

DIAMOND[®]
DIAMOND CHAIN COMPANY

SAPPHIRE[®]
DIAMOND CHAIN COMPANY



CORROSION & SPECIAL FINISH 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's trade mark as it symbolizes 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. From industry launch to industry leader, Diamond chain is the most trusted roller chain when performance matters most.

CORROSION AND MOISTURE RESISTANT ROLLER CHAIN

In addition to Diamond Chain's full assortment of carbon steel roller chain, special chain substrates and finishes are available for humid and corrosive manufacturing environments and those locations that require frequent wash downs.

For corrosion or moisture resistant needs, consider Diamond series nickel-plated, ACE® (anti-corrosion exterior), and stainless steel chain product solutions or Sapphire series nickel-plated, Rust-Buster, and stainless steel chains.

NICKEL-PLATED CHAIN

For humid work environments, or environments where the chain will be regularly exposed to moisture, consider Diamond Chain's nickel-plated roller chains available in both the Diamond and Sapphire product series. Diamond's electro-less plating process virtually eliminates the potential for stress cracking by ensuring complete and consistent coverage of component parts for superior protection against internal red oxidation.

Diamond's rust resistant roller chains have the same power transmitting capabilities of carbon steel chain.

DIAMOND ACE®

Diamond Chain's ACE® product is ideal for environments that require additional moisture and corrosion protection versus standard nickel-plated product. The ACE protective coating, a specially formulated zinc-nickel alloy and non-hexavalent chromium coating, in combination with a specialized lubricant provide multiple levels of protection for the base metal, ensuring maximum resistance to red oxidation.

Diamond ACE (anti-corrosion exterior) roller chain offers both high strength and high horsepower transmitting capacity, along with superior wear life.

STAINLESS STEEL CHAIN

When applications require frequent wash downs or are regularly exposed to caustic cleaning solutions, Diamond Chain recommends stainless steel roller chain. Available in both Diamond AP series, 300 series, 400 series, and 600 series stainless steel or Sapphire 300 series stainless steel. Diamond offers an infinite variety of substrates and attachments.

SAPPHIRE RUST-BUSTER

Ideal for both humid and corrosive environments, the Sapphire Rust-Buster series features a nickel-plating with an additional sacrificial surface coating to resist failure due to red oxidation.

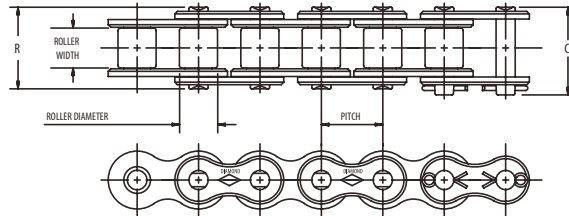
DIAMOND®

NICKEL – PLATED CHAIN

Diamond Chain produces a full line of nickel-plated roller chains for a variety of uses in environments where the chains are exposed to moisture. Common uses include applications exposed to the weather, high humidity, or those on machines that are frequently washed down with water.

Diamond nickel-plated chain provides superior protection from the elements, greatly extending the life of the base chain when operating in wet conditions. Each individual component of Diamond nickel-plated chain is plated before assembly to ensure full coverage and plate depth.

SINGLE PITCH DRIVE CHAINS

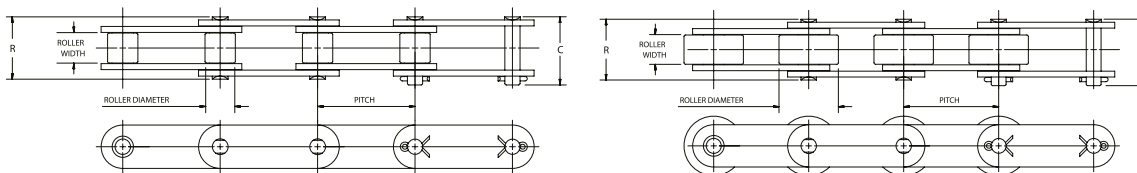


Dimensions in Inches

ASME/ANSI Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Pounds Per Foot	Average Tensile Strength
25NP	1/4	1/8	*.130	0.090	0.030	0.37	0.34	0.085	875
35NP	3/8	3/16	*.200	0.141	0.050	0.56	0.50	0.220	2100
40NP	1/2	5/16	0.312	0.156	0.060	0.72	0.67	0.420	4000
50NP	5/8	3/8	0.400	0.200	0.080	0.89	0.83	0.680	6600
60NP	3/4	1/2	0.469	0.234	0.094	1.11	1.04	0.970	8500
80NP	1	5/8	0.625	0.312	0.125	1.44	1.32	1.700	14500
100NP	1 1/4	3/4	0.750	0.375	0.156	1.73	1.61	2.500	24000
120NP	1 1/2	1	0.875	0.437	0.187	2.14	2.00	3.700	34000

*Chains are rollerless - dimension shown is bushing diameter.

