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# **ASL-8MY 4-Axis CNC Lathe**

## **Universal Driven-Tool Y-Axis Lathe**

**23.6" Swing - Over Bedways**  
**15.7" Swing - Over Saddle**  
**17.3" & 34.4" Turning Lengths**



- **A2-6 Spindle w/ 2.5" Bar Diameter**
- **8" 3-Jaw Hydraulic Chuck w/ 2.5" Thru-Bore**
- **12-Station Driven Tool Turret**
- **Y-Axis with 3" Travel ( $\pm 1.5"$ , 40mm)**
- **4,000 RPM Spindle Speed**
- **Renishaw Tool Pre-Setter**
- **Parts Catcher**
- **Tailstock with Programmable Quill**

# **STANDARD ASL – 8MY MACHINE FEATURES**

The 45° slant bed box-way ASL-8 CNC lathe is made of premium shock-absorbing Meehanite® processed cast iron for superb interrupted cut capability. The heavy one-piece bed casting is heat-treated, annealed twice and ground to eliminate stress, thermal growth and vibration. The sliding surfaces in the X, Y, & Z axes are hand scraped, oil dimpled, and coated with Turcite-B for long-life maintenance free operation with excellent stick-slip characteristics. The one-piece base and box-way lathe bed is an engineered torque-tube structure that demonstrates excellent stability and anti-flexing capability under severe cutting conditions. The chip and coolant pan is designed as a separate unit to keep hot chips away from the machine bed in order to control thermal distortion of the machine casting in a sustained production environment.

The robust headstock casting is mounted on the same ground way surface as the tailstock to maintain perfect alignment and center height regardless of bed temperature. The headstock is ribbed to increase surface area to better facilitate heat dissipation for optimal thermal stability. The heavy-duty spindle is supported by a double row of cylindrical roller bearing in front and rear, with duplex pair of angular thrust bearings mounted in between. The cylindrical roller bearings feature a large contact surface to ensure high rigidity for heavy cutting loads and superb surface finishes. All spindle bearings are precision class P4 and are grease lubricated for a long service life.

## **Renishaw Tool Pre-Setter –**

The included Renishaw removable tool pre-setter makes tool setting quick and easy while reducing profit sapping setup time.

## **True Slant-Bed Lathe Design –**

The one-piece 45° true slant bed design is made of premium Meehanite® processed cast iron for superb vibration dampening for superior surface finish and improved tool life.

## **Programmable Tailstock Quill –**

The programmable tailstock quill keeps constant pressure to the workpiece so proper support is always available, even if there is a slight shift in the part location. The pressure is adjustable to meet the specific need that the application requires. The tailstock body moves under hydraulic piston power to the limit switch setting.

## **Parts Catcher –**

The standard parts catcher extracts the finished workpiece from the work area without any machine interruption for uninterrupted machining efficiency.

## **Chip Wash-Down & Chip Conveyor –**

The steep sheet metal angles and coolant flow forces chips on to the chip conveyor so that they can efficiently discharge them from the right side of the machine to simplify maintenance.

## **Coolant Tramp Oil Separator Unit –**

The included coolant tramp oil separator unit removes tramp oil off of the surface of the coolant to reduce maintenance and extend coolant life. This device reduces maintenance interruptions help increase machine productivity.

## **Auto Power Shut Off –**

The control's auto shut off feature automatically shuts down the machine once a long program is finished. This capability enhances your ability to let the machine run lights-out for extended production capability.

## **Ball-Bar Testing –**

The **geometric ball bar test** conducted on each machine checks for servo gain synchronization, backlash, lateral play, squareness, and straightness to ensure your machine will perform to our rigid accuracy and performance standards. **Laser inspection technology** is employed to measure linear and pitch error accuracy and repeatability to ensure high quality machine performance. The spindle is **dynamically balanced** to ensure long term production performance. Premium quality ball screws are double-anchored and pre-tensioned, and then 100% inspected for parallelism to the axis guideways. The rotational torque of each ballscrew is inspected over the entire length of travel to guarantee a true smooth non-binding alignment to ensure maximum service life and the highest possible machining accuracy.

