

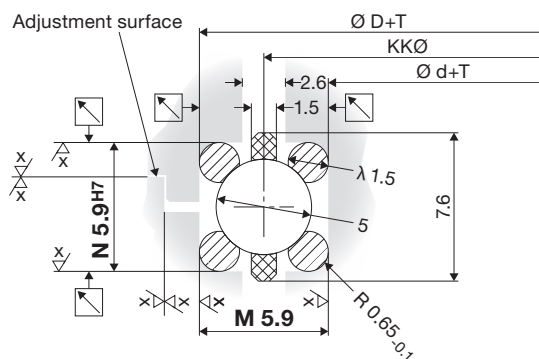
Bearing Elements

Ground raceway

Type LEL

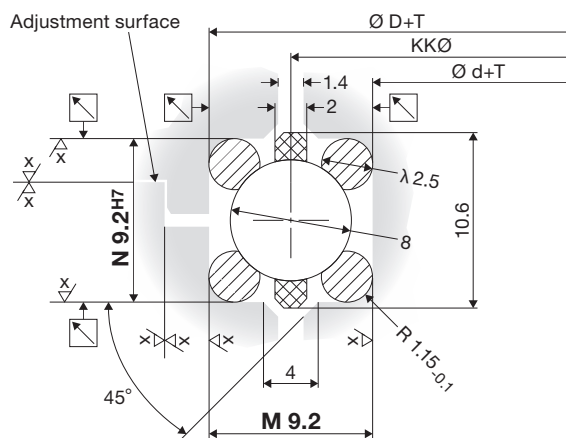
LEL1.5

KKØ mm	Load rating kN				Stat. moment kNm	Weight kg
	C_{0a}	C_{0r}	C_a	C_r		
LEL1.5-0070	13	6	7	6	0.2	0.04
LEL1.5-0080	15	7	7	6	0.3	0.05
LEL1.5-0090	18	8	8	7	0.4	0.05
LEL1.5-0100	20	9	8	7	0.5	0.06
LEL1.5-0110	22	10	8	7	0.6	0.07
LEL1.5-0120	23	11	9	8	0.7	0.07
LEL1.5-0130	25	12	9	8	0.8	0.08
LEL1.5-0140	27	13	9	8	0.9	0.09
LEL1.5-0150	30	14	10	8	1.0	0.09



LEL2.5

KKØ mm	Load rating kN				Stat. moment kNm	Weight kg
	C_{0a}	C_{0r}	C_a	C_r		
LEL2.5-0160	73	35	20	17	3	0.10
LEL2.5-0170	79	37	20	17	3	0.11
LEL2.5-0180	83	39	20	18	3	0.11
LEL2.5-0190	88	41	21	18	4	0.12
LEL2.5-0200	93	43	21	18	4	0.12
LEL2.5-0210	97	46	22	19	5	0.13
LEL2.5-0220	102	48	22	19	5	0.13
LEL2.5-0230	106	50	22	19	6	0.14
LEL2.5-0240	112	53	23	20	6	0.15
LEL2.5-0250	117	55	23	20	7	0.15
LEL2.5-0260	121	57	24	20	7	0.16
LEL2.5-0270	126	59	24	21	8	0.16
LEL2.5-0280	130	61	24	21	9	0.17
LEL2.5-0290	135	64	25	21	9	0.18
LEL2.5-0300	141	66	25	22	10	0.18



KKØ ≤ 500 mm T = IT6 KKØ > 500 mm T = IT7 $\sqrt{R_a} = Ra 3.2$

Available infinitely variable in all intermediate diameters.

The table of tolerances, see page 79.



Bearing type

Franke bearing elements in type LEL meet high standards in terms of runnability and accuracy. Their hardened and CNC-ground raceways, along with the ideal geometric adjustment of ball and raceway radius, lend them outstanding bearing properties. Bearing elements in the LEL type permit the greatest possible freedom of bearing design. The standard mounting space is between 5.9 mm and 20.9 mm. Race ring thickness of up to 20 mm and bearing sizes up to 50 mm are possible to meet special requirements.

