

# RHP *bearings*

## Guide to RHP Self-Lube<sup>®</sup> bearings

NP  
SL  
MP  
SNP  
CNP  
SF  
MSF  
SFT  
MSFT  
LFTC  
FC  
MFC  
ST  
MST  
BT  
SLC  
MSC  
SCHE  
SCH  
SLFE  
SLFT  
SLFL  
LPB  
LPBR



# Self-

## pillow blocks

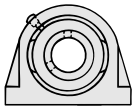


NP SL MP

cast iron, one piece

### BORE SIZE RANGE

<b>NP series</b>	Normal duty	12-90 mm	1/2-3 1/2 in
<b>SL series</b>	Low centre height	12-75 mm	1/2-2 15/16 in
<b>MP series</b>	Heavier duty	25-100 mm	1-4 in



SNP CNP

<b>SNP series</b>	Metric thread	20-60 mm	3/4-2 7/16 in
<b>CNP series</b>	UNC thread	20-60 mm	3/4-2 7/16 in

## flange units

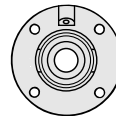


SF MSF

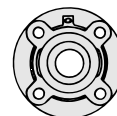
cast iron, one piece

### BORE SIZE RANGE

<b>SF series</b>	Normal duty	12-75 mm	1/2-3 in
<b>MSF series</b>	Heavier duty	25-100 mm	1-4 in



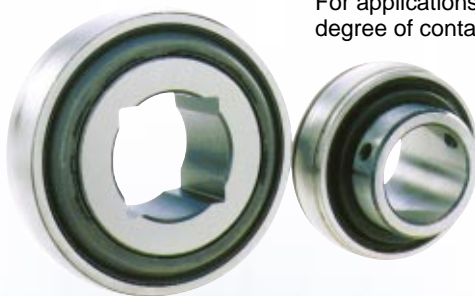
FC



MFC

<b>FC series</b>	Normal duty, METRIC SPIGOT	20-60 mm	3/4-2 7/16 in
<b>MFC series</b>	Heavier duty, INCH SPIGOT	25-100 mm	1-4 in

## inserts with triple lip seals



**Triple seal**  
For applications with a high degree of contamination.

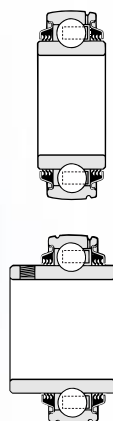
### Square, Round and Hexagonal Bores

These types with triple seals are commonly used on disc harrows and other applications. NSK supply equivalents to all popular types.

### Inserts

Triple seal inserts in series T1000 and T1000DEC are available in bearing groups T1025, T1030, T1035, T1040, T1045, T1050, T1055, T1060, T1070 and T1080.

They can be fitted into the housings shown in this guide and are designated with a prefix 'T'.  
e.g. T1040-40G = insert only  
e.g. TNP40 = complete unit



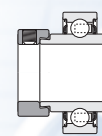
## inserts with single lip seals



### Parallel outside diameter



**1100**  
Set screw lock



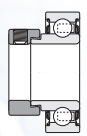
**1100 DEC**  
Eccentric collar lock



**1100 CG**  
Set screw lock and snap ring



**1300**  
Set screw lock

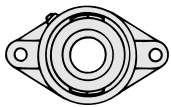


**1300 EC**  
Eccentric collar lock



# Self-Lube<sup>®</sup> – the quality product

## flange units



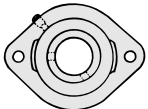
SFT MSFT



cast iron, one piece

### BORE SIZE RANGE

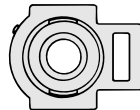
<b>SFT series</b>	Normal duty	12-60 mm	1/2-2 <sup>7</sup> / <sub>16</sub> in
<b>MSFT series</b>	Heavier duty	25-55 mm	1-2 <sup>3</sup> / <sub>16</sub> in



LFTC

<b>LFTC series</b>	Normal Duty	12-35 mm	1/2-1 <sup>7</sup> / <sub>16</sub> in
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## take-up units



