

iglidur® PRT | Technical data

Slewing ring bearings general properties

Type 01

Properties	Unit	-20	-30	-50	-60	-100	-150	-200	-300
Weight	kg	0.2	0.4	1.0	1.1	1.3	2.2	3.2	7.6
Axial load, static	N	15,000	27,000	40,000	50,000	55,000	80,000	100,000	150,000
Axial load, dynamic	N	4,000	7,000	10,000	15,000	16,000	25,000	30,000	90,000
Radial load, static	N	2,300	5,000	8,000	10,000	16,000	25,000	35,000	45,000
Radial load, dynamic	N	600	1,500	2,500	3,000	5,000	8,000	10,000	27,000
Rotat. speed dry running	rpm	300	250	200	200	150	100	80	50
Max. perm. tilting moment	Nm	100	200	600	800	1,500	2,000	3,800	5,000

Type 02

Properties	Unit	-20-AL	-20-LC	-20-P	-30-AL	-30-LC	-30-P	-50-AL	-50-LC	-50-P	-60-AL
Weight	g	105	87	72	200	165	140	440	380	320	700
Axial load, static	N	13,000	13,000	13,000	25,000	25,000	25,000	35,000	35,000	35,000	45,000
Axial load, dynamic	N	4,000	4,000	4,000	7,000	7,000	7,000	9,000	9,000	9,000	12,000
Radial load, static	N	2,000	2,000	2,000	2,500	2,500	2,500	5,000	5,000	5,000	10,000
Radial load, dynamic	N	500	500	500	700	700	700	1,200	1,200	1,200	2,800
Rotat. speed dry running	rpm	250	250	250	200	180	180	120	120	120	120
Max. perm. tilting moment	Nm	60	40	40	100	50	50	120	100	100	200

Type 03

Properties	Unit	-80
Weight	kg	0.45
Axial load, static (compressive force direction)	N	45,000
Axial load, static (tensile force direction)	N	5,000
Axial load, dynamic (compressive force direction)	N	12,000
Axial load, dynamic (tensile force direction)	N	2,000
Radial load, static	N	4,000
Radial load, dynamic	N	1,000
Rotat. speed dry running	rpm	120
Max. perm. tilting moment	Nm	120



Slewing ring bearing configurator

The most common criteria for selecting an iglidur® PRT slewing ring bearing are firstly the loads and torques to be supported and secondly the installation space available and the minimum central implementation distance required. The suitable sizes and types are selected on the basis of this data and the speed and their service life is calculated.

► www.igus.eu/prt-expert



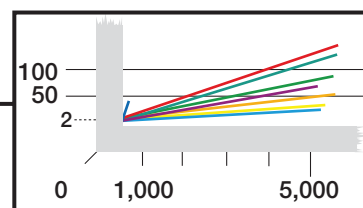
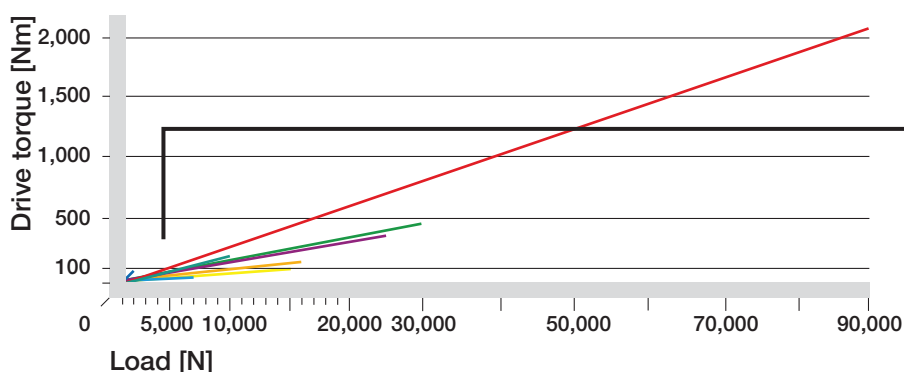