Characteristics

Bearing elements of the LEL type consist of two inner and two outer raceways, along with a plastic cage with retained balls. The race rings are divided at one point to compensate for the temperature expansion factor. They possess compensatory properties for demanding forms of stress. LEL are generally mounted free from clearance. The preload can be defined individually to meet the specific requirement. See 'Technical information' for the adjustment methods.

Mating structure

The bearing element mounted determines the overall construction's load bearing capacity. Hence the mating construction can be made of alternative materials such as steel, aluminium or plastic. Axial and radial accuracy (see diagram below) are defined to a substantial extent by the mating components. These properties can be enhanced by boosting the accuracy of manufacture.

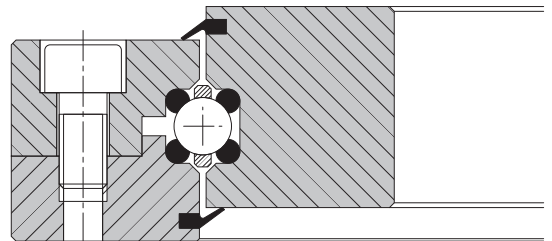
Please find construction examples, special forms, special accuracies and other options of individual tailoring on pages 11 – 19.

Technical details

Material	Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12
Temperature in use	-30 °C to +80 °C, briefly up to +100 °C
Circumferential speed	max. 5 m/s, without seals max. 10 m/s
Lubricant grease	Klüber ISOFLEX TOPAS NCA52
Lubrication schedule	See 'Technical information'.
Tolerance details	See 'Technical information'.

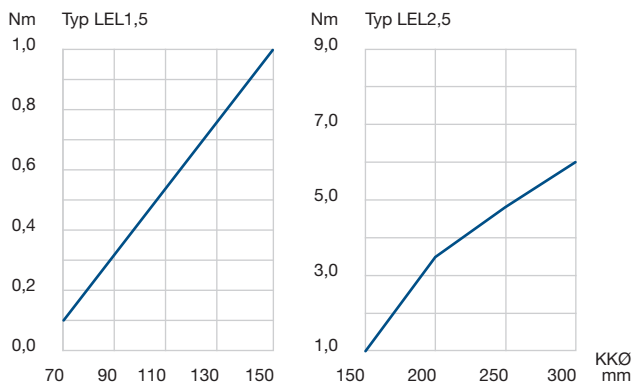
Please find additional data on calculation, mounting and setting in 'Technical information'.

Constructive example



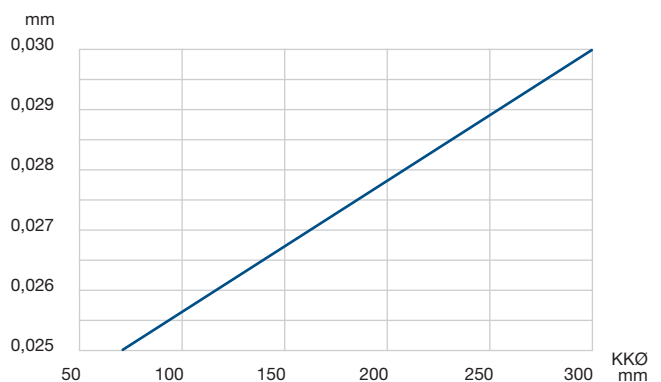
Rotational resistance

The rotational resistance indicates the preload on the bearing assembly. It is dependent on the respective type and the race ring diameter. The values indicated in the diagram are standard values and can be aligned individually.



Radial and axial runout accuracy

The running accuracies indicated in the diagram are maximum values and may be improved by restricting the tolerances.



