DIAMOND®
CHAIN COMPANY

DIAMOND® INFINITY™ SAPPHIRE®

British Standard / ANSI Product Guide

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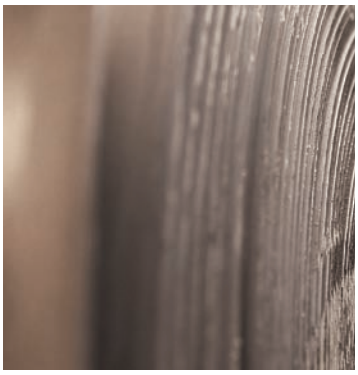
Every Calling is Great, When Greatly Pursued.

OLIVER WENDELL HOLMES

At the Diamond Chain Company, the calling to design and manufacture the world's highest-performing roller chain is greatly pursued every day by teams of passionate technical experts who have made your success their life's work. It's that intensity of focus that some of the world's greatest inventors trusted to provide the drive chains they needed to transform the world. From the Wright Brothers, to Henry Ford, to the global leaders of our time, Diamond® chain is the roller chain most trusted to perform, when performance matters most.



THE DIAMOND CHAIN COMPANY

Founded on December 24, 1890, the Diamond Chain Company is one of the most experienced roller chain manufacturers in the world. Driven by the principles of unrivaled experience, unsurpassed quality, and unparalleled performance, the diamond was adopted as the company trademark as it symbolized perfection and acts as a constant reminder of the company's core values.

Today, the Diamond Chain Company sets the standard for high performance roller chain with industry leading wear life, warranty, and product selection.

Why Choose Diamond Chain?

Building industry-leading roller chain is a matter of demanding precision and discipline, first to establish unsurpassed standards for material selection, fabrication, and final assembly, and second, to ensure those standards are continuously achieved.

The challenge when selecting roller chain is that the difference between industry leading chain and all others isn't readily visible, and only really becomes apparent after use. At the Diamond Chain Company, roller chain is our passion, our focus, and our calling. Diamond Chain has mastered the design and manufacturing processes necessary to create consistently high quality, and high performance, roller chain and we know that our processes and products are second to none. In fact, we're so confident that we back our products with industry leading warranties against defects in material and workmanship.

From industry launch to industry leader, Diamond chain is the most trusted roller chain when performance matters most.

THE DIAMOND DIFFERENCE

Material Selection and Manufacturing

The Diamond Chain Company's proprietary material standards and manufacturing processes form the core of the Diamond Difference. The Diamond Difference begins with raw materials that meet exacting standards for metal grade, mechanical properties, and carbon and alloy content to ensure the minimization of impurities that impact tensile and fatigue strength. These proprietary standards enable Diamond Chain components to maintain tighter tolerances throughout the fabrication and assembly process for a finished product with unparalleled quality, performance, and longevity.

Shot Peening

Shot peening is a process in which metal components are pelted in order to produce a residual compressive stress layer and reduce the incident of fatigue failure. Diamond Chain uses custom made shot peening machinery developed to ensure consistent intensity and coverage of components during the shot peen process.

Heat Treatment

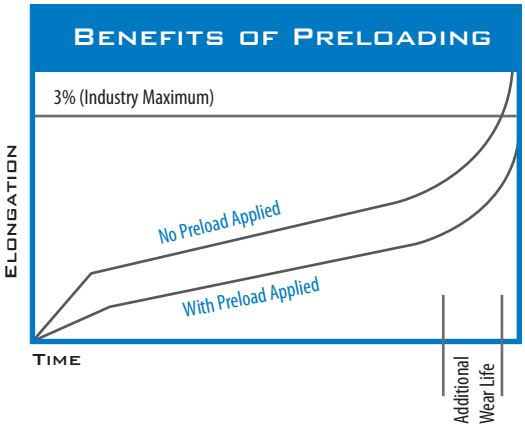
Diamond Chain heat treats all roller chain components. Using dedicated carburizing furnaces set to precise temperatures, and through strict control of both atmosphere and quench, components receive maximum carbon penetration for a high carbon surface and low carbon core which provides improved wear and fatigue resistance.

Lubrication

Diamond Chain understands the importance of proper lubrication and the impact on wear life. Diamond uses both a proprietary lubrication formula and "hot dip" process on all lubricated roller chains. The "hot dip" process ensures complete coverage of components and maximum surface retention following the treatment. Special additives in the lubrication further enhance corrosion protection and extend wear life.

Preloading

The final stage of the manufacturing and assembly process for each Diamond Chain product is the preloading process. Preloading approximates the recommended maximum loading during usage and is done to firmly seat pins and bushings in place and eliminate any initial elongation that may take place.



FABRICATION

The Diamond Chain Company produces consistently high quality product by closely controlling each stage of the fabrication process. As components move from raw materials to fabrication, they are monitored by a rigorous seventy one point quality control system that ensures only qualified pieces reach the final assembly stage.

1. PLATES: Inner and outer plates go through a four stage pitch hole process. A multi-stage process is utilized to create a maximum bearing area that is straight, smooth, and burr-free.

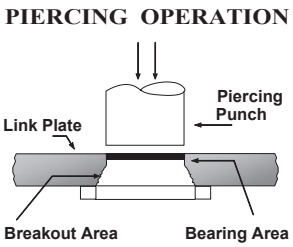
2. PINS: Precision grinding ensures consistent fit and smooth travel.

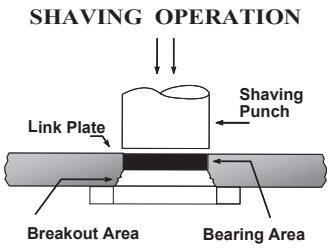
3. ROLLERS: Seamless roller design and dimensional control allows for extrusion with near perfect roundness.

