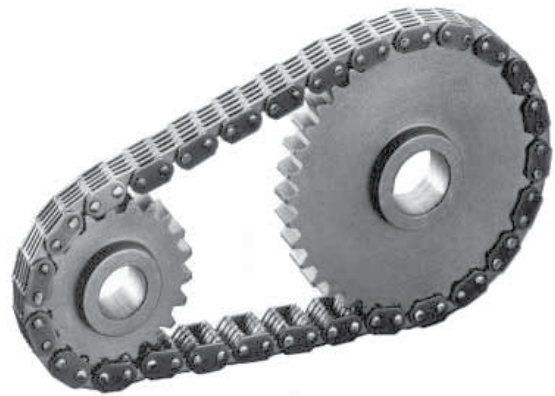


SC03 - 3/16" Pitch Round Pin Inverted Tooth Chains



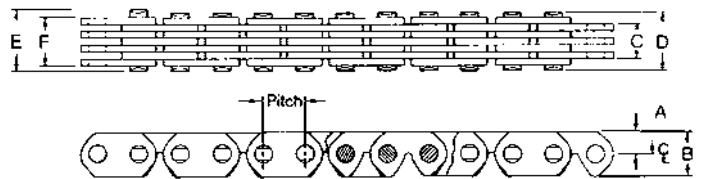
The 3/16" pitch 'SC' chains use a simple round pin construction for maximum strength and durability. Chains are available in both centre guide and single outside guide constructions in all widths, but it is normal for narrow width chains to be outside guide. The chains articulate fully on the pin, and as such tensioners can be used on the back of the chain; also the chains can be built with sets of teeth opposed to one another for serpentine drives. Tiny drives can be achieved with these chains, with power capacity up to 4 kW, and operating speeds to 10,000 rpm. All 3/16" pitch inverted tooth chain sprockets are manufactured to customer requirements, normally manufactured from induction hardened steel. Complete chain drive design and fabrication is available to meet your individual requirements. A range of Stainless Steel chains is also available for use in Food Process and Handling Machinery. These chains are manufactured from hardened, corrosion resistant, 304 grade Stainless Steel.

Chain lengths must be of even number of pitches, as offset links are not available with these series of chains.



Typical Applications

- Check Weighers - used to convey product over scales
- Postage Machinery - high operating speeds possible
- Copying Machines - transmit high loads in confined space
- Aircraft Controls - Accurate transfer of motion
- Machine Tools - Compact high torque drives
- Conveyors - handling hot small components



Chain Dimensions - 3/16" SC Series Chains

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Conn Pins E mm	Average U.T.S. kN	Ave. Weight per Metre kg
R0305	5/32				CG		4.0	5.1	6.3	2.22	0.1
SC0305	5/32				SOG	2.4	4.0	5.1	6.3	2.22	0.1
R0307	7/32				CG		5.6	6.7	7.9	3.34	0.2
SC0307	7/32				SOG	4.0	5.6	6.7	7.9	3.34	0.2
R0309	9/32				CG		7.1	8.2	9.4	4.45	0.2
SC0309	9/32				SOG	5.6	7.1	8.2	9.4	4.45	0.2
R0311	11/32	3/16"	2.4	5.1	CG		8.7	9.8	11.0	5.56	0.2
SC0311	11/32	(4.76)			SOG	7.1	8.7	9.8	11.0	5.56	0.2
SC0315	15/32				SOG	10.3	11.9	13.0	14.2	7.78	0.3
R0315	15/32				CG		11.9	13.0	14.2	7.78	0.3
SC0319	19/32				CG		15.1	16.2	17.4	10.00	0.4
R0319	19/32				SOG	13.5	15.1	16.2	17.4	10.00	0.4
SC0325	25/32				CG		19.8	20.9	22.1	13.35	0.5
R0325	25/32				SOG	18.3	19.8	20.9	22.1	13.35	0.5
SC0331	31/32				CG		24.6	25.7	26.9	16.70	0.6
R0331	31/32				SOG	23.0	24.6	25.7	26.9	16.70	0.6

Standard Chains are in bold typeface

Chain Dimensions - 3/16" SC Series Stainless Steel Chains

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Conn Pins E mm	Average U.T.S. kN	Ave. Weight per Metre kg
SC0305SS	5/32				SOG	2.4	4.0	5.1	6.3	2.00	0.1
SC0307SS	7/32				SOG	4.0	5.6	6.7	7.9	3.34	0.2
SC0309SS	9/32				SOG	5.6	7.1	8.2	9.4	4.45	0.2
SC0311SS	11/32				SOG	7.1	8.7	9.8	11.0	5.56	0.2
SC0315SS	15/32	3/16"	2.4	5.1	SOG	10.3	11.9	13.0	14.2	7.78	0.3
R0315SS	15/32	(4.76)			CG		11.9	13.0	14.2	7.78	0.3
SC0319SS	19/32				CG		15.1	16.2	17.4	10.00	0.4
R0319SS	19/32				SOG	13.5	15.1	16.2	17.4	10.00	0.4
SC0325SS	25/32				CG		19.8	20.9	22.1	13.35	0.5
R0325SS	25/32				SOG	18.3	19.8	20.9	22.1	13.35	0.5
SC0331SS	31/32				CG		24.6	25.7	26.9	16.70	0.6
R0331SS	31/32				SOG	23.0	24.6	25.7	26.9	16.70	0.6

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American Standard SC Series Inverted Tooth Chains



