



Compact CNC Lathe
for Automatic Machining

UT-100/GX-100
Series



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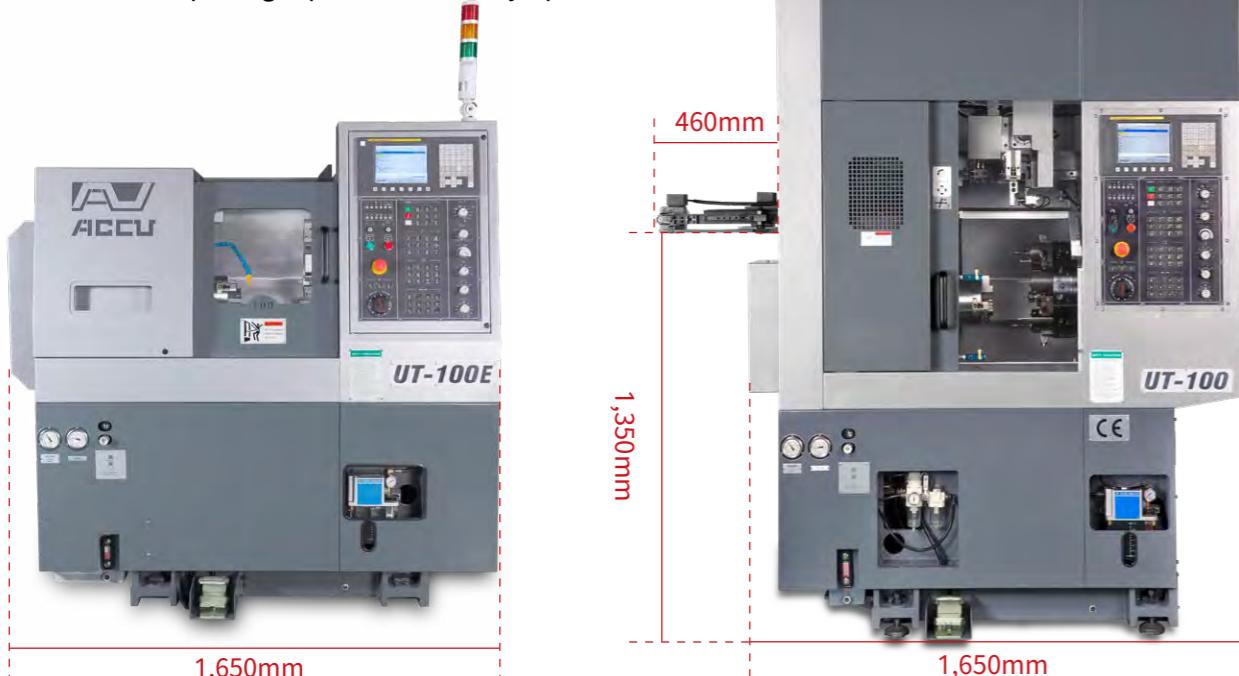
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MINIMIZED FOOTPRINT

UT-100 is the perfect solution for limited working space, with its industrial aesthetic design having the width of only 1650 mm. Even with minimized machine width, sufficient door opening is provided for easy operation.



- Built-in compact loader

HIGH PRECISION AND RIGID STRUCTURE

Robust, solid, heat-treated, and hardened box-way on one-piece 15 degree slant bed structure provides stable high-speed axial movement.



UT-100

UT-100M

UT-100Y



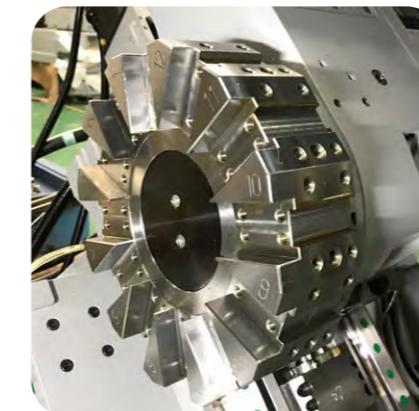
TOP QUALITY MEEHANITE CASTING

Meehanite casting owns fine and stable matrix structure with uniformly distributed graphite flakes and properties. Natural seasoning as well as annealing stress-relief process effectively reduce repeated dimensional changes, absorb machining induced thermal stress and vibration. Such excellent machining characteristics lead to high volume cutting with less tool wear advantages. Entire cutting cycle time is thus minimized to achieve higher production efficiency.



HIGH-PRECISION HEADSTOCK

Symmetric heat-dissipated fin shaped ribbed headstock design eliminates thermal distortion effectively. It is precisely bored and ground to ensure excellent roundness and concentricity. Spindle and bearings are assembled with headstock by precision tools and fixtures. Standardized run-in test removes abnormal temperature arising from mismatched tolerance.



Hydraulic Turret



BMT



VDI

HIGH PRECISION SERVO MECHANICAL TURRET

Mounted with high precision and large size curve coupling, turret disc is driven by cam-follower with hydraulic motor or servo motor to obtain high repeated indexing accuracy under continuous tool change. The 12-position BMT or VDI live tool turret providing various profile milling and off-center drilling capabilities has trouble-free maintenance with less misalignment problem. If equipped with special coolant nozzle, turret can support up to 70 Bar of high pressure.

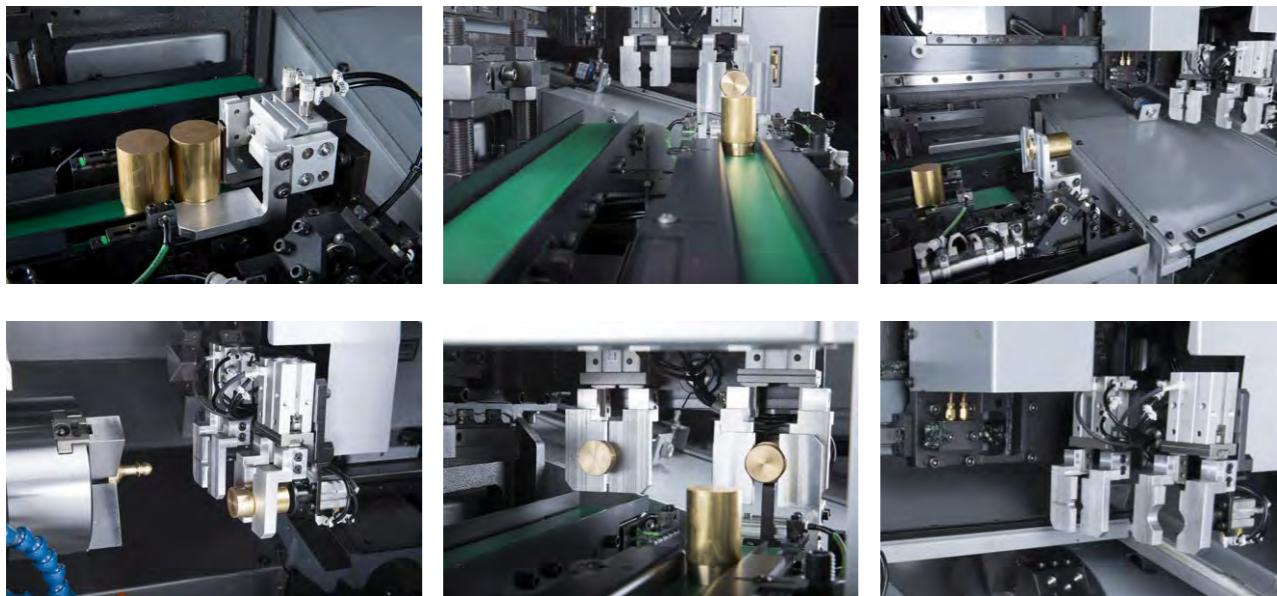
ACCURATE LEAD PITCH BALLSCREW

Pre-tensioned, precise ballscrew with special cooling networks eliminate backlash and thermal elongation significantly. Direct-drive motor not only reduces energy loss during transmission, but also increases axial positioning accuracy.