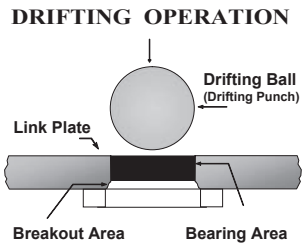
4. BUSHINGS: Dimensional control enables bushings to be extruded with uniform wall thickness and concentricity for smooth travel. Near perfect roundness increases the effective bearing area for the pin.

Diamond Chain's Multi-Stage Pitch Hole Prep Process

1. Piercing: produces a hole with limited bearing area.
2. Shaving Operation: this secondary operation creates greater bearing contact area and improved surface quality.
3. Drifting Operation: this third operation ensures a pitch hole with maximum contact area that is smooth and burr-free.
4. Re-drifting Operation: this final operation creates a bright and mirror smooth finish for an additional residual compressive stress layer.

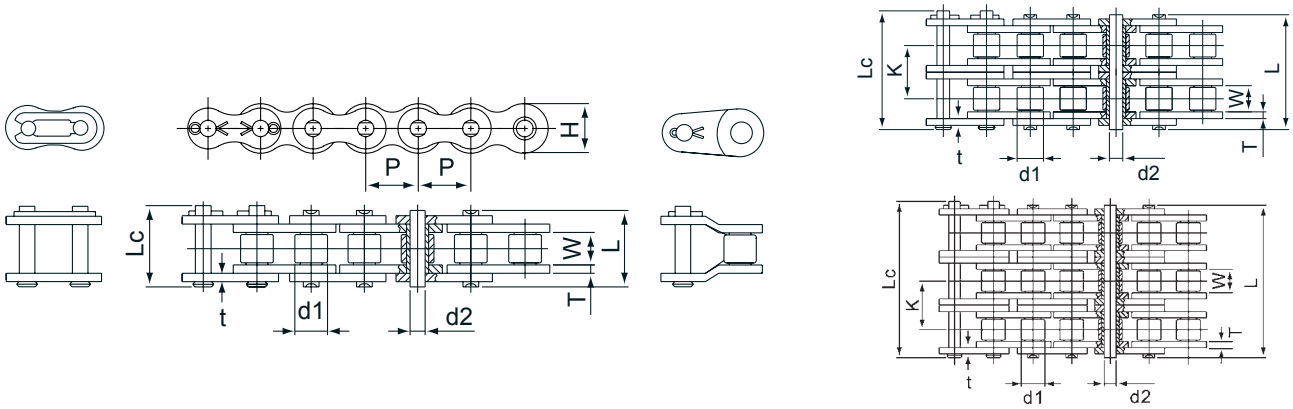






INFINITY BY DIAMOND CHAIN ISO / BRITISH STANDARD-SERIES CHAIN

Infinity by Diamond Chain's ISO / British Standard series chain is manufactured to the International Standards Organization metric dimensions (IS 606, BS228, DIN 8187) for dimensions, interoperability, and sprocket fit.

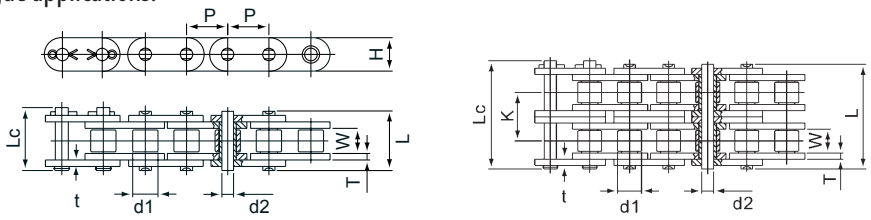


Dimensions in mm

ISO Number	Pitch P mm	Roller		Pin Outer Diameter d2 max mm	Pin Length		K mm	Link Plate Height H max mm	Link Plate Thickness T/t mm	Average Tensile Strength N
		W min mm	d1 max mm		L max mm	Lc max mm				
05B-1	8.00	3.00	5.00	2.31	8.60	11.70	....	7.10	.90	5884
06B-1	9.53	5.72	6.35	3.28	13.50	16.80	....	8.20	1.4 / 1.1	10787
06B-2	9.53	5.72	6.35	3.28	23.80	27.10	10.24	8.20	1.4 / 1.1	18633
06B-3	9.53	5.72	6.35	3.28	34.00	37.30	10.24	8.20	1.4 / 1.1	27950
08B-1	12.70	7.75	8.51	4.45	17.00	20.70	....	11.80	1.50	19123
08B-2	12.70	7.75	8.51	4.45	31.00	34.90	13.92	11.80	1.50	37756
08B-3	12.70	7.75	8.51	4.45	44.90	48.80	13.92	11.80	1.50	56634
10B-1	15.88	9.65	10.16	5.08	19.60	23.70	....	14.70	1.70	27459
10B-2	15.88	9.65	10.16	5.08	36.20	40.30	16.59	14.70	1.70	54817
10B-3	15.88	9.65	10.16	5.08	52.80	56.90	16.59	14.70	1.70	82226
12B-1	19.05	11.68	12.07	5.72	22.70	27.30	....	16.10	1.80	32852
12B-2	19.05	11.68	12.07	5.72	42.20	46.80	19.46	16.10	1.80	63743
12B-3	19.05	11.68	12.07	5.72	60.90	65.50	19.46	16.10	1.80	95615
16B-1	25.40	17.02	15.88	8.28	36.10	41.50	....	21.00	4.0 / 3.2	73550
16B-2	25.40	17.02	15.88	8.28	68.00	73.40	31.88	21.00	4.0 / 3.2	147100
16B-3	25.40	17.02	15.88	8.28	99.90	105.30	31.88	21.00	4.0 / 3.2	220650
20B-1	31.75	19.56	19.05	10.19	43.20	49.30	....	26.40	4.70	106402
20B-2	31.75	19.56	19.05	10.19	79.70	85.80	36.45	26.40	4.70	212804
20B-3	31.75	19.56	19.05	10.19	116.00	122.10	36.45	26.40	4.70	319206
24B-1	38.10	25.40	25.40	14.63	53.40	60.00	....	33.40	6.30	178481
24B-2	38.10	25.40	25.40	14.63	101.00	107.60	48.36	33.40	6.30	356962
24B-3	38.10	25.40	25.40	14.63	150.00	156.60	48.36	33.40	6.30	535443
28B-1	44.45	30.99	27.94	15.90	65.10	72.50	....	37.00	7.80	225553
28B-2	44.45	30.99	27.94	15.90	124.00	131.40	59.56	37.00	7.80	451106
28B-3	44.45	30.99	27.94	15.90	184.00	191.40	59.56	37.00	7.80	676660
32B-1	50.80	30.99	29.21	17.81	67.40	75.30	....	42.20	7.30	279490
32B-2	50.80	30.99	29.21	17.81	126.00	133.90	58.55	42.20	7.30	558979
32B-3	50.80	30.99	29.21	17.81	187.00	194.90	58.55	42.20	7.30	838470
40B-1	63.50	38.10	39.37	22.89	82.60	92.60	....	52.90	8.80	397169
40B-2	63.50	38.10	39.37	22.89	154.00	164.00	72.29	52.90	8.80	794339
40B-3	63.50	38.10	39.37	22.89	229.00	239.00	72.29	52.90	8.80	1191507
48B-1	76.20	45.72	48.26	29.24	99.10	109.10	....	63.80	12.40	622722
48B-2	76.20	45.72	48.26	29.24	190.00	200.00	91.21	63.80	12.40	1245445
48B-3	76.20	45.72	48.26	29.24	280.00	290.00	91.21	63.80	12.40	1868166

