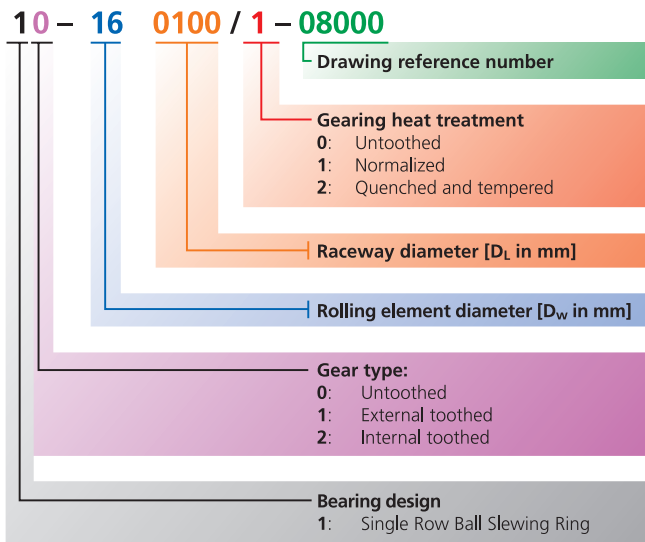
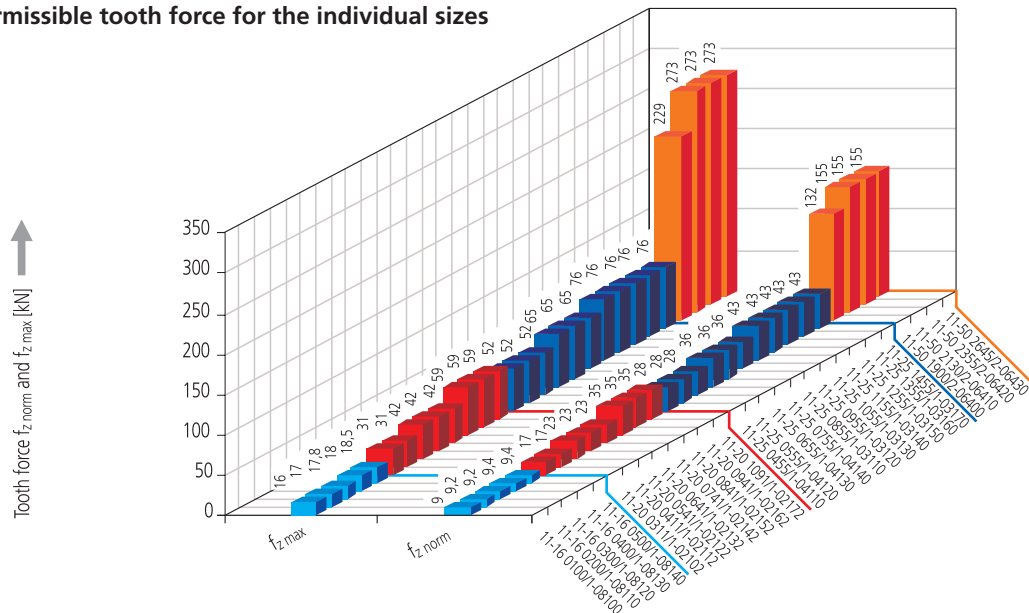


# Series 116, 120, 125, 150

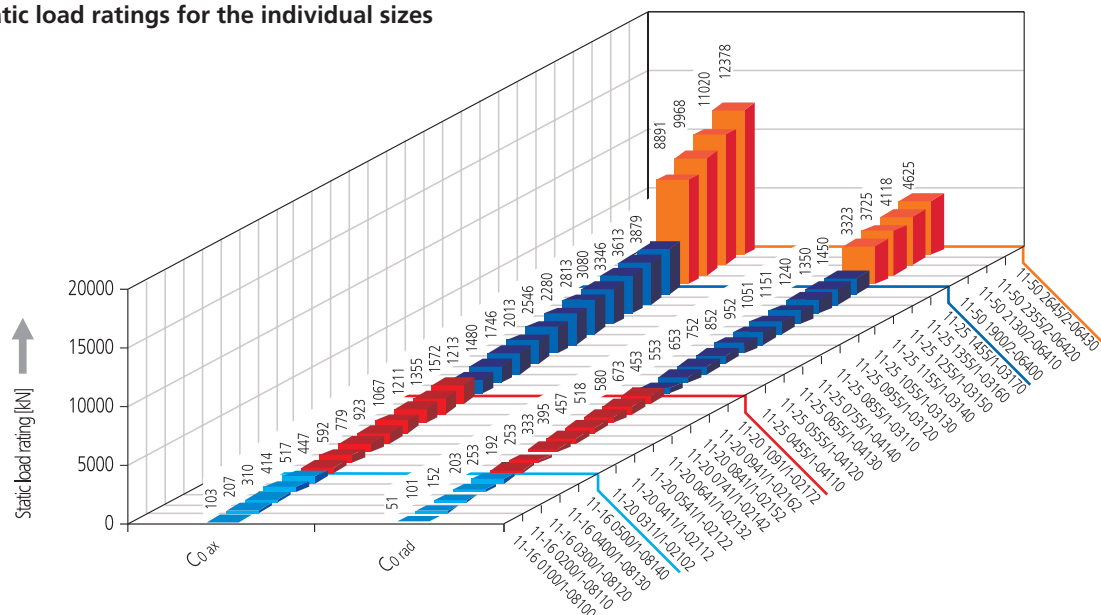
## Series Overview - Single Row Ball Slewing Rings



Permissible tooth force for the individual sizes



Static load ratings for the individual sizes



## Operating conditions

Permissible temperature range -25°C to +70°C

Maximum Permissible rotational speed  $n_{perm} = 40000 / D_L$  (for 120, 125, 150)

Maximum Permissible rotational speed  $n_{perm} = 80000 / D_L$  (for 116)

( $D_L$  = raceway diameter)

