



SUN MASTER

HIGH SPEED PRECISION LATHES

AHL Series

AHL-1840/1860/1880
-2140/2160/2180/21120

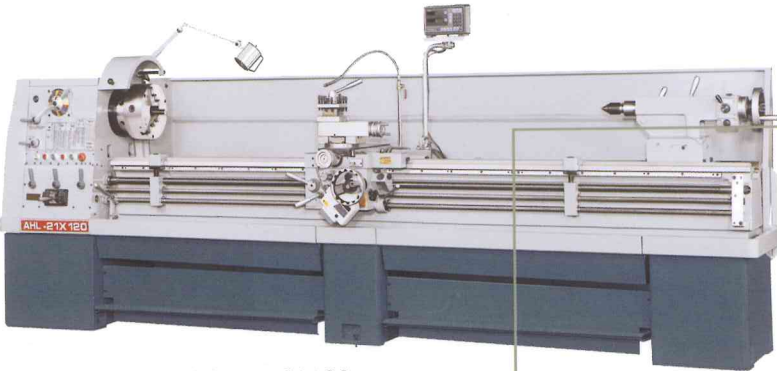
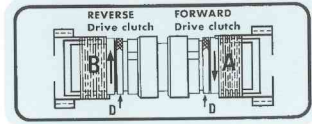
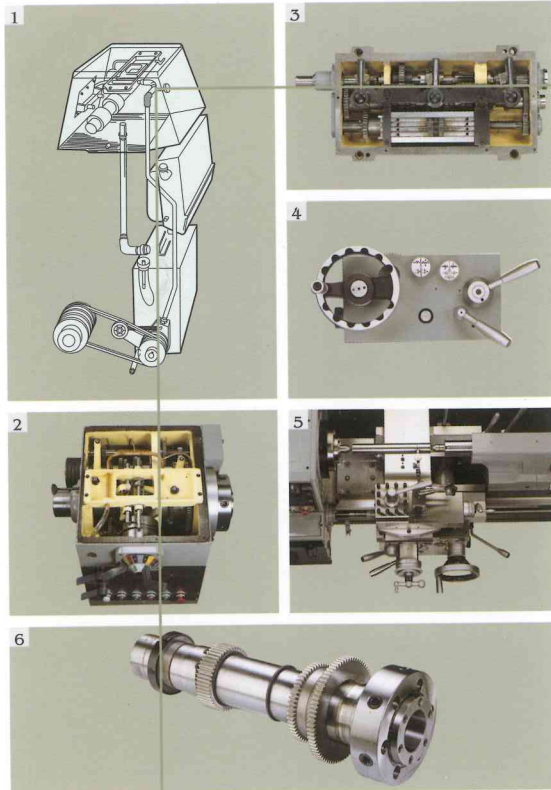


Photo shown model :AHL-21120

AHL-1840V/1860V/1880V
-2140V/2160V/2180V/21120V



Photo shown model: AHL-2160V



- All models with mechanical clutch. (excluded E.V.S. model)
- All models with auto lubrication system to headstock & external tank for cooling the oil
- All models meet CE. (on request)
- All models with 80mm (3.149") spindle bore, ASA D1-8.

FEATURES

- All castings are properly stabilized and stress relieved
 - Bed ways are hardened & ground to min. HS-70.
 - Turcite B coating between the bed and carriage.
 - Extremely low noise level.
 - Foot brake pedal provided.
 - Built-in coolant pump & fitting provided.
 - CSS (constant surface speed control) on request for E.V.S. model
 - Wider bed way which give absorbs vibration.
- LUBRICATION** • Oil sight window for efficient check of oil level action. • Pressure lubrication system in headstock can ensure it's lubricated and cooling when high speed cutting. • Splash lubrication in feed gearbox & apron.
 - HEADSTOCK** • Housing is vibration-absorbent, deflection-free. • Gears are hardened & MAAG or REISHAUER ground.
 - GEAR BOX** • Universal type allowing a wide range of inch, metric, M.P., D.P. threads without change gears. • Induction hardened & precision ground gears.
 - APRON** • R/H or L/H wheel can be available on request. • Integrated automatic control for longitudinal & cross feeds, forward & reverse feeds.
 - CARRIAGE & SLIDE** • Anti-Float design backlash eliminator fitted in cross slide nut. • Safety clutch at feed shaft. • One shot lubrication in carriage & top slide. • Dual dials supply inch system screw. • Metric dial supply metric system only.
 - SAFETY FEATURES** • Nylon safety gears in end train. • Shear pin in leadscrew.
 - HEAVY DUTY SPINDLE** • Machined from forged alloy steel, hardened ground & dynamically balanced. • Three point support by high grade precision, machine tool taper roller & ball bearings.



