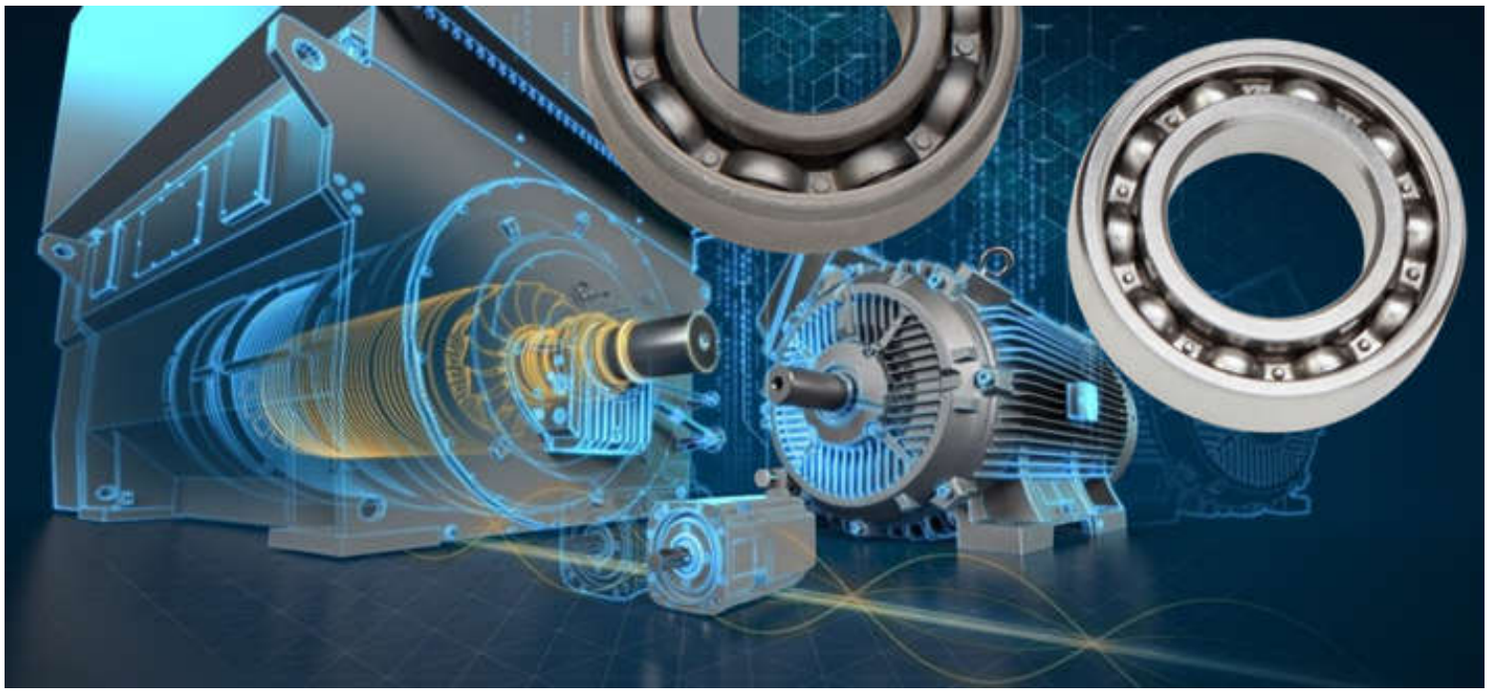
HIGH-TEMP DEEP GROOVE BALL BEARINGS FOR FAST SPEEDS



Version: 10/2023

Every care has been taken to ensure the correctness of the information contained in this document but no liability can be accepted for any errors or omissions. Subject to change without prior notice.

GMW High-Temperature Deep Groove Ball Bearings for fast speeds:

Besides High-temp Deep Groove Ball Bearings for slow speeds, our also offers normal bearings, which can be used for fast speeds. Due to their heat treatment, these bearings are suitable for considerably higher temperatures than normal standard bearings. Our offers two different versions:



T150 – The Basic *(According to DIN 620 and DIN ISO 1132)*

Every T150 bearing is filled with suitable lubricant or available as sealed bearing and comprises the following properties:

- Heat treatment of the bearing up to 150°C
- Made from Chromium steel material
- Radial clearance: Normal clearance CN or C3
- Riveted sheet steel cage
- Special high-temperature grease (a combination of *diurea thickener and mineral oil)* (suitable up to 180°C)
- Optional:

Steel shields (2Z), NBR seals (2RS1)



T200 – The Standard *(According to DIN 620 and DIN ISO 1132)*

Every T200 bearing is filled with suitable lubricant or available as sealed bearing and comprises the following properties:

- Heat treatment of the bearing up to 200°C
- Made from Chromium steel material
- Radial clearance: Normal clearance C3
- Riveted sheet steel cage
- Special high-temperature grease (a combination of *diurea thickener and synthetic oil)* (suitable up to 200°C)
- Optional:

Steel shields (2Z), NBR seals (2RS1)

T250 – The Standard *(According to DIN 620 and DIN ISO 1132)*

Every T250 bearing is filled with suitable lubricant or available as sealed bearing and comprises the following properties:

- Heat treatment of the bearing up to 250°C
- Made from Chromium steel material
- Radial clearance: Normal clearance C3 or C4
- Riveted sheet steel cage
- Special *polytetrafluoroethylene* (PTFE) heat-resistant grease (suitable up to 250°C)
- Optional:

Steel shields (2Z), NBR seals (2RS1) or Viton seals (2RSV)

T250X The Upgrade *(According to DIN 620 and DIN ISO 1132)*

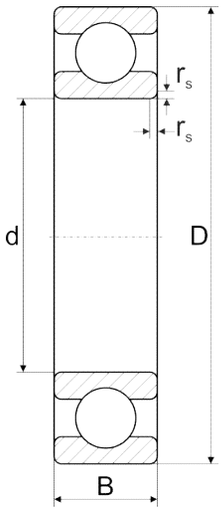


Every T250X bearing is filled with suitable lubricant or available as sealed bearing and comprises the following properties:

- Heat treatment of the bearing up to 250°C
- Made from Chromium steel material
- Radial clearance: C4
- Manganese Phosphate surface treatment According DIN EN ISO 9717
- Riveted sheet steel cage
- Special *polytetrafluoroethylene* (PTFE) heat-resistant grease (suitable up to 260°C)
- Optional:

Steel shields (2Z), NBR seals (2RS1) or Viton seals (2RSV)

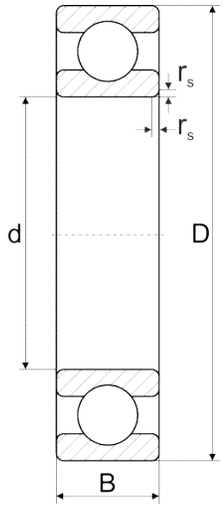
60XX



GMW	Dimensions				Load Ratings		Max. Speed				Weight
Code	d	D	B	rs	C0	Cdyn	T150	T200	T250	T250X	
				min			2Z	2Z	2Z	2Z	
	[mm]	[mm]	[mm]	[mm]	[kN]	[kN]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[kg]
6000	10	26	8	0,3	1,96	4,55	17300	10800	8600	2400	0,019
6001	12	28	8	0,3	2,36	5,10	15300	9615	7600	2190	0,020
6002	15	32	9	0,3	2,85	5,60	12900	8060	6450	1950	0,031
6003	17	35	10	0,3	3,25	6,00	11500	7250	5800	1700	0,038
6004	20	42	12	0,6	5,00	9,30	9750	6100	4850	1620	0,068
6005	25	47	12	0,6	5,85	10,0	8250	5150	4100	1380	0,080
6006	30	55	13	1,0	8,00	12,7	6950	4300	3470	1195	0,122
6007	35	62	14	1,0	10,2	16,0	6060	3750	3030	1050	0,157
6008	40	68	15	1,0	11,6	16,6	5400	3370	2700	890	0,194
6009	45	75	16	1,0	14,3	20,0	4800	3030	2450	810	0,247
6010	50	80	16	1,0	15,6	20,8	4400	7200	2200	730	0,272
6011	55	90	18	1,1	21,2	28,5	4000	2500	2000	695	0,397
6012	60	95	18	1,1	23,2	29,0	3720	2320	1860	620	0,404
6013	65	100	18	1,1	25,0	30,5	3470	2170	1730	580	0,411
6014	70	110	20	1,1	31,0	38,0	3200	2000	1600	530	0,594
6015	75	115	20	1,1	33,5	39,0	3000	1880	1500	495	0,639
6016	80	125	22	1,1	40,0	47,5	2800	1750	1400	450	0,844
6017	85	130	22	1,1	43,0	49,0	2650	1660	1350	410	0,880
6018	90	140	24	1,5	50,0	58,5	2500	1560	1250	390	1,010
6019	95	145	24	1,5	54,0	60,0	2300	1790	1190	365	1,070
6020	100	150	24	1,5	54,0	60,0	2285	1420	1140	320	1,140

(Remark: The weight applies for the bearing only without lubricant and shields)

