



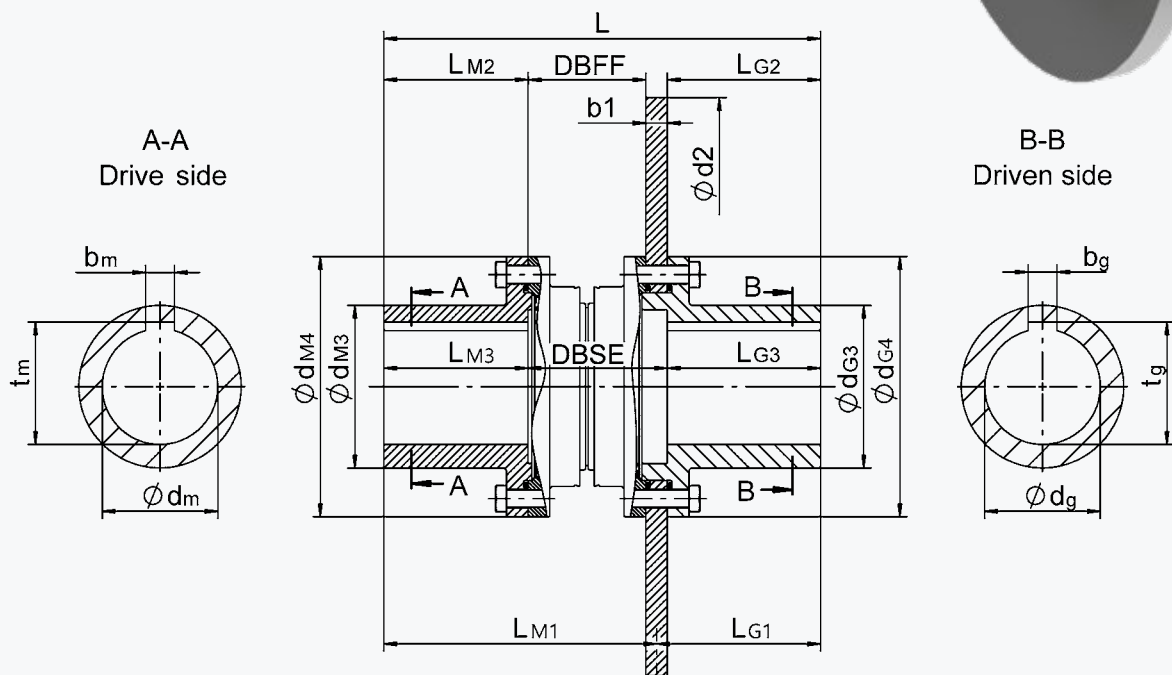
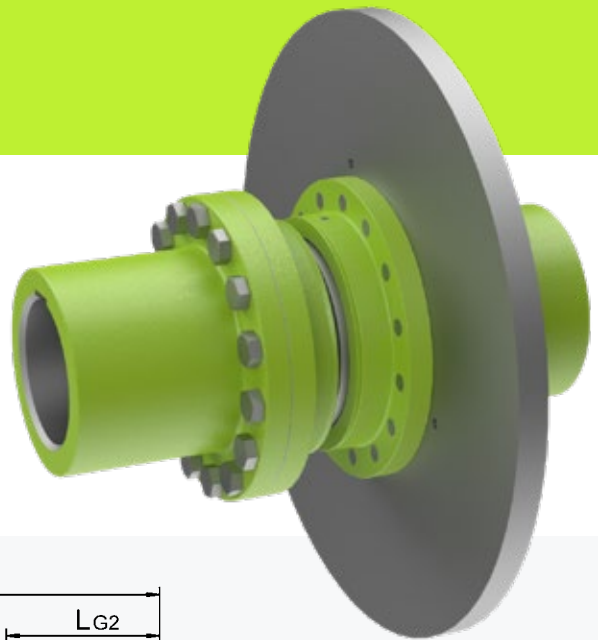
**DELLNER BUBENZER**

## **GEAR COUPLING TYPE KBSD**

## TYPE KBSD

These couplings are for use in machinery where a torsionally rigid torque transmission is required, especially on frequently varying loads and speeds.

$T_{Kmax}$ : 168000 Nm



### Key function of KBSD Coupling

Key part of a gear coupling KBSD is the flexible center part with outer and inner toothing to accommodate misalignment between drive and driven side. Additionally axial displacements can be compensated.

To avoid wear and high restoring forces, lubrication is necessary. The quantity and procedure to fill up lubrication is given in the operation manual.