STANDARD ACCESSORIES:

- 1 Backplate for 12" chuck
- 2 Dead center MT.5
- 3 Dead center MT.5 with carbide tip
- 4 Spindle center sleeve MT.7
- 5 Level pads.....8 pcs
- 6 Tool set & Box
- 7 Operation manual & parts list

OPTIONAL ACCESSORIES:

- 1 3-Jaws scroll 12" chuck
- 2 4-Jaws independent chuck 12" for 18....or 14" for 21...
- 3 5C collet closer attachment
- 4 5C collets (metric or inch)
- 5 Chuck safety guard
- 6 Hydraulic copying attachment
- 7 Tool post grinder attachment
- 8 Taper turning attachment
- 9 Electrical system for CE
- 10 Protect cover on leadscrew for CE
- 11 Steady rest w/ball bearing
- 12 Follow rest w/bronze tip
- 13 Faceplate 14"
- 14 Drill chuck & arbor
- 15 Rotating center MT.5
- 16 Halogen lamp
- 17 Quick change tool post
- 18 Carriage micro stop set
- 19 Digital read out system
- 20 Full length splash guard

**AHL-1840
AHL-1860
AHL-1880**

**AHL-2140
AHL-2160
AHL-2180
AHL-21120**

**AHL-1840V
AHL-1860V
AHL-1880V**

**AHL-2140V
AHL-2160V
AHL-2180V
AHL-21120V**

MODEL		AHL-1840 AHL-1860 AHL-1880	AHL-2140 AHL-2160 AHL-2180 AHL-21120	AHL-1840V AHL-1860V AHL-1880V	AHL-2140V AHL-2160V AHL-2180V AHL-21120V										
Capacity	Height of centers	230 mm (9.055")		271 mm (10.67")											
	Swing over bed	ø460 mm (18.11")		ø533 mm (20.98")											
	Swing in gap	ø710 mm (27.95")		ø790 mm (31.10")											
	Swing over cross slide	ø280 mm (11.02")		ø356 mm (14.01")											
Headstock and Main Spindle	Distance between centers	1000 mm (40")	1500 mm (60")	2000 mm (80")	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")			
	Width of bed	345 mm (13.58")													
	Gap width in front of faceplate	250 mm (9.84")													
	Spindle nose, internal taper	D1-8, MT.No.7													
	Spindle center sleeve	MT. No.7 x MT. No.5													
	Spindle bore	ø80 mm (3.149")													
	Gear steps	16 steps / 20~1600 R.P.M.													
		Green 20 65 210 670													
		Yellow 25 85 280 900													
	Spindle speed: / Range	4 steps / M 55~180 R.P.M.													
H 600~1800 R.P.M.															
"MATRIX" Disc clutch for Forward / Reverse Infinitely variable															
Carriage	Length on bed / Width of carriage	543 mm (21.37") / 542 mm (21.33")													
	Cross slide travel	272 mm (10.7")													
	Top slide travel	137 mm (5.39")													
Threads and Feeds	Whitworth threads: Kinds / Range	38 Kinds / 2~72 T.P.I.													
	Metric threads: Kinds / Range	40 Kinds / 0.4~14 mm													
	D.P. threads: Kinds / Range	21 Kinds / 8~44 D.P.													
	M.P. threads: Kinds / Range	18 Kinds / 0.3~3.5 M.P.													
	Longitudinal feeds	0.04~1.0 mm (0.0015"~0.04")													
Tailstock	Cross feeds	0.02~0.5 mm (0.00075"~0.02")													
	Quill diameter	ø76 mm (3")													
	Quill travel	165 mm (6.5")													
Motor	Taper of center	MT.No.5													
	Main spindle	10HP				12.5HP				AC 9.375kW (12.5HP), Inverter					
	Forced lubrication for HD.	-----													
Measurement	Coolant pump	1/8HP													
	Weight (Net /Gross) Approx.	2000 kgs / 2350 kgs	2350 kgs / 2700 kgs	2700 kgs / 3100 kgs	2300 kgs / 2650 kgs	2650 kgs / 3000 kgs	3000 kgs / 3400 kgs	3400 kgs / 4200 kgs	2000 kgs / 2350 kgs	2350 kgs / 2700 kgs	2700 kgs / 3100 kgs	2300 kgs / 2650 kgs	2650 kgs / 3000 kgs	3000 kgs / 3400 kgs	3400 kgs / 4200 kgs
	Packing sizes	Length	2535 mm (99.8")	3035 mm (119.5")	3535 mm (139.2")	2535 mm (99.8")	3035 mm (119.5")	3535 mm (139.2")	4624 mm (182")	2535 mm (99.8")	3035 mm (119.5")	3535 mm (139.2")	2535 mm (99.8")	3035 mm (119.5")	3535 mm (139.2")
		Width x Height	Width 1120 mm (44.1") x Height 1745 mm (68.7")												

