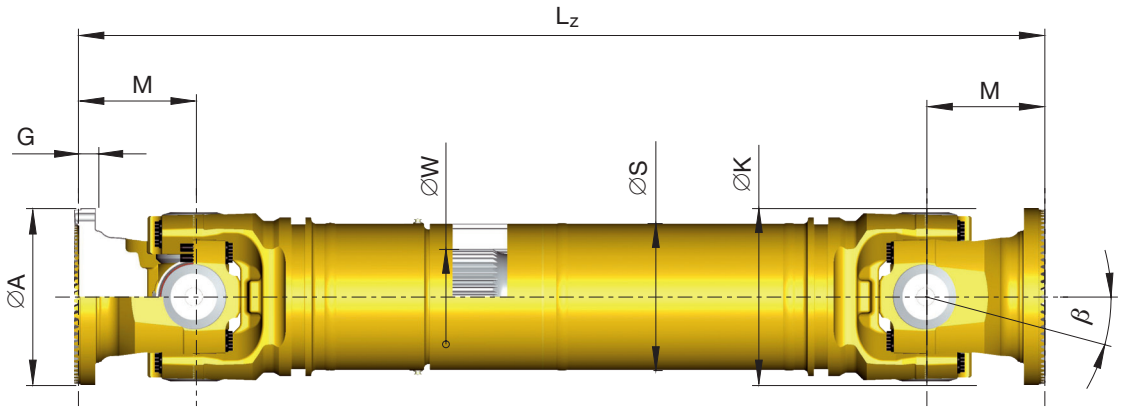
Data sheet series 492 Maximum torque capacity

0.01 with length compensation, tubular design
0.03 without length compensation, tubular design
9.01 with length compensation, short design
9.02 with length compensation, short design
9.03 with length compensation, short design
9.04 without length compensation, double flange shaft design

Design

0.01



Shaft size		492.60	492.65	492.70	492.75		492.80		492.85		492.90	
T_{CS}	kNm	210	250	340	440	410	650	580	850	770	1.300	1.170
T_{DW}	kNm	100	115	160	210	190	280	250	400	360	600	540
L_c	–	110	330	855	2.120		7.390		17.370		60.120	
β	∢°	7	7	7	10	15	10	15	10	15	10	15
A	mm	285	315	350	390		435		480		550	
K	mm	285	315	350	390		435		480		550	
B	mm	255	280	315	350		395		445		510	
G	mm	35	35	40	45		50		55		65	
H	mm	15	17	17	19		19		21		23	
I[1])	–	10	10	12	12		16		16		16	
M	mm	200	220	240	260		280		300		330	
S	mm	244,5 x 22,2	254 x 36	292 x 36	323,9 x 36		355,6 x 40		406,4 x 40		457 x 50	
W *DIN 5480*	mm	185 x 5	185 x 5	210 x 5	210 x 5		240 x 5		240 x 5		290 x 8	

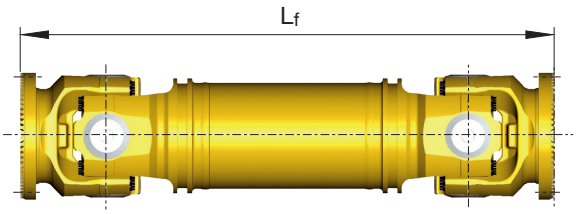
T_{CS} = Functional limit torque*
Yield torque 30% over T_{CS}
T_{DW} = Reversing fatigue torque*
L_c = Bearing capacity factor*

* See specifications of driveshafts.
β = Maximum deflection angle per joint
1) Number of flange holes

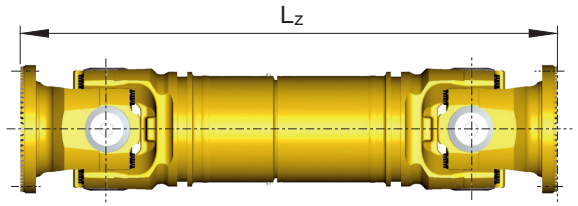
Data sheet series 492 Maximum torque capacity

Design

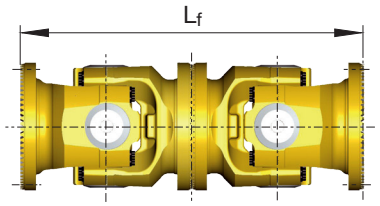
0.03



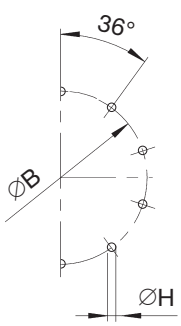
9.01
9.02
9.03



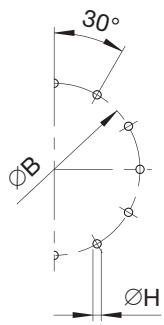
9.04



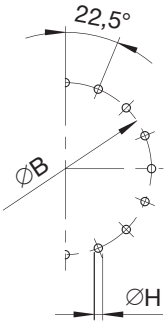
Flange connection with Hirth-serration



10-hole flange



12-hole flange



16-hole flange

Each driveshaft size has a specific hole pattern (see table). Other hole patterns available on request.

Design	Shaft size		492.60	492.65	492.70	492.75	492.80	492.85	492.90
0.01	$L_{z\,min}$	mm	1.440	1.520	1.680	1.750	1.900	2.130	2.415
	L_a	mm	135	135	150	170	170	190	210
	G	kg	472	568	788	1.025	1.355	1.873	2.750
	G_R	kg	121,7	193,5	227,3	255,6	311,3	361,4	501,9
	Jm	kgm^2	4,16	5,16	7,73	15	30,7	50,4	92,7
	Jm_R	kgm^2	1,52	2,36	3,80	5,38	7,88	12,28	21,1
	C	Nm/rad.	$3{,}32 \times 10^6$	$4{,}31 \times 10^6$	$5{,}97 \times 10^6$	$6{,}76 \times 10^6$	$9{,}7 \times 10^6$	$13{,}64 \times 10^6$	$19{,}44 \times 10^6$
	C_R	Nm/rad.	$1{,}55 \times 10^7$	$2{,}41 \times 10^7$	$3{,}87 \times 10^7$	$5{,}48 \times 10^7$	$8{,}03 \times 10^7$	$12{,}51 \times 10^7$	$21{,}5 \times 10^7$
0.03	$L_{f\,min}$	mm	940	1.020	1.130	1.220	1.320	1.450	1.620
	G	kg	311	407	557	819	1.040	1.330	1.880
	G_R	kg	121,7	193,5	227,3	255,6	311,3	361,4	501,9
9.01	L_z	mm	1.380	1.460	1.620	1.700	1.840	2.050	2.340
	L_a	mm	135	135	150	170	170	190	210
	G	kg	465	559	777	1.010	1.340	1.850	2.710
9.04	L_f	mm	800	880	960	1.040	1.120	1.200	1.320
	G	kg	284	374	479	590	870	1.190	1.734

$L_{z\,min}$ = Shortest possible compressed length
L_a = Length compensation
$L_{f\,min}$ = Shortest fixed length
$L_z + L_a$ = Maximum operating length

G = Weight of shaft
G_R = Weight per 1.000 mm tube
Jm = Moment of inertia
Jm_R = Moment of inertia per 1.000 mm tube

C = Torsional stiffness of shaft without tube
C_R = Torsional stiffness per 1.000 mm tube

Length dimensions (L_z/L_a) of the designs 0.02 · 9.02 · 9.03 available on request.