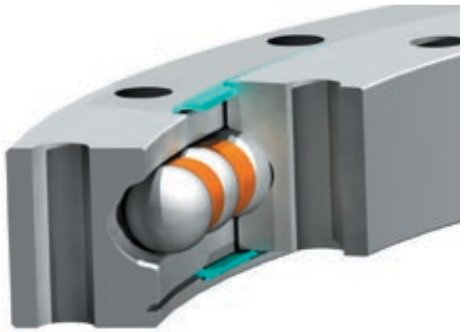
MT Series



Introduction

MT Series slewing ring bearings have a rectangular cross-section and range in size from 4 – 47 inches OD (100 – 1200 mm). They provide optimal economy and capacity for a given envelope dimension.

Design Features

The internal configuration consists of deep groove gothic arch raceways and maximum ball complement. This results in a four-point contact design which provides exceptional moment, thrust, and radial load capacities. Integral face riding seals for the larger sizes and non-contact shields for the smaller assist in the exclusion of contaminants. These features make them an ideal choice for a wide range of applications from light to heavy duty.

MT Series bearings are offered in non-geared (MTO) and externally geared (MTE) configurations. The gears are Fellows Stub Involute up to the MTE-324 size and Stub Involute for larger sizes, all manufactured to AGMA Class Q6 quality. Contact Kaydon for tooth backlash allowance.

Part numbers ending in a "T" suffix have threaded mounting holes. Thread depths are a minimum of 1.5 times the nominal hole size diameter indicated.

Part numbers ending in an "X" suffix provide additional load capacity.

Versions of these standard bearings with features manufactured to higher precision requirements can be used in machine tool, material handling, power transmission, radar, and robotics applications.

Contact Kaydon to speak with an applications engineer about the following options:

- Precision runout control
- Precision gear
- Preload for zero free play and increased stiffness
- Pilot diameters
- Tapped mounting holes
- Endurakote® plating for increased corrosion resistance

Kaydon also offers a high-precision KH Series in a standard line which incorporates all the above except Endurakote® plating.

Availability

MT Series bearings are generally available from stock, and mating pinions for the geared versions through MTE-705 are also generally available. Refer to page 70 for mating pinions.

Applications

MT Series bearings have been used successfully in a wide range of applications from light to heavy duty.

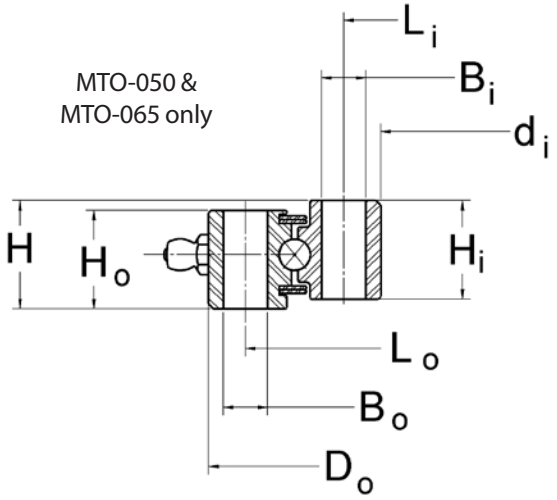
The smaller sizes are well suited for:

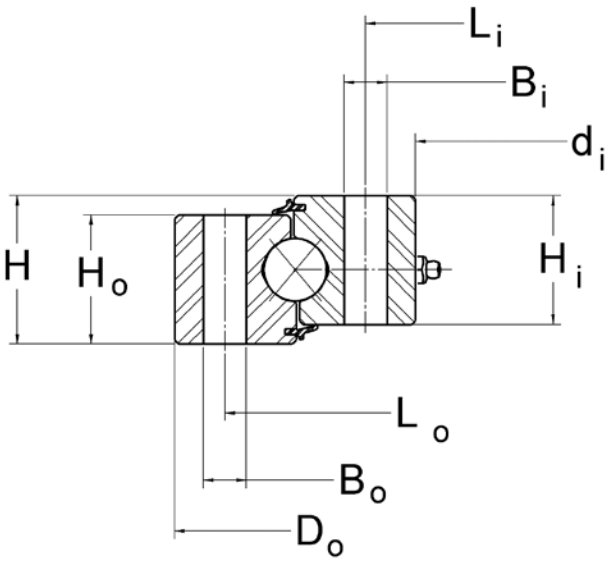
- Manipulators
- Jib cranes
- Lift-assist devices
- Work positioners

