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**LEADWELL**  
LEADWELL CNC MACHINES MFG., CORP.



**LEADWELL CNC MACHINES MFG., CORP.**



NO.23, Gong 33th Road, Taichung Industrial Park  
Taichung 407, Taiwan  
TEL: 886-4-23591880  
FAX: 886-4-23592555  
E-mail: sales@leadwell.com.tw

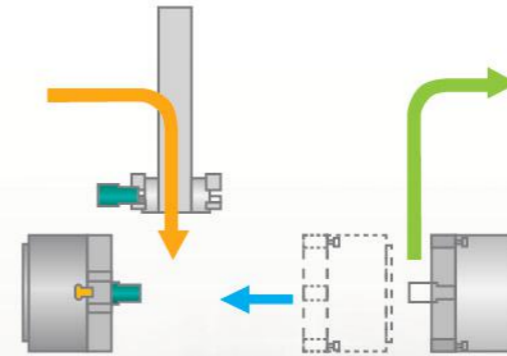
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※ All performance are based on 220V/3PH/60HZ. Specification are subject to change without notice.

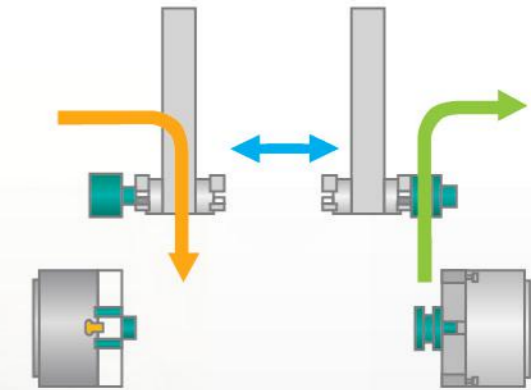
***T-6SMY/MY Series***  
**CNC TURNING CENTER**

# CNC TURNING CENTER

Innovative new design for the outstanding performance.

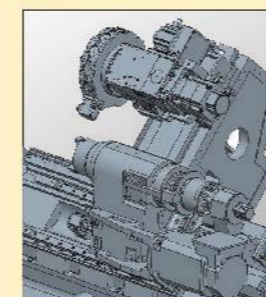


Robot Arm Loading System: The sub-spindle can continue the machining program on the rear side.



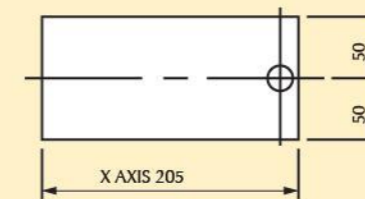
The loading of work-pieces become more efficient with the incorporation of the automatic Gantry Robot System.

- ▶ **MORE POWER**
  - Powerful main spindle with high torque and 6000 R.P.M. spindle speed
- ▶ **INCREASED CAPACITY**
  - 6 inch chuck as standard.
  - $\varnothing 52\text{mm}$  bar capacity standard
  - Y axis travel:  $\pm 50\text{mm}$
- ▶ **FASTER / MORE PRODUCTIVE**
  - Fast rapid rates X axis 15 m/minute & Z axis 30 m/minute.
  - Tool to tool turret indexing time 0.25 sec, 180° indexing 1.0 sec.



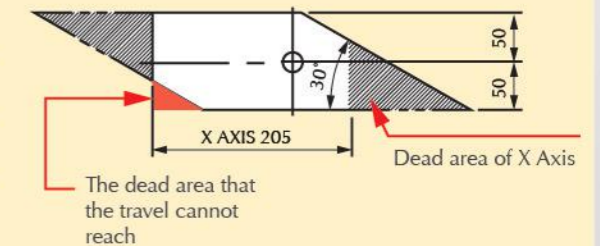
### Orthogonal Y Axis Explanation

Y axis is orthogonal placed on the X axis to ensure the full range of travel and to maximize the machining purposes.



### Orthogonal Y axis

No dead area within it's travel

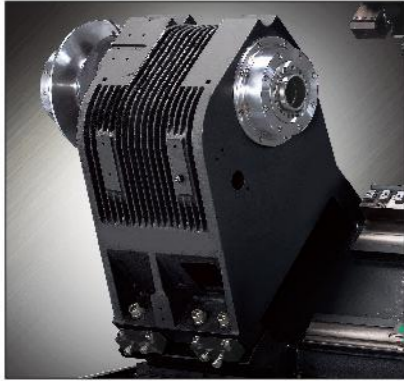


### Virtual Y axis

There will be dead area within it's travel, and requires complex programs.

