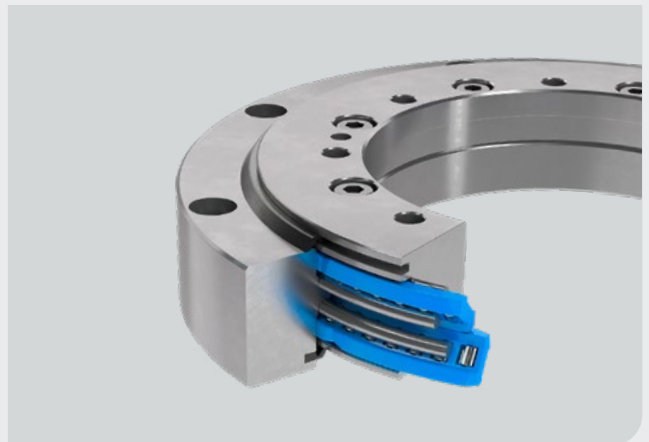
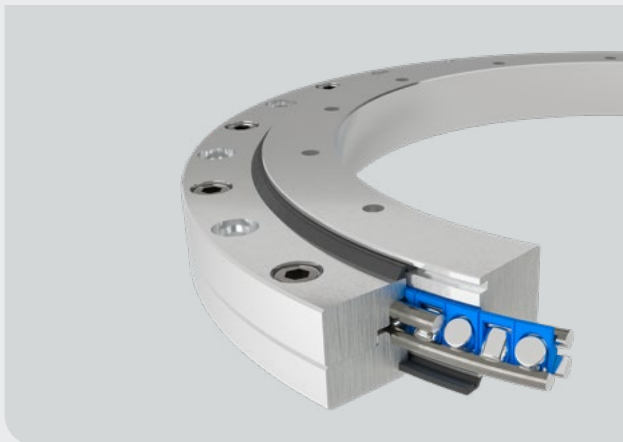
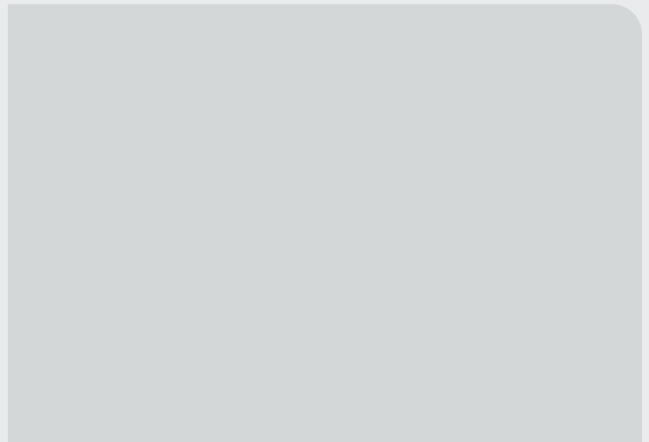


For Highest Loads:

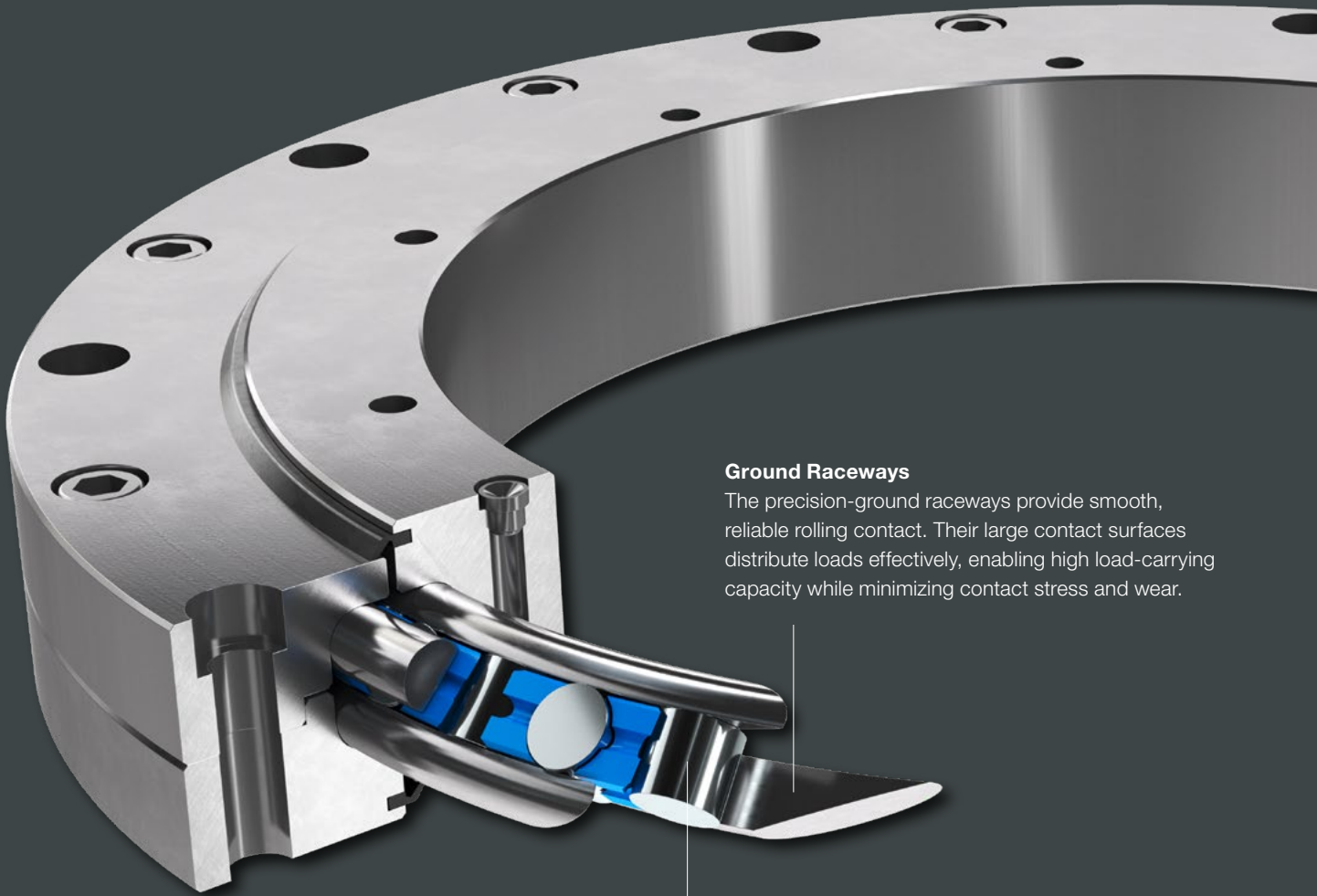
Wire-Race-Bearings as Cross Roller Bearings and Angular Roller Bearings



Wire-Race-Bearings as Roller Bearings

Open Race Rings made of Steel 67SiCr5
The race rings absorb all operating loads. Their open design allows them to adapt to the surrounding structure, helping to compensate for factors such as torsional deformation and temperature-related expansion or contraction.

Plastic Cage made of PA12
The cage incorporates precisely positioned pockets that hold the rollers in a crossed arrangement. The rollers are supported in every direction, enabling the bearing to absorb loads from all directions while delivering high load capacity and rigidity in a compact design.



Ground Raceways
The precision-ground raceways provide smooth, reliable rolling contact. Their large contact surfaces distribute loads effectively, enabling high load-carrying capacity while minimizing contact stress and wear.

Rollers made of hardened Steel 100Cr6
The rollers are designed with a slightly larger diameter than their width. This geometry ensures that only the load-bearing roller is in contact with the raceways at any given time. The result is reduced friction, exceptionally smooth running characteristics, and very low rotational resistance.

