



ROLLER CHAIN

Mechanical
Electrical

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Selection

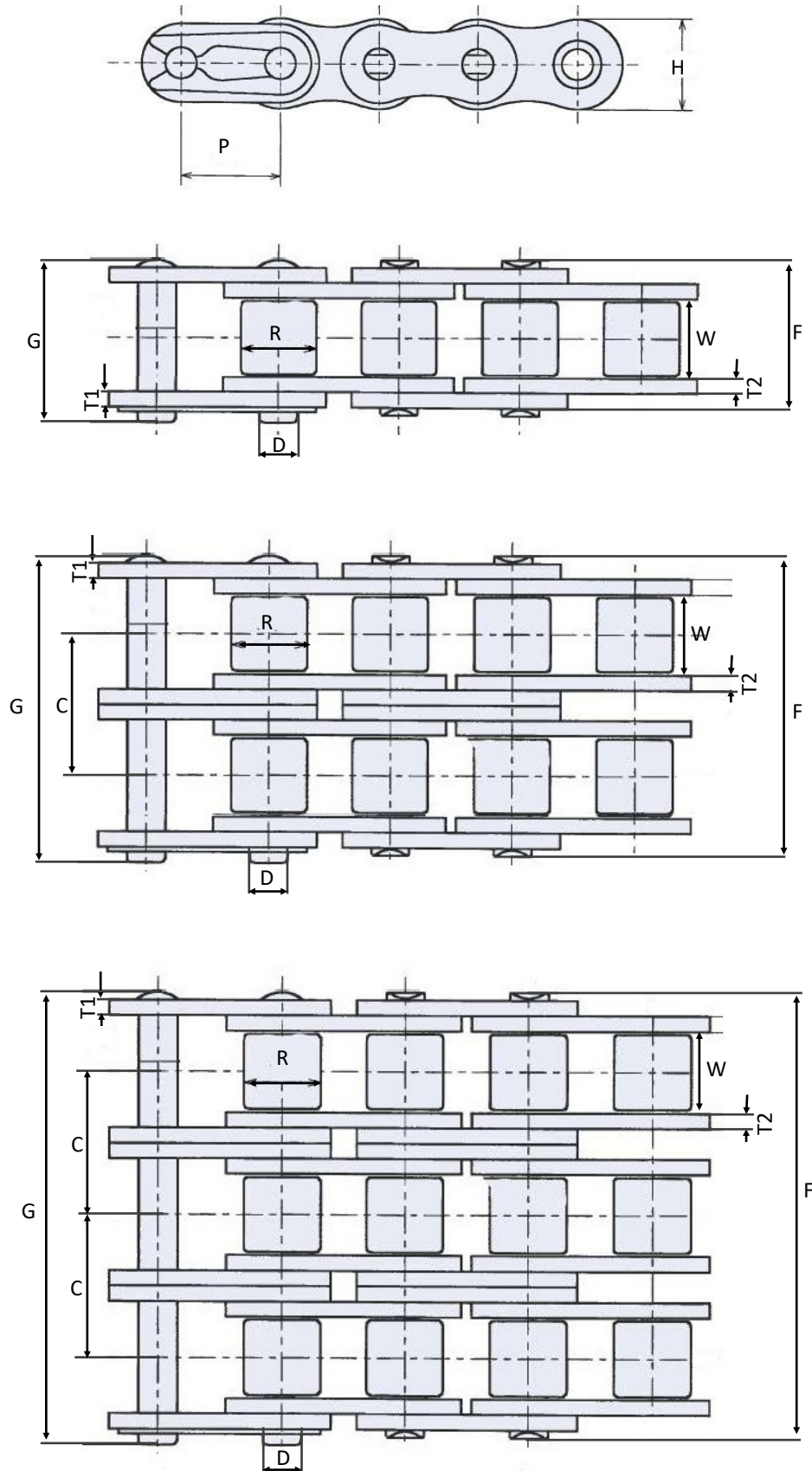
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SELECTION

Roller Chains ANSI Standard



The value for the dimensions will be found on the following page.

