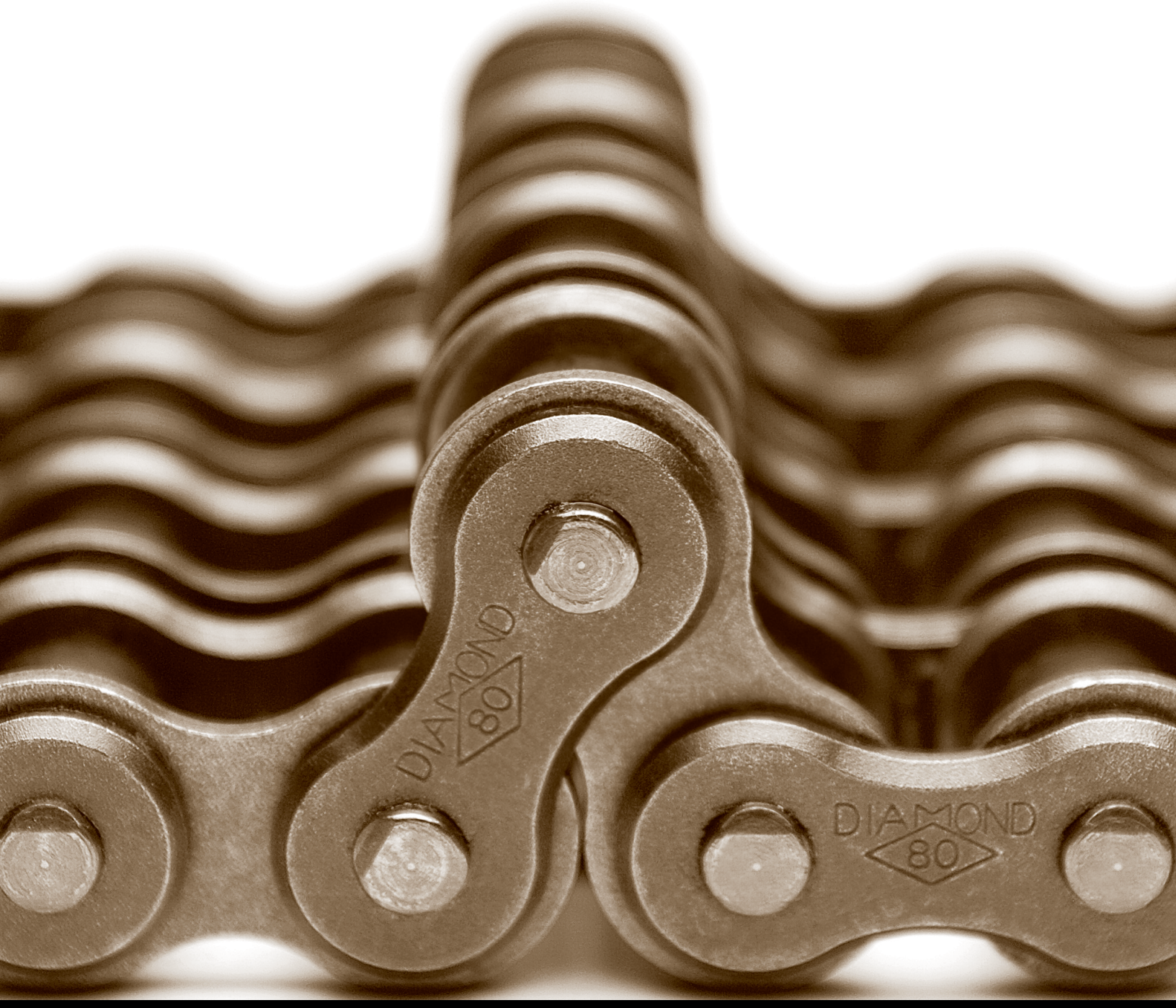
DIAMOND®

DIAMOND CHAIN COMPANY



Oil Field Product Guide

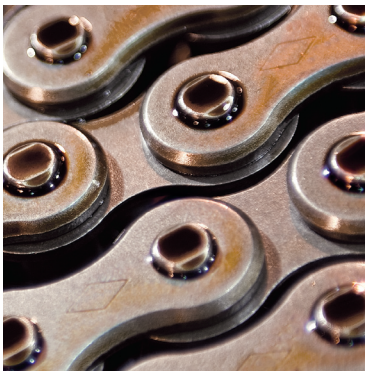
Table of Contents

Oil and Gas Roller Chain Solutions	4
Diamond ACE®	4
Coil Tubing Injector Chain	4
Chain Components	5
Oil Field Chain	6-9
Chain Descriptions & Dimensions	6-8
- Mechanical Setup	9

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.



