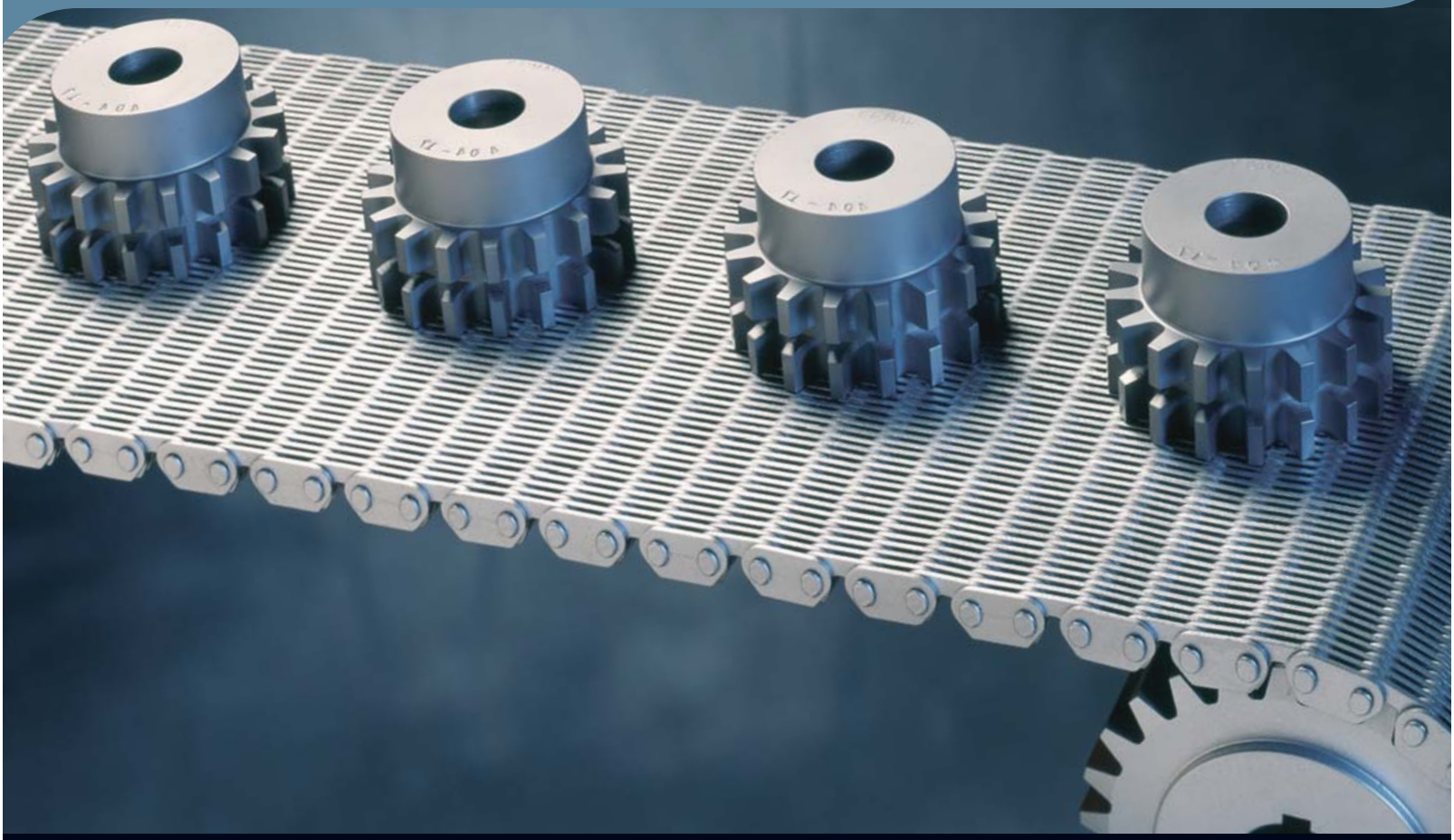
Silent conveying chains



FOR IMPROVED HANDLING AND PERFORMANCE

Since 1923

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.

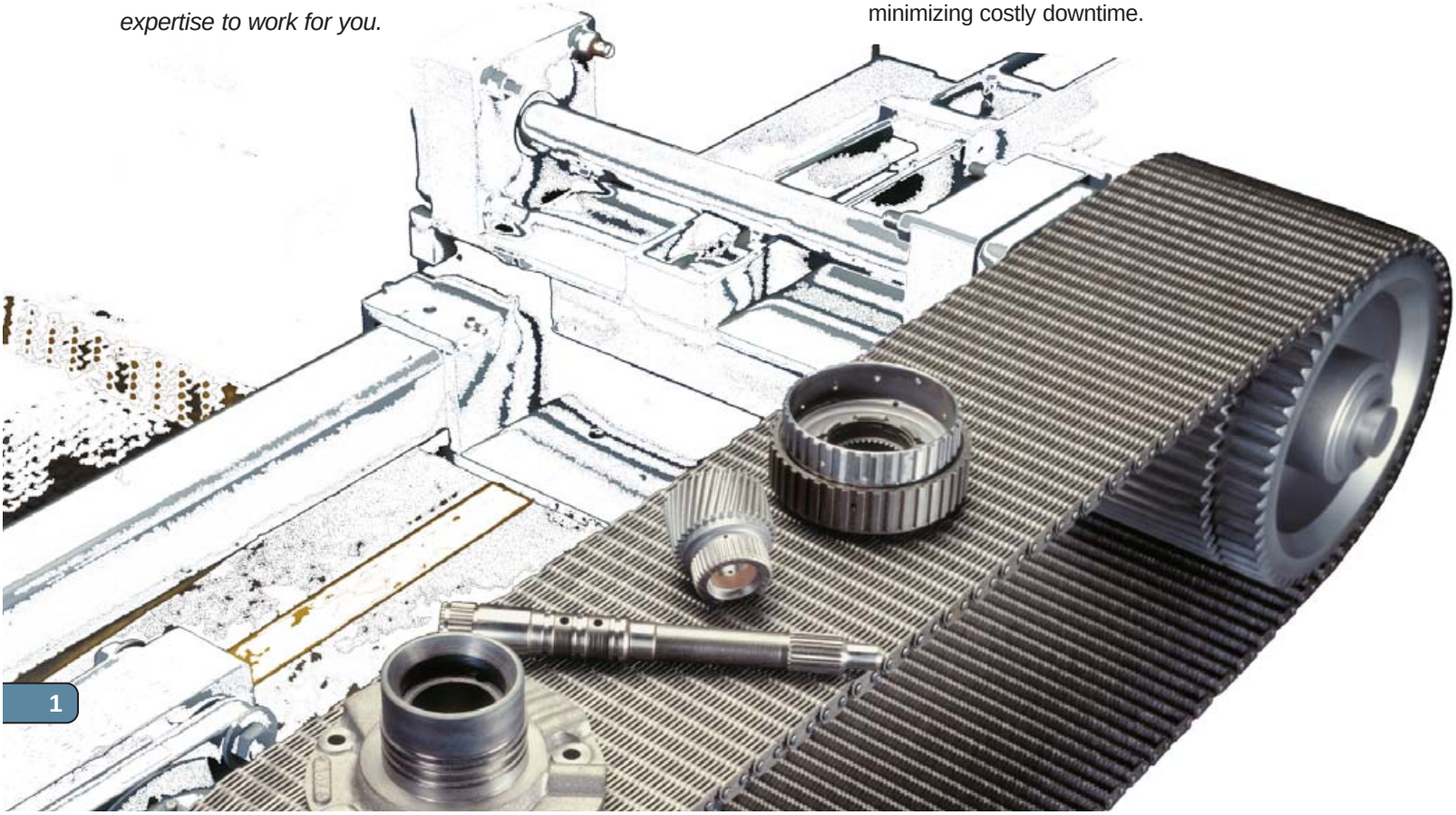
Ramsey Products Corporation has designed and manufactured silent chains for more than 80 years. Today, we remain committed to providing our customers with the world's widest selection of top quality silent chain, unmatched service, and competitive prices. We are eager to put our expertise to work for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

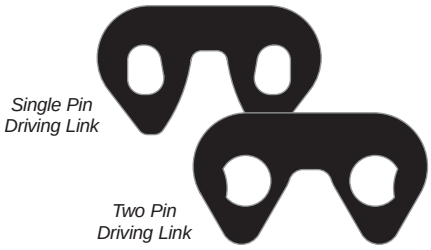
Spacers: Spacers are often placed between link plates in order to reduce chain weight and thermal mass, lessen the resistance to air flow through the chain, and allow the passage of debris.

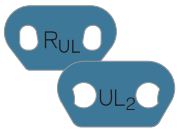
Pins: Pins allow the chain joint to flex and hold the assembled chain together. Chains may have a single pin in each joint or two pins, depending on the chain type.

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

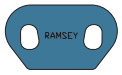
The improved performance of UltraLife is the result of Ramsey's proprietary link and chain production techniques. These techniques produce driving links that are flat and uniform, with straight-edged, burr-free apertures.

