

FREEPORT

- SGS-614F/618F
- SGS-618M/MR
- SGS-816M/MR
- SGS-816H/HR
- SGS-1020M/MR
- SGS-1020H/AH/AHR/AHD/SD
- SGS-N1224H/AH/AHR/AHD/SD
- SGS-1224H/AH/AHR/AHD/SD
- SGS-1230H/AH/AHR/AHD/SD
- SGS-1632AH/AHD/SD
- SGS-1640AH/AHD/SD





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-614F-618F



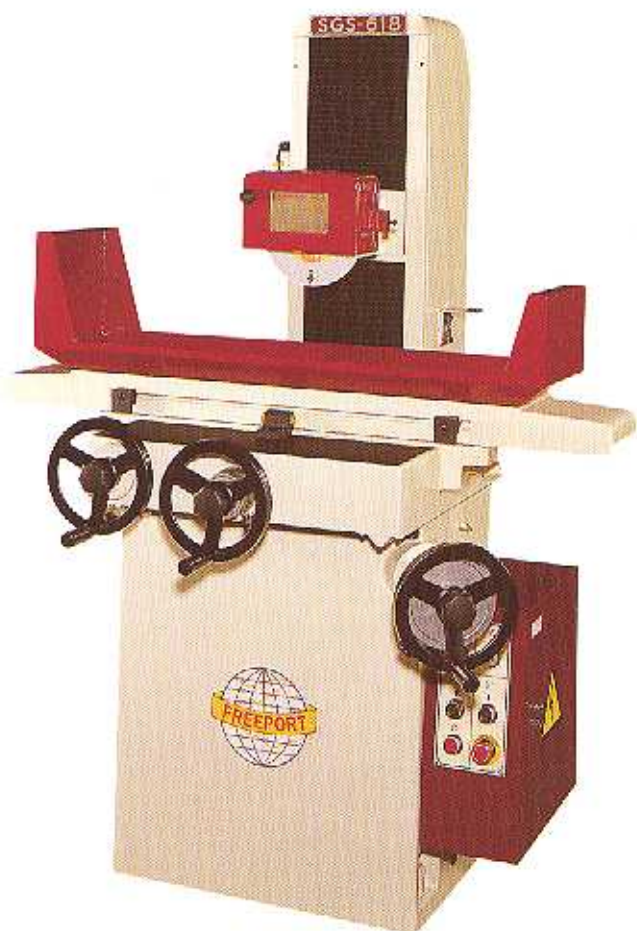


SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-618 M/MR . SGS-816 M/MR





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-816 H/HR





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-1020 M/MR





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-1020-1640 H/AH/AHR



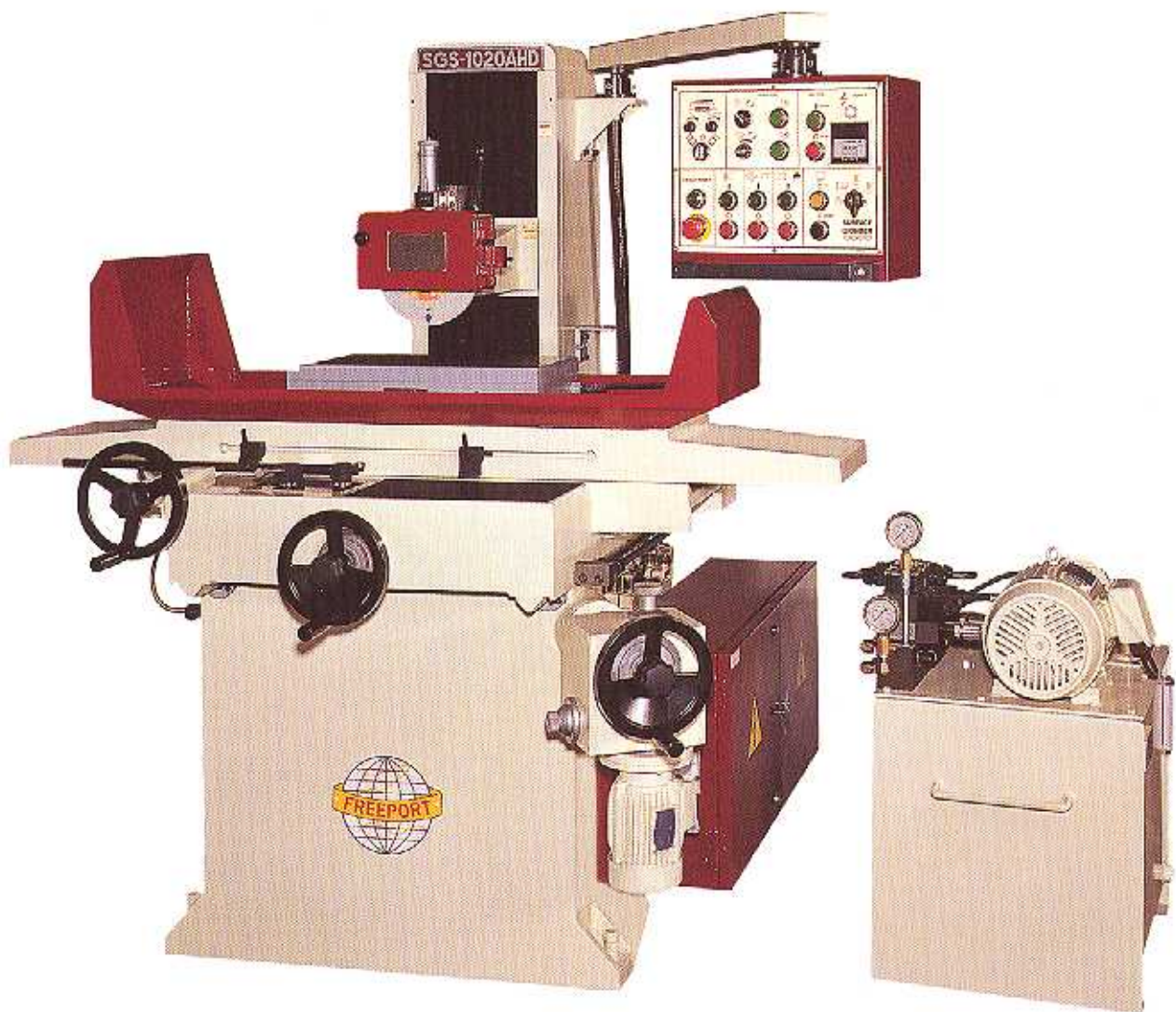


SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-1020-N1224 AHD





