

LV

Series

LV450 Series | LV500 Series | LV1100 Series

HYUNDAI WIA Vertical Turning Center

Technical Leader

Flexible, Productive Automation System Vertical Turning Center

The CNC Turning Center LV Series, designed by Hyundai WIA with years of expertise and the latest technology, is designed to maximize productivity by high speed and accurate performance.

| MODEL | Main Chuck | | | | | Guideway | | | Turret | |
|------------|------------|-----|-----|-----|-----|----------|--------|-----|--------|------|
| | 12" | 15" | 18" | 32" | 40" | Ball | Roller | Box | Std. | Mill |
| LV450R/L | ● | | | | | | ● | | ● | |
| LV450RM/LM | ● | | | | | | ● | | | ● |
| LV500R/L | | ● | ○ | | | ● | | | ● | |
| LV500RM/LM | | ● | ○ | | | ● | | | | ● |
| LV1100R | | | | ● | ○ | | ● | | ● | |
| LV1100RM | | | | ● | ○ | | ● | | | ● |

●: Standard ○: Option

LV

Series

High Productivity, Heavy Duty Vertical Turning Center

- Stable spindle structure with excellent heavy duty cutting ability
- 2 step chuck pressure mechanism adopted to minimize workpiece deformation
- Various peripheral equipment can be used for optimized machining
- Designed for optimal chip disposal
- “Right” and “Left” structure for practical automation construction



01 BASIC STRUCTURE

High Speed & Heavy Duty Cutting Vertical CNC Turning Center

Fixed Type Column

LV450/500 Series

Moving Column

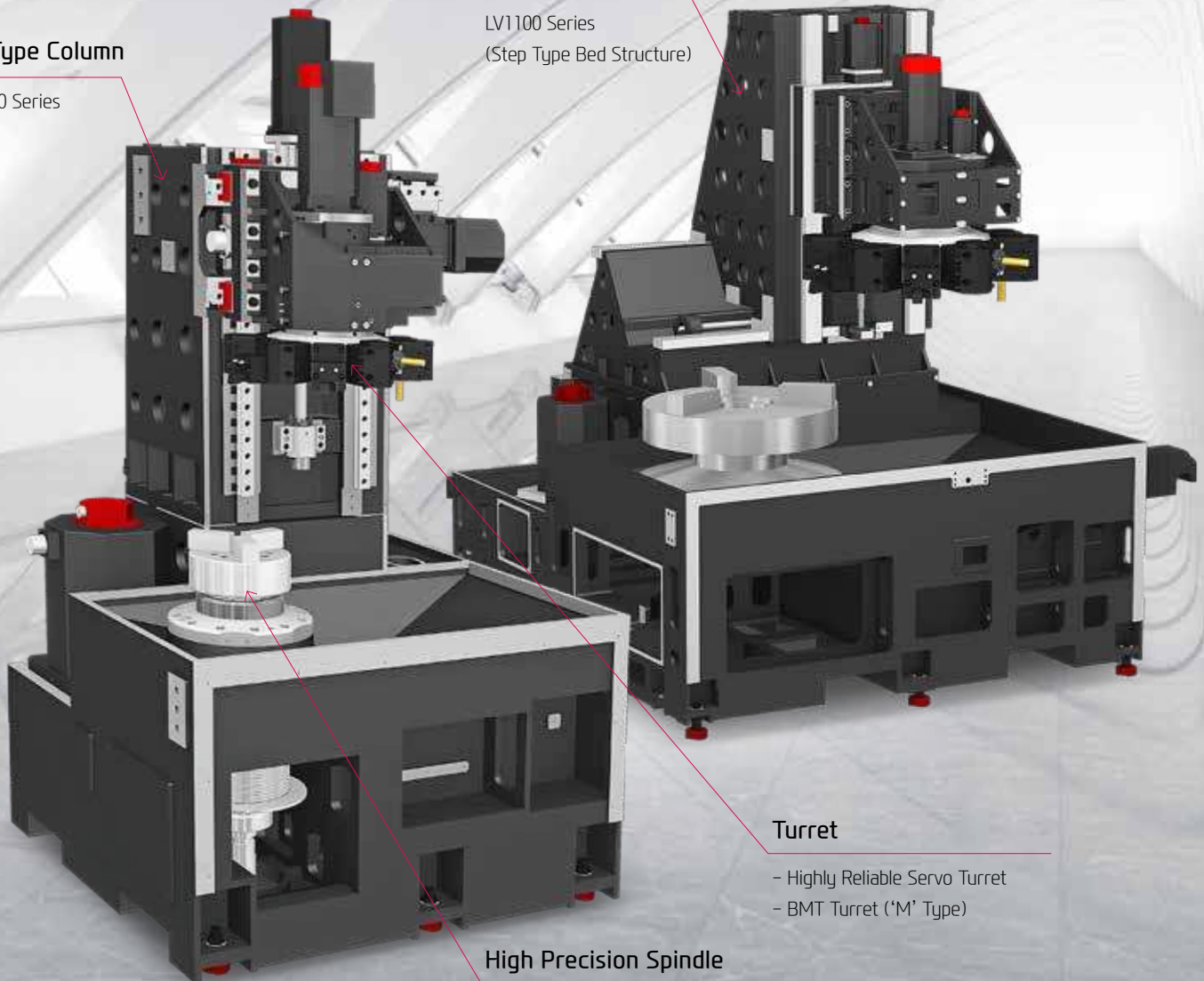
LV1100 Series
(Step Type Bed Structure)

Turret

- Highly Reliable Servo Turret
- BMT Turret ('M' Type)

High Precision Spindle

- 2 Step Pressure Chucking Device
- Various Spindle Configurations by Model
- C-Axis Control : 0.001° ('M' Type)



REDUCTION OF NON-CUTTING TIME BY FAST RAPID SPEED

HIGH-PRECISION STRUCTURE

Right and Left Machine Structure

The LV Series consists of Left and Right machine configuration, allowing for more efficient automation options. (Except LV1100)



Front Operation Structure

The power supply, hydraulic device and lubrication device are all designed to be controlled on the front side of the machine, leading to enhanced user convenience.

COLUMN

Fixed Type Column (LV450/500 Series)

The LV450/500 Series is designed with a fixed column to minimize vibration during axial movements.

Moving Column (LV1100 Series)

The LV1100 Series Features a traveling column to maintain superior accuracy when turning larger work pieces.

Step Type Bed Structure

For the LV1100 Series, the column feed unit of the bed is designed to form steps, so that the load generated in the front during machining operations may be minimized. Also, by optimizing the weight of the column, feed stability is enhanced.

Guideway

| ITEM | LV450 Series | LV500 Series | LV1100 Series |
|---------------------------|--------------------------|--------------------------|----------------------------|
| Slide Type | Roller LM Guide | LM Guide | Box Guide |
| Travel (X/Z) | 310/495 mm (12.2"/19.5") | 325/625 mm (12.8"/24.6") | 620/1,000 mm (24.4"/39.4") |
| Rapid Traverse Rate (X/Z) | 20/24 m/min | 20/18 m/min | 24/24 m/min |

02 HIGH PRECISION SPINDLE

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center

Spindle Specifications

[] : Option

| Model | Spindle Speed | Motor (Max./Cont.) | Torque (Max./Cont.) | Driving Method |
|--------------|-----------------|-----------------------|---|----------------|
| LV450 Series | 3,000 r/min | 22/18.5 kW (30/25 HP) | 730/614 N·m (538.4/452.9 lbft·ft) | Belt |
| LV500 Series | 2,000 r/min | 22/18.5 kW (30/25 HP) | 824/693 N·m (607.8/511.1 lbft·ft) | |
| | [2,000 r/min] | [30/22 kW (40/30 HP)] | [1,124/824 N·m (829/607.8 lbft·ft)] | |
| LV500 Series | [2,000 r/min] | [30/22 kW (40/30 HP)] | [1,619/1,188 N·m (1,194.1/876.2 lbft·ft)] | Gear |
| | 800 [630] r/min | 65/45 kW (87/60 HP) | 7,671/5,310 N·m (5,657.8/3,916.5 lbft·ft) | |

HEAVY DUTY CUTTING & HIGH ACCURACY

SPINDLE

Spindle for Heavy Cutting

The use of both cylindrical roller bearings and angular contact bearings provide high speed and rigidity. This enables machining of heavy workpieces. Also, LV1000 Series is with a gear drive spindle (Option), which provides high torque at low rpm and stability at high rpm.



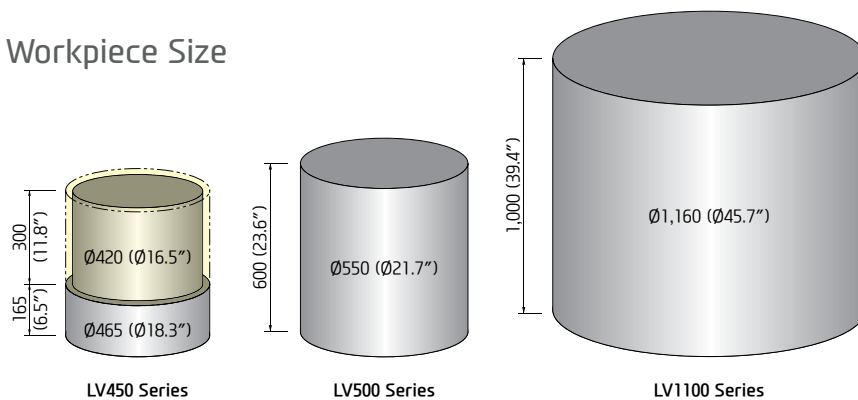
C-Axis Control ('M' Type)

The C-axis is capable of 0.001° control when milling turret is applied. Machining capability is strengthened with turning and milling operations.

2 Step Pressure Chucking Device

The 2 step pressure chucking system enables high pressure chucking during rough cutting and low pressure chucking during precision cutting.

Max. Workpiece Size



CHIP INFLUX PROTECTION

The LV Series is incorporated with a protection device to keep chips and other foreign materials from entering the main spindle, ensuring long term high precision performance.

Chute Structure

The sloped bed design improves chip flow and disposal of cutting fluids minimizing thermal displacement.



