



ROYSE

Contents

Brief introduction	p. 4
Product feature	p. 5
Application examples	p. 6
Transport, storage and mounting preparation	p. 7
Safety coefficient	p. 8
Calculation of singlerow four-points contact ball slewing ring	p. 9
Flatness	p. 10
Pre-load forces and tightening torques for metric bolts	p. 11
Structure's flange	p. 12
Reference identification	p. 13
Lubrication	p. 14
Assembly	p. 15
Slewing rings - Without teeth (SD)	p. 16
Slewing rings - With external teeth (E)	p. 22
Slewing rings - With internal teeth (I)	p. 32
Slewing rings - Special models	p. 42



Brief introduction

TECMA DRIVE is a brand that positions itself in the industrial and solar market with the versatility and quality that a product needs to satisfy the demands of the sector.

Behind TECMA DRIVE there is a long trajectory in the sector with over 15 years of experience, which allows us to commercialize and guarantee a product that meets the needs of the market.

In order to manage the demands of different sectors, TECMA DRIVE provides technical support and calculation solutions.

All factories used for the manufacture of our products currently possess all required ISO certifications and have been audited by TECMA DRIVE staff. These factories are required to adhere to TECMA DRIVE's standards and quality specifications which cover all aspects of design, materials, and manufacture.

WARRANTY

TECMA DRIVE slewing rings are guaranteed for 12 months (with the possibility to extend it) after delivery to be free from material defect and manufacturing or assembly error.

TECMA DRIVE assumes no liability for damages arising from:

- Improper selection of product by the customer
- Failure to follow the instructions and information in this manual
- Improper use of the product
- The use of untrained personnel
- Any modifications to the product as delivered



Product features

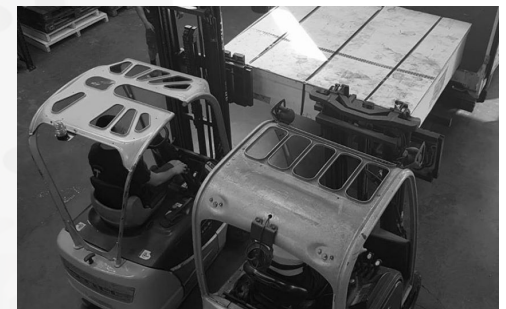
TECMA DRIVE's light and reinforced series of slewing rings comply with international standards, requirements and are approved for both simple and complex use cases.

Slewing rings are composed of two rings, an inner and an outer ring, in which raceway are obtained that contain rolling elements on which the working loads are transmitted from the moving ring to the fixed one. They should be transported and stored horizontally or on specially adapted incline frames.

The raceways of our slewing ring are hardened, and the soft area is properly marked. The slewing rings can be supplied gearless or with either internal or external teeth. The suffixes corresponding to each version are E. (external teeth), I. (internal teeth) and SD. (without teeth). TECMA DRIVE can also provide also slewing rings with clearance limitations and centering coefficients. Slewing's rings with anti-corrosion or painted treatment are also available upon request. The materials used for the slewing rings are the following: C45 N, C45 B, 42 CrM04 N, 42 CrM04 B.

The teeth of our standard slewing rings are not hardened. However, at the request of our clients, these types of treatments can be performed following special requests or requirements. The operating temperature of our slewing rings ranges from -25°C to + 60°C. All our slewing rings include a protective seal on each inner ring; the seal is made of NBR material that is characterized by a good resistance to oil and grease and guarantees a perfect sealing protection.

If conditions require a different seal, TECMA DRIVE can provide alternative solutions according to your application. TECMA DRIVE slewing rings are sold with pre-lubricated raceways and come rust protected.



Application Examples



1. Tower Cranes



2. Mining Equipment



3. Hand Lifting Manipulators



4. Elevator Machines



5. Maritime Cranes



6. Packaging Machines



7. Bottling Machines



8. Renewable Energy Sources



Transport, Storage and Mounting Preparation

TECMA DRIVE's light and reinforced series of slewing rings comply with international standards, requirements and are approved for multiple simple and complex applications. Vibrations during transport should be minimized because they may damage the raceways. Shock loads should be avoided to prevent damage to the raceways. Caution must be taken not to dislodge seals or grease nipples during movement. Wooden or rubber spacers should be used to separate unwrapped rings stacked vertically to avoid surface damage. Gear teeth should be protected from impact damage.

Light surface corrosion may occur in humid conditions, but it can be easily removed from the external surface. It is very important that the raceways are well greased to remain rust free. For this reason, slewing rings are pre-lubricated with grease.

In case of long storage time, the slewing rings may need professional cleaning and greasing before use. For this reason, those that are sold after long time storage are inspected before being sent.

If the slewing ring has threaded holes, eyebolts can be used for manipulation or lifting. For safety reasons, check the weight of the ring to ensure any slings or chains used are suitable. Slewing rings must not be suspended from a crane by a single sling or placed on the ground vertically as they may deform under their own weight.

Degrease and clean the slewing rings, especially the mounting faces. Use degreaser sparingly and do not let the fluid work its way under the seals and into the raceway. The datum plane of slewing rings and the installing platform should be cleaned up lest the sundries and welding slag should affect the installing precision. The installing support should be rigid enough to prevent the slewing rings from distorting and affecting the performance.



Storage



Packaging



Transportation



Technical info



Sales



Safety Coefficient

Forces to consider in slewing rings:

- Total axial force F_a (10^4N)
- Total overturning moment M_r (10^4 Nm.)
- Total radial force F_r of the fractional surface of overturning moment (10^4 N)
- Gear forces F_n

When the type selection is calculated, the static condition of the slewing ring, F_a , M_r , F_r and Dynamic conditions of forces F_a , M_r , F_r should be calculated separately.

If host ascends, ascension load should be multiplied by the inertia coefficient K , $K= 1,25$.

Table-Slewing ring safety coefficient

Application of the slewing ring			The type of slewing ring					
			Q,01		02		J.11:S.13	
			fs	fd	fs	fd	fs	fd
Tower crane for construction	Upper type of slewing	Mf ≤ 0.5M	1.25	1.36	1.25	1.00	1.25	1.00
		0.5M <Mf <0.8M		1.55		1.15		1.13
		Mf ≥ 0.8M		1.71		1.26		1.23
	Under type of slewing rings			1.36		1.00		1.07
Wheel crane, stacker-reclaimer and all kinds of the workbench			1.10		1.10	1.10	1.10	1.00
Cantilever crane, port crane, all kinds of and unloading machinery			1.25	1.55	1.25	1.15	1.25	1.13
Belt conveyor handling with tower cranes and crawler cranes				1.71	1.10	1.26		1.23
Grab and shovel excavator, dredger, floating crane			1.45	2.50	1.45	1.71		
Excavators of bucket capacity <1. 6m³					1.25	1.26	1.45	1.45
Excavators of bucket capacity ≥ 1.6m³			1.75	3.00			1.75	
Metallurgical crane, bucket wheel excavators, tunnel boring machine			2.00	3.50	1.45	1.75		

Table 1: Recommended safety coefficient slewing rings use



Calculation of single row four-point contact ball slewing ring

45° and 60°

Static working condition to selection

$\alpha = 45^\circ$

$$Fa' = (1,225Fa + 2,676Fr)fs$$

$$M' = 1,225Mfs$$

$\alpha = 60^\circ$

$$Fa' = (Fa + 5,046Fr)fs$$

$$M' = Mfs$$

Dynamic working condition to life checking

$\alpha = 45^\circ$

$$Fa' = (1,225Fa + 2,676Fr)fd$$

$$M' = 1,225Mfd$$

$\alpha = 60^\circ$

$$Fa' = (Fa + 5,046Fr)fd$$

$$M' = Mfd$$

Calculation of model single cross roller type

Static working condition to selection

$$Fa' = (Fa + 2,05Fr)fs$$

$$M' = Mfs$$

Dynamic working condition to life checking

$$Fa' = (Fa + 2,05Fr)fd$$

$$M' = Mfd$$

Fa: Nominal axial load (kN)
 Mr: Nominal tilting moment (kN.m)
 Fr: Nominal radial load (kN)
 Fa': Equivalent axial load (kN)
 M': Working tilting moment (kN.m)
 fs: Safety factor coefficient
 fd: Working axial load (kN)

Static Load Capacity:
 Axial load → (Coa)
 Radial Load → (Cor)
 Tilting Moment → (Mr)
 Dynamic Load Capacity:
 Axial Load → (CA)
 Radial Load → (CR)



Flatness

The flatness of the slewing rings mounting surface is critical to optimal performance. Oftentimes, mounting structures are welded or worked in a way which induces stresses into the structure.

These stresses must be relieved, following which the slewing rings mounting surface must be machined flat. The amount of out-of-flatness allowable in the circumferential direction for four-point ball rings is shown in the table below.

Raceway diameter (mm)	Permissible flatness deviation of the mounting surface (mm)		
	Single row ball	Double row ball	Roller
>500	0.10	0.15	0.07
>1000	0.15	0.20	0.10
>1500	0.19	0.25	0.12
>2000	0.22	0.30	0.15
>2500	0.25	0.35	0.17
>4000	0.30	0.40	0.20
>6000	0.40	0.50	0.30

Table 2: Surface flatness requirements



Pre-load Forces and Tightening Torques for Metric Bolts

The safe operation and service life of the slewing rings are significantly influenced by the bolted connection. Therefore, it is necessary that the prescribed number, quality and dimensions of the bolts is observed.

The supporting surface of the tapped part of the bolt and nut must not show any chambered corners. If a chambered angle is present, an additional alternating bending load is present, negatively affecting the service life of the bolt. In addition, the fixing holes of the rings and the connection construction must match, otherwise this will cause tension in the ring.

When using bolts with a higher quality class than 8.8, refined washers according to DIN 6916 are prescribed under the bolt head and nut. Due to the high tightening force of the bolts, this otherwise leads to the flow of the material and thus to the reduction of the bolt tension and the loosening of the bolts. The washers can only be dispensed with for the slewing ring with refined rings.

Bolt Specification	Holes Diameter (mm)	Bolt Intensity Grade (GB3098.1-82)		
		8.8	10.9	12.9
		Intensity Limit of Bolt Material δ s/min (N/mm2)		
		640	900	1080
		Pre-tightening Moment of Torque MA (N·m)		
M10	11	44	62	75
M12	13.5	79	110	130
M14	15.5	120	170	210
M16	18	190	265	320
M18	20	260	365	435
M20	22	370	520	620
M22	24	500	700	840
M24	26	640	900	1080
M27	30	950	1350	1620
M30	33	1300	1800	2160

Table 3: Recommended bolt torque (UNC thread)



Structure's Flange

Although slewing rings are designed to support large axial, radial and moment loads they are inherently elastic structures that must be supported by flat, machined companion surfaces which are rigid enough to eliminate torsional buckling under load that would affect the smooth operation of the ring.

Thick circular supports are preferred over thinner supports with reinforcement ribs.

Where there are high radial forces the ring should be properly supported on the reference diameters to ensure the bolts are not overloaded in shear.

The suggested thickness of the supporting rings are shown in the table below.

