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# MANUAL LATHE

**3. CLUTCH  
TYPE**

AHL / AHL-V  
BHL / BHL-V

# AHL BHL Series

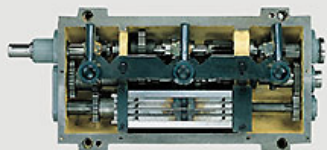
## Features

- 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.

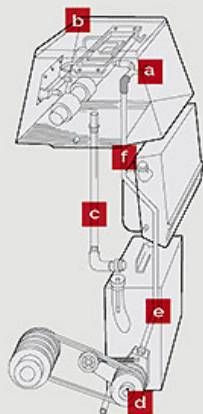


### GEAR BOX

- 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.

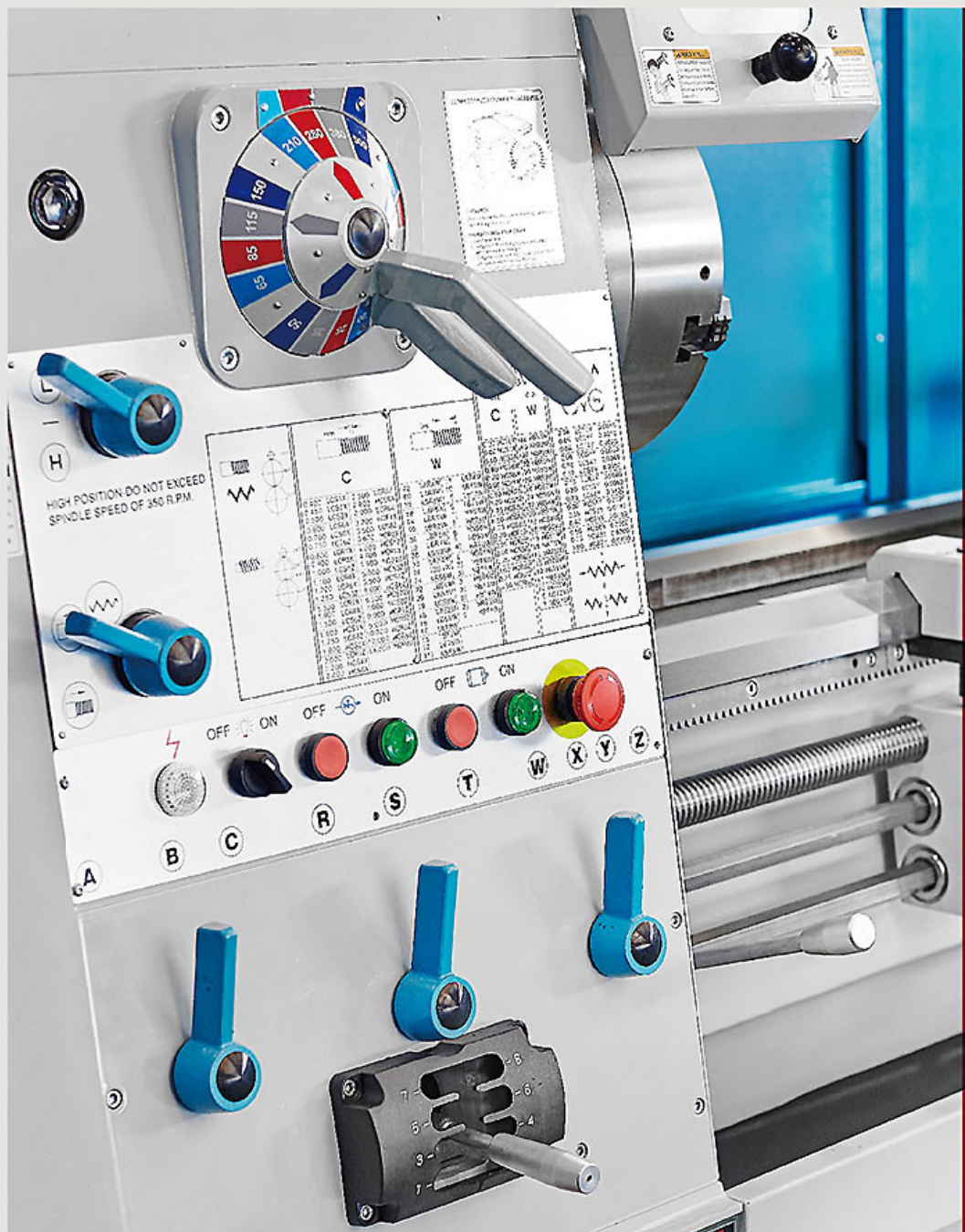
