NTN

Palm Oil Industry
Product Guidebook

CAT.No.1901/E

CAT.No.MY1901/E 19.11.01

Palm Oil Mill Process

NTN Solutions for Palm Oil Mill Machinery

Palm fruit is harvested from trees and transported by conveyors and cages, to be subsequently steamed and pressed by an array of Palm Oil Milling machinery.

The bearings used in this machinery are often operating under extreme conditions such as heavy axial loads, steam, water, dust, etc. **NTN** provides a premium product, designed to handle the rigours of oil milling, often resulting in longer operating life and extended maintenance cycles.

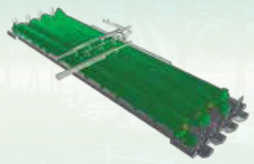
Conveyor and Elevator

Elevator

Conveyor

Steriliser Station

Cages



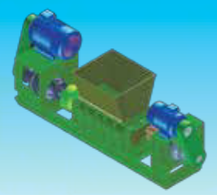
Horizontal Steriliser

Vertical Steriliser

Threshing Station

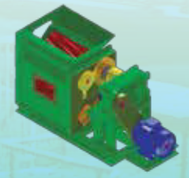
Thresher Drum

EFB Station



EFB Shredder Press

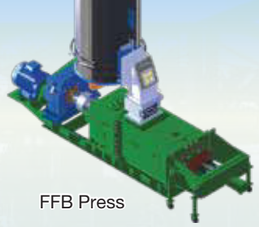
EFB Fibre Press



EFB Fibre Shredder

Digestion and Press Station

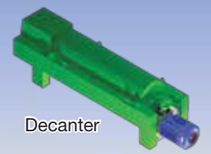
Digester



FFB Press

Vibrating Screen

Clarification Station



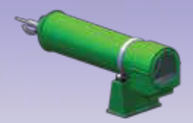
Decanter

Sludge Separator

Separator

Oil Purifier

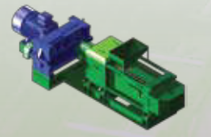
Nut and Kernel Station



Nut Polishing Drum

Nut Grading Drum

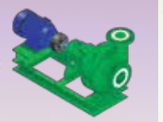
Ripple Mill



Kernel Press

Pump

Condensate Pump



Hot Well Pump

Hot Well Pump

Centrifugal Pump

Water Pump

Bearing Units

Plummer Blocks

ULTAGE®
Spherical Roller Bearings

Thrust Spherical Roller Bearings

Thrust Ball Bearings

Experts & Tools
Maintenance Tools and Lubricants

Long Life Ball Bearings

Product Catalog for Palm Oil Industry

ULTAGE® ULTAGE Series Spherical Roller Bearings

Longer operating life, higher load capacities and higher speed capability provide maximum equipment productivity

Type EA, Type EM

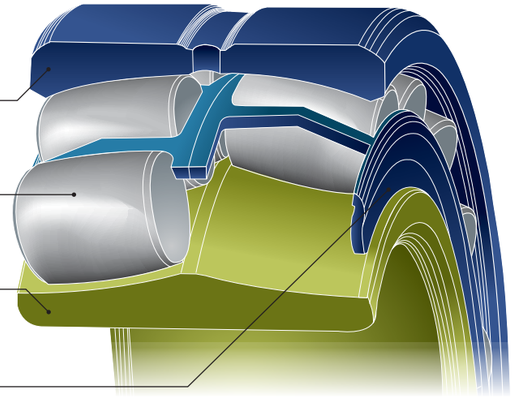
Operating life Up to 5 times longer (compared to **NTN** conventional product)

Allowable speed Up to 20% increase (compared to **NTN** conventional product)

Higher load ratings and speed capability contribute to reduced maintenance costs.

Features (Type EA)

Outer ring	● With oil inlets and oil groove ● Optimal curvature
Rollers	● Larger rollers ● Maximum number of rollers
Inner ring	● No rib reguired ● Optimal curvature
Cage	● Window-type pressed steel cage ● Cage end faces function as guides



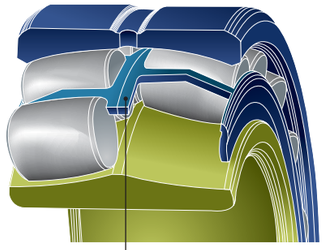
Long operating life
- World's highest standard load capacity (using large diameter rollers)
- Extended maintenance cycle
- Heat resistant to 200˚C (392˚F)

Enhanced high-speed performance
- World's highest standard permitted rotational speed
- Optimized pressed steel cage
- Center guide ring eliminated, now guided by steel cage side face

Improved handling
- Easy to lubricate design

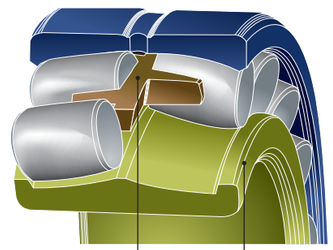
"ULTAGE" (a name created from the combination of **"Ultimate,"** signifying refinement, and **"Stage,"** signifying **NTN**'s intention that this series of products be employed in diverse applications) is the general name for **NTN**'s new generation of bearings that are noted for their industry-leading performance.

● Type EA



Window-type pressed steel cage

● Type EM

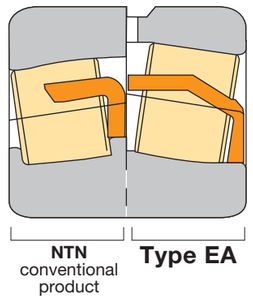


One-piece machined cage

Inner ring rib

For applications that expose bearings to severe vibration and impact, we recommend Type EM bearings, which incorporate a high-tension brass cage machined from a single piece. (Type EM differs from Type EA in the shape of the inner ring.)

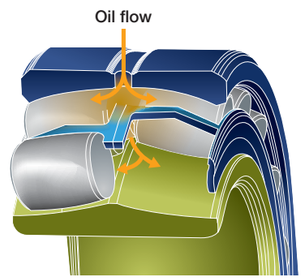
Roller Diameter Comparison



NTN conventional product

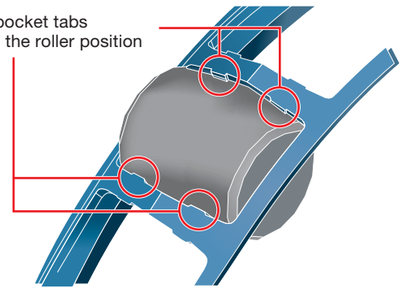
Type EA

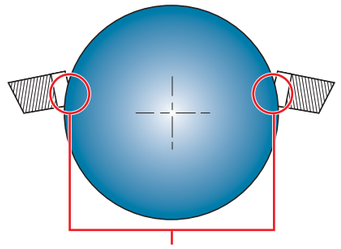
Improved Lubricant Distribution



Pressed Steel Cage Design

4 cage pocket tabs stabilize the roller position





Chamfered cage pocket tabs

[Allowable Misalignment] ● 0.06 Cr < dynamic equivalent radial load : 0.009 rad (0.5°)
● Dynamic equivalent radial load 0.06 Cr : 0.035 rad (2°)

✻ If the installed misalignment is greater than recommended, there is a risk of roller/cage protrusion and impact to surrounding components.

Refer to the size charts (P-20)

ULTAGE®

ULTAGE Series Spherical Roller Bearings
Higher load capacity and speed contribute to reduced maintenance

▶ Type EA, Type EM

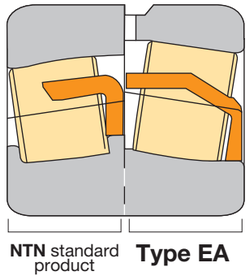
World's Highest Standard High-Load Capacity

By maximizing the roller diameter, the number of rollers and roller design, longer operating life and higher load ratings have been achieved. With this improvement, maintenance cycles can be extended.

