Dimensions

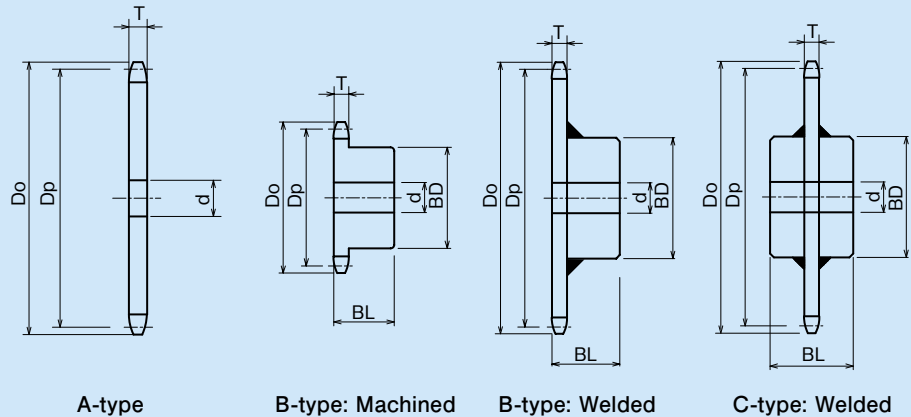
[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
	10	140	123.29	23	24	2.16
	11	153	135.24	25	26	2.60
	12	165	147.21	25	26	3.10
	13	177	159.20	25	26	3.60
	14	190	171.22	25	26	4.20
	15	202	183.25	25	26	4.80
	16	214	195.29	25	26	5.50
	17	227	207.35	25	26	6.20
	18	239	219.41	25	26	6.95
	19	251	231.48	25	26	7.70
	20	263	243.55	25	26	8.55
	21	276	255.63	25	26	9.40
	22	288	267.72	26	27	10.30
	23	300	279.80	26	27	11.30
	24	312	291.90	26	27	12.30
120A	25	324	303.99	26	27	13.30
	26	337	316.09	26	27	14.40
	27	349	328.19	26	27	15.50
	28	361	340.29	26	27	16.70
	29	373	352.39	26	27	17.80
	30	385	364.50	26	27	19.20
	31	398	376.60	30	31	20.40
	32	410	388.71	30	31	21.80
	33	422	400.82	30	31	23.20
	34	434	412.93	30	31	24.60
	35	446	425.04	30	31	26.10
	36	458	437.15	30	31	27.60
	38	483	461.38	30	31	30.80
	40	507	485.60	30	31	34.10
	42	531	509.83	30	31	37.60
		44	556	534.07	30	31
	45	568	546.19	30	31	43.10
	46	580	558.30	30	31	45.10
	48	604	582.54	30	31	49.00
	50	628	606.78	30	31	53.30
	54	677	655.26	30	31	62.10
	60	750	727.99	30	31	76.70
	70	871	849.22	30	31	104.30
	75	932	909.84	30	31	119.80
	80	993	970.46	30	31	136.30

TYPE (B-type, C-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
120B	10	140	123.29	23	24	51	78	56	3.20	Machined	Carbon steel for machine structural use / Inducton hardened tooth end
	11	153	135.24	25	26	60	91	56	4.00		
	12	165	147.21	25	26	66	98	56	4.80		
	13	177	159.20	25	26	66	98	56	5.30		
	14	190	171.22	25	26	75	107	56	6.30		
	15	202	183.25	25	26	80	117	63	7.80		
	16	214	195.29	25	26	80	117	63	8.40		
	17	227	207.35	25	26	80	117	63	9.10		
	18	239	219.41	25	26	80	117	63	9.90		
	19	251	231.48	25	26	80	117	63	10.70		
	20	263	243.55	25	26	89	127	63	12.10		
	21	276	255.63	25	26	89	127	63	13.00		
	22	288	267.72	26	27	89	127	63	13.40		
	23	300	279.80	26	27	89	127	63	14.50		
	24	312	291.90	26	27	89	127	63	15.20		
	25	324	303.99	26	27	89	127	63	16.20		
	26	337	316.09	26	27	89	127	63	17.20		
	28	361	340.29	26	27	95	137	71	20.90		
	30	385	364.50	26	27	95	137	71	23.20		
	32	410	388.71	30	31	95	137	71	25.70		
	33	422	400.82	30	31	95	137	71	28.40		
	34	434	412.93	30	31	95	137	71	29.00		
	35	446	425.04	30	31	95	137	71	29.70		
	36	458	437.15	30	31	95	137	71	32.00		
38	483	461.38	30	31	95	137	71	35.00			
40	507	485.60	30	31	103	147	80	38.20			
42	531	509.83	30	31	103	147	80	42.00			
45	568	546.19	30	31	103	147	80	47.60			
48	604	582.54	30	31	103	147	80	53.00			
50	628	606.78	30	31	103	147	80	58.00			
120C	54	677	655.26	30	31	103	147	100	65.20	Welded	Common steel
	60	750	727.99	30	31	103	167	100	78.00		

NOTES: - Material of A-type is all common steel.

- Shaft bore, key, tap, and the like will be processed to meet your request.
- Sprockets other than those listed above are also manufactured. Contact us.



- Chain No.140
- Chain pitch (P) 44.45mm
- Roller link inside width (W) 25.22mm
- Roller diameter (Dr) 25.40mm
- Teeth width (T) 23.5 mm

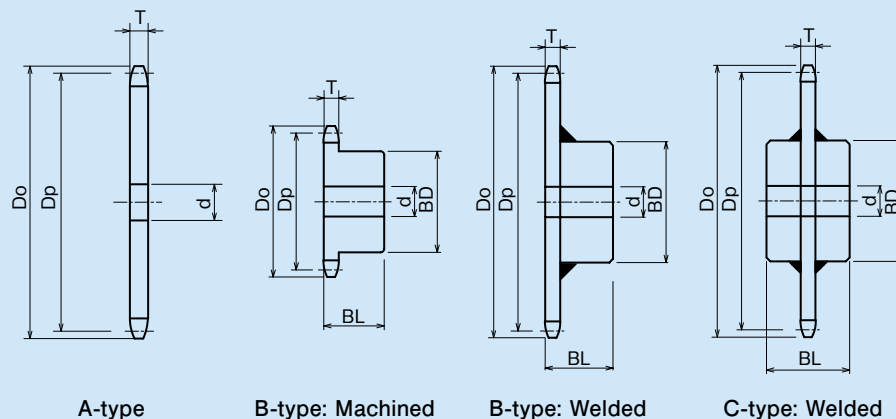
○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
140A	10	163	143.84	26	27	2.90
	11	178	157.78	26	27	3.60
	12	193	171.74	26	27	4.20
	13	207	185.74	26	27	4.90
	14	221	199.76	26	27	5.70
	15	236	213.79	26	27	6.60
	16	250	227.84	26	27	7.50
	17	264	241.91	26	27	8.40
	18	279	255.98	26	27	9.40
	19	293	270.06	26	27	10.50
	20	307	284.15	26	27	11.60
	21	322	298.24	26	27	12.80
	22	336	312.34	30	31	14.10
	23	350	326.44	30	31	15.30
	24	364	340.54	30	31	16.70
	25	379	354.65	30	31	18.10
	26	393	368.77	30	31	19.60
	28	421	397.00	30	31	23.00
	30	450	425.24	30	31	26.00
	32	478	453.49	30	31	29.70
35	521	495.88	30	31	35.60	
38	563	538.27	30	31	41.90	
40	591	566.54	30	31	46.40	
42	620	594.81	30	31	51.10	
45	662	637.22	30	31	58.80	
48	705	679.63	30	31	66.90	
50	733	707.91	30	31	72.50	
54	790	764.47	35	36	84.60	
60	875	849.32	35	36	104.00	