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

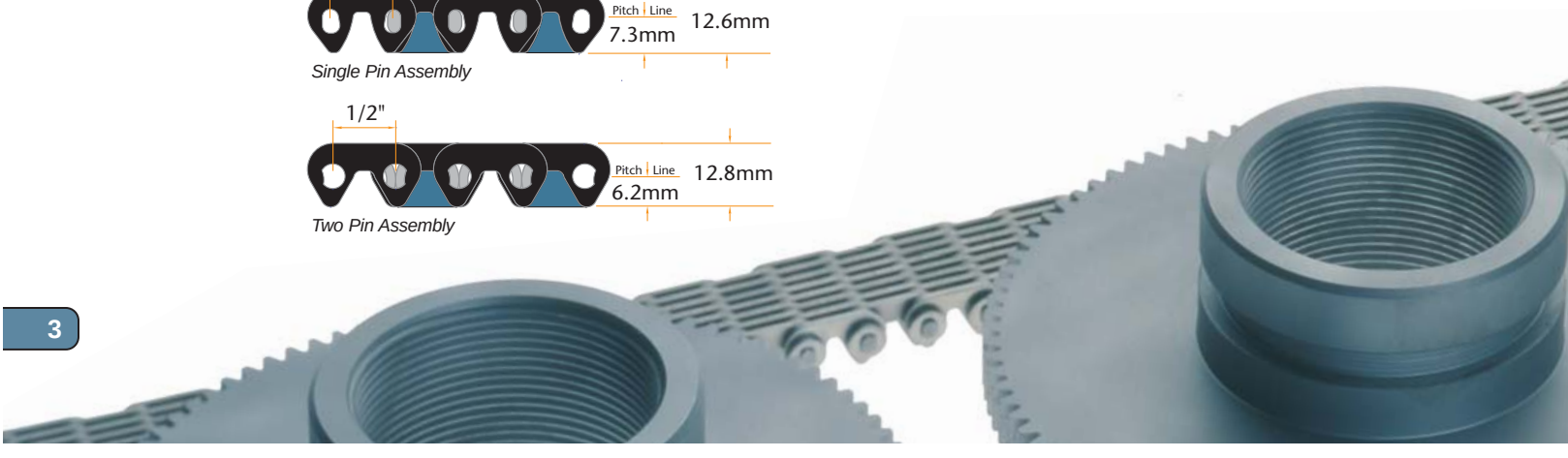


Single Pin Guide Link

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

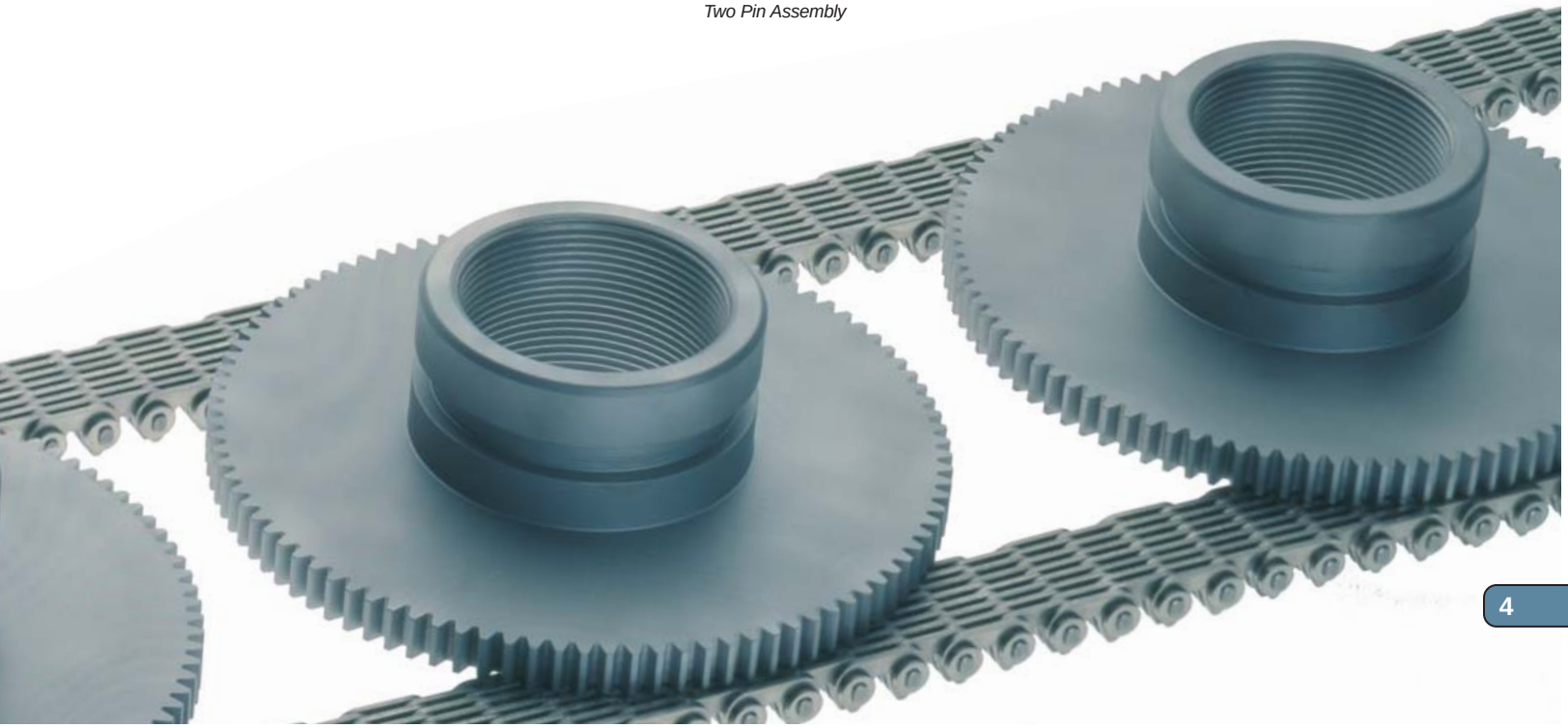
Single Pin Driving Link

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.

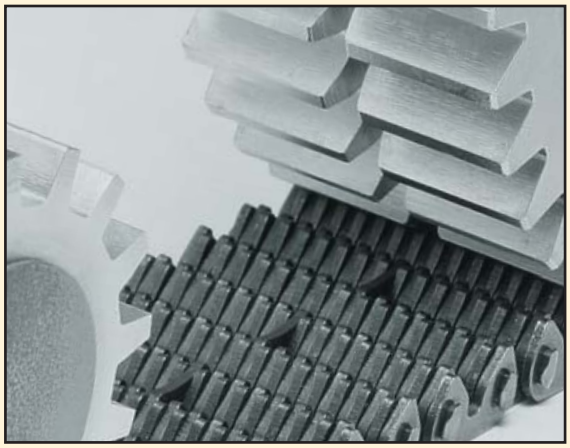
Single Pin Assembly

Two Pin Assembly



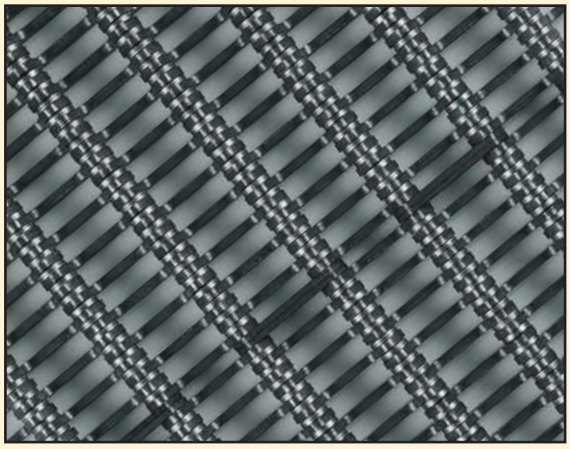
Specifying A Chain

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

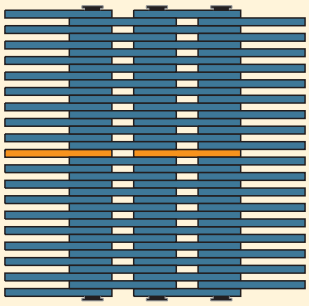