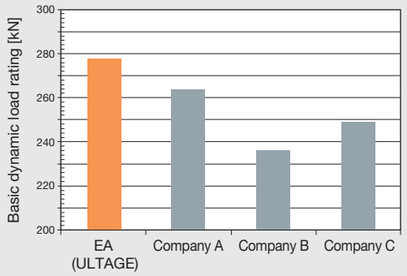
① Basic Dynamic Load Rating : Up to 65% greater
(compared to **NTN** conventional products)

② Basic Static Load Rating : Up to 35% greater
(compared to **NTN** conventional products)

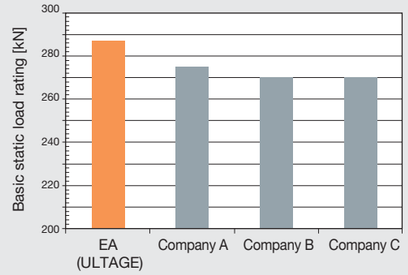
③ Operating Life : Up to 5 times longer
(compared to **NTN** conventional products)



● Comparison of other manufacturer's cataloged basic dynamic load rating values (C_r)
22216 (ø80 × ø140 × 33)



● Comparison of other manufacturer's cataloged basic static load rating values (C_{or})
22216 (ø80 × ø140 × 33)



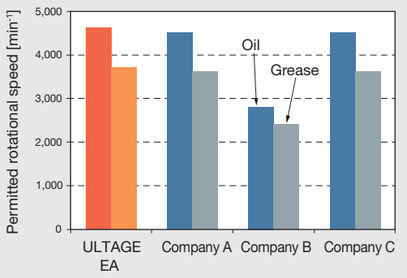
World's Highest Standard Maximum Shaft Speed

Higher operating speeds have been achieved by using an optimized design pressed steel cage.

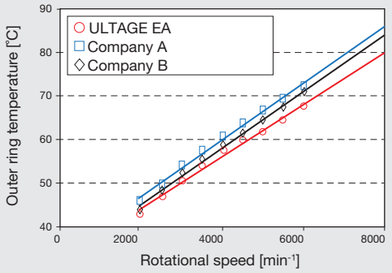
Limiting Speed : Up to a 20% increase when compared to NTN conventional products

The results of comparative testing of bearing temperature rise under circulating oiling conditions show that this bearing suppresses temperature rise at a lower torque compared to other manufacturers' bearings.

● Comparison of other manufacturer's cataloged permitted rotational speeds
22216 (ø80 × ø140 × 33)



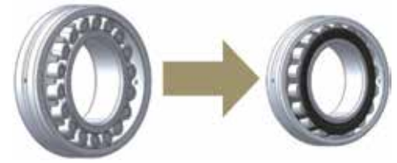
● Temperature rise test results (circulating oiling)
22216 (ø80 × ø140 × 33)



Enhanced Loads : Smaller Bearing

Due to higher load capacity a smaller, lighter weight bearing is used to achieve a longer life.

Model Number	Basic Dynamic Load Rating (kN)	Basic Static Load Rating (kN)	Primary Dimensions (mm)	Mass (kg)	Life Ratio
22220B	315	415	ø100 × ø180 × 46	4.95	1
22217EA	324	330	ø85 × ø150 × 36	2.59	1.1
			△ 20%	△ 48%	10%



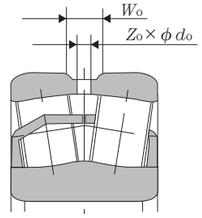
Overall size reduction up to 20%

Mass ratio reduced by 48%

Calculated operating life increased by 10%

Outer Ring Oil Groove/Holes Equipped as Standard

ULTAGE series are equipped with oil groove/holes as standard specification. D1 is Japan specification, W33 is Europe specification. (22205, 22206, and 22207 support W33 specification)



Nominal Bearing Outer dia. mm		No. of Oil Holes	
		D1	W33
Greater Than	Less Than	Z_o	Z_o
–	320	4	3
320	420[1)]	8	3

1) 420 mm is included in this size class.

W_o and d_o differ according to the model number.
Refer to the catalog bearing size charts.


Bearing outer ring

⚠ Do not use the oil holes as position locating pin holes.

Improved Easy Handling

Assembly, disassembly, and re-lubrication have been improved due to the optimized pressed steel cage design.

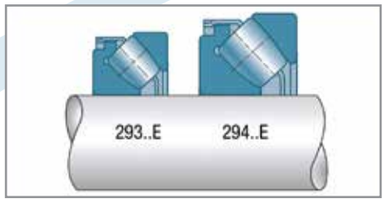
Minimized roller projection enables quick and easy disassembly, repair and reassembly.

Grease dispersion to rolling surfaces is enhanced.

Refer to the size charts (P-20)

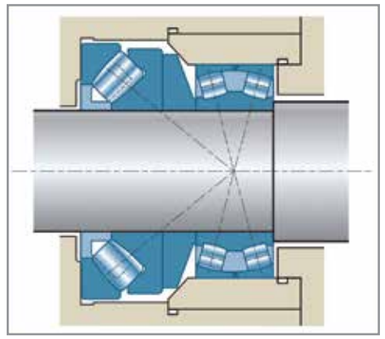
Thrust Spherical Roller Bearings

Thrust spherical roller bearings are made up of two detachable components, the shaft ring on which are mounted the cage and the spherical-tapered rolling elements and the housing ring whose spherical raceway enables the bearing to swivel.



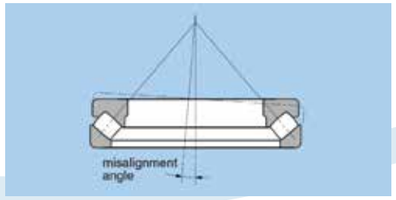
Advantages

- Very high axial load capacity and longer service life.
- Possibility of withstanding relatively high radial loads, of about half the value of the axial load, thanks to a high contact angle of about 50°.
- Operating temperature up to 200°C.



Misalignment

- The self-alignment possibility provided by the spherical raceway of the housing-ring enables it to accept misalignment of about 3°. The misalignment may be limited, depending on the sealing system used.



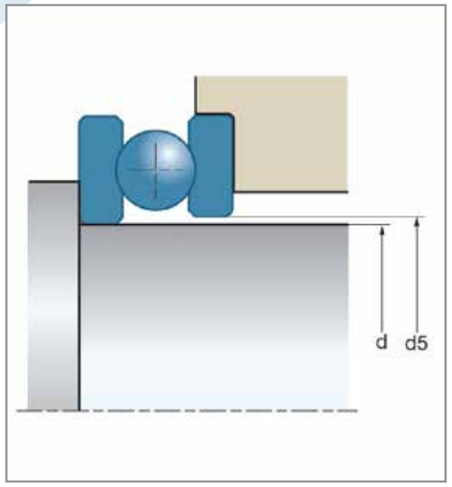
Refer to the size charts (P-22)

Thrust Ball Bearings

Thrust ball bearings have a contact angle of 90° and are designed to withstand axial loads in one direction only. Thrust bearings are made of detachable elements: shaft-ring, housing-ring, ball-cage assembly.

Installation

- The shafting is mounted on its seat with an interference fit and the housing-ring must be free to center itself. To ease the correct position of the thrust bearing when fitting, the housing-ring has a bore diameter (d5) greater than that of the shaft-ring (d).
- If the axial load of the non-loaded thrust bearing is insufficient, a pre-load must be applied using springs to reach the minimum dynamic axial load defined above.
- The performance of a thrust bearing is related to the distribution of the load over the entire circumference, it is important to have virtually no misalignment between the shaft-ring and the housing-ring (misalignment angle less than 0.03°).

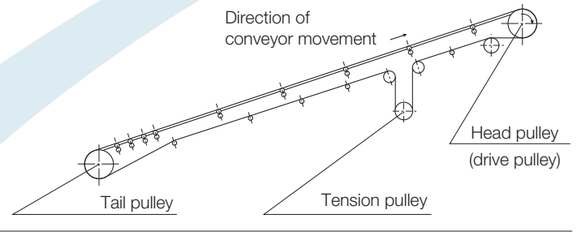


Refer to the size charts (P-22)

Bearing Units

- Available with dust covers.
- Easy to install/remove.
- Choose from unit with re-lubrication fitting or without.

Palm oil conveyor and elevator



UCP, UCF and UCT

This UCP type of bearing units is equivalent to the combination of a widely used plumber block and an automatic self-aligning bearing. Fitting to a shaft can be done easily, simply by fastening ball-point set screws. This type is most widely used in transmission mechanisms, general machinery and similar.

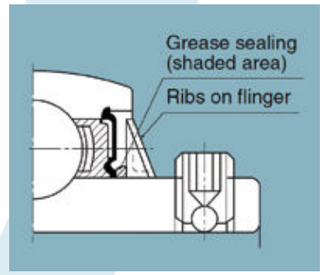
This UCF square shaped bearing units can be mounted on the side walls of machinery and similar using four bolts. The construction around the bearing is simple and mounting is easy. This is the most widely used flange type.

This UCT type has a slide groove in the bearing units that allows the bearing housing to be freely moved. It is used in locations where between-shaft distance must be adjusted. There is no problem even if the shaft center is moved during rotation, so this type is suitable for sprocket shafts for chains and similar.

Protrusions on Flinger to Expel Dust

NTN insert bearings have a double-sealing construction that comprises an oil-resistant rubber seal and a flinger, the flinger is fixed on the inner ring and has four triangular ribs on it.

