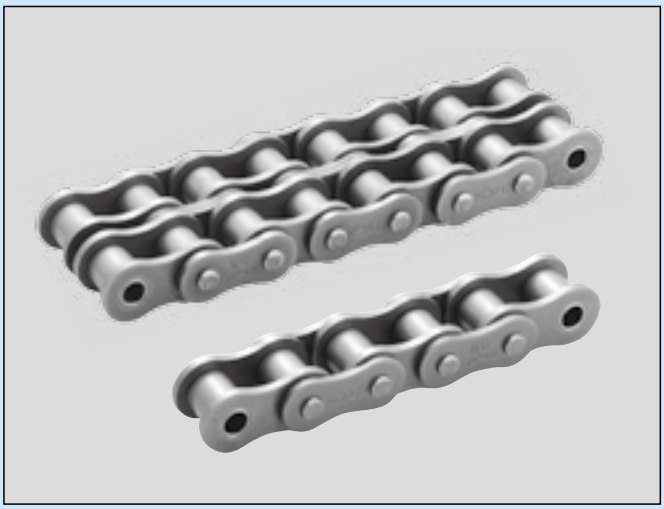
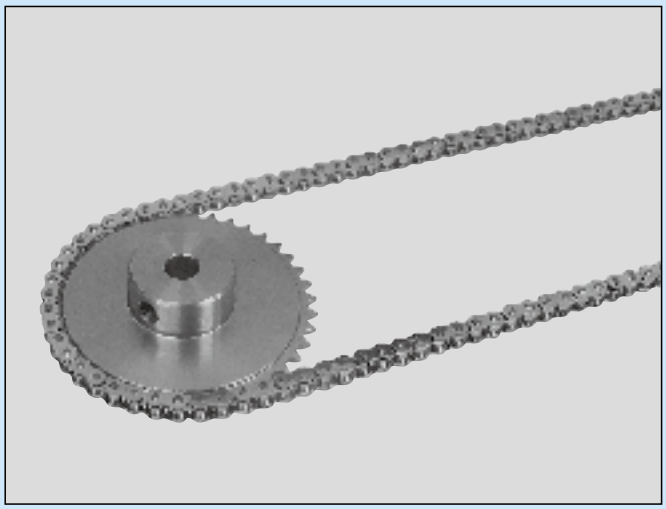
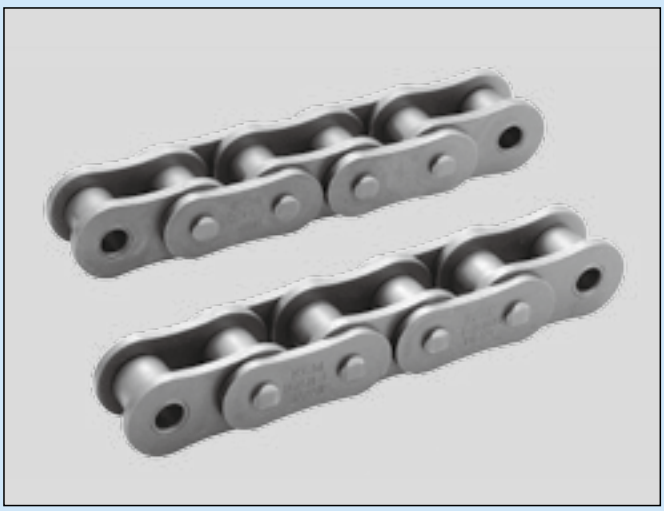
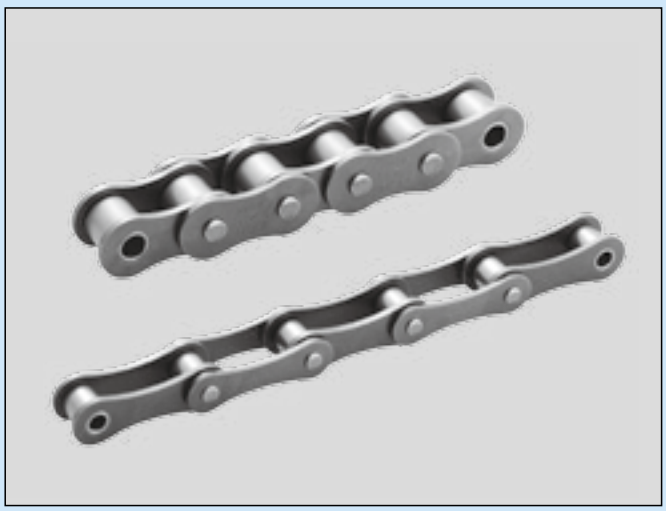
TRANSMISSION CHAINS



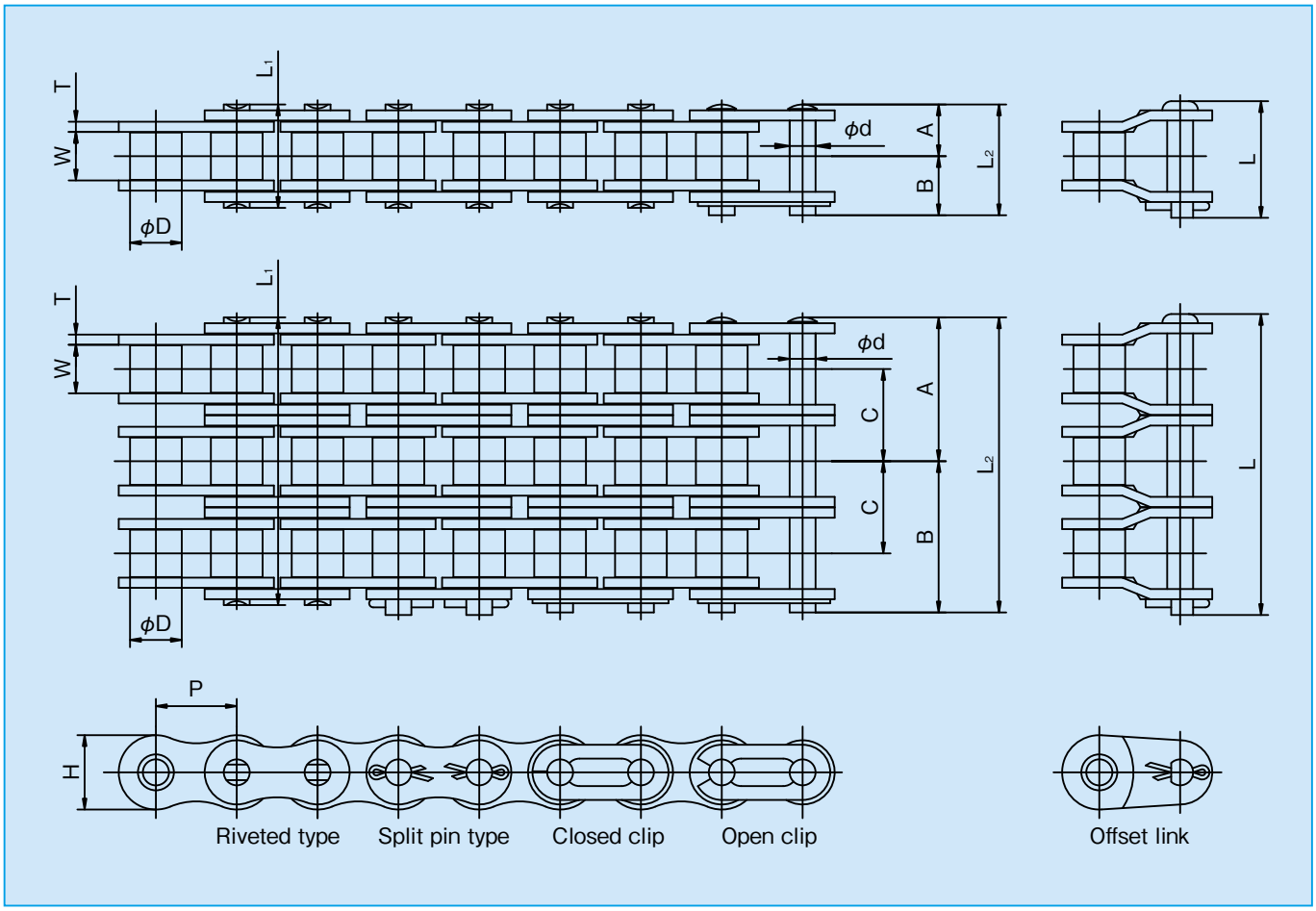






STANDARD ROLLER CHAINS

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



○ Dimensions [Unit: mm]

Chain No.		Pitch	Width between Inner Plates	Roller Dia.	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
KCM	JIS & ANSI	P	W	D	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.

STANDARD ROLLER CHAINS (MULTIPLE STRAND TYPE)

11 types of multiple roller chains, conforming to JIS and ANSI, are available.

