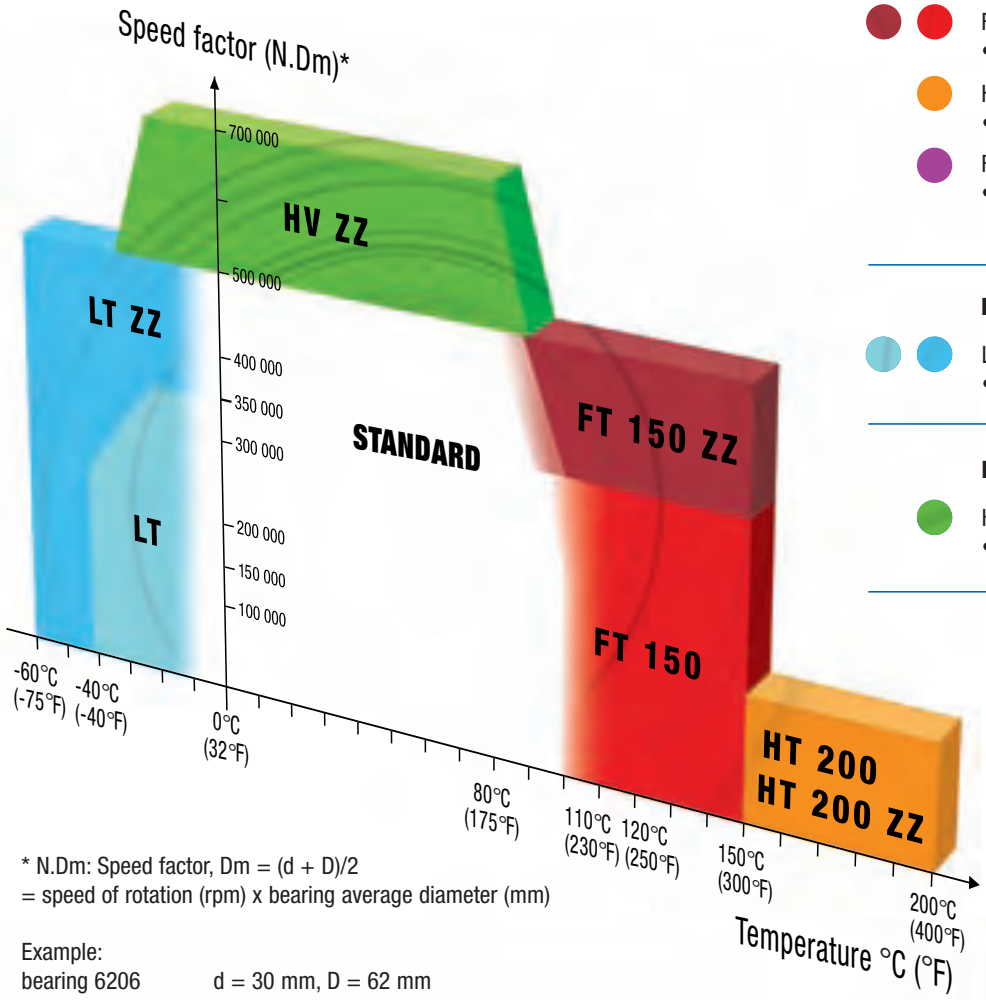
SNR - Industry

The first range of bearings for extreme use available from stock

NTN

SNR

A range suited to the most demanding applications.



High temperatures:

FT series: 150°C (300°F) peak
- up to 500 000 N.Dm

HT series: 200°C (400°F) peak
- up to 150 000 N.Dm

F600/F604 series
- 200°C (390°F) to 350°C (660°F) (not pictured)

Low temperatures:

LT series:
- down to -60°C (- 75°F)

High speeds:

HV series:
- up to 700 000 N.Dm

* N.Dm: Speed factor, Dm = (d + D)/2
= speed of rotation (rpm) x bearing average diameter (mm)

Example:
bearing 6206 d = 30 mm, D = 62 mm
N.Dm = 46 mm x 10 000 rpm = 460 000 N.Dm

With the new SNR TOPLINE range, you can significantly extend bearing life

Backed by its unique experience in the bearing field, the SNR group has developed a range of ball bearings that survive under extreme operating conditions. Indeed, new equipment is often subjected to ever increasing speed and/or operating temperature requirements… SNR's TOPLINE range now broadens the technical range of solutions provided to meet the greatest variety of applications.

■ Application examples

Electric motors, textile machines, ac generators, heating pumps, refrigeration systems, industrial ventilation, couplings, dryers, compressors, etc.

A special range but with the availability of standard bearings.

Straightforward and immediately available, SNR's TOPLINE range is divided into 4 families of ball bearings and covers the most stringent technical applications. It thus provides:

- wider selection,
- simplified product management,
- faster procurement.