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-1224~1230 H/AH/AHR/AHD



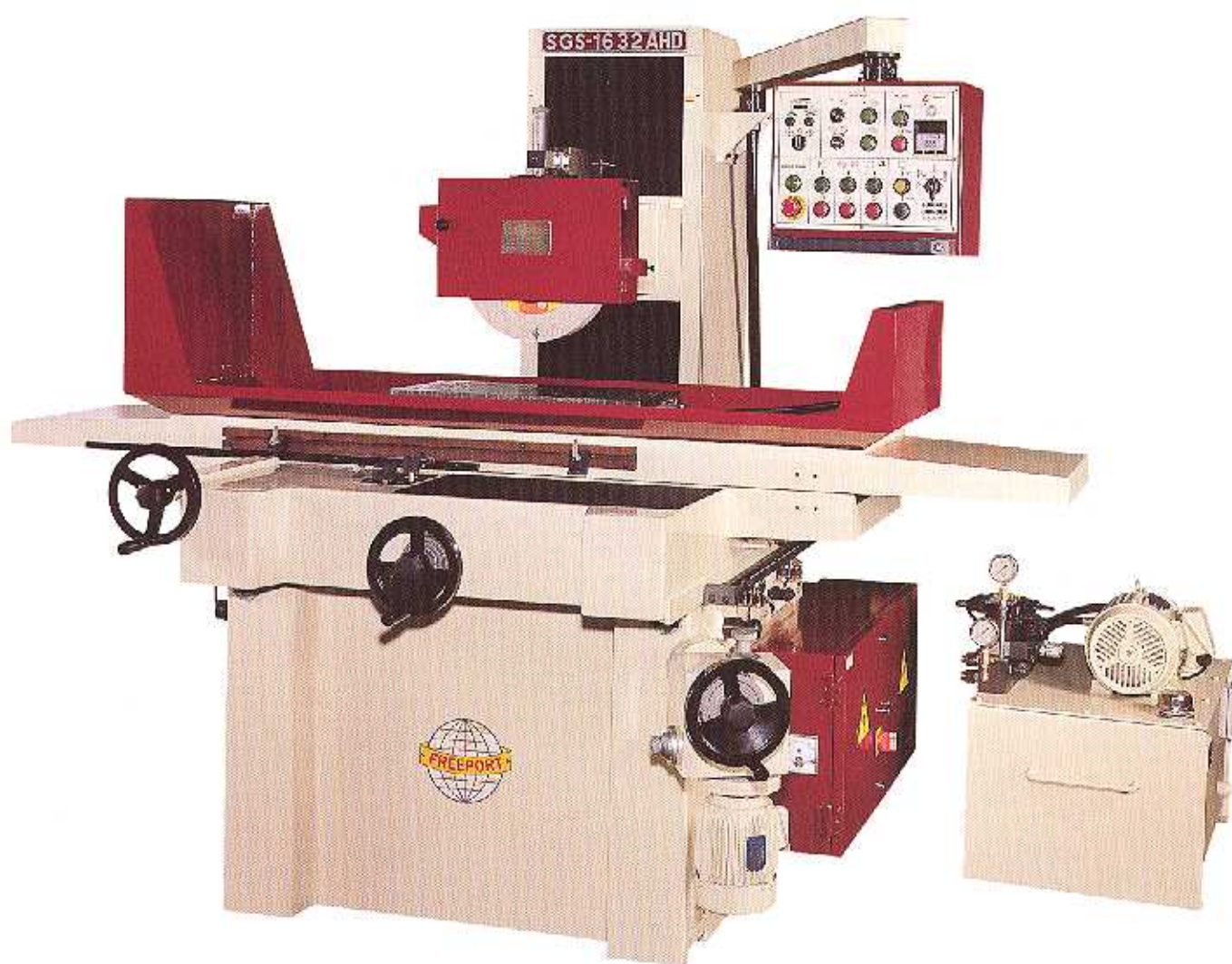


SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

SGS-1632-1640 AH/AHD





SUNNY MACHINERY

PRECISION SURFACE GRINDER

精密平面磨床

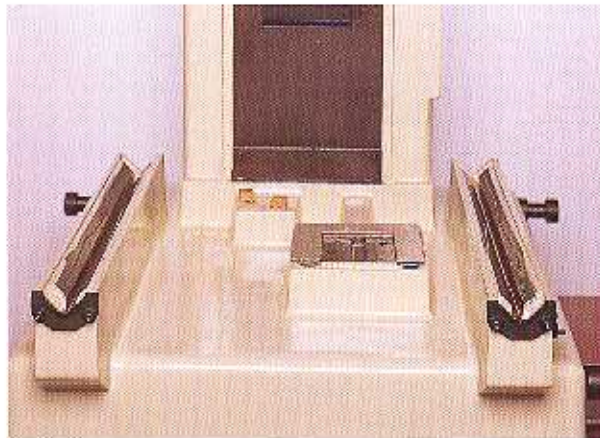
SGS-1020~1640 SD





PRECISION SURFACE GRINDER

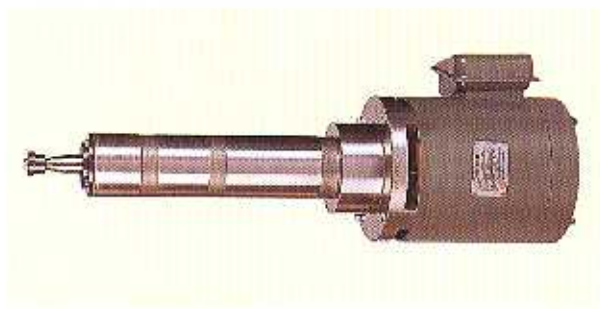
機器結構與特點



▲ SGS-614F~618F

Between saddle and base, the cross sliding rails are constructed with two V's(W) and coated with Turcite-B; this design can afford most steady machining and fine accuracy.

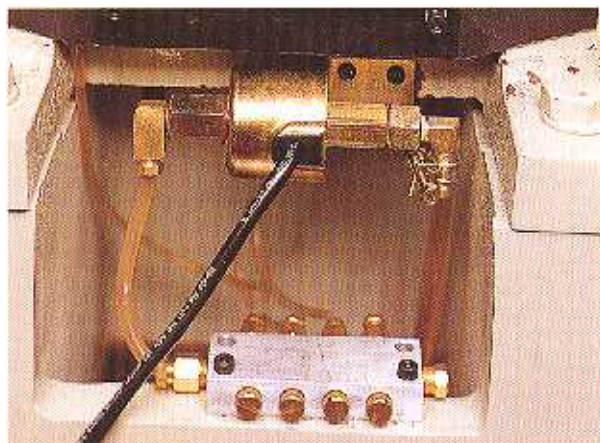
鞍座與底座間之滑軌滑道為雙V之結構設計，襯貼TURCITE B 能提供更穩固的操控性和更佳的精確度。



▲ SGS-614F~618F

