

# British Standard Stainless Steel and Corrosion Resistant Roller Chains

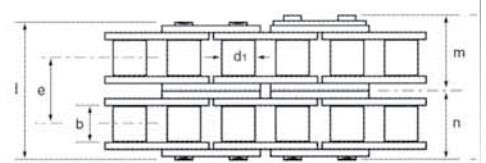
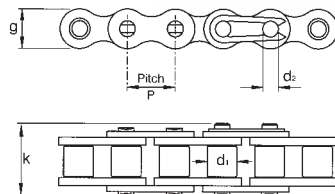


Cross+Morse SS - Stainless Steel chain has been designed with a higher allowable load than other makes of stainless steel chain and is suitable for use in the most demanding applications. Where WATER, ACIDS, ALKALIS, CHEMICALS, HIGH HUMIDITY AND EXTREMES OF TEMPERATURE are encountered - conditions potentially destructive to ordinary transmission chain, SS chain provide the answer.



SS chain completely overcomes corrosion and wear problems normally encountered with standard chain used in such harsh conditions.

Remaining impervious to even the most severe chemicals required for cleaning and hygiene maintenance within food and pharmaceutical processing, SS chain offers proven high-performance and maintenance-free life time performance.



Cat No.	Pitch P inches	Inside Width mm	Roller Diameter d <sub>1</sub> mm	Pin Diameter d <sub>2</sub> mm	Plate Depth mm	Pin Lengths				Transverse Pitch mm	Bearing Area cm <sup>2</sup>	Ultimate Tensile kN	Maximum Allowable kN	Approx Weight kg/m
						l max. mm	m2 max. mm	m mm	n mm					
<b>BS Series Simplex Chains</b>														
04B-1SS	6mm	2.80	4.00	1.85	5.0	7.4	10.2	6.5	3.7	-	0.07	2.2	0.08	0.12
05B-1SS	8mm	3.00	5.00	2.31	7.1	8.6	11.7	7.4	4.3	-	0.11	3.5	0.11	0.18
06B-1SS	3/8	5.72	6.35	3.28	8.3	12.6	14.2	7.1	6.3	-	0.28	6.2	0.40	0.41
08B-1SS	1/2	7.75	8.51	4.45	11.8	16.7	17.8	9.4	8.4	-	0.50	10.3	0.78	0.70
10B-1SS	5/8	9.65	10.16	5.08	14.7	19.0	20.6	11.1	9.5	-	0.67	15.7	1.02	0.96
12B-1SS	3/4	11.68	12.07	5.72	16.1	22.0	23.6	12.6	11.0	-	0.89	18.1	1.32	1.23
16B-1SS	1	17.02	15.88	8.28	21.1	35.1	38.2	20.6	17.6	-	2.10	42.2	3.09	2.60
20B-1SS	1.1/4	19.56	19.05	10.19	26.3	41.0	44.1	23.6	20.5	-	2.95	64.0	3.05	3.70
24B-1SS	1.1/2	25.40	25.40	14.63	33.3	53.4	56.9	30.2	26.7	-	5.54	110.0	5.60	6.90
<b>BS Series Duplex Chains</b>														
06B-2SS	3/8	5.72	6.35	3.28	8.3	22.9	23.6	12.2	11.4	10.24	0.55	12.2	0.57	0.78
08B-2SS	1/2	7.75	8.51	4.45	11.8	30.7	31.7	16.4	15.4	13.92	1.00	20.4	1.05	1.40
10B-2SS	5/8	9.65	10.16	5.08	14.7	35.6	37.2	19.4	17.8	16.59	1.34	31.2	1.38	1.80
12B-2SS	3/4	11.68	12.07	5.72	16.1	41.4	43.1	22.3	20.7	19.46	1.78	36.0	1.82	2.44
16B-2SS	1	17.02	15.88	8.28	21.1	67.6	70.1	36.5	33.5	31.88	4.21	84.0	4.30	5.30
20B-2SS	1.1/4	19.56	19.05	10.19	26.3	77.5	80.6	41.8	38.7	36.45	5.90	125.0	6.00	7.45

Chains from Stock, other chains to order.

Chains to Triplex Construction can also be supplied to special order.

Standard Chain components are all manufactured in 304 (18-8) Nickel Chrome Stainless Steel. The chains are suitable for temperatures up to 350°C, with intermittent peaks of 500°C, and also for the sub- zero conditions involved in food packaging.