Diagram 01: Required drive torque versus applied moment

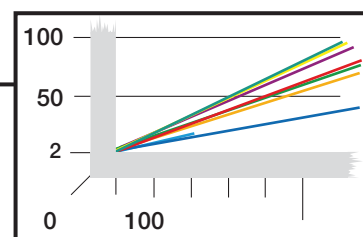
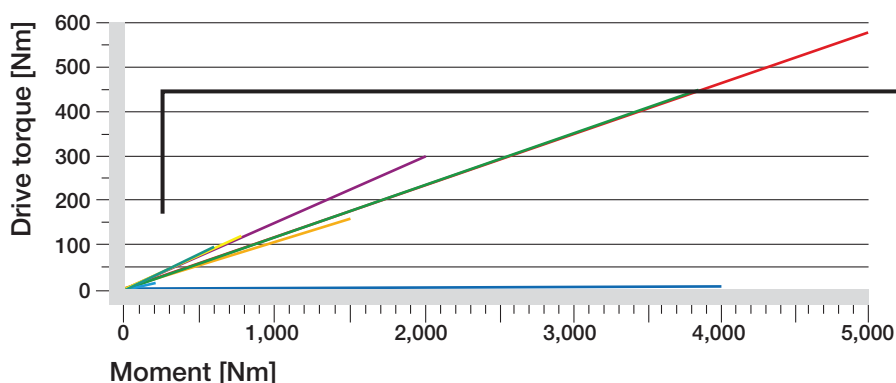


Diagram 02: Required drive torque versus applied moment

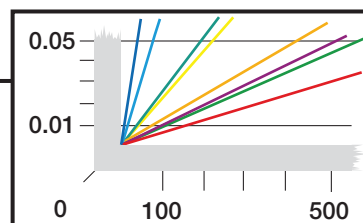
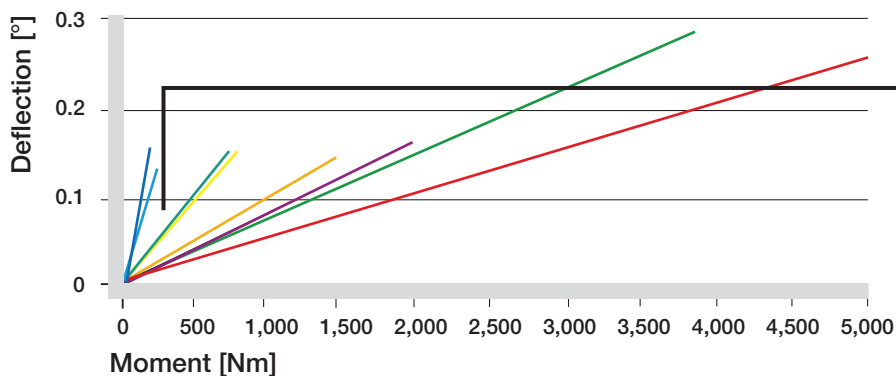


Diagram 03: Deflection versus applied moment

PRT-01-20	PRT-01-30	PRT-01-50	PRT-01-60	PRT-01-100	PRT-01-150	PRT-01-200	PRT-01-300
M4, min.	M4, min.	M6, min.	M5, min.	M5, min.	M5, min.	M6, min.	M8, min.
6 screws	8 screws	12 screws	10 screws	12 screws	12 screws	12 screws	12 screws



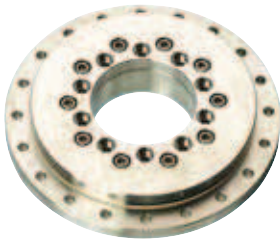
All load values assume the PRT is assembled with socket head screws (strength class 8.8) on the outside pitch circle diameter. For the assembly (using strength class 8.8 screws) of the PRT, the screws have to be inserted to a minimum thread depth of $2 \times d$ in every hole location in the outer ring. All data can be used for both lateral and horizontal assembly (including overhead installation).