INFINITY BY DIAMOND CHAIN ISO / BRITISH STANDARD OVAL CONTOUR SERIES CHAIN

Infinity by Diamond Chain's high strength oval contour roller chains feature a full oval contour pin and roller link plates for maximum plate rigidity in high load fatigue applications.

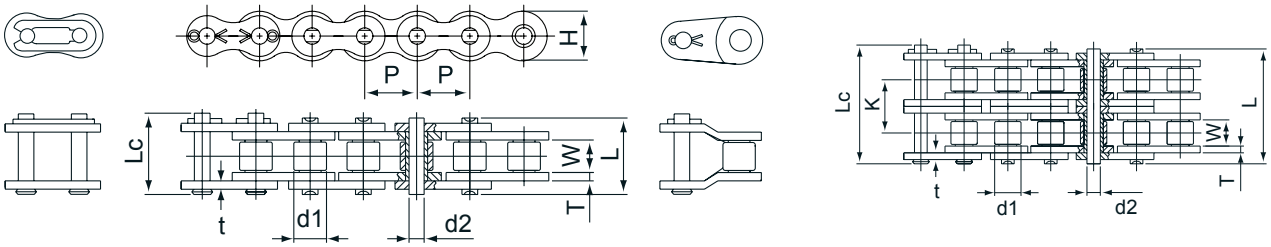


Dimensions in mm

ISO Number	Pitch P mm	Roller W min mm	Roller d1 max mm	Pin Outer Diameter d2 max mm	Pin Length L max mm	Pin Length Lc max mm	K mm	Link Plate Height H max mm	Link Plate Thickness T/t mm	Average Tensile Strength N
08B0C	12.70	7.75	8.51	4.45	17.00	20.70	....	11.80	1.50	19123
08B0C-2	12.70	7.75	8.51	4.45	31.00	34.90	13.92	11.80	1.50	37756
10B0C	15.88	9.65	10.16	5.08	19.60	23.70	....	14.70	1.70	27459
10B0C-2	15.88	9.65	10.16	5.08	36.20	40.30	16.59	14.70	1.70	54817
12B0C	19.05	11.68	12.07	5.72	22.70	2730	....	16.10	1.80	31872
12B0C-2	19.05	11.68	12.07	5.72	42.20	46.80	19.46	16.10	1.80	63743
16B0C	25.40	17.02	15.88	8.28	36.10	41.50	....	21.00	4.00	73550
16B0C-2	25.40	17.02	15.88	8.28	68.00	73.40	31.88	21.00	4.00	147100

SAPPHIRE ISO / BRITISH STANDARD SERIES CHAIN

Sapphire British Standard series chain is manufactured to the International Standards Organization metric dimensions (IS 606, BS228, DIN 8187).



