Infinite Possibilities

Franke Wire Race Bearings are space-saving, variable and individually adaptable. With our customers we develop the optimal solution for every application.

Lightweight Bearings, Direkt Drive Bearings and Special Bearings for Innovation

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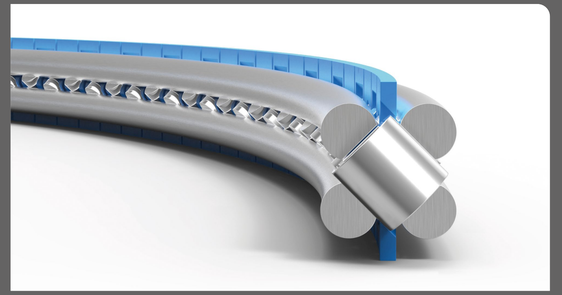
Innovation in Motion

Franke

Wire Race Bearings as Roller Bearings

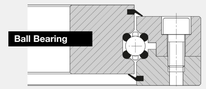
Bearing Elements and Bearing Assemblies

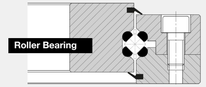


The Franke Principle: Compact, precise and durable Wire Race Bearings

With Franke Wire Race Bearings, the rolling process does not take place directly between the rolling elements and the mating structure, but rather on special race rings. The compact and highly resilient four-point geometry of the bearing gives you maximum reedom of design. The choice of material, geometry, size, drilling pattern, gear or seals is unlimited.

Mounting examples:





Features of all Franke Wire Race Bearings

- Raceways made of hardened steel
- High precision
- Takes equal loads from all directions
- Individualization of wire profile, raceways, ball diameter and material to fit the application
- Some types available in non-magnetic and stainless steel versions
- From lot size 1 to serial production
- Bearing diameter depending on type 60 - 2000 mm
- Fast availability, partly available from stock

additional features of Franke Roller Bearings

- extremely low rotational resistance especially at high moment load
- high load capacity
- high rigidity

Compact Design and Light Weight

Whether as ball bearings or as roller bearings: Wire Race Bearings are extremely compact and adapt to even the smallest mounting spaces. They are available either as bearing elements (consisting of race rings, rolling elements and cage) or complete with the enclosing construction as ready-to-use bearing assemblies.

Roller Bearings for highest Load Capacity and Rigidity

- extremely low rotational resistance especially at high moment load
- high load capacity
- high rigidity

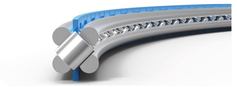
Open race rings made of steel 67SiCr5
The race rings take loads from all directions. They are open to optimally adapt to the enclosing structure and, for example, to compensate for torsion or temperature changes.

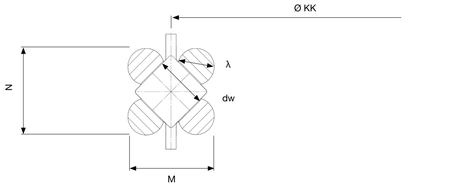
Plastic cages made of PA12
The cage is designed for the crosswise arrangement of the rollers. The rollers run alternately on two races and guarantee high load capacity from all directions.

Rollers made of hardened steel 100Cr6
The rollers are slightly larger in diameter than in their width. This ensures that only the respective carrying roller has contact with the race rings. The friction is minimized and ensures extremely low rotational resistance.

Ground Raceways
The race rings have ground raceways. Large contact surfaces ensure maximum load capacity.

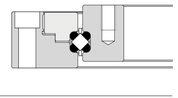
Bearing Element
Type LEW
1-row Cross Roller Bearing