“Compressive” load

Bolt grade 10.9

## Typical applications

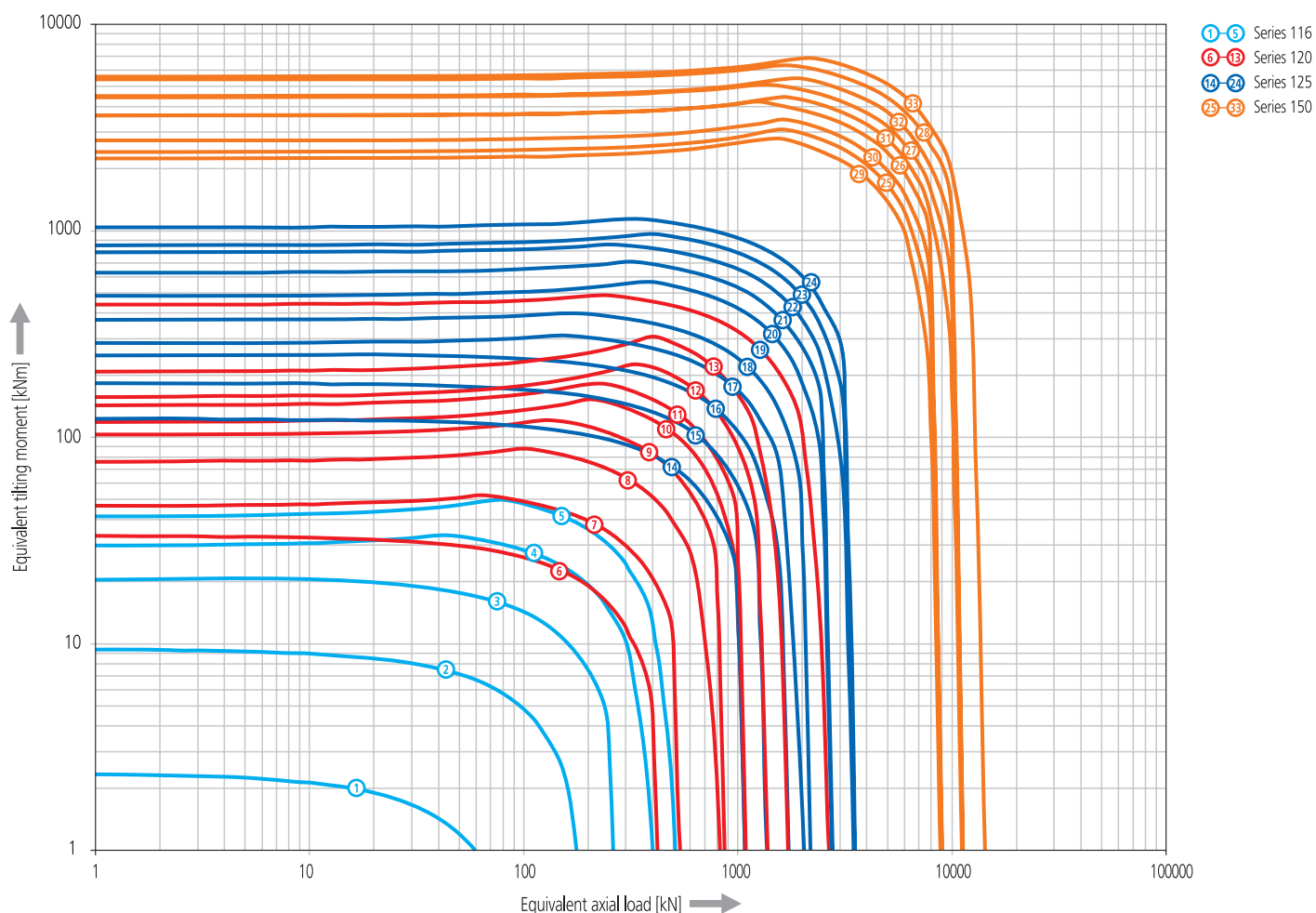
Turntables, slewing mechanisms, bogies, light to medium-sized cranes and construction machinery, winders, wind energy turbines, handling equipment.

## Characteristics

- Robust design
- Insensitive to vibrations
- Cost-optimized design
- Medium precision
- For Series 116 & 120 precision versions are available

## Limiting load diagrams, series 116, 120, 125, 150

Please refer to the explanations in the Technical Information section of the catalog.



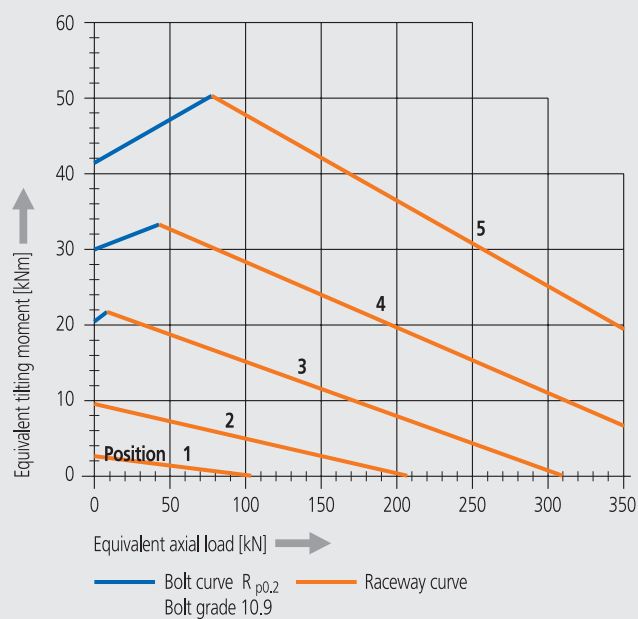
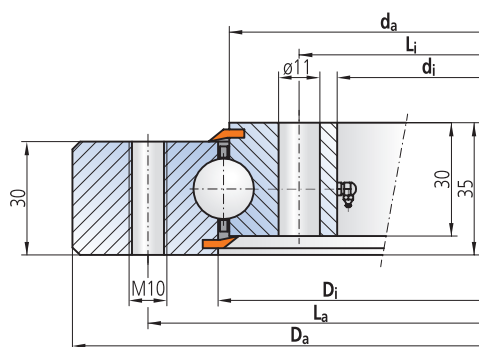
# Series 116 standard design

## Untoothed

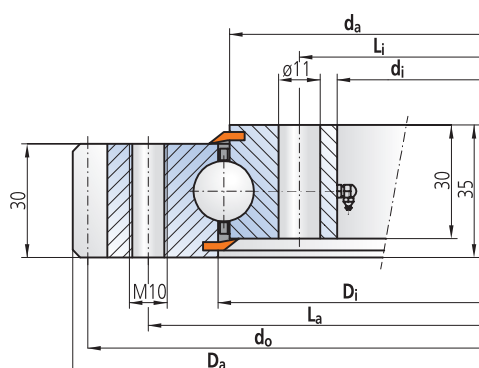
Drawing number	Position	Dimensions and weight					Mounting holes				Load ratings			
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Static		Dynamic	
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
10-16 0100/0-08000	1	180	40	103	97	5	140	6	60	6	51	103	71	61
10-16 0200/0-08010	2	280	140	203	197	10	240	12	160	12	101	207	99	85
10-16 0300/0-08020	3	380	240	303	297	14	340	20	260	20	152	310	117	101
10-16 0400/0-08030	4	480	340	403	397	19	440	24	360	24	203	414	130	112
10-16 0500/0-08040	5	580	440	503	497	24	540	28	460	28	253	517	142	122

## External toothed

Drawing number	Position	Dimensions and weight					Mounting holes				Gearing and tooth forces				Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static		Dynamic	
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$d_o$ [mm]	$m$ [mm]	$z2$ [-]	$f_z\ norm$ [kN]	$f_z\ max$ [kN]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
11-16 0100/1-08100	1	180	40	103	97	140	6	6	60	6	172	4	43	9.0	16.0	51	103	71	61
11-16 0200/1-08110	2	280	140	203	197	240	12	12	160	12	272	4	68	9.2	17.0	101	207	99	85
11-16 0300/1-08120	3	380	240	303	297	340	20	20	260	20	372	4	93	9.2	17.8	152	310	117	101
11-16 0400/1-08130	4	480	340	403	397	440	24	24	360	24	472	4	118	9.4	18.0	203	414	130	112
11-16 0500/1-08140	5	580	440	503	497	540	28	28	460	28	572	4	143	9.4	18.5	253	517	142	122



Please adhere strictly to the rules given in the Technical Information section when using above graph!