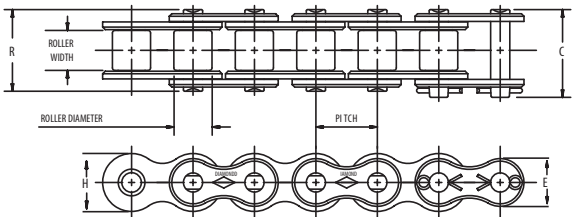
Dimensions in mm

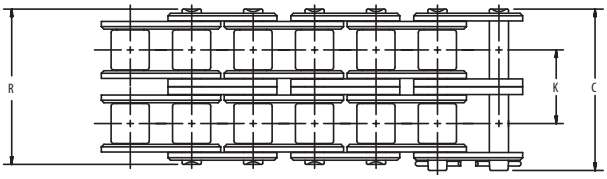
ISO Number	Pitch P mm	Roller W min mm	Roller d1 max mm	Pin Outer Diameter d2 max mm	Pin Length L max mm	Pin Length Lc max mm	K mm	Link Plate Height H max mm	Link Plate Thickness T/t mm	Average Tensile Strength N
05B-1	8.00	3.00	5.00	2.31	8.60	11.70	....	7.10	.90	5884
06B-1*	9.53	5.72	6.35	3.28	13.50	16.80	....	8.20	1.4 / 1.1	10787
06B-2*	9.53	5.72	6.35	3.28	23.80	27.10	10.24	8.20	1.4 / 1.1	18633
08B-1	12.7	7.75	8.51	4.45	17.00	20.70	....	11.80	1.50	19123
08B-2	12.7	7.75	8.51	4.45	31.00	34.90	13.92	11.80	1.50	37756
10B-1	15.88	9.65	10.16	5.08	19.60	23.70	....	14.70	1.70	27459
10B-2	15.88	9.65	10.16	5.08	36.20	40.30	16.59	14.70	1.70	54817
12B-1	19.05	11.68	12.07	5.72	22.70	27.30	....	16.10	1.80	32852
12B-2	19.05	11.68	12.07	5.72	42.20	46.80	19.46	16.10	1.80	63743
16B-1	25.4	17.02	15.88	8.28	36.10	41.50	....	21.00	4.0 / 3.2	73550
16B-2	25.4	17.02	15.88	8.28	68.00	73.40	31.88	21.00	4.0 / 3.2	147100
20B-1	31.75	19.56	19.05	10.19	43.20	49.30	....	26.40	4.70	106402
20B-2	31.75	19.56	19.05	10.19	79.70	85.80	36.45	26.40	4.70	212804
24B-1	38.1	25.4	25.4	14.63	53.40	60.00	....	33.40	6.30	178481
24B-2	38.1	25.4	25.4	14.63	101.00	107.60	48.36	33.40	6.30	356962
28B-1	44.45	30.99	27.94	15.9	65.10	72.50	....	37.00	7.80	225553
32B-1	50.8	30.99	29.21	17.81	67.40	75.30	....	42.20	7.30	279490

*Straight sidebar chain

DIAMOND ASME / ANSI SERIES CHAIN

Diamond standard series chains are built to ASME/ANSI B29.1 standards for dimensions, interoperability, and sprocket fit and exceed the established standards for tensile strength.





Dimensions in mm

ASME/ANSI Number	Pitch mm	Roller Width mm	Roller Diameter mm	Pin Diameter mm	Link Plate Thickness mm	C mm	R mm	K mm	KG Per M	Average Tensile Strength N	E**	H**
25	6.35	3.18	3.30*	2.29	0.76	9.40	8.64	....	0.125	3892	5.21	6.05
25-2	6.35	3.18	3.30*	2.29	0.76	16.00	14.99	6.40	0.243	7784	5.21	6.05
25-3	6.35	3.18	3.30*	2.29	0.76	22.35	21.34	6.40	0.366	11677	5.21	6.05
35	13.28	4.76	5.08*	3.58	1.27	14.22	12.70	....	0.313	9341	7.82	9.04
35-2	13.28	4.76	5.08*	3.58	1.27	24.38	22.86	10.13	0.670	18683	7.82	9.04
35-3	13.28	4.76	5.08*	3.58	1.27	34.54	33.27	10.13	1.012	28024	7.82	9.04
35-4	13.28	4.76	5.08*	3.58	1.27	44.70	43.18	10.13	1.354	37365	7.82	9.04
35-5	13.28	4.76	5.08*	3.58	1.27	54.86	53.59	10.13	1.697	46707	7.82	9.04
35-6	13.28	4.76	5.08*	3.58	1.27	65.28	63.75	10.13	2.039	56048	7.82	9.04
40	12.70	7.94	7.92	3.96	1.52	18.29	17.02	....	0.610	17793	10.41	12.07
40-2	12.70	7.94	7.92	3.96	1.52	32.77	31.50	14.38	1.191	35586	10.41	12.07
40-3	12.70	7.94	7.92	3.96	1.52	46.99	45.72	14.38	1.786	53379	10.41	12.07
40-4	12.70	7.94	7.92	3.96	1.52	61.47	60.20	14.38	2.381	71172	10.41	12.07
40-6	12.70	7.94	7.92	3.96	1.52	90.42	89.15	14.38	3.601	106758	10.41	12.07
41	12.70	6.35	7.77	3.58	1.27	16.51	14.48	....	0.387	10676	7.87	9.73
50	15.88	13.28	10.16	5.08	2.03	22.61	21.08	....	1.048	29358	13.00	15.09
50-2	15.88	13.28	10.16	5.08	2.03	40.64	39.37	18.11	2.082	58717	13.00	15.09
50-3	15.88	13.28	10.16	5.08	2.03	58.67	57.40	18.11	3.110	88075	13.00	15.09
50-4	15.88	13.28	10.16	5.08	2.03	76.96	75.44	18.11	4.143	117434	13.00	15.09
50-5	15.88	13.28	10.16	5.08	2.03	95.25	93.73	18.11	5.164	146792	13.00	15.09
50-6	15.88	13.28	10.16	5.08	2.03	113.28	111.76	18.11	6.204	176151	13.00	15.09
50-8	15.88	13.28	10.16	5.08	2.03	149.61	148.08	18.11	8.267	234867	13.00	15.09
50-10	15.88	13.28	10.16	5.08	2.03	185.93	184.40	18.11	10.313	293584	13.00	15.09
60	19.05	12.70	11.91	5.94	2.39	28.19	26.42	....	0.011	37810	15.62	18.11
60-2	19.05	12.70	11.91	5.94	2.39	51.05	49.28	22.78	0.022	75620	15.62	18.11
60-3	19.05	12.70	11.91	5.94	2.39	73.91	72.14	22.78	0.033	113430	15.62	18.11
60-4	19.05	12.70	11.91	5.94	2.39	96.77	95.00	22.78	0.045	151240	15.62	18.11
60-5	19.05	12.70	11.91	5.94	2.39	119.63	117.86	22.78	0.057	189049	15.62	18.11
60-6	19.05	12.70	11.91	5.94	2.39	142.24	140.46	22.78	0.069	226859	15.62	18.11
60-8	19.05	12.70	11.91	5.94	2.39	187.96	186.18	22.78	0.091	302479	15.62	18.11
60-10	19.05	12.70	11.91	5.94	2.39	233.43	231.65	22.78	0.114	378099	15.62	18.11
80	25.40	15.88	15.88	7.92	3.18	36.58	33.53	....	0.020	64499	20.83	24.13
80-2	25.40	15.88	15.88	7.92	3.18	65.79	62.74	29.29	0.039	128998	20.83	24.13

