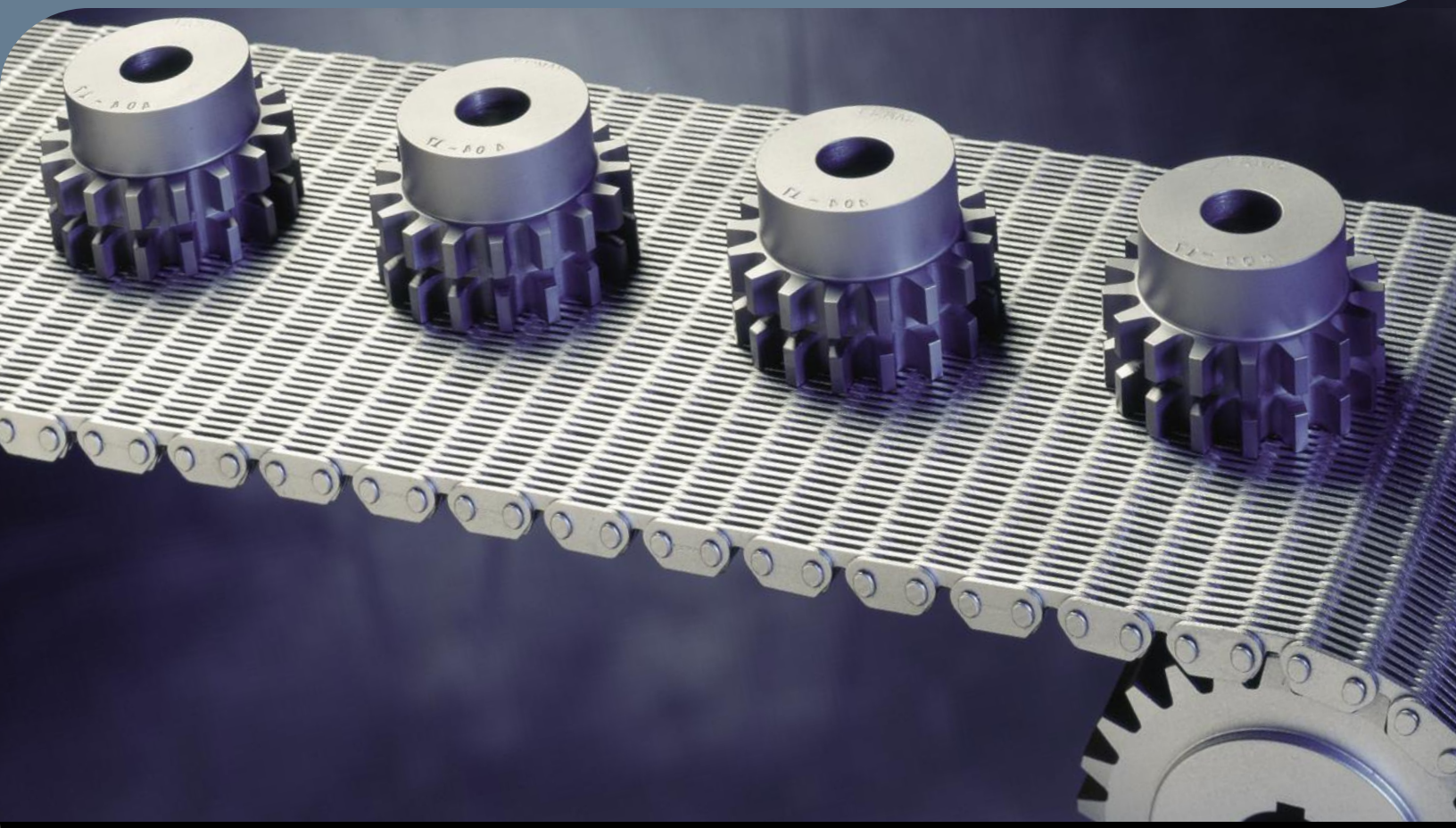
Silent conveying chains



FOR IMPROVED HANDLING AND PERFORMANCE

Ramsey Products Corporation

Silent Conveying Chains

Today's conveying system designer faces a dazzling array of conveyor chain choices, from a multitude of suppliers. This catalog focuses on just one type of chain, silent conveying chain from Ramsey.

For more than 30 years, Ramsey silent conveying chain has been the preferred solution for demanding conveying applications, throughout the world. Developed from the same technology used in high performance power transmission chain, Ramsey silent conveyor delivers the features one would expect in a high performance conveyor chain: unrivaled strength, durability, and smoothness of operation. These features, as well as an extensive range of styles and widths, provide today's designer with options not found in other chains or belts.

