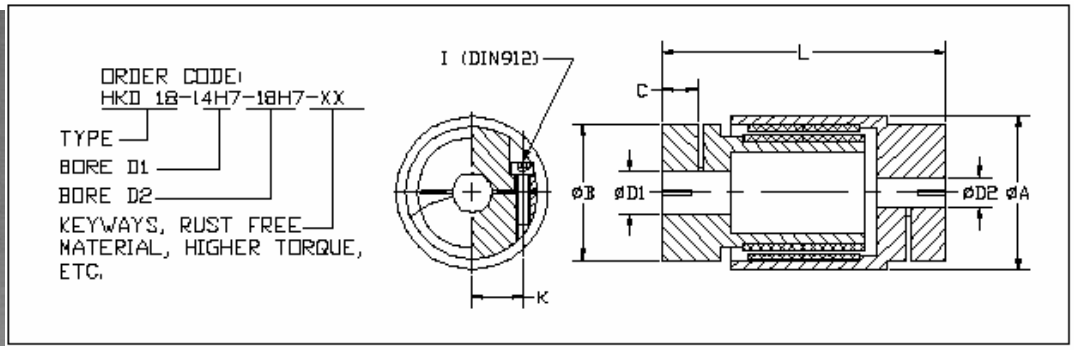
HKD SERIES COLLET TYPE
PERMANENT - MAGNET HYSTERESIS CLUTCH



DIMENSIONS: (mm)

Type HKD	ØA	ØB	C	ØD1 and ØD2 Min - Max H7	I DIN 912	K	L	M Magnet Length (mm)
HKD 2	31	25	8.2	3 - 12.7	M3	9	55	20
HKD 4	38	32	10	6 - 16	M4	11.5	58	20
HKD 10	46	40	10	6 - 19	M4	15.5	57	20
HKD 18	51	45	12	10 - 26	M5	17.5	78	30
HKD 60	69	56	19.5	10 - 26	M6	20	107	40

TECHNICAL DATA:

Type HKD	Moment of Inertia Inside (10^{-3}kgm^2)	Moment of Inertia Outside (10^{-3}kgm^2)	Overload Torque (Nm) 7)	Mass Inside (kg)	Mass Outside (kg)	Torque to Tighten Clamps (Nm)	Misalignment Lateral (mm)	Max. Operating Speed (rpm)	Max. Power Dissipation (W)
HKD 2	0.005	0.018	0.1	0.07	0.12	2	0.2	10000	4.0
HKD 4	0.02	0.04	0.2	0.11	0.15	3	0.2	9000	5.0
HKD 10	0.04	0.07	0.4	0.16	0.18	3	0.2	8000	7.0
HKD 18	0.08	0.14	0.9	0.25	0.28	6	0.2	7000	12.0
HKD 60	0.57	0.87	2.5	0.51	0.68	30	0.2	5000	20.0

1) Samarium Cobalt (SmCo) magnets available for higher temperature applications, up to 300 degrees C.
2) Size 2-60 clamping hubs made of aluminum.
3) In the case of bores of less than D_{min}, transmission of nominal torque Nm of the clutch is no longer guaranteed. Versions with bores of less than D_{min} can be supplied.
4) Keyways according to standard DIN 6885 or American on request. Clearance of keyway, standard JS 9.
5) Larger radial misalignment possible.
6) See below for calculation of HKD heat dissipation.
7) Higher torque values available on request.

Power Dissipation Calculation

Hysteresis type clutches and brakes slip if an overload occurs. The losses due to the slip rotation and torque are converted into heat. If the power to be dissipated exceeds the heat dissipation capabilities of the clutch, the clutch (brake) will superheat, damaging the magnets. The following formula should be used to insure that the maximum power loss of the selected clutch (brake) is sufficient for the desired operation mode.

$$P_V = \frac{T \cdot n_S \cdot d}{9.55}$$

P_V = Maximum power loss (in Watt)
T = Applied torque (in Nm)
n_S = Slip rotation (in rpm)
d = Duty cycle (in %)

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