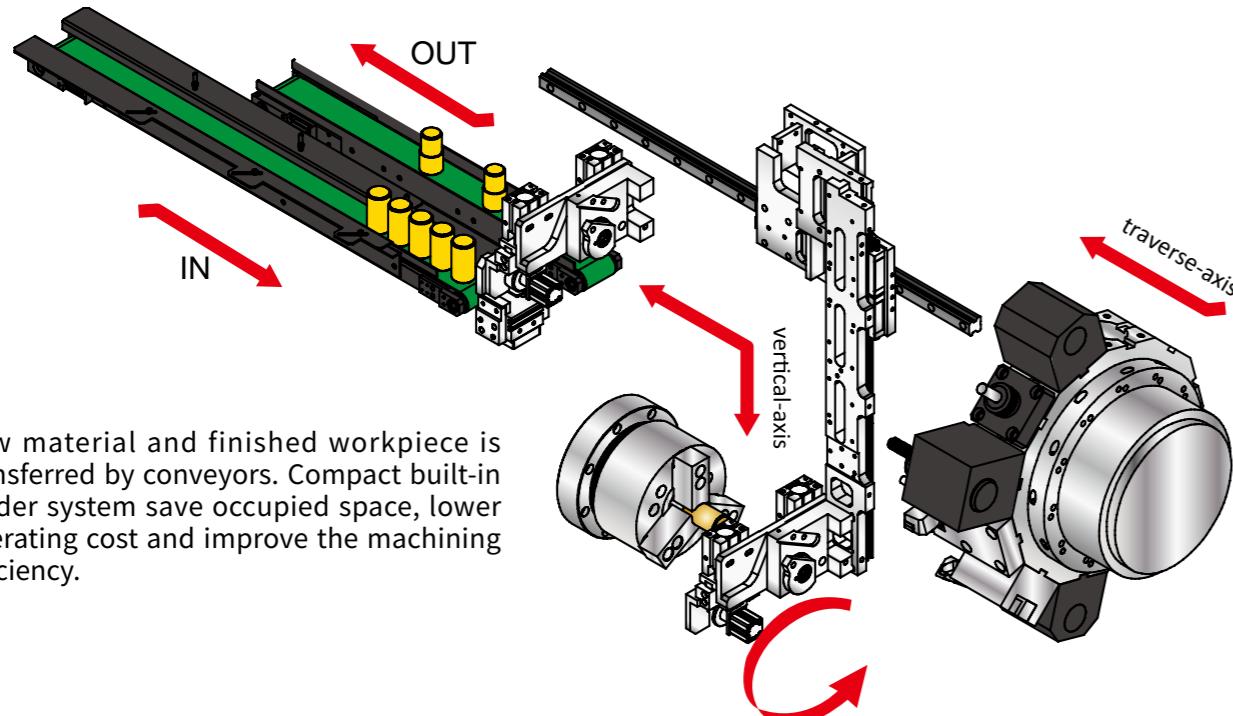


FLEXIBLE AUTOMATION SYSTEM

UT-100 series offers optional built-in type and gantry type automatic loading/unloading system. The maximum diameter of raw material is 125 mm and weight limit is 2 kg respectively to satisfy various production requirement. Raw material is loaded, processed and unloaded with finished part automatically. It can optimized machine run time under minimized labor interference.



BUILT-IN TYPE LOADER SYSTEM

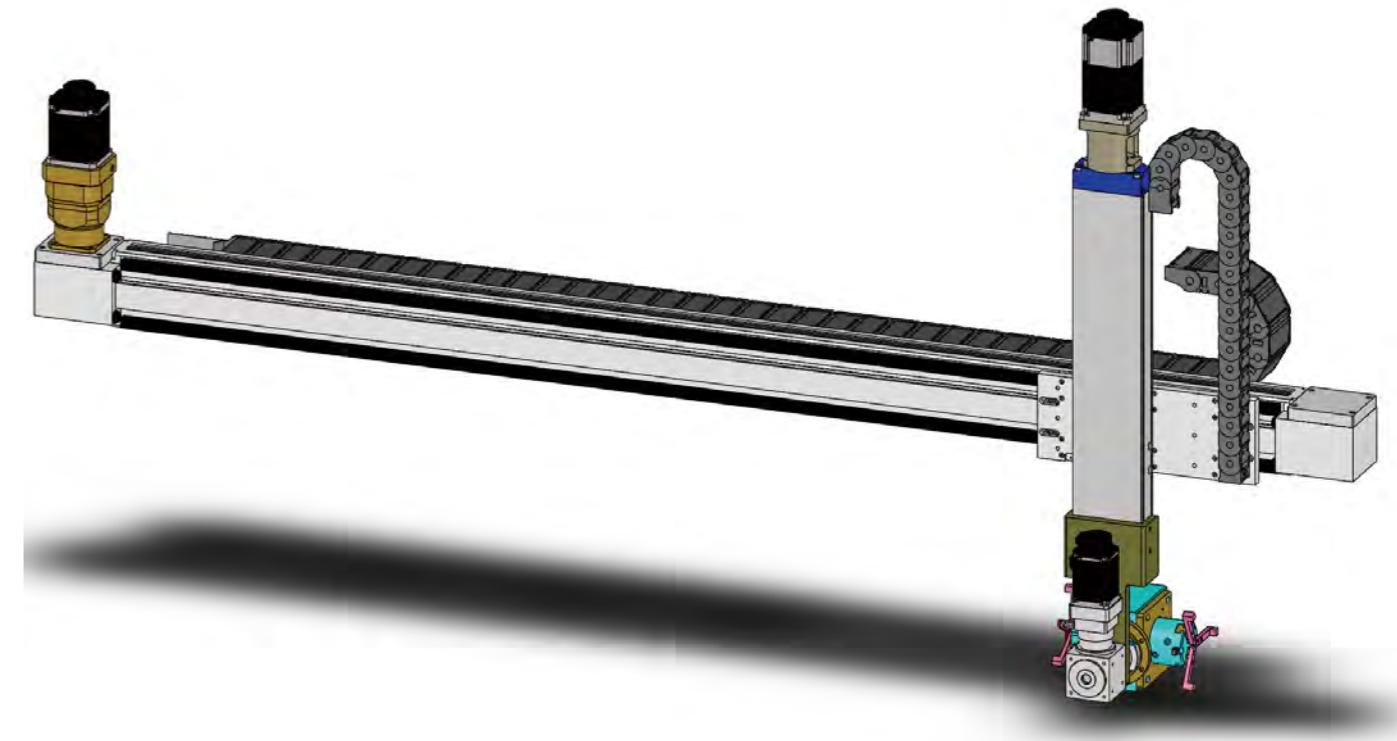


Raw material and finished workpiece is transferred by conveyors. Compact built-in loader system save occupied space, lower operating cost and improve the machining efficiency.

Item Model	Loader axis	traverse-axis			vertical-axis					
		Max. Diameter	Max. Length	Max. weight	drive system	stroke	Rapid traverse rate	drive system	stroke	Rapid traverse rate
axis	mm	mm	KG	mm	mm	m/min		mm	m/min	
UT-100	2	Ø60	100	0.5/1	servo motor	360	84	servo motor	360	84
UT-100Y									660	

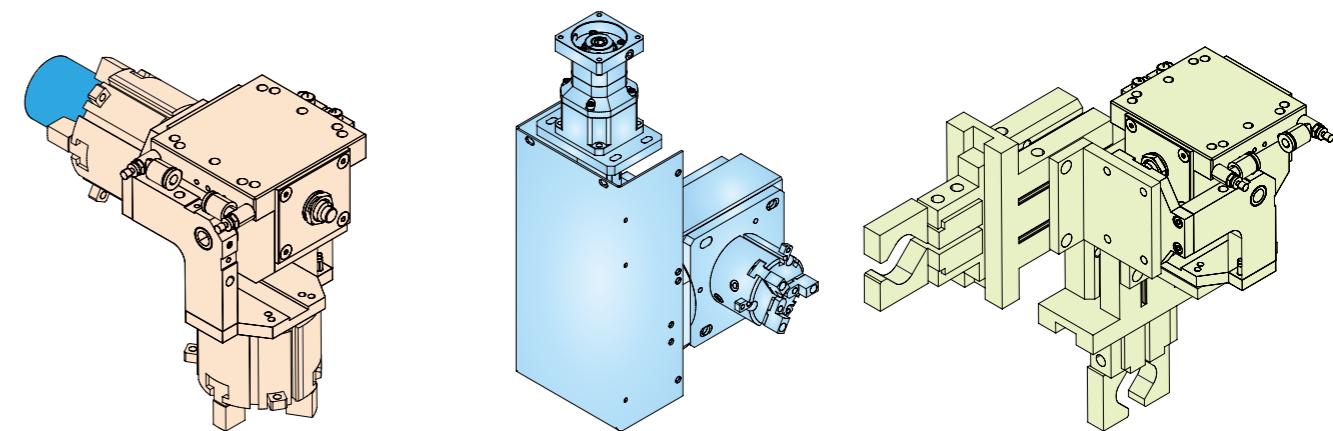
GANTRY LOADER SYSTEM

Raw material and finished workpiece is stored on various type of work stockers to match workpiece geometry and feeding requirement.



Item Model	Loader axis	traverse-axis				vertical-axis				
		Max. Diameter	Max. Length	Max. weight	drive system	stroke	Rapid traverse rate	drive system	stroke	Rapid traverse rate
axis	mm	mm	KG	mm	mm	m/min		mm	m/min	
UT-100MX	2	Ø150	100	1	servo motor	1650	90	servo motor	360	75

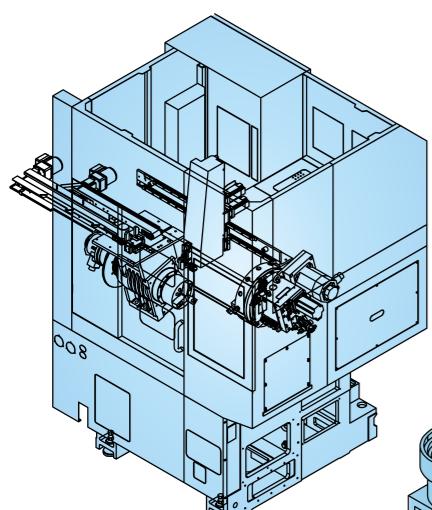
GRIPPER HEADS



3-jaw pneumatic gripper with 2 x 90° indexing.

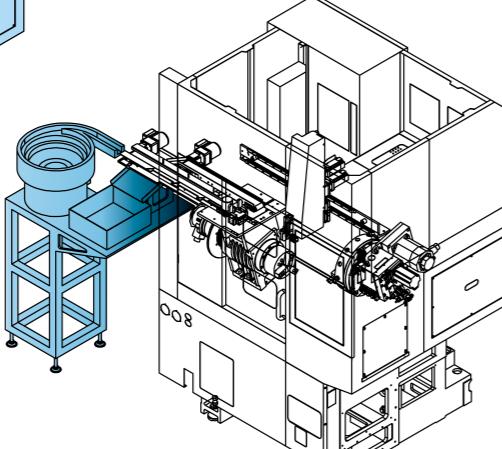
2-jaw servo gripper with 2 x 180° indexing.

