



Split plummer block housings SNLN 30 series

Bearing types

- Spherical roller bearings
- CARB toroidal roller bearings

Bearing dimension series

- 30, 40

Shaft diameter range

- 110 to 280 mm

Typical shaft-bearing combinations

- Plain shaft with bearing on an adapter sleeve
- Stepped shaft with bearing on a cylindrical seat

Seals

- Four-lip
- Labyrinth
- Felt
- V-ring
- Heavy-duty

Lubrication

- Grease

Materials

- Grey cast iron
- Spheroidal graphite cast iron

Mounting

- Two-bolt mounting
- Four-bolt mounting

Compliance to standards

- ISO 113
(two-bolt plummer block housings)

Supersedes

- SN 30 series

SNLN 30 plummer (pillow) block housings are robust and versatile housings. They are designed for bearings in the 30 dimension series, and can also accommodate some bearings in the 40 dimension series for mounting on a cylindrical shaft seat. They enable the incorporated bearings to achieve maximum service life with less need for maintenance. Different housing variants and seal designs are available, making the use of tailored housings virtually unnecessary and enabling cost-effective bearing arrangements to be made.

Split plummer block housings SNLN 30 series

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Designations

Designation system for SNLN 30 plummer block housings

SNLN_3024 SN

Prefix for bolt holes

- Two oblong cast holes for attachment bolts
- S** No holes for attachment bolts (only for housings made of spheroidal graphite cast iron)

Series

- SNLN** Standard plummer block housing

Material

- Grey cast iron
- D** Spheroidal graphite cast iron

Size identification

- 30(00)** Housings for bearings in the 30 (or 40) dimension series
- ..(00)** Size code for the bearing, (00) × 5 = bearing bore diameter [mm]

Suffixes¹⁾

- V** Grease escape hole in the housing base
- T** Drilled and tapped hole 1/4-28 UNF at one side of the housing cap to lubricate the seal.
Grease fitting AH 1/4-28 SAE-LT supplied with the housing.
- TD** Drilled and tapped hole 1/4-28 UNF at both sides of the housing cap to lubricate the seals.
Two grease fittings AH 1/4-28 SAE-LT supplied with the housing.
- SN** Drilled and tapped M8 hole for sensor in position 3 (→ **fig. 15, page 178**)
- /MS1** Two drilled holes for attachment bolts
- /MS2** Four drilled holes for attachment bolts

¹⁾ When multiple suffixes are used, they are listed in the same order as shown here.

Split plummer block housings SNLN 30 series

Designation system for seals

TSN 228 L
TNF 3048

Series

TSN Seal for SNLN 30 plummer block housings
TNF Taconite heavy-duty seal with axial labyrinth for housings from size 3034 to 3056

Size identification

30(00) For housings from size 3024 to 3056, for bearings on an adapter sleeve
2(00) For housings from size 3024 to 3032, for bearings on a cylindrical seat
30(00)/... For housings from size 3034 to 3056, for bearings on a cylindrical seat

Seal type

A¹⁾ V-ring seal
C¹⁾ Felt seal
CB¹⁾ Felt seal for high operating temperature
L¹⁾ Four-lip seal
S Labyrinth seal
NB¹⁾ Taconite heavy-duty seal with axial labyrinth and V-ring seal
NC¹⁾ Taconite heavy-duty seal with axial labyrinth
ND¹⁾ Taconite heavy-duty seal with radial labyrinth and V-ring seal

¹⁾ For housings from size 3024 to 3032

Designation system for end covers

ASNH 526
ETS 3038

Series

ASNH End cover of plastic for SNLN 30 plummer block housings, size 3024 to 3032
ETS End cover of grey cast iron for SNLN 30 plummer block housings, size 3034 to 3056

Size identification

524-620 For housings size 3024 (series ASNH)
5(00) For housings from size 3026 to 3032 (series ASNH)
30(00) For housings from size 3034 to 3056 (series ETS)
(00) Size code of the bearing, (00) × 5 = bearing bore diameter [mm]

Designation system for locating rings

FRB 12/180

Series

FRB Locating ring for SKF bearing housings

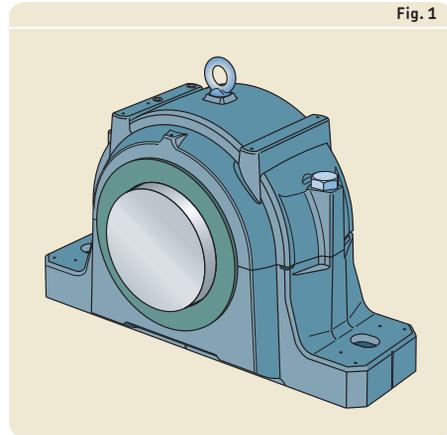
Size identification

... Width and outside diameter of the locating ring [mm]

Standard housing design

SNLN 30 plummer (pillow) block housings are split housings consisting of a cap and base (→ **fig. 1**). They have two holes cast into the base for attachment bolts.

The housings are designed on the “building block” principle to enable a wider choice of bearings and seals as well as a variety of shaft-bearing combinations.



Split plummer block housings SNLN 30 series

Features and benefits

SNLN 30 housings have the following features and benefits:

Stiff housing

The housing base is reinforced with ribs and has extra material surrounding the holes for the attachment bolts (→ **fig. 2**). This virtually eliminates any distortion of the base and bearing seat during tightening of the attachment bolts.

Good heat dissipation

The centre cross reinforcement in the housing base (→ **fig. 3**) increases the contact area between the housing base and the support surface to improve the heat flow from the bearing outer ring to the support surface.

Grease guiding system

For more efficient relubrication from the side, SNLN 30 housings have an integrated flange that guides grease from the grease fitting directly to the bearing (→ **fig. 4**). This feature is available for housings up to and including size 3038.

Fig. 2

Reinforcement rib in the base

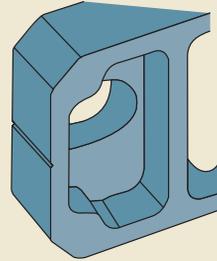


Fig. 3

Centre cross for better heat dissipation

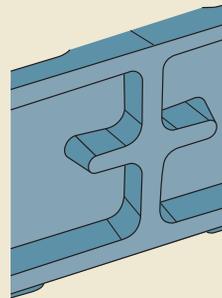
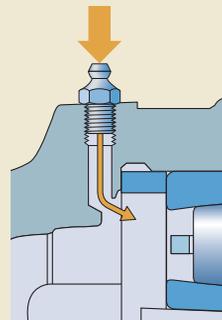


Fig. 4

Grease guiding system



Caps and bases individually marked

The housing cap and base are matched during manufacture and are not interchangeable with the caps and bases of other housings. To prevent any mismatches, a unique serial number is marked on both the housing cap and the base (→ **fig. 5**).

Dimples to locate accessories

Dimples cast into the housing cap indicate where grease fittings and condition monitoring sensors can be mounted for maximum effectiveness (→ **fig. 6**).

Simple mounting

To simplify mounting and make alignment more accurate, lines indicating the centre of the bearing seat and housing bore axis are cast into the housing base. Dimples indicate the position for dowel pins (→ **fig. 7**).

Mounting instructions are supplied with most seal packs¹⁾. Housings from size 3028 and above are supplied with an eye bolt on the cap for safe and easy handling.

Fig. 5

Individually marked cap and base



Fig. 6

Dimples indicate positions for accessories

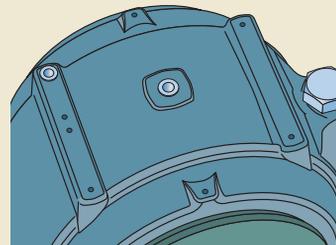
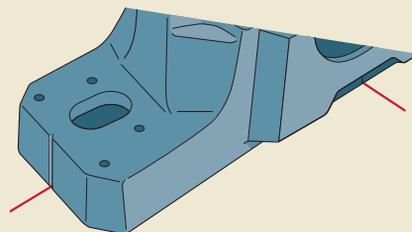


Fig. 7

Cast indications mark the centre of the housing bore



¹⁾ The mounting instructions for housings from size 3024 to 3032, with seals in the 200 series, must be ordered separately.

Housing material

SNLN 30 housings are made of grey cast iron.

Paint, corrosion protection

SNLN 30 housings are painted black (RAL 9005) using a water based alkyd/acryl paint. The paint protects the housing in accordance with ISO 12944-2, corrosivity category C2 (i.e. exterior atmospheres with low level of pollution, interior atmospheres where condensation may occur). The paint is not affected by most lubricating or engine oils, cutting fluids or alkalescent washing chemicals. Housings can be repainted with most water or solvent based 1- or 2-component paints.

Unpainted surfaces are protected by a solventless rust inhibitor.

Dimension standards

Boundary dimensions are in accordance with ISO 113 for two-bolt plummer block housings.

Interchangeability

SNLN 30 plummer block housings are dimensionally interchangeable with the earlier SN 30 housings.

Housing variants

In addition to standard design SNLN 30 housings, a number of variants are also available. Variants include housings made of different materials, alternative attachment bolt hole configurations, different bearing seat tolerance classes and modifications for special applications.

Housing material

For applications where extra strength is needed, SNLN 30 housings are also available in spheroidal graphite cast iron. These housings are supplied with a solid base, designation SSLND.