Inverted tooth conveyor chains are available in two basic build types: all-link, identified with an (L) in Ramsey ordering charts, and link-spacer, identified with an (S).

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.

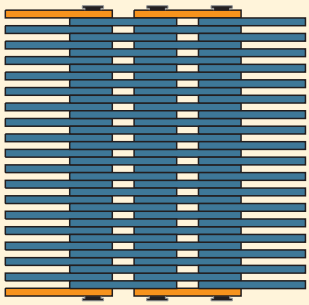
JOINT TYPE

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.

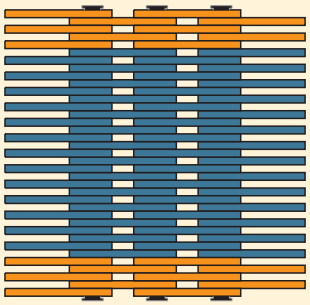
Ramsey manufactures both styles of chain and we can supply you with whichever style you prefer. Contact Ramsey if you are uncertain about the best choice for your application.



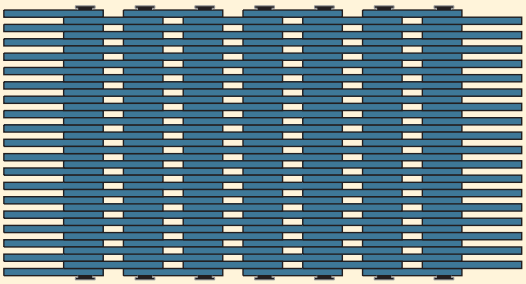
Center Guide (C) Guide links in the center of the chain align with a groove in the center of the sprocket.