Applications	Sealed version	Shielded version
Medium-high temperature, 150°C (300°F) peak High speed: up to 500 000 N.Dm	FT 150	FT 150 ZZ
High temperature, 200°C (400°F) peak Medium speed: up to 150 000 N.Dm	HT 200	HT 200 ZZ
Low temperature, down to -60°C (-75°F)	LT	LT ZZ
High speed, up to 700 000 N.Dm	Not available	HV ZZ
Extreme temperature 200° C (390°F) to 350°C (660°F)	Not available	F604

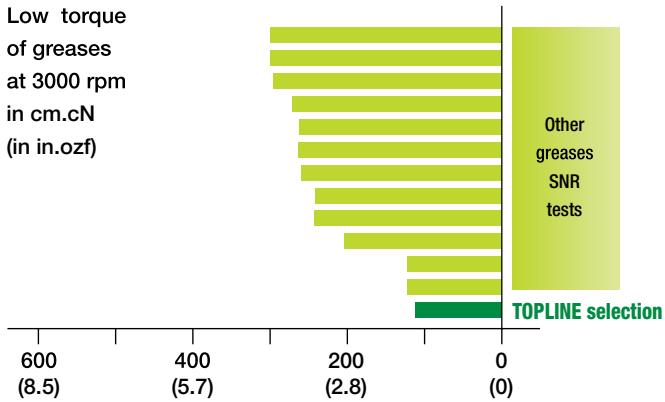
"Top-of-the- line" service for the TOPLINE range.

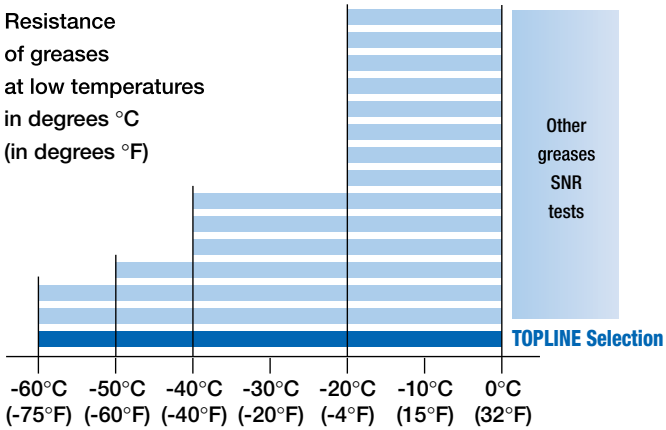
Our priority: be there at all times to serve you.

Test facilities, simulation software, bearing installation… SNR is on hand to advise you and assist you. Because for us, service is working closely with our customers!

When SNR places its expertise at your disposal we are there to assist you in determining the product that is best adapted to your application. With the TOPLINE range our Engineers and Technicians can now recommend a solution to provide you with the best possible performance, regardless of the challenging application conditions.

A tested and approved technical range.





Extreme conditions, extreme controls ...

Thanks to its test center with more than 100 machines, SNR has tested all the bearings of the TOPLINE range and all their components.

Lubricant breakdown, responsible for 70% of premature bearing failures, is averted due to the selection of greases suited to the particular application conditions.

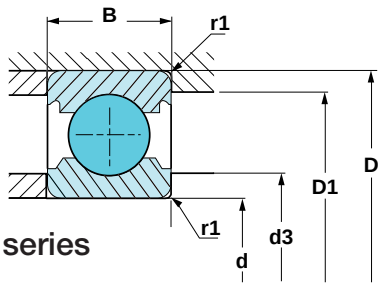
The test programs on the TOPLINE range have focused on this critical criterion through consideration of:

- physical/chemical characteristics: upper and lower operating limits, drop point, extreme pressure properties, etc.
- mechanical features: stability at various temperatures, in the presence of water, high temperature capabilities, resistance at high speed and/or low torque.
- proven performance under actual operating conditions. SNR has worked with the largest industrial manufacturers. A guarantee of reliability!

State-of-the-art design features.

To meet the most stringent requirements, the TOPLINE range benefits from all of SNR's latest technological innovations:

- Optimized internal geometry, with tighter tolerances and greater precision in the case of the HV series.
- Heat treatment adapted to operating conditions.
- Lubrication with grease selected to enhance operating performance.
- Two possible types of protection:
  - seals: highly effective against outside contamination and temperature for the FT and HT series, with a seal made of "viton".
  - shields: suitable for higher speeds of rotation, more cost effective.