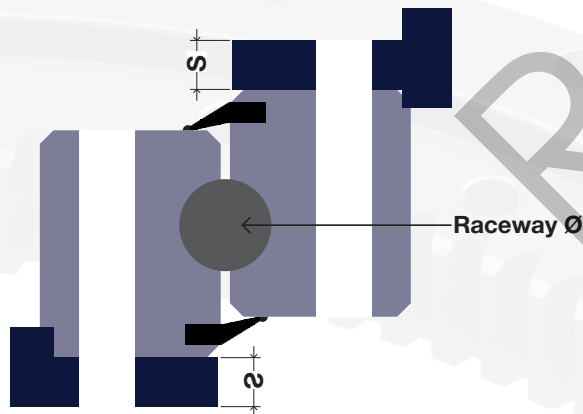


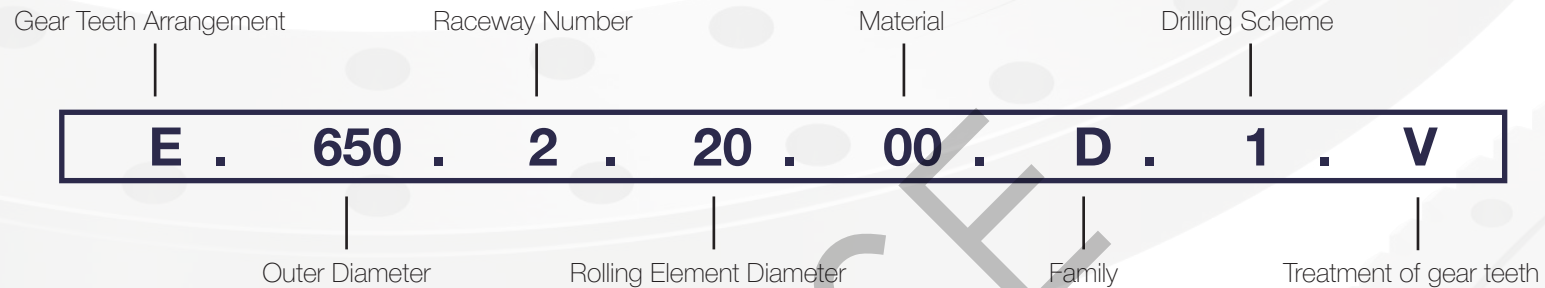
Figure 1: Support needed in slewing rings

Raceway diameter (mm)	Minimum support thickness (mm)
>500	25
>750	30
>1000	35
>1250	40
>1500	50
>2000	60
>2500	70
>3000	80

Table 4: Recommended minimum support thickness to reinforce ribs



Reference identification



Gear Teeth Arrangement:

SD = Without gear teeth
E = External gear teeth
I = Internal gear teeth

Raceway Number:

Shown when it's a double row slewing ring (2).

Material:

00 = C45 (Q+T)
10 = C45 (Q+T) and 42CrMo4 (Q+T)
15 = 42CrMo4 (Q+T)

Drilling Scheme:

Slewing rings have through holes or threaded holes for fixing screws.

Outer Diameter:

Shown in mm. Ranges from 200mm to 3500mm.

Rolling Elements:

Shown in mm.

Family:

A = Slewing ring with same diameter fixing holes in both inner and outer ring
B = Standard version
C = Light standard version
D = Special version

Treatment of gear teeth:

V = gear hardened flank teeth
W = gear hardened flank and bottom teeth



Lubrication

TECMA DRIVE slewing rings come pre-lubricated with a lithium-complex grease based on mineral oil with EP-additive. The recommended lubricants for the raceways are lithium plastic lubricants with the consistency level of 2 with EP additives.

Relubrication interval and lubricant quantity will vary according to on operating conditions, which includes but is not limited to: load, rotational speed, operational environment properties, etc. For low-speed applications (mobile cranes, construction cranes, etc.), the relubrication interval is around 200 operating hours.

For other applications, such as machines with higher rotational speed, equipment operating under permanent rotational speed or equipment in tropical conditions (excavators, universal finishing machines, magnetic separators, etc.), the re-lubrication interval is shorter, at approximately 70-100 operating hours.

If possible, relubrication should be done using the same grease as present on the slewing rings. When using different types of grease, it must be compatible with the current grease and with seal materials. Greases with different thickeners or base oils are generally not mixable. When in doubt, please contact the grease manufacturer.

The following table contains common greases for the slewing rings raceways and gears:

Company	Raceway	Gear
BP	Energrease LS - EP2	Energrease LC 2
Mobilux	Mobilux EP2	Mobilgear OGL 461
SHELL	Alvania EPLF2	Malleus OGH
MOTUL /BECHEM	Rhus L 474/2	Berulit GA 400
ESSO	BEACON EP 2	Multi-Purpose Grease (Moly)
TOTAL FINA	Multis EP2 - Lical	Ceran AD
ELF	Epexa 2 / Epexelf 2	Cardrex DC1
CASTROL	Spheerol EPL 2	Castol LMX
ARAL	Aralub HLP2	Aralub MKA-Z 1

Table 5: TECMA DRIVE recommended raceway lubricants



Assembly

The ring must be mounted on a machined supporting structure, which must be clean, flat and rigid.

The mounting surface must be:

1. Free of any foreign matter (such as paint or welding beads).
2. Checked for their flatness and perpendicular deviations.

This helps to distribute proportionally the force on the ring, avoiding a concentration into restricted parts which would be harmful to the good working of the ring.

Shape defects of the supporting structure lead to deformation of the raceway; this can cause tight spots or possible seizure and will reduce the ring service.

The maximum flatness error depends on the constructive form of the ring and the medium diameter of the raceway (U.C.). This error must not exceed the limits reported in the table below. If this errors exceed of the recommended values, please contact our technical departament.

Bolt clamp length $LK=5d$ (Bolt Diameter)

The nut intensity grade, allowed to be lower one grade than of the bolt, comply with the stipulation in the GB398.2-82 standard.

After installation

1. Inspect whether the gear intervenes
2. Confirm whether the bolts have been completely
3. Confirm whether the operation is well

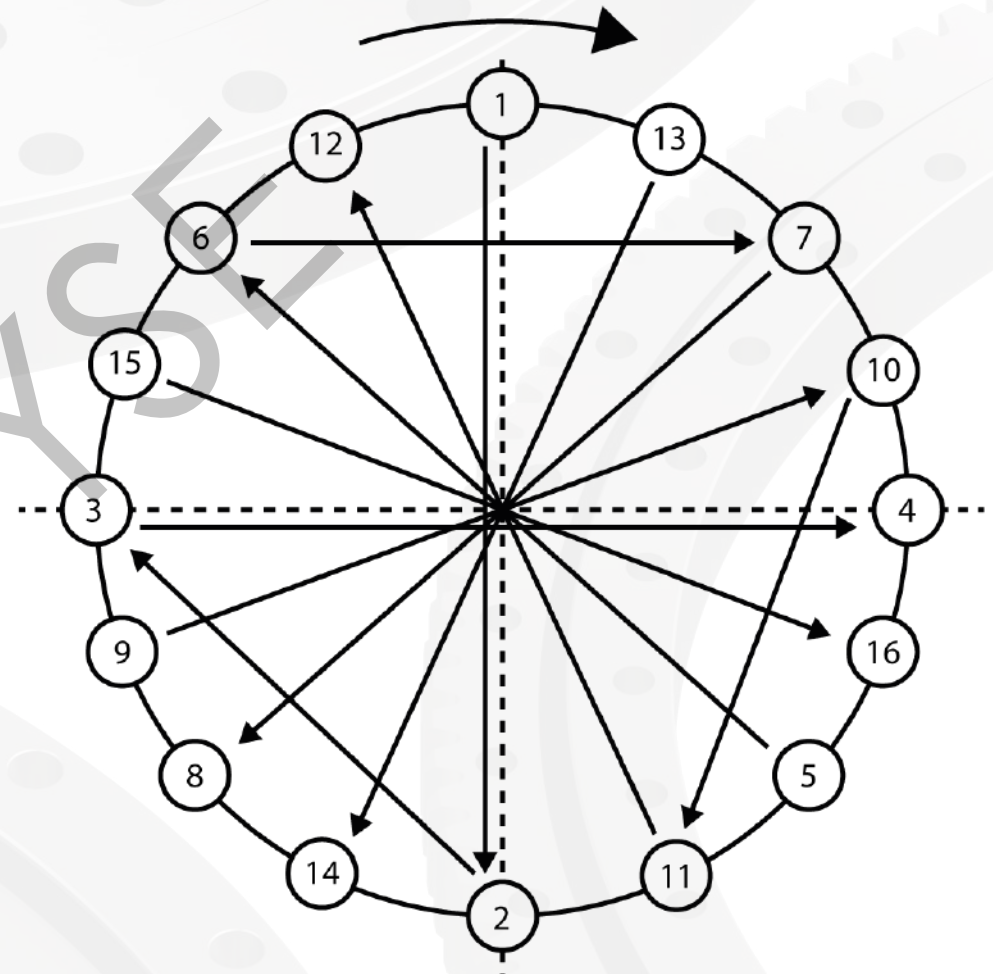


Figure 2: Order how to fix the slewing rings





GEARLESS MODELS

Light version, ball Ø20mm, gearless, standard holes



- Options include: Up to 1600mm diameter, undrilled, double drilled and higher precision bearings. Ask for details
- Grease Nipples: DIN 71412

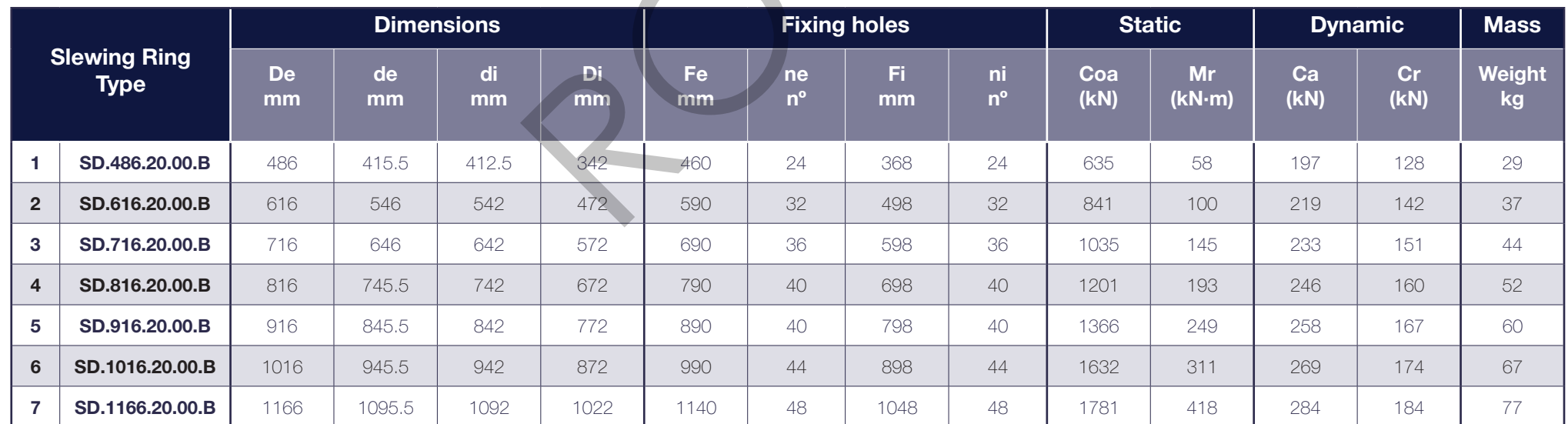
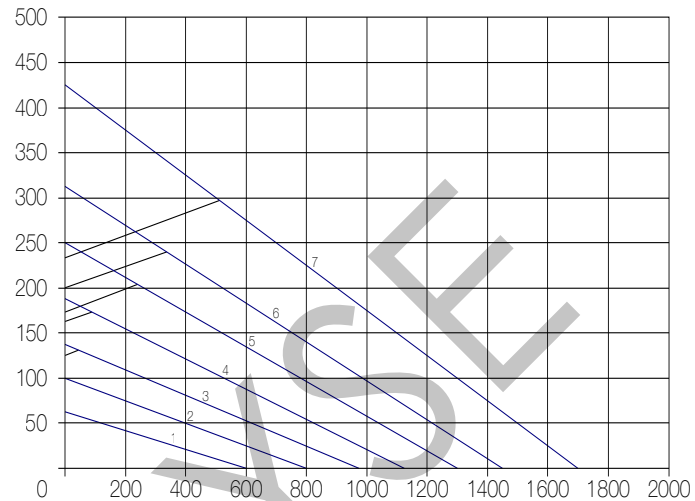


