

CNC TILTING ROTARY TABLE



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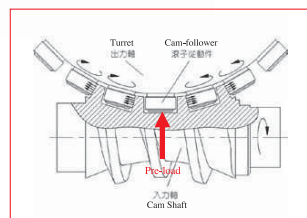
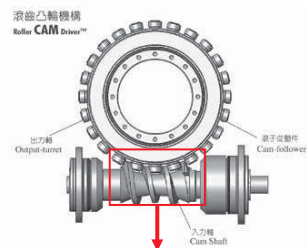
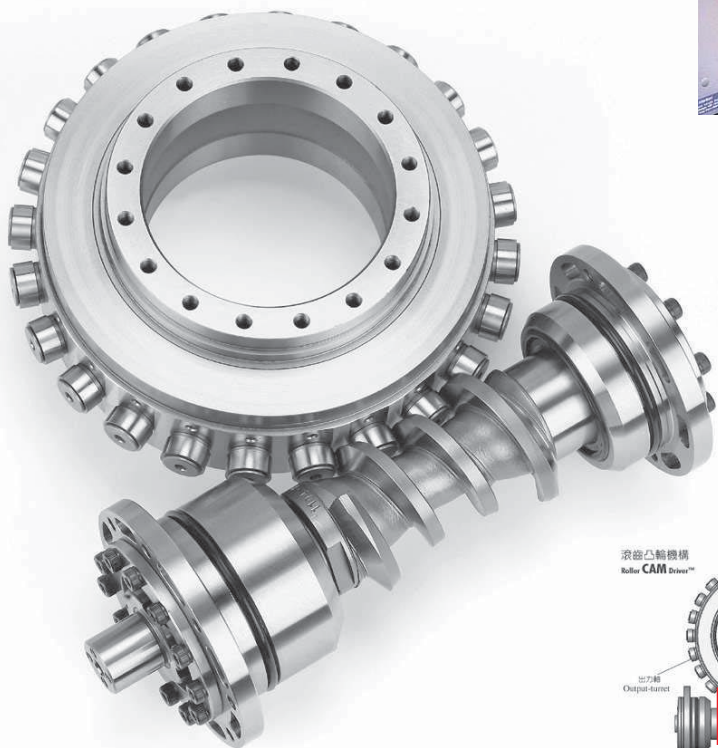
Auto Cam 2013.07.25

Non-Backlash ゼロバックラッシュのNC割出しテーブル
CNC ROTARY TABLE
滾動式無背隙滾齒凸輪 Roller CAM Driver™





Non-Backlash CNC ROTARY TABLE

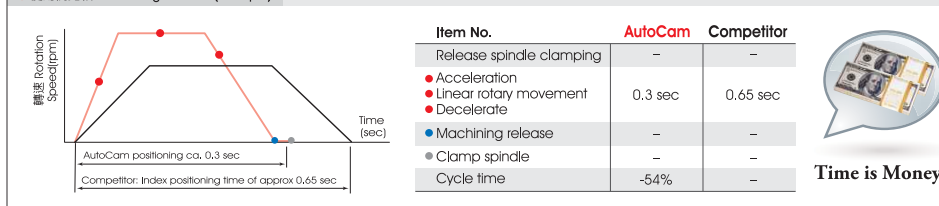


Auto Cam Roller CAM Driver™
•Accuracy •High Speed •Durability

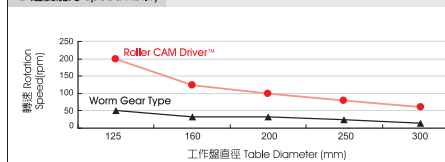
分度盤機構特性比較 Reducer mechanism character comparison

No.	項目 Item	Roller CAM Driver™	Worm Gear Type
1	形式 Drive type	零背隙 Non-Backlash	
2	運動接觸狀況 Drive status	滾動接觸 Rolling contact	滑動接觸 Slide contact
3	接觸部的材質、硬度 Material: Hardness of the contact part	凸輪軸：滲碳鋼、HRC60 Cam shaft: Hardening steel; HRC60 凸輪從動件：軸承鋼、HRC60 Cam followers: Bearing steel; HRC60	蝸桿：滲碳鋼、HRC60 Worm shaft: Hardening steel; HRC60 蝸輪：磷青銅、HB90 Worm gear: Phosphor bronze; HB90
4	預壓 Preload	○ 有 Yes	× 沒有 NO
5	傳動效率 Transmission efficiency	○ 高 Higher	△ 低 Lower

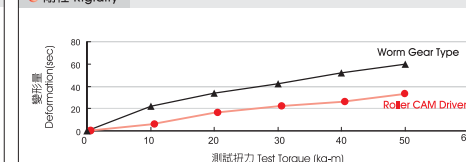
使用例比較 Positioning time 90° (Example)



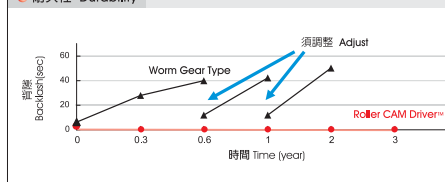
速度能力 Speed Ability



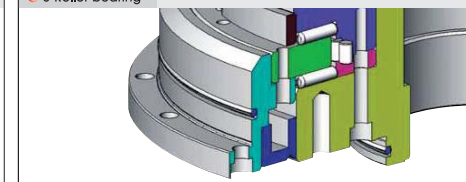
剛性 Rigidity



耐久性 Durability



3 Roller bearing



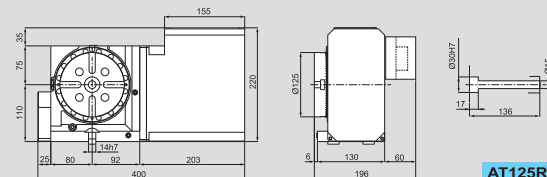


Non-Backlash CNC ROTARY TABLE

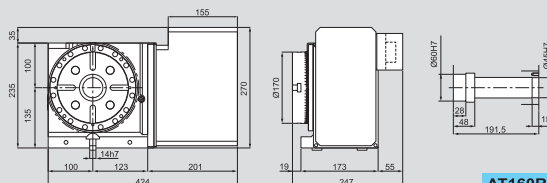
機械式樣表 Specification

項目 Code No.		AT125R	AT160R		AT160L		AT200R	
工作盤直徑 Table diameter		ø mm	125	170		170		200
中心高度 Center height		mm	110	135		135		160
中心孔徑/貫穿孔徑 Spindle hole		ø mm	30H7/15	60H7/45		60H7/45		60H7/45
盤面 T 型溝尺寸 T slot width		mm	12H7	12H7		12H7		12H7
基準定位鍵 Guide block width		mm	14h7	14h7		14h7		18h7
使用馬達 Motor	FANUC		α2i	α4i		α4i		α4i
	MITSUBISHI		HF75	HF104		HF104		HF104
總減速比 Gear ratio			30	36		36		36
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm rpm			100	83.3		83.3		83.3
最小設定單位 Min. increment			0.001°	0.001°		0.001°		0.001°
容許切削扭力 Output rated torque		kg•m	8	15		15		15
鎖緊壓力 Clamp system (空 P: Pneumatic / 油 H: Hydraulic)		kg/cm²	(空 P) 5	(空 P) 5	(油 H) 20	(空 P) 5	(油 H) 20	(空 P) 5 (油 H) 20
鎖緊扭力 Output torque at brake	kg•m	8	13	40	13	40	13	40
	(N-m)	(78)	(127)	(392)	(127)	(392)	(127)	(392)
分割精度 Indexing accuracy		sec	40	20		20		20
重覆精度 Repeatability		sec	4	4		4		4
製品質量 Weight		kg	32	55		55		65
容許承重 Allowable work weight		kg	20	75		75		75
		kg	50	150		150		150
當夾鎖時其 容許負載 Allowable load (When table clamped)		kgf	600	800		800		800
		FxL Kg-f-m	8	13	42	13	42	13 42
		FxL kgf-m	16	40		40		40
容許慣性 Allowable work inertia		kg-m²	0.1	0.48		0.48		0.48
不怠制車時間 Cycle time	 90°	sec	0.3	0.38		0.38		0.38
	 180°	sec	0.45	0.55		0.55		0.55