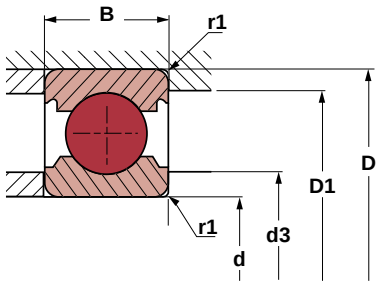
LT, LT ZZ SERIES

Low temperature
- 40°C (- 40°F) for the LT series / - 60°C (- 75°F) for the LT ZZ series

PART NUMBER	DIMENSIONS (mm)			BASIC LOAD RATING		LIMITING SPEED (rpm)	SHOULDERS AND FILLETS (mm)			WEIGHT	
	d	D	B	Cx1000 Newtons	C (lbf)		D1 min	d3 max	r1 max	(kg)	(lbs)
6000 LT	10	26	8	4.60	1 000	19 000	23.60	12.80	0.30	0.019	0.041
6200 LT	10	30	9	6.00	1 400	16 000	25.80	14.60	0.60	0.029	0.064
6000 LT ZZ	*10*	*26*	*8*	*4.60*	*1 000*	*28 000*	*23.60*	*12.80*	*0.30*	*0.019*	*0.041*
6200 LT ZZ	*10*	*30*	*9*	*6.00*	*1 400*	*23 000*	*25.80*	*14.60*	*0.60*	*0.029*	*0.064*
6001 LT	12	28	8	5.10	1 100	17 000	25.60	14.80	0.30	0.021	0.046
6201 LT	12	32	10	6.90	1 600	15 000	27.90	16.50	0.60	0.037	0.082
6001 LT ZZ	*12*	*28*	*8*	*5.10*	*1 100*	*25 000*	*25.60*	*14.80*	*0.30*	*0.021*	*0.046*
6201 LT ZZ	*12*	*32*	*10*	*6.90*	*1 600*	*22 000*	*27.90*	*16.50*	*0.60*	*0.037*	*0.082*
6002 LT	15	32	9	5.60	1 300	14 000	29.10	18.30	0.30	0.029	0.064
6202 LT	15	35	11	7.70	1 700	13 000	31.00	19.60	0.60	0.046	0.101
6002 LT ZZ	*15*	*32*	*9*	*5.60*	*1 300*	*21 000*	*29.10*	*18.30*	*0.30*	*0.029*	*0.064*
6202 LT ZZ	*15*	*35*	*11*	*7.70*	*1 700*	*19 000*	*31.00*	*19.60*	*0.60*	*0.046*	*0.101*
6003 LT	17	35	10	6.00	1 400	13 000	31.70	20.70	0.30	0.039	0.086
6203 LT	17	40	12	9.50	2 100	11 000	35.00	22.40	0.60	0.068	0.150
6003 LT ZZ	*17*	*35*	*10*	*6.00*	*1 400*	*19 000*	*31.70*	*20.70*	*0.30*	*0.039*	*0.086*
6203 LT ZZ	*17*	*40*	*12*	*9.50*	*2 100*	*17 000*	*35.00*	*22.40*	*0.60*	*0.060*	*0.132*
6004 LT	20	42	12	9.40	2 100	10 000	37.10	25.10	0.60	0.070	0.153
6204 LT	20	47	14	12.80	2 900	9 300	41.10	26.20	1.00	0.103	0.227
6004 LT ZZ	*20*	*42*	*12*	*9.40*	*2 100*	*16 000*	*37.10*	*25.10*	*0.60*	*0.070*	*0.153*
6204 LT ZZ	*20*	*47*	*14*	*12.80*	*2 900*	*14 000*	*41.10*	*26.20*	*1.00*	*0.103*	*0.227*
6005 LT	25	47	12	10.10	2 300	9 300	42.10	30.10	0.60	0.080	0.176
6205 LT	25	52	15	14.00	3 200	8 200	46.30	31.40	1.00	0.133	0.293
6005 LT ZZ	*25*	*47*	*12*	*10.10*	*2 300*	*14 000*	*42.10*	*30.10*	*0.60*	*0.080*	*0.176*
6205 LT ZZ	*25*	*52*	*15*	*14.00*	*3 200*	*12 000*	*46.30*	*31.40*	*1.00*	*0.133*	*0.293*
6006 LT	30	55	13	12.60	2 800	7 800	48.80	36.20	1.00	0.121	0.267
6206 LT	30	62	16	19.50	4 400	7 000	54.60	38.00	1.00	0.200	0.441
6006 LT ZZ	*30*	*55*	*13*	*12.60*	*2 800*	*12 000*	*48.80*	*36.20*	*1.00*	*0.121*	*0.267*
6206 LT ZZ	*30*	*62*	*16*	*19.50*	*4 400*	*10 000*	*54.60*	*38.00*	*1.00*	*0.200*	*0.441*

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	m6	H7
Outer ring rotating in relation to the load	h6	M7



FT 150, FT 150 ZZ SERIES

Medium-high temperature (150°C (300°F) peak)
High speed (up to 500 000 N.Dm)

