

# Contents

---

<b>1. Introduction:</b>	
High performance, customized products .....	<b>p.4</b>
<hr/>	
<b>2. Design description – Products and the main suffixes</b> .....	<b>p.5</b>
<hr/>	
<b>3. Series and bores</b>	
A multitude of solutions, a wide range of bore sizes .....	<b>p.6</b>
<hr/>	
<b>4. Cage selection guide</b>	
A summary table to identify your needs .....	<b>p.7</b>
<hr/>	
<b>5. Cages:</b>	
Three cages, four specific solutions .....	<b>p.8-9</b>
<hr/>	
<b>6. Fits and clearances:</b>	
E-Generation, series EF800 .....	<b>p.10</b>
<hr/>	
<b>7. Range of spherical roller bearings and sleeves</b> .....	<b>p.11-15</b>
<hr/>	
<b>8. Lubrication:</b>	
Suitable lubrication: a guarantee of long service life .....	<b>p.16</b>
<hr/>	
<b>9. Sleeves</b>	
The essential complement for our spherical roller bearings .....	<b>p.17</b>
Fitting with mounting sleeves: reduction of the internal clearance .....	<b>p.18-19</b>

## Introduction

High performance,  
customized products.

Many years of close cooperation with our steel suppliers has resulted in spectacular advances in the **performance of steels**. The use of steels with a high level of inclusion **purity**, combined with the **precision** of the bearing elements, results in a **longer service life**.

The **optimized profile design** and control of the manufacturing tolerances give a balanced distribution of the contact pressures, reducing friction, operating temperature and the over stresses that cause excessive metal fatigue.

**These developments in materials and techniques have resulted in an 18% increase in the dynamic load capacities of SNR spherical roller bearings and a 75% increase in their service life.**

Apart from the gain in bearing load capacity and service life, the different types of SNR cages enable the spherical roller bearing products to meet the most varied specifications, by proposing:

- a **reduction in the operating temperature** due to reduced internal friction,
- a **higher maximum speed**, thereby extending the range of possible applications,
- the **ability to withstand temperatures of up to 200°C (392°F)** for bearings with pressed steel or solid brass cages. Dimensional stability is ensured by a special heat treatment,
- a **misalignment capacity of  $\pm 0.5^\circ$**  without reducing the load capacity, and up to  $1^\circ 30'$  with lighter loads.

The basic models of SNR spherical roller bearings are manufactured with normal internal clearance. To better meet the individual service and fitting conditions, we also supply bearings with increased radial clearance of up to J40 (C4) or a reduced radial clearance (J20 or C2) on request.

The E-Generation product line is divided into different series, each one adapted to particular service conditions.

- Series EA: steel cage
- Series EM: solid copper alloy cage
- Series EF800: solid cage for vibrating applications
- Series E: 6.6 polyamide cage reinforced with 25% glass fibers

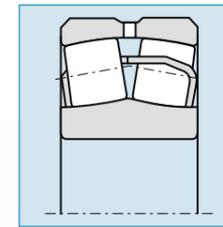


Specific applications brochures are also available to help you choose the right bearing for a given application: Quarries, Papermaking industry, Iron and Steel industry, Food production industry, etc. Ask your SNR representative for them.

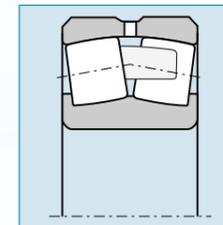
## Design descriptions

Products and the main  
suffixes.

**E:** Optimized version with 6.6 polyamide cage reinforced with 25% glass fibers.

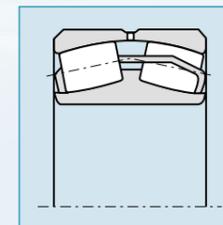


**EA:** Optimized version with symmetrical rollers, inner ring without central flange or shoulders, steel cage with highly enveloping profile guided by the inner ring and situated above the pitch diameter of the rollers. Roller pockets featuring 4 guidance tabs resulting in more precise roller guidance and a larger reserve of lubricant.

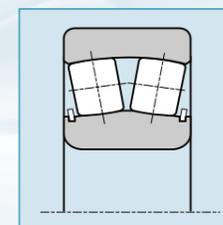


**EM:** Optimized version with symmetrical rollers, one-piece solid copper alloy cage with machined recesses with enveloping profile centered on the rollers, lateral shoulders on the inner ring.

**EF800:** Same as EM, but with control of final clearance after fitting thanks to the reduced tolerances on the outside diameter, the bore and the radial internal clearance.



**240.., 241..V:** Optimized version with symmetrical rollers, central flange on the inner ring, pressed steel cage with enveloping profile centered on the inner ring.



**213..V:** Lateral snap rings. Fitted with a 2-piece pressed steel cage with hooks, centered on the rollers, or a solid brass cage (VM).

**B33:** Lubrication groove with 3 greasing holes in the outer ring.

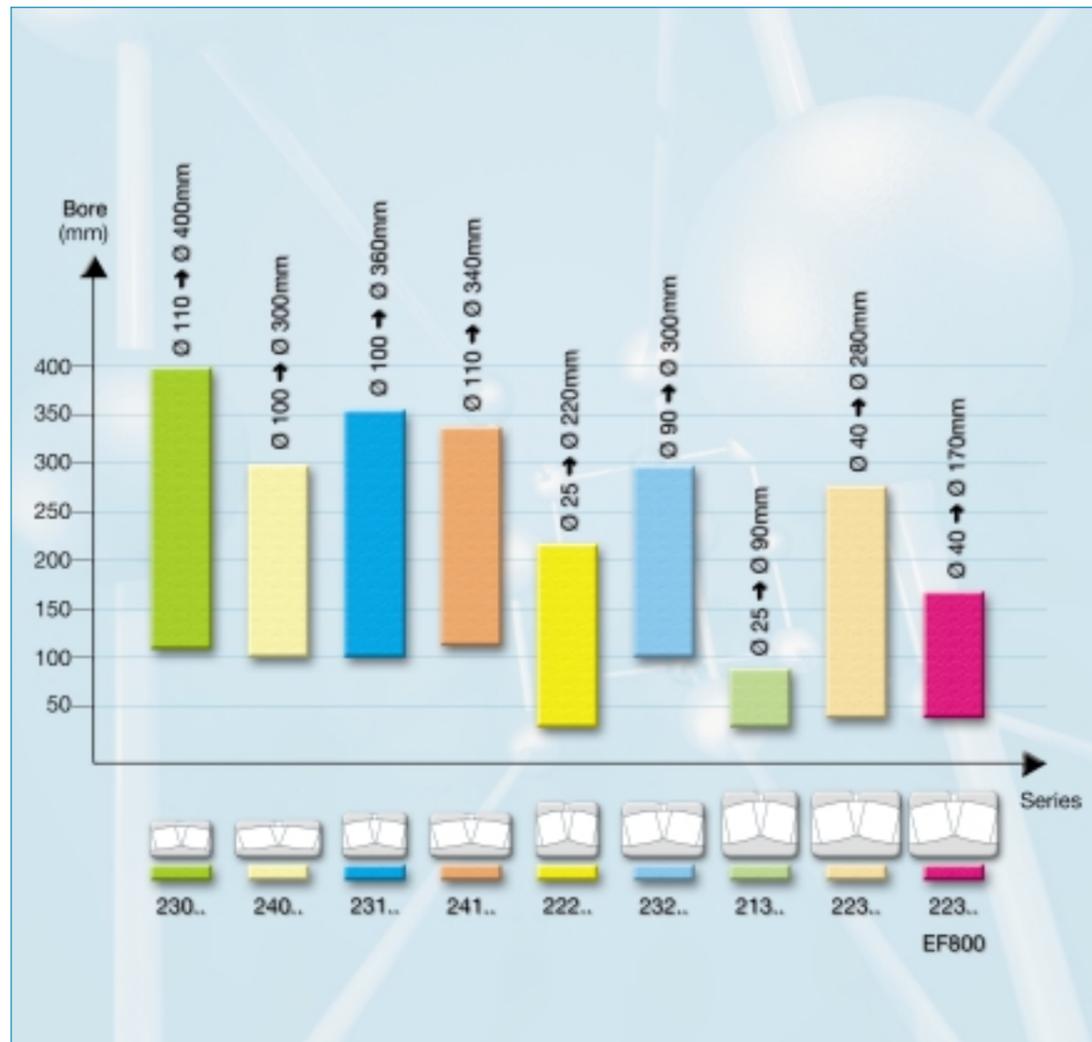
**K:** 1/12 tapered bore bearing.