Spindle combines with motor to one strong unit, motor drives spindle shaft directly; the ideal design can afford best grinding power and efficiency.

主軸與馬達為一體的結合設計，馬達直接驅動心軸，可提供最大的研磨馬力，和良好的研磨效果。



▲ SGS-614F~618F

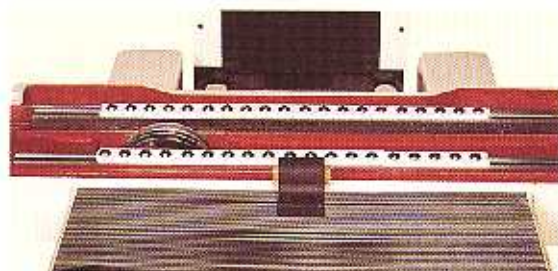
Centralized automatic lubricant system, flow can be adjusted per working request on every lubricated place; this will ensure every sliding rail and transmitting parts at best lubricated status.

潤滑系統採中央集中式強制給油潤滑，每個潤滑點，都可依實際需求，作最適當的調整；使機器的滑軌(道)和傳動元件，都可獲得最好的潤滑效果。



FEATURES AND CONSTRUCTION

機器結構與特點



SGS-618~1020M/MR

▲Table slideway

- Table slideway is formed for a special hardened and precise ground alloy steel.
- Precise roller balls enable movement light and easy.
- Table can move steadily and smoothly.

