

22310 E/VA405

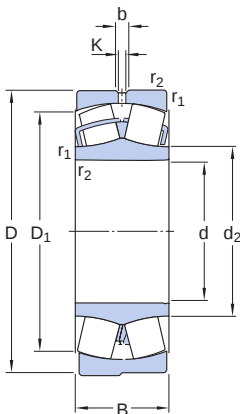


Spherical roller bearings can accommodate heavy loads in both directions. They are self-aligning and accommodate misalignment and shaft deflections, with virtually no increase in friction or temperature. This bearing design offers excellent performance in many types of vibrating machinery. The design includes features to facilitate relubrication. The bearings can be used in a modular system, including housings, sleeves and nuts.

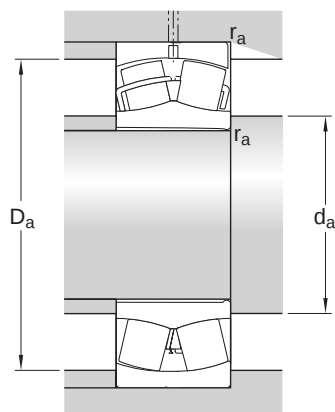
- Accommodate misalignment
- High load carrying capacity
- Accommodate very high vibration levels
- Low friction and long service life
- Increased wear resistance

Bore type

Cylindrical



Dimensions		
d	50 mm	Bore diameter
t _{Δdmp}	-0.008 – 0.0 mm	Deviation limits of mid-range bore diameter
D	110 mm	Outside diameter
t _{ΔDmp}	-0.013 – 0.0 mm	Deviation limits of mid-range outside diameter
B	40 mm	Width
t _{ΔBs}	-0.06 – 0.0 mm	Deviation limits of ring width
d ₂	≈ 63.9 mm	Shoulder diameter of inner ring
D ₁	≈ 91.9 mm	Shoulder/recess diameter of outer ring
b	6 mm	Width of lubrication groove
K	3 mm	Diameter of lubrication hole
r _{1,2}	min. 2 mm	Chamfer dimension
Normal, bore to P5 and outside		ISO tolerance class for dimensions



diameter P6

Abutment dimensions

d_a	min. 61 mm	Diameter of shaft abutment
D_a	max. 99 mm	Diameter of housing abutment
r_a	max. 2 mm	Radius of fillet

Calculation data

AGA performance class	AGA Explorer	
Basic dynamic load rating	C	228 kN
Basic static load rating	C_0	224 kN
Fatigue load limit	P_u	23.6 kN
Reference speed	4 800 r/min	
Limiting speed	6 300 r/min	
Limiting value	e	0.37
Calculation factor	Y_1	1.8
Calculation factor	Y_2	2.7
Calculation factor	Y_0	1.8
Permissible rotational acceleration for oil lubrication	834 m/s ²	
Permissible linear acceleration for oil lubrication	275 m/s ²	

Tolerances of run-out

Range of section height at inner ring of assembled bearing	t_{Kia}	5 μ m
Maximum run-out of inner ring side face to the bore	t_{Sd}	8 μ m
Range of section height at outer ring of assembled bearing	t_{Kea}	10 μ m

Perpendicularity of outer ring outside surface	t_{SD}	4.5 μm
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ISO tolerance class for geol tolerances	P5
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Radial internal clearance

Minimum initial clearance	75 μm
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Maximum initial clearance	100 μm
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Tolerances of run-out

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P6, P5, tapered bore 1:12, tapered bore 1:30
- Radial internal clearance: cylindrical bore, tapered bore

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit