

# *Wheels and sprockets*



**RENOLD**  
Superior Coupling Technology

[www.renold.com](http://www.renold.com)

## Background

Located in South Wales, Renold Clutches and Couplings' Cardiff factory was initially opened in 1946 as a dedicated sprocket manufacturing facility with operations being moved to a modern purpose built factory in 1991.



*Staff celebrate the company's first anniversary in 1947.*

With the company's reputation for quality a cornerstone of its success, Renold manufacture standard sprockets as well as custom wheels of up to 1 metre in size.

In addition to sprockets and wheels, Renold also produce a wide range of power transmission products ranging from sprag clutches to fluid couplings, all designed and manufactured to the highest standards.

The company calls on its vast expertise to create specific solutions to customers' unique requirements. International companies from steel manufacturing to food processing and from escalators to textile machinery have chosen Renold to solve their problems.

*Renold Works, Cardiff, 1946.*



*All historical images courtesy of The Renold Collection.*

*Renold Works factory floor, 1947.*



Commemorative wheel engraved with the signatures of dignitaries and guests at the opening of the Renold Cardiff factory in 1946.

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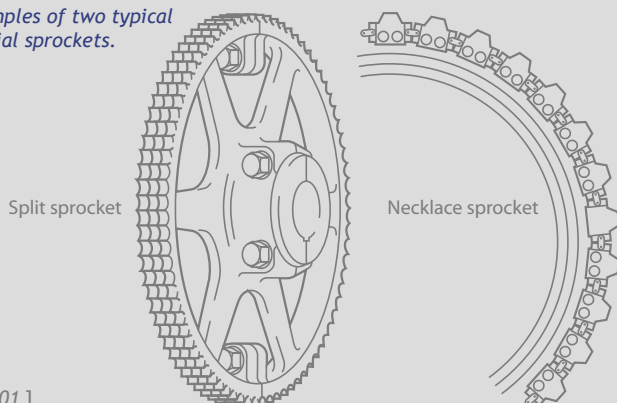


# *Designer guide*



## Designer guide

Examples of two typical special sprockets.

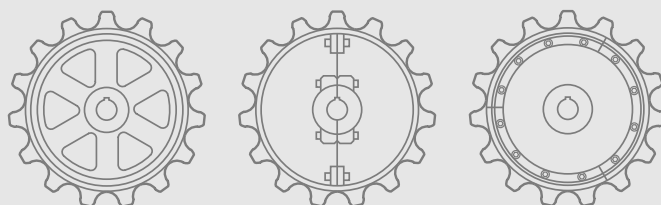


[ fig 01 ]

Cast sprocket

Split sprocket

Segmental sprocket



[ fig 02 ]

### Introduction

Renold manufacture a comprehensive range of stock sprockets for British Standard chain up to two inch pitch.

Other sizes of sprocket, including those to American Standard dimensions, are also available on request.

Special sprockets are also manufactured on request, in special materials or formats, normally to suit a specific application in harsh or difficult drive situations, examples being:

- Sprockets incorporating shafts
- Welded or detachable hubs
- Shear pin devices fitted
- Necklace sprockets made up of chain plates and individual tooth sections for turning large drums or tables
- Combination sprockets (two or more sprockets combined having different pitch sizes and numbers of teeth)
- Sprockets in two or more sections, ie, split sprockets or segmental sprockets

### Sprockets

The normal function of a chain sprocket is not only to drive or be driven by the chain, but also to guide and support it in its intended path.

Sprockets manufactured from good quality iron castings are suitable for the majority of applications. For arduous duty it may be necessary to use steel sprockets having a 0.4% carbon content. For extremely arduous duty the tooth flanks should be flame hardened. There are other materials which may be specified for particular requirements. Stainless steel for example is used in high temperature or corrosive conditions.

Sprockets are usually of 3 main types. [ fig 02 ]

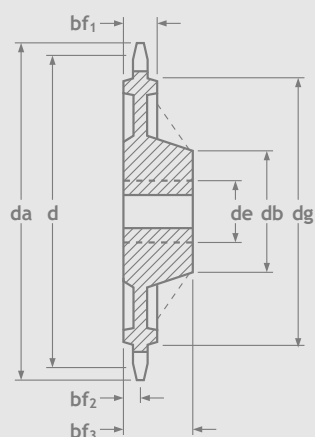
- One piece sprockets of steel or cast iron.
- Two piece split sprockets.
- Sprockets with bolt-on-tooth segments.

The vast majority of sprockets in use are of the one piece cast iron or fabricated steel design and are usually parallel or taper keyed to a through shaft. In this case it is necessary to remove the complete shaft to be able to remove the sprockets. If the sprockets and shaft have been in place for a number of years or the shaft is in hostile conditions, it may be more economical to replace the complete shaft assembly, rather than try to remove the sprockets from the existing shaft.

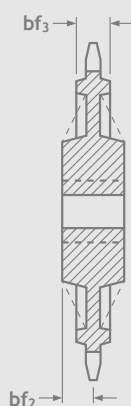
If quick detachability is necessary without dismantling shafts or bearings the sprockets may be of the split type. These are made in two half sections and the mating faces machined to allow accurate assembly with the shaft in place. After removal of the chain, the sprocket can be dismantled and a new one assembled around the shaft. This type of sprocket is particularly useful on multi-strand conveyors where long through shafts are used. Considerable expense can be saved in sprocket replacement time.

Sprockets with removable tooth segments are particularly useful where sprocket tooth wear is much more rapid than chain wear. With this type of sprocket, segments of teeth can be replaced one at a time without having to disconnect or remove the chain from the sprockets, thus considerable expense and downtime can be saved.

Shafts, whether they are through shafts or of the stub type, should be of such proportions and strength that sprocket alignment remains unimpaired under load. Shaft sizes should be selected taking into account combined bending and torsional moments.



[ fig 03 ]

**Key**

- d = Pitch circle diameter
- da = Top diameter
- db = Boss diameter
- de = Bore diameter
- dg = Shroud diameter
- bf<sub>1</sub> = Shroud width
- bf<sub>2</sub> = Face to sprocket centre line
- bf<sub>3</sub> = Distance through boss

## Sprocket dimensions

Salient sprocket dimensions are shown in [ fig 03 ].

### Pitch circle diameter

The pitch circle diameter is drawn through the bearing pin centres when a length of chain is wrapped around a sprocket [ table 01 ] shows pitch circle diameter for sprockets to suit a chain of unit pitch. The pitch circle diameters for sprockets to suit a chain of any other pitch are directly proportional to the pitch of the chain, ie, unit PCD x Chain Pitch = Sprocket PCD.

No. of teeth	Unit pitch circle diameter	No. of teeth	Unit pitch circle diameter	No. of teeth	Unit pitch circle diameter
6	2,000	21	6,709	36	11,474
7	2,305	22	7,027	37	11,792
8	2,613	23	7,344	38	12,110
9	2,924	24	7,661	39	12,428
10	3,236	25	7,979	40	12,746
11	3,549	26	8,296	41	13,063
12	3,864	27	8,614	42	13,382
13	4,179	28	8,931	43	13,700
14	4,494	29	9,249	44	14,018
15	4,810	30	9,567	45	14,336
16	5,126	31	9,885	46	14,654
17	5,442	32	10,202	47	14,972
18	5,759	33	10,520	48	15,290
19	6,076	34	10,838	49	15,608
20	6,392	35	11,156	50	15,926

[ table 01 ]

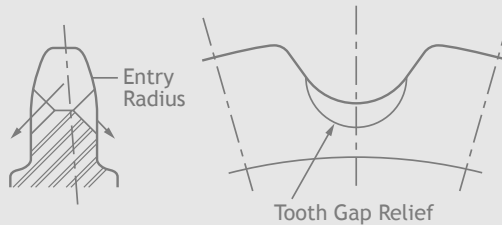
## Tooth form

For most applications sprocket teeth as cast and unmachined are satisfactory, but machine cut teeth may however be preferable as referred to later. In conjunction with the chain rollers, the shape of the teeth facilitates a smooth gearing action. The teeth shape, whether cast or cut, is based on chain roller diameter and pitch for each specific chain. To ensure easy entry and exit of the chain the teeth have a radius on their outside faces at the periphery [ fig 04 ].

When an application calls for a size of sprocket and a number of teeth that are not contained within the stock sprocket range then fabricated steel sprockets are supplied with flame cut teeth. The accuracy of flame cut tooth form is usually better than the cast tooth form and has generally replaced it for non-stock sprockets. If necessary, fabricated sprockets can be manufactured from medium carbon steel and the teeth can then be flame hardened to give a very tough, hard-wearing surface.

In some handling equipment such as elevators and scraper conveyors, both the chain and the sprockets have to operate in contact with bulk material. This is liable to enter the spaces between the chain rollers and sprocket teeth, where the roller pressure can cause it to pack. If this is allowed to occur, the chain then takes up a larger pitch circle diameter leading to excessive chain tension, and possibly breakage. This packing effect can be minimised by relieving the tooth gap as shown in [ fig 04 ].

## Designer guide



[ fig 04 ]

Machine cut teeth with their closer tolerances are employed in the class of applications listed because of their greater accuracy.

- High speed applications with chain speed in excess of about 0.9m/s.
- Where synchronization of the chain to a predetermined stopping position is required.
- Where numerous sprockets are employed in a closed circuit and variations in tooth form and pitch circle diameter could result in a tendency to tighten or slacken the chain on straight sections. This applies particularly where the sprockets are closely spaced in either the horizontal or vertical planes or in close proximity in combined planes.
- Where the linear chain speed variation has to be reduced to a minimum.

### Number of teeth

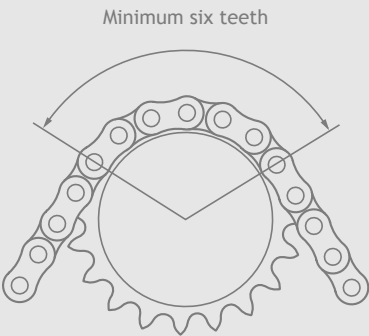
For the majority of conveyor applications, experience shows that eight teeth represents a reasonable minimum size for sprockets. Below this the effect of polygonal speed variation is pronounced. [ table 02 ] indicates the normal range of sprockets for conveyors and elevators.

The maximum number of teeth in any driven sprocket (72) should not exceed 114. This limitation is due to the fact that for a given elongation of chain due to wear, the working pitch diameter of the chain on the sprocket increases in relation to the nominal pitch diameter. The allowable safe chain wear is considered to be in the order of 2% elongation over the nominal length.