When the inner ring runs at high speed, the ribs will blow off the dust, serving as a splash guard, they also enhance the flinger rigidity, and prevent the flinger from displacing even when the bearing unit is subjected to vibration or impact loads.



Test Condition

Bearings : UC205 (Standard type), JEL205 (Agricultural type) & 6205LLU (Double lips seal)

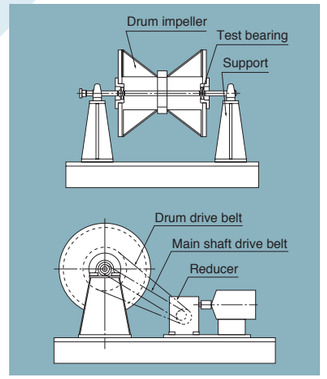
Rotational speed : 50rpm (Drum), 1,750rpm (Main shaft)

Load : 25kgf

Test equipment : NTN dust -proofing test equipment

Dust specification : Activated alumina

Test mode : Recorded the running time of the bearings until they were finally jammed, due to excessive accumulated dust inside.



Test equipment

Dust-Proofing Test Results

- Dust-proofing performance of UC205 is 9.8 times as good as that of the 6205LLU.
- JEL205 was specifically developed for agricultural machinery, the dust-proofing performance of JEL205 is 5 times greater than the 6205LLU.

Bearing	Normal running time
UC205	1,308h
6205LLU	133h
JEL205	668h

Refer to the size charts (P-23)

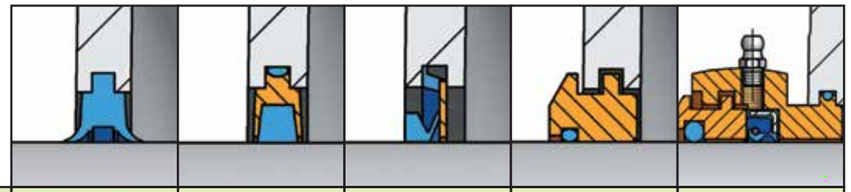
Plummer Blocks

- **Suitable for withstanding impact, vibrations and heavy loads.**
- **Suitable for a broad permissible operating temperature range (–20 to 300˚C (–4 to 572˚F)).**

* This is the permissible temperature for the plummer block body. Special heat treatment is required for bearings.

- **Can be used with either grease or oil lubrication.**

Seal Selection



Structural properties	SC..DS Double lip seal	SC..FS Felt strip seal	SC..SV V-ring seal	SC..LA Labyrinth seal	SC..TA Taconite seal
Operating temperature (°C)	-40 to +100	-40 to +100	-40 to +100	-40 to +200	-40 to +100
Circumferential speed (m/s)	<8	<15	<7	<15	<8
Possible misalignment (°)	0.5…1	<0.5	1…1.5	<0.3	<0.5
Splash water / moisture	Good	Moderate	Good	Poor	Excellent
Ultra-fine particles	Excellent	Good	Good	Good	Excellent
Fine particles	Excellent	Moderate	Good	Good	Excellent
Large particles	Good	Moderate	Moderate	Good	Excellent
Sharp-edge particles	Good	Good	Poor	Excellent	Excellent
Environment	General	High rotation speed	Low friction	High temperature	Large dust pollution

Structural Details

Strength Properties
- The circular ribbing on the housing body gives the SNC housing excellent stability and rigidity, in the same time optimize the vibration behavior and heat dissipation of the units.

Heat Dissipation
- The X-shaped support surface insures extremely efficient dissipation of operating heat.

Connection Bolts
- Bolts with a larger diameter enables higher radial loads to act on the housing cap.

Mounting Holes
- The mounting holes simplify exact alignment of the units in series production.
- If modification of the housing is necessary, the mounting holes can also be used for re-machining purposes.

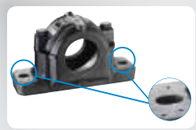
Grease Drain Hole
- The drain hole is located in the foot area opposite the lubricating fitting. It ensures that excess grease from inside the housing can escape.

Drain Edge
- The chamfered edge prevents the penetration of moisture at the interface between the upper and lower section.

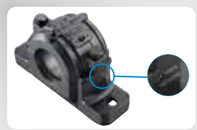
Alignment Markings
- SNC housings have positioning marks, for quick and easy alignment on the mounting surface.

Dismounting Edge
- A lever can be used to easily separate the upper and lower sections of the housing.

Lubrication Fitting
- All SNC housings come with two threaded holes for mounting lubricators.



Markings for Additional Fastening Bolts and Dowel Pins
- There are four markings in the housing foot. These can be used as alternative fastening holes.
- Additional dowel pins are useful if very high loads occur parallel to the support surface.



Upper and Lower Section Marking
- When mounting several housings, the code numbers imprinted on the side of the housing body are used to correctly assign the upper and lower section.

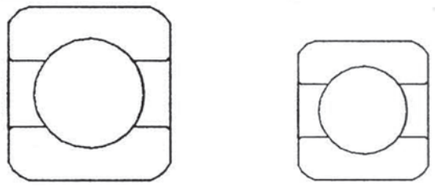
SNR the European Brand of NTN Group

Refer to the size charts (P-28)

Long Life Ball Bearings

- Clean, vacuum-degassed, high-carbon chromium steel that undergoes a proprietary heat treatment to reduce crack sensitivity.
- High-power density that allows a smaller bearing to support higher loads.
- Low-weight, compact designs.
- A wide range of sizes.

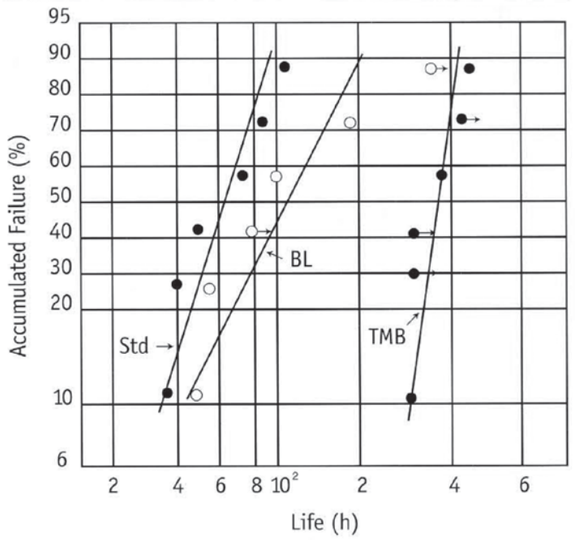
Power Density: allows for a more compact design



Calculated L_{10} Life Comparison

Bearing Numbers	d x D x Width (mm)	L_{10} Life (Hours)
6208	40 x 80 x 18	1,991
BL208	40 x 80 x 18	3,654
TMB208	40 x 80 x 18	4,379
6308	40 x 90 x 23	4,437

Test results: lubricant containing debris

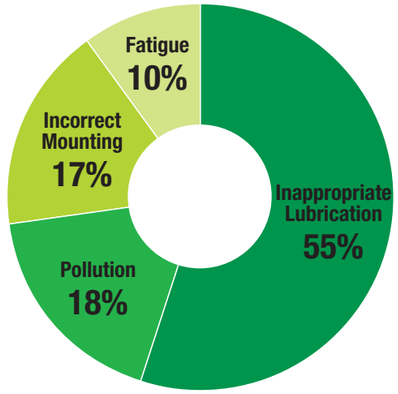


Refer to the size charts (P-26)

Maintenance Tools and Lubricants

NTN-SNR Experts & Tools, at the service of our customers

Main causes of bearing failures



• Source : NTN-SNR Catalogue, Maintenance Tools

Example of bearings damage

Maintenance tools and lubricants

- Mounting and dismounting of bearings, can be easy.
- Your safety and security is secure.
- Proper handling of bearings can extend your bearings lifetime.

