



SUN MASTER

MANUAL AT THE





BRIEF INTRODUCTION

Company Established: December 1994

Factory Area: 90,000 sq. meters

Total Employees: 70

Annual Turnover:

USD 11,000,000.00 ~ 13,000,000.00

Annual Production Capacity:

Conventional Lathes: 700

CNC Lathes: 320



Company History

Established in 1994, Shun Chuan Machinery Ind Co.,Ltd. specializes in the design and manufacture of metalworking machinery. Although Shun Chuan is still comparatively young, but derived extensive knowledge from a former reputed company's 25 years of precision manufacturing experience. Therefore, Shun Chuan is often referred to as "a young but experienced manufacturer."

Since establishment, Shun Chuan has dedicated itself to R&D and innovation based on extensive manufacturing experience. Shun Chuan has won a solid reputation for the dependability of its products.

In the early years, Shun Chuan produced the complete range of conventional lathes originally developed by the former reputed Company. Over the next several years, Shun Chuan constantly improved machine design, construction and developed new models including the currently popular conversational computerized lathes. At the moment, Shun Chuan produces the most complete range of lathes among Taiwan lathe manufacturers.

Shun Chuan machines have been sold to over 50 countries in Europe, America, Africa, the Middle East, and Asia. In addition to our current business, our new customers are gradually increasing providing Shun Chuan with the opportunity to expand our products and services. We will constantly develop new models to provide flexible choices and a competitive edge to our customers all over the world.



SUN MASTER

HIGH SPEED PRECISION LATHES

AHL Series

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

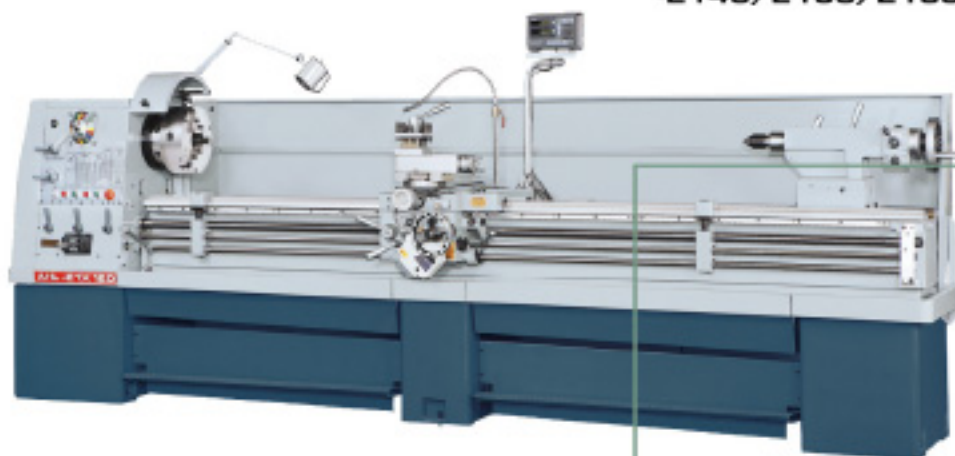
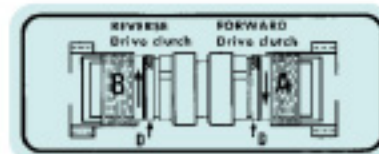


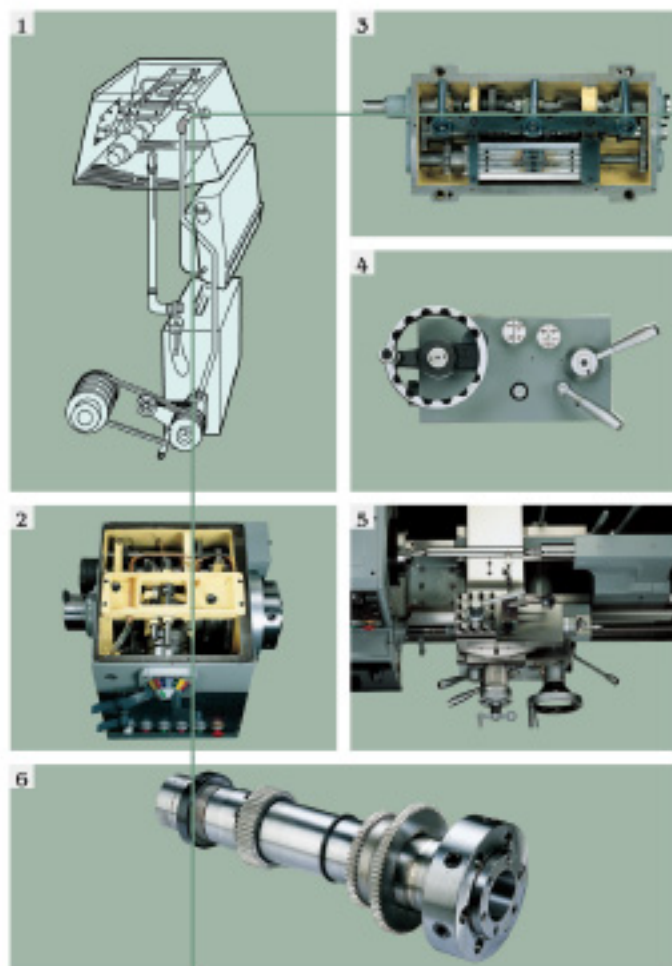
Photo shown model :AHL-21120



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.

- 1] 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.
- 2] HEADSTOCK • Housing is vibration-absorbent, deflection-free. • Gears are hardened & MAAG or REISHAUER ground.
- 3] GEAR BOX • Universal type allowing a wide range of inch, metric, M.P., D.P. threads without change gears. • Induction hardened & precision ground gears.
- 4] APRON • R/H or L/H wheel can be available on request. • Integrated automatic control for longitudinal & cross feeds, forward & reverse feeds.