Application	Normal range of sprockets No. of teeth		
Slat, bar, steel apron, wire mesh or similar conveyors	8-12		
Tray, soft fruit and similar elevators	8-12		
Cask, package and similar elevators	8-12		
Swing tray elevators	16-24		
Ore feed conveyors	6-8		
Scraper conveyors	8-12		
Box scraper conveyors	8-16		
	Normal minimum number of teeth in sprocket		
Bucket elevators	Head	Boot	Deflector
Spaced bucket			
High speed vertical (one or two chains)	14	11	
Medium speed inclined (one or two chains)	14	11	
Slow speed vertical (two chains)	12	11	9
Continuous bucket			
Medium speed; vertical or inclined (one or two chains)	8	8	
Slow speed; vertical or inclined (two chains)	8	8	
Gravity bucket conveyor/ Elevator	Driver 12	Top corner 12	Follower 8

[ table 02 ]





[ fig 05 ]

A simple formula for determining how much chain elongation a sprocket can accommodate is  $\frac{200}{N}$  expressed as a percentage where N is the number of teeth on the largest sprocket in the drive system.

It is good practice to have the sum of the teeth not less than 50 where both the driver and driven sprockets are operated by the same chain, eg, on a 1:1 ratio drive, both sprockets should have 25 teeth each.

Centre distance

For optimum wear life, centre distance between two sprockets should normally be within the range 30 to 50 times the chain pitch. On drive proposals with centre distances below 30 pitches or greater than 2m, we would recommend that the drive details are discussed with our technical staff.

The minimum distance is sometimes governed by the amount of chain lap on the driver sprocket, our normal recommendation in this circumstance being not less than 6 teeth in engagement with the chain. [ fig 05 ]

The centre distance is also governed by the desirability of using a chain with an even number of pitches to avoid the use of a cranked link, a practice that is not recommended except in special circumstances.

For a drive in the horizontal plane the shortest centre distance possible should be used consonant with recommended chain lap on the driver sprocket.

Recommended centre distances for drives can be found in [ table 03 ].

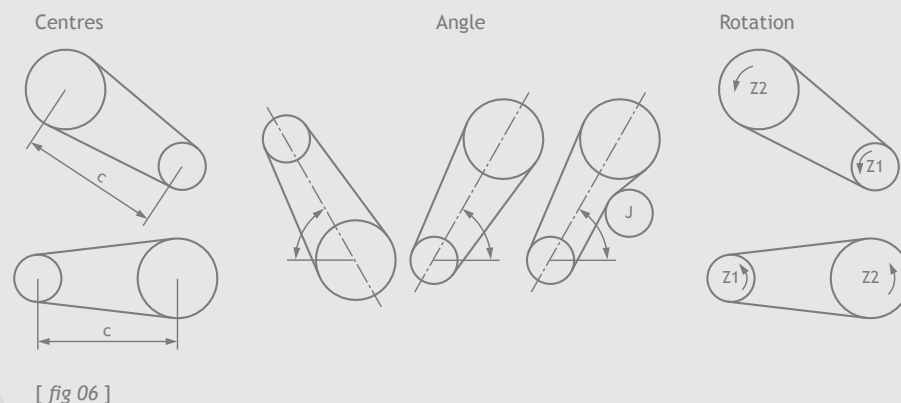
Lie of drive

Drives may be arranged to run horizontally, inclined or vertically. In general, the loaded strand of the chain may be uppermost or lowermost as desired. Where the lie of the drive is vertical, or nearly so, it is preferable for the drive sprocket (Z1) to be above the driven sprocket (Z2); however, even with a drive of vertical lie it is quite feasible for the driver sprocket to be lowermost, provided care is taken that correct chain adjustment is maintained at all times.

Pitch	Inch mm	3/8 9.525	1/2 12.70	5/8 15.87	3/4 19.05	1 25.40	1 1/4 31.75	1 1/2 38.1	1 3/4 44.45	2 50.80	2 1/2 63.50	3 76.20
Centre distance	mm	450	600	750	900	1000	1200	1350	1500	1700	1800	2000

[ table 03 ]

## Designer guide



### Centres

The centre distance between the axis of the two shafts or sprockets. [ fig 06 ]

### Angle

The lie of the drive is given by the angle formed by the line through the shaft centres and a horizontal line. [ fig 06 ]

### Rotation

Viewed along the axis of the driven shaft the rotation can be clockwise or anti-clockwise. [ fig 06 ]

### Selection of sprocket materials

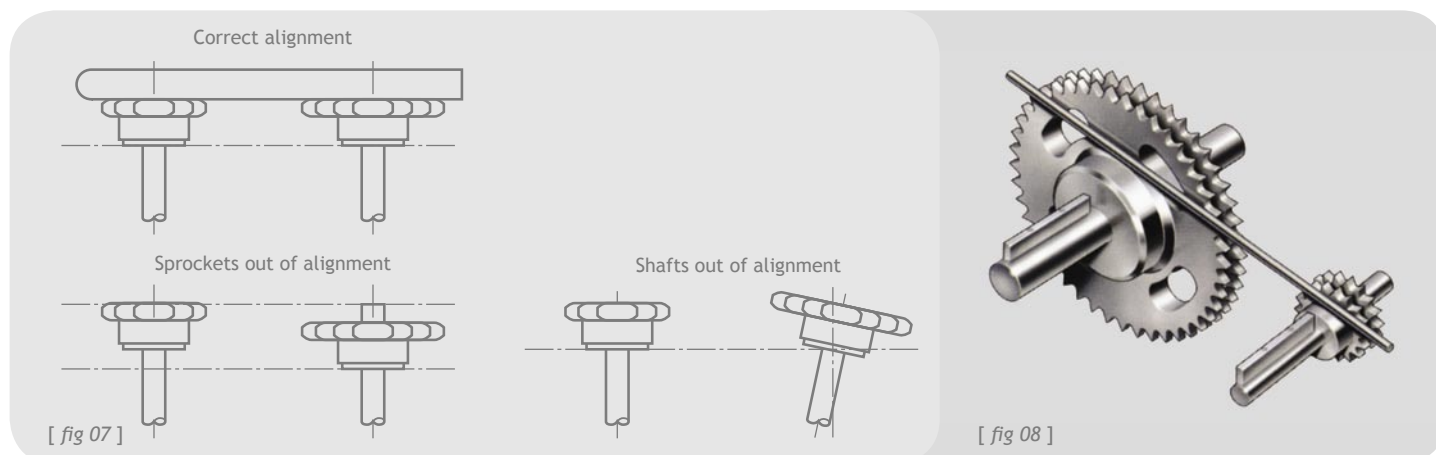
Choice of material and heat treatment will depend upon shape, diameter and mass of the sprocket. [ table 04 ] can be used as a simple guide to the correct selection of sprocket material.

### Sprocket and chain compatibility

Most drives have an even number of pitches in the chain and by using a driver sprocket with an odd number of teeth, uniform wear distributes over both chain and sprocket teeth is ensured. Even numbers of teeth for both the driver and driven sprockets can be used, but wear distribution on both the sprocket teeth and chain is poor.

Sprocket	Smooth running	Moderate shocks	Heavy shocks
Up to 29T	EN8 or EN9	EN8 or EN9 Hardened and tempered or case hardened Mild Steel	EN8 or EN9 Hardened and tempered or case hardened Mild Steel
30T and over	Cast iron	Mild Steel or Meehanite	EN8 or EN9 Hardened and tempered or case hardened Mild Steel

[ table 04 ]



## Preparation

Check equipment to ensure that general transmission requirements are correct (eg, flexible couplings, flywheel, means of drive adjustment).

Check condition and rigidity of the shafts and bearings, particularly if there has been considerable previous service with an alternative method of transmission. Replace or rectify if necessary.

Driver and driven shafts should be checked to ensure they are level and parallel to each other. This applies equally to the jockey shaft if present.

Use a spirit level and adjustable comparator bar or micrometer between shafts at extreme points on each side of the drive. Rectify any parallelism error present and mark a permanent datum line for the adjustable shaft.

Place sprockets or respective shafts in approximate alignment and fit the keys in accordance with correct engineering practice. Do not finally secure keys at this stage.

Care must be taken with sprockets of split design to ensure perfect abutting of the faces of each half. Proceed with the key

fitting after the halves are finally bolted together, otherwise the key can prevent correct assembly and subsequently result in malgearing.

It should be verified that key heads will not project beyond the width of any chaincases.

## Checking sprocket alignment

Accurate alignment of shafts and sprocket tooth faces [ fig 07 ] provides a uniform distribution of load across the entire chain width and contributes substantially to maximum drive life.

Use a straight edge across the machine faces of the sprockets [ fig 08 ] in several different positions, if possible, as a check against wobble. A nylon or similar line is a good substitute for a straight edge particularly on longer centre distances.

Should endwise "float" of shafts be present, make due allowance so that sprocket alignment is correct at the mid position of the "float".

When alignment is correct within closest practical limits, drive the keys home and take a final check on sprocket alignment.

## Designer guide

## Notes

# *Transmission sprockets*



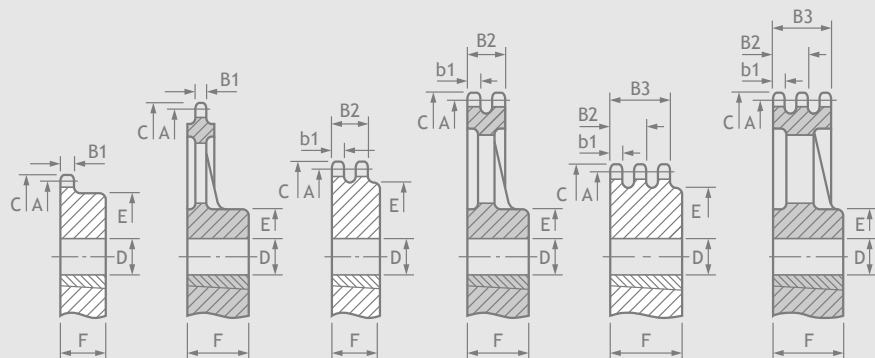


# Transmission sprockets

ISO 606

## Key

Tool Width SIMPLEX	B1 - 5.3mm
Tool Width	b1 - 5.2mm
Tool Width DUPLEX	B2 - 15.4mm
Tool Width TRIPLEX	B3 - 25.6mm



