Ramsey Conveying Chains

For Industrial Conveying

Ramsey Products
CORPORATION

MEETING THE CHALLENGES OF INDUSTRIAL CONVEYING

Ramsey Products designs and manufactures silent or “inverted tooth” chains and sprockets to meet the challenges inherent in transporting industrial products. We offer an extensive line of standard silent chains, custom-designed chains, as well as replacements for most competitors’ products. For 100 years, Ramsey has focused on silent chain products. Today, we remain committed to providing our customers with the world’s widest range of top quality products, competitive pricing, and unparalled service. If a job can be done with silent chain, we will find the best chain for the job, at the lowest possible cost.

SINCE 1923 MADE IN USA

WHY SILENT CHAIN?

For companies that require conveying, silent chains offer many benefits in applications with large temperature ranges, precision inspection and measurement. Ramsey silent conveyor chains are designed and built specifically for these environments.

DURABILITY

Our chains are made from through-hardened steel link plates and case hardened steel pins. Chain designs and materials are chosen to meet the demanding conditions encountered on the production floor. Long service life and minimal maintenance helps you minimize costly downtime for conveyor chain replacement.

FLATNESS AND UNIFORMITY

The flat uniform surface of Ramsey chain provides trouble-free transport of even the smallest products. Consistent chain height allows items to be smoothly transferred on and off the conveyor, reducing problems caused by improper product feeding and moving. For the ultimate in smooth transport, the chain surface can be ground.

NEARLY CONSTANT SURFACE VELOCITY

Ramsey carefully controls chain pitch and lot uniformity during chain manufacture to ensure consistent chain surface velocity throughout the conveyor. Uniform velocity reduces problems associated with irregular spacing and misfeeds. Also, as the chain wears, the pitch increases uniformly throughout the chain, and velocity remains constant.

HEAT RESISTANT

We manufacture our chain from hardened steel components to withstand high temperatures. Heat transfer from transported products does not affect the uniformity of the conveyor surface.

ECONOMIC

Because it lasts for years, improves product handling, and requires little or no maintenance, Ramsey chain provides a cost-effective means for conveying products in high-speed production lines. The right chain can help reduce problems and machine downtime.

COMPONENTS

A Ramsey inverted tooth chain drive consists of a chain and two or more 1/2" pitch sprockets 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.

ULTRALIFE CONVEYOR SERIES

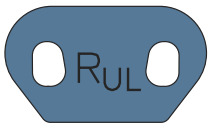
UltraLife, one of Ramsey's best quality conveyor chains, was designed in cooperation with major manufacturers for high-speed production lines and field tested in plants around the world. UltraLife chain has been proven to last longer than any other conveyor chain we have tested. Ramsey's proprietary link and chain production techniques produce driving links that are flat and uniform, with straight-edged, burr-free apertures. This 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.

ULTRALIFE - 1/2" PITCH

SINGLE PIN

Single Pin Driving Link

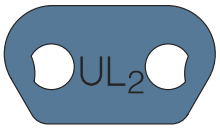
Single Pin Guide Link



TWO PIN

Two Pin Driving Link

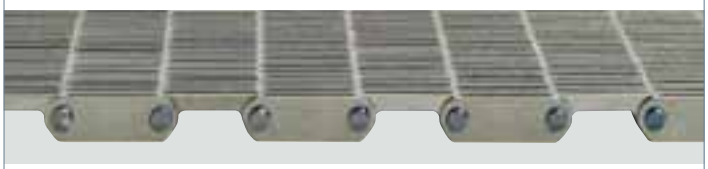
Two Pin Guide Link



ULTRALIFE - 1" EXTENDED PITCH

Extended pitch conveyor chain 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 is also less susceptible to joint fouling and wear.

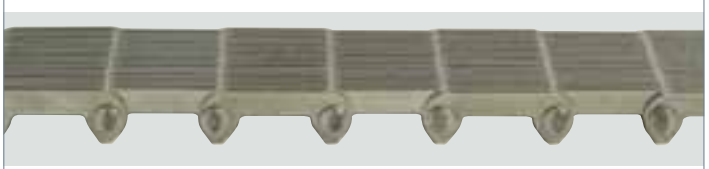
SINGLE PIN



Single Pin Driving Link

Single Pin Guide Link

TWO PIN



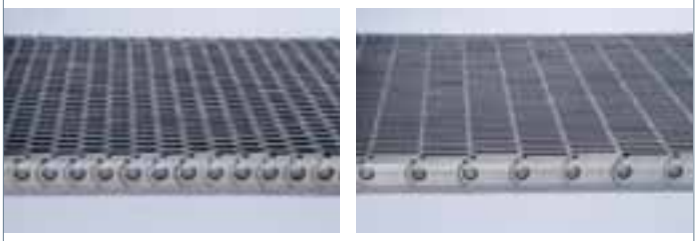
Two Pin Driving Link

Two Pin Guide Link

HEAD PROTECTED CHAINS

Typical chains contain exposed pin heads that can snag or hang up on protruding edges along the conveyor's path. This snagging can lead to the chipping or shearing away of the pin head, conveyor surging, and product flow disruption. Ramsey Wear Protected Chains are made with special wear protected side links that fully enclose pin heads guarding them against pin wear and chipping. This allows the chain to be operated in direct contact with lateral guides or transfer plates, eliminating gaps that can prevent smooth product transfer.

