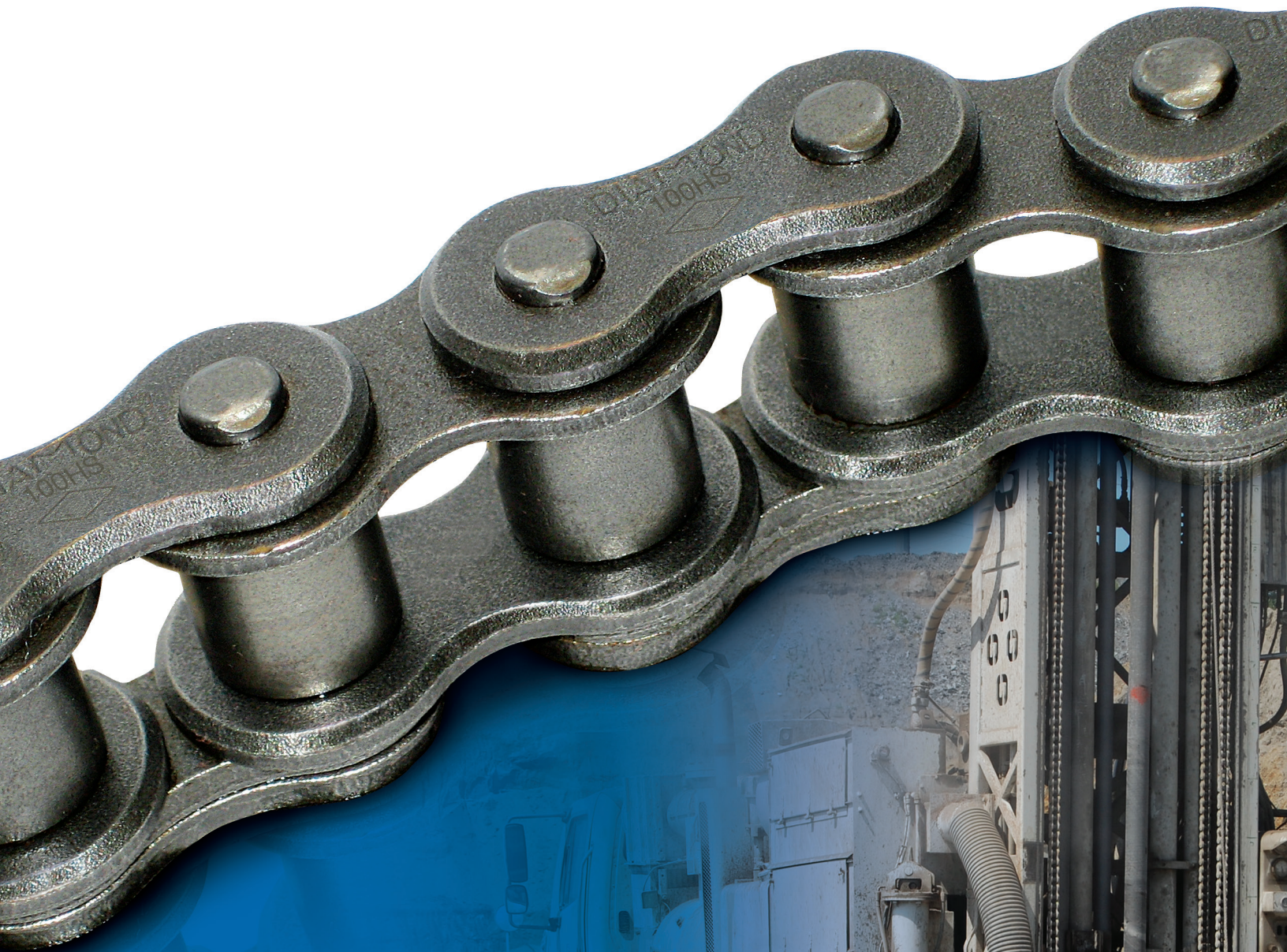




Drilling Rig Solutions

Nothing outlasts a **DIAMOND**®

For drilling rig applications, Nothing outlasts a **DIAMOND®**

Diamond® High Strength Series roller chain is specifically designed for dynamic high shock load applications such as drill rigs (aka pull-down rigs). Multiple design features and production controls work in concert to deliver the dependable performance required in this difficult environment.

Diamond® High Strength Chain

Shock Load / Fatigue Resistance

- ◆ Link plates use the thicker material of the next larger size chain for additional fatigue resistance.
- ◆ Shot-peened link plates have a layer of compressive stress that helps resist fatigue when subjected to repeated high loads. A proprietary Diamond Chain process provides superior shot-peen consistency.
- ◆ Medium carbon through-hardened pins increase tensile strength and allow the chain to better absorb shock loads.
- ◆ Pin link and roller link plates are oriented during assembly such that the pitch hole bearing area is maximized, thus improving fatigue performance.

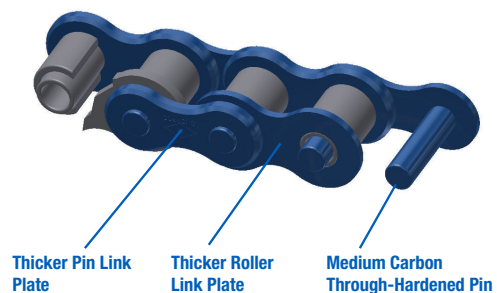
Wear Performance

- ◆ Multi-step pitch hole process maximizes bearing area and creates straight, smooth, burr-free bushing interface.
- ◆ Diamond Series Roller chain only uses solid bushings and rollers. This seamless design allows for extended pin wear life and smoother operation with the chain sprocket.
- ◆ Proprietary hot-dip lubrication penetrates between chain components, extending wear life as well as providing corrosion resistance.
- ◆ Each chain is pre-loaded to 50% tensile strength – firmly seating all components and reducing initial run-in.

Corrosion Resistance

- ◆ Proprietary hot-dip lubrication penetrates between chain components and protects against corrosion as well as extends wear life.
- ◆ Available nickel coating for protection against water and humidity.
- ◆ Available Diamond ACE® (Anti-Corrosion Exterior) plating provides superior water, salt water and humidity protection.

High Strength Series roller chain has multiple enhancements vs standard ANSI chain for improved performance in dynamic shock load applications.



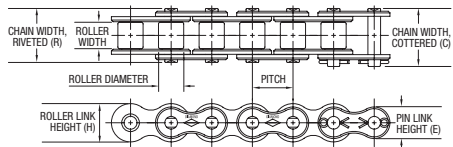
Diamond Chain High Strength Series Roller Chain

High Strength Series chain is specifically designed for high load, lifting or pulsating applications. Thicker link plates and medium carbon through-hardened pins allow for a higher tensile strength, working load, and fatigue strength.

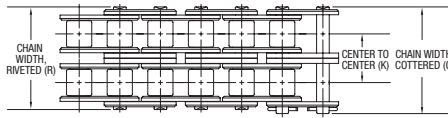
For additional performance in high load fatigue applications, Diamond HS Oval Contour chain (identifiable by the “OC” part number suffix) utilizes full oval contour link plates for greater link plate rigidity.

NOTE: offset links and slip-fit connecting links are not recommended for any high strength drive chain.