## ASL-8MY MACHINE FEATURES

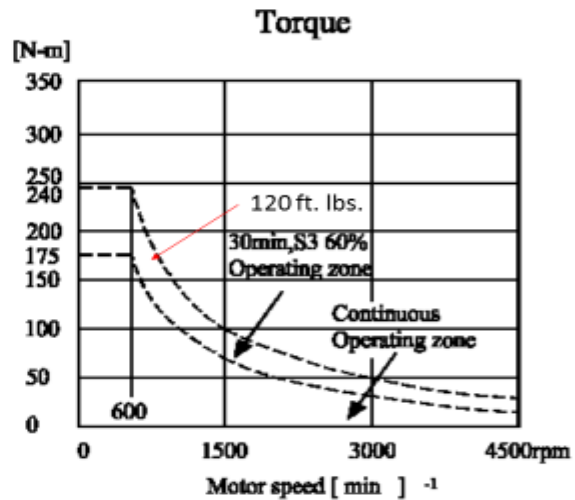
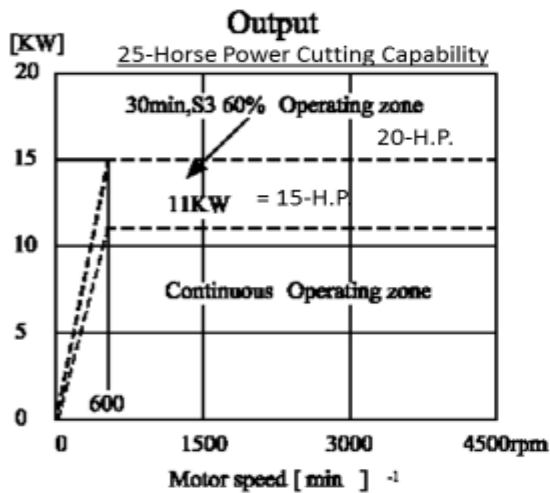


SMW AUTOBLOCK SLU-1 Steady Rest ( $\varnothing$ .16" –  $\varnothing$  2.52" capacity) in photo is optional.

Ballscrews are centered between the guideways and are direct mount to the AC servo motors.

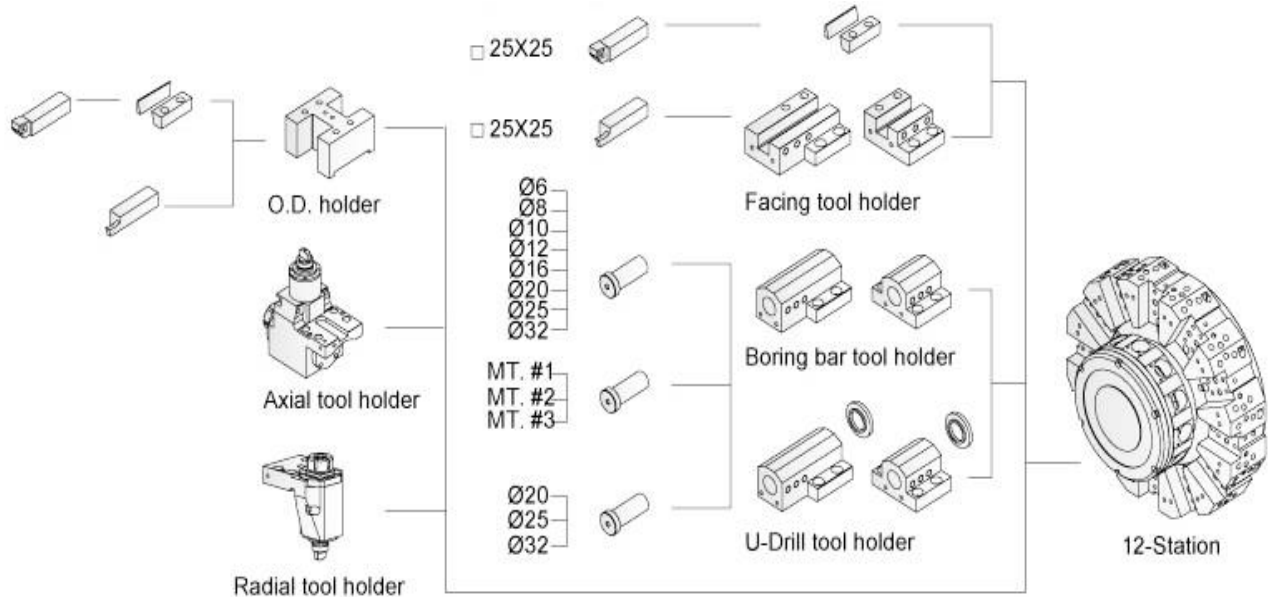
The tailstock is mounted on widely spaced guideways and the heavy-duty design ensures ample rigidity for long heavy shafts. The 3" diameter quill features 3.15" of quill stroke and is activated manually by foot pedal or automatically in the part program by M-code. The Morse Taper #4 center is suitable for heavy loads.