Specifications subject to change without notice.



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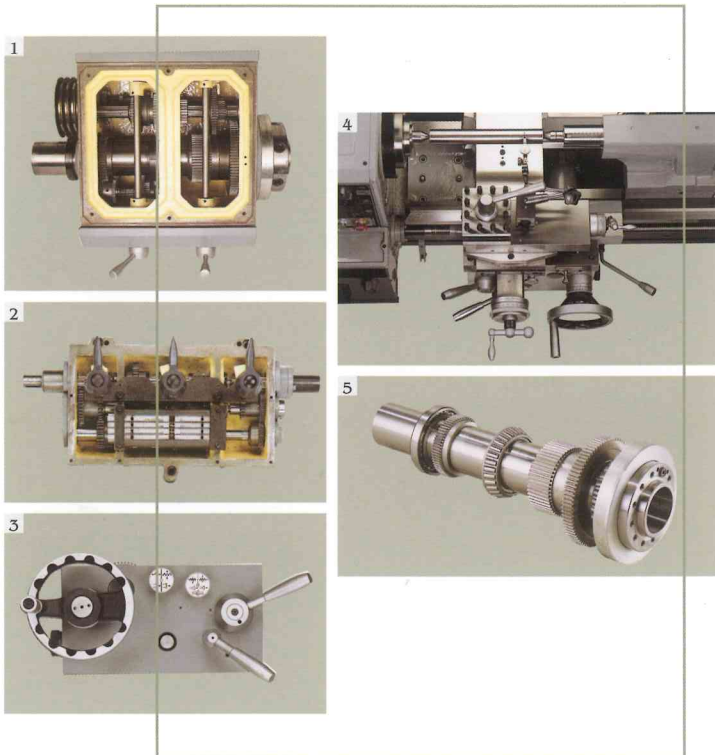
ML Series

ML-1740/1760/2040/2060
-1740V/1760V/2040V/2060V



Photo shown model: ML-1760V

- E.V.S models with auto lubrication system to headstock & external tank for cooling the oil.
- All models with one piece solid stand.
- All models with universal feed gearbox & reversible apron.
- All models meet CE. (on request)
- All models with 80mm (3.149") spindle bore, ASA D1-6.
- All models cross slide is hardened and ground to prolong operation life.



FEATURES

- All castings are properly stabilized and stress relieved
- Bed ways are hardened & ground to min. HS-70.
- Turcite B coating between the bed and carriage.
- Extremely low noise level.
- Foot brake pedal provided.
- Built-in coolant pump & fitting provided.
- CSS (constant surface speed control) on request for E.V.S. model
- Wider bed way which give absorbs vibration.

- 11] **HEADSTOCK** • Housing is vibration-absorbent, deflection-free.
• Gears are hardened & MAAG or REISHAUER ground.
- 12] **GEAR BOX** • Universal type allowing a wide range of inch, metric, M.P., D.P. threads without change gears.
- 13] **APRON** • R/H or L/H wheel can be available on request.
• Integrated automatic control for longitudinal & cross feeds, forward & reverse feeds.

- 14] **CARRIAGE & SLIDE** • Anti-Float design backlash eliminator fitted in cross slide nut. • Safety clutch at feed shaft. • One shot lubrication in carriage & top slide. • Dual dials supply inch system screw. • Metric dial supply metric system only.
- SAFETY FEATURES** • Nylon safety gears in end train.
• Shear pin in leadscrew.

- 15] **HEAVY DUTY SPINDLE** • Proven design of same models but with big spindle bore (80mm) to offer you more efficient, durable operation. • Spindle machined from forged alloy steel, hardened, ground & treated by dynamically balanced. • The spindle is supported at three-point by high precision taper roller and ball bearings keeps rigid, high accuracy.