## 9.525mm (0.375") pitch

Plain bore - steel

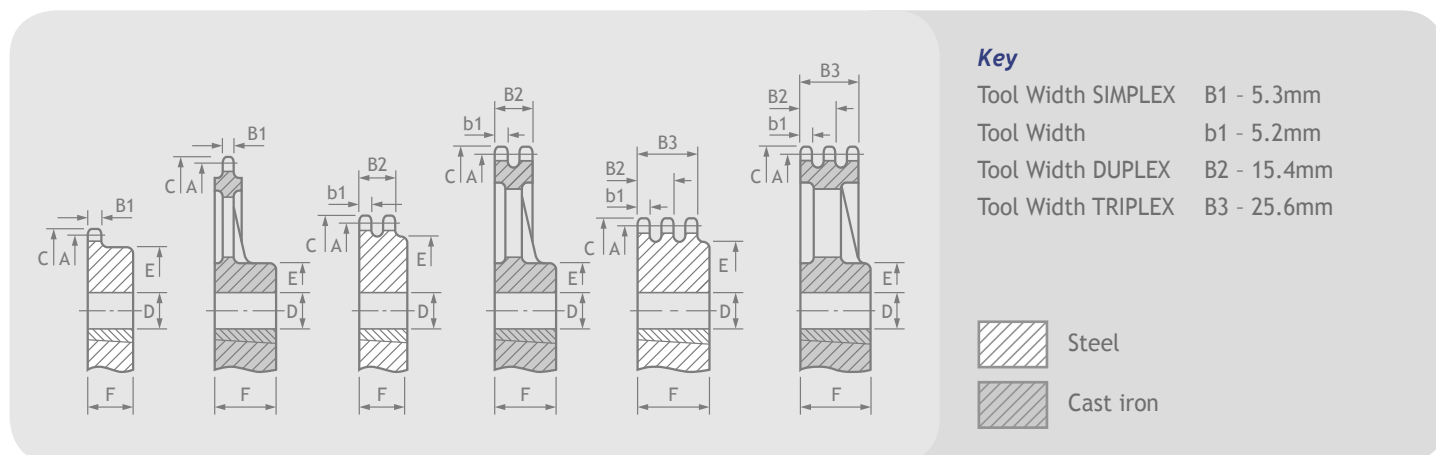
			SIMPLEX					DUPLEX					TRIPLEX				
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia	Dist' Thro' E	Part No F	Bore Min	D Max	Boss Dia	Dist' Thro' E	Part No F	Bore Min	D Max	Boss Dia E	Dist' Thro' F
11	33.80	37.5	06B1/11T	8	14	22	25	06B2/11T	10	14	22	30	06B3/11T	12	14	22	35
12	36.80	40.5	06B1/12T	8	16	25	25	06B2/12T	10	16	25	30	06B3/12T	12	16	25	35
13	39.80	43.5	06B1/13T	10	16	28	25	06B2/13T	10	16	28	30	06B3/13T	12	16	28	35
14	42.80	46.5	06B1/14T	10	20	31	25	06B2/14T	10	20	31	30	06B3/14T	12	22	31	35
15	45.81	49.5	06B1/15T	10	22	34	25	06B2/15T	10	22	34	30	06B3/15T	12	22	34	35
16	48.82	52.5	06B1/16T	10	22	37	28	-	-	-	-	-	-	-	-	-	-
17	51.83	55.5	06B1/17T	10	25	40	28	06B2/17T	12	25	40	30	06B3/17T	12	25	40	35
18	54.85	58.6	06B1/18T	10	25	43	28	-	-	-	-	-	-	-	-	-	-
19	57.87	61.6	06B1/19T	10	28	45	28	06B2/19T	12	28	46	30	06B3/19T	12	28	46	35
20	60.89	64.6	06B1/20T	10	30	46	28	06B2/20T	12	30	49	30	06B3/20T	12	30	49	35
21	63.91	67.6	06B1/21T	12	32	48	28	06B2/21T	16	35	52	30	06B3/21T	16	35	52	40
22	66.93	70.6	06B1/22T	12	32	50	28	-	-	-	-	-	-	-	-	-	-
23	69.95	73.7	06B1/23T	12	38	52	28	06B2/23T	16	42	58	30	06B3/23T	16	42	58	40
24	72.97	76.7	06B1/24T	12	38	54	28	-	-	-	-	-	-	-	-	-	-
25	76.00	79.7	06B1/25T	12	38	57	28	06B2/25T	16	42	64	30	06B3/25T	16	42	64	40
26	79.02	82.7	06B1/26T	12	38	60	28	-	-	-	-	-	-	-	-	-	-
27	82.04	85.7	06B1/27T	12	38	60	28	06B2/27T	16	42	70	30	06B3/27T	16	42	70	40
30	91.12	94.8	06B1/30T	12	38	60	28	06B2/30T	16	40	79	30	06B3/30T	16	45	79	40
38	115.34	119.0	06B1/38T	16	42	70	30	06B2/38T	16	50	90	30	06B3/38T	16	55	90	40

Plain bore - heavy duty cast iron

57	172.94	177.5	06B1/57T	19	45	80	25	06B2/57T	24	50	90	25	06B3/57T	28	55	95	38
76	230.49	235.1	06B1/76T	19	45	80	25	06B2/76T	24	50	90	25	06B3/76T	28	65	110	45
95	288.08	292.7	06B1/95T	24	50	90	25	06B2/95T	28	55	95	38	06B3/95T	28	65	110	45
114	345.68	350.3	06B1/114T	24	50	90	38	06B2/114T	28	55	95	38	06B3/114T	28	65	110	52
150	454.81	461.2	06B1/150T	24	50	90	45	06B2/150T	35	65	110	52	-	-	-	-	-

## Transmission sprockets

ISO 606



## 9.525mm (0.375") pitch

Taper bore - steel

			SIMPLEX				DUPLEX				TRIPLEX						
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia	Dist' Thro' E	Part No F	Bore Min	D Max	Boss Dia	Dist' Thro' E	Part No F	Bore Min	D Max	Boss Dia E	Dist' Thro' F
			Taper bush				Taper bush				Taper bush						
17	51.83	55.5	T06B1/17T	TB1008		45	22	T06B2/17T	TB1008		41	22	T06B3/17T	TB1008		-	25.6
19	57.87	61.6	T06B1/19T	TB1008		45	22	T06B2/19T	TB1008		46	22	T06B3/19T	TB1008		-	25.6
21	63.91	67.6	T06B1/21T	TB1008		46	22	T06B2/21T	TB1008		49	22	T06B3/21T	TB1008		-	25.6
23	69.95	73.7	T06B1/23T	TB1210		63	25	T06B2/23T	TB1210		59	25	T06B3/23T	TB1210		-	25.6
25	76.00	79.7	T06B1/25T	TB1210		63	25	T06B2/25T	TB1210		64	25	T06B3/25T	TB1210		-	25.6
38	115.34	119.0	T06B1/38T	TB1210		70	25	T06B2/38T	TB1610		80	25	T06B3/38T	TB1615		90	38.0

Taper bore - heavy duty cast iron

57	172.94	177.5	T06B1/57T	TB1210	80	25		T06B2/57T	TB1610	90	25		T06B3/57T	TB1615	95	38	
76	230.49	235.1	T06B1/76T	TB1210	80	25		T06B2/76T	TB1610	90	25		T06B3/76T	TB2017	110	45	
95	288.08	292.7	T06B1/95T	TB1210	90	25		T06B2/95T	TB1615	95	38		-	-	-	-	
114	345.68	350.3	T06B1/114T	TB1615	90	38		T06B2/114T	TB1615	95	38		-	-	-	-	

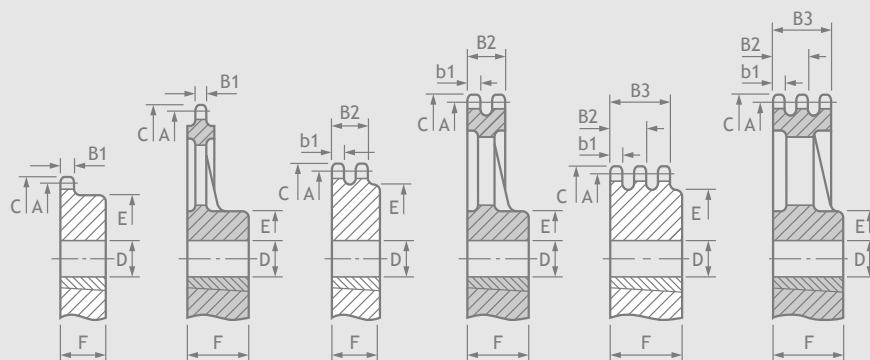
Rebore, keyway and setscrew modification service available - see page 24.

# Transmission sprockets

ISO 606

## Key

Tool Width SIMPLEX	B1 - 7.2mm
Tool Width	b1 - 7.1mm
Tool Width DUPLEX	B2 - 21.0mm
Tool Width TRIPLEX	B3 - 34.9mm



## 12.7mm (0.500") pitch

Plain bore - steel

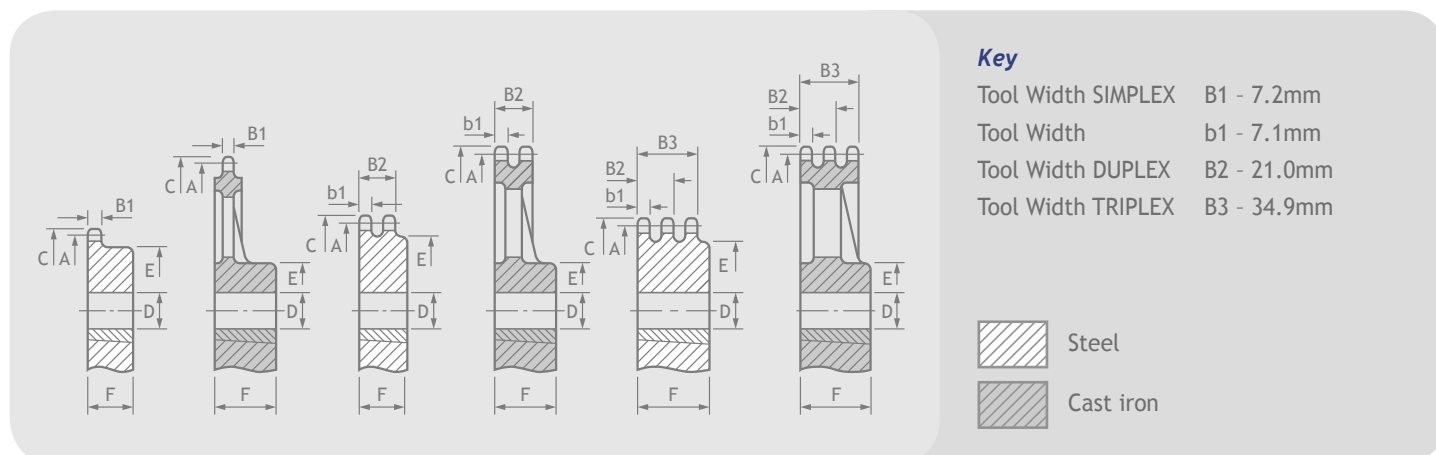
No of Teeth	PCD	Top Dia A	SIMPLEX					DUPLEX					TRIPLEX				
			Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
11	45.07	49.9	08B1/11T	10	19	29	25	08B2/11T	12	20	32	35	08B3/11T	16	20	32	50
12	49.07	53.9	08B1/12T	10	22	33	28	08B2/12T	12	22	35	35	08B3/12T	16	22	35	50
13	53.07	57.9	08B1/13T	10	25	37	28	08B2/13T	12	25	38	35	08B3/13T	16	25	38	50
14	57.07	61.9	08B1/14T	10	25	41	28	08B2/14T	12	28	42	35	08B3/14T	16	28	42	50
15	61.09	65.9	08B1/15T	10	32	45	28	08B2/15T	12	32	46	35	08B3/15T	16	32	46	50
16	65.10	69.9	08B1/16T	12	33	50	28	-	-	-	-	-	-	-	-	-	-
17	69.11	74.0	08B1/17T	12	35	52	28	08B2/17T	16	38	54	38	08B3/17T	16	38	54	50
18	73.14	78.0	08B1/18T	12	35	56	28	-	-	-	-	-	-	-	-	-	-
19	77.16	82.0	08B1/19T	12	40	60	28	08B2/19T	16	42	62	38	08B3/19T	16	42	62	50
20	81.18	86.0	08B1/20T	12	42	64	28	08B2/20T	16	42	66	38	08B3/20T	16	42	66	50
21	85.22	90.1	08B1/21T	14	45	68	28	08B2/21T	16	45	70	40	08B3/21T	16	45	70	55
22	89.24	94.1	08B1/22T	14	45	70	28	-	-	-	-	-	-	-	-	-	-
23	93.27	98.1	08B1/23T	14	45	70	28	08B2/23T	16	45	70	40	08B3/23T	16	45	70	55
24	97.29	102.1	08B1/24T	14	45	70	28	-	-	-	-	-	-	-	-	-	-
25	101.33	106.2	08B1/25T	14	45	70	28	08B2/25T	16	48	80	40	08B3/25T	16	48	80	55
26	105.36	110.2	08B1/26T	16	45	70	30	-	-	-	-	-	-	-	-	-	-
27	109.40	114.2	08B1/27T	16	45	70	30	08B2/27T	16	58	85	40	08B3/27T	20	58	85	55
30	121.50	126.3	08B1/30T	16	48	80	30	08B2/30T	16	60	100	40	08B3/30T	20	60	100	55
38	153.80	158.6	08B1/38T	16	60	90	35	08B2/38T	20	60	100	40	08B3/38T	25	72	120	55

