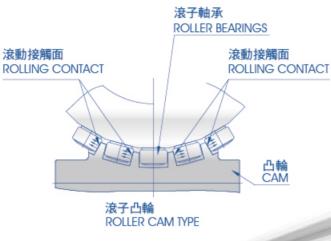
HYDEX

AR Series









- 》CNC分度盤
- 》 適用於不同類型加工-立式、臥式兩用型
- 》可選配HFT, HFTS, HMT Series 使用
- 》可選配海德漢ECA-4000系列光學尺
- > CNC rotary table.
- Vertical and horizontal dual-purpose. Can be usd on different types of processing.
- Optional HYDEX HFT, HFTS, HMT series.
- Optional HEIDENHAIN ECA-4000 series modular angle encoders.

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

規格表 SPECIFICATIONS

型號	MODEL		UNIT	AR-135	AR-160	AR-200	AR-250	AR-320	AR-400	AR-500	AR-800
工作盤直徑	Table Diamete	er	Ømm	135	160	200	250	320	400	500	800
中心高度	Center Height		mm	110	135	160	160	210	255	310	530
中心孔徑	Spindle Hole		Ømm	Ø30H7 Ø15	Ø60H7 Ø45	Ø60H7 Ø45	Ø75H7 Ø70	Ø75H7 Ø70	Ø150H7 Ø120	Ø200H7 Ø140	Ø360H7 Ø310
盤面T型溝	T-slot Width		mm	12H7	12H7	12H7	12H7	14H7	14H7	18H7	18H7
基準定位鍵	Guide Key Wid	lth	mm	14H7	18H7	18H7	18H7	18H7	18H7	18H7	22H7
總減速比	Total Speed Re	eduction Ratio		30	36	36	60	60	60	60	180
最高迴轉數	Max. Rotation	Speed (3,000 rpm)	rpm	100	83.3	83.3	50	50	50	50	16.7
	Resource (Pneumatic / Hydra	ulic)	kg/cm ²	5 (空壓) (PNEUMATIC)	5 (空間) (PNEUMATIC)	5 (空壓) (PNEUMATIC)	20 (油壓) (HYDRAULIC)	20 (油壓) (HYDRAULIC)	20 (油壓) (HYDRAULIC)	20 (油壓) (HYDRAULIC)	30 (油壓) (HYDRAULIC)
鎖緊扭力	Output Braking	Torque	kg/m	8	14	14	90	150	280	400	750
分割精度	Indexing Accu	гасу	sec	±20	±10	±10	±10	±10	±7.5	±7.5	±7.5
重覆精度	Repeatability		sec	4	4	4	4	4	4	4	4
最小設定單位	Min. Incremen	t		0.001°	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°
重量(不含馬達)	Weight		kg	28	64	68	107	168	320	500	1410
容許承重		立式 Vertical	kg	20	70	70	100	150	200	250	750
Allowable Work V	Weight	臥式 Horizontal	kg	45	140	140	250	350	500	600	1500
		F	kgf	60	800	800	1400	2000	400	5000	6000
當夾鎖時其容許 Allowable Load		Ď ^F	Fxl kgf-m	8	13	13	150	260	280	400	700
(When Table is Clamp	eaj	Ė	Fxl kgf-m	15	40	40	100	200	250	350	1000
容許慣性	Allowable Wor	k Inertia	kg-m²	0.1	0.48	0.48	1.95	3.7	8.8	18.4	320

※ HYDEX 產品保留設計與變更之權利。 ※ HYDEX reserves the right to change designs and specifications.