# STRUCTURE

## ● Rigid Construction

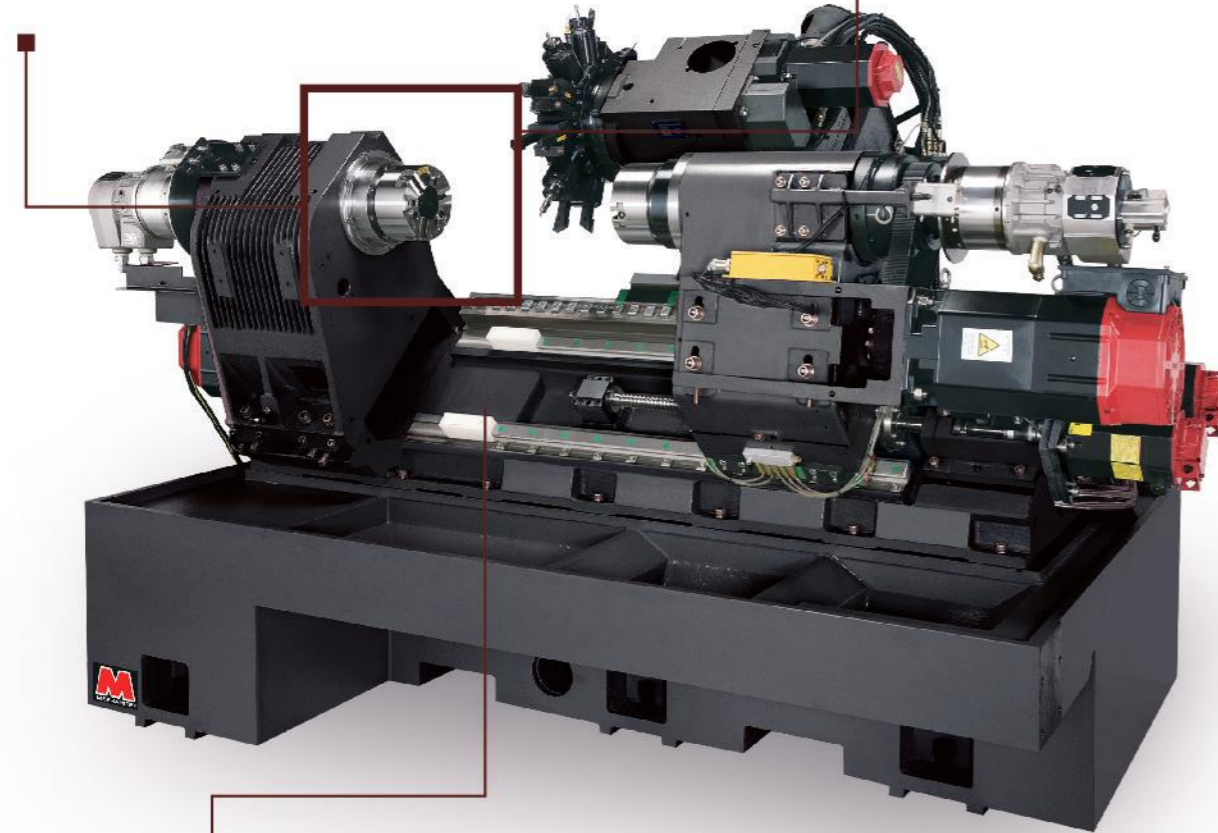


### ▶ CARTRIDGE TYPE SPINDLE

- The heavy-duty spindle utilizes high quality bearings to support heavy cutting.
- Heavy duty A2-5 spindle nose
- Wide bearing spacing for high rigidity
- Special heat treatment on relevant parts
- Highly accurate draw tube mechanism
- Precision Labyrinth seal
- Large diameter quill for high rigidity
- Optimum spacing of front bearings to spindle nose for highest rigidity

### ▶ HEADSTOCK

- Heavy duty thermally symmetrical headstock design with heat dissipating fins to minimize thermal distortion during long machining cycles. All important components are machined in a temperature controlled environment and assembled in a clean-room.
- Cartridge style spindle provides quick and easy replacement.



- The 45 degree slant bed design allows chips to fall directly into the chip tank, avoiding accumulation inside the machine.



### ▶ TAILSTOCK DRIVE BY SERVO MOTOR (FOR T-6MY)

- Heavy duty tailstock with large diameter quill and precision #5 Morse taper provides outstanding rigidity.
- The tailstock is driven by servo motor to increase the accuracy.

# FEATURE

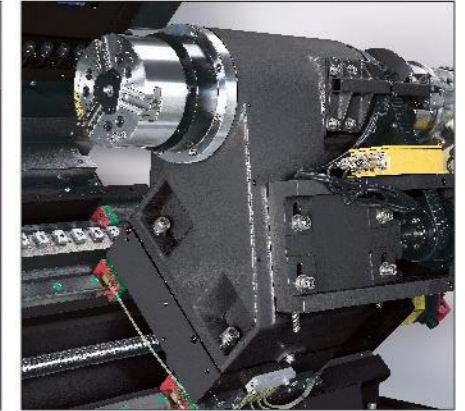
**S + M + Y**  
**M + Y**

**S**

### SUB-SPINDLE

The sub-spindle replaces the standard tailstock on turning centers. A position CZi sensor is attached to the sub-spindle so the sub-spindle can then be synchronized with the main spindle. Special software allows the work piece to be transferred from the main spindle to the sub-spindle at any speed for secondary machining operations. This eliminates the need for operator intervention.

- \* Allows machining on both end of parts.