Pneumatic gripper for shafts with 2 x 90° indexing.

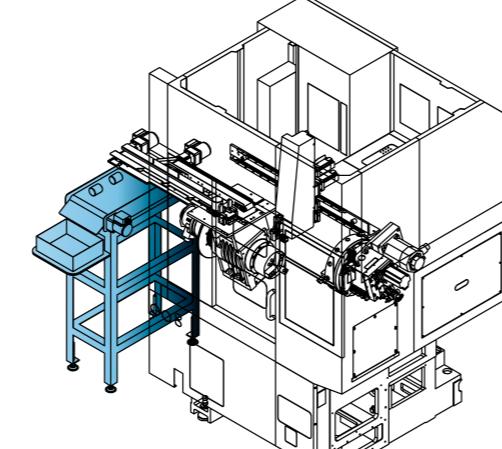


AUTO FEEDING

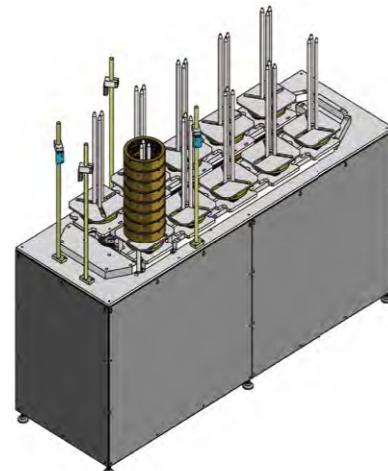
Applicable for various types of material feeders for different workpiece requirements.



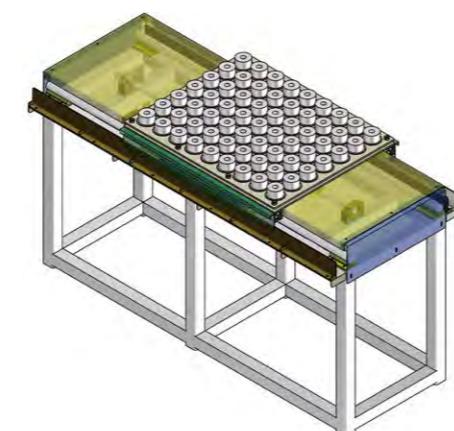
Vibration feeder & tray stocker



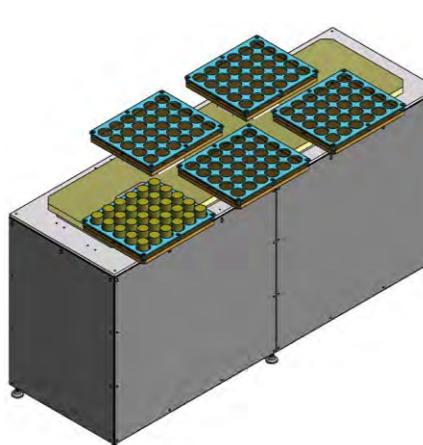
Conveyor tray stocker



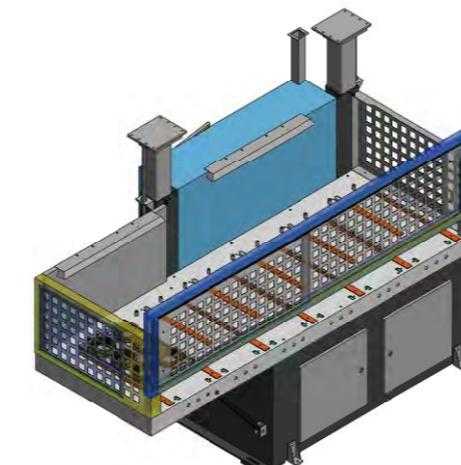
Multi-layer work stocker



Transferred single pallet stocker



Multi-pallet stocker

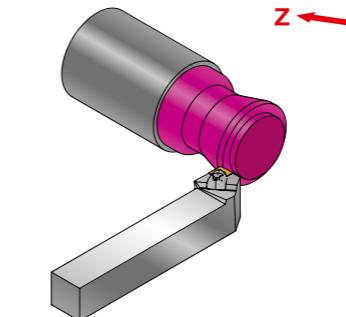


Fixed pallet stocker

VARIETY OF MACHINING CAPACITY

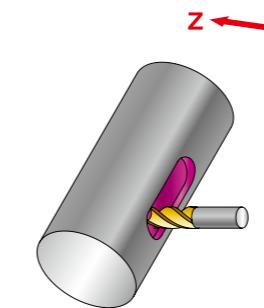
• Basic Turning

Machining Inner and outer diameters, end face, conical surface, threads, tapping...etc.



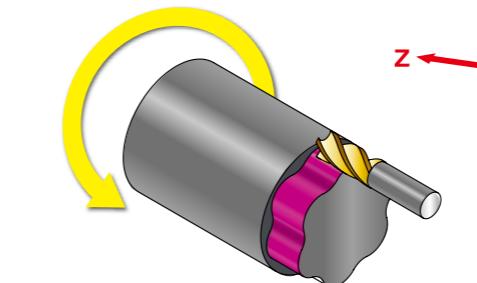
• Slot Milling

Machining flat surface & groove.



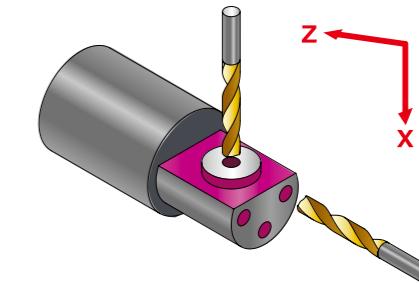
• Contour machining

C-axis & X-axis simultaneous cutting



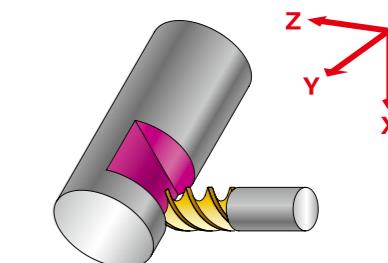
• Live tool drilling

Precise parts reaming



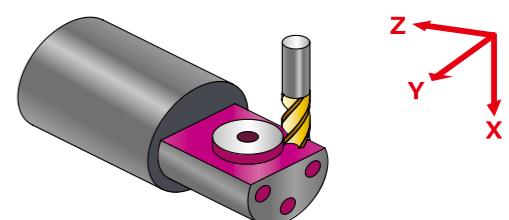
• Basic complex machining

By using Y-axis combined motion control to perform flat, contour, groove, and slot milling

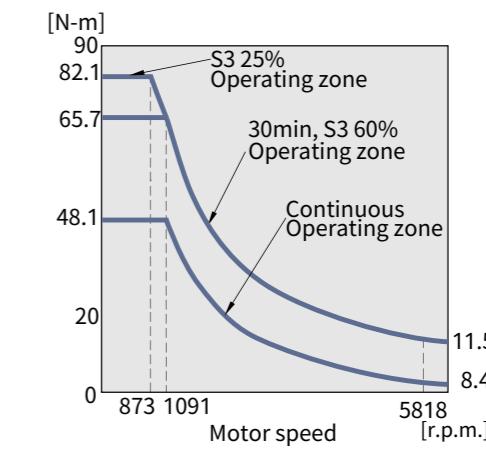
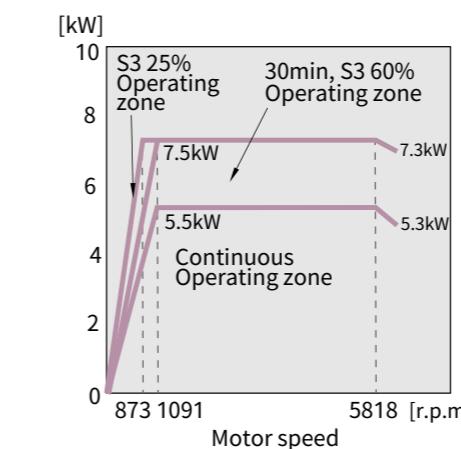


