



Vertical Turning Center



UV
Series

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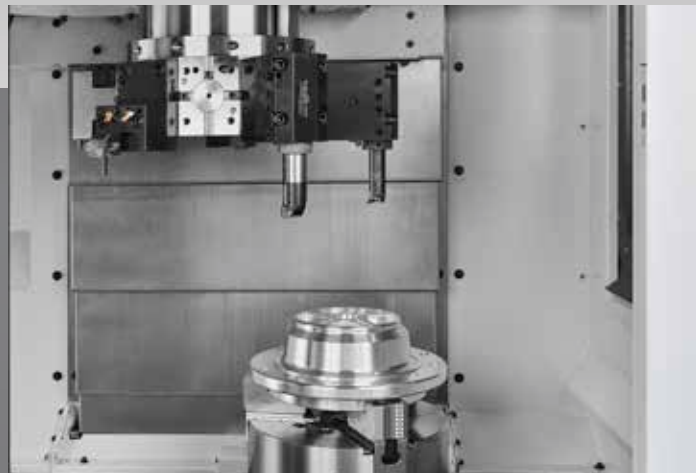
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UV series Vertical Lathes

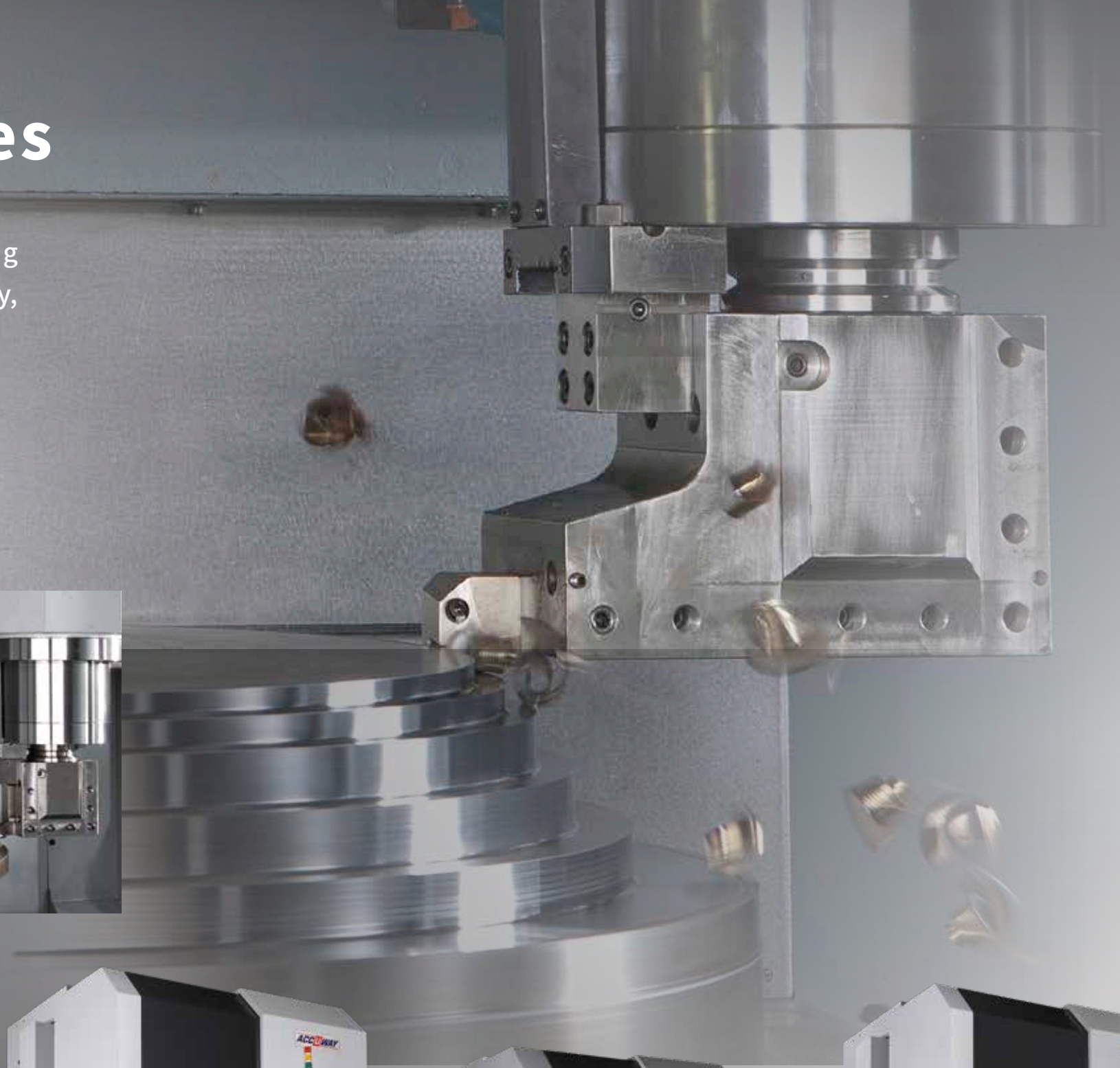
The UV series are designed to handle the most demanding applications across various industries. They provide high efficiency, exceptional accuracy, robust rigidity, and outstanding stability.



