Extreme Temperature Bearings

HIGH-TEMP DEEP GROOVE BALL BEARINGS FOR LOW 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

Depending on the used grease, perfect running performance for normal bearings is on guaranteed up to maximum of 150°C. GMW High-temp Deep Groove Ball Bearings allow **temperatures ranger from 280°C up to 500°C at low speeds**.

Advantages:

- **Increased radial clearance** *(multiple of C5) compensation for temperature-induced deformations of the production goods*
- **Made material:**
  made from Chromium steel material
- **Riveted sheet steel cage**
  provides high stability at low friction
- **Manganese phosphate coating** *(according to EN ISO 9717) ensures increased protection against corrosion, good adhesion of lubricants and better runability.*
- **All HT1, HT2, HT3, ENC330 (Enhanced+), HT4 and HT4U (Ultra)** - *bearings are available open, with steel (2Z) (Z) shield on one or both sides*

Lubricants:

GMW offers four standard lubricants for High-temp Deep Groove Ball Bearings. Additionally, our coated bearings can be filled with individual grease as required by the customer



HT1

Temperature range:	< 350°C
Grease lubrication	*High-temperature paste (MoS2)*
Clearance	*(multiple of C5)*
Maintenance after:	*09 – 13 Months*

HT2

Temperature range:	< 280°C
Grease lubrication	*High-temperature grease (PTFE)*
Clearance	*(multiple of C5)*
Maintenance after:	*12 – 18 Months*

HT3

Temperature range:	< 300°C
Grease lubrication	*High-temperature grease (PTFE)*
Clearance	*(multiple of C5)*
Maintenance after:	*10 – 16 Months*

ENC330 (Enhanced+)

Temperature range:	< 330°C
Grease lubrication	*Graphite-containing high-temperature paste*
Clearance	*(multiple of C5)*
Maintenance after:	*11 – 14 Months*



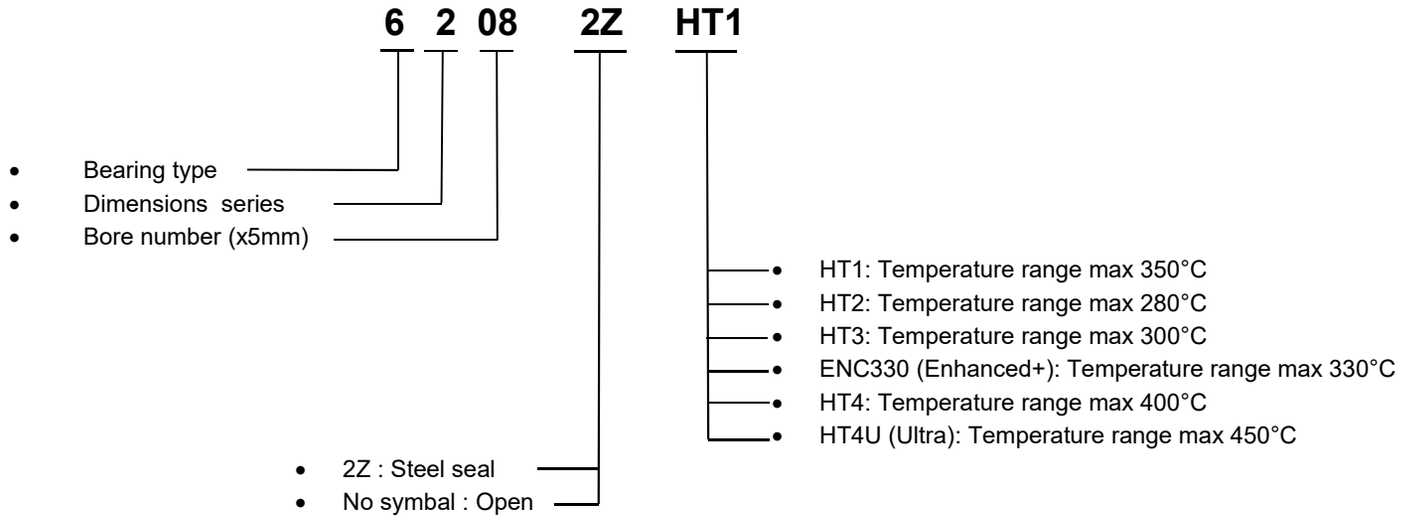
HT4

Temperature range:	< 400°C
Grease lubrication	*High-temperature paste (MoS2)*
Clearance	*(multiple of C5)*
Maintenance after:	*11 – 16 Months*

HT4U (Ultra)

Temperature range:	< 450°C
Grease lubrication	*High-temperature paste (MoS2)*
Clearance	*(multiple of C5)*
Maintenance after:	*11 – 16 Months*

Parameter instructions:

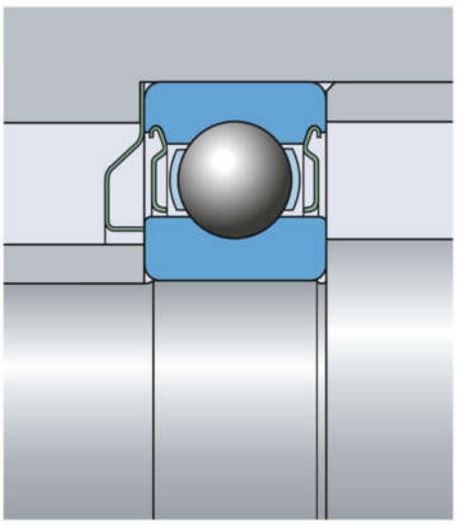


Sealing solutions:

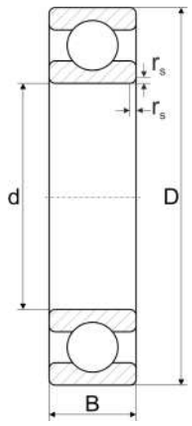
High temperature deep groove ball bearings can be protected from contamination by either integrated shields, external shields or a combination of both.