04

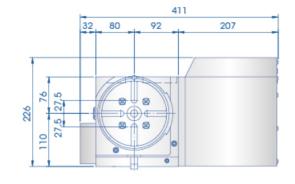
THE HEART OF CREATION

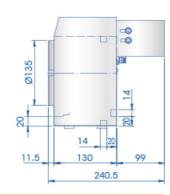
4hypex

/

AR-135



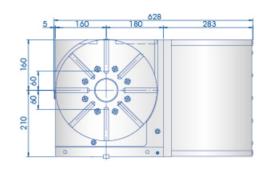


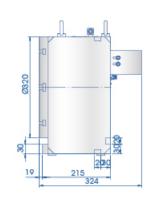


HYDEX

AR-320

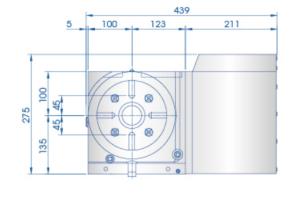


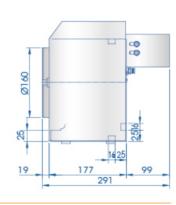




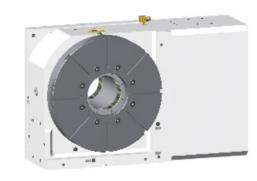
AR-160

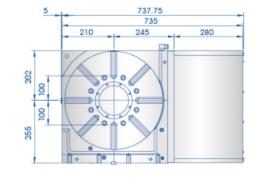


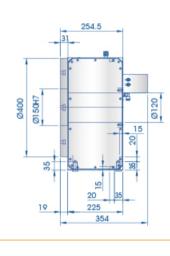




AR-400

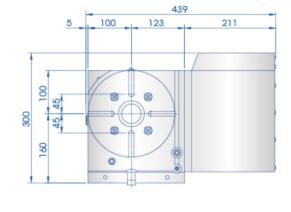


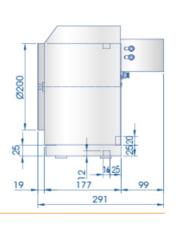




AR-200

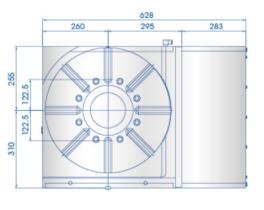


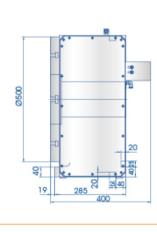




AR-500

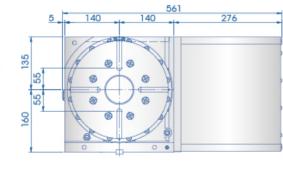


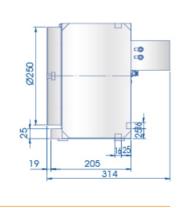




AR-250

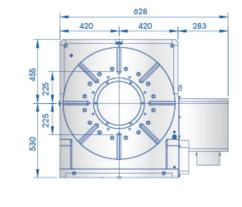


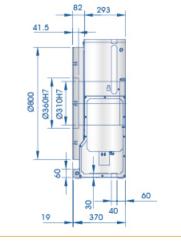




AR-800







AH Series



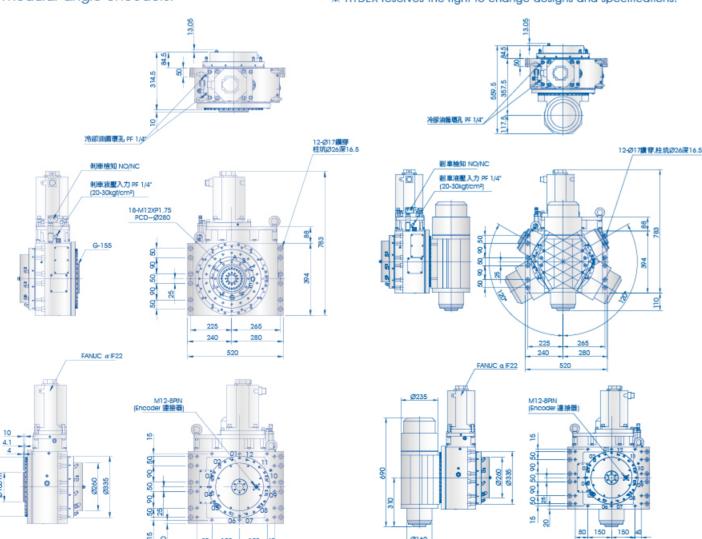
- > CNC swiveling spindle head set.
- Can be matched with spindle heads of different brands.
- Spindle integrated cable, air and hydraulic circuits.
- Optional HEIDENHAIN ECA-4000 modular angle encoders.