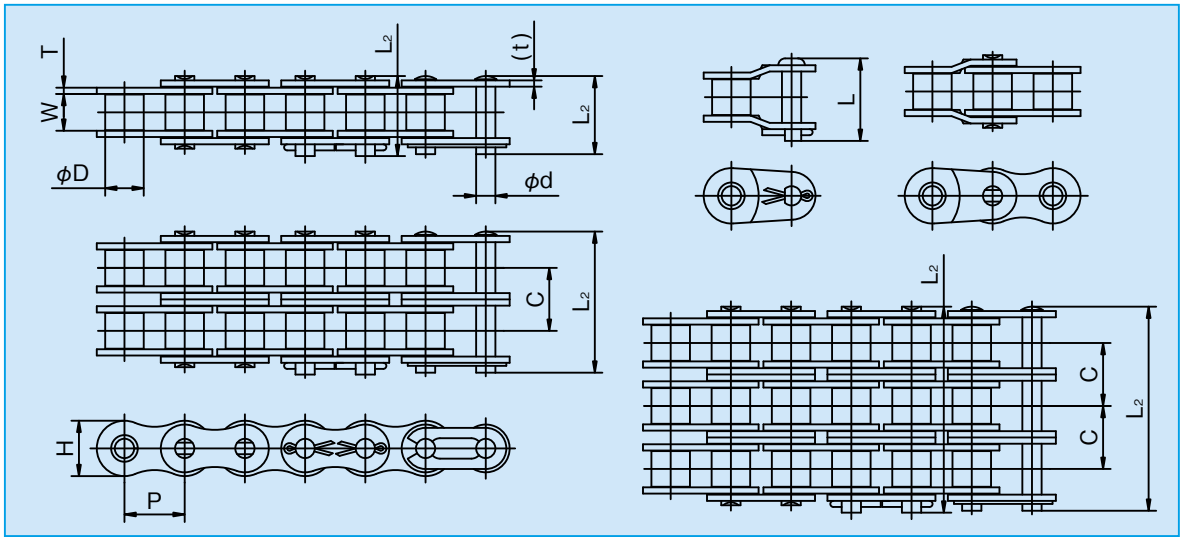
○ Dimensions [Unit: mm]

Chain No.		Pitch	Width between Inner Plates	Roller Dia.	Pin						Link Plate		Trans-verse Pitch	JIS Tensile strength kN (kgf)	Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
KCM	JIS & ANSI	P	W	D	Dia. d	A	B	(A+A) L_1	(A+B) L_2	Offset L	Thickness T	Height H	C					
25-2	25-2	6.35	3.18	*3.30	2.31	7.00	8.00	14.00	15.00	—	0.75	5.8	6.4	7.0(714)	8.8(900)	1.08(110)	0.26	480
25-3	25-3					10.20	11.20	20.40	21.40					10.5(1,071)	13.2(1,350)	1.57(160)	0.39	
35-2	35-2	9.525	4.78	*5.08	3.59	10.75	12.15	21.50	22.90	23.75	1.25	8.8	10.1	15.8(1,611)	21.6(2,200)	3.63(370)	0.64	320
35-3	35-3					15.80	17.20	31.60	33.00	33.85				23.7(2,417)	32.4(3,300)	5.39(550)	0.95	
40-2	40-2	12.70	7.95	7.92	3.97	15.22	16.73	30.45	31.95	33.35	1.5	11.7	14.4	27.8(2,835)	36.3(3,700)	6.17(630)	1.19	240
40-3	40-3					22.42	23.93	44.85	46.35	47.75				41.7(4,252)	54.4(5,550)	9.11(930)	1.79	
40-4	40-4					29.62	31.13	59.25	60.75	62.15				55.6(5,670)	72.6(7,400)	11.96(1,220)	2.38	
40-5	40-5					36.82	38.33	73.65	75.15	76.55				69.5(7,087)	90.7(9,250)	14.12(1,440)	2.96	
50-2	50-2	15.875	9.53	10.16	5.09	19.20	20.65	38.40	39.85	41.10	2.0	14.6	18.1	43.6(4,446)	59.8(6,100)	10.79(1,100)	2.01	192
50-3	50-3					28.25	29.70	56.50	57.95	59.20				65.4(6,669)	89.7(9,150)	15.89(1,620)	2.99	
50-4	50-4					37.30	38.75	74.60	76.05	77.30				87.2(8,892)	119.6(12,200)	21.08(2,150)	3.99	
50-5	50-5					46.35	47.80	92.70	94.15	95.40				109.0(11,115)	149.6(15,250)	24.81(2,530)	4.99	
60-2	60-2	19.05	12.70	11.91	5.96	24.05	25.55	48.10	49.60	52.25	2.4	17.5	22.8	62.6(6,383)	82.4(8,400)	15.00(1,530)	2.95	160
60-3	60-3					35.45	36.95	70.90	72.40	75.05				93.9(9,575)	123.5(12,600)	22.06(2,250)	4.41	
60-4	60-4					46.85	48.35	93.70	95.20	97.05				125.2(12,767)	164.6(16,800)	28.93(2,950)	5.83	
60-5	60-5					58.25	59.75	116.50	118.00	119.85				156.5(15,959)	205.8(21,000)	34.32(3,500)	7.32	
60-6	60-6					69.65	71.15	139.30	140.80	142.65				187.8(19,150)	247.0(25,200)	40.60(4,140)	8.78	
80-2	80-2	25.40	15.88	15.88	7.94	30.72	33.83	61.45	64.55	66.20	3.2	23.0	29.3	111.2(11,339)	145.0(14,800)	25.01(2,550)	4.96	120
80-3	80-3					45.37	48.48	90.75	93.85	95.50				166.8(17,009)	217.7(22,200)	36.77(3,750)	7.40	
80-4	80-4					60.02	63.13	120.05	123.15	124.00				222.4(22,678)	290.3(29,600)	48.54(4,950)	9.84	
80-5	80-5					74.67	77.78	149.35	152.45	153.30				278.0(28,348)	362.8(37,000)	57.37(5,850)	12.29	
80-6	80-6					89.32	92.43	178.65	181.75	182.60				333.6(34,018)	435.4(44,400)	67.67(6,900)	14.73	
100-2	100-2	31.75	19.05	19.05	9.54	38.00	40.95	76.00	78.95	80.85	4.0	28.9	35.8	174.0(17,743)	225.6(23,000)	38.25(3,900)	7.62	96
100-3	100-3					55.90	58.85	111.80	114.75	116.50				261.0(26,615)	338.3(34,500)	56.39(5,750)	11.38	
100-4	100-4					73.80	76.75	147.60	150.55	151.75				348.0(35,486)	451.1(46,000)	74.04(7,550)	15.15	48
100-5	100-5					91.70	94.65	183.40	186.35	187.55				435.0(44,358)	563.9(57,500)	87,77(8,950)	18.91	
100-6	100-6					119.60	122.55	239.20	242.15	223.35				522.0(53,229)	676.7(69,000)	103.75(10,580)	22.68	
120-2	120-2	38.10	25.40	22.23	11.11	47.90	51.30	95.80	99.20	100.70	4.8	35.0	45.4	250.0(25,493)	313.8(32,000)	51.48(5,250)	11.21	80
120-3	120-3					70.60	74.00	141.20	144.60	146.10				375.0(38,239)	470.7(48,000)	76.00(7,750)	16.74	40
120-4	120-4					93.30	96.70	186.60	190.00	191.50				500.0(50,986)	627.6(64,000)	100.03(10,200)	22.28	
120-5	120-5					116.00	119.40	232.00	235.40	236.90				625.0(63,732)	784.5(80,000)	118.17(12,050)	27.83	
120-6	120-6					138.70	142.10	277.40	280.80	282.30				750.0(76,479)	941.4(96,000)	139.84(14,260)	33.36	
140-2	140-2	44.45	25.40	25.40	12.71	51.75	55.75	103.50	107.50	108.95	5.6	40.7	48.9	340.0(34,670)	421.7(43,000)	68.31(6,970)	14.24	34
140-3	140-3					76.20	80.20	152.40	156.40	157.85				510.0(52,006)	632.5(64,500)	100.52(10,250)	21.30	
140-4	140-4					100.65	104.65	201.30	205.30	206.75				680.0(69,341)	843.4(86,000)	132.39(13,500)	28.33	
160-2	160-2	50.80	31.75	28.58	14.29	61.70	66.40	123.40	128.10	130.35	6.4	46.7	58.5	446.0(45,479)	539.4(55,000)	89.73(9,150)	19.06	30
160-3	160-3					90.95	95.65	181.90	186.60	188.85				669.0(68,219)	809.0(82,500)	132.39(13,500)	28.50	
160-4	160-4					120.20	124.90	240.40	245.10	247.35				892.0(90,959)	1078.7(110,000)	174.56(17,800)	37.93	
200-2	200-2	63.50	38.10	39.68	19.85	75.45	82.45	150.90	157.90	160.80	8.0	58.4	71.6	694.0(70,768)	941.4(96,000)	121.60(12,400)	31.59	24
200-3	200-3					111.25	118.25	222.50	229.50	232.40				1041.0(106,152)	1412.2(144,000)	178.97(18,250)	47.29	
200-4	200-4					147.05	154.05	294.10	301.10	304.00				1388.0(141,537)	1882.9(192,000)	235.85(24,050)	62.95	

