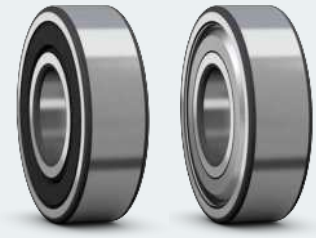
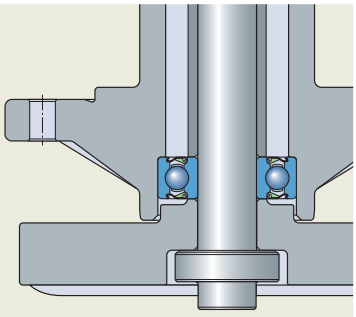
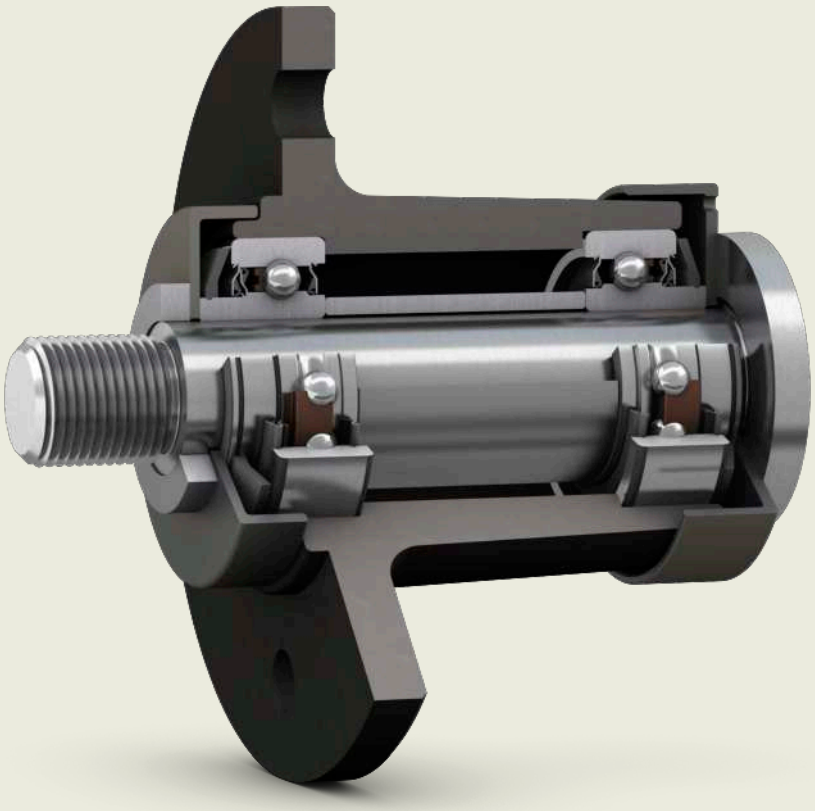
Bearing solutions for lawn and garden applications

Extend machine life and keep warranty costs down



- Improved contamination resistance
- Interchangeable with standard bearing arrangements





2X

GREASE FILL OF STANDARD SOLUTIONS

- Bearings undergo rigorous testing
- Designs available for easy mounting

Contamination is the leading cause of premature bearing failure in residential and commercial equipment

Lawn and garden equipment is, by nature, exposed to a number of harmful contaminants and debris. Idler pulleys, spindles, clutches, casters, rollers, and wheels should run smoothly and reliably day after day. You expect consistent and long-term performance in every part of the application. But standard bearing arrangements aren't properly equipped to keep rotating equipment protected against contamination in this demanding environment. This often leads to increased cost since you need to regularly replace spindles, idler pulleys, and other components. In the worst-case scenario, you experience machine failure in the middle of your operation.

What if you could maximize outdoor equipment performance and reliability by simply preventing contaminant ingress?

Preventing contaminant ingress is crucial in extending service life and lowering the total cost of machine ownership. Many original equipment manufacturers in the lawn and garden industry use standard deep-groove ball bearings with standard seals. And although suitable for relatively clean applications, such as electric motors, they are not designed for use in high contamination areas. They normally won't last longer than a couple of hundred hours when exposed to clippings, fertilizer, dirt, and debris.