SELECTION

Roller Chains ANSI Standard

Chain number	Pitch		Chain width (min)	Roller Width (min)	Plate			Pin			Transverse Pitch	Ultimate minimum tensile Strength kN / (lbs)	Approximative Weight kg/m / (lb/ft)	Working Load kgs (lbs)
					Max Height	Thickness 1	Thickness 2	Max Diameter	Max Length					
	P po/in	P mm	W mm (po/in)	R mm (po/in)	H mm (po/in)	T1 mm (po/in)	T2 mm (po/in)	D mm (po/in)	F mm (po/in)	G mm (po/in)	C mm (po/in)			
25-1	1/4	6.35	2.99 (0.118)	2.99 (0.118)	5.99 (0.236)	20.32 (0.80)	20.32 (0.80)	2.00 (0.079)	8.99 (0.354)	10.99 (0.433)	—	3.50 (795)	0.14 (0.094)	63.6 (140)
25-2*	1/4	6.35	2.99 (0.118)	2.99 (0.118)	5.99 (0.236)	20.32 (0.80)	20.32 (0.80)	2.00 (0.079)	14.98 (0.59)	16.00 (0.63)	5.99 (0.236)	7.00 (1591)	0.26 (0.1747)	108.94 (240)
25-3*	1/4	6.35	2.99 (0.118)	2.99 (0.118)	5.99 (0.236)	20.32 (0.80)	20.32 (0.80)	2.00 (0.079)	21.00 (0.827)	21.00 (0.827)	5.99 (0.236)	10.5 (2386)	0.40 (0.2687)	142.26 (320)
35-1	3/8	9.52	3.98 (0.157)	5.00 (0.197)	8.99 (0.354)	0.99 (0.039)	0.99 (0.039)	2.99 (0.118)	13.00 (0.512)	13.97 (0.55)	—	7.90 (1795)	0.33 (0.2217)	217.88 (480)
35-2*	3/8	9.52	3.98 (0.157)	5.00 (0.197)	8.99 (0.354)	0.99 (0.039)	0.99 (0.039)	2.99 (0.118)	23.01 (0.906)	24.00 (0.945)	10.00 (0.394)	15.80 (3591)	0.69 (0.4636)	367.68 (810)
35-3*	3/8	9.52	3.99 (0.1574)	5.00 (0.197)	8.99 (0.354)	0.99 (0.039)	0.99 (0.039)	2.99 (0.118)	32.00 (1.26)	32.99 (1.299)	10.00 (0.394)	23.7 (5386)	1.05 (0.7056)	544.71 (1200)
41*	1/2	12.7	5.99 (0.236)	7.01 (0.276)	8.99 (0.354)	0.99 (0.039)	0.99 (0.039)	2.99 (0.118)	13.97 (0.55)	14.98 (0.59)	—	6.67 (1516)	0.41 (0.2755)	226.97 (500)
40-1	1/2	12.7	7.00 (0.2756)	7.01 (0.276)	11.98 (0.472)	9.98 (0.393)	9.98 (0.393)	2.99 (0.118)	17.01 (0.67)	18.00 (0.709)	—	14.10 (3205)	0.63 (0.4233)	367.68 (810)
40-2*	1/2	12.7	7.00 (0.2756)	7.01 (0.276)	11.98 (0.472)	9.98 (0.393)	9.98 (0.393)	2.99 (0.118)	30.98 (1.22)	34.03 (1.34)	13.97 (0.55)	28.20 (6409)	1.19 (0.7996)	624.88 (1370)
40-3*	1/2	12.7	7.00 (0.2756)	7.01 (0.276)	11.98 (0.472)	9.98 (0.393)	9.98 (0.393)	2.99 (0.118)	44.95 (1.77)	45.99 (1.811)	13.97 (0.55)	42.3 (9614)	1.77 (1.1893)	919.2 (2025)
50-1	5/8	15.87	8.99 (0.354)	9.99 (0.3937)	15.01 (0.591)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	21.00 (0.827)	21.99 (0.866)	—	22.20 (5045)	1.01 (0.6789)	635.49 (1400)
50-2*	5/8	15.87	8.99 (0.354)	9.99 (0.3937)	15.01 (0.591)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	38.98 (1.535)	42.01 (1.654)	18.00 (0.709)	44.40 (10091)	2.04 (1.3708)	1080.34 (2380)
50-3*	5/8	15.87	8.99 (0.354)	9.99 (0.3937)	15.01 (0.591)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	56.99 (2.244)	61.97 (2.44)	18.00 (0.709)	66.73 (14982)	3.05 (2.0495)	1588.73 (3500)
60-1	3/4	19.05	11.99 (0.4724)	10.99 (0.433)	18.00 (0.709)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	26.00 (1.024)	27.00 (1.063)	—	31.80 (7227)	1.44 (0.9676)	885.15 (1950)
60-2*	3/4	19.05	11.99 (0.4724)	10.99 (0.433)	18.00 (0.709)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	49.02 (1.93)	51.05 (2.01)	21.99 (0.866)	63.60 (14455)	3.03 (2.0360)	1504.76 (3315)
60-3*	3/4	19.05	11.99 (0.4724)	10.99 (0.433)	18.00 (0.709)	1.99 (0.0787)	1.99 (0.0787)	5.00 (0.197)	70.99 (2.795)	72.89 (2.87)	21.99 (0.866)	95.4 (21682)	4.50 (3.023)	2212.88 (4875)

*:This type of chain is available on demand only

SELECTION

Roller Chains ANSI Standard

Chain number	Pitch		Chain width (min)	Roller Width (min)	Plate			Pin			Transverse Pitch	Ultimate minimum tensile Strength kN / (lbs)	Approximate Weight kg/m / (lb/ft)	Working Load kgs (lbs)
					Max Height	Thickness 1	Thickness 2	Max Diameter	Max Length					
	P po/in	P mm			W mm (po/in)	R mm (po/in)	H mm (po/in)	T1 mm (po/in)	T2 mm (po/in)	D mm (po/in)				
80-1	1	25.40	15.75 (0.62)	15.88 (0.62)	24.13 (0.949)	3.25 (0.12)	3.25 (0.12)	7.94 (0.312)	33.5 (1.318)	35.0 (1.37)	—	56.70 (12886)	2.40 (1.6127)	1496.85 (3300)
80-2*	1	25.40	15.75 (0.62)	15.88 (0.62)	24.13 (0.949)	3.25 (0.12)	3.25 (0.12)	7.94 (0.312)	62.7 (2.46)	64.3 (2.53)	29.29 (1.15)	113.40 (25772)	5.26 (3.5345)	2544.65 (5610)
80-3*	1	25.40	15.75 (0.62)	15.88 (0.62)	24.10 (0.948)	3.25 (0.12)	3.25 (0.12)	7.92 (0.311)	91.7 (3.61)	93.6 (3.68)	29.29 (1.15)	170.1 (38659)	7.80 (5.2413)	3742.13 (8250)
100-1	1-1/4	31.75	18.90 (0.74)	19.05 (0.74)	30.17 (1.187)	4.0 (0.15)	4.0 (0.15)	9.54 (0.375)	41.1 (1.61)	44.70 (1.75)	—	88.50 (20114)	3.74 (2.5131)	2295.17 (5060)
100-2*	1-1/4	31.75	18.90 (0.74)	19.05 (0.74)	30.17 (1.187)	4.0 (0.15)	4.0 (0.15)	9.54 (0.375)	77.0 (3.03)	80.5 (3.16)	35.76 (1.40)	177.00 (40227)	7.51 (5.0464)	3900.89 (8600)
100-3*	1-1/4	31.75	18.90 (0.74)	19.05 (0.74)	30.10 (1.185)	4.0 (0.15)	4.0 (0.15)	9.53 (0.375)	112.2 (4.41)	116.3 (4.57)	35.76 (1.40)	265.5 (60341)	11.20 (7.5260)	5737.94 (12650)
120-1	1-1/2	38.10	25.22 (0.99)	22.23 (0.87)	36.20 (1.42)	4.80 (0.18)	4.80 (0.18)	11.11 (0.437)	50.8 (1.99)	54.30 (2.13)	—	127.00 (28864)	6.18 (4.1527)	3084.42 (6800)
120-2*	1-1/2	38.10	25.22 (0.99)	22.23 (0.87)	36.20 (1.42)	4.80 (0.18)	4.80 (0.18)	11.11 (0.437)	96.3 (3.79)	99.7 (3.92)	45.44 (1.78)	254.00 (57727)	12.25 (8.2316)	5243.52 (11560)
120-3*	1-1/2	38.10	25.22 (0.99)	22.23 (0.87)	36.10 (1.42)	4.80 (0.18)	4.80 (0.18)	11.10 (0.437)	141.4 (5.56)	145.2 (5.71)	45.44 (1.78)	381.0 (86591)	18.30 (12.2970)	7711.07 (17000)
140-1	1-3/4	44.45	25.22 (0.99)	25.40 (0.99)	42.23 (1.66)	5.60 (0.22)	5.60 (0.22)	12.71 (0.50)	54.9 (2.16)	59.0 (2.32)	—	172.40 (39182)	7.49 (5.0330)	4082.33 (9000)
140-2*	1-3/4	44.45	25.22 (0.99)	25.40 (0.99)	42.23 (1.66)	5.60 (0.22)	5.60 (0.22)	12.71 (0.50)	103.6 (4.07)	110.9 (4.36)	48.87 (1.92)	344.80 (78364)	14.83 (9.9652)	6939.96 (15300)
140-3*	1-3/4	44.45	25.22 (0.99)	25.40 (0.99)	41.00 (1.61)	5.60 (0.22)	5.60 (0.22)	12.70 (0.49)	152.2 (5.99)	156.8 (6.17)	48.87 (1.92)	517.2 (117545)	22.20 (14.9177)	10205.83 (22500)
160-1	2	50.80	31.55 (1.24)	28.58 (1.125)	48.26 (1.89)	6.40 (0.25)	6.40 (0.25)	14.29 (0.56)	65.5 (2.57)	69.60 (2.74)	—	226.80 (51545)	10.10 (6.7868)	5397.74 (11900)
160-2*	2	50.80	31.55 (1.24)	28.58 (1.125)	48.26 (1.89)	6.40 (0.25)	6.40 (0.25)	14.29 (0.56)	124.2 (4.88)	128.1 (5.04)	58.55 (2.30)	453.60 (103091)	20.04 (13.4662)	9176.17 (20230)
160-3*	2	50.80	31.55 (1.24)	28.58 (1.125)	48.00 (1.88)	6.40 (0.25)	6.40 (0.25)	14.29 (0.56)	181.8 (7.15)	186.6 (7.34)	58.55 (2.30)	680.41 (154636)	30.20 (20.2934)	13494.37 (29750)