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-SERIES ROLLER CHAINS

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		Trans-verse 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					8.60	—				4.4(449)	4.9(500)	0.18	
KCM 05B-2	8.00	3.00	5.00	2.31	14.25	—	0.75	7.1	5.64	7.8(800)	8.5(870)	0.31	626
KCM 05B-3					19.90	—				11.1(1,130)	12.2(1,240)	0.46	
KCM 06B					13.60	15.15				8.9(910)	9.0(920)	0.39	
KCM 06B-2	9.525	5.72	6.35	3.28	23.85	25.40	1.3 (1.0)	8.1	10.24	16.9(1,720)	17.0(1,730)	0.74	320
KCM 06B-3					34.10	35.65				24.9(2,540)	24.9(2,540)	1.10	
KCM 08B					18.05	19.20				17.8(1,820)	18.9(1,930)	0.65	
KCM 08B-2	12.70	7.75	8.51	4.45	31.95	33.10	1.6	11.7	13.92	31.1(3,170)	32.0(3,260)	1.25	240
KCM 08B-3					45.90	47.05				44.5(4,540)	47.5(4,840)	1.85	
KCM 10B					20.15	21.50				22.2(2,260)	22.9(2,340)	0.91	
KCM 10B-2	15.875	9.65	10.16	5.08	36.95	38.10	1.5	14.6	16.59	44.5(4,540)	44.5(4,540)	1.80	192
KCM 10B-3					53.35	54.70				66.7(6,800)	66.8(6,810)	2.70	
KCM 12B					23.60	26.30				28.9(2,950)	31.0(3,160)	1.24	
KCM 12B-2	19.05	11.68	12.07	5.72	43.05	45.75	1.8	16.0	19.46	57.8(5,890)	61.0(6,220)	2.44	160
KCM 12B-3					62.50	65.20				86.7(8,840)	92.2(9,400)	3.65	
KCM 16B					38.10	41.45				60 (6,120)	69.6(7,100)	2.62	
KCM 16B-2	25.40	17.02	15.88	8.28	70.00	73.35	4.0 (3.2)	19.7	31.88	106 (10,810)	127.5(13,000)	5.18	120
KCM 16B-3					101.90	105.25				160 (16,320)	192.2(19,600)	7.74	
KCM 20B					43.95	47.25				95 (9,690)	98.1(10,000)	3.81	
KCM 20B-2	31.75	19.56	19.05	10.19	80.40	83.70	4.5 (3.5)	26.0	36.45	170 (17,340)	197.1(20,100)	7.52	96
KCM 20B-3					116.85	120.15				250 (25,490)	295.2(30,100)	11.24	
KCM 24B					58.70	64.20				160 (16,320)	166.7(17,000)	6.65	
KCM 24B-2	38.10	25.40	25.40	14.63	107.05	112.55	6.0 (5.0)	33.0	48.36	280 (28,550)	334.4(34,100)	13.11	80
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. Sprit 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.

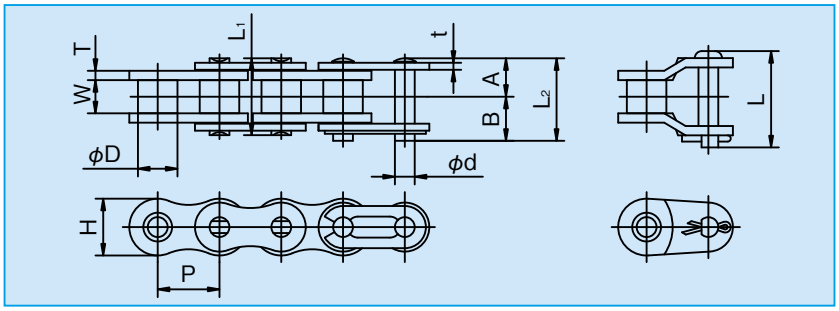
LUBRICATION-FREE CHAINS

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℃ to +150℃

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

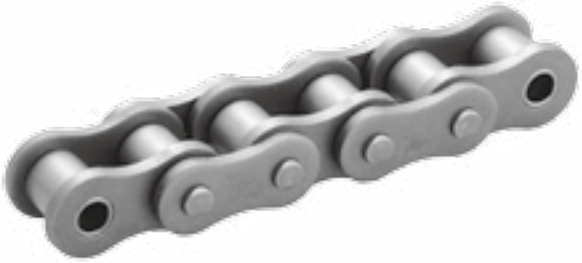
NOTES: - Pin is longer than that of standard chain because inner plate is thickened. Avoid interference with equipment.
- In case of single strand chain, standard sprocket can be used. In case of multiple strand chain, exclusive sprocket is required.
- Maximum allowable load is determined based on tensile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

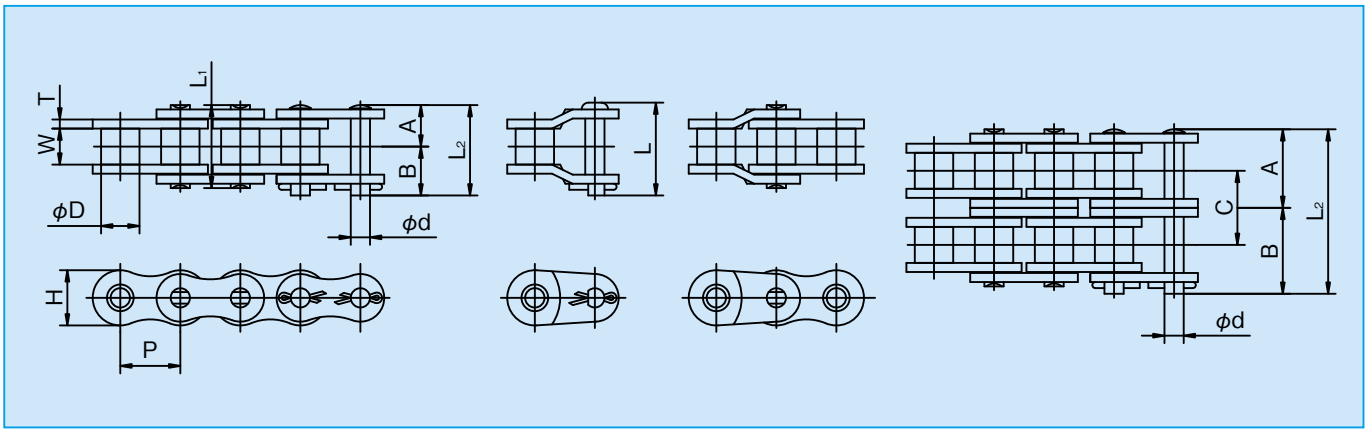
Operating Notes to NL Chains

- 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.

H-TYPE ROLLER CHAINS

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.





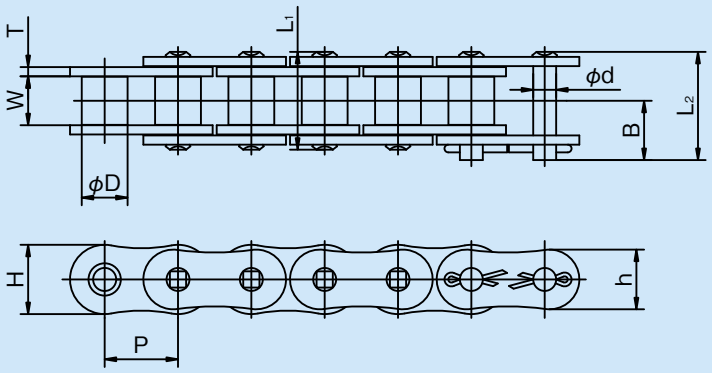
○ Dimensions [Unit: mm]

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	34

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.

LL-SERIES HIGH FATIGUE STRENGTH ROLLER CHAINS

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]

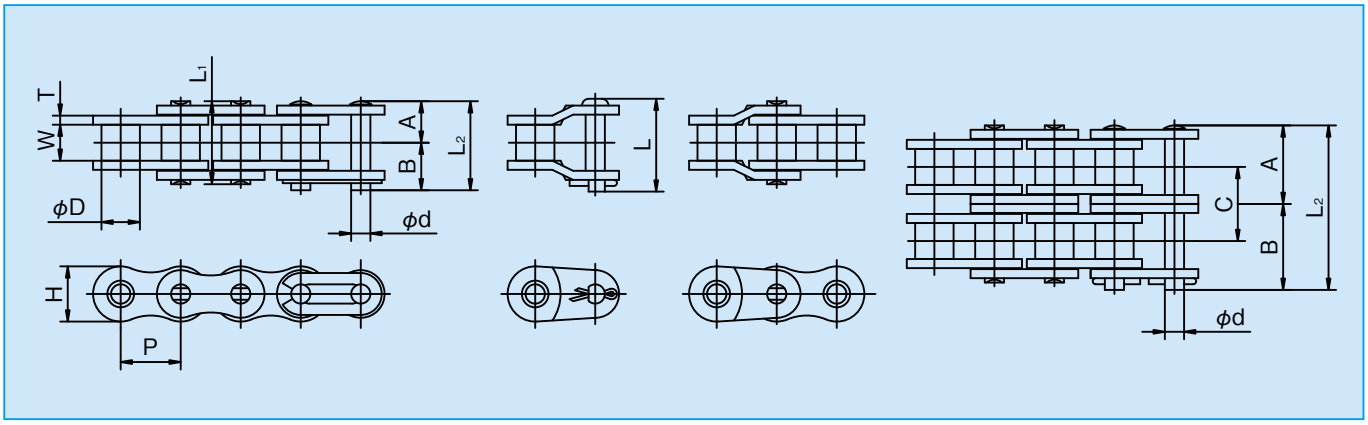
KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin				Link Plate			Ave. Tensile Strength kN (kgf)	Max. Allowable Load kN (kgf)	Approx. Weight (kg/m)	Links of 1 unit
				Dia. d	B	L_1	L_2	Thickness T	Height H	Height h				
KCM 80LL	25.40	15.88	15.88	7.94	19.30	32.40	35.50	3.2	24.0	20.6	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.