To ensure our bearing solutions for lawn and garden are a reliable and cost-effective choice, we have included the latest sealing technology in our designs. Made from nitrile rubber, seals have improved wear life and can withstand high operating temperatures. A specialized landing groove on the inner ring provides support and can prevent seal lip inversion due to contamination or pressure washing

Known as TurfXtreme, our bearings for lawn and garden applications also contain twice the amount of grease of standard solutions. This provides better bearing lubrication and resistance to contamination and corrosion, contributing to fewer relubrication stoppages. Additionally, they are interchangeable with current industry standard deep-groove ball bearings.

Your benefits at a glance:

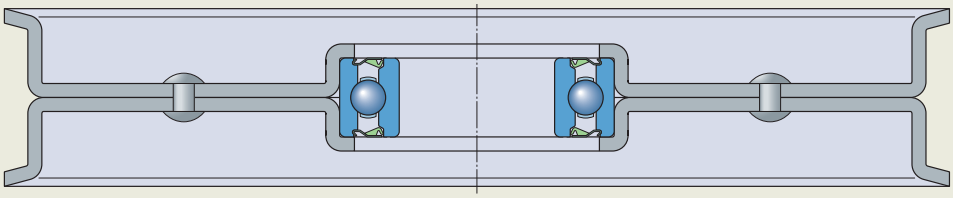
- **Increased equipment life during normal operating conditions**
- **Reduced maintenance and machine downtime**
- **Lower total cost of ownership**
- **Tailored design for lawn and garden applications**
- **Increased lubrication**
- **Fully interchangeable with standard bearing arrangements**

Bearing solutions for mower applications

Solutions for idler pulleys

If an idler pulley seems loose, is vibrating, or feels rough when rotated, it's likely a result of substandard bearing arrangements. Regular pressure washing is also a common cause of early failure. Our seals help keep any water or residue from entering the bearing arrangements and can withstand extreme operating conditions. Increased lubrication also helps defend against corrosion.

- Increased lubrication for improved corrosion protection
- Seal options for high contamination environments
- Seals designed to avoid water intrusion during mower deck washing
- Special designs with extended inner rings available for easy mounting



Solutions for spindles

As contamination is the most common cause of premature spindle failure in lawn and garden applications, the performance of OEM-supplied mower spindles is often limited by the ability of the bearing seals and features to resist contamination ingress. Our bearings contain more lubricant than standard arrangements, are easy to install, and include seals to help keep out wrapping debris.

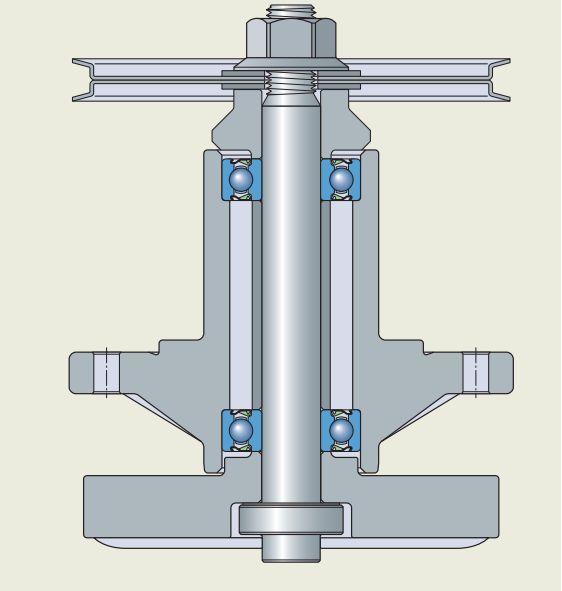
- Increased lubrication for improved corrosion protection
- Seal options for high contamination environments
- Seals designed to avoid water intrusion during mower deck washing
- Special designs with extended inner rings available for easy mounting
- Seal designs available to avoid damage due to wrapping debris

Mower deck spindle assemblies

Our mower deck spindle assemblies are an alternative for OEMs interested in a high-performance, integrated spindle assembly. As in all lawn and garden environments, it's crucial that mower deck spindles are robust enough to stand up to even the harshest operating conditions.