Roller Bearings in Action: Medical ceiling supply unit



Franke wire race bearings are already being used in a medical ceiling pendant that supports an X-ray unit. In this application, their high load-carrying capacity, compact installation envelope, and consistently low rotational resistance under high moment loads provide clear advantages. The generously dimensioned bearing element also compensates reliably for limited stiffness in the surrounding structure. This allows designers to achieve smooth, precise movement while maintaining a lightweight and space-efficient overall system design.

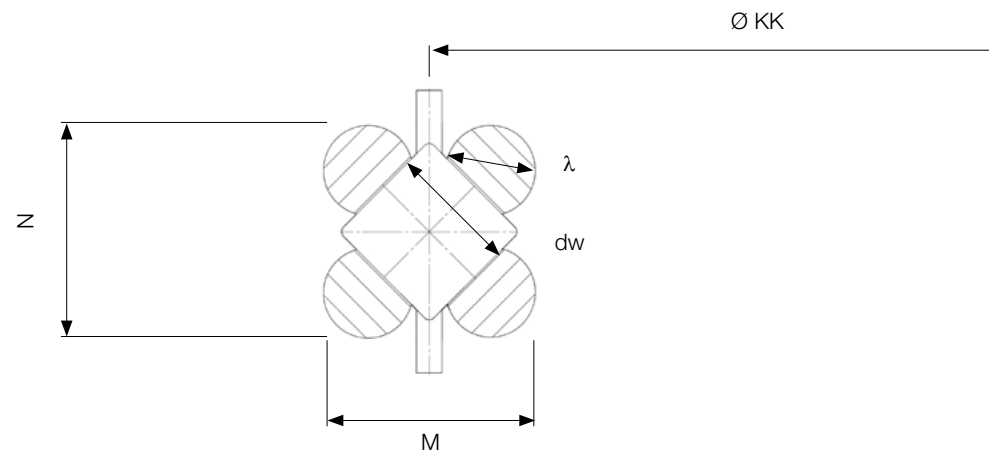
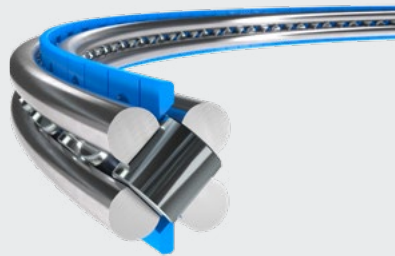
„When it comes to load capacity, preload, and running characteristics, Franke cross roller bearings deliver the highest levels of performance.“



Stephan Kuhn
Head of Technical Sales

- Preferred application areas:
- Medical technology
 - Security and surveillance systems
 - Vehicle engineering
 - Aerospace

Wire Race Bearing
Roller Bearing **Type LEW 4**
with ground raceways



Dimensions

Size	Dimensions mm				Load Capacity kN				Weight kg	Design example
	Ø KK	M x N	dw	λ	C _{oa}	C _{or}	C _a	C _r		
LEW4-0150	150	9,25 x 9,25	6 x 9,8	4	81	32	34	18	0,21	
LEW4-0200	200	9,25 x 9,25	6 x 9,8	4	109	44	41	21	0,27	
LEW4-0250	250	9,25 x 9,25	6 x 9,8	4	137	55	45	23	0,46	
LEW4-0300	300	9,25 x 9,25	6 x 9,8	4	164	66	47	25	0,55	
LEW4-0350	350	9,25 x 9,25	6 x 9,8	4	192	77	53	28	0,64	
LEW4-0400	400	9,25 x 9,25	6 x 9,8	4	220	88	59	31	0,73	

Characteristics

Franke LEW bearing elements are suitable for medium rotational speeds and accuracy requirements. They are characterized by smooth running even under high moment loads, high rigidity and a compact installation space. The crossed rollers accommodate high loads from all directions. LEW bearing elements are insensitive to shock loads and vibration. In terms of preload, running characteristics and available diameter ranges, they offer maximum flexibility.