TYPE (B-type, C-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
140B	10	163	143.84	26	27	66	98	56	4.90	Machined	Carbon steel for machine structural use
	11	178	157.78	26	27	70	106	56	5.50		
	12	193	171.74	26	27	80	117	56	6.60		
	13	207	185.74	26	27	80	117	63	7.90		
	14	221	199.76	26	27	89	127	63	9.30		
	15	236	213.79	26	27	89	127	63	10.10		
	16	250	227.84	26	27	89	127	63	11.00		
	17	264	241.91	26	27	89	127	63	12.00		
	18	279	255.98	26	27	89	127	63	13.00		
	19	293	270.06	26	27	95	137	71	15.60		
	20	307	284.15	26	27	95	137	71	16.70		
	21	322	298.24	26	27	95	137	71	17.90		
	22	336	312.34	30	31	95	137	71	18.40		
	23	350	326.44	30	31	95	137	71	20.10		
	24	364	340.54	30	31	95	137	71	20.90		
	25	379	354.65	30	31	103	147	80	24.10		
	26	393	368.77	30	31	103	147	80	25.50		
	27	407	382.88	30	31	103	147	80	28.20		
	28	421	397.00	30	31	103	147	80	30.10		
	30	450	425.24	30	31	103	147	80	31.50		
32	478	453.49	30	31	103	147	80	36.00			
35	521	495.88	30	31	110	157	90	42.90			
38	563	538.27	30	31	110	157	90	47.40			
40	591	566.54	30	31	110	157	90	51.00			
42	620	594.81	30	31	110	157	90	53.10			
44	650	623.12	30	31	110	157	90	58.80			
48	705	679.63	30	31	118	167	100	68.00			
50	733	707.91	30	31	118	167	100	75.00			
54	790	764.47	35	36	118	167	100	85.30			
60	875	849.32	35	36	118	167	112	97.40			
60	875	849.32	35	36	118	167	112	119.30	Welded	Common steel	

NOTES: - Material of A-type is all common steel.
 - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.



- Chain No.160
- Chain pitch (P) 50.80mm
- Roller link inside width (W) 31.55mm
- Roller diameter (Dr) 28.58mm
- Teeth width (T) 29.4 mm

○ Dimensions

[Unit: mm]

TYPE (A-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d		Weight (kg)
				Drill Hole	Min.	
160A	10	187	164.39	26	27	4.85
	11	204	180.31	26	27	5.85
	12	220	196.28	26	27	6.90
	13	237	212.27	26	27	8.10
	14	253	228.30	26	27	9.40
	15	269	244.33	30	31	10.80
	16	286	260.39	30	31	12.25
	17	302	276.46	30	31	13.80
	18	319	292.55	30	31	15.50
	19	335	308.64	30	31	17.20
	20	351	324.74	30	31	19.00
	21	368	340.84	30	31	21.00
	22	384	356.96	35	36	23.00
	23	400	373.07	35	36	25.10
	24	416	389.19	35	36	27.40
	25	433	405.32	35	36	29.70
	26	449	421.45	35	36	32.10
	28	481	453.72	35	36	37.20
	30	514	485.99	35	36	42.70
	32	546	518.28	35	36	48.70
	35	595	566.71	35	36	58.10
	38	644	615.17	35	36	68.50
	40	676	647.47	35	36	75.10
	45	757	728.25	35	36	96.00
48	806	776.72	35	36	109.00	
50	838	809.04	35	36	118.50	
54	903	873.68	35	36	138.20	
60	1,000	970.65	35	36	170.00	

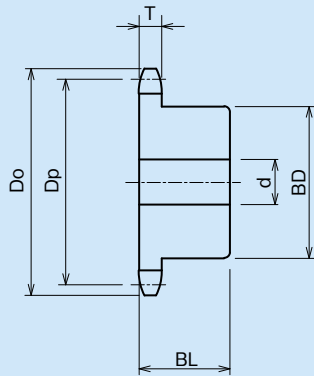
TYPE (B-type, C-type)	No. of Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
160B	10	187	164.39	26	27	70	105	63	6.80	Machined	Carbon steel for machine structural use
	11	204	180.31	26	27	80	117	63	8.30		
	12	220	196.28	26	27	89	127	63	9.90		
	13	237	212.27	26	27	95	137	71	12.50		
	14	253	228.30	26	27	95	137	71	13.80		
	15	269	244.33	30	31	95	137	71	15.20		
	16	286	260.39	30	31	103	147	71	17.40		
	17	302	276.46	30	31	103	147	71	18.90		
	18	319	292.55	30	31	103	147	71	20.60		
	19	335	308.64	30	31	103	147	71	22.30		
	20	351	324.74	30	31	103	147	71	24.20		
	21	368	340.84	30	31	103	147	71	26.10		
	22	384	356.96	35	36	118	167	80	30.20		
	24	416	389.19	35	36	118	167	80	34.40		
	25	433	405.32	35	36	118	167	80	36.60		
	26	449	421.45	35	36	118	167	80	38.90		
	30	514	485.99	35	36	118	167	100	52.30		
	32	546	518.28	35	36	118	167	100	59.00		
	35	595	566.71	35	36	118	167	100	66.90		
	40	676	647.47	35	36	118	167	112	88.00		
160C	45	757	728.25	35	36	132	187	125	115.00	Welded	Common steel
	48	806	776.72	35	36	132	187	125	128.00		
	50	838	809.04	35	36	132	187	125	138.70		
	54	903	873.68	35	36	132	187	125	158.40		
	60	1,000	970.65	35	36	132	187	125	190.80		

NOTES: - Material of A-type is all common steel.

- Shaft bore, key, tap, and the like will be processed to meet your request.
- Sprockets other than those listed above are also manufactured. Contact us.

●B-Type for S-Roller

Sprocket with odd number of teeth where chain roller engages with the original tooth in two rotation features longer wear life. A number of teeth where chain engages every other tooth is referred to as a number of working teeth.



- KCM 2040**
- Chain pitch (P) 25.4 mm
 - Roller link inside width (W) 7.95 mm
 - Roller diameter (Dr) 7.92 mm
 - Teeth width (T) 7.2 mm

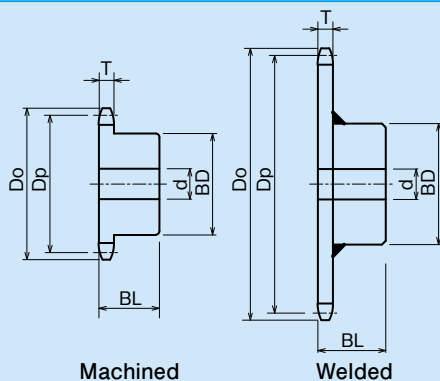
TYPE (B-type)	No. of Actual Teeth	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Material
					Drill Hole	Min.	Max.				
2040B	13	6½	59	54.66	12	13	20	35	22	0.20	Carbon steel for machine structural use / Induction hardened tooth end
	15	7½	67	62.45	12	13	25	43	22	0.30	
	17	8½	76	70.31	13	14	32	52	22	0.42	
	19	9½	84	78.23	14	15	38	60	25	0.61	
	21	10½	92	86.17	14	15	46	69	25	0.82	
	23	11½	100	94.15	14	15	51	77	25	0.98	
25	12½	108	102.14	14	15	42	63	25	0.83		

- KCM 2050**
- Chain pitch (P) 31.75 mm
 - Roller link inside width (W) 9.53 mm
 - Roller diameter (Dr) 10.16 mm
 - Teeth width (T) 8.7 mm

TYPE (B-type)	No. of Actual Teeth	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Material
					Drill Hole	Min.	Max.				
2050B	13	6½	74	68.32	12	13	25	44	25	0.38	Carbon steel for machine structural use / Induction hardened tooth end
	15	7½	84	78.06	12	13	32	54	25	0.55	
	17	8½	94	87.89	14	15	45	65	25	0.76	
	19	9½	105	97.78	14	15	48	73	28	1.06	
	21	10½	115	107.72	14	15	48	73	28	1.16	
	23	11½	125	117.68	16	17	48	73	28	1.27	
25	12½	135	127.67	16	17	48	73	28	1.40		

