

Anti-Corrosive Heat Resistant Chain

NEPTUNE® CHAIN

NEPTUNE® chain resists corrosion when exposed to harsh outdoor environments, including seawater. The exclusive **NEPTUNE** surface treatment process gives the chain its unique matte grey color and provides a protective finish that is more corrosion resistant than Nickel-Plated chains. **NEPTUNE** chain has the same high maximum allowable load as our standard carbon steel roller chain.

NICKEL-PLATED CHAIN

Nickel-Plated chains provide acceptable performance where equipment must operate in mildly corrosive environments.

600 AS SERIES

AS Series chains are an excellent choice for drives requiring both corrosion resistance and high load capacity. Link plates are made of 304 stainless steel and the round parts are made of hardened 600 series stainless steel. Of all the stainless steel chains offered by U.S. Tsubaki, **AS Series** has the highest load capacity. Use where stainless steel is required by FDA regulations.

304 SS SERIES

SS Series chains are made completely of 304 stainless steel. **SS Series** has an excellent resistance to corrosion & temperature extremes. It is generally considered non-magnetic, although some permeability can be found in these chains. This is caused by the cold working of the components during the manufacturing process. If more complete non-magnetic permeability is required, we suggest our NS Series.

316 NS SERIES

NS Series chains are made completely of 316 stainless steel. It is the most corrosion resistant standard stainless steel chain offered by U.S. Tsubaki. It also has the highest resistance to temperature extremes, and is sometimes referred to as our *non-magnetic series* because of its extremely low magnetic permeability. The load capacity of 316 **NS Series** is equal to that of our 304 SS Series.

POLY-STEEL CHAIN

Poly-Steel chain is made of molded engineered plastic with 304 stainless steel pin links. This combination effectively incorporates the advantages of both materials into one chain. **Poly-Steel** chain from U.S. Tsubaki has superior wear life, excellent corrosion resistance, and requires no lubrication. This design provides a quiet, lightweight chain for economical solutions to difficult application problems.

TITANIUM TI SERIES

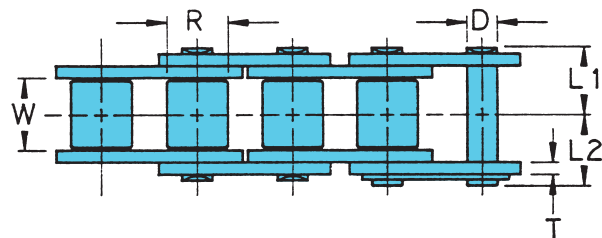
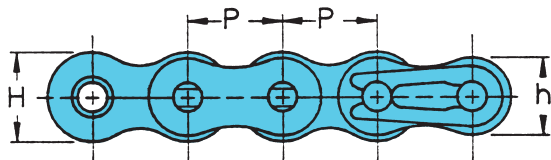
TI Series chains are made completely of Titanium. Available in sizes RS35TI - RS60TI, **TI Series** brings the unique properties of Titanium to roller chain applications, specifically extreme corrosion resistance in a lightweight chain. Available on a made-to-order basis in the same dimensions as the 304 SS Series. Call U.S. Tsubaki for further details.

NEPTUNE[®] Chain

Drive Chain

U.S. TSUBAKI Chain Size	Pitch P	Width Between Roller Link Plates W	Roller Diameter R	Link Plate			Pin			Average Tensile Strength lbs.	Max. Allowable Load lbs.	Approx. Weight lbs./ft.
				T	H	h	L ₁	L ₂	D			
RS35NT	.375	.188	.200	.050	.354	.307	.230	.270	.141	2,530	480	.22
RS40NT	.500	.312	.312	.060	.472	.409	.325	.392	.156	4,290	810	.43
RS50NT	.625	.375	.400	.080	.591	.512	.406	.472	.200	7,050	1,430	.70
RS60NT	.750	.500	.469	.094	.713	.614	.506	.581	.234	9,920	1,980	1.03
RS80NT	1.000	.625	.625	.125	.949	.819	.640	.758	.312	17,640	3,300	1.79
RS100NT	1.250	.750	.750	.156	1.185	1.024	.778	.900	.375	26,460	5,070	2.68

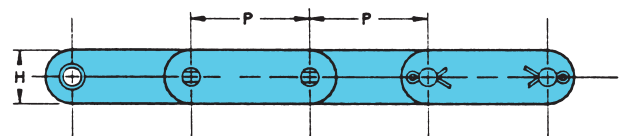
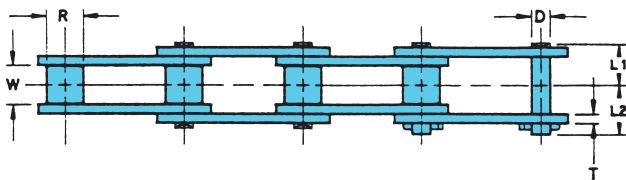
Note: RS40NT ~ RS60NT are provided with clip type connecting links. RS80NT & RS100NT are cottered type. All other links are riveted.



