Roller Chain Couplings

Cross & Morse Roller Chain Couplings consist of three high strength components; two special chain sprockets manufactured from high quality medium carbon alloy steels connected by a length of high strength Duplex Roller Chain. The sprockets have precision cut teeth, induction hardened for maximum service life; available either plain bore or machined for taper bores to provide ease of assembly. Size for size an LRC Roller Chain Coupling correctly lubricated is one of the strongest couplings available providing the following design advantages:-

● *Ease of Installation*

The LRC Coupling can be quickly installed and aligned. Connected shafts are easily separated by removing the spring clip connecting link and then the chain from the sprockets.

● *High Capacity*

Obtained through use of hardened tooth sprockets, Morse Precision Roller Chain with hardened rollers, allowing substantial kW Power in a compact size

● *Minimum Maintenance*

When optional spun covers are used lubrication is retained on the hardened working surfaces.

● *Inexpensive*

Low initial cost per kW Power transmitted, and long service life are obtained through the use of standard components with hardened working surfaces.

● *Flexibility*

Good installation practice dictates that coupling be installed with a minimum of misalignment. The LRC Coupling permits moderate angular and parallel shaft misalignment.

kW Power Ratings - Stock Roller Chain Couplings

Coupling No.	Torque Below 50 rpm Nm	Revolutions per minute														
		50	100	200	400	600	800	1000	1200	1500	1800	2000	2500	3000	4000	5000
LRC 4012	162	0.8	1.6	2.9	4.4	5.9	7.4	8.9	10.4	12.2	14.4	15.6	19.1	22.4	28.6	34.9
TB 4016	146	0.7	1.5	3.0	6.1	9.2	12.2	15.3	18.3	22.9	27.5	30.5	38.2	44.9	57.2	69.8
LRC 4016	325	1.7	3.2	5.8	8.8	11.4	14.9	17.6	20.4	24.5	28.8	31.3	38.3	44.9	57.2	69.8
LRC 5016	520	2.7	5.2	9.3	14.1	18.3	23.9	28.2	33.3	39.2	46.1	50.1	61.3	71.9	91.5	
TB 5018	485	2.5	5.0	10.1	18.8	24.6	32.0	37.8	44.6	52.6	61.9	67.2	82.2	96.5		
LRC 5018	712	3.6	7.0	12.5	18.8	24.6	32.0	37.8	44.6	52.6	61.9	67.2	82.2	96.5		
TB 6018	810	4.2	8.5	17.0	28.7	37.1	48.7	57.2	67.7	76.6	93.6	101.8	124.5	146.1		
LRC 6018	1056	5.5	10.6	19.0	28.7	37.1	48.7	57.2	67.7	76.6	93.6	101.8	124.5	146.1		
TB 6022	1310	6.6	13.7	27.4	42.8	55.4	72.6	85.2	101.0	114.0	139.2	151.5	185.0			
LRC 6022	1570	8.2	15.8	28.4	42.8	55.4	72.6	85.2	101.0	114.0	139.2	151.5	185.0			
TB 8018	1310	6.6	13.7	27.4	54.8	82.3	109.7	137.2	164.6	205.7	246.9	274.0				
LRC 8018	2913	15.2	29.2	52.4	79.3	102.5	134.2	158.0	186.7	219.6	258.1	280.7				
TB 8020	2700	14.1	28.3	56.5	103.0	133.2	174.4	205.4	242.7	285.4	335.5					
LRC 8020	3772	19.7	37.9	68.1	103.0	133.2	174.4	205.4	242.7	285.4	335.5					
LRC 12016	8945	46.8	89.9	161.1	243.5	314.1	412.1	485.3	573.2	674.3	792.3					
LRC 12020	11655	61.0	117.1	209.9	317.3	410.0	537.0	632.4	746.9	878.7						
LRC 12024	14432	75.5	145.0	259.9	392.9	507.8	665.0	783.0	924.9							
LRC 12030	18040	94.0	180.0	324.0	490.0	630.0	830.0	995.0								

For maximum service life, couplings selected with ratings to the right of the heavy line in table must be lubricated with a cover. Maximum speeds are indicated by heavy broken lines.

Torque and power capacities at slow speeds for TB series couplings are governed by taper bush limitations.

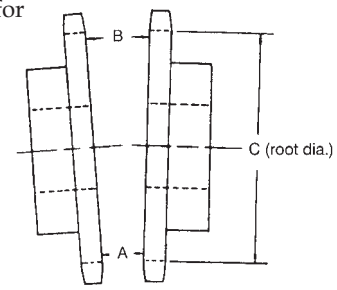
In addition to the standard sizes, Roller chain Couplings can be furnished in a wide range of sizes for special designs with Torque Ratings of up to 2000 Nm.

Misalignment

Maximum angular misalignment is 1°, but for maximum life angular misalignment should not exceed ½°. Refer to sketch on right, where .009mm per mm root dia. is equivalent to ½° angular misalignment.

B – A = .009 x C.

Offset or Parallel misalignment should not exceed 2% of chain pitch.



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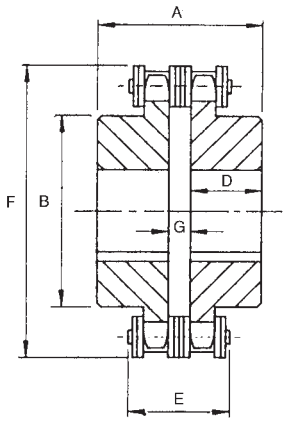
Roller Chain Couplings

LRC Plain Bore - Roller Chain Coupling Dimensions

Available from stock with pilot bore, or can be quickly modified to customers shaft requirements; standard finished bores being to H8 tolerance.