Larger sizes are well suited for:

- Truck-mounted cranes
- Aerial lifts
- Hoists
- Small wind turbines
- Non-precision positioning tables

MT Series





No Gear

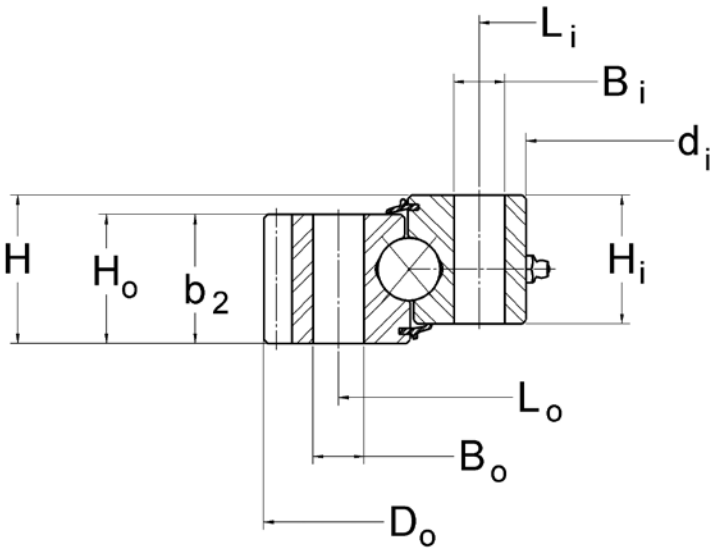
Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT				
	D_o (in)	d_i (in)	H (in)	H_i/H_o (in)	G APPROX. (lbs)
MTO-050	4.331	1.968	0.787	0.728	2
MTO-050T	4.331	1.968	0.787	0.728	2
MTO-065	5.315	2.559	0.866	0.787	4
MTO-065T	5.315	2.559	0.866	0.787	4
MTO-122	8.898	4.803	1.339	1.142	13
MTO-122T	8.898	4.803	1.339	1.142	13
MTO-143	9.803	5.630	1.339	1.142	15
MTO-143T	9.803	5.630	1.339	1.142	15
MTO-145	11.811	5.709	1.968	1.732	37
MTO-145T	11.811	5.709	1.968	1.732	37
MTO-145X	12.286	5.709	1.968	1.732	41
MTO-170	12.205	6.693	1.811	1.614	33
MTO-170T	12.205	6.693	1.811	1.614	33
MTO-210	14.370	8.268	1.575	1.496	38
MTO-210T	14.370	8.268	1.575	1.496	38
MTO-210X	14.686	8.268	1.968	1.732	48
MTO-265	16.535	10.433	1.968	1.732	54
MTO-265T	16.535	10.433	1.968	1.732	54
MTO-265X	17.086	10.433	1.968	1.732	61
*MTO-324T	20.486	12.750	2.062	2.022	105
MTO-324X	20.486	12.770	2.375	2.063	105

* Part number MTO-324 has been superseded by MTO-324T.

MT Series

MOUNTING HOLES						MOMENT RATING C_{rm} (ft-lbs)
OUTER RING			INNER RING			
L_o (in)	n_o	B_o (in)	L_i (in)	n_i	B_i (in)	
3.818	8	0.26	2.480	8	0.26	830
3.818	8	M6	2.480	8	M6	830
4.724	8	0.354	3.149	8	0.354	1,330
4.724	8	M8	3.149	8	M8	1,330
8.189	12	0.354	5.512	12	0.354	5,020
8.189	12	M8	5.512	12	M8	5,020
8.937	12	0.433	6.496	12	0.433	8,950
8.937	12	M10	6.496	12	M10	8,950
10.630	16	0.562	6.890	16	0.562	26,000
10.630	16	5/8-11	6.890	16	5/8-11	26,000
10.630	16	0.594	6.890	16	0.594	30,600
11.024	12	0.512	7.874	12	0.512	16,520
11.024	12	M12	7.874	12	M12	16,520
13.190	16	0.562	9.449	20	0.562	44,500
13.190	16	5/8-11	9.449	20	5/8-11	44,500
13.190	16	0.594	9.449	20	0.594	52,100
15.354	18	0.562	11.614	24	0.562	62,000
15.354	18	5/8-11	11.614	24	5/8-11	62,000
15.354	18	0.594	11.614	24	0.594	71,900
18.875	20	5/8-11	14.375	20	5/8-11	102,400
18.875	20	0.688	14.375	20	0.688	102,400