**M**

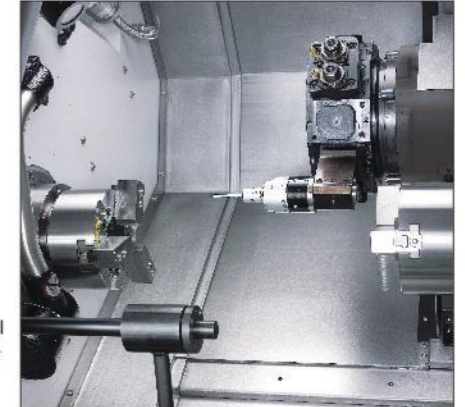
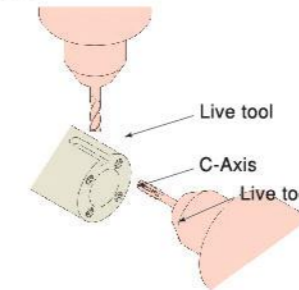
### LIVE TOOL TURRET

Each tool can become a rotating tool for both milling and drilling operations.

- Tools can be either radially or axially oriented.

#### Power Turret Cutting Capacity:

Tool	12 live tools
Drill	10mm
End Mill	12mm
Tapping	M10xP1.5

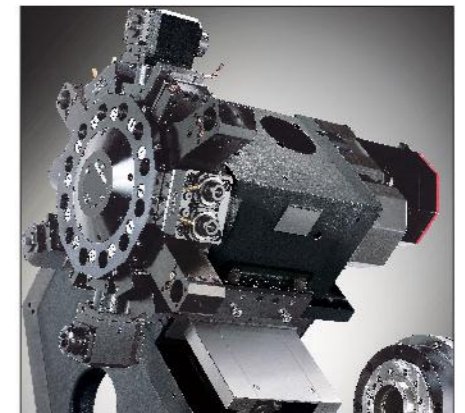
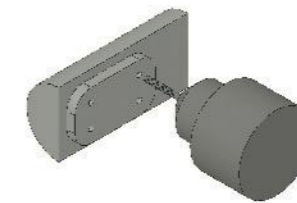


**Y**

### A turning center can operate like a column moving machining center

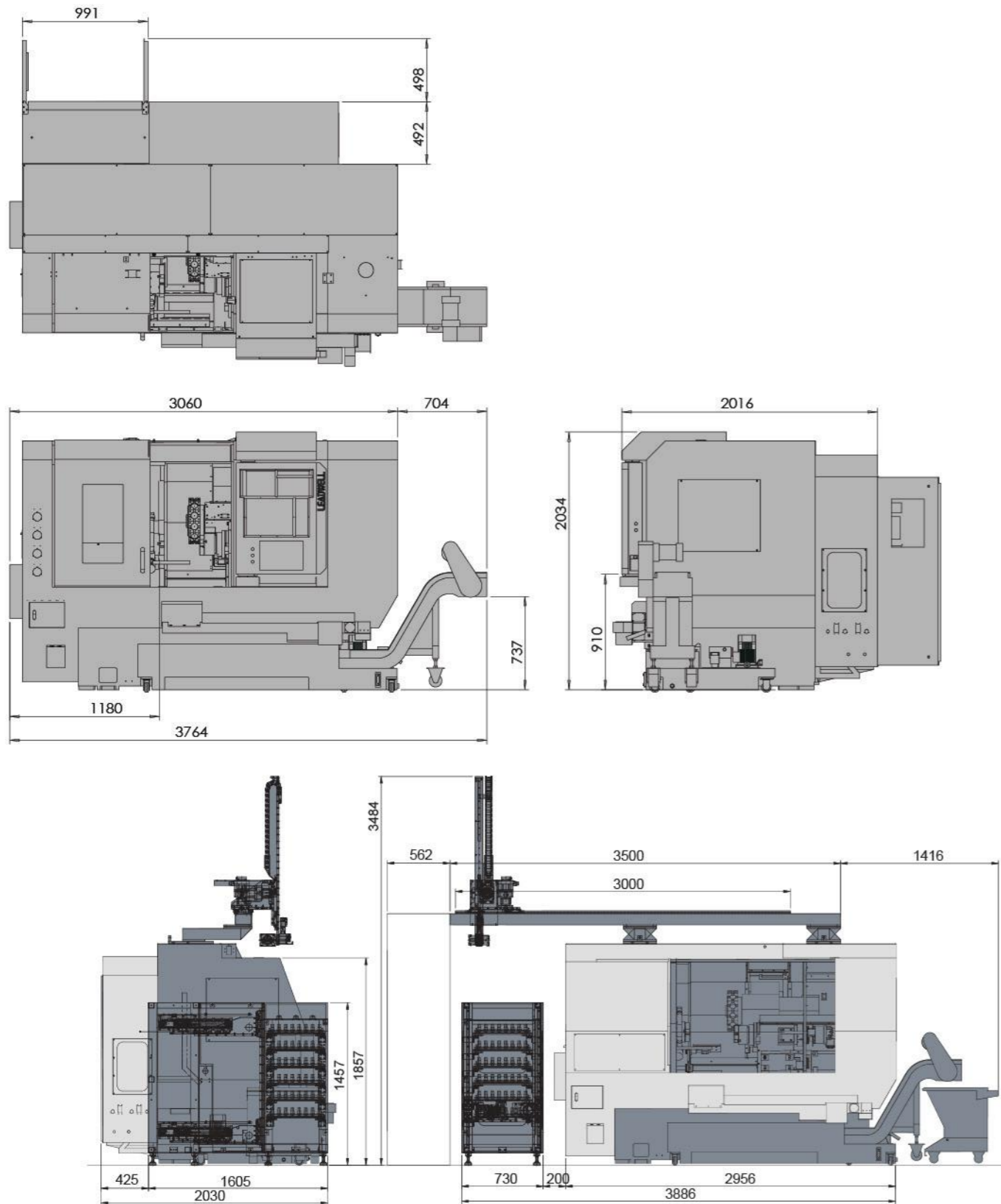
#### Y axis

The Y axis design can decrease inaccuracy from machining and arithmetic error. (Patent no. M257917)