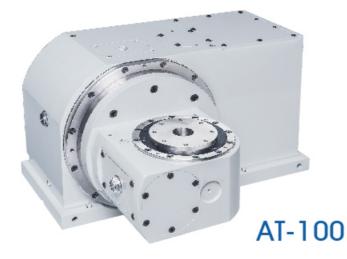


- 》CNC搖擺主軸旋轉擺頭座
- 》可搭配不同品牌之主軸頭
- 》主軸整合電纜、空、油壓通路
- 》可選配海德漢ECA-4000系列光學尺

型號	MODEL	UNIT	AH-400
工作盤直徑	Table Diameter	Ømm	160
中心孔徑	Spindle Hole	Ømm	Ø50H7 / Ø40
減速比	Total Speed Reduction Ratio		1:90
最高迴轉速	Max. Rotation Speed	rpm	33.3
鎖緊壓力	Resource (Hydraulic)	kgf/m²	30
鎖緊扭力	Output Torque at Brake	kg/m	250
分割精度	Indexing Accuracy	sec	±10
重覆精度	Repeatability	sec	4
最小設定單位	Min. Increment	316	0.001°
產品重量	Weight	kg	320

- ※ HYDEX 產品保留設計與變更之權利。
- * HYDEX reserves the right to change designs and specifications.



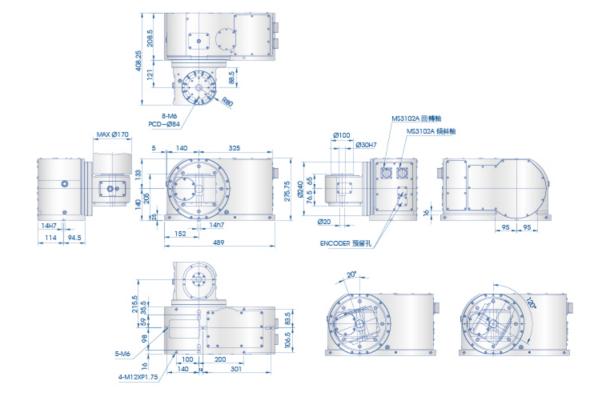


TYPEX

AT Series

- 》CNC五軸單臂分度盤
- 》可選配海德漢ECA-4000系列光學尺
- > CNC Five-axi single-arm type rotary table
- Optional HEIDENHAIN ECA-4000 series modular angle encoders.

型號	MODEL	UNIT	AT-100
工作盤直徑	Table Diameter	Ømm	160
中心高度	Center Height	mm	205 (0°) 14 (90°)
中心孔徑	Spindle Hole	Ømm	Ø30H7 Ø20
基準定位鍵	Guide Key Width	mm	14H7
減速比	Total Speed Reduction Ratio		1:48 (迴轉軸/Rotary axis) 1:60 (傾斜軸/Tilt axis)
最高迴轉速	Max. Rotation Speed	rpm	83.3 (迴轉軸/Rotary axis) 66.7 (傾斜軸/Tilt axis)
鎖緊扭力	Output Torque at Brake	kg/m	無刹車設計
分割精度	Indexing Accuracy	sec	30 (迴轉軸/Rotary axis) 20 (傾斜軸/Tilt axis)
重複精度	Repeatability	sec	4
最小設定單位	Min. Increment		0.001°
傾斜角度	Tilting angle	deg	-20°~120°
產品重量(不含馬達)	Weight (Without Motor)	deg	314



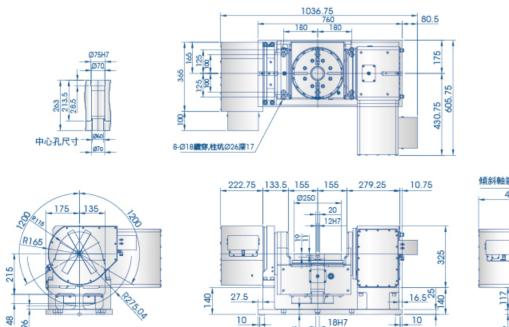


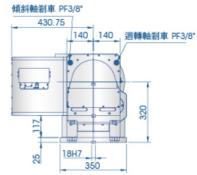
TYDEX

AT Series

- 》 CNC五軸雙臂搖籃分度盤
- 》可選配海德漢ECA-4000系列光學尺
- CNC Five-axis double-arm cradle type rotary table
- Optional HEIDENHAIN ECA-4000 series modular angle encoders.