03 SERVO TURRET

High speed, High Accuracy, Highly Reliable Servo Turret

Servo Turret

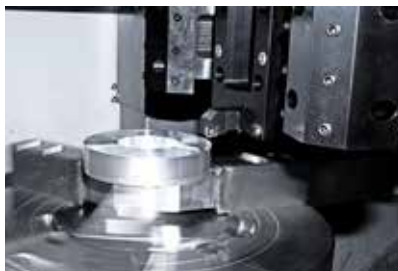
| Model | No. of Tools | Tool Size (O.D/i.D) | Indexing Time |
|---------------|--------------|----------------------------|---------------|
| LV450 Series | 12 EA | □ 25/Ø50 mm (□ 1"/Ø2") | 0.2 sec |
| LV500 Series | 8 [12] EA | □ 32/Ø50 mm (□ 1.3"/Ø2") | |
| LV1100 Series | 8 [12] EA | □ 32/Ø80 mm (□ 1.3"/Ø3.1") | 0.6 sec |

Mill Turret

| Model | Speed | Motor (Max./Cont) | Torque (Max./Cont) | Type |
|---------------|-------------|-----------------------|---------------------------------|-------|
| LV450 Series | 4,000 r/min | 5.5/3.7 kW (7.5/5 HP) | 35/23.5 N·m (25.8/17.3 lbft·ft) | BMT65 |
| LV500 Series | 3,000 r/min | 3.7/2.2 kW (5/3 HP) | 58.9/35 N·m (43.4/25.8 lbft·ft) | BMT75 |
| LV1100 Series | 3,000 r/min | 11/7.5 kW (15/10 HP) | 70/47.8 N·m (51.6/35.3 lbft·ft) | BMT85 |

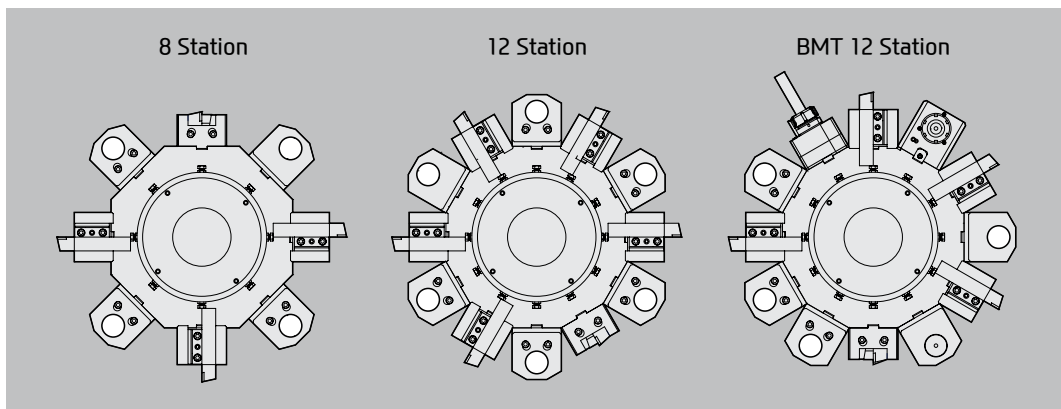
VARIOUS DRIVEN PRECISION BMT TOOL HOLDERS

SERVO TURRET



Servo Turret

The LV Series' machining reliability is enhanced by incorporating a high performance AC servo motor to the turret drive mechanism. Also, the turrets are installed with 3 piece couplings to improve indexing accuracy. Powerful hydraulic tool clamping exhibits great heavy duty machining performance by minimizing tool tip deviation due to work load.



MILL TURRET

BMT Turret ('M' Type)

The BMT turret secures the tool with four bolts and key on the tool mounting surface of the turret, making it possible to powerfully fix the tool, ensuring high reliability in rigidity and precision.



STRAIGHT MILLING HEAD



ANGULAR MILLING HEAD



Mill Tool Holder

Machining capability has increased with the addition of straight milling head tool holder, which can machine workpieces from the side, and angular milling head tool holder, which can perform I.D. operations.

SPECIFICATIONS

Standard & Optional

| Spindle | LV450 | LV500 | LV1100 |
|--|-----------------------------------|----------|----------|
| Main Spindle Hollow Chuck 3 Jaw | - | - | - |
| Main Spindle Solid Chuck 3 Jaw | 12" | ● | - |
| | 15" | ○ | ● |
| | 18" | - | ○ |
| | 32" | - | - |
| 40" | - | - | ○ |
| Standard Soft Jaw (1set) | ● | ● | ● |
| Chuck Clamp Foot Switch | ● | ● | ● |
| 2 Steps Hyd. Pressure Device | ● | ● | ● |
| Spindle Inside Stopper | - | - | - |
| 5" Index | ☆ | ☆ | ☆ |
| Cs-Axis (0.001") | M ● | M ● | M ● |
| 2 Steps Chuck Foot Switch | ○ | ○ | ○ |
| Chuck Open/Close Confirmation Device | ○ (CE:●) | ○ (CE:●) | ○ (CE:●) |
| High Power Main Spindle 30/22kW (40.2/29.5 HP) | - | ○ | - |
| Turret | | | |
| Tool Holder | ● | ● | ● |
| 8 station Turret | - | ● | - |
| 12 station Turret | ● | ○ | ● |
| Mill Turret | M ● | M ● | M ● |
| Straight Milling Head(Radial) Collet Type,1ea | M ● | M ● | M ● |
| Angular Milling Head(Axial) Collet Type,1ea | M ● | M ● | M ● |
| Straight Milling Head Adapter Type | M ○ | M ○ | M ○ |
| Angular Milling Head Adapter Type | M ○ | M ○ | M ○ |
| Boring Sleeve | ● | ● | ● |
| Drill Socket | ● | ● | ● |
| Angle Head | M ☆ | M ☆ | M ☆ |
| Coolant & Air Blow | | | |
| Standard Coolant (Nozzle) | ● | ● | ● |
| Bed Flushing Coolant | ● | ○ | ● |
| Jet Coolant System | ● | ○ | ○ |
| Chuck Coolant (Upper Chuck) | ○ | ○ | ○ |
| Gun Coolant | ○ | ○ | ○ |
| Though Spindle Coolant (Only for Special Chuck) | - | - | - |
| Thru Coolant for Live Tool | M ☆ | M ☆ | M ☆ |
| Chuck Air Blow (Upper Chuck) | ○ | ○ | ○ |
| Turret Air Blow | ☆ | ☆ | ☆ |
| Air Gun | ○ | ○ | ○ |
| Though Spindle Air Blow (Only for Special Chuck) | ☆ | ☆ | ☆ |
| High Pressure Coolant | 0.5Bar (7.2psi) | ● | ● |
| | 6Bar (87psi) | ☆ | ○ |
| | 20Bar (290psi) | ○ | ○ |
| | 30Bar (435psi) | ☆ | ☆ |
| | 70Bar (1,015psi) | ☆ | ○ |
| Power Coolant System (For Automation) | ☆ | ☆ | ☆ |
| Coolant Chiller | ☆ | ☆ | ☆ |
| Chip Disposal | | | |
| Coolant Tank | 300 ℓ (79.3 gal) | ● | - |
| | 200 ℓ (52.8 gal) | - | ● |
| | 340 ℓ (89.8 gal) | - | - |
| | 420 ℓ (111 gal) | - | - |
| Chip Conveyor (Hinge/Scraper) | Front (Side) | ○ | ○ |
| | Rear (Rear) | ○ | ○ |
| Special Chip Conveyor (Drum Filter) | ☆ | ☆ | ☆ |
| Chip Wagon | Standard (180 ℓ [47.5 gal]) | ○ | ○ |
| | Swing (200 ℓ [52.8 gal]) | ○ | ○ |
| | Large Swing (290 ℓ [76.6 gal]) | ○ | ○ |
| | Large Size (330 ℓ [87.2 gal]) | ○ | ○ |
| | Customized | ☆ | ☆ |
| Safety Device | | | |
| Total Splash Guard | ● | ● | ● |
| Chuck hydraulic pressure maintenance interlock | ○ (CE:●) | ○ (CE:●) | ○ (CE:●) |

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

| Electric Device | LV450 | LV500 | LV1100 |
|---|---|-------|--------|
| Call Light | ● | ● | ● |
| Call Light & Buzzer | ○ | ○ | ○ |
| Electric Cabinet Light | ○ | ○ | ○ |
| Remote MPG | ○ | ○ | ○ |
| Work Counter | ○ | ○ | ○ |
| Total Counter | ○ | ○ | ○ |
| Tool Counter | ○ | ○ | ○ |
| Multi Tool Counter | ○ | ○ | ○ |
| Electric Circuit Breaker | ○ | ○ | ○ |
| AVR (Auto Voltage Regulator) | ☆ | ☆ | ☆ |
| Transformer | 30kVA | ○ | - |
| | 35kVA | - | ○ |
| | 60kVA | - | - |
| Auto Power Off | ○ | ○ | ○ |
| Measurement | | | |
| Q-Setter | Removable Type | ○ | ☆ |
| Automatic Q-Setter | | - | ○ |
| Work Close Confirmation Device | TACO | ☆ | ☆ |
| | SMC | ☆ | ☆ |
| Work Setter | | ☆ | ☆ |
| Linear Scale | X Axis | ☆ | ☆ |
| | Z Axis | ☆ | ☆ |
| Coolant Level Sensor (Only for Chip Conveyor) | | ☆ | ☆ |
| Environment | | | |
| Air Conditioner | ○ | ○ | ○ |
| Oil Mist Collector | ☆ | ☆ | ☆ |
| Oil Skimmer (Only for Chip Conveyor) | ○ | ○ | ○ |
| MLQ (Minimal Quantity Lubrication) | ☆ | ☆ | ☆ |
| Fixture & Automation | | | |
| Auto Door | Standard | ○ | ○ |
| | High Speed | ☆ | ☆ |
| Auto Shutter (Only for Automatic System) | | - | - |
| Sub Operation Pannel | | ☆ | ☆ |
| Extra M-Code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O Extension (IN & OUT) | 16 Contact | ○ | ○ |
| | 32 Contact | ○ | ○ |
| Turret Work Pusher (For Automation) | | ☆ | ☆ |
| Hyd. Device | | | |
| Standard Hyd. Cylinder | Solid | ● | ● |
| | 35bar (507.6psi) / 42 ℓ (11 gal) | ● | - |
| | 70bar (1,015.3psi) / 24 ℓ (6.3 gal) | - | - |
| | 70bar (1,015.3psi) / 50 ℓ (13.2 gal) | - | ● |
| Standard Hyd. Unit | | - | - |
| S/W | | | |
| Conversational program | SmartGuide-i | ● | ● |
| | HW-DPRO | ○ | ○ |
| Thermal Displacement Compensation (HW-TDC) | | ○ | ○ |
| Tool Monitoring (HW-TM) | | ○ | ○ |
| Machine Guidance (HW-MCG) | | ● | ● |
| Energy Saving System (HW-ESS) | | ● | ● |
| DNC software (HW-eDNC) | | ○ | ○ |
| Machine Monitoring System (HW-MMS) | | ○ | ○ |
| Thermal Displacement Compensation Device | | ○ | ○ |
| Premium Tool Operation | | ● | ● |
| Manual Viewer | | ● | ● |
| Scheduling | | ● | ● |
| Operation Memo | | ● | ● |
| ETC | | | |
| Tool Box | | ● | ● |
| Customized Color | Need Munsel No. | ☆ | ☆ |
| CAD & CAM | | ☆ | ☆ |
| Special Level Seat | Only with Air Zero | ☆ | ☆ |

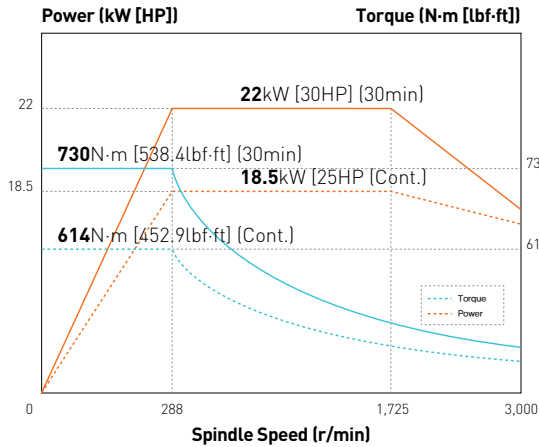
◆ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Prior consultation is required when applying spindle contouring control for gear driven spindle. / Specifications are subject to change without notice for improvement.

