

Seals for Needle Roller Bearings

Features

IKO Seals for Needle Roller Bearings have a low sectional height and consist of a sheet metal ring and special synthetic rubber.

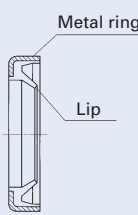
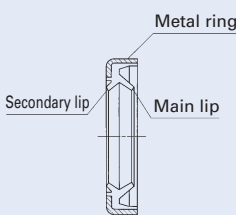
As these seals are manufactured to the same sectional height as IKO Needle Roller Bearings, grease leakage and the penetration of foreign particles can be effectively prevented by fitting them directly to the sides of combinable bearings shown in the dimension table.

When fitting seals to needle roller bearings with inner ring, wide inner rings (see page H2) must be used, as shown in the mounting examples.

Types

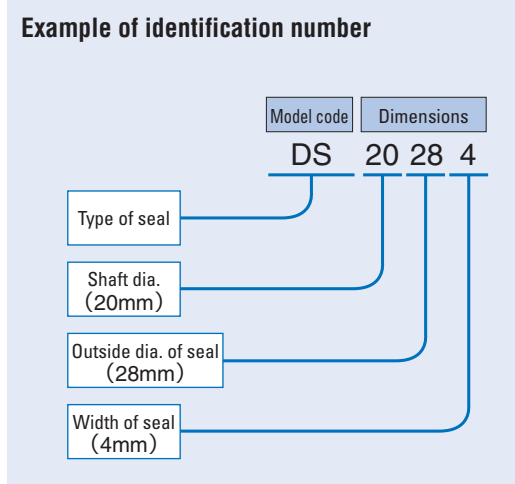
Seals for Needle Roller Bearings are available as shown in Table 1.

Table 1 Seal type

Type	Single lip	Double lips
Structure		
Model code	OS	DS

Identification Number

The identification number of Seals for Needle Roller Bearings consists of a model code and dimensions. An example of an identification number is shown as follows.



Accuracy

Tolerances of Seals for Needle Roller Bearings are based on JIS B 2402:1996.

Tolerances of outside diameter and width are based on Tables 2 and 3, respectively.

Table 2 Tolerance of outside diameter unit: mm

Nominal outside diameter		Tolerance	
Over	Incl.	High	Low
—	30	+ 0.09	+ 0.04
30	50	+ 0.11	+ 0.05
50	80	+ 0.14	+ 0.06
80	120	+ 0.17	+ 0.08

Table 3 Tolerance of width unit: mm

Nominal size of width		Tolerance	
Over	Incl.	High	Low
—	6	+ 0.2	- 0.2
6	10	+ 0.3	- 0.3

Precautions for Use

① For the single lip OS type, the lip has to face inward when using the seal to prevent grease leakage, and outward to prevent the penetration of foreign particles. The DS type of double-lips is effective for prevention of grease leakage and dust penetration. However, when the main purpose is to prevent grease leakage, the main lip should face inward, and when used mainly to prevent dust penetration, it should face outward.

② The permissible temperature range is -20 ~ +120°C.

For use at higher or lower temperatures, a special seal is required. Please contact IKO for further information.

③ The limiting peripheral speed of shaft depends on the conditions of use, but is normally 6 to 8 m/s. Double this speed is possible if the conditions (lubrication, temperature, shaft finish, etc.) are good.

Mounting

When inserting the shaft, damage to the lip should be prevented by chamfering the end of the shaft, as shown in the upper part of Fig. 1. When this cannot be performed, a mounting bushing should be used, as shown in the lower part of Fig. 1.

When press fitting the seal to the housing, do not strike it directly, but fit it gently, using a suitable tool.

To prevent early wear and heat generation at the seal surface, it is necessary to thickly coat the tip of the lip for the OS type, or to fill the space between the two lips for the DS type, with bearing grease.