**K30:** 1/30 tapered bore bearing.

## Series and bores

A multitude of solutions, a wide range of bore sizes.

The following table summarizes the SNR range of spherical roller bearings, indicating the corresponding bore sizes.



## Cage selection guide

A summary table to identify your needs.

The following pages provide a detailed description of the different cages and series. The table below provides a summary of their characteristics according to the application.

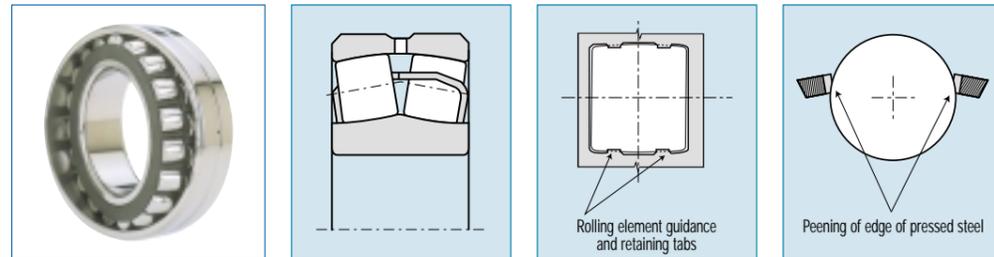
Series	EA series	EM series	EF800 series	E series
<b>Applications</b>	General	Difficult	Vibrating	General
<b>Cage materials</b>	Steel + Surface treatment	Copper alloys	Copper alloys	Polyamide 6.6 (reinforced with 25% glass fibers)
<b>Operating temperatures</b>	Up to 200°C (392°F)	Up to 200°C (392°F)	Up to 200°C (392°F)	Up to 120°C (250°F) continuous and 150°C (302°F) transient peak
<b>Resistance to impacts and vibrations</b>	* * *	* * * * *	* * * * *	* * * *
<b>Resistance to friction</b>	* * *	* * * * *	* * * * *	* * * * *
<b>Resistance to heating</b>	* * * * *	* * * * *	* * * * *	* * *

Legend  
 \* \* \* : average  
 \* \* \* \* : good  
 \* \* \* \* \* : excellent

# Cages

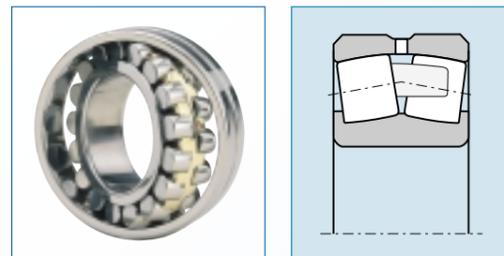
Three cages,  
four specific solutions.

## EA Series: steel cage



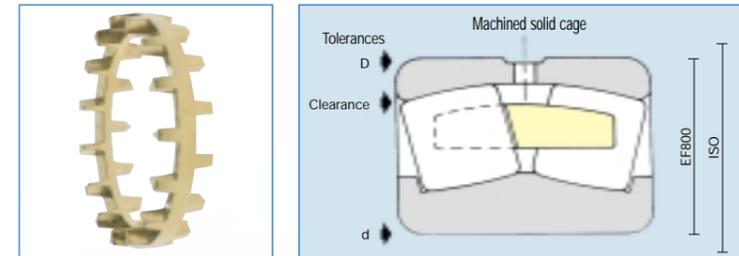
- The SNR steel cage is a high-performance cage adapted to general high temperature applications up to 200°C (392°F).
- Centered on the inner ring, it is based on a **unique concept** with guidance tabs giving perfect control of the position of the rolling elements without the addition of extra parts. This guarantees minimum friction and heating, resulting in a longer service life and reduced maintenance.
- Its surface treatment (phosphate coating) reduces the friction coefficient and wear, giving better performance at high maximum rotation speeds.
- Its design enables the reserve of lubricant in the bearing to be increased and facilitates its circulation.

## EM Series: solid copper alloy cage



- Particularly suited to difficult applications up to 200°C (392°F). The EM version is capable of withstanding the most taxing service conditions (high speeds, impacts, contamination, etc.), thanks to the physical characteristics of the copper alloy.
- One-piece cage displaying excellent resistance to impacts and vibration.
- Cage centered on the rolling elements with lateral shoulders on inner ring. The absence of cage-to-ring contact prevents seizing in case of thermal expansion.

## EF800 Series: solid brass cage for vibrating applications



Vibrating mechanisms such as those found in shaker screens, crushers, grinders, and some civil engineering equipment are the most taxing applications for spherical roller bearings. The solution for such cases is the E-Generation bearing with solid brass cage: EF800.

- The integrally machined one-piece cage minimizes fracture-inducing resonance phenomena thanks to the lateral shoulders of the inner ring and the control of the final clearance after fitting. In effect, to ensure good operation in a vibrating environment the tolerances on the outside diameter, the bore and the internal clearance are reduced.
- Special radial clearance: J40 (C4) positioned in the upper 2/3 of the tolerance (**see diagram above**). This special clearance is also available in category J30 (C3).
- Recommended fits (**see table page 10**):
  - Interference fit in the housing, class P6.
  - Slip fit on the shaft, class g6.

## E Series: 6.6 polyamide cage (reinforced with 25% glass fibers)



- General applications at continuous service temperatures of up to 120°C (250°F), and up to 150°C (300°F) intermittently.
- Excellent resistance to vibration, impacts, fast accelerations and decelerations, thanks to the elasticity and low weight of the polyamide.
- A cage with a unique and precise geometrical design giving exceptional roller retention through the enveloping profile of the cage obtained by molding.
- Lubrication facilitated by the cage design and the sliding of the polyamide on the steel. (In the case of oil lubrication, the additives in the oil can affect the cage service life).
- Lowering of noise level as a result of the material used.



# Spherical Roller Bearings

## Fits and clearances – E-Generation, series EF800

### Clearances

Reduced radial clearance tolerances														
<b>Dimensions in inch</b>														
Nominal bore	greater than	1.182	1.576	1.970	2.561	3.152	3.940	4.728	5.516	6.304	7.092	7.880	8.865	9.850
	up to	1.576	1.970	2.561	3.152	3.940	4.728	5.516	6.304	7.092	7.880	8.865	9.850	11.032
With cylindrical bore														
<b>Clearances in microns</b>														
Group of clearances	min.	65	85	100	120	150	180	205	240	260	285	320	355	385
EF800 (J40)	max.	80	100	120	145	180	210	240	280	310	340	380	420	460
<b>Clearances in microns</b>														
Group of clearances	min.	50	60	75	90	110	135	160	190	200	220	245	265	290
EF801 (J30)	max.	60	75	90	110	135	160	190	220	240	260	290	320	350
<b>Clearances in microns</b>														
Group of clearances	min.	35	40	50	60	75	90	110	130	140	155	165	180	200
EF802 (J0)	max.	45	55	65	80	100	120	145	170	180	200	220	240	260
With tapered bore (taper 1/12)														
<b>Clearances in microns</b>														
Group of clearances	min.	70	85	105	130	155	185	220	255	285	315	350	385	425
EKF800 (J40)	max.	85	100	120	150	180	220	260	300	340	370	410	450	490
<b>Clearances in microns</b>														
Group of clearances	min.	55	65	80	100	120	145	175	195	220	245	275	295	330
EKF801 (J30)	max.	65	80	95	120	140	170	200	230	260	290	320	350	390
<b>Clearances in microns</b>														
Group of clearances	min.	40	50	60	80	90	110	135	145	160	180	205	225	245
EKF802 (J0)	max.	50	60	75	95	110	135	160	180	200	220	250	270	300

### Tolerances

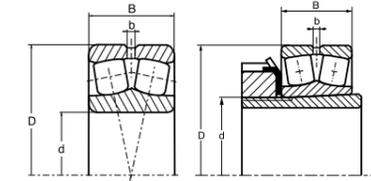
Inner ring – Reduced bore tolerances						
<b>Dimensions in inch</b>						
Nominal bore	greater than	1.182	1.970	3.152	4.728	7.092
	up to	1.970	3.152	4.728	7.092	9.850
<b>Micron-scale differences</b>						
Cylindrical bore	d <sub>m</sub> , d	0	0	0	0	0
		-7	-9	-12	-15	-18
Tapered bore	d	25	30	35	40	46
		0	0	0	0	0
Width	B	0	0	0	0	0
		-120	-150	-200	-250	-300
Outer ring – Reduced tolerances on the outside diameter						
<b>Dimensions in inch</b>						
Nominal outside diameter	greater than	3.152	4.728	5.910	7.092	9.850
	up to	4.728	5.910	7.092	9.850	12.411
		12.411	15.760	19.700	24.822	
<b>Micron-scale differences</b>						
Outside diameter	D <sub>m</sub> , D	-5	-5	-5	-10	-10
		-13	-13	-18	-23	-23
		-13	-13	-18	-23	-28
		-13	-13	-18	-23	-30
		-13	-13	-18	-23	-35

The outer ring has the same width tolerance as the inner ring.