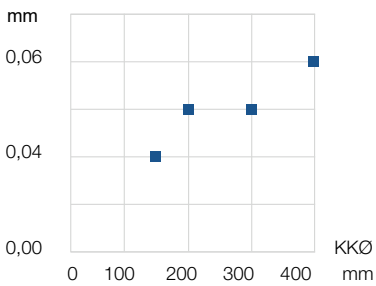
Radial and axial runout accuracy: The values shown in the diagram are standard values and can be improved by specifying tighter tolerances.

Rotational resistance (preload): The values shown in the diagram are standard values and can be individually adapted to the specific application.

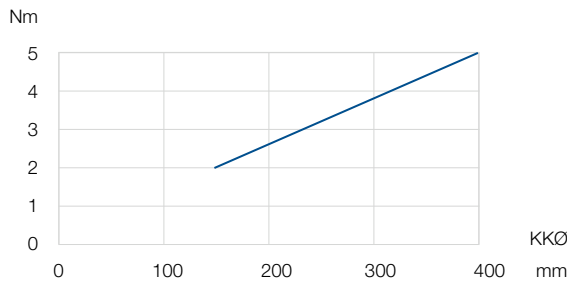
Technical Data:

Materials: Race rings: 67SiCr5; Rollers: 100Cr6; Cage: PA12
Operating temp.: -30 °C to +80 °C, up to +100 °C for short periods
Circumferential speed: max. 2 m/s
Lubricating grease: Shell Gadus S3 V220

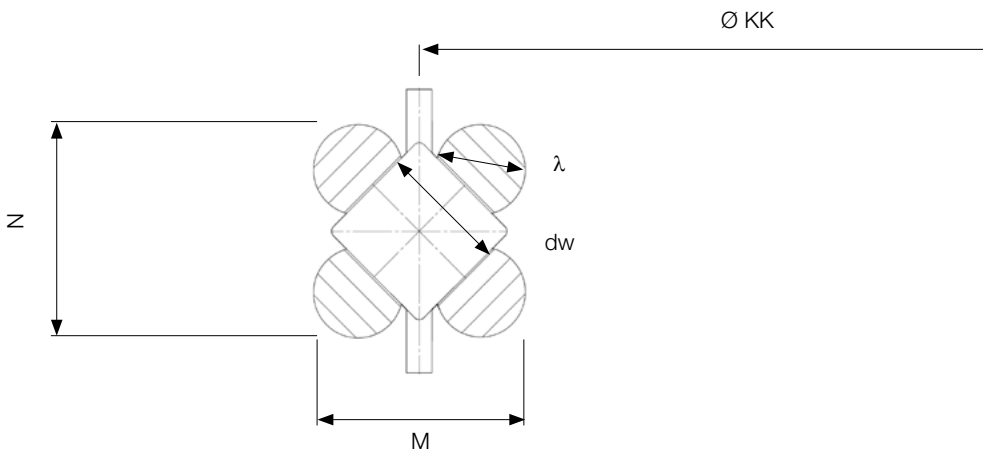
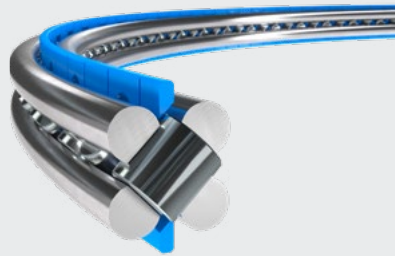
Radial and axial accuracy



Rotational resistance (preload)



Wire Race Bearing
Roller Bearing **Type LEW 7**
with ground raceways



Dimensions

Size	Dimensions mm				Load Capacity kN				Gewicht kg	Design Example
	Ø KK	M x N	dw	λ	C _{oa}	C _{or}	C _a	C _r		
LEW7-0400	400	16,6 x 16,6	10 x 9,8	7	354	141	91	48	1,08	
LEW7-0500	500	16,6 x 16,6	10 x 9,8	7	444	177	99	52	1,34	
LEW7-0600	600	16,6 x 16,6	10 x 9,8	7	534	214	114	60	1,61	
LEW7-0700	700	16,6 x 16,6	10 x 9,8	7	624	250	128	67	1,88	
LEW7-0800	800	16,6 x 16,6	10 x 9,8	7	714	268	129	68	2,15	
LEW7-0900	900	16,6 x 16,6	10 x 9,8	7	804	322	141	74	2,42	
LEW7-1000	1000	16,6 x 16,6	10 x 9,8	7	894	358	152	80	2,69	
LEW7-1100	1100	16,6 x 16,6	10 x 9,8	7	984	394	164	86	2,96	
LEW7-1200	1200	16,6 x 16,6	10 x 9,8	7	1074	430	175	92	3,23	