Double Pitch Conveyor Chain

U.S. TSUBAKI Chain Size	Pitch P	Width Between Roller Link Plates W	Roller Diameter R	Pin			Plate		Average Tensile Strength lbs.	Max. Allowable Load lbs.	Approx. Weight lbs./ft.
				L ₁	L ₂	D	H	T			
C2040NT	1.000	.312	.312	.325	.380	.156	.472	.060	3,740	590	.34
C2050NT	1.250	.375	.400	.406	.469	.200	.591	.080	6,170	970	.56
C2060HNT	1.500	.500	.469	.575	.646	.234	.677	.125	9,040	1,410	1.01
C2080HNT	2.000	.625	.625	.720	.823	.312	.906	.156	15,430	2,400	1.78

Note: C2040NT ~ C2060HNT are provided with clip type connecting links. C2080HNT is a cottered type. All other links are riveted.



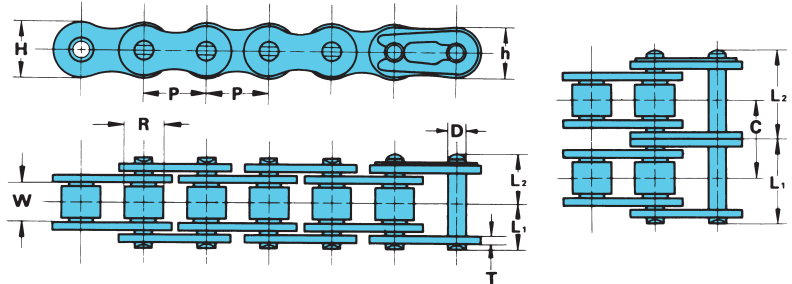
Standard Roller Type

U.S. TSUBAKI ANTI-CORROSIVE / HEAT RESISTANT CHAIN

A - DRIVE CHAINS

Nickel-Plated Chain

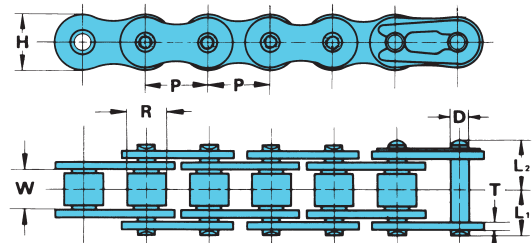
1. RS ROLLER CHAIN



U.S. TSUBAKI Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Pin			Link Plate			Transverse Pitch C	Average Tensile Strength lbs.	Maximum Allowable Load lbs.	Approx. Weight lbs./ft.
				D	L ₁	L ₂	T	H	h				
SINGLE STRAND													
▲ RS25NP ★	.250	.130	.125	.0905	.150	.189	.030	.230	.199	—	1,050	140	.094
▲ RS35NP ★	.375	.200	.188	.141	.230	.270	.050	.354	.307	—	2,500	350	.220
▲ RS41NP ★	.500	.306	.251	.141	.266	.312	.050	.382	.331	—	2,600	370	.270
▲ RS40NP ★	.500	.312	.312	.156	.325	.392	.060	.472	.409	—	4,250	660	.430
▲ RS50NP ★	.625	.400	.375	.200	.406	.472	.080	.591	.512	—	7,050	1,140	.700
▲ RS60NP	.750	.469	.500	.234	.506	.581	.094	.713	.614	—	9,900	1,630	1.030
▲ RS80NP	1.000	.625	.625	.312	.640	.758	.125	.949	.819	—	16,500	2,900	1.790
▲ RS100NP	1.250	.750	.750	.375	.778	.900	.156	1.185	1.024	—	25,500	4,100	2.680
▲ RS120NP	1.500	.875	1.000	.437	.980	1.138	.187	1.425	1.228	—	35,000	5,200	3.980
DOUBLE STRAND													
RS35NP-2	.375	.200	.188	.141	.439	.469	.050	.354	.307	.399	5,000	590	.460
RS40NP-2	.500	.312	.312	.156	.608	.675	.060	.472	.409	.566	8,500	1,120	.850
RS50NP-2	.625	.400	.375	.200	.762	.833	.080	.591	.512	.713	14,100	1,940	1.390
RS60NP-2	.750	.469	.500	.234	.955	1.053	.094	.713	.614	.897	19,800	2,800	2.040
RS80NP-2	1.000	.625	.625	.312	1.217	1.335	.125	.949	.819	1.153	32,500	4,900	3.540
RS100NP-2	1.250	.750	.750	.375	1.484	1.606	.156	1.185	1.024	1.408	51,000	7,000	5.270
RS120NP-2	1.500	.875	1.000	.437	1.874	2.031	.187	1.425	1.228	1.789	70,000	8,900	7.860

Note: ▲ Rollerless (bushing only) ★ Riveted only
 Double strand nickel-plated chains are also available.
 Attachment chain is available. Refer to Section "B" for dimensions.

