

配件表 標準配件 Standard Accessories



選擇配件 Optional Accessories



表粗比較表 Roughness of surface comparison form

	Ra μm	CLA μ"	Rt μm	Rz μm	RMS μm	RMS μ"	France	England SUIZE	Russia Raμm
	0.008	0.32	0.08	0.04	0.009	0.30			▽14
	0.010	0.40	0.10	0.05	0.011	0.40			
	0.012	0.50	0.12	0.06	0.013	0.50			
	0.016	0.63	0.16	0.08	0.018	0.70	9	N1	▽13
	0.020	0.80	0.20	0.10	0.022	0.90			
	0.025	1	0.25	0.12	0.027	1.10			
	0.030	1.20	0.30	0.15	0.033	1.30			
	0.032	1.25					10	N2	▽12
	0.040	1.60	0.40	0.20	0.044	1.80			
	0.050	2	0.50	0.25	0.055	2.20			
	0.060	2.40	0.60	0.30	0.066	2.65			
	0.063	2.50	0.63	0.32	0.073	2.87	11	N3	▽11
	0.080	3.2	0.80	0.40	0.088	3.50			
	0.090	3.6			0.10	4.20			
	0.10	4	0.90	0.50	0.11	4.40			
	0.125	5	1.05	0.60	0.137	5.40			
	0.14	5.60							
	0.16	6.30	1.30	0.85	0.177	7	12	N4	▽10
	0.18	7.20			0.20	8			
	0.20	8	1.60	1	0.22	8.80			
	0.25	10	2	1.20	0.27	10.80			
	0.30	12	2.50	1.60	0.33	13.20			
	0.32	12.50			0.35	14	13	N5	▽9
	0.35	14							
	0.40	16	3	2	0.44	17.60			
	0.45	18	3.50	2.25	0.50	20			
	0.50	20	4	2.50	0.55	22	14	N6	▽8
	0.63	25	5	3	0.73	28.70			
	0.80	32			0.88	35			
	1	40							
	1.25	50	10	6	1.37	54.60			
	1.50	60					15	N7	▽7
	1.60	63			1.77	69.70			
	1.80	72							
	2	80			2.20	88			
	2.50	100	15	10	2.70	108	16	N8	▽6
	3.2	125			3.55	140			
	4	160			4.40	176			
	5	200	30	20	5.50	220			
	6	240					17	N9	▽5
	6.30	250			7.30	287			
	8	320			8.8	350			
	10	400	50	40	11	440	18	N10	▽4
	12.5	500			13.7	546			
	16	630			17.7	697			
	20	800	100	80	22	880	19	N11	▽3
	25	1000			27	1080			
	32	1250							
	40	1600	200	160	44	1760	20	N12	▽2
	50	2000							
	63	2500							
	80	3200	400	320	88	3500			▽1
	100	4000							

1μm = 0.001mm=39.37μ" 1μ"0.000,001=0.0254μm

TK2202003



T-series

簡易式2軸NC外圓磨床

TWO AXES NC CYLINDRICAL GRINDING MACHINE



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TOPKING

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簡易式2軸NC外圓磨床

TWO AXES NC CYLINDRICAL GRINDING MACHINE



T-1020

工作台旋徑 Swivel Over Table: $\Phi 270\text{mm}$
 兩頂心間距 Distance Between Centers: 500mm
 最大研磨外徑 Max. Grinding Dia.: $\Phi 250\text{mm}$



T-1224

工作台旋徑 Swivel Over Table: $\Phi 320\text{mm}$
 兩頂心間距 Distance Between Centers: 600mm
 最大研磨外徑 Max. Grinding Dia.: $\Phi 300\text{mm}$
 選配Optional: 半罩滑門式防濺板金
 Semi-Splash Guard-Sliding Door Type

T系列是一款適合多段差工件研磨的簡易型數控外圓磨床。X軸及Z軸皆採用滾珠螺桿搭配伺服馬達驅動，排除傳統數控磨床複雜的程式編輯，使用高性能控制系統搭配圖形對話式操作介面，操作簡單、易學習，提供操作者最便捷的操作環境。

TOP KING cylindrical grinder – T-series is suit for steps grinding. The X axis and Z axis are driven by NC servo motor with ball screw. To rule out the complicated program edition as traditional CNC control system. T-series equipped with high performance control system with GUI. Providing the most convenient operating environment for operator.