▲工作台導軌

- 特殊合金鋼，經熱處理及精密研磨。
- 配以精密滾動鋼珠使工作者操作省力輕便。
- 達到工作台運動平穩之順暢。



SGS-618~1640

▲Spindle and V3 graded spindle motor

- High precision spindle has two pairs of super precision angular contact ball bearing, which are sealed completely, and the spindle requires no further maintenance.
- The V3 graded motor drive the spindle directly by a pair of coupling, to get best torque & reduce the vibration of running.
- The power of motor is from 2hp to 10hp, it's according to the different machine model.

▲主軸及V3 級馬達

- 高精密度套筒式主軸。
- 採用4個超精密斜角滾珠軸承。
- 馬達與主軸經聯軸器結合，直接傳動，可獲得最大的扭力，和減少震動的產生。
- 主軸馬達從2馬力至10馬力，可依不同的工作需求，選擇合適的機種。



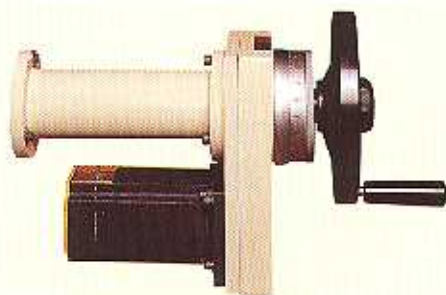
SGS-618~1230MR/HR/AHR

▲Micro adjustment & rapid downfeed construction (Optional accessory)

- Use 1/5HP motor to drive wheel head for up and down movement.
- Minimum feeding capacity of micro adjustment switch is 0.002mm, the feeding capacity can be increased per user's request.
- There is a clutch assembly to reduce normal wear of the parts.

▲微調及上下快送機構(特別附件)

- 利用1/5馬力，使砂輪頭上下運動，到節省工作時間。
- 微調旋鈕每次最小進刀量0.002mm可隨使用者決定進刀量大小。
- 微調及快送有脫離機構，以減少機器零件損耗。



SGS-1020~1640 SD

▲Servo motor for the downfeed construction

- NC control system with servo motor can make the downfeed construction operation easy, accurate and quick.
- The servo motor compound with a feed-back encoder to ensure the location of spindle seat sensitive & high precision.
- The downfeed operation use multiple control modes:
 - a. auto downfeed control mode.
 - b. manual downfeed mode.
 - c. pulse generator hand-wheel operation mode.

▲上下進給伺服機構

- 上下進給使用NC系統，控制AC伺服馬達可快速精確的控制上下進刀系統。
- 伺服馬達裝置回饋解碼器以確保砂輪軸定位的高靈感性，和高準確度。
- 上下進刀多重進刀模式：a. 自動進刀模式 b. 按鍵式手動模式。 c. 電子手輪操控模式。



FEATURES AND CONSTRUCTION

機器結構與特點



SGS-1020~1640 AH/AHR/AHD

Pendant Control Panel

Our pendant control panel is a double swinging type. A workman can stand in the most comfortable place to move the control panel to the best position for easy operation.

懸掛式控制面板

所有控制都在此懸掛式操作箱上，操作角度可作雙重旋轉，不僅能使操作者站在最方便的位置操作，並可提高生產效率。



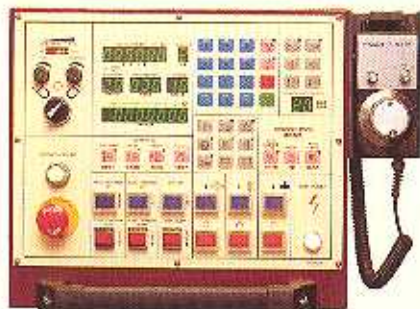
SGS-1020~1640 AHD

Micro-Regulation and Auto-Feed Equipment

Precise micro-regulation equipment creates greater convenience in operation and obtains high precision. Autofeed can be set from 0.0001" to 0.001" in ten steps. Auto-feed times can be set from 1 to 999 times freely. All axis and gears have been heat-treated and hardened before precise grinding to achieve long life.

微調與自動進刀裝置

精密微調裝置，能提供更方便的操作和可達到更高精度。自動進刀量可從0.002mm/m至0.02mm/m分十段自由調整，進刀次數也從1次到999次任意設定。所有齒輪和軸心都經硬化熱處理，以確保長久使用壽命。



SGS-1020~1640 SD

SD series control panel

- NC control system with the LED position indicator can be showed reference position of spindle seat instantaneously, so the user can take this feature to be used as a linear scale.
- Setting the auto cross feed stroke on the panel.
- The downfeed operation use multiple control modes:
 - a. auto downfeed control mode.
 - b. manual downfeed mode.
 - c. pulse generator hand-wheel operation mode.

