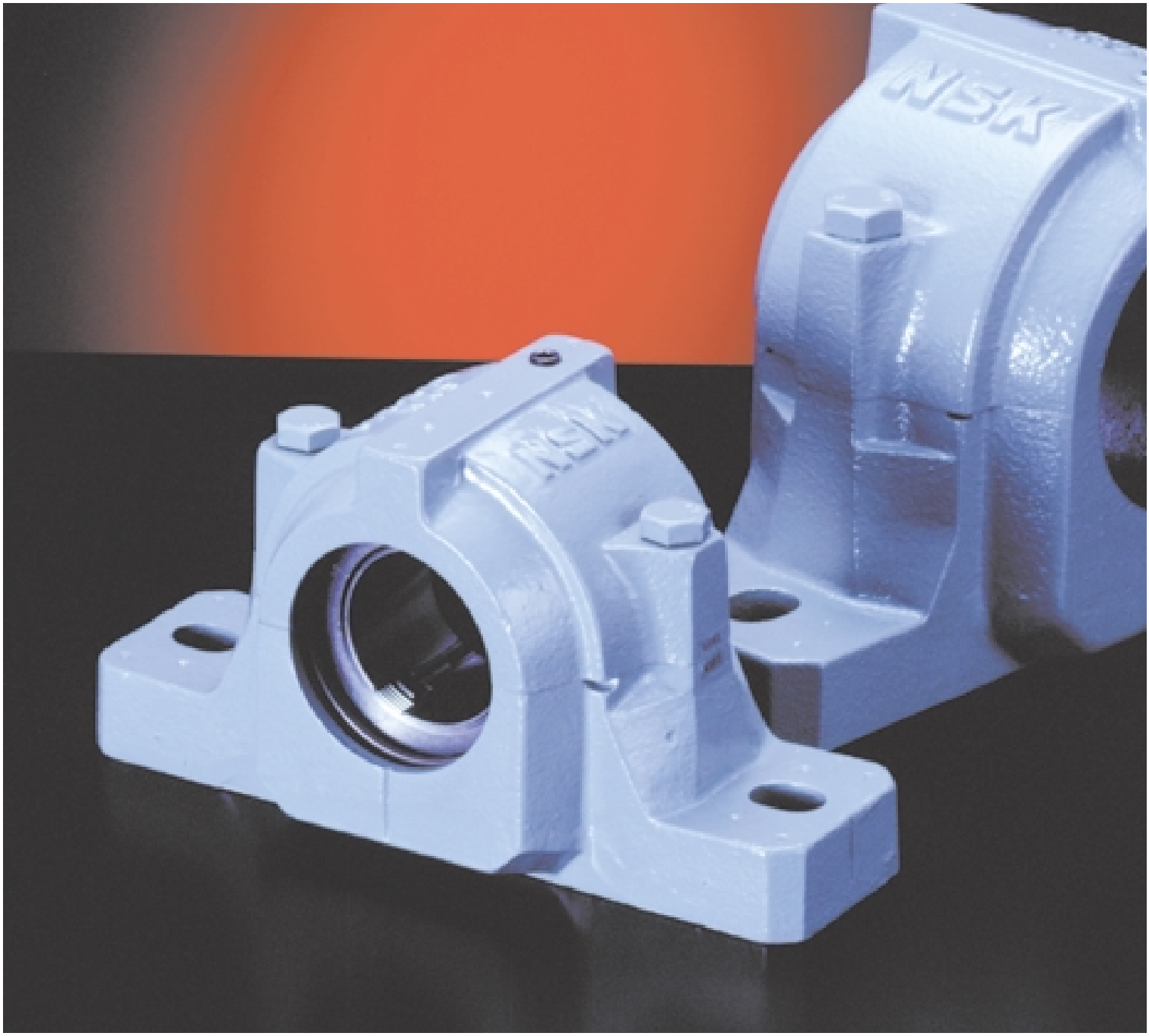
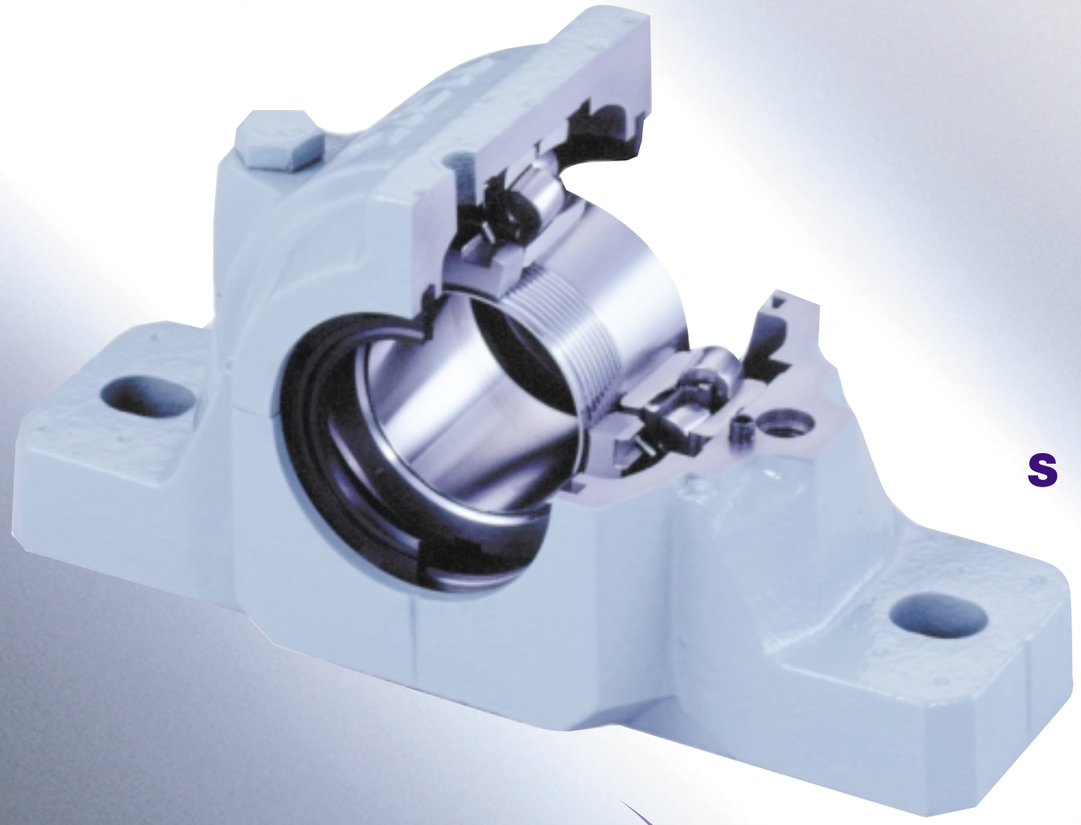
MOTION & CONTROL
NSK