Radial clearance: 0 - 0.2 mm  
 Axial tilting clearance: 0 - 0.4 mm  
 Bearing ring material: C45N  
 1 Taper type grease nipple, form C in filling plug  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse

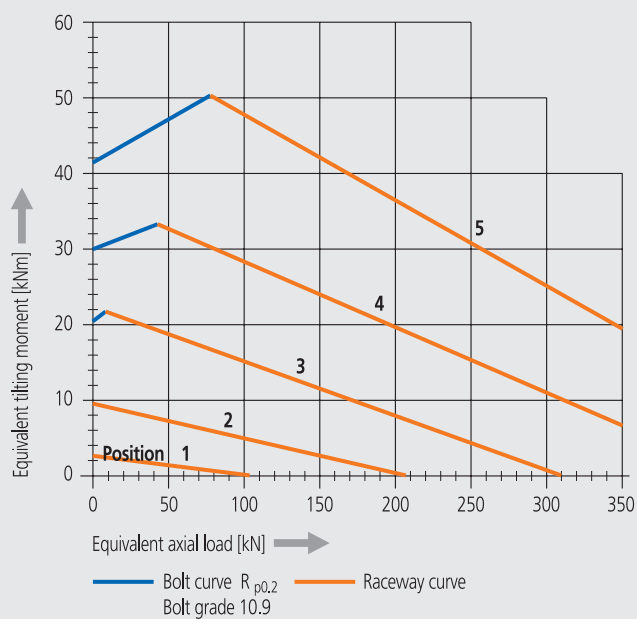
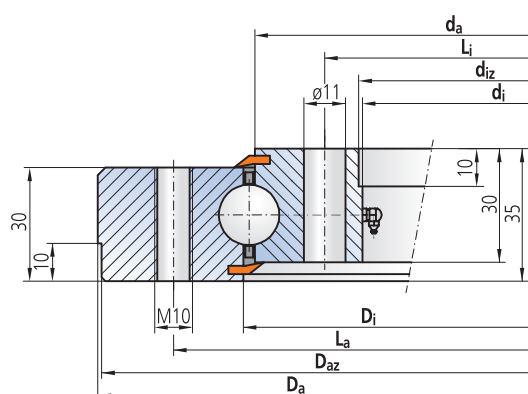
# Series 116 precision version

## Untoothed

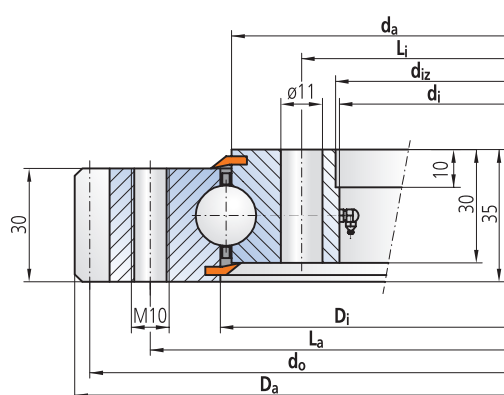
Drawing number	Position	Dimensions and weight							Mounting holes				Load ratings			
		Outside diameter, outer ring	Outside diameter, outer ring, spigot	Inside diameter, inner ring	Inside diameter, inner ring, spigot	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Static		Dynamic	
		$D_a$ [mm]	$D_{az}$ [mm]	$d_i$ [mm]	$d_{iz}$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
10-16 0100/0-08003	1	180	178-0.06	40	42+0.04	103	97	5	140	6	60	6	51	103	71	61
10-16 0200/0-08013	2	280	278-0.08	140	142+0.06	203	197	10	240	12	160	12	101	207	99	85
10-16 0300/0-08023	3	380	378-0.09	240	242+0.07	303	297	14	340	20	260	20	152	310	117	101
10-16 0400/0-08033	4	480	478-0.10	340	342+0.09	403	397	19	440	24	360	24	203	414	130	112
10-16 0500/0-08043	5	580	578-0.11	440	442+0.10	503	497	24	540	28	460	28	253	517	142	122

## External toothed

Drawing number	Position	Dimensions and weight							Mounting holes				Gearing and tooth forces				Load ratings			
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, inner ring, spigot	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static		Dynamic	
		$D_a$ [mm]	$d_i$ [mm]	$d_{iz}$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$d_o$ [mm]	$m$ [mm]	$z_2$ [-]	$f_z\ norm$ [kN]	$f_z\ max$ [kN]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
11-16 0100/1-08103	1	180	40	42+0.04	103	97	5	140	6	60	6	172	4	43	9.0	16.0	51	103	71	61
11-16 0200/1-08113	2	280	140	142+0.06	203	197	9	240	12	160	12	272	4	68	9.2	17.0	101	207	99	85
11-16 0300/1-08123	3	380	240	242+0.07	303	297	14	340	20	260	20	372	4	93	9.2	17.8	152	310	117	101
11-16 0400/1-08133	4	480	340	342+0.09	403	397	18	440	24	360	24	472	4	118	9.4	18.0	203	414	130	112
11-16 0500/1-08143	5	580	440	442+0.10	503	497	22	540	28	460	28	572	4	143	9.4	18.5	253	517	142	122



Please adhere strictly to the rules given in the Technical Information section when using above graph!



Radial clearance max. 0.03 mm  
 Axial clearance: max. 0.03 mm  
 Bearing ring material: C45N  
 1 Taper type grease nipple, form C in filling plug  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse

# Series 120 standard design

## Untoothed

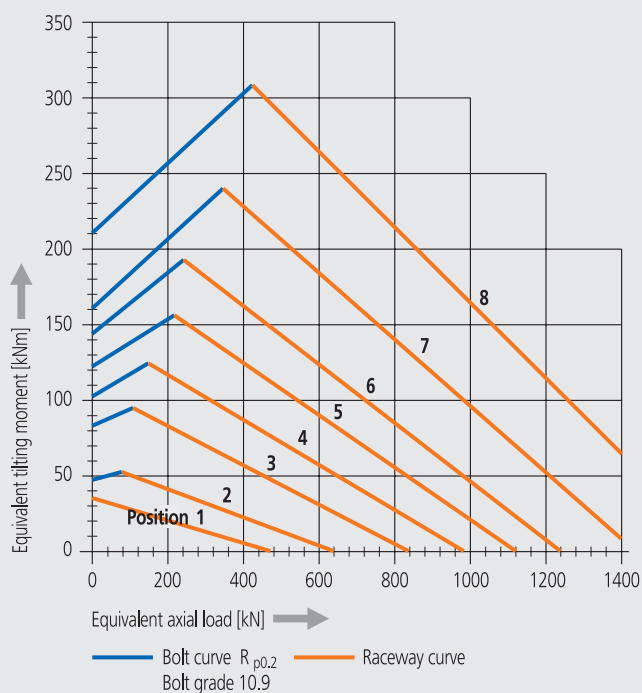
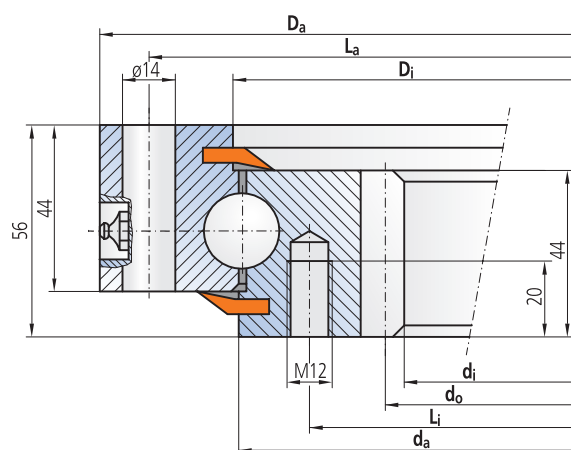
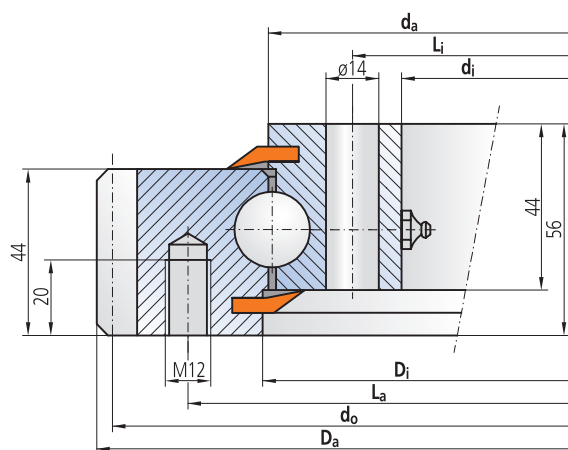
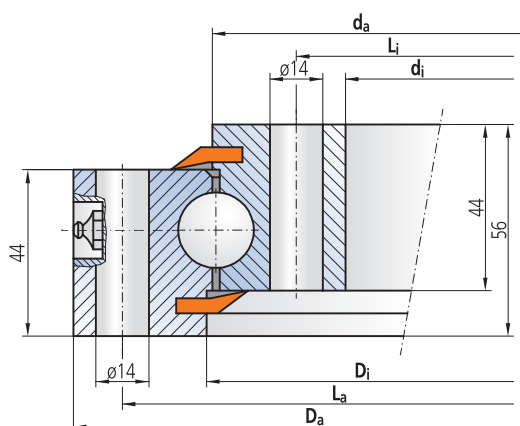
Drawing number	Position	Dimensions and weight					Mounting holes				Load ratings			
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Static	Dynamic		
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
10-20 0311/0-02002	1	386	242	315.5	312.5	21	360	20	268	20	192	448	140	140
10-20 0411/0-02012	2	486	342	415.5	412.5	29	460	24	368	24	254	592	156	156
10-20 0541/0-02022	3	616	472	545.5	542.5	37	590	32	498	32	334	780	173	174
10-20 0641/0-02032	4	716	572	645.5	642.5	44	690	36	598	36	395	924	184	185
10-20 0741/0-02042	5	816	672	745.5	742.5	52	790	40	698	40	457	1068	194	195
10-20 0841/0-02052	6	916	772	845.5	842.5	59	890	40	798	40	519	1212	204	205
10-20 0941/0-02062	7	1016	872	945.5	942.5	66	990	44	898	44	580	1356	213	214
10-20 1091/0-02072	8	1166	1022	1095.5	1092.5	77	1140	48	1048	48	673	1572	224	225

