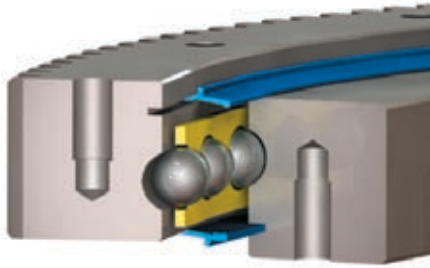


KH Series



Introduction

KH Series slewing ring bearings have a rectangular cross-section and range in size from 16 – 37 inches OD (400 – 950 mm). They provide precise positioning and repeatability in applications where rotation is constant, intermittent, or oscillating.

Design Features

The internal configuration is a deep-groove gothic arch raceway, which provides four points of contact with the balls, enabling it to carry radial, thrust, and moment loads individually or simultaneously. The use of internal diametral preload provides for greater stiffness, which combined with tightly controlled radial and axial runouts, delivers accurate repeatability. The axial runouts are 0.001 inch TIR and the radial runouts for locating diameters are 0.002 inch TIR.

A separator is used to maintain consistent ball spacing interval, keep friction to a minimum, and minimize noise. Integral face riding seals are provided to assist in the exclusion of contaminants.

KH Series bearings are offered in non-geared and externally geared configurations. The gears have Full Depth Involute teeth and are manufactured to an AGMA Class Q8 quality, allowing for decreased backlash, more accurate positioning, and less noise while operating.

Availability

KH Series bearings are generally available from stock.

Applications

KH Series bearings have been used successfully in applications demanding higher precision, including:

- Precision rotary index tables
- Radar antennas
- Satellite antennas
- Robots
- Medical equipment
- Machine tool tables
- Any design where the KH bearing features will interface with other precision components.

KH Series

No Gear

Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT					HOLE DATA				GEAR DATA			GEAR TOOTH RATING F _z (lbs)
						OUTER RING		INNER RING					
	D _o (in)	d _i (in)	D _i (in)	d _o (in)	G APPROX. (lbs)	L _o (in)	n _o	L _i (in)	n _i	D ₂ (in)	b ₂ (in)	z ₂	
KH-125P	16.500	8.625	12.750	12.250	80	14.750	16	10.250	16	—	—	—	—
KH-166P	20.500	12.750	16.875	16.375	105	18.875	20	14.375	20	—	—	—	—
KH-225P	26.700	18.500	22.750	22.250	150	24.500	18	20.500	18	—	—	—	—
KH-275P	31.700	23.500	27.750	27.250	185	29.500	24	25.500	24	—	—	—	—
KH-325P	36.700	28.500	32.750	32.250	220	34.500	28	30.500	28	—	—	—	—
TOLERANCES	±.050	±.050	*Note	*Note		⊕ .030		⊕ .030					

External Gear

Kaydon P/N	OUTLINE DIMENSIONS AND WEIGHT					HOLE DATA				GEAR DATA - FD INVOLUTE			GEAR TOOTH RATING F _z (lbs)
						OUTER RING		INNER RING		P _d = 6, α = 20°, AGMA Q8			
	D _o (in)	d _i (in)	D _i (in)	d _o (in)	G APPROX. (lbs)	L _o (in)	n _o	L _i (in)	n _i	D ₂ (in)	b ₂ (in)	z ₂	
KH-125E	16.500	8.625	12.750	12.250	75	14.750	16	10.250	16	16.167	2.000	97	5,480
KH-166E	20.500	12.750	16.875	16.375	100	18.875	20	14.375	20	20.167	2.000	121	5,570
KH-225E	26.667	18.500	22.750	22.250	140	24.500	18	20.500	18	26.333	2.000	158	5,670
KH-275E	31.667	23.500	27.750	27.250	175	29.500	24	25.500	24	31.333	2.000	188	5,700
KH-325E	36.667	28.500	32.750	32.250	205	34.500	28	30.500	28	36.333	2.000	218	5,730
TOLERANCES	+0/-.020	±.050	*Note	*Note		⊕ .030		⊕ .030					±.030