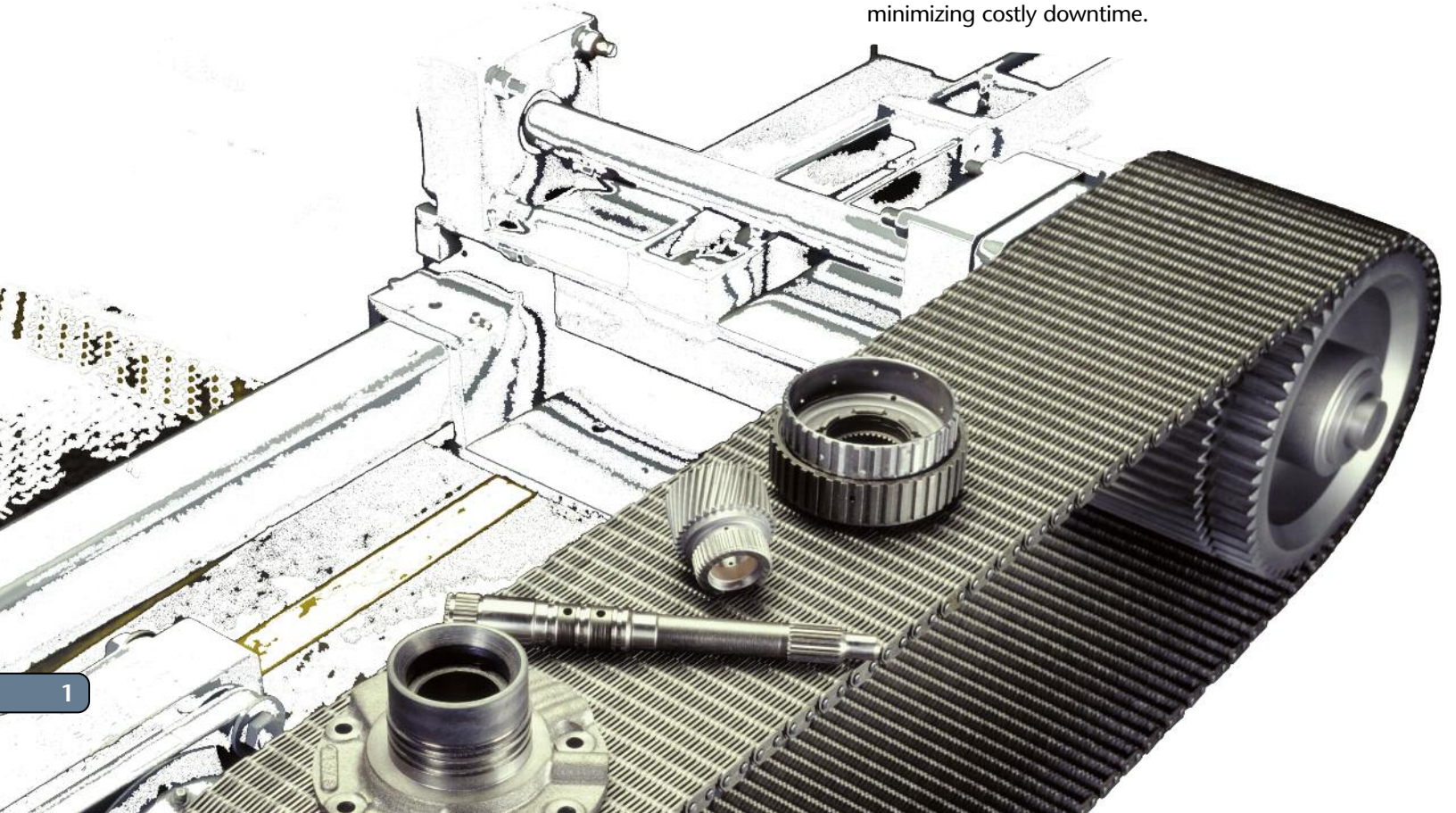
Ramsey Products Corporation has designed and manufactured silent chains for more than 80 years. Today, we remain committed to providing our customers with the world's widest selection of top quality silent chain, unmatched service, and competitive prices. We are eager to put our expertise to work for you.

WHY SILENT CONVEYING CHAIN?

Silent conveyor chains offer many features that appeal to both designers and operators of conveying systems:

Quiet, Efficient Operation Silent conveying chain earned its name by producing less vibration and noise than other types of chain. This characteristic is the direct result of specialized link and pin designs that enhance smooth interaction between chain and sprockets. Smooth chain-sprocket interaction reduces friction, decreases noise, and improves overall operating efficiency.

Durability Our chains are made from alloy steels, selected to provide optimal toughness, wear resistance, and strength. All carbon steel chains employ through-hardened link plates and case hardened pins. Stainless steel chains contain 316 stainless link plates and hardened stainless alloy pins. Chains are designed and built to provide a long service life, with little maintenance, thereby minimizing costly downtime.



CONTENTS

A Flat, Uniform Conveying Surface The pins and links used in Ramsey chains are manufactured to exacting tolerances. This ensures that conveyor chains have a uniform height and a flat conveying surface. Consistent conveyor height enhances the smooth transport of articles on and off the conveyor, and minimizes tipping.

Nearly constant surface velocity. Throughout the production process, we carefully control the pitch of all conveying chains. Controlling the pitch ensures consistent surface velocity in each chain. Uniform surface velocity reduces the occurrence of irregular article spacing, misfeeds, and associated problems. Also, since batch-to-batch variations are held to a minimum, chain from different production batches can be connected without significant speed variation.

Open, Laced, construction . Silent conveyor chains are typically composed of multiple rows of stacked, alternating, link plates. The space between alternating rows of links allows air and other fluids to pass through the chain, thereby promoting product drying or cooling. Interlink spaces also prevent surface debris accumulation by allowing small objects to fall through the chain. Spacers are often used between rows of links to further increase the open area and reduce overall chain weight.

Economical, Low Maintenance, Operation. Ramsey silent conveyor chain will often run for years with little or no lubrication and maintenance. Extended life and reduced maintenance translates into reduced downtime and lower life cycle cost.

COMPONENTS

A Ramsey conveyor chain drive consists of a chain and two or more 1/2" pitch sprockets (see page 13) to drive and guide the chain. Chain is available in a wide variety of types and assemblies. Depending on the type, a chain contains some or all of the following component parts:

Driving Links: Driving links, also known as plain links, engage with sprocket teeth to drive the chain. They are typically the most common component in the chain.

Guide Links: Guide links maintain proper tracking of the chain on sprockets. They can be positioned on the outer edges of the chain in side guide and multiguide chain or in the center, with center guide chain.

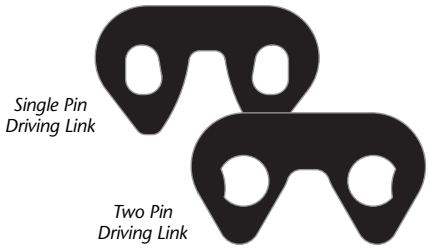
Spacers: Spacers are often placed between link plates in order to reduce chain weight and thermal mass, lessen the resistance to air flow through the chain, and allow the passage of debris.

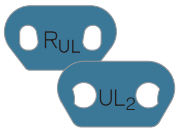
Pins: Pins allow the chain joint to flex and hold the assembled chain together. Chains may have a single pin in each joint or two pins, depending on the chain type.

Chain Type

Ramsey manufactures four basic types of conveyor chain: Ultralife (available in single pin or two pin joint types), Standard, Lo-Profile and Extended Pitch.

