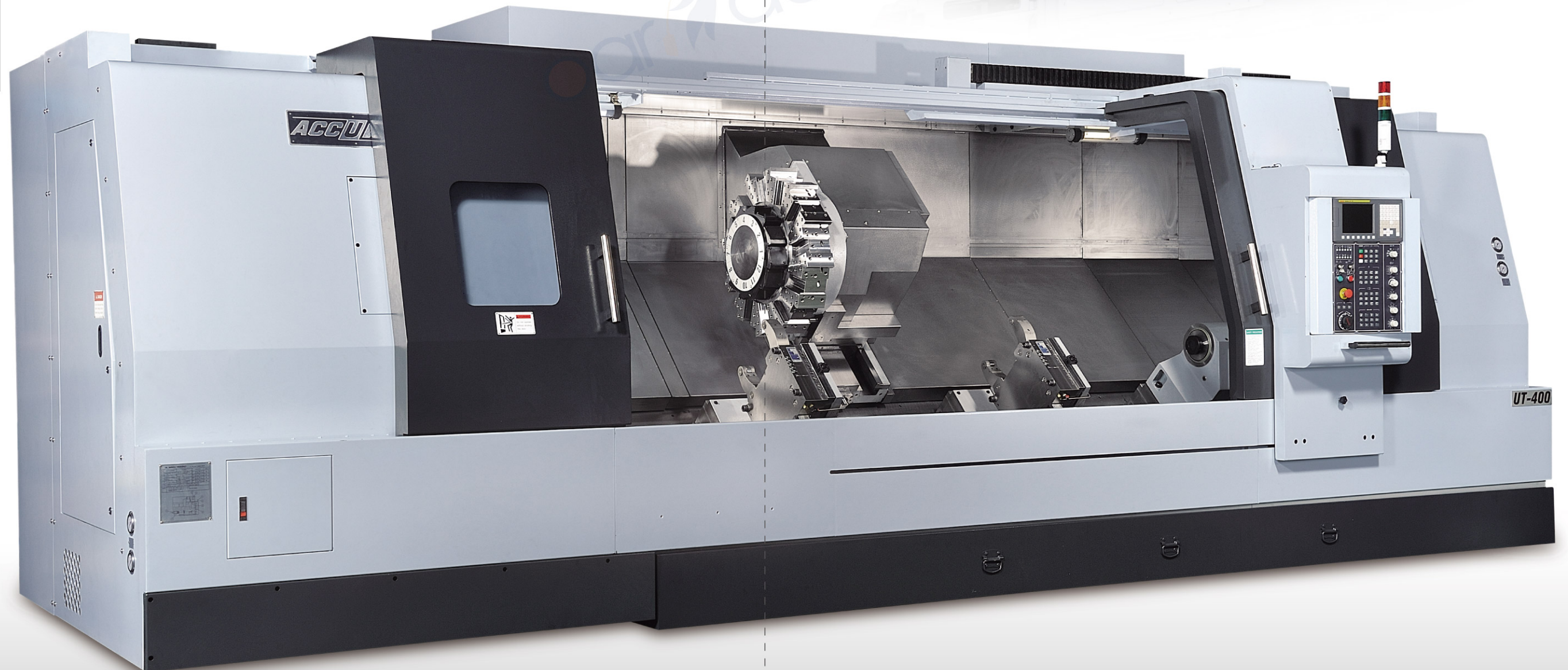
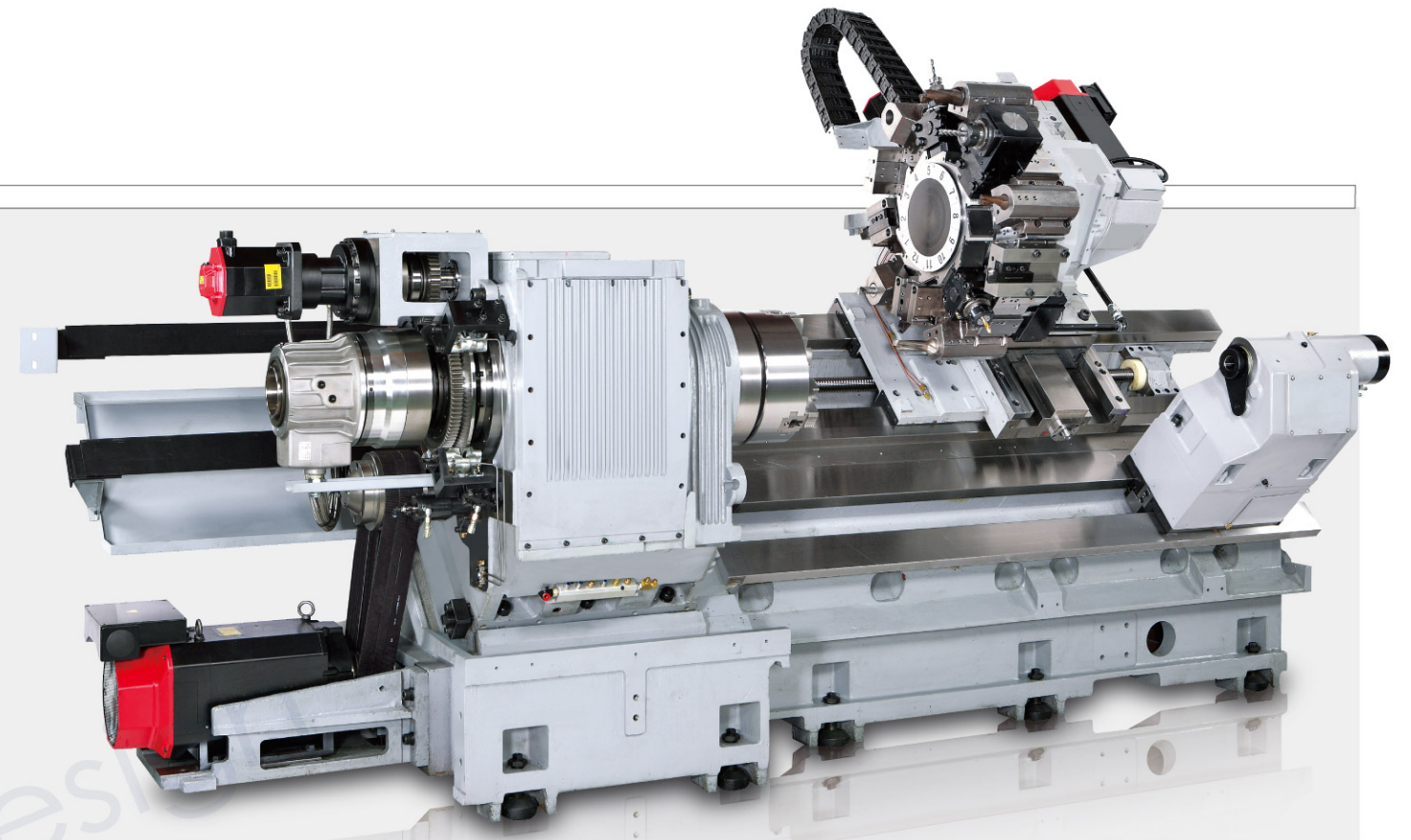