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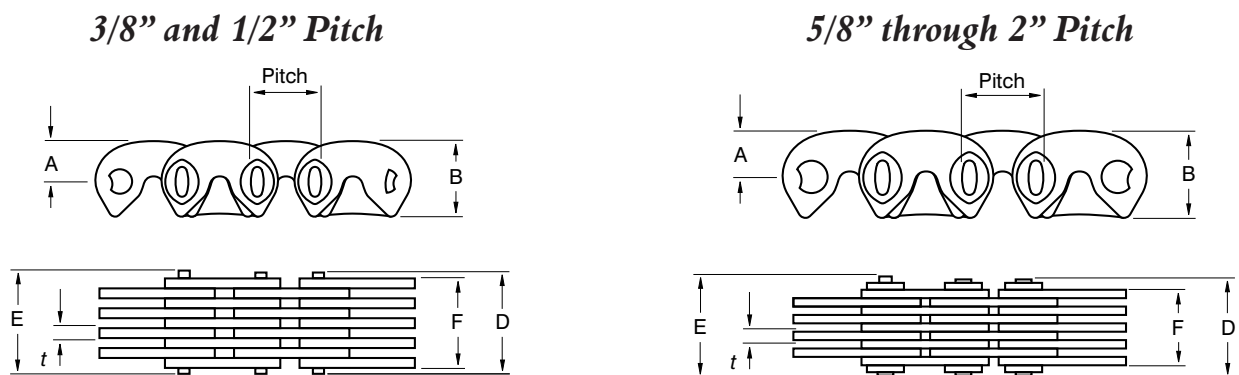
Cross+Morse 'SC' Series Inverted Tooth chains are manufactured to meet the American Standards ASME(ANSI) B29.2, and will operate on Sprockets manufactured to that Standard. Chains of other manufacture, often identified with letters 'SC' stamped on the outer plates, can be replaced, but only as complete chains, because the ASME Standard allows manufacturers individual design within the concept, so although all chains will operate on the standard sprockets, chains from different manufacturers will not usually connect together. All Cross+Morse chains use the Pin and Rocker design developed in the 'HV' series chains, so eliminating friction and chordal action during articulation allowing the chains to me operated at speeds up to 35 metres/sec, with negligible wear or heat generation. Improved Link design combined with the 'HV' type pins has enabled higher loads to be transmitted, with the chains having twice the power capacity specified in the Standard. The improved Link design reduces stress concentrations giving improved fatigue life and increased tensile strength. Innovative stamping methods in link production maximise the bearing surface area of each link, reducing stress in the chain joint, and chain elongation when operating. All chain links are shot peened to improve fatigue resistance and provide a uniform finish.

The new series 'SC' chains suffer minimal wear elongation during operation, making them well suited to 'fixed centre' drive applications. The chains can also be used to replace other manufacturers chains on existing applications to increase power ratings.

The 'SC' chains are available in standard Centre Guide construction, as shown in the following table; or with either Single or Double Outside Guides, as shown in tables on pages 87/88. Other widths and guiding arrangements from the standards shown can be supplied as replacements on existing drives on short lead time.

Our Standard 'SC' Chains are not suitable for Conveying applications, due to the curved back of the links. We are also able to offer an earlier series of chains, which do have flat back surface, to fit SC Sprockets. This 'Original Series SC Chain' is available to order on chains up to 1" pitch. Round Pin chain is also available to request in 3/8" to 3/4" pitch, for applications requiring to run on small sprockets, or subject to back-bending in operation.

It is desirable on all Inverted Tooth Chain drives to design installations so that chains have an even number of pitches, but on 'SC' if this is not possible we can provide Offset (Hunting) Link sets to accommodate odd pitch length chains. Chains will normally be supplied in requested length complete with Cotter Pin Joining Pin, but can also be supplied rivetted endless if required.



Chain Dimensions - SC Series Centre Guide Chains Imperial Widths

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
R302†	1/2	3/8" (9.525)	5.6	10.7	CG	14.3	16.3	17.8	17	0.7
SC303	3/4				CG	20.6	22.6	24.0	25	1.0
SC304	1				CG	27.0	29.0	30.5	33	1.3
SC305	1.1/4				CG	33.4	35.3	36.8	42	1.6
SC306	1.1/2				CG	39.8	41.7	43.2	50	1.9
SC307	1.3/4				CG	46.2	48.1	49.6	67	2.2
SC308	2				CG	52.5	54.4	55.9	75	2.5
SC310	2.1/2				CG	65.3	67.2	68.8	83	3.1
SC312	3				CG	78.1	80.0	81.5	100	3.7
SC316	4				DCG*	103.6	105.6	107.2	133	4.9
SC403	3/4	1/2" (12.70)	7.6	14.2	CG	20.6	23.6	25.4	33	1.3
SC404	1				CG	27.0	30.0	32.0	44	1.7
SC405	1.1/4				CG	33.4	36.3	38.1	56	2.1
SC406	1.1/2				CG	39.8	42.7	44.5	67	2.5
SC407	1.3/4				CG	46.2	49.0	51.0	78	2.9
SC408	2				CG	52.5	55.4	57.2	89	3.3
SC410	2.1/2				CG	65.3	68.1	70.1	111	4.1
SC412	3				CG	78.1	80.9	82.8	133	4.9
SC414	3.1/2				CG	90.8	93.7	95.5	156	5.7
SC416	4				DCG*	103.6	106.4	108.2	178	6.5
SC420	5	DCG*	129.1	132.1	133.9	222	8.1			
SC424	6	DCG*	154.6	157.5	159.3	267	9.7			
SC428	7	DCG*	180.1	183.0	185.0	356	11.3			

* The Guide Spacing on Double Centre Guide Chains varies by manufacturer, it is thus necessary to provide this dimension when ordering. The dimension can be taken from either the chain to be replaced, or the sprockets, and should be from centre to centre of link or groove. †SC302 Chain is a Single Side Guide construction chain, see page 87.

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American Standard SC Series Inverted Tooth Chains