ULTRALIFE





Single Pin (top) and Two Pin (below) Guide Links

UltraLife is Ramsey's best quality conveyor chain. It was designed in cooperation with major manufacturers for high-speed production lines and field tested in plants around the world. UltraLife chain has been proven to last longer than any other conveyor chain we have tested.

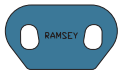
ULTRA LIFE The improved performance of UltraLife is the result of Ramsey's proprietary link and chain production techniques. These techniques produce driving links that are flat and uniform, with straight-edged, burr-free apertures.

The straight edge of the aperture maximizes the link area contacting the pins and reduces joint bearing stresses and wear. Process controls throughout component manufacture and chain assembly ensure consistent chain pitch and quality. Consistent pitch results in very little fluctuation in chain velocity and uniform wear throughout the life of the chain.

Single Pin Assembly

Two Pin Assembly

STANDARD



Single Pin Guide Link

First introduced more than 30 years ago, Ramsey standard conveyor has become the most common silent conveying chain around the world. Designed with a unique oval pin joint, standard conveyor provides trouble-free operation in most production settings. Produced exclusively by Ramsey, it includes many of the features of UltraLife but at a reduced price.

Single Pin Assembly

Stainless Steel Chains

LO-PROFILE

Single Pin Driving Link

Single Pin Guide Link

Produced to the same quality standards as standard conveyor, Ramsey Lo-Profile conveyor has a reduced overall link height and larger flats on link points. The increased surface area on the bottom of the chain serves to reduce bearing stress on wear plates, effectively reducing link wear and resistance to sliding. It works well where a more compact chain is needed.

Single Pin Assembly

EXTENDED PITCH

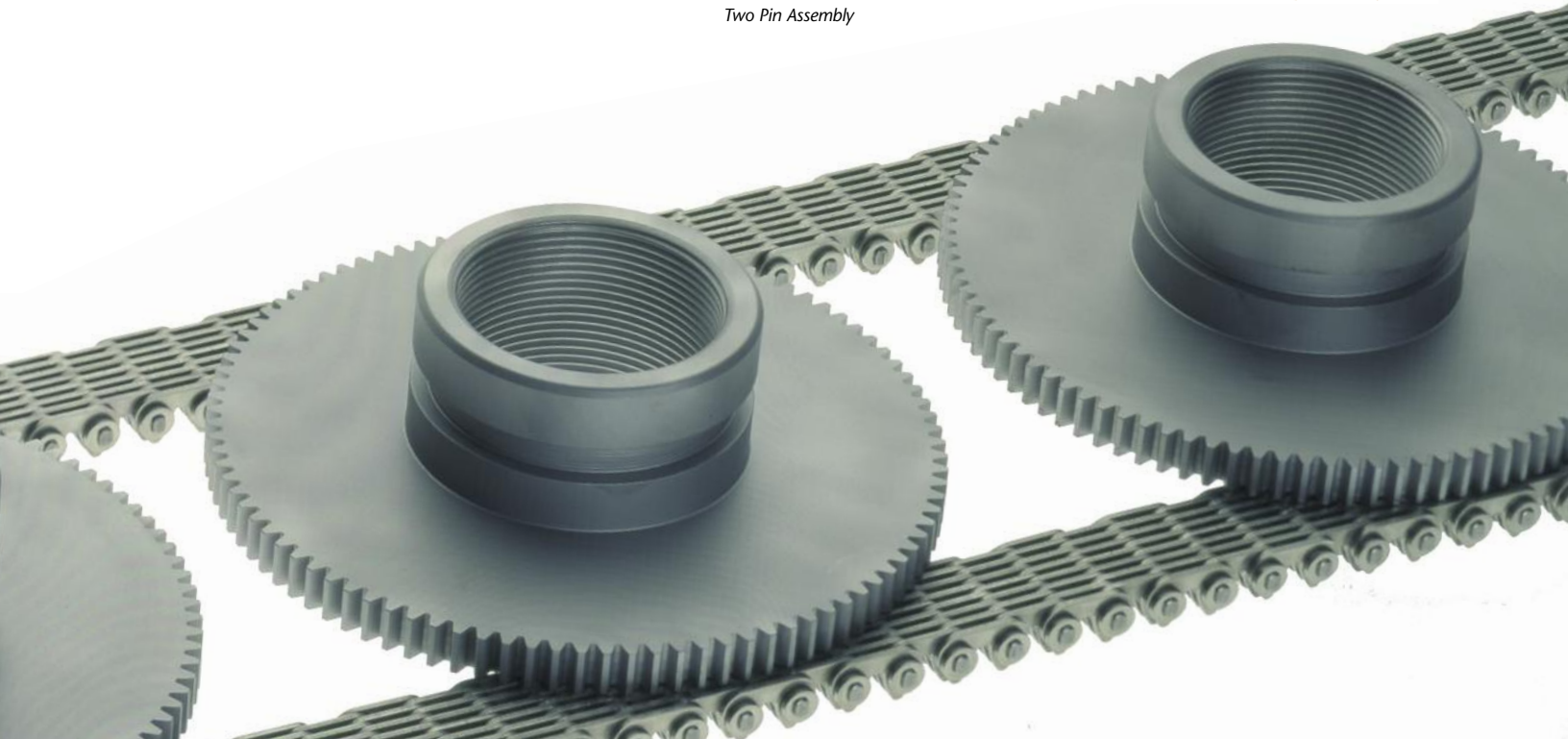
Single Pin Driving Link

Single Pin Guide Link

Extended pitch conveyor was developed in cooperation with industry engineers looking for a lightweight, long-lasting chain that would operate on existing 1/2" pitch sprockets. The resulting 1"pitch chain has less mass than a comparable width standard conveyor. With fewer joints per foot, it has a reduced number of contacts for fouling and wear.