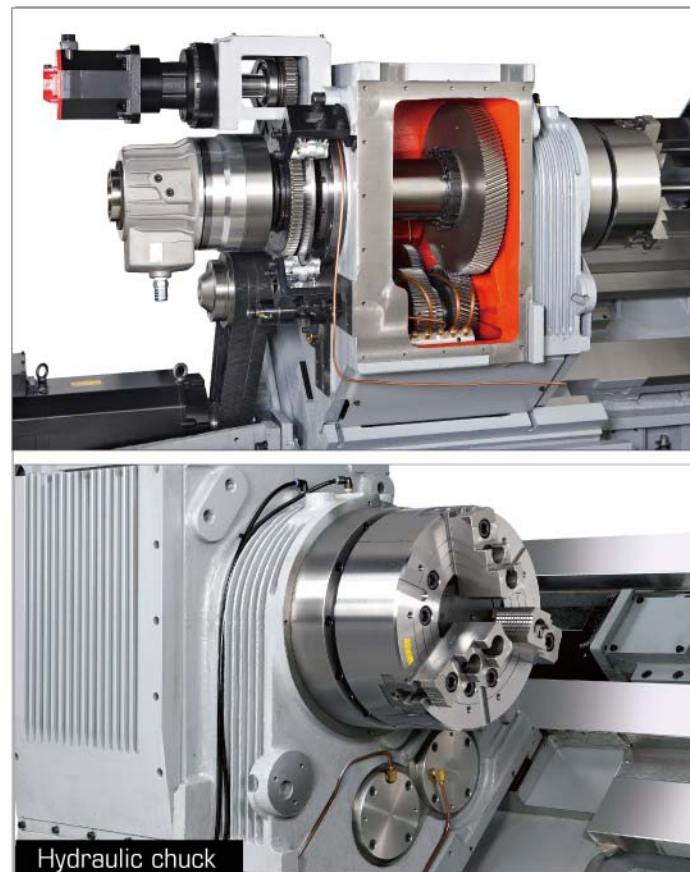
CE

Rigid Basic Structure

- The 45 degree slant bed structural design consists of a one piece bed and box way casting with low center of gravity, large swing diameter, superior rigidity for easy disposal of coolant and chips and longer tool life.
- Bed structure is internally reinforced with numerous heavy ribs to reduce deformation from shear or tensile stress.
- Each sliding surface is coated with Turcite-B to obtain long and stable operating life even under rigorous impact loading conditions.
- Fine grain wear resisting, shock-absorbing Meehanite cast iron is heat-treated, annealed twice and ground to eliminate internal stress as well as naturally seasoned to attain stability and hardness of HRC 53. This ensures the high rigidity with minimum deformation to meet tough demands from continuous heavy duty and/or step cutting.

