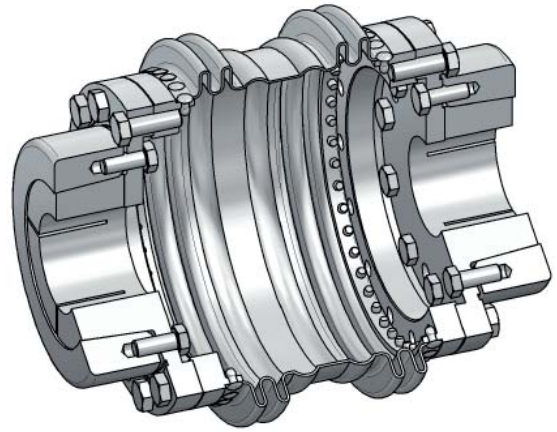


# Metal bellows coupling I Series KXL

- /// for high torques up to 65.000 Nm // backlash free, exact torque transfer
- /// high torsional stiffness // low moments of inertia // high tolerance of shaft displacements
- /// three-parted construction // easy to fit // variable in use

The metal bellows couplings of the series KXL are constructed for medium- size to big drives of up to max. 65.000 Nm. Although this type of coupling has proven itself reliable for years, the series was completely reworked in order to make it even more attractive regarding technical parameters as well as the aspect of costs. It is very special because of the three- parted construction with a flexible intermediate piece (bellow). This intermediate piece can be disassembled. It consists of an optimal torsionally stiff stainless steel bellow with 2 bellow shafts on each side and an intermediate pipe which is variable in length. The connection with the two hubs is frictionally engaged (screws acc. to ISO 4017). Therefore, assembly is much easier as, e.g. in case of inspection or service, the heavy drive unit or the output unit need not be disassembled. The designer can chose between several hub variations (see selection table). The very good moment of inertia and the rotation symmetrical design ensure good dynamic operation characteristics. KXL-couplings are most suitable for precise drives, such as for printing machines, cross cutters, main spindle drives, transfer axis or gearbox attachment. A transprt of media or a parallel drive chain through the coupling interior is possible.



**Material:**  
 bellows: stainless steel  
 flange: heat-treated steel - black finish  
 hubs: heat-treated steel - black finish

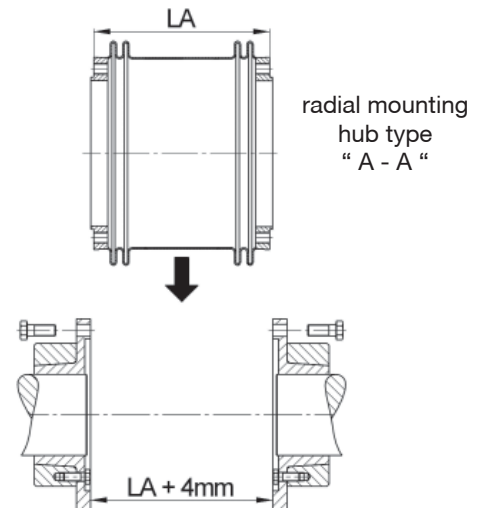
## Technical data:

KXL Size	torques		torsional stiffness CT [Nm/arcmin]	spring rate		max. shaft displacement		
	nominal torque T <sub>N</sub> [Nm]	maximum torque T <sub>max</sub> [Nm]		axial C <sub>a</sub> [N/mm]	angular C <sub>w</sub> [N/°]	axial ±	angular	radial
						d <sub>a</sub> [mm]	d <sub>w</sub> [°]	d <sub>r</sub> [mm]
4	4.000	6.000	610	480	35	3	1,4	1,2
6,5	6.500	9.000	1000	550	55	3	1,3	1,4
9	9.000	13.000	1.700	650	115	3	1,3	1,5
12	12.000	17.000	2.200	490	85	3,5	1,4	2,0
18	18.000	25.000	3.200	500	125	3,5	1,3	2,3
28	28.000	38.000	5.700	460	180	4	1,2	2,3
50	50.000	65.000	11.000	570	225	4	1,2	2,5

maximum temperature range: -40°C up to +300°C

KXL Size	mass			moments of inertia		
	per hub A/B m <sub>A</sub> /m <sub>B</sub> [kg]	per hub F/G m <sub>F</sub> /m <sub>G</sub> [kg]	bellows m <sub>BP</sub> [kg]	per hub A/B J <sub>A</sub> /J <sub>B</sub> [kgm <sup>2</sup> ]	per hub F/G J <sub>F</sub> /J <sub>G</sub> [kgm <sup>2</sup> ]	bellows J <sub>BP</sub> [kgm <sup>2</sup> ]
4	7,7	3,3	5,6	0,03	0,02	0,04
6,5	10,9	5,7	8,0	0,07	0,04	0,08
9						
12	18,8	8	13,9	0,17	0,08	0,24
18	28,8	11,5	19,7	0,36	0,18	0,46
28	49,9	20	29,9	0,93	0,53	1,11
50						

Note: The specific parameters for the total weight resp. the total moment of inertia must be rounded off in dependence of length „L 16“.