Characteristics

Franke LEW bearing elements are suitable for medium rotational speeds and accuracy requirements. They are characterized by smooth running even under high moment loads, high rigidity and a compact installation space. The crossed rollers accommodate high loads from all directions. LEW bearing elements are insensitive to shock loads and vibration. In terms of preload, running characteristics and available diameter ranges, they offer maximum flexibility.

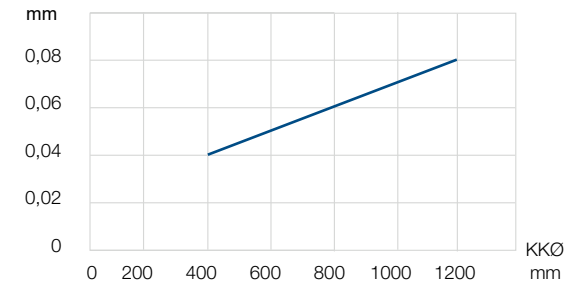
Radial and axial runout accuracy: The values shown in the diagram are standard values and can be improved by specifying tighter tolerances.

Rotational resistance (preload): The values shown in the diagram are standard values and can be individually adapted to the specific application.

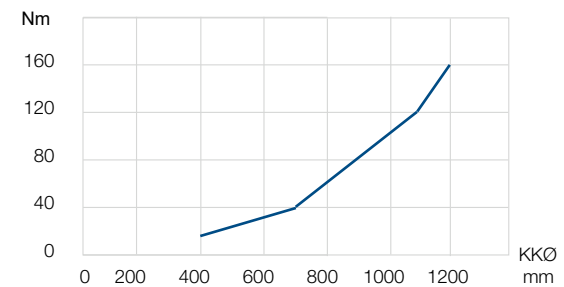
Technical Data:

Materials: Race rings: 67SiCr5; Rollers: 100Cr6; Cage: PA12
Operating temp.: -30 °C to +80 °C, up to +100 °C for short periods
Circumferential speed: max. 2 m/s
Lubricating grease: Shell Gadus S3 V220

Radial and axial accuracy



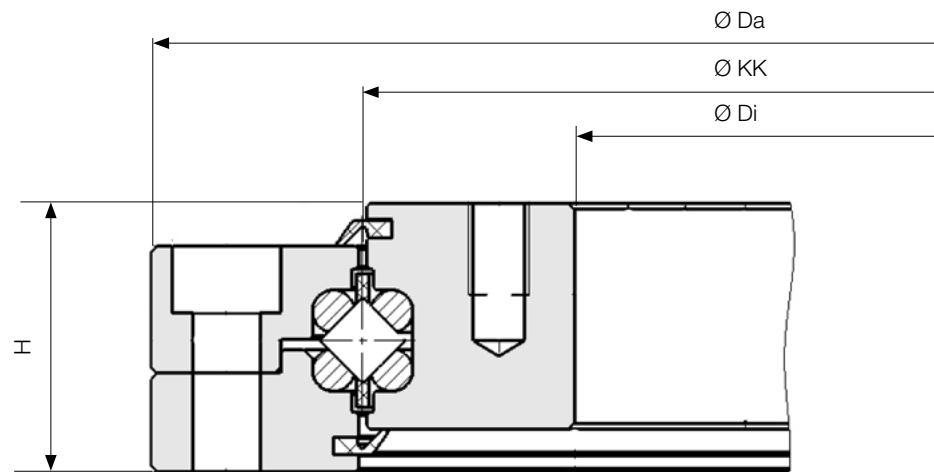
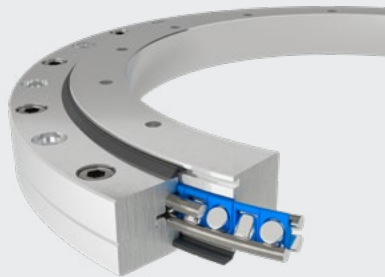
Rotational resistance (preload)