## External toothed

Drawing number	Position	Dimensions and weight					Mounting holes				Gearing and tooth forces				Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$d_o$ [mm]	$m$ [mm]	$z2$ [-]	$f_z\ norm$ [kN]	$f_z\ max$ [kN]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
11-20 0311/1-02102	1	404.0	242	315.5	312.5	23	355	20	268	20	395	5	79	11.75	23.5	192	448	140	140
11-20 0411/1-02112	2	504.0	342	415.5	412.5	32	455	20	368	24	495	5	99	11.75	23.5	254	592	156	156
11-20 0541/1-02122	3	640.8	472	545.5	542.5	43	585	28	498	32	630	6	105	17.5	32.7	334	780	173	174
11-20 0641/1-02132	4	742.8	572	645.5	642.5	52	685	32	598	36	732	6	122	17.5	32.7	395	924	184	185
11-20 0741/1-02142	5	838.8	672	745.5	742.5	58	785	36	698	40	828	6	138	17.5	32.7	457	1068	194	195
11-20 0841/1-02152	6	950.4	772	845.5	842.5	71	885	36	798	40	936	8	117	27.9	50.3	519	1212	204	205
11-20 0941/1-02162	7	1046.4	872	945.5	942.5	77	985	40	898	44	1032	8	129	27.9	50.3	580	1356	213	214
11-20 1091/1-02172	8	1198.4	1022	1095.5	1092.5	90	1135	44	1048	48	1184	8	148	27.9	50.3	673	1572	224	225

## Internal toothed

Drawing number	Position	Dimensions and weight					Mounting holes				Gearing and tooth forces				Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$n_a$ [-]	$L_i$ [mm]	$n_i$ [-]	$d_o$ [mm]	$m$ [mm]	$z2$ [-]	$f_z\ norm$ [kN]	$f_z\ max$ [kN]	$C_{o\ rad}$ [kN]	$C_{o\ ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
12-20 0311/1-02202	1	386	225	315.5	312.5	22	360	20	275	24	235	5	47	11.9	22.7	192	448	140	140
12-20 0411/1-02212	2	486	325	415.5	412.5	31	460	24	375	24	335	5	67	11.9	22.7	254	592	156	156
12-20 0541/1-02222	3	616	444	545.5	542.5	43	590	32	505	32	456	6	76	17.5	32.9	334	780	173	174
12-20 0641/1-02232	4	716	546	645.5	642.5	50	690	36	605	36	558	6	93	17.5	32.9	395	924	184	185
12-20 0741/1-02242	5	816	648	745.5	742.5	57	790	40	705	40	660	6	110	17.5	32.9	457	1068	194	195
12-20 0841/1-02252	6	916	736	845.5	842.5	69	890	40	805	40	752	8	94	28	50.5	519	1212	204	205
12-20 0941/1-02262	7	1016	840	945.5	942.5	75	990	44	905	44	856	8	107	28	50.5	580	1356	213	214
12-20 1091/1-02272	8	1166	984	1095.5	1092.5	91	1140	48	1055	48	1000	8	125	28	50.5	673	1572	224	225



Please adhere strictly to the rules given in the Technical Information section when using above graph!

Radial clearance: 0 - 0.2 mm  
 Axial clearance: 0 - 0.4 mm  
 Bearing ring material: C45N  
 4 Taper type grease nipples on circumference  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse



# Series 120 precision version

## Untoothed

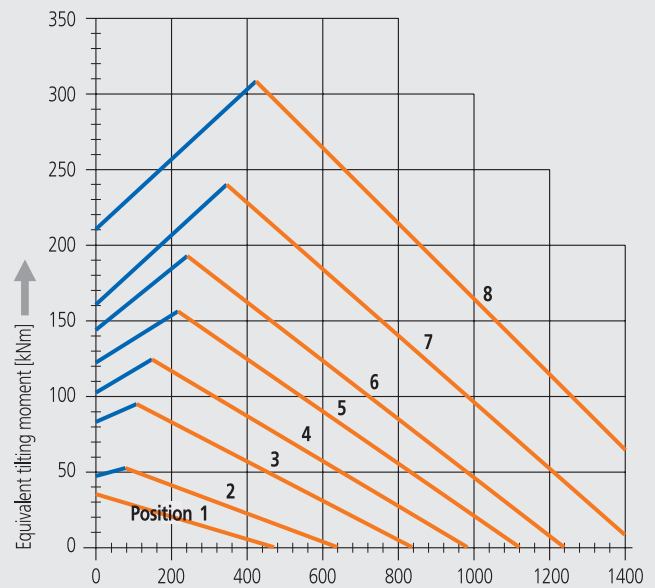
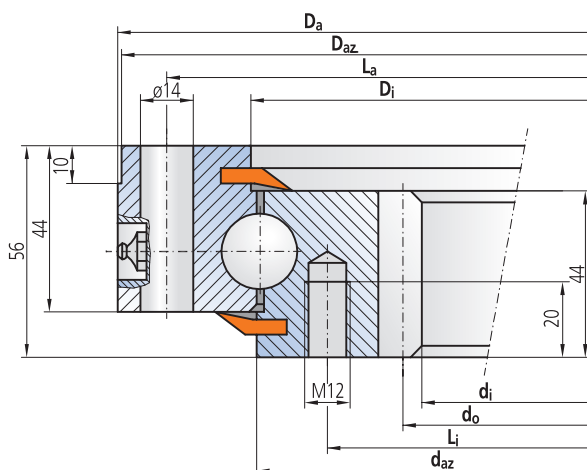
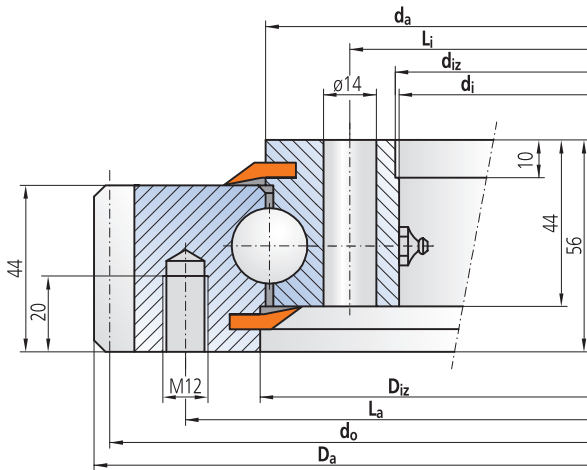
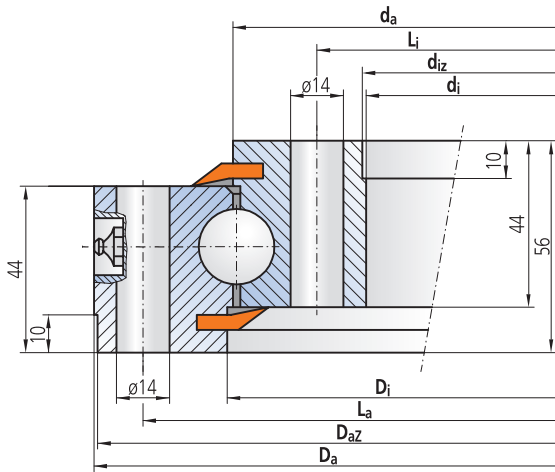
Drawing number	Position	Dimensions and weight							Mounting holes				Load ratings			
		Outside diameter, outer ring	Outside diameter, outer ring, spigot	Inside diameter, inner ring	Inside diameter, inner ring, spigot	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Static	Dynamic		
		D <sub>a</sub> [mm]	D <sub>az</sub> [mm]	d <sub>i</sub> [mm]	d <sub>iz</sub> [mm]	D <sub>i</sub> [mm]	d <sub>a</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
10-20 0311/0-02003	1	386	384.5-0.09	242	243.5+0.07	315.5	312.5	21	360	20	268	20	192	448	140	140
10-20 0411/0-02013	2	486	484.5-0.10	342	343.5+0.09	415.5	412.5	29	460	24	368	24	254	592	156	156
10-20 0541/0-02023	3	616	614.5-0.11	472	473.5+0.10	545.5	542.5	37	590	32	498	32	334	780	173	174
10-20 0641/0-02033	4	716	714.5-0.13	572	573.5+0.11	645.5	642.5	44	690	36	598	36	395	924	184	185
10-20 0741/0-02043	5	816	814.5-0.14	672	673.5+0.13	745.5	742.5	52	790	40	698	40	457	1068	194	195
10-20 0841/0-02053	6	916	914.5-0.14	772	773.5+0.13	845.5	842.5	59	890	40	798	40	519	1212	204	205
10-20 0941/0-02063	7	1016	1014.5-0.17	872	873.5+0.14	945.5	942.5	66	990	44	898	44	580	1356	213	214
10-20 1091/0-02073	8	1166	1164.5-0.17	1022	1023.5+0.17	1095.5	1092.5	77	1140	48	1048	48	673	1572	224	225

## External toothed

Drawing number	Position	Dimensions and weight							Mounting holes				Gearing and tooth forces				Load ratings			
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, inner ring, spigot	Inside diameter, outer ring, spigot	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		D <sub>a</sub> [mm]	d <sub>i</sub> [mm]	d <sub>iz</sub> [mm]	D <sub>iz</sub> [mm]	d <sub>a</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	d <sub>o</sub> [mm]	m [mm]	z2 [-]	f <sub>z norm</sub> [kN]	f <sub>z max</sub> [kN]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
11-20 0311/1-02103	1	404.0	242	243.5+0.07	317 +0.09	312.5	23	355	20	268	20	395	5	79	11.75	23.5	192	448	140	140
11-20 0411/1-02113	2	504.0	342	343.5+0.09	417 +0.10	412.5	32	455	20	368	24	495	5	99	11.75	23.5	254	592	156	156
11-20 0541/1-02123	3	640.8	472	473.5+0.10	547 +0.11	542.5	43	585	28	498	32	630	6	105	17.5	32.7	334	780	173	174
11-20 0641/1-02133	4	742.8	572	573.5+0.11	647 +0.13	642.5	52	685	32	598	36	732	6	122	17.5	32.7	395	924	184	185
11-20 0741/1-02143	5	838.8	672	673.5+0.13	747 +0.13	742.5	58	785	36	698	40	828	6	138	17.5	32.7	457	1068	194	195
11-20 0841/1-02153	6	950.4	772	773.5+0.13	847 +0.14	842.5	71	885	36	798	40	936	8	117	27.9	50.3	519	1212	204	205
11-20 0941/1-02163	7	1046.4	872	873.5+0.14	947 +0.14	942.5	77	985	40	898	44	1032	8	129	27.9	50.3	580	1356	213	214
11-20 1091/1-02173	8	1198.4	1022	1023.5+0.17	1097 +0.17	1092.5	90	1135	44	1048	48	1184	8	148	27.9	50.3	673	1572	224	225

## Internal toothed

Drawing number	Position	Dimensions and weight							Mounting holes				Gearing and tooth forces				Load ratings			
		Outside diameter, outer ring	Outside diameter, outer ring, spigot	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, outer ring, spigot	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		D <sub>a</sub> [mm]	D <sub>az</sub> [mm]	d <sub>i</sub> [mm]	D <sub>i</sub> [mm]	d <sub>az</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	d <sub>o</sub> [mm]	m [mm]	z2 [-]	f <sub>z norm</sub> [kN]	f <sub>z max</sub> [kN]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
12-20 0311/1-02203	1	386	384.5-0.09	225	315.5	311 -0.08	22	360	24	275	24	235	5	47	11.9	22.7	192	448	140	140
12-20 0411/1-02213	2	486	484.5-0.10	325	415.5	411 -0.10	31	460	24	375	24	335	5	67	11.9	22.7	254	592	156	156
12-20 0541/1-02223	3	616	614.5-0.11	444	545.5	541 -0.11	43	590	32	505	32	456	6	76	17.5	32.9	334	780	173	174
12-20 0641/1-02233	4	716	714.5-0.13	546	645.5	641 -0.13	50	690	36	605	36	558	6	93	17.5	32.9	395	924	184	185
12-20 0741/1-02243	5	816	814.5-0.14	648	745.5	741 -0.13	57	790	40	705	40	660	6	110	17.5	32.9	457	1068	194	195
12-20 0841/1-02253	6	916	914.5-0.14	736	845.5	841 -0.14	69	890	40	805	40	752	8	94	28	50.5	519	1212	204	205
12-20 0941/1-02263	7	1016	1014.5-0.17	840	945.5	941 -0.14	75	990	44	905	44	856	8	107	28	50.5	580	1356	213	214
12-20 1091/1-02273	8	1166	1164.5-0.17	984	1095.5	1091 -0.17	91	1140	48	1055	48	1000	8	125	28	50.5	673	1572	224	225



Equivalent axial load [kN] →

— Bolt curve R<sub>p0.2</sub> Bolt grade 10.9 — Raceway curve

Please adhere strictly to the rules given in the Technical Information section when using above graph!