Light version, ball Ø32mm, gearless, standard holes



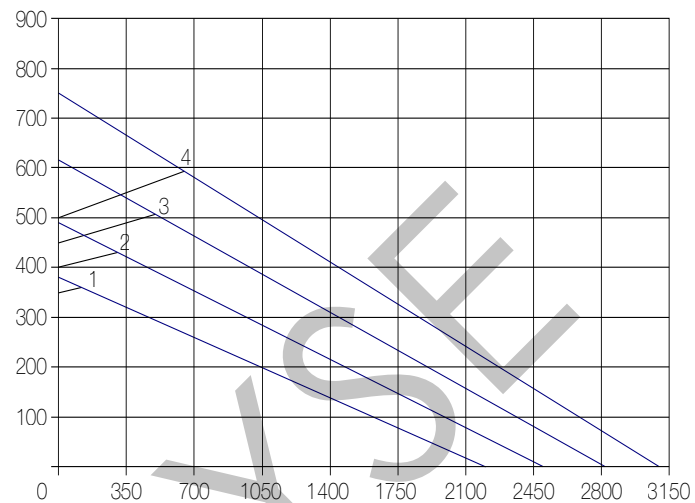
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Standard version, ball Ø20mm, gearless, standard holes



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Standard version, ball Ø25mm, gearless, standard holes

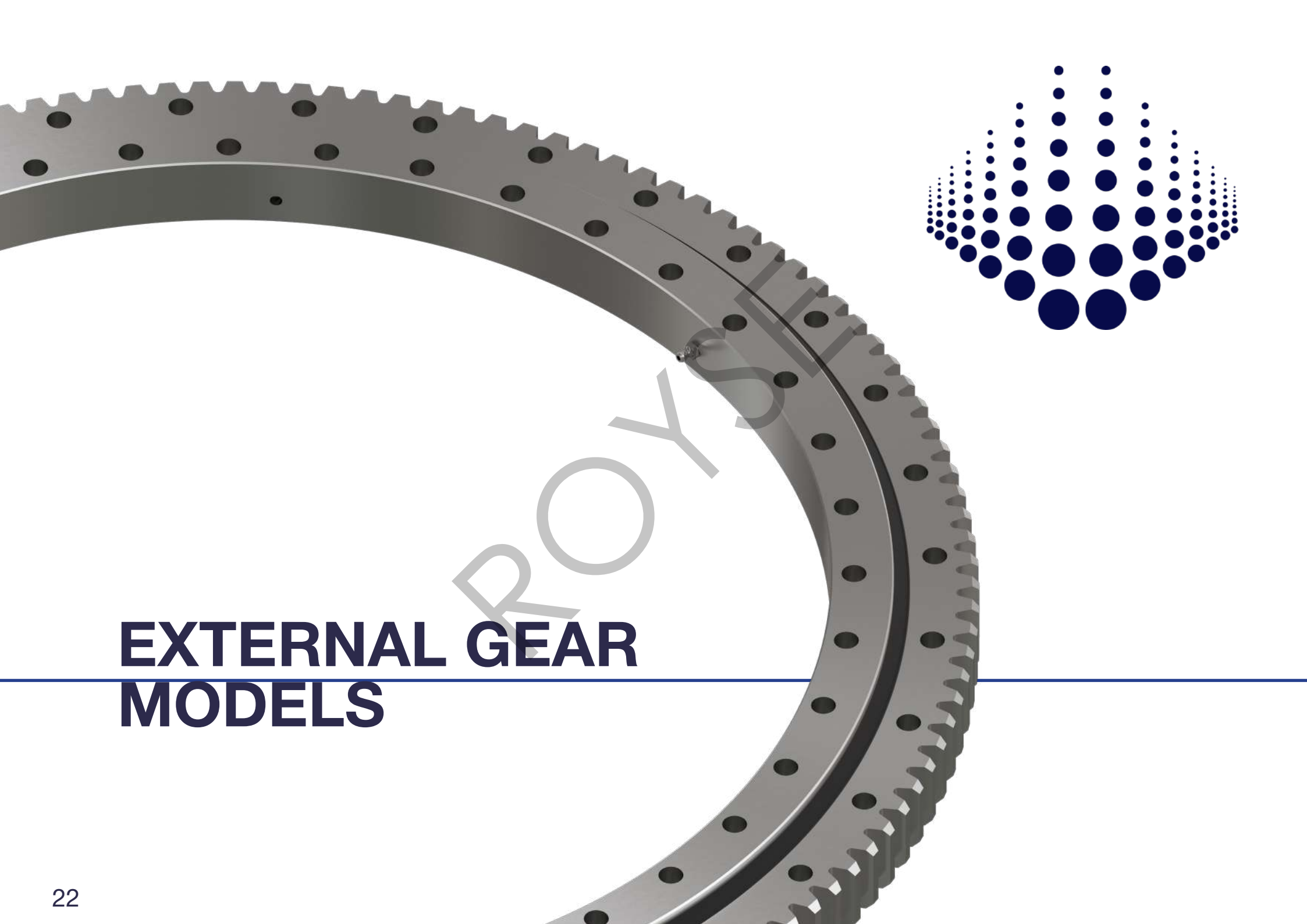


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Special version, different ball Ø in mm, gearless, special holes

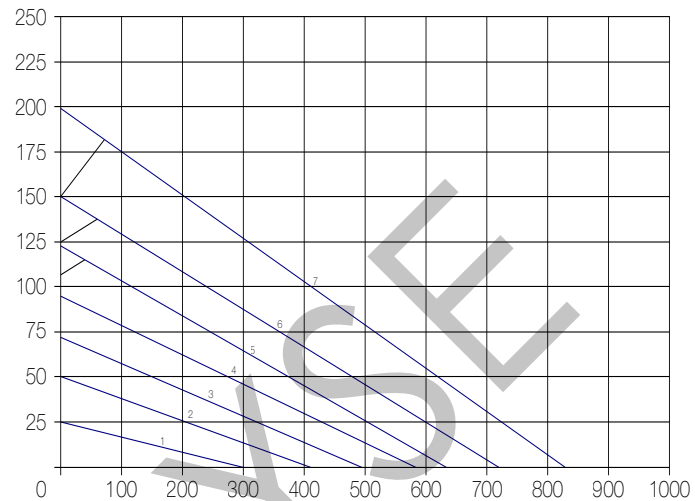


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EXTERNAL GEAR MODELS

Light version, ball Ø20mm, externally geared, standard holes

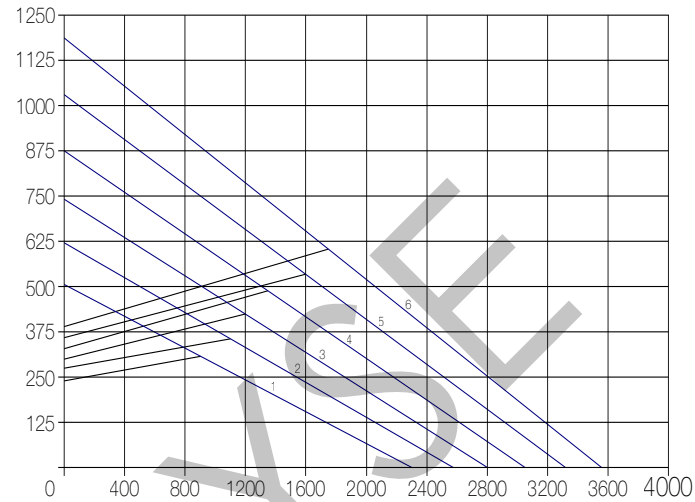
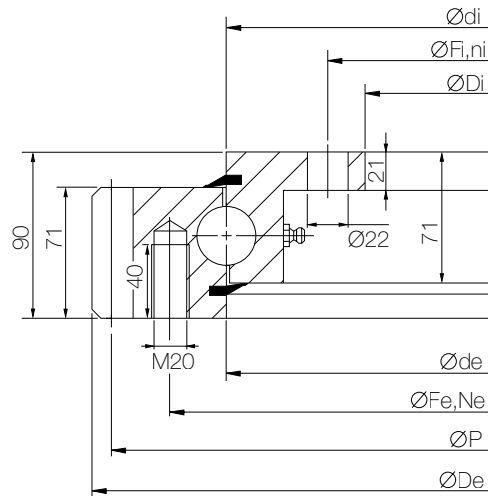


- Options include: Up to 1600mm diameter, undrilled, double drilled and higher precision bearings. Ask for details
- Grease nipples: DIN 71412



E.32.00.C

Light version, ball Ø32mm, externally geared, standard holes



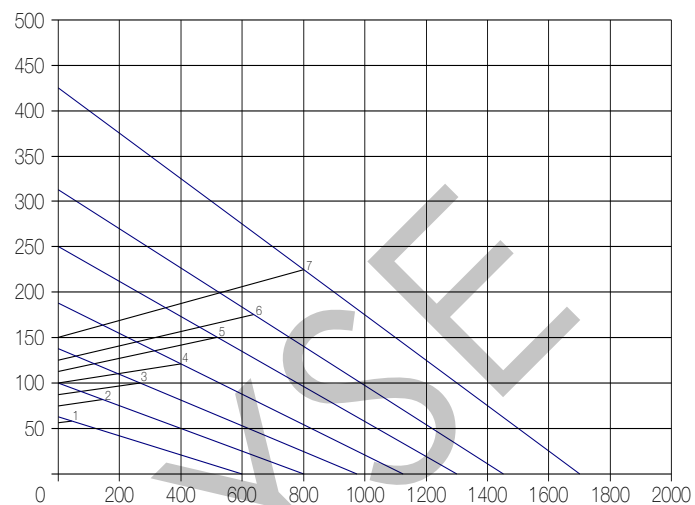
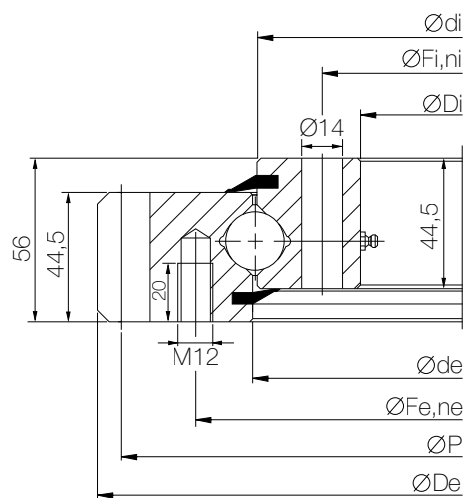
Slewing Ring Type	Dimensions					Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
	De mm	de mm	di mm	l mm	Di mm	Fe mm	na n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1 E.1100.32.00.C	1098	955	955	893	805	1016	30	845	30	1080	9	120	49.9	69.9	2260	553	538	349	165
2 E.1200.32.00.C	1200	1055	1055	993	905	1116	30	945	30	1180	10	118	55.5	77.6	2941	674	557	362	183
3 E.1300.32.00.C	1300	1155	1155	1093	1005	1216	36	1045	36	1280	10	128	55.5	77.6	3222	806	576	374	200
4 E.1400.32.00.C	1400	1255	1255	1193	1105	1316	42	1145	42	1380	10	138	55.5	77.6	3503	951	593	385	216
5 E.1500.32.00.C	1500	1355	1355	1293	1205	1416	42	1245	42	1480	10	148	55.5	77.6	3784	1107	610	396	234
6 E.1600.32.00.C	1600	1455	1455	1393	1305	1516	48	1345	48	1580	10	158	55.5	77.6	4065	1276	626	406	250