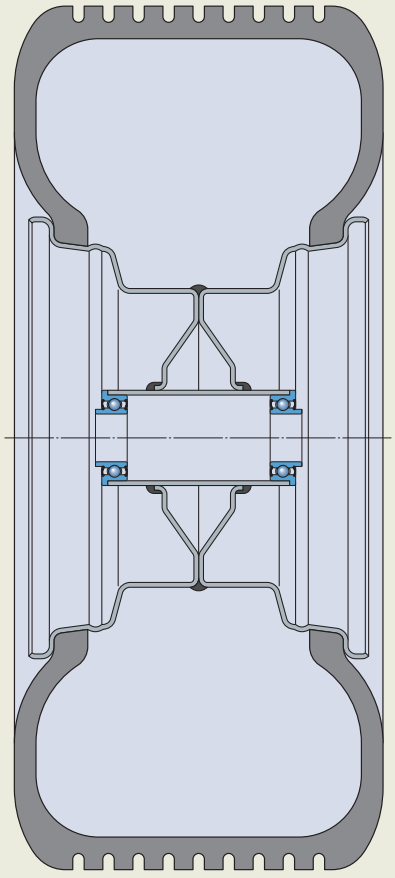
Our bearing seals are protected by a nylon flinger and a thick steel end cap. These can provide added seal protection when exposed to external force. Our spindle assemblies also incorporate a high strength ductile iron housing and precision shaft, spacers, and bearings which are all designed for smooth operation and optimized spindle life. Finally, customized mounting dimensions help to get new spindles up and running sooner.

- High quality precision bearings for long service life
- Double seal arrangement facing outboard side to protect against contamination
- Ductile iron housing for increased durability
- Precise bearing shaft/housing fits and spacers can avoid short hour failures due to preload, etc.
- End caps and nylon flingers can provide first line of protection against grass, dust, moisture and wrapping contamination



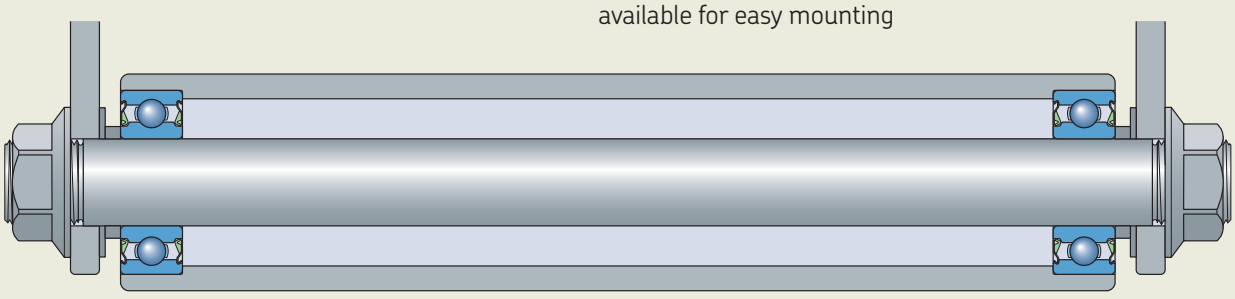
Solutions for wheels

- Increased lubrication for improved corrosion protection
- Designs with increased clearance available for economical mounting (standard tube can be used)
- Flanges, snap rings, or special dimensions available for easy mounting



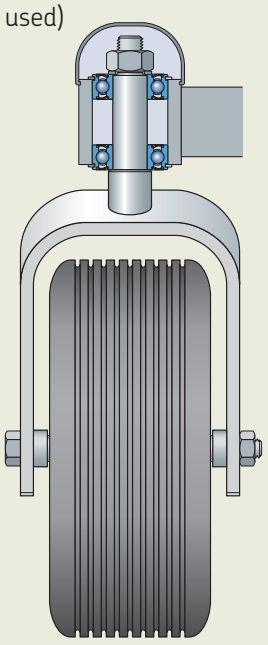
Solutions for rollers

- Increased lubrication for improved corrosion protection
- Seal options for high contamination environments including multi-lip seals
- Designs with increased clearance available for economical mounting (standard tube can be used)
- Flanges, snap rings or special dimensions available for easy mounting