- KCM 2060**
- Chain pitch (P) 38.10 mm
 - Roller link inside width (W) 12.70 mm
 - Roller diameter (Dr) 11.91 mm
 - Teeth width (T) 11.7 mm

TYPE (B-type)	No. of Actual Teeth	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Material
					Drill Hole	Min.	Max.				
2060B	13	6½	88	81.98	14	15	32	53	32	0.73	Carbon steel for machine structural use / Induction hardened tooth end
	15	7½	101	93.67	16	17	45	66	32	1.05	
	17	8½	113	105.47	16	17	48	73	32	1.33	
	19	9½	126	117.34	16	17	55	83	40	2.03	
	21	10½	138	129.26	16	17	55	83	40	2.23	
	23	11½	150	141.22	16	17	55	83	45	2.56	
25	12½	162	153.20	18	19	55	83	45	2.81		

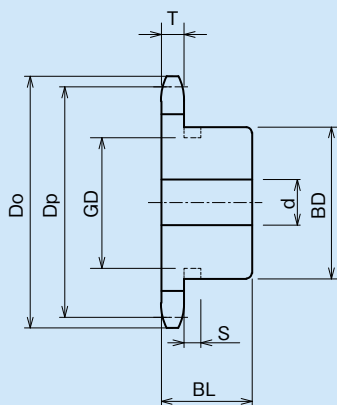


- KCM 2080**
- Chain pitch (P) 50.80 mm
 - Roller link inside width (W) 15.88 mm
 - Roller diameter (Dr) 15.88 mm
 - Teeth width (T) 14.6 mm

TYPE (B-type)	No. of Actual Teeth	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
					Drill Hole	Min.	Max.					
2080B	13	6½	118	109.31	16	17	46	70	40	1.62	Machined	Carbon steel for machine structural use / Induction hardened tooth end
	15	7½	135	124.90	20	21	60	88	40	2.34		
	17	8½	151	140.63	20	21	63	93	40	2.48		
	19	9½	167	156.45	20	21	63	93	40	3.24		
	21	10½	184	172.35	20	21	63	93	40	3.68		
	23	11½	200	188.29	26	27	75	107	45	4.88		
25	12½	216	204.27	26	27	75	107	45	5.43	Welded	Common steel	

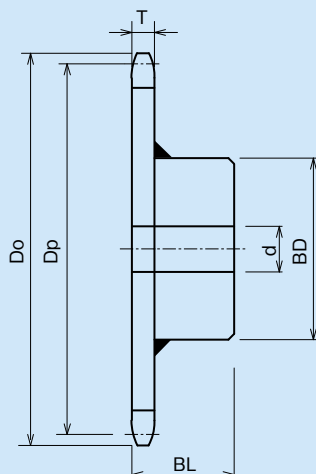
● B-type for R-Rollers

R-roller sprocket is a sprocket exclusively designed for double pitch chain for R-roller.



Machined

No. of Teeth	Groove Dimensions	
	Width	Dia.
7	6	35
8	6	43



Welded

No. of Teeth	Groove Dimensions	
	Width	Dia.
7	7	45
8	7	56

KCM 2042

- Chain pitch (P) 25.4 mm
- Roller link inside width (W) 7.95 mm
- Roller diameter (Dr) 15.88 mm
- Teeth width (T) 7.2 mm

TYPE (B-type)	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
2042B	7	68	58.54	14	15	22	★40	25	0.26	Machined	Carbon steel for machine structural use
	8	77	66.37	14	15	28	★48	25	0.37		
	9	85	74.26	14	15	32	52	25	0.47		
	10	93	82.20	15	16	42	63	25	0.70		
	11	102	90.16	15	16	42	63	25	0.77		
	12	108	98.14	15	16	42	63	25	0.84		
	13	118	106.14	16	17	42	63	25	0.97		
	14	127	114.15	16	17	42	63	25	1.07		
	15	135	122.17	20	21	45	68	28	1.26		
	16	143	130.20	20	21	45	68	28	1.30		
	17	151	138.23	20	21	45	68	28	1.35		
	18	159	146.27	20	21	45	68	28	1.45		
	19	167	154.32	20	21	45	68	28	1.60		
	20	176	162.37	20	21	45	68	28	1.80		
	21	183	170.42	20	21	48	73	32	1.91		
22	192	178.48	26	27	48	73	32	2.03			
23	200	186.54	26	27	48	73	32	2.15			
24	208	194.60	26	27	48	73	32	2.28			
25	216	202.66	26	27	48	73	32	2.42			
26	224	210.72	26	27	48	73	32	2.56			
28	241	226.86	26	27	48	73	32	2.87			
30	257	243.00	26	27	48	73	32	3.19			
32	273	259.14	26	27	55	83	32	4.04			

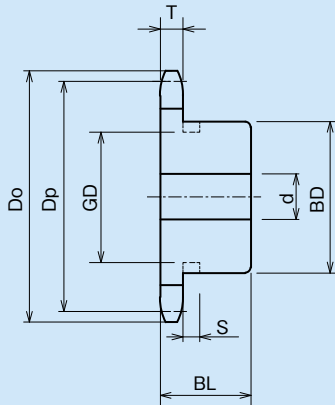
- NOTES: - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.

KCM 2052

- Chain pitch (P) 31.75 mm
- Roller link inside width (W) 9.53 mm
- Roller diameter (Dr) 19.05 mm
- Teeth width (T) 8.7 mm

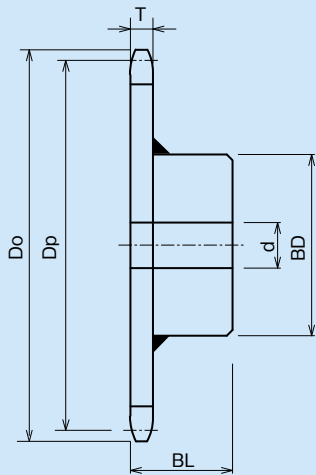
TYPE (B-type)	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
2052B	7	85	73.18	20	21	30	★50	28	0.46	Machined	Carbon steel for machine structural use
	8	96	82.97	20	21	40	★60	28	0.67		
	9	106	92.83	20	21	42	66	28	0.86		
	10	116	102.75	20	21	48	73	28	1.10		
	11	127	112.70	20	21	48	73	28	1.20		
	12	138	122.67	20	21	48	73	28	1.30		
	13	148	132.67	20	21	48	73	28	1.50		
	14	158	142.68	20	21	48	73	28	1.90		
	15	168	152.71	20	21	48	73	28	2.00		
	16	179	162.74	20	21	48	73	28	2.30		
	17	189	172.79	20	21	55	83	35	2.45		
	18	199	182.84	20	21	55	83	35	2.75		
	19	209	192.90	20	21	55	83	35	2.95		
	20	220	202.96	20	21	55	83	35	3.15		
	21	229	213.03	20	21	55	83	35	3.25		
22	240	223.10	26	27	55	83	35	3.48			
23	250	233.17	26	27	55	83	35	3.71			
24	260	243.25	26	27	55	83	35	3.96			
25	270	253.32	26	27	55	83	35	4.22			
26	281	263.41	26	27	55	83	35	4.49			
28	301	283.57	26	27	55	83	35	5.06			
30	321	303.75	26	27	55	83	35	5.68			

- NOTES: - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.