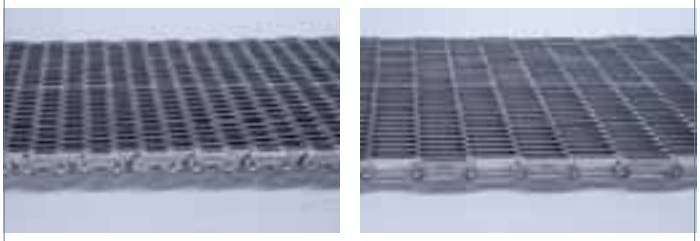
LIFEGUARD



Available in 1/2" (left) or 1" pitch (right)

PATENTED IN THE USA AND EUROPE
Ramsey's Lifeguard Wear Protected conveying chains are designed to prolong chain life by guarding exposed pin heads against wear and by preventing chain snagging. In addition, Lifeguard's special interlocking side links not only guard against pin head wear, but also greatly reduce the size of gaps between adjacent side plates. With smaller gaps between the links, the potential for snagging on lateral guides is significantly reduced.

SENTRY

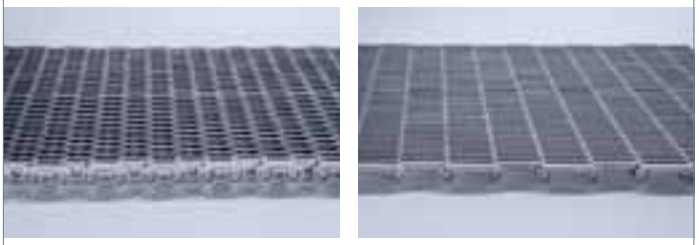


Available in 1/2" (left) or 1" pitch (right)

Ramsey's Sentry chains combine wear protection, two pin chain design with the best qualities of Ramsey's high speed power transmission chains. Sentry chains feature:

- Guard Links with Fully Recessed Pin Heads
- 100% Hardened Alloy Steel Construction- No Sintered Metal
- Two Pin Chain Joints
- Staked Pin Heads
- Pre-Stressing for Reduced Chain Elongation

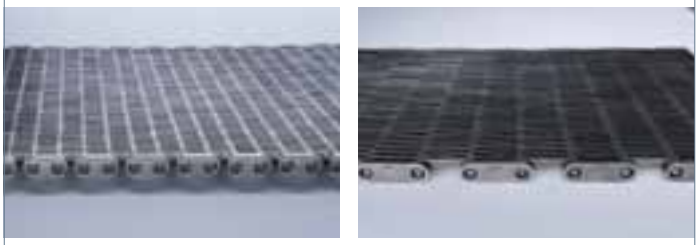
RAMSEY ALL-STEEL



Available in 1/2" and 1" pitch, Side Guide, Center Guide, or Multiguide

Ramsey's 100% steel chains are tough enough for the most demanding applications. Protected against lateral chain and pin head wear by all steel, hardened, alloy side links, the links in this chain will never crack under pressure. Ramsey All-Steel chains are available in 1/2" and 1" pitch and chain widths range from less than 1 inch to over 20 inches.

ALLGUARD FX



Available in 1/2" pitch, Side Guide or Multiguide

Ramsey's Allguard FX conveyor chains are designed to extend chain life and improve product handling. Allguard FX side links fully enclose pin heads and guard against pin wear and chipping. This allows Allguard FX chains to run in direct contact with lateral guides, immune to the pin head wear that can destroy typical chains.

SPECIAL APPLICATION CHAINS

RZ3 EXTENDED PITCH CHAIN

The RZ3 chain features an innovative third tooth positioned centrally within the extended pitch chain link. This increases the points of contact with the plate or the sprocket, providing extra support and enhanced stability. Features include:

- Flattening of the link-bottom tips - minimize wear and maximize durability.
- Thicker links - provide greater strength and durability.
- Utilizes Sentry Head Protected Side Links

The RZ3 design ensures smooth operation, minimizes wear and elongation, and extends the chain's lifespan.

RFT (RAMSEY FLAT TOP) CHAIN

The RFT chain is super heavy-duty, able to handle heavy loads and intense production environments. The RFT chain runs flush with the production floor and is constructed to withstand heavy forklift and foot traffic. The flat top design of the link prevents debris from falling through it and allows the chain to “self clean” as it runs.

All RFT links and pins are made of steel. The chain is made using round pins which enhance the strength of the chain and minimize backbend.

RAMSEY ROUND PIN RPV

Ramsey’s Round Pin RPV is designed to meet the challenges of a rugged manufacturing environment. Our Round Pin Chain is designed for specific phases of the manufacturing process.

Round Pin chains:

- Enhance the strength of the chain
- Alows the chain to backbend

LO-PROFILE

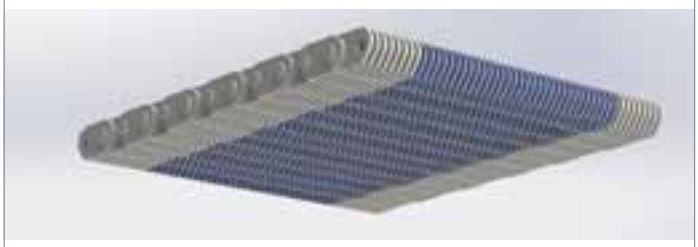
Produced to the same quality standards as standard conveyor, Ramsey Lo-Profile conveyor has a reduced overall link height and larger flats on link points. The increased surface area on the bottom of the chain serves to reduce bearing stress on wear plates, effectively reducing link wear and resistance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

STAINLESS STEEL

Available in 1/2" or 1" pitch (above)

Most Ramsey chains are available in stainless steel. Typically, links are made from 316 and 420 stainless steel and pins are made from a wear resistant, hardenable grade of stainless or carbon steel. With compatible stainless steel sprockets, these chains are capable of intermittent temperatures up to 1200°F (650°C). Stainless steel chains also offer superior corrosion resistance. They provide a tolerance to chemicals and atmospheres which are unsuitable for carbon steel chains.