- Options include: Up to 2200mm diameter, undrilled, double drilled and higher precision bearings. Ask for details
- Grease nipples: DIN 71412



E.20.00.B

Standard version, ball Ø20mm, externally geared, standard holes



Slewing Ring Type		Dimensions				Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
		De mm	de mm	di mm	Di mm	Fe mm	ne n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1	E.505.20.00.B	503.3	415.5	412.5	342	455	20	368	24	495	5	99	17.8	24.9	635	58	197	128	31
2	E.650.20.00.B	640.3	545.5	542.5	472	585	28	498	32	630	6	105	21.2	29.7	869	103	218	142	43
3	E.750.20.00.B	742.3	645.5	642.5	572	685	32	598	36	732	6	122	21.2	29.7	1035	145	233	151	52
4	E.850.20.00.B	838.1	745.5	742.5	672	785	36	698	40	828	6	138	21.2	29.7	1186	191	246	160	59
5	E.950.20.00.B	950.1	845.5	842.5	772	885	36	798	40	936	8	117	28.2	39.6	1366	249	258	167	71
6	E.1050.20.00.B	1046.1	945.5	942.5	872	985	40	898	44	1032	8	129	28.2	39.6	1532	312	269	174	77
7	E.1200.20.00.B	1198.1	1095.5	1092.5	1022	1135	44	1048	48	1184	8	148	28.2	39.6	1781	418	284	184	91

- Options include: Double drilled and higher precision bearings. Ask for details
- Grease nipples: DIN 71412



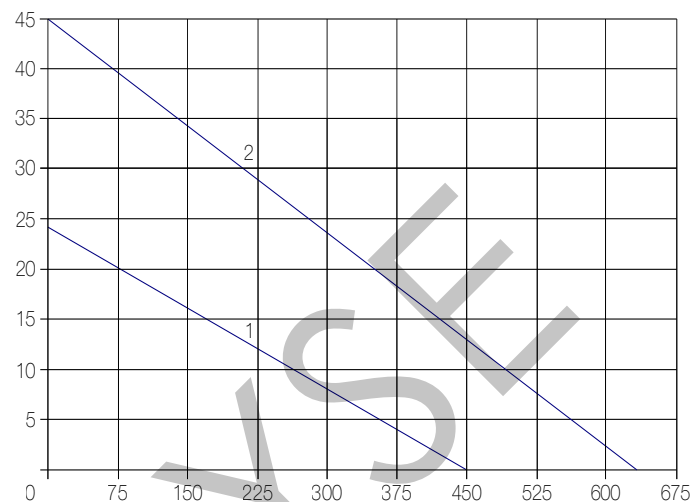
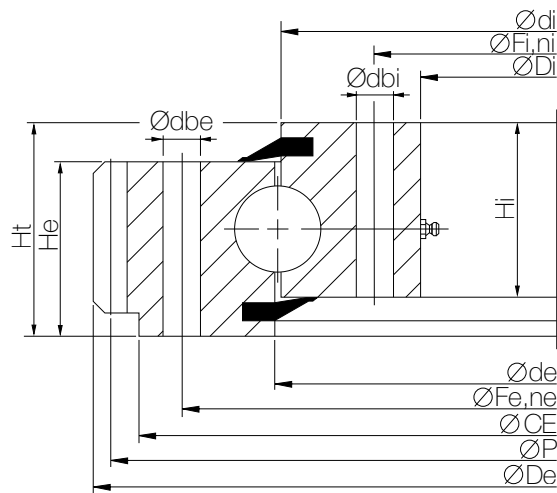
Standard version, ball Ø25mm, externally geared, standard holes



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E.22.00.D

Special version, ball Ø22mm, externally geared, special holes



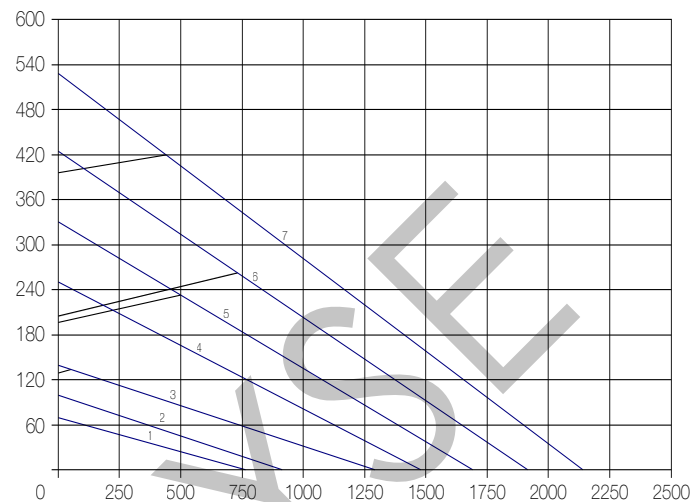
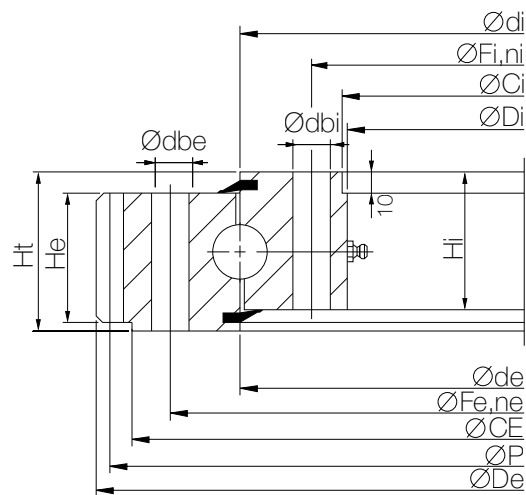
Slewing Ring Type	Dimensions									Fixing holes					Gear			Tooth Force		Mass
	De mm	CE mm	de mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1 E.318.22.00.D.1	318	297	230	226	162	40	46	56	275	20	13	182	20-1	13	310.5	4.5	69	14.3	20	17
2 E.403.22.00.D.1	403.5	380	310	306	235	39	47	55	358	24	13	259	28-1	13	396	4.5	88	14.3	20	23

- Grease nipples: DIN 71412



E.25.00.D

Special version, ball Ø25mm, externally geared, special holes



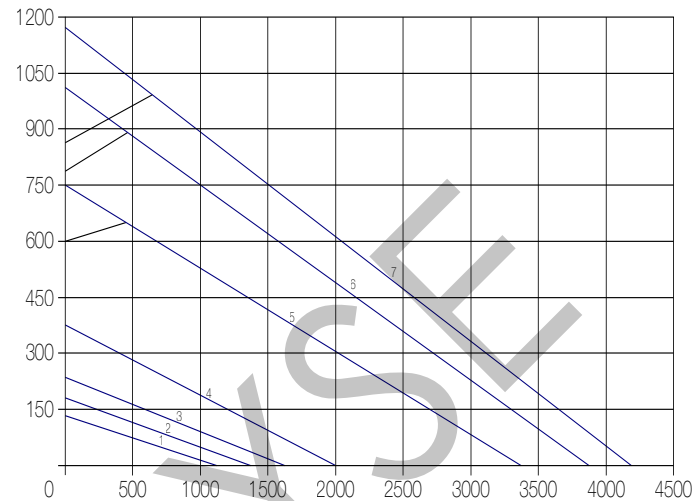
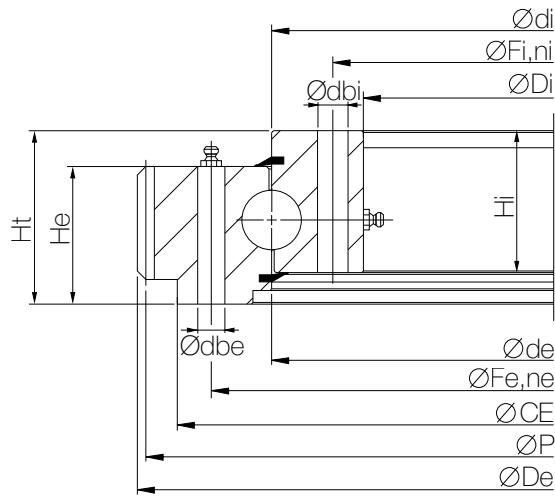
Slewing Ring Type	Dimensions									Fixing holes					Gear			Tooth Force		Mass
	De mm	Ce mm	de mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1 E.535.25.00.D.1	535	495	401	401	305	55	63	75	466	18	20	336	18	20	520	8	65	34.2	47.9	65
2 E.589.25.15.D.1	589.5	566	475	475	383	40	63	75	540	36	16	410	36-1	16	580.5	4.5	129	14.9	21.4	60
3 E.595.25.00.D.6	595	565	477	477	382	50	55	65	540	18	17	410	18	17	585	5	117	19.5	27.3	58
4 E.864.25.00.D.5	864	835	771.5	756	679	57	65	82	800	24	M16	706	24	M16	852	6	142	26.9	37.7	85
5 E.972.25.00.D.3	972	942	854	854	766	58	60	70	912	36	M16	796	36	18	960	6	160	27.4	38.4	108
6 E.1080.25.00.D.5	1080	1042	987	987	893	62	64	82	1015	30	M16	922	30	M16	1064	8	133	40.4	56.5	120
7 E.1200.25.00.D.1	1200	1163	1076	1076	982	50	55	65	1135	30	18	1012	30	18	1184	8	148	31.5	44.1	140