Standard



High temperature
up to +180 °C



Stainless steel version



ESD-compliant

- Aluminium or stainless steel body (upon request)
- Replaceable maintenance-free sliding pads made of iglidur® J (Standard) ► **page 141**, iglidur® H1 (for temperatures up to +180 °C) ► **page 297**, or iglidur® F2 (ESD-compliant) ► **page 457**



Order key

Type	Size [mm]	Options
PRT-01-	30	-ES-H1
Slewing Ring	design	Inner Ø
Body material		Sliding pads

Options:

Body material

Blank: Aluminium

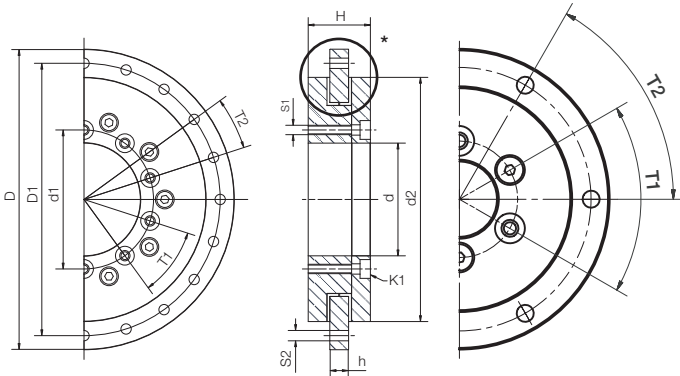
ES: V4A stainless steel

Sliding pads

Blank: iglidur® J

H1: iglidur® H1,
high temperature

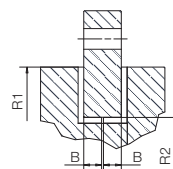
F2: iglidur® F2,
ESD-compliant
(only in conjunction
with stainless steel)



Accessories

► From page 594

Detail*



Dimensions [mm]

D ¹⁰⁾	D1	d1	d	d2 ±0.2	H	h	T1	T2	S1	S2	K1 for screw	R1	R2	B	Part No.
80	70	31	20	60	24	8	6 x 60°	6 x 60°	M4	4.5	DIN 7984 M4	30	20	3.5	PRT-01-20-...
100	91	42.5	30	82	29	10	8 x 45°	8 x 45°	M4	4.5	DIN 7984 M4	41	29	4.5	PRT-01-30-...
150	135	65	50	120	33	10	8 x 45°	16 x 22.5°	M6	6.6	ISO 4762 M6	60	46.5	4.5	PRT-01-50-...
160	145	74	60	130	33	10	10 x 36°	20 x 18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	PRT-01-60-...
185	170	112	100	160	34	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	80	69	5.5	PRT-01-100-...
250	235	165	150	220	35	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	110	96.5	5.5	PRT-01-150-...
300	285	215	200	274	38	15	12 x 30°	16 x 22.5°	M6	6.6	ISO 4762 M6	137	124	7.0	PRT-01-200-...
450	430	320	300	410	42	15	12 x 30°	16 x 22.5°	M8	9.0	DIN 7984 M8	205	186.6	7.0	PRT-01-300-...

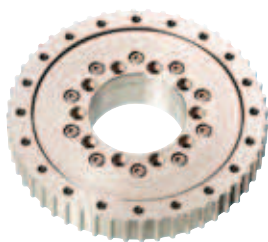
¹⁰⁾ Tolerance according to DIN ISO 2768 mK



All stainless steel versions
upon request



Standard



Stainless steel version

- 4 standards for outer drive rings are available
 - A classic spur gear according to DIN3967
 - Commercially available belt profiles: T10, AT10, HTD8M
- The inner ring is fixed and the outer ring driven
- The outer ring carries the item to be moved
- Outer ring available in stainless steel as an option (suffix "-ES")

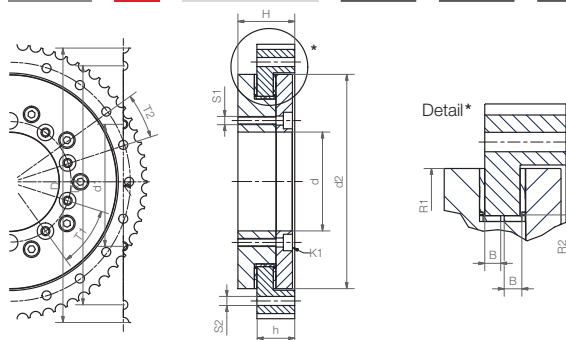


Order key

Type	Size [mm]	Options
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PRT-01- 30 - TO - ... - ES

