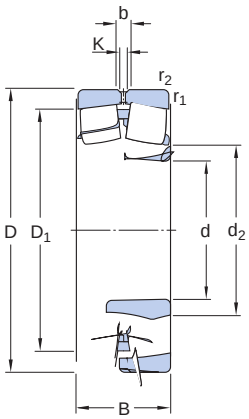
22314 EK/VA405

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

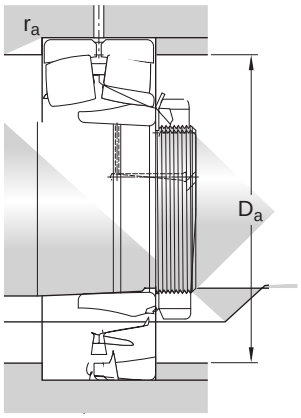
Bore type	Tapered 1:12



Dimensions

d	70 mm	Bore diameter
$t_{\Delta dmp}$	0.0 – 0.03 mm	Deviation limits of mid-range bore diameter
$t_{\Delta SL}$	0.0 – 0.03 mm	Deviation limits of tapered slope
D	150 mm	Outside diameter
$t_{\Delta Dmp}$	-0.018 – 0.0 mm	Deviation limits of mid-range outside diameter
B	51 mm	Width
$t_{\Delta Bs}$	-0.06 – 0.0 mm	Deviation limits of ring width
d_2	≈ 90.3 mm	Shoulder diameter of inner ring
D_1	≈ 128 mm	Shoulder/recess diameter of outer ring
b	8.3 mm	Width of lubrication groove
K	4.5 mm	Diameter of lubrication hole
$r_{1,2}$	min. 2.1 mm	Chamfer dimension

	Normal, bore to P5 and outside diameter P6	ISO tolerance class for dimensions



Abutment dimensions

D_a	max. 138 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	413 kN
Basic static load rating	C_0	430 kN
Fatigue load limit	P_u	45 kN
Reference speed		3 400 r/min
Limiting speed		4 500 r/min
Limiting value	e	0.33
Calculation factor	Y_1	2
Calculation factor	Y_2	3
Calculation factor	Y_0	2
Permissible rotational acceleration for oil lubrication		598 m/s²
Permissible linear acceleration for oil lubrication		226 m/s²

Tolerances of run-out

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

Range of section height at outer ring of assembled bearing	t_{Kea}	11 µm
Perpendicularity of outer ring outside surface	t_{SD}	5 µm
ISO tolerance class for geoal tolerances		P5

Radial internal clearance

Minimum initial clearance		120 µm
Maximum initial clearance		150 µm

Mounting information

Recommended tightening angle for lock nut	α	130 °

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