- 5] 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.
- 6] 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:

- | | |
|--|---|
| <ul style="list-style-type: none"> 1 Backplate for 12" chuck 2 Dead center MT.5 3 Dead center MT.5 with carbide tip 4 Spindle center sleeve MT.7 | <ul style="list-style-type: none"> 5 Level pads.....8 pcs 6 Tool set & Box 7 Operation manual & parts list |
|--|---|

OPTIONAL ACCESSORIES:

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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" | <ul style="list-style-type: none"> 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 |
|--|--|--|

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	231 mm (9.09")				271 mm (10.67")				231 mm (9.09")				271 mm (10.67")				
	Swing over bed	ø462 mm (18.19")				ø542 mm (21.34")				ø462 mm (18.19")				ø542 mm (21.34")				
	Swing in gap	ø710 mm (27.95")				ø790 mm (31.10")				ø710 mm (27.95")				ø790 mm (31.10")				
	Swing over cross slide	ø298 mm (11.73")				ø380 mm (14.96")				ø298 mm (11.73")				ø380 mm (14.96")				
	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")		1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	
	Width of bed	345 mm (13.58")																
Headstock and Main Spindle	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")																
	Spindle speed: / Range	Gear steps	16 steps / 20~1600 R.P.M.								4 steps /							
			Green	20	65	210	670					L	18~55 R.P.M.					
Carriage		Yellow	25	85	280	900					M	55~180 R.P.M.						
		Red	35	115	380	1200					MH	180~600 R.P.M.						
		Blue	50	150	500	1600					H	600~1800 R.P.M.						
		"MATRIX" Disc clutch for Forward / Reverse								Infinitely variable								
	Length on bed / Width of carriage	543 mm (21.37") / 542 mm (21.33")																
	Cross slide travel	272 mm (10.7")																
Threads and Feeds	Top slide travel	137 mm (5.39")																
	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")																
	Taper of center	MT.No.5																
Motor	Main spindle	10HP				12.5HP				AC 7.5kW (10HP)				AC 9.4kW (12.5HP), Inverter				
	Forced lubrication for HD.	-----																
	Coolant pump	1/8HP																
Measurement	Weight (Net /Gross) Approx.	2000 kgs / 2350 kgs	2350 kgs / 2700 kgs	2700 kgs / 3000 kgs	3000 kgs / 3300 kgs	3300 kgs / 3650 kgs	3650 kgs / 4000 kgs	4000 kgs / 4200 kgs	4200 kgs / 4624 kgs	2000 kgs / 2350 kgs	2350 kgs / 2700 kgs	2700 kgs / 3000 kgs	3000 kgs / 3300 kgs	3300 kgs / 3650 kgs	3650 kgs / 4000 kgs	4000 kgs / 4200 kgs	4200 kgs / 4624 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")	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																	

Specifications subject to change without notice



SUN MASTER

HIGH SPEED PRECISION LATHES

BHL Series

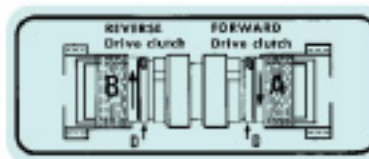


Photo shown model : BHL-1550
w/protect cover on leadscrew

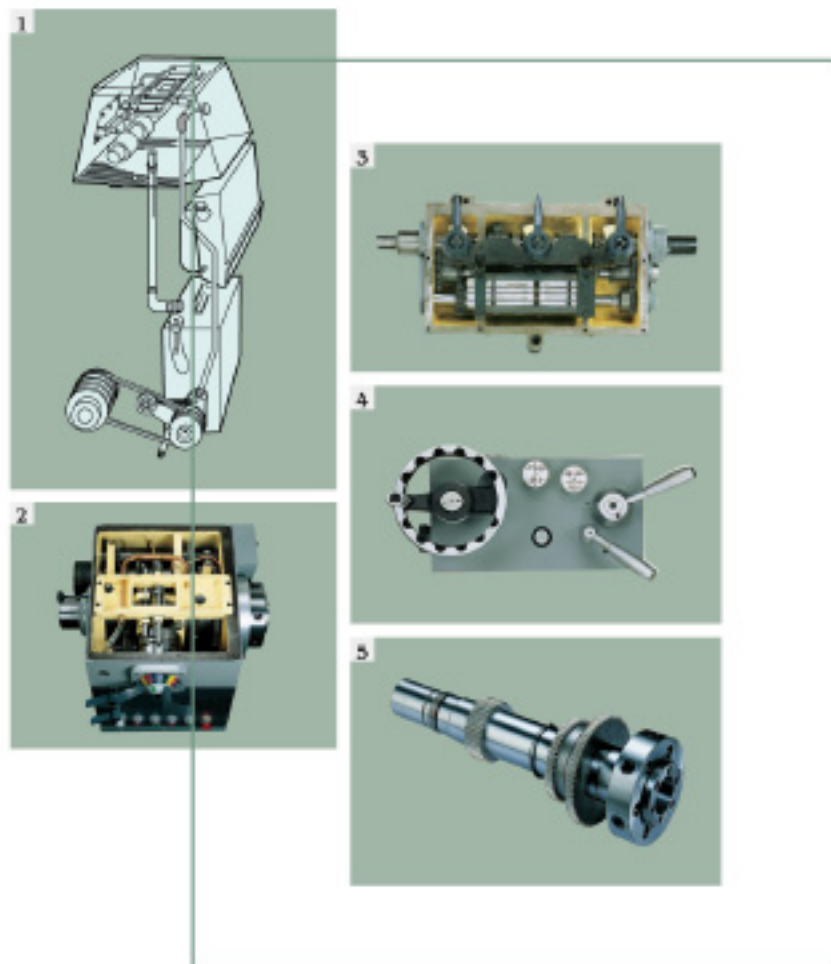


Photo shown model: BHL-1550V

- 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 56mm (2.2") spindle bore, ASA D1-6.

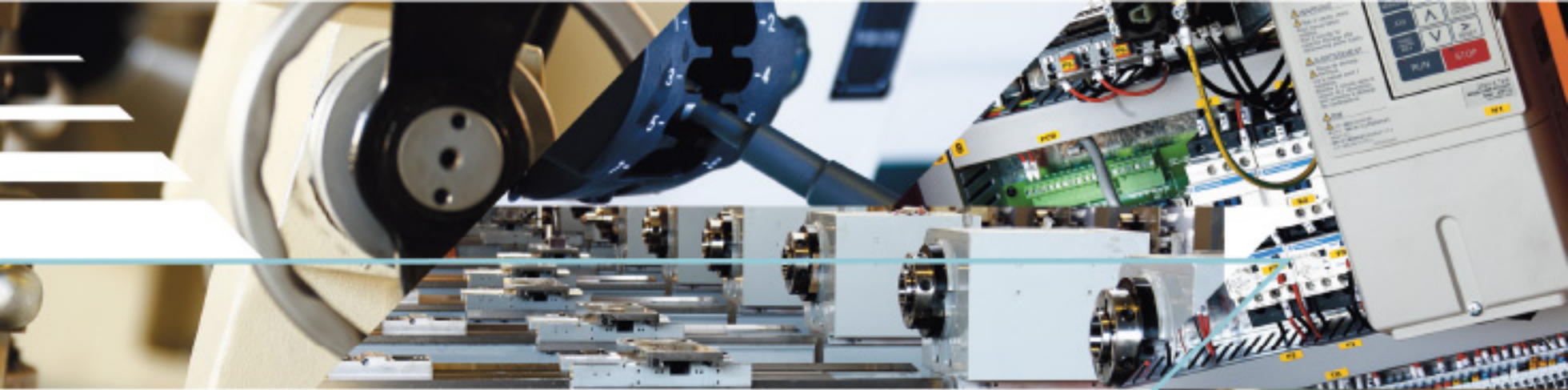
FEATURES

- 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.