DOUBLE PITCH DRIVE CHAINS



Dimensions in Inches

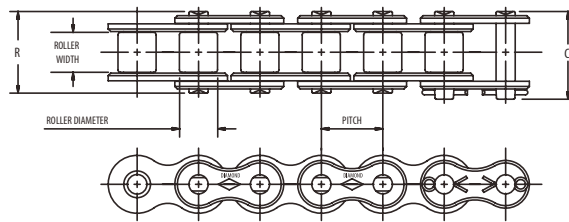
ASME/ANSI Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Pounds Per Foot	Average Tensile Strength
C2040NP	1	1/8	0.312	0.156	0.060	0.76	0.68	0.340	3700
C2042NP	1	3/16	0.625	0.156	0.060	0.76	0.68	0.340	3700
C2050NP	1 1/4	5/16	0.400	0.000	0.080	0.92	0.84	0.580	6100
C2052NP	1 1/4	3/8	0.750	0.200	0.080	0.92	0.84	0.580	6100
C2060HNP	1 1/2	1/7	0.469	0.234	0.125	1.25	1.18	1.050	8500
C2062HNP	1 1/2	1/2	0.875	0.234	0.125	1.25	1.18	1.050	8500
C2080HNP	2	5/8	0.625	0.312	0.156	1.57	1.45	1.400	14500
C20802HNP	2	5/8	1.125	0.312	0.156	1.57	1.45	1.400	14500

The Diamond ACE (anti-corrosion exterior) chain incorporates an electrochemically bonded, protective exterior coating that is applied prior to assembly. Each individual part is treated before assembly using an electrochemical bonding process that provides maximum resistance to iron oxide (red rust) corrosion. Pre-assembly coating ensures all component parts are thoroughly treated, which prevents internal rust from seeping out and causing contamination. Diamond ACE features a zinc-nickel and non-hexavalent chromate coating with a protective lubricant to provide corrosion protection and extended wear resistance. The anti-corrosion exterior is specifically designed to permit sacrificial oxidation of the outer layer, allowing the chain to function without corrosive attack of the base metal.

Independent salt spray and sprocket drive tests have shown that Diamond ACE is superior in balancing corrosion protection and performance.

NOTE: These chains are not intended to resist corrosion from caustic chemicals or acids. Stainless steel chain is recommended for those types of applications. Contact Diamond's application engineers for assistance in selecting the proper chain for your application.

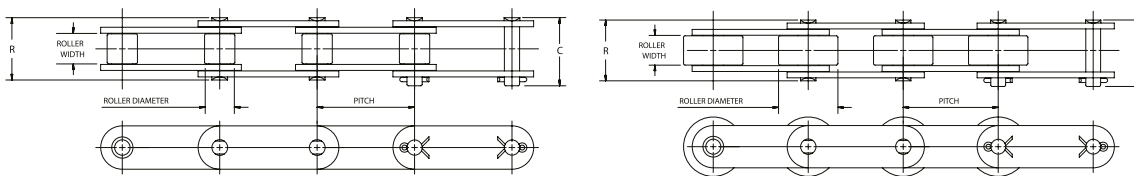
SINGLE PITCH DRIVE CHAINS



Dimensions in Inches

ASME/ANSI Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Pounds Per Foot	Average Tensile Strength
40 ACE	1/2	5/16	0.312	0.156	0.060	0.72	0.67	0.420	4000
50 ACE	5/8	3/8	0.400	0.200	0.080	0.89	0.83	0.680	6600
60 ACE	3/4	1/2	0.469	0.234	0.094	1.11	1.04	0.970	8500
80 ACE	1	5/8	0.625	0.312	0.125	1.44	1.32	1.700	14500

DOUBLE PITCH DRIVE CHAINS



Dimensions in Inches

ASME/ANSI Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Pounds Per Foot	Average Tensile Strength
C2040 ACE	1	5/16	0.312	0.156	0.060	0.76	0.68	0.340	3700
C2042 ACE	1	5/16	0.625	0.156	0.060	0.76	0.68	0.340	3700
C2050 ACE	1 1/4	3/8	0.400	0.200	0.080	0.92	0.84	0.580	6100
C2052 ACE	1 1/4	3/8	0.750	0.200	0.080	0.92	0.84	0.580	6100
C2060H ACE	1 1/2	1/2	0.469	0.234	0.125	1.25	1.18	1.050	8500
C2062H ACE	1 1/2	1/2	0.875	0.234	0.125	1.25	1.18	1.050	8500
C2080H ACE	2	5/8	0.625	0.312	0.156	1.57	1.45	1.400	14500
C2082H ACE	2	5/8	1.125	0.312	0.156	1.57	1.45	1.400	14500

NOTE: For sizes not listed, contact Diamond for availability on a made-to-order basis.



STAINLESS STEEL CHAIN

Diamond produces a wide range of single-pitch and double-pitch stainless steel conveyor chains. These chains are offered in four different stainless steel series to best suit your needs: AP series, 300 series, 400 series, and 600 series.

AP SERIES STAINLESS STEEL CHAIN

These chains are assembled using 300 series link plates, bushings, and rollers along with a precipitation-hardened stainless steel pin. This combination increases the wear life of the chain. AP stainless steel chains are well suited for food processing and are approved by the FDA.

300 SERIES STAINLESS STEEL CHAIN

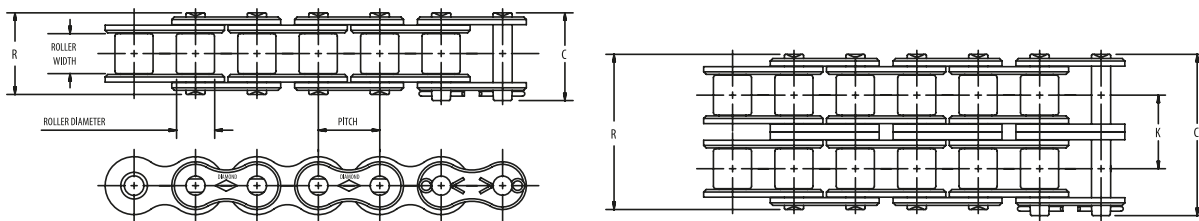
These chains are assembled using only 300 series components. They have excellent corrosion resistance and very low magnetic permeability. The 300 series chain is a “non-sparking” chain.