R-SELECT



Available in 1/2" (above) or 1" pitch

R-Select chains put hardened, highly wear resistant chromium alloy links in the parts of the chain which are expected to wear the most. Other parts of the chain, which are less subject to wear, are made with standard, heat treated steel links. Because, the chain is not made entirely of the more costly wear resistant links, the overall cost of the chain can be as little as 20% more than the cost of a standard chain. Alternatively, those customers looking for optimum wear characteristics, and are less concerned about the added cost, can have chains made entirely from wear resistant alloy links.

RKO TOOL

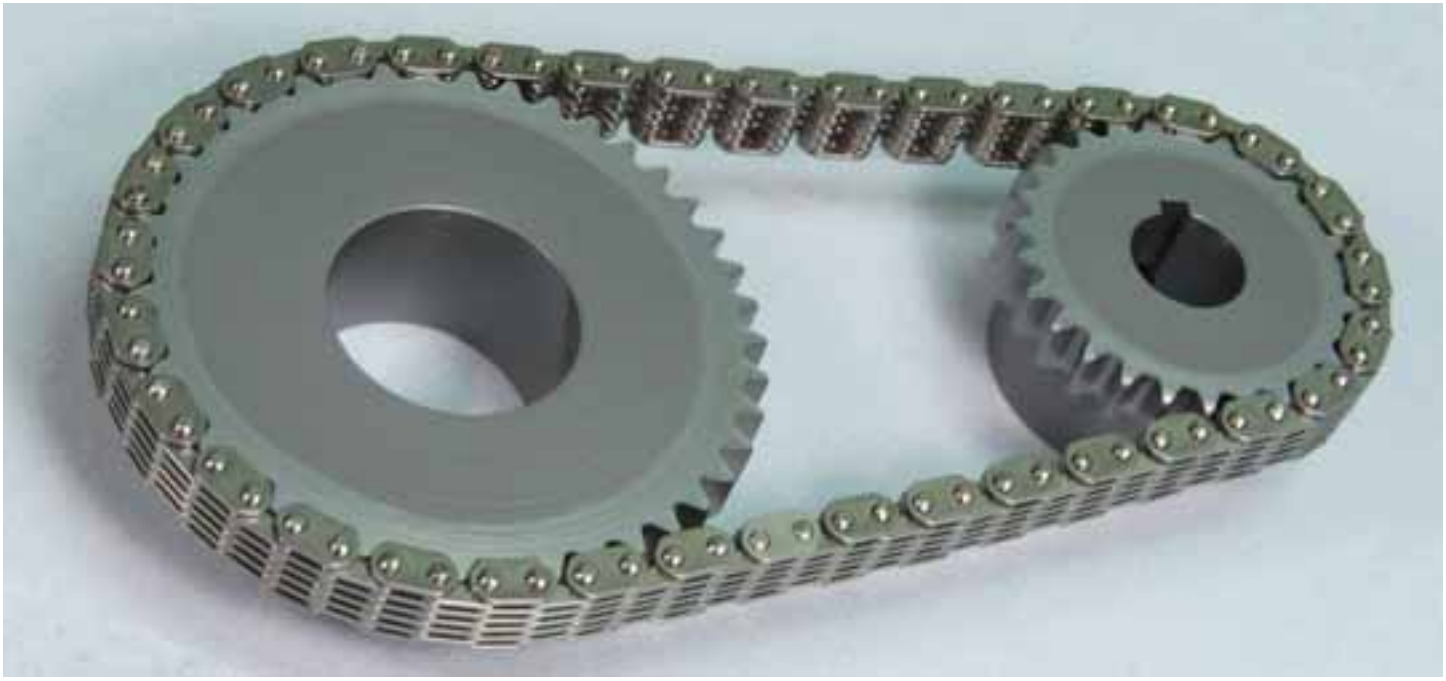
The RKO Tool, or "Ramsey Knock Out" Tool, greatly simplifies connecting and disconnecting all Ramsey conveying chains which use a single pin joint. The tool is especially beneficial with wear protected chains, including Allguard, Lifeguard, and All-Steel chains.

Three Distinct Work Stations:

- First station uses a ram screw to remove the pin head.
- Second station maintains link alignment and allows pin removal or new pin insertion.
- Third station provides for insertion of drive pin chain connector.

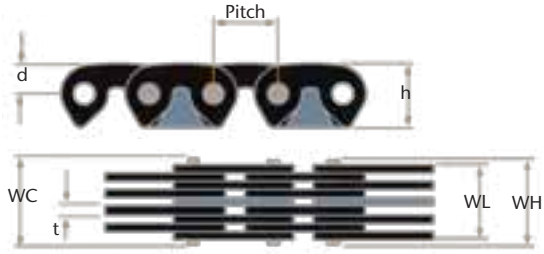
Note: Optional drive pin connectors must be purchased separately.

