

# Sovereign

Superior Abrasion Resistant Chain

**RENOLD**



# The benchmark for abrasion resistance

In extreme applications, particulates adhere to chains and infiltrate the joints, accelerating wear. Lubrication may attract and trap foreign material – increasing friction rather than reducing it. Sovereign's precision-engineered components combine best-in-class features, delivering market-leading abrasion resistance.

# 3X

Optimized for dust and debris-filled environments, Renold Sovereign can last **up to three times longer** than standard chain.

**Thermochemically-treated outside plates** resist wear from contacting debris-covered surfaces and abrasive buildup.



**Intensely heat-treated specialty steel pins** with a surface hardness capable of wearing down sand. They withstand severe abuse without chipping, flaking or peeling like inferior chrome-plated pins found elsewhere in the market. Plated components aren't ideal for abrasive conditions and may experience more wear between the pin and bushing.

**Solid, carburized alloy bushing** with high-hardness specification complements the pin construction, maximizing wear life.

## Benefits

- Up to three times longer life than standard chain in harsh environments
- Ideal for irregular or restricted maintenance situations
- Longer service life equals more uptime and fewer maintenance expenses
- Suitable for high-speed or heavy-load applications



# Where Sovereign delivers the most value

## *Applications and Industries*

 Timber Processing

 Cement

 Aggregates

 Brick Manufacturing

 Ceramic Manufacturing

 Metal Processing

 Agriculture

 Sugar Processing

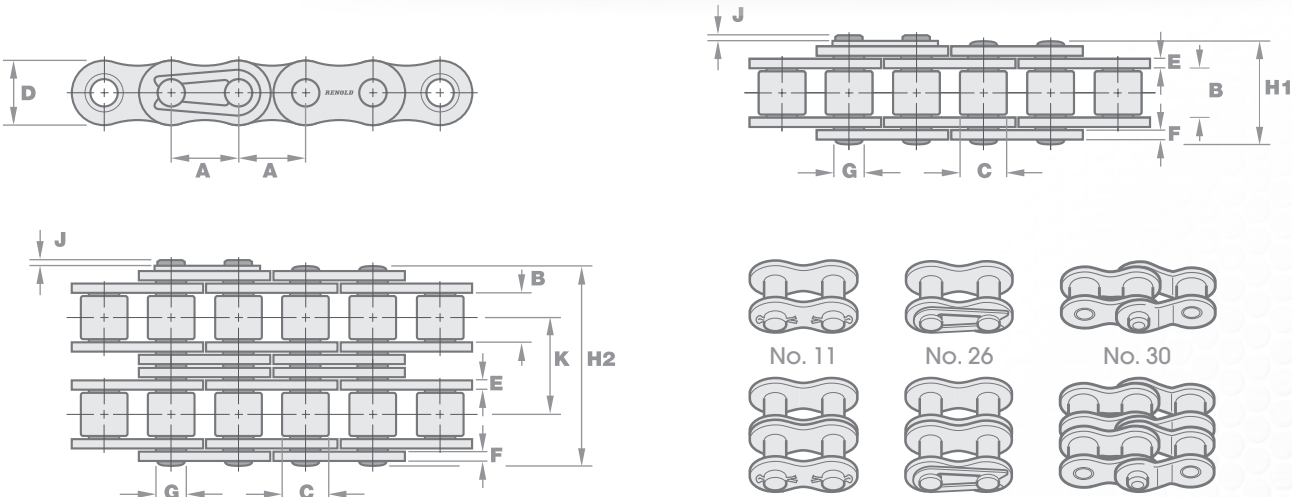
 Food Production





# Sovereign

ANSI Standard



### Single-Strand Roller Chain

ANSI Ref No.	Renold No.	Pitch	Inside Width Min	Roller Diam Max	Plate Height Max	Inner Plate Thick Max	Outer Plate Thick Max	Pin Diam Max	Pin Length Max	Conn Link Extra Max	Trans Pitch	Tensile Strength Min	Rated Working Load	Weight	Connecting Links		
		in	in	in	in	in	in	in	in	in	in	lb	lb	lb / ft	No. 11	No. 26	No. 30
		A	B	C	D	E	F	G	H1	J	K						
40-1	40A1SO	0.500	0.309	0.312	0.441	0.061	0.061	0.156	0.646	0.083	-	3,130	810	0.40		✓	✓
50-1	50A1SO	0.625	0.370	0.400	0.575	0.080	0.080	0.200	0.803	0.106	-	4,880	1,400	0.67		✓	✓
60-1	60A1SO	0.750	0.495	0.469	0.689	0.096	0.096	0.234	0.996	0.102	-	7,030	1,950	0.99		✓	✓
80-1	80A1SO	1.000	0.620	0.625	0.950	0.128	0.128	0.313	1.287	0.118	-	12,500	3,300	1.88	✓		✓
100-1	100A1SO	1.250	0.744	0.750	1.188	0.160	0.160	0.376	1.563	0.165	-	19,530	5,060	2.82	✓		✓
120-1	120A1SO	1.500	0.993	0.875	1.425	0.189	0.189	0.437	1.941	0.209	-	28,130	6,800	3.83	✓		✓
140-1	140A1SO	1.750	0.993	1.000	1.663	0.221	0.221	0.500	2.083	0.205	-	38,280	9,000	5.24	✓		✓
160-1	160A1SO	2.000	1.242	1.125	1.900	0.250	0.250	0.563	2.484	0.256	-	50,000	11,900	6.99	✓		✓
180-1	180A1SO	2.250	1.397	1.406	2.139	0.281	0.281	0.688	2.782	0.311	-	63,280	13,000	9.34	✓		✓
200-1	200A1SO	2.500	1.490	1.562	2.377	0.320	0.320	0.781	3.028	0.354	-	78,130	16,000	11.59	✓		✓
240-1	240A1SO	3.000	1.864	1.875	2.852	0.375	0.375	0.938	3.719	0.414	-	112,500	22,000	16.75	✓		✓