• Grease nipples: DIN 71412



E.32.00.D

Special version, ball Ø32mm, externally geared, special holes



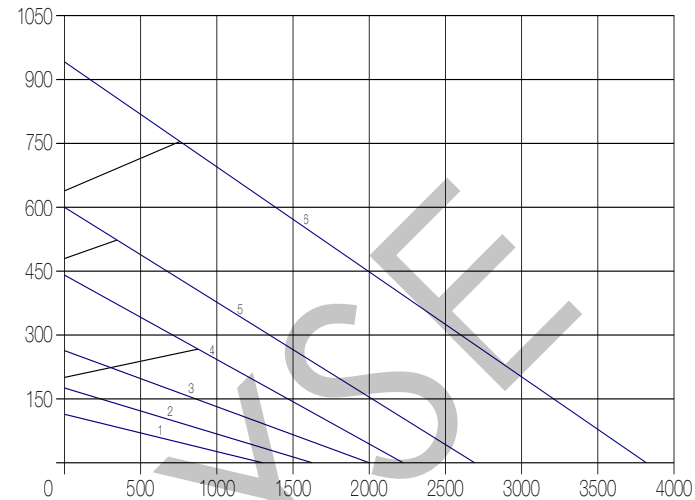
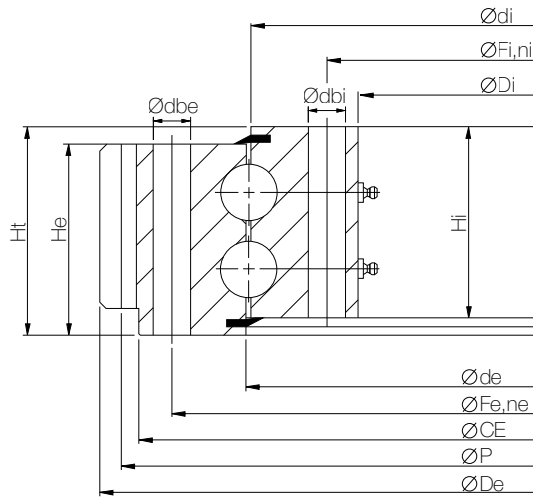
Slewing Ring Type		Dimensions								Fixing holes						Gear			Tooth Force		Mass
		De mm	Ce mm	de mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1	E.595.32.00.D.1	595	565	475	475	382	65	75	88	540	24	18	410	24-1	18	585	5	117	24.5	35.5	80
2	E.695.32.15.D.1	695	672	574	574	479	42	64	77	640	36	18	508	36-1	18	685	5	137	18.3	26.1	77
3	E.816.32.00.D.1	816	781	682	682	574	65	70	90	753	18	22	604	18	22	792	6	132	29.4	41.2	120
4	E.980.32.00.D.1	979	932	845	845	717	65	82	100	893	36	22	753	36-1	22	940	10	94	52.1	72.9	167
5	E.1144.32.15.D.1	1144	1090	993	993	869	67	84	100	1050	36	22	910	36-1	22	1110	10	111	60.9	87.2	230
6	E.1289.32.15.D.1	1289.5	1240	1116	1116	985	78	94	114	1198	40	22	1035	40	22	1250	10	125	64.7	92.7	330
7	E.1380.32.15.D.1	1380	1352	1224	1224	1098	80	94	114	1290	36	22	1135	36	22	1360	10	136	67.4	97.2	335

- Grease nipples: DIN 71412



E.2.XX.00.D

Double row version, double ball different $\varnothing$ in mm, externally geared, special holes



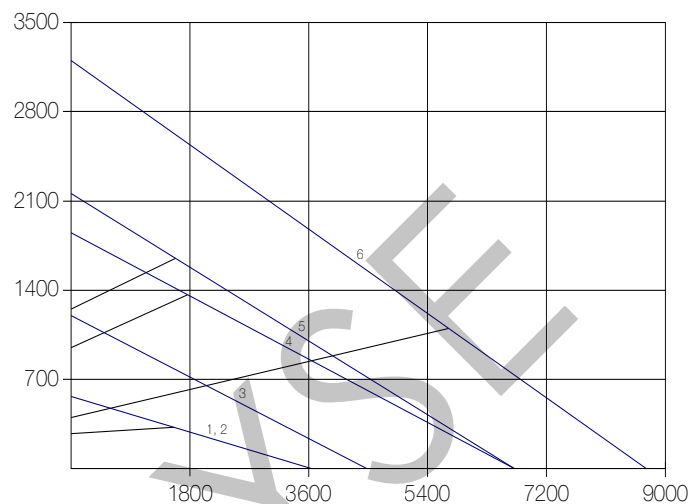
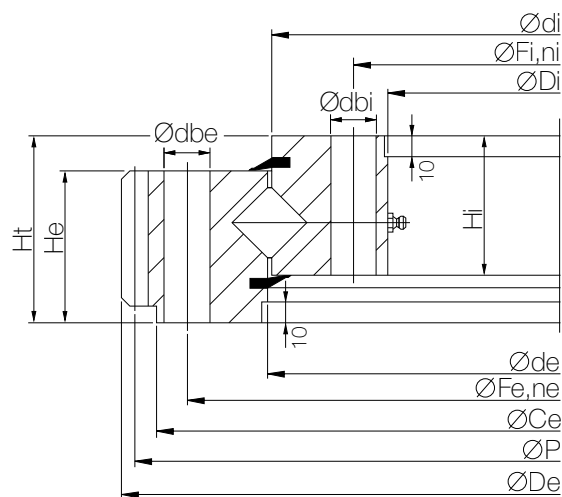
Slewing Ring Type	Dimensions									Fixing holes					Gear			Tooth Force		Mass
	De mm	Ce mm	de mm	Di mm	di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1 E.504.2.25.00.D.6	504	466	387	300	387	75	87	95	436	16	17	330	16	17	488	8	61	31	62	65
2 E.608.2.25.10.D.6	608	570	477	382	487	78	87	95	540	24	17	410	24	17	592	8	74	40	80	84
3 E.712.2.25.12.D.6	712	670	577	470	577	75	88	98	640	24	17	508	24	20	696	8	87	41	82	103
4 E.1079.2.20.12.D.3-V	1079	972	972	893	972	70	80	90	1015	30	M16	922	30	18	1048	8	131	42	84	140
5 E.1080.2.22.00.D.6	1080	1062	970	893	970	76	83	92	1015	30	17	992	30	17	1064	8	133	32	64	150
6 E.1200.2.25.00.D.1	1200	1163	1079	976	1079	77	88	98	1135	36	19	1012	36	19	1184	8	148	32	64	210

• Grease nipples: DIN 71412



E.XX.00.D-RV

Cross row version, different rollers Ø in mm, externally geared, special holes

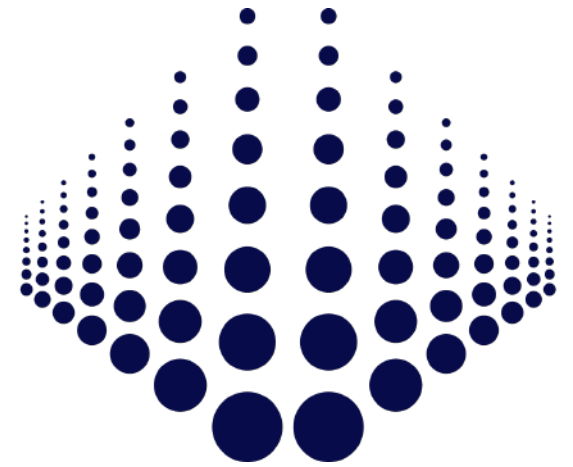
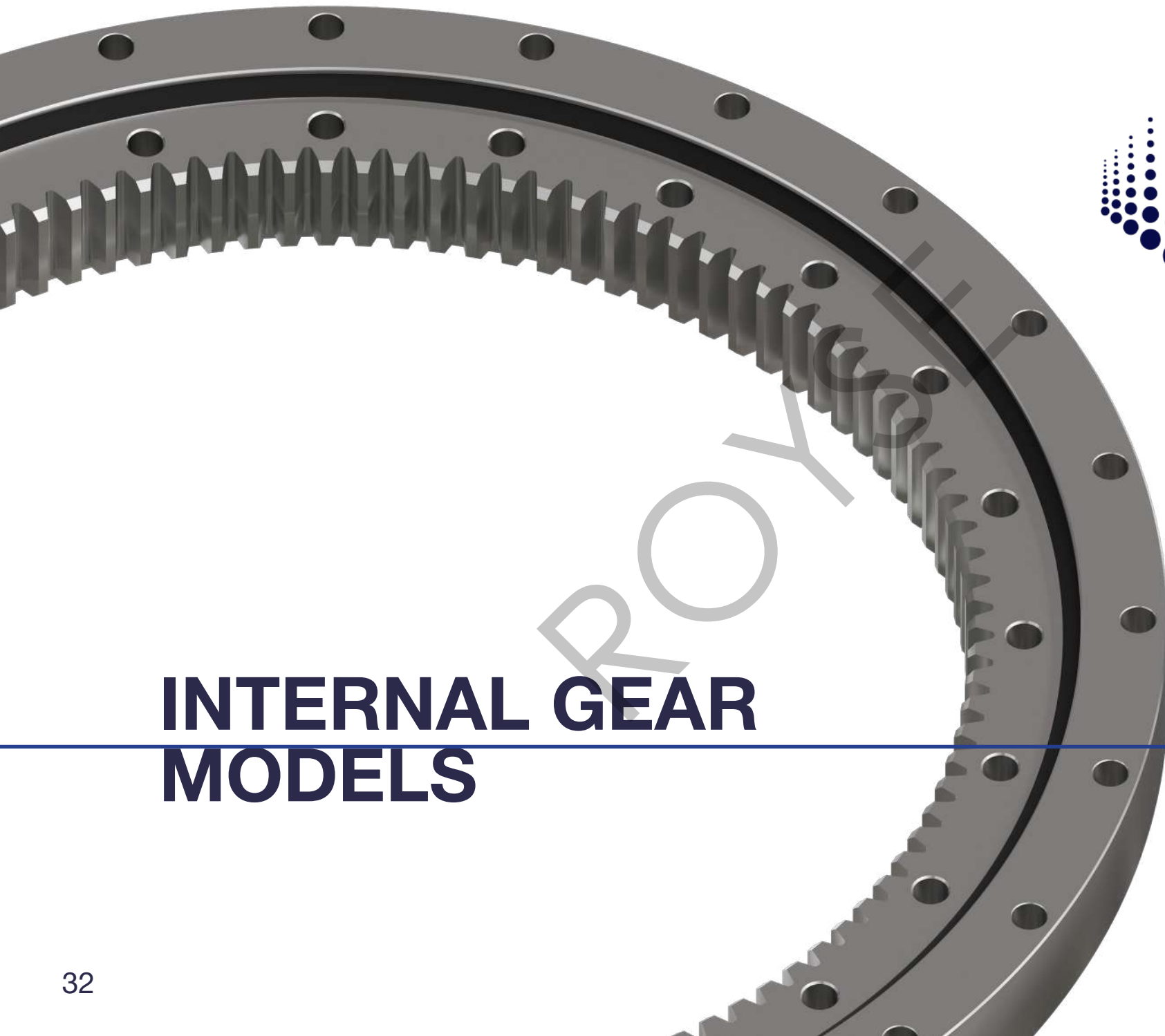


Slewing Ring Type		Dimensions							Fixing holes						Gear			Tooth Force		Mass	
		De mm	Ce mm	de mm	Di mm	di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1	E.1144.30.12.D.1-RV	1144	1090	993	869	993	84	67	100	1050	18	22	910	SC*	22	1110	10	111	58	116	230
2	E.1144.30.12.D.3-RV	1144	1090	993	870	993	84	67	100	1050	SC*	22	910	SC*	22	1122	11	102	60	120	230
3	E.1390.30.15.D.1-R	1390	1237	1237	1115	1237	89	85	105	1290	30	M20	1150	30	22	1368	12	114	82	164	329
4	E.1476.45.15.D.1-RV	1476	1415	1252	1084	1252	100	77	110	1350	24	26	1150	28	26	1440	10	144	68	136	475
5	E.1604.50.10.D.1-RV	1604	1550	1394	1208	1394	116	75	128	1500	24	29	1280	SC*	29	1570	10	157	55	110	606
6	E.1805.45.17.D.3-R	1805	1730	1600	1433	1600	120	115	140	1671	60	M27	1485	60	30	1744	16	109	167	334	750