Machined

No. of Teeth	Groove Dimensions	
	Width	Dia.
7	10	56
8	10	68



Welded

- KCM 2062**
- Chain pitch (P) 38.10 mm
 - Roller link inside width (W) 12.70 mm
 - Roller diameter (Dr) 22.23 mm
 - Teeth width (T) 11.7 mm

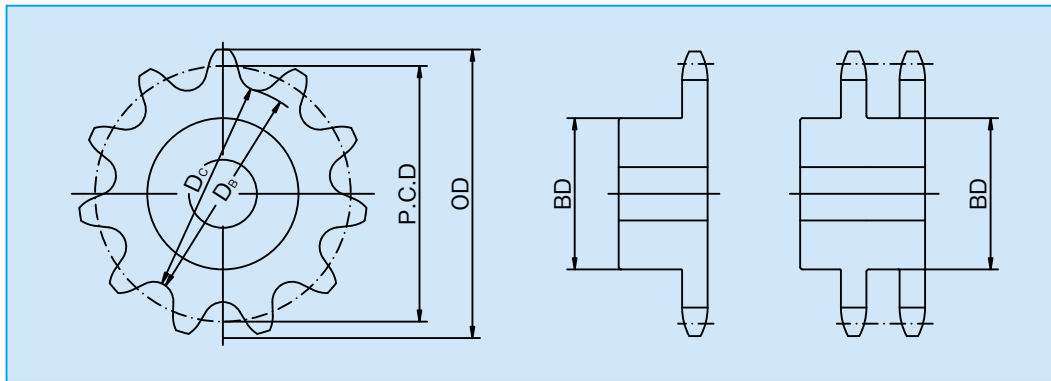
TYPE (B-type)	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
2062B	7	102	87.81	20	21	40	★60	40	0.97	Machined	Carbon steel for machine structural use
	8	115	99.56	20	21	50	★75	40	1.44		
	9	128	111.40	20	21	50	80	40	1.80		
	10	140	123.29	23	24	55	80	45	2.50		
	11	153	135.23	25	26	55	80	45	2.60		
	12	165	147.21	25	26	55	80	45	2.80		
	13	177	159.20	25	26	55	83	45	3.10	Welded	Common steel
	14	190	171.22	25	26	55	83	45	3.60		
	15	202	183.25	25	26	55	83	45	3.90		
	16	214	195.29	25	26	55	83	45	4.20		
	17	227	207.35	25	26	63	93	45	4.60		
	18	239	219.41	25	26	63	93	45	5.00		
	19	251	231.48	25	26	63	93	45	5.50		
	20	263	243.55	25	26	63	93	45	6.00		
	21	276	255.63	25	26	63	93	45	5.89		
	22	288	267.72	26	27	63	93	45	6.34		
24	312	291.90	26	27	63	93	45	7.28			
25	324	303.99	26	27	63	93	45	7.77			
26	337	316.09	26	27	63	93	45	8.77			
28	361	340.29	26	27	63	93	45	9.90			
30	385	364.49	26	27	63	93	45	11.20			

- NOTES: - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.
 - Sprockets marked with star ★ are provided with groove on hub perimeter. See Groove Dimensions Table.

- KCM 2082**
- Chain pitch (P) 50.80 mm
 - Roller link inside width (W) 15.88 mm
 - Roller diameter (Dr) 28.58 mm
 - Teeth width (T) 14.6 mm

TYPE (B-type)	No. of Working Teeth	Outside Dia. Do	Pitch Dia. Dp	Shaft Bore Dia. d			Hub Dia. BD	Hub Length BL	Weight (kg)	Construction	Material
				Drill Hole	Min.	Max.					
2082B	7	136	117.08	22	23	50	76	40	1.85	Machined	Carbon steel for machine structural use
	8	153	132.75	22	23	60	93	40	2.64		
	9	170	148.53	26	27	65	110	40	3.56		
	10	187	164.39	26	27	63	93	40	3.29		
	11	204	180.31	26	27	75	107	45	4.42		
	12	220	196.28	26	27	75	107	45	4.94		
	13	237	212.27	26	27	75	107	45	5.46	Welded	Common steel
	14	253	228.29	26	27	75	107	45	6.09		
	15	269	244.33	30	31	75	107	45	6.70		
	16	286	260.39	30	31	75	107	45	7.42		
	17	302	276.46	30	31	75	107	45	8.12		
	18	319	292.55	30	31	80	117	50	9.76		
	19	335	308.64	30	31	80	117	50	10.56		
	20	351	324.74	30	31	80	117	50	11.46		
	24	416	389.19	35	36	80	117	50	16.30		
	25	433	405.32	35	36	80	117	50	17.50		
26	449	421.45	35	36	80	117	50	18.70			
28	481	453.72	35	36	80	117	50	21.20			
30	514	485.99	35	36	80	117	50	24.00			

- NOTES: - Shaft bore, key, tap, and the like will be processed to meet your request.
 - Sprockets other than those listed above are also manufactured. Contact us.



Number of Teeth of Sprocket

Sprockets with 17 teeth or more are typically used but it is recommended to use sprockets with as many teeth as possible if space and operating condition allow it.

Items	Equations
Chain pitch Roller diameter Sprocket speed Chain speed,	P (mm) D_r (mm) n (r/min) v (m/min)
Number of teeth of sprocket N Pitch circle diameter PCD Standard outside diameter OD Teeth bottom diameter DB	$N = \frac{1000v}{P \cdot n}$ $P.C.D = P \sin \frac{180^\circ}{N}$ $OD = P \left(0.6 + \cot \frac{180^\circ}{N} \right)$ $D_B = P.C.D - D_r$
Teeth bottom-to-bottom distance of sprocket with an even number of teeth DC Teeth bottom-to-bottom distance of sprocket with an odd number of teeth DC	$D_c = D_B$ $D_c = P.C.D \left(\cos \frac{90^\circ}{N} \right) - D_r$
Tolerance of bottom-to-bottom distance between teeth (+) Tolerance = 0.000 (-) Tolerance = $0.001P\sqrt{N} + 0.76$ Max. Hub diameter $DH = P \left(\cot \frac{180^\circ}{N} - 1 \right) - 0.76$	

Diameter, teeth bottom-to-bottom distance, and pitch circle diameter can be easily found using Table 1.

Pitch circle diameter (PCD) can be calculated by the equation: $PCD = \text{Factor} \times \text{Pitch } (P)$.

Example

To calculate the pitch circle diameter of the sprocket KCM40 ($P=12.70$) with 30 teeth:

$$9.5668 \text{ (factor)} \times 12.70 \text{ (P)} \\ = 121.49836$$

Therefore, the pitch circle diameter is 121.50.

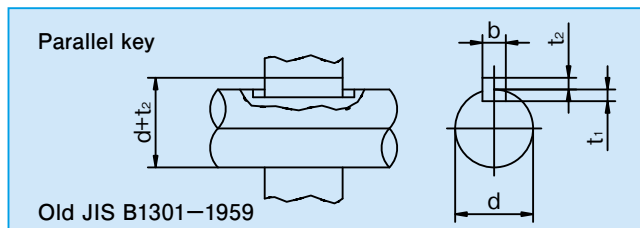
Hardening of Tooth End

Teeth of sprockets are required for toughness and abrasion resistance because the teeth are impacted by engagement with rollers and abrasion takes place by sliding with rollers.

In special cases of applications subject to severe abrasion or significant impact load, carbon steel is used and induced-hardened.

Induced hardening is required to use in the following operating environment.

- Smaller sprockets with 20 teeth or less are used at 1/6 or higher the max speed specified in Chain Power Transmission Table.
- Smaller sprockets is used at a speed ratio 4:1 or more.
- Smaller sprockets subject to heavy load at low speed.
- Sprockets are used in the atmosphere where teeth are subject to severe abrasion.
- In the operating conditions where frequent starts and stops or sudden reversing transmission take place.