SNN Series Plummer Blocks

High-strength, easy-to-handle plummer blocks with
high-capacity spherical roller bearings





SNN Series Plummer Blocks

High-grade bolts

Threaded hole for grease nipple
Plug for threaded hole is standard

Dimples for additional holes
These can be utilized for sensors or lubrication holes for the seal or bearing

Dimples for positioning pins

High-grade casting iron
Very tough material

Dimples for four mounting bolt holes

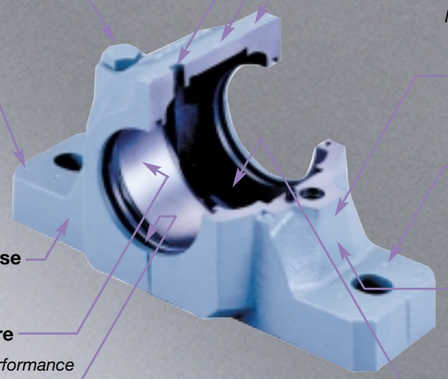
Square-shaped base
Facilitates alignment

Ideally shaped stiffer design

High-precision bore
Maximizes bearing performance

Seal groove for various types of seals
Split seal, V-ring seal, Labyrinth seal

Large oil bath
Prolongs the oil change interval



Webs for heat transfer

Rib for bearing seat
Prevents deformation of bearing seat

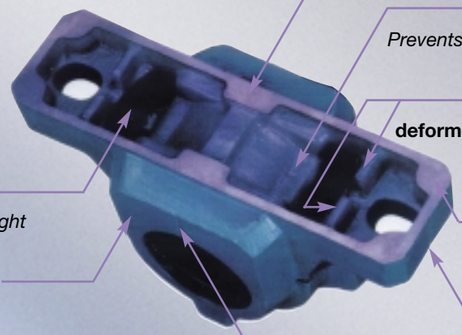
Supports to minimize deformation caused by tightening the mounting bolts