SC* = Drilling not equi-spaced

• Grease nipples: DIN 71412





INTERNAL GEAR MODELS

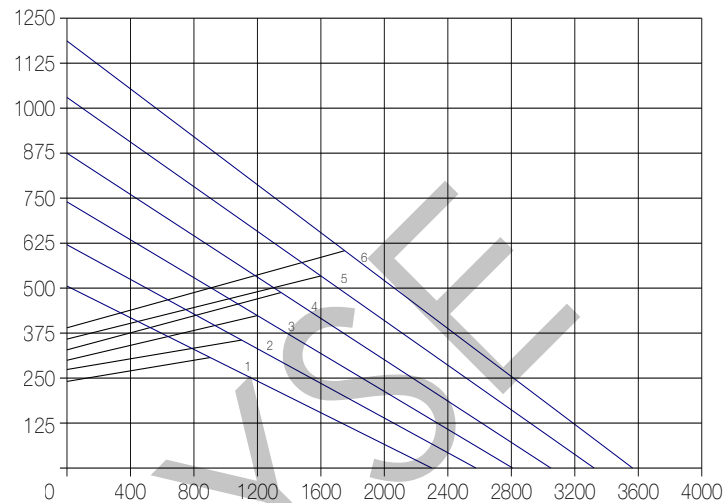
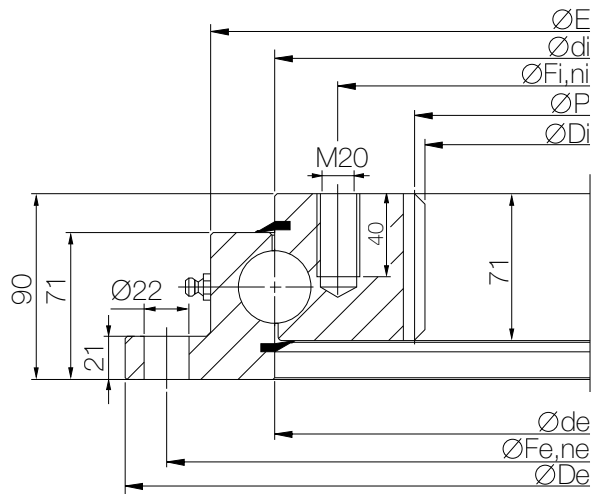
Light version, ball Ø20mm, internally geared, standard holes



-

I.32.00.C

Light version, ball Ø32mm, internally geared, standard holes

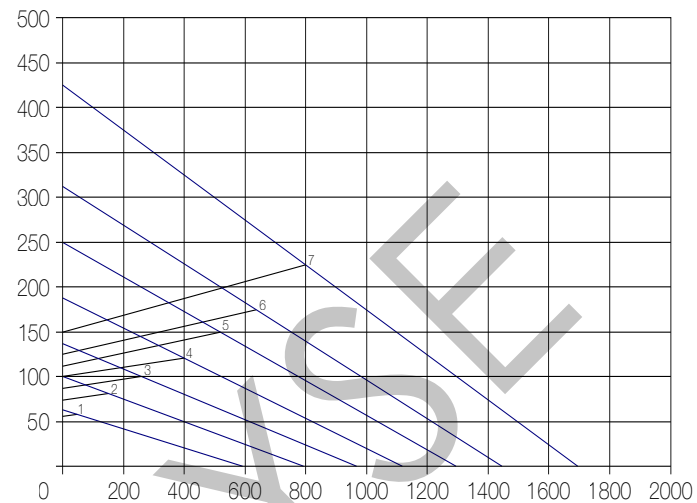


Slewing Ring Type	Dimensions					Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
	De mm	E mm	de mm	di mm	Di mm	Fe mm	ne n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1 I.1100.32.00.C	1100	1017	955	955	810	1060	30	894	30	830	10	83	56.8	84.2	2660	553	538	349	159
2 I.1200.32.00.C	1200	1117	1055	1055	910	1160	30	994	30	930	10	93	56.8	84.2	2941	674	557	362	176
3 I.1300.32.00.C	1300	1217	1155	1155	1010	1260	36	1094	36	1030	10	103	56.8	84.2	3222	806	576	374	192
4 I.1400.32.00.C	1400	1317	1255	1255	1110	1360	42	1194	42	1130	10	113	56.8	84.2	3503	951	593	385	208
5 I.1500.32.00.C	1500	1417	1355	1355	1210	1460	42	1294	42	1230	10	123	56.8	84.2	3784	1107	610	396	226
6 I.1600.32.00.C	1600	1517	1455	1455	1310	1560	48	1394	48	1330	10	133	56.8	84.2	4065	1276	626	406	243

- Options include: Up to 2200mm diameter, undrilled, double drilled and higher precision bearings. Ask for details
- Grease nipples: DIN 71412



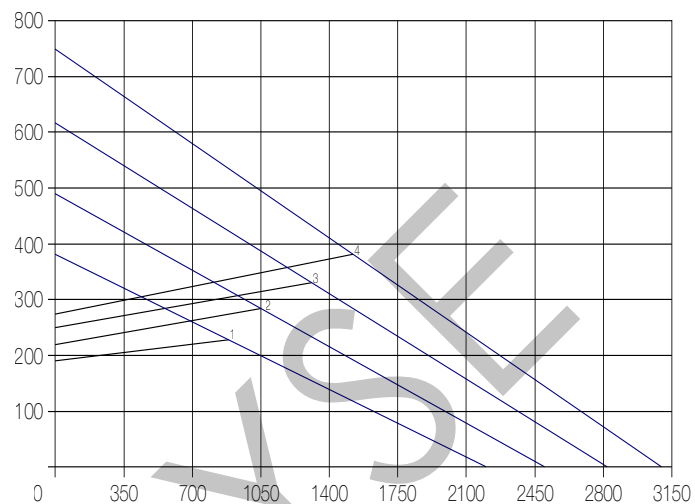
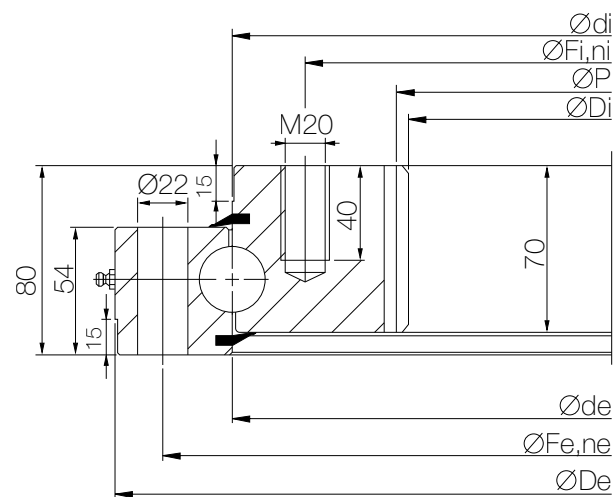
Standard version, ball Ø20mm, internally geared, standard holes



-

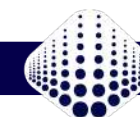
I.25.00.B

Standard version, ball Ø25mm, internally geared, standard holes



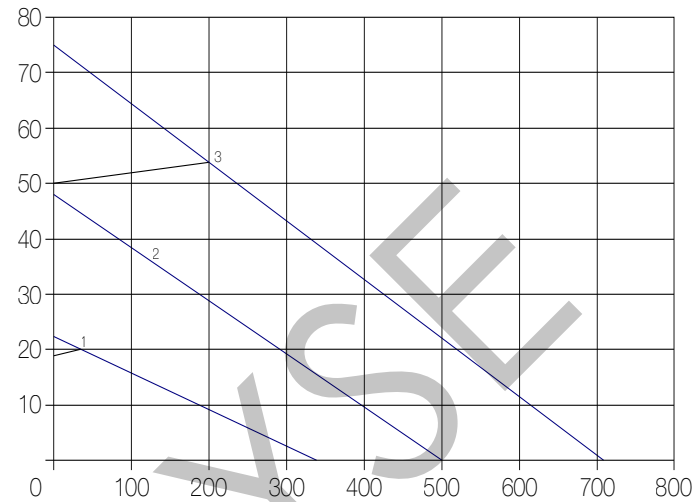
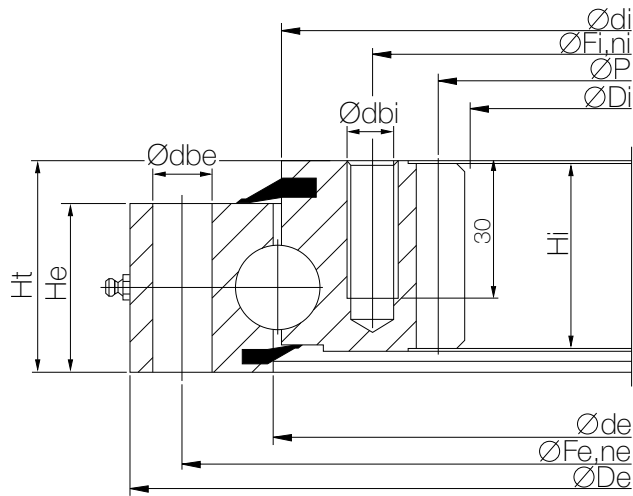
Slewing Ring Type		Dimensions				Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
		De -IT8 mm	de mm	di -IT8 mm	Di mm	Fe mm	ne n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1	I.855.25.00.B	853	756	755	610	815	24	694	24	630	10	63	55.5	77.7	1497	247	344	223	119
2	I.955.25.00.B	955	856	856	710	915	28	794	28	730	10	73	55.5	77.7	1703	317	362	235	137
3	I.1055.25.00.B	1055	956	956	810	1015	30	894	30	830	10	83	55.5	77.7	1910	396	376	244	149
4	I.1155.25.00.B	1155	1056	1056	910	1115	30	994	30	930	10	93	55.5	77.7	2125	485	391	254	165

- Grease nipples: DIN 71412



I.16-22.00.D

Special version, different ball Ø in mm, internally geared, special holes



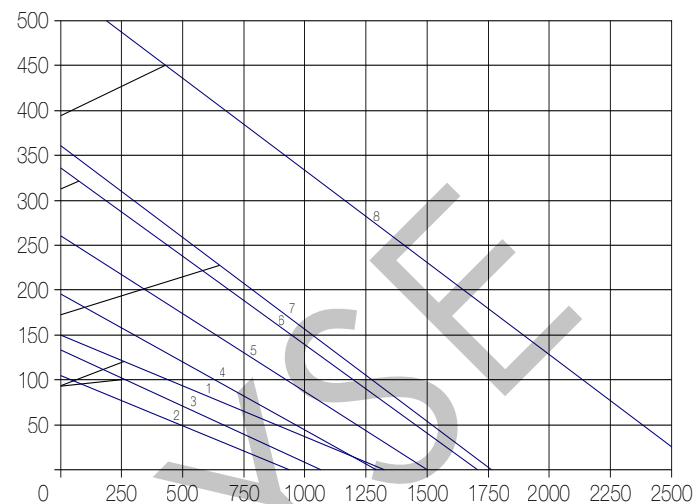
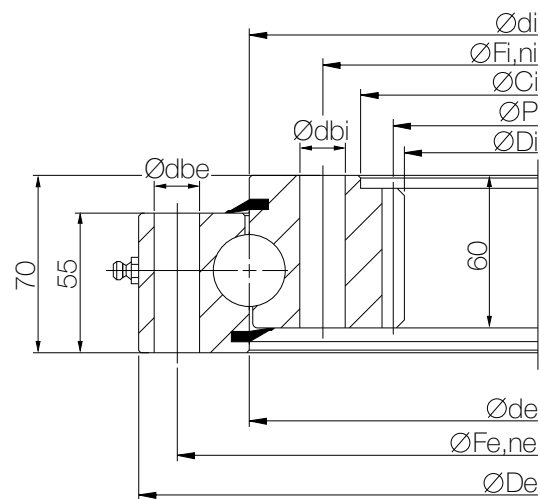
Slewing Ring Type	Dimensions							Fixing holes						Gear			Tooth Force		Mass
	De mm	de mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1 I.340.16.00.D.1	340	288	288	216	34	34	39	324	20	9	252	20	9	224	4	56	10.7	14.9	12
2 I.486.16.00.D.1	486	418.5	421.5	332	34	34	39	462	16	14	378	16	14	340	4	85	10.7	14.9	24
3 I.535.22.00.D.3.V	535	466.5	466.5	380	40	40	50	510	16	13	420	16	M12	384	4	96	11	22	32