OIL AND GAS CHAIN SOLUTIONS

THE DIAMOND CHAIN COMPANY

Founded on December 24, 1890, the Diamond Chain Company is one of the most experienced roller chain manufacturer's in the world. Driven by the principles of unrivaled experience, unsurpassed quality, and unparalleled performance, the diamond was adopted as the company's trade mark 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 "Nothing Outlasts a Diamond," 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.

OIL FIELD ROLLER CHAIN

Manufactured up to twelve strands wide, Diamond Chain's multi strand products are available in two types of construction – with center plates slip-fit on the pins or with center plates press-fit on the pins.

DIAMOND ACE®

Diamond ACE® (anti-corrosive exterior) roller chains incorporate an electro-chemically bonded, protective exterior coating that is applied to each component part prior to assembly. The protective coating, a specially formulated zinc-nickel alloy with a hex free chromate coating, serves as a physical barrier that provides superior water-resistance, physical, and structural integrity for carbon steel base chain. Diamond ACE® provides the optimum balance between corrosion protection and driver performance.

COILED TUBING INJECTOR CHAIN

Diamond series coiled tubing injector chains feature specially manufactured pins for increased tensile strength and improved impact and pin fatigue resistance. Special interference fit coverplates are manufactured to exacting tolerances to minimize pin turning and assure equal distribution of chain working load. Diamond's coil tubing injector chain is available in nickel and ACE® plating for improved water and stress corrosion cracking caused by use in wet environments. Diamond Chain products continually prove themselves to be the most reliable roller chain able to stand up to the strenuous conditions of the oil and gas industry which means longer chain life and increased up-time and production.

CHAIN COMPONENTS

ROLLER LINKS

Standard for all sizes of roller chains, they are furnished as complete roller link assemblies. The two bushings are press-fit in each of the link plates.

SLIP-FIT CENTER PLATES

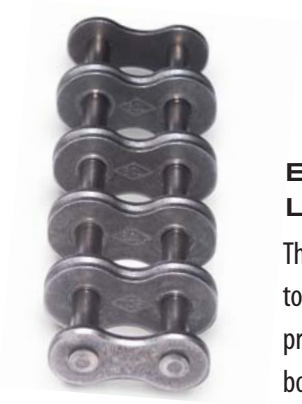
Slip-fit center plate roller chains are intended for drive applications of moderate severity. They are designed to be easily disassembled, shortened, or elongated with minimal effort.

PRESS-FIT CENTER PLATES

Press-fit center plate roller chains are intended for extreme service applications such as power shovels, diesel engines, and oil drilling and pumping units. Roller chains with press-fit construction have significantly greater fatigue strength over slip-fit roller chains due to the rigid support of the pins at each tension point.

FOUR-PITCH PRESS-FIT OFFSET LINK ASSEMBLY

Pins are press-fit in offset link pitch holes. Four-pitch length permits the use of BCL connecting links on either end, giving maximum capacity of chain assembly.



BCL (BUSHED CENTER PLATE LINKS) CONNECTING LINK BUSHED CENTER PLATE LINK

The BCL connecting link is constructed using center plate assemblies consisting of two center plates securely held together with two press-fit bushings. These bushings, hardened to resists wear, have inside diameters that are precision ground after assembly in the center plates. The grinding tolerances are extremely close with respect to both the pitch dimension and the hole size to assure a close sliding-fit on the chain pins.

These features reduce the possibility of any relative motion between pins and bushings assuring equal distribution of chain load across pins. Diamond BCL connecting links are available for 5/8" through 2 ½" pitch standard series multi strand roller chain.