400 SERIES STAINLESS STEEL CHAIN

These chains are manufactured using 300 series link plates but have pins, bushings, and rollers that are produced from 400 series heat treated stainless steel. This combination significantly increases wear resistance over those that are constructed using only 300 series stainless steel components.

600 SERIES STAINLESS STEEL CHAIN

These chains are assembled using 300 series link plates with pins, bushings, and rollers made from 600 series precipitation-hardened stainless steel.



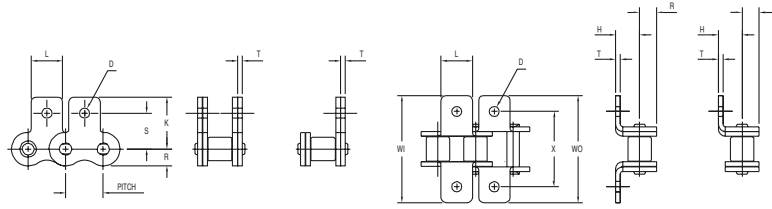
Dimensions in Inches

ASME/ANSI Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	K	Pounds Per Foot	Average Tensile Strength
47SS	.1475	0.072	*.090	0.062	0.015	0.25	0.22	.....	0.035	180
25SS	1/4	1/8	*.130	0.090	0.030	0.37	0.34	.....	0.084	700
25-2SS	1/4	1/8	*.130	0.090	0.030	0.63	0.59	0.252	0.163	1400
35SS	3/8	3/16	*.200	0.141	0.050	0.56	0.50	.....	0.210	1700
40SS	1/2	5/16	0.312	0.156	0.060	0.72	0.67	.....	0.410	3000
40-2SS	1/2	5/16	0.312	0.156	0.060	1.29	1.24	0.566	0.800	6000
41SS	1/2	1/4	0.306	0.141	0.050	0.65	0.57	.....	0.280	1700
50SS	5/8	3/8	0.400	0.200	0.080	0.89	0.83	.....	0.680	4700
50-2SS	5/8	3/8	0.4	0.200	0.080	1.60	1.55	0.713	1.320	9400
60SS	3/4	1/2	0.469	0.234	0.094	1.11	1.04	.....	1.000	6750
60-2SS	3/4	1/2	0.469	0.234	0.094	2.01	1.94	0.897	1.950	13500
80SS	1	5/6	0.625	0.312	0.125	1.44	1.32	.....	1.690	12000

*Chains are rollerless - dimension shown is bushing diameter.

STANDARD STRAIGHT AND BENT ATTACHMENT STAINLESS STEEL CHAIN

Others	Diamond
M-35, SA1	S1 (one hole)
M-1, SK1	S2 (one hole)



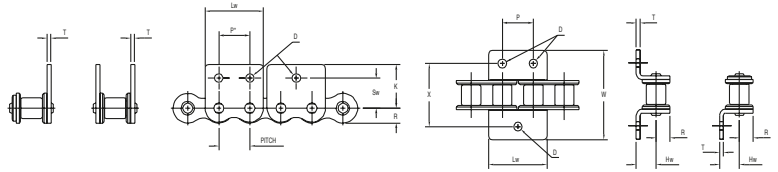
Others	Diamond
A1	B1 (one hole)
K1	B2 (one hole)

Dimensions in Inches

Diamond Number	Pitch Inches	D	H	K	L	R Max.	S	T	WI	WO	X
25SS	.250	.125	.180	.451	.218	.119	.308	.030	.781	.843	.562
35SS	.375	.102	.250	.577	.312	.178	.387	.050	1.125	1.125	.750
40SS	.500	.141	.312	.684	.375	.238	.489	.060	1.390	1.390	1.000
41SS	.500	.141	.282	.698	.375	.192	.482	.050	1.375	1.375	.937
50SS	.625	.203	.406	.895	.500	.297	.618	.080	1.812	1.812	1.250
60SS	.750	.203	.478	1.038	.625	.356	.716	.094	2.135	2.135	1.500
80SS	1.000	.266	.625	1.339	.750	.475	.968	.125	2.750	2.750	2.000

Note: Above attachments available for multiple strand chain.

WIDE CONTOUR STRAIGHT AND BENT ATTACHMENT STAINLESS STEEL CHAIN



Others	Diamond	Others	Diamond
WM-35	WCS1 (one hole)	WM-1	WCS2 (one hole)
WM-35-2	WCS1 (two holes)	WM-2	WCS2 (two holes)

Others	Diamond	Others	Diamond
WA-1	WCB1 (one hole)	WK-1	WCB2 (one hole)
WA-2, A2	WCB1 (two holes)	WK-2, K2	WCB2 (two holes)