Quick, accurate and safe mounting of bearings
Cold mounting tool kit case

For quick and easy dismounting of bearings mounted in a housing
Bore puller kit case

Designed to prevent contact rust, wear and fretting corrosion
Lub mounting paste

Portable induction heater, lightweight and easy to use
SmartTEMP induction heater

Take care when dismantling: look after your equipment and save time, while working safely
Jaws self-centering hydraulic puller

Optimize your bearing by using
NTN-SNR lubricants

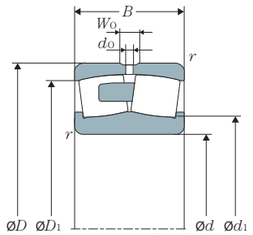
SNR the European Brand of NTN Group

Refer to the size charts (P-29 & 30)

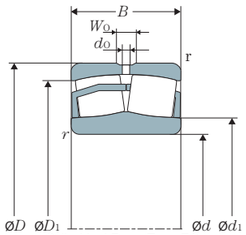
Dimension Tables

ULTAGE Series

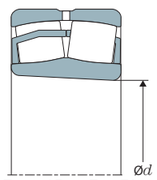
Spherical Roller Bearings [EA / EM type]



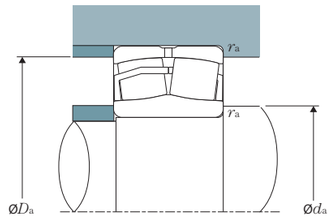
Cylindrical Bore (Type EM)



Cylindrical Bore (Type EA)



Tapered Bore (Type EA)



Boundary Dimensions (mm)			Basic Load Ratings (kN)		Limiting Speeds (min⁻¹)		Bearing Numbers		Mass (approx.) kg	
d	*D*	*B*	Cr	Cor	Grease	Oil	Cylindrical bore	Tapered bore	Cylindrical bore	Tapered bore
25	52	18	57.3	46.1	10 400	13 000	**22205**	**22205K**	0.173	0.169
30	62	20	75.7	64.5	8 800	11 000	**22206**	**22206K**	0.278	0.272
35	72	23	100	92	7 500	9 400	**22207**	**22207K**	0.438	0.43
40	80	23	116	105	6 800	8 500	**22208EA**	**22208EAK**	0.528	0.518
	80	23	110	105	7 800	9 500	**22208EM**	**22208EMK**	0.529	0.519
	90	33	169	152	5 400	6 600	**22308**	**22308K**	1.02	1
45	85	23	121	113	6100	7700	**22209EA**	**22209EAK**	0.572	0.561
	85	23	116	113	6100	7700	**22209EM**	**22209EMK**	0.577	0.566
	100	36	206	187	4600	5700	**22309**	**22309K**	1.37	1.34
50	90	23	130	124	5700	7200	**22210EA**	**22210EAK**	0.614	0.602
	90	23	125	124	5700	7200	**22210EM**	**22210EMK**	0.616	0.604
	110	40	250	232	4300	5300	**22310**	**22310K**	1.82	1.79
55	100	25	155	148	5300	6700	**22211EA**	**22211EAK**	0.83	0.814
	100	25	148	148	5300	6700	**22211EM**	**22211EMK**	0.827	0.811
	120	43	296	274	3900	4800	**22311**	**22311K**	2.13	2.26
60	110	28	187	181	4800	6000	**22212EA**	**22212EAK**	1.14	1.12
	110	28	179	181	4800	6000	**22212EM**	**22212EMK**	1.15	1.13
	130	46	340	319	3600	4600	**22312**	**22312K**	2.86	2.8
65	120	31	226	224	4400	5500	**22213EA**	**22213EAK**	1.52	1.49
	120	31	217	224	4400	5500	**22213EM**	**22213EMK**	1.53	1.5
	140	48	369	343	3300	4100	**22313**	**22313K**	3.48	3.41
70	125	31	235	240	4100	5200	**22214**	**22214K**	1.61	1.58
	150	51	420	396	3000	3800	**22314**	**22314K**	4.25	4.16
75	130	31	244	249	4000	5000	**22215**	**22215K**	1.67	1.64
	160	55	491	467	2900	3600	**22315**	**22315K**	5.18	5.07
80	140	33	278	287	3700	4600	**22216EA**	**22216EAK**	2.09	2.05
	140	33	267	287	3700	4600	**22216EM**	**22216EMK**	2.11	2.07
	170	58	541	522	2700	3400	**22316**	**22316K**	6.12	5.99
85	150	36	324	330	3400	4300	**22217**	**22217K**	2.59	2.54
	180	60	599	604	2600	3200	**22317**	**22317K**	7.18	7.04
90	160	40	384	398	3200	4000	**22218**	**22218K**	3.34	3.27
	190	64	668	652	2500	3000	**22318**	**22318K**	8.42	8.25
95	170	43	416	417	3000	3800	**22219**	**22219K**	3.98	3.9
	200	67	732	751	2300	2800	**22319**	**22319K**	9.91	9.71
100	180	46	472	495	2800	3600	**22220**	**22220K**	4.9	4.8
	215	73	827	844	2100	2600	**22320**	**22320K**	12.6	12.3
110	200	53	602	643	2600	3300	**22222**	**22222K**	7.1	6.95
	240	80	975	972	2000	2400	**22322**	**22322K**	17	16.6

Dynamic Equivalent Radial Load

$P_r = XF_r + YF_a$

$\frac{F_a}{F_r} \le e$		$\frac{F_a}{F_r} > e$	
X	*Y*	*X*	*Y*
1	Y_1	0.67	Y_2

Static Equivalent Radial Load

$P_{or} = F_r + Y_o F_a$

For values e , Y_1 , Y_2 and Y_o see the following table.

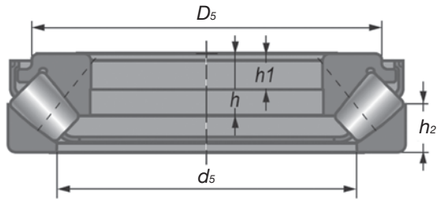
222 16 EA K D1 C3

- C3 — Internal Clearance Code
- D1 — Lubrication Hole/Lubrication Groove Code
- K — Bore Type Code...K, No Code
- EA — Type Code...EA, EM
- 16 — Bore Diameter Code
- 222 — Bearing Series Code

Boundary Dimensions (mm)			Basic Load Ratings (kN)		Limiting Speeds (min⁻¹)		Bearing Numbers		Mass (approx.) kg	
d	*D*	*B*	Cr	Cor	Grease	Oil	Cylindrical bore	Tapered bore	Cylindrical bore	Tapered bore
120	215	58	688	753	2400	3000	**22224**	**22224K**	8.88	8.68
	260	86	1170	1280	1800	2200	**22324**	**22324K**	22.3	21.9
130	230	64	808	898	2200	2800	**22226**	**22226K**	11	10.7
	280	93	1330	1400	1600	2000	**22326**	**22326K**	27.2	26.6
140	250	68	912	1010	2000	2500	**22228**	**22228K**	13.9	13.6
	300	102	1540	1720	1500	1900	**22328**	**22328K**	34.4	33.7
150	270	73	1080	1220	1800	2300	**22230**	**22230K**	17.6	17.3
	320	108	1740	1890	1400	1700	**22330**	**22330K**	42.2	41.3

Thrust Spherical Roller Bearings

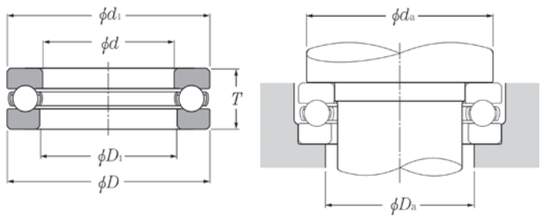
294 20. E
- Type code
- Bore diameter code
- Dimension series code



Boundary Dimensions (mm)			Dimensions (mm)					Bearing Load Ratings (kN)		Limiting Speeds (min^{-1})	Mass	Bearing Numbers
d	D	T	D_5	d_5	h	h_1	h_2	Cr	Cor	Oil	kg	
60	**130**	**42**	88.0	112.3	27.0	15.0	20.5	335	951	2500	2.47	**29412.E**
65	**140**	**45**	96.5	122.8	29.5	16.0	22.0	405	1157	2300	3.26	**29413.E**
70	**150**	**48**	105.0	131.6	31.0	17.0	23.0	440	1280	2200	3.98	**29414.E**
75	**160**	**51**	109.0	141.8	33.5	18.0	24.0	512	1502	2000	4.9	**29415.E**
80	**170**	**54**	117.0	150.8	35.0	19.0	24.0	607	1636	1900	5.68	**29416.E**
85	**180**	**58**	123.0	160.6	37.0	19.0	28.0	692	1945	1800	6.67	**29417.E**
90	**190**	**60**	130.0	170.8	39.0	22.0	29.0	703	2172	1700	7.77	**29418.E**
100	**210**	**67**	144.5	189.8	43.0	24.0	32.0	865	2578	1500	10.8	**29420.E**
110	**230**	**73**	159.0	211.5	47.0	27.0	35.0	1022	3078	1400	13.5	**29422.E**
120	**250**	**78**	173.0	227.8	50.5	29.0	37.0	1180	3590	1300	17.5	**29424.E**
130	**270**	**85**	188.0	245.4	54.0	31.0	41.0	1395	4300	1200	21.6	**29426.E**
140	**280**	**85**	196.5	254.0	54.0	32.0	41.0	1509	4686	1100	23	**29428.E**
150	**300**	**90**	209.5	273.0	58.0	34.0	44.0	1626	5241	1000	23	**29430.E**
160	**320**	**95**	226.0	306.0	42.0	34.0	45.0	1510	5000	1000	37.3	**29432.E**