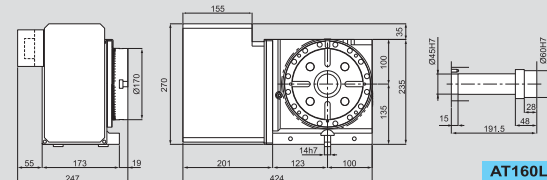
機械寸法圖 Outline dimensions



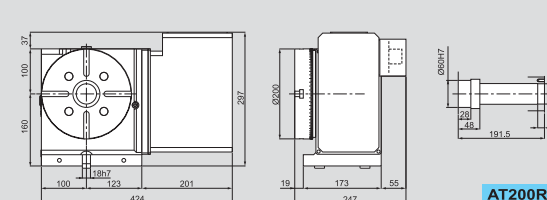
AT125R



AT160R



AT160L



AT200R

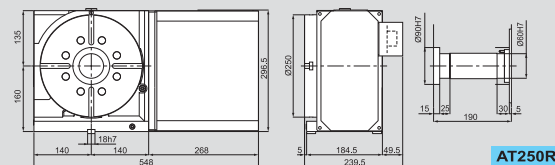


Non-Backlash CNC ROTARY TABLE

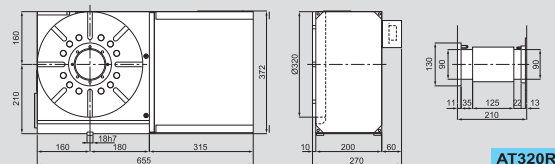
機械式樣表 Specification

項目 Code No.		AT250R	AT320R	AT400R	AT500R	AT800R
工作盤直徑 Table diameter	ø mm	250	320	400	500	800
中心高度 Center height	mm	160	210	255	320	530
中心孔徑/貫穿孔徑 Spindle hole	ø mm	90H7/60	130H7/90	150H7/120	200H7/140	400H7/350
盤面 T 型溝尺寸 T slot width	mm	12H7	14H7	14H7	18H7	18H7
基準定位鍵 Guide block width	mm	18h7	18h7	18h7	18h7	22h7
使用馬達 Motor	FANUC	α8i	α12i	α12i	α12i	α22i
	MITSUBISHI	HF154	HF204S	HF204S	HF204S	HF354S
總減速比 Gear ratio		60	90	120	120	180
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	rpm	50	33.3	25	25	16.7
最小設定單位 Min. increment		0.001°	0.001°	0.001°	0.001°	0.001°
容許切削扭力 Output rated torque	kg•m	45	95	125	125	320
鎖緊壓力 Clamp system (空 P: Pneumatic / 油 H: Hydraulic)	kg/cm²	(油 H) 20	(油 H) 20	(油 H) 20	(油 H) 20	(油 H) 20
	kg•m (N•m)	50 (490)	150 (1470)	280 (2744)	400 (3920)	700 (6860)
鎖緊扭力 Output torque at brake						
分割精度 Indexing accuracy	sec	20	20	15	15	15
重複精度 Repeatability	sec	4	4	4	4	4
製品質量 Weight	kg	95	200	250	450	1400
容許承重 Allowable work weight	 kg	100	150	200	250	750
	 kg	250	350	500	600	1500
當夾鎖時其 容許負載 Allowable load (When table clamped)	 kgf	1400	2000	4000	5000	6000
	 FxL Kgf•m	150	260	280	400	700
	 FxL kgf•m	100	200	250	350	1000
	 kg•m²	1.95	3.70	8.8	18.4	120
容許慣性 Allowable work inertia						
不含刹車時間 Cycle time	 90° sec	0.5	0.65	0.75	0.9	-
	 180° sec	0.75	0.98	1.33	1.58	-

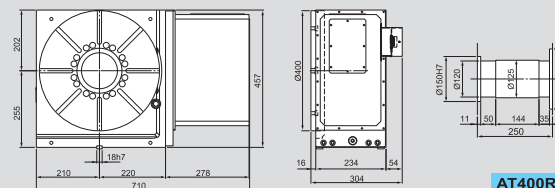
機械寸法圖 Outline dimensions



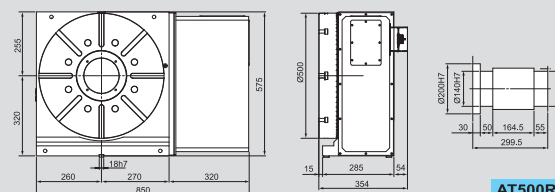
AT250R



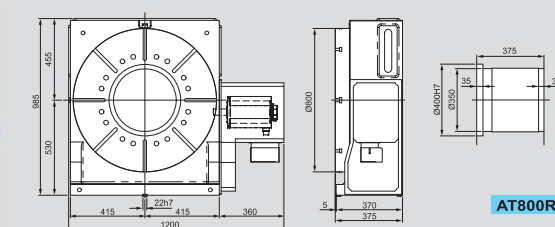
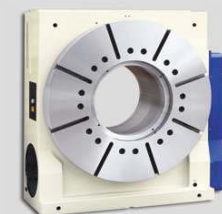
AT320R