*Chains are rollerless - dimension shown is bushing diameter.

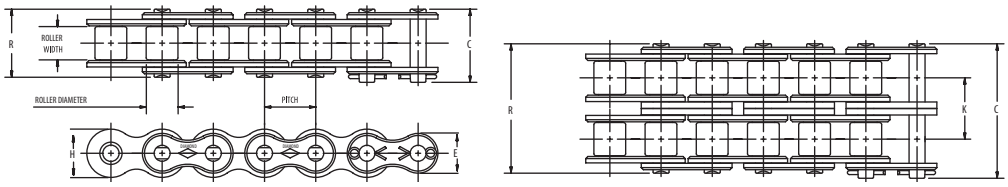
Chart continues on next page.

** Maximum values are shown.

Note: ASME/ANSI 60 and larger chains are available as cottered or riveted type design.

Multiple strand chains are available with slip-fit (standard) or press-fit center plates.

DIAMOND ASME / ANSI SERIES CHAIN



Dimensions in mm

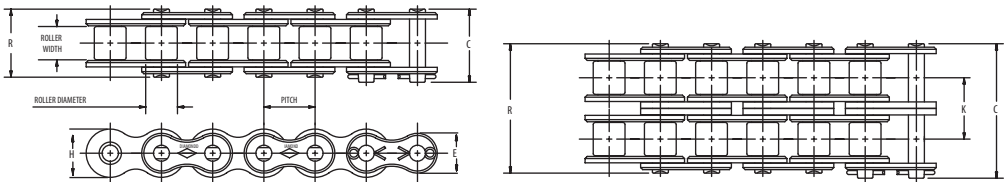
ASME/ANSI Number	Pitch mm	Roller Width mm	Roller Diameter mm	Pin Diameter mm	Link Plate Thickness mm	C mm	R mm	K mm	KG Per M	Average Tensile Strength N	E*	H*
80-3	25.40	15.88	15.88	7.92	3.18	95.00	91.95	29.29	0.058	193498	20.83	24.13
80-4	25.40	15.88	15.88	7.92	3.18	124.46	121.67	29.29	0.078	257997	20.83	24.13
80-5	25.40	15.88	15.88	7.92	3.18	153.92	150.88	29.29	0.097	322496	20.83	24.13
80-6	25.40	15.88	15.88	7.92	3.18	183.39	180.34	29.29	0.116	386995	20.83	24.13
80-8	25.40	15.88	15.88	7.92	3.18	242.06	238.76	29.29	0.154	515994	20.83	24.13
100	31.75	19.05	19.05	9.53	3.96	43.94	40.89	….	0.029	106757	26.04	30.18
100-2	31.75	19.05	19.05	9.53	3.96	79.76	76.71	35.76	0.057	213515	26.04	30.18
100-3	31.75	19.05	19.05	9.53	3.96	115.82	112.52	35.76	0.085	320272	26.04	30.18
100-4	31.75	19.05	19.05	9.53	3.96	151.64	148.34	35.76	0.113	427029	26.04	30.18
100-5	31.75	19.05	19.05	9.53	3.96	187.45	184.15	35.76	0.141	533787	26.04	30.18
100-6	31.75	19.05	19.05	9.53	3.96	223.01	219.96	35.76	0.168	640544	26.04	30.18
100-8	31.75	19.05	19.05	9.53	3.96	294.64	291.59	35.76	0.224	854059	26.04	30.18
120	38.10	25.40	22.23	11.10	4.75	54.36	50.80	….	0.043	151240	31.24	36.20
120-2	38.10	25.40	22.23	11.10	4.75	99.82	96.27	35.76	0.085	302479	31.24	36.20
120-3	38.10	25.40	22.23	11.10	4.75	145.29	141.73	35.76	0.128	453719	31.24	36.20
120-4	38.10	25.40	22.23	11.10	4.75	191.01	187.45	35.76	0.169	604958	31.24	36.20
120-5	38.10	25.40	22.23	11.10	4.75	236.47	232.92	35.76	0.212	756198	31.24	36.20
120-6	38.10	25.40	22.23	11.10	4.75	281.94	278.38	35.76	0.255	907437	31.24	36.20
120-8	38.10	25.40	22.23	11.10	4.75	372.87	369.32	35.76	0.340	1209916	31.24	36.20
120-10	38.10	25.40	22.23	11.10	4.75	463.80	460.25	35.76	0.424	1512395	31.24	36.20
140	44.45	25.40	25.40	12.70	5.56	58.67	54.36	….	0.058	204618	36.45	42.24
140-2	44.45	25.40	25.40	12.70	5.56	107.70	103.38	48.87	0.111	409236	36.45	42.24
140-3	44.45	25.40	25.40	12.70	5.56	156.46	152.40	48.87	0.165	613855	36.45	42.24
140-4	44.45	25.40	25.40	12.70	5.56	205.49	201.42	48.87	0.218	818473	36.45	42.24
140-6	44.45	25.40	25.40	12.70	5.56	303.28	299.21	48.87	0.325	1227709	36.45	42.24
160	50.80	31.75	28.58	14.27	6.35	69.34	64.52	….	0.075	257997	41.66	48.26
160-2	50.80	31.75	28.58	14.27	6.35	128.02	123.19	58.55	0.148	515994	41.66	48.26
160-3	50.80	31.75	28.58	14.27	6.35	186.69	181.86	58.55	0.219	773991	41.66	48.26
160-4	50.80	31.75	28.58	14.27	6.35	245.36	240.54	58.55	0.295	1031987	41.66	48.26
160-6	50.80	31.75	28.58	14.27	6.35	362.46	357.89	58.55	0.435	1547981	41.66	48.26
180	57.15	35.72	35.71	17.45	7.14	80.01	73.15	….	0.104	338065	46.86	54.31
180-2	57.15	35.72	35.71	17.45	7.14	146.05	139.19	65.84	0.204	676130	46.86	54.31
180-3	57.15	35.72	35.71	17.45	7.14	211.84	204.98	65.84	0.302	1014195	46.86	54.31
200	63.50	38.10	39.67	19.84	7.92	87.38	79.25	….	0.123	422581	52.07	60.33
200-2	63.50	38.10	39.67	19.84	7.92	159.00	150.88	71.55	0.248	845162	52.07	60.33
200-3	63.50	38.10	39.67	19.84	7.92	230.63	222.50	71.55	0.372	1267743	52.07	60.33
200-4	63.50	38.10	39.67	19.84	7.92	302.26	294.13	71.55	0.494	1690324	52.07	60.33
200-6	63.50	38.10	39.67	19.84	7.92	445.01	437.13	71.55	0.743	2535486	52.07	60.33
240	76.20	47.63	47.63	23.80	9.53	109.73	97.28	….	0.196	701040	61.52	71.27
240-2	76.20	47.63	47.63	23.80	9.53	197.36	184.66	87.83	0.385	1402079	61.52	71.27
240-3	76.20	47.63	47.63	23.80	9.53	285.24	272.54	87.83	0.573	2103119	61.52	71.27

