



**GANESH
MACHINERY**
The Edge in Cutting.

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ASL-15MY 4-Axis CNC Lathe

Universal Driven-Tool Y-Axis Lathe

35" Swing over Bedways, 28" Swing over Saddle
17.7" Maximum Turning Diameter
23.2" Turning Length



- **A2-11 Spindle w/ 4.1" Bar Diameter in Drawtube**
- **15" 3-Jaw Hydraulic Chuck w/ 4" Thru-Bore**
- **2,500 RPM Spindle Speed**
- **12-Station BMT-65 Driven Tool Turret**
- **Renishaw Tool Setter**
- **Tailstock with Programmable Quill**
- **Mitsubishi M80 CNC Control w/ Premium Drives & Motors**

STANDARD ASL-15MY MACHINE FEATURES

The 30° box way slant bed ASL-15 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 to Rc53, annealed twice and ground to eliminate stress, thermal growth and vibration. The sliding surfaces 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 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.

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.

True Slant-Bed Lathe Design –

The one-piece 30° true slant-bed design is made of premium Meehanite® processed cast iron for superb vibration dampening for superior surface finish and improved tool life.

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 –

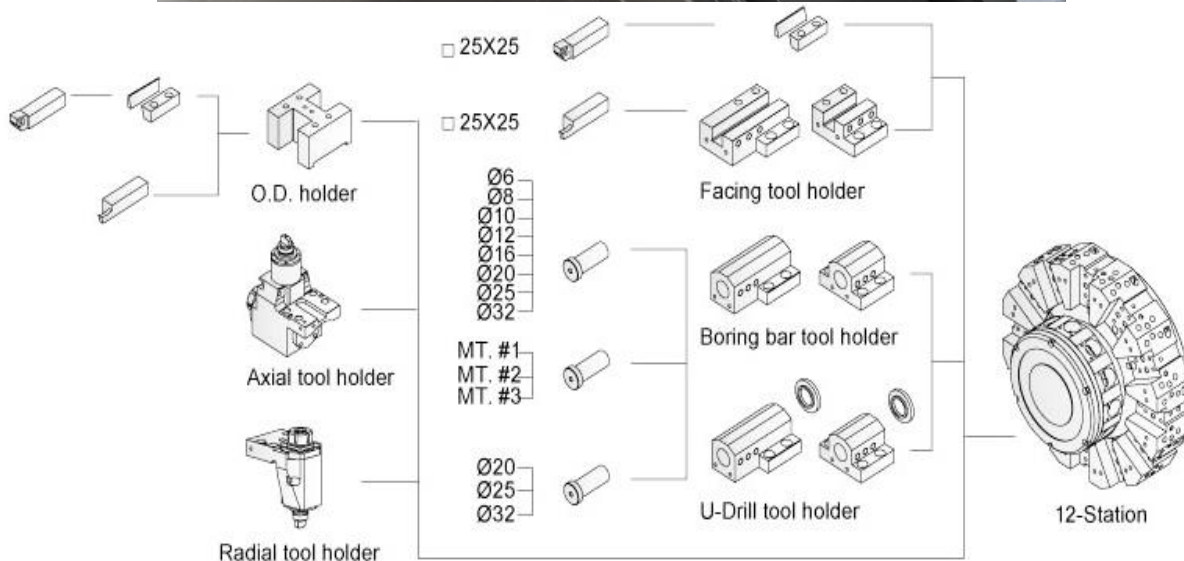
The control's auto shut off feature automatically shuts down the machine once a long program is finished. This capability enhances your ability to let the machine run lights-out for extended production capability.

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.