AT400R



AT500R



AT800R



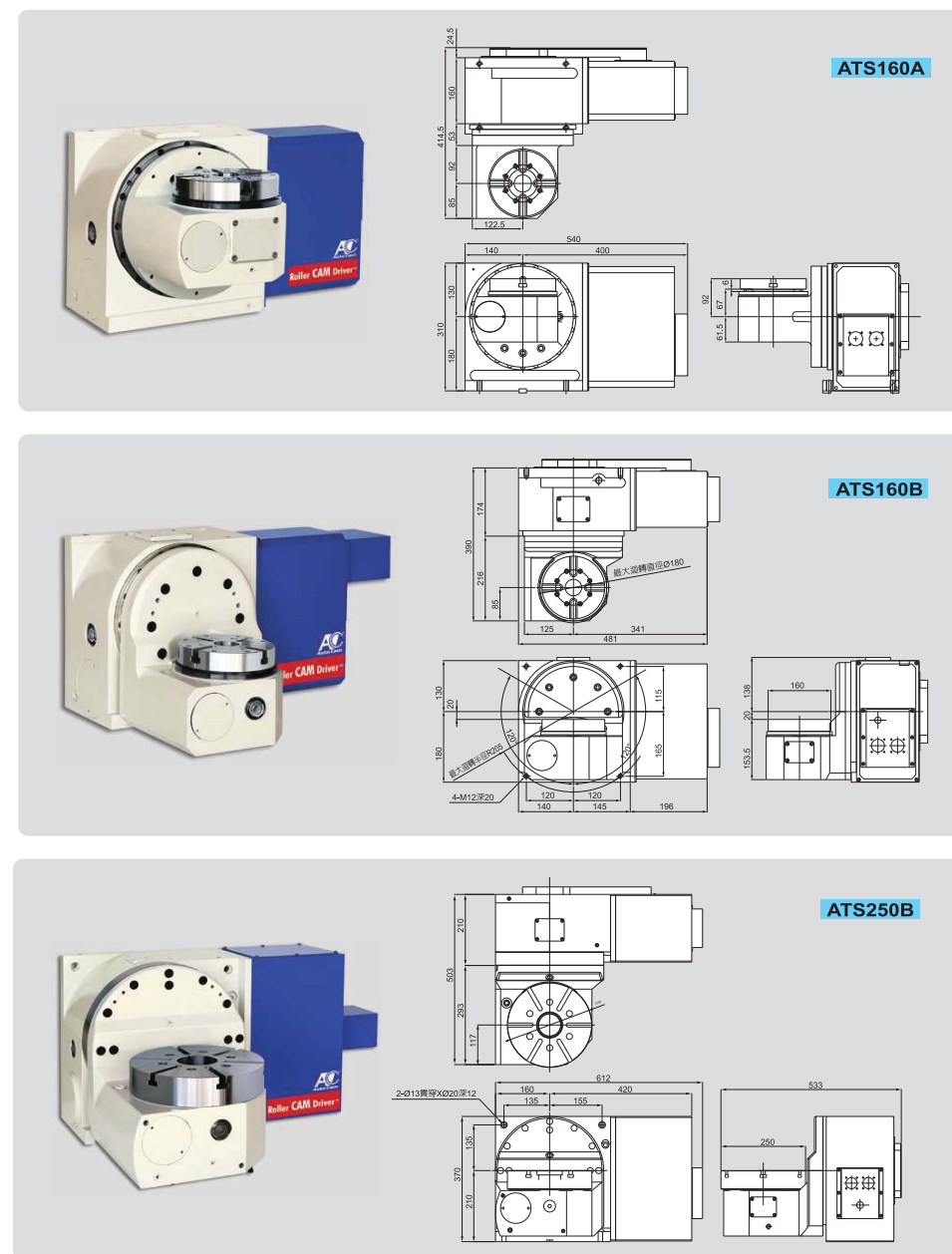
Non-Backlash

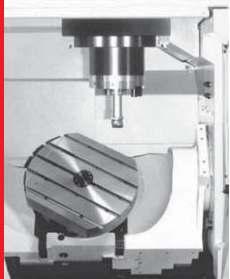
CNC TILTING ROTARY TABLE

機械式樣表 Specification

項目 Code No.		ATS160A	ATS160B	ATS250B
工作盤直徑 Table diameter	ø mm	160	160	250
0°時工作盤面高度 Table height (Tilting=0°)	mm	272	160	210
90°時工作盤面中心高度 Table center height (Tilting=90°)	mm	180	180	210
中心孔徑/貫穿孔徑 Spindle hole	ø mm	42H7 / 40	42H7 / 40	75H7/65
盤面 T 型溝尺寸 T slot width	mm	12H7	12H7	12H7
容許工件負載 Allowed works load	kg	20	20	60
製品質量 Weight	kg	90	90	220
分度範圍 Rotation range	degree	Rotation 360 Tilting ±120	Rotation 360 Tilting ±120	Rotation 360 Tilting ±120
使用馬達 Motor		HF105T	HF105T	HF105T
總減速比 Gear ratio		48	60	75
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	rpm	100	75	100
最小設定單位 Min. Increment		0.001°	0.001°	0.001°
容許切削扭力 Output rated torque	kg•m	9.0	24	14
鎖緊壓力 Clamp system (油壓 Hydraulic)	kg/cm²	20	20	20
鎖緊扭力 Output torque at brake	kg•m	15	50	60
	(N•m)	(147)	(490)	(588)
分割精度 Indexing accuracy	sec	25	40	20
重覆精度 Repeatability	sec	4	4	4
容許承重 Allowable work weight	 kg	20	20	60
	 kg	20	20	60
當夾鎖時其容許負載 Allowable load (When table clamped)	 kgf	610	610	890
	 F x L kgf•m	22	22	48
	 F x L kgf•m	30	30	85
容許慣性 Allowable work inertia	 kg•m²	0.16	0.16	0.4

機械寸法圖 Outline dimensions



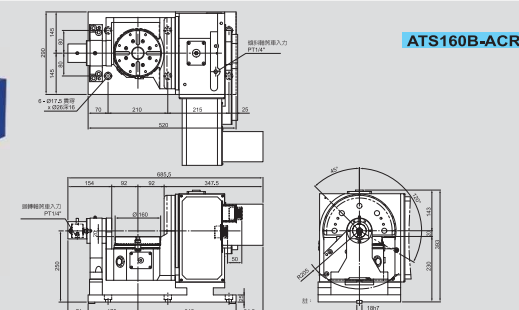
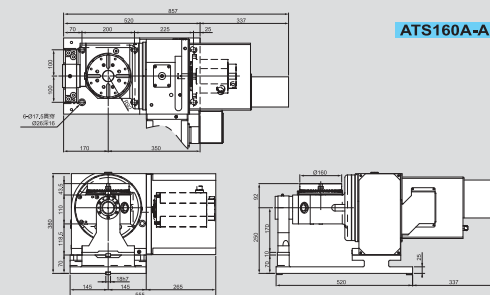
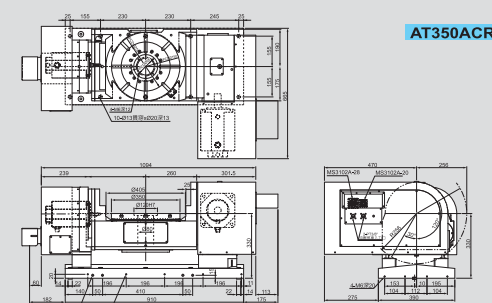
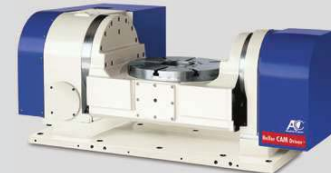
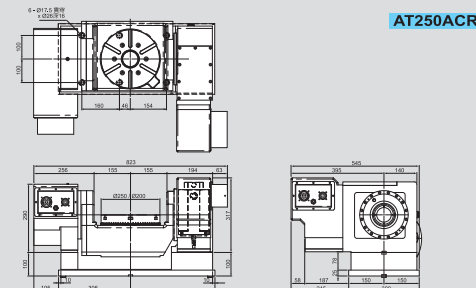


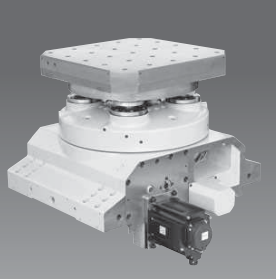
Non-Backlash CNC TILTING ROTARY TABLE

機械式樣表 *Specification*

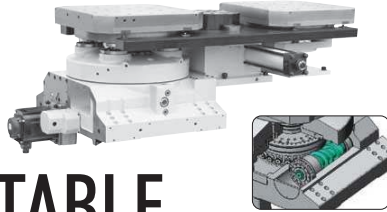
※B:表示馬達附剎車 B: Motor with Brake

項目 Code No.	AT250ACR	AT350ACR	ATS160A-ACR	ATS160B-ACR
工作盤直徑 Table diameter	200/250	350	160	160
0°時工作盤面高度 Table height (Tilting=0°)	260	330	342	230
90°時工作盤面中心高度 Table center height (Tilting=90°)	260	330	250	250
中心孔徑/貫穿孔徑 Spindle hole	75H7 / 65	120H7 / 80	42	42H7 / 40
盤面T型溝尺寸 T slot width	12H7	12H7	12H7	12H7
容許工件負載 Allowed works load	70	200	50	50
製品質量 Weight	200	450	100	120
分度範圍 Rotation range	Rotation 360 Tilting +30 ~ -120	Rotation 360 Tilting +30 ~ -120	Rotation 360 Tilting ±120	Rotation 360 Tilting +45 ~ -120
使用馬達 Motor	α4i α8i+B	α8i α12i+B	α4i / 4000 α8i / 3000+B	HF105T-A48 HF105T-A48+B
總減速比 Gear ratio	1/60 1/90	1/75 1/90	1/48 1/60	1/48 1/60
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	66.7 33.3	40 33.3	83.3 50	100 75
最小設定單位 Min. increment	0.001° 0.001°	0.001° 0.001°	0.001° 0.001°	0.001° 0.001°
容許切削扭力 Output rated torque	20 60	60 108	9 24	9 24
鎖緊壓力 Clamp system (油壓 Hydraulic)	25 25	35 35	20 20	20 20
鎖緊扭力 Output torque at brake	60 100 (588) (980)	220 250 (2156) (2450)	15 50 (147) (490)	15 50 (147) (490)
分割精度 Indexing accuracy	20 30	20 40	25 40	25 40
重複精度 Repeatability	4 4	4 4	4 4	4 4
選配裝置 Options	角度編碼器 Angular encoder (Heidenhain) RCN227 RCN227	— —	— —	— —
容許承重 Allowable work weight	Tilting=0~30° kg 100	200	50	50
	Tilting=30~90° kg 100	200	50	50
容許負載 Allowable load	Tilting=0° kgf 3300	6000	2000	2000
	Tilting=0° F x L kgf-m L=125mm F=460kg	L=175mm F=560kg	L=80mm F=600kg	L=80mm F=600kg
	Tilting=90° F x L kgf-m 48	82	22	22
	Tilting=90° F x L kgf-m L=100mm F=580kg	L=100mm F=980kg	L=100mm F=800kg	L=100mm F=800kg
容許慣性 Allowable work inertia	kg-m² 0.46	2.09	0.16	0.16

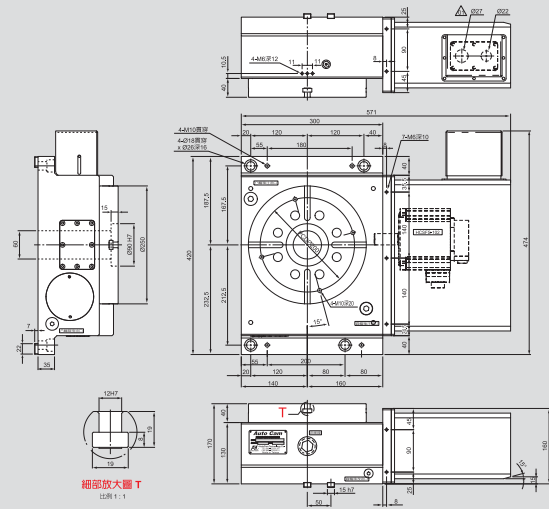
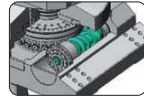




