BROWN EUROPE

BX Curved Tooth Gear Couplings
for Shaft to Shaft Applications.
Double crowned tooth gear coupling, nylon sleeve, steel hubs. Suitable for blind assembly

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BX CURVED TOOTH GEAR COUPLINGS

RATINGS

Steel Hubs - Polyamide Sleeve

Design	Size	Torque Nm		Max Speed rpm	Max Axial Displacement mm	Max Radial Displacement mm	Angular Displacement
		$T_{K\,N}$ Nominal	$T_{K\,MAX}$ Peak				
Three Part Model	**BX- 14**	10	20	14000	± 1.0	± 0.3	± 1° per hub
	BX- 19	16	32	11800			
	BX- 24	21	42	10500			
	BX- 28	45	90	8500			
	BX- 32	60	120	7500		± 0.4	
	BX- 38	81	162	6700			
	BX- 42	100	200	6000			
	BX- 48	142	285	5500			
	BX- 65	380	760	4000		± 0.6	
	BX- 80	700	1400	3100		± 0.7	
	BX- 100	1210	2420	3000		± 0.7	
	BX- 125	2500	5000	2100		± 0.7	

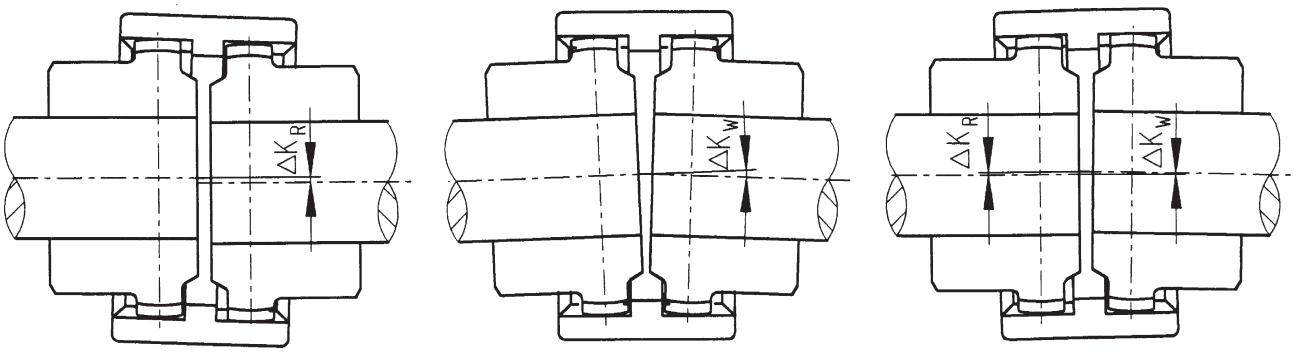
The coupling is selected so that maximum effective starting torque of the driving and driven machine does not exceed the maximum torque $T_{K\,MAX}$ capacity of the coupling.

For uniform loading and well aligned shafts, the coupling can be loaded to its max. torque capacity.

For an uneven torque loading with only brief peaks; the BX coupling can be over-loaded to the extent of 3 times its stated nominal torque.

Running torque = nominal torque

MIS-ALIGNMENT



Radial **Angular** **Combined Radial and Angular**

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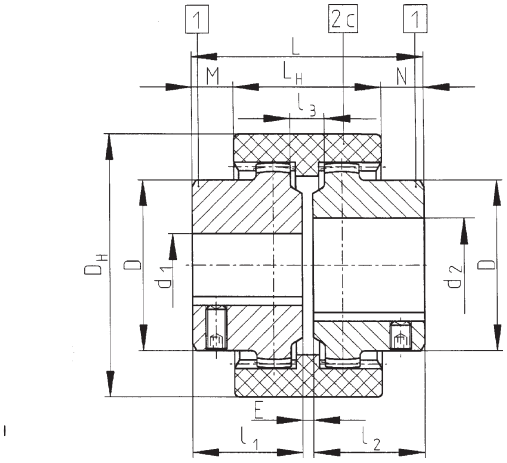