PART NUMBER	DIMENSIONS (mm)			BASIC LOAD RATING		LIMITING SPEED (rpm)	SHOULDERS AND FILLETS (mm)			WEIGHT	
	d	D	B	Cx1000 Newtons	C (lbf)		D1 min	d3 max	r1 max	(kg)	(lbs)
608 FT 150	8	22	7	3.30	700	23 000	19.30	10.50	0.30	0.012	0.026
6000 FT 150	10	26	8	4.60	1 000	19 000	23.60	12.80	0.30	0.018	0.040
6000 FT 150 ZZ	*10*	*26*	*8*	*4.60*	*1 000*	*28 000*	*23.60*	*12.80*	*0.30*	*0.018*	*0.040*
6200 FT 150 ZZ	*10*	*30*	*9*	*6.00*	*1 400*	*23 000*	*25.80*	*14.60*	*0.60*	*0.031*	*0.067*
6300 FT 150 ZZ	*10*	*35*	*11*	*8.10*	*1 800*	*20 000*	*29.20*	*16.60*	*0.60*	*0.056*	*0.123*
6001 FT 150	12	28	8	5.10	1 100	17 000	25.60	14.80	0.30	0.020	0.044
6201 FT 150	12	32	10	6.90	1 600	15 000	27.90	16.50	0.60	0.037	0.082
6001 FT 150 ZZ	*12*	*28*	*8*	*5.10*	*1 100*	*25 000*	*25.60*	*14.80*	*0.30*	*0.020*	*0.044*
6201 FT 150 ZZ	*12*	*32*	*10*	*6.90*	*1 600*	*19 000*	*27.90*	*16.50*	*0.60*	*0.037*	*0.082*
6301 FT 150 ZZ	*12*	*37*	*11*	*9.70*	*2 200*	*18 000*	*31.30*	*18.10*	*1.00*	*0.062*	*0.137*
6002 FT 150	15	32	9	5.60	1 300	14 000	29.10	18.30	0.30	0.029	0.064
6202 FT 150	15	35	11	7.70	1 700	13 000	31.00	19.60	0.60	0.046	0.101
6002 FT 150 ZZ	*15*	*32*	*9*	*5.60*	*1 300*	*21 000*	*29.10*	*18.30*	*0.30*	*0.029*	*0.064*
6202 FT 150 ZZ	*15*	*35*	*11*	*7.70*	*1 700*	*19 000*	*31.00*	*19.60*	*0.60*	*0.046*	*0.101*
6302 FT 150 ZZ	*15*	*42*	*13*	*11.30*	*2 500*	*16 000*	*36.10*	*21.20*	*1.00*	*0.085*	*0.187*
6003 FT 150	17	35	10	6.00	1 400	13 000	31.70	20.70	0.30	0.039	0.087
6203 FT 150	17	40	12	9.50	2 100	11 000	35.00	22.40	0.60	0.068	0.150
6303 FT 150	17	47	14	13.60	3 100	9 300	40.30	24.50	1.00	0.115	0.254
6003 FT 150 ZZ	*17*	*35*	*10*	*6.00*	*1 400*	*19 000*	*31.70*	*20.70*	*0.30*	*0.039*	*0.087*
6203 FT 150 ZZ	*17*	*40*	*12*	*9.50*	*2 100*	*17 000*	*35.00*	*22.40*	*0.60*	*0.068*	*0.150*
6303 FT 150 ZZ	*17*	*47*	*14*	*13.60*	*3 100*	*14 000*	*40.30*	*24.50*	*1.00*	*0.115*	*0.254*
6004 FT 150	20	42	12	9.40	2 100	10 000	37.10	25.10	0.60	0.066	0.146
6204 FT 150	20	47	14	12.80	2 900	9 300	41.10	26.20	1.00	0.103	0.227
6304 FT 150	20	52	15	15.90	3 600	8 600	44.50	27.90	1.10	0.141	0.311
6004 FT 150 ZZ	*20*	*42*	*12*	*9.40*	*2 100*	*16 000*	*37.10*	*25.10*	*0.60*	*0.070*	*0.153*
6204 FT 150 ZZ	*20*	*47*	*14*	*12.80*	*2 900*	*14 000*	*41.10*	*26.20*	*1.00*	*0.103*	*0.227*
6304 FT 150 ZZ	*20*	*52*	*15*	*15.90*	*3 600*	*12 000*	*44.50*	*27.90*	*1.10*	*0.141*	*0.311*
6005 FT 150	25	47	12	10.10	2 300	9 300	42.10	30.10	0.60	0.080	0.176
6205 FT 150	25	52	15	14.00	3 200	8 300	46.30	31.40	1.00	0.133	0.293
6305 FT 150	25	62	17	23.70	5 300	7 000	53.10	34.90	1.10	0.243	0.536
6005 FT 150 ZZ	*25*	*47*	*12*	*10.10*	*2 300*	*14 000*	*42.10*	*30.10*	*0.60*	*0.080*	*0.176*
6205 FT 150 ZZ	*25*	*52*	*15*	*14.00*	*3 200*	*12 000*	*46.30*	*31.40*	*1.00*	*0.133*	*0.293*
6305 FT 150 ZZ	*25*	*62*	*17*	*23.70*	*5 300*	*11 000*	*53.10*	*34.90*	*1.10*	*0.243*	*0.536*