Dimensions in Inches

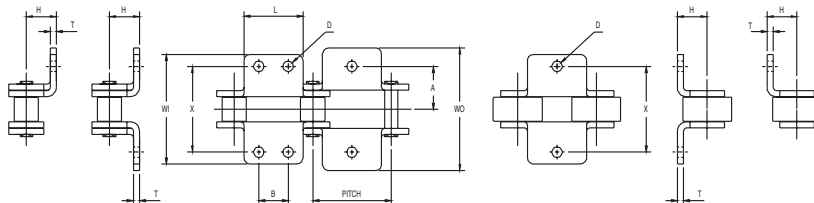
Diamond Number	Pitch Inches	D	Hw	K	Lw	P	R Max.	Sw	T	W	X
35SS	.375	.125	.262	.577	.727	.375	.178	.399	.050	1.105	.750
40SS	.500	.141	.326	.684	.946	.500	.238	.503	.060	1.366	1.000
50SS	.625	.203	.406	.895	1.211	.625	.297	.618	.080	1.807	1.250
60SS	.750	.203	.478	1.038	1.420	.750	.356	.716	.094	2.135	1.500
80SS	1.000	.266	.625	1.339	1.885	1.000	.475	.967	.125	2.750	2.000

Contact Diamond Chain for available attachments on roller links (wide contour).

Note: Above attachments available for multiple strand chain.

DOUBLE-PITCH OVAL CONTOUR STAINLESS STEEL CONVEYOR CHAIN BENT ATTACHMENTS OVAL CONTOUR LINK PLATES / STANDARD AND OVERSIZED ROLLER

Others	Diamond
A1	B1 (one hole)
A2	B1 (two holes)



Others	Diamond
K1	B2 (one hole)
K2	B2 (two holes)

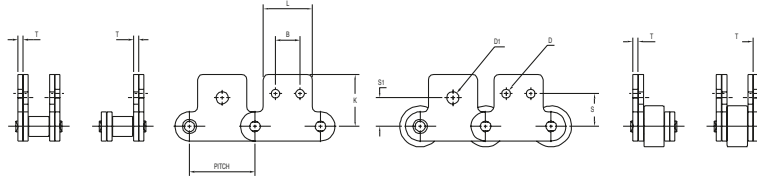
Dimensions in Inches

Standard Roller		Pitch Inches	A	B	D	H	L	T	WI	WO	X	Large Roller	
Diamond Number	Roller Diameter											Diamond Number	Roller Diameter
C2040SS	.312	1.00	.500	.375	.141	.355	.750	.060	1.350	1.488	1.000	C2042SS	.625
C2050SS	.400	1.25	.625	.469	.203	.453	.937	.080	1.692	1.863	1.250	C2052SS	.750
C2060SS	.469	1.50	.844	.562	.203	.561	1.125	.094	2.115	2.317	1.688	C2062SS	.875
C2080SS	.625	2.00	1.094	.750	.266	.739	1.500	.125	2.760	3.028	2.188	C2082SS	1.125

DIAMOND®

DOUBLE-PITCH OVAL CONTOUR STAINLESS STEEL CONVEYOR CHAIN STRAIGHT ATTACHMENTS (OVAL CONTOUR LINK PLATES / STANDARD AND OVERSIZED ROLLER)

Others	Diamond
M-35, SA1	S1 (one hole)
M-35-2, SA2	S1 (two holes)

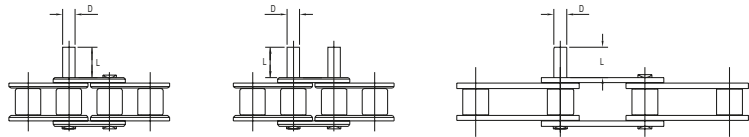


Others	Diamond
M-1, SK1	S2 (one hole)
M-2, SK2	S2 (two holes)

Standard Roller		Pitch Inches	2 Attachment Holes			K	L	T	1 Attachment Hole		Large Roller	
Diamond Number	Roller Diameter		B	D	S				D1	S1	Diamond Number	Roller Diameter
C2040SS	.312	1.00	.375	.141	.531	.773	.750	.060	.188	.438	C2042SS	.625
C2050SS	.400	1.25	.469	.203	.625	.971	.937	.080	.250	.563	C2052SS	.750
C2060SS	.469	1.50	.562	.203	.750	1.203	1.125	.094	.329	.688	C2062SS	.875
C2080SS	.625	2.00	.750	.266	1.000	1.590	1.500	.125	.375	.875	C2082SS	1.125

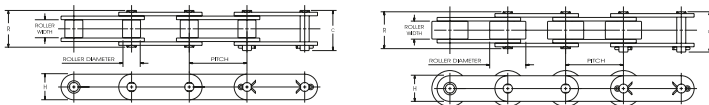
STANDARD EXTENDED PIN STAINLESS STEEL CHAIN

Others	Diamond
D1	E1 (one extended pin)
D3	E2 (two extended pins)



Diamond Number	Pitch Inches	D ± .0005"	L ± .010"
35SS	.375	.141	.375
40SS	.500	.156	.383
41SS	.500	.141	.375
50SS	.625	.200	.469
60SS	.750	.234	.562
80SS	1.000	.312	.750

Diamond Number	Pitch Inches	D ± .0005"	L ± .010"
C2040SS	1.00	.156	.375
C2042SS	1.00	.156	.375
C2050SS	1.25	.200	.469
C2052SS	1.25	.200	.469
C2060SS	1.50	.234	.562
C2062SS	1.50	.234	.562
C2080SS	2.00	.312	.750
C2082SS	2.00	.312	.750