• Profile machining

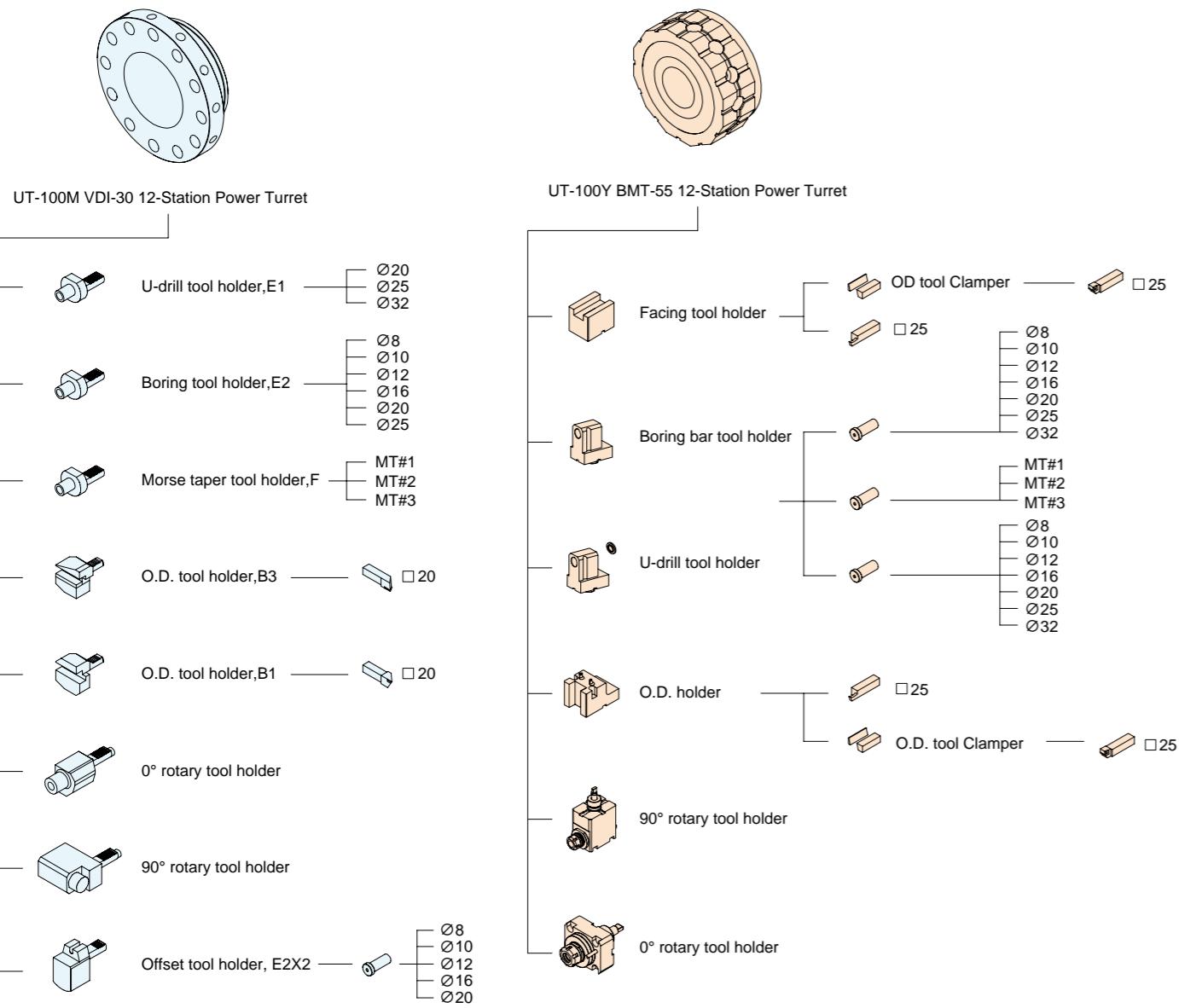
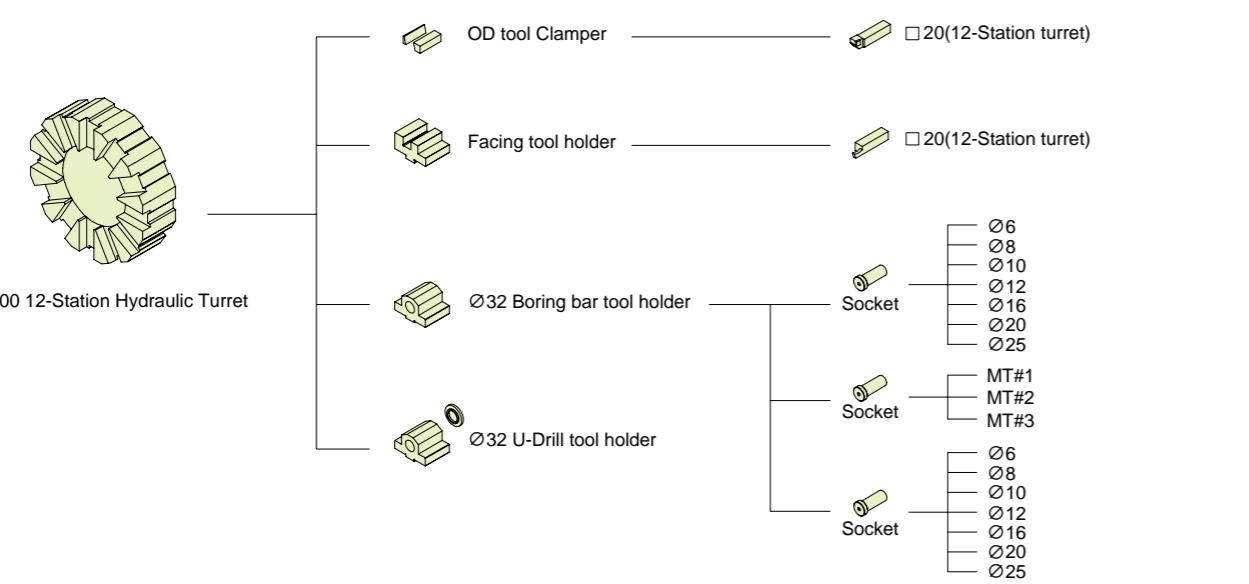
Z-axis & Y-axis simultaneous cutting



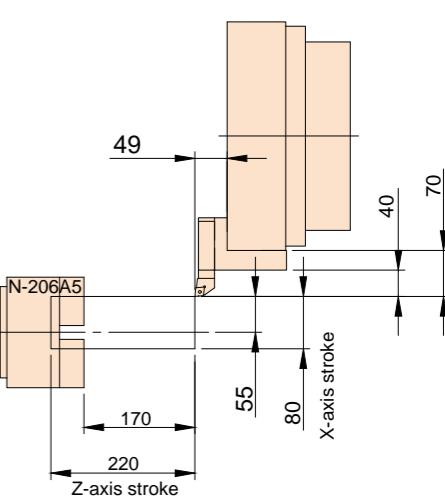
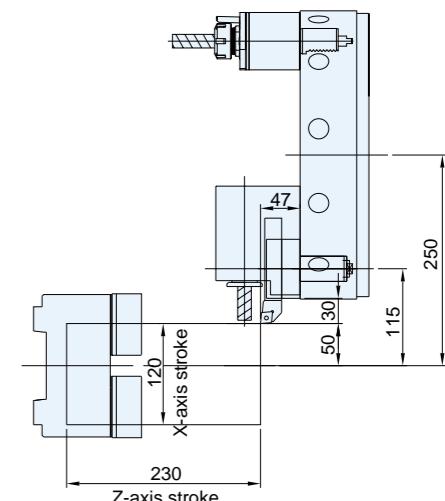
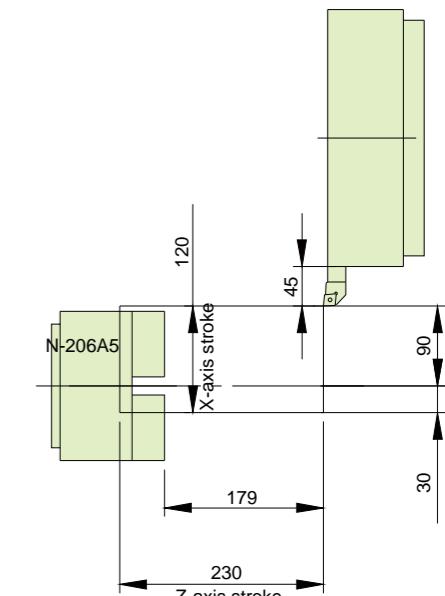
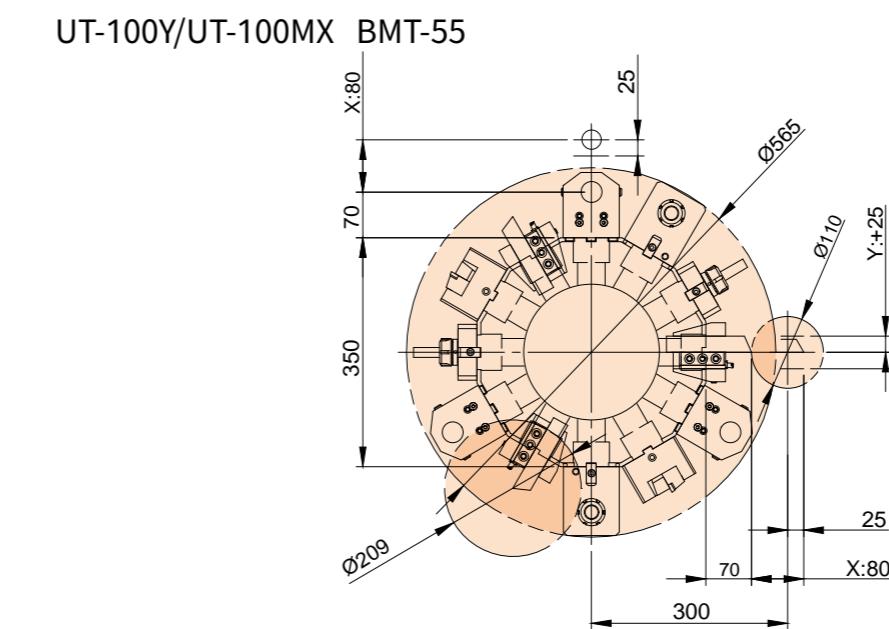
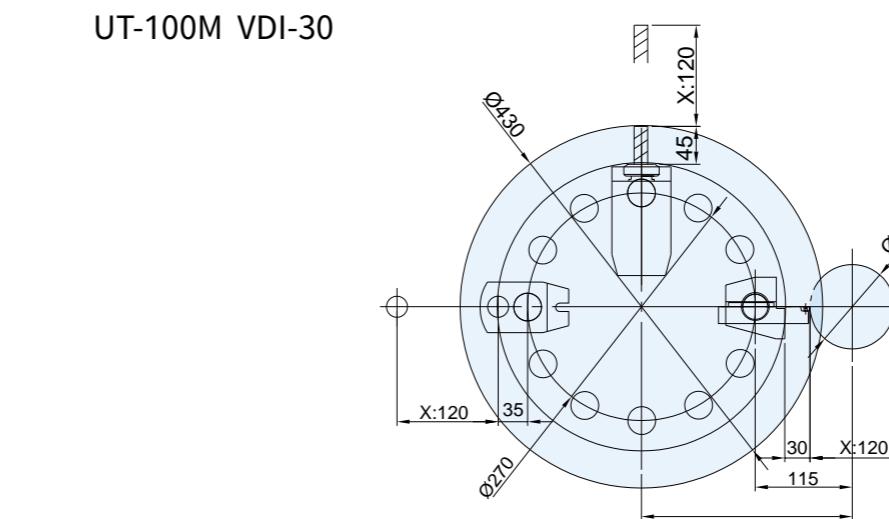
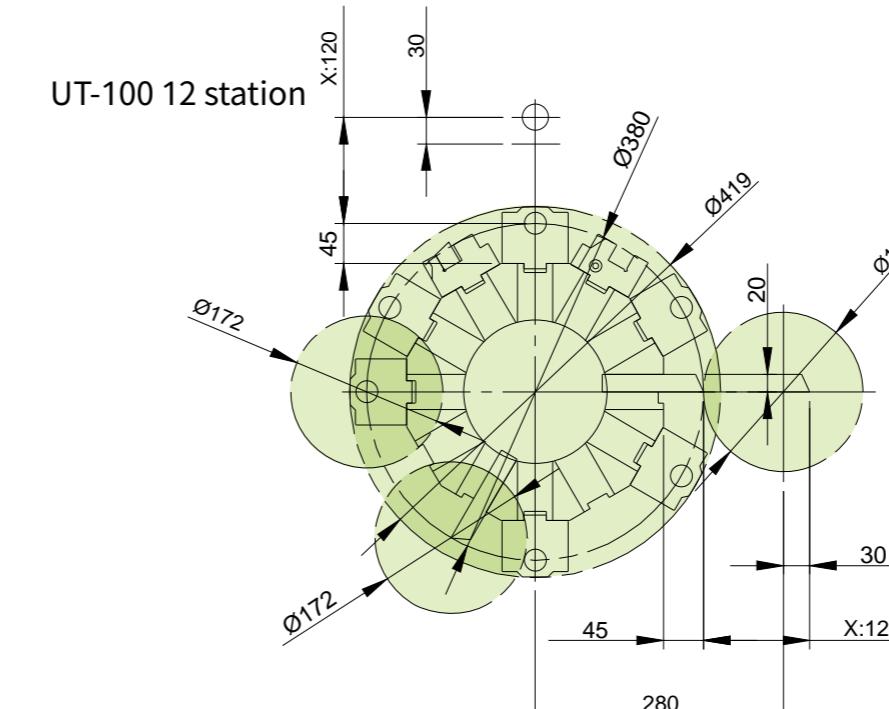
SPINDLE MOTOR TORQUE POWER CHART