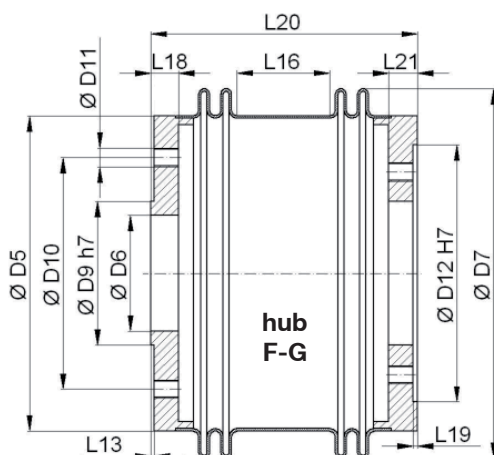


# Metal bellows coupling I Series KXL

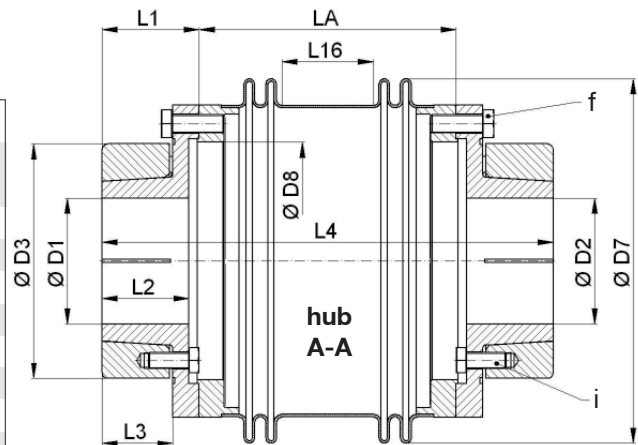
Dimensions [mm]:  
length dimensions according to DIN ISO 2768 cH

Size	4	6,5	9	12	18	28	50
D1 min	70	75	80	90	110	130	150
D2 max	90	100	108	130	150	170	220
D3	157	168	190	205	247	296	380
D5	167	198	256	273	322	406	505
D7	203	236	259	319	372	460	561
D8	152	183	193	208	250	325	416
L1	62	70	77	85	91	105	120
L2	53,5	60,5	66	74	79	93	108
L3	46	50	54	62	66	78	88
L4**	286	321	351	399	442	497	537
L5	-	20	23	23	25	27	30
L6	-	7,5	8,8	10	11,5	12,5	12,5
L7	-	43	48,8	55	62	68	72,5
L8	-	38	48,8	44	55	55	66,5
L9	-	68	75	83	89	103	118
L10**	-	217	239	271	306	337	357
L12**	-	267	293	333	372	415	447
L16*	41	50	59	80	100	110	120
LA ±2	158	177	193	225	256	283	297
L18	21	24	25	25	30	30	34
L20**	164	188	200	232	266	288	304
L21	21	24	25	25	30	30	34
f	12 x M10	12 x M12	12 x M14	14 x M16	12 x M18	12 x M20	16 x M20
i	10x M10	9x M12	8x M14	9x M14	8x M16	10x M16	12x M18
TA-f [Nm]	67	115	185	250	350	500	500
TA-i [Nm]	67	115	185	185	250	250	350

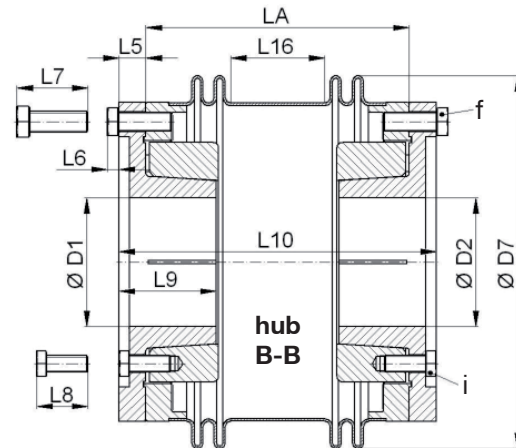
\* Standard length - intermediate part:  
\*\* Overall length for standard length L16



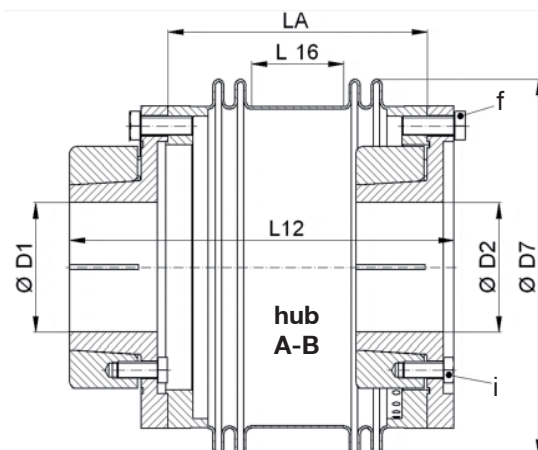
**Hub type F/G:**  
attached flange acc. to ISO 9409 resp. customer's requirements - Center outside or inside. Dimensions of flange hub types F and G of L13, L19 and ØD6, ØD9, ØD10, ØD11, ØD12 customized.



**Hub type A:**  
frictional, backlash free conical clamping ring connection, external free radial disassembly of the bellow part. The elongation of total length „L4“ of the intermediate piece of 4 mm at mounting is considered. (see mounting picture)



**Hub type B:**  
frictional, backlash free conical clamping ring connection, internal free radial disassembly of the bellow part is NOT possible



**Hub type A/B:**  
frictional, backlash free conical clamping ring connection, - external - internal - free radial disassembly of the bellow part is NOT possible

Ordering example: KXL 6,5 – AA / L4 = 318 / D1 = Ø80<sup>H7</sup> / D2 = = Ø90<sup>H7</sup>  
KXL 13,5 – BG / L16 = 200 / D1 = Ø120<sup>G6</sup> / D2 = customer specific