SKF stainless steel deep groove ball bearings

Reliable bearing solutions for corrosive environments



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The SKF brand now stands for more than ever before, and means more to you as a valued customer.

While SKF maintains its leadership as a high-quality bearing manufacturer throughout the world, new dimensions in technical advances, product support and services have evolved SKF into a truly solutions-oriented supplier, creating greater value for customers.

These solutions enable customers to improve productivity, not only with breakthrough application-specific products, but also through leading-edge design simulation tools and consultancy services, plant asset efficiency maintenance programmes, and the industry's most advanced supply management techniques.

The SKF brand still stands for the very best in rolling bearings, but it now stands for much more.

SKF – the knowledge engineering company

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Demanding applications and environments require special solutions

Applications in industries like food and beverage, pharmaceutical, chemical and hydrocarbon processing or medical require components that can provide high operational reliability and long service life. In these environments, corrosion resistance is particulary important, which is the reason why stainless steel bearings are frequently used.

SKF stainless steel deep groove ball bearings are manufactured to both withstand tough application requirements and to be the first choice when moisture, corrosive or abrasive materials are present.

SKF now offers an expanded assortment of stainless steel deep groove ball bearings in both metric and imperial sizes. A wide variety of diameters and types can be supplied through SKF's logistics network. Beside the standard range, SKF also introduced a new product line for the food and beverage industry – SKF stainless steel deep groove ball bearings with food compatible grease.



SKF stainless steel deep groove ball bearing

SKF stainless steel bearings for increased reliability

SKF stainless steel deep groove ball bearings (→ **fig. 1**) are corrosion resistant when exposed to moisture and several other media. They can accommodate radial loads and axial loads acting in both directions. SKF stainless steel deep groove ball bearings have a lower load carrying capacity than same-sized bearings made of high chromium steel.

The bearings are available open or capped (with seals or shields) and with or without a flange. Open bearings that are also available capped may have recesses in both the inner and outer rings or only in the outer ring (→ **fig. 2**).

Benefits

The main benefit of SKF stainless steel deep groove ball bearings is their resistance to corrosion in moist and other corrosive environments.

They are also very versatile since the sealed versions can be supplied with different greases. This allows the choice of the most suitable grease for each application, for example, the use of food compatible, non-toxic bearing grease for the food industry. SKF stainless steel deep groove ball bearings are dimensionally stable up to 120 °C *(250 °F)*.

Fig. 1

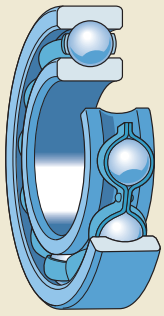
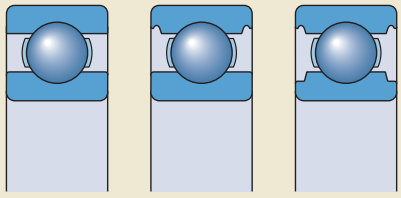


Fig. 2



Applications

SKF stainless steel deep groove ball bearings are recommended for use wherever resistance to corrosion is desired. Typical industries include:

- Food and beverage
- Pharmaceutical
- Chemical and hydrocarbon processing
- Medical
- Printing
- Engines and pumps
- Paper
- Offshore
- Marine

Industry focus: Food and beverage

In the food and beverage industry, food safety and Good Manufacturing Practices (GMP) are always top priorities.

When machine components directly contact foodstuffs, there is a risk that the lubricant will contaminate the product. To avoid this, food safety management systems and regulations* recommend the use of certified food grade lubricants.

Taking that recommendation one step further, the industry trend is to use food grade lubricants plant-wide. This avoids the possibility that a non-food grade lubricant is mistakenly applied to a critical position requiring a food grade lubricant.

From the acidity of citrus products to the abrasiveness of bakery goods, food and beverage equipment is impacted by both the characteristics of the products being processed, and the cleaning regulations of the manufacturing environment.

To prevent bacterial growth, machinery is exposed to frequent washdowns with caustic antibacterial cleansing agents. Harsh washdowns can wash away bearing lubricants and increase the risk of contaminating the product being processed. Additionally, the ingress of water can drastically raise the risk of corroding a standard high chromium steel bearing. Both scenarios can lead to costly unplanned stops.

In order to minimize the risk of corrosion and improve bearing service life, SKF stainless steel deep groove ball bearings offer a reliable solution. Filled with H1 NSF Certified food grade grease identified by the SKF suffix VT378, and with an effective seal, the units can be used in all applications from preparation to filling and packaging where corrosion and accidental food contact are a risk factor.

* HACCP, GMPS, BRC, ISO22000, ISO14000, SQF, IFS



Bottling line



Dairy plant



Fish processing



SKF stainless steel deep groove ball bearing filled with NSF Certified food grade grease (identified by the SKF suffix VT378).

Bearing data – designs

SKF stainless steel deep groove ball bearings are available for shaft diameters from 0,6 to 50 mm. Other sizes may also be available, please contact the SKF application engineering service. Also, a range of inch series bearings is available.

Sealing solutions

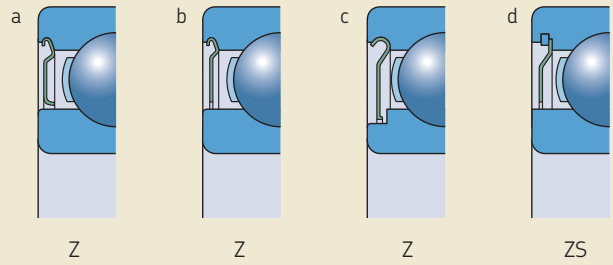
Shields

Shields identified by the designation suffix Z typically have an extension in the shield bore to form a long, narrow gap with the land of the inner ring shoulder. Bearings fitted with shields are primarily intended for applications where the inner ring rotates and both high temperatures and high speeds apply (→ **fig. 3a**). A grease other than that provided may be needed. Some shields do not have the extension (→ **fig. 3b**). The bore of a Z shield on some stainless steel bearings can extend into a recess on the inner ring (→ **fig. 3c**). Shields identified by the designation suffix ZS are fixed in the outer ring by a retaining ring (→ **fig. 3d**) and may extend into a recess on the inner ring. For stainless steel bearings, shields made of polytetrafluoroethylene (PTFE) may be available. For additional information, contact the SKF application engineering service.

Contact seals

Contact seals, which are fitted in a recess on the outer ring, make good, positive contact with the recess, without deforming the outer ring. Theses seals are made of an oil and wear resistant acrylonitrile-butadiene rubber (NBR) and are reinforced with a sheet steel insert. SKF stainless steel bearings are equipped with RS1 seals to design (a) or (b) (→ **fig. 4**). The exact seal design may differ from the illustrations.

Fig. 3

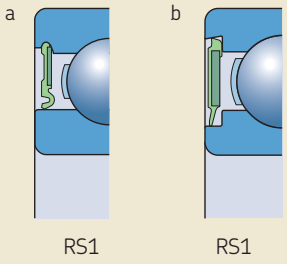


Non-contact seals

Some sizes of SKF stainless steel deep groove ball bearings with non-contact seals are available on request. Low-friction seals, made of polytetrafluoroethylene (PTFE), are also available for some sizes.

Other seal types or materials may also be available, please contact the SKF application engineering service.

Fig. 4



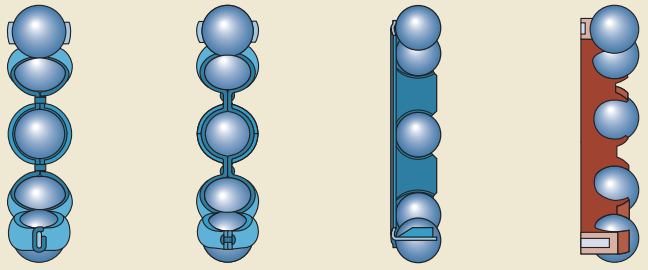
Cages

The bearings are equipped with a stamped stainless steel cage as standard. The following standard cage types can be supplied:

- Ribbon type, ball centred (→ **fig. 5a**)
- Riveted, ball centred (→ **fig. 5b**)
- Snap type, ball centred (→ **fig. 5c**)

Injection moulded, ball centred (→ **fig. 5d**) polymer cages made of fibre reinforced polyamide 66 may also be available. For additional information about these cages, contact the SKF engineering service.

Fig. 5



Grease

Standard SKF capped stainless steel deep groove ball bearings are filled with LHT23 under clean conditions. The bearings are considered maintenance-free for the life of the bearing. Details of this grease can be found in **table 1**. Other lubricating greases can be supplied on request.

Materials

The rings, balls, cages and shields of SKF stainless steel bearings are all made from stainless steel. The bearing rings are produced from X65Cr13 according to ISO 683-17:2000. The balls are made from X105CrMo17 while the shields and cages are made from X5CrNi1810 in accordance with EN 10088-1:1995.

Table 1

Technical specifications of SKF standard and special grease for capped stainless deep groove ball bearings

Grease	Temperature range[1]	Thickener	Base oil type	NLGI consistency class	Base oil viscosity [mm²/s] at 40 °C (105 °F)	at 100 °C (210 °F)	Grease performance factor (GPF)
	–50 0 50 100 150 200 250 °C –50 0 100 200 300 400 500 °F 50 150 250 350 450						
LHT23		Lithium soap	Ester	2–3	27	5,1	2[2]
VT378		Aluminium complex soap	PAO	2	150	15,5	1[3]

[1] For the SKF traffic light concept, please refer to the *SKF General Catalogue*
[2] For calculating the grease life of an SKF standard capped stainless steel deep groove ball bearing, please refer to the *SKF Interactive Engineering Catalogue*
[3] For calculating the grease life of an SKF standard capped stainless steel deep groove ball bearing, please refer to the *SKF Interactive Engineering Catalogue* (reference grease MT33) and multiply the grease life obtained by 20%.

Bearing data – general

Dimensions

The boundary dimensions of metric stainless steel deep groove ball bearings conform to ISO 15-1998, except for bearings with a WBB1 prefix or an X suffix. Inch series stainless steel deep groove ball bearings conform to ANSI/AFBMA Std. 12.2-1992.

Tolerances

All stainless steel deep groove ball bearings are manufactured as standard to Normal tolerances corresponding to ISO 492-2002.

Internal clearance

SKF stainless steel deep groove ball bearings are manufactured as standard with Normal radial internal clearance to ISO 5753-1991, except for bore diameters < 10 mm (→ **table 2**). Other classes are available upon request. The values for radial internal clearance given in **table 2** are valid for unmounted bearings under zero measuring load.

Misalignment

SKF stainless steel deep groove ball bearings have only a limited ability to accomodate misalignment. The permissible angular misalignment between inner and outer rings which will not produce inadmissibly high additonal stresses in the bearing depends on the radial internal clearance of the bearing in operation, bearing size, the internal design and the forces and moments acting on the bearing. In other words, depending on the various influencing factors, the permissible angular misalignment lies between 2 and 10 minutes of arc. Any misalignment will increase bearing noise and reduce bearing service life. For additional information, contact the SKF application engineering service.

Table 2

Radial internal clearance

Bore diameter d		Radial internal clearance C2		Normal		C3		C4	
over	incl.	min	max	min	max	min	max	min	max
mm		µm							
–	**9,525**	3	8	5	10	8	13	13	20
10	**10**	0	7	2	13	8	23	14	29
10	**18**	0	9	3	18	11	25	18	33
18	**24**	1	10	5	20	13	28	20	36
24	**30**	1	11	5	20	13	28	23	41
30	**40**	1	11	6	20	15	33	28	46
40	**50**	1	11	6	23	18	36	30	51
50	**65**	1	15	8	28	23	43	38	61
65	**80**	1	15	10	30	25	51	46	71

Minimum load

For satisfactory operation, SKF stainless steel deep groove ball bearings must always be subjected to a given minimum load.

The requisite minimum radial load to be applied to SKF stainless steel deep groove ball bearings can be estimated using

$$F_{rm} = k_r \left(\frac{\nu n}{1\,000} \right)^{2/3} \left(\frac{d_m}{100} \right)^2$$

where

F_{rm} = minimum radial load [kN]
k_r = minimum load factor
ν = oil viscosity at operating temperature [mm²/s]
n = rotational speed [r/min]
d_m = bearing mean diameter = 0,5 (d + D) [mm]

When starting up at low temperatures or when the lubricant is highly viscous, even greater minimum loads may be required. The weight of the compoments supported by the bearing, together with external forces, generally exceeds the requisite minimum load. If this is not the case, the bearing must be subjected to an additional radial load.

For applications where stainless steel deep groove ball bearings are used, an axial preload can be applied by adjusing the inner and outer rings against each other or by using springs.

Axial load carrying capacity

SKF stainless steel deep groove ball bearings have the same axial load carrying capacity as standard SKF deep groove ball bearings. If they are subjected to purely axial loads, this load should generally not exceed the value of 0,25 C_0. Excessive axial load can lead to a reduction in bearing service life.

Equivalent bearing loads

Equivalent bearing loads for SKF stainless steel deep groove ball bearings can be calculated the same way as for standard SKF deep groove ball bearings. For additional information, contact the SKF application engineering service.