# OUTLINE DIMENSION

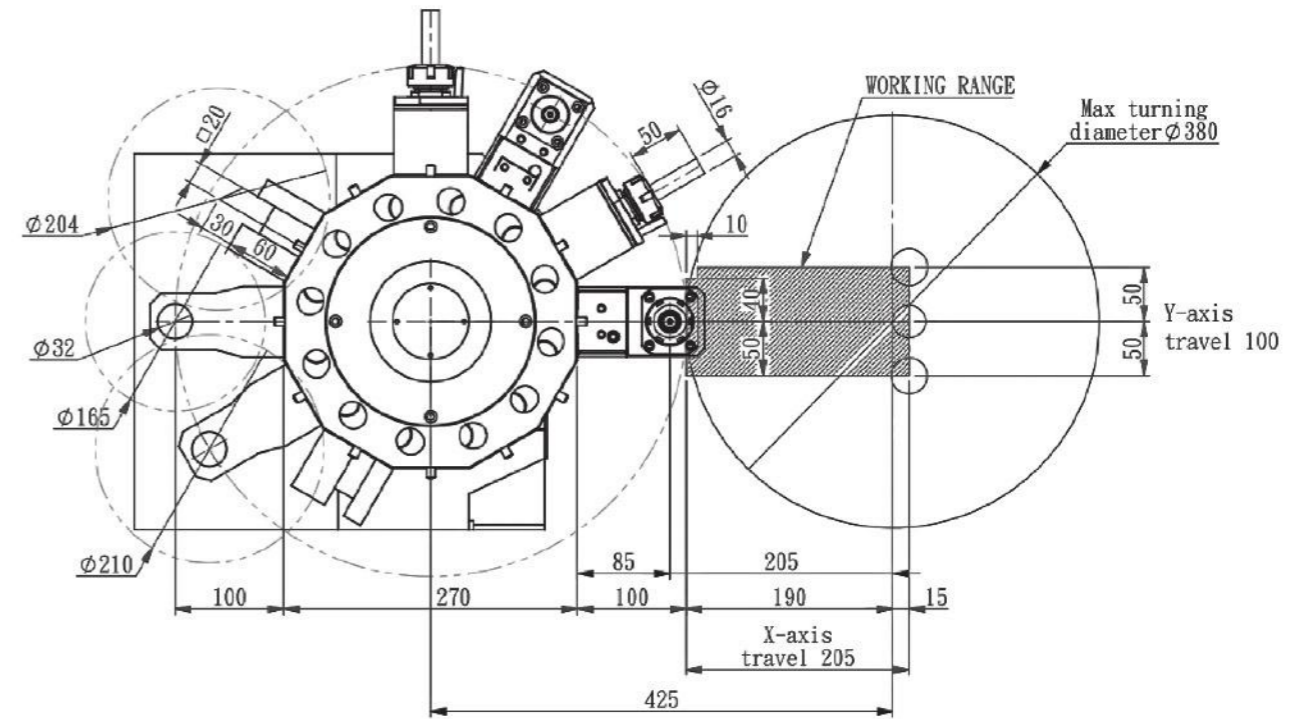
Unit:mm



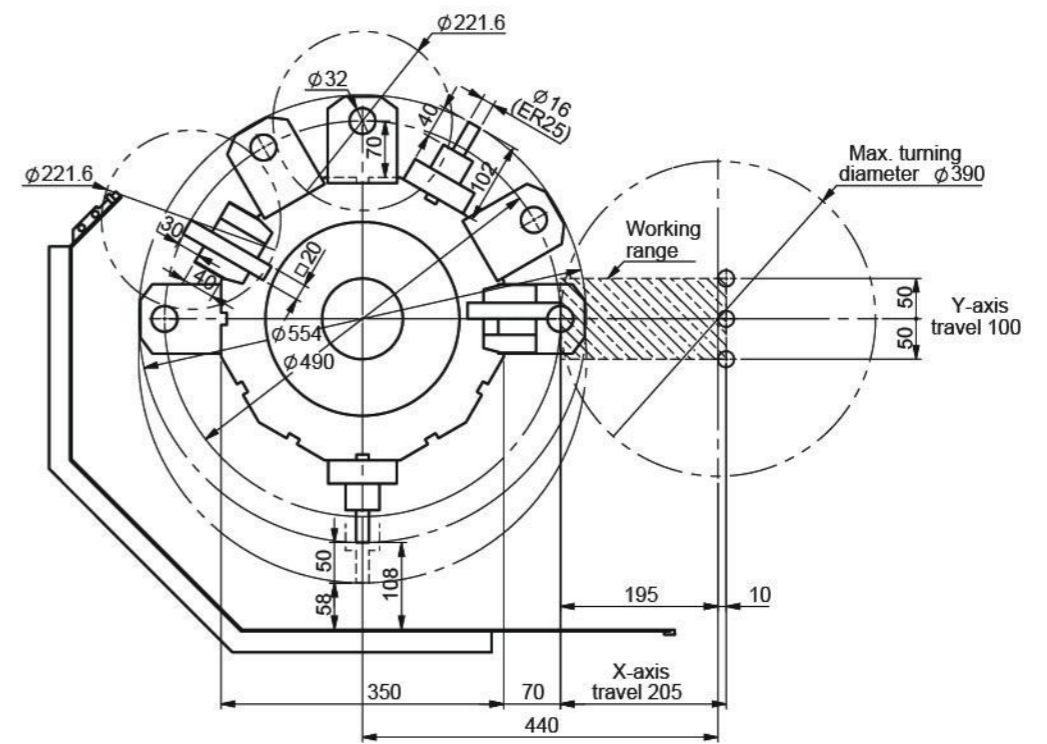
# TOOLING INTERFERENCE

Unit:mm

## ► T-6SMY/T-6MY (VDI 30)