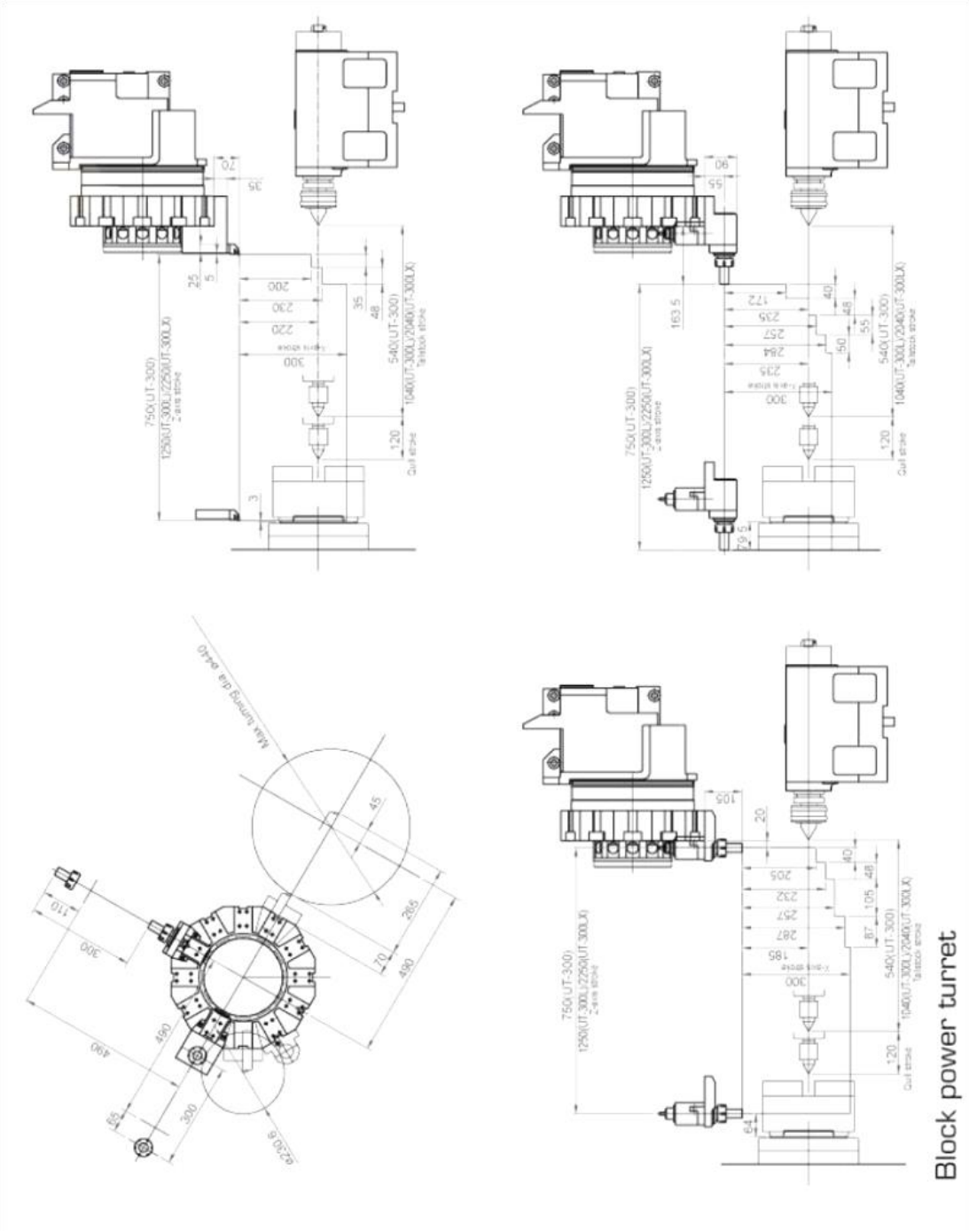
12-Station BMT-65 Servo Driven Tool Turret

The 12-station BMT-65 driven tool turret uses an extra-large 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 motor. Turret position is determined and confirmed by a rotary encoder, and clamp complete is confirmed by a proximity switch.