SD 系列控制面板

- NC伺服系統控制，配合面板上的LED顯示器可即時顯示出砂輪軸的參考位置，此一特性可讓使用者當成精密的光學尺使用。
- 可直接在面板上設定前後自動研磨行程。
- 上下進給控制，採用多種選擇模式 a. 自動進給模式。 b. 手動進給模式。 c. 電子手輪進給模式。



OPTIONAL ACCESSORIES / STANDARD ACCESSORIES

特殊附件與標準附件

SGS-614F~618F

STANDARD ACCESSORIES:

- Operation manual
- Tool box with tools
- Wheel flange
- Wheel balancing arbor
- Grinding wheel
- flange extractor
- Diamond dresser
- Diamond dresser base
- Working light
- Level adjust screw
- Adjust screw base
- Hang bolt
- Lubricant oil

標準附件:

- 操作手冊
- 工具箱及工具
- 法蘭
- 砂輪平衡棒
- 砂輪
- 法蘭拆具
- 鑽石修刀
- 鑽石修刀座
- 工作燈
- 水平調整螺絲
- 腳墊盤
- 吊栓
- 潤滑油

SGS-618~1640

STANDARD ACCESSORIES:

- Operation manual
- Tool box with tools
- Wheel flange
- Wheel balancing base
- Wheel balancing arbor
- Grinding wheel
- flange extractor
- Diamond dresser
- Diamond dresser base
- Working light

標準附件:

- 操作手冊
- 工具箱及工具
- 法蘭
- 砂輪平衡台
- 砂輪平衡棒
- 砂輪
- 法蘭拆具
- 鑽石修刀
- 鑽石修刀座
- 工作燈

SD系列特殊機種





OPTIONAL ACCESSORIES / STANDARD ACCESSORIES

特殊附件與標準附件

OPTIONAL ACCESSORIES:

Coolant equipment
 Dust suction equipment
 Cooling and dust suction equipment
 Coolant equipment with paper filter
 Coolant equipment with paper filter and magnetic separator
 Manual type overhead parallel dressing attachment
 Hydraulic type overhead parallel dressing attachment
 Permanent magnetic chuck

Electromagnetic chuck
 Inclined electromagnetic chuck
 Angle forming attachment
 Radius forming attachment
 Sine bar
 Precision vise
 Electrodemagnetized equipment



Coolant equipment with paper filter and magnetic separator 磁柵兼紙帶過濾沖水

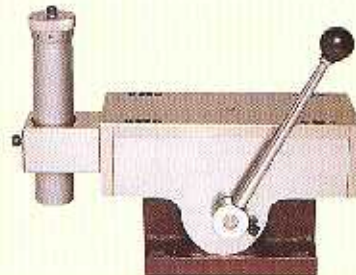
特別附件：

沖水箱
 吸塵器
 沖水吸塵裝置
 紙帶過濾沖水
 磁性兼紙帶過濾沖水
 平行整輪器
 油壓平行整輪器
 固定式永久磁盤

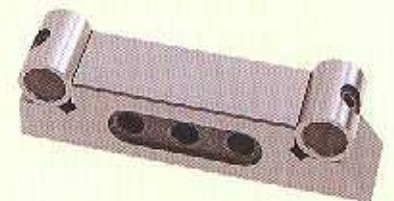
固定式電磁盤
 可傾式電磁盤
 角度成型器
 R 成型器
 正弦棒
 精密虎鉗
 沖子成型器
 電子式自動脫磁器