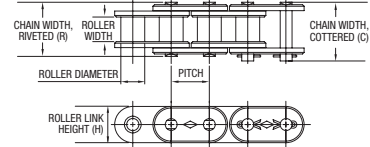
Single Strand



Multiple Strand (-X suffix)



Oval Contour (OC suffix)



Diamond Number	Pitch	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	K	E**	H**	Avg. Weight	Avg. Tensile Strength†
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	lbs/ft kg/m	lbs kg
60HS	0.750 19.05	0.500 12.70	0.469 11.91	0.234 5.94	0.125 3.18	1.240 31.50	1.170 29.72	-	0.615 15.62	0.713 18.11	1.180 1.76	12,000 5,443
60HSOC	0.750 19.05	0.500 12.70	0.469 11.91	0.234 5.94	0.125 3.18	1.240 31.50	1.170 29.72	-	0.713 18.11	0.713 18.11	1.420 2.11	12,000 5,443
80HS	1.000 25.40	0.625 15.88	0.625 15.88	0.312 7.92	0.156 3.96	1.570 39.88	1.450 36.83	-	0.820 20.83	0.950 24.13	2.020 3.01	21,000 9,525
80HSOC	1.000 25.40	0.625 15.88	0.625 15.88	0.312 7.92	0.156 3.96	1.570 39.88	1.450 36.83	-	0.950 24.13	0.950 24.13	2.380 3.54	21,000 9,525
100HS	1.250 31.75	0.750 19.05	0.750 19.05	0.375 9.53	0.187 4.75	1.860 47.24	1.740 44.20	-	1.025 26.04	1.188 30.18	2.820 4.20	30,000 13,608
100HSOC	1.250 31.75	0.750 19.05	0.750 19.05	0.375 9.53	0.187 4.75	1.860 47.24	1.740 44.20	-	1.188 30.18	1.188 30.18	3.290 4.90	30,000 13,608
120HS	1.500 38.10	1.000 25.40	0.875 22.23	0.437 11.10	0.219 5.56	2.270 57.66	2.130 54.10	-	1.230 31.24	1.425 36.20	4.080 6.07	41,000 18,597
140HS	1.750 44.45	1.000 25.40	1.000 25.40	0.500 12.70	0.250 6.35	2.440 61.98	2.280 57.91	-	1.435 36.45	1.663 42.24	5.400 8.04	56,000 25,401
160HS	2.000 50.80	1.250 31.75	1.125 28.58	0.562 14.27	0.281 7.14	2.860 72.64	2.680 68.07	-	1.640 41.66	1.900 48.26	7.030 10.46	70,000 31,751
180HS	2.250 57.15	1.406 35.72	1.406 35.71	0.687 17.45	0.312 7.92	3.280 83.31	3.010 76.45	-	1.845 46.86	2.138 54.31	9.590 14.27	95,000 43,091
200HS	2.500 63.50	1.500 38.10	1.562 39.67	0.781 19.84	0.375 9.53	3.710 94.23	3.390 86.11	-	2.050 52.07	2.375 60.33	13.750 20.46	136,000 61,689
200HS-2	2.500 63.50	1.500 38.10	1.562 39.67	0.781 19.84	0.375 9.53	6.790 172.47	6.480 164.59	3.083 78.31	2.050 52.07	2.375 60.33	26.380 39.26	270,000 122,470
200HS-3	2.500 63.50	1.500 38.10	1.562 39.67	0.781 19.84	0.375 9.53	9.880 250.95	9.560 242.82	3.083 78.31	2.050 52.07	2.375 60.33	40.850 60.79	405,000 183,705
240HS	3.000 76.20	1.875 47.63	1.875 47.63	0.937 23.80	0.500 12.70	4.850 123.19	4.350 110.49	-	2.422 61.52	2.806 71.27	21.080 31.37	157,600 71,486

**Maximum value listed.

†Diamond uses average tensile strength, as it is a more appropriate value for strength and load calculations. Working load should not exceed 1/6th tensile strength under typical conditions when using a press fit connecting link or 1/9th tensile strength when using a slip fit connecting or offset link (slip fit links not recommended for high strength series chain).



Diamond is the recognized world leader in the design and manufacture of high quality, high performance roller chain. Since 1890, we've produced tens of thousands of types of roller chain for a wide variety of applications from oil fields to conveyors and to combines.



diamonddrives.com

Diamond® chains are part of The Timken Company's growing portfolio of engineered bearings and industrial motion products.