- Grease nipples: DIN 71412



I.25.00.D

Special version, ball Ø25mm, internally geared, special holes



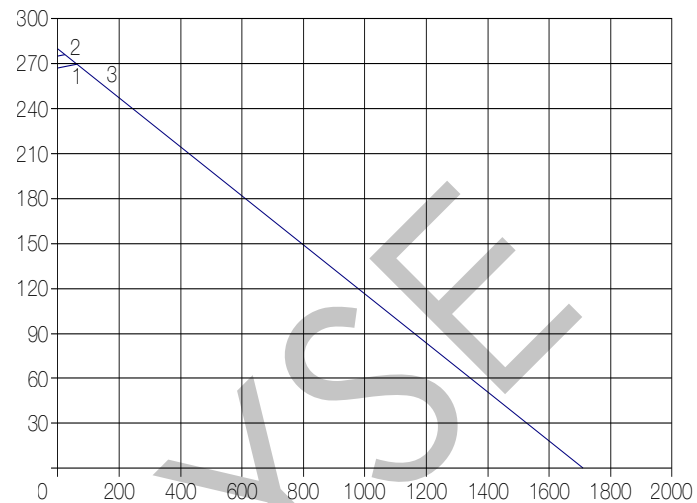
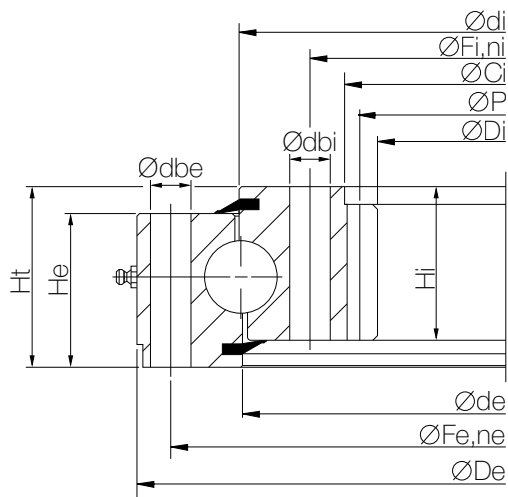
Slewing Ring Type	Dimensions									Fixing holes					Gear			Tooth Force		Mass
	De mm	de mm	di mm	Ci mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1 I.562.25.15.D.1	562	489	489	418	385	50	50	60	538	30	14	440	30	14	396	6	66	25.5	36.5	41
2 I.570.25.00.D.1	570	488	488	410	378	55	60	70	540	18	18	436	18	18	390	6	65	25.7	35.9	54
3 I.635.25.00.D.3.V	635	547	547	467	439.5	50	55	60	605	24	15	490	16	M16	444	6	74	30.9	46	57
4 I.750.25.00.D.1	750	663	663	575	546	55	60	70	720	20	18	605	20	18	558	6	93	26.4	37	76
5 I.850.25.00.D.1	850	762	762	677	648	55	60	70	820	24	18	705	24	18	660	6	110	24.9	36	91
6 I.950.25.00.D.1	950	862	862	775	736	55	60	70	920	30	18	805	30	18	752	8	94	33.3	46.6	108
7 I.980.25.00.D.3	975	892	892	824	784	66	72	84	944	36	M16	850	36	M16	800	8	100	43	62	135
8 I.1015.25.15.D.1	1015	920	920	824	784	66	69	82	980	40	18	860	40	18	800	8	100	43	62	143

• Grease nipples: DIN 71412



I.32.00.D

Special version, ball Ø32mm, internally geared, special holes



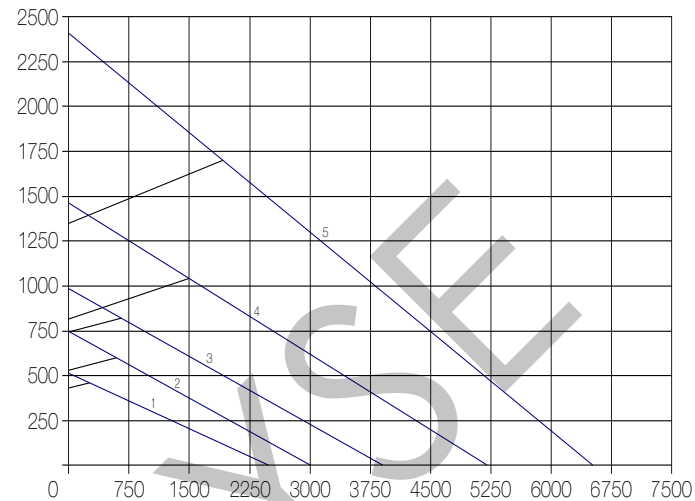
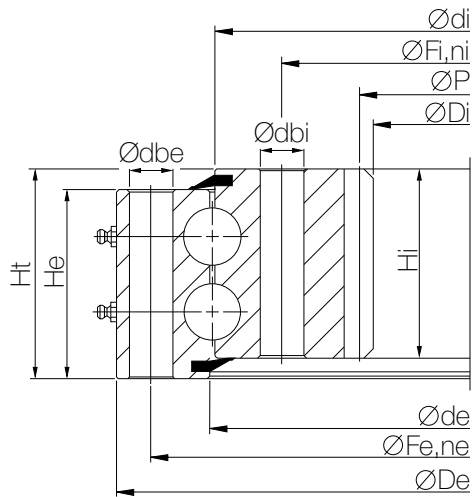
Slewing Ring Type		Dimensions								Fixing holes						Gear			Tooth Force		Mass
		De mm	de mm	di mm	Ci mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1	I.810.32.00.D.1	810	720	720	630	601	68	68	80	780	20	18	660	20	18	612	6	102	28.2	40.3	110
2	I.815.32.10.D.1	815	720	720	630	593	68	66	80	780	42-1	18	660	42	18	608	8	76	37.9	53.1	110
3	I.816.32.00.D.1	815	715	715	605	568.9	67	75	90	785	18	17	640	18	17	574	7	82	37	51.8	143

- Grease nipples: DIN 71412



I.2.XX.00.D

Double row version, double ball different Ø in mm, internally geared, special holes



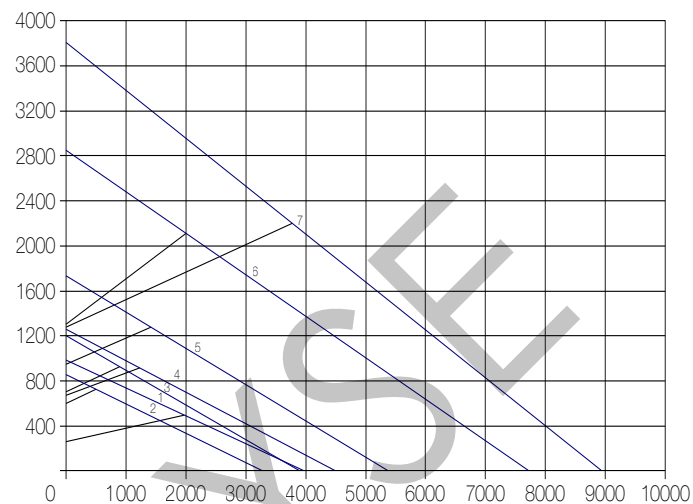
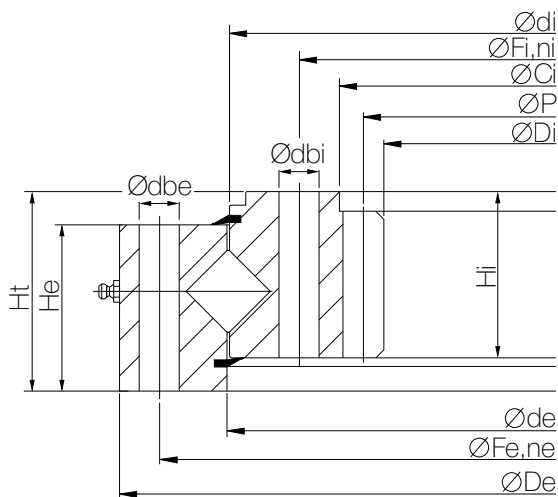
Slewing Ring Type		Dimensions								Fixing holes						Gear			Tooth Force		Mass
		De mm	de mm	Ci mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1	I.973.2.22.00.D.6	973	898.5	820	895.5	786	88	88	97	944	36	17	850	36	17	800	8	100	36.2	72.4	141
2	I.1165.2.22.00.D.6	1172	1090	1010	1085	962	88	88	97	1134	36	17	1040	36	17	980	10	98	45	90	187
3	I.1200.2.25.00.D.6	1200	1102	1010	1098	963.5	96	96	110	1160	36	21	1040	36	21	980	10	98	69	99	230
4	I.1346.2.30.05.D.6	1345	1225	1115	1219	1061.6	98	98	108	1290	48	21	1150	48	21	1080	10	108	68.9	137.8	326
5	I.1750.2.30.20.D.6	1750	1617	1470	1612	1418.2	105	110	120	1705	48	25	1525	48	25	1440	12	120	94	140	564

• Grease nipples: DIN 71412



I.XX.00.D-RV

Cross row version, different rollers $\varnothing$ in mm, internally geared, special holes

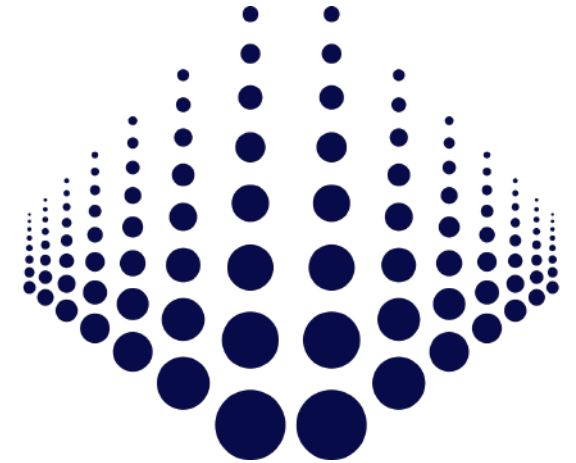


Slewing Ring Type		Dimensions								Fixing holes						Gear			Tooth Force		Mass
		De mm	de mm	Ci mm	di mm	Di mm	He mm	Hi mm	Ht mm	Fe mm	ne n°	dbe mm	Fi mm	ni n°	dbi mm	P mm	m	z n°	Fz nor. kN	Fz max. kN	Weight kg
1	I.1165.25.12.D.3-RV	1165	1077.5	1010	1072.5	961	72	75	90	1134	36	M16	1040	36	M16	980	10	98	40	80	155
2	I.1251.30.12.D.1-RV	1250	1142	1142	1135	979	75	75	91	1212	40	22	1068	36	22	990	10	99	58	116	240
3	I.1346.30.15.D.1-RV	1346	1222	1115	1214	1067	85	85	105	1290	36	22	1150	42	22	1080	10	108	58	116	300
4	I.1460.30.12.D.1-RV	1460	1350	1230	1345	1173	80	84	102	1425	36	22	1270	36	22	1176	12	98	74	148	365
5	I.1530.40.12.D.1-RV	1530	1410	1240	1382	1186	90	107	130	1480	36	26	1290	36	26	1200	10	120	70	140	560
6	I.1770.50.17.D.1-RV	1770	1608	1440	1604	1375	125	125	150	1710	60	30	1500	60	30	1400	14	100	120	240	845
7	I.2025.50.15.D.1-RV	2025	1863	1695	1862	1619	118	118	140	1970	36	30	1780	36	30	1616	16	101	135	270	960