Grinding wheel and wheel flange 砂輪法蘭



Manual type overhead parallel dressing attachment 手動平行整輪



Sine bar 正弦棒



Electromagnetic chuck 固定式電磁盤



Radius forming attachment R 成型器



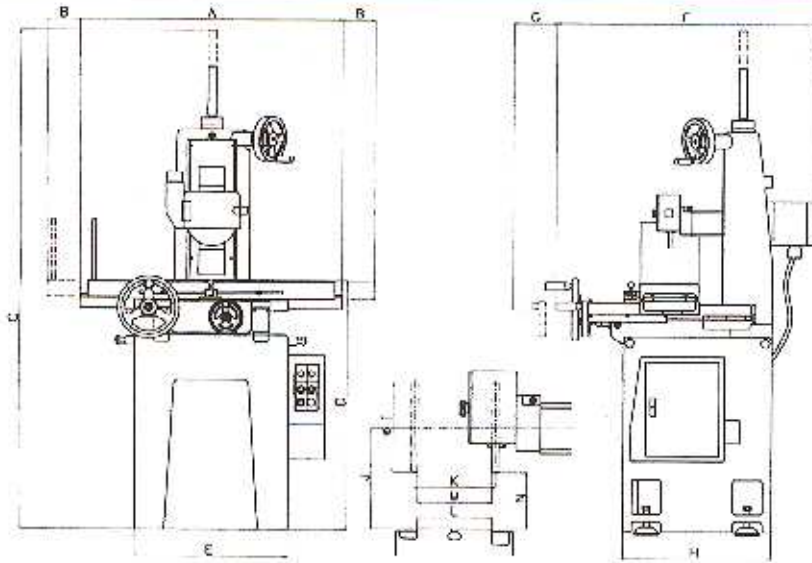
Angle forming attachment 角度成型器



PRECISION SURFACE GRINDER

機器外觀尺寸

SGS-614F~618F



規格表 SPECIFICATION

規格 Specification	機型 Models	SGS-614F	SGS-618F
工作台面積 (寬×長) Working Surface of table. WxL		150x365(5.9"x14.3")	150x465(5.9"x18.3")
最大研磨面積 (寬×長) Max. grinding surface. WxL		152x355(6"x14")	152x455(6"x18")
工作台左右最大行程 Max. Horizontal travel of table.		380(15")	480(18.9")
工作台前後最大行程 Distance between table surface and spindle center		175(6.9")	175(6.9")
工作台面與主軸中心最大距離 Max. Cross travel of table.		400(15.7")	
上下手輪每一刻度 Vertical handwheel (1 gra)		0.005 (0.0002")	
上下手輪每一轉 Vertical handwheel (1 rev)		1 (0.05")	
前後手輪每一刻度 Crossfeed handwheel (1 gra)		0.02(0.001")	
前後手輪每一轉 Crossfeed handwheel (1 rev)		5 (0.1")	
主軸馬達 Spindle motor		1.5HPx2P	
砂輪尺寸(外徑×厚度×內徑) Grinding wheel (ODxTxID)		180x13x31.75(7"x0.5"x1.25")	
主軸速度 60/50HZ Spindle speed 60/50HZ		3450RPM/60HZ 2850RPM/50HZ	
沖水泵 Coolant motor		1/8HP	
吸塵馬達 Dust collector motor		1/2HPx2P	
機器重量 Net Weight		580kgs(1276lbs)	680kgs(1496lbs)
裝箱毛量 Gross Weight		730kgs(1606lbs)	780kgs(1716lbs)
裝箱尺寸 Packing dimensions		1340x1040x2100 (52.8"x40.9"x82.7")	1400x1040x2100 (55.1"x40.9"x82.7")

單位: mm

單位: inch

	SGS-614F	SGS-618F
A	1080/42.5"	1260/49.6"
B	190/7.5"	240/9.4"
C	1980/78"	1980/78"
D	1000/39.4"	1000/39.4"
E	540/21.3"	640/25.2"
F	965/38"	965/38"
G	82/3.2"	82/3.2"
H	600/23.6"	600/23.6"
I	180/7.1"	180/7.1"
J	400/15.7"	400/15.7"
K	163/6.4"	163/6.4"
L	150/5.9"	150/5.9"
M	152/6"	152/6"
N	310/12.2"	310/12.2"

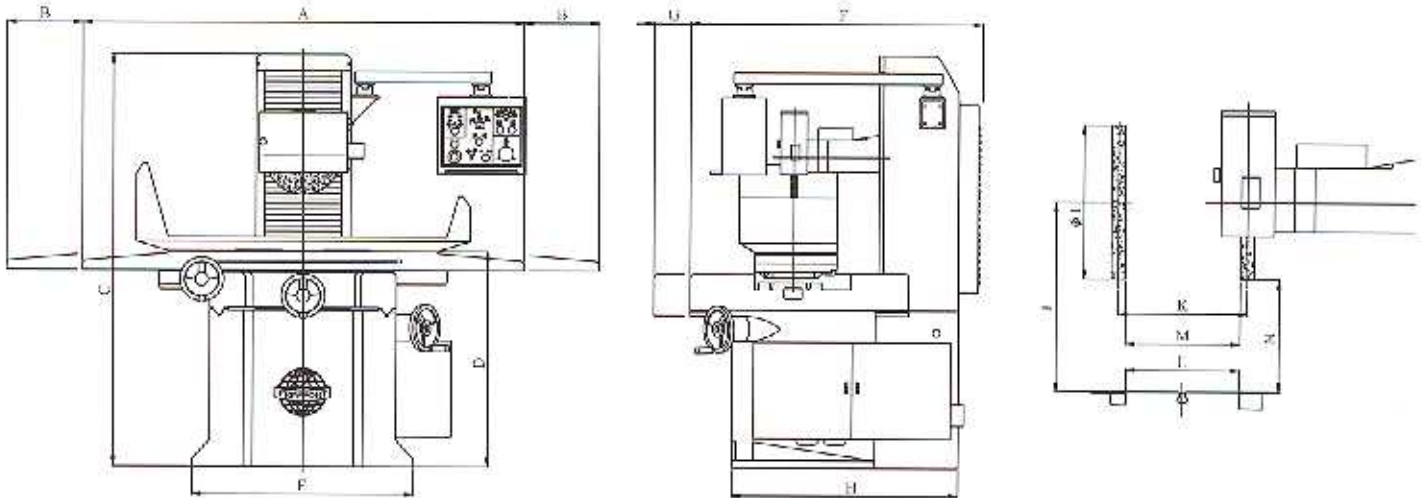
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PROFILE DIMENSION