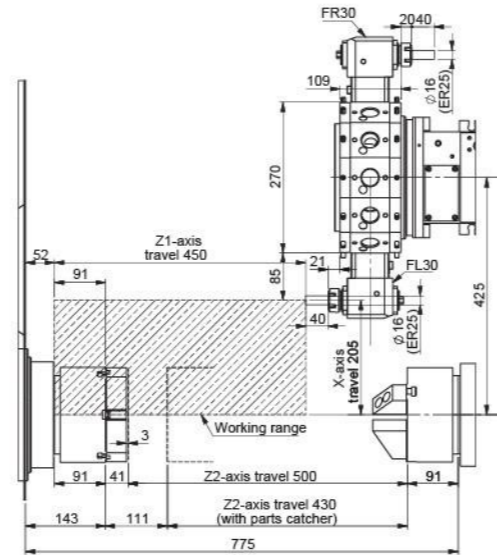
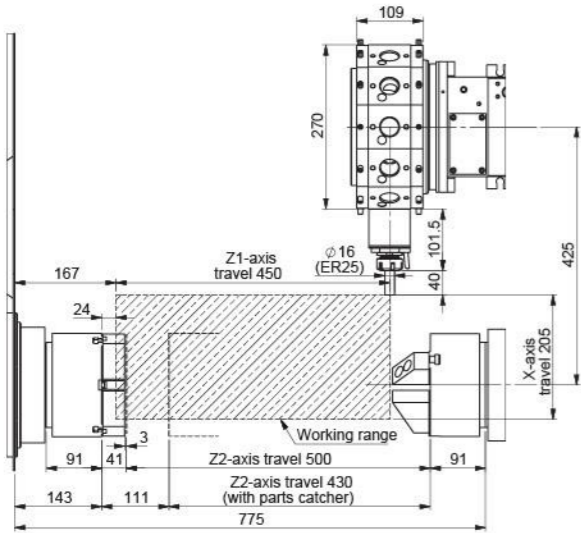


## ► T-6SMY/T-6MY (BMT 55)

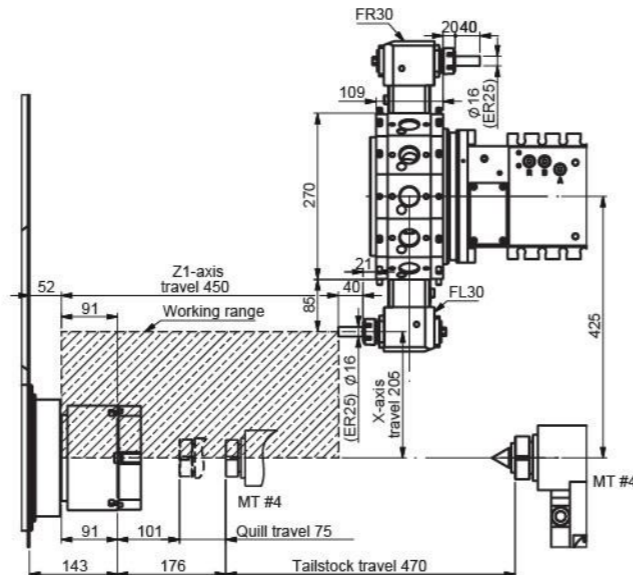
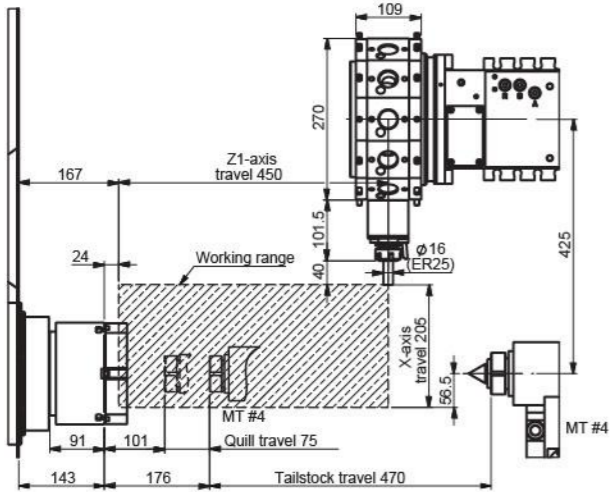