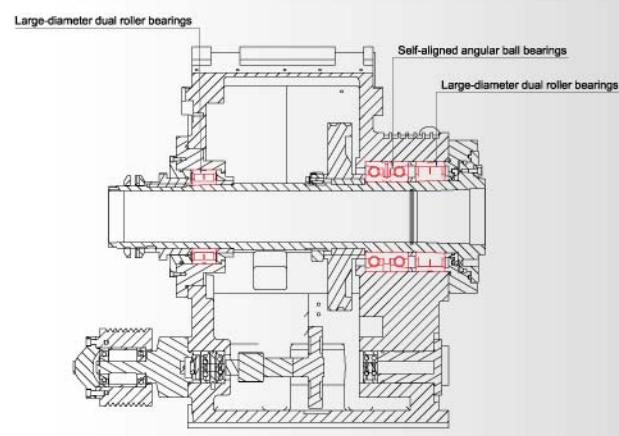


Powerful Main Spindle Design



Hydraulic chuck

- Power is delivered to the spindle through a two speed geared head allowing stable spindle speed changes as well as powerful torque output.
- Helical gears are incorporated in the gearbox to reduce noise, increase contact area, and reduce backlash for even high precision cutting.
- Headstock design, uses symmetrical heat-dissipating ribs, precision-bored and ground to reduce error from heat distortion, maintain circularity and concentricity, thereby ensuring long-term cutting accuracy.
- Every spindle is assembled, along with headstock and bearings, in a temperature controlled environment and with precise fitting jigs. Then it undergoes extensive run-in test to eliminate bearing mismatch arising from elevated temperatures.

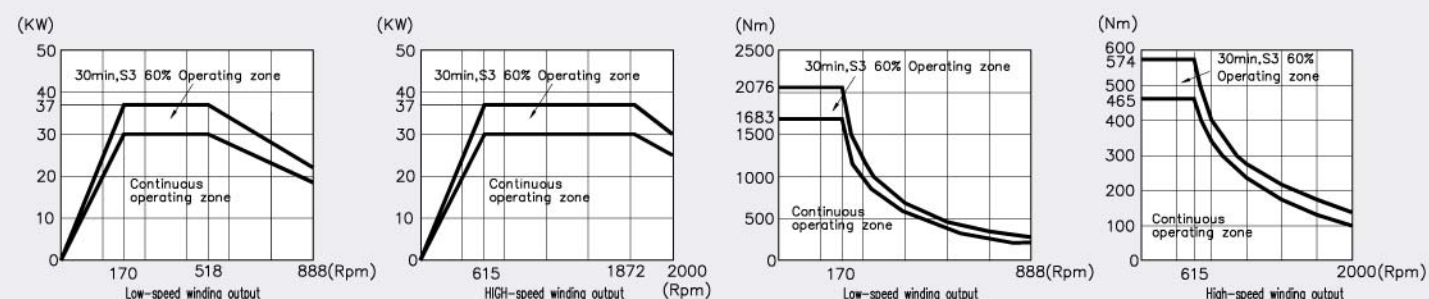


Spindle design

- High-precision spindle is supported by large-diameter, dual roller bearings and self-aligned angular ball bearings.
- Twin optimized supports can resist any kind of axial or radial loading generated by high-speed precision turning or low-speed heavy-duty rough turning.

Specification/Model	Inner diameter of spindle	Outer diameter of spindle bearings	Inner diameter of spindle bearings
UT-400	mm	131	280
		205	360
		260	

Spindle torque-power chart



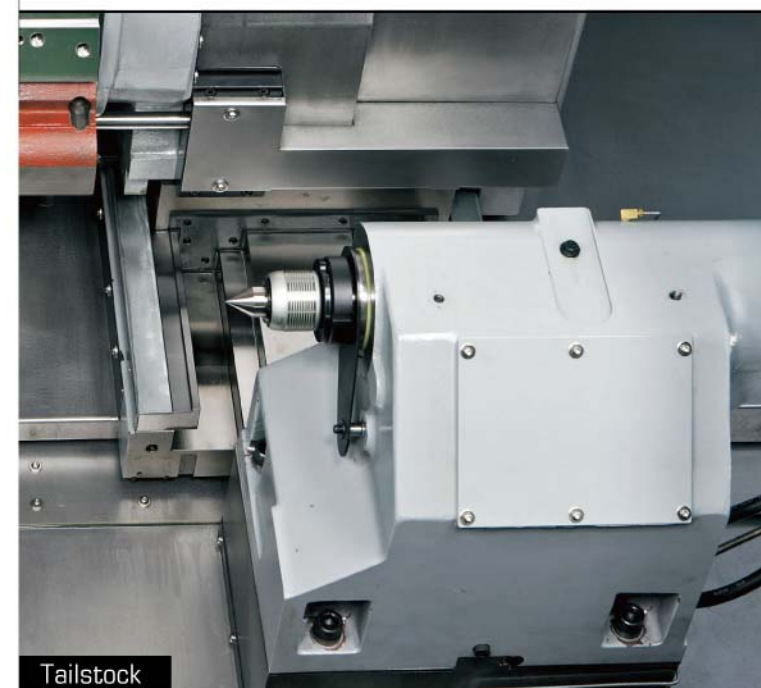
Special Turret Design and Precision Motion Control