Bearing ring material: C45N  
 4 Taper type grease nipples on circumference  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse

**Clearance of precision version**

Position	Radial	Axial
	Clearance	Clearance
1	max. 0.03	max. 0.03
2	max. 0.03	max. 0.03
3	max. 0.03	max. 0.03
4	max. 0.04	max. 0.04
5	max. 0.04	max. 0.04
6	max. 0.05	max. 0.05
7	max. 0.05	max. 0.05
8	max. 0.06	max. 0.06

# Series 125 standard design

## Untoothed

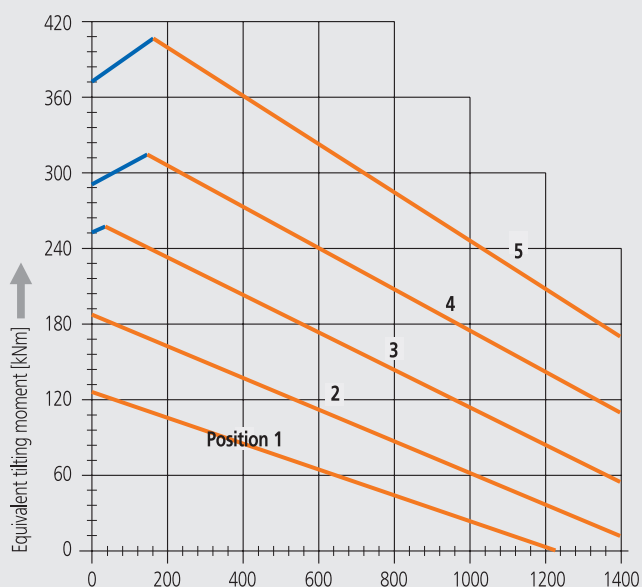
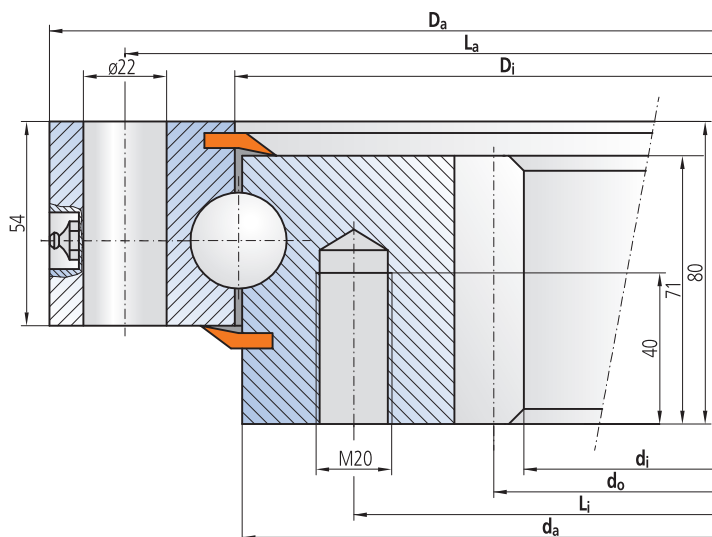
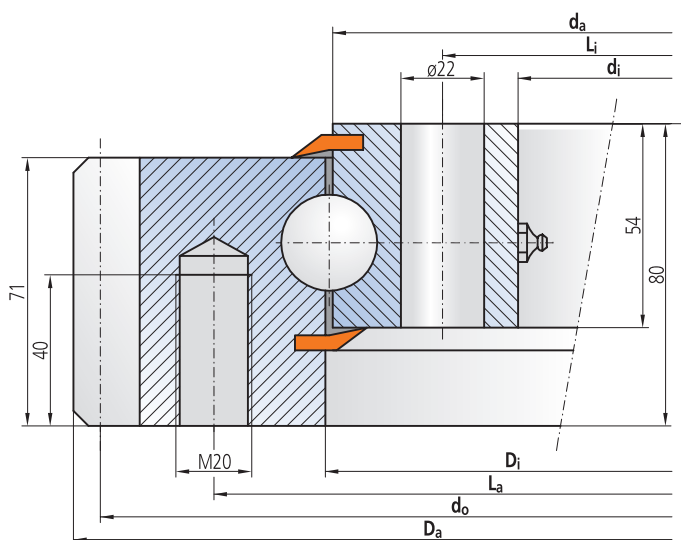
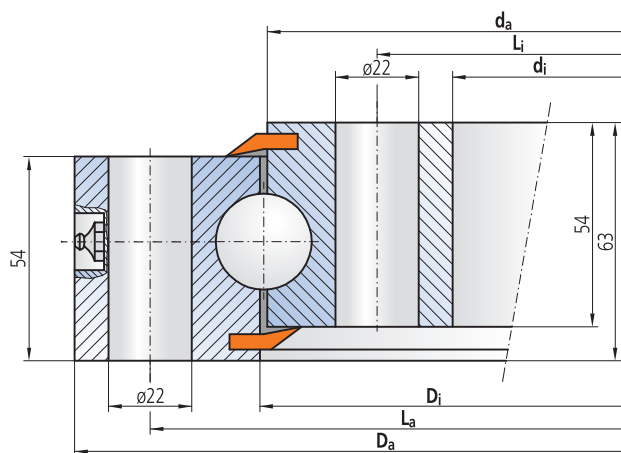
Drawing number	Position	Dimensions and weight					Mounting holes				Load ratings			
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Static	Dynamic		
		D <sub>a</sub> [mm]	d <sub>i</sub> [mm]	D <sub>i</sub> [mm]	d <sub>a</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
10-25 0455/0-04010	1	555	355	457	453	53	515	18	395	18	453	1213	249	289
10-25 0555/0-04020	2	655	455	557	553	65	615	20	495	20	553	1480	268	311
10-25 0655/0-04030	3	755	555	657	653	76	715	24	595	24	653	1746	284	331
10-25 0755/0-04040	4	855	655	757	753	90	815	24	695	24	752	2013	300	349
10-25 0855/0-03010	5	955	755	857	853	101	915	28	795	28	852	2280	316	367
10-25 0955/0-03020	6	1055	855	957	953	115	1015	30	895	30	952	2546	328	382
10-25 1055/0-03030	7	1155	955	1057	1053	128	1115	30	995	30	1051	2813	340	396
10-25 1155/0-03040	8	1255	1055	1157	1153	139	1215	36	1095	36	1151	3080	351	409
10-25 1255/0-03050	9	1355	1155	1257	1253	150	1315	42	1195	42	1240	3346	364	424
10-25 1355/0-03060	10	1455	1255	1357	1353	163	1415	42	1295	42	1350	3613	374	435
10-25 1455/0-03070	11	1555	1355	1457	1453	174	1515	48	1395	48	1450	3879	383	447