STAINLESS STEEL "SS" ROLLER CHAINS

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		Trans-verse 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	6.35	3.18	*3.30	2.31	3.82	4.83	7.65	8.65	—	0.75	5.8	6.4	0.12 (12)	0.14	480
KCM 25 SS-2					7.03	8.02	14.05	15.05	—				0.21 (21)	0.26	
KCM 35 SS	9.525	4.78	*5.08	3.59	5.77	7.13	11.55	12.90	13.85	1.25	8.8	10.1	0.26 (27)	0.33	320
KCM 35 SS-2					10.82	12.18	21.65	23.00	23.95				0.45 (46)	0.65	
KCM 40 SS	12.70	7.95	7.92	3.97	8.07	9.58	16.15	17.65	19.05	1.5	11.7	14.4	0.44 (45)	0.63	240
KCM 40 SS-2					15.27	16.78	30.55	32.05	33.45				0.76 (77)	1.19	
KCM 50 SS	15.875	9.53	10.16	5.09	10.20	11.60	20.40	21.80	23.05	2.0	14.6	18.1	0.69 (70)	1.04	192
KCM 50 SS-2					19.25	20.68	38.50	39.90	41.15				1.17 (119)	2.01	
KCM 60 SS	19.05	12.70	11.91	5.96	12.70	14.20	25.40	26.90	29.55	2.4	17.5	22.8	1.03 (105)	1.50	160
KCM 60 SS-2					24.10	25.60	48.20	49.70	52.35				1.76 (179)	2.95	
KCM 80 SS	25.40	15.88	15.88	7.94	16.15	19.25	32.30	35.40	37.10	3.2	23.0	29.3	1.77 (180)	2.62	120
KCM 80 SS-2					30.80	33.90	61.60	64.70	66.40				3.00 (306)	5.12	
KCM 100 SS	31.75	19.05	19.05	9.54	20.20	23.15	40.40	43.35	44.05	4.0	28.9	35.8	2.55 (260)	4.09	96
KCM 100 SS-2					38.10	41.05	76.20	79.15	79.85				4.33 (442)	8.10	

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.

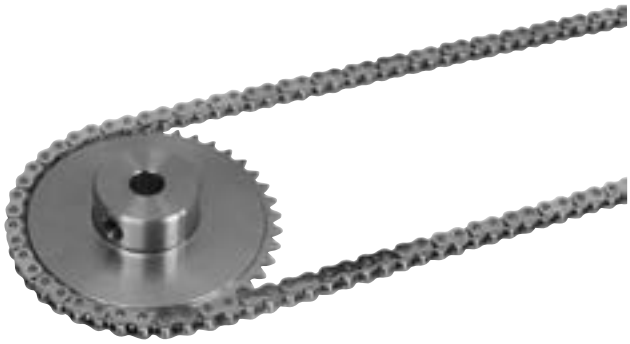
ISO-B (European Type) Stainless Roller Chains

[Unit: mm]

KCM Chain No.	Pitch P	Width between Inner Plates W	Roller Dia. D	Pin						Link Plate		Trans-verse 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	8.00	3.00	5.00	2.31	3.82	4.83	7.65	8.65	—	0.75	7.1	5.64	0.12 (12)	0.18	626
KCM 05B SS-2					6.65	7.65	13.30	14.30	—				0.21 (21)	0.34	
KCM 06B SS	9.525	5.72	6.35	3.28	6.10	7.50	12.20	13.60	15.15	1.3(1.0)	8.1	10.24	0.26 (27)	0.39	320
KCM 06B SS-2					11.22	12.63	22.45	23.85	25.40				0.45 (46)	0.77	
KCM 08B SS	12.70	7.75	8.51	4.45	8.17	9.58	16.35	17.75	19.30	1.5	11.7	13.92	0.44 (45)	0.65	240
KCM 08B SS-2					15.12	16.53	30.25	31.65	33.20				0.76 (77)	1.25	
KCM 10B SS	15.875	9.65	10.16	5.08	9.58	11.02	19.15	20.60	21.95	1.65	14.6	16.59	0.70 (70)	0.94	192
KCM 10B SS-2					17.87	19.33	35.75	37.20	38.55				1.17 (119)	1.84	
KCM 12B SS	19.05	11.68	12.07	5.72	11.05	12.55	22.10	23.60	26.30	1.8	16.0	19.46	1.00 (105)	1.25	160
KCM 12B SS-2					20.77	22.28	41.55	43.05	45.75				1.76 (179)	2.44	
KCM 16B SS	25.40	17.02	15.88	8.28	17.60	20.70	35.20	38.30	41.65	4.0(3.2)	19.7	31.88	1.77 (180)	2.63	120
KCM 16B SS-2					33.55	36.65	67.10	70.20	73.55				3.00 (306)	5.19	

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



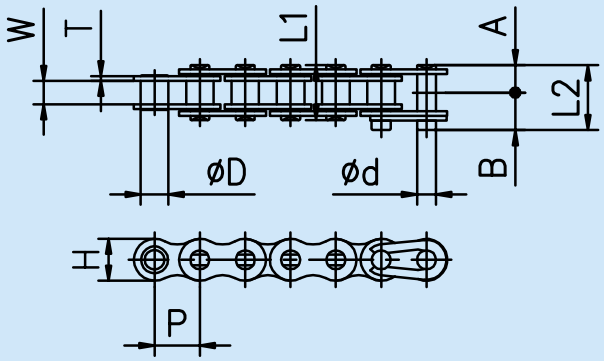
CHAIN PITCH 3.7465mm

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 dimention 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℃ to +400℃ .

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.

SURFACE-TREATED CHAINS (N), (BC), and (DG)

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℃ to +60℃
- 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℃ to +150℃
- 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℃ to +60℃
- 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.

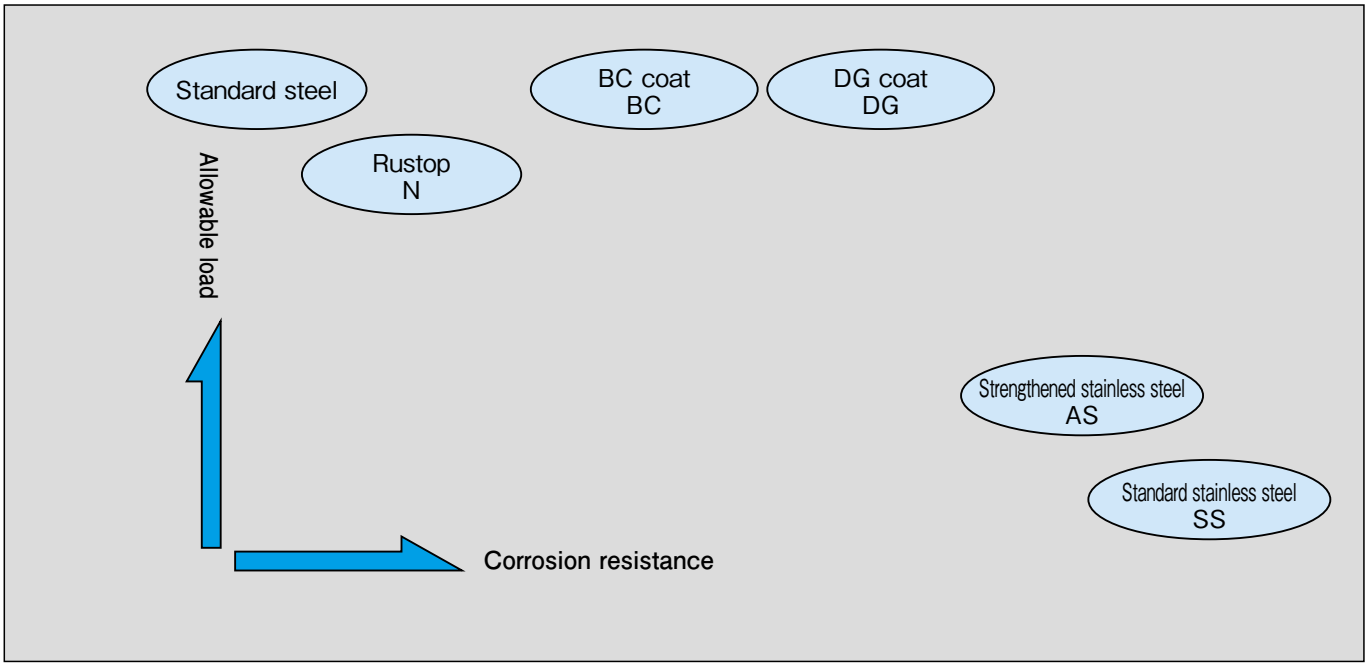
Safety Precautions: Do not use surface-treated chain if chain directly contacts food or abrasion particles are mixed into food.