An advantage of the KBSD is the possibility to change center part or brake disk without moving drive and driven machine.

For standard the balancing quality of all KBSD coupling parts are 40 gmm/kg.

The operation temperature is limited by standard grease and sealing from -20°C to 80°C.

### Determination of Coupling size

Crane and hoist are particular applications for gear couplings. Therefore a service factor has to be considered. The service factor depends on motor characteristics and the mass of the driven side. A common factor for crane and hoist application is 2,0 to 2,5, that has to be multiplied on the rated motor torque.

The maximum torque given for the gear coupling is intended to accommodate special torque events for limited occurrence. For more information please contact DELLNER BUBENZER.

After coupling size selection, flange connections of drive and driven side have to be checked. A feather key connection as well as a shrink fit connection is possible. In addition, braking torque and brake disk diameter must be compared with the permissible values. For support contact DELLNER BUBENZER.

Coupling type KBSD coupling size		50	65	80	100	120	140	170	190	210
T <sub>KN</sub> *	Nm	1450	3400	5800	9900	13800	21500	35600	52800	67200
T <sub>Kmax</sub> *	Nm	3625	8500	14500	24750	34500	53750	89000	132000	168000
n <sub>max</sub> *	1/min	9500	7000	6300	5200	4600	3900	3200	2800	2600
M <sub>Br</sub> *	Nm	2000	4000	5000	9250	15250	27500	36500	46000	63000
Radial misalignment	mm	±0,70	±0,75	±0,85	±1,0	±1,1	±1,3	±1,4	±1,5	±1,6
Axial displacement	mm	±2,0	±3,0	±3,0	±5,0	±6,0	±6,0	±8,0	±8,0	±8,0
d <sub>M4</sub> / d <sub>G4</sub>	mm	145	170	200	230	260	300	360	400	450
d <sub>m,max</sub> / d <sub>G,max</sub> **	mm	55	75	90	110	120	140	160	185	210
d <sub>M3</sub> / d <sub>G3</sub>	mm	85	110	134	160	180	200	225	265	300
L	mm	345	383	442	474	502	538	605	639	711
L <sub>M1</sub>	mm	203	241	260	292	315	351	378	412	456
L <sub>G1</sub>	mm	142	142	182	182	187	187	227	227	255
L <sub>M2</sub>	mm	110	140	146	165	170	190	200	220	250
L <sub>G2</sub>	mm	127	127	167	167	172	172	212	212	240
DBSE	mm	108	116	129	142	160	176	193	207	221
DBFF	mm	78	86	99	112	130	146	163	177	191
Lubrication per half	dm <sup>3</sup>	0,020	0,020	0,030	0,035	0,050	0,080	0,11	0,15	0,20
Brake disc dimension d2 x b1		Weight Moment of inertia			of complete coupling with steel brake disc					
355x30 n <sub>max</sub> =4800 1/min	kg	36								
	kgm <sup>2</sup>	0,40								
400x30 n <sub>max</sub> =4300 1/min	kg	42	48	62						
	kgm <sup>2</sup>	0,62	0,65	0,73						
450x30 n <sub>max</sub> =3800 1/min	kg	50	56	69						
	kgm <sup>2</sup>	0,98	1,0	1,1						
500x30 n <sub>max</sub> =3400 1/min	kg		65	78	91					
	kgm <sup>2</sup>		1,5	1,6	1,7					
560x30 n <sub>max</sub> =3000 1/min	kg			90	102	122				
	kgm <sup>2</sup>			2,4	2,5	2,8				
630x30 n <sub>max</sub> =2750 1/min	kg			105	118	138	163			
	kgm <sup>2</sup>			3,8	3,9	4,2	4,6			
710x30 n <sub>max</sub> =2400 1/min	kg				138	158	183	233	288	
	kgm <sup>2</sup>				6,1	6,4	6,9	8,1	9,6	
800x30 n <sub>max</sub> =2200 1/min	kg					183	208	258	313	387
	kgm <sup>2</sup>					10,0	10,5	11,7	13,2	15,9
900x30 n <sub>max</sub> =1950 1/min	kg							290	344	418
	kgm <sup>2</sup>							17,4	18,9	21,6

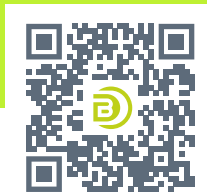
\* This value is based on KBS-toothings with standard material and contains no service factor. Screw connection and brake disc limit the transmittable torque to a value M<sub>Br</sub>.

\*\* Larger bores on request

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