Dimensions

Size	Dimensions mm				Load Capacity kN				Weight kg	Construction Example
	Ø KK	M x N	dw	λ	C_{0a}	C_{0r}	C_a	C_r		
LEW7-0400	400	16,6 x 16,6	10 x 9,8	7	350	140	90	47	1,9	
LEW7-0500	500	16,6 x 16,6	10 x 9,8	7	440	176	99	52	2,3	
LEW7-0600	600	16,6 x 16,6	10 x 9,8	7	530	212	113	59	2,8	
LEW7-0700	700	16,6 x 16,6	10 x 9,8	7	624	250	128	67	3,2	
LEW7-0800	800	16,6 x 16,6	10 x 9,8	7	714	286	144	75	3,7	
LEW7-0900	900	16,6 x 16,6	10 x 9,8	7	804	322	163	85	4,1	
LEW7-1000	1000	16,6 x 16,6	10 x 9,8	7	894	358	184	96	4,6	
LEW7-1100	1100	16,6 x 16,6	10 x 9,8	7	984	394	207	108	5,1	
LEW7-1200	1200	16,6 x 16,6	10 x 9,8	7	1074	430	234	122	5,5	

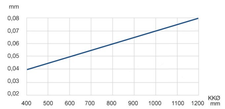


Characteristics
Franke bearing elements of type LEW are suitable for high demands on load capacity and rigidity. The crosswise arranged rollers take equally high loads from all directions. Bearing elements of the type LEW have excellent running behaviour due to the hardened, CNC-ground raceways as well as the perfect geometrical adjustment of rollers and raceway radius. They guarantee highest possible freedom of design and material selection of the mating structure.

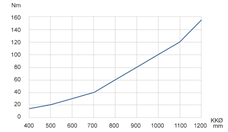
Radia-/Axial accuracy: The values of the graph are standard values and can be improved by limiting the tolerances.

Rotational eresistance (preload): The values of the graphic are standard values and can be adapted individually to the application.

Radial-/axial accuracy



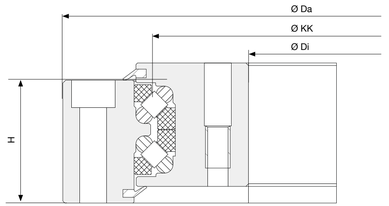
Rotational resistance (preload)



Technical Details:

Material:	race rings: 67SiCr5, rollers: 100Cr6, cage: PA12
Temperature in use:	-20 °C to +80 °C, briefly up to +100 °C
Circumferent. speed:	max. 4 m/s
Lubricant grease:	Shell Gadus S3 V220

Bearing Assembly
Type LVG
2-row Roller Bearing/Aluminum



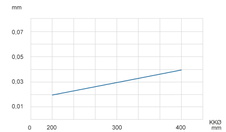
Dimensions

Size	Dimensions mm				Load Capacity kN				stat. Moment kNm	Weight kg
	Ø KK	Ø Da	Ø Di	H	C_{0a}	C_{0r}	C_a	C_r		
LVG0200	200	262	140	47	309	124	39	36	14	4,1
LVG0300	300	375	223	57	617	247	78	72	39	9,3
LVG0400	400	475	323	57	827	331	90	83	60	12,4

Characteristics
LVG is a 2-row angular roller bearing assembly with aluminum housing rings and two integrated bearing elements. Franke type LVG bearing assemblies are suitable for the highest load ratings. They convince by high rigidity, low rotational resistance and low weight. Designed as roller bearings, they absorb equally high loads from all directions and are insensitive to shocks and vibrations.

The bearing assemblies are sealed on both sides and adjusted free from clearance and with preload. By using housing parts made of aluminum, they are about 60% lighter than comparable steel bearings.

Radial / axial accuracy
The running accuracies indicated in the diagram are standard values. For higher accuracies please consult us.



Technical Details:

Material:	Inner/outer ring: ENAW7022, race rings: 67SiCr5, rollers: 100Cr6, cage: POM, seal: NBR
Temperature in use:	-20 °C to +80 °C, briefly up to +100 °C
Circumferential Speed:	max. 4 m/s
Lubricant grease:	Shell Gadus S3 V220
Lubrication:	via lubrication nipples

Roller Bearings in action: Medical Ceiling Equipment

The bearing element LEW7 is already being used in a medical ceiling equipment for the rotation of an X-ray unit. High load capacity, small mounting space and evenly easy rotary resistance with high torque load are the product advantages.

The strongly dimensioned bearing element moreover reliably compensates for the lack of rigidity of the enclosing structure.

Preferred applications for Roller Bearings:
- Medical technology
- Navigation / antenna systems
- Vehicle construction
- Aerospace