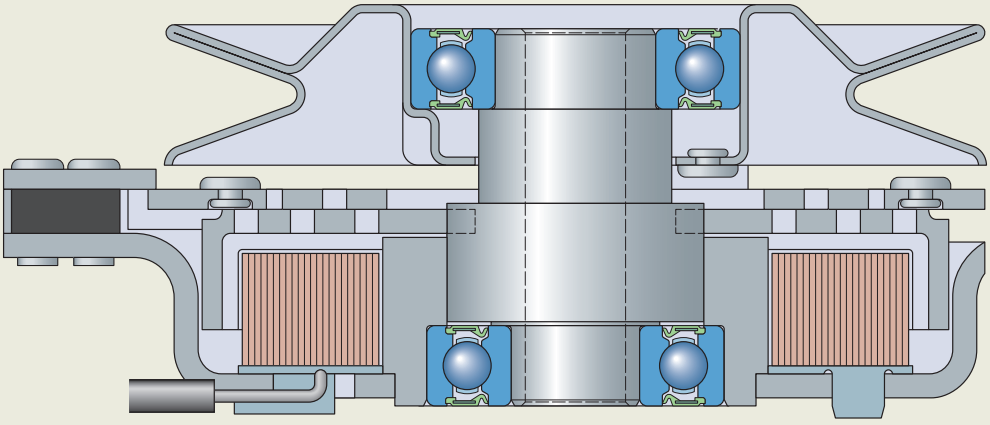
Solutions for casters

- Ball bearings with integrated snap rings for easy mounting
- Designs with increased clearance available for economical mounting (standard tube can be used)



Solutions for clutches

- Specially-designed seals can prevent grease purge and ingress of contaminants
- Seal material and grease options available for high temperature applications



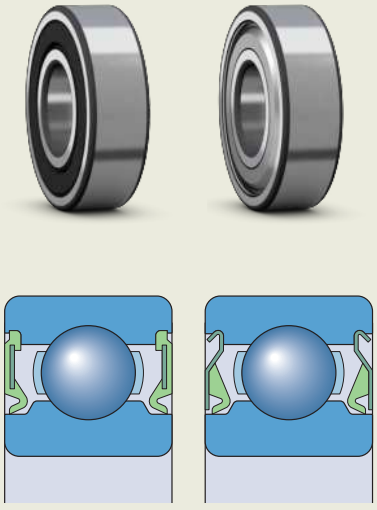
Tailored for longer life and top performance

Regardless of application, our bearings can help you meet high performance requirements.

How SKF solutions can benefit your operation:

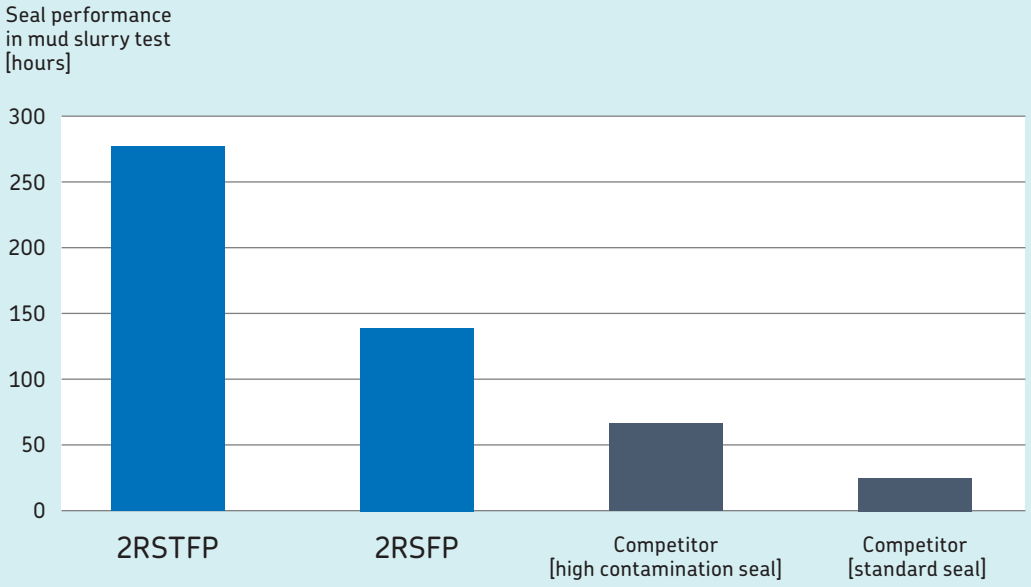
Feature	Benefit	2RSFP seal	2RSTFP seal
High quality through hardened bearing steel	Improves fatigue life	X	X
Precision ground and super finished raceways	Reduces vibration and extends life	X	X
Premium polyurea thickened grease	Excellent high and low temperature capability extends grease life	X	X
Increased grease fill (50-60%)	Improves corrosion protection during machine idle periods	X	X
Premium nitrile/ NBR seal material composition	Longer seal life due to improved resistance to high temperatures and wear	X	X
Seal design optimized for lawn and garden applications	Maintains seal integrity when exposed to external forces due to wrapping debris and pressure washing and thereby provides a long wear life and contamination resistance	X	X
Precision ground seal contact surface	Smooth surface finish results in longer seal lip life and improves ring concentricity which results in increased seal effectiveness	X	X
Heavy gauge steel shroud	Additional protection against solid contaminants (sticks, pebbles) and wrapping debris		X