Chains can also be supplied in 316 grade Stainless Steel for applications involving strong acids, or where a totally non-magnetic chain is required. Temperatures of 500°C, with intermittent peaks of 650°C are possible with these chains. These chains should only be used where conditions demand as they do not have the same wear life properties as the standard chain, and for this reason it is recommended that working loads should not exceed half those recommended for standard Stainless Steel Chain.

## Alternate Corrosion Protection Treatments

For many applications plated chains, and standard chain with chemical surface treatment can provide the level of corrosion resistance at a lower cost. Cross and Morse offer the following standard treatments.

## Aqua Proof Roller Chains

A special coating applied to chain components which offers excellent corrosion resistance without the hydrogen embrittlement problems associated with plating. The strength and working load values of the base chain are fully retained. Can be used in outdoor environments, seawater applications etc.

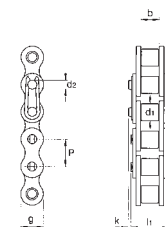
Cat. No.	Pitch Inches P	Inside Width mm b	Roller Diameter mm d <sub>1</sub>	Pin Diameter mm d <sub>2</sub>	Plate Depth mm g	Pin Length max. mm l <sub>1</sub>	Conn Pin Ext. mm k	Transverse Pitch mm e	Bearing Area cm <sup>2</sup>	Tensile Strength N	Approx. Weight kg/m
06B1-AP	3/8	5.72	6.35	3.28	8.30	12.60	2.20		0.28	9.10	0.41
08B1-AP	1/2	7.75	8.51	4.45	11.80	16.20	2.10		0.50	18.20	0.70
10B1-AP	5/8	9.65	10.16	5.08	14.70	18.60	2.20		0.67	22.70	0.96
12B1-AP	3/4	11.68	12.07	5.72	16.10	21.90	2.60		0.89	29.00	1.23
16B1-AP	1	17.02	15.88	8.28	21.10	35.60	3.10		2.10	64.00	2.60



## Nickel Plated BS Roller Chains

Electroless nickel plating is applied to standard carbon steel chain, offering protection to surfaces where mild corrosion is likely. The plated chain retains all the inherent properties of the base chain.

Cat. No.	Pitch Inches P	Inside Width mm b	Roller Diameter mm d <sub>1</sub>	Pin Diameter mm d <sub>2</sub>	Plate Depth mm g	Pin Length max. mm l <sub>1</sub>	Conn Pin Ext. mm k	Transverse Pitch mm e	Bearing Area cm <sup>2</sup>	Tensile Strength N	Approx. Weight kg/m
06B1-N	3/8	5.72	6.35	3.28	8.30	12.60	2.20		0.28	9.10	0.41
08B1-N	1/2	7.75	8.51	4.45	11.80	16.20	2.10		0.50	18.20	0.70
10B1-N	5/8	9.65	10.16	5.08	14.70	18.60	2.20		0.67	22.70	0.96
12B1-N	3/4	11.68	12.07	5.72	16.10	21.90	2.60		0.89	29.00	1.23
16B1-N	1	17.02	15.88	8.28	21.10	35.60	3.10		2.10	64.00	2.60
20B1-N	1.1/4	19.56	19.05	10.19	26.30	41.00	3.10		2.95	98.00	3.70



## MolyPaul Treated Chains

A hard coating of dry lubricant, including MoS<sub>2</sub> and Graphite is chemically bonded to the surface of all chain components. The treated chain has excellent dry lubricant properties, with good corrosion resistance, and ability to work up to 200°C. Available all sizes of chains up to 1 1/2" pitch. The chains with corrosion protection are suitable for many outdoor applications including Car Washers, Automated Car Parking, Agricultural Equipment, Tanneries, and Marine environments. When used with additional lubrication long chain life can be achieved.

# British Standard Stainless Steel and Corrosion Resistant Roller Chains



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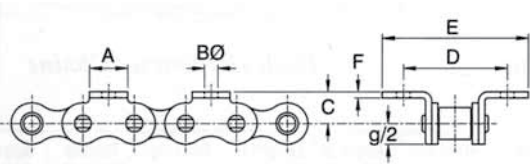
Email sales@crossmorse.com

## Standard Attachments for Conveying Applications

The attachments shown on the opposite page enable standard Stainless Steel chains to be used in a variety of conveying applications. Available on a 72 hour service built into the base chain at spacings to suit the application. The K and M attachments can be fitted to one side of the chain only or both sides (as illustrated). Attachments of different designs can be fitted into one chain assembly. In addition to the standard attachments, custom made units are available on a short lead time, to meet customers specific requirements. Attachments can also be assembled into Duplex and Triplex Chains. If Attachment Chains are used in parallel on Conveying Applications they should be ordered as **matched pairs**.