T-1240

工作台旋徑 Swivel Over Table: $\Phi 320\text{mm}$
 兩頂心間距 Distance Between Centers: 1000mm
 最大研磨外徑 Max. Grinding Dia.: $\Phi 300\text{mm}$
 選配Optional: 內徑研磨裝置 Internal Grinding Attachment
 半罩滑門式防濺板金 Semi-Splash Guard-Sliding Door Type



T-1012

工作台旋徑 Swivel Over Table: $\Phi 270\text{mm}$
 兩頂心間距 Distance Between Centers: 300mm
 最大研磨外徑 Max. Grinding Dia.: $\Phi 250\text{mm}$
 選配Optional: 全罩式板金 Fully Splash Guard



T-1260

工作台旋徑 Swivel Over Table: $\Phi 320\text{mm}$
 兩頂心間距 Distance Between Centers: 1500mm
 最大研磨外徑 Max. Grinding Dia.: $\Phi 300\text{mm}$
 選配Optional: 全罩式板金 Fully Splash Guard
 油壓尾座 Hydraulic Tailstock



獨特靜壓自動潤滑系統

工作台與砂輪座滑動面，採用先進的靜壓自動潤滑系統。大幅提升滑動順暢性，進刀精準，加工精度高。

Hydrostatic Lubrication System

The slideways of the table and the wheel head are lubricated by an advanced automatic hydrostatic lubrication system. This provides various features, such as extremely smooth movement, added feed accuracy and superior grinding accuracy.



砂輪頭座機構

砂輪主軸採用SNCM-220高級合金鋼材，經正常化、調質、滲炭熱處理、深冷處理等多重處理。再作精密研磨與鏡面處理，表面硬度達HRC62°以上。保證不變形、耐磨耗、永保高精度。

Wheel Head

The grinding wheel spindle is precision machined from high quality alloy steel SNCM-220, normalized, tempered, carburized and sub-zero treated, precision ground and mirror-effect treated. Hardness reaches to over HRC 62°. No deformation, maximum wear resistance and lifetime accuracy are assured.

工作主軸

- 工作主軸採用精密級軸承，展現最佳的穩定性。
- 採伺服馬達驅動，無段變速可依需求變更速度。
- 工作台固定式工作主軸，增加精度穩定性。

Workhead

- The spindle run on precision bearing, assuring max. spindle stability.
- Drive by servo motor, providing variable speed.
- Workhead fixed on work table. To increase accuracy stability.

尾座

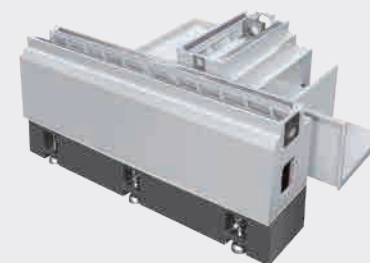
- 尾座潤滑油採用油浴式潤滑系統，隨時確保尾座的高精度。
- 潤滑系統有附油量檢視計，方便操作者檢視油量。

Tailstock

- An auto. oil bath lubrication system has been provide for tailstock to maintain high-level accuracy.
- An oil level gauge enables quickly and oil level check.



機體



本機的結構不同於以往的輕量結構的設計理念，大幅提升機體及結構的剛性，達到更加穩固的訴求，滑台採用更厚實的1V1平的設計結構，及潤滑油系統採用靜壓原理，在研磨時提供最佳的精度及穩定性。

Machine Base

The machine's structure is different from the light weight design philosophy in the past; it substantially consolidates the rigidity of body and parts structure, takes being more stable as the appeal, and adopts thick and solid sliding seat mechanism, slide way 1V1 flat structure, and lubrication system designed by the hydrostatic principle providing the best precision and stability of moving when doing grinding.



滑台固定式修整機構 (T-1012 & T-1020標配)

- 修整機構固定於Z軸滑台上，降低因調整工作台角度後反覆修整對刀動作而造成的誤差。
- 另有多樣化的修整機構，可依工件需求選擇。

Diamond Tool Holder (Slider Mound Type) (Standard accessory for T-1012 & T-1020)

- Dressing device fixed on Z axis slider. Could reduce the dressing position calibration frequency and increase the dressing accuracy.
- Various diamond tool holder types could be chosen according work request.