# Spherical Roller Bearings

## The product line



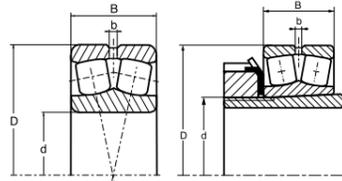
### ALL CLEARANCE VERSIONS AVAILABLE FROM STOCK OR TO ORDER

OVERALL DIMENSIONS	BASIC CAPACITIES lbf		MAXIMUM ROTATION SPEEDS (rpm)		WEIGHTS (lbs)		DESIGNATIONS		SLEEVES for tapered bore					
	(inch)		Lubrication		Bore		Bore		Adapter sleeves	Withdrawal sleeves	Withdrawal nuts			
d	D	B	b	C	Co	grease	oil	cylindrical	tapered	cylindrical	tapered			
0.985	2.049	0.709	0.118	12,200	10,400	8,600	11,000	0.375	0.353	22205EAB33	22205EAKB33	H305	-	-
	2.049	0.709	0.118	12,200	10,400	8,600	11,000	0.364	0.342	22205EB33	22205EKB33	H305	-	-
	2.443	0.670	-	10,900	8,400	6,800	9,100	0.567	0.560	21305V	21305VK	H305	-	-
1.182	2.443	0.788	0.173	16,200	14,500	7,200	9,300	0.600	0.573	22206EAB33	22206EAKB33	H306	-	-
	2.443	0.788	0.173	16,200	14,500	7,200	9,300	0.584	0.558	22206EB33	22206EKB33	H306	-	-
	2.443	0.788	0.173	16,200	13,500	7,100	9,300	0.609	0.593	22206EB33M	22206EKB33M	H306	-	-
	2.837	0.749	-	14,200	11,300	5,800	7,700	0.869	0.847	21306V	21306VK	H305	-	-
1.379	2.837	0.906	0.193	21,500	20,700	6,100	7,900	0.970	0.926	22207EAB33	22207EAKB33	H307	-	-
	2.837	0.906	0.193	21,500	20,700	6,100	7,900	0.926	0.882	22207EB33	22207EKB33	H307	-	-
	2.837	0.906	0.193	21,500	20,700	6,100	7,900	0.970	0.948	22207EB33M	22207EKB33M	H307	-	-
	3.152	0.827	-	17,800	14,900	5,200	6,900	1.13	1.11	21307V	21307VK	H307	-	-
1.576	3.152	0.906	0.213	24,800	23,600	5,500	7,100	1.14	1.10	22208EAB33	22208EAKB33	H308	AH308	KM9
	3.152	0.906	0.213	24,800	23,600	5,500	7,100	1.12	1.08	22208EB33	22208EKB33	H308	AH308	KM9
	3.152	0.906	0.213	23,600	22,100	5,500	7,100	1.10	0.992	22208EB33M	22208EKB33M	H308	AH308	KM9
	3.546	0.906	-	21,600	18,900	4,500	6,100	1.58	1.55	21308V	21308VK	H308	AH308	KM9
	3.546	1.300	0.232	36,200	34,200	4,100	5,300	2.22	2.21	22308EAB33	22308EAKB33	H2308	AH2308	KM9
	3.546	1.300	0.232	36,200	34,200	4,100	5,300	2.21	2.16	22308EB33	22308EKB33	H2308	AH2308	KM9
	3.546	1.300	0.232	36,200	34,200	4,100	5,300	2.25	2.21	22308EB33M	22308EKB33M	H2308	AH2308	KM9
	3.546	1.300	0.232	36,200	34,200	4,100	5,300	2.25	2.21	22308EF800	22308EKF800	H2308	AH2308	KM9
	1.773	3.349	0.906	0.229	25,900	25,400	5,100	6,600	1.25	1.20	22209EAB33	22209EAKB33	H309	AH309
3.349		0.906	0.229	25,900	25,400	5,100	6,600	1.21	1.16	22209EB33	22209EKB33	H309	AH309	KM10
3.349		0.906	0.229	24,800	23,900	5,100	6,600	1.10	0.992	22209EB33M	22209EKB33M	H309	AH309	KM10
3.940		0.985	-	26,800	23,900	4,100	5,400	2.09	2.06	21309V	21309VK	H309	AH309	KM10
3.940		1.418	0.252	44,100	42,100	3,700	4,800	2.98	2.95	22309EAB33	22309EAKB33	H2309	AH2309	KM10
3.940		1.418	0.252	44,100	42,100	3,700	4,800	2.97	2.95	22309EB33	22309EKB33	H2309	AH2309	KM10
3.940		1.418	0.252	44,100	42,100	3,700	4,800	3.02	2.99	22309EB33M	22309EKB33M	H2309	AH2309	KM10
3.940		1.418	0.252	44,100	42,100	3,700	4,800	3.02	2.99	22309EF800	22309EKF800	H2309	AH2309	KM10
1.970		3.546	0.906	0.229	27,900	27,900	4,800	6,200	1.33	1.27	22210EAB33	22210EAKB33	H310	AHX310
	3.546	0.906	0.229	27,900	27,900	4,800	6,200	1.29	1.23	22210EB33	22210EKB33	H310	AHX310	KM11
	3.546	0.906	0.229	26,600	26,300	4,800	6,200	1.34	1.30	22210EB33M	22210EKB33M	H310	AHX310	KM11
	4.334	1.064	-	30,800	28,800	3,700	4,900	2.76	2.70	21310V	21310VK	H310	AHX310	KM11
	4.334	1.576	0.292	53,300	52,200	3,400	4,400	3.99	3.97	22310EAB33	22310EAKB33	H2310	AHX2310	KM11
	4.334	1.576	0.292	53,300	52,200	3,400	4,400	3.97	3.75	22310EB33	22310EKB33	H2310	AHX2310	KM11
	4.334	1.576	0.292	53,300	52,200	3,600	4,800	4.04	4.02	22310EB33M	22310EKB33M	H2310	AHX2310	KM11
	4.334	1.576	0.292	53,300	52,200	3,400	4,400	4.04	4.02	22310EF800	22310EKF800	H2310	AHX2310	KM11
	2.167	3.940	0.985	0.248	33,100	33,300	4,300	5,500	1.81	1.69	22211EAB33	22211EAKB33	H311	AHX311
3.940		0.985	0.248	31,700	31,500	4,300	5,500	1.72	1.60	22211EB33	22211EKB33	H311	AHX311	KM12
3.940		0.985	0.248	31,700	31,500	4,300	5,500	1.85	1.79	22211EB33M	22211EKB33M	H311	AHX311	KM12
4.728		1.143	-	37,600	35,600	3,300	4,500	3.39	3.35	21311V	21311VK	H311	AHX311	KM12
4.728		1.694	0.307	63,500	61,700	3,100	4,000	5.05	5.01	22311EAB33	22311EAKB33	H2311	AHX2311	KM12
4.728		1.694	0.307	63,500	61,700	3,100	4,000	5.01	4.96	22311EB33	22311EKB33	H2311	AHX2311	KM12
4.728		1.694	0.307	63,500	61,700	3,300	4,400	5.16	5.09	22311EB33M	22311EKB33M	H2311	AHX2311	KM12
4.728		1.694	0.307	63,500	61,700	3,100	4,000	5.16	5.12	22311EF800	22311EKF800	H2311	AHX2311	KM12
2.364		4.334	1.103	0.272	40,100	40,700	3,900	5,100	2.50	2.36	22212EAB33	22212EAKB33	H312	AHX312
	4.334	1.103	0.272	40,100	40,700	3,900	5,100	2.36	2.21	22212EB33	22212EKB33	H312	AHX312	KM13
	4.334	1.103	0.272	38,300	38,500	3,900	5,100	2.53	2.47	22212EB33M	22212EKB33M	H312	AHX312	KM13
	5.122	1.221	-	41,900	40,300	3,100	4,100	4.38	4.32	21312V	21312VK	H312	AHX312	KM13
	5.122	1.812	0.343	72,700	71,800	2,900	3,700	6.18	6.13	22312EAB33	22312EAKB33	H2312	AHX2312	KM13
	5.122	1.812	0.343	72,700	71,800	2,900	3,700	6.15	6.10	22312EB33	22312EKB33	H2312	AHX2312	KM1