型號	MODEL	UNIT	AT-250
工作盤直徑	Table Diameter	Ømm	250
中心高度	Center Height	mm	320 (0°) / 320 (90°)
中心孔徑	Spindle Hole	Ømm	Ø75H7 / Ø60
盤面T型槽	T - slot	mm	12H7
基準定位鍵	Guide Key Width	mm	18H7
減速比	Total Speed Reduction Ratio		1:60 (迴轉軸/Rotary axis) / 1:90 (傾斜軸/Titt axis)
最高迴轉速	Max. Rotation Speed	rpm	50 (迴轉軸/Rotary axis) / 33.3 (傾斜軸/Tilt axis)
鎖緊壓力(油壓)	Resource (Hydraulic)	kgf/cm ²	30
鎖緊扭力	Output Torque at Brake	kg/m	60 (迴轉軸/Rotary axis) / 110 (傾斜軸/Tilt axis)
分割精度	Indexing Accuracy	sec	±10 (迴轉軸/Rotary axis) / ±15 (傾斜軸/Tilt axis)
重複精度	Repeatability	sec	4
最小設定單位	Min. Increment		0.001°
傾斜角度	Tilting angle	deg	-20°~120°
產品重量(不含馬達)	Weight (Without motor)	kg	400





伺服馬達一欄表 Servo Motor Drive



AR Series

MODEL	FANUC	MITSUBISHI	YASKAWA	SIEMENS	HEIDENHAIN	FOGOR	SANYO	
AR-135	αiF2/5000	HF75T/S		1EV 7040	000044	EKNADO 20	O0440007ED	
AIX-100	βiS4/4000	HG75T/S	-	1FK-7042	QSY96A	FKM22.30	Q2AA08075D	
AR-160	α iF4/5000	HF104T/S	CCMCV/12A	1FK-7060	O0V1140	FIZMANO 20	DOMARO I COECOCYMA	
AR-100	βiS8/3000	HG104T/S	SGMGV-13A	1FK-7000	QSY116C	FKM42.30	R2AAB8100FCPGYM	
AR-200	α iF4/5000	HF104T/S	SGMGV-13A	1FK-7060	QSY116C	FKM42.30	DOMARO I ODECDOVIM	
AR-200	βiS8/3000	HG104T/S	3GIVIGV-T3A	1FK-7U0U	Ø31110C	1 KIVI42.30	R2AAB8100FCPGYM	
AR-250	αiF8/3000	HF154T/S	SCMCV 20A	1FK-7063	QSY116E	FKM44.30		
AR-200	βiS12/3000	HG154T/S	SGMGV-20A	11 K-7003	Ø31110L	1 1(10144.50	_	
AR-320	αiF12/4000	HF204S	SCMCV 20A	1FK-7083	OCV155D	EI/N46.4.20		
AR-320	βiS22/2000	HG204S	SGMGV-30A	IFK-7003	QSY155B	FKM64.30	-	
AD 400	αiF12/4000	HF204S	SGMGV-30A	1FK-7083	QSY155B	FKM64.30	-	
AR-400	βiS22/2000	HG204S	3GIVIGV-3UA	1FK-7003	6211220	FKIVI04.30		
AR-500	αiF12/4000	HF204S	CCMCV 20A	1FK-7083	OCV155D	EI/N44 4 20		
AIK-300	βiS22/2000	HG204S	SGMGV-30A	1FK-7003	QSY155B	FKM64.30	-	
AD 000	:F00/2000	HF354S		151/ 700 /	OCVIEED			
AR-800	α iF22/3000	HG3548	-	1FK-7084	QSY155D	-	-	

AH Series

MODEL	FANUC	MITSUBISHI	SIEMENS	HEIDENHAIN	
ΔH_400	0 α iF22/3000	HF354	1FK7084	QSY-155D	
AH-4UU	u 22/3000	HG354	11 K7 004		

AT Series

MODEL	AXIS	FANUC	MITSUBISHI	SIEMENS	HEIDENHAIN	SANYO	
	迴轉軸	iaOB/4000	HF43S	-	-	R2AAB8075HXP	
AT 100	Rotary axis	αis2B/6000	HG43S	-	-		
AT-100	傾斜軸	uio 40/4000	HF73S	-	-	DOMARO LOOF OR	
	Tilt axis	α is 4B/6000	HG73S	-	-	R2AAB8100FCF	
	迴轉軸	αifF4/5000	HF154S	1577040	QSY-116C	-	
AT-250	Rotary axis	βiS8/3000	HG1548	1FK7060	Ø31-110C	-	
AI-250	傾斜軸	αifF8B/3000	HF154BS	151/7042	QSY-116E	-	
	Tilt axis	βiS12B/3000	HG154BS	1FK7063	Ø91-110E	-	

THE HEART OF CREATION -thypex

HFT / HFTS Series

H F T - 200P



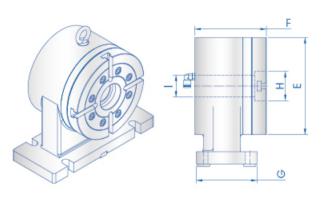
P 氣壓鎖緊 Pneumatic H 油壓鎖緊 Hydraulic Faceplate Dimension

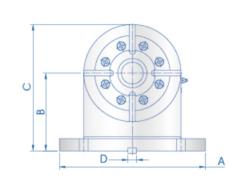
TYDEX

- 》圓盤尾座
- 》與AR series產品搭配使用
- Use with AR series.