MT Series



External Gear

Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT					MOUNTING HOLES					
						OUTER RING			INNER RING		
	D_o (in)	d_i (in)	H (in)	H_i/H_o (in)	G APPROX. (lbs)	L_o (in)	n_o	B_o (in)	L_i (in)	n_i	B_i (in)
MTE-145	12.286	5.709	1.968	1.732	38	10.630	16	0.562	6.890	16	0.562
MTE-145T	12.286	5.709	1.968	1.732	38	10.630	16	5/8-11	6.890	16	5/8-11
MTE-145X	12.286	5.709	1.968	1.732	38	10.630	16	0.594	6.890	16	0.594
MTE-210	14.686	8.268	1.575	1.496	38	13.190	16	0.562	9.449	20	0.562
MTE-210T	14.686	8.268	1.575	1.496	38	13.190	16	5/8-11	9.449	20	5/8-11
MTE-210X	14.686	8.268	1.968	1.732	44	13.190	16	0.594	9.449	20	0.594
MTE-265	17.086	10.433	1.968	1.732	57	15.354	18	0.562	11.614	24	0.562
MTE-265T	17.086	10.433	1.968	1.732	57	15.354	18	5/8-11	11.614	24	5/8-11
MTE-265X	17.086	10.433	1.968	1.732	57	15.354	18	0.594	11.614	24	0.594
*MTE-324T	20.486	12.750	2.062	2.022	98	18.875	20	5/8-11	14.375	20	5/8-11
MTE-324X	20.486	12.770	2.375	2.063	99	18.875	20	0.688	14.375	20	0.688
MTE-415	24.650	16.250	2.375	2.063	132	22.250	16	0.813	17.750	20	0.813
MTE-415T	24.650	16.250	2.375	2.063	132	22.250	16	3/4-10	17.750	20	3/4-10
MTE-470	26.900	18.500	2.375	2.063	147	24.500	18	0.813	20.000	24	0.813
MTE-470T	26.900	18.500	2.375	2.063	147	24.500	18	3/4-10	20.000	24	3/4-10
MTE-540	29.650	21.250	2.375	2.063	163	27.250	24	0.813	22.750	28	0.813
MTE-540T	29.650	21.250	2.375	2.063	163	27.250	24	3/4-10	22.750	28	3/4-10
MTE-590	33.534	23.125	2.875	2.563	283	30.625	18	0.938	24.875	24	0.938
MTE-590T	33.534	23.125	2.875	2.563	283	30.625	18	7/8-9	24.875	24	7/8-9
MTE-705	38.201	27.750	2.875	2.563	325	35.250	24	0.938	29.50	28	0.938
MTE-705T	38.201	27.750	2.875	2.563	325	35.250	24	7/8-9	29.50	28	7/8-9
MTE-730	41.85	28.750	3.250	2.880	491	38.000	20	1.063	31.00	24	1.063
MTE-730T	41.85	28.750	3.250	2.880	491	38.000	20	1-8	31.00	24	1-8
MTE-870	47.444	34.250	4.250	3.875	771	43.875	24	1.188	36.25	28	1.188
MTE-870T	47.444	34.250	4.250	3.875	771	43.875	24	1 1/8-7	36.25	28	1 1/8-7