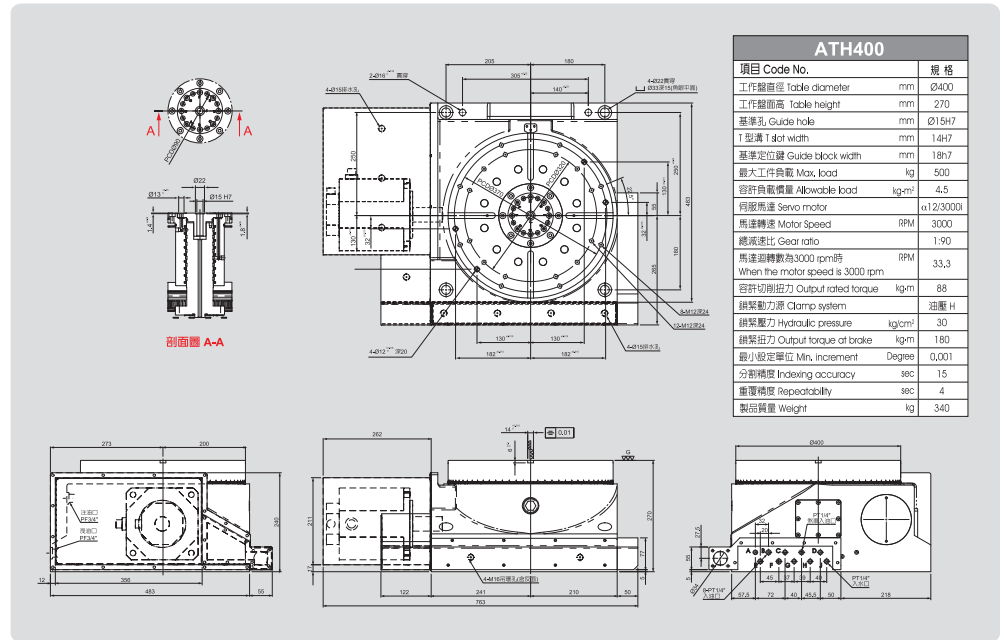
Horizontal ROTARY TABLE



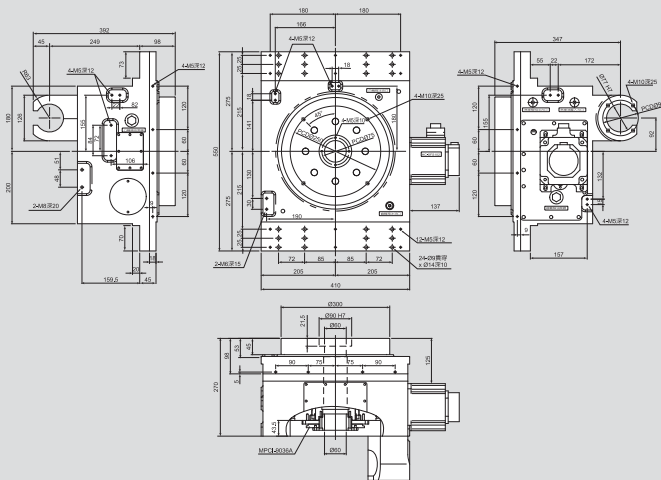
CNC-B軸滾子凸輪機構
B axis-Roller CAM Driver mechanism



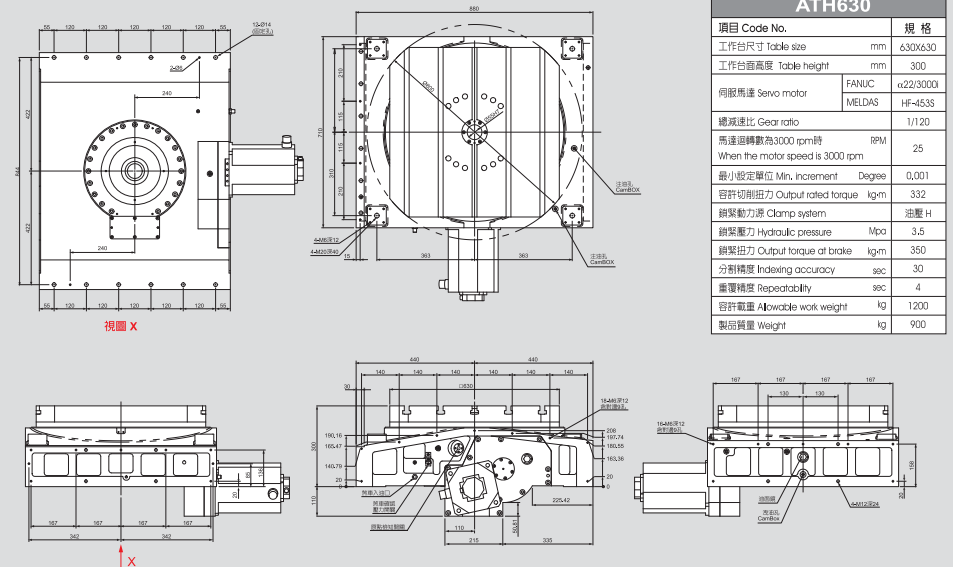
ATH250	
項目 Code No.	規格
工作盤直徑 Table diameter	mm Ø250
工作盤面高 Table height	mm 170
基準孔 Guide hole	mm Ø90H7
貫穿孔 Spindle hole	mm Ø60
T型溝 T slot width	mm 12H7
基準定位鍵 Guide block width	mm 15H7
伺服馬達 Servo motor	MELDAS HC-SFS-102
總減速比 Gear ratio	1/60
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	RPM 50
容許切削扭矩 Output rated torque	kg·m 25
分割精度 Indexing accuracy	sec 20
重複精度 Repeatability	sec 4
製品質量 Weight	kg 90



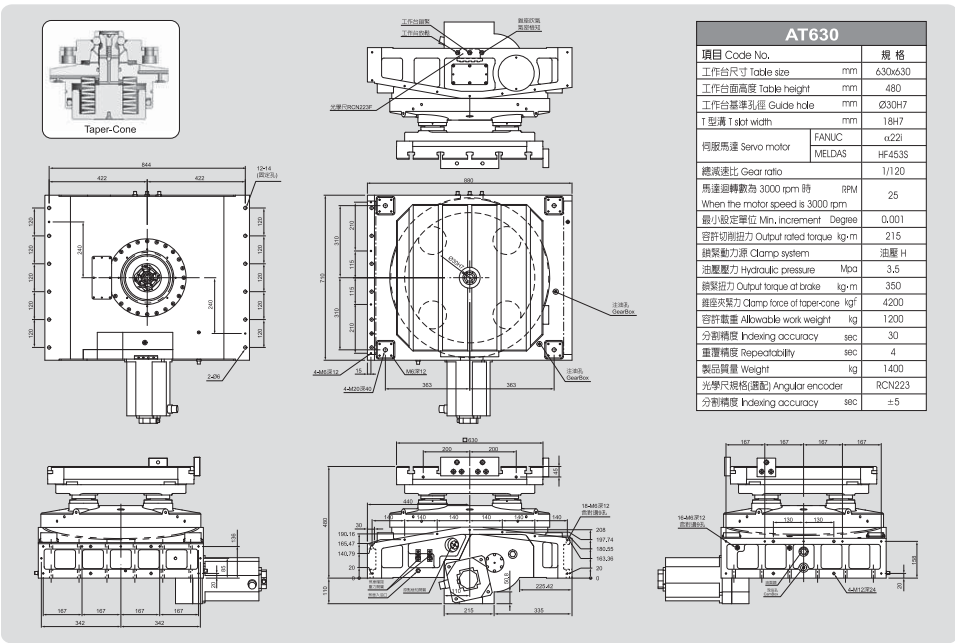
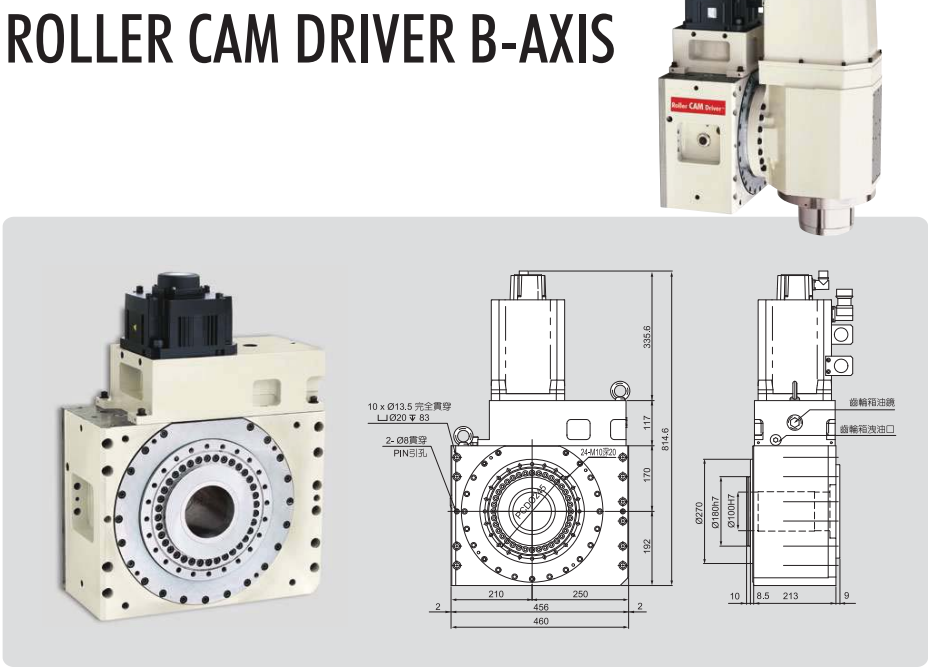
ATH400	
項目 Code No.	規格
工作盤直徑 Table diameter	mm Ø400
工作盤面高 Table height	mm 270
基準孔 Guide hole	mm Ø15H7
T型溝 T slot width	mm 14H7
基準定位鍵 Guide block width	mm 18H7
最大工件負載 Max. load	kg 500
容許負載容量 Allowable load	kg·m ² 4.5
伺服馬達 Servo motor	α12/3000i
馬達迴轉數 Motor Speed	RPM 3000
總減速比 Gear ratio	1/90
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	RPM 33.3
容許切削扭矩 Output rated torque	kg·m 88
鎖緊動力源 Clamp system	油壓 H
鎖緊壓力 Hydraulic pressure	kg/cm ² 30
鎖緊扭力 Output torque of brake	kg·m 180
最小設定單位 Min. increment	Degree 0.001
分割精度 Indexing accuracy	sec 15
重複精度 Repeatability	sec 4
製品質量 Weight	kg 340