Ideal casting design
Highly rigid and lightweight

Solid corners for locating pins

Free surface provided for drain holes

Center marks
Facilitate alignment



High-performance SNN Series plummer blocks are highly rigid and easy to handle. They contain NSK's tough spherical roller bearings, which have high load capacity, low temperature rise and high-strength cages.

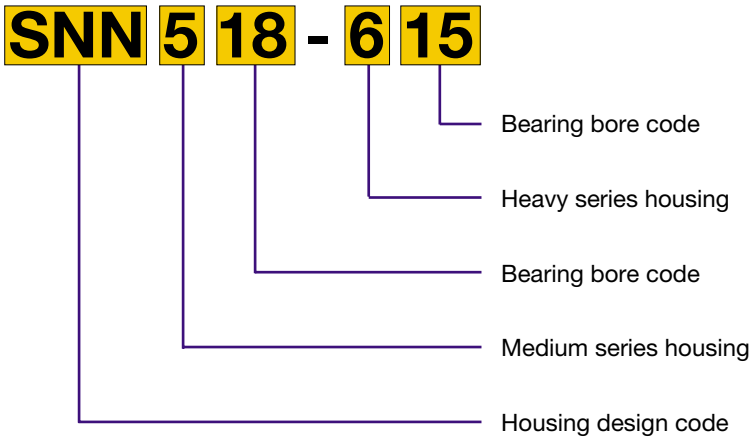
Easy and convenient mounting

- Solid corners in the base for locating pins
- Free surface provided for drain holes
- Threaded hole for grease nipple
- Dimples for additional holes
- Square-shaped base and center marks to facilitate alignment
- Dimples for four mounting bolt holes

Performance

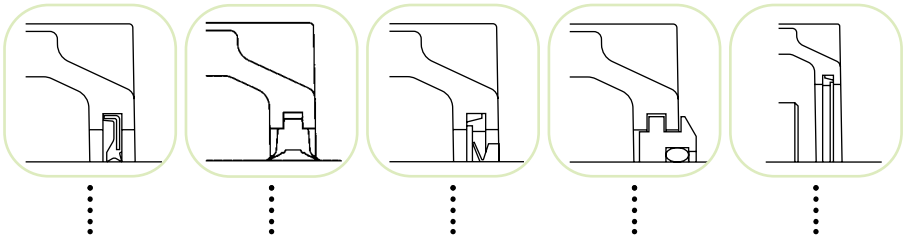
- High rigidity
  (Minimizes deformation of the bearing seat)
- Webs for heat transfer
- Both grease and oil lubrication are possible
- Large oil bath
- The same plummer block can be used with spherical roller bearings in the 222xx and 223xx series

Housing No.



The SNN 500 and 600 series comprise a number of housings which, when combined with different seal options and ball or spherical roller bearings, provide an answer for most plummer block applications with shaft diameters ranging from 20 mm to 140 mm.

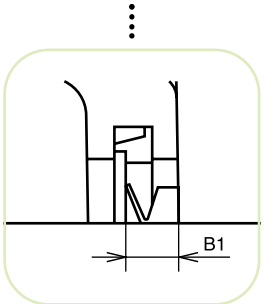
Seal types and their features



		Contact			Non-contact	
		U-LOK Seal	G-LOK Seal	V-RING Seal	TS-RING Seal	End Cover
Maximum speed		4 m/s	5 m/s	7 m/s	Bearing's limiting speed	–
Grease lubrication		Excellent	Excellent	Excellent	Good	–
Oil lubrication		Fair	Fair	Good	Excellent	–
Friction torque		Good	Good	Good	Excellent	–
Temperature range		-20 thru +80°C	-20 thru +80°C	-20 thru +80°C	-20 thru +120°C	-20 thru +120°C
Performance when exposed to	Dust	Excellent	Excellent	Excellent	Good	–
	Large particles	Good	Good	Poor	Good	–
	Water	Good	Good	Good	Poor	–