Special turret design



- Heavy duty servo controlled turret with 2-piece large diameter Hirth-type coupling provides strong clamping, high stiffness, high loading capacity, and precise positioning accuracy. Bi-directional indexing of the 12-station block type turret top plate allows shortest path indexing for reduced non-cut time.



Tailstock

- The high-precision tailstock quill encased in a sleeve is fully programmable. The tailstock body is mounted on box ways to ensure maximum rigidity for greater stability when machining long and heavy components between centers, allowing closer tolerances and better surface finishes.
- The tailstock taper is MT5 standard, with either a live center or a rotating quill option depending upon requirements.

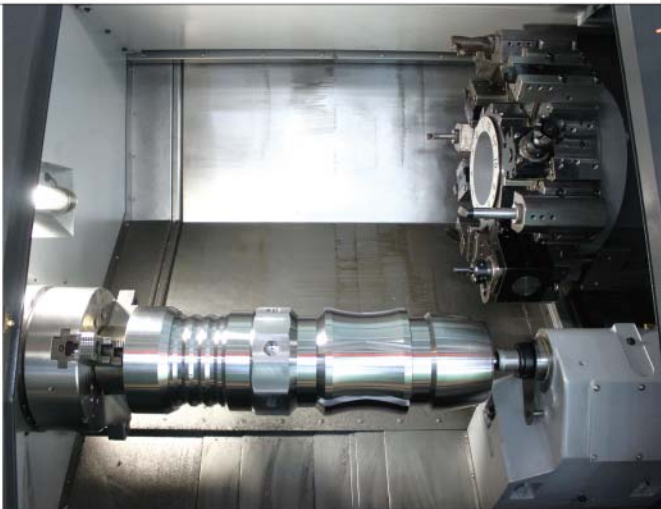
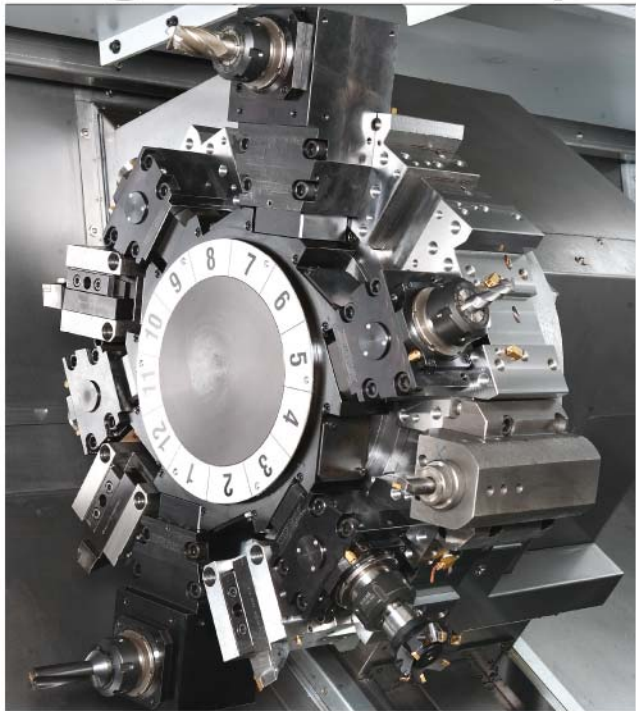
- Precision ground ball screw with C3 class hardness ensures high accuracy and durability.



- Advanced green environment oil mist system lubricates and cools both bearings and gears while eliminating oil contamination bearings when using oil cooler.



Strong Live Tooling for Long, Large Sized Workpieces



Heavy Duty Servo Mechanical Power Turret + C-axis index control

■ New design high rigid 12-station base mount tooling turret is capable of accepting rotary tools at any station, providing flexible machining through various machining operations in just one set-up. Each tool holder is securely tightened by 4 screws, allowing the turret to perform heavy-duty cutting, milling and drilling operations. Turret indexing is non-stop, bi-directional with a fast 0.25 second next station index time.