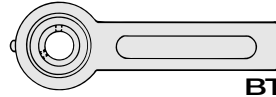
ST MST



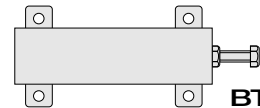
cast iron, one piece

### BORE SIZE RANGE

<b>ST series</b>	Normal duty	20-85 mm	3/4-3 <sup>7</sup> / <sub>16</sub> in
<b>MST series</b>	Heavier duty	25-100 mm	1-4 in



BT



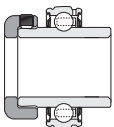
BTH/BTHF

<b>BT series</b>	Belt tensioner unit	25-35 mm	7/8-1 <sup>7</sup> / <sub>16</sub> in
<b>BTH series</b>	Belt tensioner holder without feet		
<b>BTHF series</b>	Belt tensioner holder with feet		

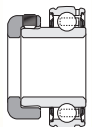
## inserts with single lip seals

### Spherical outside diameter

Suitable for use with most housing types.

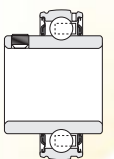


1000LSG



1200SG

"S" Lock.

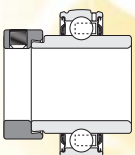


1000G

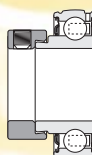


1200G

Integral set screw lock.



1000DECG



1200ECG

Eccentric collar lock.

## inserts HLT



### HLT inserts

HLT Self-Lube<sup>®</sup> inserts are designed to operate reliably at extreme temperatures, with upper and lower limits of +180 °C and -40 °C.

### High performance grease

Effective lubrication at extreme temperatures.

### Efficient sealing and protection

New durable silicone seal to proven 'S' type design up to 40 mm shafts, above this shaft size the 'M' type seal is used.

### Special internal features

Designed to function at temperature extremes.

# Product with the widest c

## other units

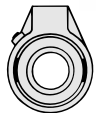
Special cast iron housings can also be produced for particular applications.



**SLC MSC** cast iron, one piece

### BORE SIZE RANGE

<b>SLC series</b>	Normal duty	12-65 mm	1/2-2 1/2 in
<b>MSC series</b>	Heavier duty	25-100mm	1-4 in



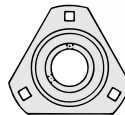
**SCHB SCH**

<b>SCHB series</b>	Normal duty BSP thread	20-80 mm	3/4-3 3/16 in
<b>SCH series</b>	Normal duty Metric thread	20-80 mm	3/4-3 3/16 in

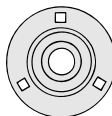
## pressed steel units



**SLFL**



**SLFT**



**SLFE**



Two piece, zinc plated

### BORE SIZE RANGE

<b>SLFE series</b>	Light duty	12-60 mm	1/2-2 7/16 in
<b>SLFT series</b>	Light duty	25-35 mm	7/8-1 7/16 in
<b>SLFL series</b>	Light duty	12-40 mm	1/2-1 1/2 in



**LPB LPBR**

<b>LPB series</b>	Light duty	12-35 mm	1/2-1 7/16 in
<b>LPBR series</b>	Light duty	12-30 mm	1/2-1 1/4 in

The LPBR series has a rubber seating ring between the insert and housing, and is suitable for light applications where noise and vibration are present.

## locking types



### "S" Lock

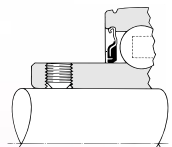
The new RHP "S" Lock shaft locking arrangement is for use with Self-Lube® mounted bearing units and inserts, where Simple, Secure and Safe locking is required. The arrangement consists of a concentric collar fitted with two set screws, which contact the inner ring diameter when tightened. This action causes the collar and inner ring to move in opposite radial directions to lock the whole bearing assembly securely to the shaft.

The "S" Lock is designed as an alternative to the 'eccentric collar' type for the series 1200ECG and 1000DECG.



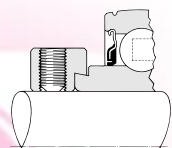
### Set screw lock

This simple locking system is suitable for most applications except where vibration is a problem. The locking arrangement consists of two knurled-cup point set screws fitted in the extended inner ring. These set screws are tightened down onto the shaft.



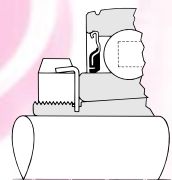
### Eccentric collar lock

This locking system is often used when vibration is a problem. The locking arrangement consists of an eccentric diameter formed on the extended inner ring of the bearing which engages an eccentric diameter in the bore of a separate collar. The collar is then locked in position on the shaft with a knurled cup-point set screw.



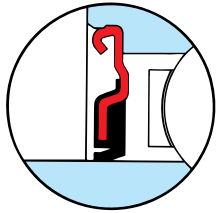
### Taper sleeve lock

This locking system is recommended when a positive concentric lock is required or when heavy vibration and/or shock load is present. The locking arrangement consists of a standard taper adaptor sleeve, locknut and lock washer (H300 series).



# choice

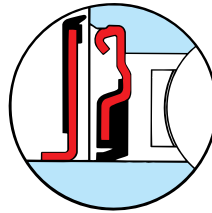
## seal types



### Single lip seal (standard)

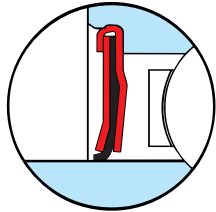
The 'S' type seal has a moulded nitrile lip bonded to a strong steel pressing secured in the bearing outer ring.

For extremes of temperature, +180°C to -40°C, silicon seals made to the proven 'S' type design are available.



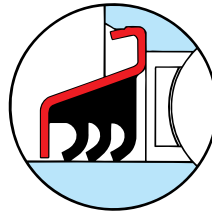
### Single lip seal plus flinger seal

The 'Flinger Seal' has a nitrile moulded lip bonded to a steel former, which is pressed onto the bearing inner ring. This 'extra seal' gives added protection to the standard single lip seal to extend bearing life in arduous conditions without any loss in speed capability.



### Single lip seal (above 40 mm shaft size)

The 'M' type seal consists of a nitrile fabric sealing element sandwiched between two metal pressings. This has been successfully proven over the years in a wide variety of applications.



### Triple lip seal

This seal is recommended where a high degree of contamination is present and consists of one piece nitrile moulding with three sealing lips bonded to a steel pressing. When secured in the outer ring it makes a highly efficient sealing arrangement. There is a restricted speed rating with this seal type.

## cage types

### Nylon cage

A one-piece high density injection moulded nylon 66 cage is fitted as standard. This specially developed cage has proved its reliability in a wide range of challenging applications throughout the world.

Bearing temperature limits are:

HIGH +110°C    LOW -20°C

### Steel cage

Pressed steel cages are fitted to bearing inserts required to operate at extremes of temperature.

Bearing temperature limits are:

HIGH +180°C    LOW -40°C



## protector

### Self-Lube® Protector

The Self-Lube® Protector has been designed to protect the machine operator from the dangers of rotating shaft ends. It also provides additional protection to the bearing from contamination.

The Protector is made from mild steel coated with enamel for an attractive durable appearance.

The Protector fits easily and securely to most standard cast Self-Lube® units. It is difficult to dislodge. It can be removed without damage and refitted again and again. No special bearings or additional securing devices are required.

Protectors are available for bearing groups 1020, 1025, 1030, 1035, 1040, 1045, 1050, 1055 and 1060.



# Self-Lube<sup>®</sup> – housed bearing units

Below is a pillow block unit, but NSK offer a wide range of housed bearing units with various sealing options to suit the bearing application.