Seals

Shaft dia. d	Housing No.	U-LOK Seal	G-LOK Seal	V-RING Seal (B1: fitted width)	TS-RING Seal	End Cover
20	SNN505	U505	G505	V505 (6.0±0.8)	TS505	A505
	SNN506-605	U605	G605	V605 (6.0±0.8)	TS605	A605
25	SNN506-605	U506	G506	V506 (6.0±0.8)	TS506	A506
	SNN507-606	U606	G606	V606 (6.0±0.8)	TS606	A606
30	SNN507-606	U507	G507	V507 (6.0±0.8)	TS507	A507
	SNN508-607	U607	G607	V607 (6.0±0.8)	TS607	A607
35	SNN508-607	U508	G508	V508 (6.0±0.8)	TS508	A508
	SNN510-608	U608	G608	V608 (6.0±0.8)	TS608	A608
40	SNN509	U509	G509	V509 (7.0±1.0)	TS509	A509
	SNN511-609	U609	G609	V609 (7.0±1.0)	TS609	A609
45	SNN510-608	U510	G510	V510 (7.0±1.0)	TS510	A510
	SNN512-610	U610	G610	V610 (7.0±1.0)	TS610	A610
50	SNN511-609	U511	G511	V511 (7.0±1.0)	TS511	A511
	SNN513-611	U611	G611	V611 (7.0±1.0)	TS611	A611
55	SNN512-610	U512	G512	V512 (7.0±1.0)	TS512	A512
	SNN515-612	U612	G612	V612 (7.0±1.0)	TS612	A612
60	SNN513-611	U513	G513	V513 (7.0±1.0)	TS513	A513
	SNN516-613	U613	G613	V613 (7.0±1.0)	TS613	A613
65	SNN515-612	U515	G515	V515 (7.0±1.0)	TS515	A515
	SNN518-615	U615	G615	V615 (7.0±1.0)	TS615	A615
70	SNN516-613	U516	G516	V516 (9.0±1.2)	TS516	A516
	SNN519-616	U616	G616	V616 (9.0±1.2)	TS616	A616
75	SNN517	U517	G517	V517 (9.0±1.2)	TS517	A517
	SNN520-617	U617	G617	V617 (9.0±1.2)	TS617	A617
80	SNN518-615	U518	G518	V518 (9.0±1.2)	TS518	A518
85	SNN519-616	U519	G519	V519 (9.0±1.2)	TS519	A519
	SNN522-619	U619	G619	V619 (9.0±1.2)	TS619	A619
90	SNN520-617	U520	G520	V520 (9.0±1.2)	TS520	A520
	SNN524-620	U620	G520	V620 (9.0±1.2)	TS620	A620
100	SNN522-619	U522	G522	V522 (9.0±1.2)	TS522	A522
110	SNN524-620	U524	G524	V524 (10.5±1.5)	TS524	A524
115	SNN526	U526	G526	V526 (10.5±1.5)	TS526	A526
125	SNN528	U528	G528	V528 (10.5±1.5)	TS528	A528
135	SNN530	U530	G530	V530 (10.5±1.5)	TS530	A530
140	SNN532	U532	G532	V532 (10.5±1.5)	TS532	A532