Attachment bolt holes

SNLN 30 plummer block housings can be supplied with the following bolt hole configurations:

- four drilled holes
These variants are available for housings with two cast bolt holes, designation SNLN, and for housings made of spheroidal graphite cast iron with a solid base, designation SSLND.
Dimensions are listed in **table 1**. These housings have the designation suffix /MS2.
- two drilled holes
These variants are available for housings made of spheroidal graphite cast iron with a solid base, designation SSLND.
Dimensions are listed in **table 1**. These housings have the designation suffix /MS1.

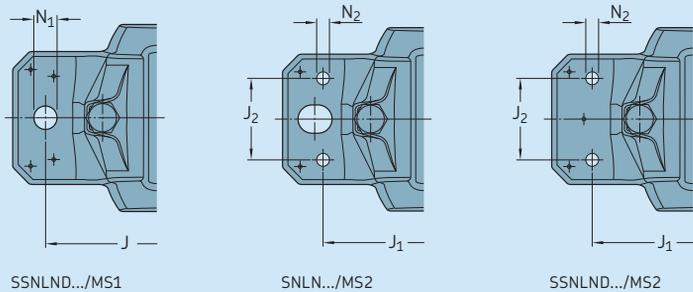
Bearing seat tolerance

SNLN 30 housings can be supplied with different bearing seat tolerance classes, e.g. for applications prone to vibration, with rotating outer ring load or for applications operating at high temperatures.

For additional information, contact the SKF application engineering service.

Table 1

Dimensions for drilled attachment bolt holes



Housing Size	Two bolt holes (/MS1)			Four bolt holes (/MS2)			
	Dimensions J	N ₁	Appropriate bolt size	Dimensions J ₁	J ₂	N ₂	Appropriate bolt size
–	mm			mm			
SNLN 3024	320	26	M24	300	66	18	M16
SNLN 3026	350	26	M24	320	74	18	M16
SNLN 3028	350	26	M24	330	74	18	M16
SNLN 3030	380	28	M24	370	80	22	M20
SNLN 3032	390	28	M24	380	80	22	M20
SNLN 3034	450	35	M30	430	100	26	M24
SNLN 3036	470	35	M30	450	100	26	M24
SNLN 3038	470	35	M30	450	100	26	M24
SNLN 3040	515	35	M30	500	100	26	M24
SNLN 3044	580	42	M36	560	105	28	M24
SNLN 3048	610	42	M36	580	115	28	M24
SNLN 3052	680	48	M42	630	120	35	M30
SNLN 3056	720	48	M42	650	132	35	M30

Sealing solutions

SNLN 30 plummer (pillow) block housings are available with different standard sealing solutions (→ fig. 8).

- four-lip seals (TSN .. L)
- V-ring seals (TSN .. A)
- felt seals (TSN .. C)
- labyrinth seals (TSN .. S)
- taconite heavy-duty seals (TSN .. ND, TNF ..)
- end covers (ASNH .., ETS ..)

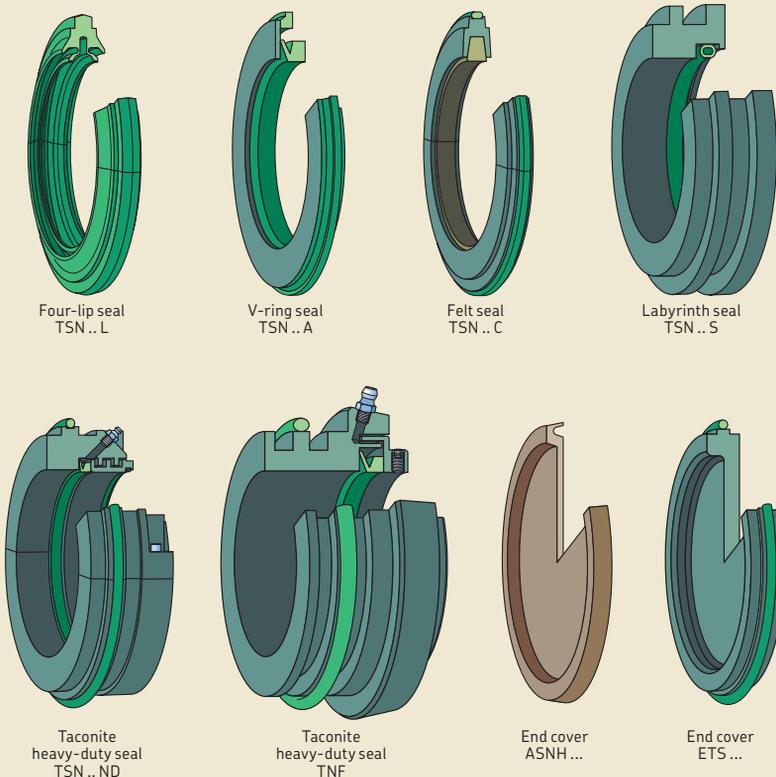
The housing size determines which sealing solutions can be used. **Table 2, page 162**, provides an overview of the characteristics and suitability of each sealing solution. Details are provided in the following text. This information should be used as a guideline, and does not substitute for testing a seal in its application.

Four-lip seals

Four-lip seals replace the former double-lip seals (TSN .. G). When compared to double-lip seals, the new seals are more effective. They also generate less friction, which enables higher shaft speeds. Four-lip seals are radially split and easy to mount.

Fig. 8

Standard sealing solutions for SNLN 30 plummer block housings



V-ring seals

V-ring seals consist of a V-ring and a sheet steel sealing washer with a vulcanized rubber lip. The rubber lip fits into the seal groove in the housing. The washer is protected against corrosion.

V-rings can accommodate circumferential speeds up to 7 m/s. For circumferential speeds between 7 and 12 m/s, they should be located axially on the shaft. At speeds above 12 m/s, a support ring must be used to prevent the seal from lifting. Recommended dimensions for appropriate support rings for axial and radial location are provided in **table 3**.

The permissible angular misalignment for seals mounted on shafts < 150 mm in diameter is approximately 1,5° and approximately

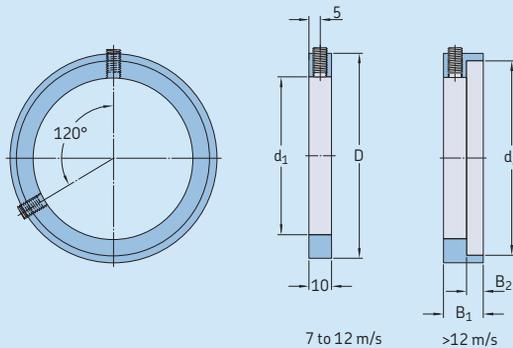
1° for larger shafts. The axial movement of the shaft relative to the housing is limited to ±1,5 mm.

For arrangements with a vertical shaft, the V-ring of the lower seal should be mounted inside the housing.

4

Table 3

Recommended dimensions for support rings for V-ring seals

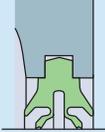
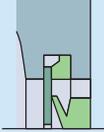
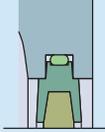


Shaft diameter $d_a, d_b^{1)}$	Dimensions					Grub screw to DIN 913	V-ring seal Standard designation	Alternative designation
	d_1	d_2	B_1	B_2	D			
mm	mm					-	-	
110	110	122,9	17,5	7,5	128	M6 x 8	110 VAR	CR 401100
115	115	127,4	17,5	7,5	133	M6 x 8	110 VAR	CR 401100
125	125	138,1	17,5	7,5	143	M6 x 8	130 VAR	CR 401300
135	135	147,5	17,5	7,5	153	M6 x 8	130 VAR	CR 401300
140	140	152,9	17,5	7,5	158	M6 x 8	140 VAR	CR 401400
145	145	158,1	17,5	7,5	163	M6 x 8	150 VAR	CR 401500
155	155	167,5	18,5	8,5	173	M6 x 8	150 VAR	CR 401500
165	165	179,9	18,5	8,5	185,5	M6 x 8	170 VAR	CR 401700
175	175	189,3	18,5	8,5	195	M6 x 8	170 VAR	CR 401700

¹⁾ d_a : shaft diameter for bearings on an adapter sleeve
 d_b : shaft diameter for bearings on a stepped shaft

Split plummer block housings SNLN 30 series

Standard seals for SNLN 30 plummer block housings

Seal			
Type	Four-lip split	V-ring	Felt split
Designation	TSN .. L	TSN .. A	TSN .. C
Size range for adapter sleeve mounting	3024 to 3032	3024 to 3032	3024 to 3032
Size range for cylindrical seat mounting	224 to 230	224 to 232	n/a
Material	thermoplastic polyester elastomer	nitrile rubber, steel	felt, nitrile rubber, aluminium
Seals per pack	2 seals	2 seals	2 seals

Application conditions and requirements

Temperature [°C]	-40 to +100	-40 to +100	-40 to +100
Temperature [°F]	-40 to +210	-40 to +210	-40 to +210
Max. circumferential speed ¹⁾ [m/s]	13	7 ²⁾	4
Max. misalignment [°]	0,5	1 to 1,5	0,5
Low friction	++	++	-
Axial shaft displacement	++	-	++
Vertical shaft arrangement	+	++ ³⁾	--
Replacement	++	-	+
Shaft tolerance class	h9 	n/a	h9 
Shaft roughness R _a [µm]	≤ 3,2	n/a	≤ 3,2

Sealing suitability

Dust	++	+	-
Fine particles	++	+	-
Coarse particles	++	+	+
Chips	+	--	+
Liquids when sprayed	+	+	-
Direct sunlight	+	--	++

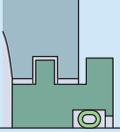
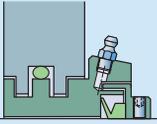
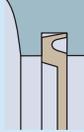
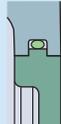
Symbols: n/a not applicable, ++ very suitable, + suitable, - limited suitability, -- unsuitable

¹⁾ To convert circumferential speeds to rotational speeds, refer to **table 7** on **page 37**.