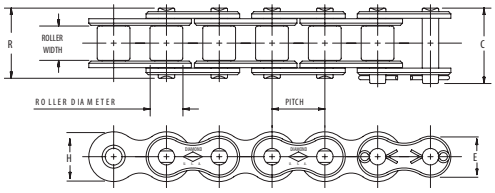
OIL FIELD ROLLER CHAIN

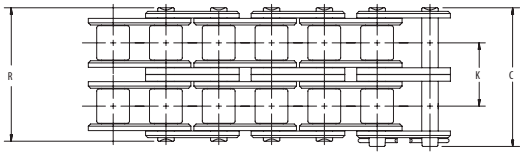
CHAIN DESCRIPTIONS AND DIMENSIONS

Roller chains used in the oil and gas industry are subjected to some of the greatest operating loads and harshest environments. Diamond Chain produces its oil and gas roller chain to meet or exceed the standards set by the American Petroleum Institute's (API) Specification 7F*. It is highly recommended that multi strand chains used in oil field operations be constructed with press-fit center plates.

American Petroleum Institute

7F-0003





Dimensions in Inches

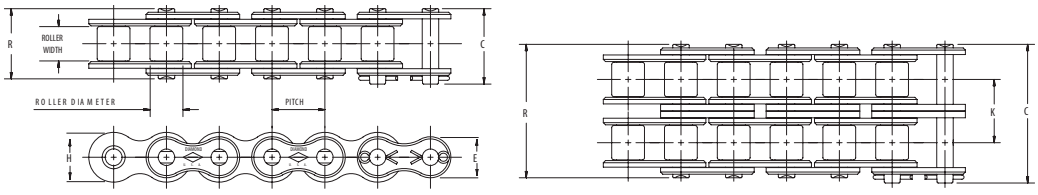
ANSI NUMBER	PITCH INCHES	ROLLER WIDTH	ROLLER DIAMETER	PIN DIAMETER	LINK PLATE THICKNESS	C	R	K	POUNDS PER FOOT	AVERAGE TENSILE STRENGTH	E*	H*
60	3/4	1/2	.469	.234	.044	1.11	1.04	–	.99	8500	0.615	0.713
60H	3/4	1/2	.469	.234	.125	1.24	1.17	–	1.18	8500	0.615	0.713
60-2	3/4	1/2	.469	.234	.094	2.01	1.94	.897	1.95	17000	0.615	0.713
60H-2	3/4	1/2	.469	.234	.125	2.27	2.20	1.028	2.33	17000	0.615	0.713
60-3	3/4	1/2	.469	.234	.094	2.91	2.84	.897	2.88	25500	0.615	0.713
60H-3	3/4	1/2	.469	.234	.125	3.31	3.24	1.028	3.47	25500	0.615	0.713
60-4	3/4	1/2	.469	.234	.094	3.81	3.74	.897	3.90	34000	0.615	0.713
60H-4	3/4	1/2	.469	.234	.125	4.34	4.26	1.028	4.61	34000	0.615	0.713
60-5	3/4	1/2	.469	.234	.094	4.71	4.64	.897	4.97	42500	0.615	0.713
60-6	3/4	1/2	.469	.234	.094	5.60	5.53	.897	5.96	51000	0.615	0.713
60-8	3/4	1/2	.469	.234	.094	7.40	7.33	.897	7.94	68000	0.615	0.713
60-10	3/4	1/2	.469	.234	.094	9.19	9.12	.897	9.92	85000	0.615	0.713
80	1	5/8	.625	.312	.125	1.44	1.32	–	1.73	14500	0.820	0.950
80H	1	5/8	.625	.312	.156	1.57	1.45	–	2.02	14500	0.820	0.950
80-2	1	5/8	.625	.312	.125	2.59	2.47	1.153	3.37	29000	0.820	0.950
80H-2	1	5/8	.625	.312	.156	2.84	2.72	1.283	3.93	29000	0.820	0.950
80-3	1	5/8	.625	.312	.125	3.74	3.62	1.153	5.02	43500	0.820	0.950
80H-3	1	5/8	.625	.312	.156	4.14	4.02	1.283	5.92	43500	0.820	0.950
80-4	1	5/8	.625	.312	.125	4.90	4.79	1.153	6.73	58000	0.820	0.950
80H-4	1	5/8	.625	.312	.156	5.42	5.30	1.283	7.87	58000	0.820	0.950
80-5	1	5/8	.625	.312	.125	6.06	5.94	1.153	8.40	72500	0.820	0.950
80-6	1	5/8	.625	.312	.125	7.22	7.10	1.153	10.07	87000	0.820	0.950
80-8	1	5/8	.625	.312	.125	9.53	9.40	1.153	13.41	116000	0.820	0.950