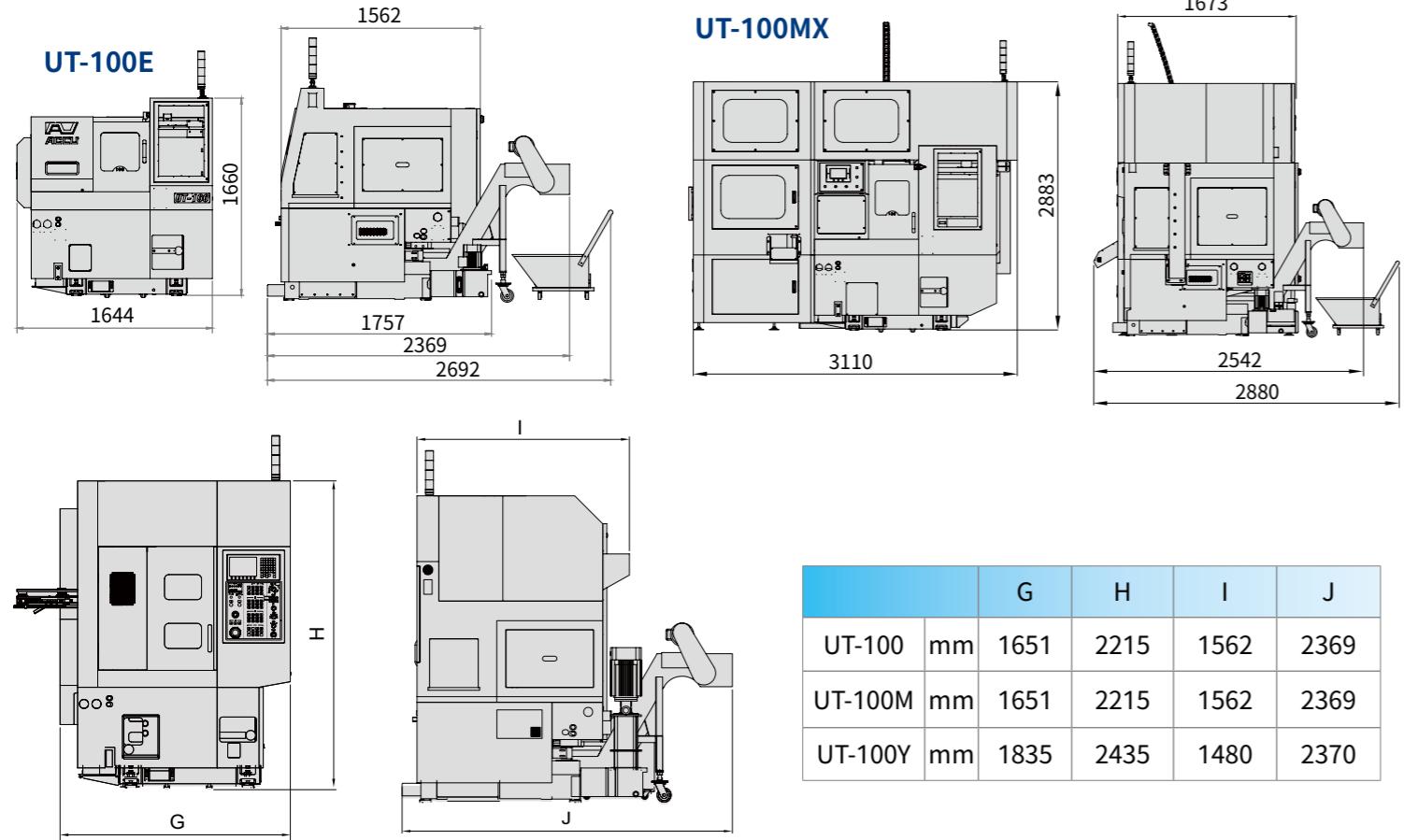
TOOLING SYSTEM



WORKING RANGE DIAGRAM



DIMENTION

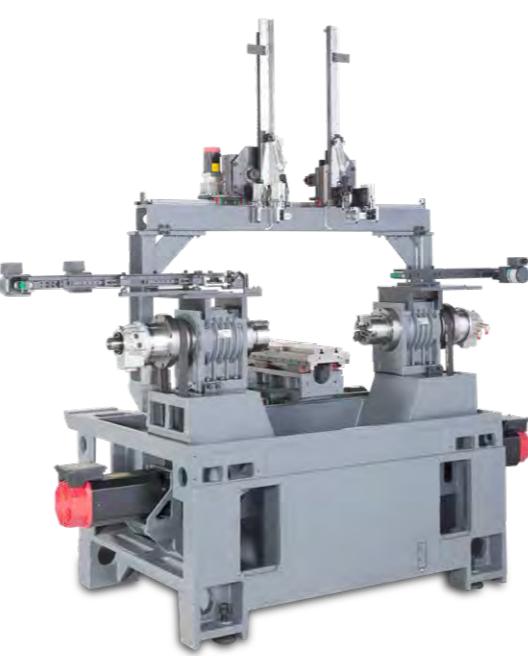


Item/Model	UT-100EM	UT-100E	UT-100	UT-100M	UT-100MX	UT-100Y
Controller						
Swing over bed	mm		380			450
Swing over saddle	mm		320			330
Max. turning diameter	mm	100	180	100	220	110
Max. turning length	mm	140	175	130	155	170
Spindle nose taper	ASA		A2-5			
Chuck diameter	inch		6			
Spindle speed	rpm		6000			
Spindle motor power (Cont. / 30min)	kW		5.5/7.5			
Bar capacity	mm		30			
X-axis Travel	mm		120			80
Y-axis Travel	mm		-			±25
Z-axis Travel	mm		230			220
X-axis Rapid Traverse Rate	m/min		12			
Y-axis Rapid Traverse Rate	m/min		-			10
Z-axis Rapid Traverse Rate	m/min		18			
Turret driven type	Servo	Hydraulic/Servo		Servo mechanical		
Tooling system	-	BOT	VDI-30	BMT-55		
Number of tools	station		12			
Square tool shank size	mm		20			25
Round tool shank size	mm		32			40
Max. Rotary Tool Speed	rpm	6000	-	6000		
Rotary Tool driver power	kW	4.5	-	4.5		
Machine dimension L x W x H	m	1.9 x 1.7 x 1.8	1.7 x 1.6 x 1.7	1.7 x 1.6 x 2.2	1.7 x 1.6 x 2.2	3.1 x 1.7 x 2.4
Net weight	kg	1800	1800	1900	1900	2200
						2.4 x 2 x 2.5
						2300