## External toothed

Drawing number	Position	Dimensions and weight					Mounting holes				Gearing and tooth forces				Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		D <sub>a</sub> [mm]	d <sub>i</sub> [mm]	D <sub>i</sub> [mm]	d <sub>a</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	d <sub>o</sub> [mm]	m [mm]	z2 [-]	f <sub>z norm</sub> [kN]	f <sub>z max</sub> [kN]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
11-25 0455/1-04110	1	590.4	355	457	453	74	516	18	395	18	576	8	72	28	52	453	1213	249	289
11-25 0555/1-04120	2	694.4	455	557	553	93	616	20	495	20	680	8	85	28	52	553	1480	268	311
11-25 0655/1-04130	3	798.4	555	657	653	111	716	24	595	24	784	8	98	28	52	653	1746	284	331
11-25 0755/1-04140	4	898	655	757	753	125	816	24	695	24	882	9	98	36	65	752	2013	300	349
11-25 0855/1-03110	5	997	755	857	853	145	916	28	795	28	981	9	109	36	65	852	2280	316	367
11-25 0955/1-03120	6	1096	855	957	953	155	1016	30	895	30	1080	9	120	36	65	952	2546	328	382
11-25 1055/1-03130	7	1198	955	1057	1053	171	1116	30	995	30	1180	10	118	43	76	1051	2813	340	396
11-25 1155/1-03140	8	1298	1055	1157	1153	186	1216	36	1095	36	1280	10	128	43	76	1151	3080	351	409
11-25 1255/1-03150	9	1398	1155	1257	1253	201	1316	42	1195	42	1380	10	138	43	76	1240	3346	364	424
11-25 1355/1-03160	10	1498	1255	1357	1353	218	1416	42	1295	42	1480	10	148	43	76	1350	3613	374	435
11-25 1455/1-03170	11	1598	1355	1457	1453	233	1516	48	1395	48	1580	10	158	43	76	1450	3879	383	447

## Internal toothed

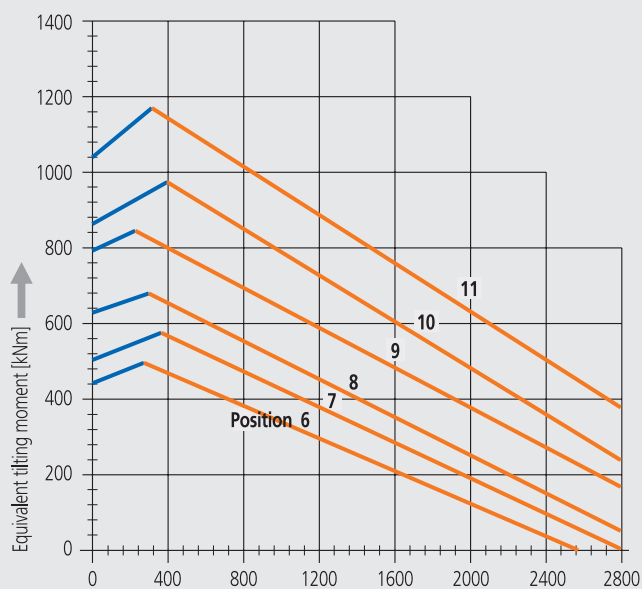
Drawing number	Position	Dimensions and weight					Mounting holes				Gearing and tooth forces				Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Number of holes, outer ring	Pitch circle diameter, inner ring	Number of holes, inner ring	Pitch circle diameter	Module	Number of teeth	Permissible tooth force	Maximum permissible tooth force	Static	Dynamic		
		D <sub>a</sub> [mm]	d <sub>i</sub> [mm]	D <sub>i</sub> [mm]	d <sub>a</sub> [mm]	G [kg]	L <sub>a</sub> [mm]	n <sub>a</sub> [-]	L <sub>i</sub> [mm]	n <sub>i</sub> [-]	d <sub>o</sub> [mm]	m [mm]	z2 [-]	f <sub>z norm</sub> [kN]	f <sub>z max</sub> [kN]	C <sub>o rad</sub> [kN]	C <sub>o ax</sub> [kN]	C <sub>rad</sub> [kN]	C <sub>ax</sub> [kN]
12-25 0455/1-04210	1	555	304	457	453	64	515	18	394	18	320	8	40	32	64	453	1213	249	289
12-25 0555/1-04220	2	655	416	557	553	76	615	20	494	20	432	8	54	32	64	553	1480	268	311
12-25 0655/1-04230	3	755	512	657	653	102	715	24	594	24	528	8	66	32	64	653	1746	284	331
12-25 0755/1-04240	4	855	610	757	753	119	815	24	694	24	630	10	63	47	86	752	2013	300	349
12-25 0855/1-03210	5	955	710	857	853	137	915	28	794	28	730	10	73	47	86	852	2280	316	367
12-25 0955/1-03220	6	1055	810	957	953	149	1015	30	894	30	830	10	83	47	86	952	2546	328	382
12-25 1055/1-03230	7	1155	910	1057	1053	165	1115	30	994	30	930	10	93	47	86	1051	2813	340	396
12-25 1155/1-03240	8	1255	1010	1157	1153	180	1215	36	1094	36	1030	10	103	47	86	1151	3080	351	409
12-25 1255/1-03250	9	1355	1110	1257	1253	195	1315	42	1194	42	1130	10	113	47	86	1240	3346	364	424
12-25 1355/1-03260	10	1455	1210	1357	1353	212	1415	42	1294	42	1230	10	123	47	86	1350	3613	374	435
12-25 1455/1-03270	11	1555	1310	1457	1453	227	1515	48	1394	48	1330	10	133	47	86	1450	3879	383	447



Equivalent axial load [kN] →

— Bolt curve  $R_{p0.2}$  Bolt grade 10.9 — Raceway curve

Please adhere strictly to the rules given in the Technical Information section when using above graph!



Equivalent axial load [kN] →

— Bolt curve  $R_{p0.2}$  Bolt grade 10.9 — Raceway curve

Please adhere strictly to the rules given in the Technical Information section when using above graph!

Radial clearance: 0 - 0.25 mm  
 Axial clearance: 0 - 0.4 mm  
 Bearing ring material: C45N  
 4 Taper type grease nipples on circumference  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse

# Series 150 standard design

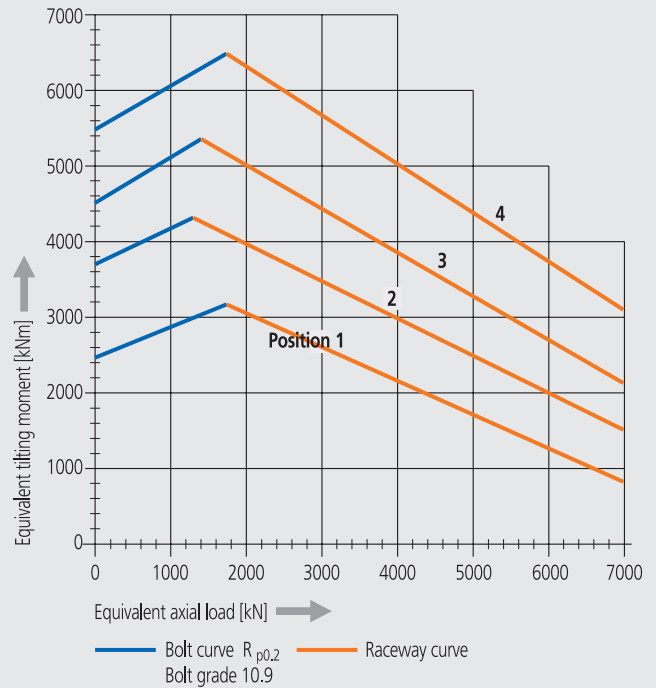
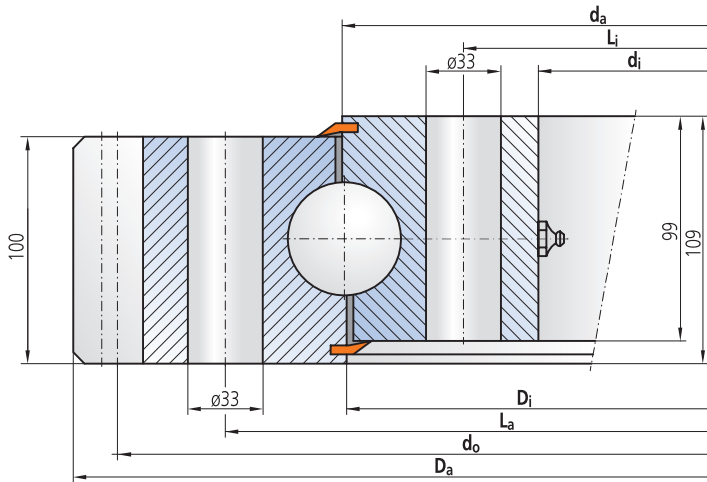
## External toothed