SURFACE-TREATED CHAINS (N), (BC), and (DG)

● Maximum Allowable Loads of Surface-Treated Chains

Type / KCM Chain No.	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)

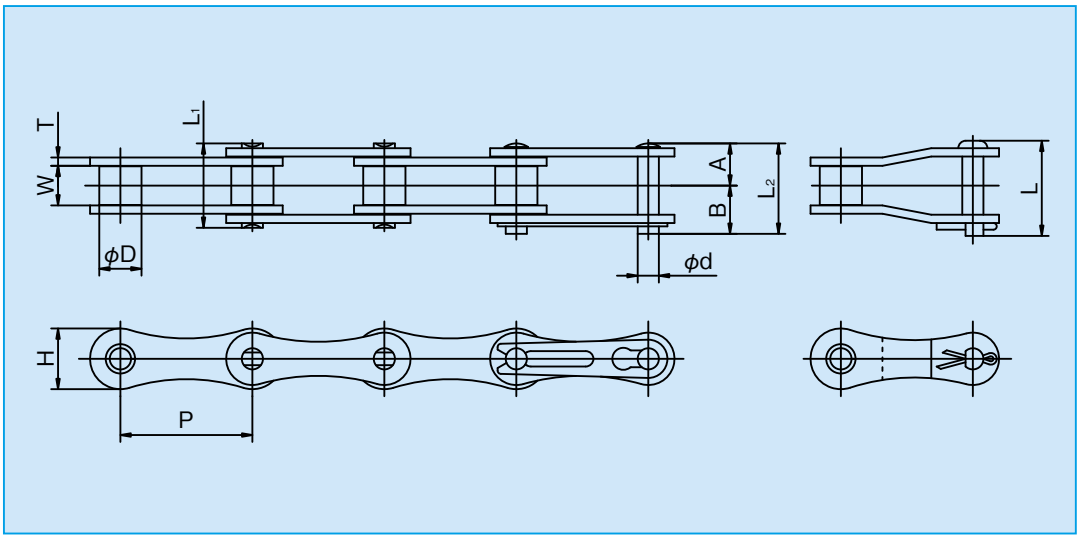
NOTES: - Dimensions of surface-treated chains are the same as those of standard steel chains.
- Connecting links of BC coat chains are split pin type.
- Surface-treated chain can be used in place of most standard steel chains and chains with attachments.



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

DOUBLE-PITCH ROLLER CHAINS (FOR TRANSMISSION)

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.



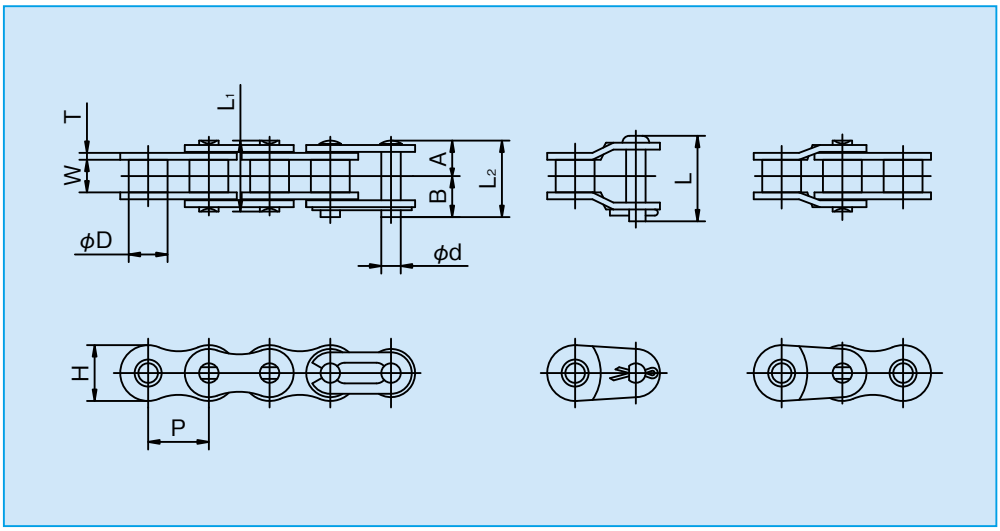
○ Dimensions [Unit: mm]

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 CHAINS

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℃ to +60℃ 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.

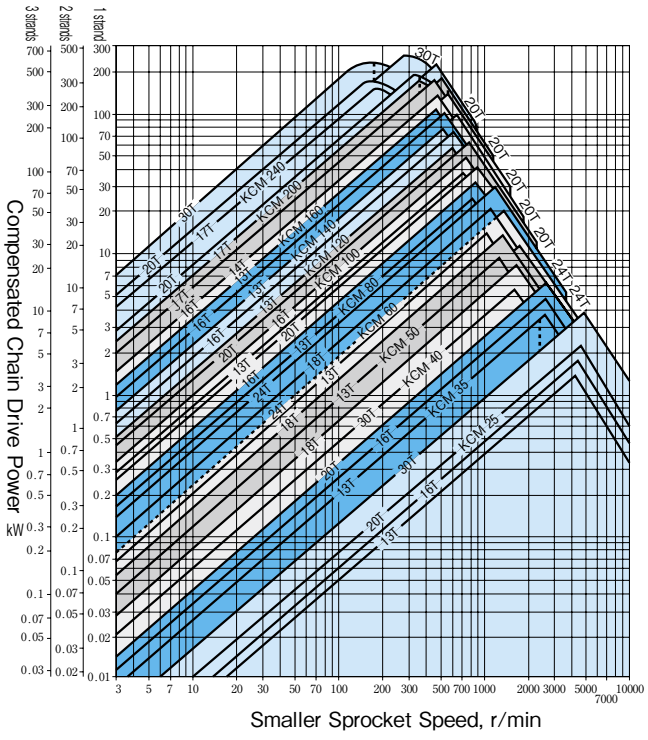
Table 1: Multiple Strand Factor

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:

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

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:

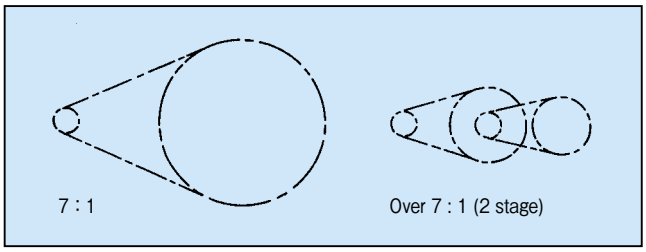
After determining the number of teeth of smaller sprocket, refer to Sprocket dimensions tables on pages 73 to 86 to find boss diameter and maximum bore diameter. If the bore diameter is less than the actual shaft diameter, reselect the increased number of teeth of smaller sprocket so that the bore diameter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

Max. load acting on chain × Service factor Table 2 × Speed factor Table 4 ≦ 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: Lp (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. (℃)	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

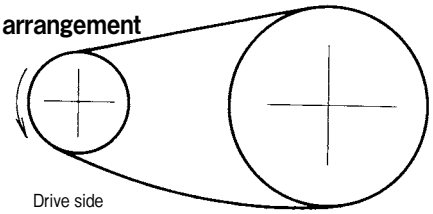
Sag of the chain is approximately 4% of shaft-to-shaft distance, and approximately 2% of that in the following cases.

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

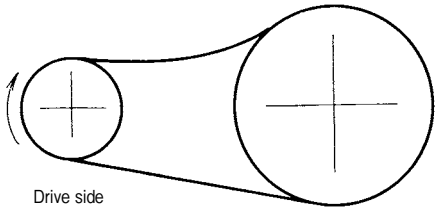
(C) Varying loads

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

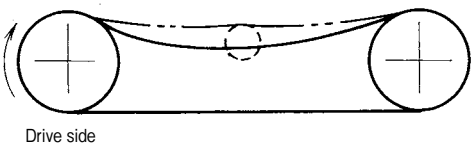
Horizontal arrangement



(1) Good

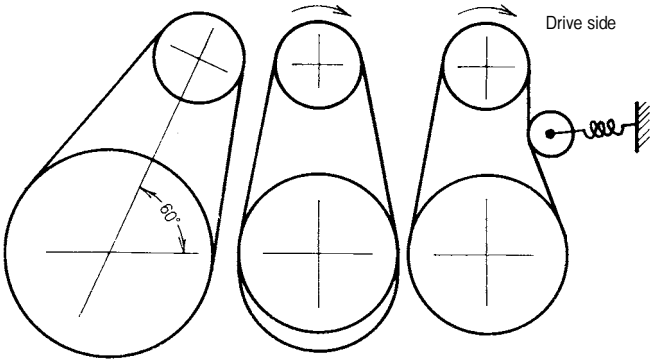


(2) Wrong



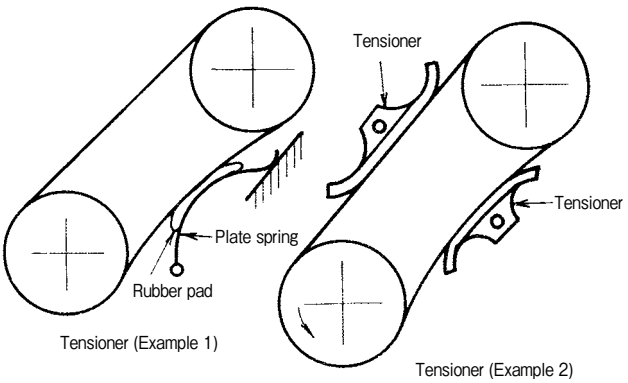
(3) Wrong (Change rotating direction or use an idler.)