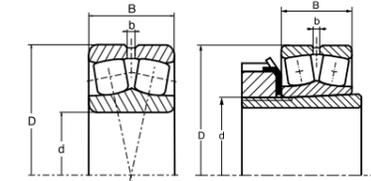
# Spherical Roller Bearings

## The product line



# Spherical Roller Bearings

## The product line



ALL CLEARANCE VERSIONS AVAILABLE FROM STOCK OR TO ORDER

OVERALL DIMENSIONS	BASIC CAPACITIES lbf		MAXIMUM ROTATION SPEEDS (rpm)		WEIGHTS (lbs)		DESIGNATIONS		SLEEVES for tapered bore					
	(inch)			Dynamic	Static	Lubrication		Bore		Adapter sleeves	Withdrawal sleeves	Withdrawal nuts		
	d	D	B	b	C	Co	grease	oil	cylindrical				tapered	
2.561	4.728	1.221	0.307	48,400	50,400	3,600	4,700	3.33	3.20	22213EAB33	22213EAKB33	H313	AH313G	KM14
	4.728	1.221	0.307	48,400	50,400	3,600	4,700	3.20	3.06	22213EB33	22213EKB33	H313	AH313G	KM14
	4.728	1.221	0.307	46,400	47,700	3,600	4,700	3.50	3.37	22213EB33M	22213EKB33M	H313	AH313G	KM14
	5.516	1.300	-	50,400	48,400	2,900	3,800	5.31	5.25	21313V	21313VK	H313	AH313G	KM14
	5.516	1.891	0.362	79,000	77,200	2,700	3,400	7.53	7.43	22313EAB33	22313EAKB33	H2313	AH2313G	KM14
	5.516	1.891	0.362	79,000	77,200	2,700	3,400	7.47	7.38	22313EB33	22313EKB33	H2313	AH2313G	KM14
	5.516	1.891	0.362	79,000	77,200	2,700	3,400	7.70	7.61	22313EB33M	22313EKB33M	H2313	AH2313G	KM14
	5.516	1.891	0.362	79,000	77,200	2,700	3,400	7.70	7.61	22313EF800	22313EKF800	H2313	AH2313G	KM14
2.758	4.925	1.221	0.292	50,400	54,000	3,400	4,400	3.50	3.35	22214EAB33	22214EAKB33	H314	AH314G	KM15
	4.925	1.221	0.292	50,400	54,000	3,400	4,400	3.35	3.21	22214EB33	22214EKB33	H314	AH314G	KM15
	4.925	1.221	0.292	50,400	54,000	3,400	4,400	3.64	3.64	22214EB33M	22214EKB33M	H314	AH314G	KM15
	5.910	1.379	-	55,400	54,000	2,700	3,600	6.59	6.50	21314V	21314VK	H314	AH314G	KM15
	5.910	2.009	0.410	90,000	89,100	2,500	3,200	9.21	9.04	22314EAB33	22314EAKB33	H2314	AHX2314G	KM15
	5.910	2.009	0.410	90,000	89,100	2,500	3,200	9.06	8.87	22314EB33	22314EKB33	H2314	AHX2314G	KM15
	5.910	2.009	0.410	90,000	89,100	2,600	3,500	9.42	9.26	22314EB33M	22314EKB33M	H2314	AHX2314G	KM15
	5.910	2.009	0.410	90,000	89,100	2,500	3,200	9.42	9.26	22314EF800	22314EKF800	H2314	AHX2314G	KM15
2.955	5.122	1.221	0.292	52,200	56,000	3,200	4,200	3.63	3.44	22215EAB33	22215EAKB33	H315	AH315G	KM16
	5.122	1.221	0.292	52,200	56,000	3,200	4,200	3.57	3.39	22215EB33	22215EKB33	H315	AH315G	KM16
	5.122	1.221	0.292	52,200	56,000	3,200	4,200	3.79	3.70	22215EB33M	22215EKB33M	H315	AH315G	KM16
	6.304	1.458	-	63,000	61,900	2,500	3,400	7.92	7.83	21315V	21315VK	H315	AH315G	KM16
	6.304	2.167	0.406	105,100	105,100	2,300	3,000	11.21	11.03	22315EAB33	22315EAKB33	H2315	AHX2315G	KM16
	6.304	2.167	0.406	105,100	105,100	2,300	3,000	11.03	10.84	22315EB33	22315EKB33	H2315	AHX2315G	KM16
	6.304	2.167	0.406	105,100	105,100	2,300	3,000	11.49	11.25	22315EB33M	22315EKB33M	H2315	AHX2315G	KM16
	6.304	2.167	0.406	105,100	105,100	2,300	3,000	11.49	11.31	22315EF800	22315EKF800	H2315	AHX2315G	KM16
3.152	5.516	1.300	0.311	59,600	64,600	3,000	3,900	4.57	4.50	22216EAB33	22216EAKB33	H316	AH316	KM18
	5.516	1.300	0.311	59,600	64,600	3,000	3,900	4.41	4.32	22216EB33	22216EKB33	H316	AH316	KM18
	5.516	1.300	0.311	57,200	61,200	2,400	3,100	4.76	4.69	22216EB33M	22216EKB33M	H316	AH316	KM18
	6.698	1.537	-	68,600	68,600	2,400	3,200	9.39	9.28	21316V	21316VK	H316	AH316	KM18
	6.698	2.285	0.410	115,900	117,500	2,200	2,800	13.30	13.08	22316EAB33	22316EAKB33	H2316	AHX2316	KM18
	6.698	2.285	0.410	115,900	117,500	2,200	2,800	13.23	13.01	22316EB33	22316EKB33	H2316	AHX2316	KM18
	6.698	2.285	0.410	115,900	117,500	2,200	2,800	13.67	13.45	22316EB33M	22316EKB33M	H2316	AHX2316	KM18
	6.698	2.285	0.410	115,900	117,500	2,200	2,800	13.67	13.56	22316EF800	22316EKF800	H2316	AHX2316	KM18
3.349	5.910	1.418	0.311	58,700	74,300	2,800	3,600	5.64	5.56	22217EAB33	22217EAKB33	H317	AHX317	KM19
	5.910	1.418	0.311	69,300	74,300	2,800	3,600	5.62	5.51	22217EB33	22217EKB33	H317	AHX317	KM19
	5.910	1.418	0.311	69,300	74,300	2,800	3,600	5.73	5.62	22217EB33M	22217EKB33M	H317	AHX317	KM19
	7.092	1.615	-	79,900	82,100	2,200	3,000	11.53	11.38	21317VM	21317VKM	H317	AHX317	KM19
	7.092	2.364	0.433	128,300	135,900	2,000	2,600	15.57	15.35	22317EAB33	22317EAKB33	H2317	AHX2317	KM19
	7.092	2.364	0.433	128,300	135,900	2,000	2,600	15.79	15.57	22317EB33M	22317EKB33M	H2317	AHX2317	KM19
	7.092	2.364	0.433	128,300	135,900	2,000	2,600	15.79	15.57	22317EF800	22317EKF800	H2317	AHX2317	KM19
	3.546	6.304	1.576	0.402	82,400	89,600	2,700	3,500	7.24	7.14	22218EAB33	22218EAKB33	H318	AHX318
6.304		1.576	0.402	82,400	89,600	2,700	3,500	7.21	7.12	22218EB33	22218EKB33	H318	AHX318	KM20
6.304		1.576	0.402	82,400	89,600	2,200	2,800	7.28	7.17	22218EB33M	22218EKB33M	H318	AHX318	KM20
6.304		2.065	0.351	100,100	115,400	2,200	2,900	9.77	9.28	23218EAB33	23218EAKB33	H2318	AHX3218	KM20
6.304		2.065	0.351	100,100	115,400	2,200	2,900	9.75	9.42	23218EB33M	23218EKB33M	H2318	AHX3218	KM20
7.486		1.694	-	86,600	90,000	2,100	2,800	13.47	13.30	21318VM	21318VKM	H318	AHX318	KM20
7.486		2.522	0.457	143,100	146,700	1,900	2,500	18.27	17.99	22318EAB33	22318EAKB33	H2318	AHX2318	KM20
7.486		2.522	0.457	143,100	146,700	1,900	2,500	18.74	18.48	22318EB33M	22318EKB33M	H2318	AHX2318	KM20
3.743	6.698	1.694	0.390	88,900	93,800	2,500	3,200	8.71	8.49	22219EAB33	22219EAKB33	H319	AHX319	KM21
	6.698	1.694	0.390	88,900	93,800	2,500	3,200	9.02	8.84	22219EB33M	22219EKB33M	H319	AHX319	KM21
	7.880	2.640	0.481	156,600	169,000	1,800	2,300	21.65	21.19	22319EAB33	22319EAKB33	H2319	AHX2319	KM21
	7.880	2.640	0.481	156,600	169,000	1,800	2,300	22.18	21.94	22319EB33M	22319EKB33M	H2319	AHX2319	KM21
	7.880	2.640	0.481	156,600	169,000	1,800	2,300	22.18	21.94	22319EF800	22319EKF800	H2319	AHX2319	KM21

