

Cardan Shaft CSL

with Length Compensation



Features

Nominal Torques	29 000 - 290 000 Nm 257 000 - 2 567 000 lb•ft
Flange Yoke Diameter	180 - 480 mm 7.09 - 18.90 in
Rotation Diameter	198 - 390 mm 7.80 - 15.35 in
Max. Operating Angle	15° - 24° (size-dependent)
Sliding Length	110 - 200 mm 4.33 - 7.87 in
Max. Compressed Length	4 500 mm / 177.17 in * 6 500 mm / 255.91 in ** * balanced; ** unbalanced

Order Information

Cardan Shaft Design	e.g.
• CSL with length compensation • CSS short with length compens. • CSF without length compens.	CSL
Cardan Shaft Size	e.g.
• 2065 • 8050 • 3070 • 3052 • 3062 • 3075 • 3053 • 3065 • 3078	3053
Compressed Length	e.g.
• 760 - 6 500 mm • 29.92 - 255.91 in	2505
Flange Yoke Version, Left	e.g.
<u>Type</u> • B with frictional connection • S with clamping sleeves • K with face key • T with jaw teeth • H with Hirth serration	B
<u>Option</u> Implementation of optional joint-side bolt insertion: • Yes = S • No = leave blank	S
Flange Yoke Diameter, Left	e.g.
• 180 - 480 mm • 7.09 - 18.90 in	250

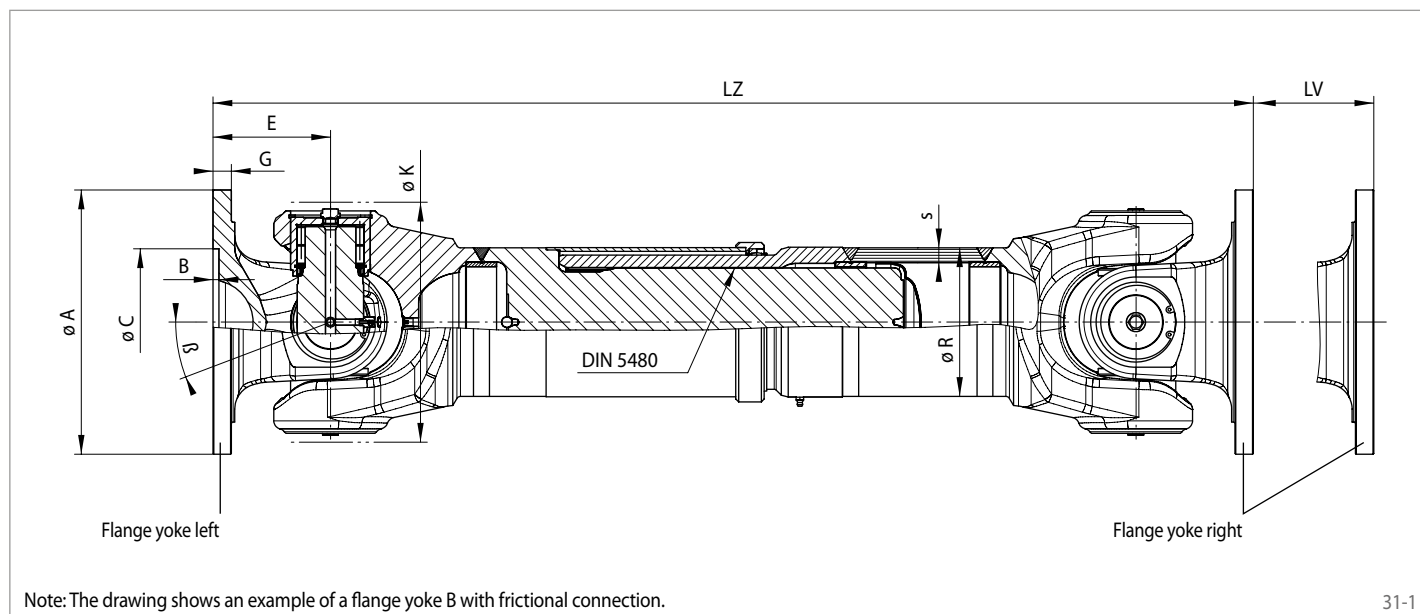
Flange Yoke Version, Right	e.g.
<u>Type</u> • B with frictional connection • S with clamping sleeves • K with face key • T with jaw teeth • H with Hirth serration	K
<u>Option</u> Implementation of optional joint-side bolt insertion: • Yes = S • No = leave blank	
Flange Yoke Diameter, Right	e.g.
• 180 - 480 mm • 7.09 - 18.90 in	225
Unit of Length	e.g.
• mm • in	mm
Short Designation CSL-3053-2505-BS250-K225-mm	