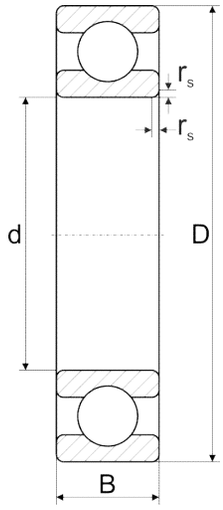
62XX



GMW	Dimensions				Load Ratings		Max. Speed				Weight
Code	d	D	B	rs	C0	Cdyn	T150	T200	T250	T250X	
				min			2Z	2Z	2Z	2Z	
	[mm]	[mm]	[mm]	[mm]	[kN]	[kN]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[kg]
6200	10	30	9	0,6	2,60	6,00	16000	10000	8000	2250	0,031
6201	12	32	10	0,6	3,10	6,95	14200	8900	7150	1950	0,037
6202	15	35	11	0,6	3,75	7,80	12300	7690	6150	1660	0,043
6203	17	40	12	0,6	4,75	9,50	10810	6750	5400	1450	0,065
6204	20	47	14	1,0	6,55	12,7	9195	5750	4590	1220	0,105
6205	25	52	15	1,0	7,80	14,0	7850	4900	3920	1160	0,128
6206	30	62	16	1,0	11,2	19,3	6550	4090	3270	895	0,195
6207	35	72	17	1,1	15,3	25,5	5630	3520	2800	770	0,291
6208	40	80	18	1,1	18,0	29,0	5000	3125	2500	690	0,371
6209	45	85	19	1,1	20,4	31,0	4570	2850	2285	650	0,429
6210	50	90	20	1,1	24,0	36,5	4210	2630	2100	615	0,466
6211	55	100	21	1,5	29,0	43,0	3810	2380	1905	570	0,616
6212	60	110	22	1,5	36,0	52,0	3470	2170	1730	480	0,789
6213	65	120	23	1,5	41,5	60,0	3200	2000	1600	430	0,980
6214	70	125	24	1,5	44,0	62,0	3020	1880	1500	410	1,060
6215	75	130	25	1,5	49,0	65,5	2850	1785	1420	390	1,170
6216	80	140	26	2,0	53,0	72,0	2660	1650	1330	350	1,390
6217	85	150	28	2,0	64,0	83,0	2500	1560	1250	320	1,780
6218	90	160	30	2,0	72,0	96,5	2350	1470	1170	290	2,140
6219	95	170	32	2,1	81,5	108,0	2220	1380	1100	265	2,610
6220	100	180	34	2,1	93,0	122,0	2100	1310	1050	220	3,130

(Remark: The weight applies for the bearing only without lubricant and shields)

63XX



GMW	Dimensions				Load Ratings		Max. Speed				Weight
Code	d	D	B	rs	C0	Cdyn	T150	T200	T250	T250X	
				min			2Z	2Z	2Z	2Z	
	[mm]	[mm]	[mm]	[mm]	[kN]	[kN]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[min^{-1}]	[kg]
6300	10	35	11	0,6	3,45	8,15	14500	9090	7270	1880	0,055
6301	12	37	12	1,0	4,15	9,65	13100	8190	6550	1790	0,062
6302	15	42	13	1,0	5,40	11,4	11100	6940	5550	1680	0,088
6303	17	47	14	1,0	6,55	13,4	8690	6172	4930	1550	0,114
6304	20	52	15	1,1	7,80	16,0	7140	5430	4350	1460	0,151
6305	25	62	17	1,1	11,4	22,4	6060	4464	3570	1320	0,234
6306	30	72	19	1,1	16,3	29,0	5330	3780	3030	1280	0,355
6307	35	80	21	1,5	19,0	33,5	4700	3330	2660	1195	0,471
6308	40	90	23	1,5	25,0	42,5	4210	2940	2350	895	0,640
6309	45	100	25	1,5	31,5	53,0	3810	2630	2100	770	0,847
6310	50	110	27	2,0	38,0	62,0	3470	2380	1905	620	1,100
6311	55	120	29	2,0	47,5	76,5	3200	2170	1740	550	1,390
6312	60	130	31	2,1	52,0	81,5	2960	2000	1600	490	1,750
6313	65	140	33	2,1	60,0	93,0	2750	1850	1480	430	2,070
6314	70	150	35	2,1	68,0	104,0	2580	1720	1370	375	2,510
6315	75	160	37	2,1	76,5	114,0	2420	1610	1290	340	3,010
6316	80	170	39	2,1	86,5	122,0	2285	1515	1210	320	3,580
6317	85	180	41	3,0	96,5	132,0	2150	1420	1150	310	4,220
6318	90	190	43	3,0	102,0	134,0	2160	1350	1080	290	4,900
6319	95	200	45	3,0	112,0	143,0	2050	1280	1025	265	5,660
6320	100	215	47	3,0	134,0	163,0	1920	1200	960	230	6,990

(Remark: The weight applies for the bearing only without lubricant and shields)