- 1] **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.
- 2] **HEADSTOCK** • Housing is vibration-absorbent, deflection-free. • Gears are hardened & MAAG or REISHAUER ground.
- 3] **GEAR BOX** • Universal type allowing a wide range of inch, metric, M.P., D.P. threads without change gears.

- 4] **APRON** • R/H or L/H wheel can be available on request. • Integrated automatic control for longitudinal & cross feeds, forward & reverse feeds.
- 5] **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:

- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Backplate for 9" chuck 2 Dead center MT.4 3 Dead center MT.4 with carbide tip 4 Spindle center sleeve MT.6 | <ul style="list-style-type: none"> 5 Level pads.....8 pcs 6 Tool set & Box 7 Operation manual & parts list |
|---|---|

OPTIONAL ACCESSORIES:

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> 1 3-Jaws scroll 9" 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 | <ul style="list-style-type: none"> 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" | <ul style="list-style-type: none"> 15 Drill chuck & arbor 16 Rotating center MT.4 17 Halogen lamp 18 Quick change tool post 19 Carriage micro stop set 20 Digital read out system 21 Full length splash guard |
|--|---|--|

BHL-1550

BHL-1550V

MODEL

Capacity		Height of centers	190 mm (7.48")
		Swing over bed	ø380 mm (14.96")
		Swing in gap	ø610 mm (24")
		Swing over cross slide	ø238 mm (9.37")
		Distance between centers	1250 mm (50")
		Width of bed	280 mm (11")
		Gap width in front of faceplate	265mm (10.43")
Headstock and Main Spindle	Spindle speed: / Range	Spindle nose, internal taper	D1-6, MT.No.6
		Spindle center sleeve	MT. No.6 x MT. No.4
		Spindle bore	ø56 mm (2.2")
		Gear steps	16 steps / 25~2000 R.P.M. Green 25 80 260 840 Yellow 33 108 350 1120 Red 45 140 470 1500 Blue 60 190 625 2000
			MATRIX Disc clutch for Forward / Reverse
Carriage	Length on bed / Width of carriage		484 mm (19.05") / 450 mm (17.71")
		Cross slide travel	235 mm (9.25")
		Top slide travel	120 mm (4.72")
		Whitworth threads: Kinds / Range	45 Kinds / 2~72 T.P.I.
		Metric threads: Kinds / Range	39 Kinds / 0.2~14 mm
Threads and Feeds		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")
		Cross feeds	0.02~0.5 mm (0.00075"~0.02")
		Quill diameter	ø59 mm (2.322")
Tailstock	Quill travel		127 mm (5")
		Taper of center	MT.No.4
Motor	Main spindle		7.5HP
		Forced lubrication for HD.	AC 5.5kW (7.5HP), Inverter
		Coolant pump	1/4HP
Measurement	Weight (Net /Gross) Approx.		1450 kgs / 1700 kgs
		Packing sizes	Length 2580 mm (101.58")
			Width 1120 mm (44.1") x Height 1745 mm (68.7")

Specifications subject to change without notice

HIGH SPEED PRECISION LATHES

SR Series

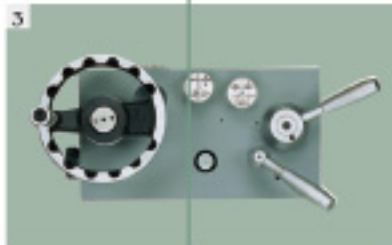
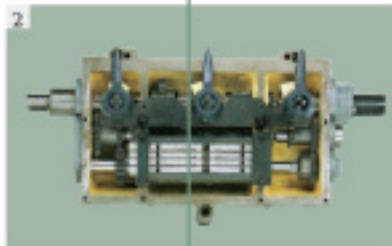


Photo shown model :SR-2160

SR-1840/1860
-2140/2160



Photo shown model: SR-1840



- All models with one piece solid stand.
- All models with universal feed gearbox & reversable apron.
- All models meet CE. (on request)
- All models with 80mm (3.149") spindle bore, ASA D1-8.
- 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.
- 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** • Machined from forged alloy steel, hardened ground & dynamically balanced. • Three point support by high grade precision, machine tool taper roller & ball bearings.



STANDARD ACCESSORIES:

- | | |
|--|---|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 5 Level pads.....6 pcs 6 Tool set & Box 7 Operation manual & parts list |
|--|---|

OPTIONAL ACCESSORIES:

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> 1 3-Jaws scroll 10" chuck 2 4-Jaws independent 12" chuck 3 5C collet closer attachment 4 5C collets (metric or inch) 5 Faceplate 14" 6 Chuck safety guard 7 Hydraulic copying attachment | <ul style="list-style-type: none"> 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 Drill chuck & arbor | <ul style="list-style-type: none"> 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 |
|--|---|--|

SR-1840

SR-1860

SR-2140

SR-2160

MODEL

		SR-1840		SR-1860		SR-2140		SR-2160	
Capacity	Height of centers	231 mm (9.09")				271 mm (10.67")			
	Swing over bed	ø462 mm (18.19")				ø542 mm (21.34")			
	Swing in gap	ø650 mm (25.6")				ø730 mm (28.74")			
	Swing over cross slide	ø307 mm (12.1")				ø387 mm (15.23")			
	Distance between centers	850 mm (33.46")		1350 mm (53.15")		850 mm (33.46")		1350 mm (53.15")	
	Width of bed			305 mm (12")					
Headstock and Main Spindle	Gap width in front of faceplate			165 mm (6.5")					
	Spindle nose, internal taper			D1-8, 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 / 30~1500 R.P.M.					
	Spindle speed: / Range			Ls 30 45 60 90 Ms 110 150 210 320 Hs 530 750 1050 1500					
Carriage	Length on bed / Width of carriage			440 mm (17.32") / 477 mm (18.77")					
	Cross slide travel			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")					
	Cross feeds			0.02~0.5 mm (0.00075"~0.02")					
Tailstock	Quill diameter			ø68 mm (2.677")					
	Quill travel			153 mm (6")					
	Taper of center			MT.No.4					
Motor	Main spindle	7.5HP		1/8HP		10HP			
	Coolant pump								
Measurement	Weight (Net /Gross) Approx.	1700 / 2000 kgs		1850 / 2150 kgs		1750 / 2050 kgs		1900 / 2200 kgs	
	Length	2400 mm (94.5")		2900 mm (114.2")		2400 mm (94.5")		2900 mm (114.2")	
	Packing sizes Width x Height			Width 1155 mm (45.5") x Height 1745 mm (68.7")					

Specifications subject to change without notice.