### Double-Strand Roller Chain

ANSI Ref No.	Renold No.	Pitch	Inside Width Min	Roller Diam Max	Plate Height Max	Inner Plate Thick Max	Outer Plate Thick Max	Pin Diam Max	Pin Length Max	Conn Link Extra Max	Trans Pitch	Tensile Strength Min	Rated Working Load	Weight	Connecting Links		
		in	in	in	in	in	in	in	in	in	in	lb	lb	lb / ft	No. 11	No. 26	No. 30
		A	B	C	D	E	F	G	H2	J	K						
40-2	40A2SO	0.500	0.309	0.312	0.441	0.061	0.061	0.156	1.213	0.083	0.566	6,250	1,370	0.81		✓	✓
50-2	50A2SO	0.625	0.370	0.400	0.575	0.080	0.080	0.200	1.512	0.106	0.713	9,760	2,380	1.33		✓	✓
60-2	60A2SO	0.750	0.495	0.469	0.689	0.096	0.096	0.234	1.894	0.102	0.897	14,060	3,320	1.96		✓	✓
80-2	80A2SO	1.000	0.620	0.625	0.950	0.128	0.128	0.313	2.437	0.118	1.153	25,000	5,610	3.70	✓		✓
100-2	100A2SO	1.250	0.744	0.750	1.188	0.160	0.160	0.376	1.968	0.165	1.408	39,060	8,600	5.64	✓		✓
120-2	120A2SO	1.500	0.993	0.875	1.425	0.189	0.189	0.437	3.728	0.209	1.789	56,250	11,560	7.39	✓		✓
140-2	140A2SO	1.750	0.993	1.000	1.663	0.221	0.221	0.500	4.008	0.205	1.924	76,560	15,300	10.41	✓		✓
160-2	160A2SO	2.000	1.242	1.125	1.900	0.250	0.250	0.563	4.787	0.256	2.305	100,000	20,230	13.84	✓		✓
200-2	200A2SO	2.500	1.490	1.562	2.377	0.320	0.320	0.781	5.846	0.354	2.817	156,250	27,200	23.05	✓		✓

Renold chain products that dimensionally align with the ANSI standard far exceed ANSI minimum tensile strength requirements. However, Renold does not consider breaking load a key performance indicator because it ignores the principal factors of wear and fatigue. Renold designs its products for the best possible results. Note that where the minimum tensile strength appears in this catalog, we are stating that the Renold product conforms to the ANSI minimum standard. Independent testing confirms Renold products exceed ANSI minimum breaking loads (many companies quote averages).



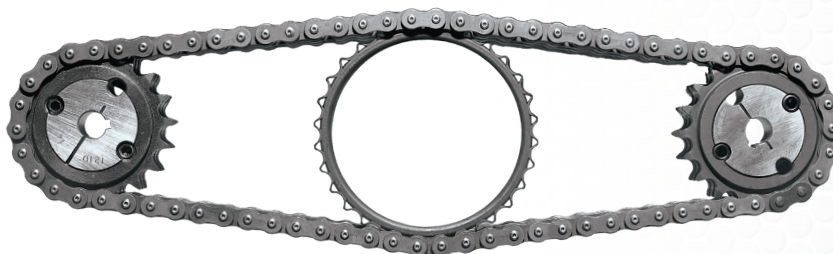
# Maintenance Tools

*Monitor wear, tension, dampen, and replace with ease*



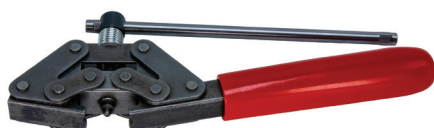
## Chain Wear Tools

Simplify chain elongation monitoring with Renold's wear indicators. Available in several styles, these guides enable quick inspection without moving the chain. Operating properly maintained chains lengthens the life of sprockets, increases efficiency, and maximizes uptime.



## Roll-Ring®

These self-adjusting chain tensioners are a simple yet innovative solution for any chain drive orientation. Doubling as dampers, they install in seconds without any tools. They function automatically, are maintenance-free, self-lubricating, and can be used in dirty environments.



## Pin Extractor and Chain Breaker/Assembly Tools

Renold screw-operated pin extractors (.375" pitch to 4.0") and more capable hydraulic breaker/assembly tools can accelerate chain maintenance with safer, easier processes. Avoid sparks and crushed fingers by eliminating grinders and sledgehammers from chain service.