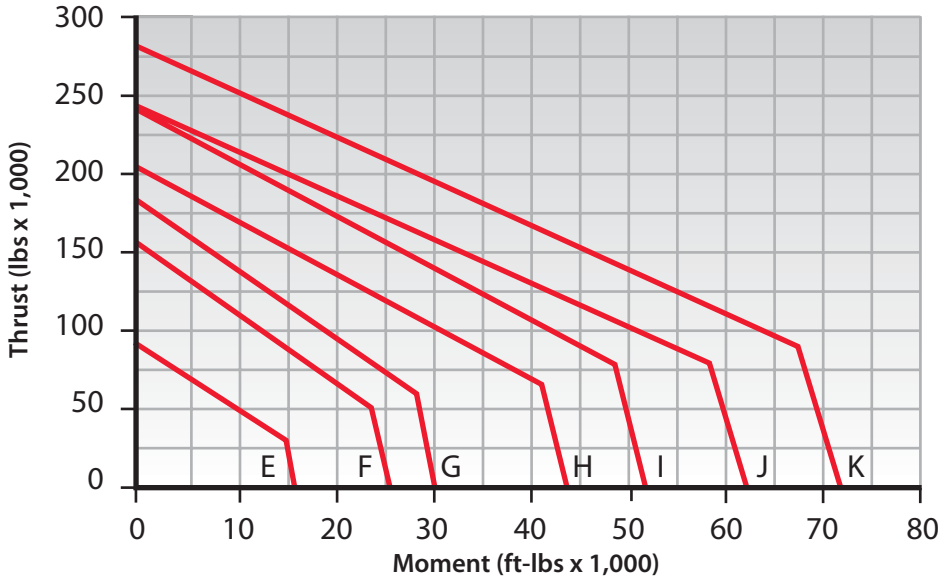
* Part number MTE-324 has been superseded by MTE-324T.

MT Series

GEAR DATA $\alpha = 20°$					F_z (lbs) MAX GEAR TOOTH LOAD	MOMENT RATING C_{rm}
TOOTH FORM	D_2 (in)	P_d	z_2	b_2 (in)		(ft-lbs)
FS	12.000	5/7	60	1.732	7,140	26,000
FS	12.000	5/7	60	1.732	7,140	26,000
FS	12.000	5/7	60	1.732	7,140	30,600
FS	14.400	5/7	72	1.496	5,810	44,500
FS	14.400	5/7	72	1.496	5,810	44,500
FS	14.400	5/7	72	1.732	7,290	52,100
FS	16.800	5/7	84	1.732	7,330	62,000
FS	16.800	5/7	84	1.732	7,330	62,000
FS	16.800	5/7	84	1.732	7,330	71,900
FS	20.200	5/7	101	2.022	8,700	102,400
FS	20.200	5/7	101	2.063	8,863	102,400
SD	24.250	4	97	2.063	10,420	159,200
SD	24.250	4	97	2.063	10,420	159,200
SD	26.500	4	106	2.063	10,460	191,600
SD	26.500	4	106	2.063	10,460	191,600
SD	29.250	4	117	2.063	10,520	232,000
SD	29.250	4	117	2.063	10,520	232,000
SD	33.000	3	99	2.563	17,290	338,700
SD	33.000	3	99	2.563	17,290	338,700
SD	37.667	3	113	2.563	17,390	443,200
SD	37.667	3	113	2.563	17,390	443,200
SD	41.200	2.5	103	2.630	21,290	588,000
SD	41.200	2.5	103	2.630	21,290	588,000
SD	46.800	2.5	117	3.875	31,620	873,800
SD	46.800	2.5	117	3.875	31,620	873,800