Thrust Ball Bearings

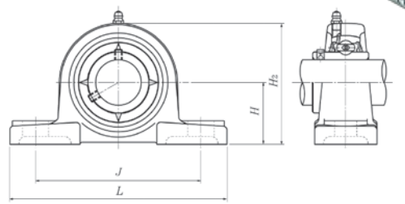
5 1 1 20 L1 P5
- Tolerances JIS Class 5
- High Strength, machined brass cage
- Nominal bore diameter 100mm
- Diameter series 1
- Height series 1
- **Thrust ball bearing**



Boundary Dimensions (mm)			Dimensions (mm)				Bearing Load Ratings (kN)		Limiting Speeds (min^{-1})		Mass	Bearing Numbers
d	D	T	d_1	D_1	d_a min	D_a max	Ca	Coa	Oil	Grease	kg	
90	**155**	**50**	155	93	129	116	213	525	1600	1100	3.74	**51318**
100	**170**	**55**	170	103	142	128	237	595	1400	990	4.88	**51320**
110	**190**	**63**	187	113	158	142	267	705	1200	870	7.67	**51322**
120	**210**	**70**	205	123	173	157	296	805	1100	780	10.8	**51324**
130	**225**	**75**	220	134	186	169	330	960	1000	720	12.7	**51326**

Pillow Blocks Cast Housing Set Screw Type

UC P 2 05 D1
- Lubrication code
- Bore dia. No.
- Dia. series code
- Bearing housing type code
- Bearing type code

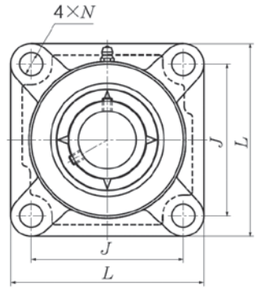


Shaft Dia. (mm)	Bearing Numbers	Shaft Dia. (Inch)		Bearing Numbers	Dimensions (mm)				Bolt Spec	Weight	Bearing Load Ratings (kN)	
d	mm	d		inch	H	L	J	H_2	mm	kg	Cr	Cor
50	**UCP210D1**	1 1 2	7/8 15/16 -	UCP210-114D1 UCP210-115D1 UCP210-200D1	57.2	206	159	114	M16	3.2	35	23.2
	UCP310D1	1 1	7/8 15/16	UCP310-114D1 UCP310-115D1	75	275	212	143	M16	5.6	62	38.5
55	**UCP211D1**	2 2 2 2	- 1/16 1/8 3/16	UCP211-200D1 UCP211-201D1 UCP211-202D1 UCP211-203D1	63.5	219	171	126	M16	3.5	43.5	29.2
	UCP311D1	2 2 2 2	- 1/16 1/8 3/16	UCP311-200D1 UCP311-201D1 UCP311-202D1 UCP311-203D1	80	310	236	154	M16	7.3	71.5	45
60	**UCP212D1**	2 2 2 2	1/4 5/16 3/8 7/16	UCP212-204D1 UCP212-205D1 UCP212-206D1 UCP212-207D1	60	184	241	138	M16	4.7	52.5	36
	UCP312D1	2 2 2 2	1/4 5/16 3/8 7/16	UCP312-204D1 UCP312-205D1 UCP312-206D1 UCP312-207D1	85	330	250	165	M20	9.4	82	52
65	**UCP213D1**	2 2	1/2 9/16	UCP213-208D1 UCP213-209D1	76.2	265	203	151	M20	5.6	57.5	40
	UCP313D1	2 2	1/2 9/16	UCP313-208D1 UCP313-209D1	90	340	260	176	M20	10	92.5	60
70	**UCP214D1**	2 2 2	5/8 11/16 3/4	UCP214-210D1 UCP214-211D1 UCP214-212D1	79.4	266	210	157	M20	6.5	62	44
	UCP314D1	2 2 2	5/8 11/16 3/4	UCP314-210D1 UCP314-211D1 UCP314-212D1	95	360	280	187	M22	12	104	68
75	**UCP215D1**	2 2 2 3	13/16 7/8 15/16 -	UCP215-213D1 UCP215-214D1 UCP215-215D1 UCP215-300D1	82.6	275	217	163	M20	7.2	66	49.5
	UCP315D1	2 2 2 3	13/16 7/8 15/16 -	UCP315-213D1 UCP315-214D1 UCP315-215D1 UCP315-300D1	100	380	290	198	M22	14	113	77
80	**UCP216D1**	3 3 3	1/16 1/8 3/16	UCP216-301D1 UCP216-302D1 UCP216-303D1	88.9	292	232	175	M20	8.7	72.5	53
	UCP316D1	3 3 3	1/16 1/8 3/16	UCP316-301D1 UCP316-302D1 UCP316-303D1	106	400	300	210	M22	17	123	86.5
85	**UCP217D1**	3 3 3	1/4 5/16 7/16	UCP217-304D1 UCP217-305D1 UCP217-306D1	95.2	310	247	187	M20	11	83.5	64
	UCP317D1	3 3 3	1/4 5/16 7/16	UCP317-304D1 UCP317-305D1 UCP317-307D1	112	420	320	220	M27	19	133	97
90	**UCP218D1**	3	1/2	UCP218-308D1	101.6	327	262	200	M22	13	96	71.5
	UCP318D1	3 3	7/16 1/2	UCP318-307D1 UCP318-308D1	118	430	330	235	M27	22	143	107
95	**UCP319D1**	3 3 3	5/8 11/16 3/4	UCP319-310D1 UCP319-311D1 UCP319-312D1	125	470	360	250	M30	26	153	119
100	**UCP320D1**	3 3 3 4	13/16 7/8 15/16	UCP320-313D1 UCP320-314D1 UCP320-315D1 UCP320-400D1	140	490	380	280	M30	33	173	141
105	**UCP321D1**	-	-	-	140	490	380	280	M33	35	184	153
110	**UCP322D1**	-	-	-	150	520	400	300	M33	43	205	179
120	**UCP324D1**	-	-	-	160	570	450	320	M33	50	207	185

Square Flanged Units Cast Housing Set Screw Type

UC F 2 05 D1

- D1 — Lubrication code
- 05 — Bore dia. No.
- 2 — Dia. series code
- F — Bearing housing type code
- UC — Bearing type code