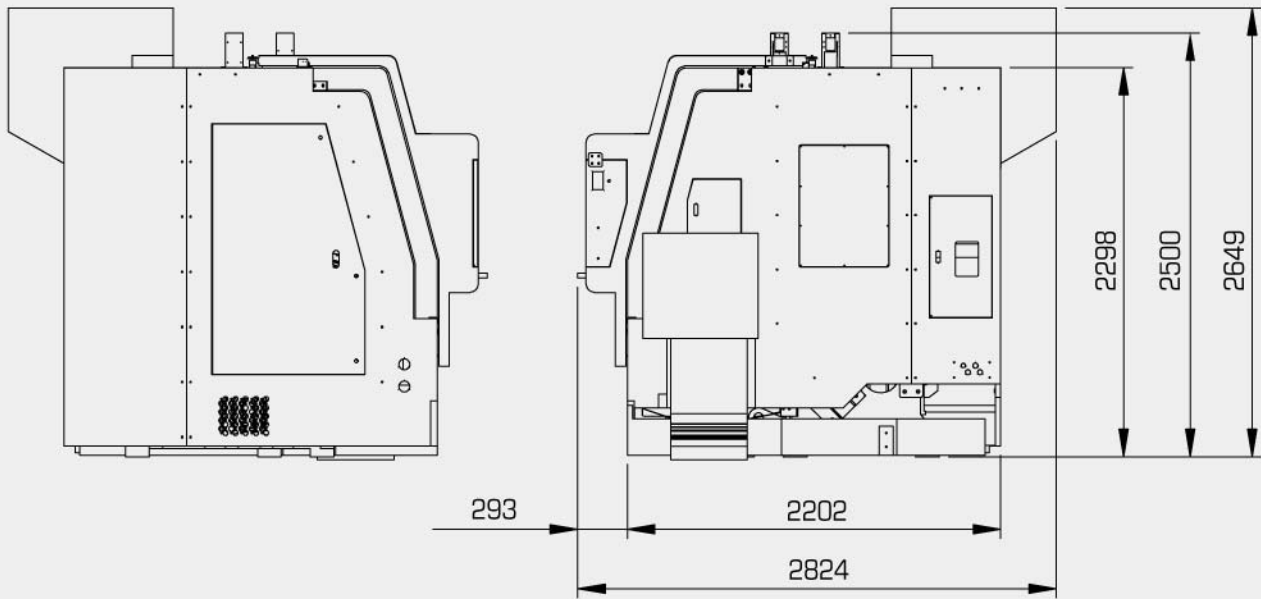
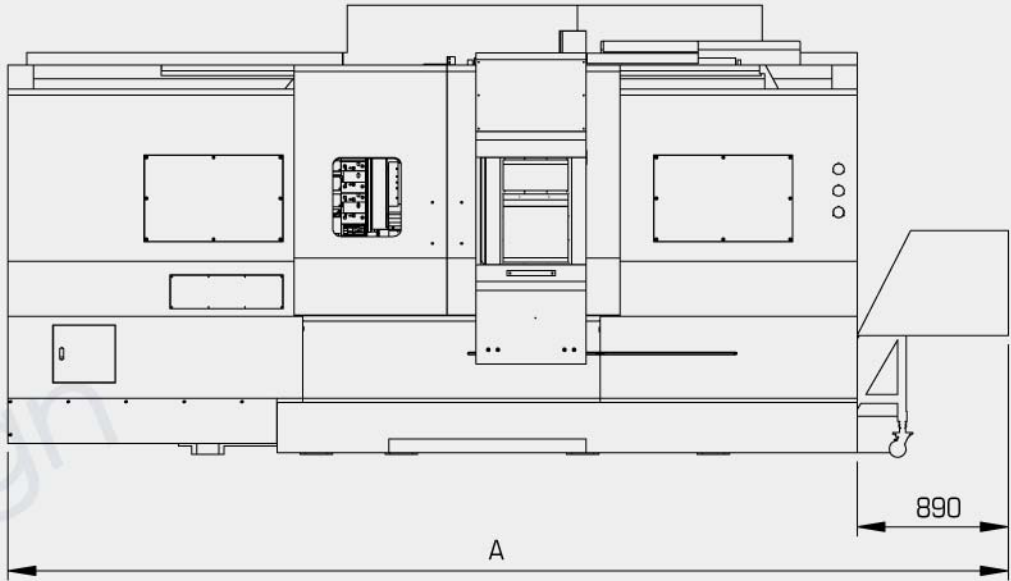
■ To cope with rigorous heavy cutting demands, the power turret features a special driving method that is superior to the VDI design, offering 11 kW of driving power for rotary tools to satisfy versatile heavy cutting process.