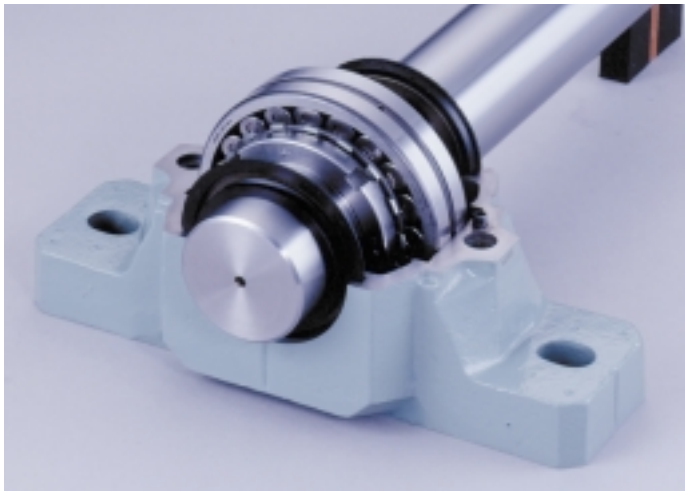


Mounting of SNN Plummer Blocks using U-LOK or G-LOK Seals



1. Remove the top half of the bearing housing to expose the bearing seat.
2. Place the housing base in position and hand tighten the fixing bolts.
3. The U-LOK (G-LOK) Kit includes four halves (2 seals). Fit the halves into the seal grooves machined in the base and top of the housing. To aid the lubrication of the running lips and sealing properties of U-LOK (G-LOK), fill the u-section of the seal with grease.
4. Mount the bearing on the shaft and charge with grease.
5. Place the shaft and bearing assembly on the lower half of the split housing.
6. For the housing set that locates the system, fit the locating rings on either side of the bearing or, where only one is supplied, fit it on the same side as the locking nut for the tapered sleeve.
7. Check the housings for alignment with each other, ensuring that they are within acceptable limits and that the fixing bolts are tightened enough to secure the base.
8. The top half of the housing should be carefully aligned with the locating dowel pins and the bolts tightened. Be sure that the split housing is paired only with its original top half, as these parts are not interchangeable from one housing to another.
9. The fixing bolts can then be fully tightened.

Mounting of SNN Plummer Blocks with open V-RING Seals



1. Remove the top half of the bearing housing to expose the bearing seat.

2. Place the housing base in position and hand tighten the fixing bolts.

3. Place a V-RING and counterface washer on the shaft. The counterface washer should be positioned to align with the seal groove machined in the housing and the V-RING.

4. Mount the bearing on the shaft and charge with grease.

5. Place the second V-RING and counterface washer on the shaft.

6. The shaft and bearing assembly with the sealing components can then be lowered into the base of the housing, taking care to locate the rubber lip of the counterface washer in the split housing seal groove.

7. For the housing set that locates the system, fit the locating rings on either side of the bearing or, where only one is supplied, fit it on the same side as the locking nut for the tapered sleeve.

8. Check the housings for alignment with each other, ensuring that they are within acceptable limits and that the fixing bolts are tightened enough to secure the base.

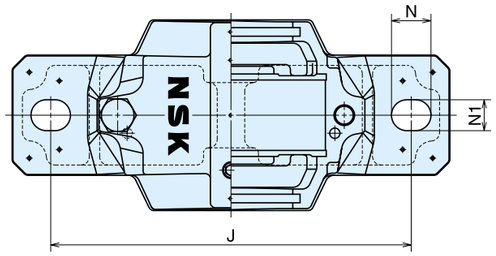
9. The top half of the housing should be carefully aligned with the locating dowel pins and the bolts tightened. Be sure that the split housing is paired only with its original top half, as these parts are not interchangeable from one housing to another.

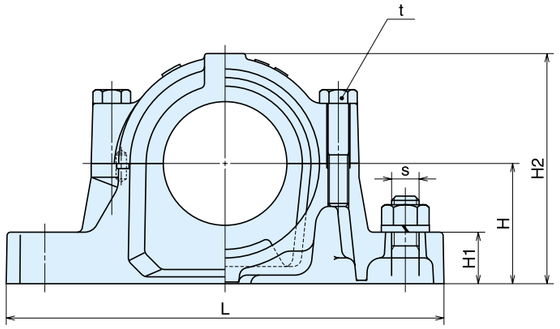
10. The fixing bolts can then be fully tightened.

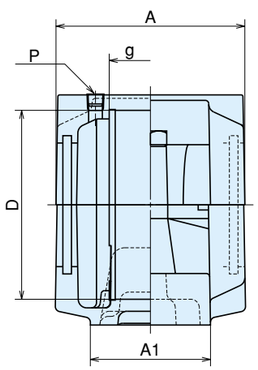
11. The rubbing surfaces of the counterface washer should be smeared with grease to help reduce friction.

12. To ensure effective sealing, the V-RINGS should then be moved axially along the shaft until their sealing lips are in the correct location relative to the washers. A convenient way of moving the V-RINGS along the shaft is to use the shank of a long screwdriver while rotating the shaft and working the V-RING into position by hand. See page 4 for the fitted width which will ensure that the correct lip pressure is applied to the wiping face.