Vertical arrangement:



(4) Good (5) (6)

Examples of Tensioners



Tensioner (Example 1) Tensioner (Example 2)

LUBRICATION FOR ROLLER CHAINS

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.

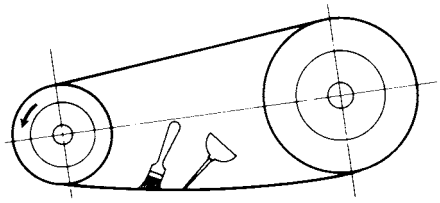
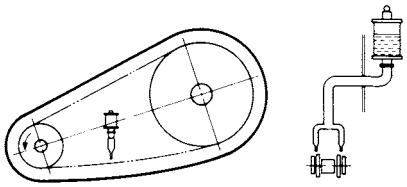
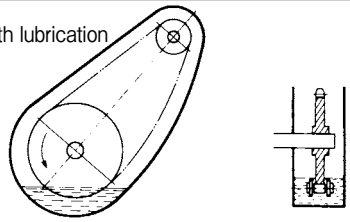
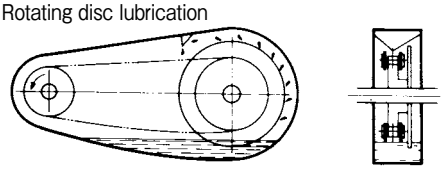
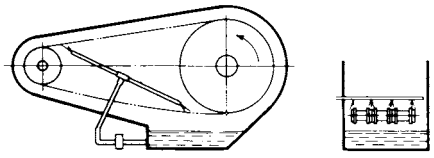
Effect of Lubrication

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

Lubrication Type	A・B				C			
Temp (℃) / KCM Chain No.	−10 ～ 0	0 ～ 40	40 ～ 50	50 ～ 60	−10 ～ 0	0 ～ 40	40 ～ 50	50 ～ 60
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.25(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
9	0.01	0.03	0.09	0.13	0.19	0.23	0.31	0.37	0.43	0.50	0.59	0.69	0.79	0.76	0.64	0.54	0.47	0.42	0.37	0.33	0.30	0.27	0.25	0.22	0.19
10	0.02	0.04	0.10	0.16	0.21	0.26	0.34	0.42	0.48	0.56	0.66	0.78	0.89	0.90	0.75	0.64	0.55	0.48	0.43	0.39	0.35	0.31	0.29	0.26	0.22
11	0.02	0.04	0.10	0.17	0.23	0.29	0.37	0.46	0.54	0.62	0.73	0.86	0.98	1.03	0.87	0.74	0.64	0.56	0.50	0.45	0.40	0.37	0.34	0.31	0.26
12	0.02	0.04	0.12	0.19	0.25	0.32	0.41	0.51	0.60	0.69	0.80	0.94	1.08	1.17	0.98	0.84	0.72	0.64	0.57	0.51	0.46	0.42	0.38	0.35	0.30
13	0.03	0.04	0.13	0.20	0.28	0.35	0.45	0.55	0.65	0.75	0.87	1.03	1.18	1.32	1.11	0.95	0.82	0.72	0.64	0.57	0.51	0.47	0.43	0.40	0.34
14	0.03	0.05	0.14	0.22	0.30	0.37	0.48	0.60	0.70	0.81	0.95	1.11	1.28	1.44	1.24	1.06	0.92	0.81	0.72	0.64	0.57	0.52	0.48	0.44	0.37
15	0.03	0.06	0.15	0.24	0.32	0.40	0.52	0.64	0.75	0.87	1.01	1.20	1.38	1.55	1.37	1.17	1.01	0.90	0.79	0.71	0.64	0.58	0.53	0.48	0.42
16	0.03	0.06	0.16	0.25	0.35	0.43	0.57	0.69	0.81	0.93	1.09	1.28	1.48	1.66	1.51	1.29	1.12	0.98	0.87	0.78	0.70	0.64	0.58	0.54	0.46
17	0.04	0.07	0.17	0.28	0.37	0.46	0.60	0.74	0.87	0.99	1.16	1.37	1.57	1.78	1.66	1.42	1.22	1.07	0.95	0.85	0.77	0.70	0.64	0.59	0.50
18	0.04	0.07	0.19	0.29	0.40	0.49	0.64	0.78	0.93	1.06	1.24	1.46	1.68	1.89	1.81	1.54	1.34	1.17	1.04	0.93	0.84	0.76	0.69	0.64	0.54
19	0.04	0.07	0.19	0.31	0.42	0.52	0.68	0.83	0.98	1.12	1.31	1.54	1.78	2.01	1.95	1.67	1.45	1.27	1.13	1.01	0.91	0.83	0.75	0.69	0.59
20	0.04	0.07	0.21	0.33	0.44	0.55	0.72	0.87	1.03	1.19	1.39	1.63	1.88	2.12	2.11	1.81	1.57	1.37	1.22	1.09	0.98	0.90	0.81	0.75	0.64
21	0.04	0.08	0.22	0.34	0.46	0.58	0.75	0.93	1.09	1.25	1.46	1.72	1.98	2.23	2.28	1.94	1.69	1.48	1.31	1.17	1.06	0.96	0.87	0.81	0.69
22	0.04	0.08	0.23	0.36	0.49	0.61	0.80	0.97	1.14	1.31	1.54	1.81	2.08	2.35	2.44	2.08	1.81	1.58	1.40	1.26	1.13	1.03	0.94	0.87	0.74
23	0.04	0.09	0.24	0.38	0.51	0.64	0.84	1.02	1.20	1.38	1.61	1.90	2.19	2.46	2.61	2.22	1.93	1.69	1.50	1.34	1.21	1.10	1.01	0.93	0.79
24	0.05	0.10	0.25	0.40	0.54	0.67	0.87	1.07	1.26	1.45	1.69	1.99	2.29	2.58	2.78	2.37	2.06	1.81	1.60	1.43	1.29	1.17	1.07	0.98	0.84
25	0.05	0.10	0.26	0.42	0.56	0.70	0.91	1.12	1.31	1.51	1.77	2.08	2.39	2.69	2.95	2.52	2.19	1.92	1.70	1.52	1.37	1.25	1.14	1.04	0.90
26	0.05	0.10	0.28	0.43	0.59	0.73	0.95	1.16	1.37	1.57	1.84	2.17	2.49	2.81	3.13	2.68	2.32	2.04	1.81	1.62	1.45	1.32	1.21	1.11	0.95
28	0.06	0.11	0.30	0.47	0.63	0.80	1.03	1.26	1.48	1.71	2.00	2.35	2.70	3.05	3.39	2.99	2.59	2.28	2.01	1.81	1.63	1.48	1.35	1.24	1.06
30	0.06	0.12	0.32	0.51	0.69	0.86	1.11	1.36	1.60	1.84	2.15	2.54	2.91	3.28	3.65	3.32	2.87	2.52	2.24	2.00	1.81	1.64	1.50	1.37	1.17
32	0.07	0.13	0.34	0.54	0.73	0.92	1.19	1.45	1.72	1.97	2.31	2.72	3.12	3.52	3.92	3.66	3.17	2.78	2.46	2.21	1.99	1.81	1.65	1.51	1.29
35	0.07	0.14	0.38	0.60	0.81	1.01	1.31	1.60	1.89	2.17	2.54	2.99	3.44	3.88	4.31	4.18	3.63	3.18	2.82	2.52	2.28	2.07	1.89	1.73	1.48
40	0.09	0.16	0.43	0.69	0.93	1.17	1.51	1.85	2.19	2.51	2.93	3.46	3.97	4.48	4.98	5.11	4.42	3.89	3.45	3.08	2.78	2.52	2.31	2.11	1.81
45	0.10	0.19	0.49	0.78	1.06	1.33	1.72	2.10	2.48	2.85	3.33	3.92	4.51	5.09	5.65	6.09	5.28	4.63	4.11	3.68	3.32	3.01	2.75	2.52	2.16
Lubrication Type	A				B									C											