²⁾ Higher speeds are permissible if the V-ring is located axially on the shaft.

³⁾ When the V-ring of the lower seal is mounted inboard

Table 2

				
Labyrinth	Taconite	Taconite	End cover	End cover
TSN .. S	TSN .. ND	TNF ..	ASNH ..	ETS ..
3024 to 3056	3024 to 3032	3034 to 3056	3024 to 3032	3034 to 3056
224 to 232, 3034/185 to 3056/295	224 to 232	3034/185 to 3056/295		
steel or cast iron, silicone	steel, nitrile rubber	steel, nitrile rubber	polymer	cast iron, silicone
1 seal	1 seal	1 seal	1 end cover	1 end cover
-50 to +200	-40 to +100	-40 to +100	-40 to +110	-50 to +200
-60 to +390	-40 to +210	-40 to +210	-40 to +230	-60 to +390
not limited	12	12	n/a	n/a
0,3	0,5	0,3	n/a	n/a
++	+	+	n/a	n/a
+	+	+	n/a	n/a
--	-	-	++	++
-	-	-	++	++
h9 	h9 	h9 	n/a	n/a
≤ 3,2	≤ 3,2	n/a	n/a	n/a
-	++	++	++	++
+	++	++	++	++
+	++	++	++	++
++	++	++	++	++
--	++	++	++	++
++	++	++	++	++

Felt seals

Felt seals are simple and effective. At circumferential speeds above 4 m/s, a small gap forms between the felt and shaft, transforming the contact seal into a non-contact, gap-type seal.

Labyrinth seals

For applications where there are high speeds or extreme temperatures, SKF recommends using labyrinth seals. Labyrinth rings, mounted on the shaft, form a multi-stage labyrinth seal with the housing seal grooves. Hollow, silicone rubber cords, supplied with the rings, hold the rings in place on the shaft.

Taconite heavy-duty seals

For bearing arrangements that must operate under highly contaminated conditions, such as those encountered in mining, taconite heavy-duty seals, which can be filled with grease, are recommended. Grease enhances the sealing effect and extends the service life of the seals. Taconite heavy-duty seals are labyrinth seals combined with a V-ring seal. The labyrinth ring is solid but the main body of the seal is split.

SNLN 30 housings from size 3024 to 3032 accommodate taconite seals with a radial labyrinth. SNLN 30 housings from size 3034 to 3056 accommodate solid taconite seals with an axial labyrinth. Both can be relubricated via a grease fitting in the main body of the seal.

The axial movement of the shaft relative to the housing is limited to $\pm 1,5$ mm for shaft diameters ranging from 110 to 150 mm, ± 2 mm for shaft diameters ranging from 160 to 200 mm and ± 4 mm for larger shaft diameters.

End covers

Housings at the end of a shaft should have an end cover that fits into the seal groove in the housing.

For housings from size 3024 to 3032, the end covers are made of plastic and are suitable for operating temperatures from -40 to $+110$ °C (-40 to $+230$ °F). For applications where temperatures exceed 110 °C (230 °F),

steel end covers should be used. These can be cut from sheet steel and placed in the seal groove. Use a hollow silicone rubber cord to hold the cover in place.

For housings from size 3034 to 3056, the end covers are made of grey cast iron and are suitable for operating temperatures from -50 to $+200$ °C (-60 to $+390$ °F). They are inserted, together with a hollow silicone rubber cord, in the housing seal groove.

Details of the permissible length of the shaft end are provided in **table 4**.

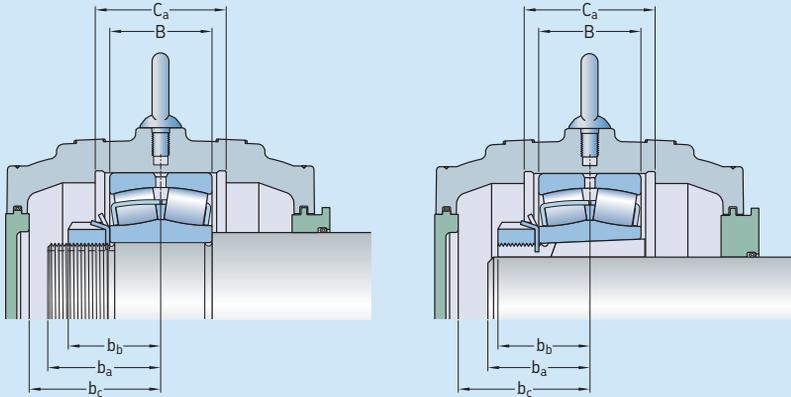
Using sealed bearings

Using sealed bearings in housings with standard seals is a good solution for highly contaminated environments. The sealed bearing together with the housing seal and grease provide three layers of protection (→ *SKF three-barrier solution*, **page 39**).

SNLN 30 housings can be used together with SKF sealed self-aligning bearings. When using taconite heavy-duty seals, a sealed bearing does not enhance the sealing effect during operation, but still protects the bearing against contaminants during mounting.

Table 4

Permissible length of a shaft end



Housing Size	Dimensions			Appropriate bearing Designation	Dimensions	
	$b_a^{1)}$	b_c	C_a		B	b_b
–	mm			–	mm	
SNLN 3024	48	70	70	23024	46	45
SNLN 3026	52	76	79	23026	52	49
SNLN 3028	53	75	79	23028	53	50,5
SNLN 3030	57	82	86	23030	56	54
SNLN 3032	60	82	90	23032	60	57,5
SNLN 3034	65	87	87	23034	67	62
SNLN 3036	69	94	94	23036	74	66,5
SNLN 3038	71	99	95	23038	75	68
SNLN 3040	75	98	102	23040	82	72,5
SNLN 3044	89	108	110	23044	90	86
SNLN 3048	95	110	112	23048	92	92
SNLN 3052	101	120	124	23052	104	98
SNLN 3056	106	123	126	23056	106	103

¹⁾ For the non-locating bearing position, the values for b_a must be adjusted if the bearing is not centred in the housing seat.

Special seals

In addition to the standard seal assortment, SNLN 30 housings are available, on request, with high-temperature seals, taconite heavy-duty seals with an axial labyrinth or custom seals for special applications.

High-temperature seals

For high operating temperatures, up to 250 °C (480 °F), high-temperature felt seals should be used. The felt seals can accommodate circumferential speeds up to 2 m/s. They are identified by the designation suffix CB, e.g. TSN 3024 CB.

Taconite heavy-duty seals with an axial labyrinth

Taconite heavy-duty seals with an axial labyrinth (TSN .. NC or TSN .. NB, → **fig. 9**) can be used under the same conditions as taconite seals with a radial labyrinth. The seals are greased via a hole in the housing cap. Therefore, they can only be used with housings with the suffix T (at the end of a shaft) or the suffix TD (for through shafts).

TSN .. NB seals have a V-ring. It limits the axial movement of the shaft relative to the housing to ±1,5 mm.

Specifications for the seals are listed in **table 5**.

Fig. 9

Taconite heavy-duty seals with an axial labyrinth

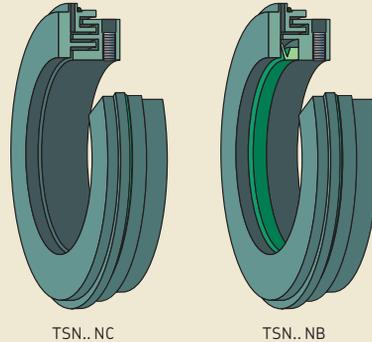


Table 5

Taconite heavy-duty seals with an axial labyrinth

Seal		
Designation	TSN .. NC	TSN .. NB
Size range	3024 to 3032	3024 to 3032
Application conditions and requirements		
Temperature [°C]	-40 to +250	-40 to +100
Temperature [°F]	-40 to +480	-40 to +210
Max. circumferential speed ¹⁾ [m/s]	not limited	12
Max. misalignment [°]	0,5	0,5
Max. axial shaft displacement from a central position [mm]	±2,5	±1,5
Shaft tolerance class	h9	h9

¹⁾ To convert circumferential speeds to rotational speeds, refer to **table 7** on **page 37**.

Custom seals

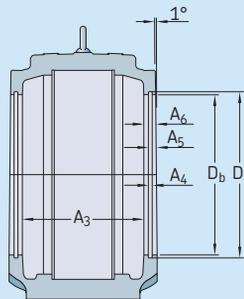
SNLN 30 housings can be equipped with any type of seal that fits the seal groove dimensions in the housing. The relevant dimensions are provided in **table 6**.

Custom seals can be supplied by SKF. For additional information, contact the SKF application engineering service.