Dimensions

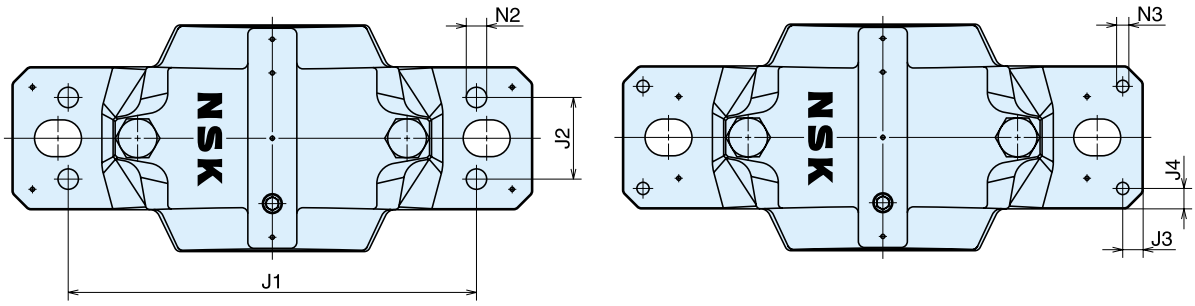






Shaft dia. d (mm)	Bearing		Adapter	Housing Order No.	Housing No.		Dimensions (mm)													Mass (kg)	Fixing Ring	
	Ball	Roller					D	H	J	A	L	A1	H1	H2	g	t	N	N1	s	P		No.	Qty.
20	1205K	–	H 205X	SNN505	SNN505		52	40	130	70	165	46	22	73	25	M10	20	15	M12	R 1/8	1.45	SR 52× 5	2
	2205K	22205CKE4	H 305X																			SR 52× 7	1
25	1305K	21305CDKE4	H 305X	SNN605	SNN506-605		62	50	150	80	185	52	22	88	32	M10	20	15	M12	R 1/8	2.0	SR 62× 7.5	2
	2305K	–	H2305X																			SR 62× 8	1
	1206K	–	H 206X	SNN506																		SR 62× 8	2
	2206K	22206CKE4	H 306X																			SR 62×12	1
30	1306K	21306CDKE4	H 306X	SNN606	SNN507-606		72	50	150	85	185	52	22	93	34	M10	20	15	M12	R 1/8	2.2	SR 72× 7.5	2
	2306K	–	H2306X																			SR 72× 7	1
	1207K	–	H 207X	SNN507																		SR 72× 8.5	2
	2207K	22207CKE4	H 307X																			SR 72×11	1
35	1307K	21307CDKE4	H 307X	SNN607	SNN508-607		80	60	170	90	205	60	25	107	39	M10	20	15	M12	R 1/8	2.9	SR 80× 9	2
	2307K	–	H2307X																			SR 80× 8	1
	1208K	–	H 208X	SNN508																		SR 80×10.5	2
	2208K	22208CDKE4	H 308X																			SR 80× 8	2
	1308K	21308CDKE4	H 308X	SNN608	SNN510-608		90	60	170	95	205	60	25	113	41	M10	20	15	M12	R 1/8	3.1	SR 90× 9	2
	2308K	22308CDKE4	H2308X																			SR 90× 8	1
40	1209K	–	H 209X	SNN509	SNN509		85	60	170	90	205	60	25	111	30	M10	20	15	M12	R 1/8	3.0	SR 85× 5.5	2
	2209K	22209CDKE4	H 309X																			SR 85× 7	1
	1309K	21309EAKE4	H 309X	SNN609	SNN511-609		100	70	210	100	255	70	28	129	44	M12	24	18	M16	R 1/8	4.8	SR100× 9.5	2
	2309K	22309CDKE4	H2309X																			SR100× 8	1
45	1210K	–	H 210X	SNN510	SNN510-608		90	60	170	95	205	60	25	113	41	M10	20	15	M12	R 1/8	3.1	SR 90×10.5	2
	2210K	22210CDKE4	H 310X																			SR 90× 9	2
	1310K	21310EAKE4	H 310X	SNN610	SNN512-610		110	70	210	110	255	70	30	134	48	M12	24	18	M16	R 1/8	5.4	SR110×10.5	2
	2310K	22310EAKE4	H2310X																			SR110× 8	1
50	1211K	–	H 211X	SNN511	SNN511-609		100	70	210	100	255	70	28	129	44	M12	24	18	M16	R 1/8	4.8	SR100×11.5	2
	2211K	22211EAKE4	H 311X																			SR100× 9.5	2
	1311K	21311EAKE4	H 311X	SNN611	SNN513-611		120	80	230	115	275	80	30	150	51	M12	24	18	M16	R 1/8	6.6	SR120×11	2
	2311K	22311EAKE4	H2311X																			SR120× 8	1
55	1212K	–	H 212X	SNN512	SNN512-610		110	70	210	110	255	70	30	134	48	M12	24	18	M16	R 1/8	5.4	SR110×13	2
	2212K	22212EAKE4	H 312X																			SR110×10	2
	1312K	21312EAKE4	H 312X	SNN612	SNN515-612		130	80	230	120	280	80	30	155	56	M12	24	18	M16	R 1/8	6.8	SR130×12.5	2
	2312K	22312EAKE4	H2312X																			SR130×10	1
60	1213K	–	H 213X	SNN513	SNN513-611		120	80	230	115	275	80	30	150	51	M12	24	18	M16	R 1/8	6.6	SR120×14	2
	2213K	22213EAKE4	H 313X																			SR120×10	2
	1313K	21313EAKE4	H 313X	SNN613	SNN516-613		140	95	260	130	315	90	32	175	58	M16	28	22	M20	R 1/4	10.2	SR140×12.5	2
	2313K	22313EAKE4	H2313X																			SR140×10	1