*: This type of chain is available on demand only

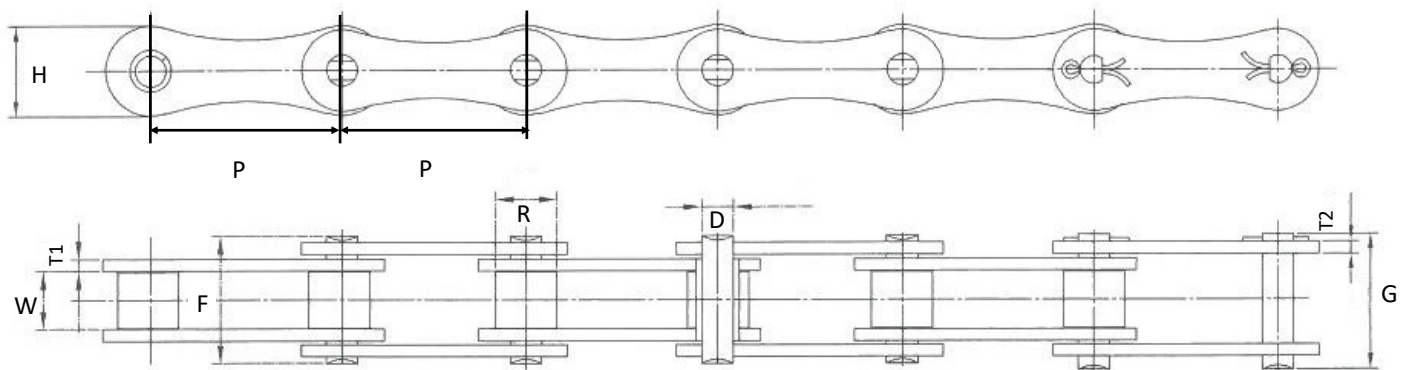
SELECTION

Type A Roller Chain - Double Pitch ANSI standard

Chain number	Pitch		Chain width (min)	Roller Width (min)	Plate			Pin			Transverse Pitch	Ultimate minimum tensile Strength kN / (lbs)	Approximate Weight kg/m / (lb/ft)	Working Load kgs (lbs)
	P	P			Max Height	Thickness 1	Thickness 2	Max Diameter	Max Length					
	po/in	mm	H	T1					T2	D	F	G	C	
A2040*	1"	25.40	7.85 (0.30)	7.95 (0.31)	12.07 (0.47)	1.5 (0.05)	1.5 (0.05)	3.98 (0.15)	17.8 (0.67)	18.8 (0.74)	—	14.1 (3172)	0.42 (0.282)	269.88 (595)
A2050*	1-1/4"	31.75	9.40 (0.37)	10.16 (0.39)	15.09 (0.59)	2 (0.07)	2 (0.07)	5.09 (0.20)	21.8 (0.85)	22.6 (0.88)	—	22.2 (4994)	0.73 (0.491)	439.98 (970)
A2060*	1-1/2"	38.10	12.57 (0.49)	11.91 (0.46)	18.10 (0.71)	2.42 (0.09)	2.42 (0.09)	5.96 (0.23)	26.9 (1.05)	27.7 (1.09)	—	31.8 (7154)	1.02 (0.685)	997.90 (2200)
A2080*	2"	50.80	15.75 (0.62)	15.88 (0.62)	24.13 (0.94)	3.25 (0.12)	3.25 (0.12)	7.94 (0.31)	33.5 (1.31)	35.0 (1.37)	—	56.7 (12755)	1.70 (1.142)	N/A
A2080H**	2"	50.80	15.75 (0.62)	15.88 (0.62)	24.13 (0.94)	4.0 (0.15)	4.0 (0.15)	7.92 (0.31)	36.2 (1.42)	39.4 (1.55)	—	59.7 (13430)	2.17 (1.458)	1088.62 (2400)
A2100**	2-1/2"	63.50	18.90 (0.74)	19.05 (0.74)	30.17 (1.187)	4.0 (0.15)	4.0 (0.15)	9.54 (0.37)	41.1 (1.61)	44.7 (1.75)	—	88.5 (19909)	2.55 (1.714)	1741.79 (3840)
A2120**	3"	76.20	25.22 (0.99)	22.23 (0.87)	36.20 (1.42)	4.80 (0.18)	4.80 (0.18)	11.11 (0.43)	50.8 (1.99)	54.3 (2.13)	—	127.0 (28570)	4.06 (2.728)	2440.32 (5380)