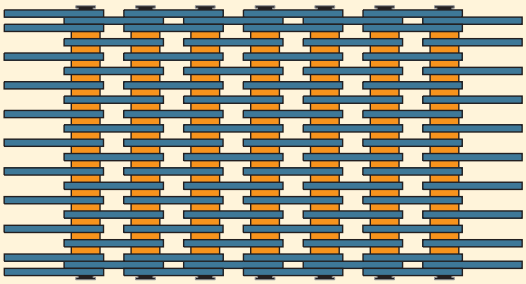
Side Guide (S) Guide links are on the outer edges of the chain and sprockets fit between them.



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.

CHAIN TYPE

UL = UltraLife single pin
UL$_2$ = UltraLife two pin
ST = Standard
LP = Lo-Profile
EP = Extended Pitch(single pin)
EP $_2$ = Extended Pitch(two pin)

ASSEMBLY NO.

UL – C L 150

GUIDE TYPE: C = center **S** = side **M** = multi
BUILD TYPE: L = all-link **S** = link-spacer
NOMINAL WIDTH

In this example the part number UL-CL150, describes an UltraLife single pin, center guide chain, all-link build, 150mm nominal width. 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.

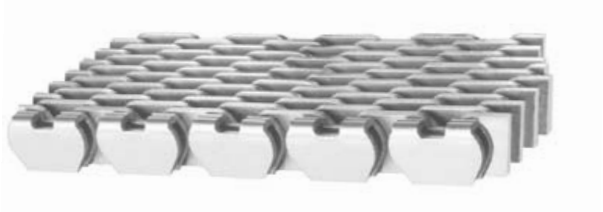
Chain Grinding Any chain in the following charts can be ground. To achieve an ultra-smooth surface Ramsey can grind the top, bottom, or both sides of a chain to the customer's desired dimensions. To order, simply specify the chain type and assembly number and include your grinding requirements. It is 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 0.10mm to 0.015mm. The standard tolerance on grinding is 0.025mm.

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 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$_{TM}$ For applications where chains operate in contact with lateral guides or wear strips Ramsey offers its exclusive ALLGUARD chain. With case hardened side plates that completely cover and protect the side of the chain, ALLGUARD runs flush with lateral guides, immune to the pin head wear that can destroy other chains.



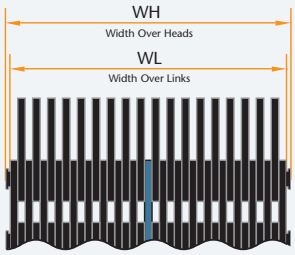
C Center Guide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

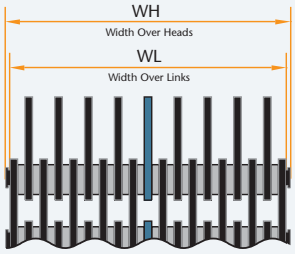
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MAX)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
CL025	25	23.6	25.4	27.2	1.5	26.2	1.5
CL038	38	36.3	38.1	39.9	2.2	38.9	2.2
CL050	50	49.0	50.8	52.6	3.0	51.6	3.0
CL075	75	74.2	76.2	77.7	4.5	76.7	4.5
CL100	100	91.0	100.0	95.0	5.2	94.0	5.6
CL120	120	116.0	120.0	120.0	6.6	119.0	7.1
CL125	125	122.0	125.0	126.0	7.0	125.0	7.5
CL140	140	135.0	140.0	139.0	7.7	138.0	8.2
CL150	150	147.0	150.0	151.0	8.5	150.0	9.1
CL180	180	175.0	180.0	179.0	10.1	178.0	10.8
CL200	200	199.0	200.0	203.0	11.4	202.0	12.2
CL250	250	250.0	250.0	254.0	14.5	253.0	15.5
CL300	300	300.0	300.0	304.0	17.2	303.0	18.4

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MAX)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
CS025	25	23.6	25.4	27.2	1.2	26.2	1.2
CS038	38	36.3	38.1	39.9	1.6	38.9	1.8
CS050	50	49.0	50.8	52.6	2.2	51.6	2.2
CS075	75	74.2	76.2	77.7	3.3	76.7	3.4
CS100	100	91.0	100.0	95.0	3.5	94.0	3.7
CS120	120	116.0	120.0	120.0	4.5	119.0	4.8
CS125	125	122.0	125.0	126.0	4.7	125.0	5.0
CS140	140	135.0	140.0	139.0	5.2	138.0	5.5
CS150	150	147.0	150.0	151.0	5.6	150.0	5.9
CS180	180	175.0	180.0	179.0	6.7	178.0	7.1
CS200	200	199.0	200.0	203.0	7.6	202.0	8.1
CS250	250	250.0	250.0	254.0	9.6	253.0	10.2
CS300	300	300.0	300.0	304.0	11.4	303.0	12.1

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

Ordering Charts

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

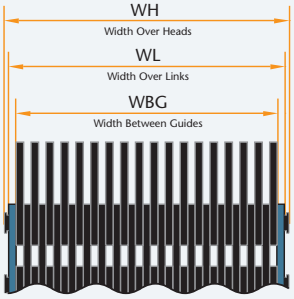
S Side Guide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