SUN MASTER

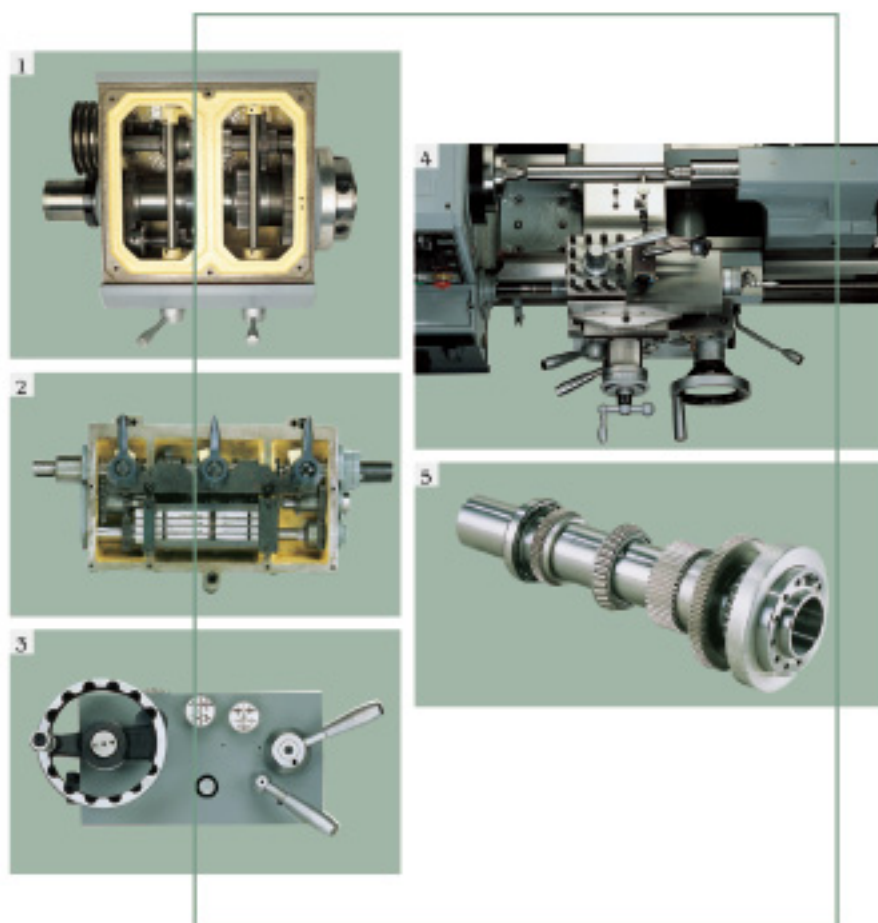
HIGH SPEED PRECISION LATHES

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

		ML-1740 ML-1760		ML-2040 ML-2060		ML-1740V ML-1760V		ML-2040V ML-2060V		
MODEL										
Capacity	Height of centers	216 mm (8.5")		254 mm (10")		216 mm (8.5")		254 mm (10")		
	Swing over bed	ø432 mm (17")		ø508 mm (20")		ø432 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.				
	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")						
	Whitworth threads: Kinds / Range			45 Kinds / 2~72 T.P.I.						
Threads and Feeds	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")						
	Cross feeds			0.02~0.5 mm (0.00075"~0.02")						
Tailstock	Quill diameter			ø59 mm (2.322")						
	Quill travel			127 mm (5")						
	Taper of center			MT.No.4						
Motor	Main spindle			7.5HP				AC 5.5kW (7.5HP), Inverter		
	Forced lubrication for HD.			-----				1/4HP		
	Coolant pump					1/8HP				
Measurement	Weight (Net /Gross) Approx.	1700 kgs / 2000kgs	1850 kgs / 2150kgs	1750 kgs / 2050kgs	1900 kgs / 2200kgs	1700 kgs / 2000kgs	1850 kgs / 2150kgs	1750 kgs / 2050kgs	1900 kgs / 2200kgs	
	Packing sizes	Length	2400 mm (94.5")	2900 mm (114.2")	2400 mm (94.5")	2900 mm (114.2")	2400 mm (94.5")	2900 mm (114.2")	2400 mm (94.5")	2900 mm (114.2")
		Width x Height	Width 1120 mm (44.1") x Height 1745 mm (68.7")							
	Specifications subject to change without notice									



SUN MASTER

HIGH SPEED PRECISION LATHES

CL Series



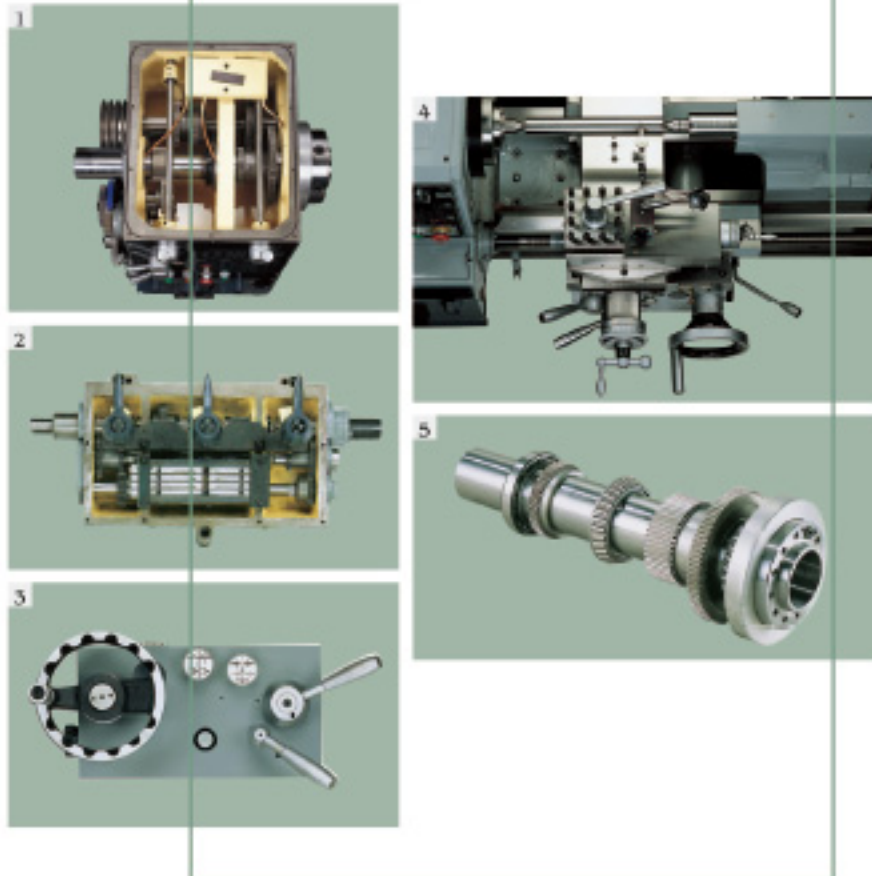
CL-1740/1760
-1740V/1760V

Photo shown model : CL-1740

- 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 52.5mm (2.066") 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.