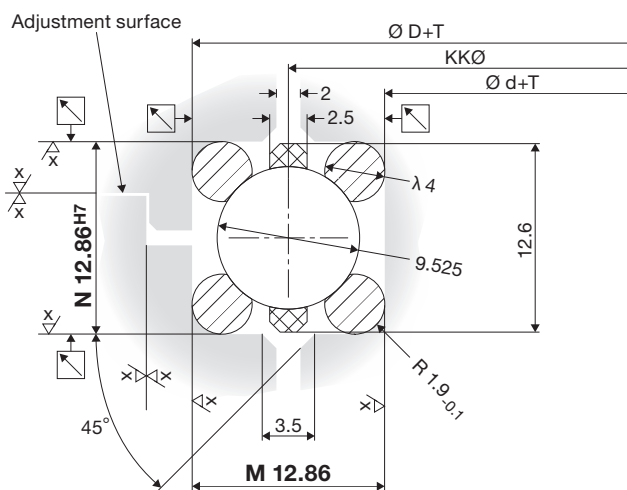
Bearing Elements

Ground raceway

Type LEL

LEL4

KKØ mm	Load rating kN				Stat. moment kNm		Weight kg
	C_{0a}	C_{0r}	C_a	C_r	C_{0m}		
LEL4-0200	118	55	26	23	6	6	0.39
LEL4-0210	123	58	26	23	6	6	0.41
LEL4-0220	131	62	27	24	7	7	0.43
LEL4-0230	136	64	28	24	7	7	0.45
LEL4-0240	142	67	28	24	8	8	0.47
LEL4-0250	147	69	28	25	9	9	0.49
LEL4-0260	155	73	29	25	10	10	0.51
LEL4-0270	161	76	29	25	10	10	0.53
LEL4-0280	166	78	30	26	11	11	0.55
LEL4-0290	172	81	30	26	12	12	0.57
LEL4-0300	177	83	30	26	13	13	0.59
LEL4-0320	191	90	31	27	14	14	0.63
LEL4-0340	202	95	32	28	16	16	0.66
LEL4-0360	215	101	33	28	18	18	0.71
LEL4-0380	226	106	33	29	20	20	0.74
LEL4-0400	240	113	34	29	23	23	0.78
LEL4-0420	251	118	35	30	25	25	0.82
LEL4-0440	264	124	35	30	27	27	0.86
LEL4-0460	275	129	36	31	30	30	0.90
LEL4-0480	289	136	36	31	33	33	0.94
LEL4-0500	299	141	37	32	35	35	0.98
LEL4-0520	313	147	37	32	38	38	1.02
LEL4-0540	324	152	38	33	41	41	1.06
LEL4-0560	337	159	39	33	44	44	1.10
LEL4-0580	348	164	39	34	48	48	1.14
LEL4-0600	359	169	39	34	51	51	1.17
LEL4-0620	373	175	40	35	54	54	1.22
LEL4-0640	384	180	40	35	58	58	1.25
LEL4-0660	397	187	41	35	62	62	1.29
LEL4-0680	408	192	41	36	65	65	1.33
LEL4-0700	442	198	42	36	69	69	1.37
LEL4-0720	432	203	42	37	73	73	1.41
LEL4-0740	446	210	43	37	78	78	1.45
LEL4-0760	457	215	43	37	81	81	1.49
LEL4-0780	470	221	44	38	86	86	1.53
LEL4-0800	481	226	44	38	91	91	1.57
LEL4-0820	495	233	44	38	95	95	1.61
LEL4-0840	506	238	45	39	100	100	1.65
LEL4-0860	519	244	45	39	105	105	1.68
LEL4-0880	580	249	45	39	110	110	1.73
LEL4-0900	541	255	46	40	115	115	1.76
LEL4-0920	555	261	46	40	120	120	1.80
LEL4-0960	579	272	47	41	131	131	1.88
LEL4-1000	603	284	48	41	142	142	1.96
LEL4-1100	663	312	49	43	172	172	2.16
LEL4-1200	723	340	51	44	204	204	2.35
LEL4-1300	785	370	52	45	240	240	2.55
LEL4-1400	845	398	54	47	278	278	2.75
LEL4-1500	905	426	55	48	319	319	2.94



KKØ ≤ 500 mm T = IT6 KKØ > 500 mm T = IT7 $\sqrt{R_a} = Ra 3.2$

Available infinitely variable in all intermediate diameters.

The table of tolerances, see page 79.