STANDARD ACCESSORIES:

- 1 Backplate for 10" chuck
- 2 Dead center MT.5
- 3 Dead center MT.4 with carbide tip
- 4 Spindle center sleeve
.....ø85mm Taper 1/19.18

- 5 Level pads.....6 pcs
- 6 Tool set & Box
- 7 Operation manual & parts list

OPTIONAL ACCESSORIES:

- 1 3-Jaws scroll 10" chuck
- 2 4-Jaws independent 10" chuck
- 3 5C collet closer attachment
- 4 5C collets (metric or inch)
- 5 Driving plate with dog
- 6 Chuck safety guard
- 7 Hydraulic copying attachment

- 8 Tool post grinder attachment
- 9 Taper turning attachment
- 10 Electrical system for CE
- 11 Protect cover on leadscrew for CE
- 12 Steady rest w/ball bearing
- 13 Follow rest w/bronze tip
- 14 Faceplate 12"

- 14 Drill chuck & arbor
- 15 Rotating center MT.4
- 16 Halogen lamp
- 17 Quick change tool post
- 18 Carriage micro stop set
- 19 Digital read out system
- 20 Full length splash guard

MODEL		ML-1740 ML-1760	ML-2040 ML-2060	ML-1740V ML-1760V	ML-2040V ML-2060V
Capacity	Height of centers	216 mm (8.5")	254 mm (10")	216 mm (8.5")	254 mm (10")
	Swing over bed	ø435 mm (17")	ø508 mm (20")	ø435 mm (17")	ø508 mm (20")
	Swing in gap	ø622 mm (24.48")	ø698 mm (27.48")	ø622 mm (24.48")	ø698 mm (27.48")
	Swing over cross slide	ø277 mm (10.9")	ø353 mm (13.89")	ø277 mm (10.9")	ø353 mm (13.89")
	Distance between centers	1000 mm (40") 1500 mm (60")	1000 mm (40") 1500 mm (60")	1000 mm (40") 1500 mm (60")	1000 mm (40") 1500 mm (60")
	Width of bed	305 mm (12")			
	Gap width in front of faceplate	195 mm (7.67")			
Headstock and Main Spindle	Spindle nose, internal taper	D1-6, ø85 mm Taper 1/19.18			
	Spindle center sleeve	ø85 mm Taper 1/19.18 x MT. No.5			
	Spindle bore	ø80 mm (3.149")			
	Gear steps	12 steps / 36~1800 R.P.M.		L _ _ 30~125 R.P.M. M _ _ 125~450 R.P.M.	
	Spindle speed: / Range	A _ 36 _ 50 _ 70 _ 105 B _ 130 _ 180 _ 250 _ 380 C _ 620 _ 900 _ 1200 _ 1800		3 steps / H _ _ 450~2200 R.P.M.	
Carriage	Length on bed / Width of carriage	440 mm (17.32") / 477 mm (18.77")			
	Cross slide travel	235 mm (9.25")	272 mm (10.7")	235 mm (9.25")	272 mm (10.7")
	Top slide travel	160 mm (6.3")			
Threads and Feeds	Whitworth threads: Kinds / Range	45 Kinds / 2~72 T.P.I.			
	Metric threads: Kinds / Range	39 Kinds / 0.2~14 mm			
	D.P. threads: Kinds / Range	21 Kinds / 8~44 D.P.			
	M.P. threads: Kinds / Range	18 Kinds / 0.3~3.5 M.P.			
	Longitudinal feeds	0.04~1.0 mm (0.0015"~0.04")			
Tailstock	Cross feeds	0.02~0.5 mm (0.00075"~0.02")			
	Quill diameter	ø59 mm (2.322")			
Motor	Quill travel	127 mm (5")			
	Taper of center	MT.No.4			
	Main spindle	7.5HP		AC 5.5kW (7.5HP), Inverter	
	Forced lubrication for HD. Coolant pump	-----		1/4HP	
Measurement	Weight (Net /Gross) Approx.	1700 kgs / 2000kgs	1850 kgs / 2150kgs	1750 kgs / 2050kgs	1900 kgs / 2200kgs
	Length	2400 mm (94.5")	2900 mm (114.2")	2400 mm (94.5")	2900 mm (114.2")
	Packing sizes	Width x Height			
Width 1120 mm (44.1") x Height 1745 mm (68.7")					

Specifications subject to change without notice.