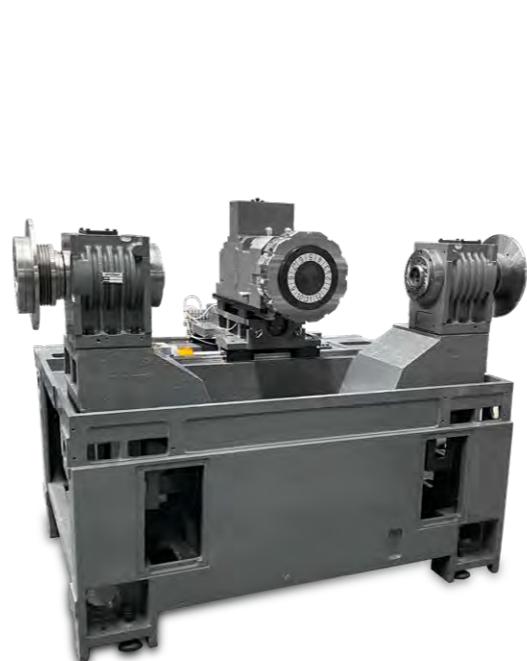
EXCELLENT MACHINING PERFORMANCE

- GX-100 with two opposing spindles and one slide that carries out its excellent machining performance.
- Two built-in, rapid loaders save the space and increase productivity without time loss.
- Gang type / BMT tool holder substantially cuts the idle time and improves cutting's flexibility.
- High precision and rapid machining is accomplished by simple construction.

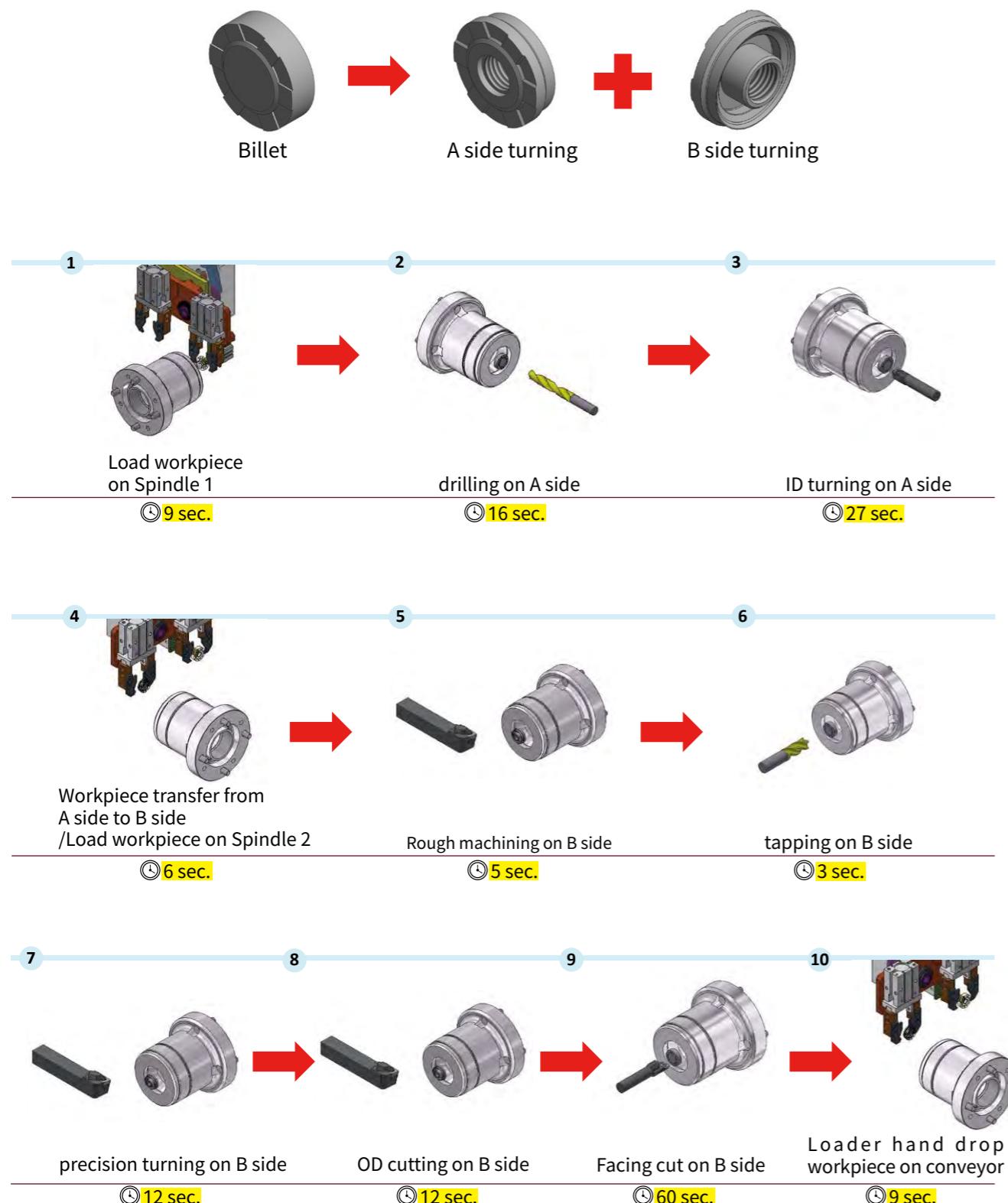
► GX-100 Gang Type



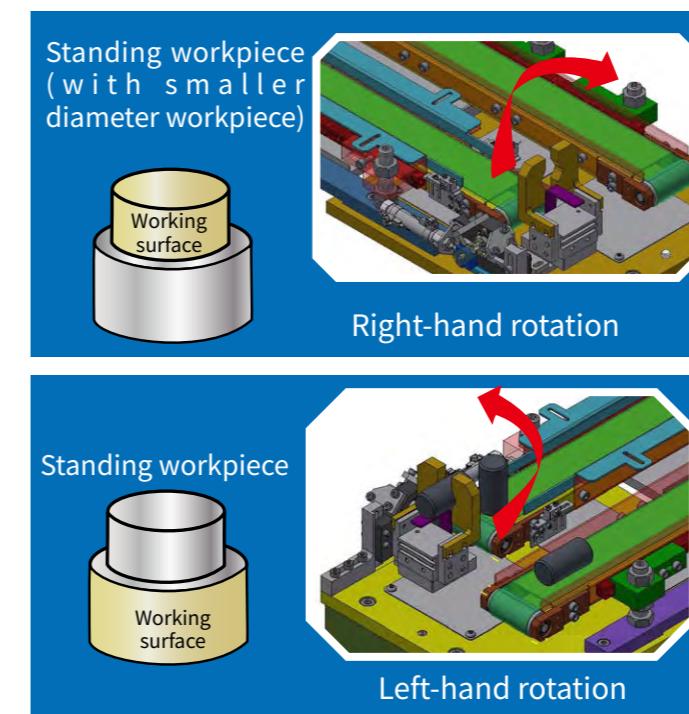
► GX-100TM BMT-45



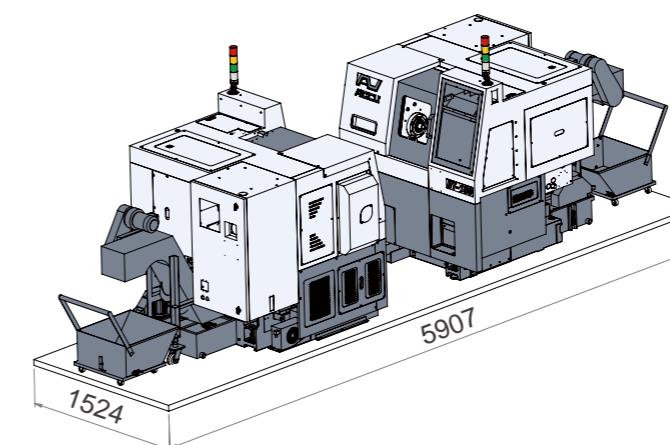
SAMPLE TURNING FLOW CHART



WORKPIECE FEEDING WAYS BY CONVEYOR

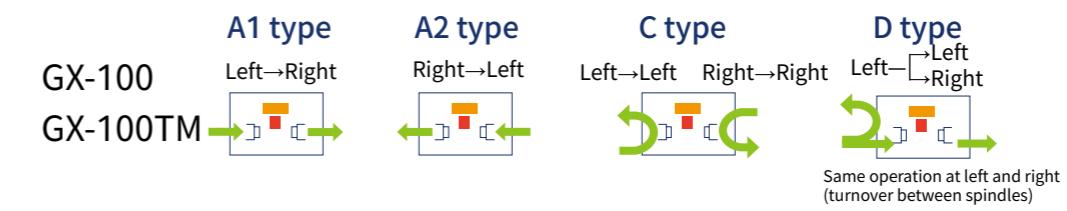


WITH LESS FLOOR SPACE

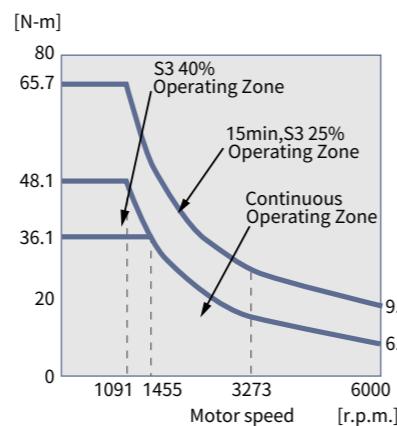
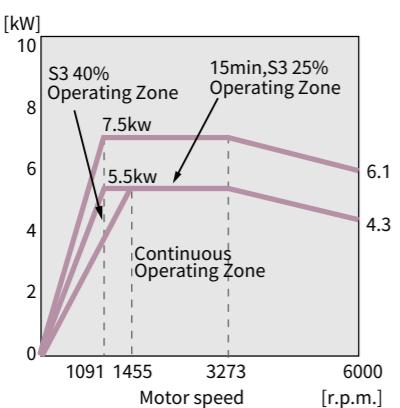