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.

Chart continues on next page.

* Maximum values are shown.

OIL FIELD ROLLER CHAIN



Dimensions in Inches

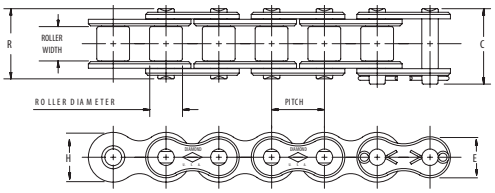
ANSI NUMBER	PITCH INCHES	ROLLER WIDTH	ROLLER DIAMETER	PIN DIAMETER	LINK PLATE THICKNESS	C	R	K	POUNDS PER FOOT	AVERAGE TENSILE STRENGTH	E*	H*
100	1 1/4	3/4	.750	.375	.156	1.73	1.61	–	2.51	24000	1.025	1.188
100H	1 1/4	3/4	.750	.375	.187	1.86	1.74	–	2.82	24000	1.025	1.188
100-2	1 1/4	3/4	.750	.375	.156	3.14	3.02	1.408	4.91	48000	1.025	1.188
100H-2	1 1/4	3/4	.750	.375	.187	3.41	3.28	1.539	5.58	48000	1.025	1.188
100-3	1 1/4	3/4	.750	.375	.156	4.56	4.43	1.408	7.40	72000	1.025	1.188
100H-3	1 1/4	3/4	.750	.375	.187	4.96	4.82	1.539	8.32	72000	1.025	1.188
100-4	1 1/4	3/4	.750	.375	.156	5.97	5.84	1.408	9.80	96000	1.025	1.188
100H-4	1 1/4	3/4	.750	.375	.187	6.49	6.37	1.539	11.04	96000	1.025	1.188
100-5	1 1/4	3/4	.750	.375	.156	7.38	7.25	1.408	12.20	120000	1.025	1.188
100-6	1 1/4	3/4	.750	.375	.156	8.78	8.66	1.408	14.60	144000	1.025	1.188
100-8	1 1/4	3/4	.750	.375	.156	11.6	11.48	1.408	19.40	192000	1.025	1.188
120	1 1/2	1	.875	.437	.187	2.14	2.00	–	3.69	34000	1.230	1.425
120H	1 1/2	1	.875	.437	.219	2.27	2.13	–	4.08	34000	1.230	1.425
120-2	1 1/2	1	.875	.437	.187	3.93	3.79	1.789	7.35	68000	1.230	1.425
120H-2	1 1/2	1	.875	.437	.219	4.20	4.06	1.924	8.04	68000	1.230	1.425
120-3	1 1/2	1	.875	.437	.187	5.72	5.58	1.789	11.10	102000	1.230	1.425
120H-3	1 1/2	1	.875	.437	.219	6.13	5.99	1.924	11.99	102000	1.230	1.425
120-4	1 1/2	1	.875	.437	.187	7.52	7.38	1.789	14.70	136000	1.230	1.425
120H-4	1 1/2	1	.875	.437	.219	8.06	7.92	1.924	15.94	136000	1.230	1.425
120-5	1 1/2	1	.875	.437	.187	9.31	9.17	1.789	18.43	170000	1.230	1.425
120-6	1 1/2	1	.875	.437	.187	11.10	10.96	1.789	22.11	204000	1.230	1.425
120H-6	1 1/2	1	.875	.437	.219	11.91	11.77	1.924	23.84	204000	1.230	1.425
120-8	1 1/2	1	.875	.437	.187	14.68	14.54	1.789	29.47	272000	1.230	1.425
120-10	1 1/2	1	.875	.437	.187	18.26	18.12	1.789	36.83	340000	1.230	1.425
140	1 3/4	1	1.000	.500	.219	2.31	2.14	–	5.00	46000	1.435	1.663
140H	1 3/4	1	1.000	.500	.250	2.44	2.28	–	5.40	46000	1.435	1.663
140-2	1 3/4	1	1.000	.500	.219	4.24	4.07	1.924	9.65	92000	1.435	1.663
140H-2	1 3/4	1	1.000	.500	.250	4.50	4.34	2.055	10.65	92000	1.435	1.663
140-3	1 3/4	1	1.000	.500	.219	6.16	6.00	1.924	14.30	138000	1.435	1.663
140H-3	1 3/4	1	1.000	.500	.250	6.56	6.39	2.055	15.90	138000	1.435	1.663
140-4	1 3/4	1	1.000	.500	.219	8.09	7.93	1.924	18.95	184000	1.435	1.663
140H-4	1 3/4	1	1.000	.500	.250	8.62	8.45	2.055	21.10	184000	1.435	1.663
140-6	1 3/4	1	1.000	.500	.219	11.94	11.78	1.924	28.25	276000	1.435	1.663
160	2	1 1/4	1.125	.562	.250	2.73	2.54	–	6.35	58000	1.640	1.900
160H	2	1 1/4	1.125	.562	.281	2.86	2.68	–	7.03	58000	1.640	1.900
160-2	2	1 1/4	1.125	.562	.250	5.04	4.85	2.305	12.83	116000	1.640	1.900
160H-2	2	1 1/4	1.125	.562	.281	5.30	5.12	2.436	13.88	116000	1.640	1.900
160-3	2	1 1/4	1.125	.562	.250	7.35	7.16	2.305	19.03	174000	1.640	1.900
160H-3	2	1 1/4	1.125	.562	.281	7.75	7.56	2.436	20.68	174000	1.640	1.900
160-4	2	1 1/4	1.125	.562	.250	9.66	9.47	2.305	25.60	232000	1.640	1.900
160H-4	2	1 1/4	1.125	.562	.281	10.17	10.00	2.436	27.62	232000	1.640	1.900
160-6	2	1 1/4	1.125	.562	.250	14.27	14.09	2.305	37.78	348000	1.640	1.900