* Maximum values are shown.
Note: ASME/ANSI 60 and larger chains are available as cottered or riveted type design.
Multiple strand chains are available with slip-fit (standard) or press-fit center plates.

DIAMOND HEAVY SERIES CHAIN

Single and Multi-Strand

Diamond heavy series chains are built to ASME/ANSI B29.1 standards and utilize link plate material thickness from the next larger size of chain. Heavy series chains are intended for applications subject to heavy shock loads, starts and stops, and forward and reverse travel.



Dimensions in mm

ASME/ANSI Number	Pitch mm	Roller Width mm	Roller Diameter mm	Pin Diameter mm	Link Plate Thickness mm	C mm	R mm	K mm	KG Per M	Average Tensile Strength N	E*	H*
60H	19.05	12.70	11.91	5.94	3.18	31.50	29.72	....	1.76	37812	15.62	18.11
60H-2	19.05	12.70	11.91	5.94	3.18	57.66	55.88	26.11	3.47	75623	15.62	18.11
60H-3	19.05	12.70	11.91	5.94	3.18	84.07	82.30	26.11	5.16	113435	15.62	18.11
60H-4	19.05	12.70	11.91	5.94	3.18	110.24	108.20	26.11	6.86	151247	15.62	18.11
80H	25.40	15.88	15.88	7.92	3.96	39.88	36.83	....	3.01	64502	20.83	24.13
80H-2	25.40	15.88	15.88	7.92	3.96	72.14	69.09	32.59	5.85	129005	20.83	24.13
80H-3	25.40	15.88	15.88	7.92	3.96	105.16	102.11	32.59	8.81	193508	20.83	24.13
80H-4	25.40	15.88	15.88	7.92	3.96	137.67	134.62	32.59	11.71	258011	20.83	24.13
100H	31.75	19.05	19.05	9.53	4.75	47.24	44.20	....	4.20	106763	26.04	30.18
100H-2	31.75	19.05	19.05	9.53	4.75	86.61	83.31	39.09	8.30	213526	26.04	30.18
100H-3	31.75	19.05	19.05	9.53	4.75	125.73	122.43	39.09	12.38	320289	26.04	30.18
100H-4	31.75	19.05	19.05	9.53	4.75	164.85	160.02	39.09	16.43	427053	26.04	30.18
120H	38.10	25.40	22.23	11.10	5.56	57.66	54.10	....	6.07	151247	31.24	36.20
120H-2	38.10	25.40	22.23	11.10	5.56	106.68	116.84	48.87	11.96	302495	31.24	36.20
120H-3	38.10	25.40	22.23	11.10	5.56	155.70	152.15	48.87	17.84	453743	31.24	36.20
120H-4	38.10	25.40	22.23	11.10	5.56	204.72	201.17	48.87	23.72	604991	31.24	36.20
120H-6	38.10	25.40	22.23	11.10	5.56	302.51	298.96	48.87	35.48	907487	31.24	36.20
140H	44.45	25.40	25.40	12.70	6.35	61.98	57.91	....	8.04	204629	36.45	42.24
140H-2	44.45	25.40	25.40	12.70	6.35	114.30	110.24	52.20	15.85	409259	36.45	42.24
140H-3	44.45	25.40	25.40	12.70	6.35	166.62	162.31	52.20	23.66	613888	36.45	42.24
140H-4	44.45	25.40	25.40	12.70	6.35	218.95	214.63	52.20	31.40	818518	36.45	42.24
160H	50.80	31.75	28.58	14.27	7.14	72.64	68.07	....	10.46	258011	41.66	48.26
160H-2	50.80	31.75	28.58	14.27	7.14	134.62	130.05	61.87	20.66	516022	41.66	48.26
160H-3	50.80	31.75	28.58	14.27	7.14	196.85	192.02	61.87	30.78	774033	41.66	48.26
160H-4	50.80	31.75	28.58	14.27	7.14	258.32	254.00	61.87	41.10	1032045	41.66	48.26
180H	57.15	35.72	35.71	17.45	7.92	83.31	76.45	....	14.27	338083	46.86	54.31
180H-2	57.15	35.72	35.71	17.45	7.92	152.40	145.54	69.16	28.07	676167	46.86	54.31
180H-3	57.15	35.72	35.71	17.45	7.92	221.74	214.88	69.16	41.88	1014251	46.86	54.31
200H	63.50	38.10	39.67	19.84	9.53	94.23	86.11	....	19.91	489331	52.07	60.33
200H-2	63.50	38.10	39.67	19.84	9.53	172.47	164.59	78.31	39.26	978663	52.07	60.33
200H-3	63.50	38.10	39.67	19.84	9.53	250.95	242.82	78.31	60.79	1467995	52.07	60.33
240H	76.20	25.40	47.63	23.80	12.70	123.19	110.49	....	31.37	701078	61.52	71.27