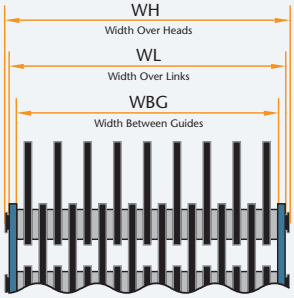
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
SL025	25	22.6	19.6	18.0	27.2	1.5	26.2	1.5
SL038	38	34.5	31.5	46.0	39.9	2.2	38.9	2.2
SL050	50	46.5	43.4	42.0	52.6	3.0	51.6	3.0
SL075	75	70.6	67.6	66.0	77.7	4.5	76.7	4.5
SL100	100	102.2	99.2	97.7	105.9	6.1	105.8	6.5
SL120	120	115.2	112.2	110.7	118.9	6.8	118.8	7.3
SL125	125	128.7	125.7	124.2	132.4	7.5	132.3	8.0
SL140	140	138.7	135.7	134.2	142.4	8.2	142.3	8.8
SL150	150	152.8	149.8	148.3	156.5	9.0	156.4	9.6
SL180	180	174.5	171.5	170.0	178.8	10.2	178.7	10.9
SL200	200	202.7	199.7	198.2	206.4	11.9	206.3	12.7
SL250	250	256.1	253.1	251.6	259.8	15.1	259.7	16.2
SL300	300	303.3	300.3	298.8	307.0	17.8	306.9	19.0

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
SL025	25	22.6	19.6	18.0	27.2	1.2	26.2	1.2
SL038	38	34.5	31.5	46.0	39.9	1.6	38.9	1.8
SL050	50	46.5	43.4	42.0	52.6	2.2	51.6	2.2
SL075	75	70.6	67.6	66.0	77.7	3.3	76.7	3.4
SS100	100	102.2	99.2	97.7	105.9	4.0	105.8	4.3
SS120	120	115.2	112.2	110.7	118.9	4.5	118.8	4.8
SS125	125	128.7	125.7	124.2	132.4	5.0	132.3	5.4
SS140	140	138.7	135.7	134.2	142.4	5.4	142.3	5.8
SS150	150	152.8	149.8	148.3	156.5	5.9	156.4	6.3
SS180	180	174.5	171.5	170.0	178.8	6.7	178.7	7.2
SS200	200	202.7	199.7	198.2	206.4	7.8	206.3	8.3
SS250	250	256.1	253.1	251.6	259.8	9.9	259.7	10.6
SS300	300	303.3	300.3	298.8	307.0	11.6	306.9	12.4

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

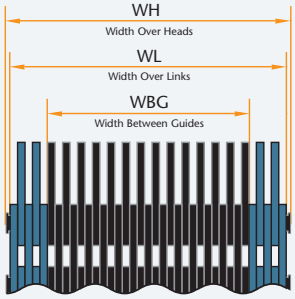
M MultiGuide Chain

ULTRALIFE SINGLE PIN & STANDARD

ULTRALIFE TWO PIN

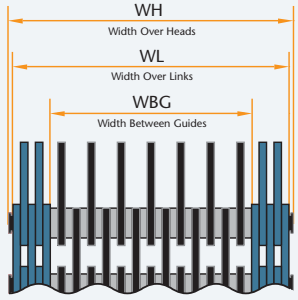
LO-PROFILE

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
ML050	50	49.5	25.4	23.9	55.6	3.2	54.6	3.2
ML075	75	76.5	52.6	51.1	83.8	4.7	82.8	4.8
ML100	100	98.5	68.3	66.8	102.2	6.1	102.1	6.7
ML125	125	123.7	96.5	95.0	127.4	7.5	127.3	8.2
ML150	150	150.2	97.3	95.8	153.4	9.1	153.3	10.0
ML200	200	196.7	145.3	143.8	200.4	12.0	200.3	13.1
ML250	250	247.4	196.0	194.5	251.1	14.9	251.0	16.3
ML300	300	299.7	245.3	243.8	303.4	18.0	303.3	19.7

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	SINGLE PIN WH (MAX)	SINGLE PIN WEIGHT KG/M	TWO PIN** WH (MAX)	TWO PIN** WEIGHT KG/M
MS050	50	49.5	25.4	23.9	55.6	2.4	54.6	2.4
MS075	75	76.5	52.6	51.1	83.8	3.5	82.8	3.6
MS100	100	98.5	68.3	66.8	102.2	4.0	102.1	4.3
MS125	125	123.7	96.5	95.0	127.4	4.9	127.3	5.3
MS150	150	150.2	97.3	95.8	153.4	5.9	153.3	6.4
MS200	200	196.7	145.3	143.8	200.4	7.7	200.3	8.4
MS250	250	247.4	196.0	194.5	251.1	9.6	251.0	10.4
MS300	300	299.7	245.3	243.8	303.4	11.7	303.3	12.7