For high temperature bearings, metallic shields are the primary recommendation where a capping device with low complexity is required. The shields:

- Prevent the ingress of solid contaminants into the bearing
- Are non-contacting, therefore not generating friction or wear
- Are particularly well suited for high temperatures because of their material and design



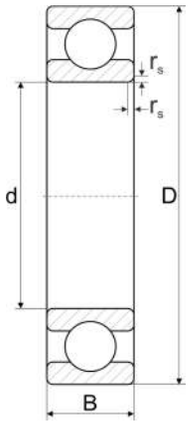
60XX



GMW	Dimensions				Load Rating	Max. Speed	Weight
Code	d	D	B	r_s min	C_0		
	[mm]	[mm]	[mm]	[mm]	[kN]	[min^{-1}]	≈ [kg]
6000	10	26	8	0,3	1,96	250	0,019
6001	12	28	8	0,3	2,36	220	0,020
6002	15	32	9	0,3	2,85	190	0,031
6003	17	35	10	0,3	3,25	170	0,038
6004	20	42	12	0,6	5,00	150	0,068
6005	25	47	12	0,6	5,85	130	0,080
6006	30	55	13	1,0	8,00	120	0,122
6007	35	62	14	1,0	10,4	100	0,157
6008	40	68	15	1,0	11,8	90	0,194
6009	45	75	16	1,0	14,3	80	0,247
6010	50	80	16	1,0	15,6	80	0,272
6011	55	90	18	1,1	21,2	70	0,397
6012	60	95	18	1,1	23,2	60	0,404
6013	65	100	18	1,1	25,0	50	0,411
6014	70	110	20	1,1	31,0	50	0,594
6015	75	115	20	1,1	33,5	50	0,639
6016	80	125	22	1,1	40,0	50	0,844
6017	85	130	22	1,1	43,0	50	0,880
6018	90	140	24	1,5	50,0	50	1,010
6019	95	145	24	1,5	54,0	50	1,070
6020	100	150	24	1,5	54,0	50	1,140

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

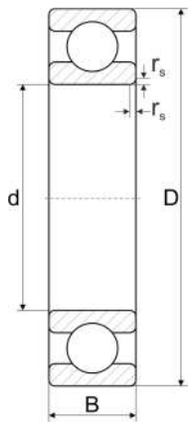
62XX



GMW	Dimensions				Load Rating	Max. Speed	Weight
Code	d	D	B	r_s min	C_0		
	[mm]	[mm]	[mm]	[mm]	[kN]	[min^{-1}]	≈ [kg]
6200	10	30	9	0,6	2,60	230	0,031
6201	12	32	10	0,6	3,10	200	0,037
6202	15	35	11	0,6	3,75	180	0,043
6203	17	40	12	0,6	4,75	160	0,065
6204	20	47	14	1,0	6,55	140	0,105
6205	25	52	15	1,0	7,80	130	0,128
6206	30	62	16	1,0	11,2	110	0,195
6207	35	72	17	1,1	15,3	90	0,291
6208	40	80	18	1,1	18,0	80	0,371
6209	45	85	19	1,1	20,4	80	0,429
6210	50	90	20	1,1	24,0	70	0,466
6211	55	100	21	1,5	29,0	60	0,616
6212	60	110	22	1,5	36,0	50	0,789
6213	65	120	23	1,5	41,5	50	0,980
6214	70	125	24	1,5	44,0	50	1,060
6215	75	130	25	1,5	49,0	50	1,170
6216	80	140	26	2,0	53,0	50	1,390
6217	85	150	28	2,0	64,0	50	1,780
6218	90	160	30	2,0	72,0	50	2,140
6219	95	170	32	2,1	81,5	50	2,610
6220	100	180	34	2,1	93,0	50	3,130

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

63XX



GMW	Dimensions				Load Rating	Max. Speed	Weight
Code	d	D	B	r_s min	C_0		
	[mm]	[mm]	[mm]	[mm]	[kN]	[min^{-1}]	≈ [kg]
6300	10	35	11	0,6	3,45	200	0,055
6301	12	37	12	1,0	4,15	190	0,062
6302	15	42	13	1,0	5,40	170	0,088
6303	17	47	14	1,0	6,55	150	0,114
6304	20	52	15	1,1	7,80	140	0,151
6305	25	62	17	1,1	11,4	120	0,234
6306	30	72	19	1,1	16,3	100	0,355
6307	35	80	21	1,5	19,0	90	0,471
6308	40	90	23	1,5	25,0	80	0,640
6309	45	100	25	1,5	32,0	70	0,847
6310	50	110	27	2,0	38,0	60	1,100
6311	55	120	29	2,0	47,5	60	1,390
6312	60	130	31	2,1	52,0	50	1,750
6313	65	140	33	2,1	60,0	50	2,070
6314	70	150	35	2,1	68,0	50	2,510
6315	75	160	37	2,1	76,5	50	3,010
6316	80	170	39	2,1	86,5	50	3,580
6317	85	180	41	3,0	96,5	50	4,220
6318	90	190	43	3,0	102,0	50	4,900
6319	95	200	45	3,0	112,0	50	5,660
6320	100	215	47	3,0	134,0	50	6,990

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