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	m6	H7
Outer ring rotating in relation to the load	h6	M7

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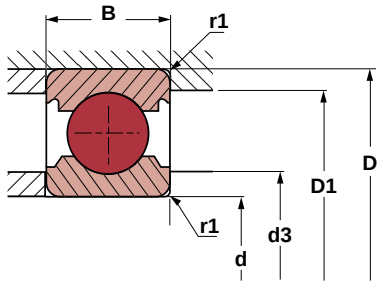


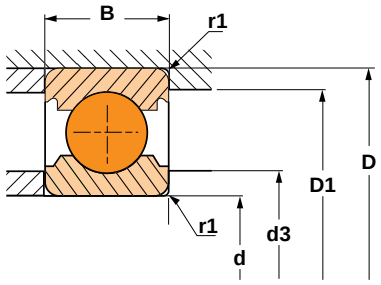
FT 150, FT 150 ZZ SERIES

Medium-high temperature (150°C (300°F) peak)
High speed (up to 500 000 N.Dm)

PART NUMBER	DIMENSIONS (mm)			BASIC LOAD RATING		LIMITING SPEED (rpm)	SHOULDERS AND FILLETS (mm)			WEIGHT	
	d	D	B	Cx1000 Newtons	C (lbf)		D1 min	d3 max	r1 max	(kg)	(lbs)
6006 FT 150	30	55	13	12.60	2 800	7 800	48.80	36.20	1.00	0.121	0.267
6206 FT 150	30	62	16	19.50	4 400	7 000	54.60	38.00	1.00	0.203	0.448
6306 FT 150	30	72	19	28.00	6 300	6 000	62.30	41.70	1.10	0.356	0.785
6006 FT 150 ZZ	*30*	*55*	*13*	*12.60*	*2 800*	*12 000*	*48.80*	*36.20*	*1.00*	*0.121*	*0.267*
6206 FT 150 ZZ	*30*	*62*	*16*	*19.50*	*4 400*	*10 000*	*54.60*	*38.00*	*1.00*	*0.203*	*0.448*
6306 FT 150 ZZ	*30*	*72*	*19*	*28.00*	*6 300*	*8 900*	*62.30*	*41.70*	*1.10*	*0.356*	*0.785*
6007 FT 150	35	62	14	16.00	3 600	6 900	56.20	41.20	1.00	0.158	0.348
6207 FT 150	35	72	17	25.50	5 700	6 000	63.70	43.80	1.10	0.283	0.624
6307 FT 150	35	80	21	33.50	7 500	5 400	68.40	46.40	1.50	0.472	1.04
6007 FT 150 ZZ	*35*	*62*	*14*	*16.00*	*3 600*	*10 000*	*56.20*	*41.20*	*1.00*	*0.158*	*0.348*
6207 FT 150 ZZ	*35*	*72*	*17*	*25.50*	*5 700*	*9 000*	*63.70*	*43.80*	*1.10*	*0.283*	*0.624*
6307 FT 150 ZZ	*35*	*80*	*21*	*33.50*	*7 500*	*8 100*	*68.40*	*46.40*	*1.50*	*0.472*	*1.04*
6008 FT 150	40	68	15	17.40	3 900	6 200	61.90	46.50	1.00	0.192	0.423
6208 FT 150	40	80	18	29.00	6 500	5 300	70.70	49.80	1.10	0.373	0.822
6308 FT 150	40	90	23	40.50	9 100	4 800	77.60	52.90	1.50	0.644	1.42
6008 FT 150 ZZ	*40*	*68*	*15*	*17.40*	*3 900*	*9 300*	*61.90*	*46.50*	*1.00*	*0.192*	*0.423*
6208 FT 150 ZZ	*40*	*80*	*18*	*29.00*	*6 500*	*8 000*	*70.70*	*49.80*	*1.10*	*0.373*	*0.822*
6308 FT 150 ZZ	*40*	*90*	*23*	*40.50*	*9 100*	*7 200*	*77.60*	*52.90*	*1.50*	*0.644*	*1.42*
6009 FT 150	45	75	16	21.00	4 700	5 600	68.10	52.30	1.00	0.250	0.551
6209 FT 150	45	85	19	32.50	7 300	4 900	76.10	54.40	1.10	0.414	0.913
6309 FT 150	45	100	25	53.00	11 900	4 300	86.70	59.20	1.50	0.851	1.88
6009 FT 150 ZZ	*45*	*75*	*16*	*21.00*	*4 700*	*8 300*	*68.10*	*52.30*	*1.00*	*0.250*	*0.551*
6209 FT 150 ZZ	*45*	*85*	*19*	*32.50*	*7 300*	*7 400*	*76.10*	*54.40*	*1.10*	*0.414*	*0.913*
6309 FT 150 ZZ	*45*	*100*	*25*	*53.00*	*11 900*	*6 400*	*86.70*	*59.20*	*1.50*	*0.851*	*1.88*
6010 FT 150	50	80	16	21.80	4 900	5 100	73.10	57.30	1.00	0.270	0.595
6210 FT 150	50	90	20	35.00	7 900	4 600	81.10	59.40	1.10	0.466	1.03
6310 FT 150	50	110	27	62.00	14 000	3 900	95.10	65.80	2.00	1.110	2.45
6010 FT 150 ZZ	*50*	*80*	*16*	*21.80*	*4 900*	*7 700*	*73.10*	*57.30*	*1.00*	*0.270*	*0.595*
6210 FT 150 ZZ	*50*	*90*	*20*	*35.00*	*7 900*	*6 900*	*81.10*	*59.40*	*1.10*	*0.466*	*1.03*
6310 FT 150 ZZ	*50*	*110*	*27*	*62.00*	*14 000*	*5 800*	*95.10*	*65.80*	*2.00*	*1.110*	*2.45*
6213 FT 150	65	120	23	57.00	12 800	3 500	106.70	78.10	1.50	1.003	2.21