SIZE	un-bored	pilot bored	max bore $d_1;d_2$	Dimensions (mm $l_1;l_2$	l_3	E	L	L_H	M;N	D	D_H	$l_1;l_2$ long hub	Max speed rpm	Weight Kg
BX - 14	X	-	14	23	10	4	50	37	6.5	25	40	30	14000	0.18
BX - 19	X	-	19	25	10	4	54	37	8.5	32	48	40	11800	0.24
BX - 24	X	-	24	26	14	4	56	41	7.5	36	52	50	10600	0.32
BX - 28	X	-	28	40	13	4	84	46	19	44	66	60	8500	0.75
BX - 32	X	-	32	40	13	4	84	48	18	50	76	60	7500	0.95
BX - 38	X	-	38	40	13	4	84	48	18	58	83	80	6700	1.25
BX - 42	X	-	42	42	13	4	88	50	19	65	92	110	6000	1.50
BX - 48	X	-	48	50	13	4	104	50	27	68	100	110	5600	1.80
BX - 65	X	-	65	70	16	4	144	72	23	96	140	140	4000	5.20
BX - 80	X	-	80	90	20	6	186	93	46.5	124	175	-	3150	11.50
BX - 100	-	35	100	110	22	8	228	102	63	152	210	-	3000	19.80
BX - 125	-	45	125	140	30	10	290	134	78	192	270	-	2100	41.3

Weights refer to complete coupling with maximum bore

STOCK BORES at STANDARD PRICING

METRIC BORES (H7) WITH KEYWAY DIN 6885, SHEET 1-JS9

● Standard length hub ■ Long hub

BX Size	Finish Bores (mm) Keyway to DIN 6885 sh.1 (JS9) and setscrew																													
	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75
14	●	●	●	●■	●	●	●■	●																							
19			●	●	●		●■	●	●	●	●	●■	●																		
24			●	●	●		●■	●	●	●	●	●■	●	●	●■																
28							●	●	●	●	●	●	●	●	●■	●	●■														
32											●	●	●	●	●	●	●	●	●												
38											●	●	●	●	●	●	●	●	●	●	●■										
42													●	●	●	●	●	●	●	●	●	●	●								
48																●	●	●	●	●	●	●	●■	●	●■						
65																		●	●	●	●	●	●	●■	●■	●■	●■	●■	●■		
80																										●	●	●	●	●	●

When mounting the coupling, dimension "E" must be observed exactly. The durability of the coupling will be increased by careful alignment of the shafts.

For hubs with splined bore or taper bore see page 8

BX CURVED TOOTH GEAR COUPLINGS

BX couplings for standard IEC Metric AC Motors

AC Motor Size	Motor Output 3000 rpm kW	Nm	BX Size	Safety factor with TK MAX	Motor Output 1500 rpm kW	Nm	BX Size	Safety factor with TK MAX	Motor Output 1000 rpm kW	Nm	BX Size	Safety factor with TK MAX	Motor Output 750 rpm kW	Nm	BX Size	Safety factor with TK MAX	Motor Shaft 3000 ≤ 1500	
56	0.09	0.32		62	0.06	0.43		46	0.037	0.43		46					9 x 20	
	0.12	0.41		49	0.09	0.64		31	0.045	0.52		38						
63	0.18	0.62	14	32	0.12	0.88	14	23	0.06	0.72	14	28					11 x 23	
	0.25	0.86		23	0.18	1.3		15	0.09	1.1		18						
71	0.37	1.3		15	0.25	1.8		11	0.18	2.0		10	0.09	1.3	14	15	14 x 30	
	0.55	1.9		10	0.37	2.5		8.0	0.25	2.7		7.4	0.12	1.8		11		
80	0.75	2.5	19	13	0.55	3.7	19	8.6	0.37	3.9	19	8.2	0.18	2.5	19	13	19 x 40	
	1.1	3.7		8.6	0.75	5.1		6.3	0.55	5.8		5.5	0.25	3.5		9.1		
90 S	1.5	5.0	24	8	1.1	7.5	24	5.3	0.75	8.0	24	5.0	0.37	5.3	24	7.5	24 x 50	
90 L	2.2	7.4		5.4	1.5	10		4.0	1.1	12		3.3	0.55	7.9		5.1		
100 L	3	9.8	28	9.2	2.2	15	28	6.0	1.5	15	28	6.0	0.75	11	28	8.2	28 x 60	
					3	20		4.5					1.1	16		5.6		
112 M	4	13		6.9	4	27		3.3	2.2	22		4.1	1.5	21		4.3		
132 S	5.5	18		8.9	5.5	36		4.4	3	30		5.3	2.2	30		5.3	38 x 80	
	7.5	25		6.4														
132 M			38		7.5	49	38	3.3	4 5.5	40 55	38	4.0 2.9	3	40	38	4.0		
160 M	11	36	42	5.5	11	72	42	2.8	7.5	75	42	2.7	4	54	42	3.7	42 x 110	
	15	49		4.1									5.5	74		2.7		
160 L	18.5	60		3.3	15	98		2.0	11	108		1.8	7.5	100		2.0		
180 M	22	71	48	3.9	18.5	121	48	2.3			48				48		48 x 110	
180 L					22	144		1.9	15	148		1.9	11	145		1.9		
200 L	30	97	65	7.8	30	196	65	3.9	18.5	181	65	4.2	15	198	65	3.8	55 x 110	
	37	120		6.3					22	215		3.5						
225 S					37	240		3.2					18.5	244		3.1	55 X 110	60 X 140
225 M	45	145		5.2	45	292		2.6	30	293		2.6	22	290		2.6		