- Grease nipples: DIN 71412



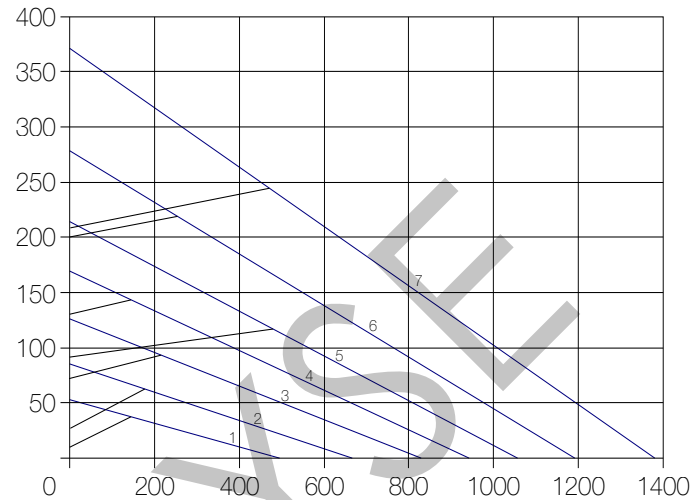
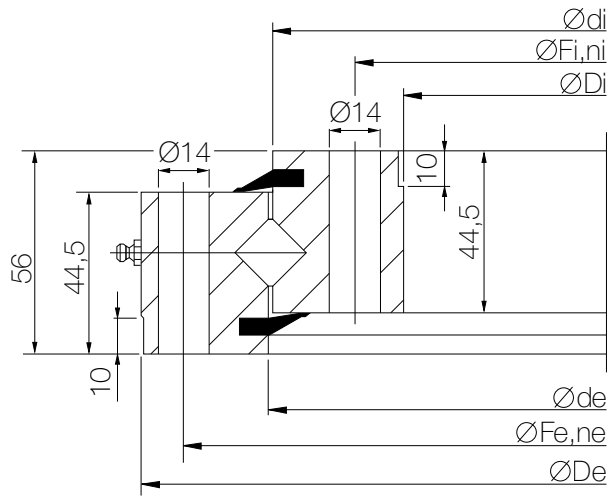
ROYSE



SPECIAL MODELS

SD.14.00.B.R-ZT

Cross row version, rollers Ø14 mm, gearless, through holes



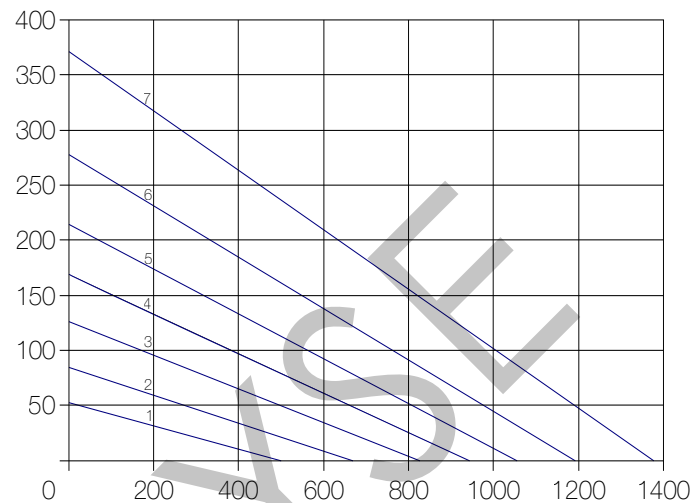
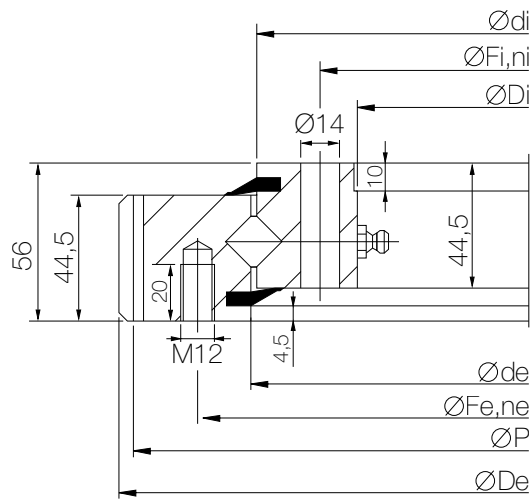
Slewing Ring Type		Dimensions				Fixing holes				Static		Dynamic		Mass
		De +1T7 mm	de mm	di mm	Di +1T7 mm	Fe mm	ne n°	Fi mm	ni n°	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1	SD.486.14.00.B.R-ZT	484	415.5	412.5	344	460	24	369	24	635	58	197	128	29
2	SD.616.14.00.B.R-ZT	614	545.5	542.5	472	590	32	498	32	841	100	219	142	37
3	SD.716.14.00.B.R-ZT	714	645.5	642.5	574	690	36	598	36	1035	145	233	151	44
4	SD.816.14.00.B.R-ZT	814	745.5	742.5	674	790	40	698	40	1201	193	246	160	52
5	SD.916.14.00.B.R-ZT	914	845.5	842.5	774	890	40	798	40	1366	249	258	167	60
6	SD.1016.14.00.B.R-ZT	1014	945.5	942.5	874	990	44	898	44	1632	311	269	174	67
7	SD.1166.14.00.B.R-ZT	1164	1095.5	1092.5	1024	1140	48	1048	48	1781	418	284	184	77

- Grease nipples: DIN 71412



E.14.00.B.R-ZT

Cross row version, rollers Ø14 mm, externally geared, through holes

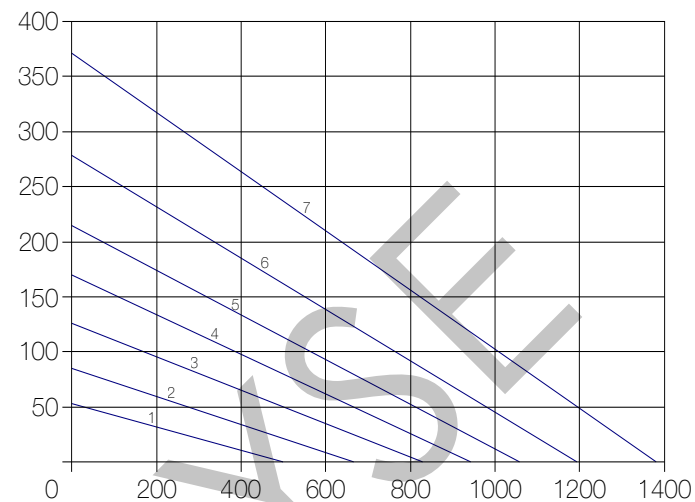
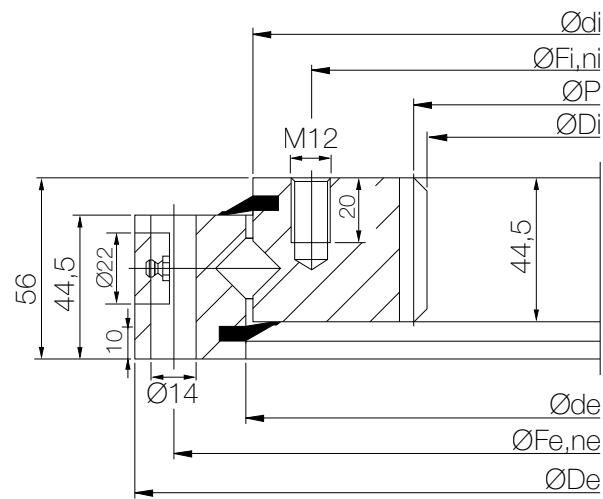


Slewing Ring Type		Dimensions				Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
		De mm	de +1T7 mm	di mm	Di +1T7 mm	Fe mm	ne n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1	E.505.14.00.B.R-ZT	503.3	417	412.5	344	455	20	368	24	495	5	99	17.8	24.9	635	58	197	128	31
2	E.650.14.00.B.R-ZT	640.3	547	543	472	585	28	498	32	630	6	105	21.2	29.7	869	103	218	142	43
3	E.750.14.00.B.R-ZT	742.3	647	643	574	685	32	598	36	732	6	122	21.2	29.7	1035	145	233	151	52
4	E.850.14.00.B.R-ZT	838.1	747	742.5	674	785	36	698	40	828	6	138	21.2	29.7	1186	191	246	160	59
5	E.950.14.00.B.R-ZT	950.1	847	842.5	774	885	36	798	40	936	8	117	28.2	39.6	1366	249	258	167	71
6	E.1050.14.00.B.R-ZT	1046.1	945.5	942.5	874	985	40	898	44	1032	8	129	28.2	39.6	1532	312	269	174	77
7	E.1200.14.00.B.R-ZT	1198.1	1095.5	1092.5	1024	1135	44	1048	48	1184	8	148	28.2	39.6	1781	418	284	184	91

- Grease nipples: DIN 71412



Cross row version, rollers Ø14 mm, internally geared, through holes



Slewing Ring Type		Dimensions				Fixing holes				Gear			Tooth Force		Static		Dynamic		Mass
		De +1T7 mm	de mm	di +1T7 mm	Di mm	Fe mm	ne n°	Fi mm	ni n°	P mm	m	z n°	Fz nor. kN	Fz max. kN	Coa (kN)	Mr (kN·m)	Ca (kN)	Cr (kN)	Weight kg
1	I.486.14.00.B.R-ZT	484	415.5	411	325	460	24	375	24	335	5	67	17.7	24.7	656	59	197	128	31
2	I.616.14.00.B.R-ZT	616	545	541	444	590	32	505	32	456	6	76	21.4	30	918	108	218	142	42
3	I.716.14.00.B.R-ZT	714	645.5	641	546	690	36	605	36	558	6	93	21.4	30	1022	143	233	151	50
4	I.816.14.00.B.R-ZT	814	745.5	741	648	790	40	705	40	660	6	110	21.4	30	1186	191	246	160	58
5	I.916.14.00.B.R-ZT	914	845.5	841	736	890	40	805	40	752	8	94	28.5	39.9	1349	246	258	167	69
6	I.1016.14.00.B.R-ZT	1014	945.5	941	840	990	44	905	44	856	8	107	28.5	39.9	1513	308	269	174	76
7	I.1166.14.00.B.R-ZT	1164	1095.5	1091	984	1140	48	1055	48	1000	8	125	28.5	39.9	1834	431	284	184	91

- Grease nipples: DIN 71412



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