Shaft Diameter d	Nominal Dimensions of Key Width × Height b × (t ₂ + t ₁)	Depth of key groove	
		Shaft: t ₁	Hub: d+t ₂
10 or more to 13 or less	4 × 4	2.5	d + 1.5
Exceeding 13 to 20	5 × 5	3.0	d + 2.0
20 " 30 "	7 × 7	4.0	d + 3.0
30 " 40 "	10 × 8	4.5	d + 3.5
40 " 50 "	12 × 8	4.5	d + 3.5
50 " 60 "	15 × 10	5.0	d + 5.0
60 " 70 "	18 × 12	6.0	d + 6.0
70 " 80 "	20 × 13	7.0	d + 6.0
80 " 95 "	24 × 16	8.0	d + 8.0
95 " 110 "	28 × 18	9.0	d + 9.0
110 " 125 "	32 × 20	10.0	d + 10.0
125 " 140 "	35 × 22	11.0	d + 11.0
140 " 160 "	38 × 24	12.0	d + 12.0
160 " 180 "	42 × 26	13.0	d + 13.0
180 " 200 "	45 × 28	14.0	d + 14.0
200 " 224 "	50 × 31.5	16.0	d + 15.5
224 " 250 "	56 × 35.5	18.0	d + 17.5

Dimensions of Drill Hole and Drilling of Shaft Bore

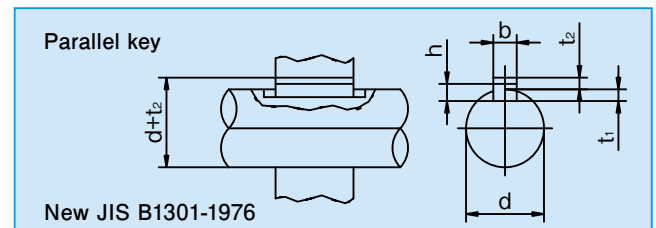
Single strand and double strand standard sprockets are provided with holes drilled 2.10 mm smaller than the minimum diameter of shaft listed. When you need to drill shaft bore, the bore must be determined based on the outside diameter or teeth bottom diameter.

Otherwise specified on order, key groove is machined to JIS and the shaft bore is drilled to tolerance H7.

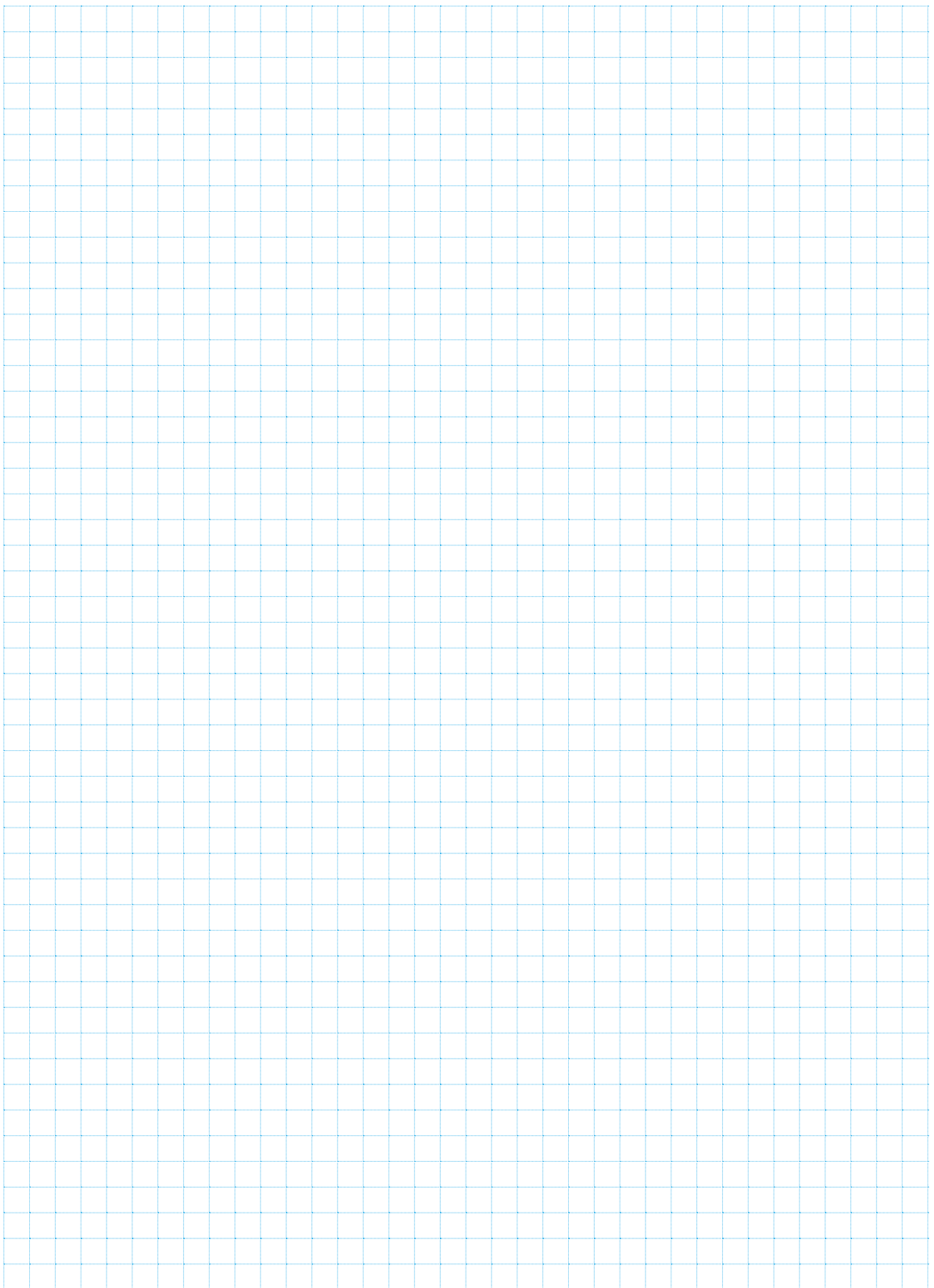
Tolerance H7 Table

(unit: mm)

Diameter φD	H7
5 ~ 6	0 ~ +0.018 (H8)
7 ~ 10	0 ~ +0.015
11 ~ 18	0 ~ +0.018
19 ~ 30	0 ~ +0.021
31 ~ 50	0 ~ +0.025
51 ~ 80	0 ~ +0.030