### FORCED LUBRICATION IN HEADSTOCK

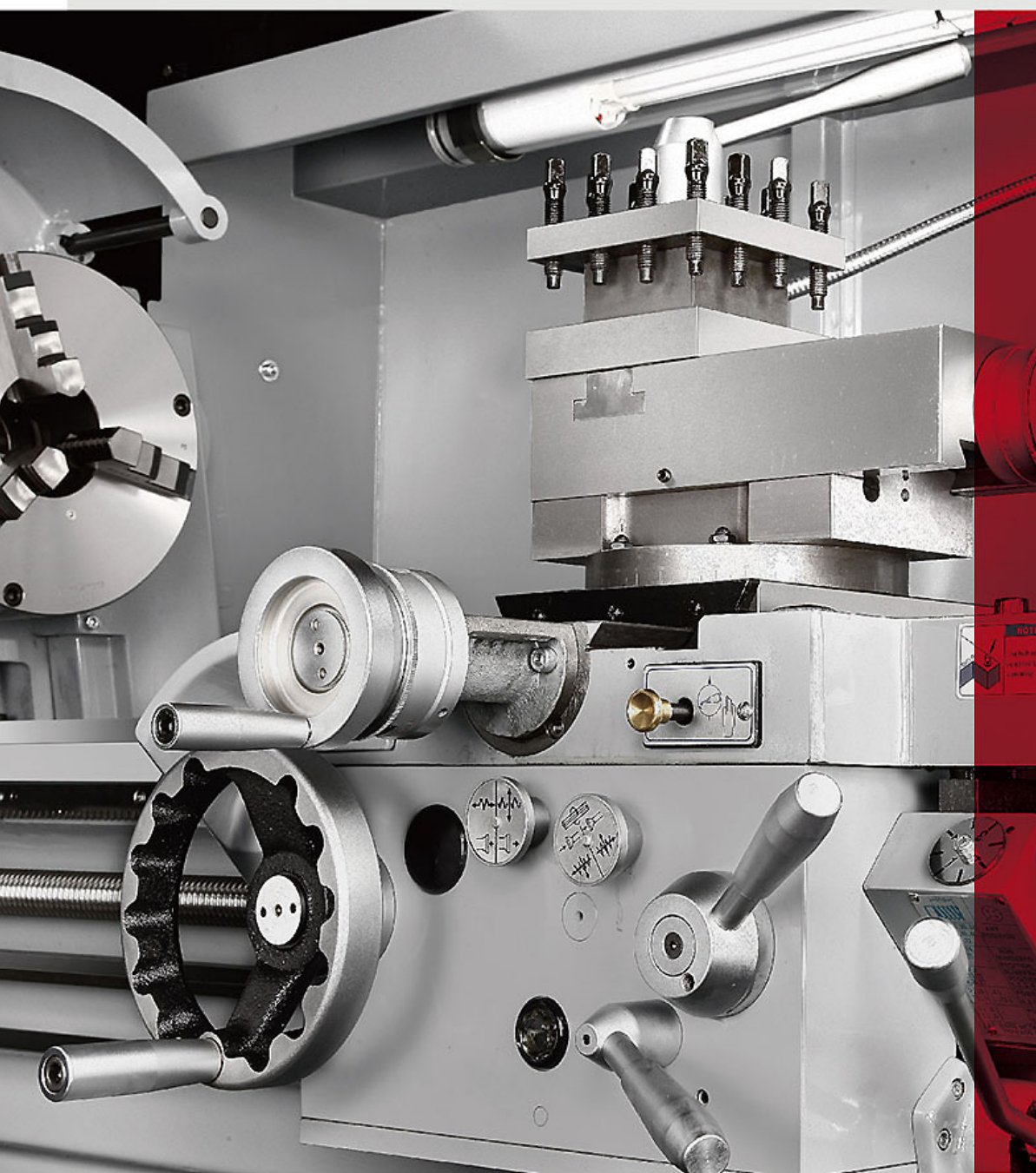
- Oil sight window for checking oil level
- Pressure lubrication system in headstock ensures better lubrication and cooling effect
- Hot oil return
- Oil pump
- Oil reservoir
- Cooling oil inlet



### 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.



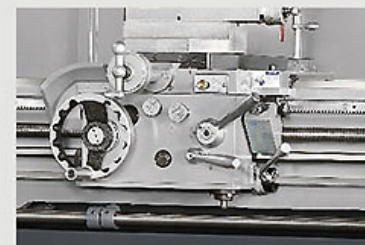


### BED

- 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.