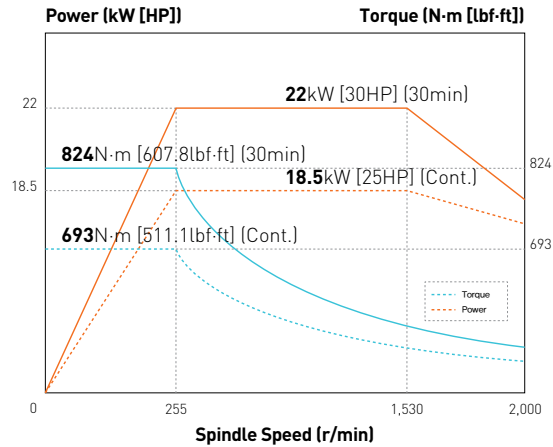
SPECIFICATIONS

Spindle Output/Torque Diagram

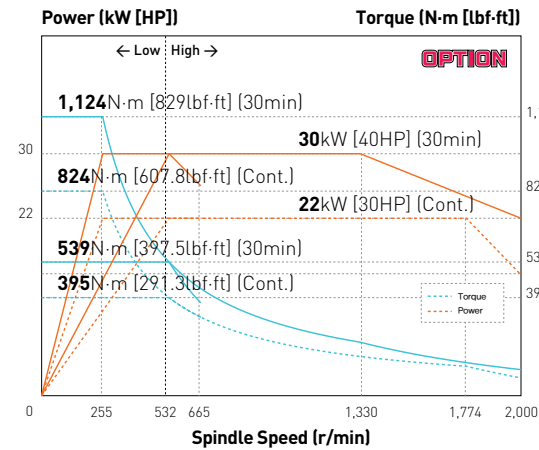
LV450 Series 3,000rpm (Belt)



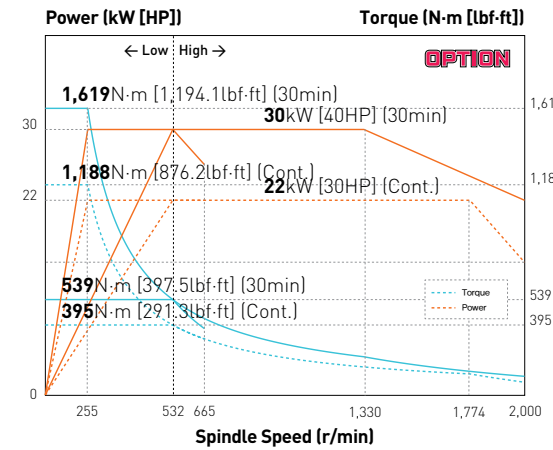
LV500 Series 2,000rpm (Belt)



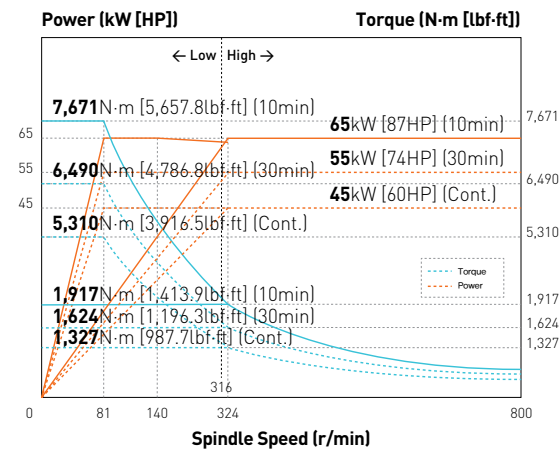
LV500 Series 2,000rpm (Belt)



LV500 Series 2,000rpm (Belt)



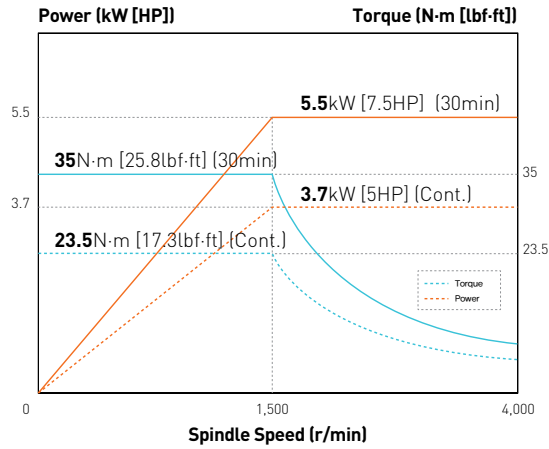
LV1100 Series 800rpm (Gear)



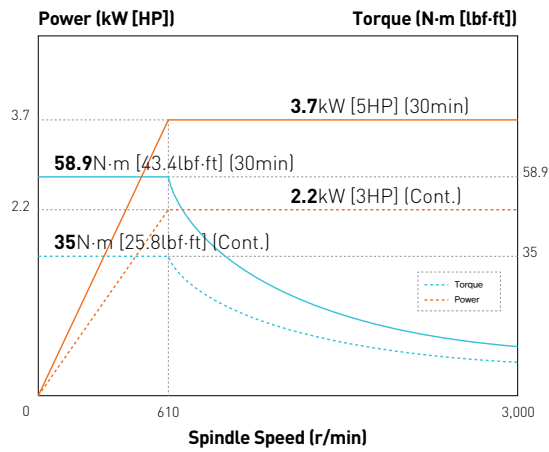
SPECIFICATIONS

Mill Turret Output/Torque Diagram

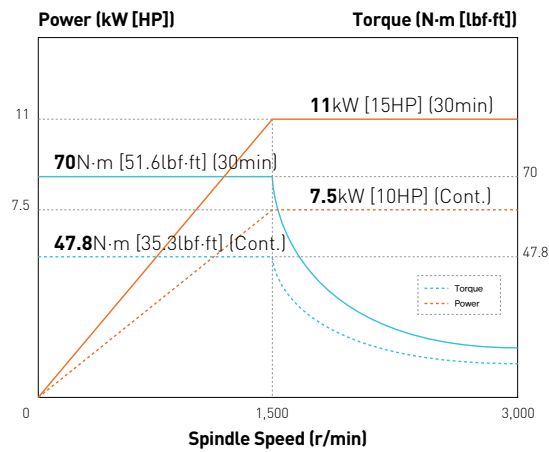
LV450 Series 4,000rpm (Mill Turret)



LV500 Series 3,000rpm (Mill Turret)



LV1100 Series 300rpm (Mill Turret)

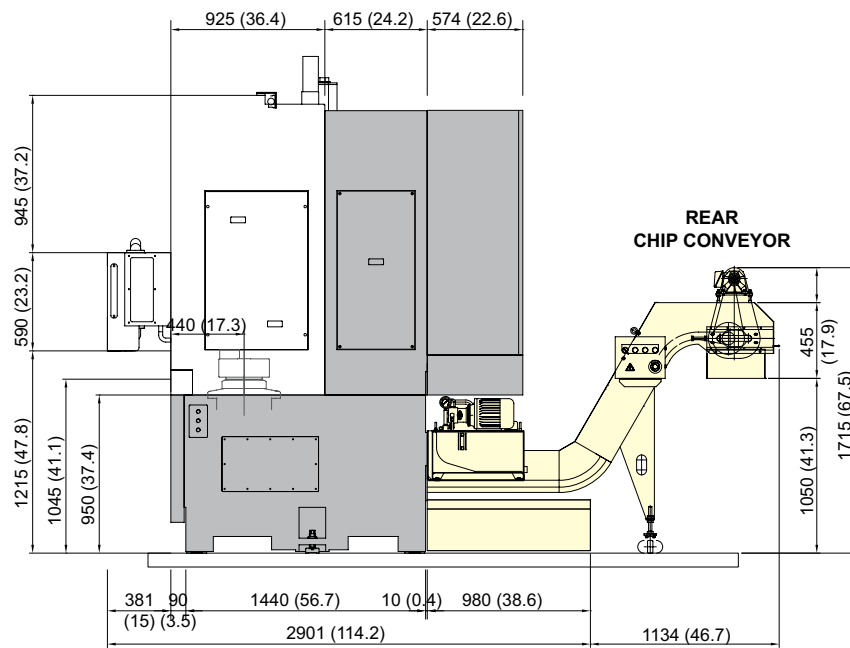
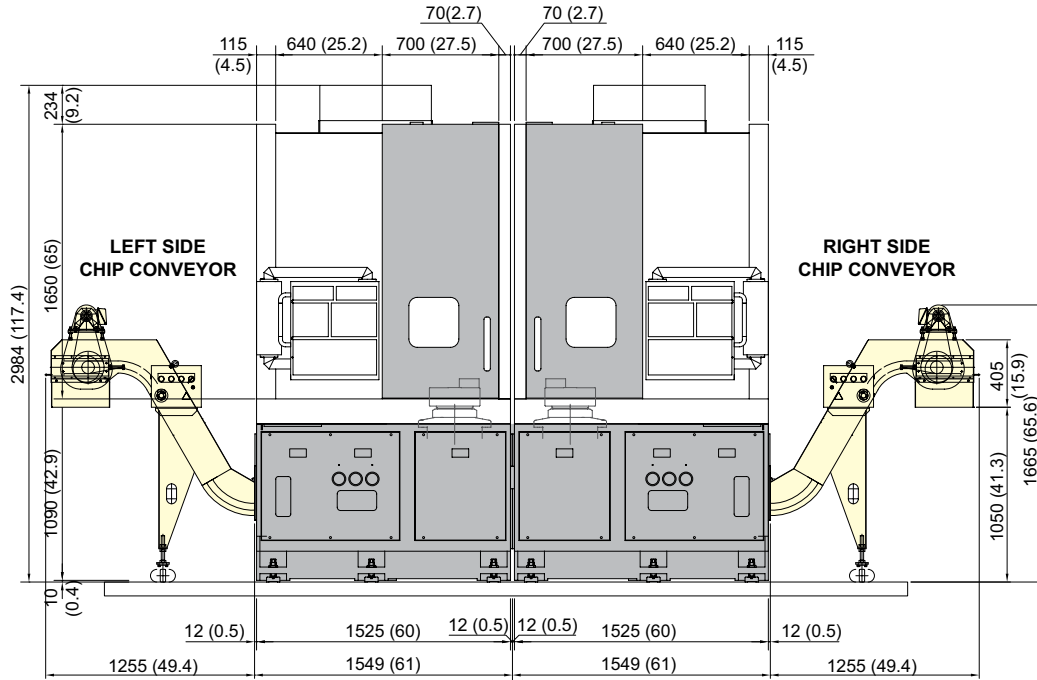


SPECIFICATIONS

External Dimensions

unit : mm(in)

LV450 Series

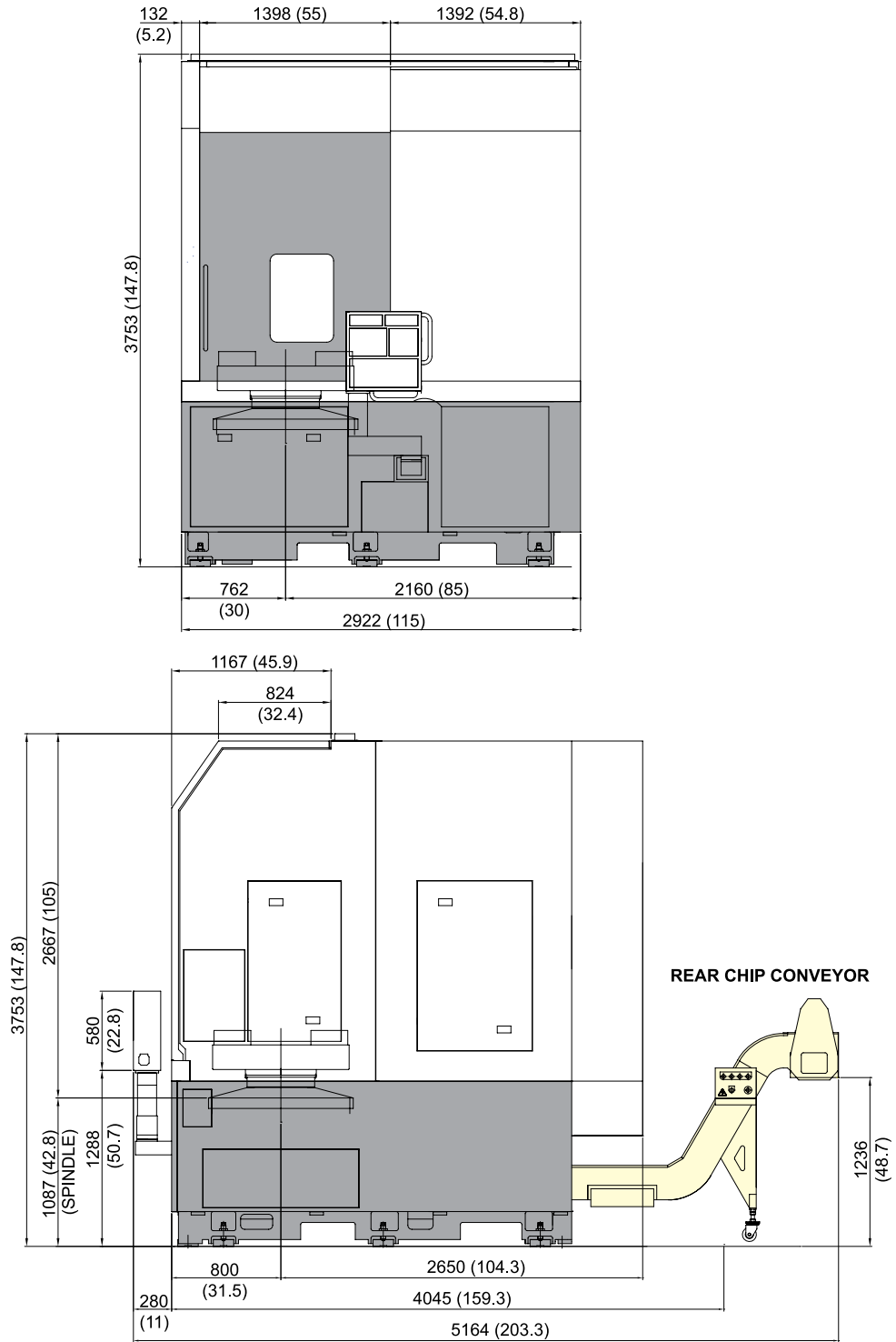


SPECIFICATIONS

External Dimensions

unit : mm(in)