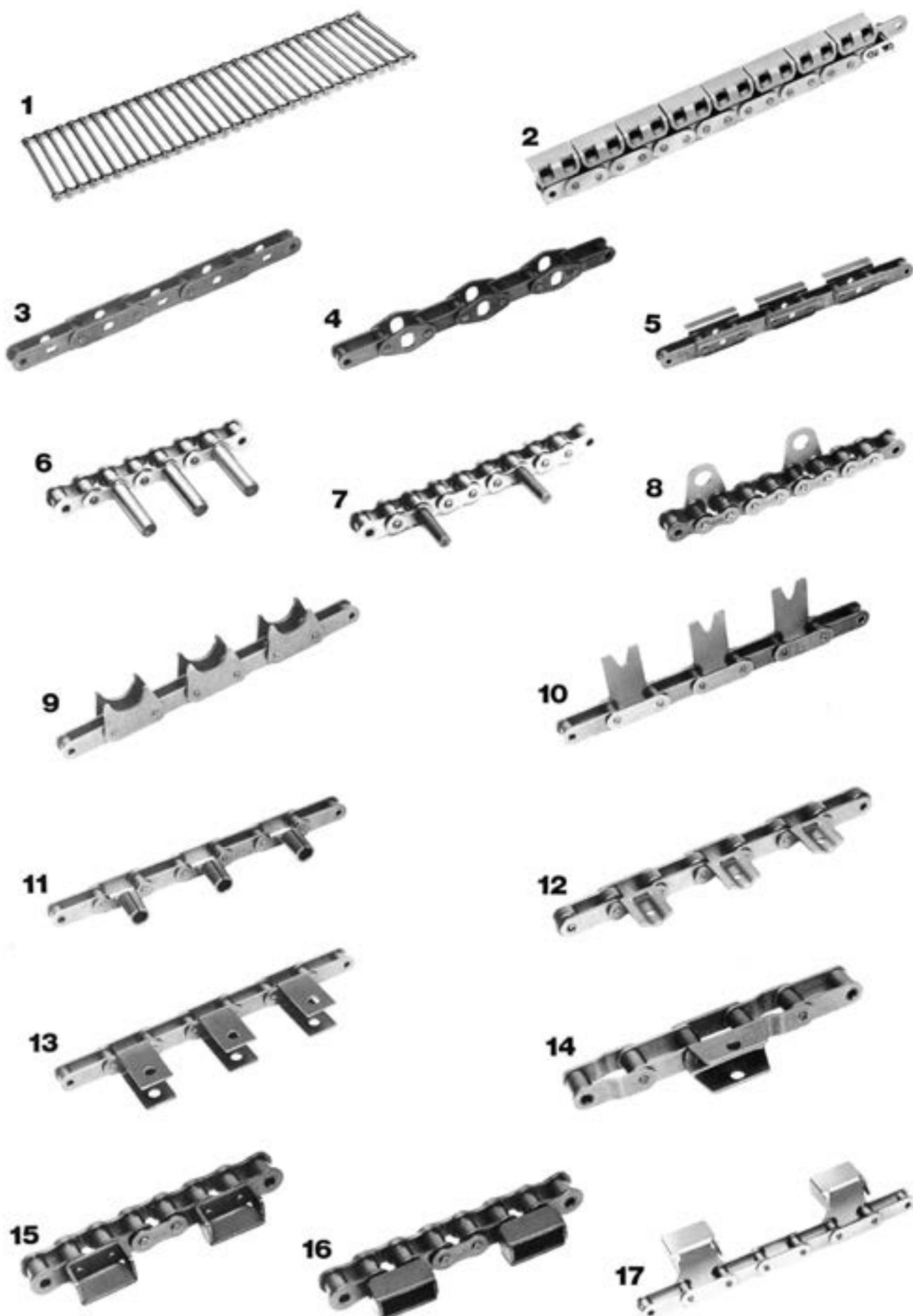


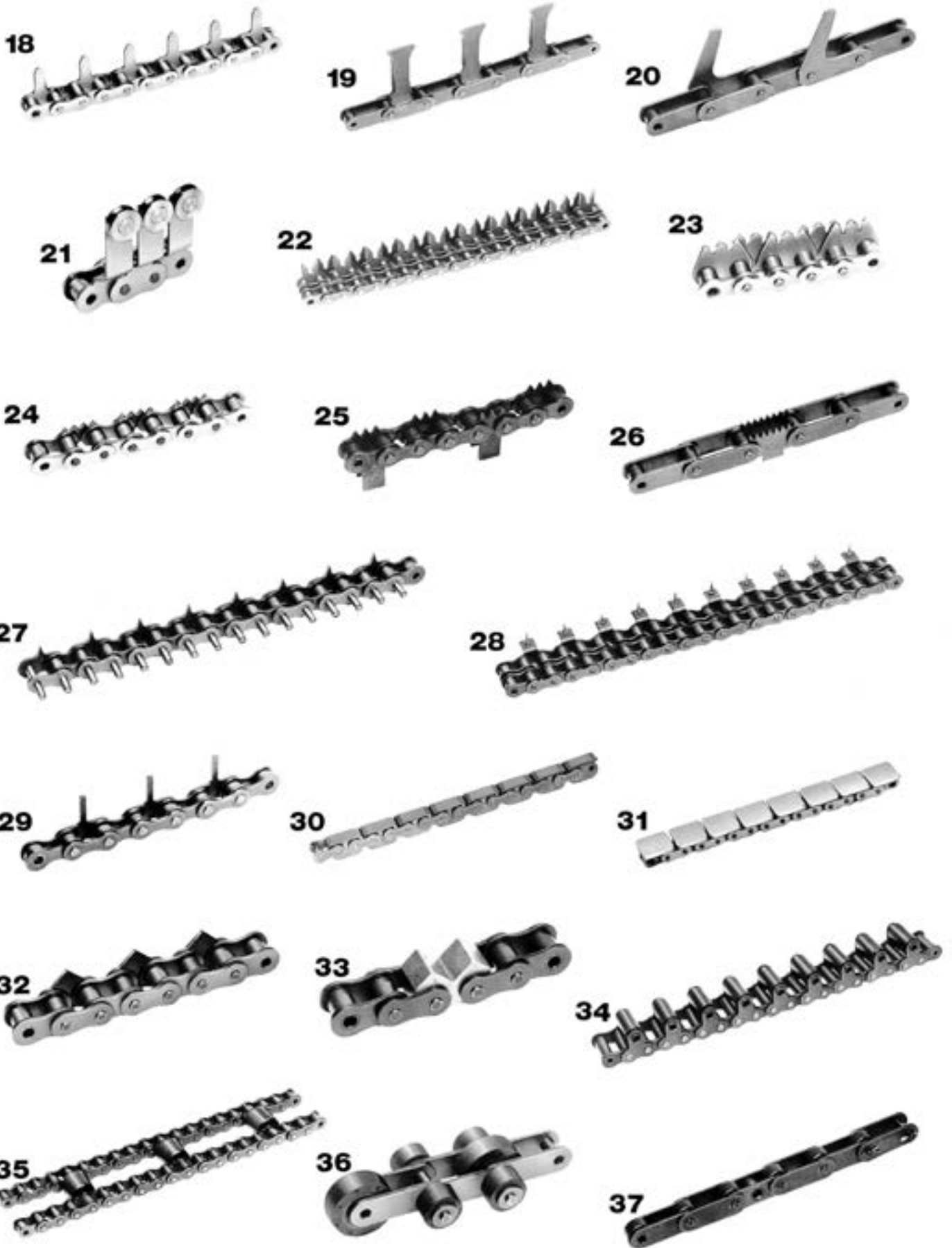
Shaft Diameter d	Nominal Dimensions of Key Width × Height b × h	Depth of key groove	
		Shaft: t ₁	Hub: d+t ₂
6 or more to 8 or less	2 × 2	1.2	d + 1.0
Exceeding 8 to 10	3 × 3	1.8	d + 1.4
10 " 12 "	4 × 4	2.5	d + 1.8
12 " 17 "	5 × 5	3.0	d + 2.3
17 " 22 "	6 × 6	3.5	d + 2.8
22 " 30 "	8 × 7	4.0	d + 3.3
30 " 38 "	10 × 8	5.0	d + 3.3
38 " 44 "	12 × 8	5.0	d + 3.3
44 " 50 "	14 × 9	5.5	d + 3.8
50 " 58 "	16 × 10	6.0	d + 4.3
58 " 65 "	18 × 11	7.0	d + 4.4
65 " 75 "	20 × 12	7.5	d + 4.9
75 " 85 "	22 × 14	9.0	d + 5.4
85 " 95 "	25 × 14	9.0	d + 5.4
95 " 110 "	28 × 16	10.0	d + 6.4
110 " 130 "	32 × 18	11.0	d + 7.4
130 " 150 "	36 × 20	12.0	d + 8.4
150 " 170 "	40 × 22	13.0	d + 9.4
170 " 200 "	45 × 25	15.0	d + 10.4
200 " 230 "	50 × 28	17.0	d + 11.4