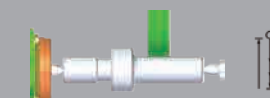
圖形對話式操作系統 High Performance Graphical User Interface

- 採用金格研發最新版的圖形對話式操作介面，提供操作者最便捷最簡易最安全的操作環境。
- 不同於以往的CNC程式編輯，數值化編程設定，可自動執行研磨循環、修整循環、補正等指令。
- 可單鍵記憶機械原點、研磨、修整座標。
- 多樣化的研磨、修整方式，可依工件需求選擇。

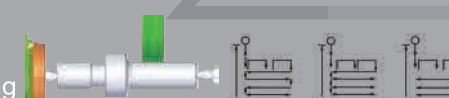
TOP KING's latest graphical user operate interface. Provide the most convenient, easiest and safest operate environment. Different with CNC program edition, GUI system use digital program setting way. Automatically achieve grinding, dressing and compensation cycle by one key. Input grinding, dressing, compensation coordinate by one key. Various grinding and dressing method could be chosen according work request.

研磨循環模式 Grinding Cycle

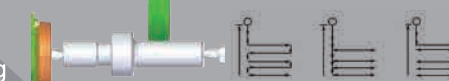
直進研磨 Plunge Grinding



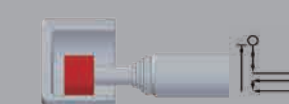
直進橫移研磨 Plunge / Traverse Grinding



橫移研磨 Traverse Grinding

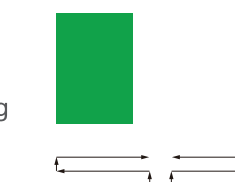


內徑研磨 (選配) Internal Grinding (Optional)