Bearing type

Franke bearing elements in type LEL meet high standards in terms of runnability and accuracy. Their hardened and CNC-ground raceways, along with the ideal geometric adjustment of ball and raceway radius, lend them outstanding bearing properties. Bearing elements in the LEL type permit the greatest possible freedom of bearing design. The standard mounting space is between 5.9 mm and 20.9 mm. Race ring thickness of up to 20 mm and bearing sizes up to 50 mm are possible to meet special requirements.

Characteristics

Bearing elements of the LEL type consist of two inner and two outer raceways, along with a plastic cage with retained balls. The race rings are divided at one point to compensate for the temperature expansion factor. They possess compensatory properties for demanding forms of stress. LEL are generally mounted free from clearance. The preload can be defined individually to meet the specific requirement. See 'Technical information' for the adjustment methods.

Mating structure

The bearing element mounted determines the overall construction's load bearing capacity. Hence the mating construction can be made of alternative materials such as steel, aluminium or plastic. Axial and radial accuracy (see diagram below) are defined to a substantial extent by the mating components. These properties can be enhanced by boosting the accuracy of manufacture.

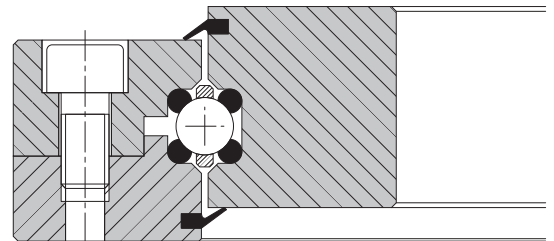
Please find construction examples, special forms, special accuracies and other options of individual tailoring on pages 11 – 19.

Technical details

Material	Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: TPU
Temperature in use	-30 °C to +80 °C, briefly up to +100 °C
Circumferential speed	max. 5 m/s, without seals max. 10 m/s
Lubricant grease	Klüber ISOFLEX TOPAS NCA52
Lubrication schedule	See 'Technical information'.
Tolerance details	See 'Technical information'.

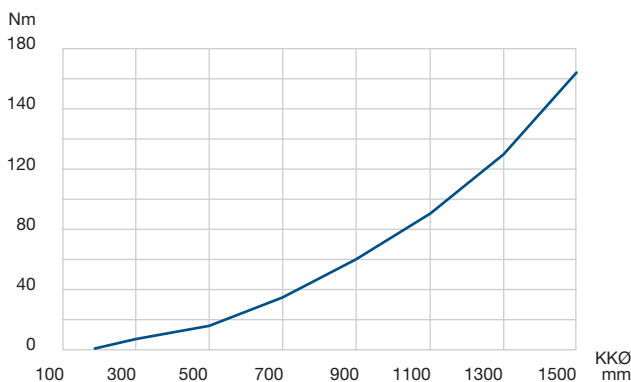
Please find additional data on calculation, mounting and setting in 'Technical information'.

Constructive example



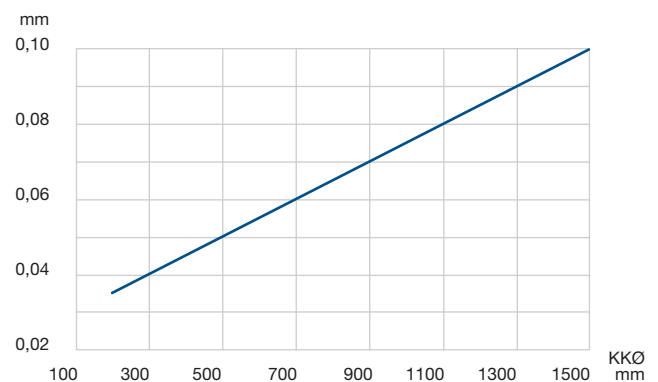
Rotational resistance

The rotational resistance indicates the preload on the bearing assembly. It is dependent on the respective type and the race ring diameter. The values indicated in the diagram are standard values and can be aligned individually.



Radial and axial runout accuracy

The running accuracies indicated in the diagram are maximum values and may be improved by restricting the tolerances.