Wire-Race-Bearing

1-row Cross Roller Bearing **Type LVW**

as Ready-to-Install Slewing Ring



Dimensions

Size	Dimeansions mm				Load Capacity kN				stat. Moment kNm	Weight kg
	Ø KK	Ø Da	Ø Di	H	C _{oa}	C _{or}	C _a	C _r	C _{om}	
LVW-0200	200	250	150	34	109	44	41	21	4,4	2,38
LVW-0300	300	360	240	38	164	66	47	25	9,8	4,80
LVW-0400	400	470	330	44	354	141	91	48	28,3	9,40
LVW-0500	500	580	420	49	444	177	99	52	44,4	14,90

Characteristics

Franke LVW bearing assemblies are designed for applications requiring medium rotational speeds and accuracy. They are characterized by smooth running even under high moment loads, high rigidity and low weight thanks to their aluminum design.

The crossed rollers accommodate high loads from all directions. LVW bearing assemblies are insensitive to shock loads and vibration. Unlike a bearing element, the LVW is supplied as a completely preassembled unit, featuring inner and outer rings made of anodized aluminum with finished mounting holes.

This allows the bearing assembly to be bolted directly between two components, eliminating the need for a separate supporting structure.

Technical Data:

Materials:

Innen-/Außenring: ENAW7022, Dichtung: NBR

Operating temp.: -30 °C bis +80 °C, kurzfristig +100 °C

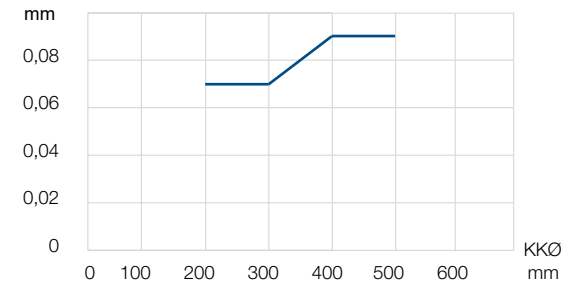
Circumfer. speed.: max. 2 m/s

Grease: Shell Gadus S3 V220

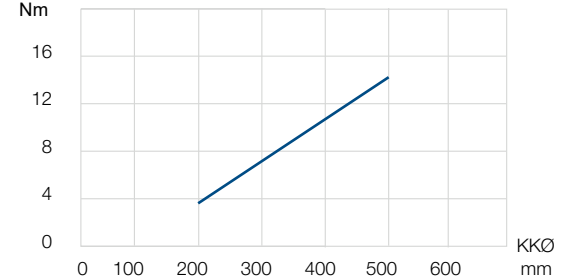
Relubrication: via grease nipple

Radial and axial accuracy

The values shown are standard values.
Higher accuracies are available on request.