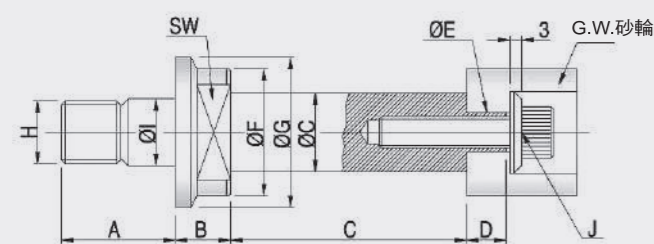


砂輪修整循環模式 Wheel Dressing Cycle

平面修整 Straight Dressing



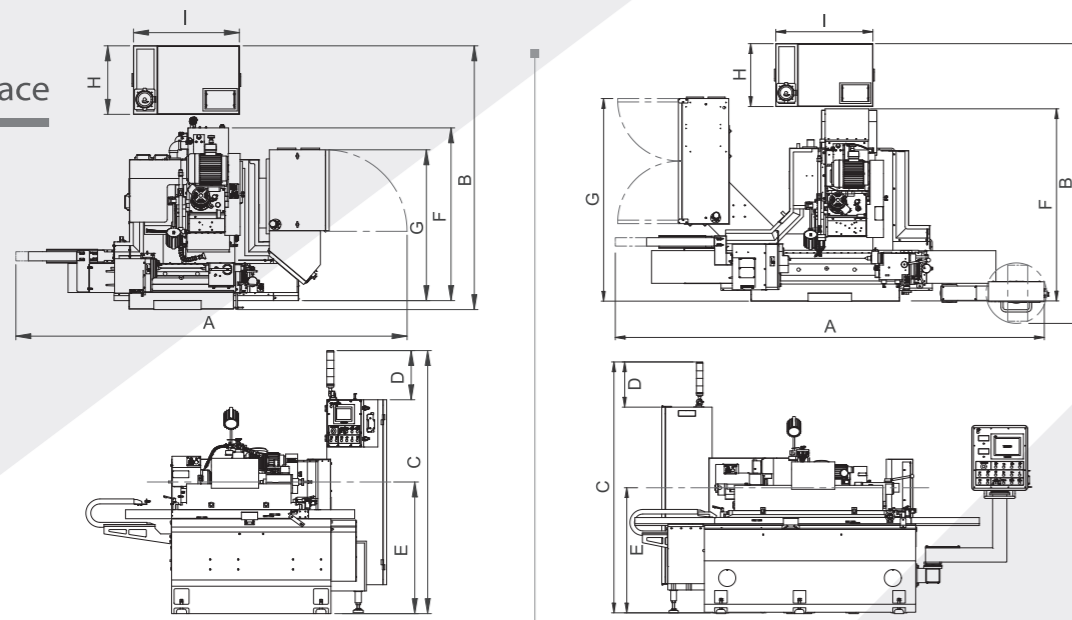
內徑研磨砂輪主軸 INTERNAL GRINDING SPINDLE



研磨孔徑與長度比例為1:3 The ration of grinding hole diameter to length is 1:3
 研磨長度最長不超過150mm The max. grinding length is 150mm

通用孔徑 Grinding Dia.	油脂式 Grease type	A	B	C	D	E	F	G	H	I	J	SW
Ø65~Ø150	8,000rpm	42	16	Ø40xØ100 Ø40xØ85 Ø40xØ55	12	Ø12	Ø50	Ø58	M26 x 2P	Ø28	M8 x 1.25P	41
Ø40~Ø80	10,000rpm	29	14	Ø30xØ90 Ø25xØ70 Ø20xØ60	10	Ø10	Ø32	Ø38	M16 x 1.5P	Ø17	M8 x 1.25P	24
Ø35~Ø70	15,000rpm	29	14	Ø30xØ90 Ø25xØ70 Ø20xØ60	10	Ø10	Ø32	Ø38	M16 x 1.5P	Ø17	M8 x 1.25P	24
Ø24~Ø40	20,000rpm	28	11	Ø24xØ80 Ø20xØ60 Ø16xØ40	8	Ø8	Ø26	Ø32	M14 x 1.5P	Ø15	M6 x 1.0P	19
Ø15~Ø25	30,000rpm	21	9	Ø16xØ40 Ø13xØ30 Ø10xØ25	6	Ø6	Ø21	Ø26	M10 x 1.5P	Ø10.5	M4 x 0.7P	17
Ø12~Ø16	40,000rpm	20	8	Ø12xØ35 Ø10xØ30 Ø8xØ25	x	x	Ø18	Ø23	M8 x 1.25P	Ø8.5	M4 x 0.7P	14
Ø9~Ø13	50,000rpm	18	7	Ø8xØ30 Ø7xØ25 Ø6xØ20	x	x	Ø15	Ø20	M7 x 1P	Ø7.5	M4 x 0.7P	11

佔地面積 Floor Space



型號 Model: T-10

型號 Model: T-12(16)

機型	A	B	C	D	E	F	G	H	I
T-1012	3041mm	2120mm	2113mm	396mm	1057mm	1387mm	1211mm	550mm	850mm
T-1020	3392mm	2120mm	2113mm	396mm	1057mm	1387mm	1211mm	550mm	850mm
T-12(16)24	3776mm	2449mm	2197mm	396mm	1095mm	1682mm	1774mm	550mm	850mm
T-12(16)40	4333mm	2752mm	2197mm	396mm	1095mm	1684mm	1774mm	550mm	850mm
T-12(16)60	5660mm	2873mm	2177mm	396mm	1145mm	1620mm	1720mm	550mm	850mm
T-12(16)80	7285mm	2923mm	2072mm	1145mm	1537mm	1607mm	550mm	850mm	