SC 3/16” PITCH CHAIN

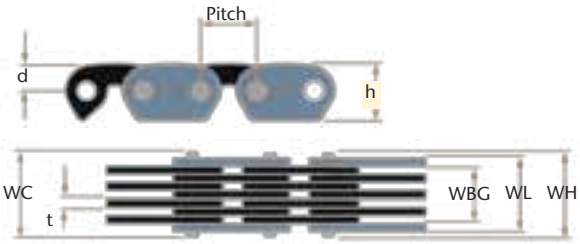


Ramsey 3/16" pitch chain is manufactured to ASME standards and will operate on standard sprockets. Chains can be made entirely of 304 stainless steel or carbon steel and are available in side guide or center guide assemblies, depending on chain width.

CENTER GUIDE

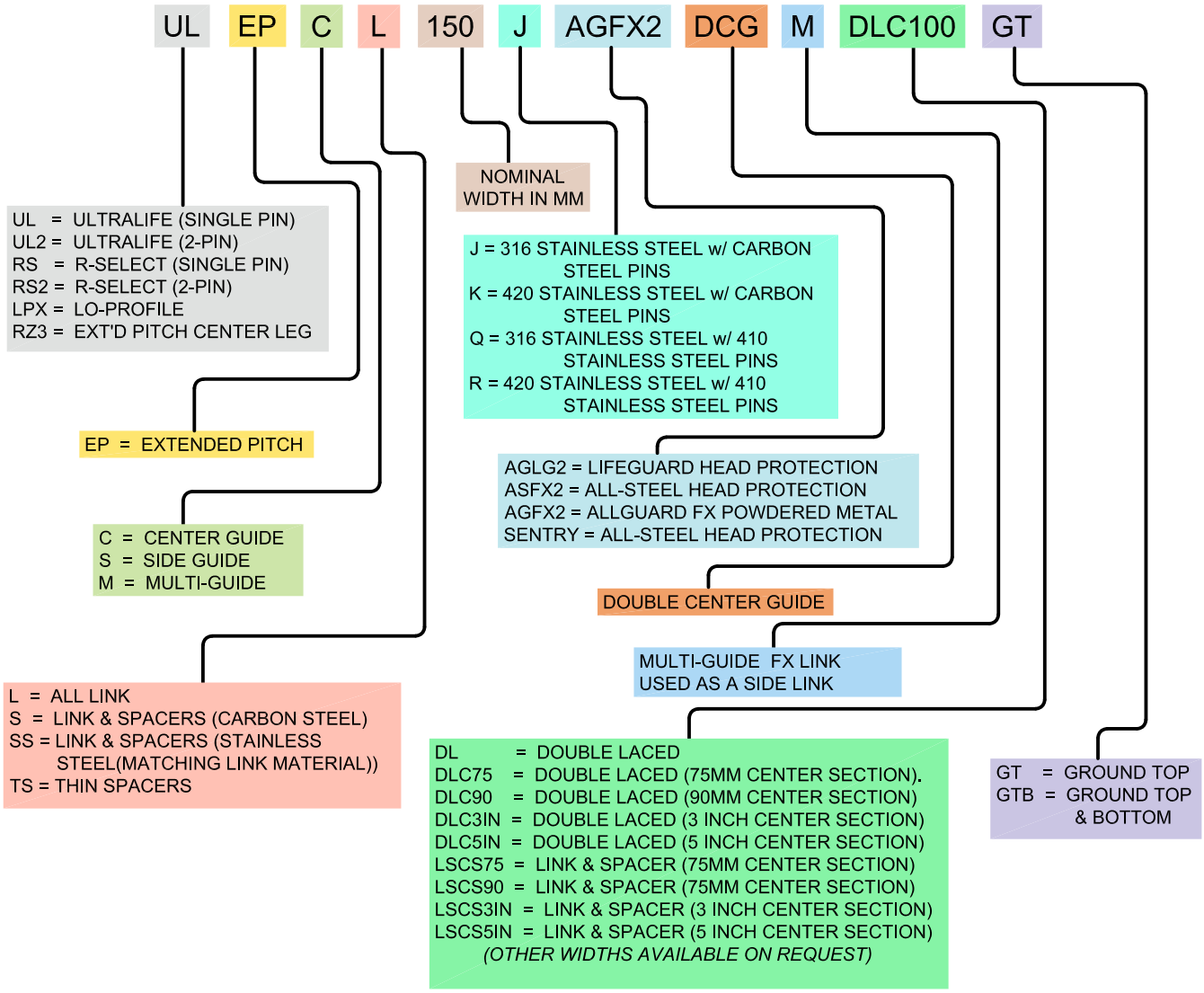


SIDE GUIDE



Pitch	Part Number	Nominal Width	Guide Type	Width Between Guides WBG	Width Over Heads WH	Width Over Links WL	Width At Connector WC	Weight (g/m)	h	d	t
3/16"	SC0305	4	SG	2.4	5.6	4.1	5.6	112	5.1	2.5	0.8
	SC0307	6	SG	4.0	6.9	5.6	6.9	149			
	SC0309	7	SG	5.6	8.6	7.1	8.6	177			
	SC0311	9	SG	7.1	10.2	8.9	10.2	223			
	SC0315	12	SG	10.3	13.5	12.2	13.5	298			
	SC0315A	12	CG		13.5	12.2	13.5	298			
	SC0319	15	CG		16.5	15.5	16.5	400			
	SC0319A	15	SG	13.5	16.5	15.5	16.5	400			
	SC0325	20	CG		21.8	20.6	21.8	502			
	SC0325A	20	SG	18.3	21.8	20.6	21.8	502			
	SC0331	20	CG		26.2	24.9	26.2	623			