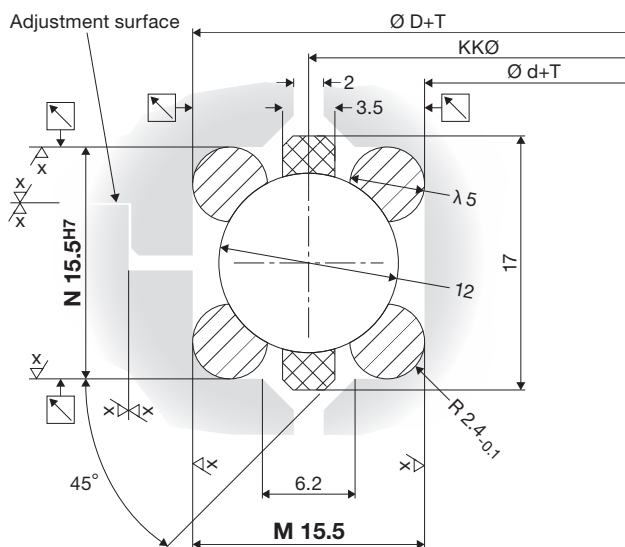
Bearing Elements

Ground raceway

Type LEL

LEL5

KKØ mm	Load rating kN				Stat. moment kNm	Weight kg
	C_{0a}	C_{0r}	C_a	C_r		
LEL5-0220	257	121	41	35	13	0.70
LEL5-0230	267	126	41	36	15	0.73
LEL5-0240	279	131	42	36	16	0.76
LEL5-0250	289	136	43	37	17	0.79
LEL5-0260	305	144	44	38	19	0.82
LEL5-0270	316	149	44	38	20	0.85
LEL5-0280	327	154	45	39	22	0.88
LEL5-0290	337	159	45	39	23	0.91
LEL5-0300	348	164	46	39	25	0.94
LEL5-0320	375	176	47	41	28	1.02
LEL5-0340	396	187	48	41	32	1.08
LEL5-0360	423	199	49	42	36	1.14
LEL5-0380	444	209	50	43	40	1.20
LEL5-0400	471	222	51	44	44	1.26
LEL5-0420	493	232	52	45	49	1.33
LEL5-0440	519	244	53	46	54	1.40
LEL5-0460	541	254	54	46	59	1.46
LEL5-0480	567	267	55	47	64	1.53
LEL5-0500	589	277	55	48	69	1.59
LEL5-0520	616	290	56	49	75	1.66
LEL5-0540	637	300	57	49	81	1.72
LEL5-0560	664	312	58	50	87	1.78
LEL5-0580	685	322	59	51	94	1.85
LEL5-0600	707	333	59	51	100	1.91
LEL5-0620	733	345	60	52	107	1.97
LEL5-0640	755	355	61	53	114	2.03
LEL5-0660	781	367	62	53	121	2.09
LEL5-0680	803	378	62	54	128	2.16
LEL5-0700	830	390	63	54	137	2.23
LEL5-0720	851	400	63	55	144	2.29
LEL5-0740	878	413	64	56	153	2.36
LEL5-0760	899	423	65	56	161	2.43
LEL5-0780	926	436	66	57	170	2.49
LEL5-0800	947	446	66	57	178	2.55
LEL5-0820	974	458	67	58	188	2.61
LEL5-0840	995	468	67	58	197	2.67
LEL5-0860	1022	484	68	59	207	2.74
LEL5-0880	1044	491	68	59	216	2.80
LEL5-0900	1065	501	69	60	226	2.86
LEL5-0920	1092	514	70	60	236	2.92
LEL5-0940	1113	524	70	61	246	2.98
LEL5-0960	1140	536	71	61	257	3.04
LEL5-0980	1161	546	71	62	268	3.10
LEL5-1000	1188	559	72	62	280	3.19
LEL5-1100	1306	614	74	64	338	3.50
LEL5-1200	1423	670	77	66	402	3.82
LEL5-1300	1546	728	79	68	473	4.14
LEL5-1400	1664	783	81	70	548	4.46
LEL5-1500	1782	839	83	72	629	4.77



KKØ ≤ 500 mm T = IT6 KKØ > 500 mm T = IT7 $\sqrt{R_a} = Ra 3.2$

Available infinitely variable in all intermediate diameters.