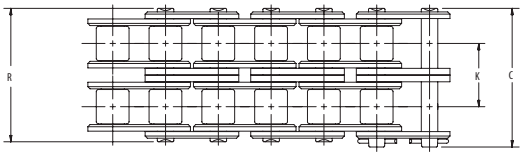
ANSI 60 and larger chains are available as cottered or riveted type design.
Multiple strand chains are available with slip-fit (standard) or press-fit center plates.

* Maximum values are shown.

OIL FIELD ROLLER CHAIN

CHAIN DESCRIPTIONS AND DIMENSIONS



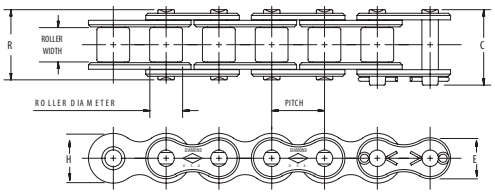


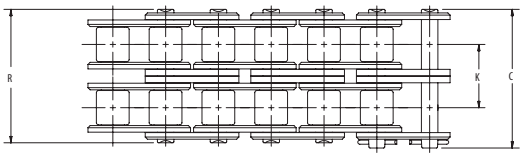
Dimensions in Inches

ANSI NUMBER	PITCH INCHES	ROLLER WIDTH	ROLLER DIAMETER	PIN DIAMETER	LINK PLATE THICKNESS	C	R	K	POUNDS PER FOOT	AVERAGE TENSILE STRENGTH	E	H
180	2 1/4	1 13/32	1.406	.687	.281	3.15	2.88	–	9.06	76000	1.845	2.138
180H	2 1/4	1 13/32	1.406	.687	.312	3.28	3.01	–	9.59	76000	1.845	2.138
180-2	2 1/4	1 13/32	1.406	.687	.281	5.75	5.48	2.592	17.67	152000	1.845	2.138
180H-2	2 1/4	1 13/32	1.406	.687	.312	6.00	5.73	2.723	18.86	152000	1.845	2.138
180-3	2 1/4	1 13/32	1.406	.687	.281	8.34	8.07	2.592	26.20	228000	1.845	2.138
180H-3	2 1/4	1 13/32	1.406	.687	.312	8.73	8.46	2.723	28.14	228000	1.845	2.138
200	2 1/2	1 1/2	1.562	.781	.312	3.44	3.12	–	10.65	95000	2.050	2.375
200H	2 1/2	1 1/2	1.562	.781	.375	3.71	3.39	–	13.38	110000	2.050	2.375
200-2	2 1/2	1 1/2	1.562	.781	.312	6.26	5.94	2.817	21.50	190000	2.050	2.375
200H-2	2 1/2	1 1/2	1.562	.781	.375	6.79	6.48	3.083	26.38	220000	2.050	2.375
200-3	2 1/2	1 1/2	1.562	.781	.312	9.08	8.76	2.817	32.30	285000	2.050	2.375
200H-3	2 1/2	1 1/2	1.562	.781	.375	9.88	9.56	3.083	40.85	330000	2.050	2.375
200-4	2 1/2	1 1/2	1.562	.781	.312	11.90	11.58	2.817	42.90	380000	2.050	2.375
200-6	2 1/2	1 1/2	1.562	.781	.312	17.52	17.21	2.817	64.50	570000	2.050	2.375
240	3	1 7/8	1.875	.937	.375	4.32	3.83	–	17.03	157600	2.422	2.806
240H	3	1 7/8	1.875	.937	.500	4.85	4.35	–	21.08	157600	2.422	2.806
240-2	3	1 7/8	1.875	.937	.375	7.77	7.27	3.458	33.44	315200	2.422	2.806
240-3	3	1 7/8	1.875	.937	.375	11.23	10.73	3.458	49.77	472800	2.422	2.806

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.

In addition to the core line of oil and gas roller chain, the Diamond Chain Company produces several specialty roller chains for oil and gas applications.