ATH300	
項目 Code No.	規格
工作盤直徑 Table diameter	mm Ø300
基準孔 Guide hole	mm Ø90H7
貫穿孔 Spindle hole	mm Ø60
伺服馬達 Servo motor	FANUC α4/4000i MELDAS HC-SFS102
總減速比 Gear ratio	1/60
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	RPM 50
容許切削扭矩 Output rated torque	kg·m 24
分割精度 Indexing accuracy	sec 20
重複精度 Repeatability	sec 4
製品質量 Weight	kg 150
鎖緊動力源 Clamp system	油壓 H
鎖緊壓力 Hydraulic pressure	Mpa 2.0
鎖緊扭力 Output torque of brake	kg·m 150
光學尺 Angular encoder	MPC-A9036A



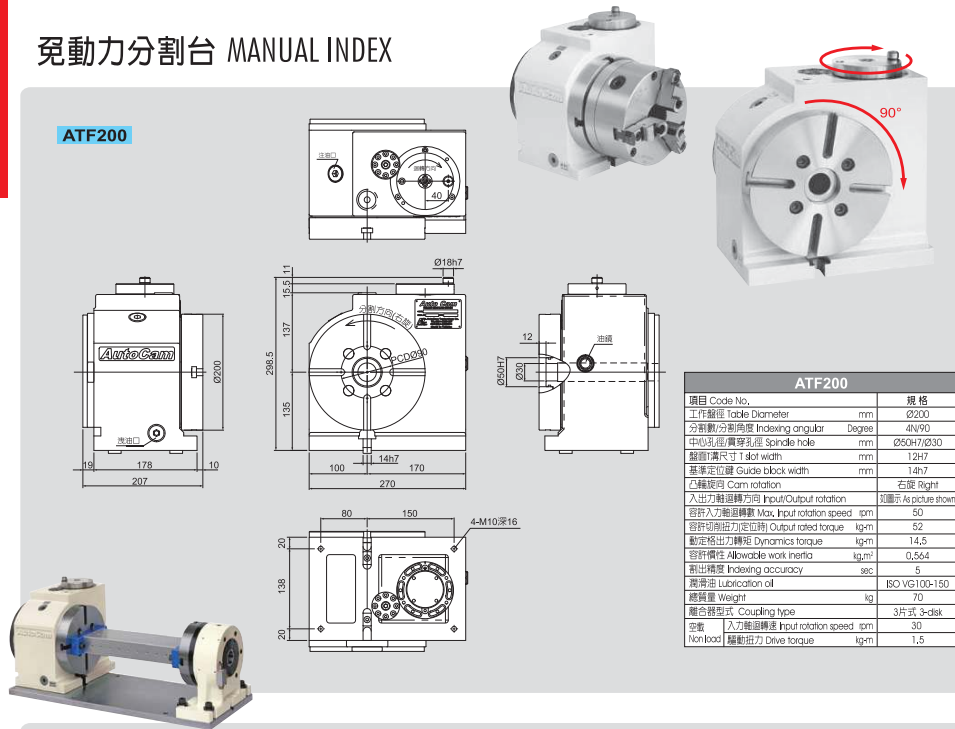
ATH630	
項目 Code No.	規格
工作盤尺寸 Table size	mm 630X630
工作盤面高 Table height	mm 300
伺服馬達 Servo motor	FANUC α22/3000i MELDAS HF-453S
總減速比 Gear ratio	1/120
馬達迴轉數為3000 rpm時 When the motor speed is 3000 rpm	RPM 25
最小設定單位 Min. increment	Degree 0.001
容許切削扭矩 Output rated torque	kg·m 332
鎖緊動力源 Clamp system	油壓 H
鎖緊壓力 Hydraulic pressure	Mpa 3.5
鎖緊扭力 Output torque of brake	kg·m 350
分割精度 Indexing accuracy	sec 30
重複精度 Repeatability	sec 4
容許載重 Allowable work weight	kg 1200
製品質量 Weight	kg 900



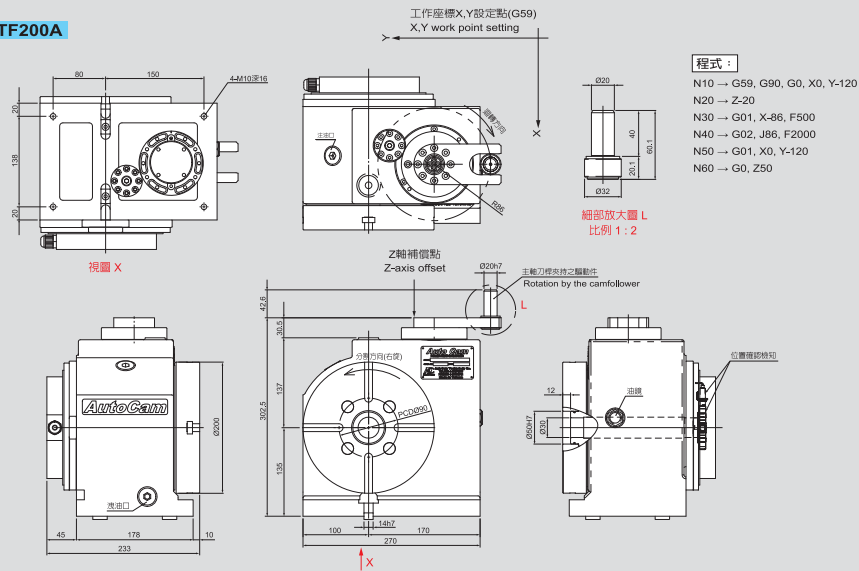
項目 Code No.		ATB165
出力軸徑 Diameter of turret	mm	Ø265
基準軸徑 Diameter of spindle hole	mm	Ø180h7
貫穿孔徑 Through hole	mm	Ø100
伺服馬達 Motor	Fanuc	α 22 / 3000 I+B
	Mitsubishi	HF354S+B
	Heidenhain	QSY190C+B
總減速比 Gear ratio		1/90
最高轉速 Max. rotation speed	rpm	33.3
最小設定單位 Min. increment	Degree	0.001
迴轉範圍 Rotation range	Degree	± 120
容許切削扭力 Output rated torque	Kg-m	160
鎖緊源/壓力 Clamp system	Kg/cm²	油壓 H / 35
鎖緊扭力 Output torque at brake	Kg-m	245
分割精度 Indexing accuracy	Sec	14
重覆精度 Repeatability	Sec	5
製品重量 Weight	Kg	220
角度編碼器介面 Angular encoder		RCN700

