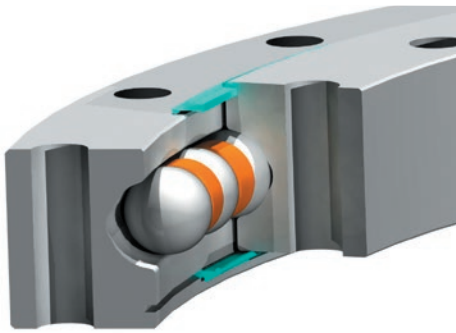


# MT Series



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.

## 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.

## 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.

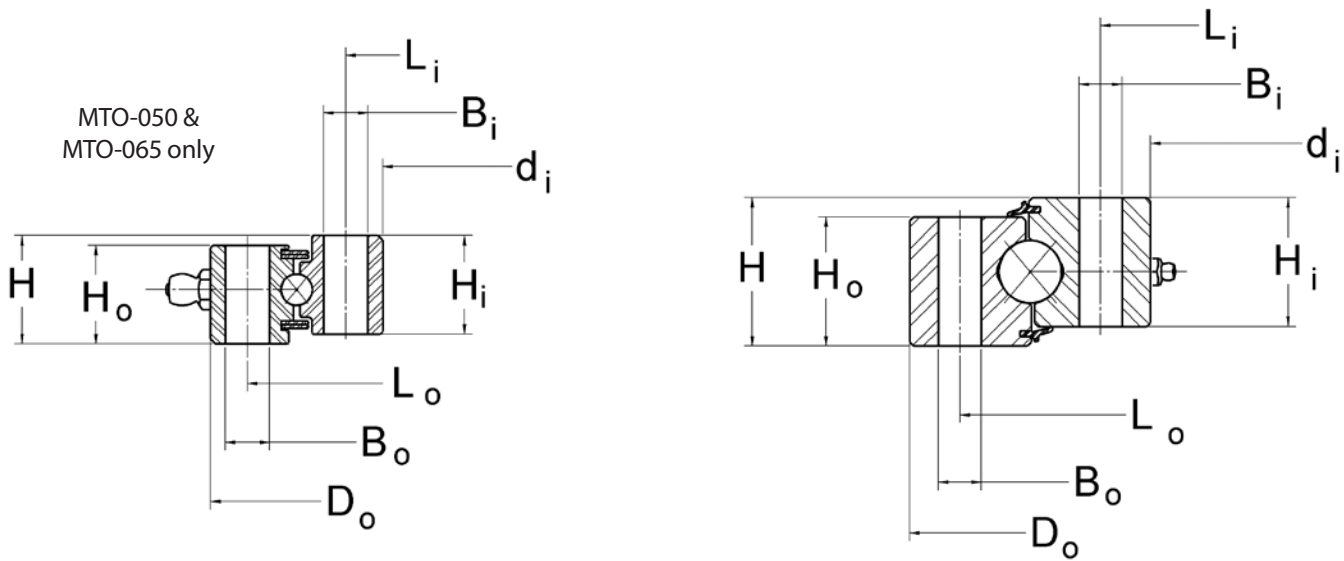
The smaller sizes are well suited for:

- 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

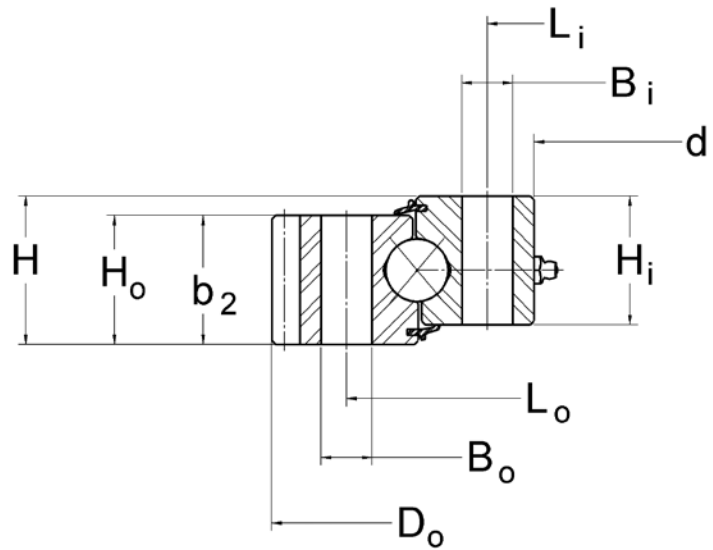
Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT				
	D <sub>o</sub> (in)	d <sub>i</sub> (in)	H (in)	H <sub>i</sub> /H <sub>o</sub> (in)	G APPROX. (lbs)
<b>MTO-050</b>	4.331	1.968	0.787	0.728	2
<b>MTO-050T</b>	4.331	1.968	0.787	0.728	2
<b>MTO-065</b>	5.315	2.559	0.866	0.787	4
<b>MTO-065T</b>	5.315	2.559	0.866	0.787	4
<b>MTO-122</b>	8.898	4.803	1.339	1.142	13
<b>MTO-122T</b>	8.898	4.803	1.339	1.142	13
<b>MTO-143</b>	9.803	5.630	1.339	1.142	15
<b>MTO-143T</b>	9.803	5.630	1.339	1.142	15
<b>MTO-145</b>	11.811	5.709	1.968	1.732	37
<b>MTO-145T</b>	11.811	5.709	1.968	1.732	37
<b>MTO-145X</b>	12.286	5.709	1.968	1.732	41
<b>MTO-170</b>	12.205	6.693	1.811	1.614	33
<b>MTO-170T</b>	12.205	6.693	1.811	1.614	33
<b>MTO-210</b>	14.370	8.268	1.575	1.496	38
<b>MTO-210T</b>	14.370	8.268	1.575	1.496	38
<b>MTO-210X</b>	14.686	8.268	1.968	1.732	48
<b>MTO-265</b>	16.535	10.433	1.968	1.732	54
<b>MTO-265T</b>	16.535	10.433	1.968	1.732	54
<b>MTO-265X</b>	17.086	10.433	1.968	1.732	61
<b>*MTO-324T</b>	20.486	12.750	2.062	2.022	105
<b>MTO-324X</b>	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		675
3.818	8	M6	2.480	8	M6		675
4.724	8	0.354	3.149	8	0.354		1,075
4.724	8	M8	3.149	8	M8		1,075
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