機器外觀尺寸

SGS-618~1640



											unit:mm
	SGS-618 M / MR	SGS-616 M / MR	SGS-616 H / HR	SGS-1020 M / MR	SGS-1020 H/AH/AHR/AHD/SD	SGS-N1224 H/AH/AHR/AHD/SD	SGS-1224 H/AH/AHR/AHD/SD	SGS-1230 H/AH/AHR/AHD/SD	SGS-1632 AH/AHD/SD	SGS-1640 AH/AHD/SD	
A	1260 /49.6"	1180 /45.7"	1330 /52.4"	1060 /41.7"	1660 /65.4"	2010 /79.1"	2010 /79.1"	2150 /84.6"	2520 /99.2"	2900 /114.2"	
B	240 /9.4"	215 /8.5"	240 /9.4"	270 /10.6"	282 /11.1"	345 /13.6"	345 /13.6"	420 /16.5"	480 /18.9"	580 /22.8"	
C	1720 /67.7"	1720 /67.7"	1720 /67.7"	1740 /68.5"	1740 /68.5"	1740 /68.5"	1860 /74"	1080 /74"	2000 /78.7"	2000 /78.7"	
D	922 /36.3"	922 /36.3"	922 /36.3"	897 /35.3"	897 /35.3"	897 /35.3"	917 /36.1"	917 /36.1"	957 /37.7"	937 /37.7"	
E	616 /24.3"	616 /24.3"	616 /24.3"	890 /35"	890 /35"	910 /35.8"	1010 /39.8"	1010 /39.8"	1055 /41.5"	1055 /41.5"	
F	860 /33.5"	900 /35.4"	900 /35.4"	1020 /40.2"	1020 /40.2"	1100 /43.3"	1185 /46.7"	1185 /46.7"	1600 /63"	1600 /63"	
G	62 /3.2"	107 /4.2"	107 /4.2"	132 /5.2"	132 /5.2"	157 /6.2"	166 /6.5"	168 /6.5"	225 /8.9"	225 /8.9"	
H	687 /27.1"	750 /29.5"	750 /29.5"	870 /34.3"	870 /34.3"	978 /38.5"	1035 /40.7"	1035 /40.7"	1425 /56.1"	1425 /56.1"	
I	205 /8.1"	205 /8.1"	205 /8.1"	205 /8.1"	205 /8.1"	205 /8.1"	355 /14"	355 /14"	355 /14"	335 /14"	
J	460 /18.1"	460 /18.1"	460 /18.1"	500 /19.7"	500 /19.7"	500 /19.7"	600 /23.6"	600 /23.6"	620 /24.4"	620 /24.4"	
K	163 /6.4"	213 /8.4"	213 /8.4"	263 /10.4"	263 /10.4"	313 /12.3"	332 /13.1"	332 /13.1"	450 /17.7"	450 /17.7"	
L	150 /5.9"	160 /6.3"	160 /6.3"	230 /9.1"	230 /9.1"	260 /10.2"	260 /10.2"	260 /10.2"	400 /15.7"	400 /15.7"	
M	152 /6"	203 /8"	203 /8"	254 /10"	254 /10"	304 /12"	304 /12"	304 /12"	406 /16"	406 /16"	
N	360 /14.2"	350 /14.2"	360 /14.2"	400 /15.7"	400 /15.7"	400 /15.7"	420 /16.5"	420 /16.5"	440 /17.3"	440 /17.3"	

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SPECIFICATION

規範

SGS-618~1640

Models/機型	SGS-618 M / MR	SGS-816 M / MR	SGS-1020 M / MR	SGS-816 H / HR
Specification/規格				
Working Surface of table. WxL 工作台面積 寬x長	150x457 (5.9"x18')	160x406 (6.3"x16')	230x500 (9"x19.7')	160x406 (6.3"x16')
Max. grinding surface. WxL 最大研磨面積 寬x長	152x457 (6"x18')	203x406 (8"x16')	254x508 (10"x20')	203x406 (8"x16')
Max. Horizontal travel of table. 工作台左右最大行程	480 (18.9")	430 (16.8")	540 (21.3")	480 (18.9")
Max. Cross travel of table. 工作台前後最大行程	163 (6.4")	213 (8.4")	263 (10.4")	213 (8.4")
Distance between table surface and spindle center 工作台面與主軸中心最大距離	460 (18.1")		500 (19.7")	460 (18.1")
Table speed 工作台左右速度	Manual			
Automatic crossfeed of saddle(60HZ) 前後每次進刀量 60HZ	Manual			
Vertical handwheel (1 gra) 上下手輪每一刻度	0.01(0.0005") *(0.0001")		0.01 (0.0005")	0.01(0.0005")*(0.0001")
Vertical handwheel (1 rev) 上下手輪每一轉	2(0.1") *(0.05")		2 (0.1')	2(0.1")*(0.05")
Crossfeed handwheel (1 gra) 前後手輪每一刻度	0.02 (0.001")		0.01 (0.0005")	0.02 (0.001")
Crossfeed handwheel (1 rev) 前後手輪每一轉				
Downfeed mirco adjustment (1 gra) 上下微調進刀量每一刻度	MR-0.001 (0.00005")			
Downfeed mirco adjustment (1 rev) 上下微調進刀量每一轉	MR-0.1 (0.005")			
Longitudinal travel adjustable from-to 左右行程調整距離	Manual			50-406 (2"x16')
Crossfeed travel adjustable from-to 前後行程調整距離	Manual			
Spindle motor 主軸馬達	2HPx2P		2HPx2P '3HPx2P	2HPx2P
Hydraulic pump motor 抽壓泵馬達	Manual			
Crossfeed motor 前後馬達	Manual			
Downfeed motor 上下馬達	MR-1/5HPx6P			
Grinding wheel (ODxTxID) 磨輪尺寸(外徑x厚度xA徑)	205x13x31.75(8"x0.5"x1.25")			
Spindle speed 60/50HZ 主軸速度 60/50HZ	3500RPM/60HZ 2900RPM/50HZ			
Coolant motor 沖水泵				
Dust collector motor 吸塵馬達				
Net Weight 機器重量	700kgs (1540lbs)	650kgs (1430lbs)	1200kgs (2640lbs)	750kgs (1650lbs)
Gross Weight 裝箱毛量	850kgs (1870lbs)	800kgs (1760lbs)	1400kgs (3080lbs)	900kgs (1980lbs)
Packing dimensions 裝箱尺寸	1460x1140x1940 (57.4"x44.8"x76.3')	1360x1140x1940 (53.5"x44.8"x76.3')	1860x1520x2050 (73.2"x59.8"x80.7')	1460x1460x1940 (57.4"x57.4"x76.3')