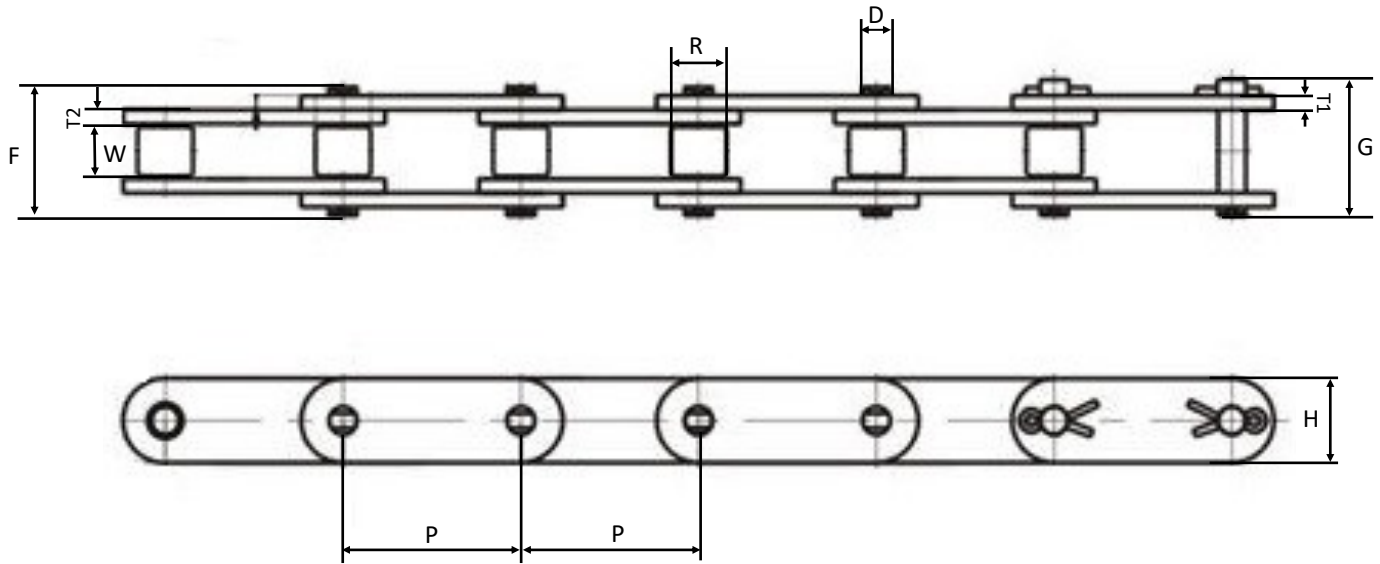
*: This type of chain is available on demand only

** : To develop with the supplier



SELECTION

Type C Roller Chain - Double Pitch ANSI standard and H type



The value for the dimensions will be found on the following page.

SELECTION

Type C Roller Chain - Double Pitch ANSI standard and H type

Chain number	Pitch		Chain width (min)	Roller Width (max)	Plate			Pin			Ultimate minimum tensile Strength kN / (lbs)	Approximate Weight kg / m / (lb / ft)	Working Load Kgs (lbs)
					Max Height	Thickness 1	Thickness 2	Max Diameter	Max Length				
	P po/in	P mm	W mm (po/in)	R mm (po/in)	H mm (po/in)	T1 mm (po/in)	T2 mm (po/in)	D mm (po/in)	F mm (po/in)	G mm (po/in)			
C2040*	1"	25.40	7.85 (0.30)	7.95 (0.31)	12.07 (0.47)	1.5 (0.05)	1.5 (0.05)	3.98 (0.156)	17.8 (0.70)	18.8 (0.74)	14.1 (3172)	0.50 (0.336)	269.88 (595)
C2040H**	1"	25.40	7.85 (0.30)	7.95 (0.31)	12.07 (0.47)	2.0 (0.07)	2.0 (0.07)	3.96 (0.155)	18.8 (0.74)	19.9 (0.78)	14.1 (3172)	0.65 (0.437)	N/A
C2042**	1"	25.40	7.85 (0.30)	15.88 (0.62)	12.07 (0.47)	1.5 (0.05)	1.5 (0.05)	3.98 (0.156)	17.8 (0.70)	18.8 (0.74)	14.1 (3172)	0.84 (0.565)	269.88 (595)
C2050*	1-1/4"	31.75	9.40 (0.37)	10.16 (0.39)	15.09 (0.59)	2.0 (0.07)	2.0 (0.07)	5.09 (0.20)	21.8 (0.85)	22.6 (0.88)	22.2 (4994)	0.78 (0.524)	439.98 (970)
C2052**	1-1/4"	31.75	9.40 (0.37)	19.05 (0.74)	15.09 (0.59)	2.0 (0.07)	2.0 (0.07)	5.09 (0.20)	21.8 (0.85)	22.6 (0.88)	22.2 (4994)	1.27 (0.8534)	439.98 (970)
C2060*	1-1/2"	38.10	12.57 (0.49)	11.91 (0.46)	18.10 (0.71)	2.42 (0.09)	2.42 (0.09)	5.94 (0.23)	25.9 (1.01)	27.7 (1.09)	31.8 (7154)	1.12 (0.753)	N/A
C2060H*	1-1/2"	38.10	12.57 (0.49)	10.91 (0.42)	18.10 (0.71)	3.25 (0.127)	3.25 (0.127)	5.94 (0.23)	29.2 (1.14)	31.6 (1.24)	31.8 (7154)	1.44 (0.968)	639.56 (1410)
C2062*	1-1/2"	38.10	12.57 (0.49)	22.23 (0.87)	18.10 (0.71)	2.42 (0.09)	2.42 (0.09)	5.94 (0.23)	25.9 (1.01)	27.7 (1.09)	31.8 (7154)	1.61 (1.082)	N/A
C2062H**	1-1/2"	38.10	12.57 (0.49)	22.23 (0.87)	18.10 (0.71)	3.25 (0.127)	3.25 (0.127)	5.94 (0.23)	29.2 (1.14)	31.6 (1.24)	31.8 (7154)	2.07 (1.391)	639.56 (1410)
C2080*	2"	50.80	15.75 (0.62)	15.88 (0.625)	24.13 (0.94)	3.25 (0.127)	3.25 (0.127)	7.94 (0.312)	33.5 (1.31)	35.0 (1.37)	56.7 (12755)	2.08 (1.398)	N/A
C2080H*	2"	50.80	15.75 (0.620)	15.88 (0.625)	24.13 (0.94)	4.0 (0.157)	4.0 (0.157)	7.92 (0.311)	36.2 (1.42)	39.4 (1.55)	56.7 (12755)	2.54 (1.707)	1632.93 (3600)