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Table 6

Seal groove dimensions



Housing Size	Dimensions					
	A ₃	A ₄	A ₅	A ₆	D _b	D _c
–	mm					
SNLN 3024	130	6	10	15	157,5	167,5
SNLN 3026	142	6	10	15	167,5	177,5
SNLN 3028	141	6	11	16	177,5	187,5
SNLN 3030	154	6	11	16	192,5	202,5
SNLN 3032	156	6	11	15	202,5	212,5
SNLN 3034	177	6	11	15	212,5	222,5
SNLN 3036	192	6	11	15	225,5	232,5
SNLN 3038	198	6	11	17	232,5	242,5
SNLN 3040	197	8	14	20	242,5	254,5
SNLN 3044	217	8	14	20	262,5	274,5
SNLN 3048	217	8	16,5	25	282,5	294,5
SNLN 3052	236	8	16,5	25	302,5	314,5
SNLN 3056	245	8	16,5	25	322,5	334,5

Design considerations

For general information about system design, refer to the following sections:

- *Typical shaft-bearing combinations* (→ **page 41**)
- *Locating/non-locating bearing arrangements* (→ **page 40**)
- *Load carrying capacity* (→ **page 44**)
- *Axial load carrying capacity for bearings on sleeves* (→ **page 44**)
- *Specifications for shafts and housing support surfaces* (→ **page 45**)

For additional information about rolling bearings, refer to the product information available online at skf.com/housings.

Typical shaft-bearing combinations

SNLN 30 housings can accommodate different shaft-bearing combinations (→ **fig. 10**):

- Plain shaft with bearing on an adapter sleeve
- Stepped shaft with bearing on a cylindrical seat
- Stepped shaft with bearing on an adapter sleeve
- Stepped shaft with bearing on a withdrawal sleeve

Plain shaft with bearing on an adapter sleeve

Housings, appropriate parts and dimensions are listed in **product table 4.1**, starting on **page 180**.

Stepped shaft with bearing on a cylindrical seat

Housings, appropriate parts and dimensions are listed in **product table 4.2**, starting on **page 184**.

The bearing is located axially between a shaft shoulder and a spacer sleeve, which is held in place by another component on the shaft. The outside diameter of the sleeve must match the bore diameter of the seal. The spacer sleeve is not supplied by SKF.

Stepped shaft with bearing on an adapter sleeve

When using an SNLN 30 housing for this arrangement, the dimensions of the abutment ring and the spacer sleeve must fit the housing.

Abutment rings and spacer sleeves are not supplied by SKF.

Stepped shaft with bearing on a withdrawal sleeve

When using an SNLN 30 housing for this arrangement, the withdrawal sleeve must be located axially on the shaft. This can be done using a spacer sleeve that is held in place by another component. Using a lock nut can be difficult because of the limited space in the housing. The outside diameter of the spacer sleeve must be the same as the shaft abutment diameter, d_b , (→ **product tables**) and it should be in accordance with the $h9$ (E) tolerance class to fit the seal. The spacer sleeve is not supplied by SKF.

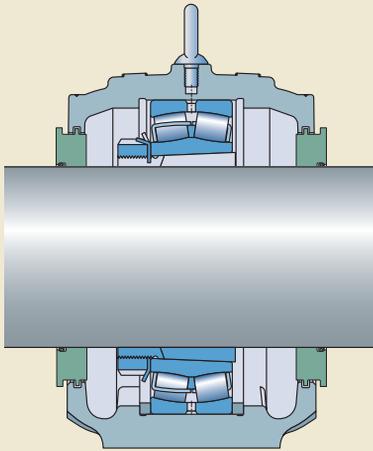
Locating and non-locating bearing positions

SNLN 30 housings can be used for both the locating and non-locating bearing positions.

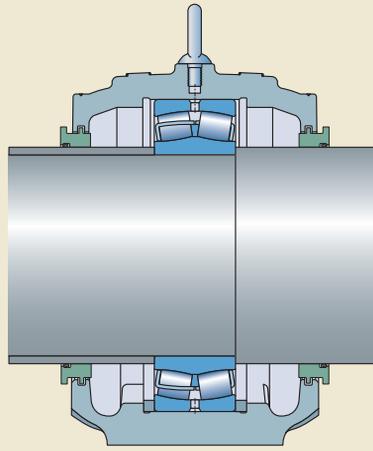
The housings are machined standard for bearings in the non-locating position. Bearings in the locating position as well as CARB toroidal roller bearings must be secured in the housing on both sides with locating rings. Appropriate locating rings are listed in the product tables.

Fig. 10

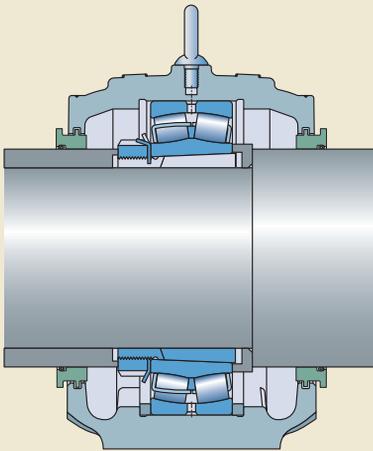
4



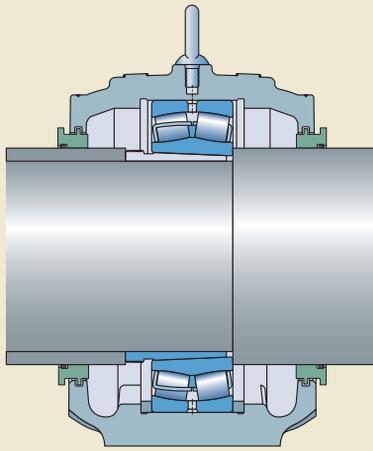
Plain shaft with bearing on an adapter sleeve



Stepped shaft with bearing on a cylindrical seat



Stepped shaft with bearing on an adapter sleeve



Stepped shaft with bearing on a withdrawal sleeve

Load carrying capacity

SNLN 30 housings are intended for loads acting perpendicularly toward the support surface. If the housing is supported over its entire base and the loads are purely perpendicular, loads are limited only by the bearing. If loads acting in other directions occur, or if the housing is not supported over its entire base, be sure that the magnitude of the load is permissible for the housing, the cap bolts and the attachment bolts. When housings are subjected to cyclic loads or dynamic imbalance, contact the SKF application engineering service.

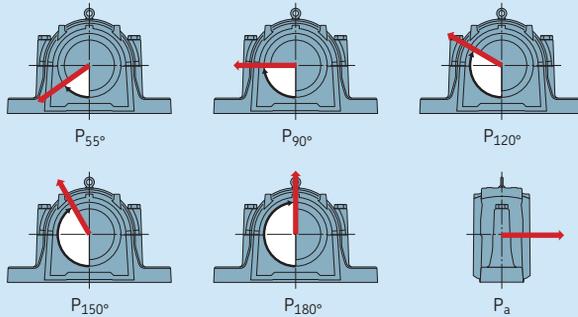
Breaking loads and safety factors

Guideline values for the breaking loads of housings made of grey cast iron are listed in **table 7**. To obtain the permissible load for a housing, the appropriate breaking load value should be divided by a factor based on the safety requirements. In general engineering, a safety factor of 6 is typical (→ *Load carrying capacity*, page 44). The permissible load can only be exploited if the cap bolts are tightened at least to the torque values listed in **table 8**.

If the housing is not supported over its entire base, the load carrying capacity for loads acting perpendicularly to the support surface may be affected. For additional information, contact the SKF application engineering service.

Table 7

Breaking loads for SNLN 30 plummer block housings made of grey cast iron



Housing Size	Breaking loads					
	P _{55°}	P _{90°}	P _{120°}	P _{150°}	P _{180°}	P _a
–	kN					
SNLN 3024	520	310	230	210	260	90
SNLN 3026	620	370	280	250	310	110
SNLN 3028	700	420	310	280	350	120
SNLN 3030	780	470	350	310	390	130
SNLN 3032	840	500	380	340	420	150
SNLN 3034	1 000	600	450	400	500	170
SNLN 3036	1 160	700	520	460	580	200
SNLN 3038	1 300	780	580	520	650	220
SNLN 3040	1 480	890	670	590	740	260
SNLN 3044	1 700	1 020	760	680	850	300
SNLN 3048	1 880	1 130	850	750	940	330
SNLN 3052	2 120	1 270	950	850	1 060	370
SNLN 3056	2 240	1 340	1 000	900	1 120	390

For housings made of spheroidal graphite cast iron, the values obtained from **table 7** should be multiplied by a factor of 1,8.

The load P_a is the axial breaking load of the housing. If the incorporated bearing is mounted on a sleeve, check the permissible axial load for the sleeve.

Additional housing support

When a housing is subjected to loads acting parallel to the support surface, it may be necessary to pin the housing to the support surface or to provide a stop to counter the load.

When loads act at angles between 55° and 120°, or when the axial loads are greater than 5% of P_{180° (→ **table 7**), the housing should be

pinned to the support surface or a stop should be provided to counter the load. The dowel pins or stop should be sufficiently strong to accommodate the loads acting parallel to the support surface.

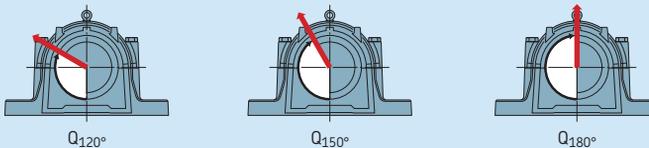
Recommendations for the position and size of the holes to accommodate dowel pins are provided in **table 11** on **page 177**.