Chain Dimensions - SC Series Centre Guide Chains Imperial Widths

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
SC504	1				CG	26.8	33.0	35.0	56	2.5
SC506	1.1/2				CG	39.2	45.3	47.4	83	3.5
SC508	2				CG	51.7	57.7	59.8	111	4.6
SC510	2.1/2	5/8"			CG	64.1	70.1	72.1	139	5.6
SC512	3	(15.88)	9.5	17.8	CG	76.5	82.6	84.6	167	6.7
SC514	3.1/2				CG	88.9	94.7	96.8	195	7.8
SC516	4				CG	101.3	107.2	109.2	222	8.8
SC520	5				CG	126.2	132.0	134.0	278	10.9
SC524	6				CG	151.0	157.0	159.0	334	13.0
SC604	1				CG	26.8	33.6	35.6	67	3.0
SC606	1.1/2				CG	39.2	46.2	48.3	100	4.2
SC608	2				CG	51.7	58.4	60.5	133	5.5
SC610	2.1/2				CG	64.1	71.1	73.2	167	6.8
SC612	3	3/4"			CG	76.5	83.4	85.4	200	8.0
SC614	3.1/2	(19.05)	10.9	21.3	CG	88.9	95.7	97.7	233	9.3
SC616	4				CG	101.3	108.2	110.2	267	10.6
SC620	5				CG	126.2	133.1	135.2	334	13.1
SC624	6				CG	151.0	158.0	160.0	400	15.6
SC628	7				CG	175.9	182.8	184.9	467	18.2
SC632	8				CG	200.7	207.7	209.7	534	20.7
SC806	1.1/2				CG	34.7	44.0	46.8	133	4.9
SC808	2				CG	47.4	57.4	60.2	178	6.5
SC810	2.1/2				CG	60.1	69.7	72.5	222	8.0
SC812	3				CG	72.8	81.0	85.1	267	9.6
SC816	4				CG	98.2	107.4	110.2	356	12.7
SC820	5				CG	123.6	131.6	134.4	445	15.8
SC824	6	1"	15.2	28.4	CG	149.0	156.0	159.8	534	18.9
SC828	7	(25.40)			CG	174.4	188.7	191.5	623	22.0
SC832	8				CG	199.8	213.6	216.4	712	25.1
SC840	10				CG	250.6	263.7	266.4	890	31.3
SC848	12				CG	307.8	316.0	319.0	1068	37.5
SC1212	3				CG	72.9	84.3	84.3	400	14.0
SC1216	4				CG	98.4	108.7	108.7	534	18.6
SC1220	5				CG	123.8	134.1	134.1	667	23.1
SC1224	6				CG	149.3	159.5	159.5	801	27.7
SC1228	7	1/1/2"	22.8	42.7	CG	174.7	184.9	184.9	934	32.2
SC1232	8	(38.10)			CG	200.1	210.6	210.6	1068	36.7
SC1236	9				CG	225.6	236.5	236.5	1201	41.3
SC1240	10				CG	254.2	264.7	264.7	1334	45.8
SC1616	4				CG	98.2	110.2	110.2	712	24.7
SC1620	5				CG	123.6	135.6	135.6	890	30.8
SC1624	6				CG	149.0	161.0	161.0	1068	36.8
SC1628	7	2"	30.4	57.0	CG	174.4	186.4	186.4	1246	42.9
SC1632	8	(50.80)			DCG*	199.8	211.8	211.8	1423	48.9
SC1640	10				DCG*	250.6	262.6	262.6	1779	61.1
SC1648	12				DCG*	301.4	313.4	313.4	2135	73.2
SC1656	14				DCG*	358.6	370.6	370.6	2491	85.3
SC1664	16				DCG*	409.4	421.4	421.4	2847	97.4

* The Guide Spacing on Double Centre Guide Chains varies by manufacturer, it is thus necessary to provide this dimension when ordering. The dimension can be taken from either the chain to be replaced, or the sprockets, and should be from centre to centre of link or groove

For Installation and Lubrication information refer to HV data on page 83. For any further Technical information contact our Technical Sales Dept. at Birmingham.

Order Information

If chain part number not available when ordering replacement chain, the following information should be supplied.

- | | |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1. Chain Pitch Distance between centres of Teeth Tips when chain laid flat. | 4. Inside Width Outside guide chains only, distance between guides. |
| 2. Chain Width Distance over Link Plates. | 5. Pin Length Length of rivet and connecting pins, if clearance critical. |
| 3. Guiding Centre or Outside Guide. | 6. No. Pitches No. pitches of chain which make closed chain. |

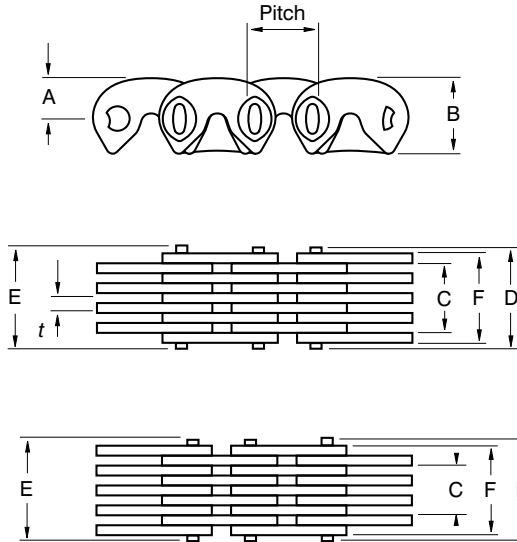
If the chain you require to replace is not shown above, or you require assistance in identification or drive design, contact our Technical Sales Dept.

Outside Guide SC Series Inverted Tooth Chains



Cross+Morse Outside Guide Inverted Tooth Chains are intended solely as replacement chains for existing applications, and hence the part numbers are all prefixed 'R'. All chains run on sprockets gearcut to specifications of tooth form in ASME(ANSI) B29.2, but with the exception of SC302 all other chain dimensions are outside the Standard, but to Industry preferred sizes. In addition to replacement chains we can provide replacement Sprockets manufactured with the latest material and heat treatment to provide a longer service life.

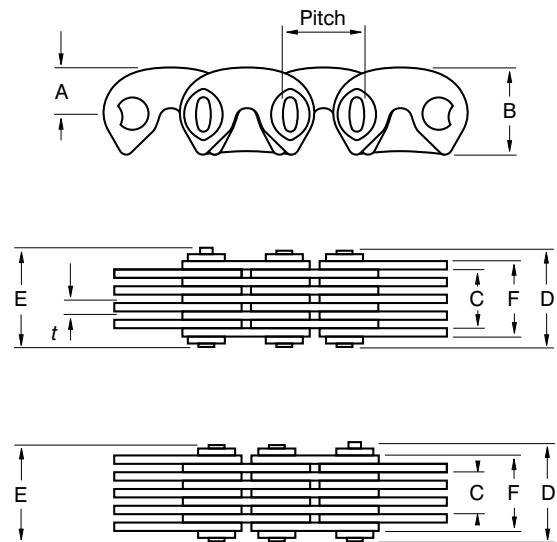
3/8" and 1/2" Pitch



Single
Outside
Guide
'SOG'

Double
Outside
Guide
'DOG'