C2082*	2"	50.80	15.75 (0.62)	28.58 (1.12)	24.13 (0.94)	3.25 (0.127)	3.25 (0.127)	7.94 (0.312)	33.5 (1.31)	35.0 (1.37)	56.7 (12755)	3.12 (2.097)	1088.62 (2400)
C2082H**	2"	50.80	15.75 (0.62)	28.58 (1.12)	24.13 (0.94)	4.0 (0.157)	4.0 (0.157)	7.92 (0.311)	36.2 (1.42)	39.4 (1.55)	56.7 (12755)	3.58 (2.406)	1088.62 (2400)
C2100*	2-1/2"	63.50	18.90 (0.74)	19.05 (0.74)	30.17 (1.18)	4.0 (0.157)	4.0 (0.157)	9.54 (0.375)	41.1 (1.61)	44.7 (1.759)	88.5 (19909)	3.01 (2.023)	N/A
C2100H*	2-1/2"	63.50	18.90 (0.74)	19.05 (0.74)	30.17 (1.18)	4.8 (0.18)	4.8 (0.18)	9.54 (0.375)	44.5 (1.751)	50.6 (1.992)	88.5 (19909)	3.50 (2.352)	1741.79 (3840)
C2010H**	2-1/2"	63.50	18.90 (0.74)	19.05 (0.74)	30.17 (1.18)	4.80 (0.18)	4.8 (0.18)	9.53 (0.375)	43.6 (1.72)	46.9 (1.85)	88.5 (19909)	3.56 (2.392)	N/A
C2012**	2-1/2"	63.50	18.90 (0.74)	39.67 (1.561)	30.17 (1.18)	4.0 (0.157)	4.0 (0.157)	9.54 (0.375)	41.1 (1.61)	44.7 (1.759)	88.5 (19909)	4.83 (3.246)	N/A
C2012H**	2-1/2"	63.50	18.90 (0.74)	39.67 (1.561)	30.17 (1.18)	4.80 (0.18)	4.80 (0.18)	9.53 (0.375)	43.6 (1.716)	46.9 (1.84)	88.5 (19909)	5.38 (3.615)	N/A
C2120*	3"	76.20	25.22 (0.99)	22.23 (0.87)	36.2 (1.42)	4.80 (0.18)	4.80 (0.18)	11.11 (0.437)	50.8 (1.99)	54.3 (2.13)	127.0 (28570)	4.66 (3.131)	N/A
C2120H**	3"	76.20	25.22 (0.99)	22.23 (0.87)	36.2 (1.42)	5.60 (0.22)	5.60 (0.22)	11.10 (0.437)	53.5 (2.10)	57.5 (2.26)	127.0 (28570)	5.26 (3.535)	2440.32 (5380)
C2122**	3"	76.20	25.22 (0.99)	44.42 (1.748)	36.2 (1.42)	4.80 (0.18)	4.80 (0.18)	11.11 (0.437)	50.8 (1.99)	54.3 (2.13)	127.0 (28570)	7.66 (5.147)	N/A
C2122H**	3"	76.20	25.22 (0.99)	44.45 (1.749)	36.2 (1.42)	5.60 (0.22)	5.60 (0.22)	11.10 (0.437)	53.5 (2.10)	57.5 (2.26)	127.0 (28570)	8.26 (5.551)	2440.32 (5380)
C2160*	4"	101.60	31.75 (1.24)	28.58 (1.125)	48.26 (1.89)	6.40 (0.25)	6.40 (0.25)	14.29 (0.562)	65.5 (2.57)	69.6 (2.74)	226.8 (51021)	8.15 (5.477)	N/A
C2160H**	4"	101.60	31.75 (1.24)	28.58 (1.125)	48.26 (1.89)	7.20 (0.28)	7.20 (0.28)	14.27 (0.562)	68.2 (2.68)	73.0 (2.87)	226.8 (51021)	9.06 (6.088)	4168.51 (9190)
C2162**	4"	101.60	31.75 (1.24)	57.15 (2.24)	48.26 (1.89)	6.40 (0.25)	6.40 (0.25)	14.29 (0.562)	65.5 (2.57)	69.6 (2.74)	226.8 (51021)	13.00 (8.736)	N/A
C2162H**	4"	101.60	31.75 (1.24)	57.15 (2.24)	48.26 (1.89)	7.20 (0.28)	7.20 (0.28)	14.27 (0.562)	68.2 (2.68)	73.0 (2.87)	226.8 (51021)	13.84 (9.300)	4168.51 (9190)

