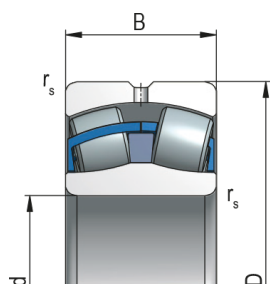
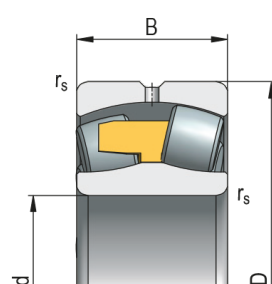


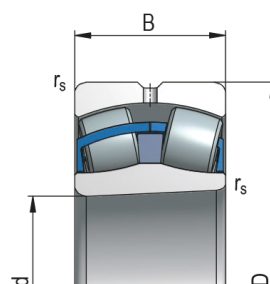
# Double row spherical roller bearings with cylindrical and tapered bore



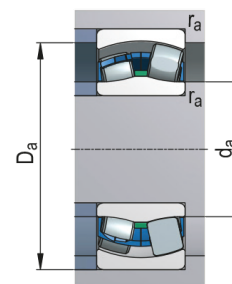
EW33J



W33M



EKW33J



Bearing Designation with Cylindrical Bore	230/560W33MB
Bearing Designation with Tapered Bore (1:12)	230/560KW33MB

## Dimensions (mm)

d	560
D	820
B	195
$r_{s \min}$	6

## Abutment and Fillet Dimensions (mm)

$d_{a \min}$	588
$D_{a \max}$	792
$r_{a \max}$	5

## Basic Load Rating (kN)

C	5302,1
$C^0$	11368,7

## Limiting Speed for Lubrication (min<sup>-1</sup>)

Grease	320
Oil	400

Weight [kg]	357,0
Weight - K [kg]	345,0

## Corresponding

Adapter Sleeve	H30/560
Withdrawal Sleeve	AH30/560
Withdrawal Nut	HML118T

## Coefficients

e	0,22
$Y_1$	3,1
$Y_2$	4,6
$Y_3$	3

## Tolerance Class

Tolerance Class	Inner Ring									
	Cylindrical Bore									
	$\Delta_{dmp}$		$V_{dp}$			$V_{dmp}$	$K_{ia}$	$\Delta_{B_s}$		$V_{B_s}$
			Diameter Series							
			7,8,9	0,1	2,3,4					
	max	min	max	max	max	max	max	max	min	max
	$\mu m$									
P0	0	-50	63	63	38	38	70	0	-500	60
P6	0	-40	50	50	30	30	40	0	-500	50

Tolerance Class	Inner Ring									
	Tapered Bore 1:12					Tapered Bore 1:30				
	$\Delta_{dmp}$		$\Delta_{d1mp} - \Delta_{dmp}$		$V_{dp}^{1)}$	$\Delta_{dmp}$		$\Delta_{d1mp} - \Delta_{dmp}$		$V_{dp}^{1)}$
	max	min	max	min	max	max	min	max	min	max
	$\mu m$									
P0 - P6	70	0	70	0	70	50	0	70	0	70

Tolerance Class	Outer Ring								
	$\Delta_{Dmp}$		$V_{Dp}$				$V_{Dmp}$	$K_{ea}$	$\Delta_{CS}, V_{CS}$
			Diameter Series			bearings <sup>2)</sup> with seals			
			7,8,9	0,1	2,3,4				
	max	min	max	max	max	max	max	max	
	$\mu m$								
P0	0	-100	125	125	75	-	75	140	Corresponds to $\Delta_{BS}, V_{BS}$ of the same bearing inner ring
P6	0	-50	75	75	45	-	45	75	

1) Valid in any bore radial plane

2) P0 - Valid only for bearings in diameter series 2, 3 and 4 \* P6 - Valid only for bearings in diameter series 0, 1, 2, 3 and 4

## Radial Clearance - Cylindrical Bore

C2		normal		C3		C4		C5	
min	max	min	max	min	max	min	max	min	max
$\mu m$									
150	280	280	440	440	600	600	780	780	1000

## Radial Clearance - Tapered Bore

C2		normal		C3		C4		C5	
min	max	min	max	min	max	min	max	min	max
$\mu m$									
290	410	410	540	540	680	680	870	870	1100

## Tolerance Symbols and Their Meaning

$d$	nominal bore diameter	$H_4$	rated height of spherical-roller bearing
$d_1$	nominal diameter of larger theoretical tapered bore diameter	$\Delta_{Bs}$	inner ring single width deviation
$d_2$	nominal diameter of the shaft washer of double direction thrust bearings	$\Delta_{Cs}$	outer ring single width deviation
$\Delta_{ds}$	deviation of single bore diameter from nominal	$\Delta_{Is}$	bearing single width deviation (total)
$\Delta_{dmp}$	mean cylindrical bore diameter deviation in single radial plane (for tapered bore $\Delta_{dmp}$ is valid for theoretical bore diameter)	$\Delta_{T1s}$	cone sub-unit effective width deviation
$\Delta_{d1mp}$	deviation of mean larger theoretical diameter of tapered bore	$\Delta_{T2s}$	cup sub-unit effective width deviation
$\Delta_{d2mp}$	mean shaft washer bore diameter deviation of double direction thrust bearings in single radial plane	$\Delta_{Hs}$	height deviation of single direction axial bearings from nominal value
$V_{dp}$	single bore diameter variation in single radial plane	$\Delta_{H1s}$	height deviation of single direction axial ball bearings with sphered housing washer from nominal value
$V_{dmp}$	mean cylindrical bore diameter variation	$\Delta_{H2s}$	height deviation of double direction axial bearings from nominal value
$V_{d2p}$	shaft washer bore diameter variation of double direction thrust bearings in single radial plane	$\Delta_{H3s}$	height deviation of double direction axial ball bearings with sphered housing washer from nominal value
$D$	nominal outside diameter	$\Delta_{H4s}$	height deviation of axial spherical-roller bearing from the rated value
$\Delta_{Ds}$	deviation of single outside diameter from the nominal dimension	$C$	outer ring nominal width
$\Delta_{Dmp}$	mean outside cylindrical surface diameter deviation in single plane	$V_{Bs}$	inner ring single width variation
$V_{Dp}$	single outside cylindrical surface diameter variation in single radial plane	$V_{Cs}$	outer ring single width variation
$V_{Dmp}$	mean outside cylindrical surface diameter variation	$K_{ia}$	radial runout of assembled bearing inner ring
$B$	inner ring nominal width	$K_{ea}$	radial runout of assembled bearing outer ring
$T$	total nominal width of tapered roller bearings	$S_{ea}$	shaft washer raceway axial runout
$T_1$	nominal effective width of cup sub-unit	$S_i$	housing washer raceway axial runout
$T_2$	nominal effective width of cone sub-unit	$S_e$	inner ring flat seat face axial runout of assembled bearing
$H$	rated width of unidirectional axial bearing	$S_{ia}$	outer ring flat seat face axial runout of assembled bearing
$H_1$	rated height of unidirectional ball axial bearing including the body ring	$S_{ea}$	flat seat face axial runout
$H_2$	rated height of bidirectional axial bearing	$S_d$	runout of outside cylindrical surface towards outer ring face
$H_3$	rated height of bidirectional axial ball bearing including body rings	$S_D$	runout of supporting face towards seat face for single row tapered roller bearings
		$S_s$	