Turret Type



ATC Type



UV-55E / 55EC



UV-75E / 75EC



UV-100E / 100EC/100EY



UV-75ATC / 75ATCC

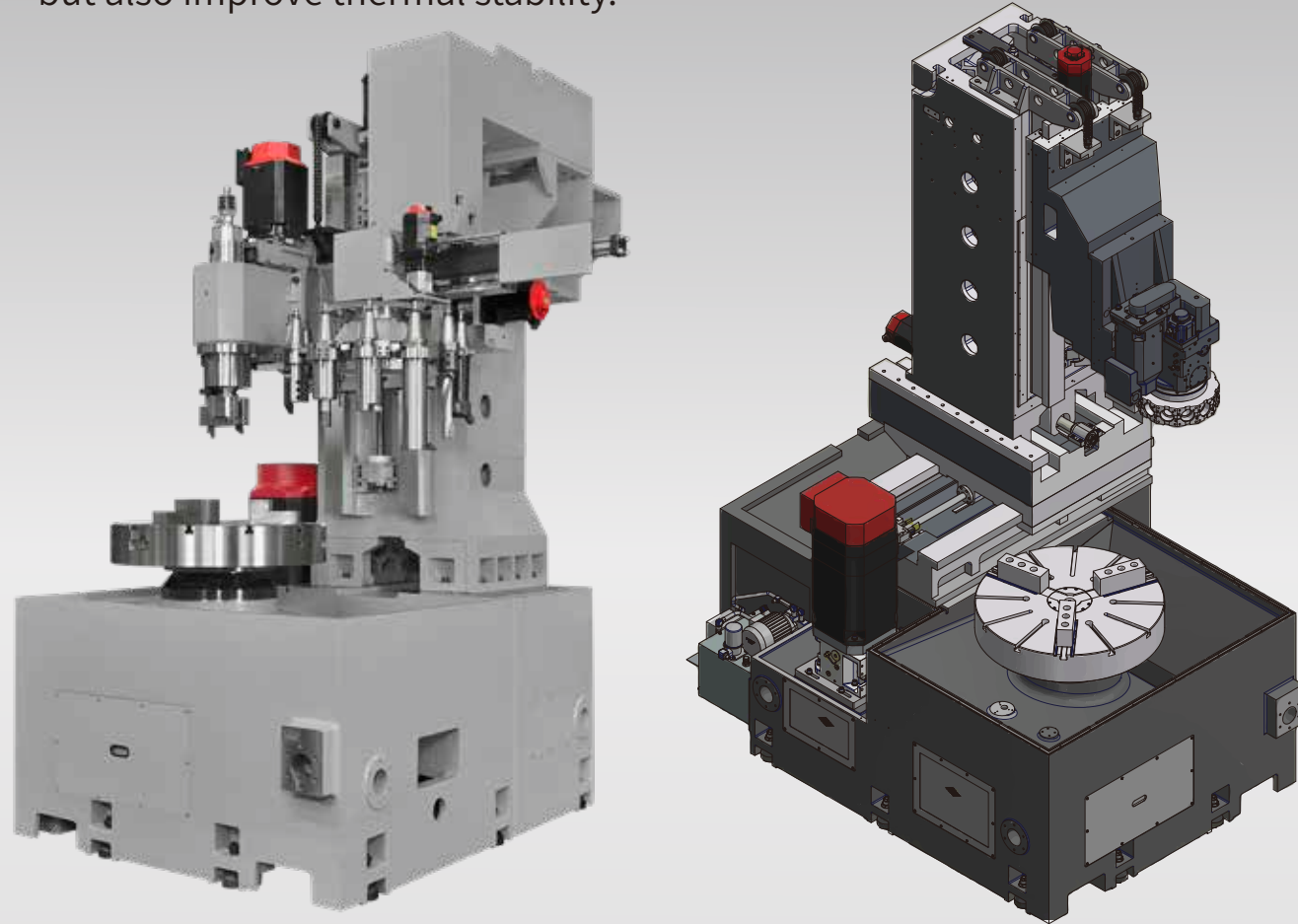


UV-100ATC / 100ATCC

Structure

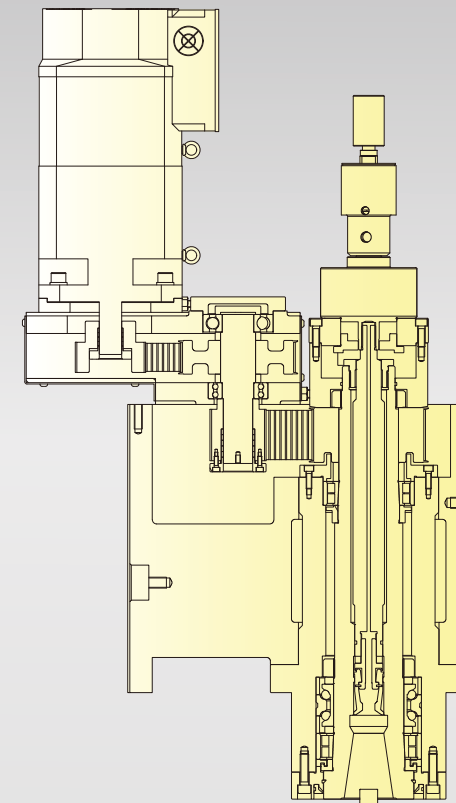
Meehanite Castings

Meehanite castings are internally reinforced with heavy ribs to resist bending and damp vibrations. The symmetric ribs not only enhance rigidity but also improve thermal stability.



Main Spindle

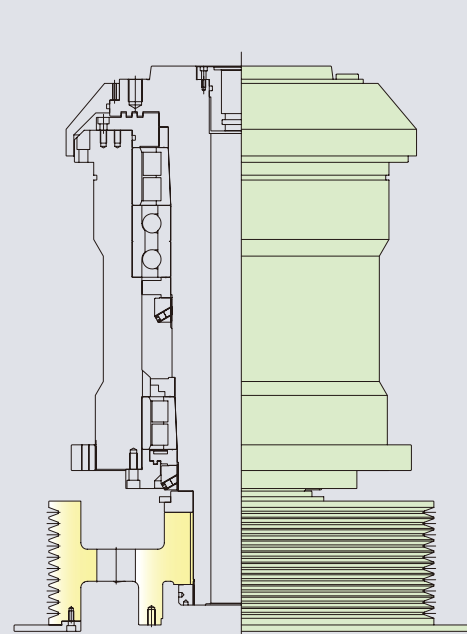
The large diameter main spindle bearing, combined with a wide-range torque spindle motor, offers exceptional rigidity during machining.



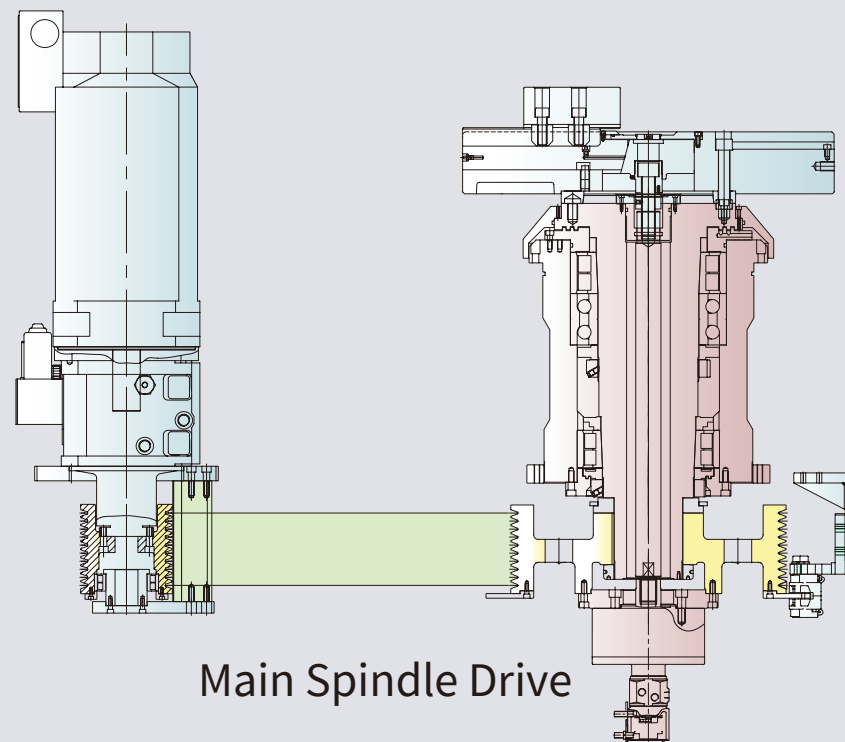
Tool Spindle

The hardened, ground, and balanced tool spindle is securely housed within a robust housing ensuring it can withstand heavy-duty machining. Power is transmitted through a special speed reduction mechanism to generate sufficient torque to meet demanding machining requirements.

The Model ATCC features a tool spindle capable of drilling, milling, and tapping, allowing it to complete a part without any secondary operations.

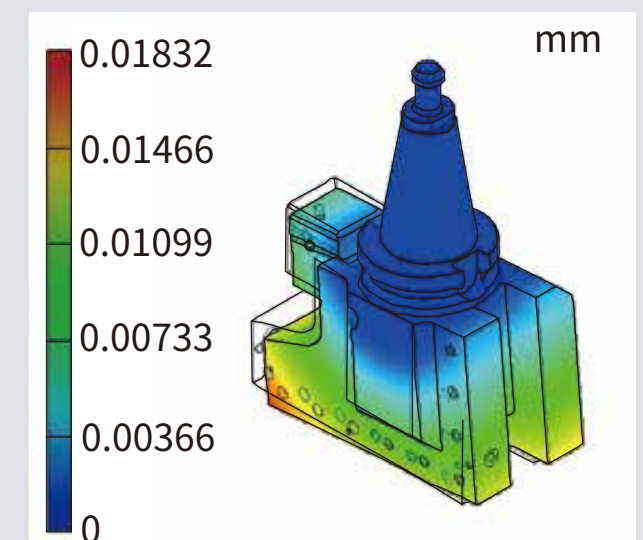
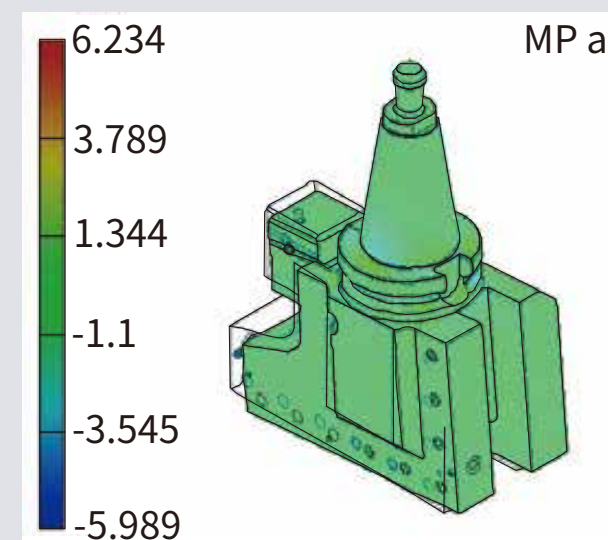