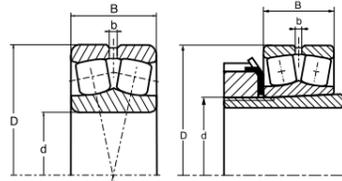
ALL CLEARANCE VERSIONS AVAILABLE FROM STOCK OR TO ORDER

OVERALL DIMENSIONS	BASIC CAPACITIES lbf		MAXIMUM ROTATION SPEEDS (rpm)		WEIGHTS (lbs)		DESIGNATIONS		SLEEVES for tapered bore					
	(inch)			Dynamic	Static	Lubrication		Bore		Adapter sleeves	Withdrawal sleeves	Withdrawal nuts		
	d	D	B	b	C	Co	grease	oil	cylindrical				tapered	
3.940	5.910	1.970	0.252	73,100	95,600	1,900	2,500	11.03	-	24020VB33	-	-	-	-
	6.501	2.049	0.331	100,800	129,400	2,200	2,800	9.70	9.37	23120EB33	23120EKB33	H3120	AHX3120	KM22
	6.501	2.049	0.331	100,800	129,400	2,200	2,800	11.03	9.70	23120EB33M	23120EKB33M	H3120	AHX3120	KM22
	7.092	1.812	0.441	101,000	111,400	2,400	3,100	10.62	10.41	22220EAB33	22220EAKB33	H320	AHX320	KM22
	7.092	1.812	0.441	101,000	111,400	2,400	3,100	10.58	10.37	22220EB33	22220EKB33	H320	AHX320	KM22
	7.092	1.812	0.441	101,000	111,400	2,400	3,100	11.21	11.12	22220EB33M	22220EKB33M	H320	AHX320	KM22
	7.092	2.376	0.370	125,600	148,700	1,900	2,600	14.11	13.72	23220EAB33	23220EAKB33	H2320	AHX2320	KM22
	7.092	2.376	0.370	125,600	148,700	1,900	2,600	14.40	14.22	23220EB33M	23220EKB33M	H2320	AHX2320	KM22
	8.471	2.876	0.524	177,100	189,900	1,700	2,200	27.50	26.87	22320EAB33	22320EAKB33	H2320	AHX2320	KM22
	8.471	2.876	0.524	177,100	189,900	1,700	2,200	28.17	27.67	22320EB33M	22320EKB33M	H2320	AHX2320	KM22
	8.471	2.876	0.524	177,100	189,900	1,700	2,200	28.17	27.67	22320EF800	22320EKF800	H2320	AHX2320	KM22
	4.334	6.698	1.773	0.307	89,300	116,300	2,300	3,000	7.83	7.61	23022EAB33	23022EAKB33	H322	AHX322
6.698		1.773	0.307	89,300	116,300	2,300	3,000	7.98	7.76	23022EB33M	23022EKB33M	H322	AHX322	KM24
6.698		2.364	0.268	102,400	135,000	1,700	2,200	11.25	-	24022VB33	-	-	-	-
7.092		2.206	0.351	117,200	150,500	2,000	2,700	12.08	11.71	23122EAB33				



