A wide assortment to meet your needs

SKF – number one in bearings

SKF has gained a reputation for excellence in the roller bearing industry by providing customers with the highest quality products, solutions and services. Commitment to total quality is reflected in every product that SKF offers and bushings are no exception.

SKF – your bushing partner

With a global sales network and logistics expertise far superior to that of any competitor, SKF is able to provide customers with delivery services and product solutions that are second to none. Featuring the world's widest bushing stock assortment, SKF gives distributors and customers the ability to meet all of their industrial application needs with one single source.

Select the right bushing for the application

Throughout the world we are recognized as the leading rolling bearing manufacturer. We are renowned for our excellent technical support and application know-how. However, we are also a major player in the plain bearing field: spherical plain bearings, rod ends, and a much expanded range of bushings. The product selection guide in this catalogue simplifies the selection of bushings from our expanded range.

SKF solid bronze bushings
The traditional and robust bushing material

SKF sintered bronze bushings
Oil impregnation enables very high sliding velocity

SKF wrapped bronze bushings
Excellent in dirty environments due to lubrication pockets

SKF PTFE composite plain bearings
Long, maintenance-free service life due to low friction

SKF POM composite plain bearings
Optimized for minimal maintenance in difficult environments

SKF PTFE polyamide bushings
The cost-effective, maintenance-free bushing

SKF filament wound bushings
The maintenance-free bushing for extreme operating conditions

SKF solid bronze bushings

The traditional and robust bushing material

Solid bronze bushings, which are suitable for use in a wide variety of applications, are the most commonly used type of cylindrical bushing. The solid bronze material is well suited for highly demanding applications in tough environments. SKF offers a standard assortment of both straight and flanged bushings.

Advantages of SKF solid bronze bushings include:

- insensitive to dirty environments
- resistant to shock loads and vibrations at low speeds
- the possibility to operate with lower quality shaft finish
- good resistance to corrosive contaminants
- equipped with grooves to retain lubricant

Material

SKF solid bronze bushings are made of a multi-component bronze, CuSn7Zn4Pb7-B, which has very good sliding properties. All surfaces of a solid bronze bushing are machined.

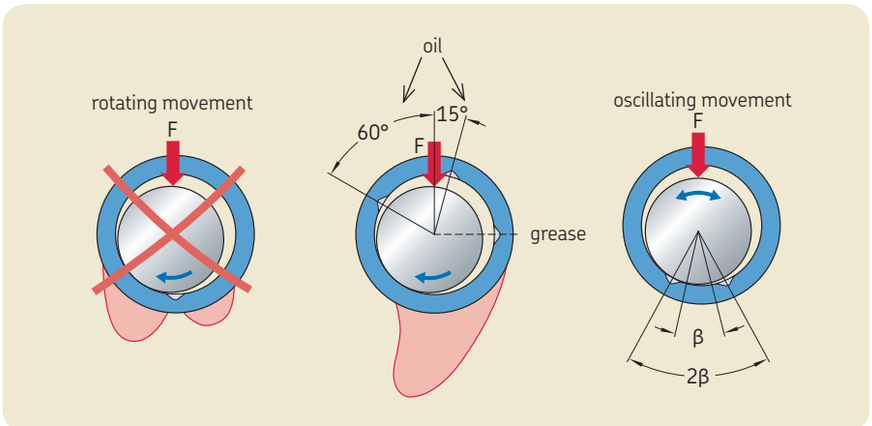
Main applications[1)]

SKF solid bronze bushings are intended for oscillating movements in both the radial and axial directions. SKF solid bronze bushings are also suitable for applications where rotating speeds are low.

Applications include:

- construction machinery
- transport equipment
- pulp and papermaking machinery
- offshore equipment

Positioning of the lubrication groove at different operating conditions



[1)] The performance of SKF solid bronze bushings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

SKF solid bronze bushings can be lubricated with either oil or grease. The lubricant not only improves the sliding properties, but also reduces wear and prevents corrosion. While oil is used in exceptional cases, solid bronze bushings are typically grease lubricated.

To protect the bushing and lubricant, seals are recommended in highly contaminated environments.

All bushings with a bore diameter > 14 mm incorporate an axial lubrication groove.

Characteristics

Permissible load (dyn/stat), N/mm^2	25 / 45
Permissible sliding velocity, m/s	0,5
Friction coefficient μ (greased)	0,08 .. 0,15
Temperature range, °C	–40 .. +250

Application recommendations

Shaft tolerance	e7 – e8
Housing tolerance	H7
Shaft roughness R_a, μm	0 .. 1,0
Shaft hardness, HB	165 – 400

SKF solid bronze bushings are available both as straight and flanged bushings.