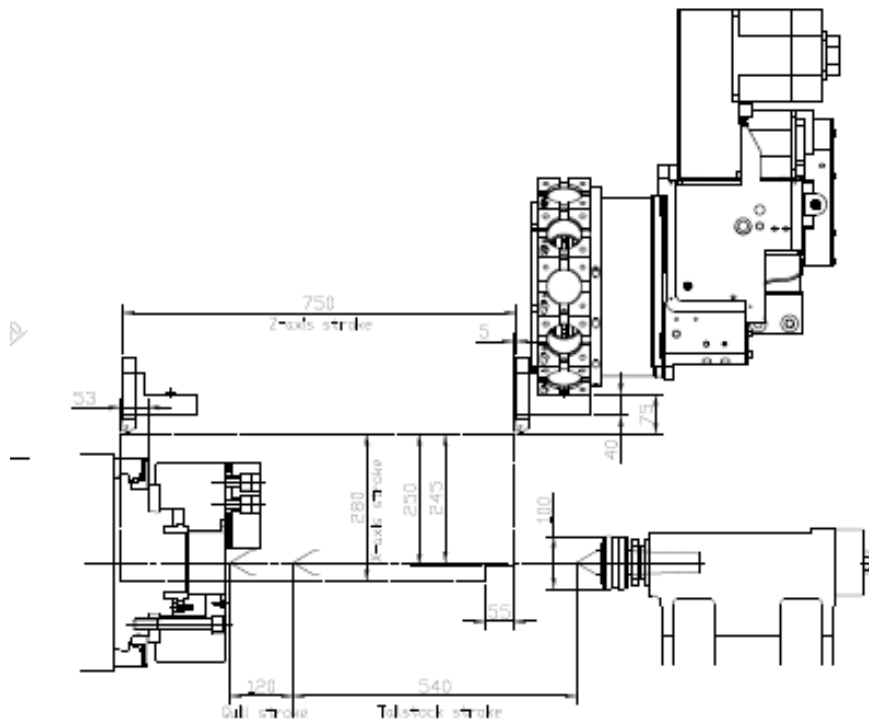
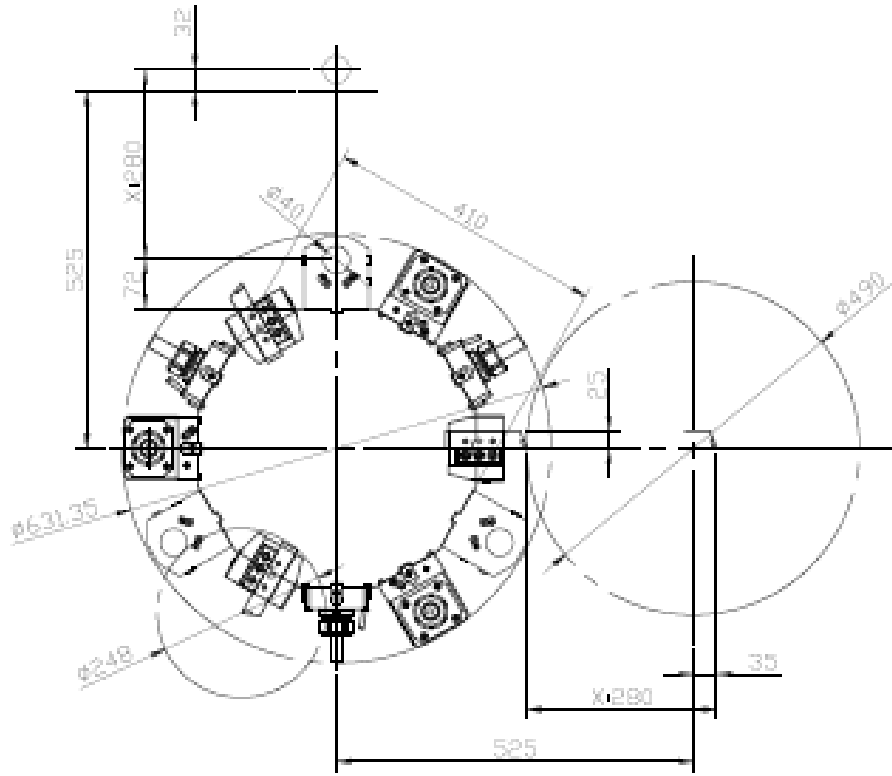
1-R/H & 1-L/H 1" facing toolholder, 4-boring bar holders Ø1-1/2" included with machine.
 Bore bar bushings for 1-1/2" Boring Bar Holders: 3/8", 1/2", 5/8", 3/4", 1", 1-1/4" supplied.