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	m6	H7
Outer ring rotating in relation to the load	h6	M7



HT 200, HT 200 ZZ SERIES

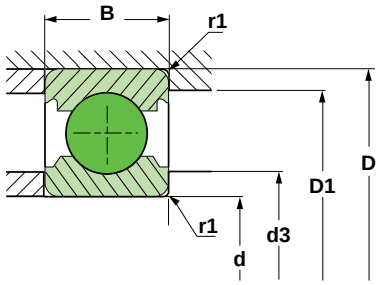
High temperature (up to 200°C (400°F) peak)
Medium speed (150 000 N.Dm)

PART NUMBER	DIMENSIONS (mm)			BASIC LOAD RATING		LIMITING SPEED (rpm)*	SHOULDERS AND FILLETS (mm)			WEIGHT	
	d	D	B	Cx1000 Newtons	C (lbf)		D1 min	d3 max	r1 max	(kg)	(lbs)
6204 HT 200	20	47	14	12.80	2 900	4 400	41.10	26.20	1.00	0.103	0.227
6304 HT 200	20	52	15	15.90	3 600	4 100	44.50	27.90	1.10	0.141	0.311
6204 HT 200 ZZ	*20*	*47*	*14*	*12.80*	*2 900*	*4 400*	*41.10*	*26.20*	*1.00*	*0.103*	*0.227*
6304 HT 200 ZZ	*20*	*52*	*15*	*15.90*	*3 600*	*4 100*	*44.50*	*27.90*	*1.10*	*0.141*	*0.311*
6205 HT 200	25	52	15	14.00	3 200	3 800	46.30	31.40	1.00	0.133	0.293
6305 HT 200	25	62	17	23.70	5 300	3 400	53.10	34.90	1.10	0.243	0.536
6205 HT 200 ZZ	*25*	*52*	*15*	*14.00*	*3 200*	*3 800*	*46.30*	*31.40*	*1.00*	*0.133*	*0.293*
6305 HT 200 ZZ	*25*	*62*	*17*	*23.70*	*5 300*	*3 400*	*53.10*	*34.90*	*1.10*	*0.243*	*0.536*
6206 HT 200	30	62	16	19.50	4 400	3 200	54.60	38.00	1.00	0.203	0.448
6306 HT 200	30	72	19	28.00	6 300	2 900	62.30	41.70	1.10	0.356	0.785
6206 HT 200 ZZ	*30*	*62*	*16*	*19.50*	*4 400*	*3 200*	*54.60*	*38.00*	*1.00*	*0.203*	*0.448*
6306 HT 200 ZZ	*30*	*72*	*19*	*28.00*	*6 300*	*2 900*	*62.30*	*41.70*	*1.10*	*0.356*	*0.785*
6207 HT 200	35	72	17	25.50	5 700	2 800	63.70	43.80	1.10	0.283	0.624
6307 HT 200	35	80	21	33.50	7 500	2 600	68.40	46.40	1.50	0.472	1.04
6207 HT 200 ZZ	*35*	*72*	*17*	*25.50*	*5 700*	*2 800*	*63.70*	*43.80*	*1.10*	*0.283*	*0.624*
6307 HT 200 ZZ	*35*	*80*	*21*	*33.50*	*7 500*	*2 600*	*68.40*	*46.40*	*1.50*	*0.472*	*1.04*
6208 HT 200	40	80	18	29.00	6 500	2 500	70.70	49.80	1.10	0.373	0.822
6308 HT 200	40	90	23	40.50	9 100	2 300	77.60	52.90	1.50	0.644	1.42
6208 HT 200 ZZ	*40*	*80*	*18*	*29.00*	*6 500*	*2 500*	*70.70*	*49.80*	*1.10*	*0.373*	*0.822*
6308 HT 200 ZZ	*40*	*90*	*23*	*40.50*	*9 100*	*2 300*	*77.60*	*52.90*	*1.50*	*0.644*	*1.42*
6209 HT 200	45	85	19	32.50	7 300	2 300	76.10	54.40	1.10	0.415	0.915
6309 HT 200	45	100	25	53.00	11 900	2 000	86.70	59.20	1.50	0.851	1.88
6209 HT 200 ZZ	*45*	*85*	*19*	*32.50*	*7 300*	*2 300*	*76.10*	*54.40*	*1.10*	*0.415*	*0.915*
6309 HT 200 ZZ	*45*	*100*	*25*	*53.00*	*11 900*	*2 000*	*86.70*	*59.20*	*1.50*	*0.851*	*1.88*
6210 HT 200	50	90	20	35.00	7 900	2 100	81.10	59.40	1.10	0.466	1.03
6310 HT 200	50	110	27	62.00	14 000	1 800	95.10	65.80	2.00	1.110	2.45
6210 HT 200 ZZ	*50*	*90*	*20*	*35.00*	*7 900*	*2 100*	*81.10*	*59.40*	*1.10*	*0.466*	*1.03*
6310 HT 200 ZZ	*50*	*110*	*27*	*62.00*	*14 000*	*1 800*	*95.10*	*65.80*	*2.00*	*1.110*	*2.45*