SKF sintered bronze bushings

Oil impregnation enables very high sliding velocity

SKF sintered bronze cylindrical bushings are self-lubricating and maintenance-free. These bushings consist of a porous bronze matrix impregnated with lubricant. The permissible sliding velocity for sintered bronze bushings is very high, making them suitable for rotating applications. SKF offers a full line of both straight and flanged sintered bronze bushings.

Advantages of SKF sintered bronze bushings include:
- very high sliding velocity
- lubrication free
- maintenance-free operation
- good frictional properties

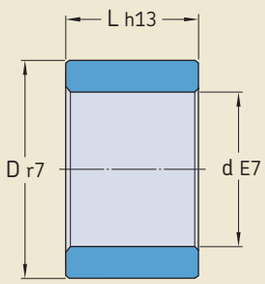
Material

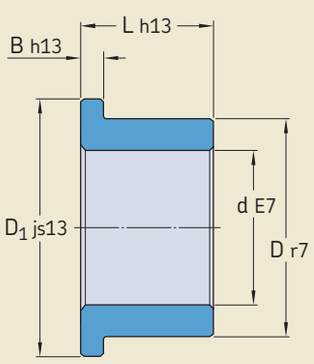
SKF sintered bronze bushings consist of a sintered metallic bronze and graphite matrix (1% weight of graphite) with fully impregnated porosity. The material composition of SKF sintered bronze bushings is SINT A51 with a porosity volume of 28%, impregnated with mineral oil. Machining or grinding of the sliding surface of a porous sintered bushing is not recommended due to the risk of closing the bushing pores.

Main applications[1)]

SKF sintered bronze bushings are most suitable for applications with rotating movements and where self-lubricating properties of the material are a prerequisite.

Applications include:
- electrical equipment
- household equipment
- printing machinery
- machine tools





[1)] The performance of SKF sintered bronze bushings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

When storing or mounting, the bushing should never come in contact with absorbent material as it may wick the oil away very quickly. Therefore, SKF recommends keeping the bushing in it's original package until just prior to mounting.

Additional lubrication is usually not necessary.

Characteristics	
Permissible load (dyn/stat), N/mm^2	10 / 20
Permissible sliding velocity, m/s	0,25 .. 5
Friction coefficient μ (greased)	0,05 .. 0,10
Temperature range, °C	–10 .. +90
Application recommendations	
Shaft tolerance	f7 – f8
Housing tolerance	H7
Shaft roughness R_a, μm	0,2 .. 0,8
Shaft hardness, HB	200 – 300

SKF sintered bronze bushings, which are impregnated with a lubricant, are available both as straight and flanged bushings.

SKF wrapped bronze bushings

Lubrication pockets help extend bushing service life

SKF wrapped bronze bushings are particularly well suited for applications where high levels of contamination make relubrication necessary. The sliding surface of an SKF wrapped bronze bushing contains diamond shaped pockets that must initially be filled with grease. The pockets act as reservoirs to progressively release lubricant during operation. SKF offers a full range of both straight and flanged wrapped bronze bushings. Straight bushings are manufactured to dimensions in accordance with ISO 3547-1.

Advantages of SKF wrapped bronze bushings include:
- insensitive to contaminated environments
- resistant to shock loads and vibrations at slow speeds
- good resistance to corrosive environments

Material

SKF wrapped bronze bushings are made entirely of bronze, CuSn8. The bushings are produced from strips which are then wrapped and calibrated.

Main applications[1)]

These bushings are well suited for machinery that must operate in highly contaminated environments and where shock loads and/or vibrations occur.

Applications include:
- agricultural machinery
- hoisting equipment
- construction machinery
- forestry machinery

Diamond-shaped lubricant reservoirs

[1)] The performance of SKF wrapped bronze bushings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

Whether grease or oil is used, a good quality lubricant will reduce friction and wear by separating a bronze bushing from its shaft. To protect the bushing and lubricant in highly contaminated environments, SKF recommends using seals.