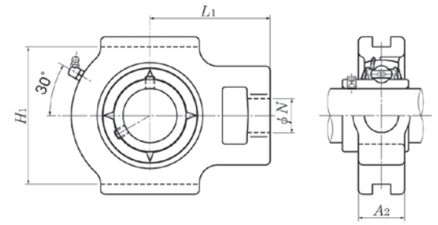


Shaft Dia. (mm)	Bearing Numbers	Shaft Dia. (Inch)		Bearing Numbers	Dimensions (mm)			Bolt Spec	Weight	Bearing Load Ratings (kN)	
d	mm	d		inch	*L*	*J*	*N*	M	kg	Cr	Cor
50	**UCF210D1**	1 1 2	7/8 15/16 -	UCF210-114D1 UCF210-115D1 UCF210-200D1	143	111	16	M14	2.5	35	23.2
	UCF310D1	1 1	7/8 15/16	UCF310-114D1 UCF310-115D1	175	132	23	M20	4.5	62	38.5
55	**UCF211D1**	2 2 2 2	- 1/16 1/8 3/16	UCF211-200D1 UCF211-201D1 UCF211-202D1 UCF211-203D1	162	130	19	M16	3.3	43.5	29.2
	UCF311D1	2 2 2 2	- 1/16 1/8 3/16	UCF311-200D1 UCF311-201D1 UCF311-202D1 UCF311-203D1	185	140	23	M20	5.3	71.5	45
60	**UCF212D1**	2 2 2 2	1/4 5/16 3/8 7/16	UCF212-204D1 UCF212-205D1 UCF212-206D1 UCF212-207D1	175	143	19	M16	3.9	52.5	36
	UCF312D1	2 2 2 2	1/4 5/16 3/8 7/16	UCF312-204D1 UCF312-205D1 UCF312-206D1 UCF312-207D1	195	150	23	M20	6.3	82	52
65	**UCF213D1**	2 2	1/2 9/16	UCF213-208D1 UCF213-209D1	187	149	19	M16	5.5	57.5	40
	UCF313D1	2 2	1/2 9/16	UCF313-208D1 UCF313-209D1	208	166	23	M20	8	92.5	60
70	**UCF214D1**	2 2 2	5/8 11/16 3/4	UCF214-210D1 UCF214-211D1 UCF214-212D1	193	152	19	M16	6.3	62	44
	UCF314D1	2 2 2	5/8 11/16 3/4	UCF314-210D1 UCF314-211D1 UCF314-212D1	226	178	25	M22	9.4	104	68
75	**UCF215D1**	2 2 2 3	13/16 7/8 15/16 -	UCF215-213D1 UCF215-214D1 UCF215-215D1 UCF215-300D1	200	159	19	M16	6.6	66	49.5
	UCF315D1	2 2 2 3	13/16 7/8 15/16 -	UCF315-213D1 UCF315-214D1 UCF315-215D1 UCF315-300D1	236	184	25	M22	11	113	77
80	**UCF216D1**	3 3 3	1/16 1/8 3/16	UCF216-301D1 UCF216-302D1 UCF216-303D1	208	165	23	M20	7.9	72.5	53
	UCF316D1	3 3 3	1/16 1/8 3/16	UCF316-301D1 UCF316-302D1 UCF316-303D1	250	196	31	M27	14	123	86.5
85	**UCF217D1**	3 3 3	1/4 5/16 7/16	UCF217-304D1 UCF217-305D1 UCF217-306D1	220	175	23	M20	9.8	83.5	64
	UCF317D1	3 3 3	1/4 5/16 7/16	UCF317-304D1 UCF317-305D1 UCF317-307D1	260	204	31	M27	15	133	97
90	**UCF218D1**	3	1/2	UCF218-308D1	235	187	23	M20	12	96	71.5
	UCF318D1	3 3	7/16 1/2	UCF318-307D1 UCF318-308D1	280	216	35	M30	19	143	107
95	**UCF319D1**	3 3 3	5/8 11/16 3/4	UCF319-310D1 UCF319-311D1 UCF319-312D1	290	228	35	M30	22	153	119
100	**UCF320D1**	3 3 3 4	13/16 7/8 15/16 -	UCF320-313D1 UCF320-314D1 UCF320-315D1 UCF320-400D1	310	242	38	M33	27	173	141
105	**UCF321D1**	-	-	-	310	242	38	M33	26	184	153
110	**UCF322D1**	-	-	-	340	266	41	M36	34	205	179
120	**UCF324D1**	-	-	-	370	290	41	M36	48	207	185
130	**UCF326D1**	-	-	-	410	320	41	M36	63	229	214
140	**UCF328D1**	-	-	-	450	350	41	M36	90	253	246

Take-up Units Cast Housing Set Screw Type

UC T 2 05 D1

- D1 — Lubrication code
- 05 — Bore dia. No.
- 2 — Dia. series code
- T — Bearing housing type code
- UC — Bearing type code



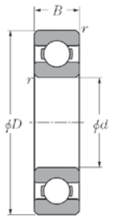
Shaft Dia. (mm)	Bearing Numbers	Shaft Dia. (Inch)		Bearing Numbers	Dimensions (mm)				Weight	Bearing Load Ratings (kN)	
d	mm	d		inch	H_1	A_2	L_1	*N*	kg	Cr	Cor
50	**UCT210D1**	1 1 2	7/8 15/16 -	UCT210-114D1 UCT210-115D1 UCT210-200D1	102	37	92	29	2.6	35	23.2
	UCT310D1	1 1	7/8 15/16	UCT310-114D1 UCT310-115D1	140	40	118	37	5	62	38.5
55	**UCT211D1**	2 2 2 2	- 1/16 1/8 3/16	UCT211-200D1 UCT211-201D1 UCT211-202D1 UCT211-203D1	130	38	106	35	3.9	43.5	29.2
	UCT311D1	2 2 2 2	- 1/16 1/8 3/16	UCP311-200D1 UCP311-201D1 UCP311-202D1 UCP311-203D1	150	44	127	39	6.3	71.5	45
60	**UCT212D1**	2 2 2 2	1/4 5/16 3/8 7/16	UCP212-204D1 UCP212-205D1 UCP212-206D1 UCP212-207D1	130	42	119	35	4.8	52.5	36
	UCT312D1	2 2 2 2	1/4 5/16 3/8 7/16	UCT312-204D1 UCT312-205D1 UCT312-206D1 UCT312-207D1	160	46	135	41	7.6	82	52
65	**UCT213D1**	2 2	1/2 9/16	UCT213-208D1 UCT213-209D1	151	44	137	41	7	57.5	40
	UCT313D1	2 2	1/2 9/16	UCT313-208D1 UCT313-209D1	170	50	146	43	9.4	92.5	60
70	**UCT214D1**	2 2 2	5/8 11/16 3/4	UCT214-210D1 UCT214-211D1 UCT214-212D1	151	46	137	41	7	62	44
	UCT314D1	2 2 2	5/8 11/16 3/4	UCT314-210D1 UCT314-211D1 UCT314-212D1	180	52	155	46	11	104	68
75	**UCT215D1**	2 2 2 3	13/16 7/8 15/16 -	UCT215-213D1 UCT215-214D1 UCT215-215D1 UCT215-300D1	151	48	140	41	7.4	66	49.5
	UCT315D1	2 2 2 3	13/16 7/8 15/16 -	UCT315-213D1 UCT315-214D1 UCT315-215D1 UCT315-300D1	192	55	160	46	13	113	77
80	**UCT216D1**	3 3 3	1/16 1/8 3/16	UCT216-301D1 UCT216-302D1 UCT216-303D1	165	51	140	41	8.2	72.5	53
	UCT316D1	3 3 3	1/16 1/8 3/16	UCT316-301D1 UCT316-302D1 UCT316-303D1	204	60	174	53	16	123	86.5
85	**UCT217D1**	3 3 3	1/4 5/16 7/16	UCT217-304D1 UCT217-305D1 UCT217-306D1	173	54	162	48	11	83.5	64
	UCT317D1	3 3 3	1/4 5/16 7/16	UCT317-304D1 UCT317-305D1 UCT317-307D1	214	64	183	53	19	133	97
90	**UCT318D1**	3 3	7/16 1/2	UCT318-307D1 UCT318-308D1	228	66	192	57	21	143	107
95	**UCT319D1**	3 3 3	5/8 11/16 3/4	UCT319-310D1 UCT319-311D1 UCT319-312D1	240	72	197	57	24	153	119
100	**UCT320D1**	3 3 3 4	13/16 7/8 15/16 -	UCT320-313D1 UCT320-314D1 UCT320-315D1 UCT320-400D1	260	75	210	59	30	173	141
105	**UCT321D1**	-	-	-	260	75	212	59	32	184	153
110	**UCT322D1**	-	-	-	285	80	235	65	40	205	179
120	**UCT324D1**	-	-	-	320	90	267	70	55	207	185
130	**UCT326D1**	-	-	-	350	100	285	75	69	229	214
140	**UCT328D1**	-	-	-	380	100	315	80	84	253	246

Dimension Tables

Long Life Ball Bearings

6 2 05 ZZ C3/ 2AS

- Shell Alvania S2 grease
- Radial internal clearance C3
- Shielded (both)
- Nominal bore diameter 25mm
- Diameter series 2
- **6 : Standard series deep groove ball bearing**
- **TMB : Long life deep groove ball bearing**



Open type

Shielded type (ZZ)

Contact sealed type (LLU)