2RSFP 2RSTFP



Mud slurry testing

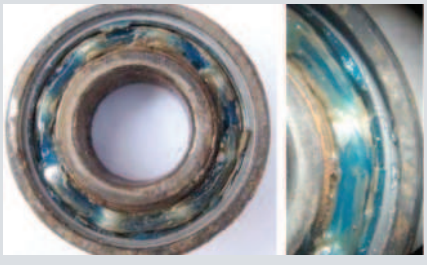
Our bearings undergo rigorous testing to validate their integrity. Mud slurry testing accelerates the effects that contaminants and debris have on a bearing. To achieve a valid test result, bearings are submerged halfway in a mixture of abrasive test dust, water, and fertilizer – simulating high contamination operating conditions.



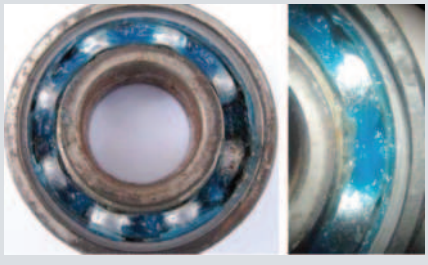
Typical bearing contamination after mud slurry testing

Typical standard seal (after 32 hours)

Competitor high contamination seal (after 32 hours)

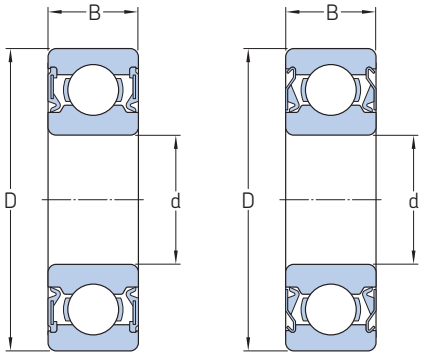


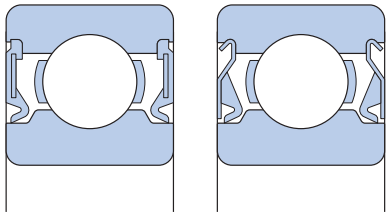
2RSFP seal (after 32 hours)



2RSTFP seal (after 32 hours)