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

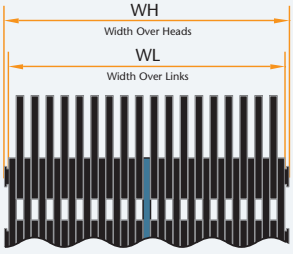
Ordering Charts

Assemblies for EP Extended Pitch

C Center Guide Chain

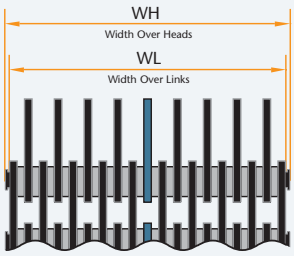
SINGLE PIN EXTENDED PITCH

L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MAX)	SPROCKET* WIDTH	WEIGHT KG/M
CL025	25	27.9	25.4	25.4	1.0
CL038	38	37.3	34.8	38.1	1.3
CL050	50	51.6	49.0	50.8	1.9
CL075	75	80.3	77.7	76.2	3.0
CL100	100	95.7	92.0	100.0	3.3
CL125	125	126.6	123.0	125.0	4.4
CL140	140	138.5	134.9	140.0	4.8
CL150	150	150.4	146.8	150.0	5.2
CL200	200	199.3	196.1	200.0	7.1
CL300	300	304.3	300.6	300.0	10.7

S LINK-SPACER ASSEMBLY



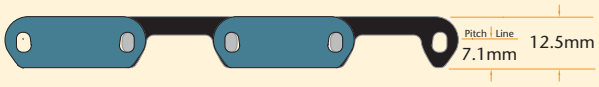
ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MAX)	SPROCKET* WIDTH	WEIGHT KG/M
CS025	25	30.2	26.7	25.4	0.9
CS038	38	41.1	37.6	38.1	1.2
CS050	50	53.6	50.0	50.8	1.6
CS075	75	80.0	76.5	76.2	2.2
CS100	100	95.7	92.0	100.0	2.4
CS125	125	126.6	123.0	125.0	3.2
CS140	140	138.5	134.9	140.0	3.5
CS150	150	150.4	146.8	150.0	3.8
CS200	200	199.3	196.1	200.0	5.1
CS300	300	304.3	300.6	300.0	7.6

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

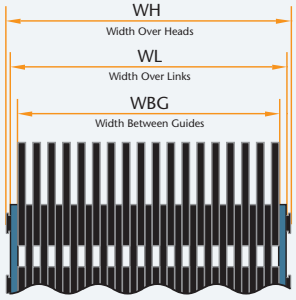
Consult Ramsey for information on Two Pin Extended Pitch Chains

S Side Guide Chain

SINGLE PIN EXTENDED PITCH

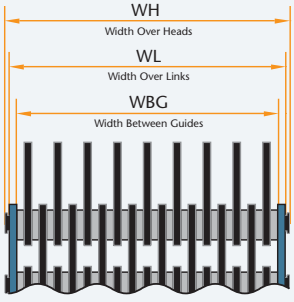


L ALL-LINK ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	WEIGHT KG/M
SL025	25	28.2	23.6	20.6	19.0	1.0
SL038	38	42.4	38.9	35.8	34.3	1.3
SL050	50	51.8	48.3	45.2	43.7	1.9
SL075	75	80.3	76.7	73.7	72.1	3.0
SL100	100	105.9	102.2	99.2	97.7	3.8
SL125	125	132.4	128.7	125.7	124.2	4.7
SL140	140	142.4	138.7	135.7	134.2	5.1
SL150	150	156.5	152.8	149.8	148.3	5.6
SL200	200	201.8	196.9	194.5	193.0	7.1
SL300	300	307.0	303.3	300.3	298.8	11.0

S LINK-SPACER ASSEMBLY



ASSEMBLY NUMBER	NOMINAL WIDTH	WH (MAX)	WL (MIN)	WBG (MIN)	SPROCKET* WIDTH	WEIGHT KG/M
SS025	25	27.7	23.1	20.0	18.5	0.9
SS038	38	40.6	35.6	32.5	31.0	1.2
SS050	50	55.9	50.3	47.2	45.8	1.6
SS075	75	79.2	72.6	69.6	68.0	2.2
SS100	100	105.9	102.2	99.2	97.7	2.5
SS125	125	132.4	128.7	125.7	124.2	3.2
SS140	140	142.4	138.7	135.7	134.2	3.3
SS150	150	153.4	149.7	146.7	145.2	4.0
SS200	200	201.8	196.9	194.5	193.0	4.9
SS300	300	307.0	303.3	300.3	298.8	7.2

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

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

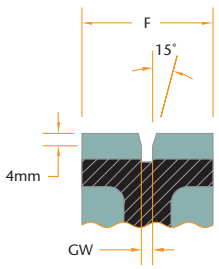
For assistance in selecting a sprocket, please contact us.