Steady rest



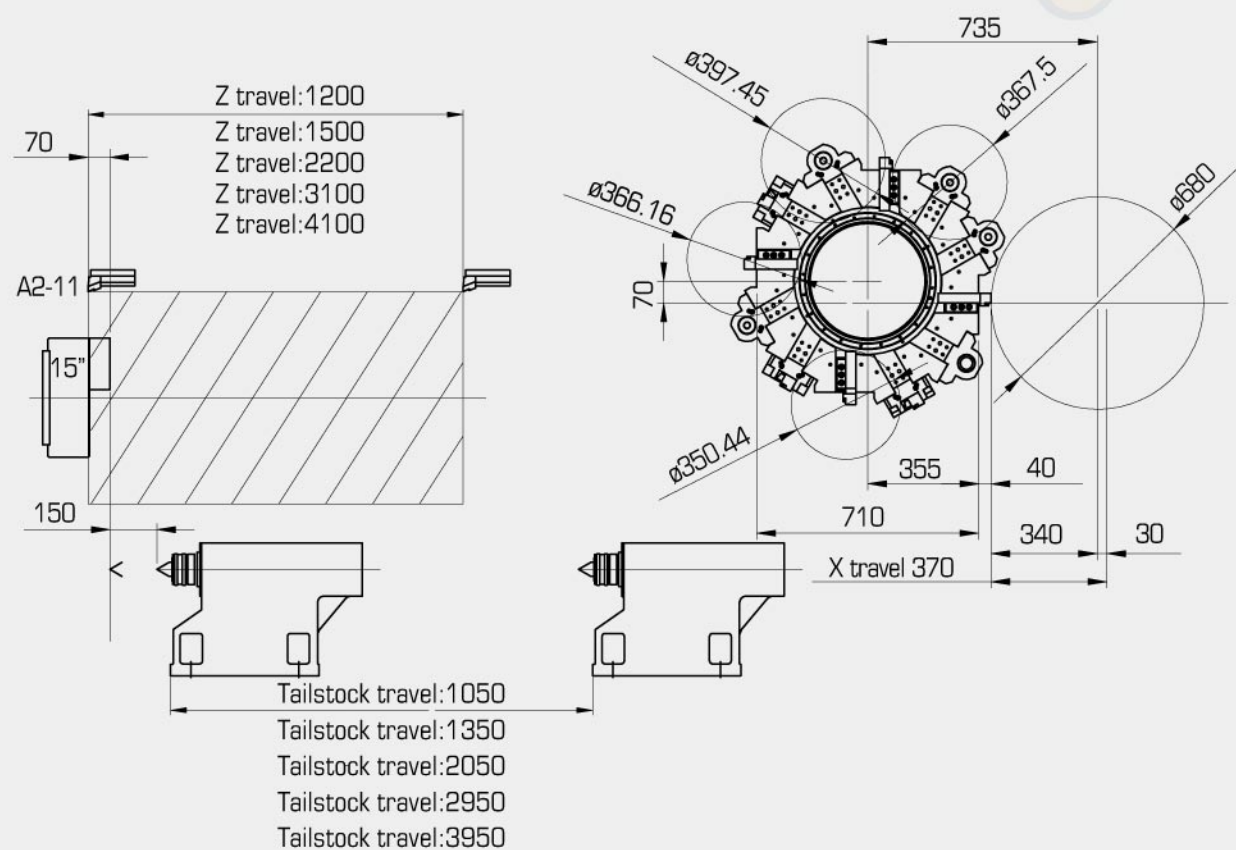
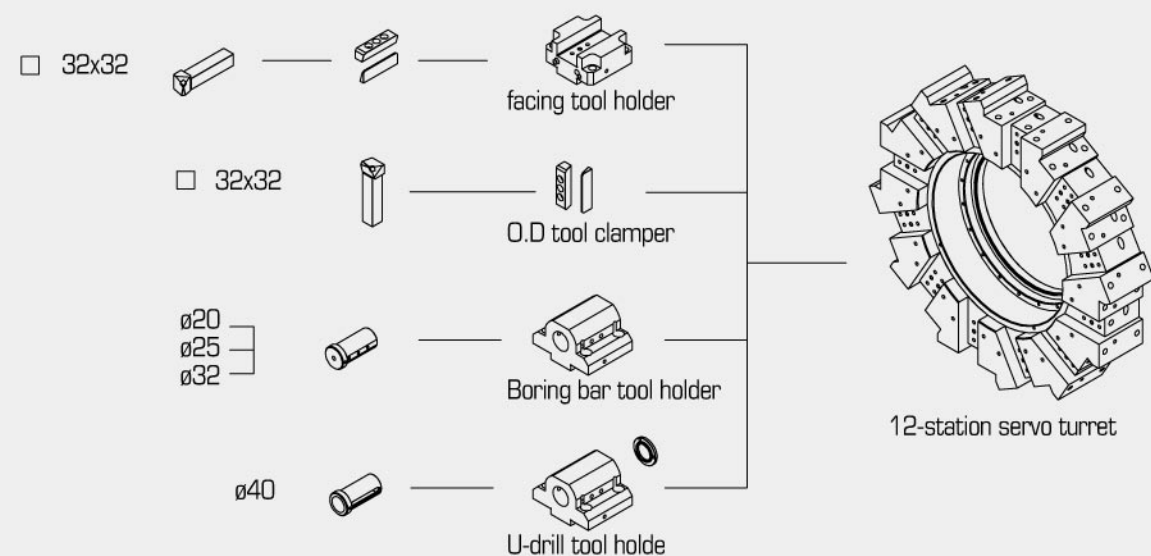
■ To prevent longitudinal deflection induced by work piece weight, hydraulic controlled automatic steady rest is available as an option to maintain cutting precision for large and long workpiece.