Further Order Information

Balancing Quality	e.g.
• Unbalanced • G25 • G16 (standard) • G6.3	G16
Max. Application Speed	e.g.
	900 min ⁻¹
Paint Finish Variant	e.g.
• Primer in deep black, matt (standard) • Standard paint finish • Reinforced paint finish • Unpainted	Standard paint finish
RAL Color	e.g.
See page 27	RAL 1003
Lubrication Type	e.g.
• Central lubrication (standard) • Bearing assembly lubrication (optional) • Lifetime lubrication (please consult us)	Central lubrication
Grease Type	e.g.
• Standard grease -40° to +120° C • Low-temperature grease < -40° C (please consult us) • High-temperature grease > +120° C (please consult us)	Standard grease

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Cardan Shaft Size (old series)	Nominal Torque M_N		Pulsating Fatigue Torque M_{PS}		Reversing Fatigue Torque M_{DW}		Dynamic Load Rating CR	
	Nm	lb·ft	Nm	lb·ft	Nm	lb·ft	Nm	lb·ft
2065 (100)	29000	257000	24000	212000	16000	142000	6340	56110
3052 (104)	42000	372000	40500	358000	27000	239000	9240	81780
3053 (106)	42000	372000	40500	358000	27000	239000	9240	81780
8050 (109)	61000	540000	55500	491000	37000	327000	11310	100100
3062 (115)	62000	549000	58500	518000	39000	345000	13390	118510
3065 (124)	104000	920000	96000	850000	64000	566000	19700	174360
3070 (135)	120000	1062000	110000	982000	74000	655000	28640	253490
3075 (145)	140000	1239000	135000	1195000	90000	797000	39660	351020
3078 (160)	290000	2567000	277500	2456000	185000	1637000	55410	490420

Cardan Shaft Size (old series)	Minimum Compressed Length LZ min.		Sliding Length LV		Bearing Center Distance E		Profile DIN 5480-1	Cardan Shaft Tube R x s		Max. Operating Angle β
	mm	in	mm	in	mm	in	mm	mm	in	
2065 (100)	760	29.92	110	4.33	110	4.33	90 x 2,5	140 x 5	5.51 x 0.20	24°
3052 (104)	900	35.43	140	5.51	125	4.92	90 x 2,5	144 x 7	5.67 x 0.28	18°
3053 (106)	855	33.66	140	5.51	125	4.92	120 x 2,5	160 x 10	6.30 x 0.39	18°
8050 (109)	855	33.66	140	5.51	125	4.92	120 x 2,5	160 x 10	6.30 x 0.39	18°
3062 (115)	935	36.81	140	5.51	130	5.12	120 x 2,5	165 x 12,5	6.50 x 0.49	18°
3065 (124)	1140	44.88	140	5.51	140	5.51	130 x 3,0	177 x 17,5	6.97 x 0.69	22°
3070 (135)	1235	48.62	140	5.51	180	7.09	130 x 3,0	177 x 17,5	6.97 x 0.69	15°
3075 (145)	1720	67.72	170	6.69	290	11.42	150 x 3,0	220 x 15	8.66 x 0.59	20°
3078 (160)	1425	56.10	200	7.87	215	8.46	200 x 3,0	280 x 25	11.02 x 0.98	18°

Compressed lengths LZ are available in increments of 5 mm or 1/5 in. For unbalanced cardan shafts, LZ is theoretically unlimited upwards. For balanced cardan shafts, LZ is limited to a maximum of 4500 mm or 177.17 in. Larger values for LZ are available on request.

Cardan Shaft Size (old series)	Rotational Diameter K		Flange Yoke Diameter * A		Centering Depth * B		Centering Diameter * C		Flange Thickness * G	
	mm	in	mm	in	mm	in	mm	in	mm	in
2065 (100)	198	7.80	225	8.86	5	0.20	140	5.51	16	0.63
3052 (104)	225	8.86	250	9.84	6	0.24	140	5.51	18	0.71
3053 (106)	225	8.86	250	9.84	6	0.24	140	5.51	18	0.71
8050 (109)	225	8.86	250	9.84	6	0.24	140	5.51	18	0.71
3062 (115)	250	9.84	285	11.22	7	0.28	175	6.89	20	0.79
3065 (124)	286	11.26	315	12.40	7	0.28	175	6.89	22	0.87
3070 (135)	315	12.40	350	13.78	8	0.31	220	8.66	25	0.98
3075 (145)	355	13.98	390	15.35	8	0.31	250	9.84	28	1.10
3078 (160)	390	15.35	435	17.13	10	0.39	280	11.02	40	1.57

* Example dimensions for Flange Yoke B with frictional connection, while all available flange diameters and corresponding dimensions are listed on page 36. Dimensions for the positive-locking Flange Yokes S, K, T and H can be found on pages 37 to 40.