Load carrying capacity of the cap bolts

Approximate values for the yield points for cap bolts are provided in **table 8**. Recommended torque values are listed in the same table. The values in **table 8** apply to 8.8 class cap bolts, which are supplied with SNLN 30 housings made of spheroidal graphite cast iron are supplied

Table 8

Load carrying capacity and torque values for cap bolts and attachment bolts



Housing Size	Cap bolts Yield point for two bolts			Size	Tightening torque	Attachment bolts	
	Q_{120°	Q_{150°	Q_{180°			Size	Tightening torque ¹⁾
–	kN			–	Nm	–	Nm
SNLN 3024	620	360	310	M 20×100	200	M 24	665
SNLN 3026	620	360	310	M 20×100	200	M 24	665
SNLN 3028	620	360	310	M 20×110	200	M 24	665
SNLN 3030	900	520	450	M 24×130	350	M 24	665
SNLN 3032	900	520	450	M 24×130	350	M 24	665
SNLN 3034	900	520	450	M 24×130	350	M 30	1 310
SNLN 3036	900	520	450	M 24×130	350	M 30	1 310
SNLN 3038	900	520	450	M 24×140	350	M 30	1 310
SNLN 3040	900	520	450	M 24×140	350	M 30	1 310
SNLN 3044	1 430	825	715	M 30×170	400	M 36	2 280
SNLN 3048	1 430	825	715	M 30×170	400	M 36	2 280
SNLN 3052	2 100	1 200	1 050	M 36×200	600	M 42	3 640
SNLN 3056	2 100	1 200	1 050	M 36×200	600	M 42	3 640

¹⁾ Recommended by bolt manufacturers

Split plummer block housings SNLN 30 series

with 10.9 class cap bolts. For these cap bolts, the values obtained from **table 8** should be multiplied by a factor of 1,4.

If a safety factor of 6 is used for the permissible load of grey cast iron SNLN 30 housings, the cap bolts do not need to be considered. In this case, the permissible load of the housing is less than the permissible load for the cap bolts.

anchoring. Make sure that attachment bolts, dowels or stops, and a sufficiently strong support can accommodate all occurring loads.

Operating temperature

The permissible operating temperature is mainly limited by the seals (→ **table 2, page 162**) and the lubricant in the bearing. For temperature limits of SKF bearings and lubricants, refer to the product information available online at skf.com/bearings.

The housing material does not have any additional temperature limits, except for very low temperature applications where impact strength could be a factor.

The housing paint is heat resistant up to 80 °C (175 °F) material temperature or 100 °C (210 °F) ambient temperature.

When temperatures outside the permissible range are expected, contact the SKF application engineering service.

Operating speed

All seals, except non-contact labyrinth seals, limit the permissible operating speed. Speed limits for seals are provided in **table 2** on **page 162**. For speed limits of the bearing, refer to the product information available online at skf.com/bearings.

Attachment bolt recommendations

In typical applications, 8.8 class hexagon head bolts in accordance with ISO 4014 can be used together with washers. If the load does not act perpendicularly toward the base, it may be necessary to use stronger 10.9 class bolts.

SKF housings can withstand loads resulting from tightening the attachment bolts to the torque values recommended by bolt manufacturers (→ **table 8, page 171**). They are valid for oiled, but otherwise untreated, thread surfaces.

SKF cannot guarantee that tightening to the recommended value provides sufficient

Lubrication

SNLN 30 plummer (pillow) block housings with standard seals are intended for grease lubrication.

The lubricant should be selected based on the operating conditions of the bearing. For additional information about lubricant selection, refer to the product information available online at skf.com/bearings.

Initial grease fill

If no other requirements exist, the free space in the bearing should be completely filled with grease and the free space in the housing should be filled to 20 to 40% of its volume.

A 40% grease fill is required when bearings have to be relubricated from the side, while a 20% grease fill is used when bearings are relubricated via the outer ring.

For highly contaminated environments and slow speeds, fill the housing to 70–80%. For best protection against contaminants, use the SKF three-barrier solution (→ [page 39](#)). For additional information, contact the SKF application engineering service.

Quantities for 20 and 40% grease fills are listed in [table 9](#). The values are valid for a typical lithium grease (about 0,95 g/cm³). They include grease for the bearing and the four-lip seals or the sealing washers of V-ring seals. The grease to fill labyrinth seals or taconite heavy-duty seals is not included. For sealed bearings, the values have to be adjusted.

In most applications, the initial grease fill will adequately lubricate the bearing until the grease is exchanged during the next planned maintenance interval.

Table 9

Initial grease fill		
Housing Size	Initial fill 20%	40%
–	kg	
SNLN 3024	0,25	0,45
SNLN 3026	0,35	0,65
SNLN 3028	0,50	0,70
SNLN 3030	0,50	0,90
SNLN 3032	0,50	1,0
SNLN 3034	0,75	1,4
SNLN 3036	0,95	1,8
SNLN 3038	1,0	1,9
SNLN 3040	1,1	2,0
SNLN 3044	1,5	2,7
SNLN 3048	1,5	2,8
SNLN 3052	2,1	3,8
SNLN 3056	2,3	4,2

Relubrication

SNLN 30 plummer block housings enable relubrication of the incorporated bearings and seals (→ **fig. 11**):

- SNLN 30 housings have two holes that have been drilled and tapped for an AH 1/8-27 PTF grease fitting. On a new housing, the holes are covered by plastic plugs. These plugs should be replaced with the grease fitting and threaded plug supplied with the housing.
- If a larger grease fitting or other equipment has to be used, an adapter to change to a G 1/4 thread is available (→ **page 48**).
- Dimples cast into the top of the housing cap indicate alternative positions where holes can be drilled and tapped to accommodate a grease fitting for bearing or seal relubrication.

Relubrication via the outer ring

The hole in the centre of the cap should be used to relubricate spherical roller bearings with a relubrication feature (a lubrication groove and holes in the outer ring) (→ **fig. 12**). When applying grease via the relubrication feature, the shaft should be rotating.

Relubrication from the side

When relubricating from the side, which is typically necessary for CARB toroidal roller bearings, the offset hole in the housing should be used. SNLN 30 housings from size 3024 to 3038 have an integral flange that guides

grease from the grease fitting directly to the rolling elements (→ **fig. 13**).

When bearings mounted on an adapter sleeve have to be relubricated from the side, the grease should be introduced from the side opposite the lock nut.

When bearings mounted at the end of a shaft have to be relubricated from the side, the grease should be applied at the point closest to the end cover.

Fig. 12

Relubrication via the outer ring

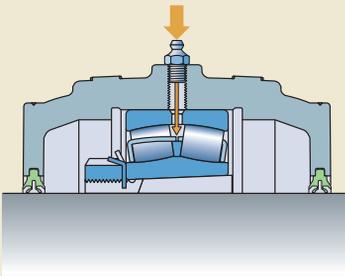


Fig. 13

Relubrication from the side

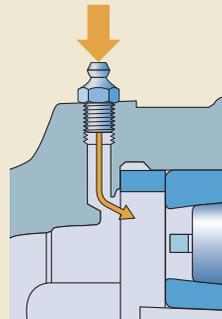
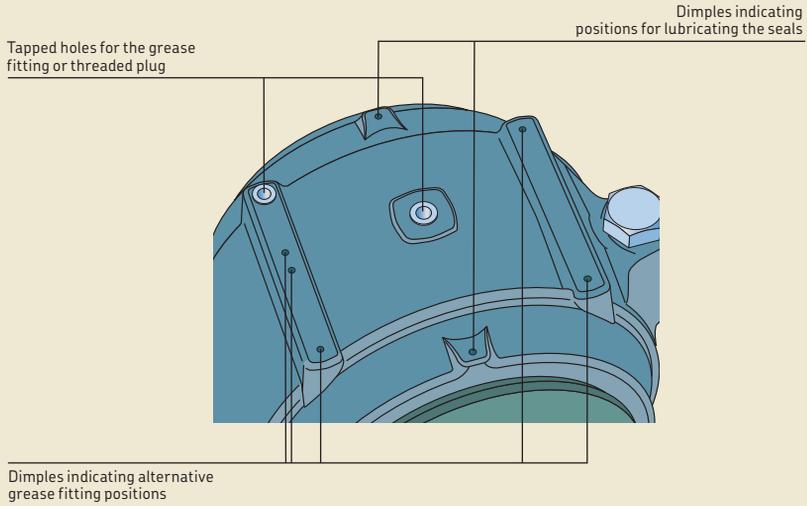


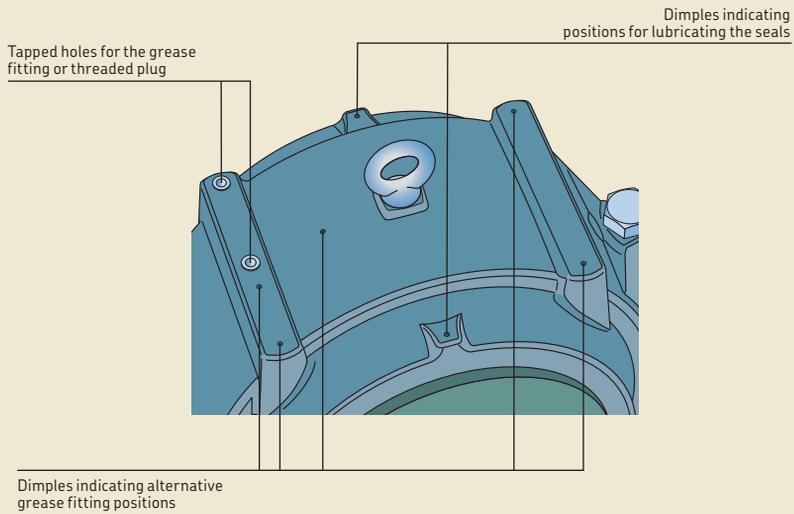
Fig. 11

Relubrication possibilities

SNLN housings up to size 3024



SNLN housings from size 3028 and above



Split plummer block housings SNLN 30 series

Relubrication from the side for housings with V-ring seals

When relubricating bearings from the side in housings with V-ring seals, mount an additional V-ring inside the housing on the side where grease is applied (→ **fig. 14**). This forces the grease to travel through the bearing and exit the housing on the opposite side.