Designations

The designations for SKF stainless steel deep groove ball bearings follow the basic SKF designation system except for inch types. However, the prefix “W” has been implemented to indicate that the material is stainless steel.

Supplementary designations

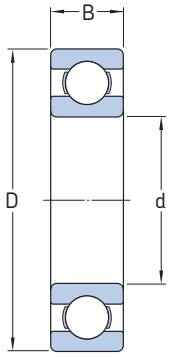
In addition to the designation suffixes that are listed in the *SKF General Catalogue*, the following designation suffixes are relevant for SKF stainlees steel deep groove ball bearings:

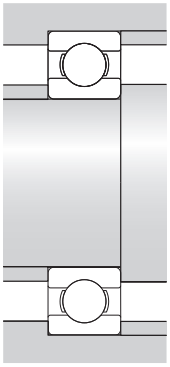
W	Stainless steel deep groove ball bearing metric series
D/W	Stainless steel deep groove ball bearing inch series
X	One boundary dimension deviates from ISO standard
BB1	Two or more boundary dimensions deviate from ISO standard
2TS	PTFE seal for stainless steel deep groove ball bearing
2ZS	Shield of pressed sheet steel on both sides of the bearing with retaining ring
R	Flanged outer ring
RZ	Non-contact seal for stainless steel deep groove ball bearing
R-2Z	Shield of pressed sheet steel on both sides of the bearing and flanged outer ring
VT378	Food grade grease with aluminium thickener of consistency 2 to the NLGI Scale for a temperature range –25 to +120 °C (normal fill grade)

For additional information, refer to the *SKF General Catalogue* or the *SKF Interactive Engineering Catalogue* available online at www.skf.com.

Metric stainless steel deep groove ball bearings

d **0,6 – 10** mm

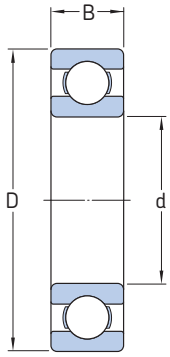


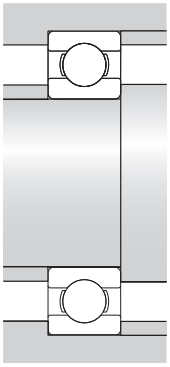


Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
0,6	2,5	1	34	7	–	260 000	160 000	0,00002	**W 618/0.6**
1	3	1	52	12	1	240 000	150 000	0,00003	**W 618/1**
	3	1,5	52	12	1	240 000	150 000	0,0001	**W 638/1**
	4	1,6	79	18	1	220 000	140 000	0,0001	**W 619/1**
1,2	4	1,8	62	16	1	220 000	140 000	0,0001	**WBB1-8700**
1,5	4	1,2	62	16	1	220 000	140 000	0,0001	**W 618/1.5**
	5	2	135	36	2	200 000	120 000	0,0002	**W 619/1.5**
	6	2,5	190	51	2	180 000	110 000	0,00038	**W 60/1.5**
2	4	1,2	68	19	1	200 000	130 000	0,0001	**W 617/2**
	5	1,5	94	25	1	200 000	120 000	0,00015	**W 618/2**
	5	2	94	25	1	200 000	120 000	0,00016	**W 618/2 X**
	6	2,3	190	51	2	180 000	110 000	0,00028	**W 619/2**
	6	2,5	190	51	2	180 000	110 000	0,0003	**W 619/2 X**
	7	2,8	221	67	3	160 000	100 000	0,0005	**W 602**
	7	2,5	221	67	3	160 000	100 000	0,00042	**WBB1-8701**
2,5	6	1,8	117	36	2	170 000	110 000	0,0002	**W 618/2.5**
	7	2,5	221	67	3	160 000	100 000	0,0004	**W 619/2.5**
	8	2,8	312	88	4	160 000	95 000	0,0006	**W 60/2.5**
	8	2,5	319	90	4	150 000	95 000	0,0004	**WBB1-8702**
3	6	2	117	36	2	170 000	110 000	0,0002	**W 617/3**
	7	2	178	57	2	160 000	100 000	0,00034	**W 618/3**
	8	3	319	90	4	150 000	95 000	0,0007	**W 619/3**
	8	2,5	225	72	3	150 000	90 000	0,0006	**WBB1-8703**
	9	3	325	95	4	140 000	90 000	0,0008	**W 603**
	9	2,5	325	95	4	140 000	90 000	0,00075	**WBB1-8704**
	10	4	358	110	5	140 000	90 000	0,0016	**W 623**
	13	5	741	250	11	110 000	70 000	0,0031	**W 633**
4	7	2	178	57	3	150 000	95 000	0,0002	**W 617/4**
	8	2	225	72	3	150 000	90 000	0,0004	**W 617/4 X**
	9	2,5	364	114	5	140 000	85 000	0,0006	**W 618/4**
	10	3	553	245	11	130 000	80 000	0,001	**W 637/4 X**
	11	4	540	176	8	130 000	80 000	0,002	**W 619/4**
	12	4	540	176	8	130 000	80 000	0,002	**W 604**
	13	5	741	250	11	110 000	70 000	0,0028	**W 624**
	16	5	761	265	11	100 000	63 000	0,005	**W 634**

Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
5	8	2	174	61	3	140 000	85 000	0,0003	**W 617/5**
	9	2,5	247	85	4	130 000	85 000	0,0005	**W 627/5 X**
	10	3	247	85	4	130 000	85 000	0,001	**WBB1-8705**
	11	3	403	143	6	120 000	75 000	0,0012	**W 618/5**
	13	4	761	335	14	110 000	70 000	0,0024	**W 619/5**
	14	5	761	260	11	110 000	67 000	0,0031	**W 605**
	16	5	1 430	630	27	100 000	63 000	0,0046	**W 625**
	19	6	2 030	880	38	85 000	56 000	0,0075	**W 635**
6	10	2,5	286	112	5	120 000	75 000	0,0006	**W 617/6**
	12	3	403	146	6	110 000	70 000	0,0013	**W 627/6 X**
	13	3,5	618	224	10	110 000	67 000	0,0019	**W 618/6**
	15	5	761	265	11	100 000	63 000	0,0036	**W 619/6**
	17	6	1 950	830	36	95 000	60 000	0,0055	**W 606**
	19	6	1 530	585	25	85 000	56 000	0,0072	**W 626**
	22	7	1 990	780	34	75 000	48 000	0,0122	**W 636**
7	11	2,5	260	104	4	110 000	70 000	0,0006	**W 617/7**
	13	3	312	143	6	100 000	63 000	0,0016	**W 627 X**
	14	3,5	663	260	11	100 000	63 000	0,0021	**W 618/7**
	17	5	923	365	16	90 000	56 000	0,0049	**W 619/7**
	19	6	1 530	585	25	85 000	56 000	0,0068	**W 607**
	22	7	1 990	780	34	75 000	48 000	0,0117	**W 627**
	26	9	3 970	1 960	83	67 000	40 000	0,0227	**W 637**
8	12	2,5	312	140	6	100 000	63 000	0,0007	**W 617/8**
	14	3,5	462	193	8	95 000	60 000	0,0019	**W 637/8 X**
	16	4	715	300	12	90 000	56 000	0,0032	**W 618/8**
	19	6	1 250	455	20	85 000	53 000	0,0063	**W 619/8**
	22	7	1 990	780	34	75 000	48 000	0,0111	**W 608**
	24	8	2 470	1 120	48	70 000	45 000	0,0164	**W 628**
	28	9	3 970	1 960	83	67 000	40 000	0,0273	**W 638**
9	14	3	520	236	10	95 000	60 000	0,0012	**W 617/9**
	17	4	761	335	14	85 000	53 000	0,0035	**W 618/9**
	20	6	2 120	1 060	45	80 000	50 000	0,0072	**W 619/9**
	24	7	2 030	815	36	70 000	43 000	0,0134	**W 609**
	26	8	3 970	1 960	83	67 000	40 000	0,0182	**W 629**
	30	10	4 360	2 320	100	56 000	36 000	0,0335	**W 639**
10	15	3	488	220	9	85 000	56 000	0,0014	**W 61700**
	19	5	1 480	830	36	80 000	48 000	0,0048	**W 61800**
	19	7	1 480	830	36	80 000	48 000	0,0068	**W 63800**
	22	6	2 340	1 250	54	70 000	45 000	0,0089	**W 61900**
	26	8	3 970	1 960	83	67 000	40 000	0,0176	**W 6000**
	30	9	4 360	2 320	100	60 000	36 000	0,0291	**W 6200**
	35	11	7 020	3 400	146	53 000	34 000	0,0505	**W 6300**

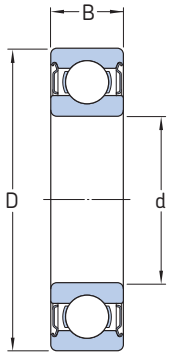
Metric stainless steel deep groove ball bearings
d **12 – 50** mm





Principal dimensions			Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
12	18	4	527	265	11	75 000	48 000	0,0027	**W 61701**
	21	5	1 510	900	39	70 000	43 000	0,0054	**W 61801**
	21	7	1 510	900	39	70 000	43 000	0,0076	**W 63801**
	24	6	2 510	1 460	62	67 000	40 000	0,0104	**W 61901**
	28	8	4 420	2 360	102	60 000	36 000	0,0185	**W 6001**
	32	10	5 720	3 000	127	53 000	34 000	0,0344	**W 6201**
	37	12	8 320	4 150	176	48 000	30 000	0,0566	**W 6301**
15	20	3,5	527	290	12	67 000	43 000	0,0022	**WBB1-8709**
	21	4	527	290	12	67 000	40 000	0,0033	**W 61702**
	21	3,5	527	290	12	67 000	40 000	0,0031	**WBB1-8710**
	24	5	1 650	1 080	48	60 000	38 000	0,0064	**W 61802**
	24	7	1 650	1 080	48	60 000	38 000	0,0091	**W 63802**
	28	7	3 710	2 240	95	56 000	34 000	0,015	**W 61902**
	32	9	4 880	2 800	120	50 000	32 000	0,0273	**W 6002**
	35	11	6 370	3 600	156	48 000	30 000	0,0422	**W 6202**
	42	13	9 950	5 400	232	40 000	26 000	0,0786	**W 6302**
16	22	4	553	320	14	63 000	40 000	0,0038	**WBB1-8711**
	23	4,5	832	585	27	60 000	38 000	0,0040	**WBB1-8712**
17	23	4	559	340	15	60 000	38 000	0,0036	**W 61703**
	26	5	1 780	1 270	54	56 000	34 000	0,0073	**W 61803**
	26	7	1 780	1 270	54	56 000	34 000	0,0102	**W 63803**
	30	7	3 970	2 550	108	50 000	32 000	0,0161	**W 61903**
	35	10	4 940	3 150	137	45 000	28 000	0,0367	**W 6003**
	40	12	8 060	4 750	200	40 000	26 000	0,0622	**W 6203**
	47	14	11 700	6 550	280	36 000	22 000	0,1085	**W 6303**
18	24	4	806	630	29	56 000	36 000	0,0040	**WBB1-8713**
20	25	4	572	365	16	53 000	34 000	0,0032	**WBB1-8714**
	27	4	585	390	17	50 000	32 000	0,0000054	**W 61704**
	32	7	3 120	2 080	90	48 000	30 000	0,0162	**W 61804**
	32	10	3 120	2 080	90	48 000	30 000	0,023	**W 63804**
	37	9	5 530	3 650	156	43 000	26 000	0,0332	**W 61904**
	42	12	8 060	5 000	212	38 000	24 000	0,0621	**W 6004**
	47	14	10 800	6 550	280	34 000	22 000	0,1018	**W 6204**
	52	15	13 800	7 800	335	34 000	20 000	0,1397	**W 6304**
25	32	4	618	465	20	43 000	26 000	0,0000065	**W 61705**
	37	7	3 380	2 500	108	38 000	24 000	0,0199	**W 61805**
	37	10	3 380	2 500	108	38 000	24 000	0,0283	**W 63805**
	42	9	6 050	4 500	193	34 000	22 000	0,0395	**W 61905**
	47	12	8 710	5 850	250	32 000	20 000	0,0731	**W 6005**
	52	15	11 700	7 650	335	30 000	19 000	0,1241	**W 6205**
	62	17	17 800	11 200	480	26 000	17 000	0,2277	**W 6305**

Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
30	37	4	650	530	22	36 000	22 000	0,0076	**W 61706**
	42	7	3 580	2 900	125	34 000	20 000	0,0228	**W 61806**
	42	10	3 580	2 900	125	34 000	20 000	0,035	**W 63806**
	47	9	6 240	5 000	212	30 000	19 000	0,0445	**W 61906**
	55	13	11 400	8 150	355	28 000	17 000	0,108	**W 6006**
	62	16	16 500	11 200	480	26 000	16 000	0,1872	**W 6206**
	72	19	22 900	15 000	640	22 000	14 000	0,34	**W 6306**
35	44	5	1 060	915	39	30 000	19 000	0,014	**W 61707**
	47	7	3 710	3 350	140	30 000	18 000	0,0269	**W 61807**
	55	10	9 360	7 650	325	26 000	16 000	0,0701	**W 61907**
	62	14	13 800	10 200	440	24 000	15 000	0,141	**W 6007**
	72	17	22 100	15 300	655	22 000	14 000	0,2677	**W 6207**
	80	21	28 600	19 000	815	20 000	13 000	0,447	**W 6307**
40	50	6	1 430	1 270	54	26 000	16 000	0,0213	**W 61708**
	52	7	3 900	3 750	160	26 000	16 000	0,0293	**W 61808**
	62	12	11 900	9 800	425	24 000	14 000	0,1048	**W 61908**
	68	15	14 600	11 400	490	22 000	14 000	0,1769	**W 6008**
	80	18	25 100	17 600	750	20 000	12 000	0,3449	**W 6208**
45	55	6	1 460	1 370	60	24 000	15 000	0,0236	**W 61709**
	58	7	4 940	5 000	212	24 000	14 000	0,0345	**W 61809**
	68	12	12 100	10 800	465	20 000	13 000	0,1179	**W 61909**
	75	16	18 200	15 000	640	20 000	12 000	0,2281	**W 6009**
	85	19	28 100	20 400	865	18 000	11 000	0,377	**W 6209**
50	62	6	1 530	1 530	67	22 000	13 000	0,0348	**W 61710**
	65	7	5 070	5 500	236	20 000	13 000	0,048	**W 61810**
	72	12	12 500	11 600	500	19 000	12 000	0,1316	**W 61910**
	80	16	19 000	16 600	710	18 000	11 000	0,2458	**W 6010**
	90	20	30 200	23 200	980	17 000	10 000	0,4279	**W 6210**



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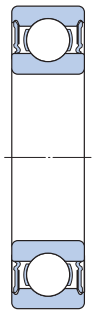

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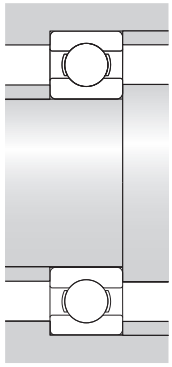
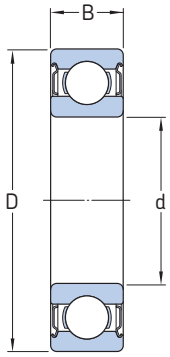


Principal dimensions			Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
1,2	4	2,5	62	16	1	220 000	110 000	0,00012	**WBB1-8700-2Z**
1,5	4	2	62	16	1	220 000	110 000	0,00014	**W 638/1.5-2Z**
	5	2,6	135	36	2	200 000	100 000	0,00025	**W 639/1.5-2Z**
	6	3	190	51	2	180 000	90 000	0,00042	**W 630/1.5-2Z**
2	4	2	68	19	1	200 000	100 000	0,00009	**W 637/2-2Z**
	5	2,5	94	25	1	200 000	100 000	0,0002	**W 638/2 X-2Z**
	5	2,3	94	25	1	200 000	100 000	0,0002	**W 638/2-2Z**
	6	2,5	190	51	2	180 000	90 000	0,00031	**W 619/2 X-2Z**
	6	2,3	94	25	1	200 000	100 000	0,00035	**W 619/2-2Z**
	6	3	190	51	2	180 000	90 000	0,00035	**W 639/2-2Z**
	7	3	221	67	3	160 000	80 000	0,0005	**W 602 X-2ZS**
	7	3,5	221	67	3	160 000	80 000	0,0006	**W 630/2-2ZS**
2,5	6	2,6	117	36	2	170 000	85 000	0,00035	**W 638/2.5-2Z**
	7	3,5	221	67	3	160 000	80 000	0,00055	**W 639/2.5-2ZS**
	8	2,8	178	57	2	160 000	80 000	0,00073	**W 60/2.5-2Z**
	8	4	312	88	4	160 000	80 000	0,00085	**W 630/2.5-2Z**
3	6	2,5	117	36	2	170 000	85 000	0,00025	**W 627/3-2Z**
	7	3	178	57	2	–	45 000	0,0005	**W 638/3-2RS1**
	7	3	178	57	2	160 000	80 000	0,0005	**W 638/3-2Z**
	8	3	225	72	3	150 000	75 000	0,0006	**W 619/3-2Z**
	8	4	319	90	4	–	43 000	0,00083	**W 639/3-2RS1**
	8	4	319	90	4	150 000	75 000	0,00083	**W 639/3-2Z**
	9	4	325	95	4	140 000	70 000	0,001	**W 603 X-2Z**
	9	5	325	95	4	140 000	70 000	0,001	**W 630/3-2Z**
	10	4	358	110	5	–	40 000	0,0017	**W 623-2RS1**
	10	4	358	110	5	140 000	70 000	0,0017	**W 623-2Z**
	13	5	741	250	11	–	32 000	0,0033	**W 633-2RS1**
	13	5	741	250	11	110 000	56 000	0,0032	**W 633-2Z**
4	7	2,5	143	53	2	150 000	75 000	0,0003	**W 627/4-2Z**
	7	2,5	143	53	2	150 000	75 000	0,0003	**W 627/4-2ZS**
	8	3	225	72	3	150 000	75 000	0,0005	**W 637/4 X-2Z**
	9	4	364	114	5	–	40 000	0,001	**W 638/4-2RS1**
	9	4	364	114	5	140 000	70 000	0,0009	**W 638/4-2Z**
	10	4	553	245	11	–	36 000	0,0014	**W 638/4 X-2RS1**
	10	4	553	245	11	130 000	63 000	0,0013	**W 638/4 X-2Z**
	11	4	540	176	8	–	36 000	0,0022	**W 619/4-2RS1**
	11	4	540	176	8	130 000	63 000	0,0022	**W 619/4-2Z**
	12	4	540	176	8	–	36 000	0,0021	**W 604-2RS1**
	12	4	540	176	8	130 000	63 000	0,0022	**W 604-2Z**
	13	5	741	250	11	–	32 000	0,003	**W 624-2RS1**
	13	5	741	250	11	110 000	56 000	0,003	**W 624-2Z**
	16	5	761	265	11	–	30 000	0,0052	**W 634-2RS1**
	16	5	761	265	11	100 000	50 000	0,0053	**W 634-2Z**

Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
5	8	2,5	121	45	2	140 000	70 000	0,0004	**W 627/5-2Z**
	8	2,5	121	45	2	140 000	70 000	0,0004	**W 627/5-2ZS**
	9	3	247	85	4	130 000	67 000	0,0005	**W 637/5 X-2Z**
	9	3	247	85	4	130 000	67 000	0,0006	**W 637/5 X-2ZS**
	10	4	247	85	4	–	38 000	0,0012	**WBB1-8705-2RS1**
	10	4	247	85	4	130 000	67 000	0,0012	**WBB1-8705-2Z**
	11	4	403	143	6	–	34 000	0,0018	**W 628/5-2RS1**
	11	4	403	143	6	120 000	60 000	0,0015	**W 628/5-2Z**
	11	5	403	143	6	–	34 000	0,0018	**W 638/5-2RS1**
	11	5	403	143	6	120 000	60 000	0,0018	**W 638/5-2Z**
	13	5	761	335	14	110 000	56 000	0,0029	**W 619/5 X-2Z**
	13	4	761	335	14	–	32 000	0,0023	**W 619/5-2RS1**
	13	4	761	335	14	110 000	56 000	0,0023	**W 619/5-2Z**
	14	5	761	260	11	–	30 000	0,0034	**W 605-2RS1**
	14	5	761	260	11	110 000	53 000	0,0034	**W 605-2Z**
	16	5	1 430	630	27	–	28 000	0,0049	**W 625-2RS1**
	16	5	1 430	630	27	100 000	50 000	0,0048	**W 625-2Z**
	19	6	2 030	880	38	–	24 000	0,008	**W 635-2RS1**
	19	6	2 030	880	38	85 000	43 000	0,008	**W 635-2Z**
6	10	3	286	112	5	120 000	60 000	0,0007	**W 627/6-2Z**
	12	4	403	146	6	–	32 000	0,0016	**WBB1-8706-2RS1**
	12	4	403	146	6	110 000	56 000	0,0016	**WBB1-8706-2Z**
	13	5	618	224	10	–	30 000	0,0025	**W 628/6-2RS1**
	13	5	618	224	10	110 000	53 000	0,0025	**W 628/6-2Z**
	15	5	761	265	11	–	30 000	0,0038	**W 619/6-2RS1**
	15	5	761	265	11	100 000	50 000	0,0039	**W 619/6-2Z**
	16	5	761	265	11	–	30 000	0,0047	**W 619/6 X-2RS1**
	16	5	761	265	11	100 000	50 000	0,0048	**W 619/6 X-2Z**
	17	6	1 950	830	36	–	26 000	0,0058	**W 606-2RS1**
	17	6	1 950	830	36	95 000	48 000	0,006	**W 606-2Z**
	19	6	1 530	585	25	–	24 000	0,0077	**W 626-2RS1**
	19	6	1 530	585	25	85 000	43 000	0,0078	**W 626-2Z**
	22	7	1 990	780	34	–	22 000	0,0129	**W 636-2RS1**
	22	7	1 990	780	34	75 000	38 000	0,0128	**W 636-2Z**
7	11	3	260	104	4	110 000	56 000	0,0008	**W 627/7-2ZS**
	13	4	312	143	6	100 000	50 000	0,002	**WBB1-8707-2Z**
	14	5	663	260	11	–	28 000	0,0028	**W 628/7-2RS1**
	14	5	663	260	11	100 000	50 000	0,0028	**W 628/7-2Z**
	17	5	923	365	16	–	26 000	0,0052	**W 619/7-2RS1**
	17	5	923	365	16	90 000	45 000	0,0051	**W 619/7-2Z**
	19	6	1 530	585	25	–	24 000	0,0073	**W 607-2RS1**
	19	6	1 530	585	25	85 000	43 000	0,0074	**W 607-2Z**
	22	7	1 990	780	34	–	22 000	0,0124	**W 627-2RS1**
	22	7	1 990	780	34	75 000	38 000	0,0123	**W 627-2Z**
	26	9	3 970	1 960	83	–	19 000	0,0236	**W 637-2RS1**
	26	9	3 970	1 960	83	67 000	32 000	0,0238	**W 637-2Z**



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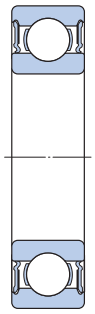

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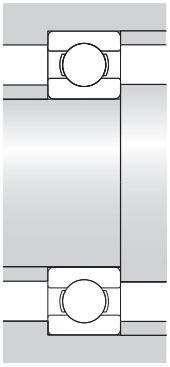
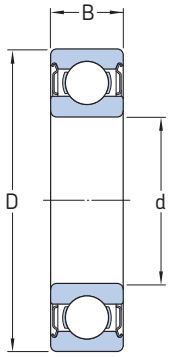
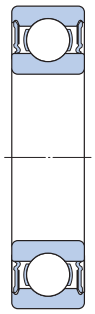


Principal dimensions			Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
8	12	3,5	312	140	6	100 000	53 000	0,0011	**W 637/8-2Z**
	12	3,5	312	140	6	100 000	50 000	0,001	**W 637/8-2ZS**
	14	4	319	53	2	–	28 000	0,0021	**WBB1-8708-2RS1**
	14	4	319	53	2	95 000	48 000	0,002	**WBB1-8708-2Z**
	16	4	715	300	12	90 000	45 000	0,0031	**W 618/8-2Z**
	16	5	715	300	12	–	26 000	0,0038	**W 628/8-2RS1**
	16	5	715	300	12	90 000	45 000	0,0038	**W 628/8-2Z**
	16	6	715	300	12	90 000	45 000	0,0041	**W 638/8-2Z**
	19	6	1 250	455	20	–	24 000	0,0065	**W 619/8-2RS1**
	19	6	1 250	455	20	85 000	43 000	0,0068	**W 619/8-2Z**
	22	7	1 990	780	34	–	22 000	0,0117	**W 608-2RS1**
	22	7	1 990	780	34	75 000	38 000	0,0117	**W 608-2Z**
	24	8	2 470	1 120	48	–	20 000	0,0171	**W 628-2RS1**
	24	8	2 470	1 120	48	70 000	36 000	0,0172	**W 628-2Z**
	28	9	3 970	1 960	83	–	19 000	0,0282	**W 638-2RS1**
	28	9	3 970	1 960	83	67 000	32 000	0,0285	**W 638-2Z**
9	14	4,5	520	236	10	95 000	45 000	0,0018	**W 637/9-2Z**
	14	4,5	520	236	10	95 000	45 000	0,0018	**W 637/9-2ZS**
	17	5	761	335	14	–	24 000	0,0042	**W 628/9-2RS1**
	17	5	761	335	14	85 000	43 000	0,0041	**W 628/9-2Z**
	17	6	761	335	14	85 000	43 000	0,0049	**W 638/9-2Z**
	20	6	2 120	1 060	45	–	22 000	0,0076	**W 619/9-2RS1**
	20	6	2 120	1 060	45	80 000	40 000	0,0077	**W 619/9-2Z**
	24	7	2 030	815	36	–	20 000	0,0143	**W 609-2RS1**
	24	7	2 030	815	36	70 000	36 000	0,0144	**W 609-2Z**
	26	8	3 970	1 960	83	–	19 000	0,0191	**W 629-2RS1**
	26	8	3 970	1 960	83	67 000	32 000	0,0193	**W 629-2Z**
	30	10	4 360	2 320	100	–	16 000	0,0348	**W 639-2RS1**
	30	10	4 360	2 320	100	56 000	28 000	0,0335	**W 639-2Z**
10	15	4	488	220	9	–	24 000	0,0018	**W 61700 X-2RS1**
	15	4	488	220	9	85 000	43 000	0,0018	**W 61700 X-2ZS**
	19	5	1 480	830	36	–	22 000	0,0052	**W 61800-2RS1**
	19	5	1 480	830	36	80 000	38 000	0,0051	**W 61800-2Z**
	19	7	1 480	830	36	–	22 000	0,0071	**W 63800-2RS1**
	19	7	1 480	830	36	80 000	38 000	0,0071	**W 63800-2Z**
	22	6	2 340	1 250	54	–	20 000	0,0094	**W 61900-2RS1**
	22	6	2 340	1 250	54	70 000	36 000	0,0095	**W 61900-2Z**
	26	8	3 970	1 960	83	–	19 000	0,0185	**W 6000-2RS1**
	26	8	3 970	1 960	83	67 000	32 000	0,0187	**W 6000-2Z**
	30	9	4 360	2 320	100	–	16 000	0,0304	**W 6200-2RS1**
	30	9	4 360	2 320	100	60 000	30 000	0,0306	**W 6200-2Z**
	35	11	7 020	3 400	146	–	15 000	0,0509	**W 6300-2RS1**
	35	11	7 020	3 400	146	53 000	26 000	0,0532	**W 6300-2Z**