Plain bore - heavy duty cast iron

57	230.54	237.1	08B1/57T	19	60	110	32	08B2/57T	28	65	110	32	08B3/57T	28	65	110	45
76	307.33	313.9	08B1/76T	19	60	110	32	08B2/76T	38	65	110	45	08B3/76T	38	75	130	64
95	384.11	390.7	08B1/95T	24	50	90	45	08B2/95T	38	65	110	52	08B3/95T	38	75	130	64
114	460.90	467.4	08B1/114T	34	50	90	45	08B2/114T	38	65	110	58	08B3/114T	38	75	130	72

## Transmission sprockets

ISO 606



## 12.7mm (0.500") pitch

## Taper bore - steel

			SIMPLEX				DUPLEX				TRIPLEX						
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
			Taper bush				Taper bush				Taper bush						
15	61.08	65.9	T08B1/15T	TB1008		45	22	T08B2/15T	TB1008		48	22	-	-	-	-	
17	69.12	74.0	T08B1/17T	TB1210		60	25	T08B2/17T	TB1210		56	25	-	-	-	-	
19	77.16	82.0	T08B1/19T	TB1210		63	25	T08B2/19T	TB1210		64	25	T08B3/19T	TB1215		62	38
21	85.21	90.1	T08B1/21T	TB1610		71	25	T08B2/21T	TB1610		71	25	T08B3/21T	TB1615		70	38
23	93.27	98.1	T08B1/23T	TB1610		76	25	T08B2/23T	TB1610		79	25	T08B3/23T	TB1615		70	38
25	101.33	106.2	T08B1/25T	TB1610		76	25	T08B2/25T	TB2012		87	32	T08B3/25T	TB2017		-	34.9

## Taper bore - heavy duty cast iron

38	153.79	158.6	T08B1/38T	TB2012	90	32		T08B2/38T	TB2012	100	32		T08B3/38T	TB2017	-	34.9	
57	230.54	237.1	T08B1/57T	TB2012	110	32		T08B2/57T	TB2012	110	32		T08B3/57T	TB2017	110	45	
76	307.33	313.9	T08B1/76T	TB2012	110	32		T08B2/76T	TB2012	110	32		T08B3/76T	TB2525	130	64	
95	384.11	390.7	T08B1/95T	TB2012	110	32		T08B2/95T	TB2012	110	32		-	-	-	-	
114	460.90	467.4	T08B1/114T	TB2017	110	32		T08B2/114T	TB2517	125	45		-	-	-	-	

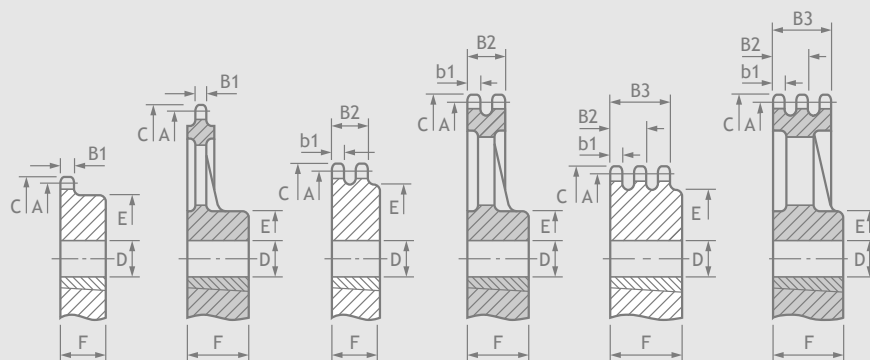
Rebore, keyway and setscrew modification service available - see page 24.

# Transmission sprockets

ISO 606

## Key

Tool Width SIMPLEX	B1 - 9.2mm
Tool Width	b1 - 9.0mm
Tool Width DUPLEX	B2 - 25.6mm
Tool Width TRIPLEX	B3 - 42.2mm



## 15.875mm (0.625") pitch

Plain bore - steel

			SIMPLEX					DUPLEX					TRIPLEX				
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
11	56.34	63.2	10B1/11T	12	25	37	30	10B2/11T	16	25	39	40	-	-	-	-	-
12	61.34	68.2	10B1/12T	12	28	42	30	10B2/12T	16	28	44	40	-	-	-	-	-
13	66.32	73.2	10B1/13T	12	30	47	30	10B2/13T	16	30	49	40	-	-	-	-	-
14	71.34	78.2	10B1/14T	12	32	52	30	10B2/14T	16	30	54	40	-	-	-	-	-
15	76.36	83.2	10B1/15T	12	32	57	30	10B2/15T	16	36	59	40	-	-	-	-	-
16	81.37	88.3	10B1/16T	12	36	60	30	-	-	-	-	-	-	-	-	-	-
17	86.39	93.3	10B1/17T	12	36	60	30	10B2/17T	16	42	69	45	-	-	-	-	-
18	91.42	98.3	10B1/18T	14	42	70	30	-	-	-	-	-	-	-	-	-	-
19	96.45	103.3	10B1/19T	14	42	70	30	10B2/19T	16	48	79	45	-	-	-	-	-
20	101.49	108.4	10B1/20T	14	45	75	30	10B2/20T	16	50	84	45	-	-	-	-	-
21	106.52	113.4	10B1/21T	16	45	75	30	10B2/21T	16	50	85	45	-	-	-	-	-
22	111.55	118.4	10B1/22T	16	48	80	30	-	-	-	-	-	-	-	-	-	-
23	116.58	123.5	10B1/23T	16	48	80	30	10B2/23T	16	60	95	45	-	-	-	-	-
24	121.62	128.5	10B1/24T	16	48	80	30	-	-	-	-	-	-	-	-	-	-
25	126.66	133.6	10B1/25T	16	48	80	30	10B2/25T	16	65	105	45	-	-	-	-	-
26	131.70	138.6	10B1/26T	20	50	85	35	-	-	-	-	-	-	-	-	-	-
27	136.75	143.6	10B1/27T	20	50	85	35	-	-	-	-	-	-	-	-	-	-
30	151.87	158.8	10B1/30T	20	55	90	35	10B2/30T	20	72	120	45	-	-	-	-	-
38	192.24	199.1	10B1/38T	20	60	100	35	-	-	-	-	-	-	-	-	-	-

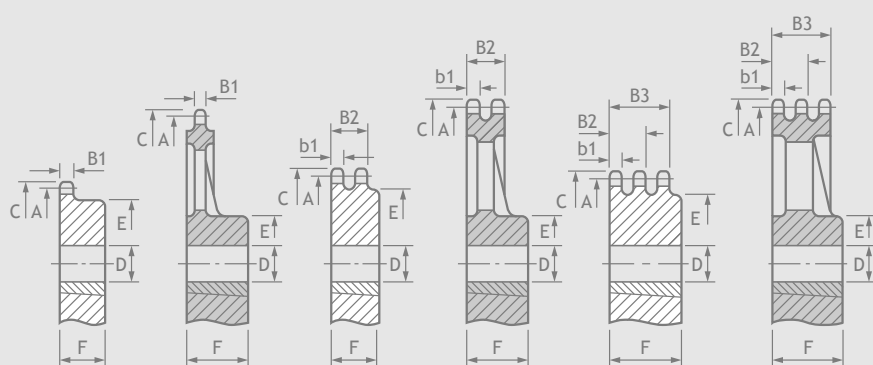
Plain bore - heavy duty cast iron

57	288.18	296.6	10B1/57T	24	50	90	45	-	-	-	-	-	-	-	-	-	-
76	384.15	392.5	10B1/76T	28	50	90	52	-	-	-	-	-	-	-	-	-	-
95	480.14	488.5	10B1/95T	28	50	90	58	-	-	-	-	-	-	-	-	-	-
114	576.13	584.5	10B1/114T	38	75	130	58	-	-	-	-	-	-	-	-	-	-



## Transmission sprockets

ISO 606



## Key

Tool Width SIMPLEX	B1 - 9.2mm
Tool Width	b1 - 9.0mm
Tool Width DUPLEX	B2 - 25.6mm
Tool Width TRIPLEX	B3 - 42.2mm



## 15.875mm (0.625") pitch

## Taper bore - steel

			SIMPLEX				DUPLEX				TRIPLEX						
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
			Taper bush				Taper bush				Taper bush						
15	76.36	83.2	T10B1/15T	TB1210		60	25	-	-	-	-	-	-	-	-	-	-
17	84.40	93.3	T10B1/17T	TB1610		71	25	-	-	-	-	-	-	-	-	-	-
19	96.45	103.3	T10B1/19T	TB1610		75	25	-	-	-	-	-	-	-	-	-	-
21	106.51	113.4	T10B1/21T	TB1610		76	25	-	-	-	-	-	-	-	-	-	-
23	116.59	123.5	T10B1/23T	TB1610		76	25	-	-	-	-	-	-	-	-	-	-
25	126.66	133.6	T10B1/25T	TB2012		90	32	-	-	-	-	-	-	-	-	-	-

## Taper bore - heavy duty cast iron

38	151.87	158.8	T10B1/38T	TB2012	90	32	-	-	-	-	-	-	-	-	-	-	-
57	288.18	296.6	T10B1/57T	TB2012	110	32	-	-	-	-	-	-	-	-	-	-	-
76	384.15	392.5	T10B1/76T	TB2012	115	32	-	-	-	-	-	-	-	-	-	-	-
95	480.14	488.5	T10B1/95T	TB2012	115	45	-	-	-	-	-	-	-	-	-	-	-

Rebore, keyway and setscrew modification service available - see page 24.