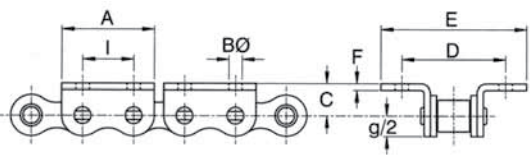
### Bent Attachments

#### K1 - Single Hole Bent Attachment



Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Plate Height C	Transverse Pitch D	Overall Width E	Plate Thick F
08B-1	1/2"	11.5	4.2	8.9	23.8	36	1.5
10B-1	5/8"	12.8	5.3	10.3	31.8	45	1.5
12B-1	3/4"	16.6	7.1	13.5	38.1	58	1.8

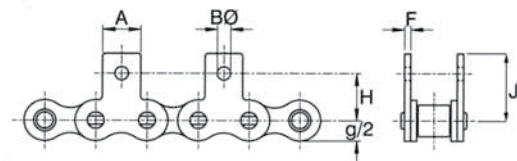
#### K2 - Two Hole Bent Attachment



Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Plate Height C	Transverse Pitch D	Overall Width E	Plate Thick F	Hole Pitch I
08B-1	1/2"	23.4	4.9	8.9	23.8	40	1.5	12.7
10B-1	5/8"	28.6	5.3	10.3	31.8	49	1.5	15.9
12B-1	3/4"	34	6.5	13.5	38.1	52	1.8	19.1

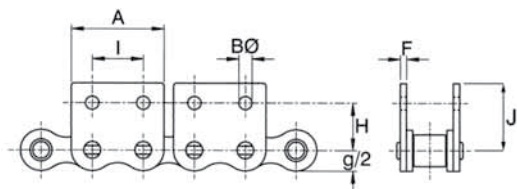
### Straight Attachments

#### M1 - Single Hole Straight Attachment



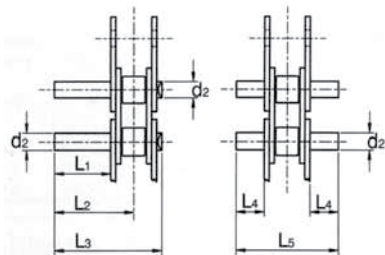
Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Hole Height H	Plate Height J	Plate Thick F
08B-1	1/2"	11.5	4.2	12.7	19.0	1.5
10B-1	5/8"	12.8	5.3	15.9	22.9	1.5
12B-1	3/4"	16.6	7.1	22.2	31.9	1.8

#### M2 - Two Hole Straight Attachment



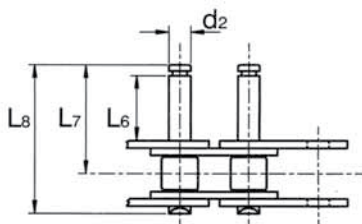
Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Hole Height H	Plate Height J	Plate Thick F	Plate Thick F
08B-1	1/2"	23.4	4.9	13.0	12.7	20.8	1.5
10B-1	5/8"	28.6	5.3	16.5	15.9	24.9	1.5
12B-1	3/4"	34.0	6.5	21.0	19.1	28.2	1.8

**Straight Parallel Pins extended one side only E1, or equally extended both sides of chain E2. Attachments available with short or long pins.**



Attachment Ref.		E1 Short			E1 Long		E2 Short		E2 Long		
Chain Ref	Pitch	Pin to Ø	Extension	Pin Ø	Pin Length	Extension	Pin Length	Extension	Pin Length	Extension	Pin Length
	P	d <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>4</sub>	L <sub>5</sub>
08B-1	1/2"	4.45	14.8	21.8	30.0	28.8	44.0	7.9	30.0	14.9	44.0
10B-1	5/8"	5.08	17.8	26.1	35.4	34.4	52.0	9.4	35.4	17.8	52.0
12B-1	3/4"	5.72	20.7	30.4	41.4	40.1	60.8	10.9	41.4	20.7	60.8
16B-1	1"	8.28	33.8	49.7	67.5	65.6	99.4	17.9	67.5	33.8	99.4