# RENOLD

## Full roller & attachment chain line-up

Behind every conceivable industry and application environment, heavy or light duty, indoor or outdoor, clean or contaminated, and high or low temperature, Renold chain delivers performance and increases productivity.

Whatever your working environment or chain requirement, Renold has the chain for you.

	Blue	Whitney	SD	Sovereign	Synergy	Syno	Hydro-Service	Stainless Steel
Corrosion Resistance						●	●	●●●
Fatigue & Wear Resistance	●●●	●●	●	●●●	★	●●●	●●	●
Wet or Underwater Application							●●●	★
No Lubrication Required						★		
High Shock Loads (HV Series*)	★	●●		●●	●●●		●●	●
Abrasion Resistant	●●			★	●			
Dirty & Dusty Environment	●●			★	●		●●●	●●●
FDA Approved for Food Contact								●●●
USDA H1 Lubricant						●●●		★
Temperature Ranges	-24° to 350°F	-24° to 350°F	-24° to 350°F	-24° to 350°F	-24° to 350°F	-24° to 302°F	-24° to 350°F	(304)1200° (316)1300°
Attachments Available	✓	✓	✓	✓		✓	✓	✓
Not Recommended            Standard ●           Good ●●           Better ●●●           Best ★								

Every application is unique. This chart is a guideline. Temperature ranges can vary based on application and lubrication. We recommend a consultation with a member of the Renold Engineering Team. Call 1-800-251-9012.

\* HV Series applies to Blue only.



# **RENOLD** Advantage

Superior chain technology

## **Precision Components**

- ▣ Multistage punched & shaved pitch holes for accuracy
- ▣ Ball drifted holes ensure quality press fits
- ▣ Shot-peening extends fatigue resistance for performance
- ▣ Tapered bushings enhance performance & reduce wear
- ▣ Solid bushings & rollers don't distort or open
- ▣ End-softened pins for easy field assembly/disassembly

## **In-House Heat Treatment**

Customized heat treatment is essential to manufacture chains to the greatest specification. Renold's multistep heat treatments deliver precise hardness and depth levels, ensuring components exceed the highest industry standards for wear life and durability.

## **Comprehensive In-House Metallurgical Capabilities**

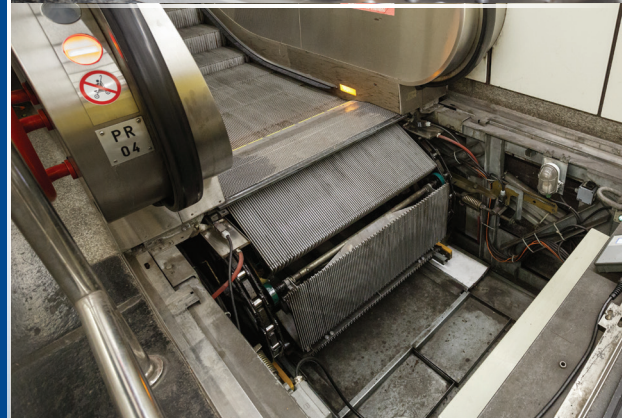
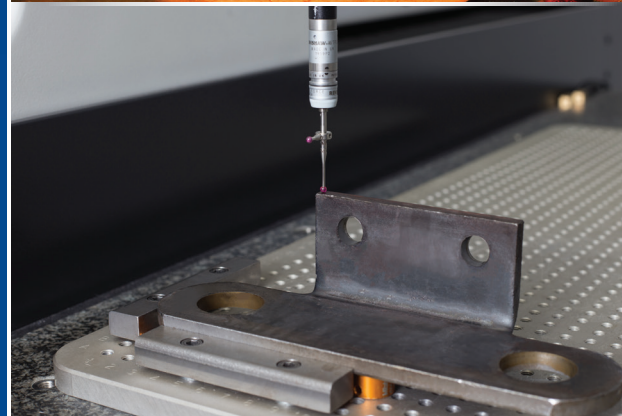
From testing alloy compositions to determining carburization depths, Renold has the equipment and expertise to verify specifications and perform failure analysis for chains of any brand. Competitors rely on expensive third-party labs, inhibiting their ability to deliver equal levels of quality assurance.

## **True Matching and Tagging**

Renold's Matching and Tagging is unrivaled. Other chain manufacturers may offer matching and tagging for left/right paired attachment chains, but what is their method? Renold measures every pocket of attachment chain under a test load, whether three pitches or thirty. The resulting mirrored pair delivers higher performance to the chain's application.

## **Offshore Manufacturing Owned by Renold**

Global supply chains have many advantages, but without proper oversight, results can vary. Renold controls and monitors the specification of all raw materials and manufacturing processes worldwide.





# Sovereign

Superior Abrasion Resistant Chain

## America's Headquarters

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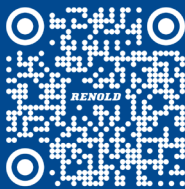
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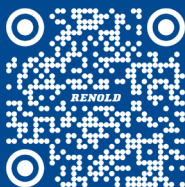
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