APPLICATIONS OF CHAINS/ ATTACHMENTS







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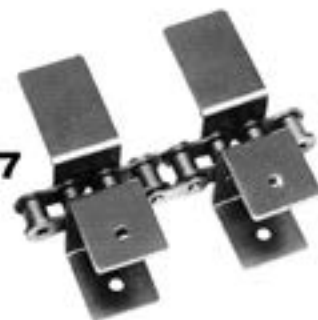
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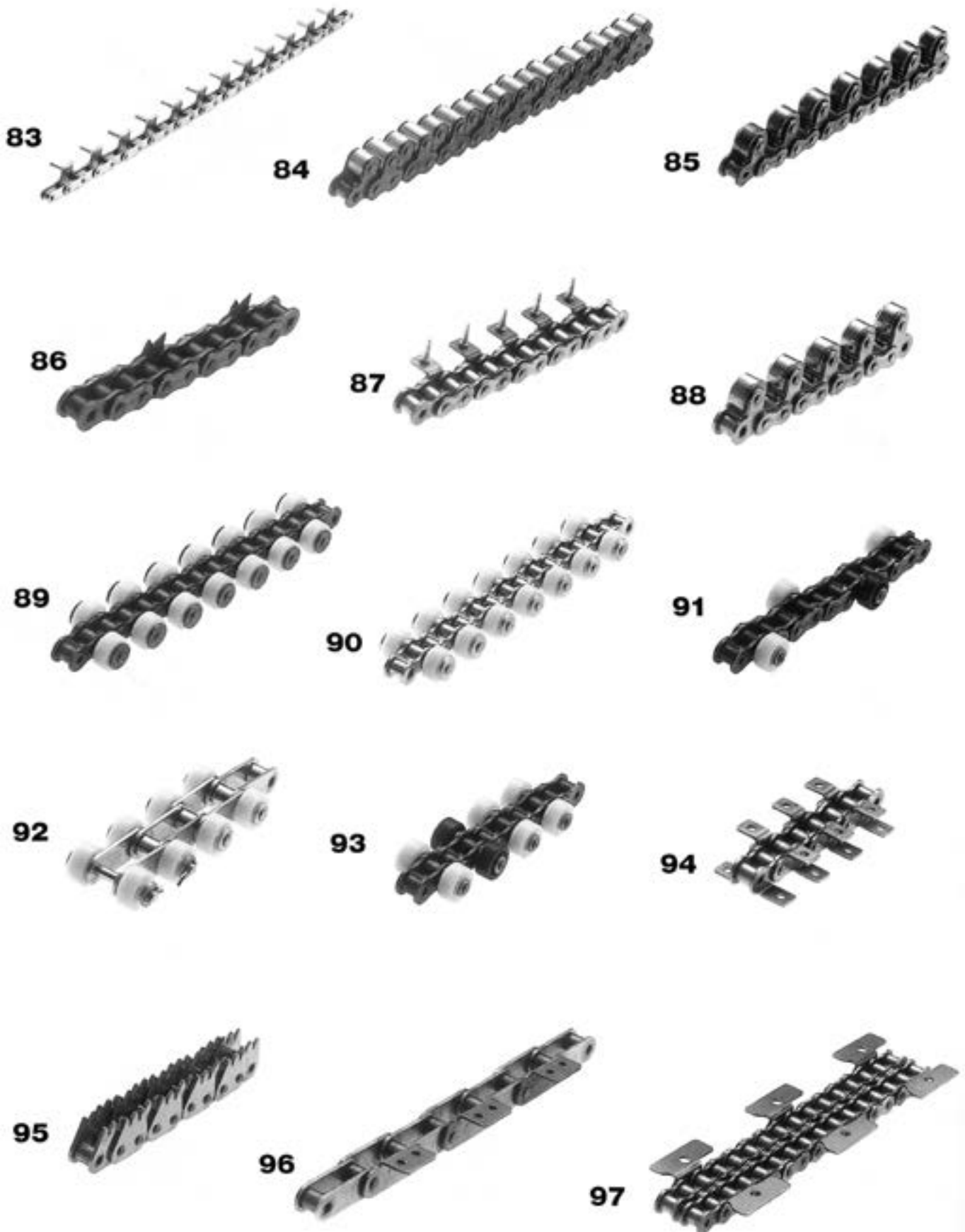


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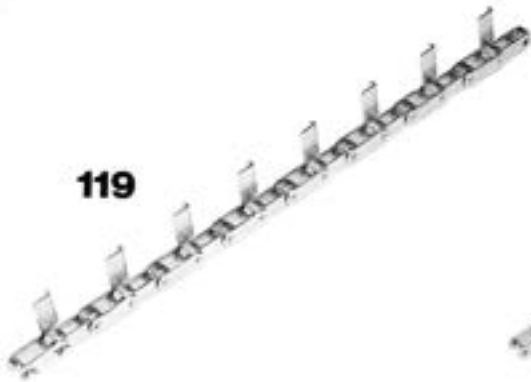




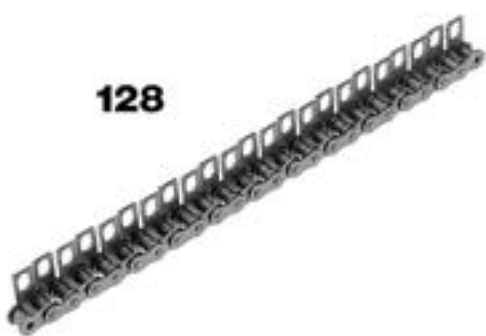








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HANDLING AND MAINTENANCE OF ROLLER CHAINS

1. Handling and Installation



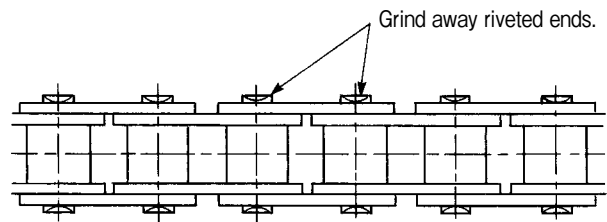
CAUTIONS (For Safe Operation)

- Always wear (proper clothing and protective equipment (safety goggles and proper shoes) appropriate to the job.
- Pay attention to safety of work crew and surrounding workers.
- Follow the related labor safety regulations, 1-1-General Provisions (Prevention of risk with prime mover and rotary shaft) in the "II. Ordinance on Industrial Safety and Hygiene".
- Before starting the work, make sure to turn power off, and avoid accidental power-on. Also, be careful that clothing or part of body is not caught by a chain, sprocket, or peripheral equipment during work.
- Clean work area, and work in safe environment.
- Do not stand or walk under lifting equipment.
- Before transferring a chain, be sure to secure it firmly.

■ Adjusting Chain Length (Number of links)

1. To shorten a chain to an appropriate length, use a proper jig and employ a method appropriate to the structure of a chain. It is recommended to use the exclusive jigs.

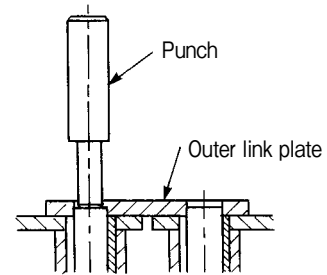
2. To shorten a riveted chain, grind away riveted ends of a part of rivets in the same line (on the same side).



3. Place a punch at ground end of a rivet and strike a punch with a hammer.

Be careful to hit two pins alternatively.

If pin is withdrawn without grinding off riveted end, a chain will be damaged. Grind away riveted ends.



4. After withdrawing pins, check to see if bushings are set correctly. If bushings are protruded, smooth power transmission cannot be achieved or strength of a chain is reduced.

5. Do not reuse the removed parts.

■ Connection (Installation to Equipment)

1. Confirm that sprocket shafts are parallel and level and misalignment of sprockets is within tolerance.

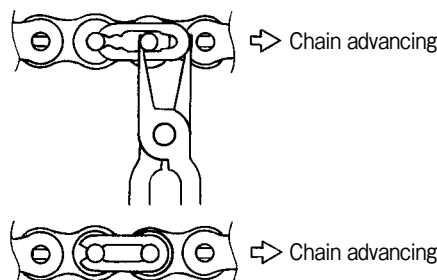
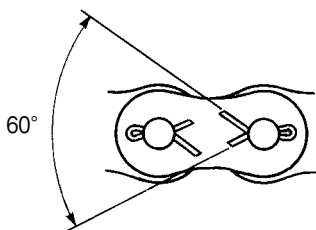
2. Insert a connecting link between both ends (inner ilinks) of a chain. In this case, this connector can be easily made when a chain is engaged with sprockets.