- | | |
|---|---|
| <p>[1] HEADSTOCK • Housing is vibration-absorbent, deflection-free. • Gears are hardened & MAAG or REISHAUER ground. • Spindle machined from forged alloy steel, hardened, ground & treated by dynamically balanced.</p> <p>[2] GEAR BOX • Universal type allowing a wide range of inch, metric, M.P., D.P. threads without change gears.</p> <p>[3] APRON • R/H or L/H wheel can be available on request. • Integrated automatic control for longitudinal & cross feeds, forward & reverse feeds.</p> | <p>[4] 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.</p> <p>SAFETY FEATURES • Nylon safety gears in end train. • Shear pin in leadscrew.</p> <p>[5] HEAVY DUTY SPINDLE • The spindle is supported at three-point by high precision taper roller and ball bearings keeps rigid, high accuracy.</p> |
|---|---|



STANDARD ACCESSORIES:

- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Backplate for 9" chuck 2 Dead center MT.4 3 Dead center MT.4 with carbide tip 4 Spindle center sleeve MT.6 | <ul style="list-style-type: none"> 5 Level pads.....6 pcs 6 Tool set & Box 7 Operation manual & parts list |
|---|---|

OPTIONAL ACCESSORIES:

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> 1 3-Jaws scroll 9" chuck 2 4-Jaws independent 9" 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 | <ul style="list-style-type: none"> 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" | <ul style="list-style-type: none"> 15 Drill chuck & arbor 16 Rotating center MT.4 17 Halogen lamp 18 Quick change tool post 19 Carriage micro stop set 20 Digital read out system 21 Full length splash guard |
|---|---|--|

		CL-1740		CL-1760		CL-1740V		CL-1760V	
MODEL									
Capacity	Height of centers					216 mm (8.5")			
	Swing over bed					ø432 mm (17")			
	Swing in gap					ø622 mm (24.48")			
	Swing over cross slide					ø277 mm (10.9")			
	Distance between centers	1000 mm (40")		1500 mm (60")		1000 mm (40")		1500 mm (60")	
	Width of bed					305 mm (12")			
Headstock and Main Spindle	Gap width in front of faceplate					120 mm (4.72")			
	Spindle nose, internal taper					D1-6, MT.No.6			
	Spindle center sleeve					MT. No.6 x MT. No.4			
	Spindle bore					ø52.5 mm (2.066")			
	Gear steps	8 steps 4P / 80~2000 R.P.M.				2 steps / L 20~400 R.P.M.			
	Spindle speed: / Range	OPT. 16 steps / 8P 40~1000 R.P.M. 4P / 8P 80~2000 R.P.M.				4P H 400~2500 R.P.M. Infinitely variable			
Carriage	Length on bed / Width of carriage					440 mm (17.32") / 477 mm (18.77")			
	Cross slide travel					235 mm (9.25")			
	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")			
	Cross feeds					0.02~0.5 mm (0.00075"~0.02")			
Tailstock	Quill diameter					ø59 mm (2.322")			
	Quill travel					127 mm (5")			
	Taper of center					MT.No.4			
Motor	Main spindle	5HP 4P OPT. 7.5HP 4P/3.75 HP 8P				AC 3.7kW (5HP), Inverter			
	Forced lubrication for HD.	-----				1/4HP			
	Coolant pump					1/8HP			
Measurement	Weight (Net /Gross) Approx.	1600 kgs / 1900 kgs		1850 kgs / 2150 kgs		1600 kgs / 1900 kgs		1850 kgs / 2150 kgs	
	Packing sizes	Length 2400 mm (94.5")		2900 mm (114.2")		2400 mm (94.5")		2900 mm (114.2")	
		Width x Height		Width 1120 mm (44.1") x Height 1745 mm (68.7")					
Specifications subject to change without notice									



SUN MASTER

HIGH SPEED PRECISION LATHES

TML Series

TML-1640/1660

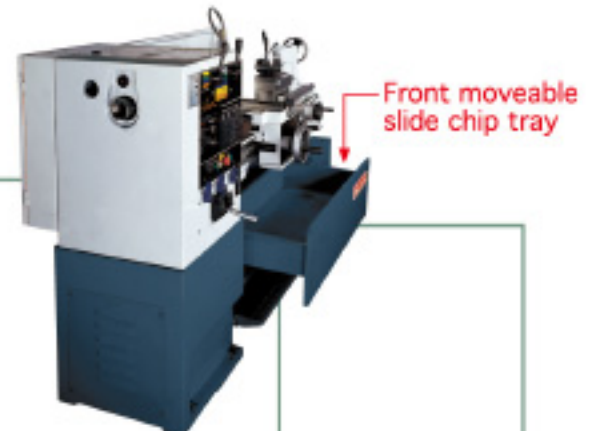
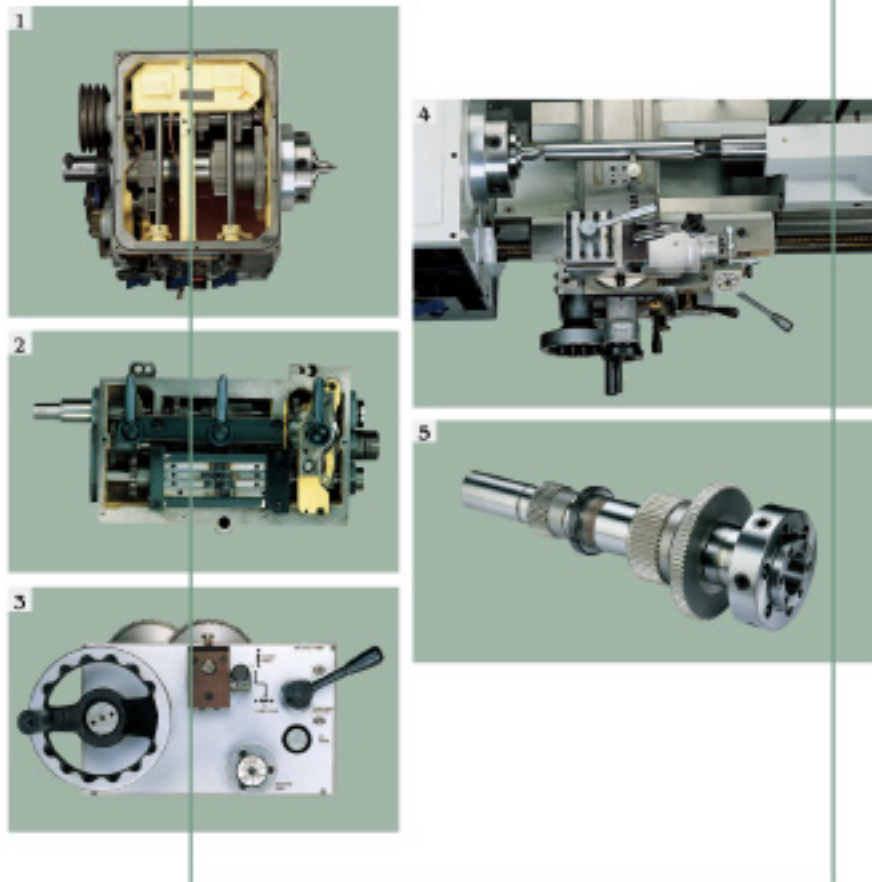


Photo shown model : TML-1640

- All models with one piece solid stand.
- All models with universal feed gearbox & reversible apron.
- All models meet CE. (on request)
- All models with 52.5mm (2.066") spindle bore, ASA D1-6.

