



SUN MASTER



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MANUAL LATHE

**3. CLUTCH
TYPE**

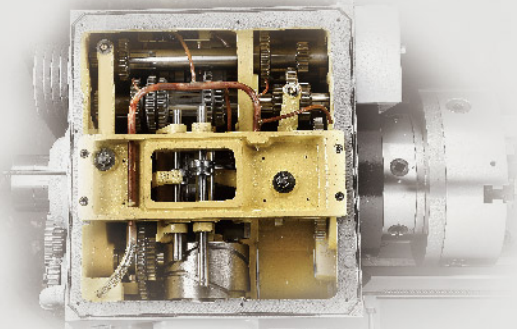
AHL / AHL-V
BHL / BHL-V

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AHL BHL Series

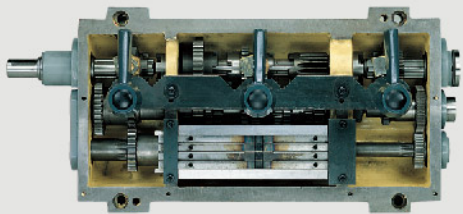
Features

- Nylon safety gears in end train. (Not for every model)
- Shear pin in lead screw.
- Low voltage control in electrical cabinet.



RUGGED HEADSTOCK

- Head housing features outstanding vibration dampening and deformation free performance.
- Rugged head construction gives extra rigidity and heavy cutting.
- All gears and shafts are hardened and precision ground by precision machines.

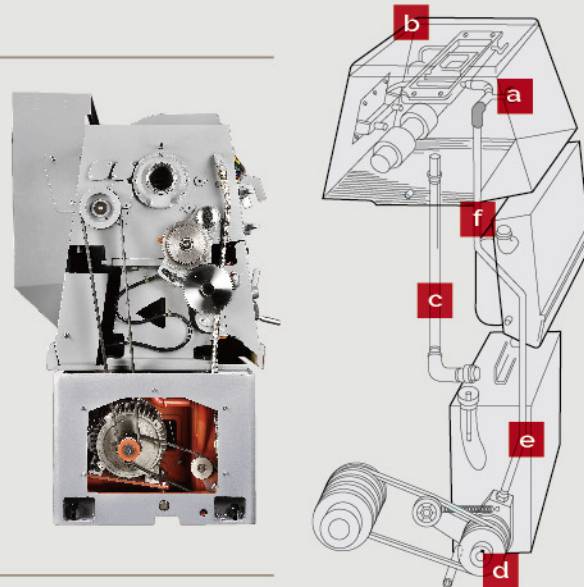


GEAR BOX

- The universal type gear box provides a wide range of inch, metric, M. P. and D.P. threads without changing any gear for increased convenience.
- Gears are hardened.
- Oil bath lubrication in gear box.