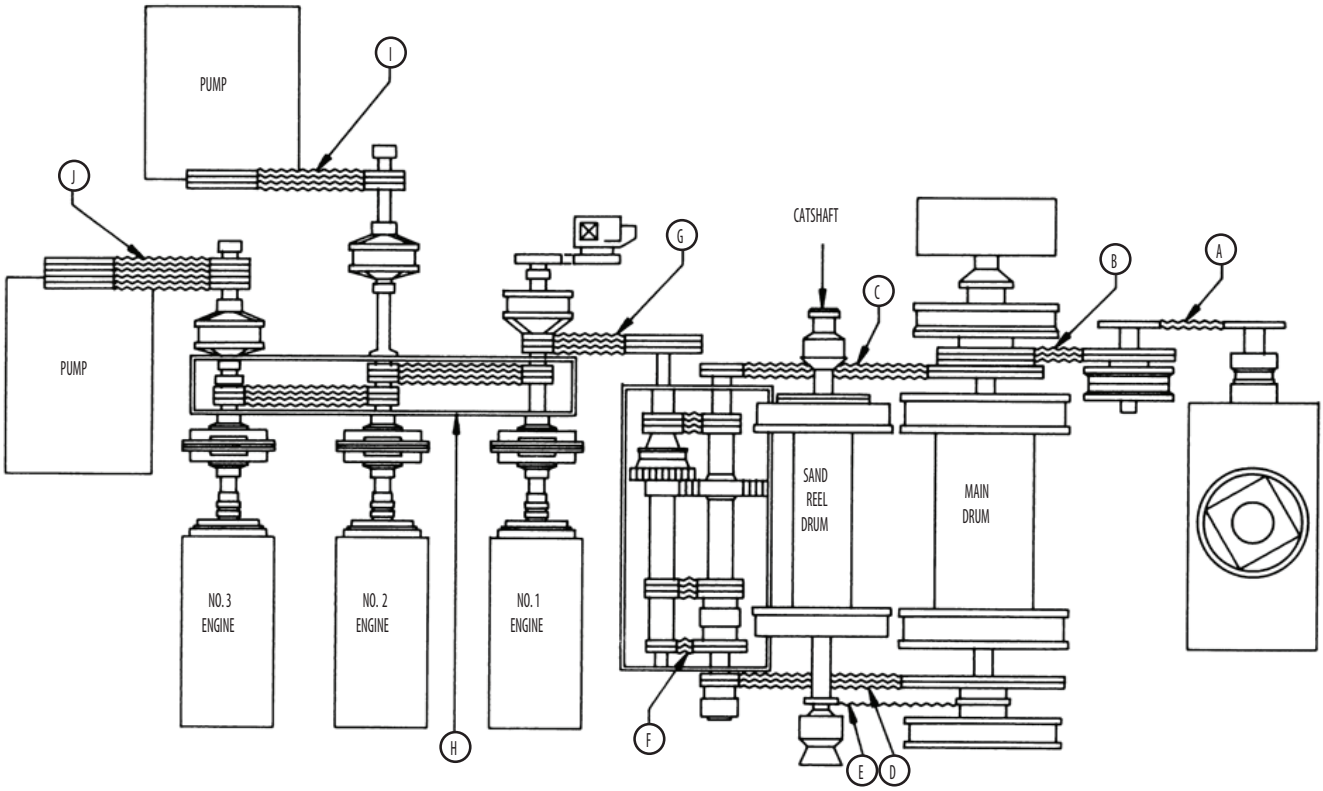




Dimensions in Inches

ANSI NUMBER	PITCH INCHES	ROLLER WIDTH	ROLLER DIAMETER	PIN DIAMETER	LINK PLATE THICKNESS	C	R	K	POUNDS PER FOOT	AVERAGE TENSILE STRENGTH
472	1 1/2	3/4	.875	.437	.187	1.86	1.72	–	3.40	34000
472-2	1 1/2	3/4	.875	.437	.187	3.45	3.30	1.546	6.76	68000
472-3	1 1/2	3/4	.875	.437	.187	5.00	4.85	1.546	10.08	102000
472-4	1 1/2	3/4	.875	.437	.187	6.55	6.41	1.546	13.40	136000
264	2 1/2	1 1/2	1.562	.875	.375	3.71	3.39	–	13.68	148500
264-3	2 1/2	1 1/2	1.562	.875	.375	9.88	9.56	3.083	40.92	445500

OIL FIELD ROLLER CHAIN



CHAIN DRIVE	RIG HORSEPOWER 4000	3000	2000	1500	1000	750	500
A. ROTARY TABLE	160-2	160-2 200H-1	160-2	160-2 140-2	140-2 160-1	140-2 160-1	140-1 120-1
B. ROTARY COUNTERSHAFT	160-2	160-2 200H-1	160-2	160-2 140-2	140-2 160-1	140-2 160-1	140-1 120-1
C. HIGH DRUM	240-3	200H-3	160-4	160-3	140-3 160-2	160-2 140-2	120-3 140-2
D. LOW DRUM	240-3	200H-3	160-4	160-3	140-3 160-2	160-2 140-3	120-3 140-2
E. CATSHAFT	160-2	160-2 200H-1	160-2	160-1 140-2	160-1 140-2	160-1 140-2	140-1 120-1
F. TRANSMISSION	140-8	160-4 200H-3	160-4 160-3	160-3	160-2 140-3	140-2	120-2 100-3
G. DRAWWORKS INPUT	140-8	120-8	120-6	120-4	120-3 120-4	100-4	100-3 100-4
H. COMPOUND	140-8	120-8	120-6	120-4	120-3 120-4	100-4	100-3
I. & J. MUD PUMP DRIVES	140-8	120-8	120-8 120-6	120-6 120-4	120-4 120-3	100-6 100-4	100-4 100-3

Notes

Notes

DIAMOND® CHAIN COMPANY

Americas

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