Disc tailstock.

HFT Series

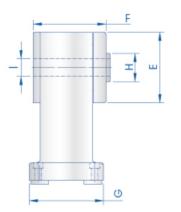


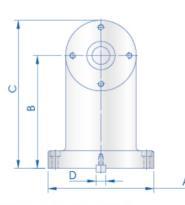


機型Model / 尺寸Size	А	В	С	D	E	F	G	Н	1
HMT-135P	200	110	190	14	135	130	105	30	15
HMT-160P	300	135	235	18	160	147	125	60	45
HMT-200P/H	300	160	260	18	200	147	125	60	45
HMT-250H	300	160	285	18	250	151	125	75	50
HMT-320H	400	210	370	18	320	160	125	75	50

HFTS Series (No Brake)

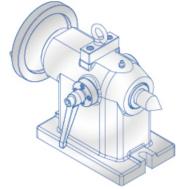






機型Model / 尺寸Size	Α	В		D		F	G	Н	1
HFTS-135	150	110	160	18	100	109	105	40	25
HFTS-160	150	135	185	18	100	109	105	40	25
HFTS-200	150	160	210	18	100	109	105	40	25

HMT Series



- 》頂針尾座
- 》與AR series產品搭配使用



可替換式

Chanaeable

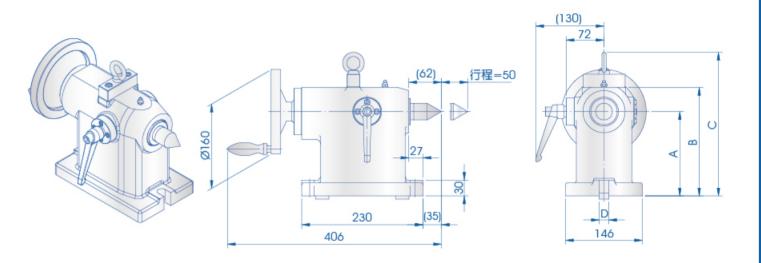
對應分度盤型號 Rotary model



Thimble tailstock.

H M T - 200C

Use with AR series.



M 手動式 Manual

P 氣壓 Pneumatic

機型Model / 尺寸Size	A	В	С	D
HMT-135C	110	156	223	14
HMT-160C	135	181	248	14
HMT-200C	160	206	273	18
HMT-250C	160	206	273	18
HMT-320C	210	256	323	18

- Standard Accessories: Clamping Bolts, Position Key

HYDEX CNC ROTARY TABLE specification confirmation form

客戶名稱 Customer name			電話 Telephone	÷			
選購CNC分度盤	型號 Model		數量 Quantity				
Selection Rotary Table	使用方式 Usage	□立臥兩用 Vertical and ho		□立式專用 Vertical use		□臥式專用 Horizontal use	
工具機	品牌 Brand			型號 Model			
Machine Tool	工作臺尺寸 Table size	T 型槽寬度 T groove widt	th ———H7	間距 Spacing —	mm	槽數 Number of groo	ves ——
	□需配套 Need matching	□提供馬達 Provide moto)r	□不需要 Not need			
何電機服 Servo Motor	製造商 Manufacturer		□三菱 Mitsubishi	□西門子 SIEMENS	□其他 Other		
	馬達型號 Motor model ———		控制器型號 Controller M	lodel-		版次 Version ——	
	電纜出線位置 Cable outlet position	□背面 Back Side		□側面 Lateral Side		□上平面 Upper plane	
分度盤規格 Rotary Table	電纜出線型式 Cable outlet type	□軍規標準接 Standard Jur		litary Regulat	tions	□直接出線 Direct outlet	
	煞車功能 Brake function	□不需要 Not need		□空壓 PNEUMATIC		□油壓 HYDRAULIC	
Specification	油壓單元 Oil pressure unit	□不需要 Not need		□氣轉油增息 Air-to-oil sup			
	電磁閥電壓 (限氣壓煞車型) Solenoid Valve Voltage (Pneumatic Brake Type only)	□AC100V		□AC220V		□DC24V	
外線組電纜線	□不需要 Not needed	□需要 Needed					
External Cables	長度 Length	□3m	□5m	□指定Appo	pint		
操作手冊 Operation Manual	□中文 Chinese	□英文 English					
尾座	圓盤尾座 Disc tailstock	□不需要 Not needed	□需要 Needed				
Tailstock	頂針尾座 Thimble tailstock	□不需要 Not needed	□需要 Needed				
	中板 Medium plate	□不需要 Not needed	□需要 Needed				
	底板 Floor plate	□不需要 Not needed	□需要 Needed				
	墊高塊 Base cushion block	□不需要 Not needed	□需要 Needed	□本體 Main body	m	m □尾座 Tailstock —	mn
其它配件 Other Accessories	L 型連接塊 L type connection block	□不需要 Not needed	□需要 Needed				
	單軸控制器 Uniaxial controller	□不需要 Not needed	□需要 Needed				
	手動卡盤 Manual chuck	□不需要 Not needed	□需要 Needed	卡盤規格 Chuck mod	lel		
	自動卡盤 Automatic chuck	□不需要 Not needed	□需要 Needed	卡盤規格 Chuck mod	lel ———		
備註 Remark							
客戶確認 Customer Confirmation							