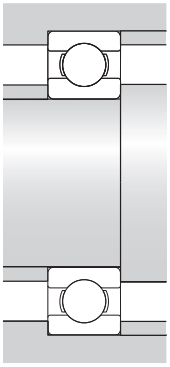
Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
12	18	4	527	265	11	–	22 000	0,003	**W 61701-2RS1**
	18	4	527	265	11	75 000	38 000	0,0029	**W 61701-2ZS**
	21	5	1 510	900	39	–	20 000	0,006	**W 61801-2RS1**
	21	5	1 510	900	39	70 000	36 000	0,0058	**W 61801-2Z**
	21	7	1 510	900	39	–	20 000	0,0082	**W 63801-2RS1**
	21	7	1 510	900	39	70 000	36 000	0,0078	**W 63801-2Z**
	24	6	2 510	1 460	62	–	19 000	0,011	**W 61901-2RS1**
	24	6	2 510	1 460	62	67 000	32 000	0,0113	**W 61901-2Z**
	28	8	4 420	2 360	102	–	16 000	0,0198	**W 6001-2RS1**
	28	8	4 420	2 360	102	60 000	30 000	0,0199	**W 6001-2Z**
	32	10	5 720	3 000	127	–	15 000	0,0362	**W 6201-2RS1**
	32	10	5 720	3 000	127	53 000	28 000	0,0361	**W 6201-2Z**
	37	12	8 320	4 150	176	–	14 000	0,0572	**W 6301-2RS1**
	37	12	8 320	4 150	176	48 000	24 000	0,06	**W 6301-2Z**
15	21	4	527	290	12	–	19 000	0,0036	**W 61702-2RS1**
	21	4	527	290	12	67 000	32 000	0,0036	**W 61702-2Z**
	24	5	1 650	1 080	48	–	17 000	0,0071	**W 61802-2RS1**
	24	5	1 650	1 080	48	60 000	30 000	0,0068	**W 61802-2Z**
	24	7	1 650	1 080	48	–	17 000	0,0099	**W 63802-2RS1**
	24	7	1 650	1 080	48	60 000	30 000	0,0096	**W 63802-2Z**
	28	7	3 710	2 240	95	–	16 000	0,0159	**W 61902-2RS1**
	28	7	3 710	2 240	95	56 000	28 000	0,0161	**W 61902-2Z**
	32	9	4 880	2 800	120	–	14 000	0,0288	**W 6002-2RS1**
	32	9	4 880	2 800	120	50 000	26 000	0,0292	**W 6002-2Z**
	35	11	6 370	3 600	156	–	13 000	0,0442	**W 6202-2RS1**
	35	11	6 370	3 600	156	48 000	24 000	0,0442	**W 6202-2Z**
	42	13	9 950	5 400	232	–	11 000	0,0793	**W 6302-2RS1**
	42	13	9 950	5 400	232	40 000	20 000	0,0824	**W 6302-2Z**
16	23	4,5	832	585	27	60 000	30 000	0,0040	**WBB1-8712-2ZS**
17	23	4	559	340	15	–	17 000	0,0039	**W 61703-2RS1**
	23	4	559	340	15	60 000	30 000	0,0039	**W 61703-2Z**
	26	5	1 780	1 270	54	–	16 000	0,008	**W 61803-2RS1**
	26	5	1 780	1 270	54	56 000	28 000	0,0076	**W 61803-2Z**
	26	7	1 780	1 270	54	–	16 000	0,011	**W 63803-2RS1**
	26	7	1 780	1 270	54	56 000	28 000	0,0105	**W 63803-2Z**
	30	7	3 970	2 550	108	–	14 000	0,0173	**W 61903-2RS1**
	30	7	3 970	2 550	108	50 000	24 000	0,017	**W 61903-2Z**
	35	10	4 940	3 150	137	–	13 000	0,0385	**W 6003-2RS1**
	35	10	4 940	3 150	137	45 000	22 000	0,0388	**W 6003-2Z**
	40	12	8 060	4 750	200	–	12 000	0,0647	**W 6203-2RS1**
	40	12	8 060	4 750	200	40 000	20 000	0,0655	**W 6203-2Z**
	47	14	1 1700	6 550	280	–	10 000	0,1128	**W 6303-2RS1**
	47	14	1 1700	6 550	280	36 000	18 000	0,1127	**W 6303-2Z**



2Z



2RS1

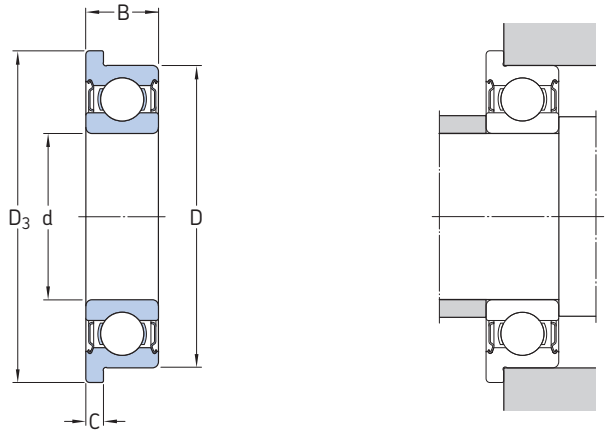


Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
20	25	4	572	365	16	53 000	26 000	0,0035	**WBB1-8714-2ZS**
	27	4	585	390	17	–	14 000	0,0059	**W 61704-2RS1**
	27	4	585	390	17	50 000	26 000	0,0057	**W 61704-2ZS**
	32	7	3 120	2 080	90	–	13 000	0,0178	**W 61804-2RS1**
	32	7	3 120	2 080	90	48 000	24 000	0,0173	**W 61804-2Z**
	32	10	3 120	2 080	90	–	13 000	0,0246	**W 63804-2RS1**
	32	10	3 120	2 080	90	48 000	24 000	0,0244	**W 63804-2Z**
	37	9	5 530	3 650	156	–	12 000	0,0354	**W 61904-2RS1**
	37	9	5 530	3 650	156	43 000	20 000	0,0353	**W 61904-2Z**
	42	12	8 060	5 000	212	–	11 000	0,0657	**W 6004-2RS1**
	42	12	8 060	5 000	212	38 000	19 000	0,0651	**W 6004-2Z**
	47	14	10 800	6 550	280	–	10 000	0,1047	**W 6204-2RS1**
	47	14	10 800	6 550	280	34 000	17 000	0,106	**W 6204-2Z**
	52	15	13 800	7 800	335	–	9 500	0,1452	**W 6304-2RS1**
	52	15	13 800	7 800	335	34 000	17 000	0,146	**W 6304-2Z**
25	32	4	618	465	20	–	12 000	0,0073	**W 61705-2RS1**
	37	7	3 380	2 500	108	–	11 000	0,0213	**W 61805-2RS1**
	37	7	3 380	2 500	108	38 000	19 000	0,021	**W 61805-2Z**
	37	10	3 380	2 500	108	–	11 000	0,0297	**W 63805-2RS1**
	37	10	3 380	2 500	108	38 000	19 000	0,0294	**W 63805-2Z**
	42	9	6 050	4 500	193	–	10 000	0,0422	**W 61905-2RS1**
	42	9	6 050	4 500	193	34 000	17 000	0,0423	**W 61905-2Z**
	47	12	8 710	5 850	250	–	9 500	0,077	**W 6005-2RS1**
	47	12	8 710	5 850	250	32 000	16 000	0,0782	**W 6005-2Z**
	52	15	11 700	7 650	335	–	8 500	0,1291	**W 6205-2RS1**
	52	15	11 700	7 650	335	30 000	15 000	0,1299	**W 6205-2Z**
	62	17	17 800	11 200	480	–	7 500	0,2348	**W 6305-2RS1**
	62	17	17 800	11 200	480	26 000	13 000	0,2356	**W 6305-2Z**
30	42	7	3 580	2 900	125	–	9 500	0,0244	**W 61806-2RS1**
	42	7	3 580	2 900	125	34 000	17 000	0,0241	**W 61806-2Z**
	42	10	3 580	2 900	125	–	9 500	0,036	**W 63806-2RS1**
	42	10	3 580	2 900	125	34 000	17 000	0,036	**W 63806-2Z**
	47	9	6 240	5 000	212	–	8 500	0,0477	**W 61906-2RS1**
	47	9	6 240	5 000	212	30 000	15 000	0,0485	**W 61906-2Z**
	55	13	11 400	8 150	355	–	8 000	0,113	**W 6006-2RS1**
	55	13	11 400	8 150	355	28 000	14 000	0,1141	**W 6006-2Z**
	62	16	16 500	11 200	480	–	7 000	0,1958	**W 6206-2RS1**
	62	16	16 500	11 200	480	26 000	13 000	0,1951	**W 6206-2Z**
	72	19	22 900	15 000	640	–	6 300	0,3512	**W 6306-2RS1**
	72	19	22 900	15 000	640	22 000	11 000	0,3496	**W 6306-2Z**

Principal dimensions			Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			dynamic	static		Reference speed	Limiting speed		
d	D	B	C	C_0	P_u				
mm			N		N	r/min		kg	–
35	44	5	1 060	915	39	–	8 500	0,0153	**W 61707-2RS1**
	47	7	3 710	3 350	140	–	8 500	0,0292	**W 61807-2RS1**
	47	7	3 710	3 350	140	30 000	15 000	0,0282	**W 61807-2Z**
	55	10	9 360	7 650	325	–	7 500	0,0743	**W 61907-2RS1**
	55	10	9 360	7 650	325	26 000	13 000	0,0742	**W 61907-2Z**
	62	14	13 800	10 200	440	–	6 700	0,1475	**W 6007-2RS1**
	62	14	13 800	10 200	440	24 000	12 000	0,1489	**W 6007-2Z**
	72	17	22 100	15 300	655	–	6 000	0,2792	**W 6207-2RS1**
	72	17	22 100	15 300	655	22 000	11 000	0,2788	**W 6207-2Z**
	80	21	28 600	19 000	815	–	5 600	0,459	**W 6307-2RS1**
	80	21	28 600	19 000	815	20 000	10 000	0,457	**W 6307-2Z**
40	50	6	1 430	1 270	54	–	7 500	0,0235	**W 61708-2RS1**
	52	7	3 900	3 750	160	–	7 500	0,0322	**W 61808-2RS1**
	52	7	3 900	3 750	160	26 000	13 000	0,0308	**W 61808-2Z**
	62	12	11 900	9 800	425	–	6 700	0,1102	**W 61908-2RS1**
	62	12	11 900	9 800	425	24 000	12 000	0,1113	**W 61908-2Z**
	68	15	14 600	11 400	490	–	6 300	0,1856	**W 6008-2RS1**
	68	15	14 600	11 400	490	22 000	11 000	0,1859	**W 6008-2Z**
	80	18	25 100	17 600	750	–	5 600	0,3578	**W 6208-2RS1**
	80	18	25 100	17 600	750	20 000	10 000	0,3568	**W 6208-2Z**
45	55	6	1 460	1 370	60	–	6 700	0,0262	**W 61709-2RS1**
	58	7	4 940	5 000	212	–	6 700	0,0373	**W 61809-2RS1**
	58	7	4 940	5 000	212	24 000	12 000	0,0363	**W 61809-2Z**
	68	12	12 100	10 800	465	–	6 000	0,1245	**W 61909-2RS1**
	68	12	12 100	10 800	465	20 000	10 000	0,1247	**W 61909-2Z**
	75	16	18 200	15 000	640	–	5 600	0,2388	**W 6009-2RS1**
	75	16	18 200	15 000	640	20 000	10 000	0,238	**W 6009-2Z**
	85	19	28 100	20 400	865	–	5 000	0,3937	**W 6209-2RS1**
	85	19	28 100	20 400	865	18 000	9 000	0,3915	**W 6209-2Z**
50	62	6	1 530	1 530	67	–	6 000	0,0377	**W 61710-2RS1**
	65	7	5 070	5 500	236	–	6 000	0,0503	**W 61810-2RS1**
	65	7	5 070	5 500	236	20 000	10 000	0,0501	**W 61810-2Z**
	72	12	12 500	11 600	500	–	5 600	0,1388	**W 61910-2RS1**
	72	12	12 500	11 600	500	19 000	9 500	0,1393	**W 61910-2Z**
	80	16	19 000	16 600	710	–	5 000	0,2575	**W 6010-2RS1**
	80	16	19 000	16 600	710	18 000	9 000	0,2572	**W 6010-2Z**
	90	20	30 200	23 200	980	–	4 800	0,4436	**W 6210-2RS1**
	90	20	30 200	23 200	980	17 000	8 500	0,4476	**W 6210-2Z**