The table of tolerances, see page 79.



Bearing type

Franke bearing elements in type LEL meet high standards in terms of runnability and accuracy. Their hardened and CNC-ground raceways, along with the ideal geometric adjustment of ball and raceway radius, lend them outstanding bearing properties. Bearing elements in the LEL type permit the greatest possible freedom of bearing design. The standard mounting space is between 5.9 mm and 20.9 mm. Race ring thickness of up to 20 mm and bearing sizes up to 50 mm are possible to meet special requirements.

Characteristics

Bearing elements of the LEL type consist of two inner and two outer raceways, along with a plastic cage with retained balls. The race rings are divided at one point to compensate for the temperature expansion factor. They possess compensatory properties for demanding forms of stress. LEL are generally mounted free from clearance. The preload can be defined individually to meet the specific requirement. See 'Technical information' for the adjustment methods.

Mating structure

The bearing element mounted determines the overall construction's load bearing capacity. Hence the mating construction can be made of alternative materials such as steel, aluminium or plastic. Axial and radial accuracy (see diagram below) are defined to a substantial extent by the mating components. These properties can be enhanced by boosting the accuracy of manufacture.

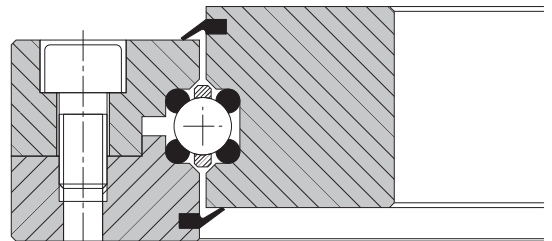
Please find construction examples, special forms, special accuracies and other options of individual tailoring on pages 11 – 19.

Technical details

Material	Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: TPU
Temperature in use	-30 °C to +80 °C, briefly up to +100 °C
Circumferential speed	max. 5 m/s, without seals max. 10 m/s
Lubricant grease	Klüber ISOFLEX TOPAS NCA52
Lubrication schedule	See 'Technical information'.
Tolerance details	See 'Technical information'.

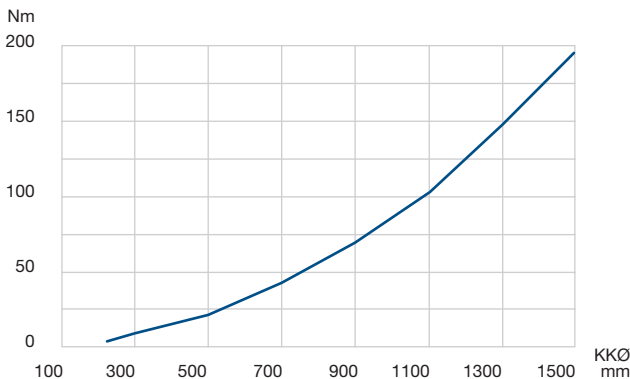
Please find additional data on calculation, mounting and setting in 'Technical information'.

Constructive example



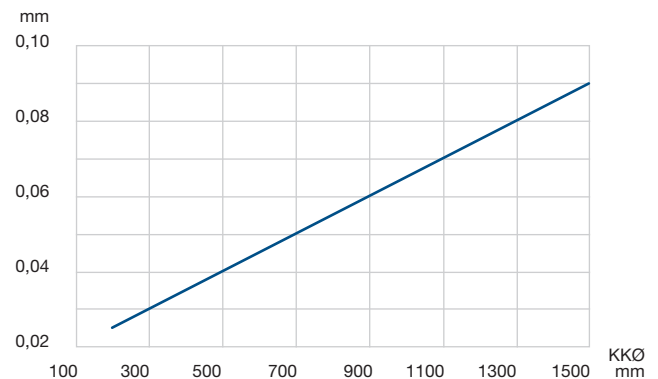
Rotational resistance

The rotational resistance indicates the preload on the bearing assembly. It is dependent on the respective type and the race ring diameter. The values indicated in the diagram are standard values and can be aligned individually.