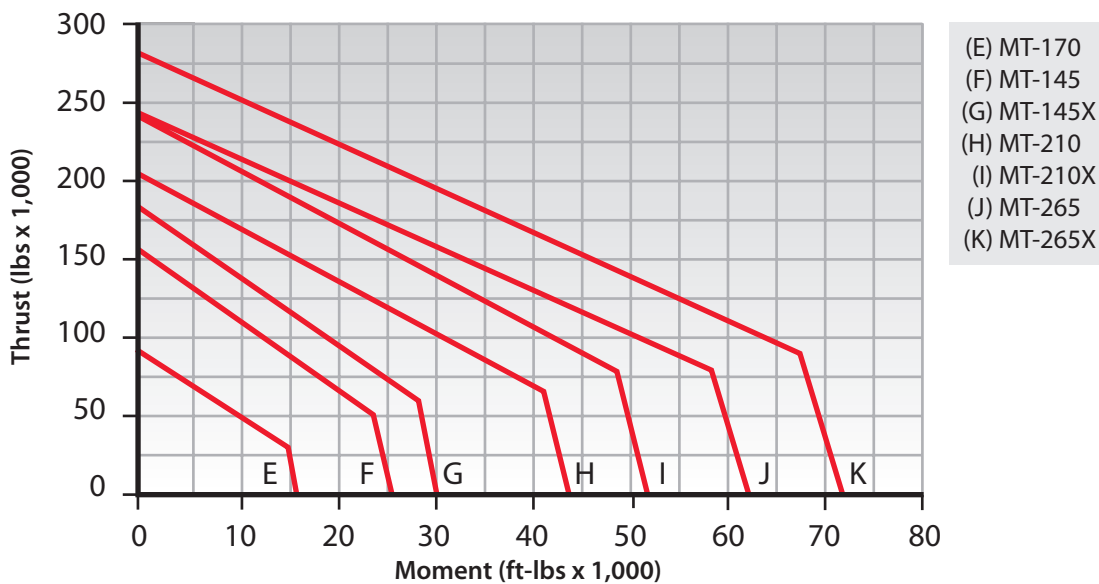
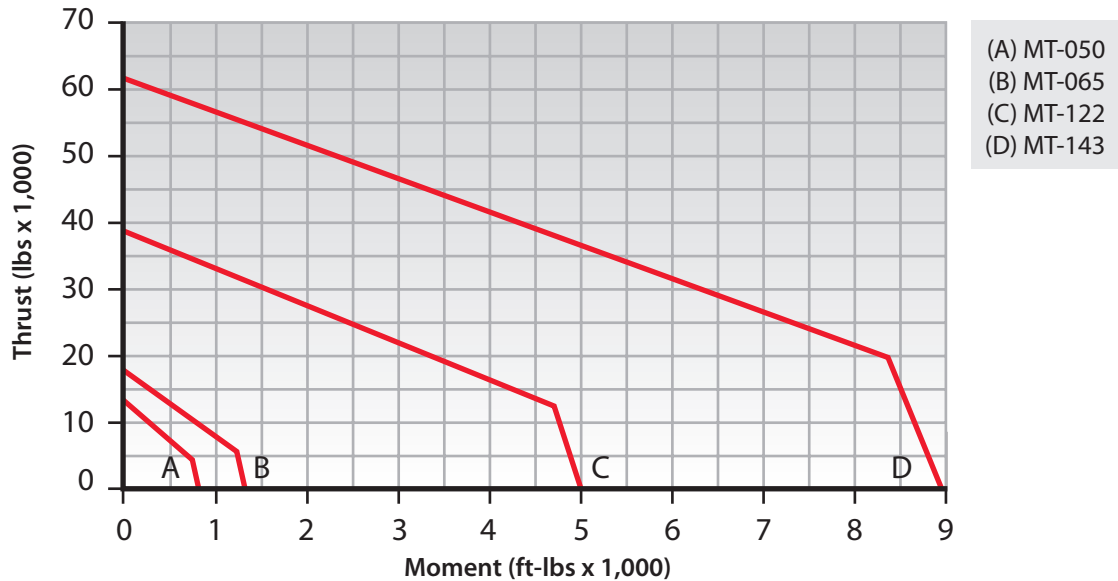
Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT					MOUNTING HOLES					
	D <sub>o</sub> (in)	d <sub>i</sub> (in)	H (in)	H <sub>i</sub> /H <sub>o</sub> (in)	G APPROX. (lbs)	OUTER RING			INNER RING		
						L <sub>o</sub> (in)	n <sub>o</sub>	B <sub>o</sub> (in)	L <sub>i</sub> (in)	n <sub>i</sub>	B <sub>i</sub>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