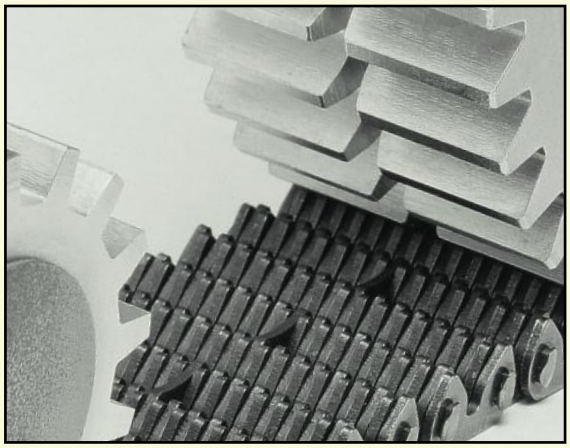
Single Pin Assembly

Two Pin Assembly



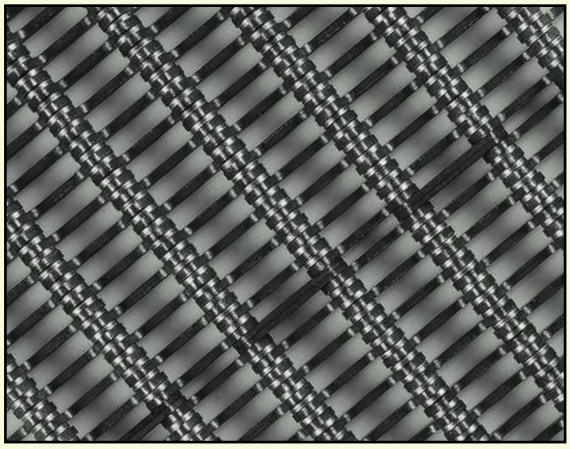
Specifying A Chain

When specifying an inverted tooth chain, you must consider appropriate guide type, build type and joint type.



GUIDE TYPE

Do you need a center guide, side guide or multi-guide chain? On Ramsey ordering charts, guide type is designated as follows: (C) for center, (S) for side or (M) for multiguide. Remember that sprocket guide type must be compatible with your chain (see Specifying A Sprocket section, p.13).



BUILD TYPE

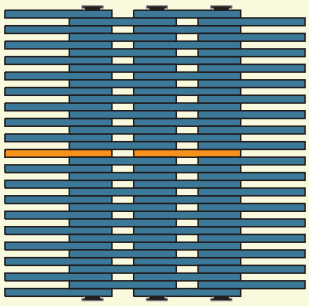
Inverted tooth conveyor chains are available in two basic build types: all-link, identified with an (L) in Ramsey ordering charts, and link-spacer, identified with an (S).

Each assembly has its advantages. Some of our customers prefer one chain build over another. When replacing a chain, we usually recommend that you select the build that has been used successfully at your company in the past. If you are uncertain which build you need, consult Ramsey or your equipment manufacturer.

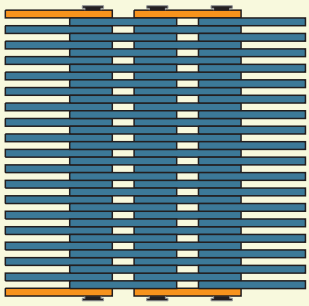
JOINT TYPE

Inverted tooth chains are available in two distinct joint types: single pin and two pin. In some applications one joint type may provide distinct advantages over the other. However, in many cases, either joint type will provide satisfactory results and it is simply a matter of customer preference.

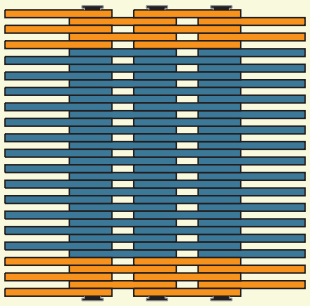
Ramsey manufactures both styles of chain and we can supply you with whichever style you prefer. Contact Ramsey if you are uncertain about the best choice for your application.



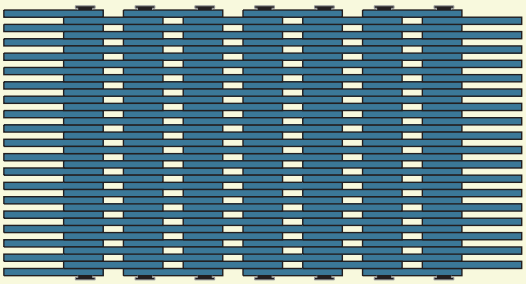
Center Guide (C) Guide links in the center of the chain align with a groove in the center of the sprocket.



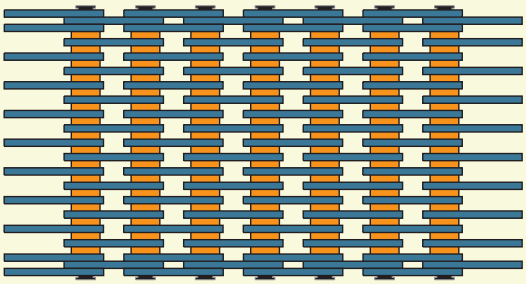
Side Guide (S) Guide links are on the outer edges of the chain and sprockets fit between them.



MultiGuide (M) Multiple guide links on the chain's outer edge surround the sprocket and provide increased area for chain support on a wear strip.



All-Link (L) Composed entirely of links, all-link chain provides maximum surface area and is often preferred for transporting small articles. All-Link chain has the greatest thermal mass and the smallest inter-link air spaces, so it provides the greatest resistance to induced heating or cooling.



Link-Spacer (S) In this assembly type, spacers are placed between link plates to decrease weight, reduce surface area and increase airflow through the chain. Larger inter-link air spaces also allow passage of debris through the chain.

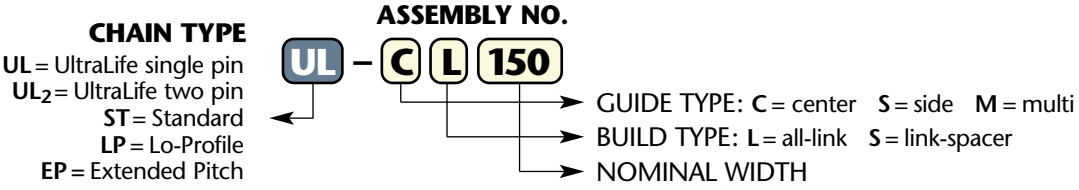
Single Pin Single pin joints provide a durable, smooth acting joint, satisfactory life, and are more easily installed than two pin joints. Ramsey's single pin joint is the most commonly used joint type in silent conveying chains.