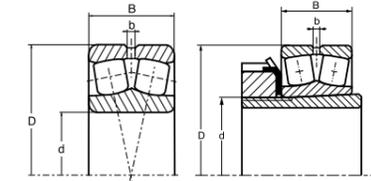
# Spherical Roller Bearings

## The product line



# Spherical Roller Bearings

## The product line



ALL CLEARANCE VERSIONS AVAILABLE FROM STOCK OR TO ORDER

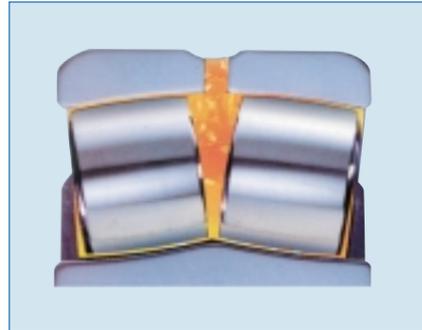
OVERALL DIMENSIONS	BASIC CAPACITIES lbf		MAXIMUM ROTATION SPEEDS (rpm)		WEIGHTS (lbs)		DESIGNATIONS		SLEEVES for tapered bore						
	(inch)		Lubrication		Bore		Bore		Adapter sleeves	Withdrawal sleeves	Withdrawal nuts				
	d	D	B	b	C	Co	grease	oil				cylindrical	tapered		
5.516	8.274	2.088	0.351	127,800	176,200	1,900	2,500	13.96	13.52	23028EAB33	23028EAKB33	H3028	AHX3028	KM30	
	8.274	2.088	0.351	127,800	176,200	1,900	2,500	14.20	13.76	23028EB33M	23028EKB33M	H3028	AHX3028	KM30	
	8.274	2.719	0.390	140,600	202,500	1,400	1,800	20.04	19.40	24028VB33	24028VK30B33	-	AH24028	KM29	
	8.865	2.679	0.414	171,700	231,800	1,600	2,100	24.03	23.75	23128EAB33	23128EAKB33	H3128	AHX3128	KM30	
	8.865	2.679	0.414	171,700	231,800	1,600	2,100	24.92	24.03	23128EB33M	23128EKB33M	H3128	AHX3128	KM30	
	8.865	3.349	0.422	186,800	252,000	800	1,100	28.67	27.56	24128VB33	24128VK30B33	-	AH24128	KM30	
	9.850	2.679	0.559	195,100	227,300	1,700	2,200	31.31	30.87	22228EAB33	22228EAKB33	H3128	AHX3128	KM30	
	9.850	2.679	0.559	195,100	227,300	1,700	2,200	31.75	30.87	22228EB33M	22228EKB33M	H3128	AHX3128	KM30	
	9.850	3.467	0.496	245,300	308,300	1,400	1,800	40.16	38.94	23228EB33M	23228EKB33M	H2328	AHX3228G	KM30	
	11.820	4.019	0.745	330,800	387,000	1,200	1,600	75.26	73.62	22328EAB33	22328EAKB33	H2328	AHX2328G	KM30	
	11.820	4.019	0.745	330,800	387,000	1,200	1,600	76.96	75.63	22328EB33M	22328EKB33M	H2328	AHX2328G	KM30	
	11.820	4.019	0.745	330,800	387,000	1,200	1,600	76.96	75.63	22328EF800	22328EF800	H2328	AHX2328G	KM30	
5.910	8.865	2.206	0.394	141,300	200,900	1,800	2,300	17.09	16.54	23030EB33M	23030EKB33M	H3030	AHX3030	KM32	
	8.865	2.955	0.366	160,900	225,000	1,300	1,600	22.49	20.62	24030VB33	24030VK30B33	-	AH24030	KM31	
	9.850	3.152	0.496	227,300	303,800	1,400	1,900	34.66	33.58	23130EB33M	23130EKB33M	H3130	AHX3130	KM33	
	9.850	3.940	0.410	240,800	315,000	850	1,100	43.88	43.22	24130VB33	24130VK30B33	-	AH24130	KM32	
	10.638	2.876	0.603	229,500	274,500	1,500	2,000	39.25	38.81	22230EAB33	22230EAKB33	H3130	AHX3130	KM33	
	10.638	2.876	0.603	229,500	274,500	1,500	2,000	39.67	39.23	22230EB33M	22230EKB33M	H3130	AHX3130	KM33	
	10.638	3.782	0.540	288,000	364,500	1,300	1,700	51.86	50.27	23230EB33M	23230EKB33M	H2330	AHX3230G	KM32	
	12.608	4.255	0.784	373,500	425,300	1,200	1,500	92.52	90.85	22330EB33M	22330EKB33M	H2330	AHX2330G	KM32	
	12.608	4.255	0.784	373,500	425,300	1,200	1,500	92.52	90.85	22330EF800	22330EF800	H2330	AHX2330G	KM32	
	6.304	9.456	2.364	0.414	160,000	225,000	1,700	2,200	21.12	20.68	23032EB33M	23032EKB33M	H3032	AH3032	KM34
		9.456	3.152	0.370	176,600	245,300	1,200	1,500	27.12	26.46	24032VB33	24032VK30B33	-	AH24032	KM34
		10.638	3.388	0.540	261,000	355,500	1,300	1,800	44.36	43.06	23132EB33M	23132EKB33M	H3132	AH3132G	KM34
10.638		4.295	0.461	283,500	391,500	800	1,000	56.45	55.13	24132VB33	24132VK30B33	-	AH24132	KM34	
11.426		3.152	0.666	261,000	312,800	1,400	1,900	50.72	50.27	22232EAB33	22232EAKB33	H3132	AH3132G	KM34	
11.426		3.152	0.666	261,000	312,800	1,400	1,900	51.16	50.72	22232EB33M	22232EKB33M	H3132	AH3132G	KM34	
11.426		4.098	0.587	330,800	425,300	1,200	1,600	65.22	63.31	23232EB33M	23232EKB33M	H2332	AH3232G	KM34	
13.396		4.492	0.800	416,300	497,300	1,100	1,400	111.79	110.25	22332EB33M	22332EKB33M	H2332	AH2332G	KM34	
13.396		4.492	0.800	416,300	497,300	1,100	1,400	111.79	110.25	22332EF800	22332EF800	H2332	AH2332G	KM34	
6.698		10.244	2.640	0.457	195,500	279,000	1,600	2,000	28.67	28.22	23034EB33M	23034EKB33M	H3034	AH3034	KM36
		10.244	3.546	0.414	227,300	321,800	1,100	1,400	39.25	38.59	24034VB33	24034VK30B33	-	AH24034	KM36
		11.032	3.467	0.540	270,000	382,500	1,300	1,700	47.52	47.52	23134EB33M	23134EKB33M	H3134	AH3134G	KM36
	11.032	4.295	0.520	294,800	414,000	650	850	58.65	57.11	24134VB33	24134VK30B33	-	AH24134	KM36	
	12.214	3.388	0.709	299,300	362,300	1,300	1,700	62.13	61.74	22234EB33M	22234EKB33M	H3134	AH3134G	KM36	
	12.214	4.334	0.548	272,300	411,800	1,100	1,400	81.59	79.60	23234CB33MB	23234CKB33MB	H2334	AH3234G	KM36	
	14.184	4.728	0.800	472,500	591,800	1,000	1,200	130.10	128.33	22334EB33M	22334EKB33M	H2334	AH2334G	KM36	
	14.184	4.728	0.800	472,500	591,800	1,000	1,200	130.10	128.33	22334EF800	22334EF800	H2334	AH2334G	KM36	
	7.092	11.032	2.916	0.520	229,500	326,300	1,400	1,900	37.26	35.86	23036EB33M	23036EKB33M	H3036	AH3036	KM38
		11.032	3.940	0.461	263,300	382,500	1,000	1,300	50.49	48.51	24036VB33	24036VK30B33	-	AH24036	KM38
		11.820	3.782	0.587	319,500	441,000	1,200	1,600	60.00	60.64	23136EB33M	23136EKB33M	H3136	AH3136G	KM38
		11.820	4.649	0.556	330,800	461,300	600	800	74.75	73.21	24136VB33	24136VK30B33	-	AH24136	KM38
12.608		3.388	0.709	310,500	373,500	1,300	1,700	63.81	63.28	22236EB33M	22236EKB33M	H3136	AH2236G	KM38	
12.608		4.413	0.548	290,300	461,300	1,000	1,300	87.76	87.32	23236CB33MB	23236CKB33MB	H2336	AH3236G	KM38	
14.972		4.964	0.910	355,500	492,800	850	1,100	148.40	146.19	22336EB33M	22336EKB33M	H2336	AH2336G	KM38	
7.486		11.426	2.955	0.520	243,000	353,300	1,400	1,800	38.52	37.93	23038EAB33	23038EAKB33	H3038	AH3038G	KM40
		11.426	2.955	0.520	243,000	353,300	1,400	1,800	39.62	38.52	23038EB33M	23038EKB33M	H3038	AH3038G	KM40
		11.426	3.940	0.457	279,000	405,000	1,000	1,300	49.68	49.04	24038VB33	24038VK30B33M	-	AH24038	KM40
		12.608	4.098	0.788	265,500	438,800	1,000	1,300	76.07	73.87	23138EB33M	23138EKB33M	H3138	AH3138G	KM40
		12.608	5.043	0.559	396,000	558,000	550	700	92.83	90.41	24138VB33	24138VK30B33	-	AH24138	KM40
	13.396	3.625	0.772	346,500	420,800	1,200	1,600	77.87	77.18	22238EB33M	22238EKB33M	H3138	AH2238G	KM40	
	13.396	4.728	0.658	333,000	533,300	950	1,200	106.94	104.52	23238CB33MB	23238CKB33MB	H2338	AH3238G	KM40	
	15.760	5.201	0.879	411,800	596,300	800	1,100	168.46	165.38	22338CB33MB	22338CKB33MB	H2338	AH2338G	KM40	

ALL CLEARANCE VERSIONS AVAILABLE FROM STOCK OR TO ORDER

OVERALL DIMENSIONS	BASIC CAPACITIES lbf		MAXIMUM ROTATION SPEEDS (rpm)		WEIGHTS (lbs)		DESIGNATIONS		SLEEVES for tapered bore						
	(inch)		Lubrication		Bore		Bore		Adapter sleeves	Withdrawal sleeves	Withdrawal nuts				
	d	D	B	b	C	Co	grease	oil				cylindrical	tapered		
7.880	12.214	3.231	0.563	281,300	402,800	1,300	1,700	53.14	52.48	23040EB33M	23040EKB33M	H3040	AH3040G	HM42T	
	12.214	4.295	0.500	324,000	477,000	950	1,200	64.39	63.72	24040EB33M	24040EK30B33M	-	AH24040	HM42T	
	13.396	4.413	0.658	290,300	477,000	950	1,200	93.71	91.29	23140B33MB	23140KB33MB	H3140	AH3140	HM44T	
	13.396	5.516	0.670	456,800	659,300	550	700	115.98	113.12	24140EB33M	24140EK30B33M	-	AH24140	HM42T	
	14.184	3.861	0.788	387,000	472,500	1,100	1,500	93.77	92.61	22240EB33M	22240EKB33M	H3140	AH2240	HM44T	
	14.184	5.043	0.658	366,800	607,500	900	1,200	128.77	128.11	23240CB33MB	23240CKB33MB	H2340	AH2340	HM44T	
	16.548	5.437	0.879	366,800	596,300	750	1,000	218.30	213.89	22340B33MB	22340KB33MB	H2340	AH2340	HM44T	
	8.668	13.396	3.546	0.607	326,300	474,800	1,200	1,500	70.12	69.35	23044EB33M	23044EKB33M	H3044H	AOH3044G	HM46T
		13.396	4.649	0.481	324,000	607,500	850	1,100	87.10	84.23	24044VB33MB	24044VK30B33MB	-	AOH24044	HM46T
		14.578	4.728	0.816	346,500	585,000	900	1,100	116.87	114.22	23144B33MB	23144KB33MB	H3144	AOH3144	HM48T
		14.578	5.910	0.481	427,500	776,300	500	670	144.65	142.22	24144VB33	24144VK30B33	-	AOH24144	HM46T
		15.760	4.255	0.812	472,500	605,300	1,000	1,300	131.14	130.10	22244EB33M	22244E			

## Lubrication

Suitable lubrication:  
a guarantee of long service life.



Good lubrication is a constant necessity to preserve all the qualities of the bearing.

The SNR engineers who designed the spherical roller bearings were particularly attentive to this aspect:

- Lubrication groove and 3 lubrication holes in the bearing outer ring, facilitating maintenance lubrication.
- Cage design that maximizes the volume of lubricant held inside the bearing and improves its circulation thanks to the absence of a central shoulder.

It is vital to obtain satisfactory lubrication from the very first revolution of the bearing. When grease is used as the lubricant, one must ensure that the grease is introduced under the cage, between the rollers and the raceway. Then turn the bearing by hand until the grease is evenly distributed between the rollers and the rings.

The SNR engineers have developed the SNR LUB EP grease for your applications:

- Suitable for high loads and normal speeds of rotation.
- Contain extreme-pressure additives to give better load resistance.

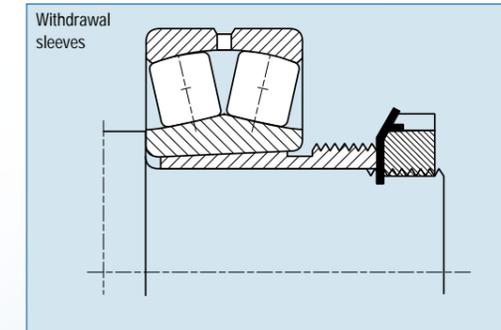
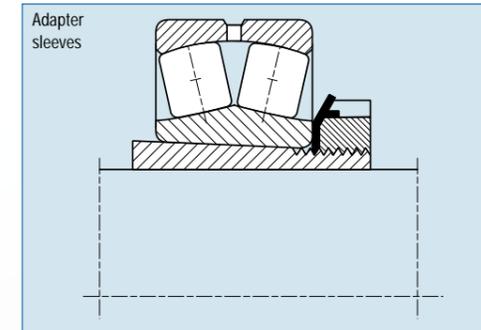
The SNR LUB EP grease ensures good lubrication at up to 120°C (250°F) in continuous service.

In severely taxing environments (high loads and low speeds) such as those found in quarrying applications for example, SNR recommends SNR LUB VX, a highly viscous grease with specific extreme pressure additives.

And a new grease for slow speed application will shortly be available: SNR LUB FV.

## Mounting sleeves

The essential complement  
for our spherical roller bearings.



The quality of the assembly and fit is of vital importance to ensure bearing reliability and durability. The sleeves enable bearings with tapered bores to be interference fitted onto cylindrical shafts with wide diameter tolerances.

The taper of the bearing bore is usually 1/12 (K). It is 1/30 for spherical roller bearings (24 0.. and 24 1..).

There are 2 main types of sleeves:

- **Adapter sleeves** create the interference fit by pressing the bearing onto the sleeve. They are supplied with a lock washer and nut.
- **Withdrawal sleeves** create the interference fit through insertion of the sleeve into the bearing bore. In addition, these sleeves provide for easy dismantling of the bearing by simply turning the withdrawal nut (to be ordered separately).

To facilitate the fitting and dismantling of large-size bearings (shaft diameters of 200mm and larger), SNR proposes hydraulic adapter and withdrawal sleeves featuring a channel for pressure-injection of oil. The presence of oil reduces friction thereby avoiding damage to the contact surfaces. This method optimizes bearing fitting and dismantling times, thereby reducing system downtimes.

Whether the bearing is installed using an adapter sleeve or a withdrawal sleeve, it is vital to check that the internal radial clearance of the bearing remains sufficient after tightening the nut (see table on page 19).

For each spherical roller bearing you will find the corresponding adapter and withdrawal sleeve in this catalog.

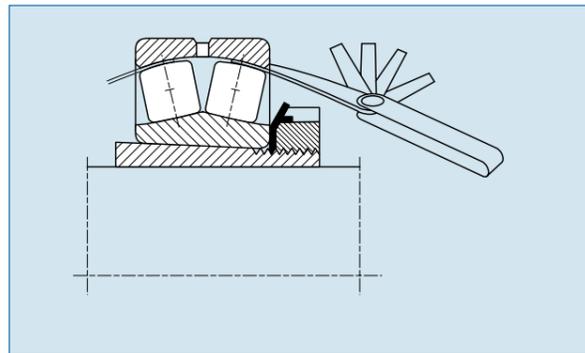
# Sleeves



## Fitting with mounting sleeves.

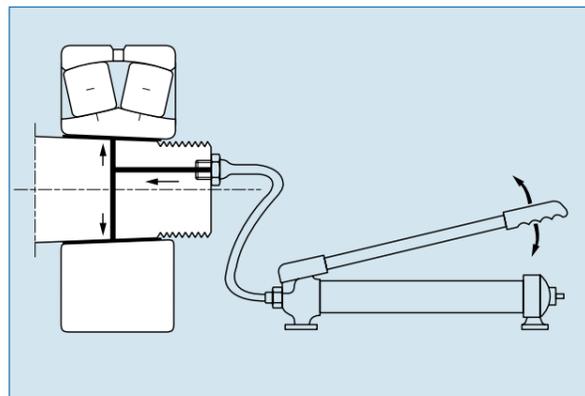
When fitting the bearing or sleeve, the expansion of the inner ring reduces the internal radial clearance of the bearing. The reduction in clearance enables the tightness of the fit to be determined. It is important to check this. Check carefully that the clearance necessary for the correct functioning of the bearing is maintained.

### Reduction of the internal clearance after fitting



#### Measurement principle

The clearance is measured by sliding thickness gauges between the outer ring and the rollers. With large-size bearings, do not use gauges of thickness exceeding 0.15mm, as they are too rigid to follow the curve of the bearing raceway; use 2 or more thinner gauges to make up the required thickness.



#### Measurement method

Place the bearing in the vertical position with the rings parallel. Rotate the bearing to position the rollers. Find the minimum standardized clearance value corresponding to the clearance category of the bearing in question in the right-hand table (column 2). Select a gauge slightly thinner than this value (column 2). Slide the thickness gauge at an angle between the unloaded rollers and the outer ring raceway. Introduce gauges of increasing thickness. The clearance value lies between the thickness of the last gauge that penetrates and the one that does not.

### Verification of clearance reduction

#### Radial clearance:

Tighten the nut until the reduction in internal clearance is within the indicated limits. Check that the final residual clearance, which depends on the original clearance category, at least equals the value indicated (column 3).

#### Axial clearance (shaft with tapered seat):

The axial movement corresponding to the fit must be within the limits indicated (column 4). Then check that the final residual clearance, which depends on the original clearance category, at least equals the value indicated.