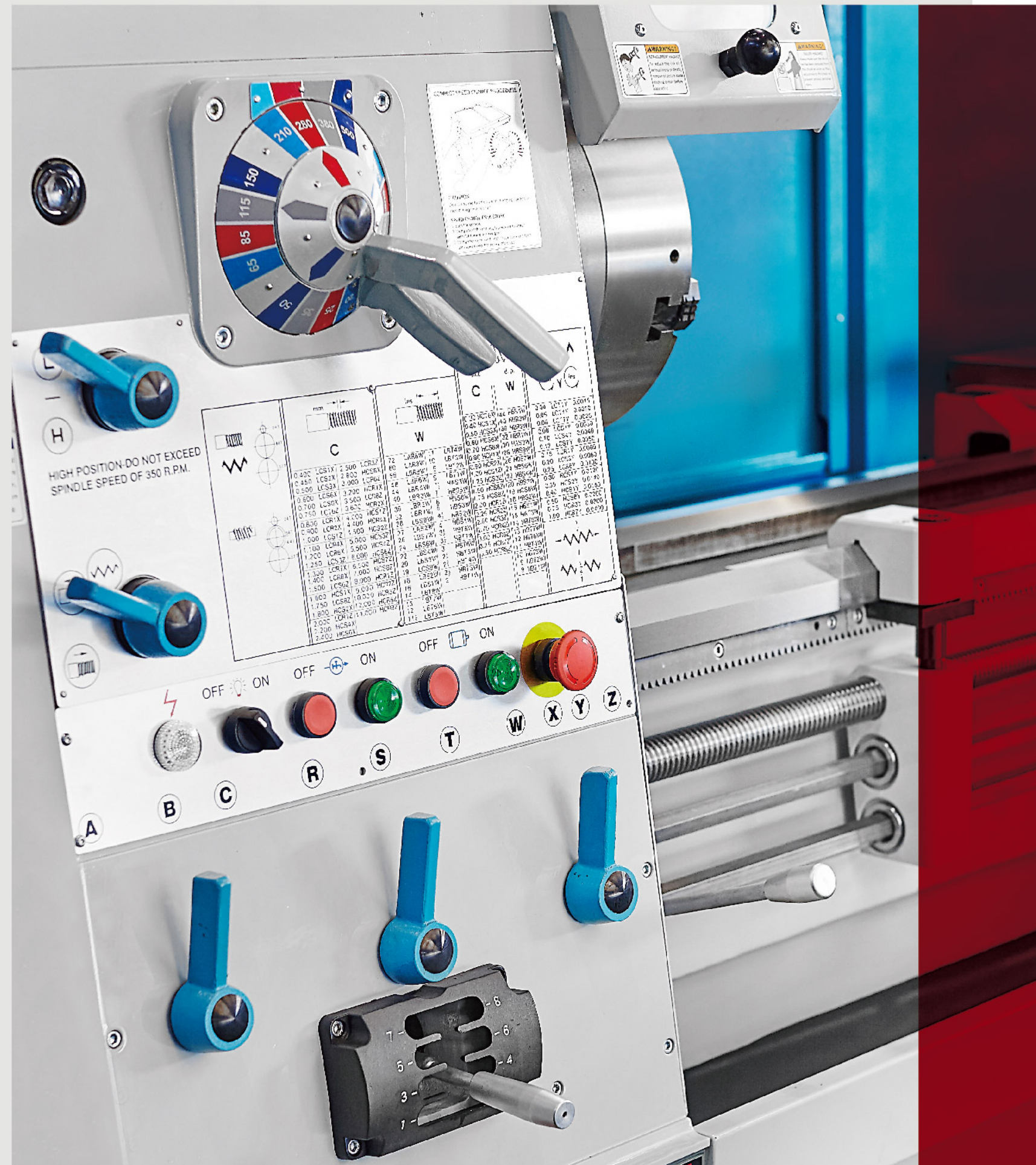
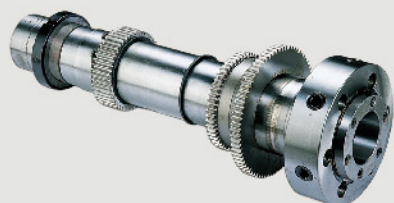
FORCED LUBRICATION IN HEADSTOCK