Two Pin Two pin joints were originally developed for use in power transmission chains and have been adapted for use in conveying chains. They offer many of the same advantages in conveyor chain as in transmission chain, including low friction, high efficiency and long life.

Ordering Charts

IDENTIFYING YOUR CONVEYOR CHAIN

Ramsey uses a four-part numbering system for identifying conveyor assemblies. The first segment of each part number shows chain type, the second guide type, the third build type and the fourth nominal width. The last five characters of the numbering system are also referred to as the Assembly Number.



In this example the part number UL-CL150, describes an UltraLife single pin, center guide, all-link build, 6 inch nominal width (150mm) chain. When ordering simply provide the appropriate chain type and Assembly Number (see ordering guide below).

Note that there are many chain widths and assemblies not included in this brochure.

ADDITIONAL CHAIN OPTIONS

From time to time, our customers need a chain that is different from our typical specifications. We are set up to make custom orders as efficiently and cost-effectively as most common chain, and we welcome such inquiries.

Chain Grinding Any chain in the following charts can be ground. To achieve an ultra-smooth surface Ramsey can grind the top, bottom, or both sides of a chain to the customer's desired dimensions. To order, simply specify the chain type and assembly number and include your grinding requirements. It is important to specify the amount of material to be ground off each surface and the desired finished dimensions of the chain.

Note: The minimum amount of grinding required to "clean up" a surface is 0.004" to 0.005". The standard tolerance on grinding is 0.001".

Stainless Steel Most chains in the charts are available in stainless steel. Typically, links are made from 316 stainless steel and pins are made from a wear resistant, hardenable grade of stainless. With compatible stainless steel sprockets these chains can operate at temperatures up to 1200 degrees F(650 C). Common applications include food processing, parts washing, chemical processing, and pharmaceutical production. Upon request, some chains are available in all 316 stainless constructions .

ALLGUARD FX$_{TM}$ For applications where chains are operated in contact with lateral guides or wear strips Ramsey offers its exclusive ALLGUARD FX chain. ALLGUARD runs flush with lateral guides, immune to the pin head wear that can destroy other chains.

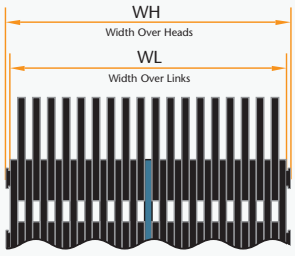
C Center Guide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

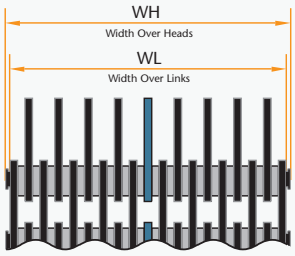
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MAX)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
CL025	1	0.93	1.00	1.07	1.0	1.03	1.0
CL038	1 1/2	1.43	1.50	1.57	1.5	1.53	1.5
CL050	2	1.93	2.00	2.07	2.0	2.03	2.0
CL075	3	2.92	3.00	3.06	3.0	3.02	3.0
CL100	4	3.58	3.94	3.74	3.5	3.70	3.7
CL120	4 3/4	4.57	4.72	4.72	4.4	4.69	4.7
CL125	5	4.80	4.92	4.96	4.7	4.92	5.0
CL140	5 1/2	5.31	5.51	5.47	5.2	5.43	5.5
CL150	6	5.79	5.91	5.94	5.7	5.91	6.1
CL180	7	6.89	7.09	7.05	6.8	7.01	7.3
CL200	8	7.83	7.87	7.99	7.7	7.95	8.2
CL250	10	9.84	9.84	10.00	9.7	9.96	10.4
CL300	12	11.81	11.81	11.97	11.6	11.93	12.4

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MAX)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
CS025	1	0.93	1.00	1.07	0.8	1.03	0.8
CS038	1 1/2	1.43	1.50	1.57	1.1	1.53	1.2
CS050	2	1.93	2.00	2.07	1.5	2.03	1.5
CS075	3	2.92	3.00	3.06	2.2	3.02	2.3
CS100	4	3.58	3.94	3.74	2.4	3.70	2.5
CS120	4 3/4	4.57	4.72	4.72	3.0	4.69	3.2
CS125	5	4.80	4.92	4.96	3.2	4.92	3.3
CS140	5 1/2	5.31	5.51	5.47	3.5	5.43	3.7
CS150	6	5.79	5.91	5.94	3.8	5.91	4.0
CS180	7	6.89	7.09	7.05	4.5	7.01	4.8
CS200	8	7.83	7.87	7.99	5.1	7.95	5.4
CS250	10	9.84	9.84	10.00	6.5	9.96	6.8
CS300	12	11.81	11.81	11.97	7.7	11.93	8.1

** +0.0/-2.0% Tolerance* *** Available in UltraLife only* *Note: Unless indicated, all dimensions are in inches*

Ordering Charts

Assemblies for **UL UltraLife**, **ST Standard**, **UL2 UltraLife Two Pin** and **LP Lo-Profile**

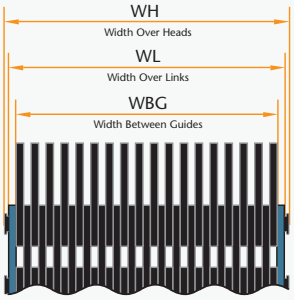
S Side Guide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