免動力分割台 MANUAL INDEX

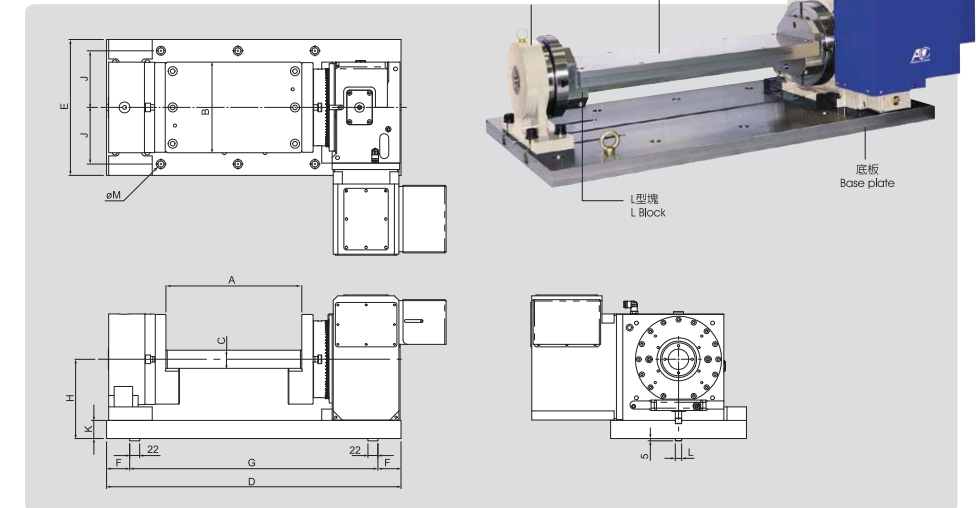
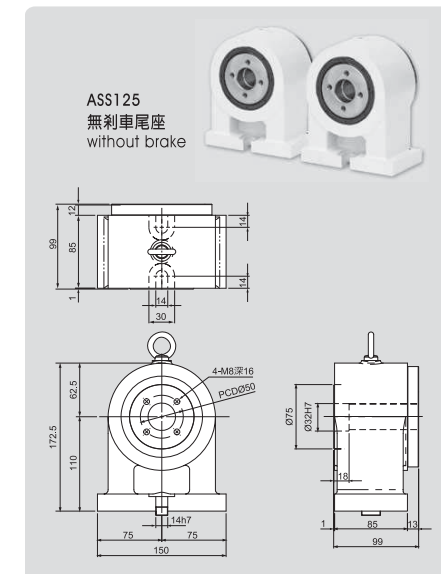
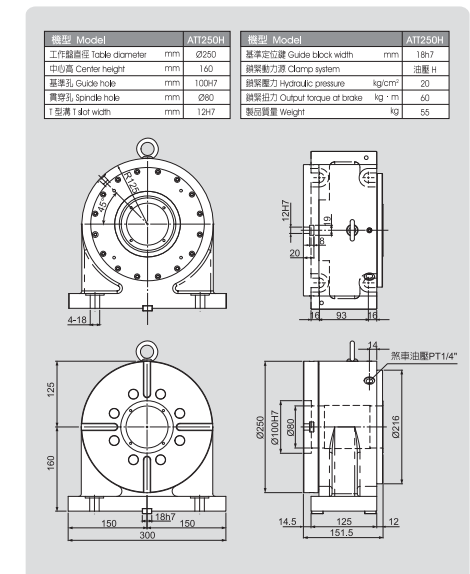
ATF200



ATF200A



使用例 Example

ASS 系列 簡易型圓盤尾座
ASS-Series Faceplate TailstockATT 系列 高剛性圓盤尾座
ATT-Series Faceplate Tailstock

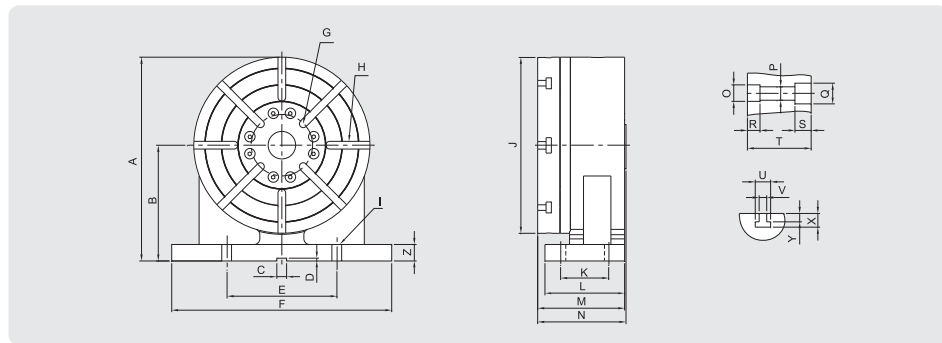
AST 系列 圓盤尾座 AST-Series Faceplate Tailstock

The AST faceplate tailstock can operate as attach to CNC rotary table of AT series, and its plate application assembly can reach to the effectiveness of making many moulds one time. It adopts overall pneumatic brake disc locking system or hydraulic clamping surrounding oil pressure embrace locking system. The integrate design ensures to save the working-hour and cost efficiently.

AST圓盤尾座可與AT系列CNC Rotary Table搭配使用，加上治具中板的應用組合，可達到一次作動多模數加工效果，採用氣壓鎖緊全面碟式剎車鎖緊方式，完整的搭配設計，有效確實節省加工工時及成本。



機械寸法圖 Outline dimensions



機型/Model/尺寸Size	A	B	C	D	E	F	G	H	I	J	K	L	M
AST-160P/H	235	135	14	7	200	300	Ø87	4	4-18	Ø200	64	96	101.3
AST-200P/H	260	160	18	7	200	300	Ø87	4	4-18	Ø200	64	96	101.3
AST-250P/H	285	160	18	7	200	300	Ø87	4	4-18	Ø250	93	125	139
AST-320H	370	210	18	7	200/360	400	Ø174	8	4-18	Ø320	109/90	145	158

機型/Model/尺寸Size	N	O	P	Q	R	S	T	U	V	X	Y	Z	重量 kg 空壓 P / 油壓 H
AST-160P/H	102	Ø50	Ø20	Ø20	24	78	102	19	12	20	9	30	29 / 33
AST-200P/H	102	Ø50	Ø20	Ø20	24	78	102	19	12	20	9	30	31 / 35
AST-250P/H	142	Ø50	Ø50	Ø50	24	118	142	19	12	20	9	30	47.5 / 51.5
AST-320H	157	Ø50	Ø50.2	Ø50.2	34	123	157	28	14	25	10	30	106 / 110

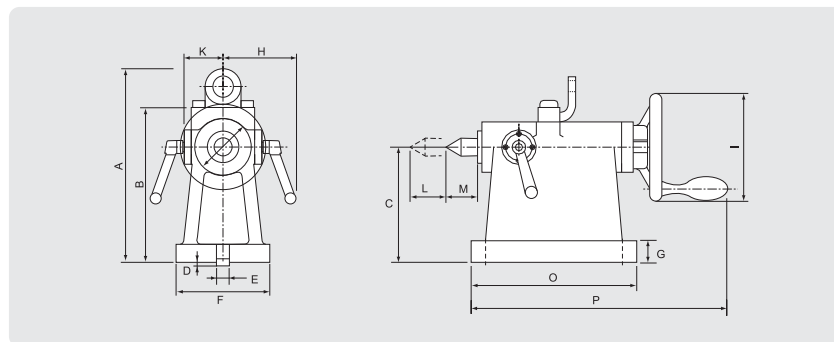
AMT系列 頂針尾座 Manual Tailstock

AMT頂針尾座，與AT系列CNC Rotary Table搭配使用，固定工件中心旋轉加工應用。

AMT Center tailstock can attach to CNC rotary table of AT series. The alternative choices are spindle with center type changeable center type for pivoting the work piece for swivel processing application.