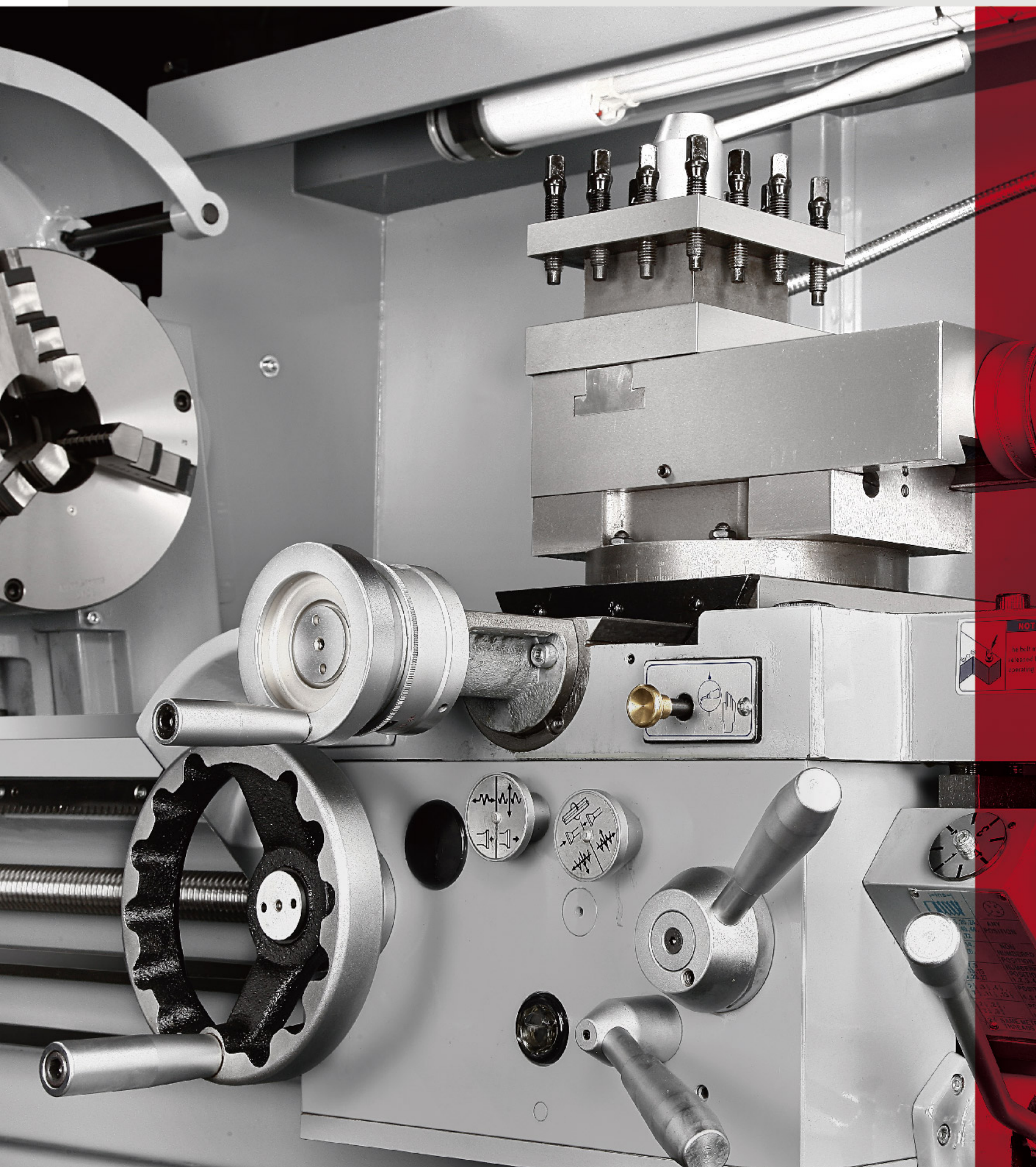
- a** Oil sight window for checking oil level
- b** Pressure lubrication system in headstock ensures better lubrication and cooling effect
- c** Hot oil return
- d** Oil pump
- e** Oil reservoir
- f** Cooling oil inlet



HEAVY DUTY SPINDLE

- Camlock type spindle.
- Precision machined from forged alloy steel, hardened, precision ground and dynamically balanced.
- Three point support by high precision taper roller and ball bearings eliminates chatter when performing heavy cut.