MT Series Load Charts

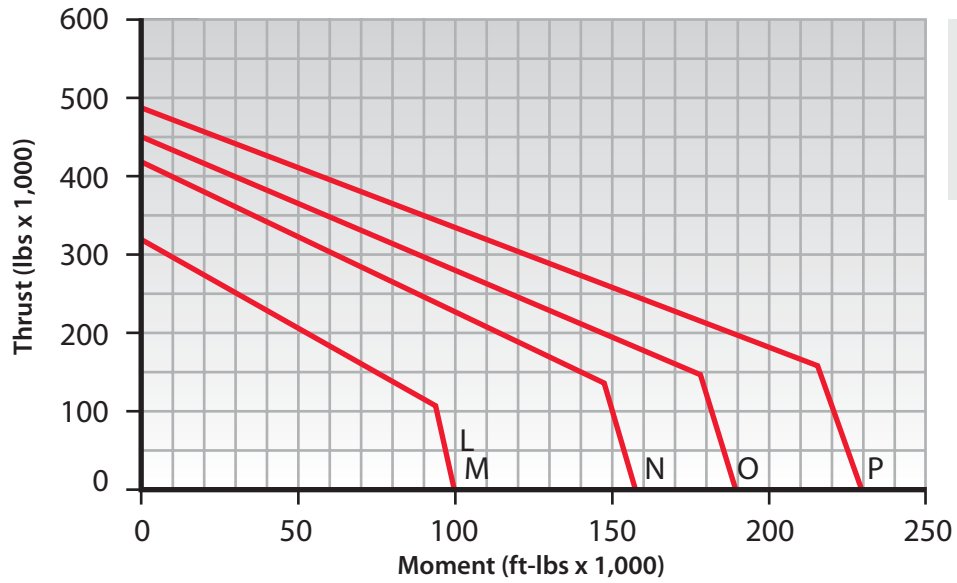
(A) MT-050
(B) MT-065
(C) MT-122
(D) MT-143



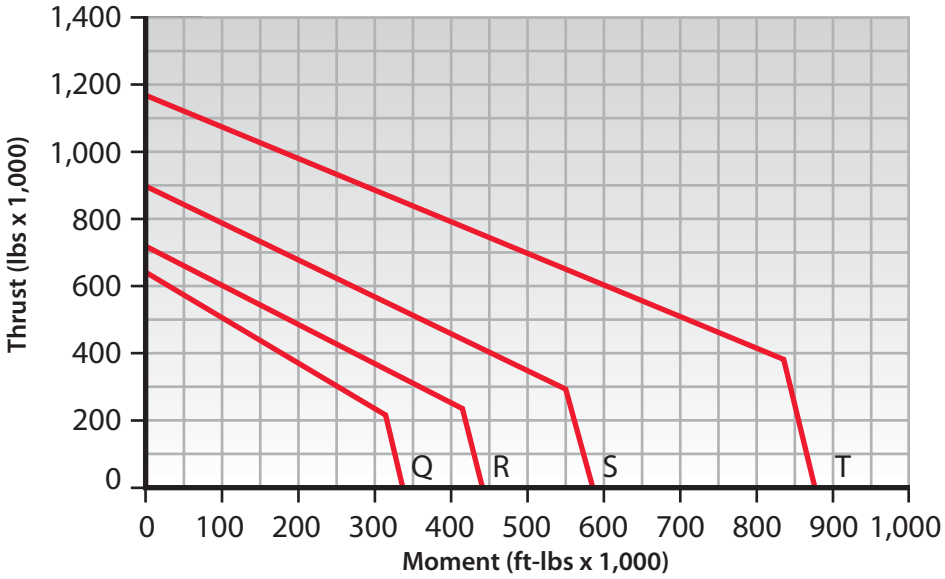
(E) MT-170
(F) MT-145
(G) MT-145X
(H) MT-210
(I) MT-210X
(J) MT-265
(K) MT-265X

Rating Charts are only applicable for operating conditions defined as NORMAL OPERATION in Section 2 and when installed and maintained as defined in Section 3 of this catalog. Bearing diameter increase does not necessarily ensure bearing rating increase due to variations in rolling elements, ring section, and fastener complements. For information concerning the basis for development of Rating Charts refer to the LOAD RATING paragraph in Section 2.

MT Series Load Charts



(L) MT-324
(M) MT-324X
(N) MT-415
(O) MT-470
(P) MT-540



(Q) MT-590
(R) MT-705
(S) MT-730
(T) MT-870

Rating Charts are only applicable for operating conditions defined as NORMAL OPERATION in Section 2 and when installed and maintained as defined in Section 3 of this catalog. Bearing diameter increase does not necessarily ensure bearing rating increase due to variations in rolling elements, ring section, and fastener complements. For information concerning the basis for development of Rating Charts refer to the LOAD RATING paragraph in Section 2.