# WORKING CAPACITY

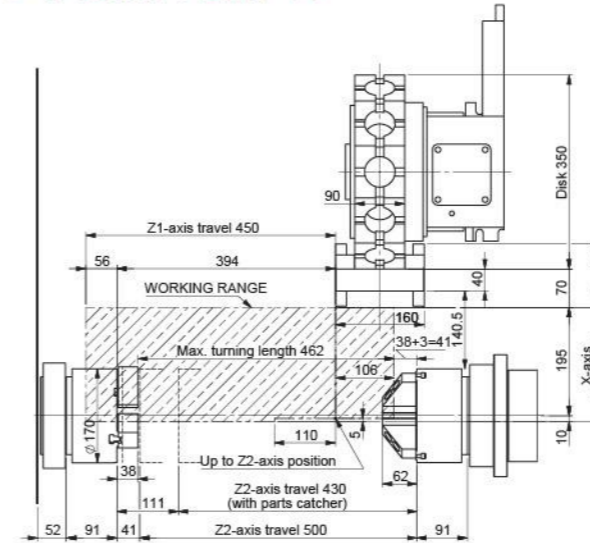
## ► T-6SMY / VDI 30



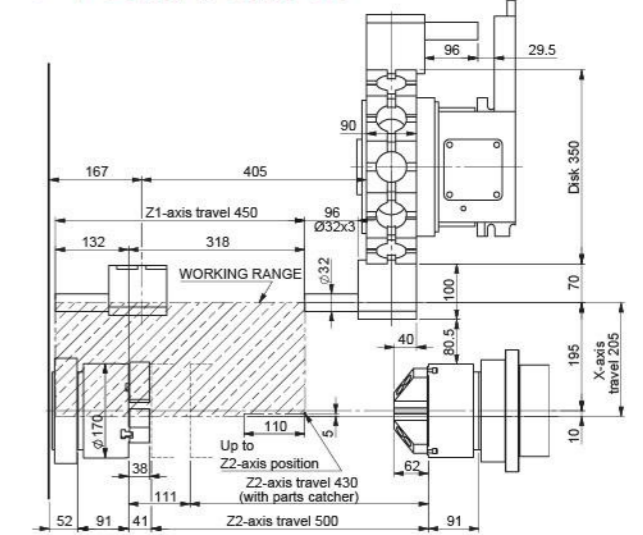
## ► T-6MY / VDI 30



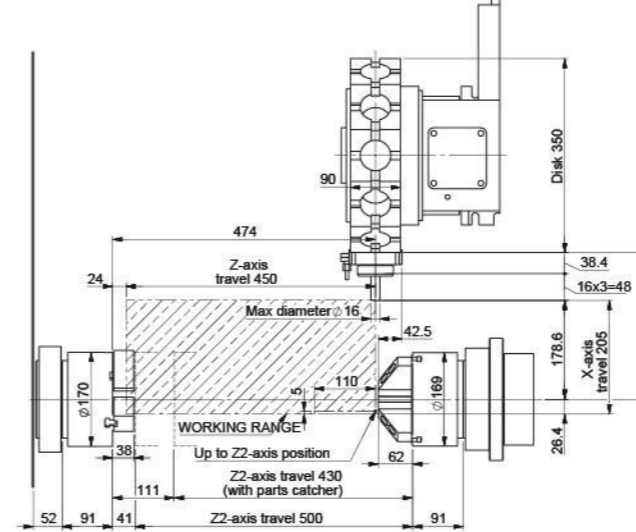
## ► T-6SMY / BMT 55



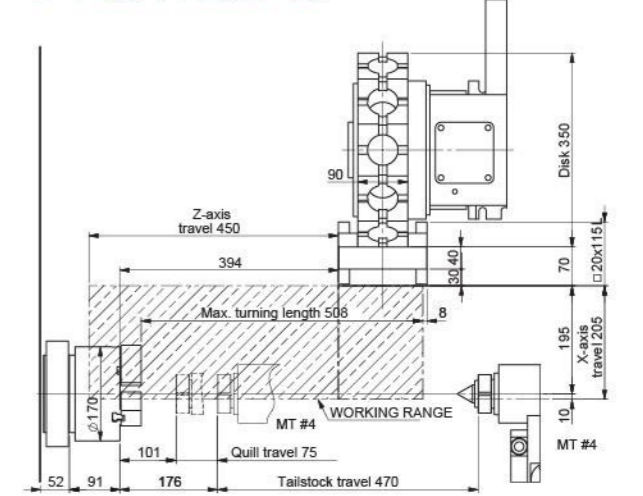