RAMSEY CONVEYOR CHAIN CODING GUIDE



EXAMPLES:

ULCL100
(CONVEYOR - STANDARD - CENTER GUIDE - ALL LINK - 100MM WIDE)

LPX-SL050
(CONVEYOR - LO PROFILE - SIDE GUIDE - ALL LINK - 50MM WIDE)

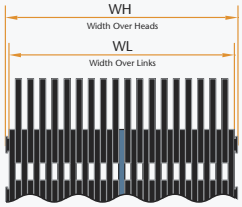
ULEPCL150AGLG2
(CONVEYOR - ULTRA LIFE - EXTENDED PITCH - CENTER GUIDE - ALL LINK - 150MM WIDE - LIFEGUARD 2-SIDED)

RSCS150ASFX2
(CONVEYOR - R-SELECT - CENTER GUIDE - LINK & SPACERS - 150MM WIDE - ALL-STEEL FX 2 SIDED)

RZ3CS180SENTRYLSCS100
(CONVEYOR - RZ3 - CENTER GUIDE - LINK & SPACER - 180MM WIDE - SENTRY 2-SIDED - LINK & SPACER CENTER SECTION (100MM)

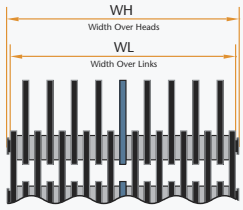
CENTER GUIDE CHAIN ORDERING CHARTS

ALL-LINK ASSEMBLY



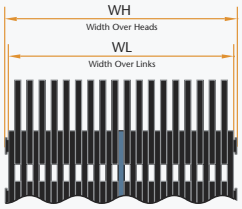
ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WL (MAX) INCHES	SPROCKET* WIDTH INCHES	SINGLE PIN WH (MAX) INCHES	SINGLE PIN WEIGHT LB/FT	TWO PIN WH (MAX) INCHES	TWO PIN WEIGHT LB/FT
CL025	1	0.93	1	1.07	1	1.03	1
CL040	1.5	1.46	1.5	1.54	1.5	1.55	1.5
CL050	2	1.93	2	2.07	2	2.03	2
CL075	3	2.92	3	3.06	3	3.02	3
CL100	4	3.58	3.94	3.74	3.5	3.7	3.7
CL120	4.75	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
CL140	5.5	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	9.7	9.96	10.4
CL300	12	11.81	11.81	11.97	11.6	11.93	12.4

LINK-SPACER ASSEMBLY



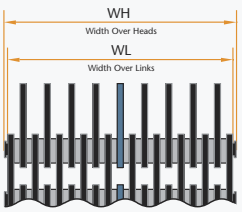
ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WL (MAX) INCHES	SPROCKET* WIDTH INCHES	SINGLE PIN WH (MAX) INCHES	SINGLE PIN WEIGHT LB/FT	TWO PIN WH (MAX) INCHES	TWO PIN WEIGHT LB/FT
CS025	1	0.93	1	1.07	0.8	1.03	0.8
CS040	1.5	1.43	1.5	1.57	1.2	1.55	1.2
CS050	2	1.93	2	2.07	1.5	2.03	1.5
CS075	3	2.92	3	3.06	2.2	3.02	2.3
CS100	4	3.58	3.94	3.74	2.4	3.7	2.5
CS120	4.75	4.57	4.72	4.72	3	4.69	3.2
CS125	5	4.80	4.92	4.96	3.2	4.92	3.3
CS140	5.5	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
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

ALL-LINK ASSEMBLY, EXTENDED PITCH



ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WH (MAX) INCHES	WL (MAX) INCHES	SPROCKET* WIDTH INCHES	WEIGHT LB/FT
CL025	1	1.10	1	1	0.7
CL040	1.5	1.47	1.37	1.50	0.9
CL050	2	2.03	1.93	2	1.3
CL075	3	3.16	3.06	3	2
CL100	4	3.77	3.62	3.94	2.2
CL125	5	4.98	4.84	4.92	3
CL140	5.5	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

LINK-SPACER ASSEMBLY, EXTENDED PITCH



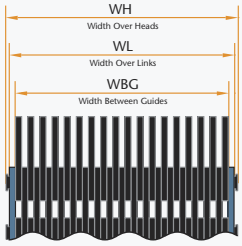
CS025	1	1.19	1.05	1	0.6
CS040	1.5	1.62	1.48	1.50	0.8
CS050	2	2.11	1.97	2	1.1
CS075	3	3.15	3.01	3	1.5
CS100	4	3.77	3.62	3.94	1.6
CS125	5	4.98	4.84	4.94	2.2
CS140	5.5	5.45	5.31	5.51	2.4
CS150	6	5.92	5.78	5.91	2.6
CS200	8	7.85	7.72	7.87	3.4
CS300	12	11.98	11.83	11.81	5.1