# Transmission sprockets

ISO 606

## Key

Tool Width SIMPLEX B1 - 11.1mm

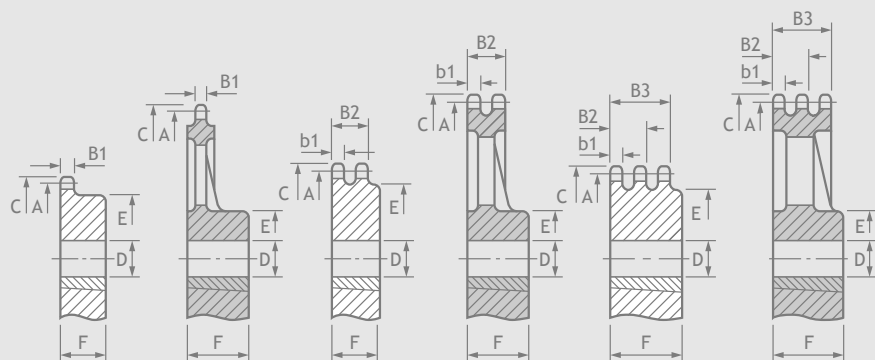
Tool Width b1 - 10.9mm

Tool Width DUPLEX B2 - 30.4mm

Tool Width TRIPLEX B3 - 49.8mm

• Welded hub

 Steel

 Cast iron


## 19.05mm (0.750") pitch

Plain bore - steel

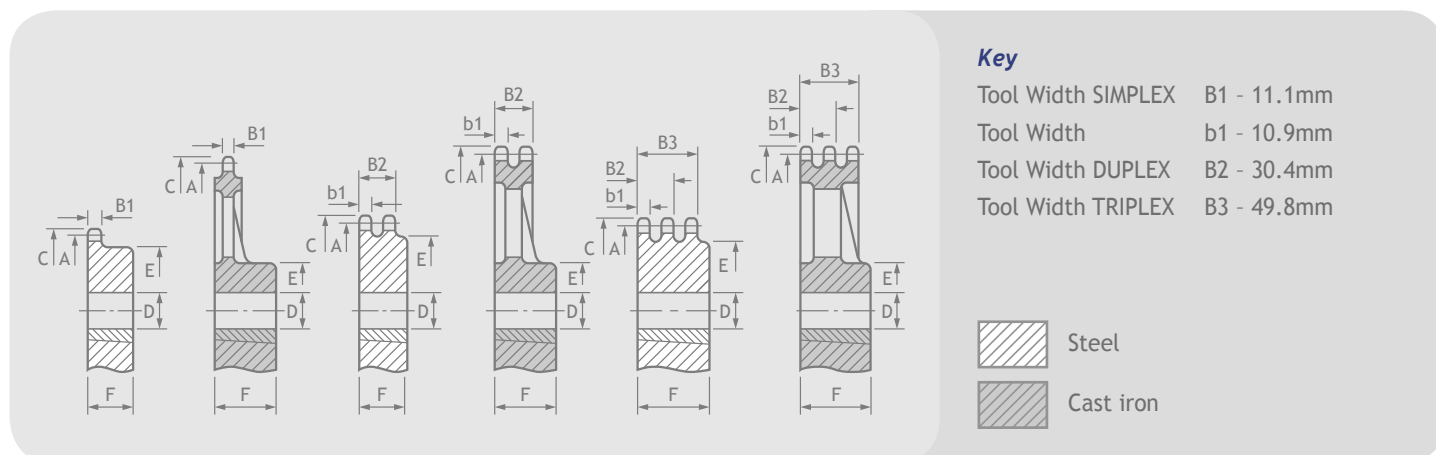
No of Teeth	PCD	Top Dia A	SIMPLEX					DUPLEX					TRIPLEX				
			Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
11	67.62	75.8	12B1/11T	16	30	46	35	12B2/11T	16	30	47	50	123B/11T	20	30	47	70
12	73.60	81.8	12B1/12T	16	32	52	35	12B2/12T	16	32	53	50	123B/12T	20	32	53	70
13	79.59	87.8	12B1/13T	16	38	58	35	12B2/13T	16	38	59	50	123B/13T	20	38	59	70
14	85.61	93.8	12B1/14T	16	42	64	35	12B2/14T	20	42	65	50	123B/14T	20	42	65	70
15	91.63	99.9	12B1/15T	16	48	70	35	12B2/15T	20	48	71	50	123B/15T	20	48	71	70
16	97.65	105.8	12B1/16T	16	50	75	35	-	-	-	-	-	-	-	-	-	-
17	103.67	111.9	12B1/17T	16	53	80	35	12B2/17T	20	50	83	50	123B/17T	20	50	83	70
18	109.71	117.9	12B1/18T	16	53	80	35	-	-	-	-	-	-	-	-	-	-
19	115.74	123.9	12B1/19T	16	53	80	35	12B2/19T	20	55	95	50	123B/19T	20	55	95	70
20	121.78	130.0	12B1/20T	16	53	80	35	12B2/20T	20	60	100	50	123B/20T	20	60	100	70
21	127.82	136.1	12B1/21T	20	55	90	40	12B2/21T	20	60	100	50	123B/21T	25	60	100	70
22	133.86	142.1	12B1/22T	20	55	90	40	-	-	-	-	-	-	-	-	-	-
23	139.90	148.1	12B1/23T	20	55	90	40	12B2/23T	20	66	110	50	123B/23T	25	66	110	70
24	145.94	154.1	12B1/24T	20	55	90	40	-	-	-	-	-	-	-	-	-	-
25	152.00	160.2	12B1/25T	20	55	90	40	12B2/25T	20	72	120	50	123B/25T	25	72	120	70
26	158.04	166.2	12B1/26T	20	55	95	40	-	-	-	-	-	-	-	-	-	-
27	164.09	172.3	12B1/27T	20	55	95	40	12B2/27T	20	72	120	50	123B/27T	25	72	120	70
30	182.25	190.4	12B1/30T	20	55	95	40	12B2/30T	20	72	120	50	123B/30T	25	72	120	70
38	230.69	238.9	12B1/38T	25	60	100	40	12B2/38T*	25	72	120	50	123B/38T*	25	78	130	70

Plain bore - heavy duty cast iron

57	345.81	355.9	12B1/57T	28	55	110	52	12B2/57T	38	65	115	64	12B3/57T	48	90	160	76
76	460.98	471.1	12B1/76T	35	55	110	58	12B2/76T	48	90	155	76	12B3/76T	55	90	165	76
95	576.17	586.2	12B1/95T	38	65	110	64	12B2/95T	55	90	155	76	12B3/95T	38	100	172	76
114	691.36	701.4	12B1/114T	38	75	130	64	12B2/114T	55	100	170	88	12B3/114T	48	100	178	76

## Transmission sprockets

ISO 606



## 19.05mm (0.750") pitch

Taper bore - steel

			SIMPLEX				DUPLEX				TRIPLEX						
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
			Taper bush				Taper bush				Taper bush						
15	91.63	99.8	12B1/15T	TB1610		71	25	12B2/15T	TB1615		72	38	12B3/15T	TB1615		-	49.8
17	103.67	111.9	12B1/17T	TB1610		76	25	12B2/17T	TB1615		80	38	12B3/17T	TB2012		-	49.8
19	115.74	123.9	12B1/19T	TB2012		90	32	12B2/19T	TB2012		90	32	12B3/19T	TB2012		-	49.8
21	127.82	136.0	12B1/21T	TB2517		102	44	12B2/21T	TB2517		107	44	12B3/21T	TB2517		-	49.8
23	139.90	148.1	12B1/23T	TB2517		108	44	12B2/23T	TB2517		108	44	12B3/23T	TB2517		-	49.8
25	152.00	160.2	12B1/25T	TB2517		108	44	12B2/25T	TB2517		108	44	12B3/25T	TB2517		-	49.8

Taper bore - heavy duty cast iron

38	230.69	238.9	T12B1/38T	TB2517	108	44	T12B2/38T	TB3020	140	51	T12B3/38T	TB3020	140	51
57	345.81	355.9	T12B1/57T	TB2517	125	45	T12B2/57T	TB3020	155	51	T12B3/57T	TB3020	160	51
76	460.98	471.1	T12B1/76T	TB2517	125	45	T12B2/76T	TB3020	155	51	T12B3/76T	TB3020	160	51
95	576.17	586.2	T12B1/95T	TB2517	130	45	T12B2/95T	TB3020	155	51	T12B3/95T	TB3030	172	76
114	691.36	701.4	T12B1/114T	TB2525	130	64	T12B2/114T	TB3030	170	76	T12B3/114T	TB3030	178	76

Rebore, keyway and setscrew modification service available - see page 24.