65	1215K	–	H 215X	SNN515	SNN515-612		130	80	230	120	280	80	30	155	56	M12	24	18	M16	R 1/8	6.8	SR130×15.5	2
	2215K	22215EAKE4	H 315X																			SR130×12.5	2
	1315K	21315EAKE4	H 315X	SNN615	SNN518-615		160	100	290	145	345	100	35	193	65	M16	28	22	M20	R 1/4	13.0	SR160×14	2
	2315K	22315EAKE4	H2315X																			SR160×10	1
70	1216K	–	H 216X	SNN516	SNN516-613		140	95	260	130	315	90	32	175	58	M16	28	22	M20	R 1/4	10.2	SR140×16	2
	2216K	22216EAKE4	H 316X																			SR140×12.5	2
	1316K	21316CDKE4	H 316X	SNN616	SNN519-616		170	112	290	145	345	100	35	210	68	M16	28	22	M20	R 1/4	14.5	SR170×14.5	2
	2316K	22316EAKE4	H2316X																			SR170×10	1
75	1217K	–	H 217X	SNN517	SNN517		150	95	260	135	320	90	32	183	61	M16	28	22	M20	R 1/4	11.2	SR150×16.5	2
	2217K	22217EAKE4	H 317X																			SR150×12.5	2
	1317K	21317EAKE4	H 317X	SNN617	SNN520-617		180	112	320	160	380	110	40	215	70	M20	32	26	M24	R 1/4	18.3	SR180×14.5	2
	2317K	22317EAKE4	H2317X																			SR180×10	1
80	1218K	–	H 218X	SNN518	SNN518-615		160	100	290	145	345	100	35	193	65	M16	28	22	M20	R 1/4	13.0	SR160×17.5	2
	2218K	22218EAKE4	H 318X																			SR160×12.5	2
	–	23218CKE4	H2318X																			SR160×12.5	1
85	1219K	–	H 219X	SNN519	SNN519-616		170	112	290	145	345	100	35	210	68	M16	28	22	M20	R 1/4	14.5	SR170×18	2
	2219K	22219EAKE4	H 319X																			SR170×12.5	2
	1319K	21319EAKE4	H 319X	SNN619	SNN522-619		200	125	350	175	410	120	45	240	80	M20	32	26	M24	R 1/4	24.0	SR200×17.5	2
	2319K	22319EAKE4	H2319X																			SR200×13	1
90	1220K	–	H 220X	SNN520	SNN520-617		180	112	320	160	380	110	40	215	70	M20	32	26	M24	R 1/4	18.3	SR180×18	2
	2220K	22220EAKE4	H 320X																			SR180×12	2
	–	23220EAKE4	H2320X																			SR180× 9.5	1
	1320K	21320EAKE4	H 320X	SNN620	SNN524-620		215	140	350	185	410	120	45	271	86	M20	32	26	M24	R 3/8	26.2	SR215×19.5	2
	2320K	22320EAKE4	H2320X																			SR215×13	1
100	1222K	–	H 222X	SNN522	SNN522-619		200	125	350	175	410	120	45	240	80	M20	32	26	M24	R 1/4	24.0	SR200×21	2
	2222K	22222EAKE4	H 322X																			SR200×13.5	2
	–	23222CKE4	H2322X																			SR200×10	1
110	–	22224EAKE4	H3124	SNN524	SNN524-620		215	140	350	185	410	120	45	271	86	M20	32	26	M24	R 3/8	26.2	SR215×14	2
	–	23224CKE4	H2324																			SR215×10	1
115	–	22226EAKE4	H3126	SNN526	SNN526		230	150	380	190	445	130	50	288	90	M24	35	28	M24	R 3/8	33.0	SR230×13	2
	–	23226CKE4	H2326																			SR230×10	1
125	–	22228CDKE4	H3128	SNN528	SNN528		250	150	420	205	500	150	50	298	98	M24	42	35	M30	R 3/8	40.0	SR250×15	2
	–	23228CKE4	H2328																			SR250×10	1
135	–	22230CDKE4	H3130	SNN530	SNN530		270	160	450	220	530	160	60	322	106	M24	42	35	M30	R 3/8	49.0	SR270×16.5	2
	–	23230CKE4	H2330																			SR270×10	1
140	–	22232CDKE4	H3132	SNN532	SNN532		290	170	470	235	550	160	60	342	114	M24	42	35	M30	R 3/8	55.0	SR290×17	2
	–	23232CKE4	H2332																			SR290×10	1