Main Spindle Design



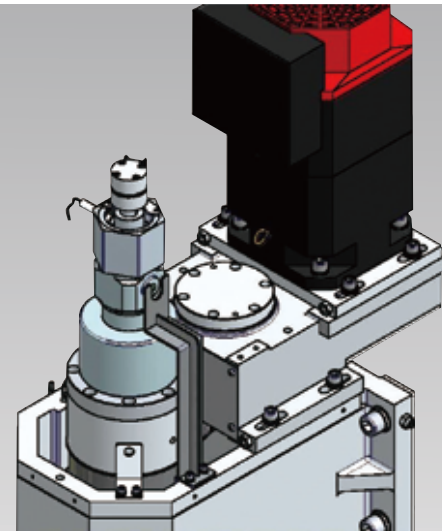
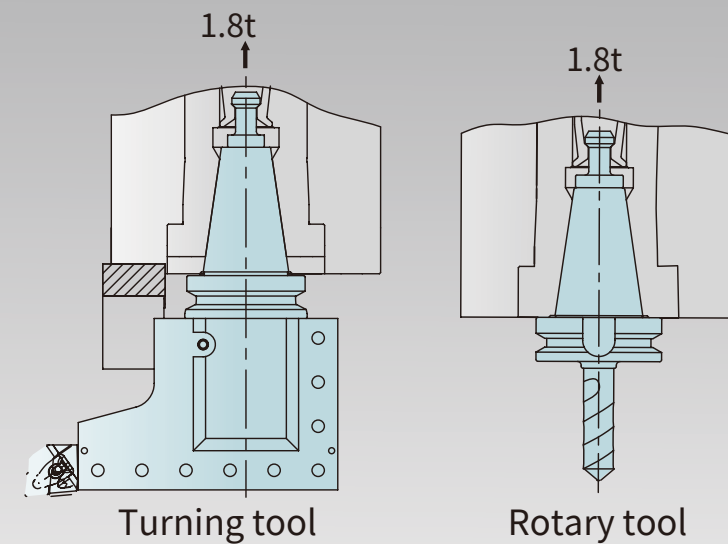
Main Spindle Drive

FEM analysis of turning tool strength



Structure

Tool-Clamping Mechanism



Hydraulic Tool Holder clamping and unclamping mechanism



Tool Magazine Type Tool Changer

The 12-tool magazine is designed to meet the demands of various machining operations, offering convenience for fast tool selection and easy operation.

Maximum weight of single tool holder: 50 kg

Maximum rotary tool power: 7.5 kW

Tool holder taper: BT-50

Tool magazine indexing mechanism: Servo motor

Optional Accessories

Two-speed Gearbox

Providing flexible and versatile power options, combined with high torque output and various speed controls, to meet the processing needs of different material characteristics and hardness.



Tool Setting probe

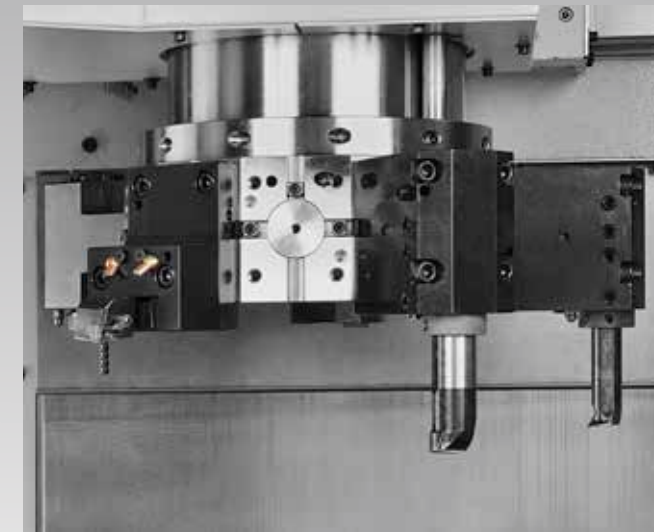
High precision tool setting probe allows fast tool setting and tool breakage detection.



Main Features

Reliable Hydro-Mechanical Turret

The hydraulic mechanical turret is driven by a hydraulic motor that powers a cam mechanism, ensuring quick, smooth, and precise indexing. It is equipped with a large-diameter curvic coupling, providing stable tool clamping during high-load machining processes.



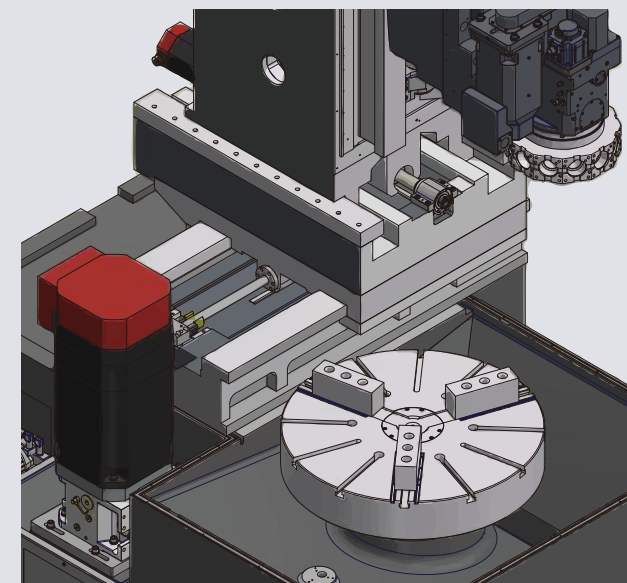
C-Axis Contour Control

The C-axis offers an indexing resolution of 0.01 degrees per increment, enabling contouring and complex turning-milling operations through simultaneous X and C interpolated axial motions.



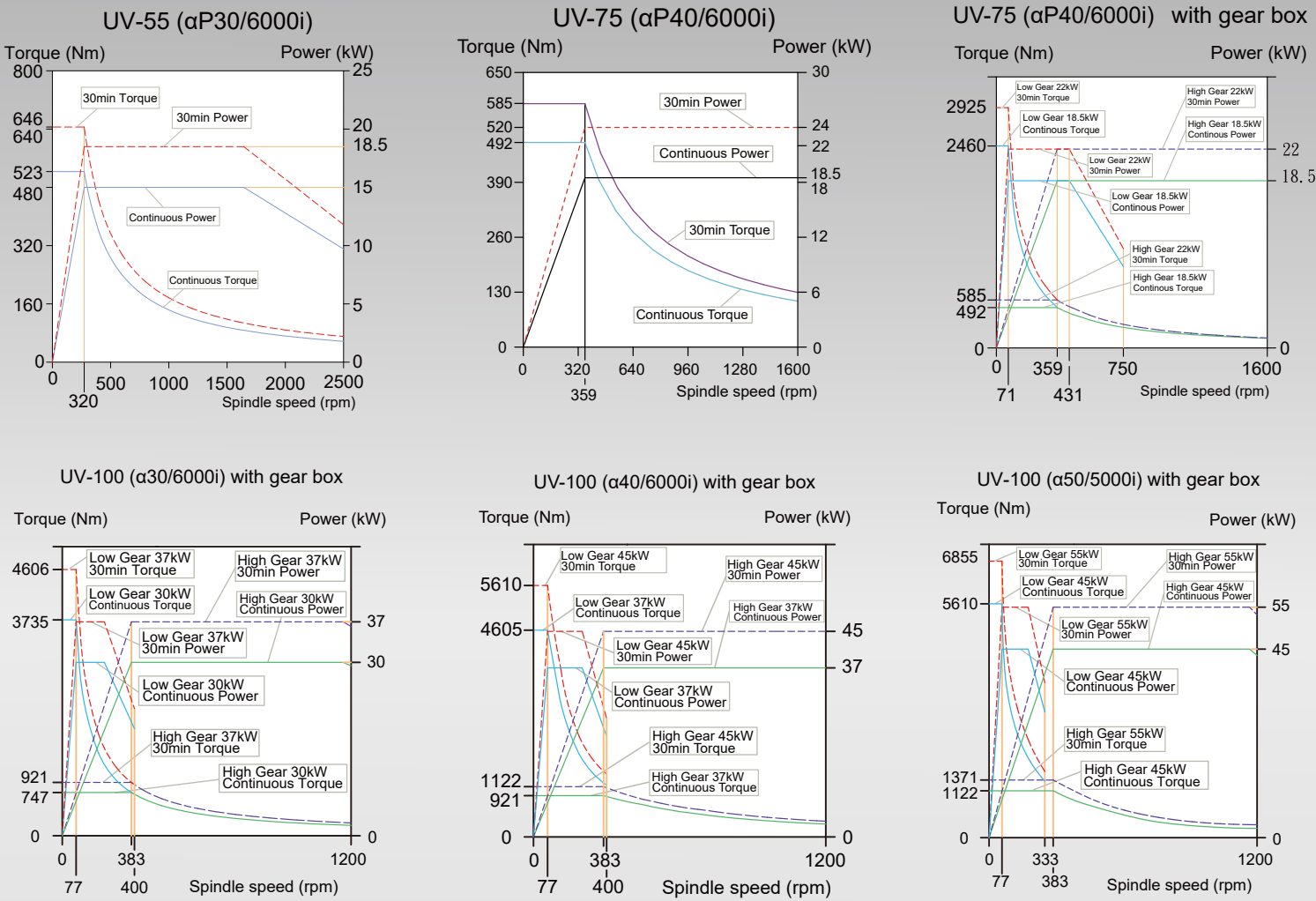
Y-Axis Travel and Axial Transmissions

The special ± 125 mm Y-axis travel makes it ideal for precise grooving and complex machining, significantly reducing the time required for workpiece disassembly and reassembly.

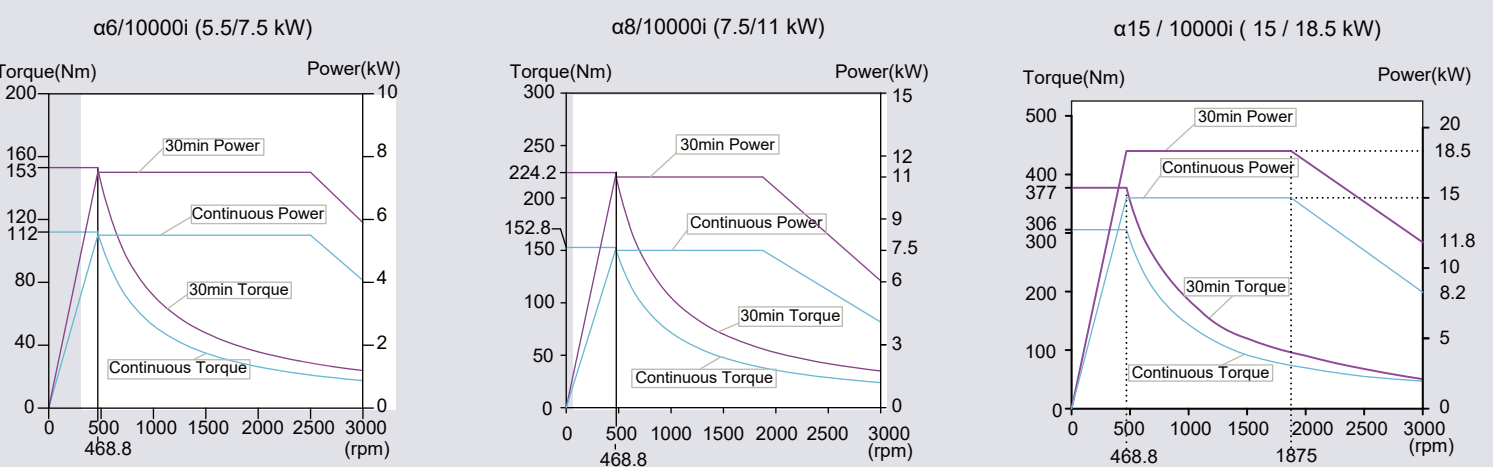


Capacity

Main Spindle Torque Chart

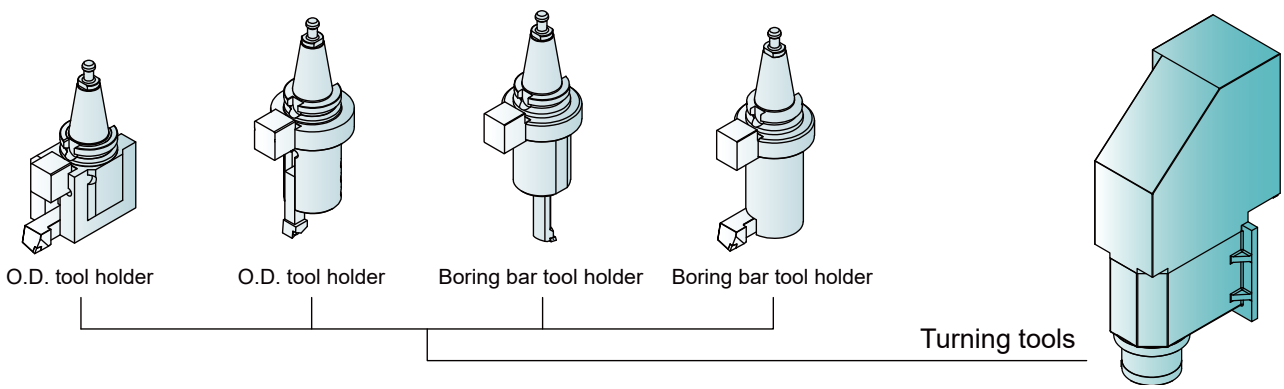


Second Spindle Torque Chart

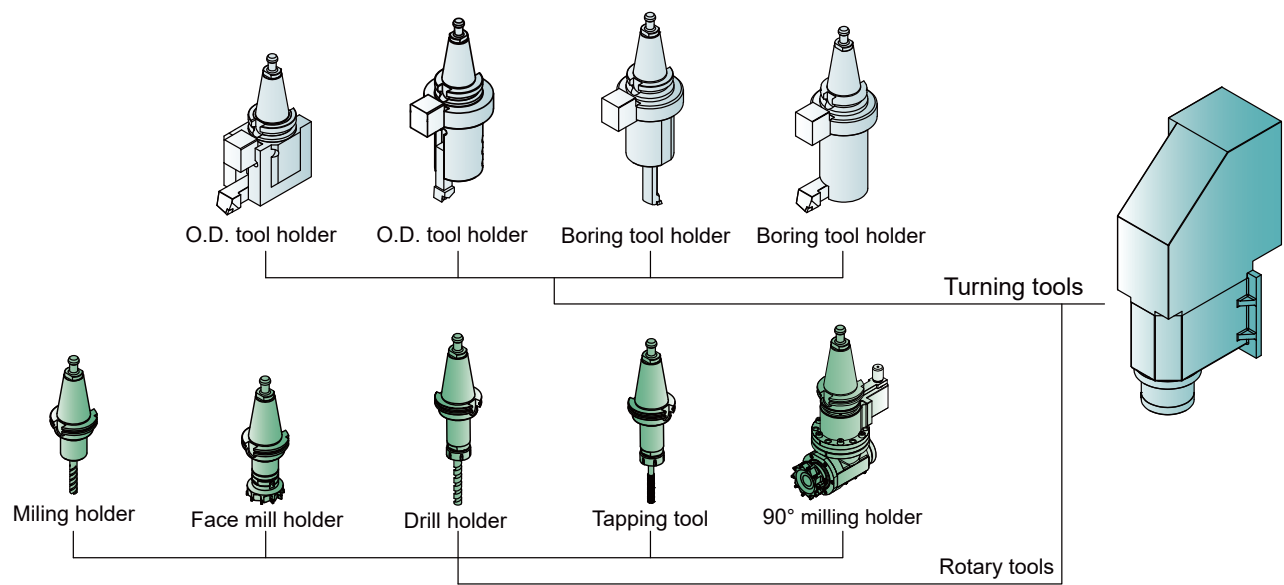


Tooling System

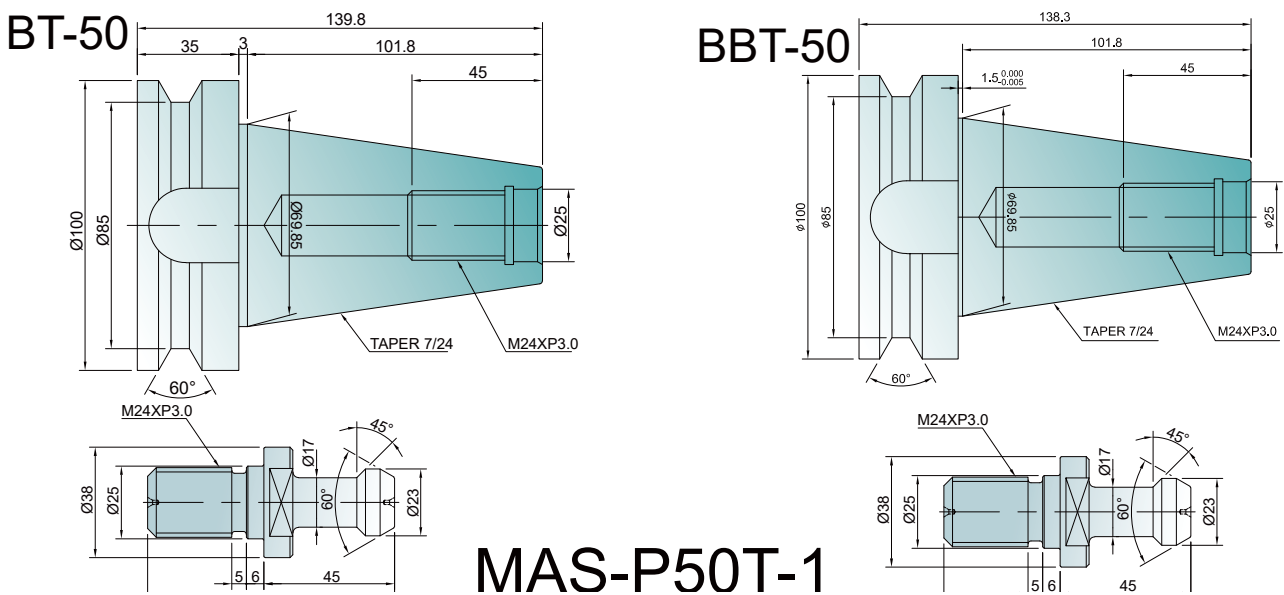
UV-75ATC 、UV-100ATC



UV-75ATCC 、UV-100ATCC