## ► T-6SMY / BMT 55



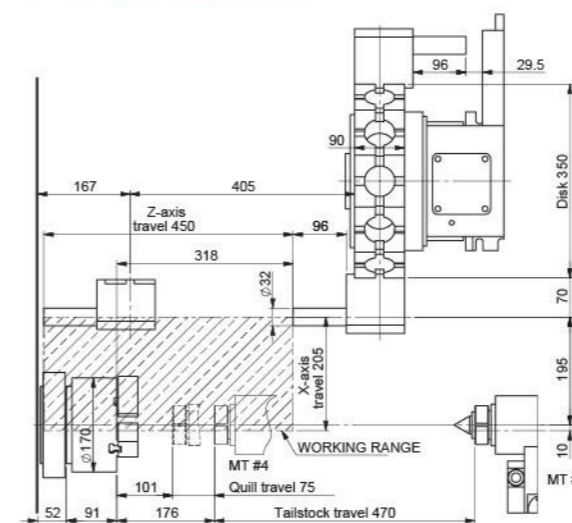
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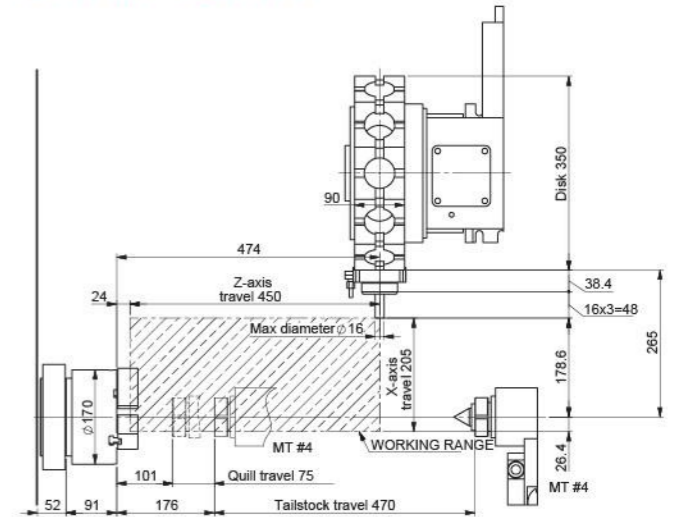
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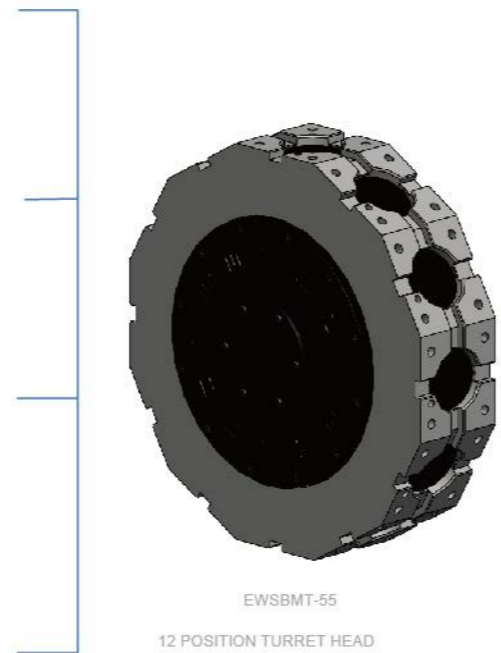
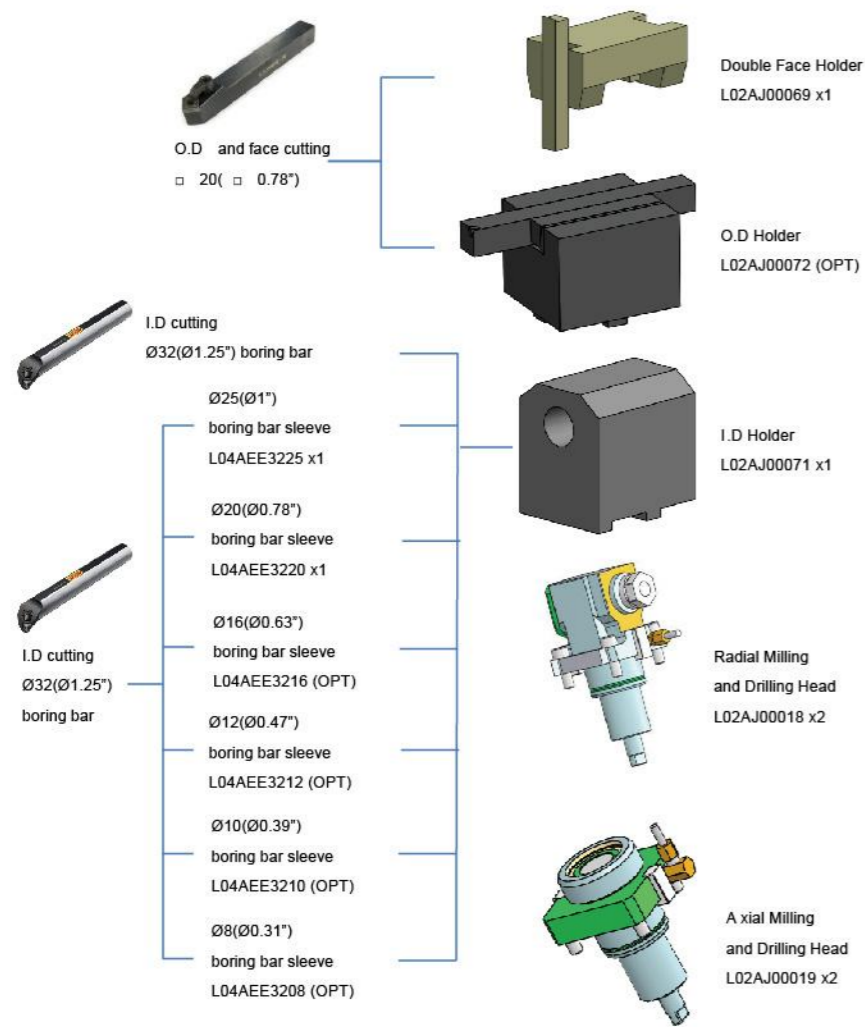
## ► T-6MY / BMT 55