SKF can supply an appropriate V-ring together with a splash plate that fits in the seal groove to cover a bit more than the top half of the housing. The sets are identified by the series designation ASNA followed by the housing size identification and the suffix V, e.g. ASNA 3024 V, and are available from size 3024 to 3032.

Grease escape holes

When four-lip seals (TSN .. L) or felt seals (TSN .. C) are used, grease cannot escape via the seals. If relubrication is required, the housing should have a grease escape hole.

SNLN 30 housings can be supplied with a grease escape hole (designation suffix V). A grease escape hole can be drilled into the housing using the dimensions provided in **table 10**.

Fig. 14

V-ring and splash plate set mounted in an SNLN 30 housing

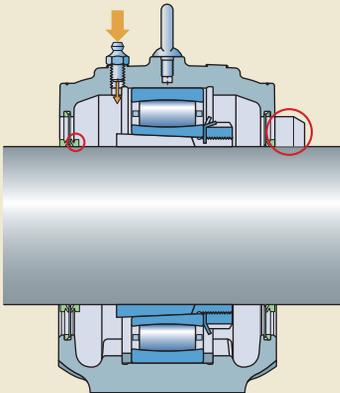
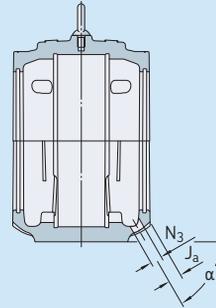


Table 10

Recommended dimensions for grease escape hole



Housing Size	Dimensions		
	J_a	N_3	α
–	mm		
SNLN 3024	21	16	65
SNLN 3026	21,5	20	60
SNLN 3028	24	20	60
SNLN 3030	22	20	55
SNLN 3032	18,5	20	50
SNLN 3034	25	20	60
SNLN 3036	25	20	60
SNLN 3038	25	20	60
SNLN 3040	32	20	65
SNLN 3044	32	25	60
SNLN 3048	32	25	55
SNLN 3052	32	25	55
SNLN 3056	32	25	50

Mounting

SNLN 30 housings must be mounted properly using the appropriate tools and state of the art mechanical mounting methods. All the associated components must also meet certain basic requirements (→ *Specifications for shafts and housing support surfaces*, page 45).

Mounting instructions for each housing are provided with the seal pack, except for housings from size 3024 to 3032 with seals in the TSN 2(00) series. For these housing/seal combinations, mounting instructions need to be ordered separately. For information about mounting rolling bearings, refer to the *SKF bearing maintenance handbook* or skf.com/mount.

Torque specifications

Cap bolts should be tightened to the torque values listed in **table 8** on **page 171**. For information about attachment bolts, refer to *Attachment bolt recommendations* on **page 172**.

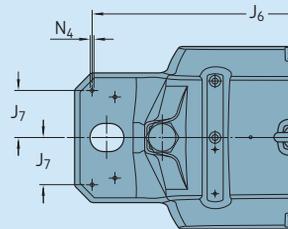
Pinning or supporting the housing

Some load conditions may require the housing to be pinned to its support surface or a stop to accommodate loads acting parallel to the housing support surface (→ *Additional housing support*, page 171).

Recommendations for the position and size of the holes to accommodate dowel pins are provided in **table 11**. Dimples cast into the housing base mark the recommended positions.

Table 11

Position and size of dowel pin holes



Housing Size	Dimensions		
	J ₆	J ₇	N ₄
–	mm		
SNLN 3024	348	39	8
SNLN 3026	378	44	8
SNLN 3028	378	44	8
SNLN 3030	414	46	12
SNLN 3032	424	46	12
SNLN 3034	486	58	12
SNLN 3036	506	58	12
SNLN 3038	506	58	12
SNLN 3040	566	63	16
SNLN 3044	644	72	16
SNLN 3048	672	76	16
SNLN 3052	760	80	16
SNLN 3056	800	85	16

Condition monitoring

SNLN 30 plummer (pillow) block housings have appropriate positions for condition monitoring sensors (→ **fig. 15**).

Position 1 is a measurement point perpendicular to the shaft, and should be used when the housing is hung from its support or when loads act away from the support surface.

Position 2 is a measurement point parallel to the shaft and should be used when loads act toward the support surface. Both positions 1 and 2 are in accordance with ISO 10816-1.

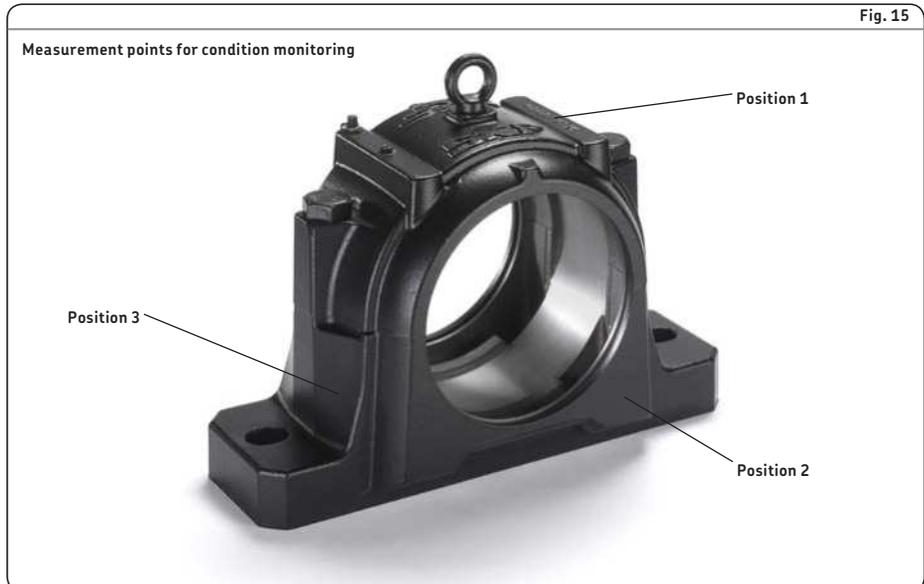
Position 3 is a measurement point that is approximately 20° to 45° to the shaft axis.

Accessories

The following accessories are available for SNLN 30 plummer (pillow) block housings:

- Adapter for G 1/4 connections: LAPN 1/8
- Automatic lubricators: SKF SYSTEM 24 and SKF MultiPoint
- Grease meter: LAGM 1000E
- Condition monitoring sensors

For additional information, refer to *SKF tools and products* (→ **page 47**).



Ordering information

For SNLN 30 plummer (pillow) block housings, each of the following items must be ordered separately:

- housing
- seals
- end cover
- locating rings
- bearing
- adapter sleeve

Order example

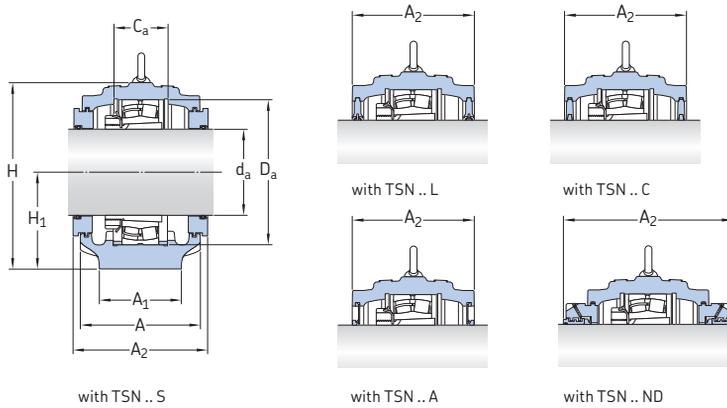
Two plummer block housings with four-lip seals are required for two 23024 CCK/W33 spherical roller bearings on H 3024 adapter sleeves. One housing will accommodate the non-locating bearing at the end of the shaft. The other housing will accommodate the locating bearing and a through shaft.