GUIDE TYPE

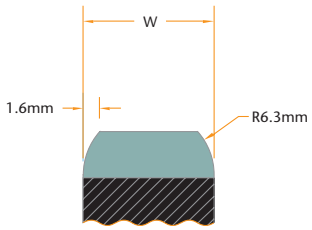
Sprockets can be grouped into two broad categories: *center guide* and *side/multiguide*

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
= 3mm for F<200mm, uses a single guide link
= 5mm for F≥200mm, uses a double guide link

SIDE/MULTIGUIDE DATA

W = WBG - 1.5mm
(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.

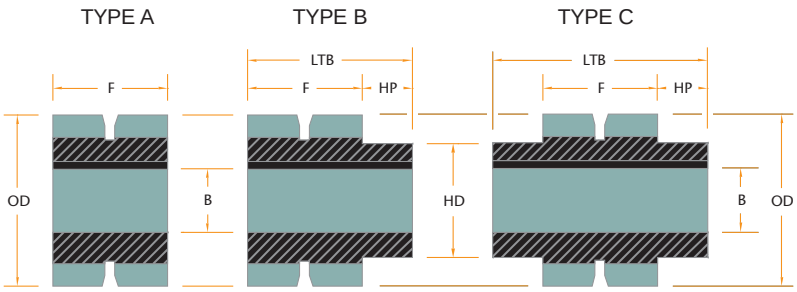
Problem: *Short chain life*
Action: Check for chain overloading that can be caused by over-tensioning or improper guide clearance. Excess debris in the chain may also accelerate wear and reduce life.

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

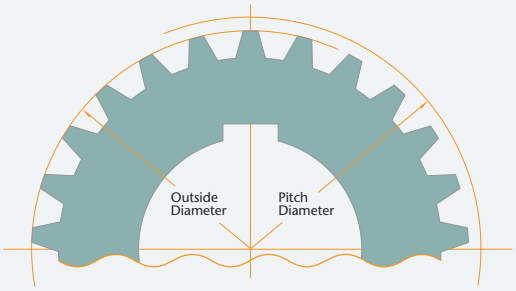
ADDITIONAL INFORMATION

PD Pitch Diamete(mm) = 12.7/ sin (180/Z)
GD Gross Wrapped Diameter(mm) = PD+X
V Surface Velocity (M/s) = $2.12x10^{-4}$ (Z)(N)
N = Revolutions per Minute
Z = Number of Teeth
X = See chart below

X in mm (for GD calculation)

Ultralife (1pin)	10.6
Ultralife (2pin)	13.2
Standard	10.6
Lo-Profile	10.2
Extended	10.8

OD=OUTSIDE DIAMETER (in inches)

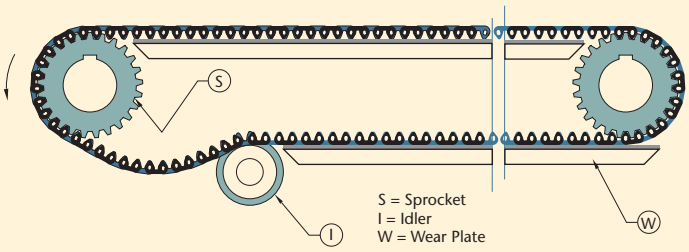


SPROCKET PROFILE

Z*	OD	Z*	OD	Z*	OD
18	71.4	46	185.9	74	299.4
19	75.5	47	190.0	75	303.5
20	79.6	48	193.4	76	307.5
21	83.8	49	198.1	77	311.6
22	87.9	50	202.1	78	315.6
23	92.0	51	206.2	79	319.7
24	96.1	52	210.3	80	323.7
25	100.2	53	214.3	81	327.8
26	104.3	54	218.4	82	331.8
27	108.4	55	222.4	83	335.9
28	112.5	56	226.5	84	339.9
29	116.6	57	230.6	85	344.0
30	120.7	58	234.6	86	348.0
31	124.8	59	238.7	87	352.1
32	128.9	60	242.7	88	356.1
33	133.0	61	246.8	89	360.2
34	137.1	62	250.8	90	364.2
35	141.2	63	254.9	91	368.3
36	145.2	64	258.9	92	372.3
37	149.3	65	263.0	93	376.4
38	154.3	66	267.0	94	380.4
39	157.4	67	271.1	95	384.4
40	161.5	68	275.1	96	388.5
41	165.6	69	279.2	97	392.5
42	169.6	70	283.2	98	396.6
43	173.7	71	287.3	99	400.6
44	177.8	72	291.4	100	404.7
45	181.8	73	295.4		

*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. We welcome all inquiries.