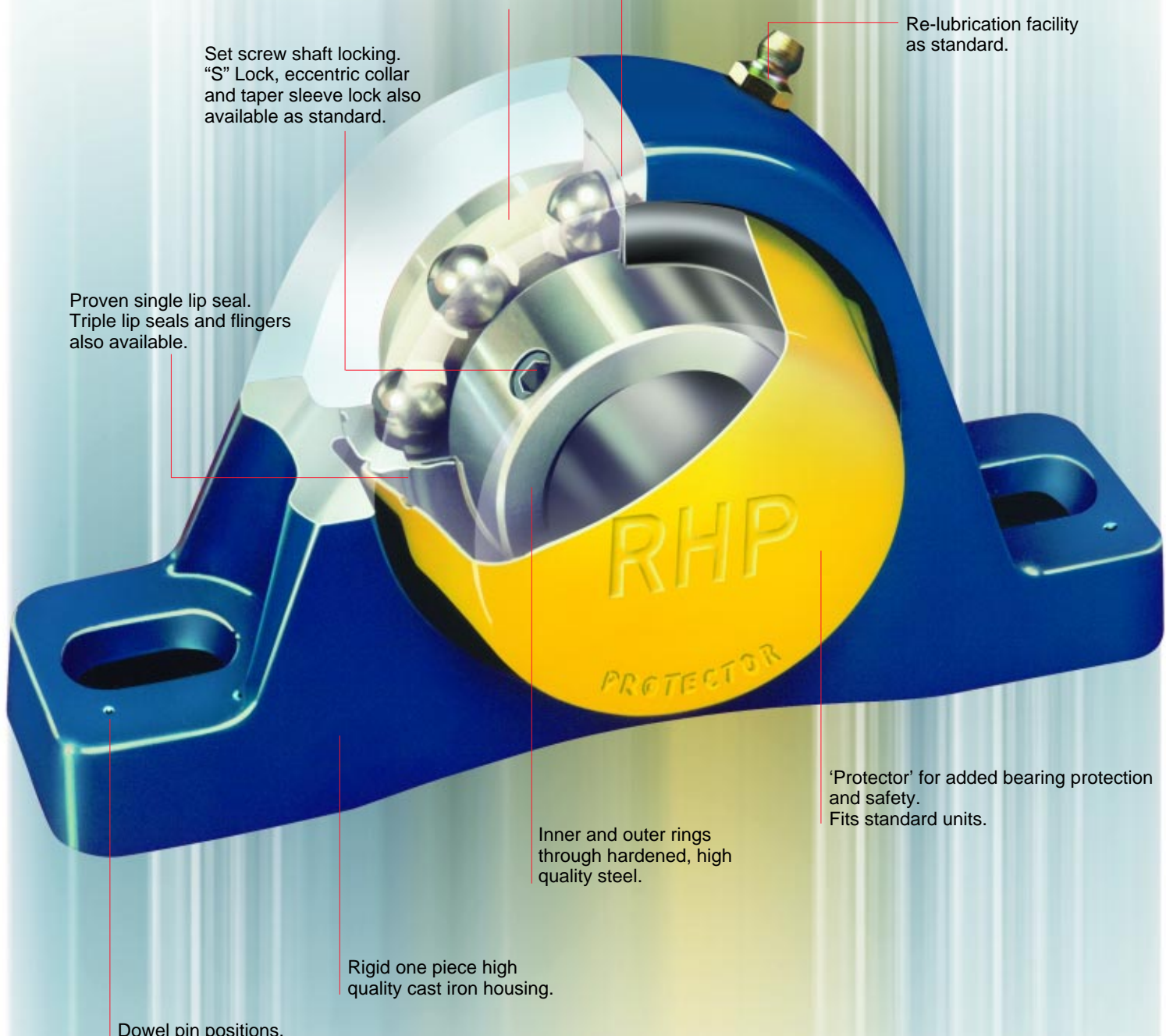
Spherical seating to allow for initial misalignment on mounting.

One piece Nylon 66 cage as standard.  
Metal cage available for extremes of temperature.

Set screw shaft locking.  
"S" Lock, eccentric collar and taper sleeve lock also available as standard.

Re-lubrication facility as standard.

Proven single lip seal.  
Triple lip seals and flingers also available.