Item Model	Loader axis	Max. Diameter	Max. Length	Max. weight	Finger stroke (one side)	Conveyor length	traverse-axis stroke	vertical-axis stroke	traverse-axis rapid traverse rate	vertical-axis rapid traverse rate
GX-100	axis	Ø50	60	0.5	7	IN:780 OUT:580	400	84	500	84
GX-100TM	2	Ø50	60	0.5	7	IN:780 OUT:580	580	550	550	84

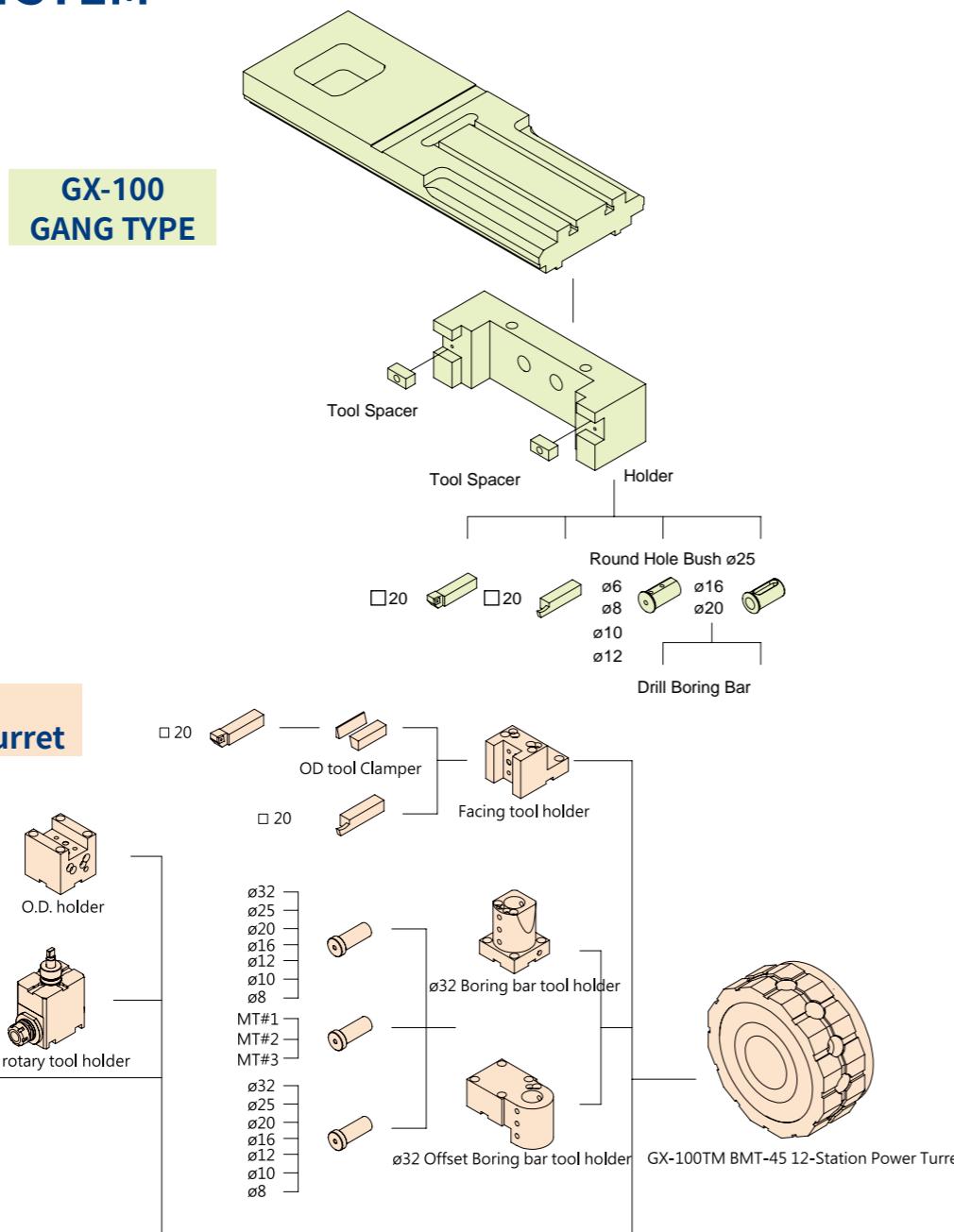
Loading variations



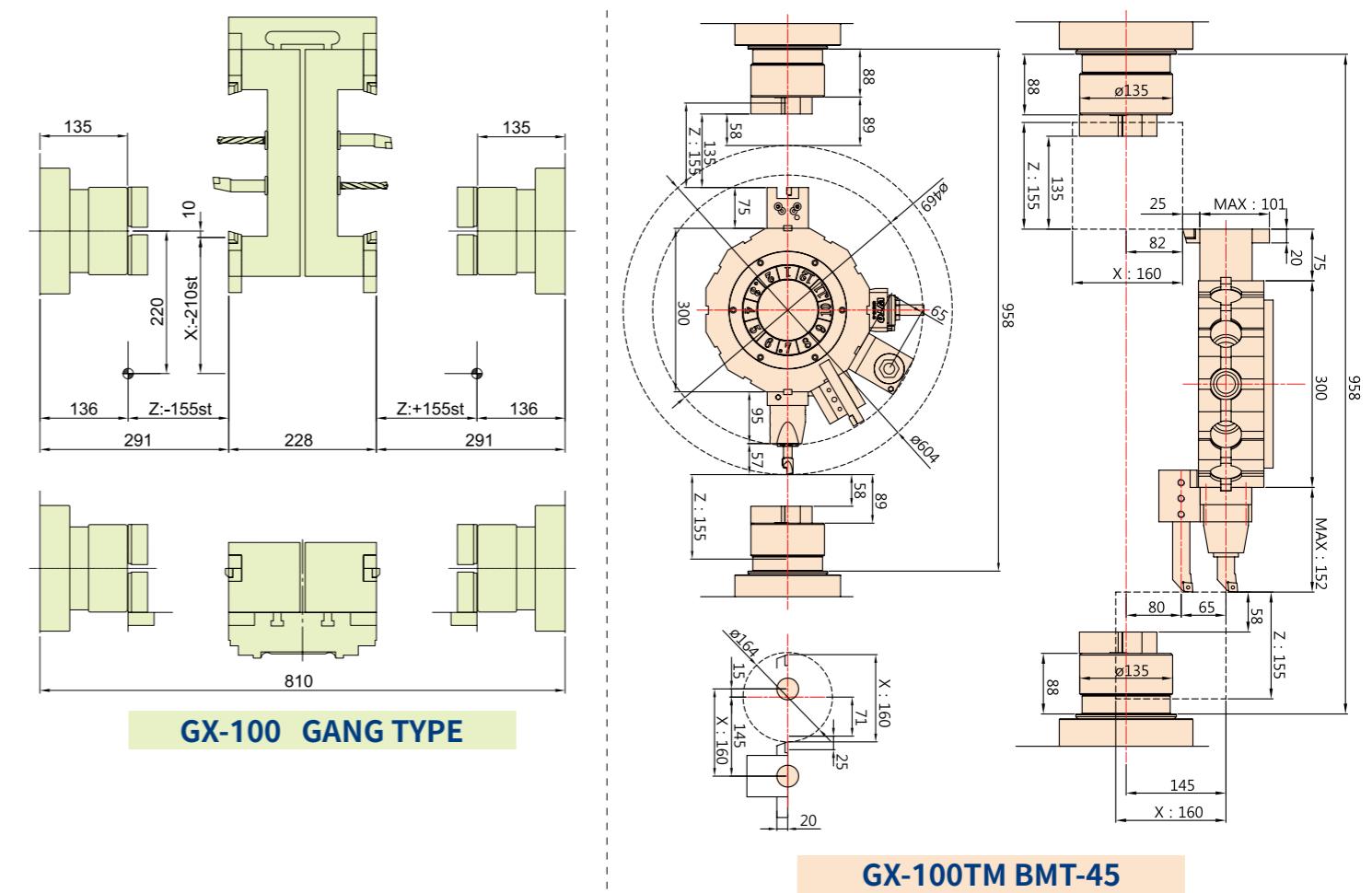
SPINDLE MOTOR TORQUE POWER CHART



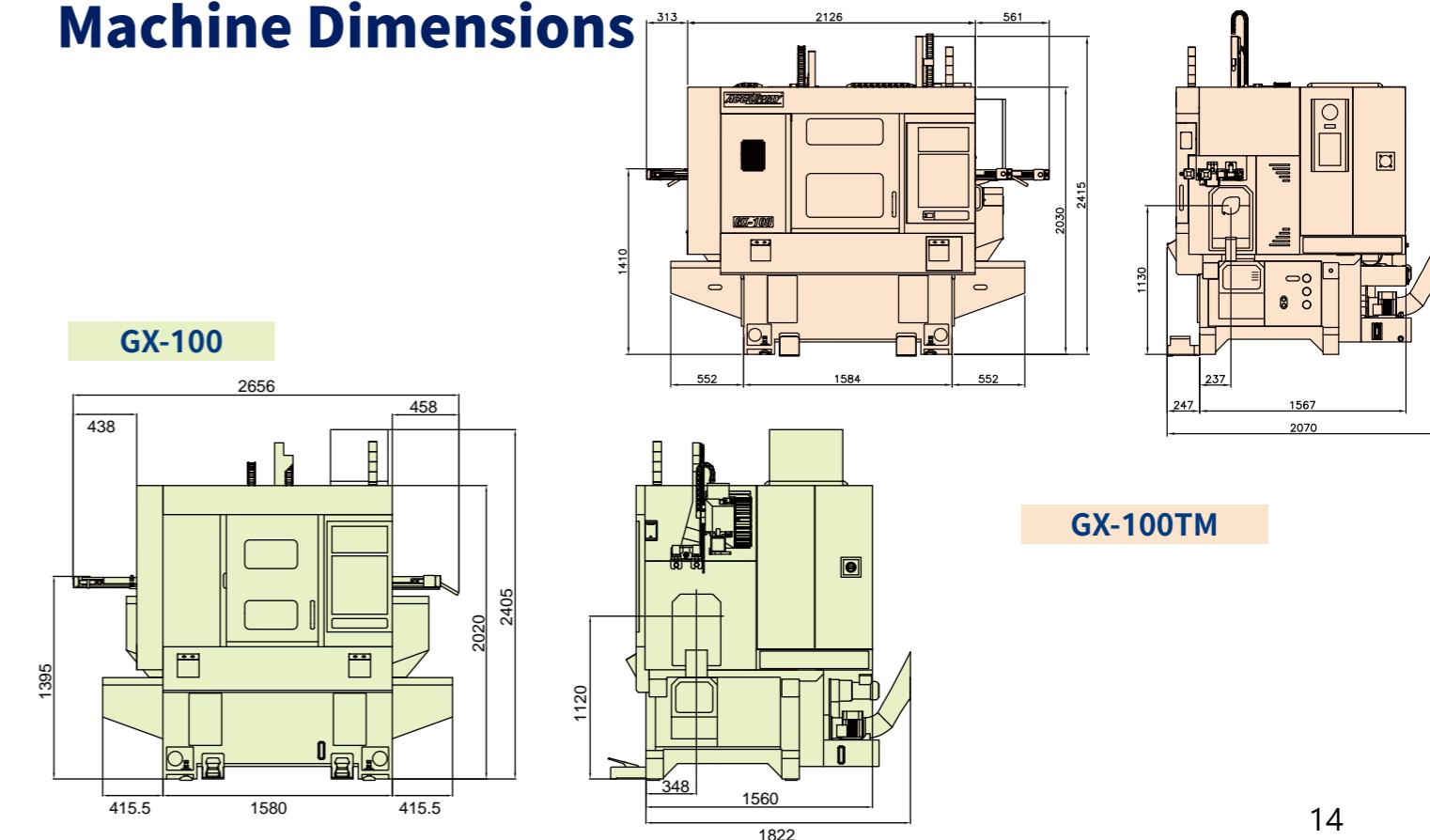
TOOLING SYSTEM



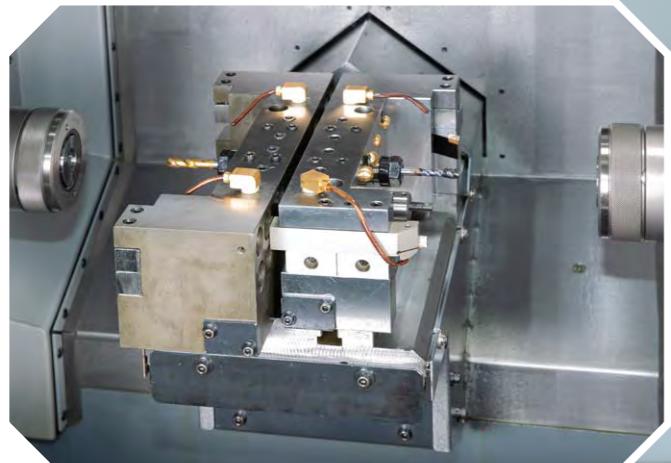
WORKING RANGE DIAGRAM



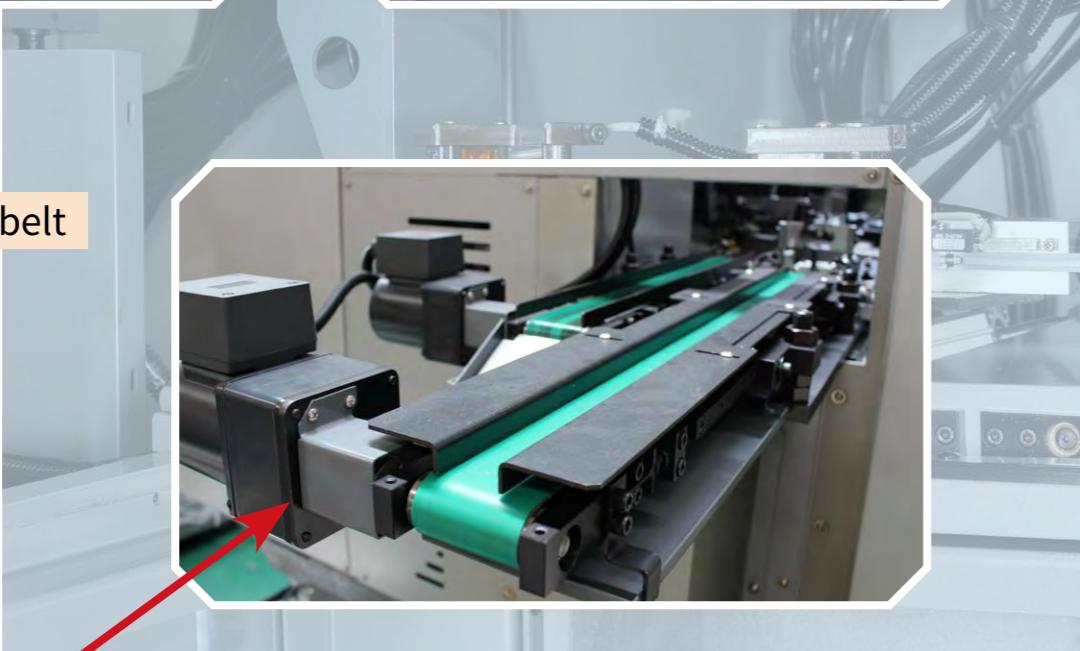
Machine Dimensions



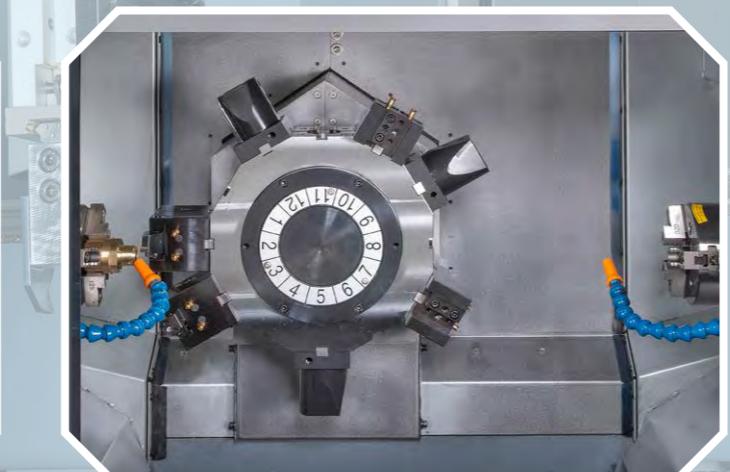
► Gang type



► Two-way conveyor belt



► BMT-45 Power Turret



SPECIFICATIONS

ITEM/MODEL	GX-100		GX-100TM					
Controller			FANUC 0i-T					
CAPACITY								
Max. Turning Diameter(SP1)	mm	50	70					
Max. Turning Diameter(SP2)	mm	50	70					
Max. Turning Length	mm	60	55					