The following items should be ordered (in addition to the bearings and adapter sleeves):

- 2 housings SNLN 3024
- 2 four-lip seal packs TSN 3024
(each pack contains two seals)
- 1 end cover ASNH 524-620
- 2 locating rings FRB 12/180

4.1 SNLN 30 plummer block housings for bearings on an adapter sleeve

d_a 110 – 140 mm



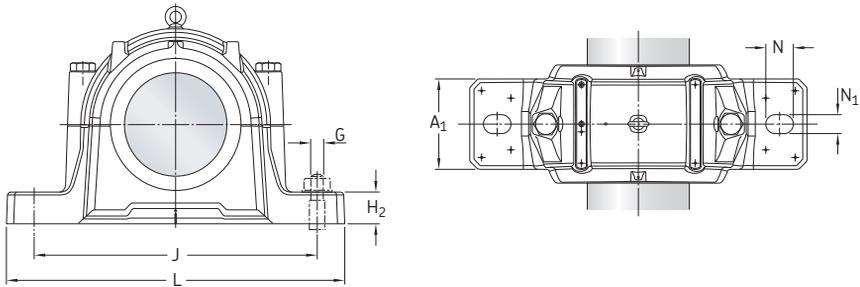
Shaft diameter d_a	Housing Designation	Appropriate parts Bearing ¹⁾	Adapter sleeve ²⁾	Locating ring ³⁾	Seals	End cover	Width incl. seals A_2
mm	–	–					mm
110	SNLN 3024	23024 CCK/W33 C 3024 K	H 3024 H 3024 E	FRB 12/180 FRB 12/180	TSN 3024 L	ASNH 524-620	160
					TSN 3024 A		160
					TSN 3024 C		160
					TSN 3024 S		180
					TSN 3024 ND		240
115	SNLN 3026	23026 CCK/W33 23026-2CS5K C 3026 K	H 3026 H 3026 E H 3026	FRB 13,5/200 FRB 13,5/200 FRB 13,5/200	TSN 3026 L	ASNH 526	175
					TSN 3026 A		175
					TSN 3026 C		175
					TSN 3026 S		200
					TSN 3026 ND		245
125	SNLN 3028	23028 CCK/W33 23028-2CS5K C 3028 K	H 3028 H 3028 E H 3028 E	FRB 13/210 FRB 13/210 FRB 13/210	TSN 3028 L	ASNH 528	175
					TSN 3028 A		175
					TSN 3028 C		175
					TSN 3028 S		195
					TSN 3028 ND		255
135	SNLN 3030	23030 CCK/W33 23030-2CS5K C 3030 KV	H 3030 H 3030 E H 3030	FRB 15/225 FRB 15/225 FRB 15/225	TSN 3030 L	ASNH 530	190
					TSN 3030 A		190
					TSN 3030 C		190
					TSN 3030 S		215
					TSN 3030 ND		265
140	SNLN 3032	23032 CCK/W33 23032-2CS5K C 3032 K	H 3032 H 3032 E H 3032 E	FRB 15/240 FRB 15/240 FRB 15/240	TSN 3032 L	ASNH 532	190
					TSN 3032 A		190
					TSN 3032 C		190
					TSN 3032 S		215
					TSN 3032 ND		270

¹⁾ Only the basic bearing designation is listed. Other bearing variants can also fit the housing.

230(00) – spherical roller bearing, C... – CARB toroidal roller bearing

²⁾ The adapter sleeve fits the bearing in the same row only.

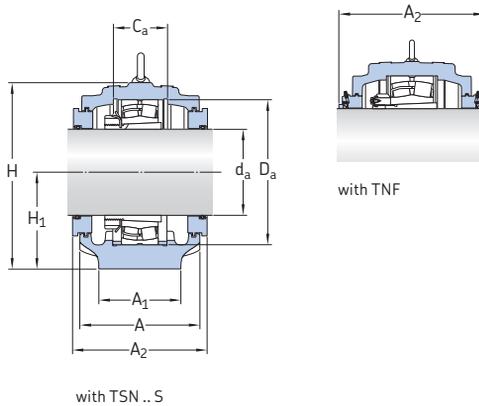
³⁾ The locating ring fits the bearing in the same row only. Two locating rings are required.



Shaft diameter d_a	Dimensions Housing												Eye bolt according to DIN 580	Mass Housing
	A	A ₁	C _a	D _a	H	H ₁	H ₂	J	L	N	N ₁	G		
mm	mm												-	kg
110	160	110	70	180	218	112	40	320	380	32	26	24	-	17,5
115	175	120	79	200	242	125	45	350	410	32	26	24	-	22,5
125	175	120	79	210	270	140	45	350	410	32	26	24	M10	30,0
135	190	130	86	225	290	150	50	380	445	35	28	24	M10	40,0
140	190	130	90	240	297	150	50	390	460	35	28	24	M10	41,0

4.1 SNLN 30 plummer block housings for bearings on an adapter sleeve

d_a 150 – 260 mm



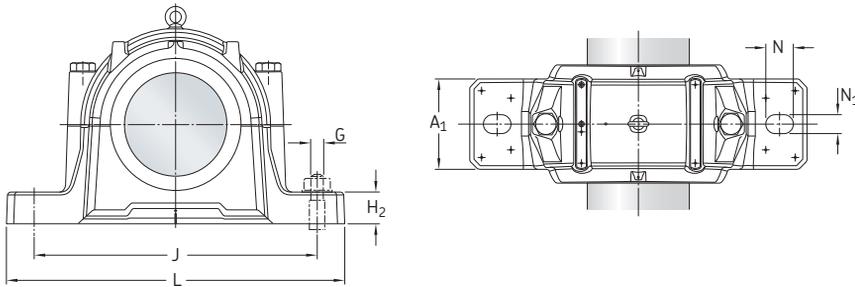
Shaft diameter d_a	Housing Designation	Appropriate parts Bearing ¹⁾	Adapter sleeve ²⁾	Locating ring ³⁾	Seals	End cover	Width incl. seals
							A_2
mm	–	–					mm
150	SNLN 3034	23034 CCK/W33	H 3034	FRB 10/260	TSN 3034 S	ETS 3034	230
		23034-2CS5K C 3034 K	H 3034 E H 3034 E	FRB 10/260 FRB 10/260	TNF 3034		266
160	SNLN 3036	23036 CCK/W33	H 3036	FRB 10/280	TSN 3036 S	ETS 3036	245
		23036-2CS5K C 3036 K	H 3036 E H 3036	FRB 10/280 FRB 10/280	TNF 3036		280
170	SNLN 3038	23038 CCK/W33 C 3038 K	H 3038 H 3038	FRB 10/290 FRB 10/290	TSN 3038 S TNF 3038	ETS 3038	255 290
180	SNLN 3040	23040 CCK/W33	H 3040	FRB 10/310	TSN 3040 S	ETS 3040	265
		23040-2CS5K C 3040 K	H 3040 H 3040	FRB 10/310 FRB 10/310	TNF 3040		295
200	SNLN 3044	23044 CCK/W33	OH 3044 H	FRB 10/340	TSN 3044 S	ETS 3044	285
		23044-2CS5K C 3044 K	OH 3044 H OH 3044 H	FRB 10/340 FRB 10/340	TNF 3044		315
220	SNLN 3048	23048 CCK/W33	OH 3048 H	FRB 10/360	TSN 3048 S	ETS 3048	295
		23048-2CS5K C 3048 K	OH 3048 HE OH 3048 H	FRB 10/360 FRB 10/360	TNF 3048		355
240	SNLN 3052	23052 CCK/W33	OH 3052 H	FRB 10/400	TSN 3052 S	ETS 3052	312
		23052-2CS5K C 3052 K	OH 3052 HE OH 3052 H	FRB 10/400 FRB 10/400	TNF 3052		374
260	SNLN 3056	23056 CCK/W33	OH 3056 H	FRB 10/420	TSN 3056 S	ETS 3056	325
		C 3056 K	OH 3056 H	FRB 10/420	TNF 3056		384

¹⁾ Only the basic bearing designation is listed. Other bearing variants can also fit the housing.

230(00) – spherical roller bearing, C... – CARB toroidal roller bearing

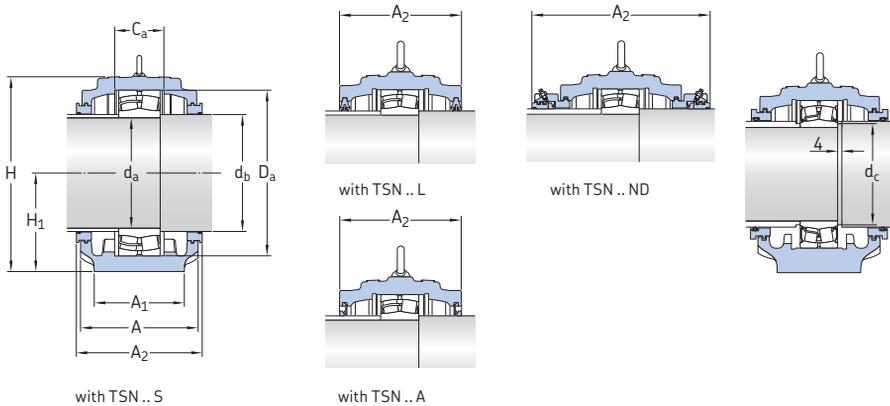
²⁾ The adapter sleeve fits the bearing in the same row only.

³⁾ The locating ring fits the bearing in the same row only. Two locating rings are required.