5/8" through 2" Pitch



Chain Dimensions - Outside Guide SC(RP) Chains

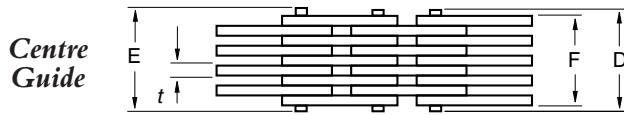
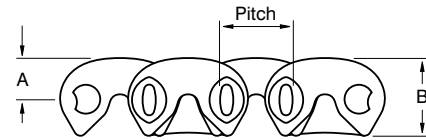
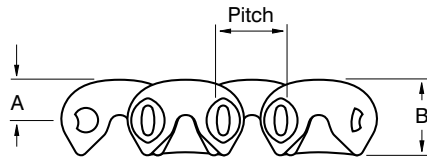
'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg			
R302DOG	1/2	3/8" (9.525)	5.6	10.7	6.4	12.7	16.3	17.8	17	0.7			
R303DOG	3/4				12.7	19.0	22.6	24.0	25	1.0			
R304DOG	1				19.0	25.4	29.0	30.5	33	1.3			
R305DOG	1.1/4				25.4	31.8	35.3	36.8	42	1.6			
R306DOG	1.1/2				31.8	38.2	41.7	43.2	50	1.9			
R307DOG	1.3/4				38.1	44.6	48.1	49.6	67	2.2			
R308DOG	2				44.5	50.9	54.4	55.9	75	2.5			
R310DOG	2.1/2				57.2	63.7	67.2	68.8	83	3.1			
R312DOG	3				69.9	76.5	79.2	81.5	100	3.7			
SC302	1/2				3/8" (9.525)	5.6	10.7	9.5	12.6	16.3	17.8	17	0.7
R303SOG	3/4	15.9	19.0	22.6				24.0	25	1.0			
R304SOG	1	22.2	25.3	29.0				30.5	33	1.3			
R305SOG	1.1/4	28.6	31.7	35.3				36.8	42	1.6			
R306SOG	1.1/2	34.9	38.1	41.7				43.2	50	1.9			
R307SOG	1.3/4	41.3	44.4	48.1				49.6	67	2.2			
R308SOG	2	47.6	50.8	54.4				55.9	75	2.5			
R310SOG	2.1/2	60.3	63.5	67.2				68.8	83	3.1			
R312SOG	3	73.0	76.2	79.2				81.5	100	3.7			
R403DOG	3/4	1/2" (12.70)	7.6	14.2				12.8	19.0	23.8	25.4	33	1.3
R404DOG	1				19.1	25.4	30.0	32.0	44	1.7			
R405DOG	1.1/4				25.5	31.8	36.3	38.1	56	2.1			
R406DOG	1.1/2				31.9	38.2	42.7	44.5	67	2.5			
R407DOG	1.3/4				38.3	44.6	49.0	51.0	78	2.9			
R408DOG	2				44.7	50.9	55.4	57.2	89	3.3			
R410DOG	2.1/2				57.4	63.7	68.1	70.1	111	4.1			
R412DOG	3				70.2	76.5	81.8	82.8	133	4.9			
R403SOG	3/4				1/2" (12.70)	7.6	14.2	15.9	19.0	23.8	25.4	33	1.3
R404SOG	1							22.3	25.3	30.0	32.0	44	1.7
R405SOG	1.1/4	28.6	31.7	36.3				38.1	56	2.1			
R406SOG	1.1/2	35.0	38.1	42.7				44.5	67	2.5			
R407SOG	1.3/4	41.3	44.4	49.0				51.0	78	2.9			
R408SOG	2	47.7	50.8	55.4				57.2	89	3.3			
R410SOG	2.1/2	60.4	63.5	68.1				70.1	111	4.1			
R412SOG	3	73.1	76.2	81.8				82.8	133	4.9			
R604DOG	1	3/4" (19.05)	10.9	21.3				12.7	21.1	33.6	35.6	67	3.0
R606DOG	1.1/2							25.4	33.8	46.2	48.3	100	4.2
R608DOG	2				38.1	46.5	58.4	60.5	133	5.5			
R610DOG	2.1/2				50.8	59.3	71.1	73.2	167	6.8			
R612DOG	3				63.5	72.0	81.5	85.4	200	8.0			
R616DOG	4				88.9	97.4	106.9	110.2	267	10.6			
R620DOG	5				114.3	122.9	131.6	135.2	334	13.1			
R624DOG	6				139.7	148.3	159.0	160.0	400	15.6			

Other combinations of Pitch and Width are available to order in both Ramsey RP format and original SC design

RKH Metric Chain Dimensions

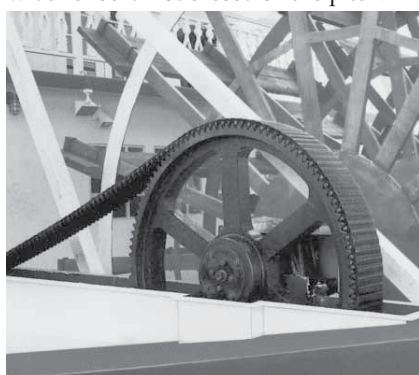


These Chains are built to be a straight replacement to SC series chains manufactured to metric width dimensions. All sizes of chains are manufactured with retaining washer beneath pin rivet head. Some narrower widths are built as single side guide construction, these chains being identified by suffix 'A' in their part number, the remainder of chains are single centre guide design.



RKH Chain Designation	Nominal Width mm	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
RKH3-015A	15				12.6	15.7	20.2	21.7	19	0.7
RKH3-020A	20				18.9	22.0	26.5	28.0	27	0.9
RKH3-030A	30		5.6	10.7	26.7	29.8	34.3	35.8	38	1.3
RKH3-025	25	3/8" (9.525)				26.7	31.2	32.7	34	1.1
RKH3-030	30					33.0	37.5	39.0	42	1.3
RKH3-035	35					39.3	43.8	45.3	50	1.6
RKH4-315A	15				12.6	15.7	21.2	23.0	25	1.0
RKH4-320A	20				18.9	22.0	27.5	29.3	36	1.4
RKH4-340A	40				34.6	37.7	43.2	45.0	63	2.6
RKH4-325	25					26.7	32.2	34.0	44	1.7
RKH4-330	30		7.6	14.2		33.0	38.5	40.3	55	2.0
RKH4-335	35	1/2" (12.70)				39.3	44.8	46.6	66	2.3
RKH4-350	50					51.9	57.4	59.2	88	3.3
RKH4-365	65					64.5	70.0	71.8	110	4.2
RKH5-420	20					22.5	30.0	32.0	47	1.9
RKH5-425	25					26.6	32.5	34.5	56	2.3
RKH5-435	35					34.8	41.0	43.0	74	3.2
RKH5-440	40		9.5	17.8		43.0	50.5	52.5	93	3.6
RKH5-450	50					51.2	57.0	59.0	112	4.5
RKH5-465	65					67.6	73.5	75.5	149	5.8
RKH6-535	35					35.1	42.5	44.6	89	3.8
RKH6-540	40					43.4	50.0	52.1	111	4.3
RKH6-550	50		10.9	21.3		51.7	58.3	60.4	133	5.4
RKH6-565	65	3/4" (19.05)				68.2	74.8	76.9	178	6.9
RKH6-575	75					76.5	83.1	85.2	200	8.0
RKH6-590	90					88.9	95.5	97.6	233	9.5
RKH8-650	50					53.0	61.5	64.3	187	6.5
RKH8-665	65					65.8	74.3	77.1	234	8.4
RKH8-675	75					78.4	86.9	89.7	281	9.6
RKH8-6100	100		15.2	28.4		103.6	112.1	114.9	374	12.8
RKH8-6125	125					122.5	131.0	133.8	445	15.9
RKH12-865	65					65.8	75.8	79.8	360	12.6
RKH12-875	75					78.4	88.4	92.4	432	14.5
RKH12-8100	100		22.8	42.7		103.6	113.6	117.6	576	19.2
RKH12-8125	125					128.7	138.7	142.7	720	23.9
RKH12-8150	150					153.9	163.9	167.9	864	28.6
RKH16-9100	100					103.8	113.8	117.8	600	25.6
RKH16-9115	115					120.4	130.4	134.4	700	29.4
RKH16-9150	150		30.4	57.0		153.7	163.7	167.7	900	38.2
RKH16-9180	180					187.0	197.0	201.0	1100	45.8

Chain widths other than listed above can be supplied to order on short lead time. For power transmission applications it is recommended that the width should not exceed 8x the pitch.



Paddle wheel drive on a large riverboat



Standard Sprockets

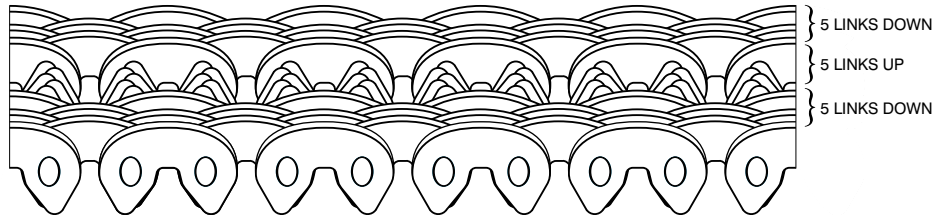
Duplex 'SC' and 'RP' Series Inverted Tooth Chains



Duplex Inverted Tooth Chain is designed for Serpentine Drives, where sprockets must be driven from both sides of the chain, and are for this reason often called Serpentine Chains. The Duplex Chains are available in two designs; the standard series type DUP using links and pins based on the earlier SC type chains, and having a flat back link form for running over guides; and the higher power capacity RPDUP type using current design SC links and pin assemblies. Power capacity of Duplex Chain is approx. 85% of equivalent size of 'SC' chain.

Duplex Chains provide the ideal alternative to Roller Chain where accurate smooth drive is required, such as extrusion of Plastic Film, or in processing of photographic film.

Standard construction chains are available in two basic Assemblies, either with two groups of links facing in one direction, with one in the opposite, or with three groups (rows) the opposite direction. Other assemblies can be provided to order.



Typical Duplex Chain Assembly - RPDUP404 - 5-5-5 Assembly

Note;

1/ Duplex Chain will not operate correctly on standard 'SC' Sprockets; and Sprockets should have minimum 21 teeth.

2/ Duplex Chain lengths must be an even number of pitches, as Offset Link Assemblies are not available for Duplex Chains.

Duplex - Serpentine - Double Sided drive - Inverted Tooth Chains

Chain Designation	Chain Pitch ins (mm)	Nominal Width Inches	Link Height B mm	Chain Assembly Type	Link Assembly	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
RPDUP404	1/2" (12.7)	1	15.2	2x1	5-5-5	27.2	30.5	31.8	44	1.8
RPDUP406(7)		1.1/2		2x1	8-7-8	39.9	43.2	44.8	67	2.6
RPDUP406(4)		1.1/2		3x2	5-4-4-4-5	39.9	43.2	44.8	67	2.5
RPDUP408(9)		2		2x1	11-9-11	52.6	56.0	57.4	89	3.3
RPDUP408(15)		2		2x1	8-15-8	52.6	56.0	57.4	89	3.3
RPDUP409		2.1/4		3x2	7-6-6-6-7	58.9	61.8	63.6	100	4.1
RPDUP412		3		2x1	12-23-12	78.3	81.5	83.0	133	4.8
RPDUP416 (19)		4		2x1	22-19-22	104.0	107.2	108.7	178	6.3
RPDUP416 (31)		4		2x1	16-31-16	104.0	107.2	108.7	178	6.3
RPDUP420		5		3x2	10-19-19-19-10	129.5	132.6	134.0	222	7.8
RPDUP424	6	3x2	16-23-15-23-16	155.0	158.3	160.0	268	9.3		
RPDUP606	3/4" (19.05)	1.1/2	22.1	2x1	6-5-6	39.2	46.0	50.3	100	3.9
RPDUP608		2		2x1	8-7-8	51.3	58.4	62.5	133	4.8
RPDUP610		2.1/2		2x1	8-13-8	63.8	70.9	75.0	167	5.8
RPDUP612		3		2x1	9-17-9	76.2	83.1	87.4	200	6.7
RPDUP616		4		2x1	12-23-12	100.8	107.7	112.0	267	8.8
RPDUP620		5		3x2	9-13-13-13-9	125.5	132.3	136.7	334	10.8
RPDUP624	6	3x2	9-17-17-17-9	150.0	157.2	161.3	400	12.8		
DUP304	3/8" (9.525)	1	9.9	2x1	4-5-4	22.6	25.4	26.4	18	1.1
DUP305		1.1/4		3x2	3-3-3-3-3	29.6	32.3	33.3	22	1.3
DUP306(7)		1.1/2		2x1	7-7-7	36.6	39.4	40.4	26	1.5
DUP306(4)		1.1/2		3x2	4-4-4-4-4	36.6	39.4	40.4	26	1.5
DUP308		2		2x1	7-15-7	49.5	52.3	52.3	35	2.1
DUP312		3		2x1	11-23-11	75.2	78.0	79.0	53	3.1
DUP404	1/2" (12.7)	1	13.5	2x1	4-5-4	22.6	25.5	27.4	23	1.5
DUP406(7)		1.1/2		2x1	7-7-7	36.6	39.6	41.4	35	2.1
DUP406(4)		1.1/2		3x2	4-4-4-4-4	36.6	39.6	41.4	35	2.1
DUP408(9)		2		2x1	10-9-10	49.5	52.6	54.4	47	2.6
DUP408(15)		2		2x1	7-15-7	49.5	52.6	54.5	47	2.6
DUP409		2.1/4		3x2	6-6-6-6-6	55.5	58.7	60.0	52	2.9
DUP412		3		2x1	11-23-11	75.2	78.3	79.8	70	3.5
DUP416(19)		4		2x1	21-19-21	100.6	103.6	105.5	93	4.5
DUP416(31)		4		2x1	158-31-15	100.6	103.6	105.5	93	4.5
DUP420		5		3x2	9-19-19-19-9	126.2	129.3	131.0	117	5.7
DUP424	6	3x2	8-17-17-17-8	152.0	155.0	156.5	140	6.7		
DUP606	3/4" (19.05)	1.1/2	20.6	2x1	5-5-5	35.4	39.9	42.7	53	3.0
DUP608		2		2x1	7-7-7	47.8	52.1	55.4	70	4.0
DUP610		2.1/2		2x1	7-13-7	60.3	64.5	67.8	88	5.2
DUP612		3		2x1	8-17-8	72.8	77.2	80.5	105	6.1
DUP616		4		2x1	11-23-11	97.8	102.4	105.7	140	8.4
DUP620		5		3x2	8-13-13-13-8	122.7	127.5	130.8	175	10.5
DUP624		6		3x2	8-17-17-17-8	147.8	151.9	155.5	210	12.6