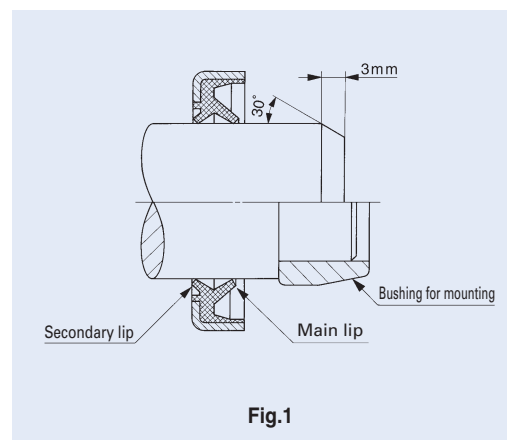


Fig.1

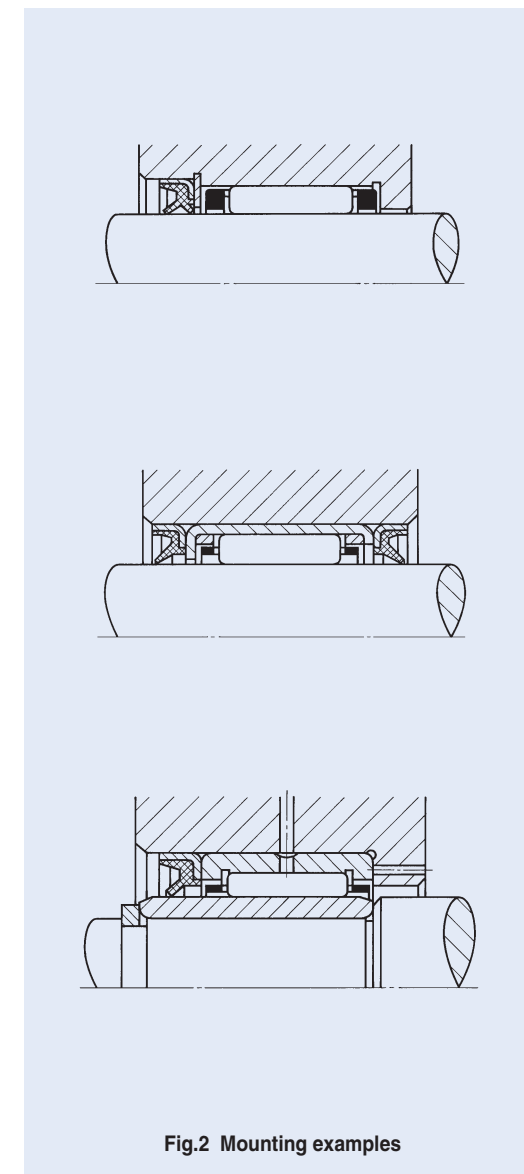


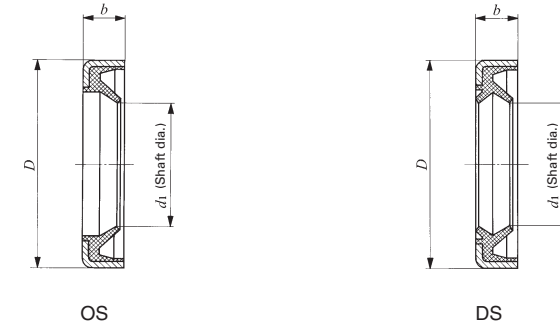
Fig.2 Mounting examples

SEALS FOR NEEDLE ROLLER BEARINGS



Shaft dia. 40 – 50mm

Shaft dia. mm	Identification number		Boundary dimensions mm			Combinable bearings			
	Single lip	Double lips	d_1	D	b	TA...Z YT TLA...Z YTL	RNA TR TAF GTR	RNAF	NAX NBX
40	OS 40474	DS 40474	40	47	4	TLA 4012Z TLA 4016Z TLA 4020Z	—	—	—
	OS 40504	DS 40504	40	50	4	TA 4015Z TA 4020Z TA 4025Z TA 4030Z TA 4040Z YT 4015 YT 4025	TAF 405020 TAF 405030	RNAF 405017 RNAFW 405034	—
	OS 40526	DS 40526	40	52	6	—	RNA 49/32 RNA 69/32	—	NAX 4032 NBX 4032
	OS 40556	DS 40556	40	55	6	—	TR 405520 GTR 405520	RNAF 405520 RNAFW 405540	—
	OS 42557	DS 42557	42	55	7	—	RNA 4907 RNA 6907	—	—



Shaft dia. mm	Identification number		Boundary dimensions mm			Combinable bearings			
	Single lip	Double lips	d_1	D	b	TA...Z YT TLA...Z YTL	RNA TR TAF GTR	RNAF	NAX NBX
45	OS 45524	DS 45524	45	52	4	TLA 4516Z TLA 4520Z	—	—	—
	OS 45554	DS 45554	45	55	4	TA 4520Z TA 4525Z TA 4530Z TA 4540Z YT 4520 YT 4525	TAF 455520 TAF 455530	RNAF 455517 RNAFW 455534	—
	OS 45627	DS 45627	45	62	7	—	—	RNAF 456220 RNAFW 456240	—
	OS 48627	DS 48627	48	62	7	—	RNA 4908 RNA 6908 TR 486230 GTR 486230	—	—
50	OS 50584	DS 50584	50	58	4	TLA 5020Z TLA 5025Z	—	—	—
	OS 50624	DS 50624	50	62	4	TA 5012Z TA 5015Z TA 5020Z TA 5025Z TA 5030Z TA 5040Z TAW 5045Z	TAF 506225 TAF 506235	RNAF 506220 RNAFW 506240	NAX 5035 NBX 5035
	OS 50657	DS 50657	50	65	7	—	RNA 49/42	RNAF 506520 RNAFW 506540	—