Guide way type								
SPINDLE 1								
Spindle Nose	ASA	A2-5						
Chuck Diameter	inch	5						
Bar Capacity	mm	30						
Spindle Speed	rpm	6000						
Spindle Motor Power(Cont. /30min)	kW	5.5/7.5						
SPINDLE 2								
Spindle Nose	ASA	A2-5						
Chuck Diameter	inch	5						
Bar Capacity	mm	30						
Spindle Speed	rpm	6000						
Spindle Motor Power(Cont. /30min)	kW	5.5/7.5						
TRAVELS								
X-axis Travel	mm	210	160(145+15)					
Z-axis Travel	mm	310(± 155)	310(± 155)					
FEEDS								
X-axis Rapid Traverse Rate	m/min	18						
Z-axis Rapid Traverse Rate	m/min	24						
TURRET								
Tooling system	Gang Type		BMT-45					
Turret driven type	-		Servo mechanical					
Number of tools	station	-						
Square Tool Shank Size	mm	20						
Round Tool Shank Size	mm	25	32					
Max. Rotary Tool Speed	rpm	6000						
Rotary Tool power	kW	4.5						
DIMENSIONS								
Machine dimension L x W x H	m	2.7 x 2.0 x 2.4	3 x 2 x 2.4					
Machine Weight	kg	3200	3300					