ASSEMBLIES SHOWN ARE FOR ULTRALIFE, ULTRALIFE EXTENDED PITCH AND LO-PROFILE

+0.0/-2.0% Tolerance

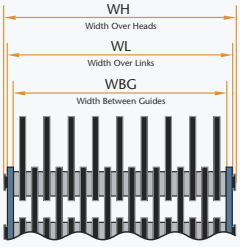
SIDE GUIDE CHAIN ORDERING CHARTS

ALL-LINK ASSEMBLY



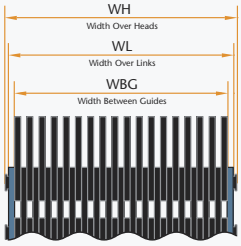
ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WL (MAX) INCHES	WBG (MIN) INCHES	SPROCKET* WIDTH INCHES	SINGLE PIN WH (MAX) INCHES	SINGLE PIN WEIGHT LB/FT	TWO PIN WH (MAX) INCHES	TWO PIN WEIGHT LB/FT
SL025	1	0.89	0.77	0.71	1.07	1	1.03	1
SL040	1.5	1.58	1.49	1.43	1.78	1.5	1.78	1.5
SL050	2	1.83	1.71	1.65	2.07	2	2.03	2
SL075	3	2.78	2.66	2.6	3.06	3	3.02	3
SL100	4	4.02	3.91	3.85	4.17	4.1	4.17	4.4
SL120	4.75	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	5.21	5.4
SL140	5.5	5.46	5.34	5.28	5.61	5.5	5.6	5.9
SL150	6	6.02	5.9	5.84	6.16	6	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	7.8	8.13	8	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	12.08	12.8

LINK-SPACER ASSEMBLY



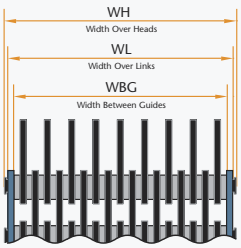
					SINGLE PIN		TWO PIN	
SS025	1	0.89	0.77	0.71	1.07	0.8	1.03	0.8
SS040	1.5	1.58	1.49	1.43	1.78	1.2	1.78	1.2
SS050	2	1.83	1.71	1.65	2.07	1.5	2.03	1.5
SS075	3	2.78	2.66	2.6	3.06	2.2	3.02	2.3
SS100	4	4.02	3.91	3.85	4.17	2.7	4.17	2.9
SS120	4.75	4.54	4.42	4.36	4.68	3	4.68	3.2
SS125	5	5.07	4.95	4.89	5.21	3.4	5.21	3.6
SS140	5.5	5.46	5.34	5.28	5.61	3.64	5.60	3.9
SS150	6	6.02	5.9	5.84	6.16	4	6.16	4.2
SS180	7	6.87	6.75	6.69	7.04	4.5	7.04	4.8
SS200	8	7.98	7.89	7.8	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

ALL-LINK ASSEMBLY, EXTENDED PITCH



ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WH (MAX) INCHES	WL (MAX) INCHES	WBG (MIN) INCHES	SPROCKET* WIDTH INCHES	WEIGHT LB/FT
SL025	1	1.11	0.93	0.81	0.75	0.7
SL040	1.5	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	5.5	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

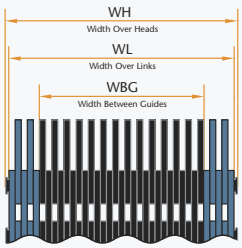
LINK-SPACER ASSEMBLY, EXTENDED PITCH



SS025	1	1.09	0.91	0.79	0.73	0.6
SS040	1.5	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	5.5	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