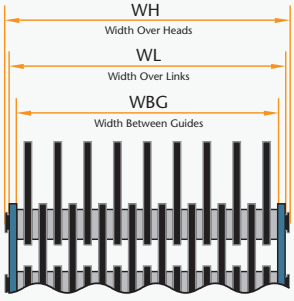
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
SL025	1	0.89	0.77	0.71	1.07	1.0	1.03	1.0
SL038	1 1/2	1.36	1.24	1.18	1.57	1.5	1.53	1.5
SL050	2	1.83	1.71	1.65	2.07	2.0	2.03	2.0
SL075	3	2.78	2.66	2.60	3.06	3.0	3.02	3.0
SL100	4	4.02	3.91	3.85	4.17	4.1	4.17	4.4
SL120	4 3/4	4.54	4.42	4.36	4.68	4.6	4.68	4.9
SL125	5	5.07	4.95	4.89	5.21	5.0	5.21	5.4
SL140	5 1/2	5.46	5.34	5.28	5.61	5.5	5.60	5.9
SL150	6	6.02	5.90	5.84	6.16	6.0	6.16	6.5
SL180	7	6.87	6.75	6.69	7.04	6.9	7.04	7.3
SL200	8	7.98	7.86	7.80	8.13	8.0	8.12	8.6
SL250	10	10.08	9.96	9.91	10.23	10.1	10.22	10.9
SL300	12	11.94	11.82	11.76	12.09	12.0	12.08	12.8

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
SS025	1	0.89	0.77	0.71	1.07	0.8	1.03	0.8
SS038	1 1/2	1.36	1.24	1.18	1.57	1.1	1.53	1.2
SS050	2	1.83	1.71	1.65	2.07	1.5	2.03	1.5
SS075	3	2.78	2.66	2.60	3.06	2.2	3.02	2.3
SS100	4	4.02	3.91	3.85	4.17	2.7	4.17	2.9
SS120	4 3/4	4.54	4.42	4.36	4.68	3.0	4.68	3.2
SS125	5	5.07	4.95	4.89	5.21	3.4	5.21	3.6
SS140	5 1/2	5.46	5.34	5.28	5.61	3.6	5.60	3.9
SS150	6	6.02	5.90	5.84	6.16	4.0	6.16	4.2
SS180	7	6.87	6.75	6.69	7.04	4.5	7.04	4.8
SS200	8	7.98	7.86	7.80	8.13	5.2	8.12	5.6
SS250	10	10.08	9.96	9.91	10.23	6.7	10.22	7.1
SS300	12	11.94	11.82	11.76	12.09	7.8	12.08	8.3

** +0.0/-2.0% Tolerance* *** Available in UltraLife only* *Note: Unless indicated, all dimensions are in inches*

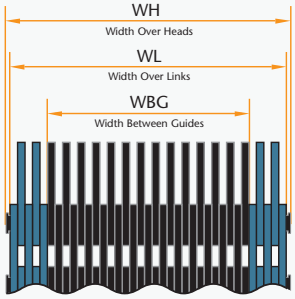
M MultiGuide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

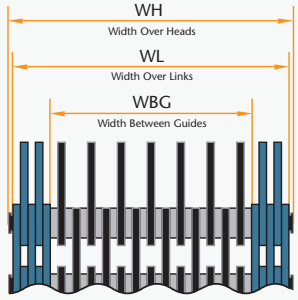
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
ML050	2	1.95	1.00	0.94	2.19	2.16	2.15	2.17
ML075	3	3.01	2.07	2.01	3.30	3.14	3.26	3.19
ML100	4	3.88	2.69	2.63	4.02	4.1	4.02	4.5
ML125	5	4.87	3.80	3.74	5.02	5.0	5.01	5.5
ML150	6	5.91	3.83	3.77	6.04	6.1	6.04	6.7
ML200	8	7.74	5.72	5.66	7.89	8.1	7.89	8.8
ML250	10	9.74	7.72	7.66	9.89	10.0	9.88	11.0
ML300	12	11.80	9.66	9.60	11.94	12.1	11.94	13.2

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT LB/FT	TWO PIN** WH (MAX)	TWO PIN** WEIGHT LB/FT
MS050	2	1.95	1.00	0.94	2.19	1.63	2.15	1.64
MS075	3	3.01	2.07	2.01	3.30	2.35	3.26	2.40
MS100	4	3.88	2.69	2.63	4.02	2.7	4.02	2.9
MS125	5	4.87	3.80	3.74	5.02	3.3	5.01	3.6
MS150	6	5.91	3.83	3.77	6.04	4.0	6.04	4.3
MS200	8	7.74	5.72	5.66	7.89	5.2	7.89	5.6
MS250	10	9.74	7.72	7.66	9.89	6.5	9.88	7.0
MS300	12	11.80	9.66	9.60	11.94	7.9	11.94	8.5

** +0.0/-2.0% Tolerance* *** Available in UltraLife only* *Note: Unless indicated, all dimensions are in inches*

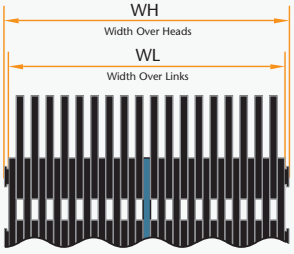
Ordering Charts

Assemblies for EP Extended Pitch

C Center Guide Chain

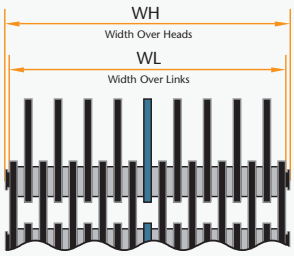
SINGLE PIN EXTENDED PITCH

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MAX)	SPROCKET* WIDTH	WEIGHT LB/FT
CL025	1	1.10	1.00	1.00	0.7
CL038	1 1/2	1.47	1.37	1.50	0.9
CL050	2	2.03	1.93	2.00	1.3
CL075	3	3.16	3.06	3.00	2.0
CL100	4	3.77	3.62	3.94	2.2
CL125	5	4.98	4.84	4.92	3.0
CL140	5 1/2	5.45	5.31	5.51	3.2
CL150	6	5.92	5.78	5.91	3.5
CL200	8	7.85	7.72	7.87	4.8
CL300	12	11.98	11.83	11.81	7.2