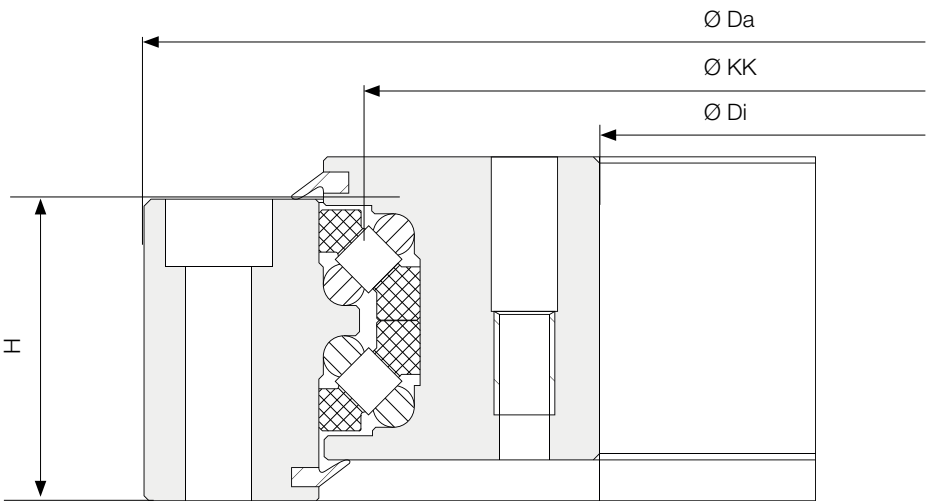
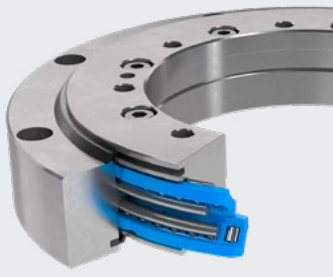
Rotational resistance (preload)



Wire-Race-Bearing

2-row Angular Roller Bearing **Type LVG**

as Ready-to-Install Slewing Ring



Dimensions

Size	Dimensions mm				Load Capacity kN				stat. Moment kNm	Weight kg
	Ø KK	Ø Da	Ø Di	H	C _{oa}	C _{or}	C _a	C _r	C _{om}	
LVG-0200	200	262	140	47	309	124	39	36	14	4,1
LVG-0300	300	375	223	57	617	247	78	72	39	9,3
LVG-0400	400	475	323	57	827	331	90	83	60	12,4

Characteristics

The LVG is a bearing assembly designed as a double-row angular roller bearing, featuring aluminum housing rings and two integrated bearing elements.

Franke LVG bearing assemblies are designed for applications requiring the highest load capacities. They combine high rigidity, low rotational resistance and low weight. Configured as a roller bearing, the LVG accommodates equally high loads from all directions and is insensitive to shock loads and vibration.

The bearing assemblies are sealed on both sides and are pre-load-adjusted to provide zero play. Thanks to the use of aluminum housing components, they are approximately 60% lighter than conventional steel rolling bearings.

Technical Data:

Materials:

Innen-/Außenring: ENAW7022, Dichtung: NBR

Operating temp.: -30 °C bis +80 °C, kurzfristig +100 °C

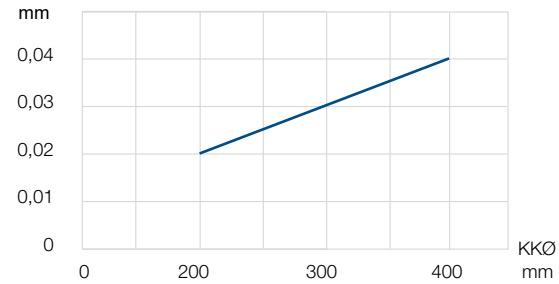
Circumfer. speed.: max. 2 m/s

Grease: Shell Gadus S3 V220

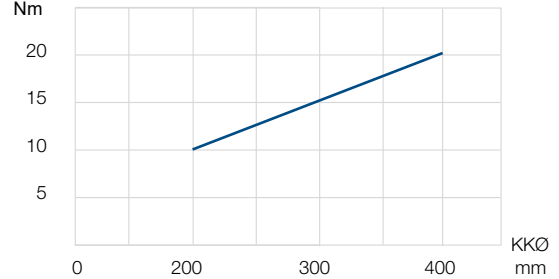
Relubrication: via grease nipple

Radial and axial accuracy

The values shown are standard values.
Higher accuracies are available on request.



Rotational resistance (preload)



www.franke-gmbh.com

Franke GmbH
Obere Bahnstraße 64
73431 Aalen, Germany
Tel. +49 7361 920-0
info@franke-gmbh.de



The Franke
Principle