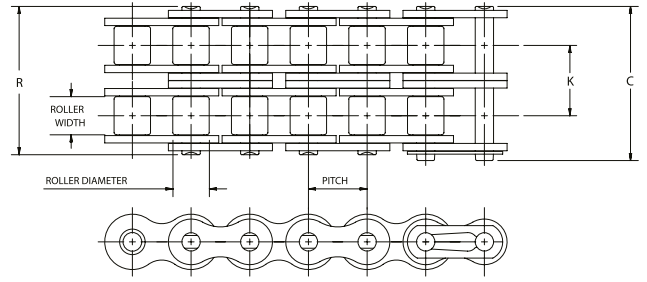
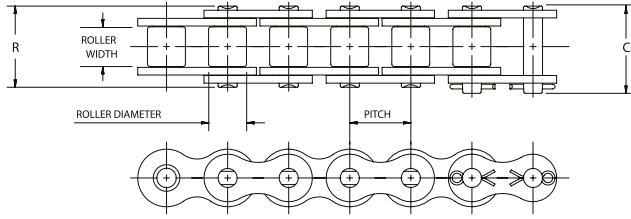
DOUBLE-PITCH OVAL CONTOUR STAINLESS STEEL CONVEYOR CHAIN STANDARD DIAMETER ROLLER

Diamond Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Weight Per Foot	Average Tensile Strength
C2040SS	1	5/16	.312	.156	.060	.76	.68	.34	3000
C2050SS	1 1/4	3/8	.400	.200	.080	.92	.84	.56	4700
C2060SS	1 1/2	1/2	.469	.234	.094	1.11	1.05	.81	6750
C2080SS	2	5/8	.625	.312	.125	1.44	1.32	1.40	12000

DOUBLE-PITCH OVAL CONTOUR STAINLESS STEEL CONVEYOR CHAIN LARGE DIAMETER ROLLER

Diamond Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Weight Per Foot	Average Tensile Strength
C2042SS	1	5/16	.625	.156	.060	.76	.68	.55	3000
C2052SS	1 1/4	3/8	.750	.200	.080	.92	.84	.86	4700
C2062SS	1 1/2	1/2	.875	.234	.094	1.11	1.05	1.27	6750
C2082SS	2	5/8	1.125	.312	.125	1.44	1.32	2.06	12000

SAPPHIRE®



NICKEL-PLATED CHAIN

Dimensions in Inches

Sapphire Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	K	Weight per foot	Minimum Tensile Strength
25NP	1/4	1/4	*.130	0.090	0.030	0.37	0.34	....	0.084	780
35NP	3/8	1/4	*.200	0.141	0.050	0.56	0.5	....	0.220	1760
40NP	1/2	5/16	0.312	0.156	0.060	0.72	0.67	....	0.420	3125
40-2NP	1/2	5/16	0.342	0.156	0.060	1.29	1.24	0.566	0.800	6250
41NP	1/2	1/4	0.306	0.141	0.050	0.65	0.57	....	0.260	1500
50NP	5/8	3/8	0.400	0.200	0.080	0.89	0.83	....	0.680	4880
50-2NP	5/8	3/8	0.400	0.200	0.080	1.60	1.55	0.713	1.320	9760
60NP	3/4	1/2	0.469	0.234	0.094	1.11	1.04	....	0.990	7030
80NP	1	5/8	0.625	0.312	0.125	1.44	1.32	....	1.725	12500

*Chains are rollerless -- dimension shown is bushing diameter.

RUST-BUSTER CHAIN

Dimensions in Inches

Sapphire Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	Weight per foot	Minimum Tensile Strength
40RB	1/2	5/16	0.312	0.156	0.060	0.72	0.67	0.420	3125
50RB	5/8	3/8	0.400	0.200	0.080	0.89	0.83	0.680	4880
60RB	3/4	1/2	0.469	0.234	0.094	1.11	1.04	0.990	7030
80RB	1	5/8	0.625	0.312	0.125	1.44	1.32	1.725	12500
100RB	1 1/4	3/4	0.750	0.375	0.156	1.73	1.61	2.510	19550

STAINLESS STEEL CHAIN

Dimensions in Inches

Sapphire Number	Pitch Inches	Roller Width	Roller Diameter	Pin Diameter	Link Plate Thickness	C	R	K	Weight per foot	Minimum Tensile Strength
25SS	1/4	1/4	*.130	0.090	0.030	0.37	0.34	....	0.084	540
35SS	3/8	1/4	*.200	0.141	0.050	0.56	0.5	....	0.225	1256
40SS	1/2	5/16	0.312	0.156	0.060	0.72	0.67	....	0.420	2203
40-2SS	1/2	5/16	0.342	0.156	0.060	1.29	1.24	0.566	0.826	4400
50SS	5/8	3/8	0.400	0.200	0.080	0.89	0.83	....	0.680	3525
50-2SS	5/8	3/8	0.400	0.200	0.080	1.60	1.55	0.713	1.400	7050
60SS	3/4	1/2	0.469	0.234	0.094	1.11	1.04	....	0.990	5070
60-2SS	3/4	1/2	0.469	0.234	0.094	2.01	1.94	0.897	1.936	10100
80SS	1	5/8	0.625	0.312	0.125	1.44	1.32	....	1.725	9035

*Chains are rollerless -- dimension shown is bushing diameter.

Sapphire extended pitch products are available with a nickel or Rust-Buster finish and in stainless steel. Please contact Diamond Chain at 1-800-872-4246 for more information.

