



近乎零背隙滾子凸輪式

- 滾子凸輪指的是入力凸輪軸及滾子轉塔組兩大部分組成。
- 滾子與凸輪以滾動方式接觸，具有高剛性、高速性及耐久性等三大特性。
- 滾子與凸輪之嚙合經預壓處理，因此可完全消除滾子與凸輪間之背隙，更凸顯滾子凸輪之超精密特性。
- 此外，以滾動方式傳遞動能，可有效減少驅動過程中之能量消耗，因此滾子凸輪之傳動效率可高達90%以上。

NEARY ZERO-BACKLASH ROLLER CAM TYPE

- The roller cam consists of an input cam shaft and a roller turret.
- The roller cam is designed with rolling contact, featuring high rigidity, high speed and outstanding durability.
- Engagement between the roller and the cam is preloaded to fully eliminate backlash, enabling the roller and the cam to exhibit their ultra-high precision feature.
- With rolling contact to transmit kinetic energy, energy consumption during drive can be dramatically reduced. This enables the roller cam to achieve over 90% transmission efficiency.

型式 TYPE	HYDEX 滾子凸輪 HYDEX ROLLER CAM	蝸桿蝸輪 WORM / WORM GEAR	DD直驅扭矩馬達 DIRECT - DRIVE TORQUE MOTOR
嚙合部位材質與硬度 Engaging Parts Material and Hardness	凸輪軸：滲碳鋼、HRC58°~60° Cam Shaft: Carburized Steel, HRC 58°~60° 凸輪從動件：軸承鋼、HRC58°~60° Cam Follower: Bearing Steel, HRC 58°~60°	蝸桿：滲碳鋼、HRC60 Worm: Carburized Steel, HRC60 蝸輪：磷青銅、HB90 Worm Gear: Phosphor Bronze, HB90	馬達直驅 Direct Drive by Motor
接觸形式 Contact Type	滾動接觸 Rolling Contact	滑動接觸 Sliding Contact	-
背隙 Backlash	近乎零背隙 (5 arc - sec以內) Nearly Zero-backlash (Within 5 arc - sec)	需要背隙 Backlash Required	-
盤面精度重現性 Table Surface Accuracy Repeatability	好 Good	低 Low	好 Good
嚙合部預壓 Engaging Parts Preload	需要 Required	不能 Not Available	無 Without
傳動效率 Transmission Efficiency	高 High	低 Low	高 High
分割精度 Indexing Accuracy	20 arc-sec 以內 Within 20 arc-sec	15 ~ 20 arc-sec 15 ~ 20 arc-sec	30 arc-sec 以內 Within 30 arc-sec
發熱性 Thermal Growth	低 (一般運轉略高於常溫) Low (Slightly higher than normal Temperature)	高 High	低 Low
高速性 High Speed	好 Good	差 Poor	好 Good
動態切削剛性 Dynamic Cutting Rigidity	高 High	低 Low	低 Low
耐久性 Durability	好 Good	差 Poor	中 Moderate
背隙調整 Backlash Adjustment	無須調整 No Need	需要 Required	-