Dynamic and Intermittent Capacities

Size	Dynamic		Intermittent	
	Axial (lbs)	Moment (ft-lbs)	Axial (lbs)	Moment (ft-lbs)
KH-125	32,000	13,100	60,000	25,800
KH-166	36,000	20,500	82,800	45,200
KH-225	40,000	30,500	115,200	56,000
KH-275	43,000	39,600	142,000	75,000
KH-325	45,000	48,100	167,000	92,000

*Note:

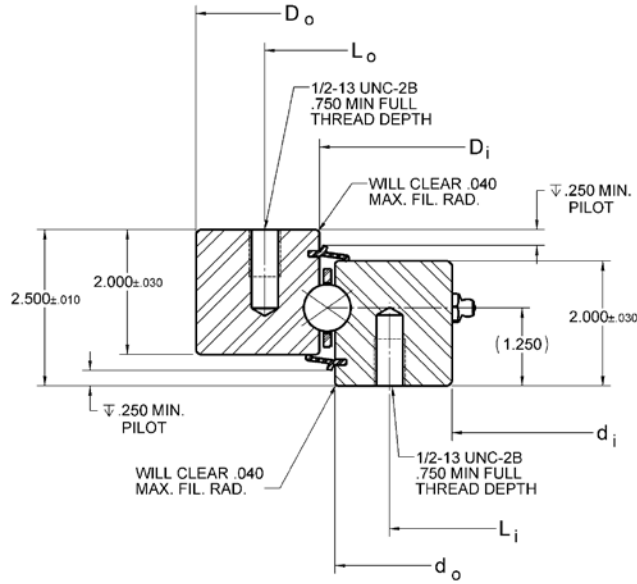
D_i = d_o = +0/-.002 tolerance for KH-125 through KH-225.

D_i = d_o = +0/-.003 tolerance for KH-275 through KH-325.

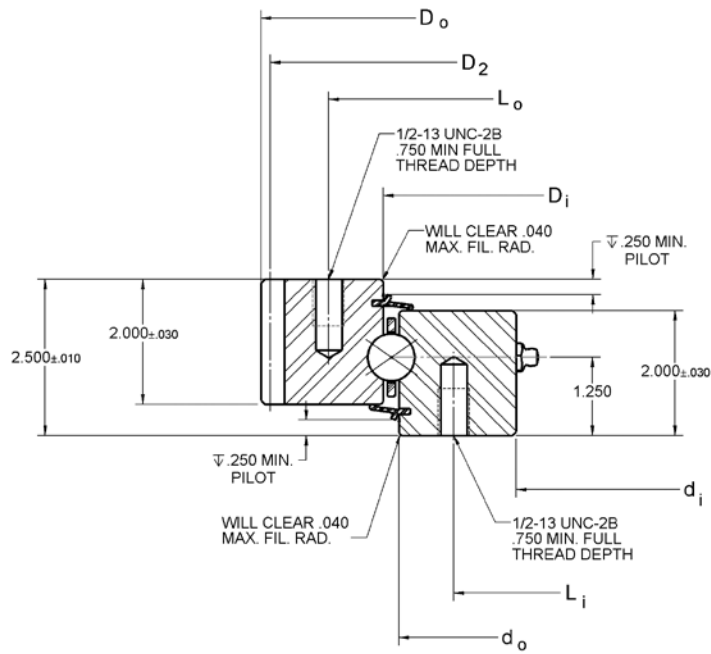
Note: Dynamic-L₁₀ capabilities based on million revolutions. Values do not apply simultaneously.

Intermittent-Individual capacity limits for maximum loading when normal mode of operation is an intermittent load application and rotation.