Boundary Dimensions (mm)			Basic Load Ratings (kN)		Limiting Speeds (min⁻¹)			Bearing Numbers			Mass
d	*D*	*B*	Cr	Cor	Grease, ZZ	Oil, Open	LLU	Open Type	Non Contact Shield Type	Contact Shield Type	kg
10	22	6	2.7	1.27	30000	36000	21000	**6900**	ZZ	LLU	0.009
	26	8	4.55	1.96	29000	34000	21000	**6000**	ZZ	LLU	0.019
	30	9	5.1	2.39	25000	30000	18000	**6200**	ZZ	LLU	0.032
	35	11	8.2	3.5	23000	27000	16000	**6300**	ZZ	LLU	0.053
12	24	6	2.89	1.46	27000	32000	19000	**6901**	ZZ	LLU	0.011
	28	8	5.1	2.39	26000	30000	18000	**6001**	ZZ	LLU	0.021
	32	10	6.1	2.75	22000	26000	16000	**6201**	ZZ	LLU	0.037
	37	12	9.7	4.2	20000	24000	15000	**6301**	ZZ	LLU	0.06
15	28	7	3.65	2	24000	28000	16000	**6902**	ZZ	LLU	0.016
	32	9	5.6	2.83	22000	26000	15000	**6002**	ZZ	LLU	0.03
	35	11	7.75	3.6	19000	23000	15000	**6202**	ZZ	LLU	0.045
	42	13	11.4	5.45	17000	21000	12000	**6302**	ZZ	LLU	0.082
17	30	7	4.65	2.58	22000	26000	14000	**6903**	ZZ	LLU	0.018
	35	10	6.8	3.35	20000	24000	14000	**6003**	ZZ	LLU	0.039
	40	12	9.6	4.6	18000	21000	12000	**6203**	ZZ	LLU	0.066
	47	14	13.5	6.55	16000	19000	11000	**6303**	ZZ	LLU	0.115
20	37	9	6.4	3.7	19000	23000	12000	**6904**	ZZ	LLU	0.036
	42	12	9.4	5.05	18000	21000	11000	**6004**	ZZ	LLU	0.069
	47	14	12.8	6.65	16000	18000	10000	**6204**	ZZ	LLU	0.106
	52	15	15.9	7.9	14000	17000	10000	**6304**	ZZ	LLU	0.144
25	42	9	7.05	4.55	16000	19000	9800	**6905**	ZZ	LLU	0.042
	47	12	10.1	5.85	15000	18000	9400	**6005**	ZZ	LLU	0.08
	52	15	14	7.85	13000	15000	8900	**6205**	ZZ	LLU	0.128
	62	17	21.2	10.9	12000	14000	8100	**6305**	ZZ	LLU	0.232
30	47	9	7.25	5	14000	17000	8400	**6906**	ZZ	LLU	0.048
	55	13	13.2	8.3	13000	15000	7700	**6006**	ZZ	LLU	0.116
	62	16	19.5	11.3	11000	13000	7300	**6206**	ZZ	LLU	0.199
	72	19	26.7	15	10000	12000	6600	**6306**	ZZ	LLU	0.36
35	55	10	9.55	6.85	12000	15000	7100	**6907**	ZZ	LLU	0.074
	62	14	16	10.3	12000	14000	6800	**6007**	ZZ	LLU	0.155
	72	17	25.7	15.3	9800	11000	6300	**6207**	ZZ	LLU	0.288
	80	21	33.5	19.1	8800	10000	6000	**6307**	ZZ	LLU	0.457
40	62	12	12.2	8.9	11000	13000	6300	**6908**	ZZ	LLU	0.11
	68	15	16.8	11.5	10000	12000	6100	**6008**	ZZ	LLU	0.19
	80	18	29.1	17.8	8700	10000	5600	**6208**	ZZ	LLU	0.366
	90	23	40.5	24	7800	9200	5300	**6308**	ZZ	LLU	0.63
45	68	12	13.1	10.4	9800	12000	5600	**6909**	ZZ	LLU	0.128
	75	16	21	15.1	9200	11000	5400	**6009**	ZZ	LLU	0.237
	85	19	32.5	20.4	7800	9200	5200	**6209**	ZZ	LLU	0.398
	100	25	53	32	7000	8200	4700	**6309**	ZZ	LLU	0.814
50	72	12	13.4	11.2	8900	11000	5100	**6910**	ZZ	LLU	0.132
	80	16	21.8	16.6	8400	9800	5000	**6010**	ZZ	LLU	0.261
	90	20	35	23.2	7100	8300	4700	**6210**	ZZ	LLU	0.454
	110	27	62	38.5	6400	7500	4200	**6310**	ZZ	LLU	1.07
55	80	13	16	13.3	8200	9600	4600	**6911**	ZZ	LLU	0.18
	90	18	28.3	21.2	7700	9000	4500	**6011**	ZZ	LLU	0.388
	100	21	43.5	29.2	6400	7600	4300	**6211**	ZZ	LLU	0.601
	120	29	71.5	45	5800	6800	3900	**6311**	ZZ	LLU	1.37
60	85	13	16.4	14.3	7600	8900	4300	**6912**	ZZ	LLU	0.193
	95	18	29.5	23.2	7000	8300	4100	**6012**	ZZ	LLU	0.414
	110	22	52.5	36	6000	7000	3800	**6212**	ZZ	LLU	0.783
	130	31	82	52	5400	6300	3600	**6312**	ZZ	LLU	1.73
65	90	13	17.4	16.1	7000	8200	4000	**6913**	ZZ	LLU	0.206
	100	18	30.5	25.2	6500	7700	3900	**6013**	ZZ	LLU	0.421
	120	23	57.5	40	5500	6500	3600	**6213**	ZZ	LLU	0.99
	140	33	92.5	60	4900	5800	3300	**6313**	ZZ	LLU	2.08
70	100	16	23.7	21.2	6500	7700	3700	**6914**	ZZ	LLU	0.334
	110	20	38	31	6100	7100	3600	**6014**	ZZ	LLU	0.604
	125	24	62	44	5100	6000	3400	**6214**	ZZ	LLU	1.07
	150	35	104	68	4600	5400	3100	**6314**	ZZ	LLU	2.52
75	105	16	24.4	22.6	6100	7200	3500	**6915**	ZZ	LLU	0.353
	115	20	39.5	33.5	5700	6700	3300	**6015**	ZZ	LLU	0.649
	130	25	66	49.5	4800	5600	3200	**6215**	ZZ	LLU	1.18
	160	37	113	77	4300	5000	2900	**6315**	ZZ	LLU	3.02
80	110	16	24.9	24	5700	6700	3200	**6916**	ZZ	LLU	0.373
	125	22	47.5	40	5300	6200	3100	**6016**	ZZ	LLU	0.854
	140	26	72.5	53	4500	5300	3000	**6216**	ZZ	LLU	1.4
	170	39	123	86.5	4000	4700	2700	**6316**	ZZ	LLU	3.59
85	120	18	32	29.6	5400	6300	3000	**6917**	ZZ	LLU	0.536
	130	22	49.5	43	5000	5900	2900	**6017**	ZZ	LLU	0.89
	150	28	83.5	64	4200	5000	2800	**6217**	ZZ	LLU	1.79
	180	41	133	97	3800	4500	2600	**6317**	ZZ	LLU	4.23
90	125	18	33	31.5	5100	6000	2900	**6918**	ZZ	LLU	0.554
	140	24	58	49.5	4700	5600	2800	**6018**	ZZ	LLU	1.02
	160	30	96	71.5	4000	4700	2600	**6218**	ZZ	LLU	2.15
	190	43	143	107	3600	4200	2400	**6318**	ZZ	LLU	4.91
95	130	18	33.5	33.5	4800	5700	2800	**6919**	ZZ	LLU	0.579
	145	24	60.5	54	4500	5300	2600	**6019**	ZZ	LLU	1.08
	170	32	109	82	3700	4400	2500	**6219**	ZZ	LLU	2.62
	200	45	153	119	3300	3900	2300	**6319**	ZZ	LLU	5.67
100	140	20	41	39.5	4500	5300	2600	**6920**	ZZ	LLU	0.785
	150	24	60	54	4200	5000	2600	**6020**	ZZ	LLU	1.15
	180	34	122	93	3500	4200	2300	**6220**	ZZ	LLU	3.14
	215	47	173	141	3200	3700	2200	**6320**	ZZ	LLU	7
120	165	22	53	54	3800	4400	-	**6924**	-	-	1.15
	180	28	85	79.5	3500	4100	2100	**6024**	ZZ	LLU	2.07
	215	40	155	131	2900	3400	2000	**6224**	ZZ	LLU	5.15
	260	55	207	185	2600	3100	-	**6324**	-	-	12.4
130	180	24	65	67.5	3500	4100	-	**6926**	-	-	1.52
	200	33	106	101	3200	3800	1900	**6026**	ZZ	LLU	3.16
	230	40	167	146	2700	3100	-	**6226**	-	-	5.82
	280	58	229	214	2400	2800	-	**6326**	-	-	15.3
140	190	24	66.5	71.5	3200	3800	-	**6928**	-	-	1.62
	210	33	110	109	3000	3500	1800	**6028**	ZZ	LLU	3.35
	250	42	166	150	2500	2900	-	**6228**	-	-	7.57
	300	62	253	246	2200	2600	-	**6328**	-	-	18.5
150	210	28	85	90.5	3000	3500	-	**6930**	-	-	2.47
	225	35	126	126	2800	3200	1700	**6030**	ZZ	LLU	4.08
	270	45	176	168	2300	2700	-	**6230**	-	-	9.41
	320	65	274	284	2100	2400	-	**6330**	-	-	22

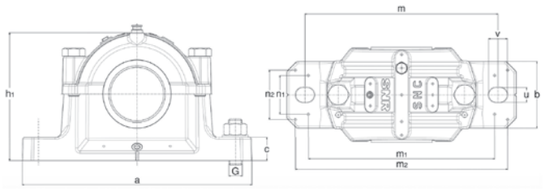
Dimension Tables

Plummer Blocks

SNC 518-615

Size

Plummer blocks housing complying with
ISO 113/II : 1994
DIN736-2011 to DIN739-2011