Metric flanged stainless steel deep groove ball bearings

d **1 – 4** mm

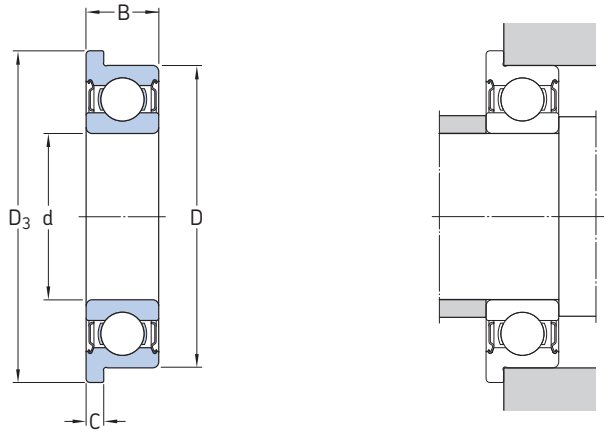


Principal dimensions					Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
1	3	3,8	1	0,3	52	12	1	240 000	150 000	0,00004	**W 618/1 R**
	4	5	1,6	0,5	79	18	1	220 000	140 000	0,00011	**W 619/1 R**
1,2	4	4,8	1,8	0,4	62	16	1	220 000	140 000	0,0001	**WBB1-8700 R**
1,5	4	5	1,2	0,4	62	16	1	220 000	140 000	0,00012	**W 618/1.5 R**
	4	5	2	0,6	62	16	1	220 000	110 000	0,00017	**W 638/1.5 R-2Z**
	5	6,5	2	0,6	135	36	2	200 000	120 000	0,00026	**W 619/1.5 R**
	5	6,5	2,6	0,8	135	36	2	200 000	100 000	0,0003	**W 639/1.5 R-2Z**
	6	7,5	2,5	0,6	190	51	2	180 000	110 000	0,001	**W 60/1.5 R**
	6	7,5	3	0,8	190	51	2	180 000	90 000	0,0011	**W 630/1.5 R-2Z**
2	5	6,1	1,5	0,5	94	25	1	200 000	120 000	0,00025	**W 618/2 R**
	5	6,2	2	0,6	94	25	1	200 000	120 000	0,00023	**W 618/2 XR**
	5	6,1	2,3	0,6	94	25	1	200 000	100 000	0,00025	**W 638/2 R-2Z**
	5	6,2	2,5	0,6	94	25	1	200 000	100 000	0,00025	**W 638/2 XR-2Z**
	6	7,5	2,3	0,6	190	51	2	180 000	110 000	0,00036	**W 619/2 R**
	6	7,2	2,5	0,6	190	51	2	180 000	110 000	0,00025	**W 619/2 XR**
	6	7,2	2,5	0,6	190	51	2	180 000	90 000	0,00025	**W 619/2 XR-2Z**
	6	7,5	3	0,8	190	51	2	180 000	90 000	0,00047	**W 639/2 R-2Z**
	7	8,5	2,8	0,7	221	67	3	160 000	100 000	0,0008	**W 602 R**
	7	8,2	2,5	0,6	221	67	3	160 000	100 000	0,0005	**WBB1-8701 R**
	7	8,2	3	0,6	221	67	3	160 000	80 000	0,0006	**W 602 XR-2ZS**
	7	8,5	3,5	0,9	221	67	3	160 000	80 000	0,0012	**W 630/2 R-2ZS**
2,5	6	7,1	1,8	0,5	117	36	2	170 000	110 000	0,00025	**W 618/2.5 R**
	6	7,1	2,6	0,8	117	36	2	170 000	85 000	0,00043	**W 638/2.5 R-2Z**
	7	8,5	2,5	0,7	221	67	3	160 000	100 000	0,0006	**W 619/2.5 R**
	7	8,5	3,5	0,9	221	67	3	160 000	80 000	0,0006	**W 639/2.5 R-2ZS**
	8	9,5	2,8	0,7	312	88	4	160 000	95 000	0,0006	**W 60/2.5 R**
	8	9,2	2,5	0,6	319	90	4	150 000	95 000	0,0005	**WBB1-8702 R**
	8	9,5	4	0,9	312	88	4	160 000	80 000	0,0009	**W 630/2.5 R-2Z**

Principal dimensions					Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
					dynamic	static		Reference speed	Limiting speed		
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
3	6	7,2	2	0,6	117	36	2	170 000	110 000	0,00025	**W 617/3 R**
	6	7,2	2,5	0,6	117	36	2	170 000	85 000	0,00031	**W 627/3 R-2Z**
	7	8,1	2	0,5	178	57	2	160 000	100 000	0,00038	**W 618/3 R**
	7	8,1	3	0,8	178	57	2	–	45 000	0,00055	**W 638/3 R-2RS1**
	7	8,1	3	0,8	178	57	2	160 000	80 000	0,00055	**W 638/3 R-2Z**
	8	9,5	3	0,7	319	90	4	150 000	95 000	0,0008	**W 619/3 R**
	8	9,2	2,5	0,6	225	72	3	150 000	90 000	0,0006	**WBB1-8703 R**
	8	9,2	3	0,6	225	72	3	150 000	75 000	0,0007	**W 619/3 R-2Z**
	8	9,5	4	0,9	319	90	4	–	43 000	0,00095	**W 639/3 R-2RS1**
	8	9,5	4	0,9	319	90	4	150 000	75 000	0,00095	**W 639/3 R-2Z**
	9	10,5	3	0,7	325	95	4	140 000	90 000	0,001	**W 603 R**
	9	10,2	2,5	0,6	325	95	4	140 000	90 000	0,0008	**WBB1-8704 R**
	9	10,6	4	0,8	325	95	4	140 000	70 000	0,0013	**W 603 XR-2Z**
	9	10,5	5	1	325	95	4	140 000	70 000	0,00105	**W 630/3 R-2Z**
	10	11,5	4	1	358	110	5	140 000	90 000	0,0018	**W 623 R**
	10	11,5	4	1	358	110	5	–	40 000	0,0019	**W 623 R-2RS1**
	10	11,5	4	1	358	110	5	140 000	70 000	0,0019	**W 623 R-2Z**
4	7	8,2	2	0,6	178	57	3	150 000	95 000	0,0003	**W 617/4 R**
	7	8,2	2,5	0,6	143	53	2	150 000	75 000	0,0004	**W 627/4 R-2Z**
	7	8,2	2,5	0,6	143	53	2	150 000	75 000	0,0004	**W 627/4 R-2ZS**
	8	9,2	2	0,6	225	72	3	150 000	90 000	0,0004	**W 617/4 XR**
	8	9,2	3	0,6	225	72	3	150 000	75 000	0,0006	**W 637/4 XR-2Z**
	9	10,3	2,5	0,6	364	114	5	140 000	85 000	0,0007	**W 618/4 R**
	9	10,3	4	1	364	114	5	–	40 000	0,0011	**W 638/4 R-2RS1**
	9	10,3	4	1	364	114	5	140 000	70 000	0,0011	**W 638/4 R-2Z**
	10	11,2	3	0,6	553	245	11	130 000	80 000	0,0011	**W 637/4 XR**
	10	11,6	4	0,8	553	245	11	–	36 000	0,0015	**W 638/4 XR-2RS1**
	10	11,6	4	0,8	553	245	11	130 000	63 000	0,0015	**W 638/4 XR-2Z**
	11	12,5	4	1	540	176	8	130 000	80 000	0,0023	**W 619/4 R**
	11	12,5	4	1	540	176	8	–	36 000	0,0024	**W 619/4 R-2RS1**
	11	12,5	4	1	540	176	8	130 000	63 000	0,0024	**W 619/4 R-2Z**
	12	13,5	4	1	540	176	8	130 000	80 000	0,0023	**W 604 R**
	12	13,5	4	1	540	176	8	–	36 000	0,0024	**W 604 R-2RS1**
	12	13,5	4	1	540	176	8	130 000	63 000	0,0024	**W 604 R-2Z**
	13	15	5	1	741	250	11	110 000	70 000	0,0031	**W 624 R**
	13	15	5	1	741	250	11	–	32 000	0,0033	**W 624 R-2RS1**
	13	15	5	1	741	250	11	110 000	56 000	0,0033	**W 624 R-2Z**
	16	18	5	1	761	265	11	100 000	63 000	0,0054	**W 634 R**
	16	18	5	1	761	265	11	–	30 000	0,0057	**W 634 R-2RS1**
	16	18	5	1	761	265	11	100 000	50 000	0,0057	**W 634 R-2Z**

Metric flanged stainless steel deep groove ball bearings

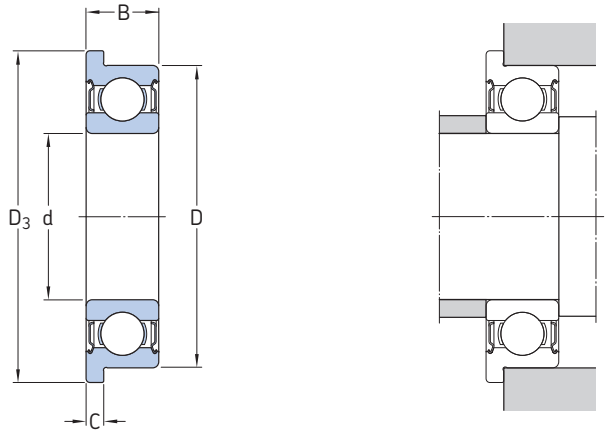
d **5 – 9** mm



Principal dimensions					Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
5	8	9,2	2	0,6	174	61	3	140 000	85 000	0,0003	**W 617/5 R**
	8	9,2	2,5	0,6	121	45	2	140 000	70 000	0,0004	**W 627/5 R-2Z**
	8	9,2	2,5	0,6	121	45	2	140 000	70 000	0,0004	**W 627/5 R-2ZS**
	9	10,2	2,5	0,6	247	85	4	130 000	85 000	0,0006	**W 627/5 XR**
	9	10,2	3	0,6	247	85	4	130 000	67 000	0,0007	**W 637/5 XR-2Z**
	9	10,2	3	0,6	247	85	4	130 000	67 000	0,0007	**W 637/5 XR-2ZS**
	10	11,2	3	0,6	247	85	4	130 000	85 000	0,001	**WBB1-8705 R**
	10	11,6	4	0,8	247	85	4	–	38 000	0,0014	**WBB1-8705 R-2RS1**
	10	11,6	4	0,8	247	85	4	130 000	67 000	0,0014	**WBB1-8705 R-2Z**
	11	12,5	3	0,8	403	143	6	120 000	75 000	0,0014	**W 618/5 R**
	11	12,6	4	0,8	403	143	6	120 000	60 000	0,0017	**W 628/5 R-2Z**
	11	12,5	5	1	403	143	6	–	34 000	0,002	**W 638/5 R-2RS1**
	11	12,5	5	1	403	143	6	120 000	60 000	0,002	**W 638/5 R-2Z**
	13	15	4	1	761	335	14	110 000	70 000	0,0025	**W 619/5 R**
	13	15	4	1	761	335	14	–	32 000	0,0027	**W 619/5 R-2RS1**
	13	15	4	1	761	335	14	110 000	56 000	0,0026	**W 619/5 R-2Z**
	14	16	5	1	761	260	11	110 000	67 000	0,0035	**W 605 R**
	14	16	5	1	761	260	11	–	30 000	0,0038	**W 605 R-2RS1**
	14	16	5	1	761	260	11	110 000	53 000	0,0038	**W 605 R-2Z**
	16	18	5	1	1 430	630	27	100 000	63 000	0,0048	**W 625 R**
	16	18	5	1	1 430	630	27	–	28 000	0,005	**W 625 R-2RS1**
	16	18	5	1	1 430	630	27	100 000	50 000	0,005	**W 625 R-2Z**
	19	22	6	1,5	2 030	880	38	85 000	56 000	0,0086	**W 635 R**
	19	22	6	1,5	2 030	880	38	–	24 000	0,0092	**W 635 R-2RS1**
	19	22	6	1,5	2 030	880	38	85 000	43 000	0,0091	**W 635 R-2Z**
6	10	11,2	2,5	0,6	286	112	5	120 000	75 000	0,0007	**W 617/6 R**
	10	11,2	3	0,6	286	112	5	120 000	60 000	0,0008	**W 627/6 R-2Z**
	12	13,2	3	0,6	403	146	6	110 000	70 000	0,0014	**W 627/6 XR**
	12	13,6	4	0,8	403	146	6	–	32 000	0,0018	**WBB1-8706 R-2RS1**
	12	13,6	4	0,8	403	146	6	110 000	56 000	0,0018	**WBB1-8706 R-2Z**
	13	15	3,5	1	618	224	10	110 000	67 000	0,0022	**W 618/6 R**
	13	15	5	1,1	618	224	10	–	30 000	0,0029	**W 628/6 R-2RS1**
	13	15	5	1,1	618	224	10	110 000	53 000	0,0029	**W 628/6 R-2Z**
	15	17	5	1,2	761	265	11	100 000	63 000	0,004	**W 619/6 R**
	15	17	5	1,2	761	265	11	–	30 000	0,0043	**W 619/6 R-2RS1**
	15	17	5	1,2	761	265	11	100 000	50 000	0,0043	**W 619/6 R-2Z**
	17	19	6	1,2	1 950	830	36	95 000	60 000	0,006	**W 606 R**
	17	19	6	1,2	1 950	830	36	–	26 000	0,0063	**W 606 R-2RS1**
	17	19	6	1,2	1 950	830	36	95 000	48 000	0,0065	**W 606 R-2Z**
	19	22	6	1,5	1 530	585	25	85 000	56 000	0,0083	**W 626 R**
	19	22	6	1,5	1 530	585	25	–	24 000	0,0088	**W 626 R-2RS1**
	19	22	6	1,5	1 530	585	25	85 000	43 000	0,0088	**W 626 R-2Z**