Characteristics

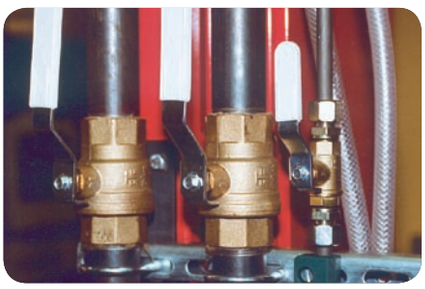
Permissible load (dyn/stat), N/mm^2	40 / 120
Permissible sliding velocity, m/s	1,0
Friction coefficient μ (greased)	0,08 .. 0,15
Temperature range, °C	–40 .. +150

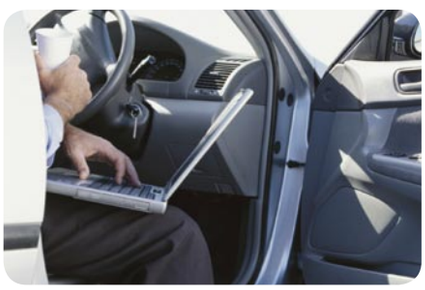
Application recommendations

Shaft tolerance	e7 – f8
Housing tolerance	H7
Shaft roughness R_a, μm	0,4 .. 0,8
Shaft hardness, HB	150 – 400

SKF wrapped bronze bushings are available both as straight and flanged bushings.

SKF PTFE composite bushings, thrust washers and strips





Extend service life with PTFE composite plain bearings

SKF PTFE composite plain bearings are the maintenance-free solution to premature bearing failure in heavy load/medium speed applications. The SKF assortment of PTFE composite plain bearings consist of a wide range of both straight and flanged bushings, thrust washers and strips.

Straight bushings are manufactured to dimensions in accordance with ISO 3547-1.

Advantages of SKF PTFE composite plain bearings include:

- maintenance-free operation
- very good frictional properties
- high load carrying capacity
- operating temperatures up to 250 °C
- sliding velocity up to 2 m/s
- small operating clearance

Material

SKF PTFE composite plain bearings combine the mechanical strength of steel with the low friction of a PTFE-based self-lubricating lead-free sliding layer. The intermediate layer of porous tin bronze creates a strong bond between the backing and sliding surfaces and also improves the dissipation of heat generated during operation. To protect the bearings from corrosion, the steel backing is tin-plated. With the exception of the sliding surface, PTFE composite dry sliding bearings can be machined. Calibration is possible within certain limits.

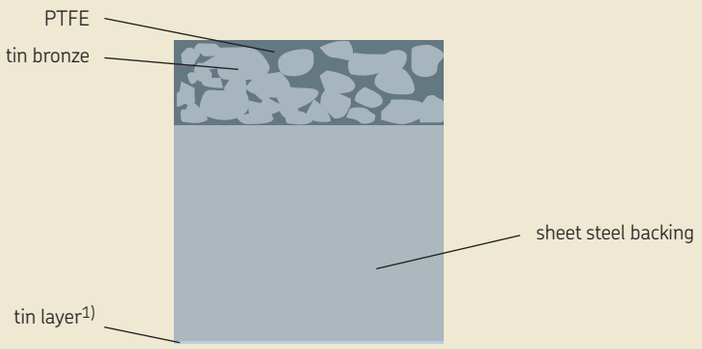
Main applications[1)]

SKF PTFE composite dry sliding bearings are suitable for applications where there are heavy loads and where a sliding material with self lubricating properties is a prerequisite.

Applications include:

- automotive
- material handling equipment
- home appliances and consumer goods
- textile machinery

Cross section of SKF PTFE composite plain bearings



1) Strips come without tin layer as standard

1) The performance of SKF PTFE composite plain bearings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

The PTFE-based sliding surface permits smooth, low-friction operation without lubrication. During a short running-in phase, there will be some transfer of PTFE material from the sliding contact surface to the counterface. After this transfer, the characteristic low friction and wear properties of these bearings will be achieved.

The presence, or continuous supply of oil or other non-corrosive fluids may be advantageous and improve the performance of these bearings.

Characteristics

Permissible load (dyn/stat), N/mm^2	80 (v ≤ 0,02) / 250
Permissible sliding velocity, m/s	2,0 (p ≤ 1,0)[1)]
Friction coefficient μ	0,03 .. 0,25
Temperature range, °C	–200 .. +250

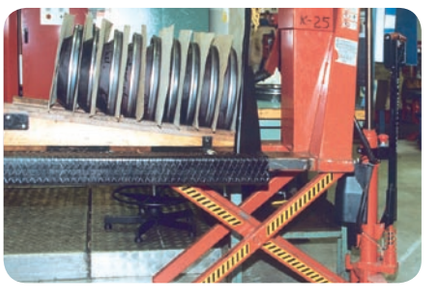
Application recommendations

Shaft tolerance	f7 – h8
Housing tolerance	H7
Shaft roughness R_a, μm	0 .. 0,4
Shaft hardness, HB	300 – 600

1) See page 20

SKF PTFE composite plain bearings are available, both as straight and flanged bushings, washers and strips.