S LINK-SPACER ASSEMBLY



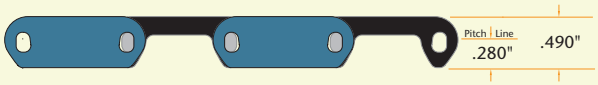
ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MAX)	SPROCKET* WIDTH	WEIGHT LB/FT
CS025	1	1.19	1.05	1.00	0.6
CS038	1 1/2	1.62	1.48	1.50	0.8
CS050	2	2.11	1.97	2.00	1.1
CS075	3	3.15	3.01	3.00	1.5
CS100	4	3.77	3.62	3.94	1.6
CS125	5	4.98	4.84	4.94	2.2
CS140	5 1/2	5.45	5.31	5.51	2.4
CS150	6	5.92	5.78	5.91	2.6
CS200	8	7.85	7.72	7.87	3.4
CS300	12	11.98	11.83	11.81	5.1

** +0.0/-2.0% Tolerance Note: Unless indicated, all dimensions are in inches*

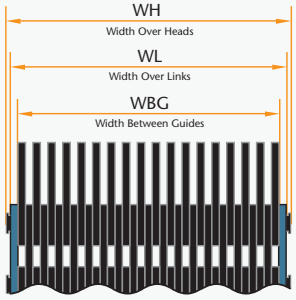
Consult Ramsey for information on Two Pin Extended Pitch Chains

S Side Guide Chain

SINGLE PIN EXTENDED PITCH

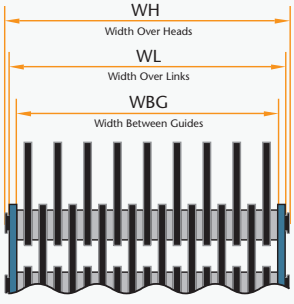


L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	WEIGHT LB/FT
SL025	1	1.11	0.93	0.81	0.75	0.7
SL038	1 1/2	1.67	1.53	1.41	1.35	0.9
SL050	2	2.04	1.90	1.78	1.72	1.3
SL075	3	3.16	3.02	2.90	2.84	2.0
SL100	4	4.17	4.02	3.91	3.85	2.6
SL125	5	5.21	5.07	4.95	4.89	3.2
SL140	5 1/2	5.61	5.46	5.34	5.28	3.4
SL150	6	6.16	6.02	5.90	5.84	3.8
SL200	8	7.94	7.75	7.66	7.60	4.8
SL300	12	12.09	11.94	11.82	11.76	7.4

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	WEIGHT LB/FT
SS025	1	1.09	0.91	0.79	0.73	0.6
SS038	1 1/2	1.60	1.40	1.28	1.22	0.8
SS050	2	2.20	1.98	1.86	1.80	1.1
SS075	3	3.12	2.86	2.74	2.68	1.5
SS100	4	4.17	4.02	3.91	3.85	1.7
SS125	5	5.21	5.07	4.95	4.89	2.2
SS140	5 1/2	5.61	5.46	5.34	5.28	2.3
SS150	6	6.04	5.89	5.78	5.72	2.7
SS200	8	7.94	7.75	7.66	7.60	3.3
SS300	12	12.09	11.94	11.82	11.76	4.8

** +0.0/-2.0% Tolerance Note: Unless indicated, all dimensions are in inches*

Consult Ramsey for information on Two Pin Extended Pitch Chains

Ramsey Sprockets

All Ramsey conveyor chains operate on 1/2" pitch Ramsey sprockets. Our sprockets are typically manufactured from C-1141 steel and are heat treated to provide hardened tooth surfaces.

Sprockets can be fully machined with finished bore and setscrews, or you can ask that they be supplied with an unfinished bore to allow further machining.

Specialized machining is available to accommodate a customer's exact specifications. Materials, other than steel, are available upon request.

PERFORMANCE GUIDELINES

In general, larger sprocket diameters will provide for smoother chain operation and less vibration, so it is best to avoid very small sprockets in applications that require smooth transport. In most cases, sprockets for UltraLife, Standard, and Lo-Profile chains should have a minimum of 21 teeth. Sprockets for Extended Pitch Chains should have at least 26 teeth.

Sprocket Tooth profiles are cut to established standards to assure proper meshing of the sprocket and chain. Chain and sprocket dimensions must be compatible for proper operation. We recommend purchasing chain and sprockets from the same source.

SPECIFYING A SPROCKET

It is important to choose a sprocket that is compatible with your chain. You should always consider the following:

- Guide type
- Face Width
- Keyway Size
- Hub Projection
- Hub Diameter
- Number of Teeth
- Bore Diameter
- Hub Type

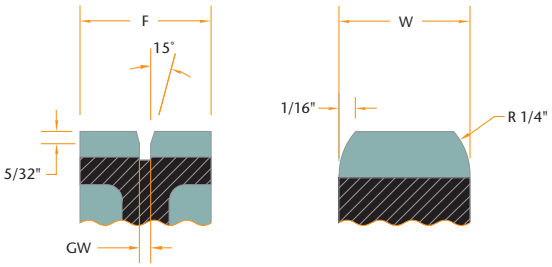
For assistance in selecting a sprocket, please contact us.

GUIDE TYPE

Sprockets can be grouped into two broad categories: *center guide* and *side/multiguide*

Center Guide A groove machined in the center of the sprocket face accepts the chain's center guide link.

Side/MultiGuide The sprocket fits between the chain's side guide plates.



CENTER GUIDE **SIDE/MULTIGUIDE**

CENTER GUIDE DATA

F = same as Nominal Chain Width

GW = Guide Width
= 1/8" for F<8.0", uses a single guide link
= 3/16" for F>8.0", uses a double guide link

SIDE/MULTIGUIDE DATA

W = WBG - 0.060"
(unless otherwise specified)

WBG = Width Between Guides
(See Ordering Charts pgs 7-12 for WBG & W)

PROBLEM SOLVING FOR CONVEYING CHAIN DRIVES

Problem: *Excessive wear on chain guide links*
Action: Check alignment of sprockets. Also, ensure conveyor guides do not force chain to one side of the sprockets.

Problem: *Pin heads worn or chipped*
Action: Check that the chain type is compatible with the guides being used, and that heads are not impacting guides. Inspect wear plate for unusual wear or grooves that cause the chain to run lower relative to the guides. Inspect link tips for excessive wear.