**Parallel Pins with grooves for circlip fixture location. Available short Pins E3 attachment, or long pins - E4 attachment**



Attachment Ref.		E3 Short Groove Pin			E4 Long Groove Pin			
Chain Ref	Pitch	Pin to Ø	Attach Length	Pin Ø	Pin Length	Attach Length	Pin Ø	Pin Length
	P	d <sub>2</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>
08B-1	1/2"	4.45	7.2	17.0	25.1	14.2	23.1	31.3
10B-1	5/8"	5.08	9.5	21.2	30.5	17.0	27.3	36.6
12B-1	3/4"	5.72	11.8	25.3	36.3	19.5	32.0	43.0
16B-1	1"	8.28	15.8	36.9	54.7	32.2	51.9	69.1

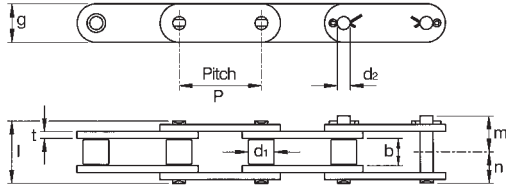
# Double Pitch Stainless Steel Chains



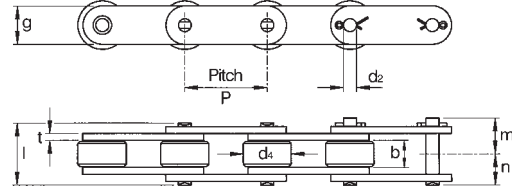
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## Stainless Steel Chains

Available in standard base chain with standard or large rollers, or chain with thermoplastic large rollers. Sideplate manufactured from 18-8 stainless steel with round parts using 17-7PH or 17-4PH materials, S and B attachments are available in 18-8 material, also D1 and D3 extended pins can be provided to special order. The thermoplastic stainless chains, suffix DS, can be operated without lubrication, and provide quiet operation with high corrosion resistance. DS chains can only be used in applications within operating temperature range -17°C to 80°C.



Standard Roller Series



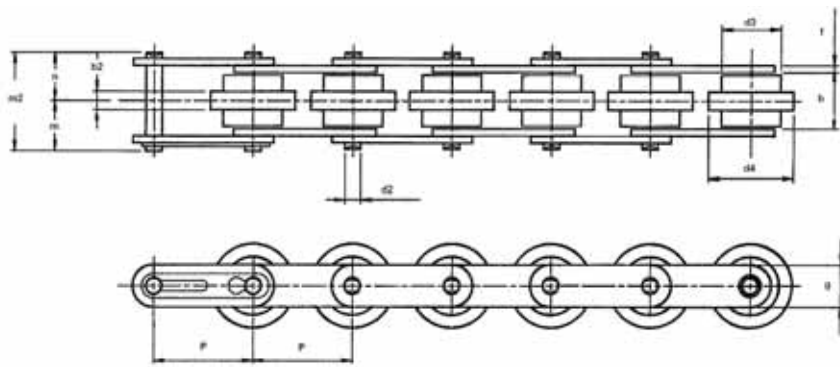
Large Roller and Thermoplastic Series

ANSI/Cat. Part No.			Pitch P Inches	Inside Width b min.	Standard Roller Dia. d: max.	Large Roller Diameter d: max.	Sideplate		Pin Bore d: min.	Rivet Pin Length l	Length to Conn. Pin m	Length to Rivet Pin n	Tensile Strength N	Approx. Weight kg/m		
Standard Roller	Large Roller	Thermo-plastic					Height g	Thickness t						Standard Roller	Large Roller	Thermo-plastic
C2040SS	C2042SS	C2042DSS	1	7.85	7.95	15.88	11.7	1.52	3.96	16.6	10.7	8.3	12,000	0.55	0.89	0.57
C2050SS	C2052SS	C2052DSS	1/4	9.40	10.16	19.05	15.0	2.04	5.08	20.2	14.3	10.2	18,800	0.91	1.37	0.92
C2060SS	C2062SS	C2062DSS	1/2	12.60	11.91	22.23	17.6	2.39	5.94	24.9	16.3	12.5	27,000	1.07	1.80	1.10
C2080SS	C2082SS	C2082DSS	2	15.80	15.88	28.58	22.4	3.18	7.92	32.5	18.8	16.3	48,000	1.46	2.49	1.46
C2100SS	C2102SS	-	2 1/2	19.00	19.05	39.70	29.2	4.75	9.53	42.5	24.9	21.2	100,000	3.42	5.58	-
C2120SS	C2122SS	-	3	25.25	22.23	44.45	34.8	5.54	11.10	52.7	30.8	26.3	130,000	5.50	8.50	-

All dimensions in mm except as indicated.