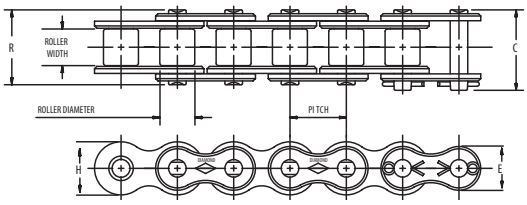
* Maximum values are shown.
Note: ASME/ANSI 60 and larger chains are available as cottered or riveted type design.
Multiple strand chains are available with slip-fit (standard) or press-fit center plates.

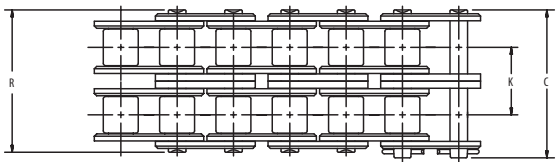
DIAMOND HIGH STRENGTH / LIFT SERIES CHAIN

Diamond high strength/lift chains are built to ASME/ANSI B29.1 standards and are intended for applications subject to heavy loads or lifting.

High Strength (HS) and High Strength Oval Contour (HSOC) Drive Chains

Diamond high strength and high strength oval contour drive chains are built to ASME/ANSI B29.1 standards. These drive chains feature through-hardened, medium carbon alloy steel pins for higher working load capacity and additional resistance versus standard heavy series drive chains in high load and pulsating applications. High Strength Oval Contour drive chains feature a full oval contour pin and roller link plates for maximum plate rigidity in high load fatigue applications.





Dimensions in mm

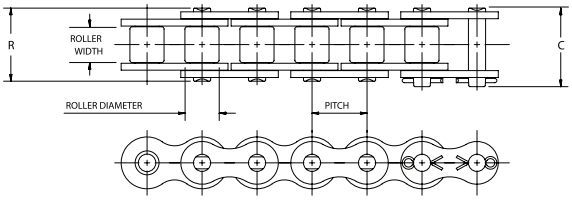
ASME/ANSI Number	Pitch mm	Roller Width mm	Roller Diameter mm	Pin Diameter mm	Link Plate Thickness mm	C mm	R mm	K mm	KG Per M	Average Tensile Strength N	E*	H*
60HS	19.05	12.70	11.91	5.94	3.18	31.50	29.72	....	1.76	53382	15.62	18.11
60HSOC	19.05	12.70	11.91	5.94	3.18	31.50	29.72	....	2.11	93418	18.11	18.11
80HS	25.40	15.88	15.88	7.92	3.96	39.88	36.83	....	3.01	93418	20.83	24.13
80HSOC	25.40	15.88	15.88	7.92	3.96	39.88	36.83	....	3.54	133454	24.13	24.13
100HS	31.75	19.05	19.05	9.53	4.75	47.24	44.20	....	4.20	133454	26.04	30.18
100HSOC	31.75	19.05	19.05	9.53	4.75	47.24	44.20	....	4.90	182387	30.18	30.18
120HS	38.10	25.40	22.23	11.10	5.56	57.66	54.10	....	6.07	182387	31.24	36.20
140HS	44.45	25.40	25.40	12.70	6.35	61.98	57.91	....	8.04	249114	36.45	42.24
160HS	50.80	31.75	28.58	14.27	7.14	72.64	68.07	....	10.46	311393	41.66	48.26
180HS	57.15	35.72	35.71	17.45	7.92	83.31	76.45	....	14.27	422605	46.86	54.31
200HS	63.50	38.10	39.67	19.84	9.53	94.23	86.11	....	20.46	604992	52.07	60.33
200HS-2	63.50	38.10	39.67	19.84	9.53	172.47	164.59	349.25	39.26	1201087	52.07	60.33
200HS-3	63.50	38.10	39.67	19.84	9.53	250.95	242.82	670.05	60.79	1801630	52.07	60.33
240HS	76.20	44.45	47.63	23.80	12.70	123.19	110.49	1037.59	31.37	701079	61.52	71.27

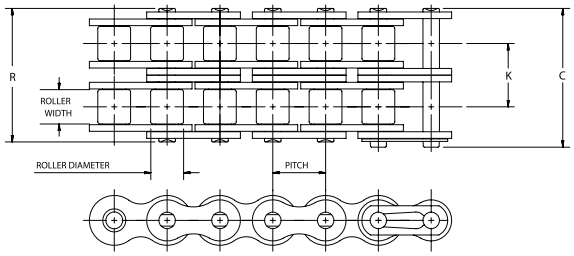
* Maximum values are shown.