Stock Coupling Dimensions

Coupling No.	Min Bore mm	Max. Bore mm	Dimensions mm						Approx. Weight kg
			A	B	D	E	F	G	
LRC 4012	10.0	22	63	33	28	33	61	7	0.6
4016	12.0	34	63	50	28	33	77	7	1.2
5016	15.9	45	81	64	37	38	96	7	2.2
5018	19.0	50	91	75	42	38	106	7	2.7
6018	19.1	57	106	87	49	44	126	8	5.1
6022	24.0	68	108	102	50	44	150	8	7.4
8018	25.4	80	136	117	60	71	167	16	11.4
8020	35.0	90	148	136	66	71	183	16	17.6
12016	38.1	105	186	156	81	105	230	24	29.0
12020	50.8	120	178	175	77	105	278	24	53.0
12024	50.8	150	231	232	103	105	326	24	76.0
12030	50.8	200	231	302	103	105	398	24	137.0

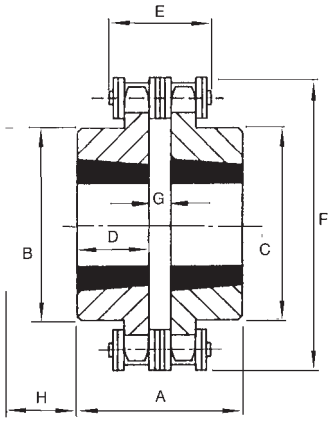


TB Taper Bore - Roller Chain Coupling Dimensions

Two types of sprockets are available; standard TBH with bushes mounted from the hub end, and type TBF where bushes are mounted from the flange (tooth) end of the sprocket.

Stock Coupling Dimensions

Coupling No.	Bush Size	Max. Bore mm	Dimensions in mm								Approx.(2) Weight kg
			A	B	C	D	E	F	G	H(1)	
TB 4016	1108	28	51	52	50	22	33	77	7	20	0.8
TB 5018	1610	42	57	75	75	25	38	106	7	27	2.6
TB 6018	2012	51	72	90	87	32	44	126	8	35	2.9
TB 6022	2517	63	98	102	102	45	44	150	8	42	4.1
TB 8018	2517	63	106	108	100	45	71	167	16	42	6.8
TB 8020	3020	76	116	136	136	50	71	183	16	53	8.4



(1) Space required to remove hub using jack screw with shortened hex. key.
(2) For coupling using 2 off TBH Sprockets - less taper bushes.
Note: To order TB coupling, hub type must be specified by suffix after coupling.
ie:- TB 6018 FH is coupling with one TBF and one TBH hub.

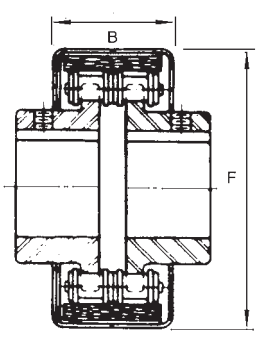
Coupling Covers

Chain Coupling Covers are used to provide protection for both the duplex roller chain and sprocket teeth on applications where couplings are exposed to corrosive or abrasive atmosphere, or to retain lubrication in the chain with high shaft speeds. Two types of cover are offered; a low cost spun aluminium cover for general use, or a fully sealed split cast aluminium cover on more demanding applications.

Stock Spun Aluminium Covers

Their light weight and cost make spun aluminium covers the ideal choice for protection of roller chain couplings. The two spun halves simply clip together to provide a protective cover for the chain. A felt pad located between chain and cover retains grease lubrication. Rounded exterior of the cover combines safety with neat appearance. Covers are also suited to the LSC inverted tooth couplings. For applications where aluminium is not permitted, spun steel covers of same dimensions can be supplied to order.

Cover No.	To Suit Couplings			B	F	App. Weight
	LRC	TB	LSC	mm	mm	kg
SA 4012C	4012			38.9	75	0.06
SA 4016C	4016	4016	4-16	38.9	93	0.08
SA 5016C	5016		4-20	47.0	110	0.10
SA 5018C	5018	5018		47.0	121	0.12
SA 6018C	6018	6018	4-28	56.6	142	0.16
SA 6022C	6022	6022		56.6	166	0.22
SA 8018C	8018	8018		79.5	186	0.35
SA 8020C	8020	8020		79.5	203	0.40
SA 12016C	12016			117.6	246	0.53



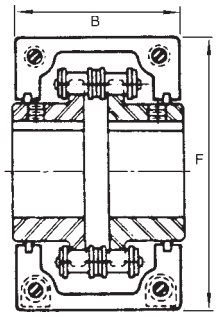
Cast Aluminium Covers

For more demanding applications, cast aluminium covers extend life of couplings by providing continuous lubrication and full protection from abrasive elements. The two halves fit around the coupling and connect by 'Nyloc' cap-head bolts. Neoprene seals are fitted to seal between sprocket hub and cover. These covers are fitted after coupling is fully installed on shafts.

Caution:- Never operate at rim speeds above 25 M/s.

Base Cover No.	Adaptor Kit No.*	To suit all couplings		B mm	F mm	Approx. Weight kg
AL 40	AL 4016K	LRC 4016		51	102	0.45
AL 50	AL 5016K	LRC 5016		60	130	0.70
AL 50	AL 5018K	LRC 5018	TB 5018	60	130	0.70
AL 60	AL 6018K	LRC 6018		75	162	1.25
AL 80	AL 8018K	LRC 8018		102	208	2.40
AL 80	AL 8020K	LRC 8020	TB 8020	102	208	2.35

*Accessory Kit includes two seals for specific hub size, two gaskets and hardwear necessary to install cover.



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