# Transmission sprockets

ISO 606

## Key

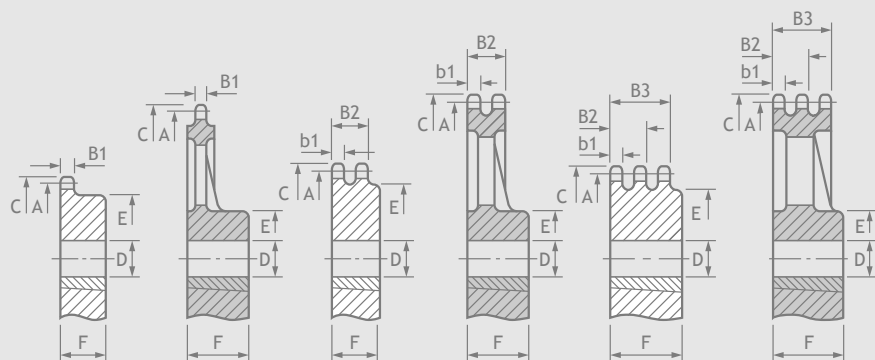
Tool Width SIMPLEX B1 - 16.2mm

Tool Width b1 - 15.8mm

Tool Width DUPLEX B2 - 47.7mm

Tool Width TRIPLEX B3 - 79.6mm

• Welded hub



## 25.4mm (1.000") pitch

Plain bore - steel

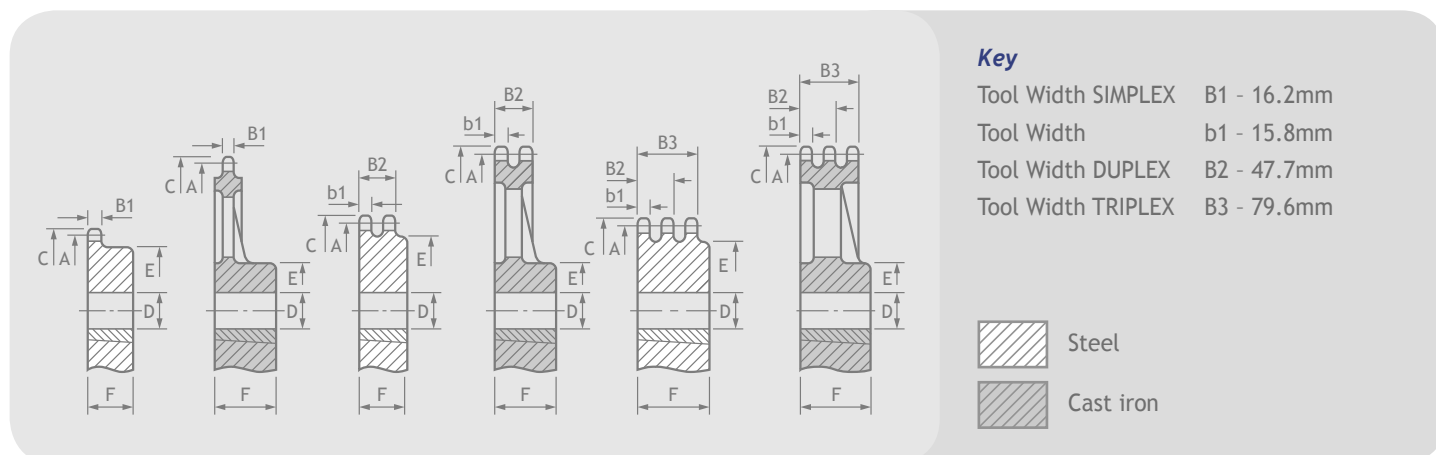
			SIMPLEX					DUPLEX					TRIPLEX				
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
11	90.14	101.7	16B1/11T	16	40	61	40	16B2/11T	20	44	64	70	16B3/11T	25	44	64	100
12	98.14	109.7	16B1/12T	16	45	69	40	16B2/12T	20	45	72	70	16B3/12T	25	45	72	100
13	106.12	117.7	16B1/13T	16	50	78	40	16B2/13T	20	50	80	70	16B3/13T	25	50	80	100
14	114.15	125.7	16B1/14T	16	55	84	40	16B2/14T	20	55	88	70	16B3/14T	25	55	88	100
15	122.17	133.7	16B1/15T	16	60	92	40	16B2/15T	20	60	96	70	16B3/15T	25	60	96	100
16	130.20	141.8	16B1/16T	20	60	100	45	-	-	-	-	-	-	-	-	-	-
17	138.22	149.8	16B1/17T	20	60	100	45	16B2/17T	25	72	112	70	16B3/17T	25	72	112	100
18	146.28	157.8	16B1/18T	20	60	100	45	-	-	-	-	-	-	-	-	-	-
19	154.33	165.9	16B1/19T	20	60	100	45	16B2/19T	25	82	128	70	16B3/19T	25	82	128	100
20	162.38	173.9	16B1/20T	20	60	100	45	16B2/20T	25	85	130	70	16B3/20T	25	85	130	100
21	170.43	182.0	16B1/21T	20	70	110	50	16B2/21T	25	85	130	70	16B3/21T*	25	85	130	100
22	178.48	190.1	16B1/22T	20	70	110	50	-	-	-	-	-	-	-	-	-	-
23	186.53	198.1	16B1/23T	20	70	110	50	16B2/23T*	25	85	130	70	16B3/23T*	25	85	130	100
24	194.59	206.2	16B1/24T	20	70	110	50	-	-	-	-	-	-	-	-	-	-
25	202.66	214.2	16B1/25T	20	70	110	50	16B2/25T*	25	85	130	70	16B3/25T*	25	85	130	100
26	210.72	222.3	16B1/26T	20	75	120	50	-	-	-	-	-	-	-	-	-	-
27	218.79	230.4	16B1/27T	20	75	120	50	16B2/27T*	25	85	130	70	16B3/27T*	30	85	130	100
30	243.00	254.6	16B1/30T	20	75	120	50	16B2/30T*	25	85	130	70	16B3/30T*	30	85	130	100
38	307.59	319.2	16B1/38T*	25	75	120	50	16B2/38T*	25	90	140	70	16B3/38T*	30	90	140	100

Plain bore - heavy duty cast iron

57	461.08	474.9	16B1/57T	35	75	130	76	16B2/57T	38	100	178	89	16B3/57T	48	110	216	102
76	614.64	628.4	16B1/76T	35	75	135	76	16B2/76T	48	100	178	89	16B3/76T	55	110	216	102
95	768.22	782.0	16B1/95T	48	75	135	90	16B2/95T	48	110	216	102	16B3/95T	55	110	216	102
114	921.82	935.6	16B1/114T	38	100	172	98	16B2/114T	48	110	203	114	16B3/114T	55	125	222	127

## Transmission sprockets

25.4mm (1.000") pitch



### 25.4mm (1.000") pitch

#### Taper bore - steel

			SIMPLEX				DUPLEX				TRIPLEX						
No of Teeth	PCD	Top Dia A	Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
			Taper bush				Taper bush				Taper bush						
15	122.17	133.7	T16B1/15T	TB1615		76	38	T16B2/15T	TB2012		-	47.7	-	-		-	-
17	138.23	149.8	T16B1/17T	TB2012		90	32	T16B2/17T	TB2517		-	47.7	T16B3/17T	TB2525		-	79.6
19	154.32	165.9	T16B1/19T	TB2517		108	44	T16B2/19T	TB2517		-	47.7	T16B3/19T	TB3030		-	79.6
21	170.42	182.0	T16B1/21T	TB2517		110	44	T16B2/21T	TB3020		140	51	T16B3/21T	TB3030		-	79.6
23	186.54	198.1	T16B1/23T	TB2517		110	44	T16B2/23T	TB3020		140	51	T16B3/23T	TB3535		159	89
25	202.66	214.2	T16B1/25T	TB2517		110	44	T16B2/25T	TB3020		140	51	T16B3/25T	TB3535		175	89

#### Taper bore - heavy duty cast iron

38	307.58	319.2	T16B1/38T	TB3020	155	51		T16B2/38T	TB3030	159	76		T16B3/38T	TB3535	178	89	
57	461.08	474.9	T16B1/57T	TB3020	155	51		T16B2/57T	TB3535	178	89		T16B3/57T	TB4040	216	102	
76	614.64	628.4	T16B1/76T	TB3020	160	51		T16B2/76T	TB3535	178	89		T16B3/76T	TB4040	216	102	
95	768.22	782.0	T16B1/95T	TB3020	160	51		T16B2/95T	TB4040	216	102		T16B3/95T	TB4040	216	102	

Rebore, keyway and setscrew modification service available - see page 24.



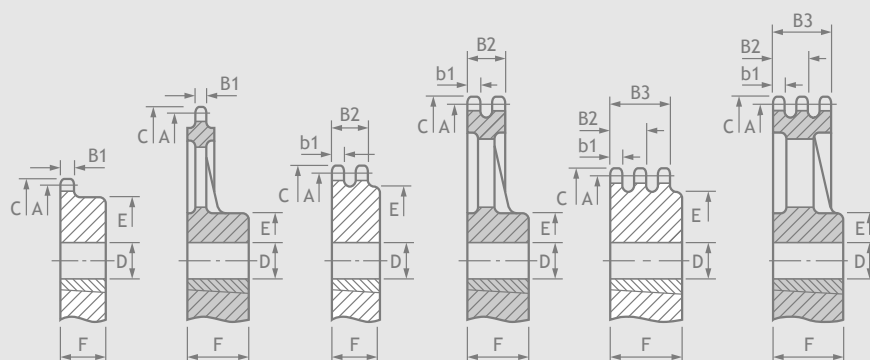
# Transmission sprockets

ISO 606

## Key

## Sprocket Size

	1.25"p	1.5"pitch
Tool Width SIMPLEX	B1 - 18.5	24.1mm
Tool Width	b1 - 18.2	23.6mm
Tool Width DUPLEX	B2 - 54.6	72.0mm
Tool Width TRIPLEX	B3 - 91.0	120.3mm



## 31.75mm to 38.10mm (1.25" to 1.5") pitch

### 1.25" plain bore - steel

No of Teeth	PCD	Top Dia A	SIMPLEX					DUPLEX					TRIPLEX				
			Part No C	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F	Part No	Bore Min	D Max	Boss Dia E	Dist' Thro' F
17	172.80	190.75	20B1/17T	25	85	120	50	20B2/17T	30	85	120	80	20B3/17T	30	85	120	115
19	192.89	210.26	20B1/19T	25	85	120	50	20B2/19T	30	85	120	80	20B3/19T	30	85	120	115
21	213.03	232.41	20B1/21T	30	100	140	55	20B2/21T	30	100	140	80	20B3/21T	30	100	140	115
23	233.17	252.22	20B1/23T	30	100	140	55	20B2/23T	30	100	140	80	20B3/23T	30	100	140	115
25	253.31	272.03	20B1/25T	30	100	140	55	20B2/25T	30	100	140	80	20B3/25T	30	100	140	115

### 1.25" plain bore - heavy duty cast iron

38	384.48	402.08	20B1/38T	30	105	150	55	20B2/38T	30	105	150	80	20B3/38T	30	105	150	115
57	576.35	593.34	20B1/57T	48	95	170	81	20B2/57T	65	110	206	127	20B3/57T	70	125	222	147
76	768.30	784.86	20B1/76T	55	100	178	89	20B2/76T	70	125	224	140	20B3/76T	85	140	254	163

### 1.5" plain bore - steel

17	207.34	225.55	24B1/17T	25	95	136	55	24B2/17T	30	95	136	100	24B3/17T	30	95	136	150
19	231.47	248.67	24B1/19T	25	95	136	55	24B2/19T	30	95	160	100	24B3/19T	30	114	160	150
21	255.63	276.61	24B1/21T	30	105	150	60	24B2/21T	30	114	160	100	24B3/21T	40	114	160	150
23	279.81	300.23	24B1/23T	30	105	150	60	24B2/23T	30	114	160	100	24B3/23T	40	114	160	150
25	303.99	324.10	24B1/25T	30	105	150	60	24B2/25T	30	114	160	100	24B3/25T	40	114	160	150