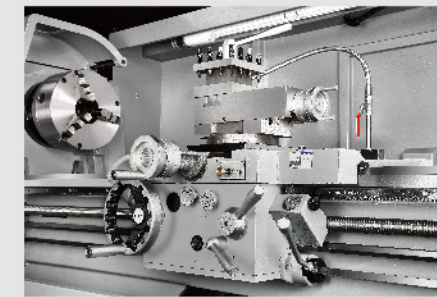
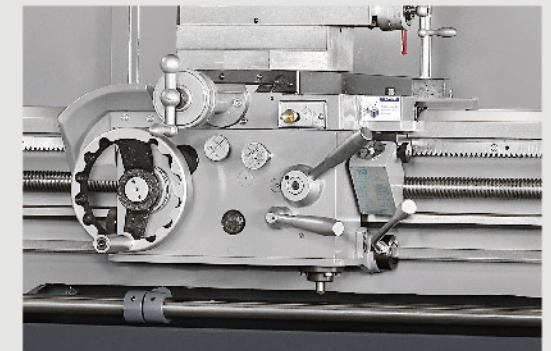


BED

- The ruggedly constructed bed is manufactured from Meehanite cast iron and stress relieved.
- Bed ways hardened and precision ground.

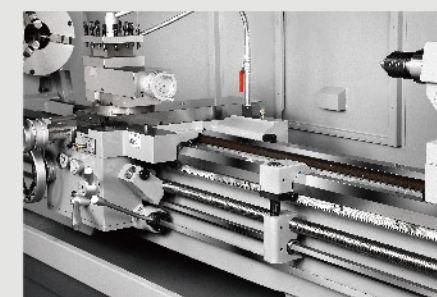
COMPOUND REST

- The compound rest has T-slot for convenient mounting of tool holder (Imperial models only).
- Both the cross slide and the compound rest screws are equipped with inch/metric graduated dials.
- The bottom of the compound slide is graduated in degrees for quick reference when swiveling.



APRON

- The apron is a double wall construction, providing a firm support for power feed shaft.
- Choice of right or left hand wheel.
- Integrated automatic control for longitudinal and cross feeds, forward and reverse feeds.
- An interlock design prevents simultaneous power feed and thread cutting.

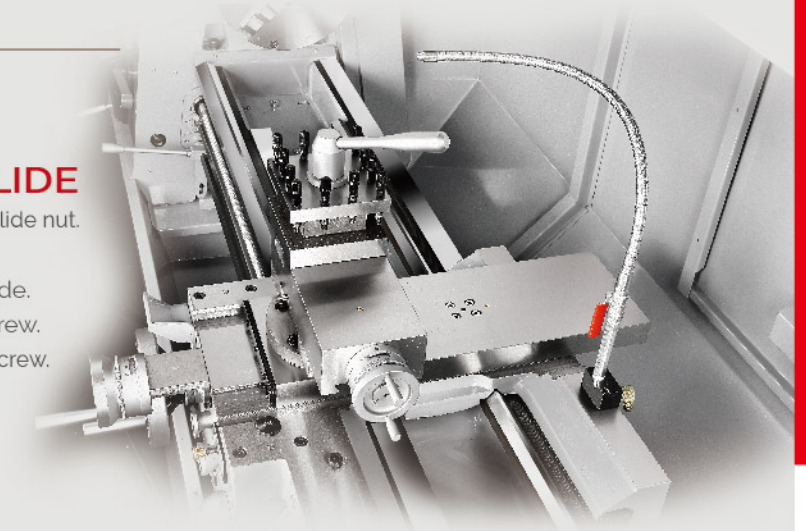


RUGGED TAILSTOCK

- Tailstock quill is graduated in inch/metric scales and has a tang slot for positive drive of tool.
- 2-step tailstock is available on request.

CARRIAGE AND CROSS SLIDE

- Anti-float backlash eliminator is fitted in cross slide nut.
- Safety clutch is equipped to feed shaft.
- One shot lubrication for carriage and top slide.
- Designed with dual dials for inch system screw.
- Designed with metrical dial for metric system screw.



AHL AHL-V Series

- 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. HRC 48-55.
- 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.