*: This type of chain is available on demand only

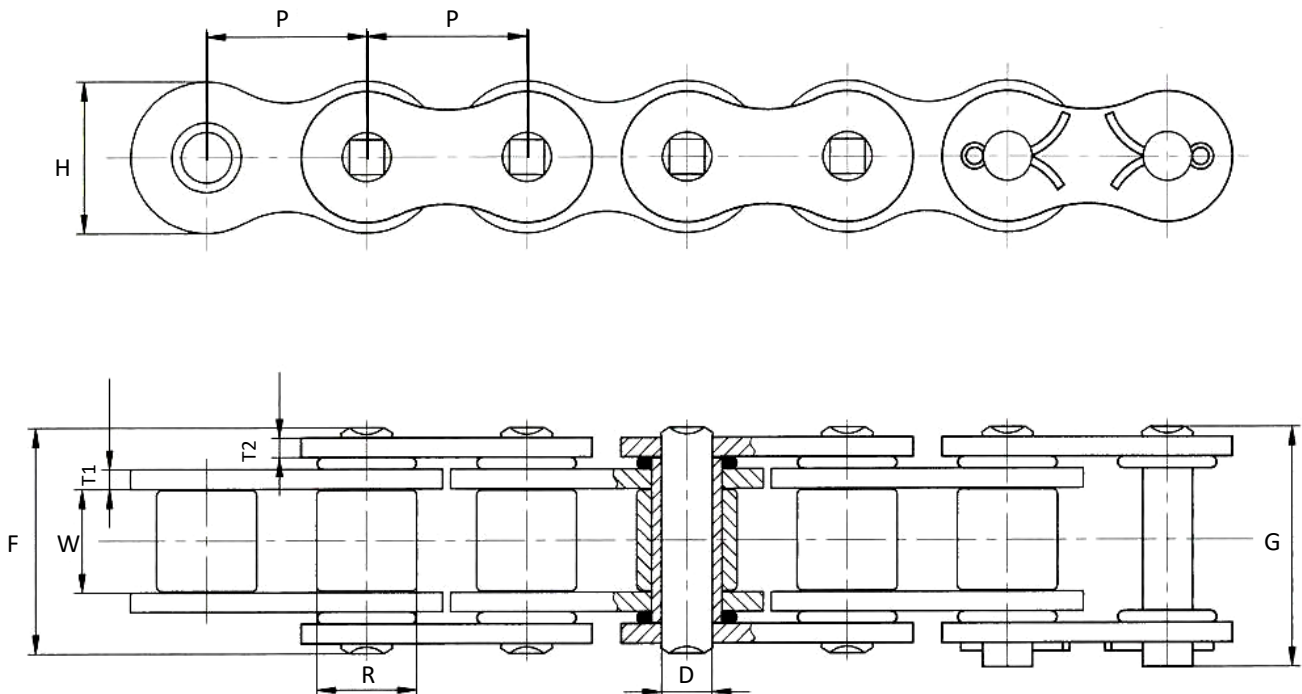
** : To develop with the supplier

SELECTION

O-ring type Roller Chain

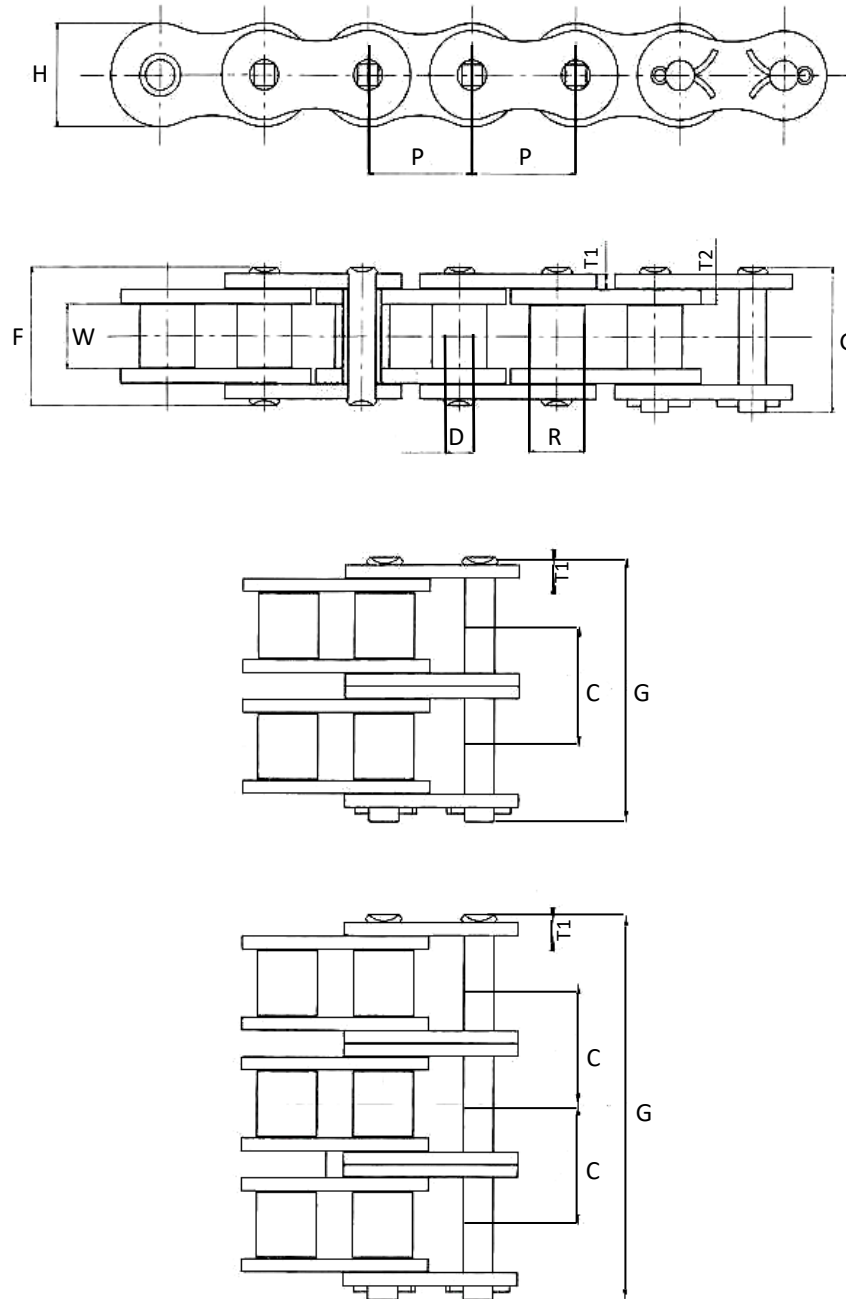
Chain number	Pitch		Chain width (min) W mm (po/in)	Roller Width (max) R mm (po/in)	Plate			Pin			Ultimate minimum tensile Strength kN / (lbs)	Approximate Weight kg/m / (lb/ft)	Working Load kgs (lbs)
	P po/in	P mm			Max Height H mm (po/in)	Thickness 1 T1 mm (po/in)	Thickness 2 T2 mm (po/in)	Max Diameter D mm (po/in)	Max Length				
			F mm (po/in)	G mm (po/in)									
40 (O-RING CHAIN)*	1/2"	12.700	7.85 (0.30)	7.95 (0.31)	12.00 (0.47)	1.50 (0.05)	1.50 (0.05)	3.96 (0.15)	18.3 (0.72)	19.6 (0.77)	14.1 (3172)	0.67 (0.450)	N/A
50 (O-RING CHAIN)*	5/8"	15.875	9.40 (0.37)	10.16 (0.39)	15.09 (0.59)	2.00 (0.078)	2.00 (0.078)	5.08 (0.19)	23.1 (0.90)	24.8 (0.97)	22.2 (4994)	1.19 (0.799)	N/A
60 (O-RING CHAIN)*	3/4"	19.050	12.57 (0.49)	11.91 (0.46)	18.00 (0.70)	2.42 (0.09)	2.42 (0.09)	5.94 (0.23)	28.5 (1.12)	30.4 (1.19)	31.8 (7154)	1.62 (1.089)	N/A
80 (O-RING CHAIN)*	1"	25.400	15.75 (0.62)	15.88 (0.62)	24.00 (0.94)	3.25 (0.12)	3.25 (0.12)	7.95 (0.31)	35.6 (1.40)	37.3 (1.46)	56.7 (12755)	2.70 (1.814)	N/A
100 (O-RING CHAIN)*	1-1/4"	31.750	18.95 (0.74)	19.05 (0.74)	30.00 (1.18)	4.00 (0.15)	4.00 (0.15)	9.53 (0.37)	43.3 (1.70)	47.0 (1.85)	88.5 (19909)	3.94 (2.648)	N/A
120 (O-RING CHAIN)*	1-1/2"	38.100	25.22 (0.99)	22.23 (0.87)	35.70 (1.40)	4.80 (0.18)	4.80 (0.18)	11.11 (0.43)	54.0 (2.12)	57.5 (2.26)	127.0 (28570)	6.34 (4.260)	N/A

*: This type of chain is available on demand only



SELECTION

Type HD Roller Chain - ANSI standard



The value for the dimensions will be found on the following page.