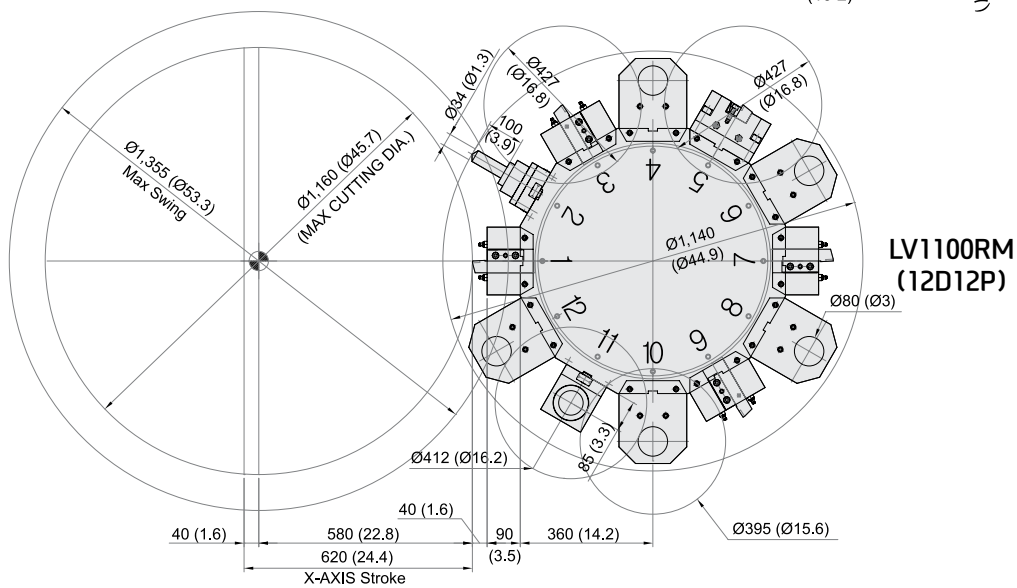
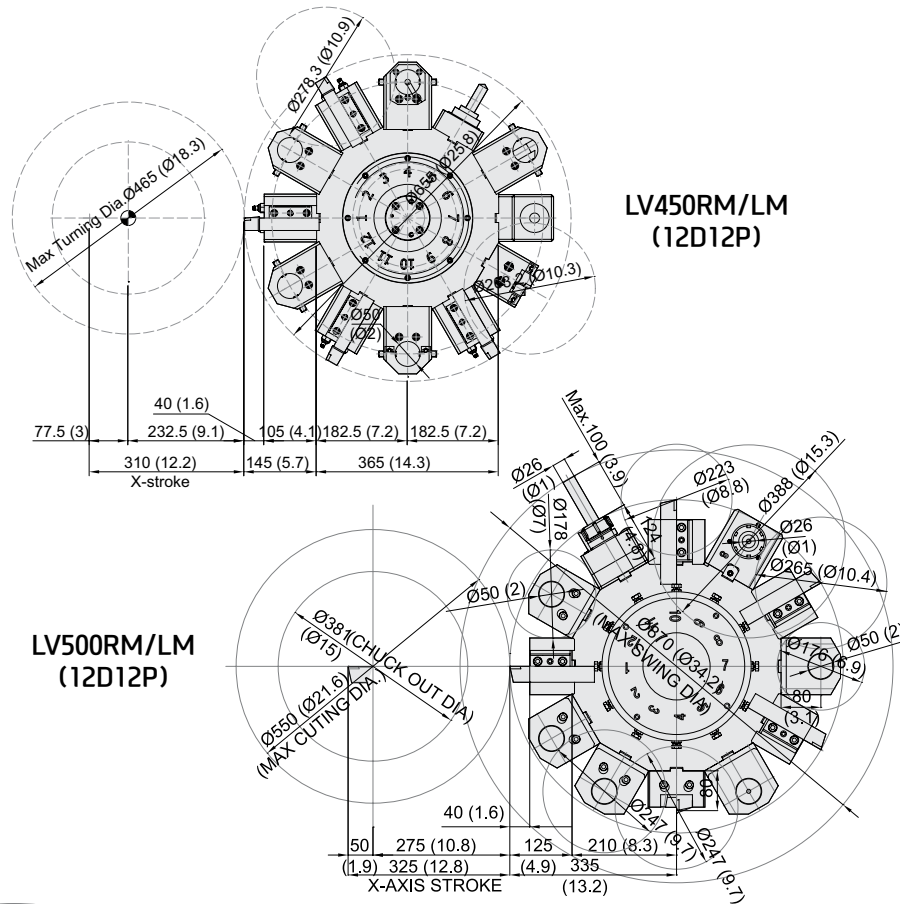
LV1100RM



SPECIFICATIONS

공구 간섭도

unit : mm(in)

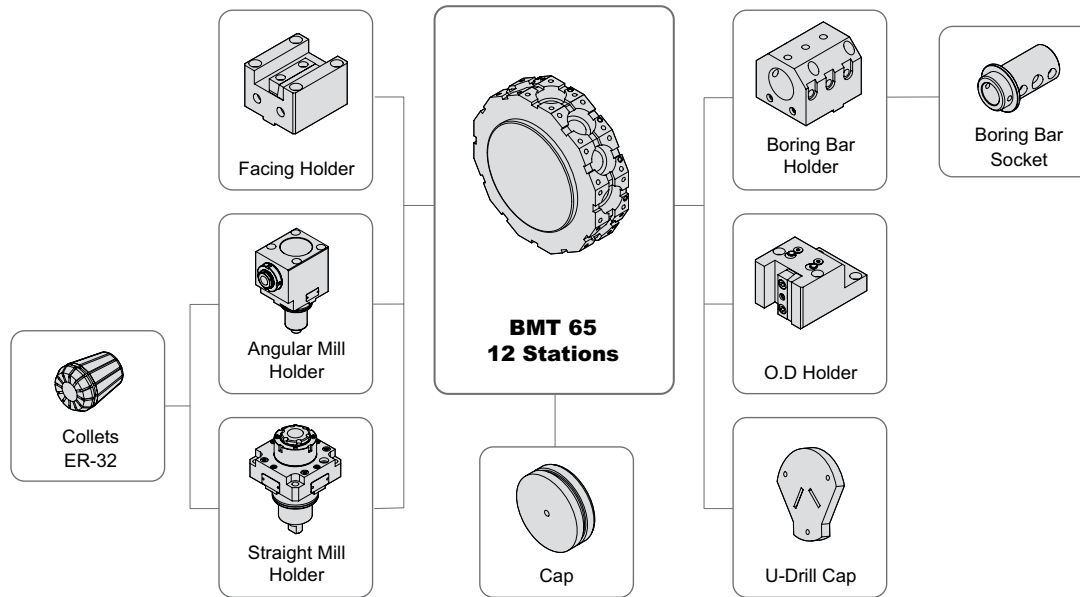


SPECIFICATIONS

Tooling System

unit : mm(in)

LV450 Series



Tooling Parts Detail

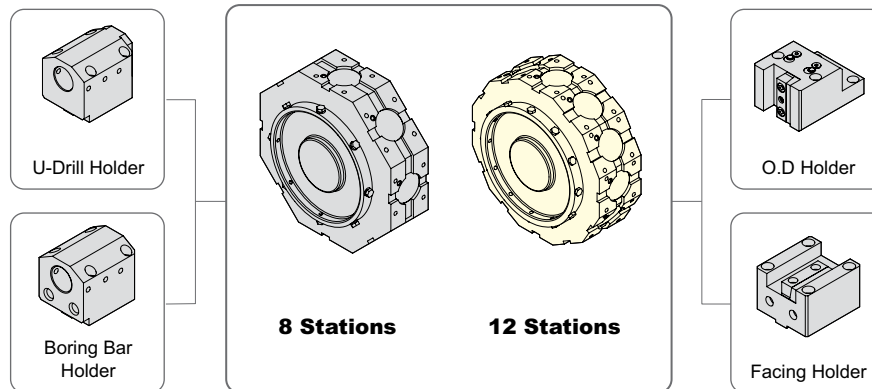
| ITEM | | | LV450R/L | | LV450RM/LM | | |
|----------------|----------------------|----------------------------|----------|-----------|------------|-----------|---|
| | | | mm Unit | inch Unit | mm Unit | inch Unit | |
| Turning Holder | O.D Holder | Right/Left | 5 | 5 | 4 | 4 | |
| | Facing Holder | | 1 | 1 | 1 | 1 | |
| Boring Holder | I.D Holder | Single | 6 | 6 | 5 | 5 | |
| | U-Drill Holder | Cap | 1 | 1 | 1 | 1 | |
| Driven Holder | Straight Mill Holder | Standard | - | - | 1 | 1 | |
| | | TTC (Tool through coolant) | - | - | Opt | Opt | |
| | Angular Mill Holder | Standard | - | - | 1 | 1 | |
| | | TTC (Tool through coolant) | - | - | Opt | Opt | |
| Socket | Boring | Ø16 (Ø3/4") | 1 | - | 1 | - | |
| | | Ø20 (Ø1") | 1 | 1 | 1 | 1 | |
| | | Ø25 (Ø1 1/4") | 1 | 1 | 1 | 1 | |
| | | Ø32 (Ø1 1/2") | 1 | 1 | 1 | 1 | |
| | | Ø40 (Ø1 3/4") | 1 | 1 | 1 | 1 | |
| | | Ø45 (Ø1 3/4") | - | 1 | - | 1 | |
| | Drill | MT 2 | | 1 | 1 | 1 | 1 |
| | | MT 3 | | 1 | 1 | 1 | 1 |
| | | MT 4 | | 1 | 1 | 1 | 1 |
| | ER Collet | | - | - | 1 Set | 1 Set | |

SPECIFICATIONS

Tooling System

unit : mm(in)