2. BRITISH STANDARD CHAIN



U.S. TSUBAKI Chain No.	ISO BS/DIN No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Pin			Link Plate Height (Max.) H	Average Tensile Strength lbs.	Bearing Area (Nominal) inch ²	Approx. Weight lbs./ft.
					D	L ₁	L ₂				
RF06BNP ★	06B	.375	.250	.225	.129	.255	.296	.323	2,310	.040	.26
RS08BNP	08B	.500	.335	.305	.175	.329	.395	.465	4,410	.078	.47
RS10BNP	10B	.625	.400	.380	.200	.370	.449	.579	5,840	.104	.64
RS12BNP	12B	.750	.475	.460	.225	.433	.520	.634	7,500	.138	.84
RS16BNP	16B	1.000	.625	.670	.326	.705	.783	.827	16,500	.326	1.82
RS20BNP	20B	1.250	.750	.770	.401	.791	.912	1.024	24,300	.457	2.59
RS24BNP	24B	1.500	1.000	1.000	.576	1.051	1.238	1.315	41,900	.859	5.01
RS28BNP	28B	1.750	1.100	1.220	.626	1.278	1.474	1.433	48,500	1.147	6.35
RS32BNP	32B	2.000	1.150	1.220	.701	1.264	1.484	1.661	63,100	1.257	6.89
RS40BNP	40B	2.500	1.550	1.500	.901	1.545	1.774	2.083	88,200	1.978	10.99

Note: ★ Flat shape link plate Double strand nickel-plated chains are also available.

3. DOUBLE PITCH CHAIN

RS Double Pitch Drive Chain



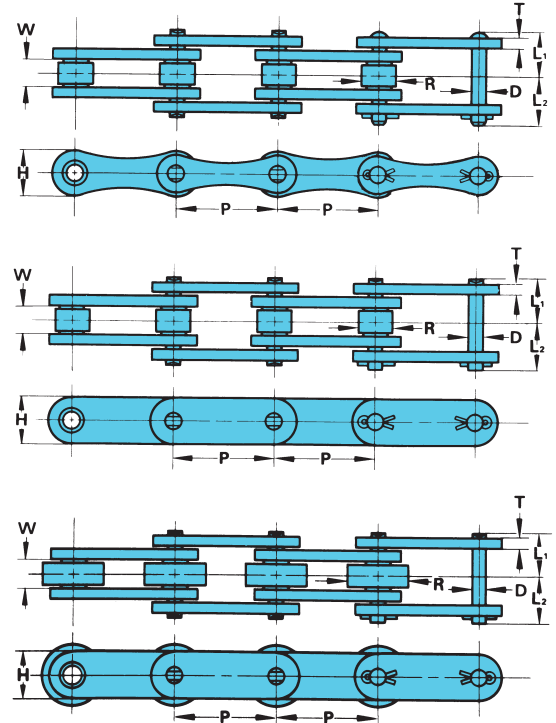
Double Pitch Conveyor Chain



STANDARD ROLLER TYPE



OVERSIZE ROLLER TYPE



U.S. TSUBAKI Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Pin			Link Plate		Average Tensile Strength lbs.	Approx. Weight lbs./ft.	No. of Links per 10 ft.
				D	L ₁	L ₂	T	H			
STANDARD ROLLER TYPE											
A2040NP	1.000	.312	.312	.156	.325	.380	.060	.472	3,700	.26	120
A2050NP	1.250	.400	.375	.200	.406	.469	.080	.591	6,100	.42	96
A2060NP	1.500	.469	.500	.234	.506	.581	.094	.709	8,500	.63	80
A2080NP	2.000	.625	.625	.312	.640	.758	.125	.906	14,500	1.03	60
STANDARD ROLLER TYPE											
C2040NP	1.000	.312	.312	.156	.325	.380	.060	.472	3,700	.34	120
C2050NP	1.250	.400	.375	.200	.406	.469	.080	.591	6,100	.56	96
C2060HNP	1.500	.469	.500	.234	.573	.652	.125	.677	9,000	1.01	80
C2080HNP	2.000	.625	.625	.312	.720	.823	.156	.906	15,400	1.78	60
C2100HNP	2.500	.750	.750	.375	.858	.965	.187	1.126	24,000	2.67	48
OVERSIZE ROLLER TYPE											
C2042NP	1.000	.625	.312	.156	.325	.380	.060	.472	3,700	.58	120
C2052NP	1.250	.750	.375	.200	.406	.469	.080	.591	6,100	.87	96
C2062HNP	1.500	.875	.500	.234	.573	.652	.125	.677	9,000	1.47	80
C2082HNP	2.000	1.125	.625	.312	.720	.823	.156	.906	15,400	2.47	60
C2102HNP	2.500	1.562	.750	.375	.858	.965	.187	1.126	24,000	4.23	48

Note: Attachment chain is available. Refer to Section "B" for dimensions.