SELECTION

Type HD Roller Chain - ANSI standard

Chain number	Pitch		Chain width (min)	Roller Width (max)	Plate			Pin			Transverse Pitch	Ultimate minimum tensile Strength kN / (lbs)	Approximate Weight kg/m / (lb/ft)	Working Load kgs (lbs)
					Max Height	Thickness 1	Thickness 2	Max Diameter	Max Length					
	P po/in	P mm			W mm (po/in)	R mm (po/in)	H mm (po/in)	T1 mm (po/in)	T2 mm (po/in)	D mm (po/in)				
60HD-1	3/4"	19.05	12.57 (0.49)	11.91 (0.46)	18.00 (0.70)	3.25 (0.127)	3.25 (0.127)	5.94 (0.23)	29.2 (1.14)	31.0 (1.22)	—	48.1 (10821)	1.87 (1.257)	N/A
60HD-2*	3/4"	19.05	12.57 (0.49)	11.91 (0.46)	18.00 (0.70)	3.25 (0.127)	3.25 (0.127)	5.94 (0.23)	55.3 (2.17)	57.1 (2.24)	26.11 (1.02)	96.1 (21619)	3.71 (2.493)	N/A
60HD-3*	3/4"	19.05	12.57 (0.49)	11.91 (0.46)	18.00 (0.70)	3.25 (0.127)	3.25 (0.127)	5.94 (0.23)	81.4 (3.20)	83.2 (3.27)	26.11 (1.02)	144.0 (32394)	5.54 (3.723)	N/A
80HD-1	1"	25.40	15.75 (0.62)	15.88 (0.62)	24.00 (0.94)	4.00 (0.157)	4.00 (0.157)	7.92 (0.31)	36.2 (1.42)	37.7 (1.48)	—	81.5 (18334)	3.11 (2.090)	N/A
80HD-2*	1"	25.40	15.75 (0.62)	15.88 (0.62)	24.00 (0.94)	4.00 (0.157)	4.00 (0.157)	7.92 (0.31)	68.8 (2.70)	70.3 (2.76)	32.59 (1.28)	163.0 (36669)	6.18 (4.153)	N/A
80HD-3*	1"	25.40	15.75 (0.62)	15.88 (0.62)	24.00 (0.94)	4.00 (0.157)	4.00 (0.157)	7.92 (0.31)	101.4 (3.98)	102.9 (4.05)	32.59 (1.28)	244.0 (54890)	9.42 (6.330)	N/A
100HD-1	1-1/4"	31.75	18.90 (0.74)	19.05 (0.75)	30.00 (1.18)	4.80 (0.188)	4.80 (0.188)	9.53 (0.37)	43.6 (1.71)	46.9 (1.84)	—	124.0 (27895)	4.53 (3.044)	N/A
100HD-2*	1-1/4"	31.75	18.90 (0.74)	19.05 (0.75)	30.00 (1.18)	4.80 (0.188)	4.80 (0.188)	9.53 (0.37)	82.7 (3.25)	86.0 (3.38)	39.09 (1.53)	247.0 (55565)	9.03 (6.068)	N/A
100HD-3*	1-1/4"	31.75	18.90 (0.74)	19.05 (0.75)	30.00 (1.18)	4.80 (0.188)	4.80 (0.188)	9.53 (0.37)	121.8 (4.79)	125.1 (4.92)	39.09 (1.53)	371.0 (83461)	13.02 (8.749)	N/A
120HD-1	1-1/2"	38.10	25.22 (0.99)	22.23 (0.87)	35.70 (1.40)	5.60 (0.22)	5.60 (0.22)	11.10 (0.43)	53.5 (2.10)	57.5 (2.26)	—	167.0 (37568)	6.60 (4.435)	N/A
120HD-2*	1-1/2"	38.10	25.22 (0.99)	22.23 (0.87)	35.70 (1.40)	5.60 (0.22)	5.60 (0.22)	11.10 (0.43)	102.4 (4.03)	106.4 (4.18)	48.87 (1.92)	333.0 (74912)	13.13 (8.823)	N/A
120HD-3*	1-1/2"	38.10	25.22 (0.99)	22.23 (0.87)	35.70 (1.40)	5.60 (0.22)	5.60 (0.22)	11.10 (0.43)	151.2 (5.95)	155.2 (6.11)	48.87 (1.92)	500.0 (112481)	19.64 (13.198)	N/A
140HD-1	1-3/4"	44.45	25.22 (0.99)	25.40 (0.99)	41.00 (1.61)	6.40 (0.25)	6.40 (0.25)	12.70 (0.5)	57.6 (2.26)	62.2 (2.44)	—	218.0 (49041)	8.30 (5.577)	N/A
140HD-2*	1-3/4"	44.45	25.22 (0.99)	25.40 (0.99)	41.00 (1.61)	6.40 (0.25)	6.40 (0.25)	12.70 (0.5)	109.8 (4.32)	114.1 (4.49)	52.20 (2.05)	435.0 (97858)	16.60 (11.155)	N/A
140HD-3*	1-3/4"	44.45	25.55 (1.00)	25.40 (0.99)	41.00 (1.61)	6.40 (0.25)	6.40 (0.25)	12.70 (0.5)	162.0 (6.37)	166.6 (6.55)	52.20 (2.05)	653.0 (146900)	24.90 (16.732)	N/A
160HD-1	2"	50.80	31.55 (1.24)	28.58 (1.12)	47.80 (1.88)	7.20 (0.28)	7.20 (0.28)	14.27 (0.56)	68.2 (2.68)	73.0 (2.87)	—	279.0 (32764)	10.50 (7.056)	N/A
160HD-2*	2"	50.80	31.55 (1.24)	28.58 (1.12)	47.80 (1.88)	7.20 (0.28)	7.20 (0.28)	14.27 (0.56)	130.1 (5.12)	134.9 (5.31)	61.90 (2.43)	555.0 (124853)	20.20 (13.574)	N/A
160HD-3*	2"	50.80	31.55 (1.24)	28.58 (1.12)	47.80 (1.88)	7.20 (0.28)	7.20 (0.28)	14.27 (0.56)	192.0 (7.55)	196.8 (7.74)	61.90 (2.43)	833.0 (187393)	30.20 (20.294)	N/A

*: This type of chain is available on demand only

MAINTENANCE

Verification of the roller chain

In general, life of a roller chain is said to be reached when parts are damaged or when wear elongation prevent the chain to engage properly in the gear. When this happens, replace the chain.

If roller selection and operating conditions are suitable, a rather long life with no unexpected trouble, can be expected. However, to prevent damages or premature wear, the chain and sprocket must be inspected and the following points verified to detect.