LV500R/L



Tooling Parts Detail

| ITEM | | | LV500R/L (8 Station) | | LV500R/L (12 Station) | | |
|----------------|----------------------|---------------|----------------------|-----------|-----------------------|-----------|---|
| | | | mm Unit | inch Unit | mm Unit | inch Unit | |
| Turning Holder | O.D Holder | Right/Left | 3 | 3 | 5 | 5 | |
| | Facing Holder | | 1 | 1 | 1 | 1 | |
| Boring Holder | I.D Holder | Single | 3 | 3 | 5 | 5 | |
| | U-Drill Holder | Tool Holder | 1 | 1 | 1 | 1 | |
| Driven Holder | Straight Mill Holder | Standard | - | - | - | - | |
| | Angular Mill Holder | Standard | - | - | - | - | |
| Socket | Boring | Ø16 (Ø5/8") | 1 | 1 | 1 | 1 | |
| | | Ø20 (Ø3/4") | 1 | 1 | 1 | 1 | |
| | | Ø25 (Ø1") | 1 | 1 | 1 | 1 | |
| | | Ø32 (Ø1 1/4") | 1 | 1 | 1 | 1 | |
| | | Ø40 (Ø1 1/2") | 1 | 1 | 1 | 1 | |
| | Drill | MT 2 | | 1 | 1 | 1 | 1 |
| | | MT 3 | | 1 | 1 | 1 | 1 |
| | | MT 4 | | 1 | 1 | 1 | 1 |
| | ER Collet | | - | - | - | - | |

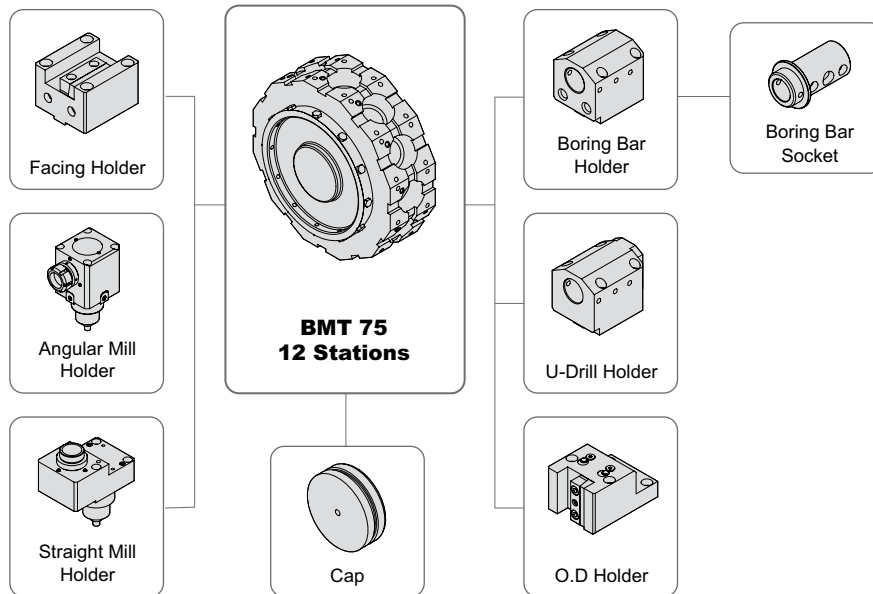
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Tooling System

unit : mm(in)

LV500RM/LM



Tooling Parts Detail

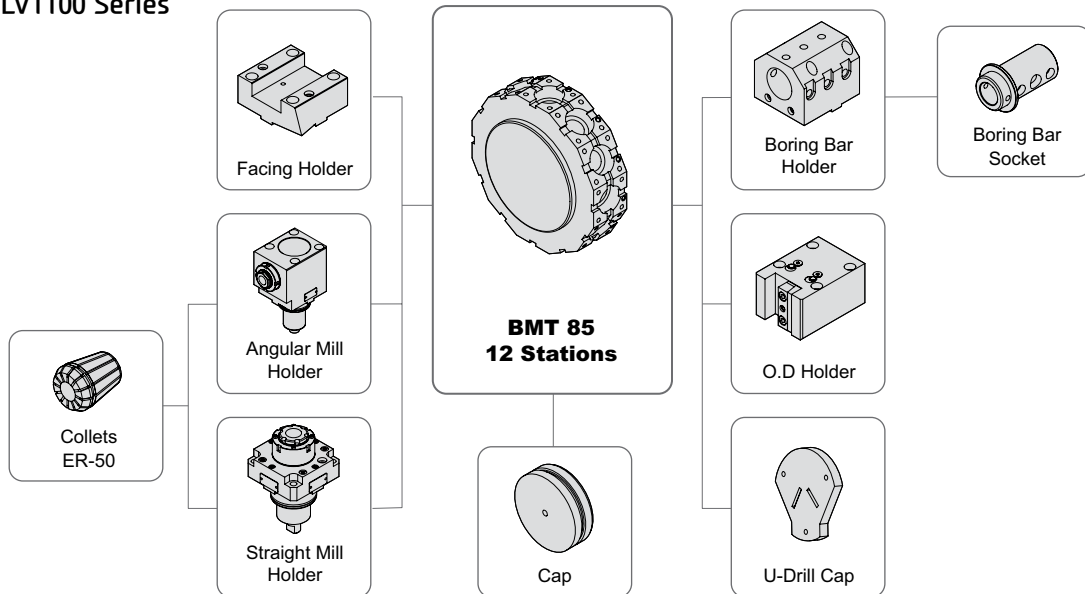
| ITEM | | | LV500RM/LM | | |
|----------------|----------------------|---------------|------------|-----------|---|
| | | | mm Unit | inch Unit | |
| Turning Holder | O.D Holder | Right/Left | 4 | 4 | |
| | Facing Holder | | 1 | 1 | |
| Boring Holder | I.D Holder | Single | 4 | 4 | |
| | U-Drill Holder | Tool Holder | 1 | 1 | |
| Driven Holder | Straight Mill Holder | Standard | 1 | 1 | |
| | Angular Mill Holder | Standard | 1 | 1 | |
| Socket | Boring | Ø16 (Ø5/8") | 1 | 1 | |
| | | Ø20 (Ø3/4") | 1 | 1 | |
| | | Ø25 (Ø1") | 1 | 1 | |
| | | Ø32 (Ø1 1/4") | 1 | 1 | |
| | | Ø40 (Ø1 1/2") | 1 | 1 | |
| | Drill | MT 2 | | 1 | 1 |
| | | MT 3 | | 1 | 1 |
| | | MT 4 | | 1 | 1 |
| | ER Collet | | | - | - |

SPECIFICATIONS

Tooling System

unit : mm(in)

LV1100 Series



Tooling Parts Detail

| ITEM | | | LV1100R/L | | LV1100RM/LM | | |
|----------------|----------------------|---------------|-----------|-----------|-------------|-----------|---|
| | | | mm Unit | inch Unit | mm Unit | inch Unit | |
| Turning Holder | O.D Holder | Right/Left | 5 | 5 | 4 | 4 | |
| | Facing Holder | | 1 | 1 | 1 | 1 | |
| Boring Holder | I.D Holder | Single | 6 | 6 | 5 | 5 | |
| | U-Drill Holder | Cap | 1 | 1 | 1 | 1 | |
| Driven Holder | Straight Mill Holder | Standard | - | - | 1 | 1 | |
| | Angular Mill Holder | Standard | - | - | 1 | 1 | |
| Socket | Boring | Ø20 (Ø3/4") | 1 | 1 | 1 | 1 | |
| | | Ø25 (Ø1") | 1 | 1 | 1 | 1 | |
| | | Ø32 (Ø1 1/4") | 1 | 1 | 1 | 1 | |
| | | Ø40 (Ø1 1/2") | 1 | 1 | 1 | 1 | |
| | | Ø50 (Ø2") | 1 | 1 | 1 | 1 | |
| | | Ø60 (Ø2 1/4") | 1 | 1 | 1 | 1 | |
| | Drill | MT 3 | | 1 | 1 | 1 | 1 |
| | | MT 4 | | 1 | 1 | 1 | 1 |
| | | MT 5 | | 1 | 1 | 1 | 1 |
| | Adapter Set | | - | - | 1 Set | 1 Set | |
| | ER Collet | | - | - | 1 Set | 1 Set | |

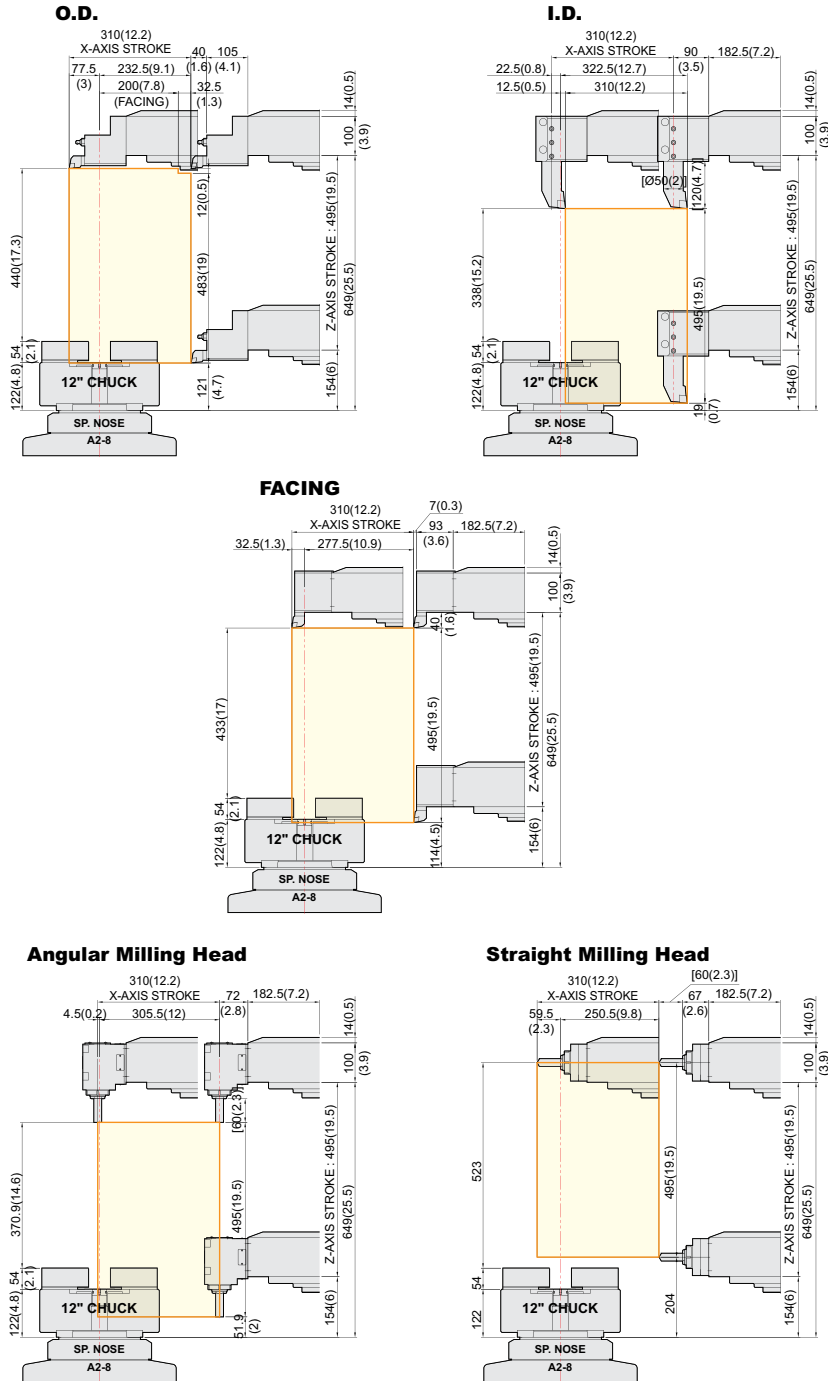
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Tooling Travel Range

unit : mm(in)

LV450R/L LV450RM/LM (Straight/Angular Milling Head)