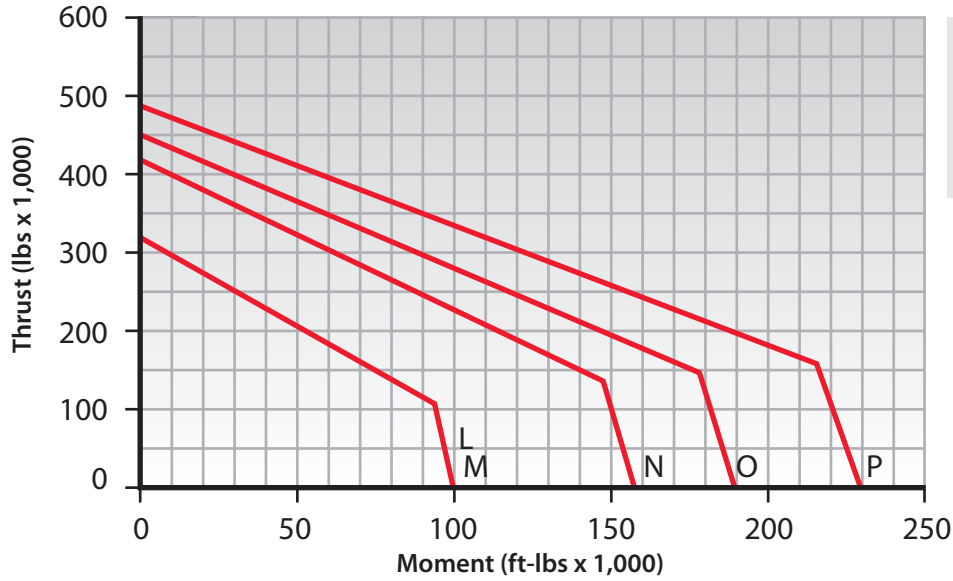
TOOTH FORM	GEAR DATA $\alpha = 20^\circ$					$F_z$ (lbs) MAX GEAR TOOTH LOAD	MOMENT RATING $C_{rm}$
	$D_2$ (in)	$P_d$	$z_2$	$b_2$ (in)	(ft-lbs)		
FS	12.000	5/7	60	1.732	7,140	26,000	
FS	12.000	5/7	60	1.732	7,140	26,000	
FS	12.000	5/7	60	1.732	7,140	30,600	
FS	14.400	5/7	72	1.496	5,810	44,500	
FS	14.400	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

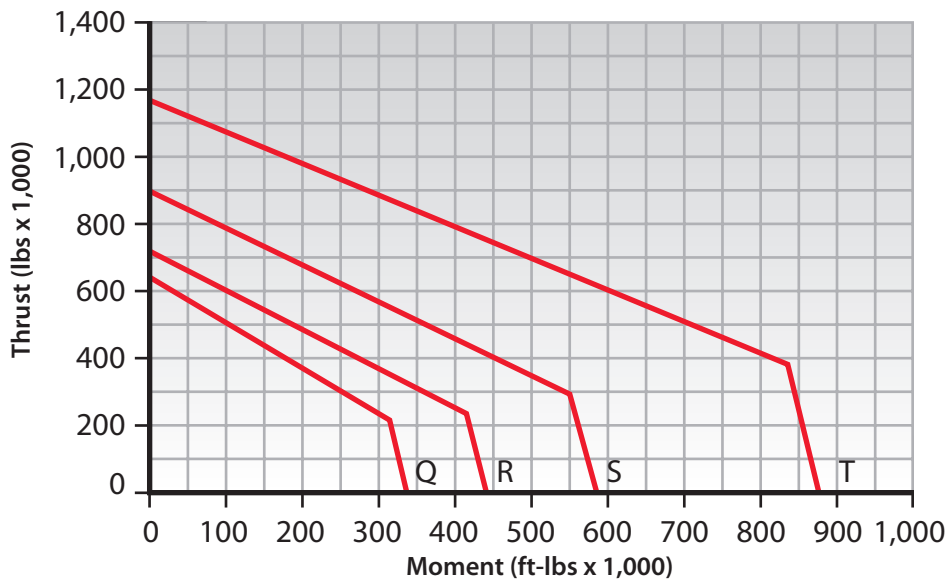


Rating Charts are only applicable for operating conditions defined as NORMAL OPERATION in Section 2 and when installed and maintained as defined in Section 3 of this catalog. Bearing diameter increase does not necessarily ensure bearing rating increase due to variations in rolling elements, ring section, 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.