1. A strange noise
2. An excessive chain vibration
3. A chain that run up the sprocket
4. A chain jammed onto the sprocket
5. Deformations or stiff areas on the chain
6. Adequate lubricating system and quality of oil
7. No contact between the chain and the case
8. The appearance of the chain. Check for external cleanliness, corrosive and lubrication conditions; also, look for scratches or other damage to the plate side and edge surfaces, pin edges, and roller surface.
9. Damages on the sprocket teeth surfaces and teeth side surfaces and the mating zones.
10. The wear elongation of the chain
11. The articulation of the chain and the rotation of rollers

Points of verification

Lubrication

During operation, check if the chain or rotating disc is immersed in lubricating oil. Also, check if there is lubricant at the clearance between the outer plater and inner plate. When the chain is stationary, check for dirt or abrasive particles as a result of improper lubrication. When the chain is removed, the connecting link pin and the edge of the inside of the bushing should be checked. Any damages or a red or reddish-brown colour is an indication of an improper lubrication. For the chain lubrication, see ASME.B29.1-2011 standard.

Link plate

If repeated loads over the maximum allowable load are put on the chain, fatigue breakage may happen on the link plate. It is difficult to notice initial cracking from fatigue breakage before they generate a breakage. Usually, a crack develops at the edge of a hole or at the side of the link plate (Fig. 1 and 2). The presence of cracks should be checked carefully to prevent accidents.



Fig. 1 Positions where cracks are likely to develop

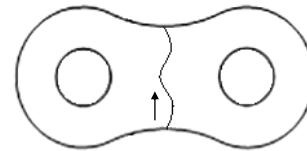


Fig. 2 Example of a crack

Roller

As with the link plate, if rollers are also subjected to loads exceeding the maximum allowable load, the repeated impact load between the chain and the sprockets may cause fatigue breakage. The roller should be checked in the same way as the link plate. If foreign bodies interfere with the engagement of the roller and sprocket, the roller may be damaged and a crack may develop. Chains damaged by fatigue breakage must be replaced.

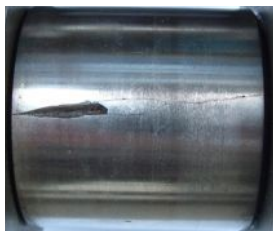


Fig. 3 - Crack on the roller

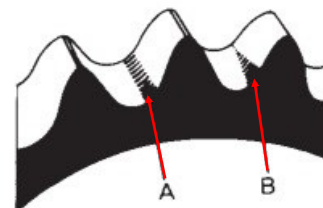


Fig. 4 Areas to check for wear on the sprocket

Sprocket

Chain and sprocket engagement can be checked by observing the roller and teeth surface. Proper engagement happens when the contact area is uniform with point A in Fig. 4. If the contact area is lopsided or the sides of the teeth are wearing away (B), this may have been caused by an improper installation of the sprocket or twisting of the roller chain.

The normal point of engagement is slightly up from the tooth bottom. If tension remains on the slack side, the roller will slightly touch the tooth bottom. When idlers or tensioners are used, the contact area will be the centre of the tooth bottom.

MAINTENANCE

Verification of the roller chain

Points of verification

Chain Elongation

Chain elongation is caused not by deformation of the link plate, but by wear on the pin and bushing. Therefore, the remaining chain life can be estimated by measuring the chain elongation.

Measuring chain elongation

1. Stretch the chain slightly to get rid of any slack
2. Measure the distance inside (L_1) and outside (L_2) of the rollers at both ends of the measured links using a caliper to get measurement (L).
3. Use the following equation to find the chain elongation:

$$\text{Chain elongation (\%)} = \frac{\text{Measured length} - \text{Standard length}}{\text{Standard length}} \times 100$$

$$\text{Standard length} = \text{Chain pitch} \times \text{number of links}$$

4. Compare the obtained value to the table below.

N.B. When measuring, use at least 6 to 10 links to help keep any measuring error down to a minimum. A measuring tape may be used, if Vernier caliper is not available. However, measurements need to be taken over as many links as possible, to reduce measuring error.

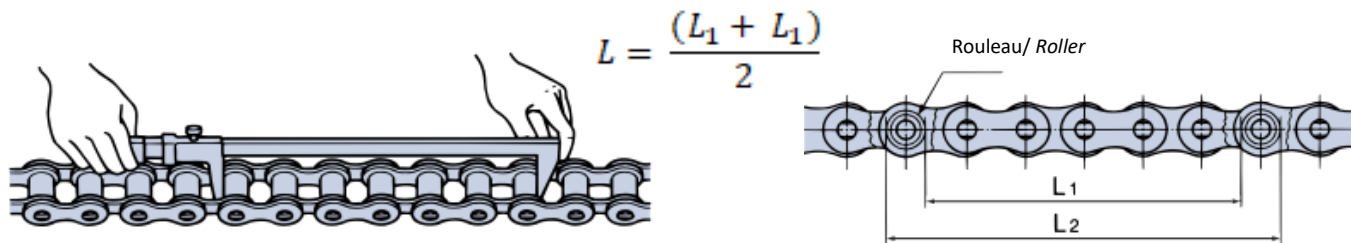


Fig. 5 Measurement of the elongation

Standard length and 1.5% elongation [mm (in)] ¹							
# link	Length	25	35	41	40	50	60
6	Standard	38.10 (1.5)	57.15 (2.25)	76.20 (3.00)	76.20 (3.00)	95.25 (3.75)	114.30 (4.50)
	1.5% elongation	38.67 (1.52)	58.01 (2.28)	77.34 (3.05)	77.34 (3.05)	96.68 (3.81)	116.01 (4.57)
10	Standard	63.50 (2.50)	95.25 (3.75)	127.00 (5.00)	127.00 (5.00)	158.75 (6.25)	190.50 (7.50)
	1.5% elongation	64.45 (2.54)	96.68 (3.81)	128.91 (5.08)	128.91 (5.08)	161.13 (6.34)	193.36 (7.62)
#link	Length	80	100	120	140	160	
6	Standard	152.40 (6.00)	190.50 (7.50)	228.60 (9.00)	266.70 (10.50)	304.80 (12.00)	
	1.5% elongation	154.69 (6.09)	193.36 (7.61)	232.03 (9.14)	270.70 (10.66)	309.37 (12.18)	
10	Standard	254.00 (10.00)	317.50 (12.5)	381.00 (15.00)	444.50 (17.50)	508.00 (20.00)	
	1.5% elongation	257.81 (10.15)	322.26 (12.69)	386.72 (15.23)	451.17 (17.76)	515.62 (20.30)	

Maximum allowed elongation of the chain	
Quantity of teeth on the sprocket	Elongation (%)
60 or less	1.5
61—80	1.2
80-100	1.0
100 or more	0.8

N.B. This table only apply to sprockets with 60 teeth or less



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