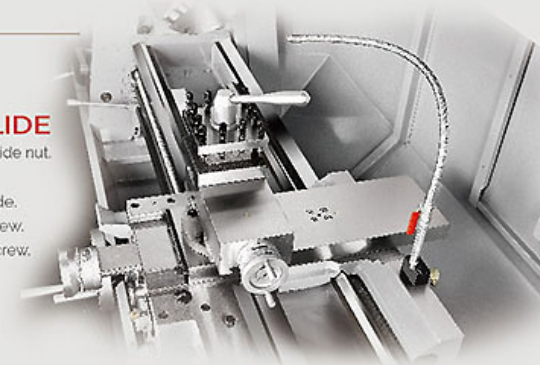


### RUGGED TAILSTOCK

- 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

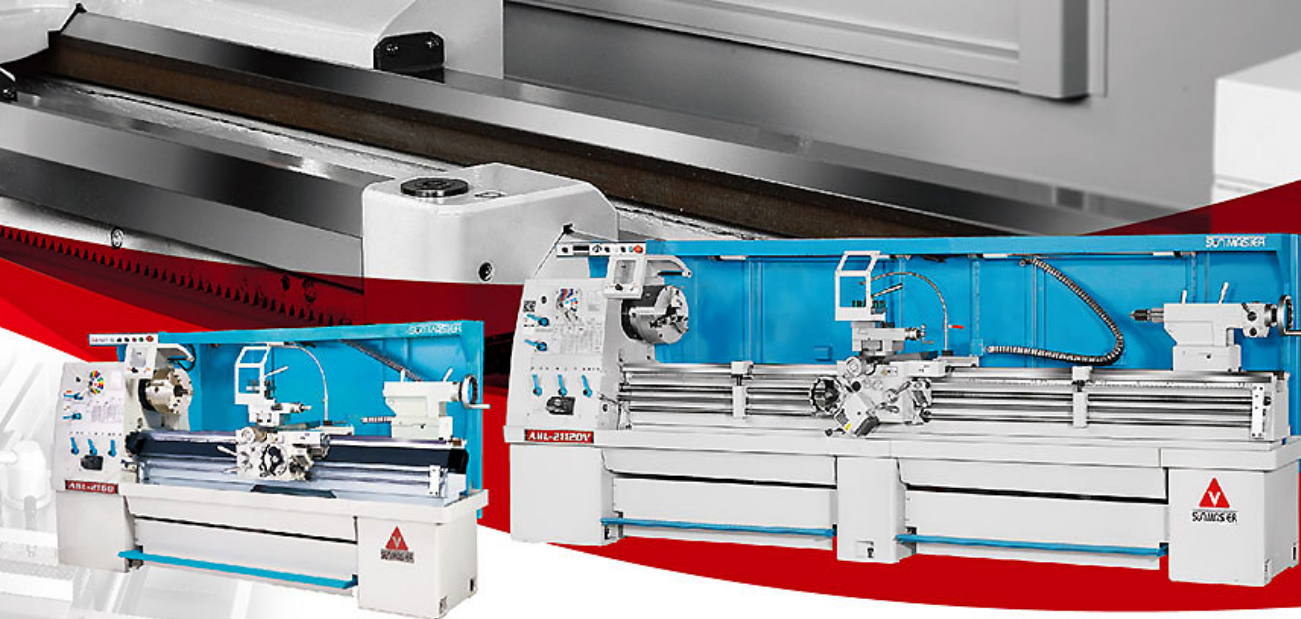
- All models with mechanical clutch. (excluded E.V.S model).
- All models with auto lubrication system to headstock & external tank for cooling the oil.
- All models meet CE. (on request).
- All models with 80mm (3.149") spindle bore, ASA D1-8.

## 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
- Level pads.....8-10 pcs
- Dead center MT5
- Tool set & Box
- Dead center MT5 with carbide tip
- Operation manual & parts list
- Spindle center sleeve MT7