規格 SPEC.	T-1012	T-1020	T-12(16)24	T-12(16)40	T-12(16)60	T-12(16)80
能力 Capability	工作台最大旋徑 Swing Over Table	Ø270 mm	Ø270 mm	Ø320 mm / Ø420 mm	Ø320 mm / Ø420 mm	Ø320 mm / Ø420 mm
	兩頂心間最大距離 Distance Between Centers	300 mm	500 mm	600 mm	1000 mm	1500 mm
	最大研磨直徑 Max. Grinding Diameter	Ø250 mm	Ø250 mm	Ø300 mm / Ø400 mm	Ø300 mm / Ø400 mm	Ø300 mm / Ø400 mm
	兩頂心間最大承受重量 Max. Load Held Between Centers	60 kg	60 kg	100kg / 150 kg	100kg / 150 kg	100kg / 150 kg
砂輪 Grinding Wheel	外徑 x 寬 x 內徑 OD x Width x ID	Ø355 x 50 x Ø127 mm	Ø355 x 50 x Ø127 mm	Ø405 x 50 x Ø127 mm	Ø405 x 50 x Ø127 mm	Ø405 x 50 x Ø127 mm
	週速度 Linear Velocity	33 m/s	33 m/s	33 m/s	33 m/s	33 m/s
行程 Travel	X軸快移速度 X-axis Rapid Feedrate	6000mm/Min	6000mm/Min	6000mm/Min	6000mm/Min	6000mm/Min
	X軸自動切入速度 X-axis auto. Feeding speed	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min
	X軸最小設定值 X-axis Min. Input Increment	0.001 mm	0.001 mm	0.001 mm	0.001 mm	0.001 mm
	Z軸快移速度 Z-axis Rapid Feedrate	6000mm/Min	6000mm/Min	6000mm/Min	6000mm/Min	6000mm/Min
工作台 Worktable	Z軸自動切入速度 Z-axis auto. Feeding speed	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min	0.001~2000mm/Min
	Z軸最小設定值 Z-axis Min. Input Increment	0.001 mm	0.001 mm	0.001 mm	0.001 mm	0.001 mm
	旋轉角度 Swiveling angle	-0° ~ 12°	-0° ~ 12°	-1° ~ 10°	-1° ~ +8°	-0.5° ~ +8°
工作主軸頭 Workhead	旋轉角度 Swiveling angle	-30°~+90° deg	-30°~+90° deg	-30°~+90° deg	-30°~+90° deg	-30°~+90°
	頂針斜度 Center	MT. 3 (選配 OPT.: MT.4)	MT. 3 (選配 OPT.: MT.4)	MT. 4	MT. 4	MT. 4
	主軸轉速 Speed	0-300rpm	0-300rpm	0-300rpm	0-300rpm	0-300rpm
	工作主軸負荷(含夾具) Max. load of spindle (tool holder included)	35kg(最長長度Max. length:150 mm)	35kg(最長長度Max. length:150 mm)	35kg(最長長度Max. length:150 mm)	35kg(最長長度Max. length:150 mm)	35kg(最長長度Max. length:150 mm)
尾座 Tailstock	頂針斜度 Center	MT. 3 (選配 OPT.: MT.4)	MT. 3 (選配 OPT.: MT.4)	MT. 4	MT. 4	MT. 4
	尾座軸移動距離 Tailstock Stroke	25 mm	25 mm	25 mm	25 mm	25 mm
馬達 Drive Motors	砂輪軸 Wheel spindle	3.75 kw	3.75 kw	3.75 kw (5.5 kw)	3.75 kw (5.5 kw)	3.75 kw (5.5 kw)
	工作主軸 Work Spindle	0.85 kw	0.85 kw	0.85 kw	1.3 kw	1.3 kw
	砂輪軸座進給 Wheelhead Feed	1.0 kw	1.0 kw	1.5 kw	1.5 kw	1.5 kw
	工作台進給 Table Feed	1.0 kw	1.0 kw	1.5 kw	1.5 kw	3.5 kw
	油壓泵浦 Hydraulic Pump	0.075 kw	0.075 kw	0.075 kw	0.37 kw	0.37 kw
	砂輪軸潤滑泵浦 Wheel Spindle Lubricant	0.18 kw	0.18 kw	0.18 kw	0.18 kw	0.18 kw
容器容量 Tank Capacities	研削液泵浦 Coolant Pump	0.18 kw	0.18 kw	0.18 kw	0.18 kw	0.18 kw
	砂輪軸潤滑油箱 Wheel Spindle Bearing Lubricant	14L	14L	18L	18L	18L
機器重量 Machine weight	潤滑油箱 Lubrication Oil Tank	15L	15L	15L	22L	22L
	淨重 Net Weight	2400 kg	2600 kg	3600 kg	4300 kg	4800 kgs

★所述機台規格與尺寸，本公司保留變動權力，不另通知。
 The mentioned specifications & dimensions are subject to change without notice.