Spring clip type connecting links will be provided for A2040NP~A2060NP, C2040NP~C2060HNP and C2042NP~C2062HNP.

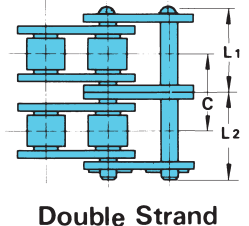
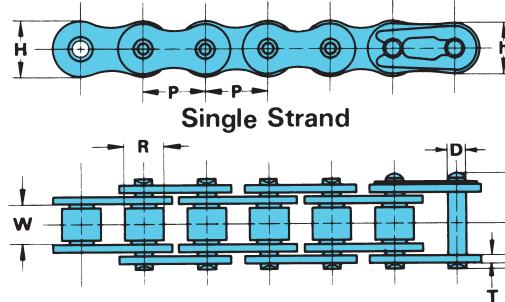
U.S. TSUBAKI ANTI-CORROSIVE / HEAT RESISTANT CHAIN

Stainless Steel Chain

1. RS ROLLER CHAIN



- Available in **304 SS SERIES**
- 316 NS SERIES**
- 600 AS SERIES**



Double Strand

Dimensions in inches

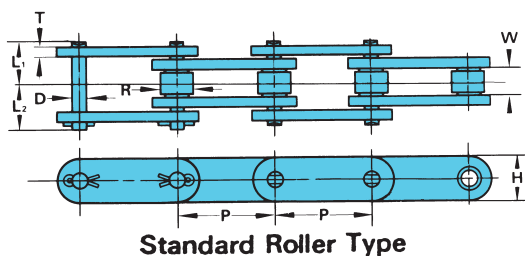
SS • NS • AS Dimensions

Specifications			Pitch P	Width Between Roller Link Plates W	Roller Dia. R	Link Plate		Pin Dia. D	Pin				Maximum Allowable Load lbs.	Approx. Weight lbs./ft.	
SS	NS	AS				T	H		SS•NS•LS		AS				
								L ₁	L ₂	L ₁	L ₂	SS•NS	AS		
RS25SS▲	RS25NS▲	—	.250	.125	.130	.030	.230	.090	.150	.189			26	.09	
RS35SS▲	RS35NS▲	RS35AS▲	.375	.188	.200	.050	.354	.141	.238	.281	.238	.281	60	91	.22
RS40SS	RS40NS	RS40AS	.500	.312	.312	.060	.472	.156	.325	.380	.325	.392	99	150	.43
RS50SS	RS50NS	RS50AS	.625	.375	.400	.080	.591	.200	.406	.469	.406	.472	154	231	.70
RS60SS	RS60NS	RS60AS	.750	.500	.469	.094	.713	.234	.506	.600	.506	.581	231	346	1.03
RS80SS	RS80NS	RS80AS	1.000	.625	.625	.125	.949	.312	.638	.768	.638	.768	397	596	1.79
RS100SS	—	—	1.250	.750	.750	.156	1.185	.375	.791	.909			573		2.69

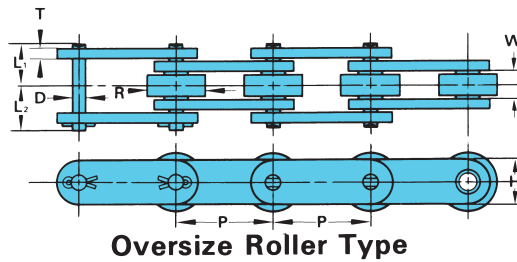
▲ Rollerless

Note: Attachment chain is available. Refer to Section "B" for dimensions.
Titanium Series chain available in sizes RS35-RS60.
Double strand chains are available.

2. DOUBLE PITCH CONVEYOR CHAIN



Standard Roller Type

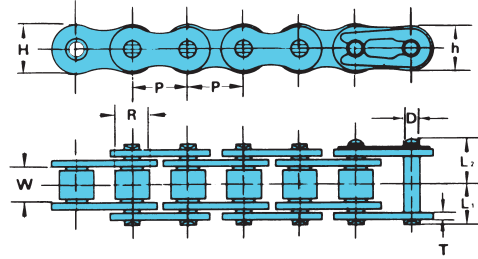


Oversize Roller Type

U.S. TSUBAKI Chain No.	Pitch	Roller Diameter	Width Between Roller Link Plates	Pin			Link Plate		Maximum Allowable Load lbs.	Approx. Weight lbs./ft.
	P	R	W	D	L ₁	L ₂	T	H		
STANDARD ROLLER TYPE										
C2040AS	1.000	.312	.312	.156	.325	.380	.060	.472	150	.34
C2050AS	1.250	.400	.375	.200	.406	.469	.080	.591	231	.56
C2060HAS	1.500	.469	.500	.234	.573	.652	.125	.677	346	1.01
C2080HAS	2.000	.625	.625	.312	.720	.823	.156	.906	596	1.62
OVERSIZE ROLLER TYPE										
C2042AS	1.000	.625	.312	.156	.325	.380	.060	.472	150	.58
C2052AS	1.250	.750	.375	.200	.406	.469	.080	.591	231	.87
C2062HAS	1.500	.875	.500	.234	.573	.652	.125	.677	346	1.47
C2082HAS	2.000	1.125	.625	.312	.720	.823	.156	.906	596	2.37

Note: 1. Material of oversize roller is 304 stainless steel.
2. Attachment chain is available. Refer to Section "B" for dimensions.