Radial and axial runout accuracy

The running accuracies indicated in the diagram are maximum values and may be improved by restricting the tolerances.



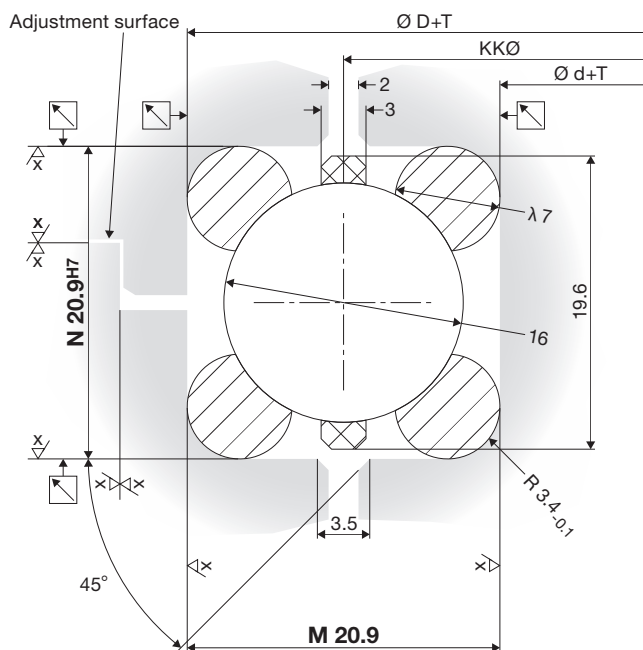
Bearing Elements

Ground raceway

Type LEL

LEL7

KKØ mm	Load rating kN				Stat. moment kNm		Weight kg
	C_{0a}	C_{0r}	C_a	C_r	C_{0m}		
LEL7-0340	441	207	62	53	35	1.89	
LEL7-0360	466	219	63	54	39	2.02	
LEL7-0380	491	231	64	55	44	2.13	
LEL7-0400	517	243	65	56	49	2.24	
LEL7-0420	542	255	66	57	54	2.35	
LEL7-0440	567	267	67	58	59	2.46	
LEL7-0460	593	279	68	59	64	2.57	
LEL7-0480	626	295	70	61	71	2.68	
LEL7-0500	652	307	71	61	77	2.79	
LEL7-0520	677	319	72	62	83	2.92	
LEL7-0540	703	331	73	63	89	3.03	
LEL7-0560	728	343	74	64	96	3.14	
LEL7-0580	753	355	75	65	103	3.25	
LEL7-0600	779	366	76	66	110	3.36	
LEL7-0620	804	378	77	66	147	3.47	
LEL7-0640	838	394	78	67	126	3.58	
LEL7-0660	863	406	79	68	134	3.69	
LEL7-0680	888	418	80	69	142	3.82	
LEL7-0700	914	430	81	70	151	3.93	
LEL7-0720	939	442	81	70	159	4.04	
LEL7-0740	964	454	82	71	168	4.15	
LEL7-0760	990	466	83	72	177	4.26	
LEL7-0780	1015	478	84	72	186	4.37	
LEL7-0800	1049	494	85	73	197	4.48	
LEL7-0820	1074	506	85	74	207	4.61	
LEL7-0840	1100	517	86	75	217	4.72	
LEL7-0860	1125	529	87	75	228	4.83	
LEL7-0880	1150	541	88	76	238	4.94	
LEL7-0900	1176	553	88	76	249	5.05	
LEL7-0920	1201	565	89	77	260	5.16	
LEL7-0940	1226	577	90	77	271	5.27	
LEL7-0960	1260	593	91	78	285	5.38	
LEL7-0980	1286	605	91	79	296	5.49	
LEL7-1000	1311	617	92	80	308	5.60	
LEL7-1060	1387	653	94	81	356	5.95	
LEL7-1100	1438	677	95	82	372	6.17	
LEL7-1160	1522	716	97	84	415	6.52	
LEL7-1200	1573	740	98	85	444	6.74	
LEL7-1260	1649	776	100	86	489	7.07	
LEL7-1300	1708	804	101	88	522	7.29	
LEL7-1360	1784	840	103	89	571	7.64	
LEL7-1400	1835	863	104	90	604	7.86	
LEL7-1460	1919	903	106	91	660	8.19	
LEL7-1500	1970	927	107	92	695	8.43	
LEL7-1600	2105	991	109	95	793	8.65	
LEL7-1700	2232	1050	112	97	893	9.09	
LEL7-1800	2367	1114	114	99	1003	9.55	
LEL7-1900	2503	1178	117	101	1119	9.77	
LEL7-2000	2629	1237	119	103	1237	11.24	