Recommended dimensions



Recommended dimensions for 4-bolt fixing holes (mm)

Housing No.	J1	J2	N2	Bolt Size
SNN 508-607	160	34	11	M10
SNN 509	160	34	11	M10
SNN 510-608	160	34	11	M10
SNN 511-609	200	40	14	M12
SNN 512-610	200	40	14	M12
SNN 513-611	210	48	14	M12
SNN 515-612	220	48	14	M12
SNN 516-613	244	52	18	M16
SNN 517	254	52	18	M16
SNN 518-615	275	58	18	M16
SNN 519-616	275	58	18	M16
SNN 520-617	300	66	18	M16
SNN 522-619	320	74	18	M16
SNN 524-620	320	74	18	M16
SNN 526	355	84	22	M20
SNN 528	400	92	26	M24
SNN 530	430	100	26	M24
SNN 532	450	100	26	M24

Recommended dimensions for locating pin holes (mm)

Housing No.	J3	J4	N3 Max.
SNN 505	7	7	6
SNN 506-605	8	8	6
SNN 507-606	8	8	6
SNN 508-607	9	9	8
SNN 509	9	9	8
SNN 510-608	9	9	8
SNN 511-609	10	10	10
SNN 512-610	10	10	10
SNN 513-611	12	12	10
SNN 515-612	12	12	10
SNN 516-613	15	15	12
SNN 517	15	15	12
SNN 518-615	15	15	12
SNN 519-616	15	15	12
SNN 520-617	15	15	12
SNN 522-619	18	18	16
SNN 524-620	18	18	16
SNN 526	18	18	16
SNN 528	18	18	16
SNN 530	18	18	16
SNN 532	18	18	16

ORDER FORM FOR NSK SNN SERIES PLUMMER BLOCKS

Company	Date
Address	
Contact	
Fax No.	Phone No.

Application	Drawing No.
Shaft size ø mm	

Housing Order No.	SNN		Qty.
Bearings	Spherical roller bearing	No.	Qty.
	Self-aligning ball bearing	No.	Qty.
Type of seals	☐ U-LOK	No.	Qty.
	☐ G-LOK	No.	Qty.
	☐ V-RING	No.	Qty.
	☐ TS-RING	No.	Qty.
	☐ End Cover	No.	Qty.
Adapters		No.	Qty.
Fixing rings		No.	Qty.