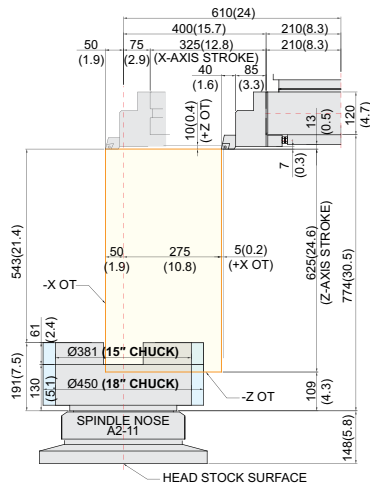
SPECIFICATIONS

Tooling Travel Range

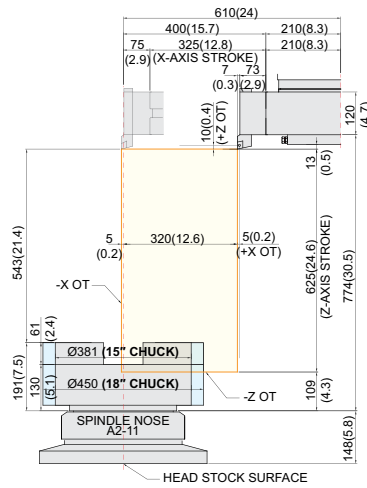
unit : mm(in)

LV500R/L

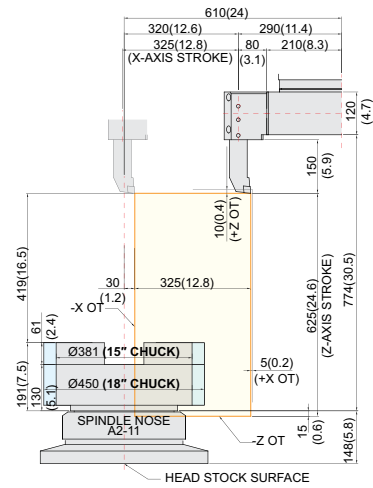
(O.D TURNING HOLDER)



(FACING HOLDER)

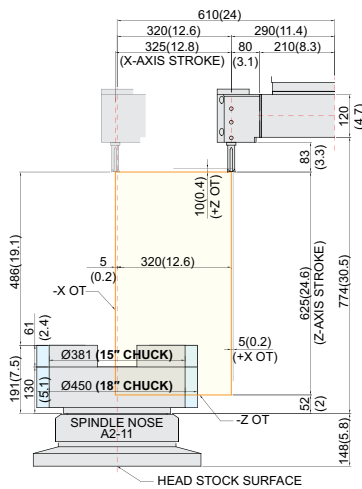


(BORING BAR HOLDER)

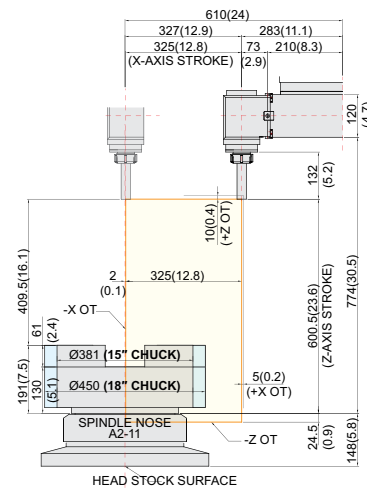


LV500RM/LM

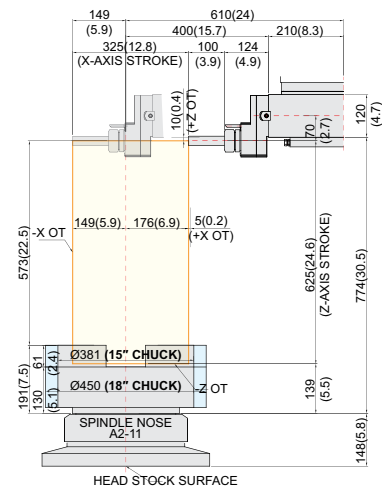
(U-DRILL HOLDER)



(ANGULAR MILLING HEAD)



(STRAIGHT MILLING HEAD)



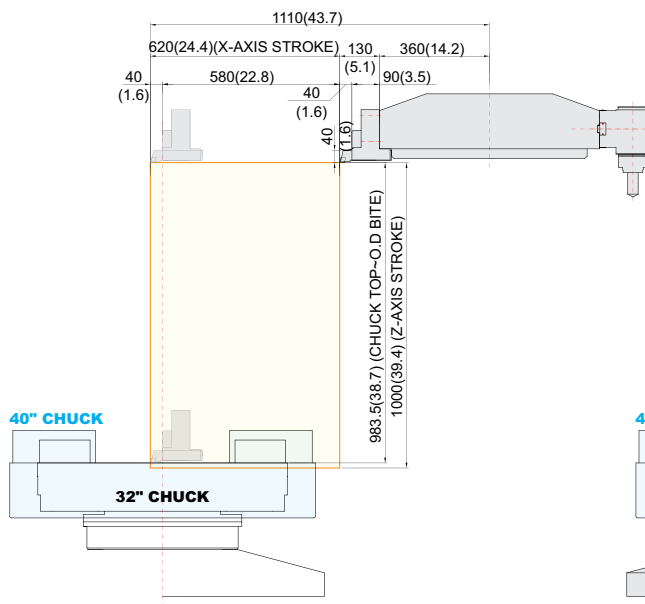
SPECIFICATIONS

Tooling Travel Range

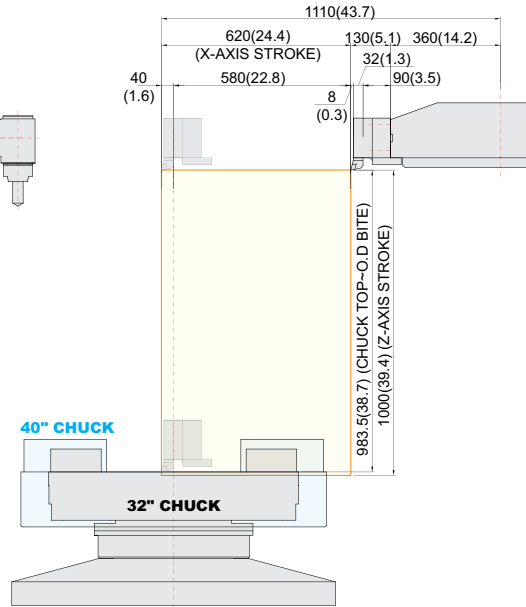
unit : mm(in)

LV1100RM

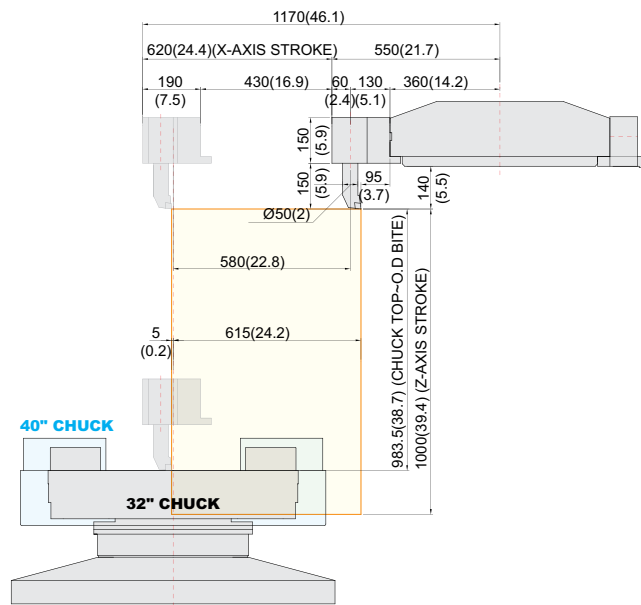
(O.D. HOLDER)



(FACING HOLDER)



(I.D. HOLDER)



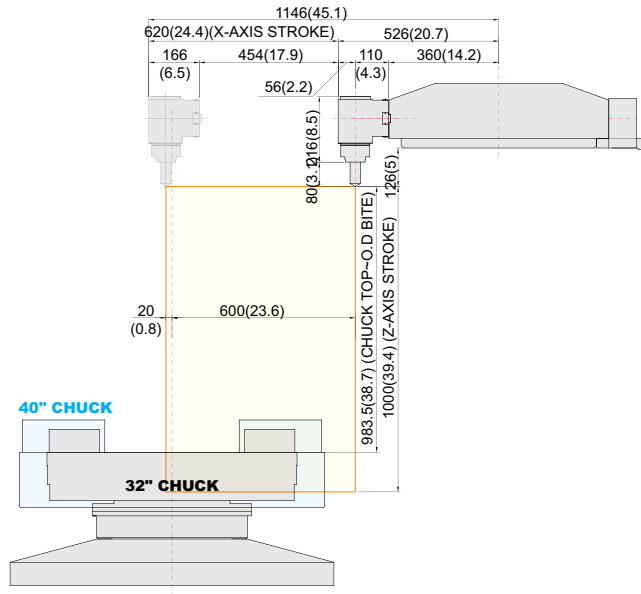
SPECIFICATIONS

Tooling Travel Range

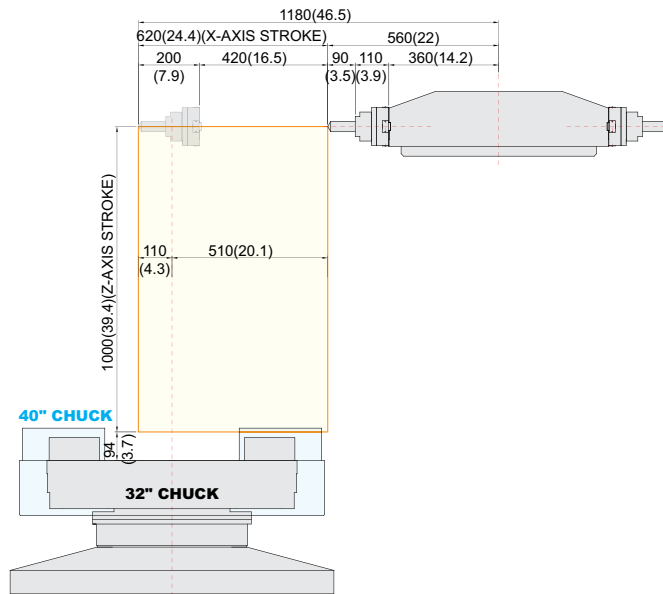
unit : mm(in)

LV1100RM

(ANGULAR MILLING HEAD)



(STRAIGHT MILLING HEAD)



SPECIFICATIONS

Specifications

[] : Option

| ITEM | | LV450R/L | LV450RM/LM | |
|---------------|---------------------------|-------------|-----------------------|---|
| CAPACITY | Swing Over the Bed | mm(in) | Ø620 (24.4") | |
| | Swing Over the Carriage | mm(in) | Ø420 (16.5") | |
| | Max. Turning Dia. | mm(in) | Ø465 (18.3") | |
| | Max. Turning Length | mm(in) | 465 (18.3") | |
| SPINDLE | Chuck Size | inch | 12" | |
| | Spindle Bore | mm(in) | Ø62.4 (2.5") | |
| | Spindle Speed (rpm) | r/min | 3,000 | |
| | Motor (Max/Cont.) | kW(HP) | 22/18.5 (30/25) | |
| | Torque (Max/Cont.) | N·m(lbf·ft) | 730/614 (538.4/452.9) | |
| | Spindle Type | - | Belt | |
| | Spindle Nose | - | A2-8 | |
| | C-axis Indexing | deg | - | 0.001° |
| FEED | Travel (X/Z) | mm(in) | 310/495 (12.2"/19.5") | |
| | Rapid Traverse Rate (X/Z) | m/min(ipm) | 20/24 (787/945) | |
| | Slide Type | - | ROLLER GUIDE | |
| TURRET | No. of Tools | EA | 12 | |
| | Tool Size | OD | mm(in) | □ 25 (1") |
| | | ID | mm(in) | Ø50 (2") |
| | Indexing Time | sec/step | | 0.2 |
| LIVE TOOL | Motor (Max/Cont.) | kW(HP) | - | 5.5/3.7 (7.5/5) |
| | Milling Tool Speed (rpm) | r/min | - | 4,000 |
| | Torque (Max/Cont.) | N·m(lbf·ft) | - | 35/23.5 (25.8/17.3) |
| | Collet Size | mm(in) | - | Ø20 (0.8") (ER32) |
| | Type | - | - | BMT65 |
| TANK CAPACITY | Coolant Tank | ℓ (gal) | | 300 (79.3) |
| | Lubricating Tank | ℓ (gal) | | 2.0 (0.52) |
| POWER SUPPLY | Electric Power Supply | kVA | | 24 |
| | Thickness of Power Cable | Sq | | Over 25 |
| | Voltage | V/Hz | | 220/60 (200/50*) |
| MACHINE | Floor Space (L×W) | mm(in) | | 1,549x2,826 (61"x111.3") |
| | Height | mm(in) | | 2,960 (116.5") |
| | Weight | kg(lb) | | 7,000 (15,432) |
| PC | Controller | - | | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] |