## ► T-6MY / BMT 55



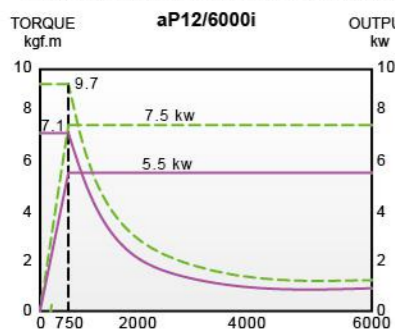
# TOOLING SYSTEM



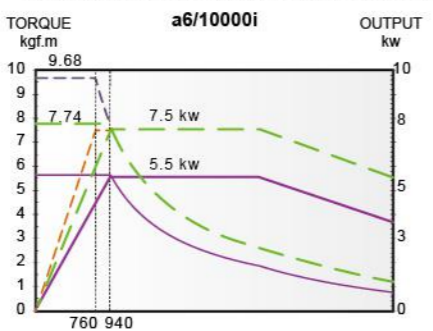
# SPINDLE POWER CURVE

--- 30 min  
— Continuous  
— Intermittent

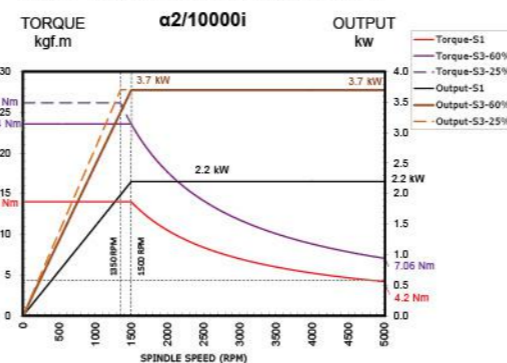
T-6SMY SPINDLE MOTOR TORQUE DRAWING



T-6SMY SUB-SPINDLE MOTOR TORQUE DRAWING



T-6SMY TURRET MOTOR TORQUE DRAWING



# MACHINE SPECIFICATIONS

ITEM	MODEL	Unit	T-6SMY	T-6MY
<b>CAPACITY</b>				
Max. swing		mm(in)	630(24.8)	
Max. turning diameter		mm(in)	410(16.14)	
Max. turning length		mm(in)	462(18.19)	508(20)
Bar capacity		mm(in)	52(2)	
<b>TRAVEL</b>				
X axis		mm(in)	205+10(8.07+0.4)	
Y axis		mm(in)	±50(±1.96)	
Z axis		mm(in)	450(17.7)	
Z2 axis/with parts catcher(OPT)		mm(in)	500(19.68)/430(16.93)	-
<b>SPINDLE</b>				
Spindle speed		rpm	6000	
Chuck size		mm(in)	152(6)	
Spindle nose			A2-5	
Spindle motor power		KW(HP)	7.5(10)	
<b>SUB SPINDLE</b>				
Sub spindle speed		rpm	4500	-
Sub chuck size		mm(in)	152(6)	-
Sub spindle motor power		KW(HP)	7.5(10)	-
Sub spindle feed motor		KW(HP)	1.6(2.1)	-
<b>TURRET</b>				
Number of tool stations		pcs	12	
Shank height for square tool		mm(in)	20(0.8) BMT 55	
Shank diameter for boring bar		mm(in)	32(1.3) BMT 55	
Turret indexing time (adjacent tool)		sec	1.13/1.8	
Rotary tool spindle speed range:axis units		rpm	5000	
Rotary tool spindle speed range:radial units		rpm	5000	
<b>TAILSTOCK</b>				
Tailstock movement type			-	SERVO
Quill inside taper		M.T	-	4
Quill Max.thrust		Kg-f	-	400(Oil pressure: 2 MPa)
<b>FEED RATE</b>				
X/Z/Y axis rapid traverse		m/min(IPM)	15/30/7.5(591/1181/295)	
<b>MOTORS</b>				
X/Z/Y axis motor		KW(HP)	1.6(2.1)	
<b>MACHINE SIZE</b>				
Total machine weight		kg	5600	
Height of machine (H)		mm(in)	2000(78.7)	
Floor space (LXW)		mm(in)	3014x2060(118.6x81.1)	
Power requirement		KVA	40	30
Controller		FANUC	0i-T	

\*AVAILABLE CONTROLLER:SIEMENS/FAGOR

## STANDARD ACCESSORIES

- RS232 interface
- Fully enclosure guarding
- Work light
- Metric disc
- Leveling screws and pads
- Maintenance tool box
- Buzzer
- 3" jaw open center chuck
- Foot peddle switch
- Wide angle v-belt
- Bullet proof glass
- Spindle side coolant nozzle
- C axis

## OPTIONAL ACCESSORIES

- Tool setter
- Parts catcher
- Alarm lamp
- Bar feeder
- Auto door
- Tool tip air blow nozzles
- High pressure coolant
- Collet chuck
- Oil mist collector
- Linear scales
- Chuck with high / low pressure
- Oil skimmer
- Transformer
- Air conditioner in cabinet
- Chip conveyor outside machine
- Chip bucket