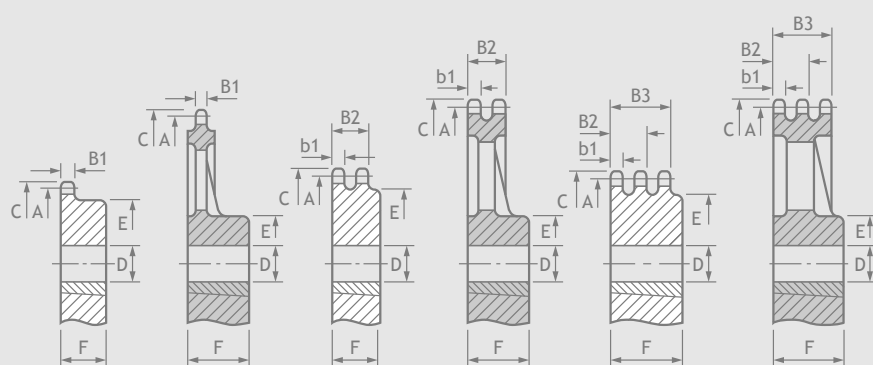
### 1.5" plain bore - heavy duty cast iron

38	461.37	479.81	24B1/38T	30	105	150	60	24B2/38T	40	114	160	100	24B3/38T	40	114	160	150
57	691.62	708.91	24B1/57T	60	110	196	122	24B2/57T	80	140	254	152	24B3/57T	90	150	267	175
76	921.97	938.78	24B1/76T	65	125	216	135	24B2/76T	85	150	267	168	24B3/76T	100	170	297	193

Rebore, keyway and setscrew modification service available - see page 24.

## Transmission sprockets

ISO 606



## Key

## Sprocket Size

1.75"p 2.0"pitch

Tool Width SIMPLEX B1 - 29.4 29.4mm

Tool Width b1 - 28.8 28.8mm

Tool Width DUPLEX B2 - 88.4 87.4mm

Tool Width TRIPLEX B3 - 148.0 146.0mm



## 44.45mm to 50.8mm (1.75" to 2.0") pitch

## 1.75" plain bore - steel

No of Teeth	PCD	Top Dia A	SIMPLEX				Dist' Thro' F	DUPLEX				Dist' Thro' F	TRIPLEX				Dist' Thro' F
			Part No C	Bore Min	D Max	Boss Dia E		Part No	Bore Min	D Max	Boss Dia E		Part No	Bore Min	D Max	Boss Dia E	
19	270.05	292.61	28B1/19T	30	114	160	75	28B2/19T	30	128	180	120	28B3/19T	30	128	180	180
21	298.25	324.35	28B1/21T	30	114	160	75	28B2/21T	30	128	180	120	28B3/21T	40	128	180	180
23	326.44	352.04	28B1/23T	30	114	160	75	28B2/23T	30	128	180	120	28B3/23T	40	128	180	180
25	354.66	379.98	28B1/25T	30	114	160	75	28B2/25T	30	128	180	120	28B3/25T	40	128	180	180

## 1.75" plain bore - heavy duty cast iron

38	538.28	538.28	28B1/38T	30	128	180	75	28B2/38T	40	142	200	120	28B3/38T	40	142	200	180
57	806.88	829.31	28B1/57T	70	125	224	147	28B2/57T	100	150	267	165	28B3/57T	105	188	264	165
76	1075.61	1097.53	28B1/76T	85	140	244	165	28B2/76T	100	150	267	165	28B3/76T	120	202	284	178

## 2.0" plain bore - steel

19	308.64	337.82	32B1/19T	30	114	160	90	32B2/19T	40	142	200	120	32B3/19T	40	142	200	180
21	340.84	372.66	32B1/21T	40	128	180	90	32B2/21T	40	142	200	120	32B3/21T	40	142	200	180
23	373.08	404.37	32B1/23T	40	128	180	90	32B2/23T	40	142	200	120	32B3/23T	40	142	200	180
25	405.31	436.12	32B1/25T	40	128	180	90	32B2/25T	40	142	200	120	32B3/25T	40	142	200	180

## 2.0" plain bore - heavy duty cast iron

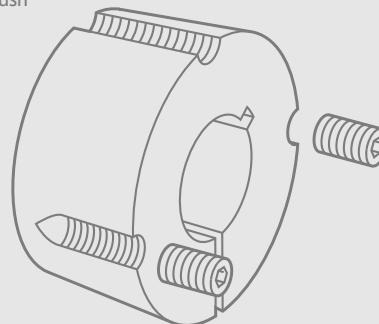
38	615.16	644.40	32B1/38T	40	142	200	90	32B2/38T	100	174	244	165	32B3/38T	105	188	264	165
57	922.17	950.47	32B1/57T	85	174	244	165	32B2/57T	105	188	264	165	32B3/57T	120	202	284	178
76	1229.28	1275.05	32B1/76T	100	190	267	165	32B2/76T	120	202	284	178	32B3/76T	130	232	325	191

Rebore, keyway and setscrew modification service available - see page 24.

## Transmission sprockets

ISO 606

Taper bush



[ fig 09 ]

### Modifications and specials

#### Renold large pitch sprockets

Detailed in this catalogue are SIMPLEX, DUPLEX, and TRIPLEX sprockets for British Standard Transmission Chain up to 1.00" pitch. 1.25" to 2.00" pitch sprockets are available to Renold specifications from stock. For more details contact Renold Chain. Renold also manufacture sprockets of intermediate numbers of teeth to suit single or multi-strand chains.

#### Special sprockets

In addition to this stock range, special design sprockets in normal or special materials can be manufactured to specific requirements.

#### American (ANSI) standard sprockets

Sprockets to suit chain manufactured to ANSI specification B29.1 are made to order.

### Rebore, keyway and setscrew modification services

Catalogued stock sprockets are supplied either taper bore or pilot bored. This pilot bore allows a larger finished bore to standard H8 tolerances to be machined. A bore to H7 tolerance can also be supplied on request. Keyways to imperial or metric specifications and setscrews can also be machined. A rebore, keyway and setscrew modification service is available and details can be obtained on request.

#### Taper bushes

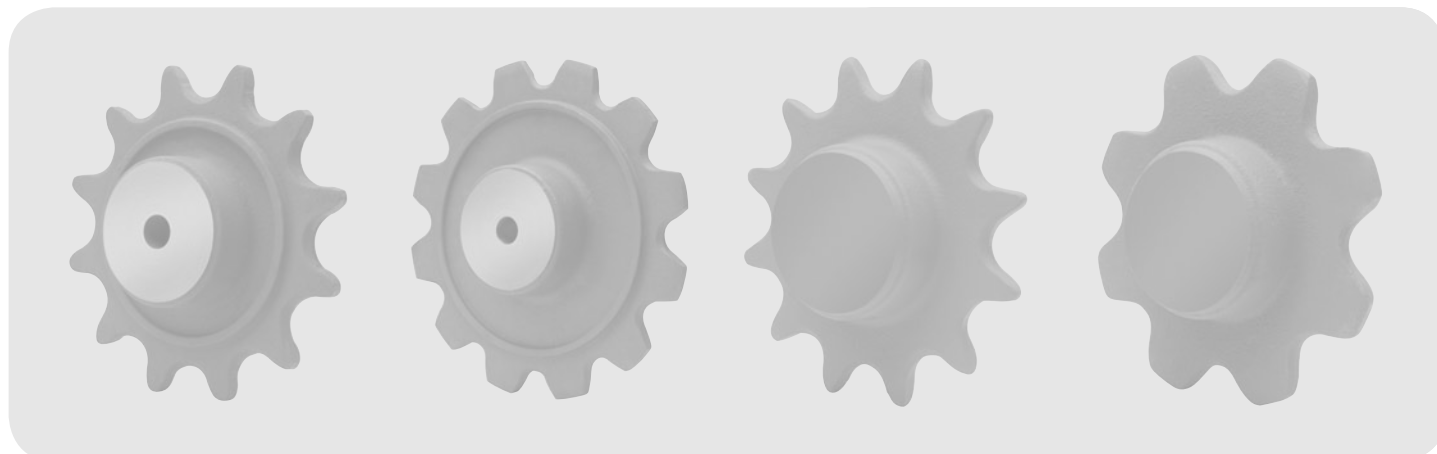
Taper bushes [ fig 09 ] provide the quickest and simplest means of securing sprockets to a range of both imperial and metric shafts and are designed to give maximum grip.

The taper surface to both the bush and sprocket combine to provide a load bearing connection by the lock action of the hardened high tensile screws.

Our range of taper bushes are fully interchangeable with most other makes of taper bush.

## Transmission sprockets

ISO 606



Bush No	Available bore sizes - metric <i>mm</i>																		
TB1008	9	10	12	14	16	18	19	20	22	24	25								
TB1210	11	12	14	16	18	19	20	22	24	25	28	30	32						
TB1215	11	12	14	16	18	19	20	22	24	25	28	30	32						
TB1610	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42				
TB1615	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42				
TB2012	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42	44	45	48	50
TB2017	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50			
TB2517	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60
TB2525	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60		
TB3020	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75			
TB3030	35	38	40	42	45	48	50	55	60	65	70	75							
TB3535	35	38	40	42	45	48	50	55	60	65	70	75	80	85	90				
TB4040	40	42	45	48	50	55	60	65	70	75	80	85	90	95	100				

Bush No	Available bore sizes - imperial <i>inch</i>																		
TB1008	0.375	0.437	0.500	0.625	0.750	1.000													
TB1210	0.500	0.625	0.750	1.000	1.125	1.250													
TB1215	0.500	0.562	0.625	0.750	0.875	1.000	1.125	1.250											
TB1610	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.500	1.625										
TB1615	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.437	1.500	1.625								
TB2012	0.500	0.625	0.750	0.975	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	2.000						
TB2017	0.750	0.812	0.875	0.937	1.000	1.125	1.250	1.375	1.437	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	
TB2517	0.750	0.875	1.000	1.125	1.250	1.375	1.437	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500			
TB2525	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000		
TB3020	1.250	1.375	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000				
TB3030	1.375	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000					
TB3535	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000	3.125	3.250	3.375	3.500			
TB4040	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000	3.125	3.250	3.375	3.500	3.625	3.750	4.000			

When ordering specify both the bush number and bore size required.