UT-400 Machine dimensions

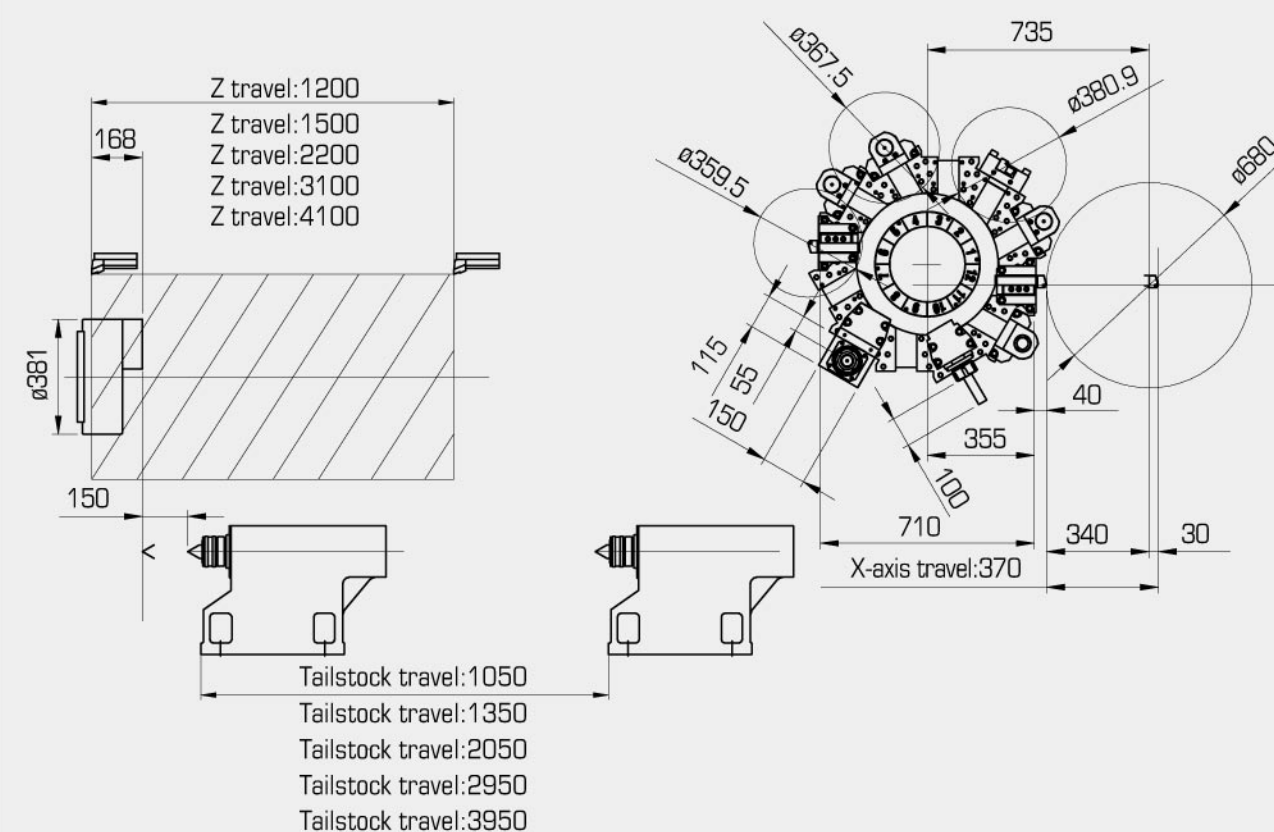
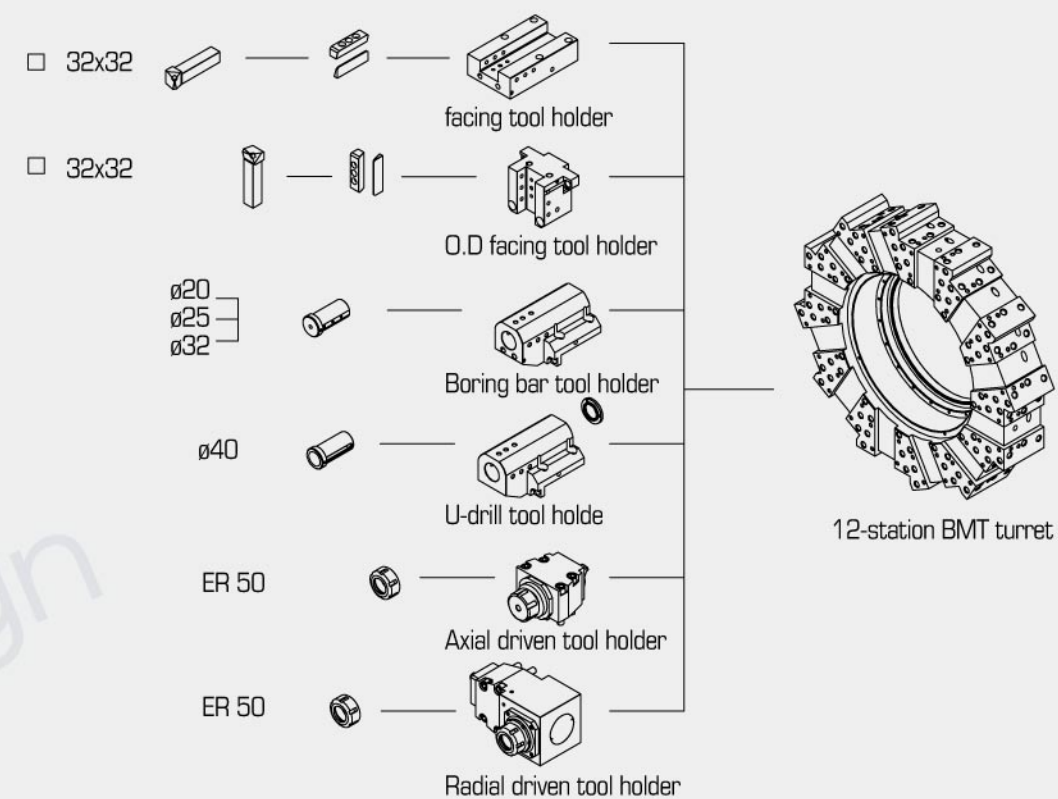