BMT-65 Tool Turret – Work Envelop Drawings

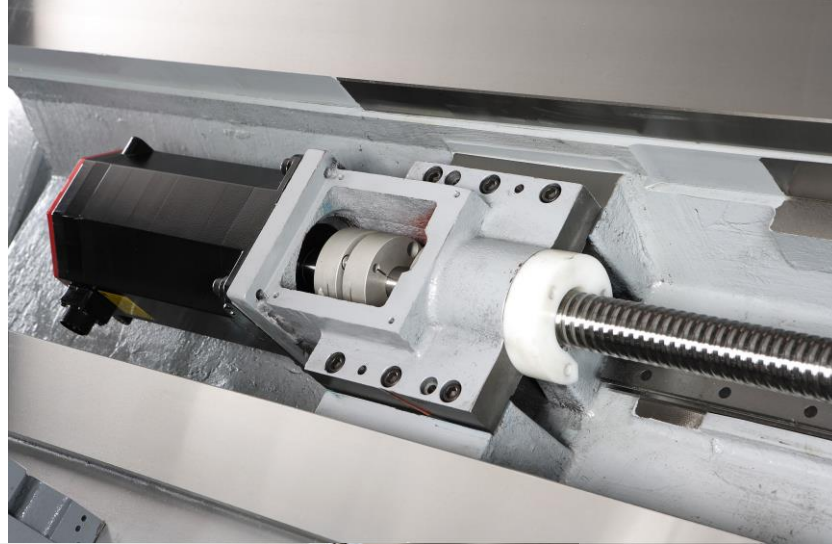


Block power turret

BMT-65 Tool Turret Clearance



ASL-15MY MACHINE FEATURES



Ballscrews are centered between the guideways and are direct mount to the AC servo motors without the use of intermediate gears to minimize backlash. The Z-axis servo motor is mounted on the headstock end of the pretensioned ball screw.

The programmable tailstock is mounted on widely spaced guideways and the heavy-duty design ensures ample rigidity for long heavy shafts. The 3.3" diameter quill features 4.7" of quill stroke and is activated by manually by foot pedal or automatically in the part program by M-code. The large Morse Taper #5 center is suitable for heavy loads. The tailstock body is position by a hydraulic motor driving against a toothed rack with a positioning rate of 400 IPM.

A parts catcher is included in the ASL-15MY machine to remove finished parts from the machine and place them into a parts collection bin. A finished parts conveyor is an available option.

ASL-15MY CNC Lathe Machine Specifications

Capacity & Dimensions-

Swing over Bed	24.09"	(910 mm)
Swing over Saddle	15.27"	(720 mm)
Maximum Turning Diameter	19.68"	(450 mm)
Maximum Turning Length	23.2"	(589 mm)

Spindle

Spindle Motor Horsepower (15/18.5kw spindle motor) (20-HP Constant duty, 25-HP 30-minute rating, 30 HP Peak)	35-HP Peak Power	
Spindle Speed	2,500 RPM	
Spindle Nose	A2-11	
Bar Capacity (in draw tube)	4.1"	(105 mm)
Chuck Diameter (with 4" through-hole)	15"	