### Verification of radial clearance on assembly

Bearing bore (inch)		Before fitting (2)						After fitting (3)						Axial displacement (4) (inch)											
		C0 (J0)*		C3 (J30)		C4 (J40)		C0 (J0)*		C3 (J30)		C4 (J40)		Taper 1/12		Taper 1/30									
from	to	Per ISO 5753 (in inch)		Per ISO 5753 (in inch)		Per ISO 5753 (in inch)		Per ISO 5753 (in inch)		Per ISO 5753 (in inch)		Per ISO 5753 (in inch)		Gauge to use		Gauge to use		Gauge to use							
		min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	yes	no	yes	no	yes	no	min.	max.	min.	max.
1.182	1.576	0.0014	0.0020	0.0020	0.0026	0.0026	0.0033	0.0006	2	3	0.0010	3	4	0.0016	4	5	0.0138	0.0158	-	-	-	-	-	-	
1.576	1.970	0.0018	0.0024	0.0024	0.0032	0.0032	0.0039	0.0008	2	3	0.0012	3	5	0.0020	5	7	0.0158	0.0177	-	-	-	-	-	-	
1.970	2.561	0.0022	0.0030	0.0030	0.0037	0.0037	0.0047	0.0010	3	5	0.0014	4	6	0.0022	6	8	0.0177	0.0236	-	-	-	-	-	-	
2.561	3.152	0.0028	0.0037	0.0037	0.0047	0.0047	0.0059	0.0010	3	5	0.0016	4	6	0.0028	7	9	0.0236	0.0296	-	-	-	-	-	-	
3.152	3.940	0.0032	0.0043	0.0043	0.0055	0.0055	0.0071	0.0014	4	6	0.0020	5	7	0.0032	8	11	0.0276	0.0355	0.0670	0.0867	-	-	-	-	
3.940	4.728	0.0039	0.0053	0.0053	0.0067	0.0067	0.0087	0.0020	5	7	0.0026	7	9	0.0039	10	13	0.0296	0.0433	0.0749	0.1064	-	-	-	-	
4.728	5.516	0.0047	0.0063	0.0063	0.0079	0.0079	0.0102	0.0022	6	9	0.0032	8	11	0.0043	11	14	0.0433	0.0552	0.1064	0.1379	-	-	-	-	
5.516	6.304	0.0051	0.0071	0.0071	0.0091	0.0091	0.0118	0.0022	6	10	0.0035	9	13	0.0051	13	17	0.0473	0.0630	0.1182	0.1576	-	-	-	-	
6.304	7.092	0.0055	0.0079	0.0079	0.0102	0.0102	0.0134	0.0024	6	10	0.0039	10	15	0.0059	15	20	0.0512	0.0670	0.1261	0.1655	-	-	-	-	
7.092	7.880	0.0063	0.0087	0.0087	0.0114	0.0114	0.0146	0.0028	7	12	0.0039	10	15	0.0063	16	22	0.0552	0.0788	0.1379	0.1970	-	-	-	-	
7.880	8.865	0.0071	0.0099	0.0099	0.0126	0.0126	0.0162	0.0032	8	13	0.0047	12	17	0.0071	18	24	0.0630	0.0867	0.1576	0.2167	-	-	-	-	
8.865	9.850	0.0079	0.0106	0.0106	0.0138	0.0138	0.0177	0.0035	9	14	0.0051	13	19	0.0079	20	27	0.0670	0.0946	0.1655	0.2364	-	-	-	-	
9.850	11.032	0.0087	0.0118	0.0118	0.0154	0.0154	0.0193	0.0039	10	16	0.0055	14	21	0.0087	22	29	0.0749	0.1064	0.1852	0.2640	-	-	-	-	
11.032	12.411	0.0095	0.0130	0.0130	0.0169	0.0169	0.0213	0.0043	11	17	0.0059	15	22	0.0095	24	32	0.0788	0.1182	0.1970	0.2955	-	-	-	-	
12.411	13.987	0.0106	0.0142	0.0142	0.0185	0.0185	0.0232	0.0047	12	19	0.0067	17	25	0.0102	26	34	0.0946	0.1300	0.2364	0.3231	-	-	-	-	
13.987	15.760	0.0118	0.0158	0.0158	0.0205	0.0205	0.0256	0.0051	13	20	0.0075	19	27	0.0114	29	37	0.1024	0.1418	0.2561	0.3546	-	-	-	-	
15.760	17.730	0.0130	0.0173	0.0173	0.0225	0.0225	0.0284	0.0051	13	20	0.0079	20	28	0.0122	31	40	0.1221	0.1576	0.3034	0.3940	-	-	-	-	
17.730	19.700	0.0146	0.0193	0.0193	0.0248	0.0248	0.0311	0.0063	16	24	0.0091	23	31	0.0138	35	44	0.1300	0.1734	0.3231	0.4334	-	-	-	-	
19.700	23.640	0.0162	0.0213	0.0213	0.0268	0.0268	0.0343	0.0067	17	26	0.0099	25	34	0.0142	36	46	0.1458	0.1970	0.3625	0.4925	-	-	-	-	

\*C0 (J0): "normal" clearance

Refer to the SNR sliding chart "Spherical roller bearings with tapered bore – Measurement of radial clearance"

## Europe

### FRANCE - EUROPE

**SNR Paris** 40, rue Jean Bleuzen  
B.P. 49  
92174 Vanves Cedex  
Tél. 01 40 93 66 00  
Fax. 01 40 93 66 10

**SNR Logistique** 9, avenue Léon Harmel  
92160 Antony  
Tél. 01 46 11 66 50  
Fax. 01 46 11 66 66

**SNR Bordeaux** 1, rue du Golf - B.P. 173  
33708 Merignac Cedex  
Tél. 05 56 34 69 80  
Fax. 05 56 34 69 81

**SNR Lyon Europe\*** Le Florentin - 71, chemin  
du Moulin Carron - B.P. 8  
69570 Dardilly  
Tél. 04 78 66 68 00  
Fax. 04 78 66 68 20

**SNR Nancy Europe\*** 3, allée Forêt de la Reine  
Parc technologique Brabois  
54500 Vandœuvre  
Tél. 03 83 44 64 00  
Fax. 03 83 44 02 31

### DEUTSCHLAND

**SNR WÄLZLAGER GMBH** www.snr.de  
40472 Düsseldorf Wahlerstraße 6  
Tél. (0211) 6 58 06-0  
40437 Düsseldorf Fax. (0211) 6 58 88 86  
Postfach 33 04 10

**33719 Bielefeld** Friedrich-Hagemann-Str.66  
33701 Bielefeld Tél. (0521) 9 24 00-0  
Postfach 17 01 45 Fax. (0521) 9 24 00 90

**70597 Stuttgart** Tränkestraße 7  
70574 Stuttgart Tél. (0711) 9 00 64-0  
Postfach 70 04 16 Fax. (0711) 9 00 64 99

### ITALIA

**SNR Italia Milano** Via Keplero, 5  
20019 Settimo Milanese (MI)  
Tél. (02) 33 55 21  
Fax (02) 33 50 06 56

**Bologna** Via E. Zago, 2/2  
40128 Bologna Tél. (051) 36 79 46  
(051) 36 29 78  
Fax (051) 36 85 38

### ESPAÑA - PORTUGAL

**SNR Rodamientos Ibérica S.A.**  
**Madrid** C/ Llanos de Jerez, 22  
Poligono Industrial Tél. 91 671 89 13  
28820 Coslada Fax. 91 673 65 48

\*EUROPE (Subsidiaries excepted)  
SNR Nancy - Europe : Benelux - Suisse - Autriche - U.K.  
SNR Lyon - Europe : Other Countries Fax. 04 78 66 68 21

## Amériques / Americas

### USA

**SNR Bearings USA** www.snrbearings.com  
**Atlanta** 4600 K Highlands Pkwy  
Smyrna, G.A. 30082 Tél. (770) 435-2818  
(800) 232-1717  
Fax. (800) 742-5215

### AMERICA LATINA

**SNR Argentina Buenos-Aires** Viamonte 1145 - Piso 11  
1053 Buenos-Aires Tél. (54) 11-4 372-1272  
Fax. (54) 11-4 372-0088

### SNR Intermondial (Overseas)

**Anncy** 18, rue du Val-Vert  
74600 Seynod Tél. (33) 4 50 65 96 00/01/02  
France Fax. (33) 4 50 65 96 15

### MAROC

**SNR Maroc Casablanca** 73, Bd Moulay Slimane  
Entrepôts Moulay Slimane  
Roches Noires e-mail : info@snr.ma  
BP 15873 CASA Principal Tél. 022 66 76 80  
Fax. 022 66 51 66



Siège social : Rue des Usines - 74000 Anncy - FRANCE

RCS Anncy B 325821072 - Code NAF 291H

http://www.snr.fr

Spherical Roller Bearings:  
A full range to meet  
the most difficult challenges.

SNR - Industry