Other Chain Widths and Link Grouping can be supplied to Special Order

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Inverted Tooth Conveying Chains



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Cross+Morse are proud to add to their extensive range of Inverted Tooth chains the Ramsey Conveying Chains. With nearly 50 years experience of supplying Conveying Chains to the Glass Industry, Ramsey have developed the best performing Conveying Chains, giving the end user optimum conveying efficiency combined with long service life, The Conveying Chains are used in the handling of Glass Bottles and Jars, Drinking Glasses, Car Headlights, and many other Glass products. It is also used for handling Glass Sheet, and in Inspection Lines

The Conveying Chains are available in four basic types of link form.

Standard Link - Introduced more than 30 years ago, has become the most commonly used chain in Glass Plants around the World. It uses a single oval pin, exclusive to Ramsey, providing trouble-free operation in most Glass production areas

UltraLife Link - An improved link form developed in conjunction with major glassware manufacturers for high production lines, to give increased service life. Enhanced production techniques enable Ramsey to produce links that are flat, and uniform with burr free straight edged apertures. The straight edge aperture maximises area of contact between pin and link so reducing joint bearing stress and wear.

Lo-Profile - The Lo-Profile Link has a reduced overall height with large flats on the link points to reduce loading on supporting wear plates, so reducing wear on the plates, and frictional drag.

Extended Pitch - Developed to reduce weight and effects of wear on long conveyors. Operates on standard 1/2" pitch sprockets. Link thickness was increased from 1.5mm to 2.3mm to improve rigidity.

Two types of Pin Assembly are available.

Single Pin - The single Oval Pin joint was specifically developed for the Glass Industry, in that the clearances it allows enables chains to run with little or no lubrication in high temperatures without seizure; and also is less effected by carbon build up than other types of joint. The single pin is also easier to install.

Pin and Rocker - The two pin joint as used in the latest transmission chains is available with the UltraLife links only. The two pin joint gives reduced friction, high efficiency and long life, but is only suitable for clean operating conditions where the chain can be lubricated, and as such is only suited to the cold end in glass production.

Two types of Link Assembly are available to provide best solution on differing applications.

All-Link Assembly(L) - The chain assembly consists entirely of links in the same manner as transmission chain. This provides the maximum surface area to support product, and is normally preferred where small products are involved. It has a high thermal mass and small inter-link air space, so creates resistance to induced heating or cooling.

Spacer Link Assembly(S) - With this assembly spacers approx. equal to the link thickness are placed between each link plate, to decrease weight, reduce surface area, and allow increased airflow through the chain. The greater interlink spaces also allow better passage of debris through the chain. For further improved airflow chains built with spacer bars can be provided to special order.

Chains are offered with three methods of guide.

Centre Guide(C) - As common with standard SC Transmission Chain a centre deep Guide Link engages with a groove in the sprockets to guide the chain over the Conveyor length.

Single Side Guide(S) - The outer links of the chain are full depth to guide the chain over simple sprockets. This enables simpler design of sprocket, and eliminates the groove in the sprocket which is a potential problem in dirty applications."

MultiSide Guide Assembly(M) - A number of the outer links are full depth to guide the chain over a narrower sprocket. This provides additional sideways strength for applications where the product is removed from the conveyor sideways. The additional deep links also provide increased area for chain support on a wear strip.

In addition to the standard chains shown in the following tables many special chains can be offered to suit the specific requirements of any application within the Glass Industry or elsewhere in conveying applications.

Ground Chain - This is a common modification done to provide an ultra smooth surface and even more accurate chain thickness control. Chain can be ground on the top surface 'GT', to provide better support for small glassware; ground the lower surface 'GB' to give a smoother operating surface; or ground on both 'GTB', for both improvements and an accurate link height (to 0.1 mm).

Chain Part Numbers: The Chain Part No. consists of four elements identifying Link type, Guide type, Assembly type, and Width. The last five characters of the number are the Assembly No., the prior letters the Chain Type, as per example:

Chain Type - Assembly No.

UL - C L 150

Chain Type	Build Type	Nominal Width (in mm)
ST = Standard Link	L = All Link	
UL = UltraLife Single Pin	S = Spacer Link	
UL2 = UltraLife Two Pin		
LP = Low Profile		
EP = Extended Pitch		
	Guide Type	
	C = Centre	
	S = Side	
	M = MultiSide	

The example part number UL-CL150, is an Ultralife single pin, centre guide, all-link build Chain, of 150mm nominal width.