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.
- 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** • Machined from forged alloy steel, hardened ground & dynamically balanced. • Three point support by high grade precision, machine tool taper roller & ball bearings.



STANDARD ACCESSORIES:

- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Backplate for 9" chuck 2 Dead center MT.4 3 Dead center MT.4 with carbide tip 4 Spindle center sleeve MT.6 | <ul style="list-style-type: none"> 5 Level pads.....6 pcs 6 Tool set & Box 7 Operation manual & parts list |
|---|---|

OPTIONAL ACCESSORIES:

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> 1 3-Jaws scroll 9" 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 | <ul style="list-style-type: none"> 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" | <ul style="list-style-type: none"> 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 |
|--|---|--|

TML-1640

TML-1660

MODEL

Capacity		TML-1640		TML-1660	
Capacity	Height of centers	205 mm (8.07")			
	Swing over bed	ø410 mm (16.14")			
	Swing in gap	ø583 mm (22.95")			
	Swing over cross slide	ø262 mm (10.3")			
	Distance between centers	1000 mm (40")		1500 mm (60")	
	Width of bed	260 mm (10.236")			
	Gap width in front of faceplate	135 mm (5.31")		225 mm (8.85")	
Headstock and Main Spindle		TML-1640		TML-1660	
Headstock and Main Spindle	Spindle nose, internal taper	D1-6, MT. No.6			
	Spindle center sleeve	MT. No.6 x MT. No.4			
	Spindle bore	ø52.5 mm (2.066")			
	Gear steps	12 steps / 36~1800 R.P.M.			
Headstock and Main Spindle	Spindle speed:	/			
	Range				
		L 36 50 70 105 M 130 180 250 380 H 620 900 1200 1800			
Carriage		TML-1640		TML-1660	
Carriage	Length on bed / Width of carriage	513 mm (20.19") / 412 mm (16.22")			
	Cross slide travel	220 mm (8.6")			
	Top slide travel	130 mm (5.1")			
Threads and Feeds		TML-1640		TML-1660	
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 / 0.3~3.6 M.P.			
	Longitudinal feeds	0.05~1.7 mm (0.002"~0.067")			
	Cross feeds	0.025~0.85 mm (0.001"~0.034")			
Tailstock		TML-1640		TML-1660	
Tailstock	Quill diameter	ø52 mm (2.47")			
	Quill travel	152 mm (6")			
	Taper of center	MT.No.4			
Motor		TML-1640		TML-1660	
Motor	Main spindle	5HP			
	Coolant pump	1/8HP			
Measurement		TML-1640		TML-1660	
Measurement	Weight (Net /Gross) Approx.	1500 / 1650 kgs		1600 / 1750 kgs	
	Packing sizes	2270 mm (89.4")		2785 mm (109.7")	
	Length Width x Height	Width 1120 mm (44.1") x Height 1745 mm (68.7")			

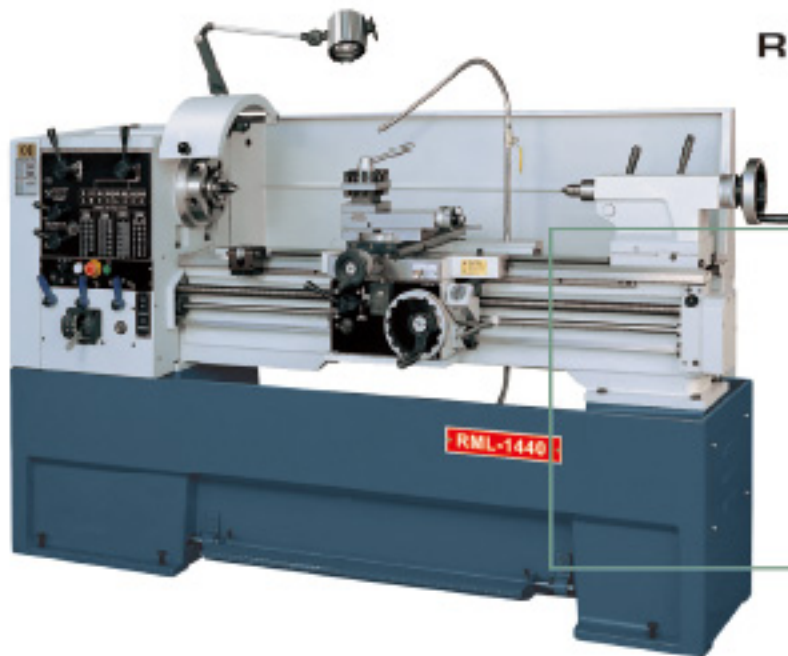
Specifications subject to change without notice



SUN MASTER

HIGH SPEED PRECISION LATHES

RML Series



RML-1440/1460
-1640/1660

CSS Device

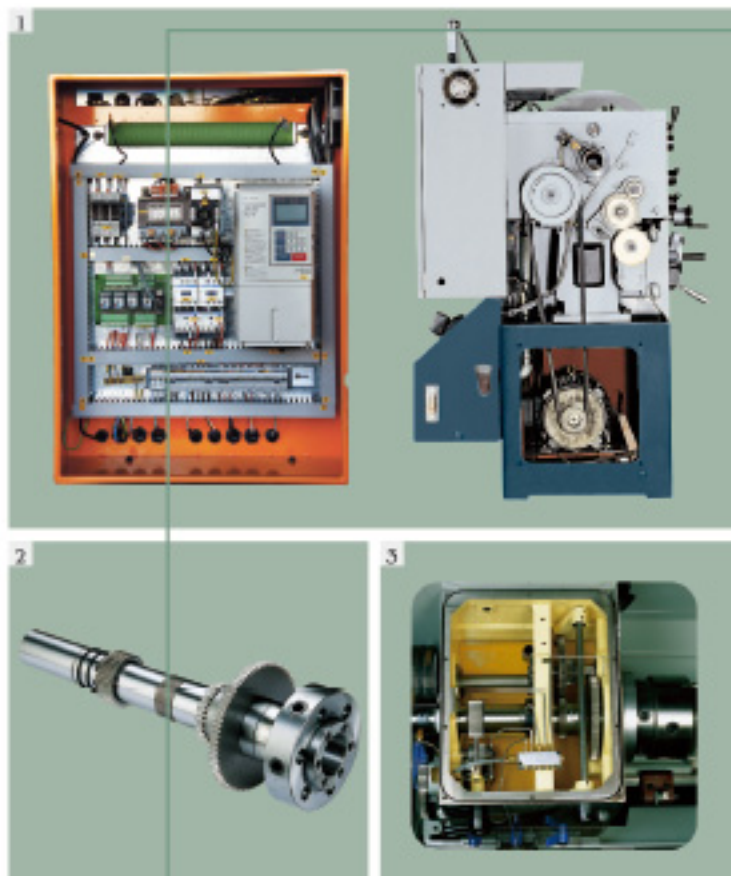


RML-1440V/1460V
-1640V/1660V



Photo shown model: RML-1440

Photo shown model : RML-1610V
w/protect cover on leadscrew



- 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 & reversable apron.
- All models meet CE. (on request)
- All models with 52.5mm (2.066") spindle bore, ASA D1-6.