CORROSION RESISTANCE OF STAINLESS STEEL CHAINS

TR = Total Resistance

SR = Satisfactory Resistance

PR = Partial Resistance

NR = Not Recommended

	AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE		AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE
Acetic Acid					Bichloride of Mercury				
Dilute 70°F	TR	TR	PR	NR	less than 0.1%	TR	TR	----	NR
Dilute Boiling	TR	PR	PR	NR	greater than 0.7%-cold	SR	SR	----	NR
Conc. 70°F	TR	TR	PR	NR	greater than 0.7%-hot	PR	PR	----	----
Conc. Boiling	PR	SR	PR	NR	Calcium Hypochloride	PR	PR	PR	NR
Acetic Anhydride	TR	TR	SR	NR	Blood (Meat Juices)	TR	TR	TR	NR
Acetic Vapors	TR	PR	----	NR	Blue Vitriol (Copper Sulfate)				
Acetone	TR	TR	SR	NR	5%-70°F	TR	TR	TR	NR
Alcohol (Methyl, Ethyl, Propyl, and Butyl)					Saturated Solution-Boiling	TR	TR	----	NR
Aluminum Acetate	TR	TR	TR	NR	Borax	TR	TR	TR	NR
Aluminum Chloride	TR	TR	----	NR	Boric Acid	TR	TR	TR	NR
Aluminum Sulfate	PR	PR	PR	NR	Bromine	NR	NR	NR	NR
70°F	SR	TR	----	NR	Buttermilk	TR	TR	TR	NR
Boiling	SR	SR	----	NR	Butyric Acid	SR	TR	TR	NR
Aluminum Potassium Sulfate					Calcium Chloride (Alkaline)				
70°F	TR	TR	PR	NR	Boiling	TR	TR	----	NR
Boiling	SR	SR	----	NR	Boiling, 300 lbs. Pressure	NR	PR	----	NR
Ammonia					Calcium Carbonate	TR	TR	TR	NR
(Ammonium Hydroxide)	TR	TR	TR	NR	Calcium Oxychloride	PR	PR	----	NR
Ammonium Bicarbonate	TR	TR	TR	NR	Calcium Sulfate	TR	TR	----	NR
Ammonium Chloride					Carbolic Acid	TR	TR	TR	NR
70°F	TR	TR	SR	NR	Carbon Disulfide	TR	TR	TR	NR
Boiling	NR	SR	----	NR	Carbon Monoxide	TR	TR	TR	NR
Ammonium Nitrate	TR	TR	TR	NR	Carbon Tetrachloride (Pure)	TR	TR	TR	NR
Ammonium Oxalate	TR	TR	TR	NR	Carnallite (Potassium, Magnesium Chloride)	SR	SR	----	NR
Ammonium Persulfate	TR	TR	----	NR	Caustic Lime, Potash or Soda (Calcium, Potassium, or So- dium Hydroxide), Lye				
Ammonium Sulfate					70°F	TR	TR	TR	NR
70°F	TR	TR	SR	NR	Boiling	SR	SR	SR	NR
plus 0.5% H ₂ SO ₄	TR	TR	----	NR	Cellulose	TR	TR	----	NR
plus 5.0% H ₂ SO ₄	TR	PR	----	NR	Chlorine Gas				
Ammonium Stannichloride					Dry	NR	PR	PR	NR
70°F	SR	SR	----	NR	Moist	NR	NR	NR	NR
120°F	NR	NR	----	NR	Chlorinated Water	NR	PR	TR	NR
Aniline	TR	TR	TR	NR	Chlorobenzene	TR	TR	----	NR
Aniline Hydrochloride	PR	PR	----	NR	Chloroform	TR	TR	----	NR
Antimony, Molten, 1100°F	NR	NR	NR	NR	Chromic Acid				
Baking Soda					70°F	TR	SR	PR	NR
(Sodium Bicarbonate)	TR	TR	TR	NR	Boiling	PR	PR	----	NR
Barium Carbonate	TR	TR	TR	NR	with SO ₂ , Boiling	NR	NR	NR	NR
Barium Chloride					Chrome Aluminum	TR	TR	----	NR
70°F	TR	TR	SR	NR	Boiling	NR	NR	----	NR
Hot	SR	SR	----	NR	Citric Acid-10%				
Barium Nitrate	TR	TR	----	NR	70°F	TR	TR	TR	NR
Barium Sulfate	TR	TR	----	NR	Boiling	PR	PR	NR	NR
Beer	TR	TR	NR		Cola Syrup	TR	TR	SR	NR
Beet Juice	TR	TR	TR	NR	Copperas (Ferrous Sulfate)	SR	SR	SR	NR
Benzene (Benzol)	TR	TR	TR	NR	Copper Acetate	TR	TR	----	NR
Benzine	TR	TR	TR	NR					
Benzoic Acid	TR	TR	TR	NR					