## Transmission sprockets

## Notes

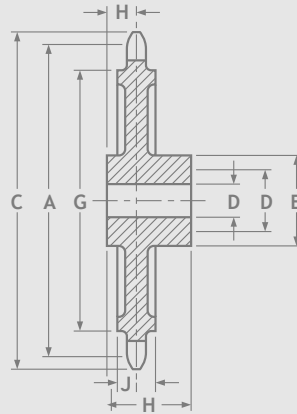


## *Standard conveyor sprockets*



## Standard conveyor sprockets

To suit BS4116 Part 4



### 3000 lbf, 13000 Newtons breaking load

Sprockets

Technical Details

Pitch Inch	mm	No. of teeth	Renold part no.	PCD	Top dia.	Shroud dia.	Shroud width	Bore dia. Min.	Bore dia. Max.	Boss dia.	☒ of tooth to end face*	Distance through	Weight approx.
				A	C	G	J	D	D	E	H	F	kg

#### 12.1mm diameter roller

1.5	38.1	8	208121#	99.57	109	-	-	16	32	57	9.5	38	0.9
		12	208125#	147.22	157	-	-	16	38	76	9.5	45	2.0
2.0	50.8	8	208212#	132.74	142	-	-	24	38	76	9.5	45	1.8
		12	208216#	196.27	207	156	19	24	45	89	9.5	51	3.9
3.0	76.2	8	208391#	199.11	208	150	19	24	45	89	9.5	51	3.7
		12	208395#	294.41	305	250	19	24	45	89	9.5	51	7.9

#### 25.4mm diameter roller

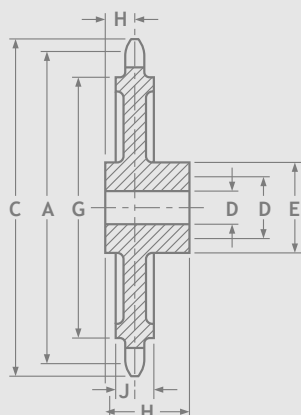
1.5	38.1	8	208151#	99.57	105	-	-	16	32	57	9.5	38	0.9
		12	208155#	147.22	157	-	-	16	38	76	9.5	45	2.0
2.0	50.8	8	208241#	132.74	142	-	-	24	38	76	9.5	45	1.8
		12	208245#	196.27	207	156	19	24	45	89	9.5	51	3.9
3.0	76.2	8	208422#	199.11	208	150	19	24	45	89	9.5	51	3.7
		12	208426#	294.41	306	250	19	24	45	89	9.5	51	7.9
4.0	101.6	8	208501#	265.51	274	212	19	24	45	89	9.5	51	7.0
		12	208505#	392.56	404	345	19	24	50	102	9.5	64	12.2

# Sprockets with cut teeth ## Sprockets with cast teeth

\* After machine facing the boss

## Standard conveyor sprockets

To suit BS4116 Part 4



### 4500 lbf, 20000 Newtons breaking load

Sprockets

Technical Details

Pitch Inch	mm	No. of teeth	Renold part no.	PCD	Top dia.	Shroud dia.	Shroud width	Bore dia. Min.	Bore dia. Max.	Boss dia.	℄ of tooth to end face*	Distance through	Weight approx.
				A	C	G	J	D	D	E	H	F	kg

### 25.4mm diameter roller

1.5	38.1	8	208151##	99.57	105	-	-	16	32	57	9.5	38	0.9
		12	208155##	147.22	157	-	-	16	38	76	9.5	45	2.0
2.0	50.8	8	208241##	132.74	142	-	-	24	38	76	9.5	45	1.8
		12	208245##	196.27	207	156	19	24	45	89	9.5	51	3.9
3.0	76.2	8	208422##	199.11	208	150	19	24	45	89	9.5	51	3.7
		12	208426##	294.41	306	250	19	24	45	89	9.5	51	7.9

### 6000 lbf, 27000 Newtons and 7500 lbf, 33000 Newtons breaking load

Sprockets

Technical Details

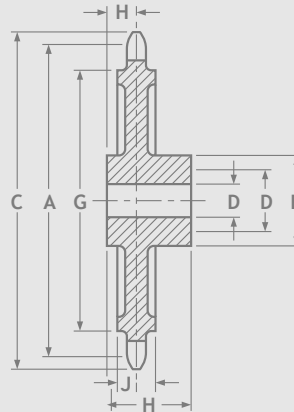
Pitch Inch	mm	No. of teeth	Renold part no.	PCD	Top dia.	Shroud dia.	Shroud width	Bore dia. Min.	Bore dia. Max.	Boss dia.	℄ of tooth to end face*	Distance through	Weight approx.
				A	C	G	J	D	D	E	H	F	kg
2.0	50.8	8	200121##	132.74	144	-	-	24	38	76	12.5	51	2.3
		12	200125##	196.27	212	-	-	24	50	102	12.5	51	5.4
3.0	76.2	8	200302##	199.11	215	-	-	24	50	102	12.5	51	5.4
		10	200304##	246.58	264	193	25	28	65	114	12.5	64	8.6
		12	200306##	294.41	314	243	25	28	65	114	12.5	64	10.0
4.0	101.6	8	200392##	265.51	281	204	25	35	65	114	12.5	64	8.6
		10	200394##	328.78	347	272	25	35	65	114	12.5	64	13.8
		12	200396##	392.56	411	338	25	38	70	127	12.5	70	16.1
6.0	152.4	8	200571##	398.25	414	326	25	38	70	127	12.5	70	19.7
		12	200575##	588.82	608	527	25	38	75	133	12.5	76	34.2

## Sprockets with cast teeth

\* After machine facing the boss

## Standard conveyor sprockets

To suit BS4116 Part 4



**12000 lbf, 54000 Newtons breaking load**  
**15000 lbf, 67000 Newtons breaking load**

Sprockets

Technical Details

Pitch Inch	mm	No. of teeth	Renold part no.	PCD	Top dia.	Shroud dia.	Shroud width	Bore dia. Min.	Bore dia. Max.	Boss dia.	℄ of tooth to end face*	Distance through	Weight approx.
				A	C	G	J	D	D	E	H	F	kg
3.0	76.2	8	201211##	199.11	218	-	-	38	70	114	16	70	8.4
		12	201215##	294.41	318	230	32	38	75	133	16	76	15.0
4.0	101.6	8	201301##	265.51	286	192	32	38	70	127	16	70	10.9
		12	201305##	392.56	415	325	32	48	80	140	16	76	20.2
6.0	152.4	8	201481##	398.25	418	314	32	48	80	140	16	76	21.5
		12	201485##	588.82	612	514	32	48	90	165	16	89	41.3

**24000 lbf, 107000 Newtons and**  
**30000 lbf, 134000 Newtons breaking load**

Sprockets

Technical Details

Pitch Inch	mm	No. of teeth	Renold part no.	PCD	Top dia.	Shroud dia.	Shroud width	Bore dia. Min.	Bore dia. Max.	Boss dia.	℄ of tooth to end face*	Distance through	Weight approx.
				A	C	G	J	D	D	E	H	F	kg
4.0	101.6	8	202121##	265.51	290	-	-	48	85	152	19	83	16.6
		12	202125##	392.56	420	312	38	55	95	165	19	95	31.3
6.0	152.4	8	202301##	398.25	423	301	38	55	95	165	19	95	32.2
		12	202305##	588.82	617	502	38	60	110	196	19	130	63.0

## Sprockets with cast teeth

\* After machine facing the boss

## Notes



## Clutches and coupling product range

For more information about clutches and couplings please  
tel: +44 (0)29 2079 2737 or email: [couplings@cc.renold.com](mailto:couplings@cc.renold.com)

### Pinflex

A robust general purpose pin/buffer coupling providing reliable fail-safe transmission of torque and misalignment capability.

- Steel half bodies, strong yet compact.
- Polyurethane buffers, reliable/flexible and temperature resistant.
- Torsionally flexible and shock absorbing, extending machine life.



### Spiderflex

A medium power torsionally flexible coupling combining shock absorbing and misalignment capacity for use in the widest range of industries and applications

- Misalignment capabilities allow flexibility in installation.
- Optional fire retardant anti-static element for use in flameproof environment.
- High torque capacity, yet compact design.
- Taper bush and multiple bore options mean reduced stock.



### Tyreflex

A range of highly flexible couplings offering excellent misalignment capacity and suitable to absorb both shock loads and vibrations.

- Standard fire retardant, anti-static elements up to size TY100.
- Interchangeability means no re-engineering.



### Discflex

A general purpose fail-safe, torsionally flexible coupling offering the option of either urethane or reinforced rubber disc, as the flexible element.

- Compact design, dimensionally small, yet high power capacity.
- Taper bush bores available for ease of maintenance.
- Optional fire retardant, anti-static disc element for use in flameproof areas.



### Spider

Compact coupling available with either cast iron or bronze half-bodies up to 107nm capacity.

- Torsionally flexible and shock absorbing for extended machine life.
- Bronze half-bodies for use in corrosive atmospheres.



### Chainflex

An all-metal flexible coupling providing a high torque capacity with compact design.

- Torsionally stiff for use as a positive drive connection.
- Easy installation for ease of maintenance.
- Misalignment capacity up to 0.50mm offset and 4mm end float.



### Crown Pin

An established pin/buffer coupling offering extended power capacity where the demand for long life and simplicity of construction make it suitable for working in arduous conditions.

- Heavy duty pin and buffer coupling suitable for shock loads.
- Neoprene buffers for robust flexibility.
- Misalignment capabilities of up to 0.25° angular and 0.13-0.18mm parallel offset.



### Renoldflex

Renoldflex is a range of torsionally rigid couplings (TRC), that utilise a stainless steel disc pack to provide a positive backlash free drive.

- High operating temperatures up to 240°C
- High operating speeds up to 10,000 rpm
- Long life with little to no wear
- Maintenance free, ideal for harsh, dangerous and remote operating environments
- Zero backlash, ideal for machines with frequent starts, stops and reverses.



### Gearflex

Heavy duty all-metal couplings giving maximum power capacity within minimum space envelope and excellent misalignment capability.

- Single and double arrangement, standard and heavy duty series types up to 60,000kW capacity.
- AGMA standard, therefore interchangeable and cost effective.
- Crowned and barreled teeth for optimum contact and long life.
- Mill motor, sheer pin and telescopic designs to give design suitability for demanding applications.



### Hydrastart

A fluid coupling suitable for soft starting high inertia machinery with reduced current demand, controlled acceleration and torque with drive overload protection.

- Fluid soft start available up to 700kW.
- Flexible couplings and vee pulley designs as standard for design flexibility.
- Soft start allows the motor to accelerate on low load.
- Allows use of standard squirrel cage motors.
- Delay fill version extends acceleration time and reduces start-up torque.



### Sprag Clutches

Anti-runback clutch used on holdback, indexing and over running applications.

- No backlash, giving positive action.
- Long life means low maintenance costs.
- Enhanced performance from optimised sprag profile design.
- Compact design, yet high torque.
- Interchangeability means no re-engineering.



### Trapped Roller Freewheels

Available in a number of design types suitable for all backstop, indexing and over-running applications.

- Totally interchangeable.
- Need no re-engineering.
- Backstop types preventing drives reversals.







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