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] E.V.S. MODEL ELECTRIC CONTROL • CE electric on request.
- The electric cabinet is sealed protected against entrance of water, dirt and other contaminants.
 - A main disconnect switch provided.
 - Electric 1/4HP pump for headstock pressure lubrication.
 - Prolong life expectancy of gears and spindle.
 - Combination of forced lubrication and oil bath system in headstock.
- 12] HEAVY DUTY SPINDLE • Machined from forged alloy steel, hardened ground & dynamically balanced.
- Supported by three points precision bearings (2 taper roller & 1 ball bearing).

- 13] E.V.S. HEADSTOCK • Forced lubrication to all running points.
- Hardened & ground gears and shafts.
 - R.P.M. LED display indicator makes it easy to obtain the optional constant surface speed also improves cutting tool life.
 - Electronic control panel located on top head stock, with RPM display unit, speed control electric knob, emergency stop and motor start push button.
 - Electronic infinitely variable speed with A.C. motor inverter.
 - Two headstock gear speed ranges supply a high torque in low range from 20 up to 400 RPM and in high range from 400 up to 2500 R.P.M.

HIGH SPEED PRECISION LATHES

ERL Series



ERL-1330/1340

Photo shown model : ERL-1340
w/protect cover on leadscrew



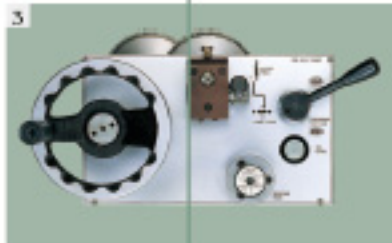
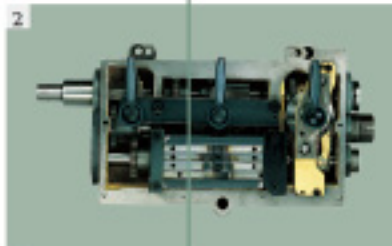
ERL-1330V/1340V

Photo shown model: ERL-1340V

- All models with oil bathed lubrication system to headstock.
- All models meet CE. (on request)
- All models with 40mm (1.57") spindle bore, ASA D1-4.

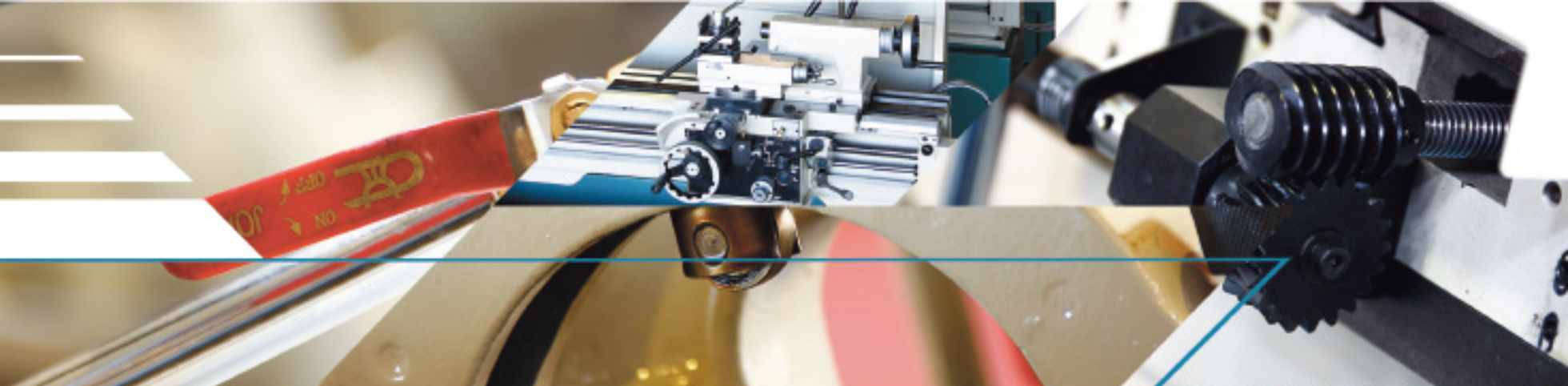
FEATURES

- All castings are properly stabilized and stress relieved.
- Bed ways are hardened & ground to min. HS-70.
- 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.



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

- [4] 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.
- [5] HEAVY DUTY SPINDLE • Machined from forged alloy steel, hardened ground & dynamically balanced. • Two point support by high grade precision, machine tool taper roller.

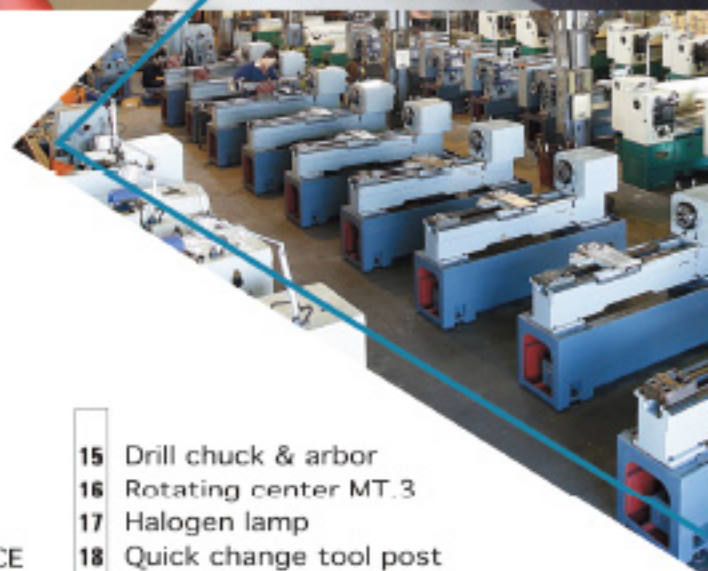


STANDARD ACCESSORIES:

- | | |
|---|---|
| <ol style="list-style-type: none"> 1 Backplate for 7" chuck 2 Dead center MT.3 3 Dead center MT.3 with carbide tip 4 Spindle center sleeve MT.5 | <ol style="list-style-type: none"> 5 Level pads.....6 pcs 6 Tool set & Box 7 Operation manual & parts list |
|---|---|

OPTIONAL ACCESSORIES:

- | | | |
|---|---|--|
| <ol style="list-style-type: none"> 1 3-Jaws scroll 7" chuck 2 4-Jaws independent 8" 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 | <ol style="list-style-type: none"> 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" | <ol style="list-style-type: none"> 15 Drill chuck & arbor 16 Rotating center MT.3 17 Halogen lamp 18 Quick change tool post 19 Carriage micro stop set 20 Digital read out system 21 Full length splash guard |
|---|---|--|



ERL-1330

ERL-1340

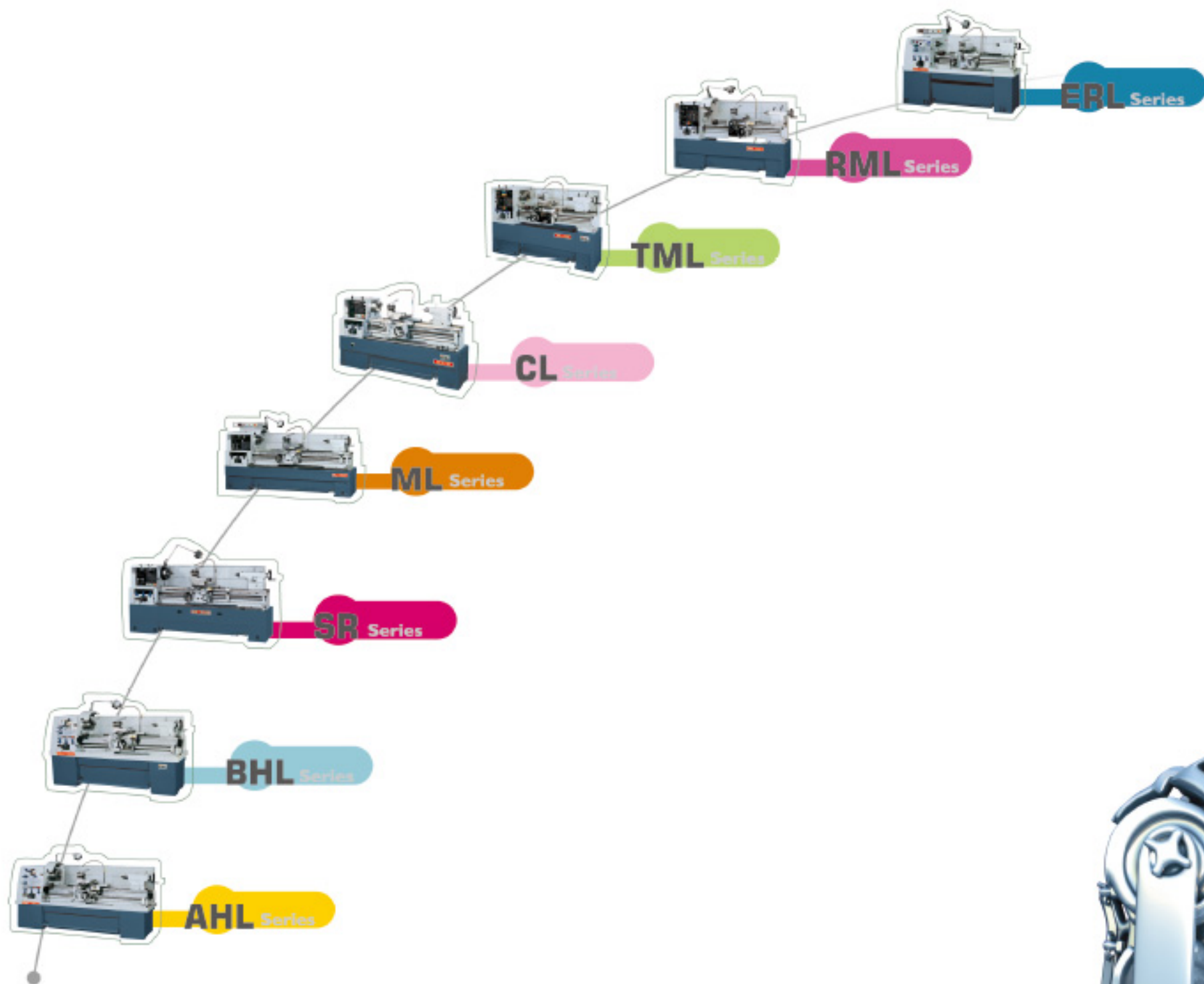
ERL-1330V

ERL-1340V

MODEL

		ERL-1330		ERL-1340		ERL-1330V		ERL-1340V	
Capacity	Height of centers			171 mm (6.73")					
	Swing over bed			ø342 mm (13.46")					
	Swing in gap			ø512 mm (20")		Not available for 1330			
	Swing over cross slide			ø205 mm (8.07")					
	Distance between centers	760 mm (30")		1000 mm (40")		760 mm (30")		1000 mm (40")	
	Width of bed			230 mm (9")					
	Gap width in front of faceplate			150 mm (5")					
Headstock and Main Spindle	Spindle nose, internal taper			D1-4, MT, No.5					
	Spindle center sleeve			MT, No.5 x MT, No.3					
	Spindle bore			ø40 mm (1.57")					
	Spindle speed: / Range	Gear steps		8 steps 4P / 80~2000 R.P.M.		2 steps /		L 100~500 R.P.M.	
		OPT. 16 steps / 2P / 4P		50~1305 R.P.M. 100~2570 R.P.M.		4P		H 500~3000 R.P.M.	
Carriage	Length on bed / Width of carriage			400 mm (15.748") / 384 mm (15.118")					
	Cross slide travel			180 mm (7")					
	Top slide travel			100 mm (4")					
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			0.05~1.7 mm (0.002"~0.067")					
Tailstock	Cross feeds			0.025~0.85 mm (0.001"~0.034")					
	Quill diameter			ø50 mm (1.968")					
	Quill travel			112 mm (4.5")					
Motor	Taper of center			MT.No.3					
	Main spindle	3HP 4P OPT.5 HP 2P/2.5HP 4P				1/8HP		AC 2.2KW (3HP), Inverter	
Measurement	Coolant pump								
	Weight (Net /Gross) Approx.	850 / 1000 kgs		1000 / 1200 kgs		850 / 1000 kgs		1000 / 1200 kgs	
	Packing sizes	Length 2000 mm (78.8")		Length 2270 mm (89.4")		Length 2000 mm (78.8")		Length 2270 mm (89.4")	
		Width x Height		Width 965 mm (38") x Height 1745 mm (68.7")					

Specifications subject to change without notice.



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