Principal dimensions					Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
					dynamic	static		Reference speed	Limiting speed		
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
7	11	12,2	2,5	0,6	260	104	4	110 000	70 000	0,0007	**W 617/7 R**
	11	12,2	3	0,6	–	–	–	–	–	0,0009	**W 627/7 R-2ZS**
	13	14,2	3	0,6	312	143	6	100 000	63 000	0,0024	**W 627 XR**
	13	14,6	4	0,8	312	143	6	100 000	50 000	0,0023	**WBB1-8707 R-2Z**
	14	16	3,5	1	663	260	11	100 000	63 000	0,0024	**W 618/7 R**
	14	16	5	1,1	663	260	11	–	28 000	0,0032	**W 628/7 R-2RS1**
	14	16	5	1,1	663	260	11	100 000	50 000	0,0032	**W 628/7 R-2Z**
	17	19	5	1,2	923	365	16	90 000	56 000	0,0054	**W 619/7 R**
	17	19	5	1,2	923	365	16	–	26 000	0,0057	**W 619/7 R-2RS1**
	17	19	5	1,2	923	365	16	90 000	45 000	0,0056	**W 619/7 R-2Z**
	19	22	6	1,5	1 530	585	25	85 000	56 000	0,0078	**W 607 R**
	19	22	6	1,5	1 530	585	25	–	24 000	0,0083	**W 607 R-2RS1**
	19	22	6	1,5	1 530	585	25	85 000	43 000	0,0083	**W 607 R-2Z**
	22	25	7	1,5	1 990	780	34	75 000	48 000	0,0131	**W 627 R**
	22	25	7	1,5	1 990	780	34	75 000	38 000	0,0137	**W 627 R-2Z**
8	12	13,2	2,5	0,6	312	140	6	100 000	63 000	0,0008	**W 617/8 R**
	12	13,6	3,5	0,8	312	140	6	100 000	53 000	0,0012	**W 637/8 R-2Z**
	12	13,6	3,5	0,8	312	140	6	100 000	50 000	0,0012	**W 637/8 R-2ZS**
	14	15,6	3,5	0,8	462	193	8	95 000	60 000	0,0021	**W 637/8 XR**
	14	15,6	4	0,8	462	193	8	–	28 000	0,0023	**WBB1-8708 R-2RS1**
	14	15,6	4	0,8	462	193	8	95 000	48 000	0,0023	**WBB1-8708 R-2Z**
	16	18	4	1	715	300	12	90 000	56 000	0,0036	**W 618/8 R**
	16	18	5	1,1	715	300	12	–	26 000	0,0043	**W 628/8 R-2RS1**
	16	18	5	1,1	715	300	12	90 000	45 000	0,0043	**W 628/8 R-2Z**
	16	18	6	1,3	715	300	12	90 000	45 000	0,005	**W 638/8 R-2Z**
	19	22	6	1,5	1 250	455	20	85 000	53 000	0,0074	**W 619/8 R**
	19	22	6	1,5	1 250	455	20	–	24 000	0,0076	**W 619/8 R-2RS1**
	19	22	6	1,5	1 250	455	20	85 000	43 000	0,0079	**W 619/8 R-2Z**
	22	25	7	1,5	1 990	780	34	75 000	48 000	0,0124	**W 608 R**
	22	25	7	1,5	1 990	780	34	–	22 000	0,013	**W 608 R-2RS1**
	22	25	7	1,5	1 990	780	34	75 000	38 000	0,013	**W 608 R-2Z**
9	14	15,5	3	0,8	520	236	10	95 000	60 000	0,0013	**W 617/9 R**
	14	15,5	4,5	0,8	520	236	10	95 000	45 000	0,0019	**W 637/9 R-2Z**
	17	19	4	1	761	335	14	85 000	53 000	0,0039	**W 618/9 R**
	17	19	5	1,1	761	335	14	–	24 000	0,0046	**W 628/9 R-2RS1**
	17	19	5	1,1	761	335	14	85 000	43 000	0,0046	**W 628/9 R-2Z**
	20	23	6	1,5	2 120	1 060	45	80 000	50 000	0,0084	**W 619/9 R**
	20	23	6	1,5	2 120	1 060	45	–	22 000	0,0088	**W 619/9 R-2RS1**
	20	23	6	1,5	2 120	1 060	45	80 000	40 000	0,0089	**W 619/9 R-2Z**
	24	27	7	1,5	2 030	815	36	70 000	43 000	0,0151	**W 609 R**
	24	27	7	1,5	2 030	815	36	70 000	36 000	0,0158	**W 609 R-2Z**

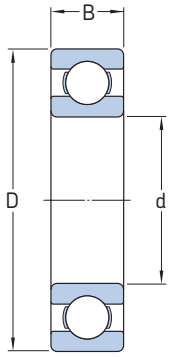
Metric flanged stainless steel deep groove ball bearings
d **10 – 50** mm

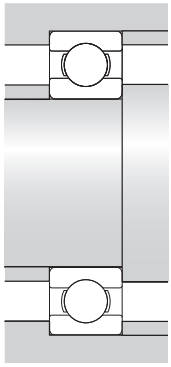


Principal dimensions					Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
10	15	16,5	3	0,8	488	220	9	85 000	56 000	0,0016	**W 61700 R**
	15	16,5	4	0,8	488	220	9	–	24 000	0,0021	**W 61700 XR-2RS1**
	15	16,5	4	0,8	488	220	9	85 000	43 000	0,002	**W 61700 XR-2ZS**
	19	21	5	1	1 480	830	36	80 000	48 000	0,0053	**W 61800 R**
	19	21	7	1,5	1 480	830	36	80 000	48 000	0,0075	**W 63800 R**
	19	21	5	1	1 480	830	36	–	22 000	0,0057	**W 61800 R-2RS1**
	19	21	5	1	1 480	830	36	80 000	38 000	0,0056	**W 61800 R-2Z**
	19	21	7	1,5	1 480	830	36	–	22 000	0,0079	**W 63800 R-2RS1**
	19	21	7	1,5	1 480	830	36	80 000	38 000	0,0078	**W 63800 R-2Z**
	22	25	6	1,5	2 340	1 250	54	70 000	45 000	0,01	**W 61900 R**
	22	25	6	1,5	2 340	1 250	54	–	20 000	0,0105	**W 61900 R-2RS1**
	22	25	6	1,5	2 340	1 250	54	70 000	36 000	0,0106	**W 61900 R-2Z**
12	18	19,5	4	0,8	527	265	11	75 000	48 000	0,003	**W 61701 R**
	18	19,5	4	0,8	527	265	11	–	22 000	0,0033	**W 61701 R-2RS1**
	18	19,5	4	0,8	527	265	11	75 000	38 000	0,0033	**W 61701 R-2ZS**
	21	23	5	1,1	1 510	900	39	70 000	43 000	0,0062	**W 61801 R**
	21	23	7	1,5	1 510	900	39	70 000	43 000	0,0084	**W 63801 R**
	21	23	5	1,1	1 510	900	39	70 000	36 000	0,0068	**W 61801 R-2ZS**
	21	23	7	1,5	1 510	900	39	70 000	36 000	0,0086	**W 63801 R-2Z**
	24	26,5	6	1,5	2 510	1 460	62	67 000	40 000	0,0116	**W 61901 R**
	24	26,5	6	1,5	2 510	1 460	62	–	19 000	0,0121	**W 61901 R-2RS1**
	24	26,5	6	1,5	2 510	1 460	62	67 000	32 000	0,0124	**W 61901 R-2Z**
15	21	22,5	4	0,8	527	290	12	67 000	40 000	0,0036	**W 61702 R**
	21	22,5	4	0,8	527	290	12	–	19 000	0,0039	**W 61702 R-2RS1**
	21	22,5	4	0,8	527	290	12	67 000	32 000	0,0039	**W 61702 R-2Z**
	24	26	5	1,1	1 650	1 080	48	60 000	38 000	0,007	**W 61802 R**
	24	26	7	1,5	1 650	1 080	48	60 000	38 000	0,0101	**W 63802 R**
	24	26	5	1,1	1 650	1 080	48	60 000	30 000	0,0074	**W 61802 R-2Z**
	24	26	7	1,5	1 650	1 080	48	60 000	30 000	0,0105	**W 63802 R-2Z**
	28	30,5	7	1,5	3 710	2 240	95	56 000	34 000	0,0164	**W 61902 R**
	28	30,5	7	1,5	3 710	2 240	95	–	16 000	0,0173	**W 61902 R-2RS1**
	28	30,5	7	1,5	3 710	2 240	95	56 000	28 000	0,0175	**W 61902 R-2Z**
17	23	24,5	4	0,8	559	340	15	60 000	38 000	0,0041	**W 61703 R**
	23	24,5	4	0,8	559	340	15	60 000	30 000	0,0044	**W 61703 R-2ZS**
	26	28	5	1,1	1 780	1 270	54	56 000	34 000	0,008	**W 61803 R**
	26	28	7	1,5	1 780	1 270	54	56 000	34 000	0,0112	**W 63803 R**
	26	28	5	1,1	1 780	1 270	54	56 000	28 000	0,0085	**W 61803 R-2Z**
	26	28	7	1,5	1 780	1 270	54	56 000	28 000	0,0117	**W 63803 R-2Z**
	30	32,5	7	1,5	3 970	2 550	108	50 000	32 000	0,0175	**W 61903 R**
	30	32,5	7	1,5	3 970	2 550	108	50 000	24 000	0,0187	**W 61903 R-2Z**