## Triple Speed Conveyor Chain

Triple Speed Conveyor Chain, often referred to as "Accumulator Chain", provides a means of rapid transfer of product combined with the facility to accumulate production in the event of a line overload. The chain is frequently used in the production lines of domestic electronic products, such as televisions, computers, and HiFi equipment. Carriers containing the products being assembled are supported on the large rollers of two or more chains, whilst the chains themselves are supported on the smaller rollers. As the chain is driven forwards frictional drive between the rollers causes the product carrier to be transferred forward at up to 2.6 times the chain speed. If there is an hold-up of product on the line the large carrier rollers are able to slip within the chain, thereby allowing the product carriers to remain static. The speed increasing function of the chain allows the chain to run at slower speeds thereby reducing noise levels and running costs. Chain can be supplied with rollers manufactured in either a conductive plastic material, or alternately a non conductive plastic where insulation is required.



### Chain Technical Specifications

Chain No.	Pitch P mm	Roller Material	Allowable Chain Pull N	Max Loading kg	Tensile Strength KN	Speed Ratio	Weight Approx kg/m
C2040TS Cond	25.40	Conductive Plastic	1000	17	14	2.56	0.7
C2040TS Non	25.40	Non Conductive Plastic	1000	17	14	2.56	0.7
C2050TS Cond	31.75	Conductable Plastic	1500	25	23	2.58	1.1
C2050TS Non	31.75	Non Conductive Plastic	1500	25	23	2.58	1.1
C2060TS Cond	38.10	Conductable Plastic	2250	39	32	2.60	2.2
C2060TS Non	38.10	Non Conductive Plastic	2250	39	32	2.60	2.2

### Chain Dimension in mm

Chain Ref	Inside Width b	Large Roller Width b2	Pin dia d2	Small Roller dia d3	Large Roller dia d4	Plate Depth g	m	Pin Lengths n	m2	Plate thickness t
C2040TS	22.43	8.94	3.96	15.85	24.61	11.68	16.28	15.24	31.52	1.52
C2050TS	27.81	11.30	5.08	19.05	30.15	15.00	20.83	19.05	39.88	2.03
C2060TS	31.55	14.94	5.94	22.23	35.74	17.53	25.91	23.62	49.53	3.18

Note: Dimensions are applicable to both Conductive and Non Conductive types

# Standard Stainless Steel Sprockets for 3/8" to 1" Pitch British Standard Chains Types 06S1-12 to 10S1-18

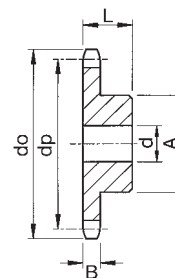


Conforming to ISO Std 606

## Sprocket Data

A standard stock range of sprockets manufactured from Stainless Steel type ANSI 304L for maximum corrosion resistance. These sprockets are suitable for corrosive environments, including the high temperature and moisture conditions found in many food process and packaging operations, and will also withstand many alkaline and acidic fluids at elevated temperatures.

The sprockets are suitable to use with either stainless steel chains or plated chains, refer page 18.



Chain No.	Tooth Width B
06B-1	5.3
08B-1	7.2
10B-1	9.2
ANSI 50	9.2
12B-1	11.2
16B-1	16.2