KKØ ≤ 500 mm T = IT6 KKØ > 500 mm T = IT7 $\sqrt{R_a} = Ra 3.2$

Available infinitely variable in all intermediate diameters.

The table of tolerances, see page 79.



Bearing type

Franke bearing elements in type LEL meet high standards in terms of runnability and accuracy. Their hardened and CNC-ground raceways, along with the ideal geometric adjustment of ball and raceway radius, lend them outstanding bearing properties. Bearing elements in the LEL type permit the greatest possible freedom of bearing design. The standard mounting space is between 5.9 mm and 20.9 mm. Race ring thickness of up to 20 mm and bearing sizes up to 50 mm are possible to meet special requirements.

Characteristics

Bearing elements of the LEL type consist of two inner and two outer raceways, along with a plastic cage with retained balls. The race rings are divided at one point to compensate for the temperature expansion factor. They possess compensatory properties for demanding forms of stress. LEL are generally mounted free from clearance. The preload can be defined individually to meet the specific requirement. See 'Technical information' for the adjustment methods.

Mating structure

The bearing element mounted determines the overall construction's load bearing capacity. Hence the mating construction can be made of alternative materials such as steel, aluminium or plastic. Axial and radial accuracy (see diagram below) are defined to a substantial extent by the mating components. These properties can be enhanced by boosting the accuracy of manufacture.

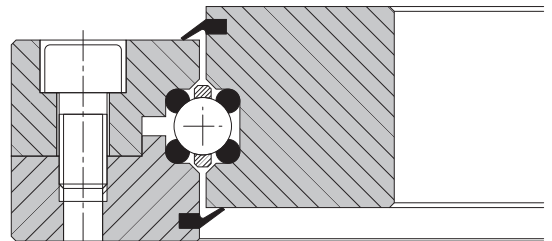
Please find construction examples, special forms, special accuracies and other options of individual tailoring on pages 11 – 19.

Technical details

Material	Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12
Temperature in use	-30 °C to +80 °C, briefly up to +100 °C
Circumferential speed	max. 5 m/s, without seals max. 10 m/s
Lubricant grease	Klüber ISOFLEX TOPAS NCA52
Lubrication schedule	See 'Technical information'.
Tolerance details	See 'Technical information'.

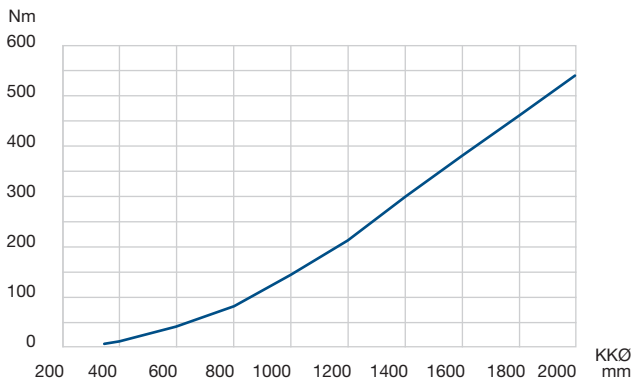
Please find additional data on calculation, mounting and setting in 'Technical information'.

Constructive example



Rotational resistance

The rotational resistance indicates the preload on the bearing assembly. It is dependent on the respective type and the race ring diameter. The values indicated in the diagram are standard values and can be aligned individually.



Radial and axial runout accuracy

The running accuracies indicated in the diagram are maximum values and may be improved by restricting the tolerances.