3. BS/DIN ROLLER CHAIN



U.S. TSUBAKI Chain No.	ISO BS/DIN No.	Pitch	Roller Diameter	Width Between Roller Link Plates		Pin		Link Plate		Average Tensile Strength lbs.	Bearing Area (Nominal) inch ²	Approx. Weight lbs./ft.
		P	R	W	D	L ₁	L ₂	T	H			
RF06BSS ★	06B	.375	.250	.225	.129	.255	.296	.050	.323	1,430	.040	.26
RS08BSS	08B	.500	.335	.305	.175	.329	.395	.060	.465	2,200	.078	.47
RS10BSS	10B	.625	.400	.380	.200	.370	.449	.060	.579	3,190	.104	.64
RS12BSS	12B	.750	.475	.460	.225	.433	.520	.070	.634	3,740	.138	.84
RS16BSS	16B	1.000	.625	.670	.326	.705	.783	.156	.827	10,560	.326	1.82

Note: ★ Flat shape link plate Stainless steel roller chains with over 1.00 inch pitch are also available upon request. Double-strand and triple-strand are also available.

4. DOUBLE PITCH CHAIN

RS Double Pitch Drive Chain



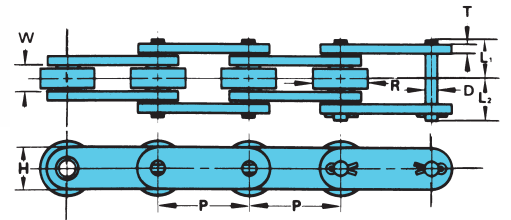
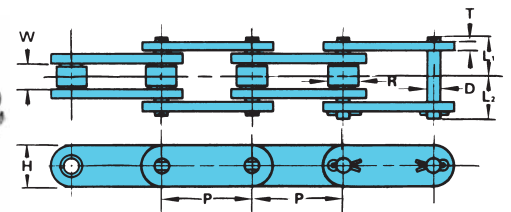
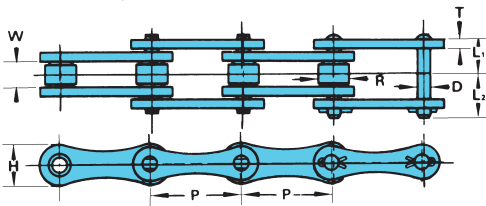
Double Pitch Conveyor Chain



STANDARD ROLLER TYPE



OVERSIZE ROLLER TYPE



U.S. TSUBAKI Chain No.	Pitch	Roller Diameter	Width Between Roller Link Plates		Pin		Link Plate		Maximum Allowable Load lbs.	Approx. Weight lbs./ft.	No. of Links per 10 ft.
	P	R	W	D	L ₁	L ₂	T	H			
RS DOUBLE PITCH DRIVE CHAIN											
A2040SS	1.000	.312	.312	.156	.325	.380	.060	.472	99	.26	120
A2050SS	1.250	.400	.375	.200	.406	.469	.080	.591	154	.42	96
A2060SS	1.500	.469	.500	.234	.506	.600	.094	.709	231	.63	80
A2080SS	2.000	.625	.625	.312	.640	.758	.125	.906	397	1.03	60
DOUBLE PITCH CONVEYOR CHAIN STANDARD ROLLER											
C2040SS	1.000	.312	.312	.156	.325	.380	.060	.472	99	.34	120
C2050SS	1.250	.400	.375	.200	.406	.469	.080	.591	154	.56	96
C2060HSS	1.500	.469	.500	.234	.573	.652	.125	.677	231	1.01	80
C2080HSS	2.000	.625	.625	.312	.720	.823	.156	.906	397	1.62	60
DOUBLE PITCH CONVEYOR CHAIN OVERSIZE ROLLER											
C2042SS	1.000	.625	.312	.156	.325	.380	.060	.472	99	.58	120
C2052SS	1.250	.750	.375	.200	.406	.469	.080	.591	154	.87	96
C2062HSS	1.500	.875	.500	.234	.573	.652	.125	.677	231	1.47	80
C2082HSS	2.000	1.125	.625	.312	.720	.823	.156	.906	397	2.37	60