STANDARD ACCESSORIES

- Backplate for 12" chuck
- Dead center MT.5
- Dead center MT.5 with carbide tip
- Spindle center sleeve MT.7
- Level pads.....8-10 pcs
- Tool set & Box
- Operation manual & parts list

MODEL	AHL	1840	1860	1880	18120	2240	2260	2280	22120	1840V	1860V	1880V	18120V	2240V	2260V	2280V	22120V	
Capacity																		
Height of centers			230 mm (9.055")				280 mm (11.02")				230 mm (9.055")				280 mm (11.02")			
Swing over bed			Ø460 mm (18.11")				Ø560 mm (22.04")				Ø460 mm (18.11")				Ø560 mm (22.04")			
Swing in gap			Ø710 mm (27.95")				Ø808 mm (31.81")				Ø710 mm (27.95")				Ø808 mm (31.81")			
Swing over cross slide			Ø298 mm (11.93")				Ø390 mm (15.35")				Ø298 mm (11.73")				Ø390 mm (15.35")			
Distance between centers	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	1000 mm (40")	1500 mm (60")	2000 mm (80")	3000 mm (120")	3000 mm (120")	
Width of bed				345 mm (13.58")									345 mm (13.58")					
Gap width in front of faceplate				250 mm (9.84")									250 mm (9.84")					
Headstock and Main Spindle																		
Spindle nose, internal taper				D1-8, MT.No.7									D1-8, MT.No.7					
Spindle center sleeve				MT. No.7 x MT. No.5									MT. No.7 x MT. No.5					
Spindle bore				Ø80 mm (3.149")									Ø80 mm (3.149")					
				16 steps / 20-1600 R.P.M.									4 steps					
Spindle speed:				Green 20 65 210 670									L 18-55 R.P.M.					
Gear steps / Range				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.					
				Disc clutch for Forward / Reverse									Infinitely variable					
Carriage																		
Length on bed / Width of carriage				543 mm (21.37") / 542 mm (21.33")									543 mm (21.37") / 542 mm (21.33")					
Cross slide travel				272 mm (10.7")									272 mm (10.7")					
Top slide travel				135 mm (5.31")									135 mm (5.31")					
Threads and Feeds																		
Whitworth threads: Kinds / Range				38 Kinds / 2-72 T.P.I.									38 Kinds / 2-72 T.P.I.					
Metric threads: Kinds / Range				40 Kinds / 0.4-14 mm									40 Kinds / 0.4-14 mm					
D.P. threads: Kinds / Range				21 Kinds / 8-44 D.P.									21 Kinds / 8-44 D.P.					
M.P. threads: Kinds / Range				18 Kinds / 0.3-3.5 M.P.									18 Kinds / 0.3-3.5 M.P.					
Longitudinal feeds				0.04-1.0 mm (0.0015"-0.04")									0.04-1.0 mm (0.0015"-0.04")					
Cross feeds				0.02-0.5 mm (0.00075"-0.02")									0.02-0.5 mm (0.00075"-0.02")					
Tailstock																		
Quill diameter				Ø76 mm (3")									Ø76 mm (3")					
Quill travel				165 mm (6.5")									165 mm (6.5")					
Taper of center				MT.No.5									MT.No.5					
Motor																		
Main spindle				10HP				12.5HP					AC 7.5kW (10HP), Inverter				AC 9.4kW (12.5HP), Inverter	
Forced lubrication for HD.																	1/4HP	
Coolant pump								1/8HP										1/8HP
Measurement																		
Weight (Net /Gross)	2000kgs	2200kgs	2500kgs	3000kgs	2150kgs	2350kgs	2650kgs	3150kgs	2000kgs	2200kgs	2500kgs	3000kgs	2150kgs	2350kgs	2650kgs	3150kgs	3150kgs	
Approx.	2140kgs	2360kgs	2700kgs	3260kgs	2290kgs	2510kgs	2850kgs	3410kgs	2140kgs	2360kgs	2700kgs	3260kgs	2290kgs	2510kgs	2850kgs	3410kgs	3410kgs	
Packing sizes																		
Length	2535mm (99.8")	3035mm (119.5")	3535mm (139.2")	4624mm (182")	2535mm (99.8")	3035mm (119.5")	3535mm (139.2")	4624mm (182")	2535mm (99.8")	3035mm (119.5")	3535mm (139.2")	4624mm (182")	2535mm (99.8")	3035mm (119.5")	3535mm (139.2")	4624mm (182")	4624mm (182")	
Width x Height	Width 1120 mm (44.1") x Height 1900 mm (74.8")								Width 1120 mm (44.1") x Height 1900 mm (74.8")									