SKF POM composite bushings, thrust washers and strips



Optimal combination of minimal maintenance under tough operating conditions

SKF POM composite plain bearings are referred to as prelubricated because they require only a trace of lubricant to operate satisfactorily for long periods. The bearing material is designed to operate with marginal lubrication and effectively fills the gap between fully lubricated bearings and dry sliding bearings. The SKF assortment of POM composite plain bearings consist of a wide range of straight bushings, thrust washers and strips.

Straight bushings are manufactured to dimensions in accordance with ISO 3547-1.

Advantages of SKF POM composite plain bearings include:

- maintenance-free operation
- very good frictional properties
- high load carrying capacity
- high sliding velocity
- small operating clearance

Material

SKF POM composite plain bearings are suitable for applications that require minimal maintenance under difficult operating conditions. As a result of the lubricant retention pockets on the sliding surface, SKF POM composite plain bearings are especially well-suited for applications in contaminated environments where lubricant cannot be supplied continuously or frequently.

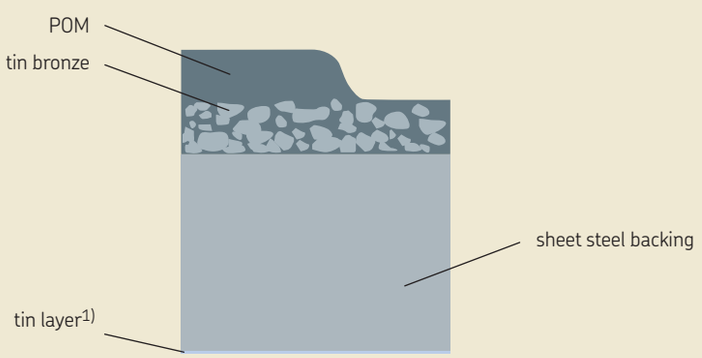
Main applications[1)]

SKF POM composite plain bearings are suitable for applications where there are heavy loads and where the self-lubricating properties of the material are a prerequisite.

Applications include:

- agricultural equipment
- construction machinery
- material handling equipment
- home appliances and consumer goods

Cross section of SKF POM composite plain bearings



[1)] Strips come without tin layer as standard

[1)] The performance of SKF POM composite plain bearings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

SKF POM composite plain bearings are designed to operate under marginal lubrication conditions. The sliding surface of these plain bearings contains grease reservoirs which should be filled prior to installation. It is not necessary to relubricate these plain bearings, but the presence of a lubricant can extend the plain bearing service life considerably. To protect the mating surface against corrosion, grease can be applied periodically.

Characteristics

Permissible load (dyn/stat), N/mm^2	120 (v ≤ 0,02) / 250
Permissible sliding velocity, m/s	2,5 (p ≤ 1,0)[1)]
Friction coefficient μ	0,02 .. 0,20
Temperature range, °C	–40 .. +110

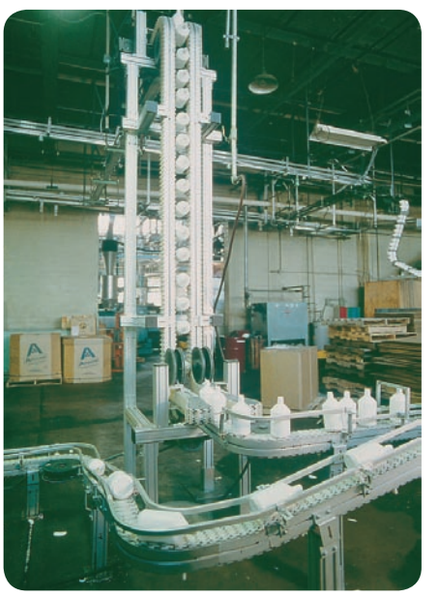
Application recommendations

Shaft tolerance	f7 – h8
Housing tolerance	H7
Shaft roughness R_a, μm	0 .. 0,8
Shaft hardness, HB	150 – 600

[1)] See page 20

SKF POM composite plain bearings are available as straight bushings, washers and strips.