Shaft diameter d_a	Dimensions Housing												Eye bolt according to DIN 580	Mass Housing kg
	A	A ₁	C _a	D _a	H	H ₁	H ₂	J	L	N	N ₁	G		
mm	mm												-	kg
150	210	160	87	260	322	160	60	450	530	42	35	30	M12	50,5
160	225	160	94	280	342	170	60	470	550	42	35	30	M12	58,5
170	235	160	95	290	347	170	60	470	550	42	35	30	M12	58,5
180	240	170	102	310	368	180	60	515	610	42	35	30	M12	76,0
200	260	190	110	340	403	200	70	580	690	50	42	36	M12	103
220	270	200	112	360	423	210	75	610	720	50	42	36	M12	117
240	290	220	124	400	475	240	80	680	820	70	48	42	M12	162
260	300	230	126	420	496	250	80	720	860	70	48	42	M12	184

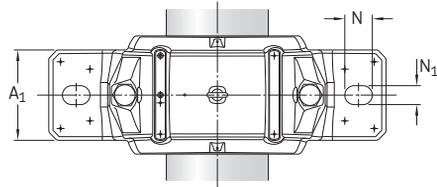
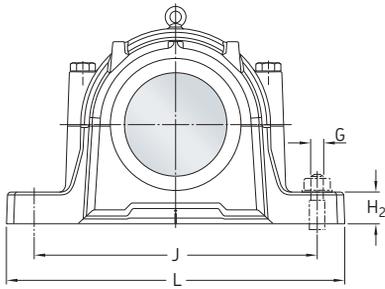
4.2 SNLN 30 plummer block housings for bearings on a cylindrical seat d 120 – 150 mm



Shaft diameter	Housing Designation	Appropriate parts Bearing ¹⁾	Locating ring ²⁾	Seals	End cover	Width incl. seals A ₂
d _a						
mm	–	–				mm
120	SNLN 3024	23024 CC/W33	FRB 12/180	TSN 224 L	ASNH 524-620	160
		23024-2CS5	FRB 12/180	TSN 224 A		160
		24024 CC/W33	FRB 5/180	TSN 224 S		180
		24024-2CS5	FRB 5/180	TSN 224 ND		250
		C 3024	FRB 12/180			
		C 4024 V	FRB 5/180			
C 4024-2CS5V	FRB 5/180					
130	SNLN 3026	23026 CC/W33	FRB 13,5/200	TSN 226 L	ASNH 526	175
		23026-2CS5	FRB 13,5/200	TSN 226 A		175
		24026 CC/W33	FRB 5/200	TSN 226 S		197
		24026-2CS5	FRB 5/200	TSN 226 ND		260
		C 3026	FRB 13,5/200			
		C 4026	FRB 5/200			
C 4026-2CS5V	FRB 5/200					
140	SNLN 3028	23028 CC/W33	FRB 13/210	TSN 228 L	ASNH 528	175
		23028-2CS5	FRB 13/210	TSN 228 A		175
		24028 CC/W33	FRB 5/210	TSN 228 S		194
		24028-2CS5	FRB 5/210	TSN 228 ND		260
		C 3028	FRB 13/210			
		C 4028 V	FRB 5/210			
C 4028-2CS5V	FRB 5/210					
150	SNLN 3030	23030 CC/W33	FRB 15/225	TSN 230 L	ASNH 530	190
		23030-2CS5	FRB 15/225	TSN 230 A		190
		24030 CC/W33	FRB 5,5/225	TSN 230 S		213
		24030-2CS5	FRB 5,5/225	TSN 230 ND		280
		C 3030 V	FRB 15/225			
		C 4030 V	FRB 5,5/225			
C 4030-2CS5V	FRB 5,5/225					

¹⁾ Only the basic bearing designation is listed. Other bearing variants can also fit the housing. 230(00), 240(00) – spherical roller bearing, C... – CARB toroidal roller bearing

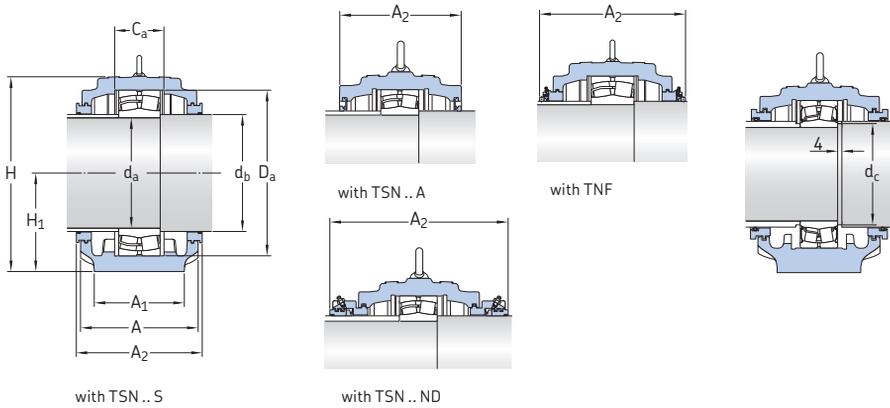
²⁾ The locating ring fits the bearing in the same row only. Two locating rings are required.



Shaft diameter				Dimensions Housing											Eye bolt according to DIN 580	Mass Housing	
d_a	d_b	$d_c^{1)}$ min	$d_c^{1)}$ max	A	A_1	C_a	D_a	H	H_1	H_2	J	L	N	N_1	G		
mm				mm											-	kg	
120	135	129	132	160	110	70	180	218	112	40	320	380	32	26	24	-	17,5
		129	130														
130	145			175	120	79	200	242	125	45	350	410	32	26	24	-	22,5
		139	140														
140	155			175	120	79	210	270	140	45	350	410	32	26	24	M10	30,0
		149	151														
150	165			190	130	86	225	290	150	50	380	445	35	28	24	M10	40,0
		161	162														

¹⁾ Valid for the sealed spherical roller bearing in the same row only.

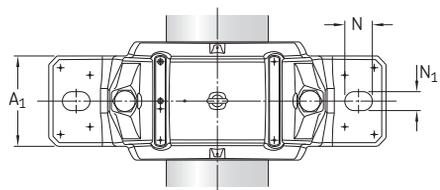
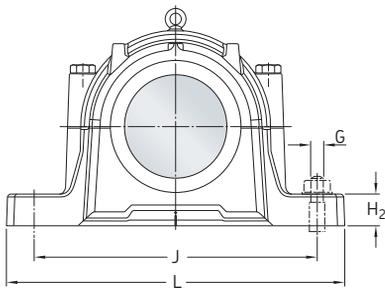
4.2 SNLN 30 plummer block housings for bearings on a cylindrical seat d 160 – 280mm



Shaft diameter	Housing Designation	Appropriate parts Bearing ¹⁾	Locating ring ²⁾	Seals	End cover	Width incl. seals A ₂
d _a						
mm	-	-				mm
160	SNLN 3032	23032 CC/W33	FRB 15/240	TSN 232 A	ASNH 532	190
		23032-2CS5	FRB 15/240	TSN 232 S		213
		24032 CC/W33	FRB 5/240	TSN 232 ND		280
		24032-2CS5	FRB 5/240			
		C 3032	FRB 15/240			
170	SNLN 3034	23034 CC/W33	FRB 10/260	TSN 3034/185 S	ETS 3034	231
		23034-2CS5	FRB 10/260	TNF 3034/185		278
		C 3034	FRB 10/260			
180	SNLN 3036	23036 CC/W33	FRB 10/280	TSN 3036/195 S	ETS 3036	246
		23036-2CS5	FRB 10/280	TNF 3036/195		292
		C 3036	FRB 10/280			
190	SNLN 3038	23038 CC/W33	FRB 10/290	TSN 3038/205 S	ETS 3038	255
		C 3038	FRB 10/290	TNF 3038/205		302
200	SNLN 3040	23040 CC/W33	FRB 10/310	TSN 3040/215 S	ETS 3040	263
		23040-2CS5	FRB 10/310	TNF 3040/215		301
		C 3040	FRB 10/310			
220	SNLN 3044	23044 CC/W33	FRB 10/340	TSN 3044/235 S	ETS 3044	283
		23044-2CS5	FRB 10/340	TNF 3044/235		321
		C 3044	FRB 10/340			
240	SNLN 3048	23048 CC/W33	FRB 10/360	TSN 3048/255 S	ETS 3048	293
		23048-2CS5	FRB 10/360	TNF 3048/255		355
		C 3048	FRB 10/360			
260	SNLN 3052	23052 CC/W33	FRB 10/400	TSN 3052/275 S	ETS 3052	312
		23052-2CS5	FRB 10/400	TNF 3052/275		374
		C 3052	FRB 10/400			
280	SNLN 3056	23056 CC/W33	FRB 10/420	TSN 3056/295 S	ETS 3056	322
		C 3056	FRB 10/420	TNF 3056/295		384

¹⁾ Only the basic bearing designation is listed. Other bearing variants can also fit the housing. 230(00), 240(00) – spherical roller bearing, C... – CARB toroidal roller bearing

²⁾ The locating ring fits the bearing in the same row only. Two locating rings are required.



Shaft diameter		Dimensions Housing													Eye bolt according to DIN 580	Mass Housing		
d_a	d_b	$d_c^{1)}$ min	$d_c^{1)}$ max	A	A ₁	C _a	D _a	H	H ₁	H ₂	J	L	N	N ₁	G		kg	
mm				mm													-	kg
160	175			190	130	90	240	297	150	50	390	460	35	28	24	M10	41,0	
		171	173															
170	185			210	160	87	260	322	160	60	450	530	42	35	30	M12	50,5	
180	195			225	160	94	280	342	170	60	470	550	42	35	30	M12	58,5	
190	205			235	160	95	290	347	170	60	470	550	42	35	30	M12	58,5	
200	215			240	170	102	310	368	180	60	515	610	42	35	30	M12	76,0	
220	235			260	190	110	340	403	200	70	580	690	50	42	36	M12	103	
240	255			270	200	112	360	423	210	75	610	720	50	42	36	M12	117	
260	275			290	220	124	400	475	240	80	680	820	70	48	42	M12	162	
280	295			300	230	126	420	496	250	80	720	860	70	48	42	M12	184	

¹⁾ Valid for the sealed spherical roller bearing in the same row only.