'Protector' for added bearing protection and safety.  
Fits standard units.

Inner and outer rings through hardened, high quality steel.

Rigid one piece high quality cast iron housing.

Dowel pin positions.

# quality



**NSK**

# NP introduction

This leaflet introduces the RHP Self-Lube® range of mounted bearing units and wide inner ring bearings. Full technical details are available in our separate catalogue, 'RHP Self-Lube® Bearings'.

Self-Lube® units provide simple and effective bearing arrangements capable of accommodating moderate initial misalignment from mounting errors. The range of inserts and housings cover a wide variety of styles, heavy or light applications and metric or inch sizes.

The reliability, simplicity and ease of assembly of items in the Self-Lube® range has resulted in their popularity for applications such as process and automation equipment, extraction, agricultural and construction machinery.

A corrosion resistant range of bearings and housings, the RHP Silver-Lube® is available for applications where frequent thorough washdowns are necessary, optimum hygiene standards are required and good chemical resistance is important. Details of these are covered in our separate brochure RHP Silver-Lube® Corrosion Resistant Bearing Units.

## insert type

### housing type

cast iron  
one piece



pressed steel  
two piece



1000LSG	1200SG	1000G	1000DECG	1200G	1200ECG	T1000G	T1000DECG	1000-GFS	1000DECGFS	1000-KG
NP-LS SL-LS	NP-S SL-S	NP SL MP	NP-DEC SL-DEC	NP-A SL-A	NP-EC SL-EC	TNP TSL TMP	TNP-DEC TSL-DEC	NP-FS SL-FS MP-FS	NP-DECFS SL-DECFS	NP1000-K MP1000-K
SNP-LS CNP-LS	SNP-S CNP-S	SNP CNP	SNP-DEC CNP-DEC	SNP-A CNP-A	SNP-EC CNP-EC	TSNP TCNP	TSNP-DEC TCNP-DEC	SNP-FS CNP-FS	SNP-DECFS CNP-DECFS	
SF-LS	SF-S	SF MSF	SF-DEC	SF-A	SF-EC	TSF TMSF	TSF-DEC	SF-FS MSF-FS	SF-DECFS	MSF1000-K
SFT-LS	SFT-S	SFT MSFT	SFT-DEC	SFT-A	SFT-EC	TSFT TMSFT	TSFT-DEC	SFT-FS MSFT-FS	SFT-DECFS	MSFT1000-K
LFTC-LS	LFTC-S	LFTC	LFTC-DEC	LFTC-A	LFTC-EC	TLFTC	TLFTC-DEC	LFTC-FS	LFTC-DECFS	
FC-LS	FC-S	FC	FC-DEC	FC-A	FC-EC	TFC	TFC-DEC	FC-FS	FC-DECFS	
		MFC				TMFC		MFC-FS		
ST-LS	ST-S	ST MST	ST-DEC	ST-A	ST-EC	TST TMST	TST-DEC	ST-FS MST-FS	ST-DECFS	MST1000-K
	BT-S	BT		BT-A	BT-EC	TBT		BT-FS		
SLC-LS	SLC-S	SLC MSC	SLC-DEC	SLC-A	SLC-EC	TSLC TMSC	TSLC-DEC	SLC-FS MSC-FS	SLC-DECFS	
		SCHB SCH				TSCHB TSCH		SCHB-FS SCH-FS		
		SLFE	SLFE-DEC	SLFE-A	SLFE-EC	TSLFE	TSLFE-DEC	SLFE-FS	SLFE-DECFS	
		SLFT	SLFT-DEC	SLFT-A	SLFT-EC	TSLFT	TSLFT-DEC	SLFT-FS	SLFT-DECFS	
		SLFL	SLFL-DEC	SLFL-A	SLFL-EC	TSLFL	TSLFL-DEC	SLFL-FS	SLFL-DECFS	
		LPB	LPB-DEC	LPB-A	LPB-EC					
		LPBR	LPBR-DEC	LPBR-A	LPBR-EC					