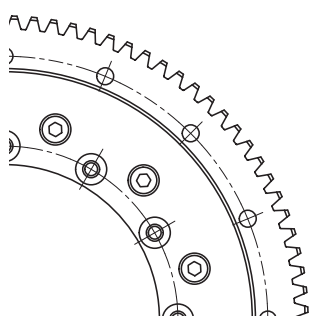
Slewing Ring	design	Inner Ø	Outer drive ring	Tooth profile type	Stainless steel version
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Dimensions [mm]

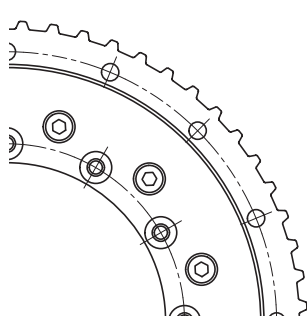
D1	d1	d	d2	h	T1	T2	S1	S2	K1	R1	R2	B	H	Part No.
for screw														
70	31.0	20	60	18	6x60°	6x60°	M4	4.5	DIN 7984 M4	30	20.0	3.5	(26.0)	PRT-01-20-TO-...
91	42.5	30	82	21	8x45°	8x45°	M4	4.5	DIN 7984 M4	41	29.0	4.5	(30.5)	PRT-01-30-TO-...
145	74.0	60	130	23	10x36°	20x18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	(34.5)	PRT-01-60-TO-...
170	112.0	100	160	25	12x30°	16x22.5°	M5	5.5	ISO 4762 M5	80	69.0	5.5	(36.0)	PRT-01-100-TO-...
235	165.0	150	220	25	12x30°	16x22.5°	M5	5.5	ISO 4762 M5	110	96.5	5.5	(36.5)	PRT-01-150-TO-...
285	215.0	200	274	30	12x30°	16x22.5°	M6	7.0	ISO 4762 M6	137	124.0	7.0	(41.5)	PRT-01-200-TO-...
430	320.0	300	410	30	12x30°	16x22.5°	M8	9.0	DIN 7984 M8	205	186.5	8.5	(43.5)	PRT-01-300-TO-...

Spur gearing DIN3967



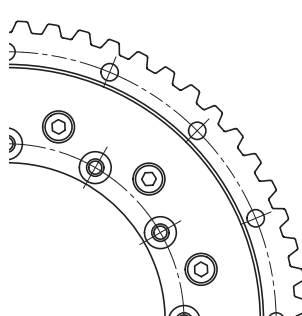
D	m	z	Part No. add-on
(88)	–	42	...-ST
(112)	2	54	...-ST
(184)	2	90	...-ST
(196)	2	96	...-ST
(256)	2	126	...-ST
(308)	2	152	...-ST
(462)	3	152	...-ST

Toothed belt profile AT10



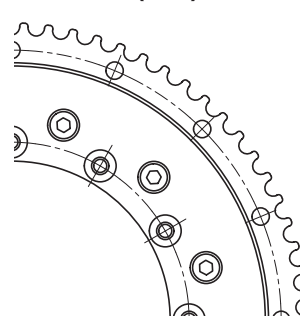
D	z	Part No. add-on
(87.25)	28	...-AT10
(106.4)	34	...-AT10
(163.8)	52	...-AT10
(189.2)	60	...-AT10
(252.9)	80	...-AT10
(303.9)	96	...-AT10
(456.7)	144	...-AT10

Toothed belt profile T10



D	z	Part No. add-on
(87.25)	28	...-T10
(106.4)	34	...-T10
(163.8)	52	...-T10
(189.2)	60	...-T10
(252.9)	80	...-T10
(303.9)	96	...-T10
(456.7)	144	...-T10

Toothed belt profile HTD5M (-20)/HTD8M



D	z	Part No. add-on
(81.25)	52	...-HTD5M
(110.7)	44	...-HTD8M
(166.7)	66	...-HTD8M
(187.1)	74	...-HTD8M
(253.3)	100	...-HTD8M
(304.3)	120	...-HTD8M
(457.1)	180	...-HTD8M