K.C.M.35(Single Strand Roller Chain)kW

No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
9	0.06	0.11	0.29	0.46	0.63	0.79	1.02	1.25	1.48	1.69	1.98	1.62	1.29	1.05	0.88	0.75	0.66	0.57	0.51	0.46	0.41	0.37	0.34	0.31	0.27
10	0.07	0.12	0.33	0.52	0.71	0.89	1.15	1.40	1.65	1.89	2.22	1.90	1.51	1.23	1.04	0.88	0.77	0.67	0.60	0.53	0.48	0.43	0.40	0.37	0.31
11	0.07	0.13	0.37	0.57	0.78	0.98	1.27	1.55	1.83	2.10	2.46	2.19	1.74	1.42	1.19	1.02	0.88	0.78	0.69	0.61	0.55	0.50	0.46	0.43	0.36
12	0.08	0.15	0.40	0.63	0.86	1.07	1.40	1.71	2.01	2.31	2.70	2.50	1.98	1.62	1.36	1.16	1.01	0.88	0.78	0.70	0.63	0.57	0.52	0.48	0.41
13	0.09	0.16	0.44	0.69	0.94	1.17	1.52	1.86	2.19	2.52	2.95	2.81	2.24	1.83	1.53	1.31	1.13	0.99	0.88	0.79	0.71	0.65	0.59	0.54	0.46
14	0.10	0.18	0.47	0.75	1.01	1.28	1.65	2.01	2.37	2.73	3.19	3.15	2.50	2.04	1.72	1.46	1.27	1.11	0.98	0.88	0.80	0.72	0.66	0.60	0.51
15	0.10	0.19	0.51	0.81	1.10	1.37	1.78	2.17	2.56	2.94	3.44	3.49	2.77	2.27	1.90	1.62	1.40	1.23	1.10	0.98	0.88	0.80	0.73	0.67	0.57
16	0.11	0.20	0.54	0.87	1.17	1.47	1.90	2.33	2.75	3.15	3.69	3.84	3.05	2.50	2.10	1.79	1.55	1.36	1.21	1.08	0.97	0.88	0.81	0.74	0.63
17	0.12	0.22	0.58	0.93	1.25	1.57	2.04	2.48	2.93	3.36	3.94	4.21	3.34	2.74	2.29	1.95	1.69	1.49	1.32	1.18	1.07	0.97	0.88	0.81	0.69
18	0.13	0.23	0.62	0.98	1.33	1.67	2.16	2.64	3.12	3.58	4.19	4.59	3.64	2.98	2.50	2.13	1.85	1.62	1.44	1.29	1.16	1.05	0.96	0.88	0.75
19	0.13	0.25	0.66	1.04	1.41	1.77	2.29	2.80	3.30	3.80	4.44	4.98	3.95	3.23	2.71	2.31	2.01	1.76	1.56	1.40	1.26	1.14	1.04	0.95	0.82
20	0.14	0.26	0.69	1.10	1.49	1.87	2.42	2.96	3.49	4.01	4.69	5.37	4.27	3.49	2.94	2.50	2.16	1.90	1.69	1.51	1.36	1.23	1.13	1.04	0.88
21	0.15	0.28	0.73	1.16	1.57	1.97	2.55	3.13	3.68	4.23	4.95	5.78	4.59	3.75	3.15	2.69	2.33	2.04	1.81	1.62	1.46	1.33	1.21	1.11	0.95
22	0.16	0.28	0.77	1.22	1.66	2.07	2.69	3.28	3.87	4.47	5.20	6.12	4.92	4.03	3.37	2.88	2.50	2.19	1.95	1.74	1.57	1.42	1.30	1.19	1.02
23	0.16	0.30	0.81	1.28	1.74	2.18	2.82	3.45	4.06	4.66	5.45	6.43	5.26	4.30	3.60	3.08	2.67	2.34	2.08	1.86	1.68	1.52	1.39	1.28	1.09
24	0.17	0.31	0.85	1.34	1.82	2.28	2.95	3.61	4.25	4.89	5.71	6.73	5.60	4.59	3.84	3.28	2.84	2.50	2.22	1.98	1.79	1.62	1.48	1.36	1.16
25	0.18	0.33	0.89	1.40	1.90	2.38	3.08	3.77	4.44	5.10	5.97	7.03	5.96	4.88	4.09	3.49	3.02	2.66	2.36	2.10	1.90	1.72	1.57	1.45	1.23
26	0.19	0.34	0.93	1.46	1.98	2.48	3.22	3.93	4.63	5.33	6.23	7.34	6.32	5.17	4.33	3.70	3.21	2.81	2.50	2.24	2.01	1.83	1.67	1.53	1.31
28	0.20	0.37	1.00	1.58	2.15	2.69	3.48	4.26	5.02	5.77	6.75	7.98	7.06	5.78	4.84	4.14	3.59	3.15	2.79	2.50	2.25	2.04	1.87	1.72	1.46
30	0.22	0.40	1.08	1.71	2.31	2.90	3.75	4.59	5.41	6.21	7.27	8.58	7.83	6.41	5.37	4.59	3.98	3.49	3.10	2.77	2.50	2.27	2.07	1.90	1.62
32	0.23	0.43	1.16	1.83	2.48	3.11	4.02	4.92	5.80	6.60	7.76	9.18	8.65	7.06	5.92	5.05	4.38	3.84	3.41	3.05	2.75	2.50	2.28	2.10	0
35	0.25	0.48	1.28	2.01	2.73	3.42	4.44	5.42	6.39	7.34	8.58	10.1	9.85	8.06	6.77	5.78	5.01	4.40	3.90	3.49	3.15	2.86	2.61	2.40	0
40	0.29	0.54	1.47	2.33	3.16	3.95	5.13	6.27	7.38	8.50	9.92	11.7	12.1	9.85	8.28	7.06	6.12	5.37	4.77	4.27	3.84	3.49	0		
45	0.34	0.62	1.67	2.65	3.58	4.49	5.82	7.11	8.36	9.62	11.3	13.3	14.4	11.8	9.85	8.43	7.30	6.41	5.68	5.09	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.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	
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	
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	
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	
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		
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		
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		
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			
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	4.48	5.06	5.00	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	
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	
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	
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	
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		
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		
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		
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			
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 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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0					
Lubrication Type	A				B				C																

K.C.M.60(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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	
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	
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	
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	
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	
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	
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	
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		
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		
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		
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			
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			
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				
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	
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	
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	
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	
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	
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	
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		
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		
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		
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		
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		
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		
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			
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			
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			
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			
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			
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				
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				
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					
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					
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.

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	
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	
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	
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	
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		
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		
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		
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		
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			
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			
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			
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			
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				
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				
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					
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					
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						
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							
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	
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	
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	
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	
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	
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	
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		
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		
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		
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		
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		
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		
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			
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			
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			
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				
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				
40	6.37	14.5	27.2	50.7	72.9	94.7	116	136	157	176	196	216	235	254	271	222	186	159	133	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					
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.

Chain Power Transmission Table (kW)

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.

NL Chain Power Transmission Table (kW)

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								

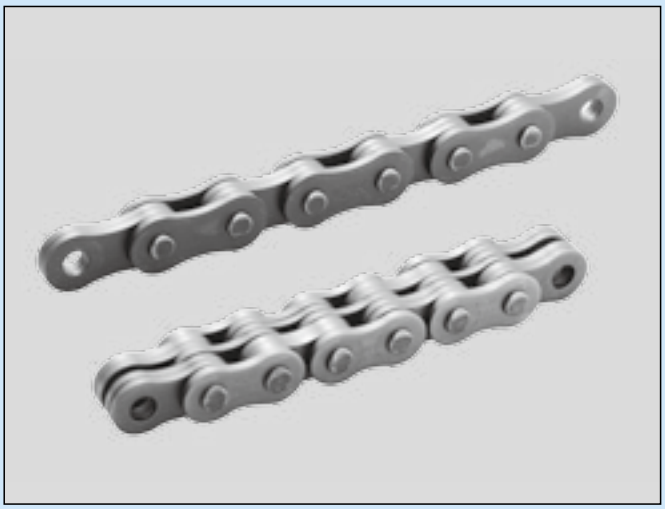
KCM 80NL Chain Power Transmission Table (Single Strand Transmission, kW)

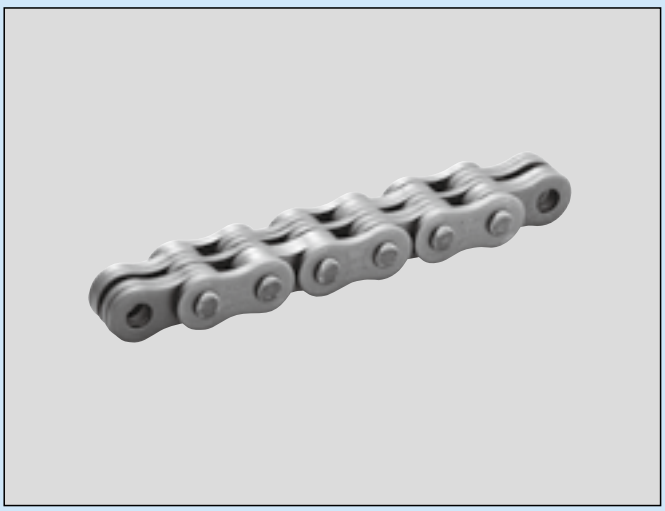
No. of Teeth / Small Spkt.	Revolutions Per Minute - Small Sprocket (r/min)										
	10	25	50	75	100	125	150	200	250	300	350
9	0.40	0.91	1.68	2.44	3.14	3.83	4.54	5.90	7.19	8.46	9.74
10	0.45	1.01	1.87	2.71	3.49	4.25	5.04	6.56	7.99	9.40	10.82
11	0.49	1.11	2.05	2.98	3.83	4.68	5.55	7.21	8.79	10.34	
12	0.54	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.