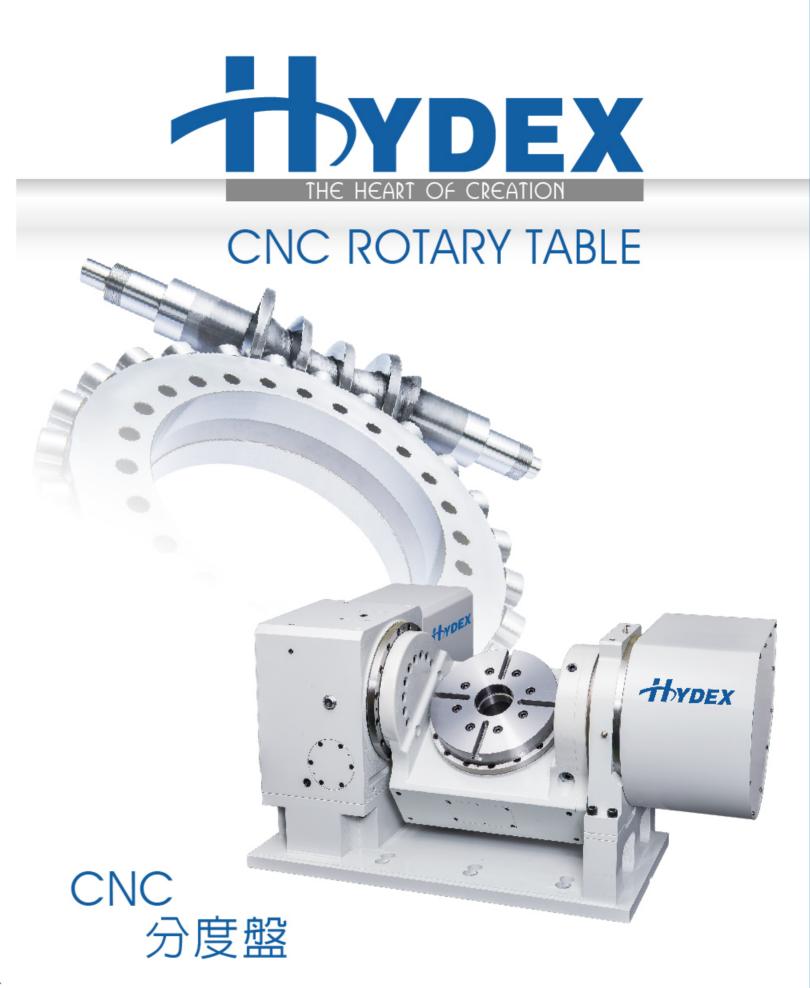


No.43-3, Gousin Rd., Shengang District, Taichung City, 429 Taiwan.

Tel: 886 - 4 - 2562-7599 Fax: 886 - 4 - 2562-5163 E-mail: hydex_xhs@126.com

E-mail: service@hydex.com.tw http://www.hydex.com.tw

HYDEX MACHINERY INDUSTRIAL CO., LTD. FUJAN XIN HONG SHENG MACHINERY CO., LTD. http://www.hydex.com.tw



近乎零背隙滾子凸輪式 NEARLY ZERO-BACKLASH ROLLER CAM TYPE