Note: Offset links and slip fit connecting links are not recommended for high strength or lift chain applications.

SAPPHIRE ASME / ANSI SERIES CHAIN

Sapphire standard series chains are built to ASME/ANSI B29.1 standards.





Dimensions in mm

ASME/ANSI Number	Pitch mm	Roller Width mm	Roller Diameter mm	Pin Diameter mm	Link Plate Thickness mm	C mm	R mm	K mm	KG Per M	Average Tensile Strength N
25	6.35	3.18	3.30*	2.29	0.76	9.40	8.64	....	0.125	3892
35	13.28	4.76	5.08*	3.58	1.27	14.22	12.70	....	0.313	9341
35-2	13.28	4.76	5.08*	3.58	1.27	24.38	22.86	10.13	0.670	18683
40	12.70	7.94	7.92	3.96	1.52	18.29	17.02	....	0.610	17793
40-2	12.70	7.94	7.92	3.96	1.52	32.77	31.50	14.38	1.191	35586
40-3	12.70	7.94	7.92	3.96	1.52	46.99	45.72	14.38	1.786	53379
41	12.70	6.35	7.77	3.58	1.27	16.51	14.48	....	0.387	10676
50	15.88	13.28	10.16	5.08	2.03	22.61	21.08	....	1.012	29358
50-2	15.88	13.28	10.16	5.08	2.03	40.64	39.37	18.11	1.964	58717
50-3	15.88	13.28	10.16	5.08	2.03	58.67	57.40	18.11	2.947	88075
60	19.05	12.70	11.91	5.94	2.39	28.19	26.42	....	1.473	37810
60-2	19.05	12.70	11.91	5.94	2.39	51.05	49.28	22.78	2.902	75620
60-3	19.05	12.70	11.91	5.94	2.39	73.91	72.14	22.78	4.286	113430
80	25.40	15.88	15.88	7.92	3.18	36.58	33.53	....	2.575	64499
80-2	25.40	15.88	15.88	7.92	3.18	65.79	62.74	29.29	5.015	128998
100	31.75	19.05	19.05	9.53	3.96	43.94	40.89	....	3.735	106757
100-2	31.75	19.05	19.05	9.53	3.96	79.76	76.71	35.76	7.307	213515
120	38.10	25.40	22.23	11.10	4.75	54.36	50.80	....	5.491	151240
120-2	38.10	25.40	22.23	11.10	4.75	99.82	96.27	35.76	10.938	302479
140	44.45	25.40	25.40	12.70	5.56	58.67	54.36	....	7.441	204618
140-2	44.45	25.40	25.40	12.70	5.56	107.70	103.38	48.87	14.361	409236
160	50.80	31.75	28.58	14.27	6.35	69.34	64.52	....	9.718	257997
160-2	50.80	31.75	28.58	14.27	6.35	128.02	123.19	58.55	19.093	515994
180	57.15	35.72	35.71	17.45	7.14	80.01	73.15	....	13.483	338065
180-2	57.15	35.72	35.71	17.45	7.14	146.05	139.19	65.84	26.058	676130
200	63.50	38.10	39.67	19.84	7.92	87.38	79.25	....	15.849	422581
200-2	63.50	38.10	39.67	19.84	7.92	159.00	150.88	71.55	31.996	845162
240	76.20	47.63	47.63	23.80	9.53	109.73	97.28	....	24.406	701040

*Chains are rollerless - dimension shown is bushing diameter.

ADDITIONAL DIAMOND CHAIN COMPANY PRODUCTS

In addition to the items featured in this catalog, the Diamond Chain Company also offers the following products:

ASME / ANSI Agricultural Roller Chain

Diamond Chain produces a full assortment of agricultural attachments for use with Diamond and Sapphire brand standard series roller chain.

Attachment Roller Chain

Diamond Chain single and double pitch roller chains can be assembled with attachment link plates or extended pins.

ASME / ANSI Corrosion / Moisture Resistant Roller Chain

Diamond Chain produces a full line of corrosion/moisture resistant chains for use in environments where the chains are exposed to moisture or corrosive materials. These chains are available in stainless steel, with nickel plating, and with Diamond Chain's proprietary anti corrosive exterior which features a two stage zinc-nickel and non-hexavalent chromium coating. Standard attachments are also available.

ASME / ANSI Double Pitch Roller Chain

Diamond Chain offers double pitch power transmission and conveyor roller chain in both Diamond and Sapphire brands. Power transmission chains feature a figure eight style link plate and are ideal for agricultural applications. Conveyor chains are available with an oval contour link plate and can be produced with standard or over-sized rollers, and a variety of attachments. Conveyor chains are intended for applications where loads are low and speeds are moderate.

ASME / ANSI Oil and Gas Roller Chain

Diamond Chain offers a full assortment of Diamond brand, API (American Petroleum Institute) certified multi-strand roller chain that meets the requirements of Specification 7F8. Diamond Chain also produces a narrow width 38.1 mm pitch and 63.5 mm pitch chain for use on older rig setups.

Pin Oven Roller Chain

Diamond Chain pin oven chains are built with Diamond brand standard series 60 pitch ANSI chain and are available with bendable, breakaway, or stainless steel carrier pins.

Specialty / Made-to-Order Attachments

Diamond Chain produces a variety of specialty application attachments in addition to producing made-to-order attachments for any application.

For additional information on the Diamond Chain Company, its products and its services, please visit us at http://www.diamondchain.co.uk or call +44-191-414-8822.

NOTES

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