### ASL-8 (α22/6000ip) A2-6



# 12-Station BMT-40 Servo Driven Tool Turret

The 12-station servo driven tool turret uses a 3-piece coupling for quick indexing and 26,000 lbs. of rigid clamp force to provide a stable cutting platform for high metal removal rates. The high-speed indexing system provides quick 0.4-second tool changes. Turret indexing is not-stop bi-directional and the rotation, deceleration and clamp force are all controlled by a high-torque servo indexing motor. Turret position is determined and confirmed by a rotary encoder, and clamp complete is confirmed by a proximity switch. Radial mounted rugged BMT-40 Tooling with excellent alignment characteristics is used for the cutting tools.



# ASL-8MY CNC Lathe Machine Specifications

## Capacity & Dimensions-

	ASL-8MY	ASL-8LMY
Swing over Bed	23.6" (600mm)	
Swing over Saddle	15.7" (400mm)	
Maximum Cutting Diameter	9.4" (240mm)	
Maximum Cutting Length	17.3" (440mm)	34.4" (875mm)

## Spindle-

Spindle Motor Horsepower - 11/15kw 20-HP 30-minute duty rating, 15-HP constant duty	25-HP Peak Cutting Power
Spindle Speed	4,000 RPM
Spindle Torque Maximum	135 ft. lbs.
Spindle Nose	A2-6
Bar Capacity (in draw tube)	2.55" (65mm)
Chuck Diameter(with 2.56" (65mm) through-hole)	8"

## Axis-

Axis Travel – X-axis	8.66" (220mm)	
Axis Travel – Y-axis	3" (±1.5") (±40mm)	
Axis Travel – Z-axis	22.4" (570mm)	41.3" (1050mm)
C-Axis Resolution	0.0001°, 360,000 radial positions	
Ballscrew Diameter / Pitch Rate – X Axis	Ø32mm / 8mm pitch	
Ballscrew Diameter / Pitch Rate – Z Axis	Ø32mm / 8mm pitch	
Axis Drive Motors - X & Z	3-Horsepower (2.2kw)	
Axis Thrust – Maximum - X & Z Axis	4612 lbs.	
Rapid Traverse Feedrate X, Z	787 IPM (20m/min)	
Rapid Traverse Feedrate Y	393 IPM (10m/min)	
Minimum input unit	0.0001" (0.001mm = 40 millionths of an inch)	
Guide Ways / Slant Bed Angle	Box ways / 45°	

## Tool Turret-

Tool stations – any combination of ID/OD tooling /Index time	Servo indexing type 12-stations
Tool Index Time- adjacent tool station / 180° index	0.19 sec. / 1.2 sec.
O.D. Tooling (25mm when specified for metric users)	1" square shank tools
I.D. Tooling (32mm when specified for metric users)	1.25" (4 I.D. holders included)
Driven Tool System / Power (Mori Seiki style BMT-40)	BMT-40 / 3-Horsepower (2.2kw)
Driven Tool rotary speed / rotary torque	6,000 rpm / 30 Nm