Inverted Tooth Conveying Chains

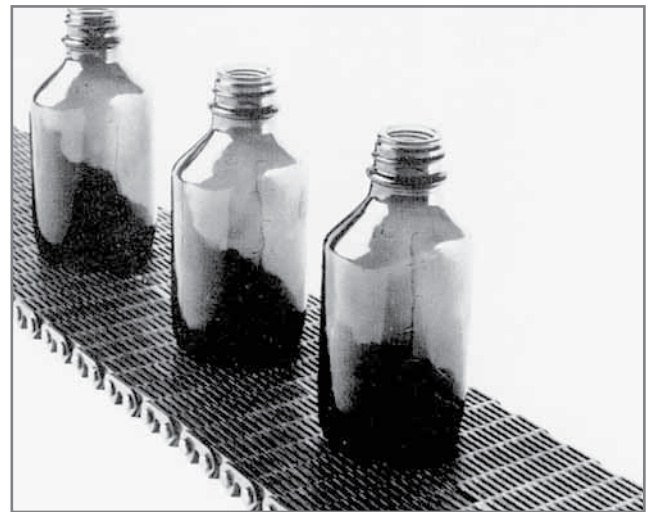


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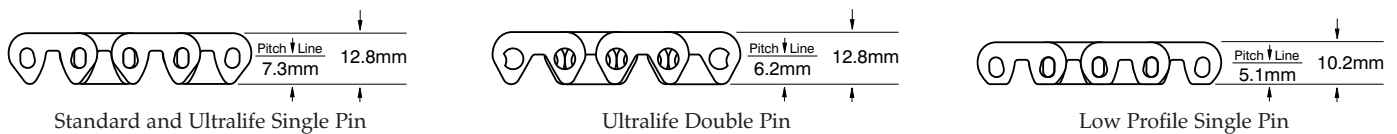
The Inverted Tooth form of this series of Conveyor Chains driving on the flank angle of the sprocket, reduces chordal effects giving a smoother transportation, coupled with improved timing and synchronisation. This enables faster production rates to be achieved. The smooth back of the chain provides the ideal conveying surface for all forms of glassware, automotive components, castings, timber and many more. Special attachments can be built into the chain where specialist conveying is required. The hardened links also exhibit high resistance to wear. Inverted Tooth Conveyor Chains can be operated either individually, in pairs or in multiple lanes for wide components. The Single Oval Pin design is particularly suited to bad environmental areas, requiring little or no lubrication, yet giving a long service life with minimal maintenance.



Centre Guide Chains

A popular assembly configuration of the chains is to use a Centre Guide Link. The Guide Links in the centre of the chain fit into a groove in the centre of the sprockets so keeping the chain aligned. The design has the advantage that the chain is supported over its full width on the sprocket and offers maximum contact between sprocket and chain to minimise wear on the chain/sprocket contact points. This feature is most beneficial on narrow width chains. Centre Guide Chains are available in Standard Single Pin, UltraLife Single and Rocker Pin design, and Lo-Profile Single Pin. In addition to the standard widths shown the chain can be provided to special order in any width from 15mm upwards. Stainless Steel Chains can also be supplied to special order for applications within a corrosive environment.

Chain Link Profiles



Chain Link Assemblies



Centre Guide Chain Dimensions

All-Link Assembly Part No.	Link-Spacer Assembly Part No.	Nominal Width mm	Width over Links WL max mm	Width over Rivet Pin 1 WH max mm	Sprocket Width max mm	Weight kg/m			
						All-Link Assembly		Link-Spacer Assembly	
						Single Pin	Two Pin*	Single Pin	Two Pin*
CL100	CS100	100	91	95	100	5.2	5.6	3.5	3.7
CL120	CS120	120	116	120	120	6.6	7.1	4.5	4.8
CL125	CS125	125	122	126	125	7.0	7.5	4.7	5.0
CL140	CS140	140	135	139	140	7.7	8.2	5.2	5.5
CL150	CS150	150	147	151	150	8.5	9.1	5.6	5.9
CL180	CS180	180	175	179	180	10.1	10.8	6.7	7.1
CL200	CS200	200	199	203	200	11.4	12.2	7.6	8.1
CL250	CS250	250	250	254	250	14.5	15.5	9.6	10.2
CL300	CS300	300	300	304	300	17.2	18.4	11.4	12.1

* Available in Ultralife only

Inverted Tooth Conveying Chains



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Side Guide Chains

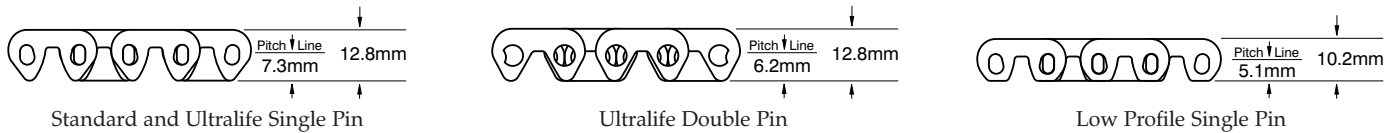
This assembly uses a single outer plate on each side of the chain to align the chain on the sprockets. It is the more popular configuration, using simpler, narrower sprockets than the centre guide.

Multiguide Chains

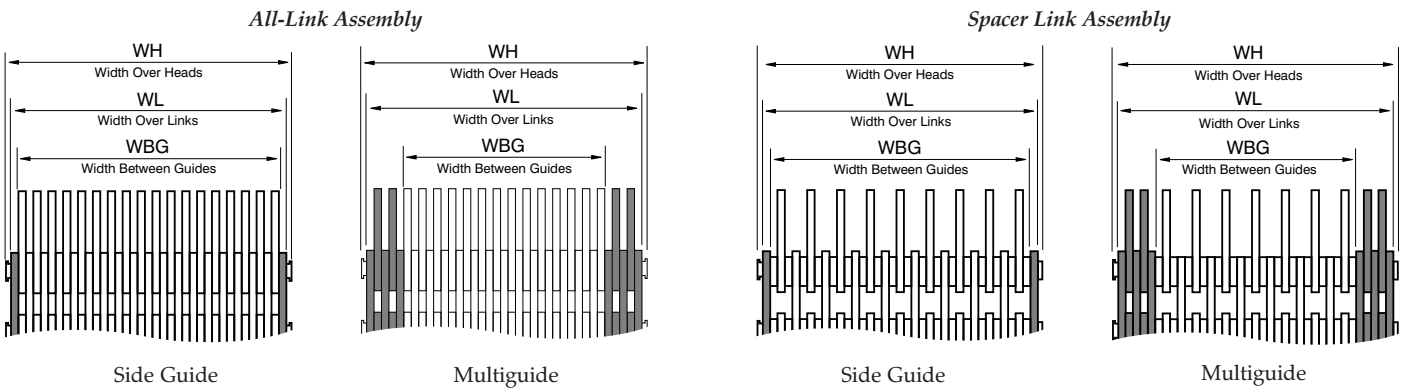
These chains have been designed for Stackers and Cross Conveyors, but are also used on other applications. Each side of the chain is built with a number of guide links from 15mm to 25mm wide. The extra guide links provide extra strength to resist bowing or twisting when the chain is subjected to constant side loads when product is pushed off sideways. The chain also offers a larger surface area to contact the support slide plates, reducing wear on both chain and support plate. Narrower Sprockets are used with these chains.