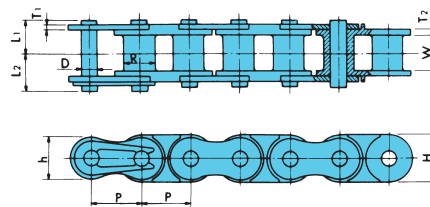
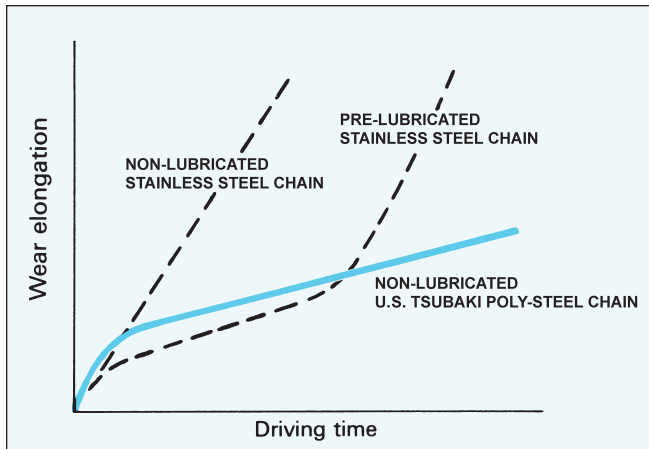
Note: 600 Series stainless steel chains are also available.
Attachment chain is available. Refer to Section "B" for dimensions.
Spring clip type connecting links will be provided for A2040SS~A2060SS, C2040SS~C2060HSS and C2042SS~C2062HSS.

U.S. TSUBAKI ANTI-CORROSIVE / HEAT RESISTANT CHAIN

Poly-Steel Chain

U.S. Tsubaki Poly-Steel chains are made to exacting specifications from polyacetal stainless steel.

The combination of polyacetal inner links and 304 stainless steel pins and outer link plates effectively incorporates the advantages of both materials into one chain. U.S. Tsubaki Poly-Steel chains can be used in both driving and conveying applications.



U.S. TSUBAKI Chain No.	Pitch P	Bushing Diameter B	Width Between Roller Link Plates W	Link Plate				Pin			Maximum Allowable Load lbs.	Approx. Weight lbs./ft.	Color
				T ₁	T ₂	H	h	D	L ₁	L ₂			
RF25PC	.250	.130	.125	.030	.051	.236	.199	.091	.177	.217	18	.06	Brown
RF35PC	.375	.200	.188	.050	.087	.354	.307	.141	.270	.309	40	.15	Brown
RF40PC	.500	.312	.312	.060	.060	.472	.409	.156	.325	.392	99	.26	Brown
RF50PC	.625	.400	.375	.080	.080	.591	.512	.200	.406	.472	154	.39	Brown
RF60PC	.750	.469	.500	.094	.094	.713	.614	.234	.506	.581	198	.55	Brown

Additional Information

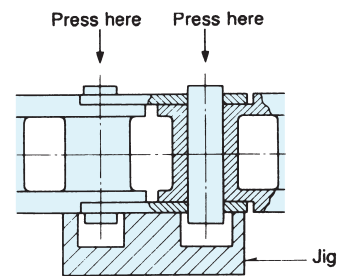
- Offset links are not available. Please use an even number of links.
- Existing RS standard sprockets can be used.
- RF40PC to RF60PC use the same connecting links as stainless steel chain. RF25PC and RF35PC use special connecting links.
- When replacing stainless steel chain with Poly-Steel chain, please check the chain tension. Chain tension should be less than the maximum allowable tension.
- Ambient temperature range: -14°F ~ 176°F (-10°C ~ 80°C)
- Maximum chain speed: less than 230 ft./min.
- Coefficient of sliding friction between chain and guide rail is 0.25 (without lubrication).
- The guide rail should support the bottom side of the links.
- The color of the inner links is WHITE.

Connecting and Disconnecting

1. Disconnect as follows:

As shown in the drawing, place the pin link plate on the jig and press down on the pin heads. Please be careful not to apply too much pressure to the plastic portion as there is the possibility of breakage.