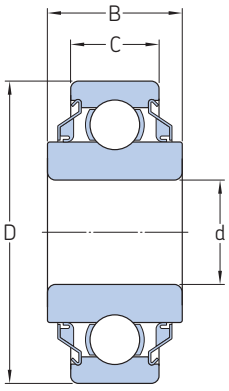
Our lawn and garden product range



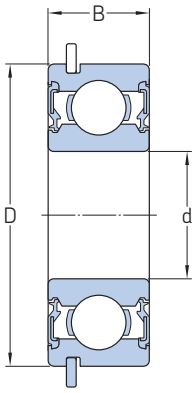


Principal dimensions			Basic load ratings		Designations and sealing system	
			dynamic	static	Industry	Order part number
d	D	B	C	C_0		
mm			kN		–	
15	35	11	7.64	3.72	**6202-2RSFP**	**PER.6202-2RSFPF6**
17	40	12	9.56	4.76	**6203-2RSFP-C3**	**PER.6203-2RSFPC3F6**
	40	12	9.56	4.76	**6203-2RSTFP-C3**	**PER.6203-2RSTFPC3F6**
20	47	14	12.81	6.58	**6204-2RSFP-C3**	**PER.6204-2RSFPC3F6**
	47	14	12.81	6.58	**6204-2RSTFP-C3**	**PER.6204-2RSTFPC3F6**
25	52	15	14.02	7.88	**6205-2RSFP-C3**	**PER.6205-2RSFPC3F6**
	52	15	14.02	7.88	**6205-2RSTFP-C3**	**PER.6205-2RSTFPC3F7**
30	62	16	19.46	11.31	**6206-2RSFP-C3**	**PER.6206-2RSFPC3F6**
	62	16	19.46	11.31	**6206-2RSTFP-C3**	**PER.6206-2RSTFPC3F6**
35	72	17	25.71	15.30	**6207-2RSTFP-C4**	**PER.6207-2RSTFPC4F6**

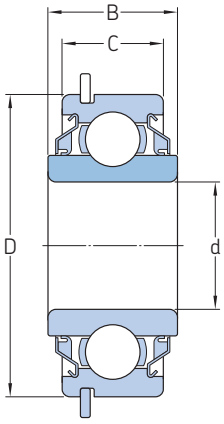
Specials



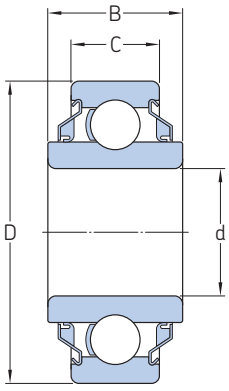
203KRR51 [1]



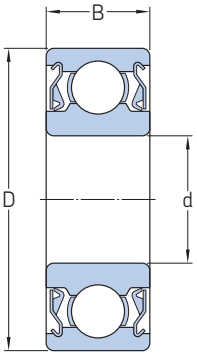
499502H [2]



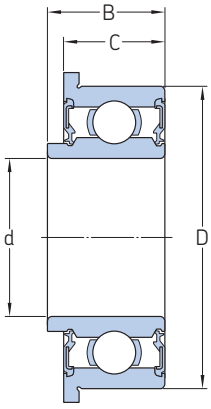
499502H-EE-C4 [2]



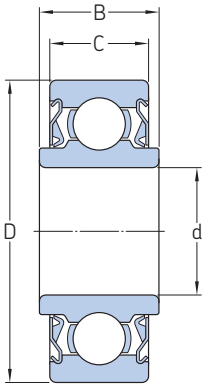
203KRR50 [1]



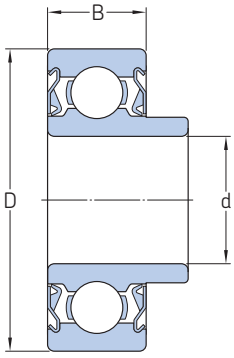
Z9504-2RSTFP [1]



F6003-2RLD-C4 [2]



UCR205-16-LAG-SP [3]



FHR205-16-LAG-SP [3]

Principal dimensions				Basic load ratings		Designations	
				dynamic	static	Industry	Order part number
d	D	C	B	C	C_0		
mm				kN		–	
13.081	40	12	18.288	9.57	4.79	**203KRR51**	**PER.203RRR5**
15.875	34.925	11	11.000	7.52	3.77	**499502H**	**PER.1623-2RLDNRF2-B**
	34.925	11	14.040	7.52	3.77	**499502H-EE-C4**	**PER.499502H-2GUNRC4G7-A**
16.256	40	12	18.288	9.57	4.79	**203KRR50**	**PER.203RRR2-B**
19.063	45.225	15.494	15.494	12.79	6.58	**Z9504-2RSTFP**	**PER.Z9504-2RSTFPC3F9**
19.076	35.052	11.2	13	5.91	3.28	**F6003E-2RLD-C4**	**PER.F6003E-2RLDC4F9-A**
25.400	52	15	18.175	13.75	7.88	**UCR205-16-LAG-SP**	**PER.UCR205-16XFN-A**
	52	15	21.400	13.75	7.88	**FHR205-16-LAG-SP**	**PER.FHR205-16AN-A**

[1] Main application: Idler pulleys [2] Main application: Wheels/casters [3] Main application: Spindles

skf.com

PUB 46/P2 18867 EN · April 2020

This publication superseeds publication L&G ENG V3_032019