Both Side Guide and Multiguide Chains are available in Standard Single Pin, UltraLife Single and Rocker Pin design, and Lo-Profile Single Pin. In addition to standard chains special widths can be supplied to order; also chain can be supplied in Stainless Steel.

Chain Link Profiles



Chain Link Assemblies



Side Guide Chains

All-Link Assembly Part No.	Link-Spacer Assembly Part No.	Nominal Width mm	Width over Links WL min mm	Width over Rivet Pin 1 WH max mm	Width between Guides WBG min mm	Sprocket Width mm	Weight kg/m			
							All-Link Assembly		Link-Spacer Assembly	
							Single Pin	Two Pin*	Single Pin	Two Pin*
SL100	SS100	100	102.2	106	99.2	97.7	6.1	6.5	4.0	4.3
SL120	SS120	120	115.2	119	112.2	110.7	6.8	7.3	4.5	4.8
SL125	SS125	125	128.7	133	125.7	124.2	7.5	8.0	5.0	5.4
SL140	SS140	140	138.7	143	135.7	134.2	8.2	8.8	5.4	5.8
SL150	SS150	150	152.8	157	149.8	148.3	9.0	9.6	5.9	6.3
SL180	SS180	180	174.5	179	171.5	170.0	10.2	10.9	6.7	7.2
SL200	SS200	200	202.7	207	199.7	198.2	11.9	12.7	7.8	8.3
SL250	SS250	250	256.1	260	253.1	251.6	15.1	16.2	9.9	10.6
SL300	SS300	300	303.3	307	300.3	298.8	17.8	19.0	11.6	12.4

Multi-Guide Side Guide Chain

All-Link Assembly Part No.	Link-Spacer Assembly Part No.	Nominal Width mm	Width over Links WL min mm	Width over Rivet Pin 1 WH max mm	Width between Guides WBG min mm	Sprocket Width mm	Weight kg/m			
							All-Link Assembly		Link-Spacer Assembly	
							Single Pin	Two Pin*	Single Pin	Two Pin*
ML100	MS100	100	98.5	103	68.3	66.8	6.1	6.7	4.0	4.3
ML125	MS125	125	123.7	128	96.5	95.0	7.5	8.2	4.9	5.3
ML150	MS150	150	150.2	155	97.3	95.8	9.1	10.0	5.9	6.4
ML200	MS200	200	196.7	201	145.3	143.8	12.0	13.1	7.7	8.4
ML250	MS250	250	247.4	252	196.0	196.0	14.9	16.3	9.6	10.4
ML300	MS300	300	299.7	305	245.3	245.3	18.0	19.7	11.7	12.7

* Available in Ultralife only

Inverted Tooth Conveying Chains



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Extended Pitch Conveyor Chain

Ramsey Conveyor Chain is also available in 1" pitch. The chain is only available in the single pin configuration using the same pin as the standard pitch single pin chain. The longer pitch chain was developed to reduce chain weight, and increase air flow through the chain. The chain operates on standard 1/2" pitch sprockets. The plate thickness of the links has been increased from 1.5mm to 2.3mm to increase side strength and provide a more open weave chain. The resulting chain is as strong as the 1/2" pitch chain, but with fewer joints in its length has reduced wear and suffers less fouling from material ingress. Extended Pitch Chain is available in All link and Spacer Link design as centre and side guide assemblies. In addition to the standard widths shown special widths can be supplied to meet individual conveyor requirements.

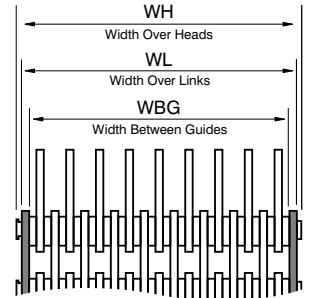
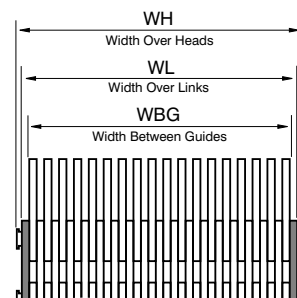
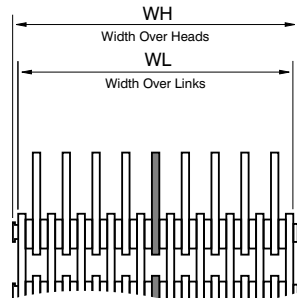
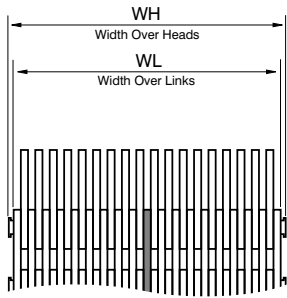
Chain Link Profiles



Chain Link Assemblies

Centre Guide

Side Guide



All-Link Assembly

Spacer Link Assembly

All-Link Assembly

Spacer Link Assembly

Extended Pitch (1 inch) Centre Guide Chain

All-Link Assembly Part No.	Link-Spacer Assembly	Nominal Width mm	Width over Links WL max mm	Width over Rivet Pin 1 WH max mm	Width between Guides	Sprocket Width mm	Weight kg/m	
							All-Link Assembly	Link-Spacer
EP-CL100	EP-CS100	100	92	95.7		100	3.3	2.4
EP-CL125	EP-CS125	125	123	126.6		125	4.4	3.2
EP-CL140	EP-CS140	140	134.9	138.5		140	4.8	3.5
EP-CL150	EP-CS150	150	146.8	150.4		150	5.2	3.8
EP-CL200	EP-CS200	200	196.1	199.3		200	7.1	5.1
EP-CL300	EP-CS300	300	300.6	304.3		300	10.7	7.6

Extended Pitch (1 inch) Side Guide Chain

All-Link Assembly Part No.	Link-Spacer Assembly	Nominal Width mm	Width over Links WL min mm	Width over Rivet Pin 1 WH max mm	Width between Guides	Sprocket Width mm	Weight kg/m	
							All-Link Assembly	Link-Spacer
EP-SL100	EP-SS100	100	102.2	106	99.2	97.7	3.8	2.5
EP-SL125	EP-SS125	125	128.7	133	125.7	124.2	4.7	3.2
EP-SL140	EP-SS140	140	138.7	143	135.7	134.2	5.1	3.3
EP-SL150		150	152.8	157	149.8	148.3	5.6	
	EP-SS150	150	149.7	154	146.7	145.2		4.0
EP-SL200	EP-SS200	200	196.9	202	194.5	193.0	7.1	4.9
EP-SL300	EP-SS300	300	303.3	307	300.3	298.8	11.0	7.2