* Note: Bearings of the HT and HT ZZ series are packed with grease that provides the optimum temperature resistance while minimizing the reduction in speed capabilities.

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	m6	H7
Outer ring rotating in relation to the load	h6	M7



HV ZZ SERIES

High speed (up to 700 000 N.Dm)

PART NUMBER	DIMENSIONS (mm)			BASIC LOAD RATING		LIMITING SPEED (rpm)*	SHOULDERS AND FILLETS (mm)			WEIGHT	
	d	D	B	Cx1000 Newtons	C (lbf)		D1 min	d3 max	r1 max	(kg)	(lbs)
6000 HV ZZ	10	26	8	4.60	1 000	38 800	23.60	12.80	0.30	0.018	0.040
6001 HV ZZ	12	28	8	5.10	1 100	35 000	25.60	14.80	0.30	0.020	0.044
6201 HV ZZ	12	32	10	6.90	1 600	31 800	27.90	16.50	0.60	0.037	0.081
6002 HV ZZ	15	32	9	5.60	1 300	29 700	29.10	18.30	0.30	0.029	0.064
6202 HV ZZ	15	35	11	7.70	1 700	28 000	31.00	19.60	0.60	0.046	0.101
6003 HV ZZ	17	35	10	6.00	1 400	26 900	31.70	20.70	0.30	0.039	0.087
6203 HV ZZ	17	40	12	9.50	2 100	24 500	35.00	22.40	0.60	0.068	0.149
6004 HV ZZ	20	42	12	9.40	2 100	22 500	37.10	25.10	0.60	0.070	0.153
6204 HV ZZ	20	47	14	12.80	2 900	20 800	41.10	26.20	1.00	0.110	0.243
6005 HV ZZ	25	47	12	10.10	2 300	19 400	42.10	30.10	0.60	0.081	0.178
6205 HV ZZ	25	52	15	14.00	3 200	18 100	46.30	31.40	1.00	0.134	0.295
6006 HV ZZ	30	55	13	12.60	2 800	16 400	48.80	36.20	1.00	0.122	0.268
6206 HV ZZ	30	62	16	19.50	4 400	15 200	54.60	38.00	1.00	0.200	0.441
6007 HV ZZ	35	62	14	16.00	3 600	14 400	56.20	41.20	1.00	0.157	0.346
6207 HV ZZ	35	72	17	25.50	5 700	13 000	63.70	43.80	1.10	0.287	0.632
6008 HV ZZ	40	68	15	17.40	3 900	12 900	61.90	46.50	1.00	0.192	0.423
6208 HV ZZ	40	80	18	29.00	6 500	11 600	70.70	49.80	1.10	0.373	0.822
6209 HV ZZ	45	85	19	32.50	7 300	10 700	76.10	54.40	1.10	0.415	0.915
6210 HV ZZ	50	90	20	35.00	7 900	10 000	81.10	59.40	1.10	0.466	1.03

* Speed indicated for operation within a temperature range of -20 to + 80°C (- 4 to + 175°F)

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	m6	H7
Outer ring rotating in relation to the load	h6	M7

F600/F604/F605 extreme temperature series

Aggressive environments require extreme solutions.