MEMO

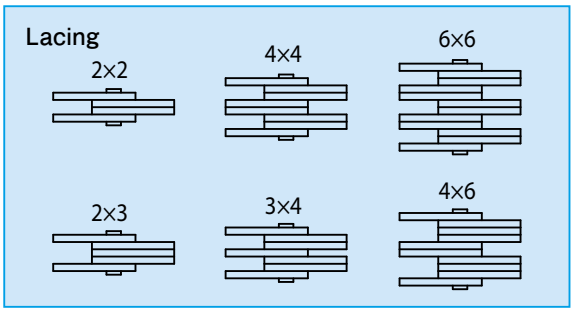
LEAF CHAINS





LEAF CHAINS

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

1.Determine the following items according to operating conditions,

- Chain speed
- Daily repetition of power applications
- Working load (attachment weight, inertia force, and impact force)

2.Determine chain type.

- BL type is recommended.
- Use roller chain if speed exceeds 30m/min or number of daily repetition exceeds 1000.

3.Determine chain size by the following equation.

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

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

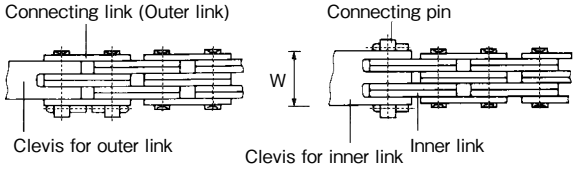
	Plate combination / No. repetition	Safety factor 2×2, 3×4, 2×3, 4×4	Safety factor 4×6, 6×6
BL type	1,000 times or less/day	8 or more	9 or more
AL type	10 times or less/day	8 or more	9 or more
	100 times or less/day	11 or more	12 or more

Notes to Selection

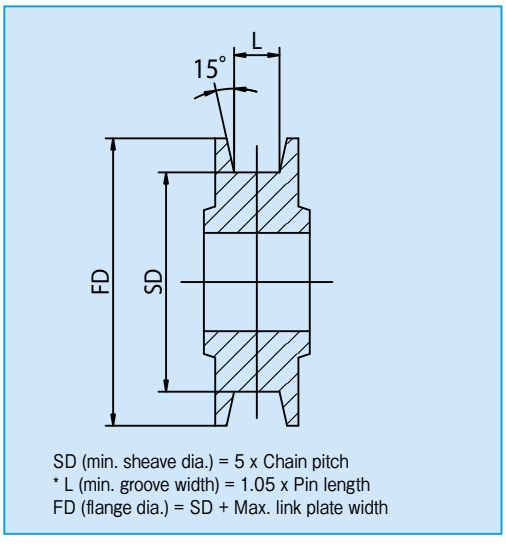
- Do not use a chain with low safety factor. Otherwise, pin will turn, resulting in dangerous chain failure.
- Perform periodic lubrication. Even when safety factor is satisfactory, insufficient lubrication will result in pin rotation.
- Safety factor of chain is defined by the related regulations, or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

Attaching of Chains and Clevises

1. When end is outer link or connecting link:
   Outer link connector and connecting link (standard) are used.
2. 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

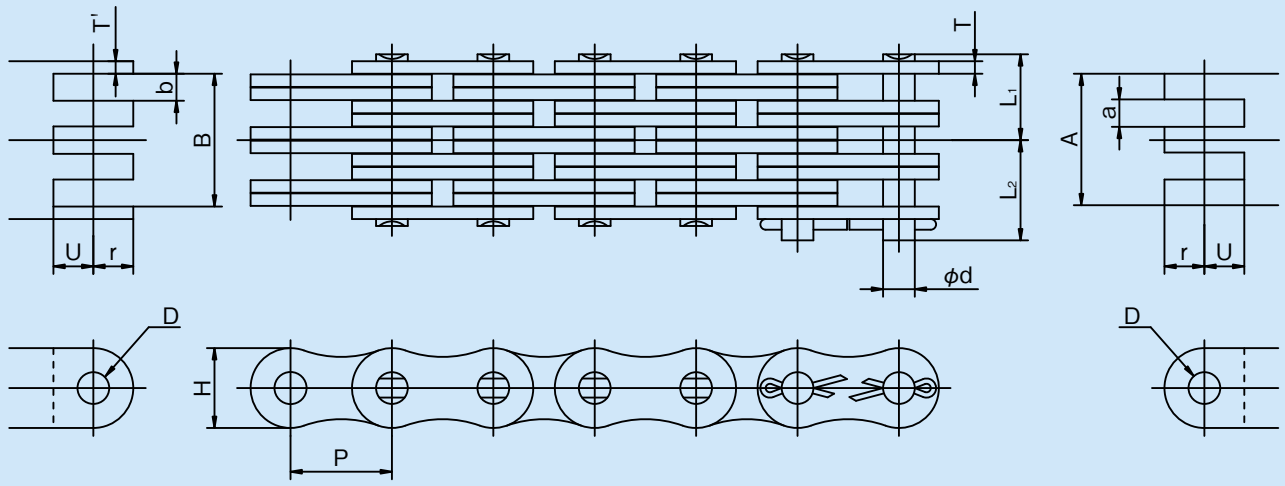
(*): Connecting pin cannot be engaged with sheave.

LEAF CHAINS (AL Series)

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



T' must be thicker than link plate.

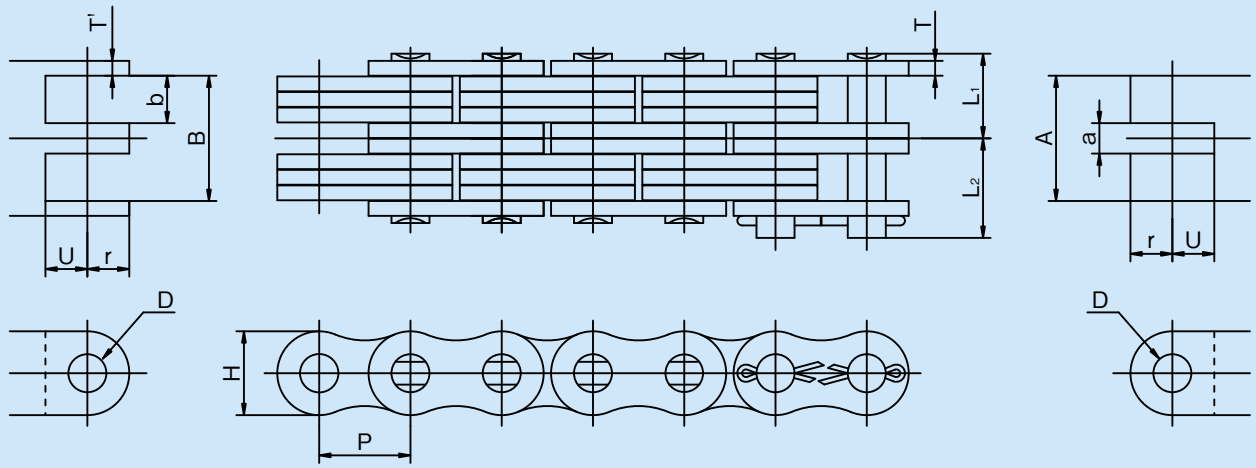
○ Dimensions [Unit: mm]

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		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	15.19	5.23
KCM AL666		6×6				16.13	18.83	114.7(11,700)	2.53				24.65		25.15	
KCM AL844	25.40	4×4	3.2	19.7	7.94	14.43	17.53	129.4(13,200)	2.92	7.96	12.70	11.43	19.80	7.00	20.40	7.00
KCM AL866		6×6				20.93	24.35	194.2(19,800)	4.35				33.20		33.80	
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	25.19	8.63
KCM AL1066		6×6				26.8	29.75	294.2(30,000)	6.94				41.05		41.75	
KCM AL1244	38.10	4×4	4.8	30.0	11.11	22.1	25.5	282.4(28,000)	6.70	11.14	19.05	17.14	29.30	10.30	30.10	10.30
KCM AL1266		6×6				31.9	35.3	423.6(43,200)	9.99				49.10		49.90	

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.

LEAF CHAINS (BL Series)

■ BL Series



T' must be thicker than link plate.

○ 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		2×3				6.22	8.18	23.50(2,400)	0.73				6.05	—	—	6.53
KCM BL434	12.7	3×4	2.0	11.7	5.09	8.27	10.23	35.30(3,600)	1.02	5.11	6.35	6.35	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		2×3				7.42	10.13	39.20(4,000)	1.13				7.20	—	—	7.76
KCM BL534	15.875	3×4	2.4	14.6	5.96	9.92	12.63	58.80(6,000)	1.56	5.98	7.92	7.92	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		2×3				9.55	12.65	63.70(6,500)	1.82				9.62	—	—	10.31
KCM BL634	19.05	3×4	3.2	17.5	7.94	12.80	15.90	95.60(9,750)	2.52	7.96	9.53	9.53	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		2×3				12.45	15.40	103.00(10,500)	2.97				11.90	—	—	12.73
KCM BL834	25.4	3×4	4.0	23.0	9.54	16.55	19.50	154.90(15,800)	4.11	9.56	12.70	12.70	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		2×3				14.75	18.15	141.20(14,400)	4.43				14.22	—	—	15.21
KCM BL1034	31.75	3×4	4.8	28.9	11.11	19.65	23.05	215.70(22,000)	6.17	11.14	15.88	15.88	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		2×3				17.25	21.25	186.30(19,000)	6.35				16.74	—	—	17.87
KCM BL1234	38.1	3×4	5.6	35.0	12.71	23.00	27.00	299.10(30,500)	8.71	12.74	19.05	19.05	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.