Principal dimensions					Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
					dynamic	static		Reference speed	Limiting speed		
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
20	27	28,5	4	0,8	585	390	17	50 000	32 000	0,0058	**W 61704 R**
	27	28,5	4	0,8	585	390	17	50 000	26 000	0,0062	**W 61704 R-2ZS**
	32	35	7	1,5	3 970	2 600	110	45 000	28 000	0,0175	**W 61804 R**
	32	35	10	2	3 120	2 080	90	48 000	30 000	0,0250	**W 63804 R**
	32	35	7	1,5	3 970	2 600	110	45 000	22 000	0,0189	**W 61804 R-2Z**
	32	35	10	2	3 120	2 080	90	48 000	24 000	0,0265	**W 63804 R-2Z**
	37	40	9	2	5 530	3 650	156	43 000	26 000	0,0366	**W 61904 R**
	37	40	9	2	5 530	3 650	156	43 000	20 000	0,0387	**W 61904 R-2Z**
25	32	34	4	1	618	465	20	43 000	26 000	0,0074	**W 61705 R**
	37	40	7	1,5	3 380	2 500	108	38 000	24 000	0,0234	**W 61805 R**
	37	40	10	2	3 380	2 500	108	38 000	24 000	0,0330	**W 63805 R**
	37	40	7	1,5	3 380	2 500	108	38 000	19 000	0,0245	**W 61805 R-2Z**
	37	40	10	2	3 380	2 500	108	38 000	19 000	0,0341	**W 63805 R-2Z**
	42	45	9	2	6 050	4 500	193	34 000	22 000	0,0434	**W 61905 R**
	42	45	9	2	6 050	4 500	193	34 000	17 000	0,0462	**W 61905 R-2Z**
30	37	39	4	1	650	530	22	36 000	22 000	0,0085	**W 61706 R**
	42	45	7	1,5	3 580	2 900	125	34 000	20 000	0,0257	**W 61806 R**
	42	45	10	2	3 580	2 900	125	34 000	20 000	0,0380	**W 63806 R**
	42	45	7	1,5	3 580	2 900	125	34 000	17 000	0,0269	**W 61806 R-2Z**
	42	45	10	2	3 580	2 900	125	34 000	17 000	0,0392	**W 63806 R-2Z**
	47	50	9	2	6 240	5 000	212	30 000	19 000	0,0489	**W 61906 R**
	47	50	9	2	6 240	5 000	212	30 000	15 000	0,0529	**W 61906 R-2Z**
35	47	50	7	1,5	3 710	3 350	140	30 000	18 000	0,0334	**W 61807 R**
	47	50	7	1,5	3 710	3 350	140	30 000	15 000	0,0347	**W 61807 R-2Z**
	55	58	10	2,5	9 360	7 650	325	26 000	16 000	0,0882	**W 61907 R**
	55	58	10	2,5	9 360	7 650	325	26 000	13 000	0,0922	**W 61907 R-2Z**
40	52	55	7	1,5	3 900	3 750	160	26 000	16 000	0,0316	**W 61808 R**
	52	55	7	1,5	3 900	3 750	160	26 000	13 000	0,0380	**W 61808 R-2Z**
	62	65	12	2,5	11 900	9 800	425	24 000	14 000	0,1300	**W 61908 R**
	62	65	12	2,5	11 900	9 800	425	24 000	12 000	0,1370	**W 61908 R-2Z**
45	58	61	7	1,5	4 940	5 000	212	24 000	14 000	0,0435	**W 61809 R**
	58	61	7	1,5	4 940	5 000	212	24 000	12 000	0,0453	**W 61809 R-2Z**
	68	71	12	2,5	12 100	10 800	465	20 000	13 000	0,1460	**W 61909 R**
	68	71	12	2,5	12 100	10 800	465	20 000	10 000	0,1530	**W 61909 R-2Z**
50	65	68	7	1,5	5 070	5 500	236	20 000	13 000	0,0524	**W 61810 R**
	65	68	7	1,5	5 070	5 500	236	20 000	10 000	0,0545	**W 61810 R-2Z**
	72	75	12	2,5	12 500	11 600	500	19 000	12 000	0,1323	**W 61910 R**
	72	75	12	2,5	12 500	11 600	500	19 000	9 500	0,1400	**W 61910 R-2Z**

Inch stainless steel deep groove ball bearings
d **1,016 – 19,05** mm



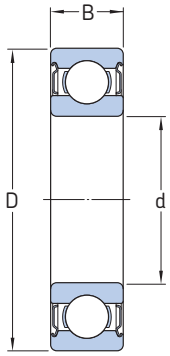


Principal dimensions				Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			Width	dynamic	static		Reference	Limiting		
d	D	B	outer ring	C	C_0	P_u	speed	speed		
mm			mm	N		N	r/min		kg	–
1,016	3,175	1,191	1,191	57	14	1	240 000	150 000	0,00005	**D/W R09**
1,191	3,967	1,588	1,588	62	16	1	220 000	140 000	0,0001	**D/W R0**
1,397	4,762	1,984	1,984	133	34	1	200 000	130 000	0,0001	**D/W R1**
1,984	6,35	2,38	2,38	163	48	2	170 000	100 000	0,0004	**D/W R1-4**
2,38	4,762	1,588	1,588	104	30	1	190 000	120 000	0,0001	**D/W R133**
	7,938	2,779	2,779	312	88	4	160 000	95 000	0,00058	**D/W R1-5**
3,175	6,35	2,38	2,38	163	48	2	170 000	100 000	0,00027	**D/W R144**
	6,35	2,38	2,38	174	55	2	170 000	100 000	0,00027	**D/W R144 J**
	7,938	2,779	2,779	319	90	4	150 000	95 000	0,0005	**D/W R2-5**
	9,525	3,967	3,967	364	114	5	130 000	80 000	0,0013	**D/W R2**
	9,525	2,779	2,779	364	114	5	130 000	80 000	0,001	**D/W R2-6**
	12,7	4,366	4,366	364	114	5	130 000	80 000	0,0031	**D/W R2A**
	7,938	2,779	2,779	203	75	3	140 000	90 000	0,0005	**D/W R155**
4,762	7,938	2,779	2,779	203	75	3	140 000	90 000	0,0004	**D/W R156**
	9,525	3,175	3,175	403	137	6	130 000	80 000	0,0006	**D/W R166**
	12,7	3,967	3,967	741	250	11	110 000	70 000	0,0022	**D/W R3**
	15,875	4,978	4,978	852	315	14	85 000	56 000	0,0045	**D/W R3A**
6,35	9,525	3,175	3,175	212	88	4	120 000	75 000	0,0005	**D/W R168**
	12,7	3,175	3,175	618	224	10	110 000	67 000	0,0015	**D/W R188**
	15,875	4,978	4,978	852	315	14	95 000	60 000	0,0039	**D/W R4**
	19,05	5,558	5,558	1 530	585	25	80 000	50 000	0,0074	**D/W R4A**
7,938	12,7	3,967	3,967	312	143	6	100 000	63 000	0,0014	**D/W R1810**
9,525	15,875	3,967	3,967	488	220	9	85 000	56 000	0,0025	**D/W ER1038**
	15,875	3,967	3,967	488	220	9	85 000	56 000	0,0025	**D/W SRI-1038**
	15,875	3,967	3,967	488	220	9	85 000	56 000	0,0045	**D/W SRI-1634**
	22,225	5,558	5,558	2 470	1 120	48	70 000	45 000	0,0088	**D/W R6**
12,7	19,05	3,967	3,967	520	270	11	75 000	45 000	0,0031	**D/W ER1212**
	19,05	3,967	3,967	520	270	11	75 000	45 000	0,0031	**D/W SRI-1212**
	22,225	5,558	5,558	1 110	530	22	70 000	43 000	0,0079	**D/W R6-5**
	28,575	6,35	6,35	4 420	2 360	102	60 000	36 000	0,0175	**D/W R8**

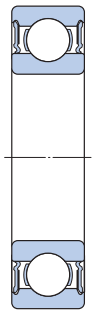
Principal dimensions				Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			Width	dynamic	static		Reference speed	Limiting speed		
d	D	B	outer ring	C	C_0	P_u				
mm			mm	N		N	r/min		kg	–
15,875	22,225	3,967	3,967	553	320	14	63 000	40 000	0,0037	**D/W ER1458**
	22,225	3,967	3,967	553	320	14	63 000	40 000	0,0037	**D/W SRI-1458**
	34,925	7,142	7,142	4 940	3 150	137	40 000	26 000	0,0299	**D/W R10**
19,05	25,4	3,967	3,967	572	365	16	53 000	34 000	0,0045	**D/W ER1634**
	41,275	7,938	7,938	6 630	4 400	186	38 000	24 000	0,0466	**D/W R12**

Inch capped stainless steel deep groove ball bearings

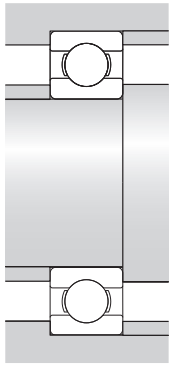
d **1,191 – 19,05** mm



2Z



2RS1

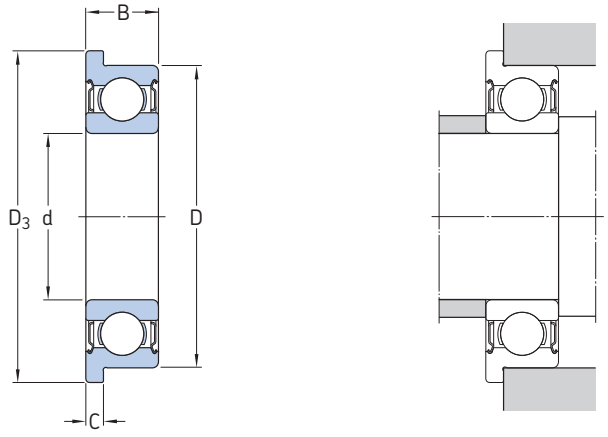


Principal dimensions				Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			Width	dynamic	static		Reference	Limiting		
d	D	B	outer ring	C	C_0	P_u	speed	speed		
mm			mm	N		N	r/min		kg	–
1,191	3,967	2,38	2,38	62	16	1	220 000	110 000	0,00015	**D/W R0-2Z**
1,397	4,762	2,779	2,779	133	34	1	200 000	100 000	0,0001	**D/W R1-2Z**
1,984	6,35	3,571	3,571	163	48	2	170 000	85 000	0,0004	**D/W R1-4-2Z**
	6,35	3,571	3,571	163	48	2	170 000	85 000	0,0004	**D/W R1-4-2ZS**
2,38	4,762	2,38	2,38	78	25	1	190 000	95 000	0,00015	**D/W R133-2ZS**
	7,938	3,571	3,571	312	88	4	160 000	80 000	0,00068	**D/W R1-5-2Z**
3,175	6,35	2,779	2,779	163	48	2	170 000	85 000	0,0003	**D/W R144-2Z**
	6,35	2,779	2,779	174	55	2	170 000	85 000	0,0003	**D/W R144-2ZJ**
	6,35	2,38	2,38	174	55	2	170 000	85 000	0,0003	**D/W R144W.0937-2Z**
	7,938	3,571	3,571	319	90	4	150 000	75 000	0,0011	**D/W R2-5-2Z**
	9,525	3,967	3,967	364	114	5	–	40 000	0,0014	**D/W R2-2RS1**
	9,525	3,967	3,967	358	110	5	130 000	67 000	0,0014	**D/W R2-2Z**
	9,525	3,571	3,571	364	114	5	–	40 000	0,0013	**D/W R2-6-2RS1**
	9,525	3,571	3,571	364	114	5	130 000	63 000	0,0012	**D/W R2-6-2Z**
	12,7	4,366	4,366	364	114	5	130 000	63 000	0,0032	**D/W R2A-2Z**
3,967	7,938	3,175	3,175	203	75	3	140 000	70 000	0,0006	**D/W R155-2ZS**
4,762	7,938	3,175	3,175	203	75	3	140 000	70 000	0,0005	**D/W R156-2ZS**
	9,525	3,175	3,175	403	137	6	130 000	63 000	0,0008	**D/W R166-2Z**
	12,7	4,978	4,978	741	250	11	–	32 000	0,0027	**D/W R3-2RS1**
	12,7	4,978	4,978	741	250	11	110 000	56 000	0,0026	**D/W R3-2Z**
	12,7	3,967	3,967	605	216	9	110 000	56 000	0,0027	**D/W R3W.1562-2Z**
	15,875	4,978	4,978	852	315	14	–	28 000	0,0049	**D/W R3A-2RS1**
	15,875	4,978	4,978	852	315	14	85 000	45 000	0,0048	**D/W R3A-2Z**
6,35	9,525	3,175	3,175	212	88	4	120 000	60 000	0,0006	**D/W R168-2Z**
	9,525	3,175	3,175	212	88	4	120 000	60 000	0,0006	**D/W R168-2ZS**
	12,7	4,762	4,762	618	224	10	–	30 000	0,002	**D/W R188-2RS1**
	12,7	4,762	4,762	618	224	10	110 000	53 000	0,002	**D/W R188-2Z**
	15,875	4,978	4,978	852	315	14	–	28 000	0,0042	**D/W R4-2RS1**
	15,875	4,978	4,978	852	315	14	95 000	48 000	0,0043	**D/W R4-2Z**
	19,05	7,142	7,142	1 530	585	25	–	24 000	0,0089	**D/W R4A-2RS1**
	19,05	7,142	7,142	1 530	585	25	80 000	40 000	0,009	**D/W R4A-2Z**
7,938	12,7	3,967	3,967	312	143	6	100 000	50 000	0,0015	**D/W R1810-2ZS**
9,525	15,875	3,967	3,967	488	220	9	85 000	43 000	0,0027	**D/W ER1038-2ZS**
	15,875	3,967	3,967	488	220	9	85 000	43 000	0,0027	**D/W SRI-1038-2ZS**
	22,225	7,142	7,142	2 470	1 120	48	–	20 000	0,0107	**D/W R6-2RS1**
	22,225	7,142	7,142	2 470	1 120	48	70 000	36 000	0,0107	**D/W R6-2Z**