Drawing number	Position	Dimensions and weight					Mounting holes			Gearing and tooth forces					Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Pitch circle diameter, inner ring	Number of holes per pitch circle	Pitch circle diameter	Module	Number of teeth	Addendum modification coeff.	Permissible tooth force	Maximum permissible tooth force	Static		Dynamic	
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$L_i$ [mm]	$n$ [-]	$d_o$ [mm]	$m$ [mm]	$z2$ [-]	$x2$ [-]	$f_z^{norm}$ [kN]	$f_z^{max}$ [kN]	$C_{o rad}$ [kN]	$C_{o ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
11-50 1900/2-06400	1	2139.2	1729	1898	1902	820	2005	1795	36	2100	14	150	+0.50	132	229	3323	8891	1129	1315
11-50 2130/2-06410	2	2380.8	1959	2128	2132	931	2235	2025	48	2336	16	146	+0.50	155	273	3725	9968	1177	1371
11-50 2355/2-06420	3	2604.8	2184	2353	2357	1024	2460	2250	54	2560	16	160	+0.50	155	273	4118	11020	1223	1425
11-50 2645/2-06430	4	2892.8	2474	2643	2647	1142	2750	2540	60	2848	16	178	+0.50	155	273	4625	12378	1279	1490

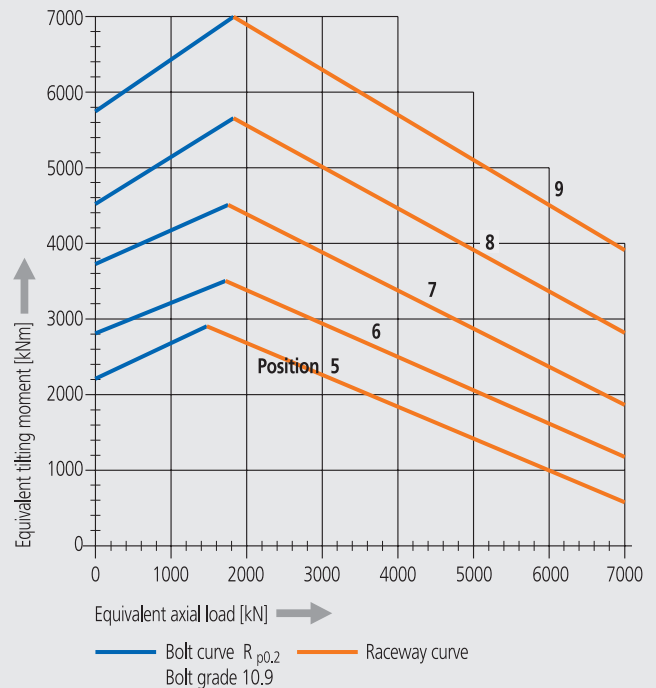
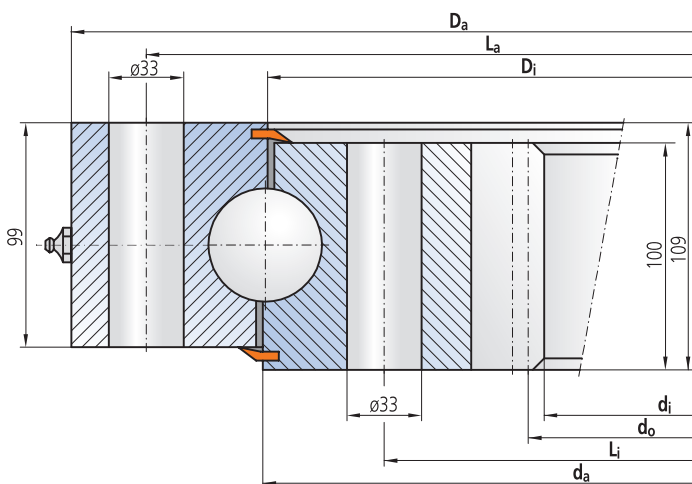
## Internal toothed

Drawing number	Position	Dimensions and weight					Mounting holes			Gearing and tooth forces					Load ratings				
		Outside diameter, outer ring	Inside diameter, inner ring	Inside diameter, outer ring	Outside diameter, inner ring	Weight	Pitch circle diameter, outer ring	Pitch circle diameter, inner ring	Number of holes per pitch circle	Pitch circle diameter	Module	Number of teeth	Addendum modification coeff.	Permissible tooth force	Maximum permissible tooth force	Static		Dynamic	
		$D_a$ [mm]	$d_i$ [mm]	$D_i$ [mm]	$d_a$ [mm]	$G$ [kg]	$L_a$ [mm]	$L_i$ [mm]	$n$ [-]	$d_o$ [mm]	$m$ [mm]	$z2$ [-]	$x2$ [-]	$f_z^{norm}$ [kN]	$f_z^{max}$ [kN]	$C_{o rad}$ [kN]	$C_{o ax}$ [kN]	$C_{rad}$ [kN]	$C_{ax}$ [kN]
12-50 1800/2-06500	5	1971	1554	1798	1802	762	1905	1695	36	1568	14	112	-0.50	141	254	3148	8423	1105	1286
12-50 2000/2-06510	6	2171	1764	1998	2002	843	2105	1895	40	1778	14	127	-0.50	141	254	3457	9359	1153	1343
12-50 2240/2-06520	7	2411	1984	2238	2242	961	2345	2135	48	2000	16	125	-0.50	166	290	3917	10482	1198	1395
12-50 2490/2-06530	8	2661	2240	2488	2492	1053	2595	2385	54	2256	16	141	-0.50	166	290	4354	11652	1250	1256
12-50 2800/2-06540	9	2971	2544	2798	2802	1205	2905	2695	60	2560	16	160	-0.50	166	290	4896	13103	1301	1516

Limiting load diagram for "compressive" loads – Series 150



Please adhere strictly to the rules given in the Technical Information section when using above graph!



Please adhere strictly to the rules given in the Technical Information section when using above graph!

Radial clearance: 0 - 0.4 mm  
 Axial clearance: 0 - 0.75 mm  
 Bearing ring material: 42CrMo4V  
 9 to 12 Taper type grease nipples on circumference  
 Mounting holes equally spaced  
 Raceway system supplied pre-lubricated  
 Dimensions without tolerances DIN ISO 2768 coarse