Axis-

Axis Travel – X-axis	10.8"	(275 mm)
Axis Travel – Y-axis	3.8" (±1.9")	(±50 mm)
Axis Travel – Z-axis (all 5 travel lengths shown)	29.5"	(750 mm)
C-Axis Resolution	0.0001°, 360,000 radial positions	
Ballscrew Diameter / Pitch Rate – X & Y Axis	Ø32mm / 8mm pitch	
Ballscrew Diameter / Pitch Rate – Z Axis	Ø40mm / 10mm pitch	
Axis Drive Motors - X & Z	4-Horsepower (3kw)	
Maximum Feed Thrust – X / Z	4452 lbs. / 5565 lbs.	
Rapid Traverse Feedrate X	787 IPM	(20m/min)
Rapid Traverse Feedrate Y	393 IPM	(10m/min)
Rapid Traverse Feedrate Z	945 IPM	(24m/min)
Minimum input unit	0.0001" (0.001mm = 40 millionths")	
Guide Ways / Slant Bed Angle	Box ways / 30°	

Tool Turret-

Tool stations – any combination of ID/OD tooling /Index time	12-stations BMT-65 Driven Turret
Tool Index Time- adjacent tool station / 180° index	0.4 sec. / 2.4 sec.
O.D. Tooling (25mm when specified for metric users)	1" square shank tools
I.D. Tooling (40mm when specified for metric users)	1.5" (4 I.D. holders included)
Driven Tool System / Power (Base Mount Tooling)	BMT-65 / 5-Horsepower (4kw)
Driven Tool rotary speed / rotary torque	4,000 rpm / 30 Nm

Tailstock-

Tailstock Body Travel (dependent on bed length)	21"
Tailstock Body Programmable Positioning	Hydraulic Motor Driven
Quill diameter	3.3" (85 mm)
Quill stroke – Programmable hydraulic actuation	4.7" (120 mm)
Quill taper	MT-5 Morse Taper # 5

Specifications –

Power Requirements	208-220vac ±5%, 50-amps
Floor Space Requirements L x W x H	126 x 79" x 83" (3.2 x 2 x 2.1m)
Machine Weight	13,227 lbs. (6000 kg)
Hydraulic Motor Power / Pressure / Oil	2-H.P. / 600 PSI / Mobil #24 oil
Coolant Pump / Coolant Pressure / Coolant Capacity	3/4-HP / 60 PSI / 56-gallons

**The Ganesh ASL-15MY CNC lathe is manufactured in our
Certified ISO-9001 Production Facility in Taiwan.**

MITSUBISHI M80 HIGH-PERFORMANCE CNC CONTROL

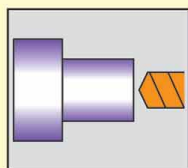


The **Mitsubishi M80 High-Performance CNC control** provides the highest level of productivity, intuitive usability, and functionality. The advanced control algorithm uses a Mitsubishi CNC-dedicated 64-Bit CPU running at 67,500 blocks per minute with 680-block look-ahead under NANO control with **Super 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.

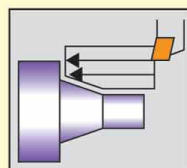
- **Mitsubishi developed CNC-Dedicated 64-Bit CPU with highly efficient RISC architecture**
- **10” Touch Screen** that operates like a smart phone that can pinch to zoom, rotate, and scroll.
- **Includes Two 32GB SD** memory card slots for data storage & DNC operation with edit capability
- **680 block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

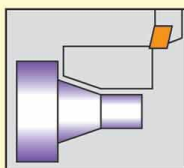
- Mid-program restart function for operator convenience after a program interruption
- Dampened backlash compensation eliminates spiking during the axis reversal moves for higher accuracy machining, superb surface finishes, and exacting workpiece feature definition.
- 10-nanometer interpolation with 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.



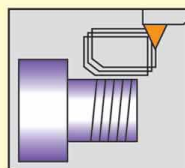
Lathe drilling



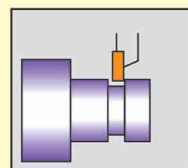
Stock removal
in turning



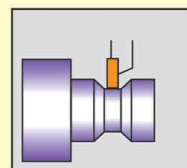
Finishing



Threading



Grooving
(Normal)



Grooving
(Trapezoidal)