KH Series



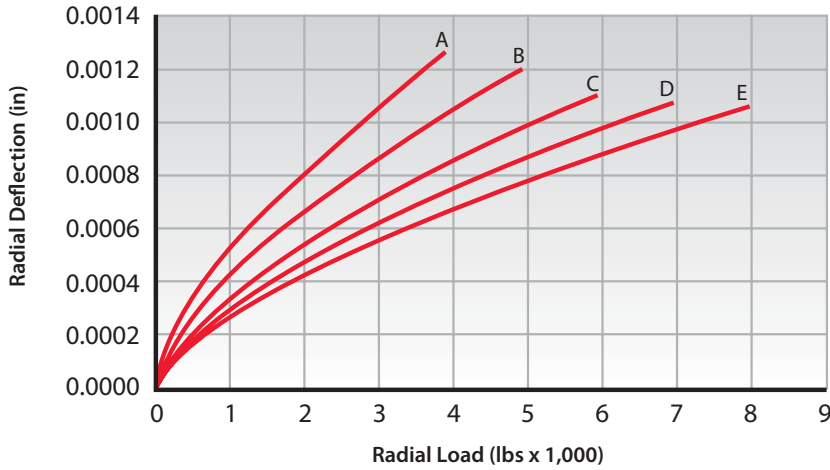
Non-geared



External geared

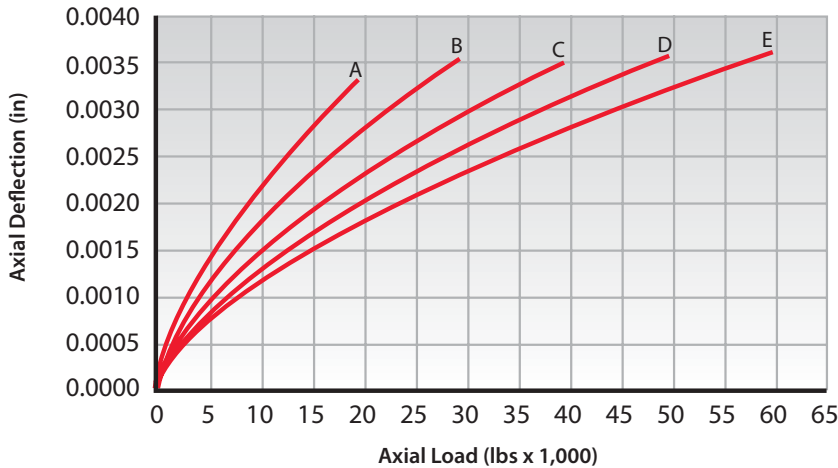
KH Series Deflection Chart

KH Series Radial Deflection



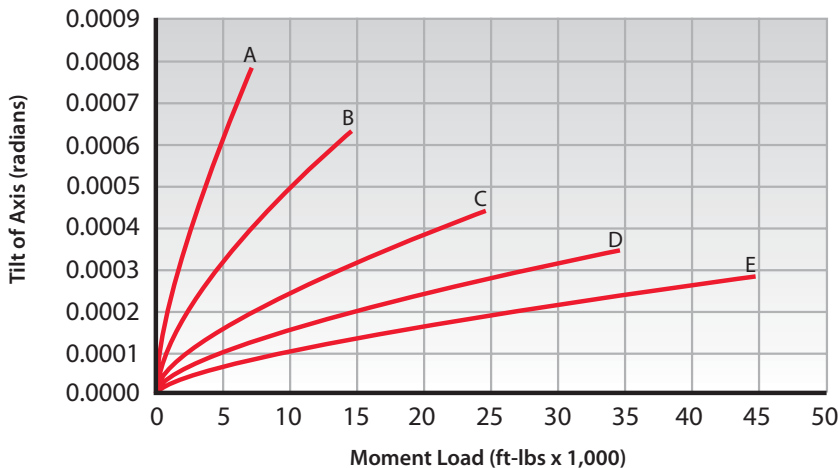
- (A) KH-125
- (B) KH-166
- (C) KH-225
- (D) KH-275
- (E) KH-325

KH Series Axial Deflection



- (A) KH-125
- (B) KH-166
- (C) KH-225
- (D) KH-275
- (E) KH-325

KH Series Tilt of Axis



- (A) KH-125
- (B) KH-166
- (C) KH-225
- (D) KH-275
- (E) KH-325