2. Please inquire about our disconnecting jig.



3. For connecting, please use a connecting link.

Corrosion Resistance Guide

1. Highly corrosion resistant
2. Partially corrosion resistant
3. Not corrosion resistant

Substance	Concentration	Temp. °F	AS	SS	NS	TI	PC	PC-SY
Acetic Acid	10%	68	1	1	1	1	1	1
Acetone		68	1	1	1	1	1	3
Alcohol			1	1	1	1	1	1
Aluminum Sulfate	Saturation	68	3	1	1	1	—	—
Ammonia Water		68	1	1	1	1	1	1
Ammonium Chloride	50%	Boiling	3	2	1	1	—	—
Ammonium Nitrate		Boiling	1	1	1	1	2	1
Ammonium Sulfate	Saturation	Boiling	2	1	1	1	—	—
Beer		68	1	1	1	1	1	1
Benzene		68	1	1	1	1	1	1
Boric Acid	50%	Boiling	1	1	1	1	—	—
Butyric Acid		68	1	1	1	1	1	—
Calcium Chloride	Saturation	68	3	2	1	1	2	1
Calcium Hydroxide	20%	Boiling	1	1	1	1	1	1
Calcium Hypochlorite	11-14%	68	3	1	1	1	3	1
Carbolic Acid			1	1	1	1	3	1
Carbon Tetrachloride (dry)		68	1	1	1	1	1	1
Chlorinated Water			3	3	1	1	3	—
Chlorine Gas (dry)		68	3	2	2	1	—	1
Chlorine Gas (moist)		68	3	3	2	1	—	1
Chromic Acid	5%	68	2	1	1	1	3	1
Citric Acid	50%	68	1	1	1	1	—	1
Coffee		Boiling	1	1	1	1	1	1
Creosote		68	1	1	1	1	—	—
Developing Solution		68	2	1	1	1	1	1
Ethyl Ether		68	1	1	1	1	1	1
Ferric Acid	50%	68	1	1	1	1	3	1
Ferric Chloride	5%	68	3	2	2	1	—	—
Formalin	40%	68	1	1	1	1	—	—
Formic Acid	50%	68	1	1	1	1	3	1
Fruit Juice		68	2	1	1	1	1	1
Gasoline		68	1	1	1	1	1	1
Glycerol		68	1	1	1	1	1	1
Honey			1	1	1	1	1	1
Hydrochloric Acid	2%	68	3	3	3	1	3	1
Hydrogen Peroxide	30%	68	2	1	1	1	3	1
Hydrogen Sulfide (dry)			1	1	1	1	1	1
Hydrogen Sulfide (wet)			3	3	3	1	3	—
Hydroxybenzene		68	1	1	1	1	3	—
Kerosene		68	1	1	1	1	—	—
Ketchup		68	1	1	1	1	1	1
Lactic Acid	10%	68	2	1	1	1	1	1
Lard			1	1	1	1	—	—
Linseed Oil	100%	68	2	1	1	1	1	—
Malic Acid	50%	Boiling	1	1	1	1	1	1
Mayonnaise		68	2	1	1	1	1	1
Milk		68	1	1	1	1	1	1

Substance	Concentration	Temp. °F	AS	SS	NS	TI	PC	PC-SY
Nitric Acid	5%	68	2	1	1	1	3	1
Nitric Acid	65%	68	3	1	1	1	3	1
Nitric Acid	65%	Boiling	3	2	2	1	3	3
Oil (Plant, Mineral)		68	1	1	1	1	1	1
Oleic Acid		68	1	1	1	1	1	—
Oxalic Acid	10%	68	2	1	1	1	—	1
Paraffin		68	1	1	1	1	1	—
Petroleum		68	1	1	1	1	1	1
Phosphate			1	1	1	1	—	—
Phosphoric Acid	5%	68	2	1	1	1	3	1
Phosphoric Acid	10%	68	2	2	2	1	3	1
Picric Acid	Saturation	68	1	1	1	1	—	—
Potassium	Saturation	68	2	1	1	1	—	—
Potassium Bichromate	10%	68	1	1	1	1	1	—
Potassium Chloride	Saturation	68	2	1	1	1	—	—
Potassium Hydroxide	20%	68	1	1	1	1	1	1
Potassium Nitrate	25%	68	1	1	1	1	1	—
Potassium Nitrate	25%	Boiling	3	1	1	1	—	—
Potassium Permanganate	Saturation	68	1	1	1	1	—	1
Sal Ammoniac	50%	Boiling	3	2	1	1	—	—
Sea-Water		68	3	2	1	1	2	1
Soap-and-Water-Solution		68	1	1	1	1	1	—
Sodium Carbonate	Saturation	Boiling	1	1	1	1	—	—
Sodium Chloride	5%	68	2	1	1	1	1	1
Sodium Cyanide		68	—	1	1	1	—	—
Sodium Hydrocarbonate		68	1	1	1	1	1	1
Sodium Hydroxide	25%	68	1	1	1	1	1	—
Sodium Hypochlorite	10%	68	3	3	1	1	3	1
Sodium Perchlorate	10%	Boiling	3	1	1	1	—	—
Sodium Sulfate	Saturation	68	1	1	1	1	—	—
Sodium Thiosulfate	25%	Boiling	1	1	1	1	—	—
Soft Drink		68	1	1	1	1	1	1
Stearic Acid	100%	Boiling	3	3	1	1	3	—
Sugar Solution		68	1	1	1	1	1	1
Sulfuric Acid	5%	68	3	3	1	1	3	1
Sulfur Dioxide		68	3	1	1	1	—	—
Synthetic Detergent			1	1	1	1	1	1
Syrup			1	1	1	1	1	1
Tartaric Acid	10%	68	1	1	1	1	1	1
Turpentine		95	1	1	1	1	—	1
Varnish			1	1	1	1	—	1
Vegetable Juice		68	1	1	1	1	1	1
Vinegar		68	3	2	1	1	2	1
Water			1	1	1	1	1	1
Whiskey		68	1	1	1	1	1	1
Wine		68	1	1	1	1	1	1
Zinc Chloride	50%	68	3	2	2	1	2	1
Zinc Sulfate	25%	68	1	1	1	1	—	1