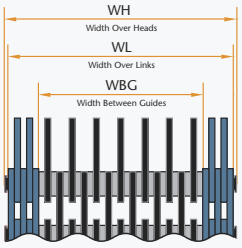
MULTIGUIDE CHAIN ORDERING CHARTS

ALL-LINK ASSEMBLY

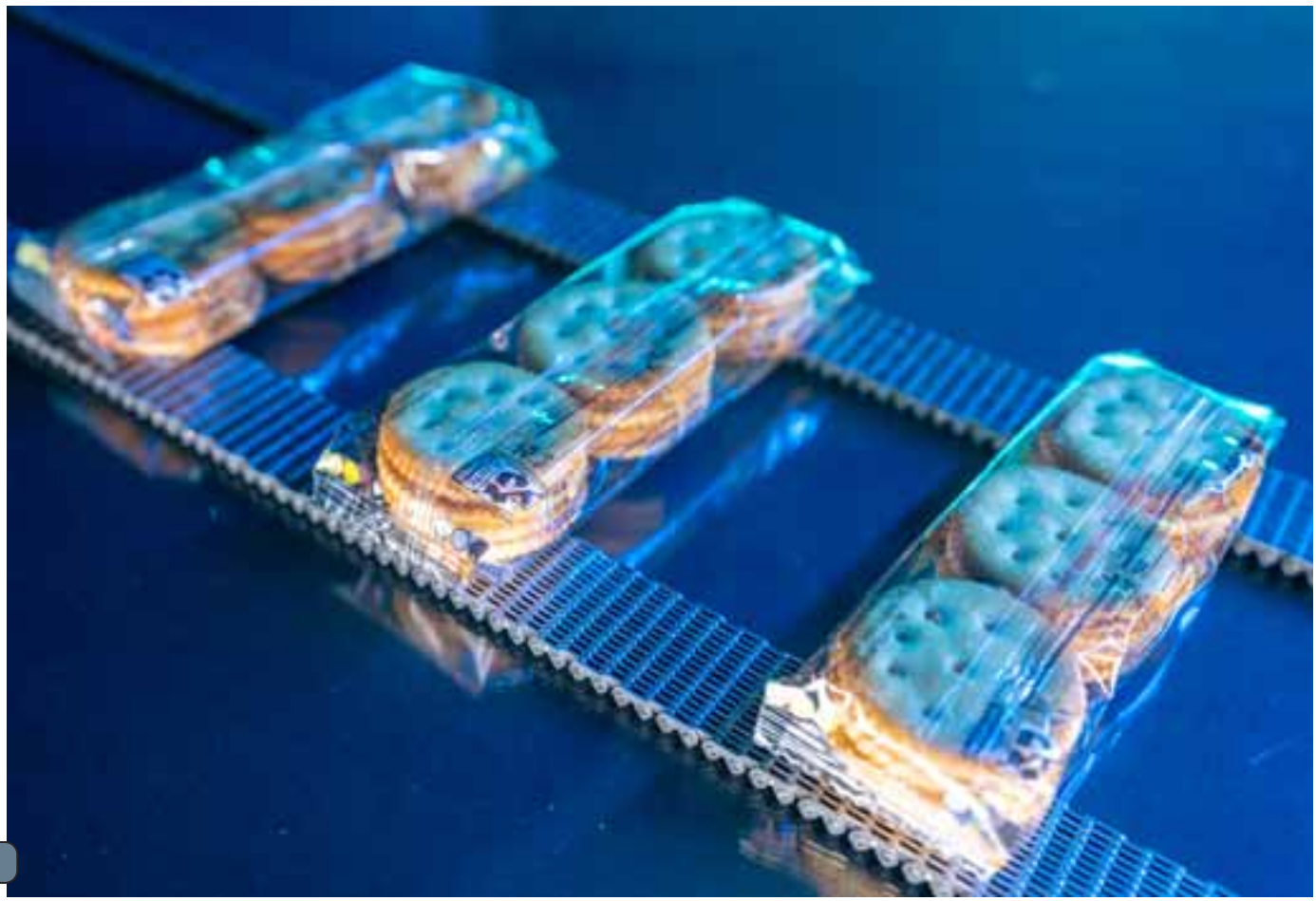


					SINGLE PIN		TWO PIN	
ASSEMBLY NUMBER	NOMINAL WIDTH INCHES	WL (MAX) INCHES	WBG (MIN) INCHES	SPROCKET* WIDTH INCHES	WH (MAX) INCHES	WEIGHT LB/FT	WH (MAX) INCHES	WEIGHT LB/FT
ML050	2	1.95	1	0.94	2.19	2.16	2.15	2.17
ML075	3	3.01	2.07	2.01	3.3	3.14	3.26	3.19
ML100	4	3.88	2.69	2.63	4.02	4.1	4.02	4.5
ML125	5	4.87	3.8	3.74	5.02	5	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	9.88	11
ML300	12	11.8	9.66	9.6	11.94	12.1	11.94	13.2

LINK-SPACER ASSEMBLY



					SINGLE PIN		TWO PIN	
MS050	2	1.95	1	0.94	2.19	1.63	2.15	1.64
MS075	3	3.01	2.07	2.01	3.3	2.35	3.26	2.4
MS100	4	3.88	2.69	2.63	4.02	2.7	4.02	2.9
MS125	5	4.87	3.8	3.74	5.02	3.3	5.01	3.6
MS150	6	5.91	3.83	3.77	6.04	4	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
MS300	12	11.8	9.66	9.6	11.94	7.9	11.94	8.5



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 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

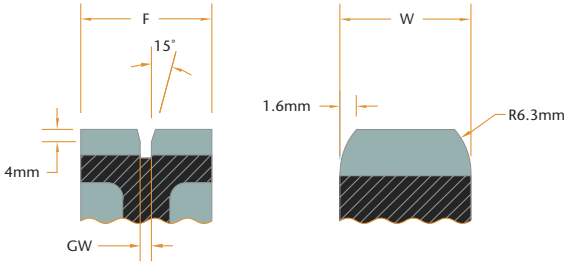
For assistance in selecting a sprocket, please contact us.

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" for F<7.9", uses a single guide link
= .2" for F≥7.9", uses a double guide link

SIDE/MULTIGUIDE DATA

W = WBG - 0.06" (unless otherwise specified)

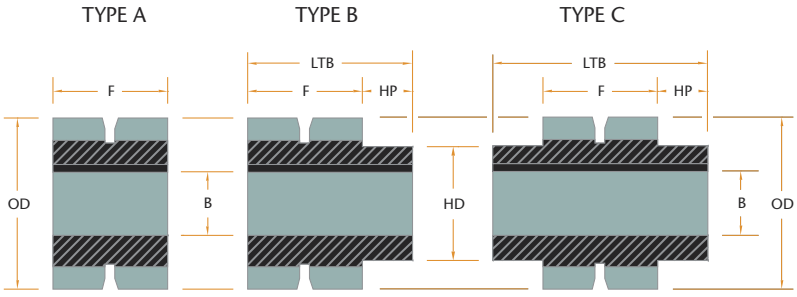
WBG = Width Between Guides

(See Ordering Charts for WBG & W)