model	UT-400/1400	UT-400/2100	UT-400/3000
A	5900(mm)	6525(mm)	8025(mm)

Standard 12-Station Servo Turret



BMT Live Tooling Turret



Machine Specification

Machine Model		UT-400			
Controller		FANUC Oi-T			
CAPACITY					
Swing over "Z" cover	mm	1000			
Swing over "X" cover	mm	745			
Max cutting diameter	mm	680			
Max cutting length	mm	1400	2100	3000	4000
BED					
Slant angle	degree	45			
Guide way		Box way			
SPINDLE					
Spindle nose	ASA	A2-11/ A2-15			
power chuck diameter	in	15(18)/(20)			
Spindle hole diameter	mm	131/205			
Spindle speed	rpm	2000/1300			
Spindle drive (Cont./30min rated)	KW	α30+ 2-Speed gearbox			
Spindle bearing inner diameter	mm	180/260			
Bar capacity	mm	115(180)			
TRAVELS					
"Z"axis	mm	1500	2200	3100	4100
"X"axis	mm	340+30			
FEEDS					
Rapid traverse-"Z"axis	m/min	24	15	10	6
Rapid traverse-"X"axis	m/min	20			
TOOL TURRET					
Type		APT(Servo turret)			
Number of tools	units	12			
Tool size square	mm	32			
Tool size bar	mm	50			
Rotary tool motor power (OP.)	kW	-			
Rotary tool speed (OP.)	rpm	-			
Rotary tool torque (OP.)	N.m	-			
TAILSTOCK					
Quill travel	mm	150			
Quill diameter	mm	160			
Quill taper hole	MT#	5			
DIMENSIONS					
Floor space required	M	6.2 x 2.8	6.9X2.8	7.9X2.8	8.9X2.8
Height	M	2.6			
Weight (aprox)	kg	13000	15000	19000	23000

Machine Specification

Machine Model		UT-400M			
Controller		FANUC Oi-T			
CAPACITY					
Swing over "Z" cover	mm	1000			
Swing over "X" cover	mm	745			
Max cutting diameter	mm	680			
Max cutting length	mm	1300	2000	2900	3900
BED					
Slant angle	degree	45			
Guide way		Box way			
SPINDLE					
Spindle nose	ASA	A2-11/ A2-15			
power chuck diameter	in	15(18)/(20)			
Spindle hole diameter	mm	131/205			
Spindle speed	rpm	2000/1300			
Spindle drive (Cont./30min rated)	KW	α30+ 2-Speed gearbox			
Spindle bearing inner diameter	mm	180/260			
Bar capacity	mm	115(180)			
TRAVELS					
"Z"axis	mm	1500	2200	3100	4100
"X"axis	mm	340+30			
FEEDS					
Rapid traverse-"Z"axis	m/min	24	15	10	6
Rapid traverse-"X"axis	m/min	20			
TOOL TURRET					
Type		APT(Power turret)			
Number of tools	units	12			
Tool size square	mm	32			
Tool size bar	mm	50			
Rotary tool motor power (OP.)	kW	7.5/11			
Rotary tool speed (OP.)	rpm	3000			
Rotary tool torque (OP.)	N.m	47.7/70			
TAILSTOCK					
Quill travel	mm	150			
Quill diameter	mm	160			
Quill taper hole	MT#	5			
DIMENTIONS					
Floor space required	M	6.2 x 2.8	6.9X2.8	7.9X2.8	8.9X2.8
Height	M	2.6			
Weight (aprox)	kg	13500	15500	19500	23000