CORROSION RESISTANCE OF STAINLESS STEEL CHAINS

	AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE		AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE
Copper Carbonate	TR	TR	TR	NR	Lactic Acid				
Copper Chloride					70°F	SR	TR	SR	NR
70°F	PR	PR	PR	NR	150°F	PR	PR	PR	NR
Boiling	NR	NR	NR	NR	Lard TR	TR	----	NR	NR
Copper Cyanide	TR	TR	TR	NR	Lead, Molten, 1200°F	SR	SR	PR	NR
Copper Nitrate	TR	TR	TR	NR	Linseed Oil	SR	TR	SR	NR
Copper Sulfate	TR	TR	TR	NR	Lye (Sodium or Potassium Hydroxide)				
Creosote	TR	TR	TR	NR	70°F	TR	TR	TR	NR
Cyanogen Gas	TR	TR	----	NR	Boiling	SR	SR	SR	NR
Dichloro-ethane (Ethylidene Chloride, Ethylene Chloride, Dutch Liquor)	TR	TR	----	NR	Lysol	TR	TR	PR	NR
Dyewood Liquor	TR	TR	----	NR	Magnesium Chloride				
Epsom Salts (Magnesium Sulfate)	TR	TR	SR	NR	70°F	SR	SR	SR	NR
Ether	TR	TR	TR	NR	Hot	PR	PR	PR	NR
Ferric Hydroxide	TR	TR	TR	NR	Magnesium Oxychloride	PR	PR	----	NR
Ferric Chloride	PR	PR	PR	NR	Magnesium Sulfate (Epsom Salt)	TR	TR	SR	NR
Ferric Nitrate	TR	TR	TR	NR	Malic Acid	TR	TR	SR	NR
Ferric or Ferrous Sulfate	SR	SR	SR	NR	Manganese Chloride	TR	TR	----	NR
Formaldehyde (Formalin)	TR	TR	TR	NR	Marsh Gas (Illuminating Gas)	TR	TR	----	NR
Formic Acid	PR	SR	PR	NR	Mash, Hot	TR	TR	----	NR
Fruit Juices	SR	TR	PR	NR	Mayonnaise	TR	SR	PR	NR
Fuel Oil	TR	TR	----	NR	Mercury	TR	TR	----	NR
Fuel Oil Containing Sulfuric Acid	PR	PR	----	NR	Methyl Aldehyde	TR	TR	----	NR
Gallic Acid	TR	TR	TR	NR	Milk-Sweet or Sour	TR	TR	TR	NR
Gasoline	TR	TR	TR	NR	Mine Water, Acid	TR	TR	TR	NR
Glauber's Salt (Sodium Sulfate)	TR	TR	TR	NR	Mixed Acids				
Glue acidified	SR	SR	----	NR	a. 50% H ₂ SO ₄ , 50% HNO ₃				
Glycerine	TR	TR	TR	NR	70°F	SR	SR	SR	NR
Grape Juice	SR	TR	TR	NR	Boiling	PR	PR	PR	NR
Gypsum (Calcium Sulfate)	TR	TR	----	NR	b. 75% H ₂ SO ₄ , 25% HNO ₃				
Hydrogen Peroxide	SR	SR	SR	NR	70°F	SR	SR	SR	NR
Hydrobromic Acid	PR	PR	PR	NR	Boiling	PR	PR	PR	NR
Hydrochloric Acid (Muriatic)					c. 5% H ₂ SO ₄ , 5% HNO ₃				
70°F	NR	PR	PR	NR	80% H ₂ O				
Boiling	NR	NR	NR	NR	70°F	SR	SR	SR	NR
Fumes-70°F	NR	PR	PR	NR	Boiling	SR	SR	----	NR
Hydrocyanic Acid (Prussic Acid)	TR	TR	PR	NR	d. Chromic and Sulfuric	PR	PR	----	NR
Hydrofluoric Acid Fumes	PR	PR	----	NR	Molasses	TR	TR	----	NR
Hydrafluosilic Acid	PR	PR	----	NR	Mustard (Prepared)	TR	TR	NR	NR
Hydrofluosilic Acid Fumes	NR	NR	NR	NR	Naphtha, Pure or Crude	TR	TR	TR	NR
Hyposulfite of Soda (Hypo, Sodium Thiosulfate)	TR	TR	SR	NR	Nickel Chloride	SR	SR	----	NR
Hydrogen Sulfide					Nickel Sulfate	TR	TR	----	NR
Dry	TR	TR	----	NR	Nitre (Potassium Nitrate)	TR	TR	TR	NR
Moist, H ₂ SO ₄ Present	NR	PR	----	NR	Nitric Acid				
Inks					70°F	SR	TR	TR	NR
Alkaline	TR	TR	----	NR	Concentrated, Boiling	SR	SR	NR	NR
Acid	SR	SR	----	NR	Fuming, Concentrated, Boiling	PR	PR	NR	NR
Iodine					Nitrous Acid	SR	TR	SR	NR
Dry	NR	TR	----	NR	Oleic Acid	TR	SR	SR	NR
Moist	NR	NR	NR	NR	Oils, Mineral or Vegetable				
Iodotorm	TR	TR	----	NR	Refined	TR	TR	TR	NR
Kerosene	TR	TR	TR	NR	Crude	SR	SR	SR	NR
Ketchup	TR	SR	SR	NR	Oxalic Acid	PR	PR	SR	NR
					Paraffin	TR	TR	TR	NR
					Phenol (Carbolic Acid)	TR	TR	TR	NR

CORROSION RESISTANCE OF STAINLESS STEEL CHAINS

Chart continued from previous page.

	AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE		AP & 600 Series Stainless	300 Series Stainless	400 Series Stainless	NP or ACE
Petroleum	TR	TR	TR	NR	Sodium Nitrate (Chili				
Petroleum Ether	TR	TR	TR	NR	Saltpeper, Soda Nitre)	TR	TR	TR	NR
Phosphoric Acid, Technical	TR	SR	PR	NR	Molten, 600°F	SR	SR	----	NR
Boiling Crude	NR	NR	NR	NR	Sodium Peroxide	TR	TR	----	NR
Picric Acid	TR	TR	TR	NR	Sodium Salicylate	TR	TR	TR	NR
Plaster of Paris (Sulfate of					Sodium Sulfate (Glauber's Salt)	TR	TR	TR	NR
Lime, Gypsum)	TR	TR	----	NR	Sodium Sulfide	SR	SR	SR	NR
Potash (Potassium Carbonate)	TR	TR	TR	NR	Sodium Thiosulfate (Hypo)	TR	TR	SR	NR
Potassium Bitartrate	SR	SR	----	NR	Stannic Chloride				
Potassium Bichromate	TR	TR	TR	NR	(Tetrachloride of Tin)	NR	NR	NR	NR
Potassium Bromide	SR	SR	PR	NR	Stannous Chloride	PR	PR	NR	NR
Potassium Chlorate	TR	TR	TR	NR	Starch	TR	TR	----	NR
Potassium Chloride	SR	SR	SR	NR	Strontium Hydroxide	TR	TR	----	NR
Potassium Cyanide	TR	TR	TR	NR	Strontium Nitrate	TR	TR	----	NR
Potassium Hydroxide					Sugar or Cane Juice	TR	TR	----	NR
Boiling	SR	SR	SR	NR	Sulfur, Dry				
Molten, 650°F	NR	NR	NR	NR	Molten, 260°F	TR	TR	----	NR
Potassium Hypochlorite	SR	SR	----	NR	Molten, 750°F	PR	PR	----	NR
Potassium Iodide	TR	TR	----	NR	Sulfur Monochloride				
Potassium Nitrate					(Rubber Vulcanizing)	TR	TR	----	NR
(Nitre, Saltpeper)	TR	TR	TR	NR	Sulfur Dioxide Gas, Moist	NR	SR	----	NR
Potassium Oxylate	TR	TR	SR	NR	Sulfurous Acid Water Solution				
Potassium Permanganate	TR	TR	TR	NR	Atmospheric Pressure	TR	TR	----	NR
Potassium Sulfate	TR	TR	TR	NR	Over 60 lbs. Pressure	PR	PR	----	NR
Potassium Sulfide	TR	TR	----	NR	Sulfuric Acid				
Pyrogallic Acid	TR	TR	TR	NR	70°F	SR	SR	----	NR
Prussic Acid					Boiling	NR	NR	NR	NR
(Hydrocyanic Acid)	TR	TR	PR	NR	Fuming	PR	PR	----	NR
Quinine Sulfate	TR	TR	SR	NR	Vapor (Battery Room)	SR	SR	----	NR
Quinine Bisulfate	SR	SR	PR	NR	Tannic Acid	TR	TR	SR	NR
Rosin, Molten	TR	TR	TR	NR	Tanning Liquor	TR	TR	----	NR
Salt (Sodium Chloride, Salt Brine)					Tartaric Acid	TR	TR	SR	NR
70°F	SR	SR	PR	NR	Tetrachloride of Tin	NR	NR	NR	NR
150°F	SR	SR	PR	NR	Tin, Molten, 1100°F	NR	NR	NR	NR
Sea Water	SR	SR	PR	NR	Trichloroethylene	SR	SR	SR	NR
Sewage, Sulfuric Acid Present	SR	SR	----	NR	Uric Acid	TR	TR	TR	NR
Silver Bromide	SR	SR	SR	NR	Varnish	TR	TR	TR	NR
Silver Nitrate	TR	TR	TR	NR	Vegetables	TR	TR	TR	NR
Soda Ash (Sodium Carbonate)	TR	TR	TR	NR	Vinegar (Acetic Acid)	TR	TR	PR	NR
Sodium Acetate	TR	TR	TR	NR	Whiskey	TR	TR	----	NR
Sodium Bicarbonate (Baking Soda)	TR	TR	TR	NR	Wood Pulp	TR	TR	----	NR
Sodium Bisulfate, Dilute	TR	TR	----	NR	Yeast	TR	TR	----	NR
Sodium Bisulfate	TR	TR	----	NR	Zinc, Molten, 1100°F	NR	NR	NR	NR
Sodium Citrate	TR	TR	TR	NR	Zinc Chloride				
Sodium Chlorate	TR	TR	TR	NR	100°F	TR	TR	PR	NR
Sodium Chloride (Salt, Salt Brine)					Boiling	PR	PR	----	NR
70°F	SR	SR	PR	NR	Zinc Cyanide	TR	TR	----	NR
150°F	SR	SR	PR	NR	Zinc Nitrate	TR	TR	----	NR
Sodium Cyanide	TR	TR	----	NR	Zinc Sulfate (White Vitriol)	SR	TR	TR	NR
Sodium Fluoride	SR	SR	SR	NR					
Sodium Hydroxide									
70°F	TR	TR	TR	NR					
Molten, 600°F	SR	SR	----	NR					
Sodium Hypochlorite	SR	SR	PR	NR					
Slightly Alkaline	TR	TR	----	NR					
Sodium Perchlorate	NR	TR	----	NR					
Sodium Hyposulfite (Hypo)	TR	TR	SR	NR					

NOTES

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