Cat No.	Pitch	No of Teeth	Pitch Circle Ø dp	Outside Ø do	Min. Bore d	Max. Bore d	L.T.B. L	Hub Ø A	Weight
06S1-12	3/8"	12	36.80	40.00	8.00	16.00	25.00	25.00	0.11
06S1-13		13	39.80	43.00	10.00	19.00	25.00	28.00	0.13
06S1-14		14	42.80	46.30	10.00	20.00	25.00	31.00	0.16
06S1-15		15	45.81	49.30	10.00	23.00	25.00	34.00	0.19
06S1-16		16	48.82	52.30	10.00	25.00	28.00	37.00	0.24
06S1-17		17	51.84	55.30	10.00	27.00	28.00	40.00	0.29
06S1-18		18	54.85	58.30	10.00	29.00	28.00	43.00	0.33
06S1-19		19	57.87	61.30	10.00	30.00	28.00	45.00	0.37
06S1-20		20	60.89	64.30	10.00	31.00	28.00	46.00	0.39
06S1-21		21	63.91	68.00	12.00	32.00	28.00	48.00	0.42
06S1-22		22	66.93	71.00	12.00	34.00	28.00	50.00	0.47
06S1-23		23	69.95	73.50	12.00	35.00	28.00	52.00	0.50
06S1-24	24	72.97	77.00	12.00	36.00	28.00	54.00	0.55	
06S1-25	25	76.00	80.00	12.00	38.00	28.00	57.00	0.61	
06S1-30	30	91.12	94.70	12.00	40.00	28.00	60.00	0.92	
08S1-12	1/2"	12	49.07	53.00	10.00	22.00	28.00	33.00	0.21
08S1-13		13	53.07	57.90	10.00	25.00	28.00	37.00	0.26
08S1-14		14	57.07	61.80	10.00	27.00	28.00	41.00	0.31
08S1-15		15	61.08	65.50	10.00	30.00	28.00	45.00	0.39
08S1-16		16	65.10	69.90	12.00	34.00	28.00	50.00	0.46
08S1-17		17	69.12	73.60	12.00	35.00	28.00	52.00	0.51
08S1-18		18	73.14	78.00	12.00	37.00	28.00	56.00	0.59
08S1-19		19	77.16	81.70	12.00	40.00	28.00	60.00	0.67
08S1-20		20	81.18	86.00	12.00	43.00	28.00	64.00	0.55
08S1-21		21	85.21	90.10	14.00	45.00	28.00	68.00	0.84
08S1-22		22	89.24	93.80	14.00	46.00	28.00	70.00	0.91
08S1-23		23	93.27	98.10	14.00	46.00	28.00	70.00	0.94
08S1-24		24	97.30	101.80	14.00	46.00	28.00	70.00	1.00
08S1-25		25	101.33	105.80	14.00	54.00	28.00	80.00	1.10
08S1-26		26	105.36	110.00	16.00	46.00	28.00	70.00	1.09
08S1-27		27	109.40	114.00	16.00	46.00	30.00	80.00	1.12
08S1-30	30	121.50	126.30	16.00	54.00	30.00	80.00	1.48	
08S1-34	34	137.64	142.60	16.00	63.00	30.00	90.00	1.87	
08S1-38	38	153.79	158.60	20.00	63.00	35.00	90.00	2.00	
08S1-40	40	161.87	166.80	20.00	63.00	35.00	90.00	2.38	
10S1-10	5/8"	10	41.10	57.50	10.00	24.00	25.00	35.00	0.22
10S1-11		11	45.08	63.00	12.00	25.00	30.00	37.00	0.29
10S1-12		12	49.07	68.00	12.00	28.00	30.00	42.00	0.38
10S1-13		13	66.33	73.00	12.00	31.00	30.00	47.00	0.47
10S1-14		14	71.34	78.00	12.00	35.00	30.00	52.00	0.60
10S1-15		15	76.35	83.00	12.00	38.00	30.00	57.00	0.67
10S1-16		16	81.37	88.00	12.00	40.00	30.00	60.00	0.76
10S1-17		17	86.39	93.00	12.00	40.00	30.00	60.00	0.82
10S1-18		18	91.42	98.30	12.00	46.00	30.00	70.00	1.02

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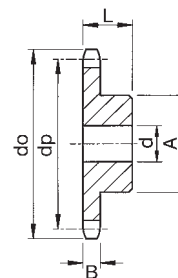
Email sales@crossmorse.com

# Standard Stainless Steel Sprockets for 3/8" to 1" Pitch British Standard Chains Types 10S1-19 to 16S1-30



Conforming to ISO Std 606

## Sprocket Data



Chain No.	Tooth Width B
06B-1	5.3
08B-1	7.2
10B-1	9.2
ANSI 50	9.2
12B-1	11.2
16B-1	16.2

A standard stock range of sprockets manufactured from Stainless Steel type ANSI 304L for maximum corrosion resistance. These sprockets are suitable for corrosive environments, including the high temperature and moisture conditions found in many food process and packaging operations, and will also withstand many alkaline and acidic fluids at elevated temperatures.