*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)

Prior consultation is required when applying spindle contouring control for gear driven spindle.
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[] : Option

| ITEM | | | LV500R/L | | LV500RM/LM | |
|---------------------------|--------------------------|--------------|---|-------------------------|-------------------------------|--|
| CAPACITY | Swing Over the Bed | mm(in) | Ø760 (29.9") | | | |
| | Swing Over the Carriage | mm(in) | Ø560 (22") | | | |
| | Max. Turning Dia. | mm(in) | Ø550 (21.7") | | | |
| | Max. Turning Length | mm(in) | 600 (23.6") | | | |
| SPINDLE | Chuck Size | inch | 15" [18"] | | | |
| | Spindle Bore | mm(in) | Ø100 (3.9") | | | |
| | Spindle Speed (rpm) | r/min | 2,000 | | | |
| | Motor (Max/Cont.) | kW(HP) | 22/18.5 (30/25) | [30/22 (40/30)] | [30/22 (40/30)] | |
| | Torque (Max/Cont.) | N·m(lbf·ft) | 824/693 (607.8/511.1) | [1,124/824 (829/607.8)] | [1,619/1,188 (1,194.1/876.2)] | |
| | Spindle Type | - | Belt | | | |
| | Spindle Nose | - | A2-11 | | | |
| | C-axis Indexing | deg | - | 0.001° | | |
| | FEED | Travel (X/Z) | mm(in) | 325/625 (12.8"/24.6") | | |
| Rapid Traverse Rate (X/Z) | | m/min(ipm) | 20/18 (787/709) | | | |
| Slide Type | | - | LM GUIDE | | | |
| TURRET | No. of Tools | EA | 8 [12] | | 12 | |
| | Tool Size | OD | □ 32 (1.3") | | | |
| | | ID | Ø50 (2") | | | |
| | Indexing Time | sec/step | 0.2 | | | |
| LIVE TOOL | Motor (Max/Cont.) | kW(HP) | - | | 3.7/2.2 (5/3) | |
| | Milling Tool Speed (rpm) | r/min | - | | 3,000 | |
| | Torque (Max/Cont.) | N·m(lbf·ft) | - | | 58.9/35 (43.4/25.8) | |
| | Collet Size | mm(in) | - | | Ø26 (1") (ER40) | |
| | Type | - | - | | BMT75 | |
| TANK CAPACITY | Coolant Tank | ℓ (gal) | 200 (52.8) | | | |
| | Lubricating Tank | ℓ (gal) | 2 (0.5) | | | |
| POWER SUPPLY | Electric Power Supply | kVA | 29 | | 32 | |
| | Thickness of Power Cable | Sq | Over 25 | | | |
| | Voltage | V/Hz | 220/60 (200/50*) | | | |
| MACHINE | Floor Space (L×W) | mm(in) | 1,855x2,842 (73"×111.9") | | | |
| | Height | mm(in) | 2,930 (115.4") | | | |
| | Weight | kg(lb) | 10,000 (22,046) | | | |
| PC | Controller | - | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] | | | |

*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)

Prior consultation is required when applying spindle contouring control for gear driven spindle.
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[] : Option

| ITEM | | | LV1100R | LV1100RM |
|-----------------|------------------------------|-------------|---|---------------------|
| CAPACITY | Swing Over the Bed | mm(in) | Ø1,355 (53.3") | |
| | Swing Over the Carriage | mm(in) | Ø1,250 (49.2") | |
| | Max. Turning Dia. | mm(in) | Ø1,160 (45.7") | |
| | Max. Turning Length | mm(in) | 1,000 (39.4") | |
| SPINDLE | Chuck Size | inch | 32" [40"] | |
| | Spindle Bore | mm(in) | Ø110 (4.3") | |
| | Spindle Speed (rpm) | r/min | 800 [630] | |
| | Motor (10min./30min./Cont.) | kW(HP) | 65/55/45 (87/74/60) | |
| | Torque (10min./30min./Cont.) | N·m(lbf·ft) | 7,671/6,490/5,310 (5,657.8/4,786.8/3,916.5) | |
| | Spindle Type | - | Gear | |
| | Spindle Nose | - | Ø380 (15") Flat | |
| C-axis Indexing | deg | - | 0.001° | |
| FEED | Travel (X/Z) | mm(in) | 620/1,000 (24.4"/39.4") | |
| | Rapid Traverse Rate (X/Z) | m/min(ipm) | 24/24 (945/945) | |
| | Slide Type | - | Box Guide | |
| TURRET | No. of Tools | EA | 12 | |
| | Tool Size | OD | □ 32 (1.3") | |
| | | ID | Ø80 (3.1") | |
| | Indexing Time | sec/step | 0.6 | |
| LIVE TOOL | Motor (Max/Cont.) | kW(HP) | - | 11/7.5 (15/10) |
| | Milling Tool Speed (rpm) | r/min | - | 3,000 |
| | Torque (Max/Cont.) | N·m(lbf·ft) | - | 70/47.8 (51.6/35.3) |
| | Collet Size | mm(in) | - | Ø34 (1.3") (ER50) |
| | Type | - | - | BMT85P |
| TANK CAPACITY | Coolant Tank | ℓ (gal) | 420 (111) | |
| | Lubricating Tank | ℓ (gal) | 4 (1.1) | |
| POWER SUPPLY | Electric Power Supply | kVA | 61 | 70 |
| | Thickness of Power Cable | Sq | Over 50 | |
| | Voltage | V/Hz | 220/60 (200/50*) | |
| MACHINE | Floor Space (L×W) | mm(in) | 2,922×4,325 (115"×170.3") | |
| | Height | mm(in) | 3,728 (146.8") | |
| | Weight | kg(lb) | 22,000 (48,502) | |
| PC | Controller | - | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] | |

*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)

Prior consultation is required when applying spindle contouring control for gear driven spindle.
Specifications are subject to change without notice for improvement.

CONTROLLER

FANUC 32i-B

[] : Option

| Controlled axis / Display / Accuracy Compensation | |
|---|--|
| Control axes | 2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X, Z, Y, C) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A) |
| Simultaneously controlled axes | 2 axes [Max. 4 axes] |
| Designation of spindle axes | 4 axes (1 path), 6 axes (2 path Total) |
| Least setting Unit | X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg |
| Least input increment | X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg |
| Inch / Metric conversion | G20 / G21 |
| High response vector control | |
| Interlock | All axes / Each axis |
| Machine lock | All axes |
| Backlash compensation | ± 0 ~ 9999 pulses (Rapid traverse / Cutting feed) |
| Position switch | |
| LCD / MDI | 10.4 inch color LCD |
| Feedback | Absolute motor feedback |
| Stored stroke check 1 | Over travel |
| Stored stroke check 2, 3 | |
| PMC axis control | |
| Operation | |
| Automatic operation (Memory) | |
| MDI operation | |
| DNC operation | Needed DNC software / CF card |
| Program restart | |
| Wrong operation prevention | |
| Program check function | Dry run, Program check |
| Single block | |
| Search function | Program Number / Sequence Number |
| Interpolation functions | |
| Nano interpolation | |
| Positioning | G00 |
| Linear interpolation | G01 |
| Circular interpolation | G02, G03 |
| Exact stop mode | Single : G09, Continuous : G61 |
| Dwell | G04, 0 ~ 9999.9999 sec |
| Skip | G31 |
| Reference position return | 1st reference : G28 2nd reference : G30 Ref. position check : G27 |
| Thread synchronous cutting | |
| Thread cutting retract | |
| Variable lead thread cutting | |
| Multi / Continuous threading | |
| Feed function / Acc. & Dec. control | |
| Manual feed | Rapid traverse Jog : 0~2,000 mm/min (79 ipm) Manual handle : x1, x10, x100 pulses Reference position return |
| Cutting Feed command | Direct input F code |
| Feedrate override | 0 ~ 200% (10% Unit) |
| Rapid traverse override | F1%, F25%, 50%, F100% |
| Override cancel | |
| Feed per minute | G98 |
| Feed per revolution | G99 |
| Look-ahead block | 1 block |
| Program input | |
| Tape Code | EIA / ISO |
| Optional block skip | 1 ea |
| Absolute / Incremental program | G90 / G91 |
| Program stop / end | M00, M01 / M02, M30 |
| Maximum command unit | ± 999,999.999 mm (± 99,999.9999 inch) |
| Plane selection | X-Y : G17 / Z-X : G18 / Y-Z : G19 |
| Workpiece coordinate system | G52, G53, 6 pairs (G54 ~ G59) |
| Manual absolute | Fixed ON |
| Programmable data input | G10 |
| Sub program call | 10 folds nested |
| Custom macro | #100 ~ #149, #500 ~ #549 |
| G code system | A |
| Programmable mirror image | G51.1, G50.1 |
| G code preventing buffering | G4.1 |
| Multiple repetitive cycles I, II | |

| | |
|--|---|
| Program input | |
| Canned cycle for turning | |
| Manual Guide i | Conversational auto program |
| Auxiliary function / Spindle speed function | |
| Auxiliary function | M 4 digit |
| Level-up M Code | High speed / Multi / Bypass M code |
| Spindle speed function | S 4 digit, Binary output |
| Spindle override | 0% ~ 150% (10% Unit) |
| Multi position spindle orientation | M19 |
| Rigid tapping | |
| Constant surface speed control | G96, G97 |
| Tool function / Tool compensation | |
| Tool function | T 2 digit + Offset 2 digit |
| Tool life management | |
| Tool offset pairs | 32 pairs |
| Tool nose radius compensation | G40, G41, G42 |
| Geometry / Wear compensation | |
| Direct input of offset measured B | |
| Editing function | |
| Part program storage size | 640m (256KB) |
| No. of registerable programs | 500 ea |
| Program protect | |
| Background editing | |
| Extended part program editing | Copy, move and change of NC program |
| Memory card program edit | |
| Data input / output & Interface | |
| I/O interface | RS 232C serial port, CF card, USB memory Embedded Ethernet interface |
| Screen hard copy | |
| External message | |
| External key input | |
| External workpiece number search | |
| Automatic data backup | |
| Setting, display and diagnosis | |
| Self-diagnosis function | |
| History display & Operation | Alarm & Operator message & Operation |
| Run hour / Parts count display | |
| Maintenance information | |
| Actual cutting feedrate display | |
| Display of spindle speed / T code | |
| Graphic display | |
| Operating monitor screen | Spindle / Servo load etc. |
| Power consumption monitoring | Spindle & Servo |
| Spindle / Servo setting screen | |
| Multi language display | Support 20 languages |
| Display language switching | Selection of 5 optional Languages |
| LCD Screen Saver | Screen saver |
| Unexpected disturbance torque | BST (Back spin torque limit) |
| Function for machine type | |
| Cs contour control (C & A axes) | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Polar coordinate interpolation | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Cylindrical interpolation | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Canned cycle for drilling | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Spindle orientation expansion | MS, SY TTS, TTMS, TTSY |
| Spindle synchronous control | MS, SY TTS, TTMS, TTSY |
| Torque control | MS, SY TTS, TTMS, TTSY |
| Y axis offset | Y, SY, TTSY |
| Arbitrary angular control | Y, SY, TTSY |
| Composite / Superimposed control | MS, SY TTS, TTMS, TTSY |
| Balance cutting | MS, SY TTS, TTMS, TTSY |
| Option | |
| Additional optional block skip | 9 ea |
| Fast ethernet | Needed option board |
| Data server | Needed option board |
| Protection of data at 8 levels | |
| Tool offset pairs | 64 pairs / 99 pairs / 200 pairs |
| Part program storage size | 1280 m (512KB) / 2560m (1MB) |
| Polygon turning (2 Spindles) | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Helical interpolation | |
| Dynamic graphic display | |
| Direct drawing dimension program | Including Chamfering / Corner R |

Figures in inch are converted from metric values.