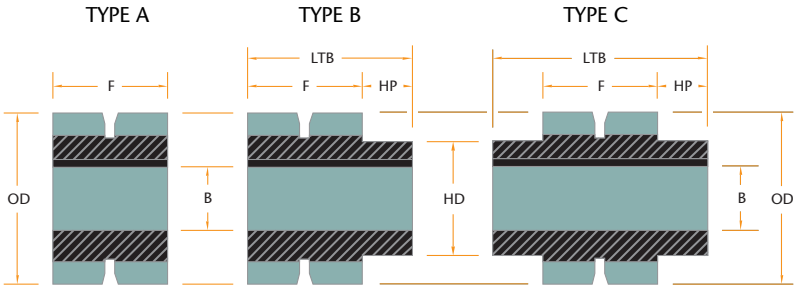
Problem: *Short chain life*
Action: Check for chain overloading that can be caused by over-tensioning or improper guide clearance. Excess debris in the chain may also accelerate wear and reduce life.

Problem: *Chain speed variation or surging*
Action: Check for excessive sprocket or chain wear or debris accumulation on sprocket or chain. It is also caused by connecting used chain sections with unused sections, a practice we discourage.

SPROCKET HUB TYPE

HUB DIMENSION DATA

F = Nominal Chain Width
B = Bore
OD = Outside Diameter
HD = Hub Diameter
LTB = Length Through the Bore
HP = Hub Projection



SPROCKET HUB TYPES

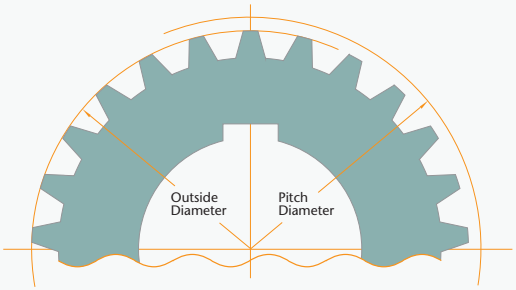
ADDITIONAL INFORMATION

PD Pitch Diameter (in.) = 0.50/sin (180/Z)
GD Gross Wrapped Diameter = PD+X
V Surface Velocity (FPM) = ZN/24
N = Revolutions per Minute
Z = Number of Teeth
X = See chart below

X in inches (for GD calculation)

Ultralife (1pin)	0.418
Ultralife (2pin)	0.522
Standard	0.418
Lo-Profile	0.400
Extended	0.420

OD = OUTSIDE DIAMETER (in inches)

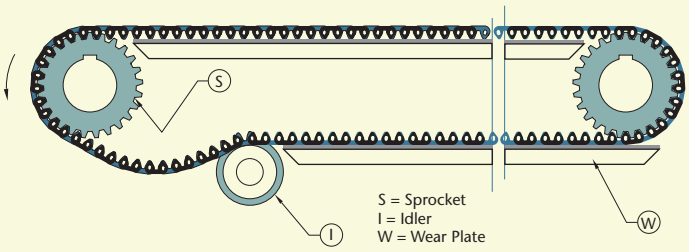


SPROCKET PROFILE

Z*	OD	Z*	OD	Z*	OD
18	2.811	46	7.318	74	11.789
19	2.973	47	7.478	75	11.948
20	3.135	48	7.638	76	12.108
21	3.297	49	7.798	77	12.267
22	3.459	50	7.958	78	12.426
23	3.621	51	8.118	79	12.586
24	3.784	52	8.278	80	12.745
25	3.945	53	8.438	81	12.904
26	4.106	54	8.598	82	13.064
27	4.268	55	8.757	83	13.223
28	4.429	56	8.917	84	13.383
29	4.590	57	9.077	85	13.542
30	4.752	58	9.236	86	13.701
31	4.914	59	9.396	87	13.861
32	5.075	60	9.556	88	14.020
33	5.235	61	9.715	89	14.179
34	5.396	62	9.875	90	14.339
35	5.557	63	10.035	91	14.498
36	5.718	64	10.194	92	14.657
37	5.878	65	10.354	93	14.817
38	6.038	66	10.513	94	14.976
39	6.198	67	10.673	95	15.135
40	6.358	68	10.832	96	15.295
41	6.518	69	10.992	97	15.454
42	6.678	70	11.151	98	15.614
43	6.838	71	11.311	99	15.773
44	6.998	72	11.470	100	15.932
45	7.158	73	11.629		

**Z = Number of Teeth*

Installation & Usage Guidelines



• **Wear Plates** In most installations, the chain is supported by hardened steel wear plates under its full width. It is important that the condition of wear plates be checked periodically, since excessive wear in the plate can cause chain to wear rapidly and non-uniformly. Typically, the plate will wear more quickly in the center of the chain where weight is supported.

• **Tensioning** When removing excess slack, take care not to over tension the chain. Excessive tension will increase chain loading, increase wear, and decrease life.

• **Guide Design** Chain guides on the side of the conveyor have different designs depending on the equipment manufacturer. When replacing a chain it is important to choose a chain type that is compatible with the guides in use. Chain dimensions are shown on pages 7-12 for various Ramsey chains. Sharp edges should be avoided at the entrance to each guide strip.

• **Guide Placement** Chain guides should not restrict or interfere with the free movement of the chain.

• **Lubrication** Consult Ramsey for recommendations on lubrication in specific applications. In many applications, lubrication is not required. Conversely, excessive or improper lubrication can cause accumulation of debris and may interfere with proper chain action and accelerate chain wear.

• **Chain Elongation** As chain pitch elongates over the life of the chain, it may be necessary to remove sections of chain. This elongation is sometimes called "stretch", even though it is caused by the wear of parts. When a chain has elongated by 3 to 4%, it is generally recommended that it be replaced.

• **Chain Link Tip Wear** As the tips of links wear, the height of the chain is reduced. When link tips become so worn that the pin heads begin to interfere with conveyor guides, the chain should be replaced.

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For over 40 years, Ramsey has been supplying chain to the international market. Our goal is to provide the widest range of top quality Inverted tooth chains, unmatched service and competitive prices. Please contact Ramsey and let us show you how we can help enhance your growth and success.