MODEL	AHL	1840	1860	1880	18120	2240	2260	2280	22120	1840V	1860V	1880V	18120V	2240V	2260V	2280V	22120V
<b>Capacity</b>																	
Height of centers			230 mm (9.055")				280 mm (11.02")				230 mm (9.055")					280 mm (11.02")	
Swing over bed			0460 mm (18.11")				0560 mm (22.04")				0460 mm (18.11")					0560 mm (22.04")	
Swing in gap			0710 mm (27.95")				0808 mm (31.81")				0710 mm (27.95")					0808 mm (31.81")	
Swing over cross slide			0298 mm (11.93")				0390 mm (15.35")				0298 mm (11.73")					0390 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")	
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")				
<b>Headstock and Main Spindle</b>																	
Spindle nose, internal taper					D1-8, MTNo7								D1-8, MTNo7				
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 RPM.								4 steps				
					Green 20 65 210 670								L 18-55 RPM				
					Yellow 25 85 280 900								M 55-180 RPM				
					Red 35 115 380 1200								MH 180-600 RPM				
					Blue 50 150 500 1600								H 600-1800 RPM				
					Disc clutch for Forward / Reverse								Infinitely variable				
<b>Carriage</b>																	
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")				
<b>Threads and Feeds</b>																	
Whitworth threads: Kinds / Range					38 Kinds / 2-72 TPI								38 Kinds / 2-72 TPI				
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 DP								21 Kinds / 8-44 DP				
M.P. threads: Kinds / Range					18 Kinds / 0.3-3.5 MP								18 Kinds / 0.3-3.5 MP				
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")				
<b>Tailstock</b>																	
Quill diameter					ø76 mm (3")								ø76 mm (3")				
Quill travel					165 mm (6.5")								165 mm (6.5")				
Taper of center					MTNo.5								MTNo.5				
<b>Motor</b>																	
Main spindle					10HP								12.5HP				
Forced lubrication for HD.					1/8HP								AC 7.5kW (10HP), Inverter				
Coolant pump					1/8HP								AC 9.4kW (12.5HP), Inverter				
<b>Measurement</b>																	
Weight (Net /Gross)					2000kgs	2200kgs	2500kgs	3000kgs	2150kgs	2350kgs	2650kgs	3150kgs	2000kgs	2200kgs	2500kgs	3000kgs	2150kgs
Approx.					2140kgs	2360kgs	2700kgs	3260kgs	2290kgs	2510kgs	2850kgs	3410kgs	2140kgs	2360kgs	2700kgs	3260kgs	2290kgs
					2535mm	3035mm	3535mm	4624mm	2535mm	3035mm	3535mm	4624mm	2535mm	3035mm	3535mm	4624mm	2535mm
					(99.8")	(119.5")	(139.2")	(182")	(99.8")	(119.5")	(139.2")	(182")	(99.8")	(119.5")	(139.2")	(182")	(99.8")
<b>Packing sizes</b>					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

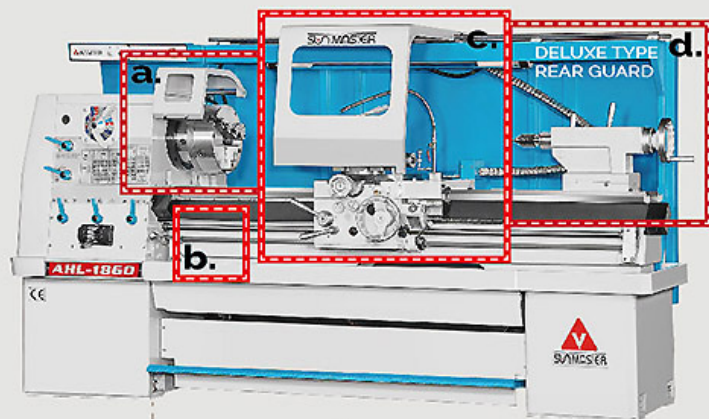
- Backplate for 9" chuck
- Level pads....8 pcs
- Dead center MT.4
- Tool set & Box
- Dead center MT.4 with carbide tip
- Operation manual & parts list
- Spindle center sleeve MT.6



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, MTNo.6	
Spindle center sleeve		MT No.6 x MT No.4	
Spindle bore		ø56 mm (2.2")	
Spindle speed:		16 steps / 25-2000 RPM	4 steps
Green	25	80 260 840	L 22-72 RPM
Yellow	33	108 350 1120	M 70-235 RPM
Red	45	140 470 1500	MH 235-780 RPM
Blue	60	190 625 2000	H 753-2500 RPM
Gear steps / Range		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 TPI	
Metric threads: Kinds / Range		39 Kinds / 0.2-14 mm	
D.P. threads: Kinds / Range		21 Kinds / 8-44 DP	
M.P. threads: Kinds / Range		18 Kinds / 0.3-3.5 MP	
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		MTNo.4	
Motor			
Main spindle		75HP	AC 55KW (75HP), Inverter
Forced lubrication for HD.			1/4HP
Coolant pump			1/8HP
Measurement			
Weight (Net /Gross) Approx.		1450 kgs / 1610 kgs	
Packing sizes		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)

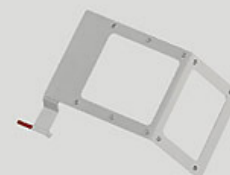
Operator friendly readout systems reduce setup time and increase productivity.

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