These radial contact ball bearings have the following features and benefits:

- **Large radial clearance.** Clearance is sufficient to compensate for differential thermal expansion between the inner and outer rings of the bearing and/or surrounding parts.
- **Heat treatment with stabilization temper.** Beyond 230° to 250°F, steel undergoes a structural change resulting in an increase of its specific volume. To limit this phenomenon, F600 bearings are subject to a special high-temperature temper.
- **Pressed steel cage.**
- **Recessed markings** on both rings. Marking maintains proper identification of bearings at all times regardless of operating conditions.

Bearing type selection and instructions for use

F600: Standard Type
Open with a black finish, the F600 benefits from a special surface treatment over the entire bearing. This surface treatment gives the bearing better resistance to corrosion while acting as a dry lubricant where speed and loads are not as severe.

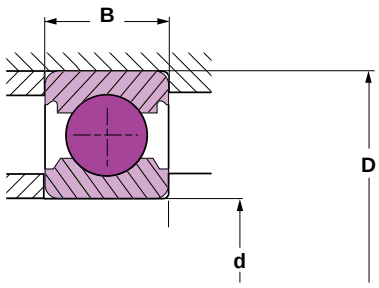
F604: Greased/Shielded Type
Suited for heavily contaminated environments, this bearing is pre-lubricated with a high-temperature grease and protected by two built-in shields.

F605: Special Type for Limestone
This open bearing is designed for use in limestone kilns or similar applications. It is heat stabilized for temperatures up to 660°F, but comes with no surface treatment. PTFE type lubricant is recommended for filling the empty housing space.

The special treatment of the F600 series can be applied to other sizes and types of bearings (e.g. spherical roller bearings). Contact your NTN representative for additional details.

F600, F604, F605 SERIES

Extreme temperature applications
200°C (390°F) to 350°C (660°F)



BEARING REFERENCE				DIMENSIONS (mm)"			"LOAD RATING (lbf)*"							
				d	D	B	390°F	480°F	570°F	660°F	390°F	480°F	570°F	660°F
							Free Wheel Configuration				Axle Configuration			
6004	F600	F604	F605	20	42	12	380	340	290	230	540	520	450	360
6007	F600	F604	F605	35	62	14	770	700	590	470	1100	1040	920	740
6008	F600	F604	F605	40	68	15	860	790	650	520	1240	1180	1040	830
6204	F600	F604	F605	20	47	14	500	450	380	290	720	680	590	470
6205	F600	F604	F605	25	52	15	590	540	450	360	860	810	720	560
6206	F600	F604	F605	30	62	16	860	770	630	520	1220	1150	1010	810
6207	F600	F604	F605	35	72	17	1150	1040	860	700	1640	1550	1370	1100
6208	F600	F604	F605	40	80	18	1350	1220	1010	810	1940	1820	1620	1280
6209	F600	F604	F605	45	85	19	1530	1400	1150	920	2210	2070	1850	1490
6210	F600	F604	F605	50	90	20	1730	1580	1310	1040	2500	2340	2090	1670
6211	F600	F604	F605	55	100	21	2180	1960	1640	1310	3130	2950	2610	2090
6212	F600	F604	F605	60	110	22	2700	2430	2030	1620	3890	3650	3240	2590
6213	F600	F604	F605	65	120	23	2990	2700	2250	1800	4320	4050	3600	2880
6214	F600	F604	F605	70	125	24	3310	2970	2480	1980	4750	4460	3960	3170
6217	F600	F604	F605	85	150	28	4790	4320	3600	2880	6910	6480	5760	4610
6220	F600	F604	F605	100	180	34	6980	6280	5240	4190	10040	9430	8370	6710
6305	F600	F604	F605	25	62	17	920	830	700	540	1330	1240	1100	880
6307	F600	F604	F605	35	80	21	1440	1280	1080	860	2070	1940	1710	1370
6309	F600	F604	F605	45	100	25	2360	2140	1780	1420	3400	3200	2840	2270
6310	-	-	F605	50	110	27	2813	2565	2136	1710	4095	3848	3420	2745
6311	F600	F604	F605	55	120	29	3330	3020	2500	2000	4820	4500	4010	3200

*Load recommended at speed lower than 50rpm

RECOMMENDED FITTING TOLERANCES

	Shaft	Steel or cast-iron housing
Inner ring rotating in relation to the load	j6	H7
Outer ring rotating in relation to the load	g6	J7

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