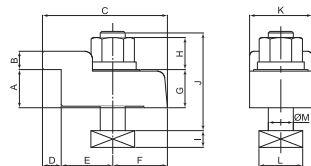


機械寸法圖 Outline dimensions



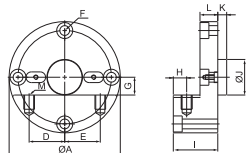
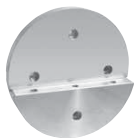
機型/規格尺寸 Specification / Model	AMT-110	AMT-135C	AMT-160C	AMT-210C	AMT-255C
A	175	217	246	296	308
B	167	164	193	243	320
C	110	135	160	210	255
D	7	7	7	7	7
E	14	14	18	18	18
F	100	130	130	200	200
G	23	25	30	30	35
H	103	109	125	125	135
I	125	125	140	140	160
K	40	44	77.5	77.5	77.5
L	30	55	55	55	50
M	42	14	18	18	18
O	135	230	230	285	285
P	247	332	356	356	412
重量 Weight	10 kg	20 kg	23.5kg	29.5 kg	36 kg

定位壓板 (Position Blocks)



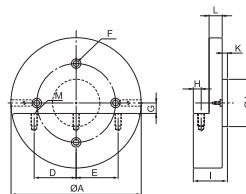
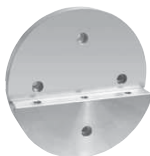
適用機種 Code No.	數量/台	適合T溝尺寸	尺 寸 Size												
			A	B	C	D	E	F	G	H	I	J	K	L	M
AT125	2	14	-	-	-	-	-	-	17	8	55	-	23	12	
AT160	2	14	-	-	-	-	-	-	17	8	60	-	23	12	
AT200	2	18	-	-	-	-	-	-	21	11	60	-	28	16	
AT250	4	18	25	12	80	12	33	35	22	21	65	40	28	16	
AT320	4	18	30	15	90	16	31	43	25	21	70	46	28	16	

一體式L型塊 Block



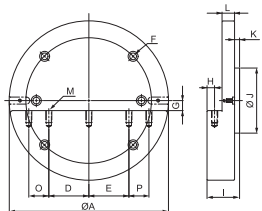
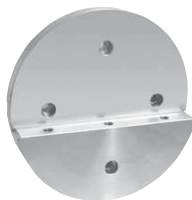
機型 Model	A	D	E	F	G	H	I	J		K	L	M	Weight
								第四軸端	尾座端				
TL-125	Ø128	40	40	M10-PCDØ105	20	15	60	Ø30	Ø40	10	20	2-M12	3 kg

一體式L型塊 Block



機型 Model	A	D	E	F	G	H	I	J		K	L	M	Weight
								第四軸端	尾座端				
TL-160	Ø198	80	80	M10-PCDØ138	20	15	65	Ø60	Ø50	10	25	3-M12	9 kg
TL-200	Ø198	80	80	M10-PCDØ138	20	15	65	Ø60	Ø50	10	25	3-M12	9 kg
TL-250	Ø248	80	80	M10-PCDØ150	20	15	65	Ø90	Ø50	10	25	3-M12	14 kg

一體式L型塊 Block

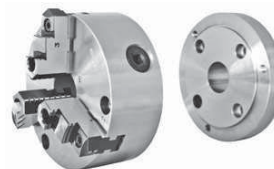


機型 Model	A	D	E	F	G	H	I	J		K	L	M	O	P	Weight
								第四軸端	尾座端						
TL-320	Ø318	80	80	M12-PCDØ250	20	15	65	Ø130	Ø50	10	25	5-M12	40	40	23 kg

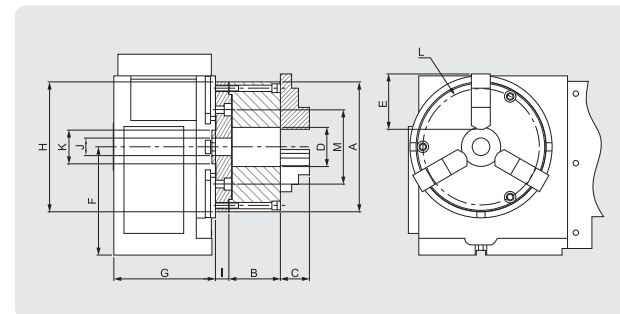
三爪連接板 3-Jaw Back Plate

※搭配強力型前鎖式三爪、油壓三爪來夾持圓型工件。

※Equipped with front mount scroll chuck or hydraulic 3-Jaw chuck for holding round material.



機械寸法圖 Outline dimensions



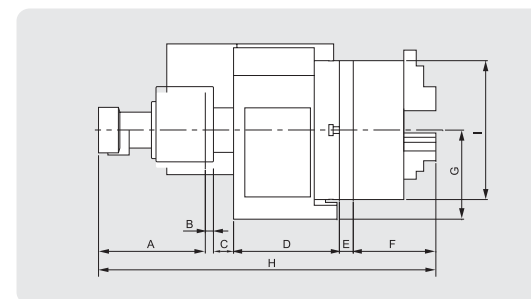
機型 Model	三爪尺寸 3 Jaw Size	A	B	C	D	E	F	G	H	I	J	K	L	M
TC-160	6"	167	66	39	45	68	135	193	167	25	30	60	147	100
TC-200	7"	193	76	43	58	82	160	193	193	25	30	60	172	130
TC-250	8"	203	76	43	58	82	160	190	203	25	30	90	176	165
TC-320	9"	233	84	50	70	93	210	210	233	30	30	130	210	220
TC-400	10"	273	86	50	89	93	255	250	-	-	-	150	250	-
TC-500	12"	310	96	56	105	118	320	300	-	-	-	200	285	-

三爪油壓夾頭搭配迴轉缸 3 Jaw Hydraulic Chuck with Cylinder

搭配油壓自動夾頭及腳踏開關或手動切換器，可縮短換料時間，增加產能，提昇加工效率。

Equipped with hydraulic chuck and foot switch or manual switch shorten loading and unloading time, increasing productivity and efficiency.

機械寸法圖 Outline dimensions



機型 Model	三爪尺寸 3 Jaw Size	A	B	C	D	E	F	G	H	I
TC-160	6"	192	15	36	193	25	118	135	536	169
TC-200	8"	192	15	36	193	25	129	160	547	210
TC-250	8"	192	15	36	190	25	129	160	593	210
TC-320	10"	202	15	40	210	30	143	210	650	254

適用伺服馬達對照表 Servo Motor Reference

FANUC 發那科	三菱 MITSUBISHI	YASKAWA 安川	SIEMENS 西門子	HEIDENHAIN 海德漢
α2/5000i β4is	HF-75T	SGMAH-04	1FK7042	QSY-96A
α4/4000i β8is	HF-54T/HF-104T (HF-54S/HF-104S)	SGMGH09A	1FK7060	QSY-116C
α8/3000i β8is	HF-104T/HF-154S (HF-104S/HF-154S)	SGMGH09A	1FK7063	QSY-116E
α12i β12is	HF-204S	SGMGH20A	1FK7083	QSY-155B
α12/3000i β22is	HF-204S	SGMGH20A	1FK7083	QSY-155B
α22/3000i β22is	HF-354S	SGMGH30A	1FK7101	QSY-190C
α22/3000i β22is	HF-354S	SGMGH30A	1FK7101	QSY-190C

RT光學尺配合表 RT Angular Encoder Reference

CNC ROTARY TABLE INDEXING ACCURACY WITH SCALE					
		Rotary encoders		MP scales	
		Order Code	Accuracy with scale	Order Code	Accuracy with scale
AT160R AT160L AT200R	Rotary axis	RON285, RCN223F	15 sec.	MPI 536A	15 sec.
AT250R AT320R	Rotary axis	RON786, RCN727F or RON886, RCN827F	10 sec. / RON786, RCN727F 6 sec. / RON886, RCN827F	MPI 736B	10 sec.
AT400R AT500R AT800R	Rotary axis			MPI 1272B	8 sec.
AT250ACR	Rotary axis Tilt axis	RON285, RCN223F	15 sec.	MPI 536A	15 sec.
AT350ACR	Rotary axis Tilt axis	RON786, RCN727F or RON886, RCN827F	10 sec. / RON786, RCN727F 6 sec. / RON886,	MPI 736B	10 sec.
ATS160A	Rotary axis Tilt axis	RON285, RCN223F	15 sec.	MPI 536A	10 sec.
ATS160B	Rotary axis Tilt axis				
ATS250B	Rotary axis Tilt axis				
ATB165	Tilt axis	RON285, RCN223F	15 sec.	MPI 536A	10 sec.

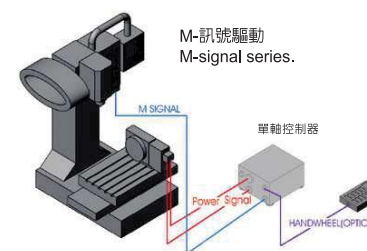
單軸控制器 Single Axis Controller

Features:

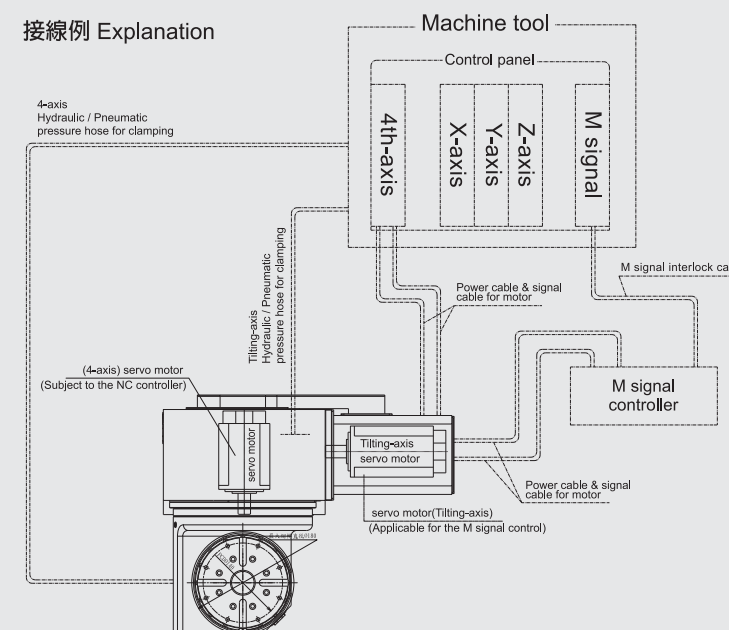
1. Single axis controller can be used with M-signal to resolve a machine cannot be installed 4th or 5th axis case.
2. Program for a rotary table should be inputted directly to the single axis controller. At the machine tool, M-signal is input as a start command.
3. M-signal control system is only for indexing.