BX couplings for standard IEC metric AC Motors (except Brook)

250 M	55	177		4.3	55	356	65	2.1	37	361	65	2.1	30	392	65	1.9	60 x 140	65 x 140
280 S	75	241	65	3.1	75	484		2.9	45	438		3.2	37	483		2.9		75 x 140
280 M	90	289		2.6	90	581	80	2.4	55	535	80	2.6	45	587	80	2.4		
315 S	110	353		2.1	110	707		2.0	75	727		1.9	55	712		2.0	65 x 140	
315 M	132	423		3.3	132	849		2.8	90	873	100	2.7	75	971	100	2.5		80 x 170
315 L	160	513	80	2.7	160	1030	100	2.3	110	1070		2.2	90	1170		2.0		
	200	641		2.2	200	1290		1.9	132	1280		1.9	110	1420		3.5		
355 M	250	801	100	3.0	250	1610		3.1	160 200	1550 1930	125	3.2 2.6	132 160	1710 2070	125	2.9 2.4		
355 L	315	1010		2.4	315	2020	125	2.5	250	2420		2.1	200	2580		1.9	75 X 140	95 X 170
400 L#	355	1140		2.1	355	2280		2.2	315	3040	-	-	250	3220	-	-	# 80 X 170	# 100 X 210
	400	1280	125	3.9	400	2560		2.0										

Shaft sizes may vary

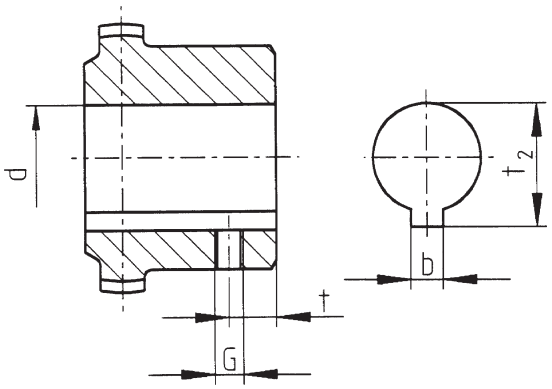
BX couplings for Brook AC Motors

250 S	55	177		4.3	55	356	65	2.1	37	361	65	2.1	30	392	80	3.6	60 x 140	70 x 140
250 M	75	241	65	3.1	75	484	80	2.9	45	438	80	3.2	37	483		2.9		
280 S	90	289		2.6	90	581		2.4	55	535		2.6	45	587		2.4		80 x 170
280 M	110	353		2.1	110	707		3.4	75	727		3.3	55	712		3.4		
315 S	132	423		3.3	132	849	100	2.8	90	873	100	2.7	75	971	100	2.5	65 x 140	
315 M	150	480	80	2.9	150	975		2.5	110	1070		2.2	90	117 0		2.2		85 x 170
315 L	185 200 225	593 641 721		2.4 2.2 3.3	185 200 225	1200 1300 1462		2.0 3.8 3.4	132 150	1280 1455		3.9 3.4	110 132	1420 1717		3.5 2.9		
355 S	250 280	801 897		3.0 2.7	250 280	1624 1820		3.1 2.7	185 200	1795 1941	125	2.8 2.6	150	1950	125	2.6	75 x 140	100 x 210
355 M	315	1009	100	2.4	315	2046	125	2.4	225 250	2183 2426		2.3 2.1	185	2407		2.1		
355 L	355 375 400	1137 1210 1281	125	2.1 4.1 3.9	355 375 400	2306 2436 2598	- -	2.2 2.0 -	280 315	2717 3507	-	- -	200 225	2602 2927	-	- -		

Note: These selections are intended as a guide only, shaft sizes and lengths can differ, always check before ordering coupling.

BX CURVED TOOTH GEAR COUPLINGS

GRUBSCREW SIZES AND POSITIONS



SIZE	14 19 24	28 32 38	42 45 48	65	80	100	125
Grubscrew G	M5	M8	M8	M10	M10	M12	M16
Distance t	6	10	10	20	20	20	40

THREADS FOR LOCKING SCREWS

Position of tapped hole for setscrews:
BX-14 to BX-24 opposite the keyway
BX-28 to BX-125 over keyway

ORDERING DATA

BX -19	d_1 Ø = 19	d_2 Ø = 14
Size of coupling	Finish Bore	Finish Bore

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HYDRAULIC ACCESSORIES

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