SKF PTFE polyamide bushings



The cost-effective maintenance-free bushing

The thermoplastic material used to make SKF PTFE polyamide bushings provides maintenance-free, dry sliding operation. SKF PTFE polyamide bushings are designed for applications where other polymer bushings might fail prematurely. These thin-walled bushings promote heat dissipation, enabling high sliding velocities. SKF offers a standard assortment of both straight and flanged PTFE polyamide bushings. Straight bushings are manufactured to dimensions in accordance with ISO 3547-1.

Advantages of SKF PTFE polyamide bushings include:
- maintenance-free
- cost-effective
- corrosion-resistant
- electrical insulator

Material

SKF PTFE polyamide bushings are made from a glass-fibre reinforced thermoplastic that contains PTFE. The material mix enables these self-lubricating, wear-resistant bushings to accommodate moderate loads.

Main applications[1)]

SKF PTFE polyamide bushings are suitable for applications where cost-effective maintenance-free bushings are preferred.

Applications include:
- textile machinery
- medical equipment
- fitness equipment
- household equipment

[1)] The performance of SKF PTFE polyamide bushings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications.

Lubrication

SKF PTFE polyamide bushings are designed for dry operation. A lubricant can, however, improve the performance of these bushings. With an adequate supply of grease, oil, water or other liquid, the operating speed of these bushings can be increased. SKF PTFE polyamide bushings are resistant to most lubricating oils and greases.

Characteristics	
Permissible load (dyn/stat), N/mm^2	40 / 80
Permissible sliding velocity, m/s	1,0
Friction coefficient μ	0,06 .. 0,15
Temperature range, °C	–30 .. +110
Application recommendations	
Shaft tolerance	h8 – h9
Housing tolerance	H7
Shaft roughness R_a, μm	0 .. 0,8
Shaft hardness, HB	100 – 300

SKF PTFE polyamide bushings are available both as straight and flanged bushings.

SKF filament wound bushings

The maintenance-free bushing for extreme operating conditions

SKF filament wound bushings are made from resin and fibres wound in multiple layers. This composite material was specially developed to accommodate heavy loads, vibrations and corrosive environments. SKF filament wound bushings are often dimensionally interchangeable with solid bronze or steel bushings. SKF offers a standard assortment of filament wound bushings with dimensions in accordance with ISO 4379.

Advantages of SKF filament wound bushings include:

- high load carrying capacity
- accommodate shock loads and vibrations
- low sensitivity to misalignment and edge loading
- maintenance-free operation
- corrosion-resistant
- very good frictional behaviour
- very good electrical insulator

Material

The modern technique of fibre winding, together with a specially developed resin matrix, combines the outstanding mechanical properties of glass-fibre with the excellent tribological behaviour of PTFE and high strength thermoplastic PES fibres. With the exception of the sliding layer, all SKF filament wound bushings can be machined.

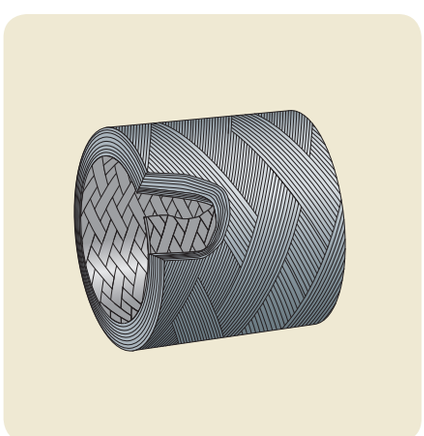
Main applications[1)]

SKF filament wound bushings are suitable for applications where there are heavy loads and vibrations and where maintenance-free operation is preferred.

Applications include:

- construction machinery
- agricultural and forestry machinery
- hoisting and conveyor equipment
- offshore equipment

Cross section of SKF filament wound bushing



1) The performance of SKF filament wound bushings depends on the interaction of load, lubrication, surface roughness, sliding velocity, and temperature encountered in specific applications .

Lubrication

SKF filament wound bushings have excellent dry sliding characteristics due to the unique sliding surface consisting of PTFE and PES fibres in an epoxy resin. The low friction sliding surface does not require additional lubricant. However, the presence of a lubricant offers protection against contaminants and has no negative effect.

NOTE: Seals are recommended when the bushing is to be used in a highly contaminated environment.

Characteristics

Permissible load (dyn/stat), N/mm^2	140 / 200
Permissible sliding velocity, m/s	0,5
Friction coefficient μ	0,03 .. 0,08
Temperature range, °C	–50 .. +140

Application recommendations

Shaft tolerance	h8
Housing tolerance	H7
Shaft roughness R_a, μm	0,2 – 0,4
Shaft hardness, HB	> 490

SKF filament wound bushings are available as straight bushings.