特性:

1. 無法加裝第四、五軸之機床，可使用單軸控制器的M信號來連接。
2. 分度盤的程式可以直接輸入到單軸控制器，然後加工中心機以M指令作為分割控制的開始訊號。
3. M信號的控制系統僅適用於分割加工。

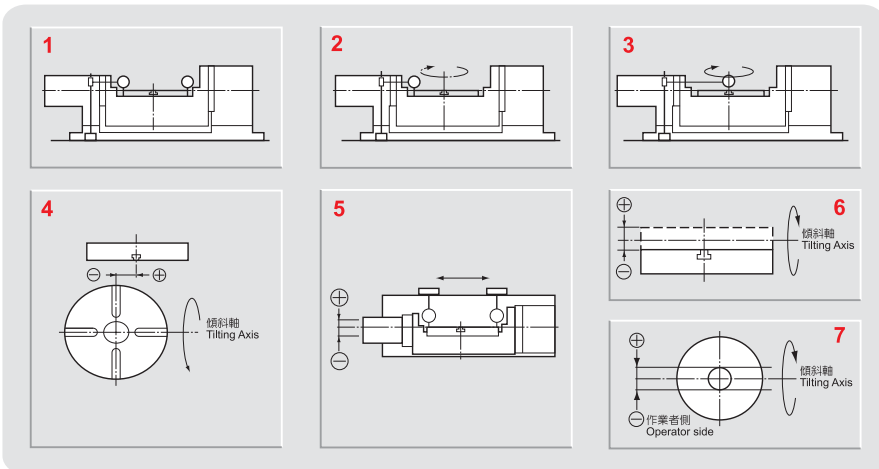


接線例 Explanation



[illegible]

標準精度檢查項目 Accuracy Standard



■ CNC五軸工作盤 (CNC Tilting Rotary Table)

No.	測定項目	ATS160A	ATS160B	ATS250B	ATS160A-ACR	ATS160B-ACR	AT250ACR	AT350ACR
1	工作盤面與基座底面平行度。 Parallelism between table surface and table base (Concave). 傾斜角度=0° Tilting angle=0°	全長 Overall length 0.015mm	全長 Overall length 0.015mm	全長 Overall length 0.02mm	全長 Overall length 0.015mm	全長 Overall length 0.015mm	全長 Overall length 0.02mm	全長 Overall length 0.02mm
2	工作盤面振幅。 Runout of table face plate. 傾斜角度=0° Tilting angle=0°	0.01mm	0.01mm	0.02mm	0.01mm	0.01mm	0.02mm	0.02mm
3	工作盤中心孔內徑振幅。 Measurement of centre bore accuracy at face. 傾斜角度=0° Tilting angle=90°	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
4	0°~90°移動時工作盤中心的變位 傾斜角度=0°~90° Measurement of displacement of centre when tilting from 0° to 90°	0.015mm	0.015mm	0.02mm	0.015mm	0.015mm	0.02mm	0.02mm
5	工作盤面與基準面平行度、 Parallelism between table face plate and a datum plane of the base. 傾斜角度=-90° Tilting angle=-90°	—	—	—	全長 Overall length 0.02mm	全長 Overall length 0.015mm	全長 Overall length 0.015mm	全長 Overall length 0.02mm
6	工作盤面與傾斜軸中心線距離。 Distance between table face plate and centre line of tilting axis	±0.02mm	±0.02mm	±0.02mm	±0.02mm	±0.02mm	±0.02mm	±0.02mm
7	傾斜軸中心線與迴轉軸中心線的距離。 Distance between centre line of tilting axis and centre line of rotary axis	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm

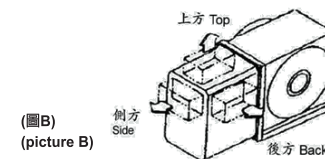
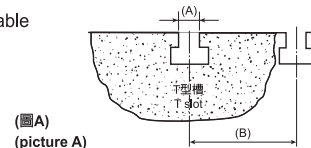


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滾齒凸輪式數控旋轉軸規格確認表 Rotary Table Specification Confirmation Form

客戶名稱 Customer Name: _____		歐權訂單編號 AC order #: _____	
客戶訂單編號 Cust Order #: _____		歐權銷售單號 AC refer #: _____	
旋轉軸名稱、規格 Rotary Table :	☐ 第四軸 4th axis: ☐ AT125R ☐ AT160R ☐ AT200R ☐ AT250R ☐ AT320R ☐ AT500R ☐ 4/5軸 Axis(A/C): ☐ AT350ACR ☐ AT280ACR ☐ 4/5軸 Axis(B/C): ☐ ATS250B ☐ ATS160A ☐ ATS160B 總減速比 Gear Ratio: 第四軸減速比 4 Axis Ratio: _____ 第五軸減速比 5 Axis Ratio: _____		
機床工作台規格 Machine Tool - table size	T槽寬A / T slot width A: ☐ 14 mm ☐ 16 mm ☐ 18 mm ☐ 22 mm T槽間距B / T slot pitch B: ☐ 100 mm ☐ 150 mm (上述如圖A示) ☐ 其他 / other _____ mm (Refer to picture A)		
控制規格 Brand of Servo Motor:	☐ 發那科 FANUC _____ ☐ 三菱 MITSUBISHI _____ ☐ 西門子 SIEMENS _____ ☐ 其他 / others _____		
馬達型號 Type of Servo Motors	Motor (A軸 axis / B軸 axis) _____ 馬達心軸 ☐ 直軸 Straight shaft ☐ 錐軸 Taper shaft Motor (C軸 axis) _____ 馬達心軸 ☐ 直軸 Straight shaft ☐ 錐軸 Taper shaft 馬達供應狀況 ☐ 不提供,客戶自行安裝 The quotation is excluding motor. Customer shall assemble by themselves. Servo Motor ☐ 客戶提供,廠內安裝 Customer provide the motor, assembling in AutoCam factory. provide by: ☐ 廠內自購並安裝 The quotation is including motor, assembling in AutoCam factory.		
接頭規格Connector Spec.	動力線軍規 Power Cable: _____ 訊號軍規: _____		
配線 Wiring	☐ 配線方式依本公司標準 AutoCam Standard (配線圖號: _____) ☐ 配線方式客戶提供 Customer provides (Wiring Drawing No.: _____)		
夾緊動力 Clamping system	☐ 空壓 / Pneumatic ☐ 油壓 / Hydraulic		
電磁閥 Solenoid valve	☐ AC110V ☐ AC220V ☐ DC24V ☐ 客戶自備 Customer Provided		
塗裝色 Color	☐ 歐權標準色 Standard ☐ 客戶須求Cust' request: (本體 Body : 鍍金 Metal sheet : _____)		
接線盒方向 Direction of Wire connection box	☐ 側方 Side ☐ 後方 Back ☐ 上方 Top (如圖B示 / Picture B)		
標準配件選用 Standard Accessories	☐ 不必附加 Unnecessary ☐ 100W001 (AT125R) ☐ 100W002 (AT160R) ☐ 100W003 (AT200R) ☐ 100W004 (AT250R) ☐ 100W005 (AT320R) ☐ AT320R追加T25壓板 (圖號:100002 x 4PCS) With T25 board (Item no.:100002 x 4PCS)		
特殊附件選用 Special Additional	☐ 無 / NO ☐ 圖面設計後加於BOM表內 / Added after Rotary Table drawing confirmed ☐ 有Necessary / 如表所示Description: _____		
送貨地址 Delivery address:	_____		
備註 Remark	_____		

機床工作台 Table



20110222

設計單位確認型號:
AutoCam Product No.: _____

客戶確認
Confirmed by: _____

註: 請在□中打√表示確認規格並回傳, 以利後續生產作業。謝謝! Please confirm and return with your duly signature.