Key: AS: 600 AS Series NS: 316 NS Series PC: Poly-Steel Chain
 SS: 304 SS Series TI: Titanium TI Series PC-SY: Poly-Steel Anti-Chemical Series

Note: For information on the corrosion resistance of LS Series Chain, please consult U.S. Tsubaki Engineering.

U.S. TSUBAKI ENGINEERING INFORMATION & CHAIN SELECTION

MATERIALS OF COMPONENT PARTS

	Link Plate	Pin	Bushing	Roller
AS Series	AISI 304	Special (13-7PH)	ASTM631-HT (17-7PH)	ASTM631-HT (17-7PH)
SS Series	AISI 304	AISI 304	AISI 304	AISI 304
NS Series	AISI 316	AISI 316	AISI 316	AISI 316

PH: Precipitation Hardened
 The corrosion resistance of special 13-7 PH is equal to that of 17-7 PH.

PERFORMANCE OF ANTI-CORROSIVE CHAINS

	Corrosion Resistance	Temperature Resistance	Magnetism	Wear Resistance
NP Chain	Acceptable for outdoor and decorative applications	14°F~140°F (Never use below -4°F or over 300°F)	Magnetic	Excellent
NEPTUNE® Chain	Excellent for outdoors, exposure to rain, and seawater	14°F~140°F	Magnetic	Excellent
AS Series	Good for general acid, alkali and water	-40°F~750°F (Never use over 930°F)	Magnetic	Good
SS Series	Good for general acid, alkali and water	-40°F~750°F (Never use below -270°F or over 1300°F)	Slightly magnetic due to cold forming of parts	Fair
NS Series	Superior to SS & AS	-40°F~750°F (Never use below -420°F or over 1500°F)	Non-magnetic	Fair

CHAIN SELECTION

General selection is based on bearing pressure between the pin and bushing. Anti-corrosive roller chains are normally intended to be used at slow speed without lubrication. Chain selection should be made based on the bearing pressure as shown below.

	Maximum Allowable Bearing Pressure Between Pin and Bushing	Maximum Operating Speed
AS Series	2,130 psi	230 ft./min.
SS Series	1,420 psi	230 ft./min.
NS Series	1,420 psi	230 ft./min.

Chain selection can be made using the following formula.

$$\boxed{\text{Maximum Chain Tension}} \times \boxed{\text{Service Factor}} \times \boxed{\text{Speed Coefficient}} \times \boxed{\text{Temperature Factor}} \leq \boxed{\text{Maximum Allowable Load}}$$

Maximum allowable load or maximum bearing pressure as shown above can be doubled only when chain is used in group "1" of the "Corrosion Resistance Guide" on page A-60 and properly lubricated.

■ MAXIMUM ALLOWABLE LOAD

The chain's maximum allowable load can be obtained by the formula:
(Maximum allowable bearing pressure) • (Bearing area between pin and bushing).

	AS Series	SS Series	NS Series
RS25	—	26 lbs.	26 lbs.
RS35	90 lbs.	60 lbs.	60 lbs.
RS40	150 lbs.	99 lbs.	99 lbs.
RS50	231 lbs.	154 lbs.	154 lbs.
RS60	346 lbs.	231 lbs.	231 lbs.
RS80	596 lbs.	397 lbs.	397 lbs.
RS100	—	573 lbs.	573 lbs.

■ SERVICE FACTOR

Type of Impact	Service Factor
Smooth transmission	1.0
Transmission with some impact	1.3
Transmission with large impact	1.5

■ SPEED COEFFICIENT

Chain Speed	Speed Coefficient
0 ~ 50 ft./min.	1.0
50 ~ 100 ft./min.	1.2
100 ~ 160 ft./min.	1.4
160 ~ 230 ft./min.	1.6

■ TEMPERATURE FACTOR*

Temperature	AS Series	SS Series	NS Series
~ -270°F	X	X	X
-270°F ~ -40°F	X	1.0	1.0
-40°F ~ 750°F	1.0	1.0	1.0
750°F ~ 930°F *	1.8	1.2	1.0
930°F ~ 1,100°F *	X	1.5	1.2
1,100°F ~ 1,300°F *	X	1.8	1.5
1,300°F ~ 1,500°F*	X	X	2.0
1,500°F ~ *	X	X	X

X: Not suggested.

* Use in temperatures exceeding 750°F requires increased clearances to accommodate thermal expansion. Consult U.S. Tsubaki prior to ordering.