Principal dimensions				Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
			Width	dynamic	static		Reference	Limiting		
			outer				speed	speed		
d	D	B	ring	C	C_0	P_u				
mm			mm	N		N	r/min		kg	–
12,7	19,05	3,967	3,967	520	270	11	75 000	36 000	0,0034	**D/W ER1212-2ZS**
	19,05	3,967	3,967	520	270	11	75 000	36 000	0,0034	**D/W SRI-1212-2ZS**
	22,225	7,142	7,142	1 110	530	22	70 000	36 000	0,0099	**D/W R6-5-2ZS**
	28,575	7,938	7,938	4 420	2 360	102	–	16 000	0,0204	**D/W R8-2RS1**
	28,575	7,938	7,938	4 420	2 360	102	60 000	30 000	0,0205	**D/W R8-2Z**
15,875	22,225	3,967	3,967	553	320	14	63 000	32 000	0,005	**D/W ER1458-2ZS**
	22,225	3,967	3,967	553	320	14	63 000	32 000	0,005	**D/W SRI-1458-2ZS**
	34,925	8,733	8,733	4 940	3 150	137	–	13 000	0,036	**D/W R10-2RS1**
	34,925	8,733	8,733	4 940	3 150	137	40 000	20 000	0,0362	**D/W R10-2Z**
19,05	25,4	3,967	3,967	572	365	16	53 000	26 000	0,0048	**D/W ER1634-2ZS**
	25,4	3,967	3,967	572	365	16	53 000	26 000	0,0048	**D/W SRI-1634-2ZS**
	41,275	11,113	11,113	8 060	5 000	212	–	11 000	0,0609	**D/W R12-2RS1**
	41,275	11,113	11,113	8 060	5 000	212	38 000	19 000	0,061	**D/W R12-2Z**

Inch flanged stainless steel deep groove ball bearings

d **1,016 – 15,875** mm



Principal dimensions					Basic load ratings dynamic	static	Fatigue load limit	Speed ratings Reference speed	Limiting speed	Mass	Designation
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
1,016	3,175	4,343	1,191	0,33	57	14	1	240 000	150 000	0,00005	**D/W R09 R**
1,191	3,967	5,156	1,588	0,33	62	16	1	220 000	140 000	0,00013	**D/W R0 R**
	3,967	5,156	2,38	0,787	62	16	1	220 000	110 000	0,00013	**D/W R0 R-2Z**
1,397	4,762	5,944	1,984	0,584	133	34	1	200 000	130 000	0,00033	**D/W R1 R**
	4,762	5,944	2,779	0,787	133	34	1	200 000	100 000	0,00033	**D/W R1 R-2Z**
1,984	6,35	7,518	2,38	0,584	163	48	2	170 000	100 000	0,0004	**D/W R1-4 R**
	6,35	7,518	3,571	0,787	163	48	2	170 000	85 000	0,0004	**D/W R1-4 R-2Z**
	6,35	7,518	3,571	0,787	163	48	2	170 000	85 000	0,0004	**D/W R1-4 R-2ZS**
2,38	4,762	5,944	1,588	0,457	104	30	1	190 000	120 000	0,00015	**D/W R133 R**
	4,762	5,944	2,38	0,787	78	25	1	190 000	95 000	0,0002	**D/W R133 R-2ZS**
	7,938	9,119	2,779	0,584	312	88	4	160 000	95 000	0,00058	**D/W R1-5 R**
	7,938	9,119	3,571	0,787	312	88	4	160 000	80 000	0,00068	**D/W R1-5 R-2Z**
3,175	6,35	7,518	2,38	0,584	163	48	2	170 000	100 000	0,00033	**D/W R144 R**
	6,35	7,518	2,38	0,584	174	55	2	170 000	100 000	0,00033	**D/W R144 RJ**
	6,35	7,518	2,779	0,787	163	48	2	170 000	85 000	0,00044	**D/W R144 R-2Z**
	6,35	7,518	2,779	0,787	174	55	2	170 000	85 000	0,00044	**D/W R144 R-2ZJ**
	7,938	9,119	2,779	0,584	319	90	4	150 000	95 000	0,0006	**D/W R2-5 R**
	7,938	9,119	3,571	0,787	319	90	4	150 000	75 000	0,0012	**D/W R2-5 R-2Z**
	9,525	11,176	3,967	0,762	358	110	5	130 000	85 000	0,0015	**D/W R2 R**
	9,525	10,719	2,779	0,584	364	114	5	130 000	80 000	0,001	**D/W R2-6 R**
	9,525	11,176	3,967	0,762	358	110	5	–	40 000	0,0016	**D/W R2 R-2RS1**
	9,525	11,176	3,967	0,762	358	110	5	130 000	67 000	0,0016	**D/W R2 R-2Z**
	9,525	10,719	3,571	0,787	364	114	5	130 000	63 000	0,0013	**D/W R2-6 R-2Z**
3,967	7,938	9,119	2,779	0,584	203	75	3	140 000	90 000	0,0006	**D/W R155 R**
	7,938	9,119	3,175	0,914	203	75	3	140 000	70 000	0,0007	**D/W R155 R-2ZS**
4,762	7,938	9,119	2,779	0,584	203	75	3	140 000	90 000	0,0005	**D/W R156 R**
	7,938	9,119	3,175	0,914	203	75	3	140 000	70 000	0,0006	**D/W R156 R-2ZS**
	9,525	10,719	3,175	0,584	403	137	6	130 000	80 000	0,0008	**D/W R166 R**
	9,525	10,719	3,175	0,787	403	137	6	130 000	63 000	0,0009	**D/W R166 R-2Z**
	12,7	14,351	4,978	1,067	741	250	11	110 000	70 000	0,0029	**D/W R3 R**
	12,7	14,351	3,967	1,067	741	250	11	110 000	70 000	0,0026	**D/W R3W.1562 R**
	12,7	14,351	4,978	1,067	741	250	11	–	32 000	0,003	**D/W R3 R-2RS1**
	12,7	14,351	4,978	1,067	741	250	11	110 000	56 000	0,0029	**D/W R3 R-2Z**

Principal dimensions					Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
					dynamic	static		Reference speed	Limiting speed		
d	D	D_3	B	C	C	C_0	P_u				
mm					N		N	r/min		kg	–
6,35	9,525	10,719	3,175	0,584	212	88	4	120 000	75 000	0,0007	**D/W R168 R**
	9,525	10,719	3,175	0,914	212	88	4	120 000	60 000	0,0007	**D/W R168 R-2ZS**
	9,525	10,719	3,175	0,914	212	88	4	120 000	60 000	0,0007	**D/W R168 R-2Z**
	12,7	13,894	3,175	0,584	618	224	10	110 000	67 000	0,0016	**D/W R188 R**
	12,7	13,894	4,762	1,143	618	224	10	110 000	53 000	0,0023	**D/W R188 R-2Z**
	15,875	17,526	4,978	1,067	852	315	14	95 000	60 000	0,0043	**D/W R4 R**
	15,875	17,526	4,978	1,607	852	315	14	–	28 000	0,0045	**D/W R4 R-2RS1**
	15,875	17,526	4,978	1,607	852	315	14	95 000	48 000	0,0046	**D/W R4 R-2Z**
7,938	12,7	13,894	3,967	0,787	312	143	6	100 000	63 000	0,0016	**D/W R1810 R**
	12,7	13,894	3,967	0,787	312	143	6	100 000	50 000	0,0017	**D/W R1810 R-2ZS**
9,525	22,225	24,613	5,558	1,575	2 470	1 120	48	70 000	45 000	0,0098	**D/W R6 R**
	22,225	24,613	7,142	1,575	2 470	1 120	48	–	20 000	0,0118	**D/W R6 R-2RS1**
	22,225	24,613	7,142	1,575	2 470	1 120	48	70 000	36 000	0,0118	**D/W R6 R-2Z**
12,7	28,575	31,12	6,35	1,575	4 420	2 360	102	60 000	36 000	0,0186	**D/W R8 R**
	28,575	31,12	7,938	1,575	4 420	2 360	102	–	16 000	0,0219	**D/W R8 R-2RS1**
	28,575	31,12	7,938	1,575	4 420	2 360	102	60 000	30 000	0,0219	**D/W R8 R-2Z**
15,875	34,925	37,846	8,733	1,745	4 940	3 150	137	40 000	20 000	0,0393	**D/W R10 R-2Z**

SKF – the knowledge engineering company

From the company that invented the self-aligning ball bearing more than 100 years ago, SKF has evolved into a knowledge engineering company that is able to draw on five technology platforms to create unique solutions for its customers. These platforms include bearings, bearing units and seals, of course, but extend to other areas including: lubricants and lubrication systems, critical for long bearing life in many applications; mechatronics that combine mechanical and electronics knowledge into systems for more effective linear motion and sensorized solutions; and a full range of services, from design and logistics support to condition monitoring and reliability systems.

Though the scope has broadened, SKF continues to maintain the world's leadership in the design, manufacture and marketing of rolling bearings, as well as complementary products such as radial seals. SKF also holds an increasingly important position in the market for linear motion products, high-precision aerospace bearings, machine tool spindles and plant maintenance services.

The SKF Group is globally certified to ISO 14001, the international standard for environmental management, as well as OHSAS 18001, the health and safety management standard. Individual divisions have been approved for quality certification in accordance with ISO 9001 and other customer specific requirements.

With over 120 manufacturing sites worldwide and sales companies in 70 countries, SKF is a truly international corporation. In addition, our distributors and dealers in some 15 000 locations around the world, an e-business marketplace and a global distribution system put SKF close to customers for the supply of both products and services. In essence, SKF solutions are available wherever and whenever customers need them. Overall, the SKF brand and the corporation are stronger than ever. As the knowledge engineering company, we stand ready to serve you with world-class product competencies, intellectual resources, and the vision to help you succeed.



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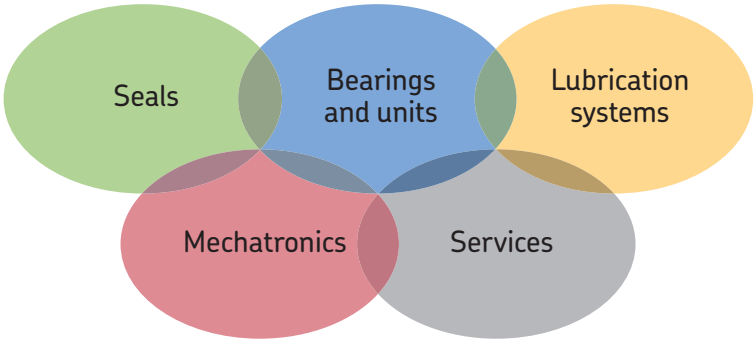
Evolving by-wire technology
SKF has a unique expertise in the fast-growing by-wire technology, from fly-by-wire, to drive-by-wire, to work-by-wire. SKF pioneered practical fly-by-wire technology and is a close working partner with all aerospace industry leaders. As an example, virtually all aircraft of the Airbus design use SKF by-wire systems for cockpit flight control.

SKF is also a leader in automotive by-wire technology, and has partnered with automotive engineers to develop two concept cars, which employ SKF mechatronics for steering and braking. Further by-wire development has led SKF to produce an all-electric forklift truck, which uses mechatronics rather than hydraulics for all controls.







Harnessing wind power
The growing industry of wind-generated electric power provides a source of clean, green electricity. SKF is working closely with global industry leaders to develop efficient and trouble-free turbines, providing a wide range of large, highly specialized bearings and condition monitoring systems to extend equipment life of wind farms located in even the most remote and inhospitable environments.



Working in extreme environments
In frigid winters, especially in northern countries, extreme sub-zero temperatures can cause bearings in railway axleboxes to seize due to lubrication starvation. SKF created a new family of synthetic lubricants formulated to retain their lubrication viscosity even at these extreme temperatures. SKF knowledge enables manufacturers and end user customers to overcome the performance issues resulting from extreme temperatures, whether hot or cold. For example, SKF products are at work in diverse environments such as baking ovens and instant freezing in food processing plants.



Developing a cleaner cleaner
The electric motor and its bearings are the heart of many household appliances. SKF works closely with appliance manufacturers to improve their products' performance, cut costs, reduce weight, and reduce energy consumption. A recent example of this cooperation is a new generation of vacuum cleaners with substantially more suction. SKF knowledge in the area of small bearing technology is also applied to manufacturers of power tools and office equipment.



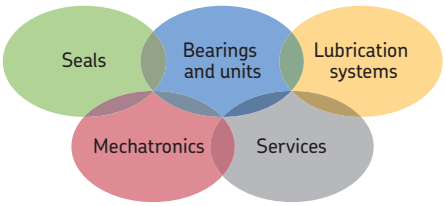
Maintaining a 350 km/h R&D lab
In addition to SKF's renowned research and development facilities in Europe and the United States, Formula One car racing provides a unique environment for SKF to push the limits of bearing technology. For over 60 years, SKF products, engineering and knowledge have helped make Scuderia Ferrari a formidable force in F1 racing. (The average racing Ferrari utilizes around 150 SKF components.) Lessons learned here are applied to the products we provide to automakers and the aftermarket worldwide.



Delivering Asset Efficiency Optimization
Through SKF Reliability Systems, SKF provides a comprehensive range of asset efficiency products and services, from condition monitoring hardware and software to maintenance strategies, engineering assistance and machine reliability programmes. To optimize efficiency and boost productivity, some industrial facilities opt for an Integrated Maintenance Solution, in which SKF delivers all services under one fixed-fee, performance-based contract.



Planning for sustainable growth
By their very nature, bearings make a positive contribution to the natural environment, enabling machinery to operate more efficiently, consume less power, and require less lubrication. By raising the performance bar for our own products, SKF is enabling a new generation of high-efficiency products and equipment. With an eye to the future and the world we will leave to our children, the SKF Group policy on environment, health and safety, as well as the manufacturing techniques, are planned and implemented to help protect and preserve the earth's limited natural resources. We remain committed to sustainable, environmentally responsible growth.



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

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