3. When inserting a connecting link it is important that split pin hole or clip groove is exposed over a connecting link.

4. Install a split pin or clip.

● Open ends of split pin at 60° as shown.

● Install a clip in direction opposite to chain advancing.



● Use genuine split pin or clip.

● Note that connecting link will be disengaged in case of improper installation. Causing injury to people or equipment damage.

■ Proper Slack

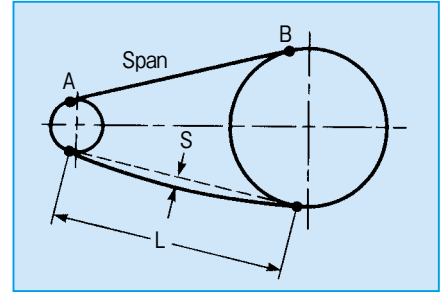
Proper slack “S” is determined by the following equation. Adjust shaft-to-shaft distance to set proper slack “S” .

$$S = 0.02L$$

where, L is span

In the following cases, determine slack “S” by the equation of $S \leq 0.01L$.

- Vertical arrangement
- Upper side of chain is slackened.
- Shaft-to-shaft distance exceeds 50 times pitch.
- Vibration or impact is present.
- Chain starts and stops frequently.
- Forward/reverse movements are repeated frequently.
- Speed change ratio exceeds 7:1.



Proper shaft-to-shaft distance is 30 to 50 times pitch.



CAUTIONS (Remanufacturing and additional manufacturing are prohibited.)

- ⊘ Remanufacturing and additional manufacturing of chain and related parts are prohibited. Otherwise, this will lead to dangerous severe accident. If remanufacturing or additional manufacturing is necessary, contact us.
 - Electric plating will lead to brittle breakage.
 - Welding of heat-treated chain will cause cracks or sacrifice strength.
 - Annealing of heat-treated chain will reduce strength of part.
 - Enlargement of connecting link hole and reduction in connecting pin diameter will reduce strength.

2. Operation

■ Check Items Before Operation

- Before operation, check if the following items are correctly set and safety cover is installed.
- If abnormal noise is caused during operation, immediately stop operation, and find cause of trouble and remedy.

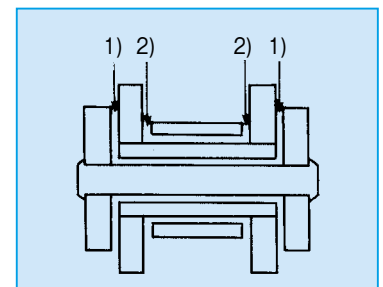
	Description of Check
Engagement	Check if sprocket is engaged correctly and slack is proper.
Link connection	Check if links are connected correctly and parts are firmly seated.
Interference	Check if there is any part or equipment that interferes with chain or any part that will be shattered.
Lubricant	Check if lubrication is proper.
Safety cover	Check if proper safety cover is installed.
Peripheral equipment	Check if peripheral equipment is properly installed.

■ Lubrication

- Roller chain lubricated with oil or grease will splash at the start of operation. Be sure to avoid splashing of lubricant on clothing and skin.
- Insufficient lubrication of chain will promote wear of pins and bushings due to dry friction. This will result in elongation and bending of chain and poor performance of chain. To ensure service life of chain, choose the right lubricant and lubrication method to meet operating requirements. For correct chain selection when no lubrication is allowed, contact us or our dealer.

Lubricating Points:

- 1) Clearances between inner and outer links
(To avoid elongation of chain)
- 2) Clearances between rollers and inner links
(To reduce wear of bushings and rollers, to avoid their breakage and to suppress noise)



3. Inspection and Maintenance

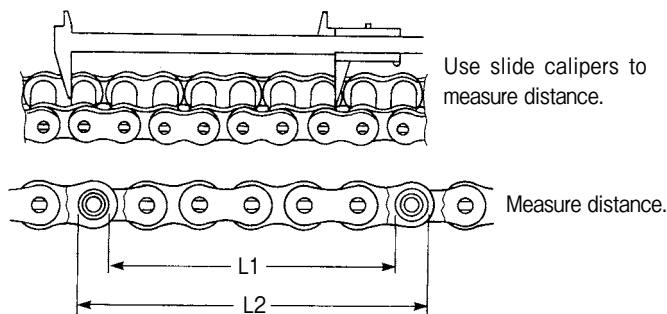
Inspection and maintenance are required to avoid trouble and keep power transmission ability.

■ Inspection Items and Measures to Trouble

Inspection Items	Measures to Troubles
● Harmful flaw or rust	Harmful flow or rust will reduce strength. Early replacement is recommended.
● Slack of chain	Adjust shaft-to-shaft distance, if slack is improper. If it is found, by measuring of elongation, that service life of chain is expired, change chain.
● Rotation of pin (incorrect caulking position rather than initial caulking position)	Possible cause is operation under over-load. Review operating conditions. Do not use any chain with a bent pin.
● Uneven wear of roller	Possible cause is poor rotation of rollers. Find cause of trouble. Change chain.
● Insufficient movement of chain	Review power transmission conditions and lubrication method. Change chain.
● Lubrication of chain	Lubricate by correct lubrication method.

■ Elongation Measuring Method and Chain Replacement Timing

(1) Measuring Chain Elongation



- Measure distances L1 and L2 with chain lightly loaded.
- Measure distance over 6 to 10 links to reduce measuring errors.
- Elongation of chain is determined by the following equation.

$$\text{Chain length} = \frac{L1 + L2}{2}$$

$$\text{Reference chain length} = \text{pitch} \times \text{Number of links measured}$$

$$\text{Elongation (\%)} = \frac{\text{Chain length} - \text{Reference chain length}}{\text{Reference length}} \times 100$$

(2) Chain Replacement Timing

Guideline of chain replacement, based on elongation of chain, is listed below.

Number of larger sprocket teeth	Elongation (%)
60 or lower	1.5
61 to 80	1.2
81 to 100	1.0
101 or more	0.8

- Listed data is applicable when take-up is possible, or when equipped with tensioner or idler.
- When shaft-to-shaft distance is fixed, guideline for elongation is 0.5% to 0.7%.
- When changing a chain, inspect sprockets. Worn-out sprocket will adversely affect chain performance.

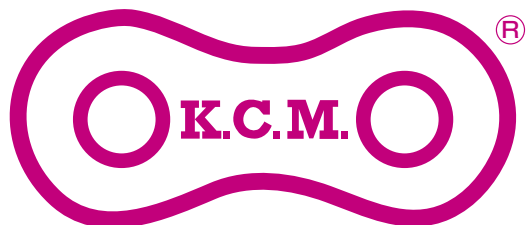
- Note that service life of chains varies depending on number of sprocket teeth, lubrication, operating environment, and other conditions, even though they are the same dimensions and type.

! CAUTIONS

- ⊘ Do not replace the damaged parts of a chain with new ones. In this case, change the whole chain. Also, do not install any used connecting link and parts to a new chain.
- ⊘ Do not adhere acid or alkaline liquid and highly volatile solvent to chain and sprockets, and do not use them for cleaning. If acid or alkaline liquid is accidentally adhered to chain, replace a chain with a new one. Adherence of acid or alkaline liquid will lead to brittle breakage. Use kerosene for cleaning. After cleaning, dry kerosene and apply lubricant sufficiently.

■ Specifications in this bulletin are described, on condition of normal use in ordinary operating environment (-10°C to 60°C).

■ For more details, contact us or our dealers.



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