The sprockets are suitable to use with either stainless steel chains or plated chains, refer page 18.

Cat No.	Pitch	No of Teeth	Pitch Circle Ø dp	Outside Ø do	Min. Bore d	Max. Bore d	L.T.B. L	Hub Ø A	Weight
10S1-19	5/8"	19	96.45	103.30	14.00	50.00	30.00	75.00	1.15
10S1-20		20	101.48	108.40	14.00	50.00	30.00	75.00	1.21
10S1-21		21	106.51	113.40	16.00	54.00	30.00	80.00	1.36
10S1-22		22	111.55	118.00	16.00	54.00	30.00	80.00	1.40
10S1-23		23	116.59	123.40	16.00	54.00	30.00	80.00	1.46
10S1-24		24	121.62	128.30	16.00	54.00	30.00	80.00	1.53
10S1-25		25	126.66	134.00	16.00	54.00	30.00	80.00	1.59
10S1-26		26	131.70	139.00	20.00	57.00	35.00	85.00	1.82
10S1-30		30	151.87	158.80	20.00	60.00	35.00	90.00	2.39
10S1-35		35	177.10	184.10	20.00	63.00	35.00	95.00	2.00
12S1-11	3/4"	11	56.35	75.00	14.00	31.00	35.00	46.00	0.54
12S1-12		12	61.34	81.50	14.00	35.00	35.00	52.00	0.70
12S1-13		13	79.60	87.50	16.00	38.00	35.00	58.00	0.80
12S1-14		14	85.61	93.60	14.00	43.00	35.00	64.00	1.00
12S1-15		15	91.63	99.80	16.00	46.00	35.00	70.00	1.16
12S1-16		16	97.65	105.00	16.00	50.00	35.00	75.00	1.34
12S1-17		17	103.67	115.50	16.00	54.00	35.00	80.00	1.53
12S1-18		18	109.70	118.00	16.00	54.00	35.00	80.00	1.61
12S1-19		19	115.74	124.20	16.00	54.00	35.00	80.00	1.70
12S1-20		20	121.78	129.70	16.00	54.00	35.00	80.00	1.79
12S1-21		21	127.82	136.00	20.00	60.00	40.00	90.00	2.34
12S1-22		22	133.86	141.80	20.00	60.00	40.00	90.00	2.40
12S1-23		23	139.90	149.00	20.00	60.00	40.00	90.00	2.55
12S1-24		24	145.95	153.90	20.00	60.00	40.00	90.00	2.74
12S1-25	25	151.99	160.00	20.00	60.00	40.00	90.00	2.77	
12S1-27	27	164.09	144.00	20.00	57.00	35.00	85.00	2.77	
12S1-30	30	182.25	190.50	20.00	63.00	40.00	95.00	3.72	
16S1-12	1"	12	73.60	109.00	16.00	46.00	40.00	69.00	1.34
16S1-13		13	106.14	117.00	16.00	52.00	40.00	78.00	1.68
16S1-14		14	114.15	125.00	16.00	56.00	40.00	84.00	2.03
16S1-15		15	122.17	133.00	16.00	61.00	40.00	92.00	2.41
16S1-16		16	130.20	141.00	19.00	67.00	45.00	100.00	3.12
16S1-17		17	138.23	149.00	20.00	67.00	45.00	100.00	3.31
16S1-18		18	146.27	157.00	20.00	67.00	45.00	100.00	3.52
16S1-19		19	154.32	165.20	20.00	67.00	45.00	100.00	3.74
16S1-20		20	162.37	173.00	20.00	67.00	45.00	100.00	3.97
16S1-21		21	170.42	181.20	20.00	74.00	50.00	100.00	4.89
16S1-22		22	178.48	189.30	20.00	74.00	50.00	110.00	5.14
16S1-23		23	186.54	197.50	20.00	74.00	50.00	110.00	5.62
16S1-24		24	194.60	205.50	20.00	74.00	50.00	110.00	5.90
16S1-25		25	202.66	213.50	20.00	74.00	50.00	110.00	6.18
16S1-30		30	243.00	254.00	20.00	80.00	50.00	120.00	8.13