## Tailstock-

Tailstock Body Travel	21.2" (540mm)	41.1" (1045mm)
Quill diameter	2.95" (75 mm)	
Quill stroke – programmable hydraulic actuation	3.15" (80 mm)	
Quill taper	MT-4 Morse Taper # 4	

## Specifications –

Power Requirements	220vac ±5%, 42-amps	
Floor Space Requirements - WxH	63" x 77"	
Floor Space Requirements - Length	126" (+ 25" for chip conveyor)	153"
Machine Weight	9,918 lbs.	13,237 lbs.
Hydraulic Motor Power / Pressure / Oil	2-H.P. / 600 PSI / Mobil #24 oil	
Coolant Pump / Coolant Pump Pressure	3/4-HP / 60 PSI	

**The Ganesh ASL-8MY CNC lathe is manufactured in our  
Certified ISO 9001 Production Facility in Taiwan.**

# MITSUBISHI M80 HIGH-PERFORMANCE CNC CONTROL

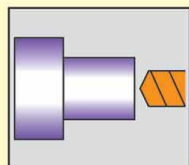


The **Mitsubishi M80 High-Performance CNC control** provides the highest level of productivity, intuitive usability, and functionality. The advanced control algorithm uses a Mitsubishi CNC-dedicated 64-Bit CPU running at 67,500 blocks per minute with 680-block look-ahead under NANO control with **Super Smooth Surface control** for superior surface finishes. The ultra-high speed fiber-optic drive communication (3 times faster) and distributed architecture delegates routine motion control operations to intelligent servo and spindle amplifiers reducing processing speed and improving cycle time and productivity. Operators appreciate the ergonomics of the easy-to-use Human Machine Interface that can be easily customized. Navi-Conversational programming, tool-life monitoring, background editing, tool and workpiece pick-up measurement, modal program search to restart the program at the exact point of interruption are all standard. Two 32GB SD memory Card Slots plus USB teamed with the 512-KB of resident memory provide ample program storage. Program validation uses easy viewing 3-dimensional solid model graphics.

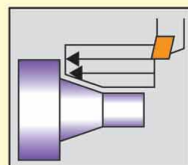
- **Mitsubishi developed CNC-Dedicated 64-Bit CPU with highly efficient RISC architecture**
- **10” Touch Screen** that operates like a smart phone that can pinch to zoom, rotate, and scroll.
- **Includes Two 32GB SD** memory card slots for data storage & DNC operation with edit capability
- **680 block buffered look-ahead** and a blazing **67,500 block per minute processing speed**

**The 4-features above work in harmony to provide faster program throughput & greater productivity**

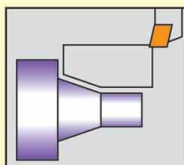
- Mid-program restart function for operator convenience after a program interruption
- Dampened backlash compensation eliminates spiking during the axis reversal moves for higher accuracy machining, superb surface finishes, and exacting workpiece feature definition.
- 10-nanometer interpolation with 680-block look-ahead provide fine surface finishes and detailed arc and radius features follow the program commands precisely
- Least input and command increment: 0.1µm
- 4-axis simultaneous contour control capability & high-speed synchronous rigid tapping
- Graphics –Tool path and 3-D part shape can be drawn to help detect errors at an early stage
- NC Monitor – monitoring of machine screens for observation on a remote PC
- Intuitive HMI for ease of operation with rapid setup & changeover and “on the fly” tool offsets
- Program copy, move, delete functions, and input guidance screens help create part programs
- Ethernet RJ-45, USB, RS-232, 2 SD Card, and a USB port provide a choice of communications.



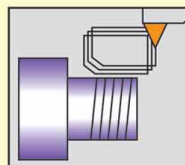
Lathe drilling



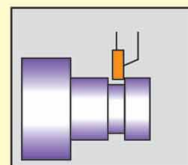
Stock removal  
in turning



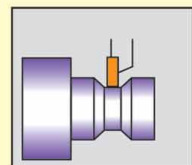
Finishing



Threading



Grooving  
(Normal)



Grooving  
(Trapezoidal)