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



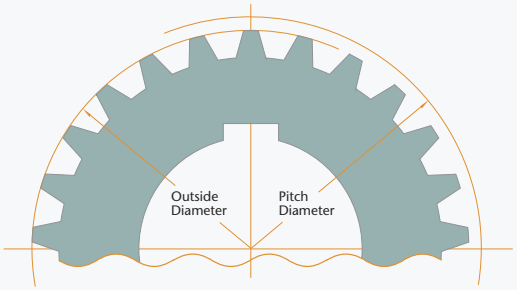
SPROCKET HUB TYPES

ADDITIONAL INFORMATION

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

X values in inches (for GD calculation)	
UltraLife (1pin)	0.4
UltraLife (2pin)	0.5
Lo-Profile	0.4
Extended	0.4

OD=OUTSIDE DIAMETER (in inches)

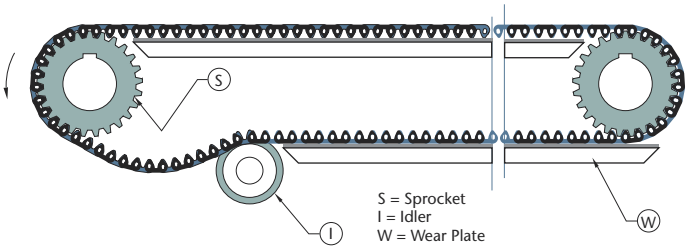


SPROCKET PROFILE

Z*	OD	Z*	OD	Z*	OD
18	2.8"	46	7.3"	74	11.8"
19	3"	47	7.5"	75	11.9"
20	3.1"	48	7.6"	76	12.1"
21	3.3"	49	7.8"	77	12.3"
22	3.5"	50	7.95"	78	12.4"
23	3.6"	51	8.1"	79	12.6"
24	3.8"	52	8.3"	80	12.7"
25	3.9"	53	8.4"	81	12.9"
26	4.1"	54	8.6"	82	13.1"
27	4.3"	55	8.75"	83	13.2"
28	4.4"	56	8.9"	84	13.4"
29	4.6"	57	9.1"	85	13.5"
30	4.75"	58	9.2"	86	13.7"
31	4.9"	59	9.4"	87	13.9"
32	5.1"	60	9.55"	88	14"
33	5.2"	61	9.7"	89	14.2"
34	5.4"	62	9.9"	90	14.3"
35	5.55"	63	10"	91	14.5"
36	5.7"	64	10.2"	92	14.65"
37	5.9"	65	10.35"	93	14.8"
38	6.1"	66	10.5"	94	15"
39	6.2"	67	10.7"	95	15.1"
40	6.35"	68	10.8"	96	15.3"
41	6.5"	69	11"	97	15.45"
42	6.7"	70	11.15"	98	15.6"
43	6.8"	71	11.3"	99	15.8"
44	7"	72	11.5"	100	15.9"
45	7.15"	73	11.6"		

*Z = Number of Teeth

INSTALLATION 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.

GUIDE DESIGN AND PLACEMENT

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 10-12 for the various Ramsey chains. Sharp edges should be avoided at the entrance to each guide strip. Chain guides should not restrict or interfere with the free movement of the chain.

LUBRICATION

In most transport applications, Ramsey does not recommend routine lubrication of the chain. During shut downs, a light oil may be applied to prevent seizing. Use of lubricants can cause accumulation of debris that interferes with proper chain action and accelerates 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.

TENSIONING

Chains must be properly tensioned at installation and checked periodically. Chain life will be shortened both by running too tight and running too loose. A chain which is too tight has an additional load imposed on it which will accelerate wear and increase noise. A chain which is too loose can be subjected to shock loads and excessive wear.

SHAFT PARALLELISM

Shaft parallelism should be checked before installing sprockets. Typically shafts should be parallel to within 0.4 mm per meter. Ramsey should be consulted for applications where shafts are not horizontal.

ALIGNMENT

Examine the sides of the chain guide links for excessive wear or gouging; these are often symptoms of misaligned sprockets. Sprockets should be aligned on the shafts so there is little or no lateral offset between sprocket faces. Excessive wear will result if the sprockets are not properly aligned. Periodically check that sprockets are securely fastened. If sprocket position has changed since installation go through the alignment procedure used during installation.

CHAIN CONNECTION

A variety of connector styles are used in Ramsey chain, depending on the chain type and customer preference. During connection, it is very important that the ends of the chain be properly laced together and that the pins be inserted with their convex surfaces facing one another.

OTHER SERVICES AND PRODUCTS

FLAME SURFACE HARDENING

Create a hardened, wear-resistant surface while maintaining a ductile core. Ramsey Products has more than 30 years of experience in precision surface hardening. Utilizing state-of-the-art flame hardening techniques and computer-controlled equipment, we can quickly respond to your flame hardening needs.

- Gears
- Sprockets
- Pulleys
- Cylindrical Parts

BENEFITS:

- Localized heating with minimal distortion
- Allows secondary machining operations
- Flexible fixtures for lower set-up costs
- Economical

TECHNICAL SPECIFICATIONS:

- From 1” diameter up to 29” diameter
- Part weight up to 2000 lbs
- Up to 12” face width
- Typical materials: C1045, 1141, 1144, 4140, 4150, SS (The last two digits of the material name denotes the amount of carbon. If the last two numbers are less than 40, pieces must be carburized before heat treatment)

No one offers the product range, quality, and support that Ramsey does. In addition to our extensive standard product line, we offer replacements for most competitors' chains, as well as custom designed chains.

Ramsey also provides free consultation and drive selection assistance through our staff of experienced engineers. Whether your requirement is a single chain, or a much larger volume, our sales and engineering staff has the experience to assist you.

With warehouses and representatives around the world, we welcome the opportunity to serve you.

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