We follow a policy of continuous improvement of all our products. Reserving the right to change specifications, mechanics, or designs at any time without notice or obligation.
為使產品改良和創新,本公司保有權利,隨時變更規格,變換設計,恕不另行通知或負責,同責任。

M/Manual type. MR/M type with rapid Up&down
HR/H type+rapid Up&down AH/Auto longitudinal
AHD/Auto longitudinal, cross, and down feed.



In specification, if there is a * mark in front of item, it is an optional specification.
 規格表裏,前方有*記號者,為特別規格.

unit:mm

SGS-1020 H/AH/AHR/AHD/SD	SGS-N1224 H/AH/AHR/AHD/SD	SGS-1224 H/AH/AHR/AHD/SD	SGS-1230 H/AH/AHR/AHD/SD	SGS-1632 AH/AHD/SD	SGS-1640 AH/AHD/SD
230x500 (9.1"x19.7")	260x600 (10.2"x23.6")	260x600 (10.2"x23.6")	260x750 (10.2"x29.5")	400x800 (15.7"x31.5")	400x1000 (15.7"x39.4")
254x508 (10"x20")	304x609 (12"x24")	304x609 (12"x24")	304x762 (12"x30")	406x812 (16"x32")	406x1016 (16"x40")
565 (22.2")	690 (27.2")		840 (33.1")	960 (37.8")	1160 (45.7")
263 (10.4")	313 (12.3")		332 (13.1")		450 (17.7")
500 (19.7")			600 (23.6")		620 (24.4")
5~25 M/min (200~1000 inch/min)					
0~9 (0"-0.35")			0~12 (0"-0.47")		
0.01(0.0005")			0.005(0.00025")		
2(0.1")			1(0.05")		
4(0.2")			0.01(0.005")		
AHD-0.002(0.0001") SD 0.001(0.00005")					
AHD-0.2(0.01")					
50~508 (2"x20")	50~609 (2"-24")		50~762 (2"x30")	50~812 (2"x32")	50~1016 (2"x40")
0~254 (0"-10")	0~304(0"-12")				0~406(0"-16")
2HPx2P *3Px2P		5HPx4P			7 1/2HPx4P *10HPx4P
H-1HPx6P AHD /SD-2HPx6P			H /AH /AHD /SD-2HPx6P		
		40Wx6P			
	AHR-1/5x6P AHD-1/4HPx6P			AH-1/5x6P AHD-1/4HPx6P	
		355x32x127(14"x1.25"x5")		355x50x127(14"x2"x5")	
		1750HPM/60HZ 1450RPM/50HZ			
	1/8HP				
	1/2HPx2P				

1350kgs (2970lbs)	1400kgs (3080lbs)	1850kgs (4070lbs)	1950kgs (4290lbs)	2800kgs (6160lbs)	3000kgs (6600lbs)
1600kgs (3520lbs)	1650kgs (3630lbs)	2150kgs (4730lbs)	2250kgs (4950lbs)	3150kgs (6930lbs)	3400kgs (7480lbs)
2060x1680x2050 (81.1"x66.1"x80.7")	2230x1670x2050 (87.7"x65.7"x80.7")	2260x1740x2210 (88.9"x68.5"x87")	2260x1740x2210 (88.9"x68.5"x87")	2780x2210x2250 (109.4"x87"x88.5")	3150x2210x2250 (124"x87"x88.5")

Auto cross feed. H/Hydraulic longitudinal feed.
 cross feed. AHR/AH type+Up&down.
 Auto longitudinal, cross, and servo control down feed.

* M/手動機種. MR/手動機種&上下快送. A/前後自動進刀. H/工作台上左油壓驅動.
 HR/H機種+上下快送. AH/前後自動進刀&工作台上左油壓驅動.
 AHR/AH機種+上下快送. AHD/AH機種+上下自動進刀. SD/AH機種+上下NC伺服自動進刀.



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