The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

CONTROLLER

HYUNDAI WIA FANUC i Series – Smart Plus

[] : Option

| Controlled axis / Display / Accuracy Compensation | |
|---|--|
| Control axes | 2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X, Z, Y, C) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A) 7 axes (X1/Z1, X2/Z2, B2, C1/C2) |
| Simultaneously controlled axes | 2 axes [Max. 4 axes] |
| Designation of spindle axes | 3 axes [Max. 4 axes] |
| Least setting Unit | X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg |
| Least input increment | X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg |
| Inch / Metric conversion | G20 / G21 |
| High response vector control | |
| Interlock | All axes / Each axis |
| Machine lock | All axes |
| Backlash compensation | ± 0~9999 pulses (exc. Rapid traverse / Cutting feed) |
| Position switch | |
| LCD / MDI | 15 inch LCD unit (with Touch Panel) |
| Feedback | Absolute motor feedback |
| Stored stroke check 1 | Over travel |
| Stored stroke check 2, 3 | |
| PMC axis control | |
| Operation | |
| Automatic operation (Memory) | |
| MDI operation | |
| DNC operation | Needed DNC software / CF card |
| Program restart | |
| Wrong operation prevention | |
| Program check function | Dry run |
| Single block | |
| Search function | Program Number / Sequence Number |
| Interpolation functions | |
| Pano interpolation | |
| Positioning | G00 |
| Linear interpolation | G01 |
| Circular interpolation | G02, G03 |
| Exact stop mode | Single : G09, Continuous : G61 |
| Dwell | G04, 0 ~ 9999.9999 sec |
| Skip | G31 |
| Reference position return | 1st reference : G28, 2nd reference : G30 Ref. position check : G27 |
| Thread synchronous cutting | G33 |
| Thread cutting retract | |
| Variable lead thread cutting | |
| Multi / Continuous threading | |
| Feed function / Acc. & Dec. control | |
| Manual feed | Rapid traverse Jog : 0~2,000 mm/min (79 ipm) Manual handle : x1, x10, x100 pulses Reference position return |
| Cutting Feed command | Direct input F code |
| Feedrate override | 0 ~ 200% (10% Unit) |
| Rapid traverse override | 1%, F25%, 50%, 100% |
| Override cancel | |
| Feed per minute | G98 |
| Feed per revolution | G99 |
| Look-ahead block | 1 block |
| Program input | |
| Tape Code | EIA / ISO |
| Optional block skip | 1 ea |
| Absolute / Incremental program | G90 / G91 |
| Program stop / end | M00, M01 / M02, M30 |
| Maximum command unit | ± 999,999.999 mm (± 99,999.9999 inch) |
| Plane selection | X-Y : G17 / Z-X : G18 / Y-Z : G19 |
| Workpiece coordinate system | G52, G53, 6 pairs (G54 ~ G59) |
| Manual absolute | Fixed ON |
| Programmable data input | G10 |
| Sub program call | 10 folds nested |
| Custom macro | #100 ~ #199, #500 ~ #999 |
| G code system | A, B/C |
| Programmable mirror image | G51.1, G50.1 |
| G code preventing buffering | G4.1 |
| Direct drawing dimension program | Including Chamfering / Corner R |
| Conversational Program | SmartGuide-i |

| Program input | |
|---|--|
| Multiple repetitive cycles | I, II |
| Canned cycle for turning | |
| Auxiliary function / Spindle speed function | |
| Auxiliary function | M & 4 digit |
| Level-up M Code | High speed / Multi / Bypass M code |
| Spindle speed function | S & 5 digit, Binary output |
| Spindle override | 0% ~ 150% (10% Unit) |
| Multi position spindle orientation | M19 (S##) |
| FSSB Rigid tapping | |
| Constant surface speed control | G96, G97 |
| Tool function / Tool compensation | |
| Tool function | T & 2 digit + Offset 2 digit |
| Tool life management | |
| Tool offset pairs | 128 pairs |
| Tool nose radius compensation | G40, G41, G42 |
| Geometry / Wear compensation | |
| Direct input of offset measured B | |
| Editing function | |
| Part program storage size | 5,120m (2MB) |
| No. of registerable programs | 1,000 ea |
| Program protect | |
| Background editing | |
| Extended part program editing | Copy, move and change of NC program |
| Memory card program edit | |
| Data input / output & Interface | |
| I/O interface | CF card, USB memory Embedded Ethernet interface |
| Screen hard copy | |
| External message | |
| External key input | |
| External workpiece number search | |
| Automatic data backup | |
| Setting, display and diagnosis | |
| Self-diagnosis function | |
| History display & Operation | Alarm & Operator message & Operation |
| Run hour / Parts count display | |
| Maintenance information | |
| Actual cutting feedrate display | |
| Display of spindle speed / T code | |
| Graphic display | |
| Operating monitor screen | Spindle / Servo load etc. |
| Power consumption monitoring | Spindle & Servo |
| Spindle / Servo setting screen | |
| Multi language display | Support 24 languages |
| Display language switching | Selection of 5 optional Languages |
| LCD Screen Saver | Screen saver |
| Unexpected disturbance torque | BST (Back spin torque limit) |
| Function for machine type | |
| Cs contour control (C & A axes) | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Polar coordinate interpolation | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Cylindrical interpolation | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Polygon turning (2 Spindles) | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Canned cycle for drilling | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY |
| Spindle orientation expansion | MS, SY TTS, TTMS, TTSY |
| Spindle synchronous control | MS, SY TTS, TTMS, TTSY |
| Torque control | MS, SY TTS, TTMS, TTSY |
| Y axis offset | Y, SY, TTSY |
| Arbitrary angular control | Y, SY, TTSY |
| Composite / Superimposed control | MS, SY, TTS, TTMS, TTSY |
| Balance cutting | TTS, TTMS, TTSY |
| Option | |
| Additional optional block skip | 9 ea |
| Fast ethernet | Needed option board |
| Data server | Needed option board |
| Protection of data at 8 levels | |
| Tool offset pairs | 200 pairs |
| Helical interpolation | |
| Optional block skip | 40 ea, 200 ea (AICC II) |

Figures in inch are converted from metric values.

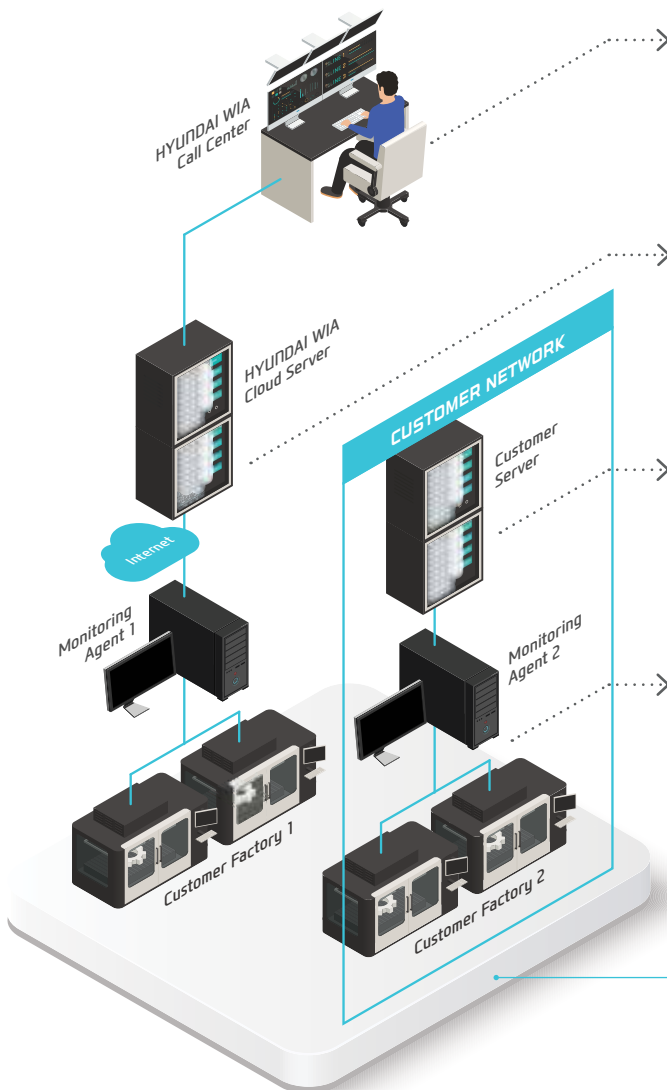
The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

HW-MMS

HYUNDAI WIA Machine Monitoring System



A brand new manufacturing machine by Hyundai Wia, HW-MMS is a unique software capable of monitoring the operation status of manufacturing machines in factories, a smart solution to improve manufacturing conditions of customers.



HW-MMS Remote

Hyundai Wia Call Center's remote diagnosis service provides a HMI/video diagnostic function.



HW-MMS Cloud

A cloud server-based equipment monitoring system for collecting and analyzing facility operation data.



HW-MMS Edge

A client server-based tool monitoring system for collection/analysis of facility operation data. (Compatible with client MES / ERP interface)



HW-MMS PT

This is a facility big data-based smart factory solution that collects and analyzes changes in spindle/feed data and NC processing files

HYUNDAI WIA
Smart Factory Solution



LV450RM
Movie



LV1100RM
Movie



You Tube HYUNDAI WIA MT

www.youtube.com/HYUNDAIWIAMT

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HEADQUARTER

Changwon Technical Center/R&D Center/Factory 153, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea TEL : +82 55 280 9114 FAX : +82 55 282 9114

Overseas Sales Team /R&D Center 37, Cheoldobangmulgwan-ro, Uiwang-si, Gyeonggi-do, Korea TEL : +82 31 8090 2539

OVERSEAS OFFICES

HYUNDAI WIA Machine America corp. 450 Commerce Blvd, Carlstadt, NJ 07072, USA TEL : +1-201-987-7298

HYUNDAI WIA Europe GmbH Alexander-Fleming-Ring 57, 65428 Rüsselsheim Germany TEL : +49-0-6142-9256-0

HYUNDAI WIA Machine Tools China 2-3F, Bldg6, No.1535 Hongmei Road, Xuhui District, Shanghai, China TEL : +86-21-6427-9885

India Branch Office #4/169, 1st Floor, LOTTE BLDG, Rajiv Gandhi Salai, (OMR), Kandanchavadi, Chennai - 600096, Tamilnadu, India TEL : +91-76-0490-3348

Vietnam Branch Office Flat number 05, Service and Trade Center of Viet Huong Industrial Zone, Highway 13, Thuan Giao, Thuan An, Binh Duong, Vietnam TEL : +84-3-5399-5099