Specifications subject to change without notice.

BHL BHL-V Series

- 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. HRC 48-55.
- 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.

STANDARD ACCESSORIES

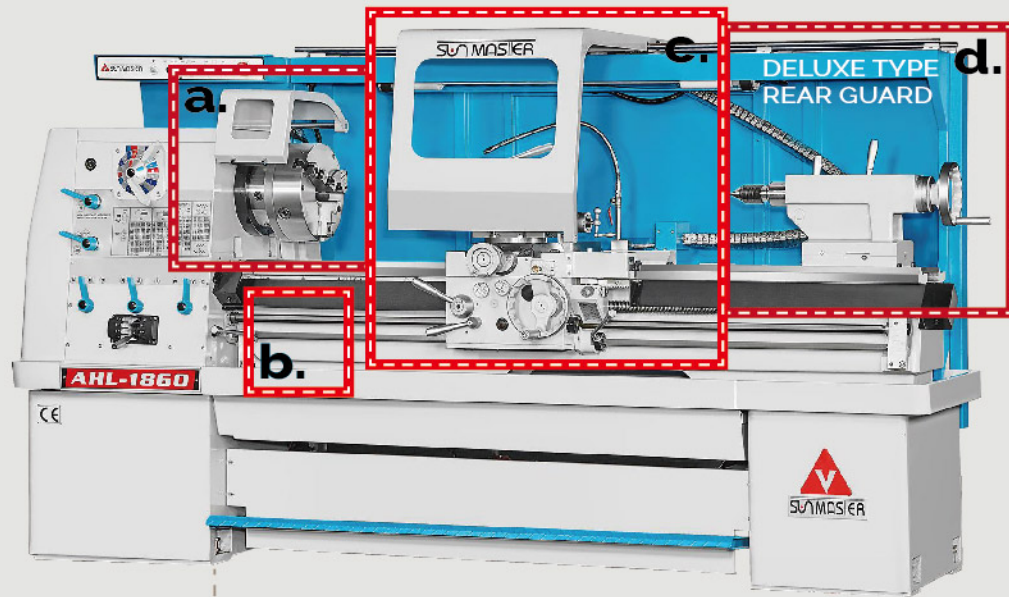
- Backplate for 9" chuck
- Dead center MT.4
- Dead center MT.4 with carbide tip
- Spindle center sleeve MT.6
- Level pads.....8 pcs
- Tool set & Box
- Operation manual & parts list