Boundary Dimensions (mm)			Housing Dimensions (mm)			Bolt spec	Weight	Housing	Rubber seal	Bearing numbers	Adaptor	Locating ring
d	Type	D	h	m	9							
40	SNC509	85	60	170	30	M12	3.2	SNC509	SC509DS	**22209K**	H 309	FR85X3.5
	SNC609	100	70	210	44	M16	5.1	SNC511-609	SC609DS	**22309K**	H 2309	FR100X4
45	SNC510	90	60	170	41	M12	3.4	SNC510-608	SC510DS	**22210K**	H 310	FR90X9
	SNC610	110	70	210	48	M16	5.4	SNC512-610	SC610DS	**22310K**	H 2310	FR110X4
50	SNC511	100	70	210	44	M16	5.1	SNC511-609	SC511DS	**22211K**	H 311	FR100x9.5
	SNC611	120	80	230	51	M16	7	SNC513-611	SC611DS	**22311K**	H 2311	FR120X4
55	SNC512	110	70	210	48	M16	5.4	SNC512-610	SC512DS	**22212K**	H 312	FR110X10
	SNC612	130	80	230	56	M16	7.3	SNC515-612	SC612DS	**22312K**	H 2312	FR130X5
60	SNC513	120	80	230	51	M16	7	SNC513-611	SC513DS	**22213K**	H 313	FR120X10
	SNC613	140	95	260	58	M20	10.4	SNC516-613	SC613DS	**22313K**	H 2313	FR140X5
65	SNC515	130	80	230	56	M16	7.3	SNC515-612	SC515DS	**22215K**	H 315	FR130X12.5
	SNC615	160	100	290	65	M20	13.5	SNC518-615	SC615DS	**22315K**	H 2315	FR160X5
70	SNC516	140	95	260	58	M20	10.4	SNC516-613	SC516DS	**22216K**	H 316	FR140X12.5
	SNC616	170	112	290	68	M20	15.6	SNC519-616	SC616DS	**22316K**	H 2316	FR170X5
75	SNC517	150	95	260	61	M20	10.2	SNC517	SC517DS	**22217K**	H 317	FR150X12.5
	SNC617	180	112	320	70	M24	18.4	SNC520-617	SC617DS	**22317K**	H 2317	FR180X5
80	SNC518	160	100	290	65	M20	13.5	SNC518-615	SC518DS	**22218K**	H 318	FR160X6.25
	SNC618	190	112	320	74	M24	18.5	SNC318-618	SC618DS	**22318K**	H 2318	FR190X5
85	SNC519	170	112	290	68	M20	15.6	SNC519-616	SC519DS	**22219K**	H 319	FR170X12.5
	SNC619	200	125	350	80	M24	24.7	SNC522-619	SC619DS	**22319K**	H 2319	FR200X6.5
90	SNC520	180	112	320	70	M24	18.4	SNC520-617	SC520DS	**22220K**	H 320	FR180X4.85
	SNC620	215	140	350	86	M24	30	SNC524-620	SC620DS	**22320K**	H 2320	FR215X5
100	SNC522	200	125	350	80	M24	24.7	SNC522-619	SC522DS	**22222K**	H 322	FR200X13.5
110	SNC524	215	140	350	86	M24	30	SNC524-620	SC524DS	**22224K**	H 3124	FR215X14
115	SNC526	230	150	380	90	M24	36.6	SNC226-526	SC526DS	**22226K**	H 3126	FR230X13
125	SNC528	250	150	420	98	M30	42.6	SNC228-528	SC528DS	**22228K**	H 3128	FR250X15
135	SNC530	270	160	450	106	M30	55.2	SNC230-530	SC530DS	**22230K**	H 3130	FR270X16.5
140	SNC532	290	170	470	114	M30	63	SNC232-532	SC532DS	**22232K**	H 3132	FR290X17

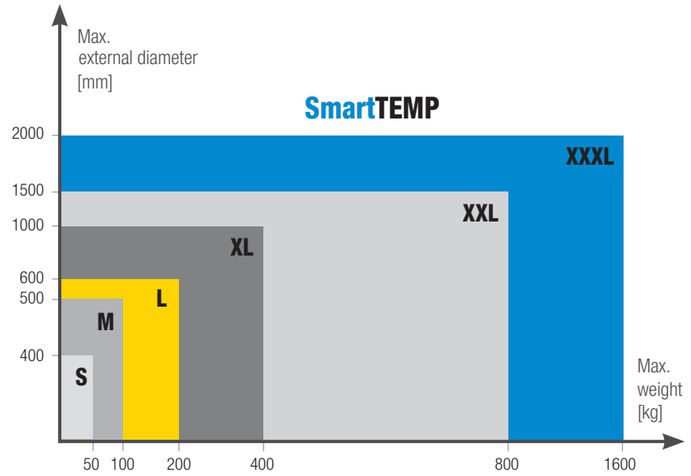
Maintenance Tools

TECHNICAL CARACTERISTICS

	SmartTEMP S	SmartTEMP M	SmartTEMP L	SmartTEMP XL & XL PIVOT	SmartTEMP XXL	SmartTEMP XXXL
Max. weight of workpiece (bearing, sprocket, ring…) (kg)	50	100	200	400	800	1600
Min. bore diameter (mm)	10	10	20	30	40	85
Max. outer diameter (mm)	400	500	600	1000	1500	2000
Power rating (kVa)	3	3.7	8	12.8	25.2	40
Facility power *	230V/13A	230V/16A	400V/20A	400V/32A	400V/63A	400V/100A
Temperature setting range	+40°C to 240°C	+40°C to 240°C	+40°C to 240°C	+40°C to 240°C	+40°C to 240°C	+40°C to 240°C
Included	• 3 yokes: 14x14x200 mm 25x24x200 mm 40x38x200 mm • 1 temperature sensor • 1 pair of gloves	• 1 pivoting yoke: 50x48x280 mm • 1 temperature sensor • 1 pair of gloves	• 1 pivoting yoke: 70x70x350 mm • 2 temperature sensors • 1 pair of gloves	• 1 yoke (pivoting according to the model): 80x80x490 mm • 2 temperature sensors • 1 pair of gloves	• 1 yoke: 100x100x750 mm • 2 temperature sensors • 1 pair of gloves	• 1 yoke: 150x150x1080 mm • 2 temperature sensors • 1 pair of gloves

* Other voltage on demand

SELECTION GUIDE FOR HEATERS



ACCESSORIES

UNIVERSAL Multi Purpose

Grease for general usage, in industry or for automobiles.

- **STANDARD APPLICATIONS**
  Agricultural equipment, washing machines, handling equipment, general mechanical devices, low-power electric motors, car wheel bearings, small tools, etc.
- **BENEFITS**
  Good properties in the presence of water, excellent protection against wear and corrosion.
- **TEMPERATURE RANGE**
  from -25°C to +140°C

HEAVY DUTY High Load

Top quality grease for very high-pressure applications, suitable for many applications, intended for arduous applications in heavy industry: metallurgy, construction, transport, etc.

- **STANDARD APPLICATIONS**
  Conveyors, lifting devices, truck wheel hubs, high-power electric motors, water pumps, presses, etc.
- **BENEFITS**
  Excellent performance under heavy loads, including high speeds, good properties in the presence of water, excellent protection against wear and corrosion.
- **TEMPERATURE RANGE**
  from -25°C to +140°C

VIB Vibrations & Shocks

This grease is an ideal lubricant for parts subjected to extensive vibrations or impact.
Recommended for quarries, cement plants, public works and agricultural operations, high-load applications in humid environments, paper plants, boring, etc.

- **STANDARD APPLICATIONS**
  Shafts in scoops, crushers, grinders, vibrating scalpers, washing machines, industrial fans, etc.
- **BENEFITS**
  Excellent resistance to impact, vibrations and heavy loads, excellent resistance to water guaranteeing long-term lubrication.
- **TEMPERATURE RANGE**
  from -20°C to +140°C

HIGH TEMP High Temperature

This grease is the ideal solution for long-term lubrication at high temperatures up to +150°C.
Accepts occasional peaks at +175°C.

- **STANDARD APPLICATIONS**
  Textile machines, paper transformation machines, hot fans, dryers, tensioning rollers, vehicle water pumps, etc.
- **BENEFITS**
  Extremely long resistance to high temperatures, excellent protection against wear and corrosion, for ball and roller bearings, for horizontal and vertical shafts.
- **TEMPERATURE RANGE**
  from -40°C to +160°C

HEADQUARTERS

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