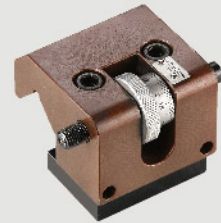
MODEL	BHL	1550	1550V
Capacity			
Height of centers		190 mm (7.48")	
Swing over bed		ø380 mm (14.96")	
Swing in gap		ø610 mm (24")	
Swing over cross slide		ø238 mm (9.37")	
Distance between centers		1250 mm (50")	
Width of bed		280 mm (11")	
Gap width in front of faceplate		265mm (10.43")	
Headstock and Main Spindle			
Spindle nose, internal taper		D1-6, MT.No.6	
Spindle center sleeve		MT. No.6 x MT. No.4	
Spindle bore		ø56 mm (2.2")	
		16 steps / 25-2000 R.P.M.	4 steps
Spindle speed:		Green 25 80 260 840	L 22-72 R.P.M.
Gear steps / Range		Yellow 33 108 350 1120	M 70-235 R.P.M.
		Red 45 140 470 1500	MH 235-780 R.P.M.
		Blue 60 190 625 2000	H 753-2500 R.P.M.
		Disc clutch for Forward / Reverse	Infinitely variable
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")	
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		7.5HP	AC 5.5kW (7.5HP), Inverter
Forced lubrication for HD.		-	1/4HP
Coolant pump			1/8HP
Measurement			
Weight (Net /Gross) Approx.		1450 kgs / 1610 kgs	
Packing sizes	Length	2580 mm (101.58")	
	Width x Height	Width 1120 mm (44.1") x Height 1900 mm (74.8")	

Specifications subject to change without notice.

AHL.BHL Series | Optional Accessories



a 5C LEVER TYPE COLLET CLOSER



b MICROMETER CARRIAGE STOP



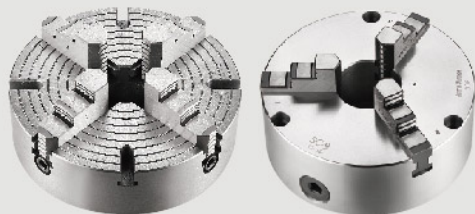
5-STEP CARRIAGE STOP



a CHUCK SAFETY GUARDS
■ Solid and clear acrylic material for safety.



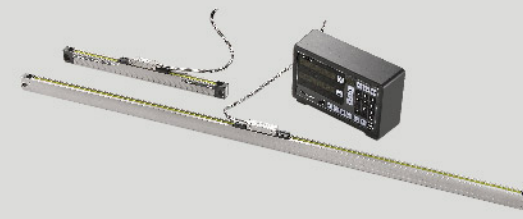
a FACEPLATES
■ Slotted. For all models.



a 4 & 3 JAW CHUCK



d DRILL CHUCKS
■ keyless and key type.
■ All sizes available.
LIVE CENTERS



DIGITAL READOUT SYSTEM (DRO)

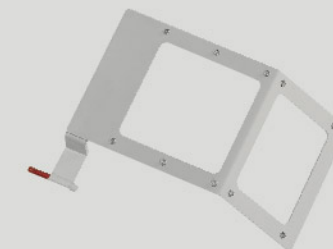
Operator friendly readout systems reduce setup time and increase productivity.

Features available:

- Tool offsets for easy compensation of different tool sizes
- Instant radius/ diameter conversion reduces math errors and allows you to machine to print dimensions.
- 2 or 3 axes display.
- Preset and zero rest.
- Instant inch/mm conversion.
- Near-zero warning.
- Most popular brands.



c TELESCOPIC TAPER ATTACHMENT
■ Available for all models.



c TOOL POST SAFETY GUARD



c HAND WHEEL COVER



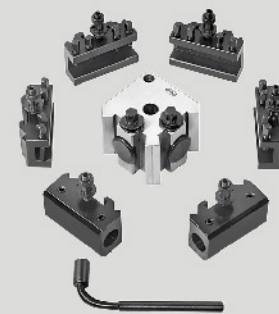
c STEADY REST
■ For all models with roller tips.



c POWER FEED



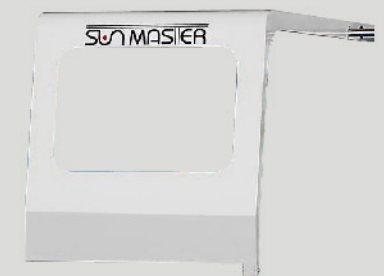
c WORKING LIGHT



c QUICK CHANGE TOOL POST SET



c FOLLOW REST
■ For all models.
■ With bronze or roller tips.



c SLIDING TOOL POST SAFETY GUARD