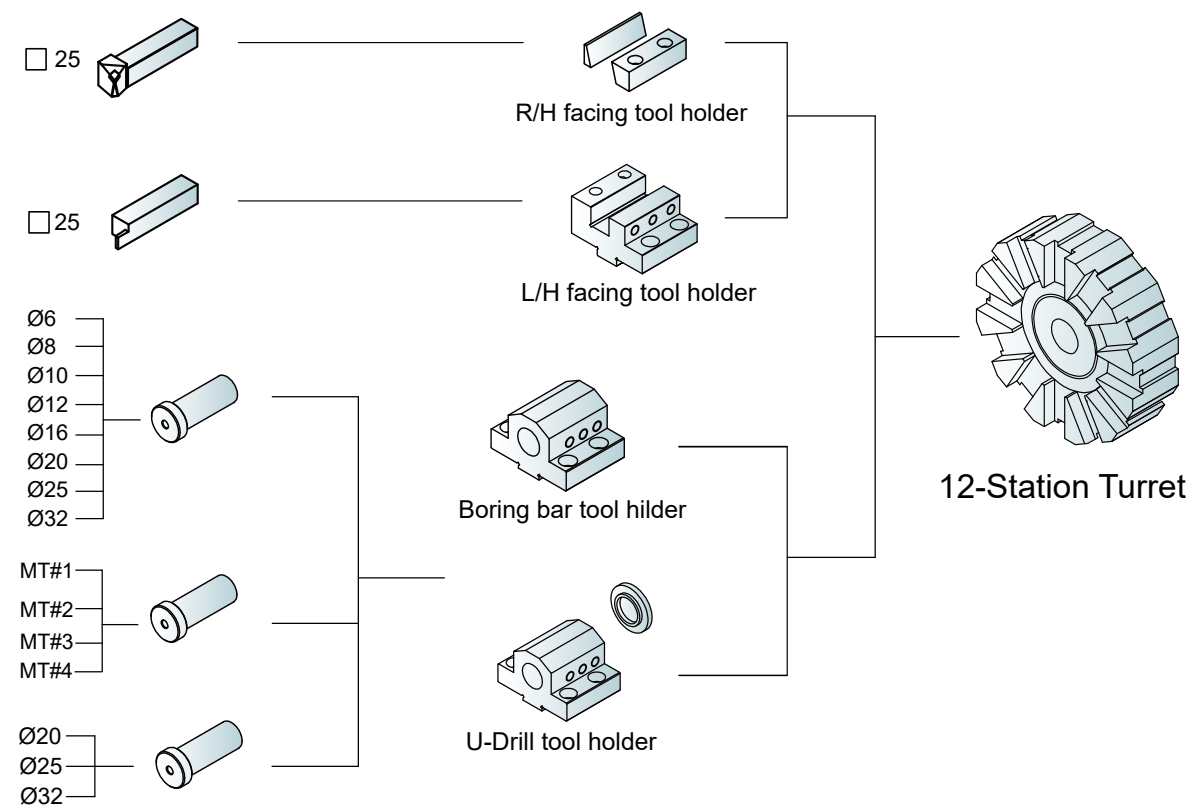
Pull Stud and Tool Shank



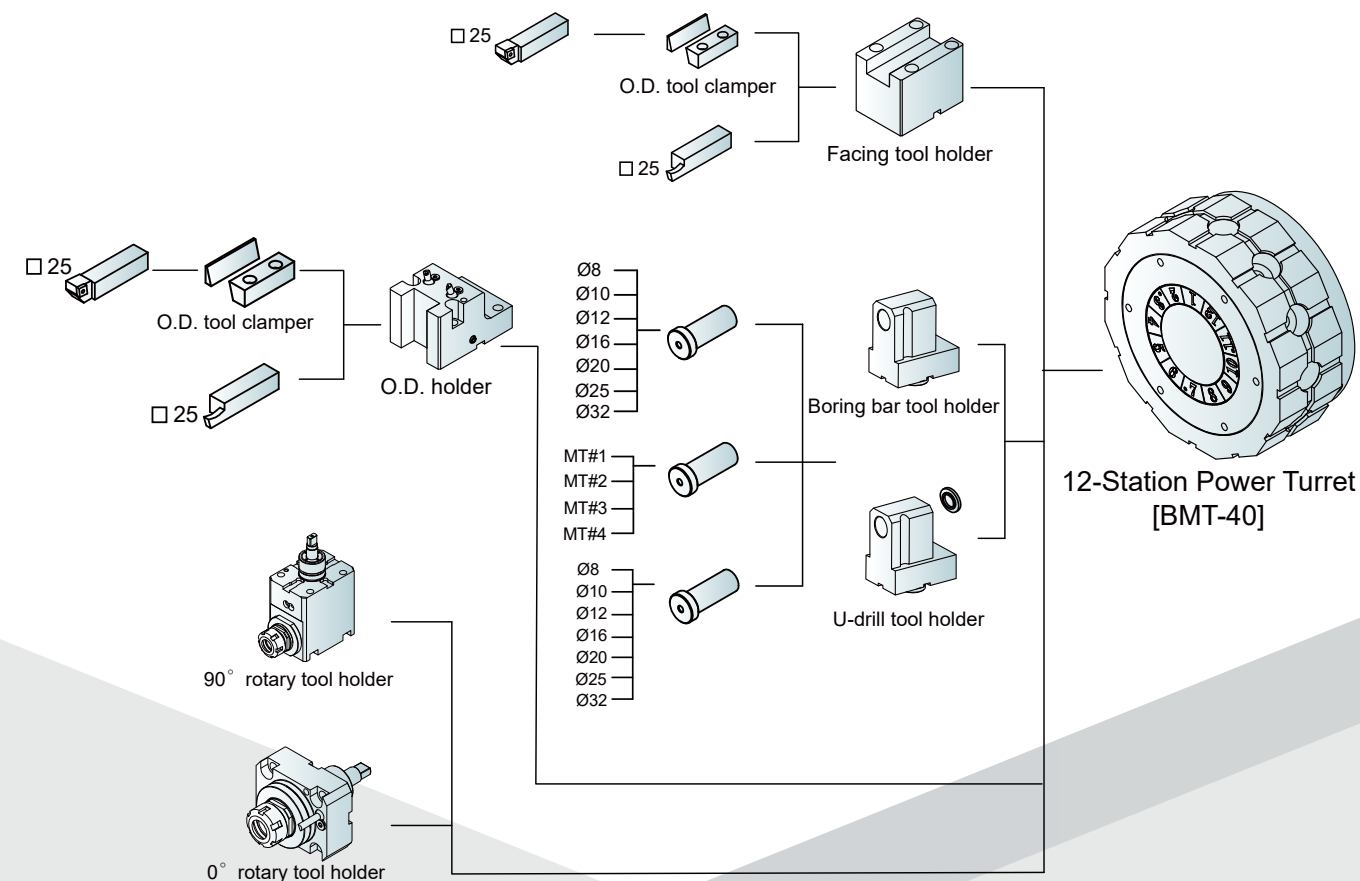
MAS-P50T-1

Tooling System

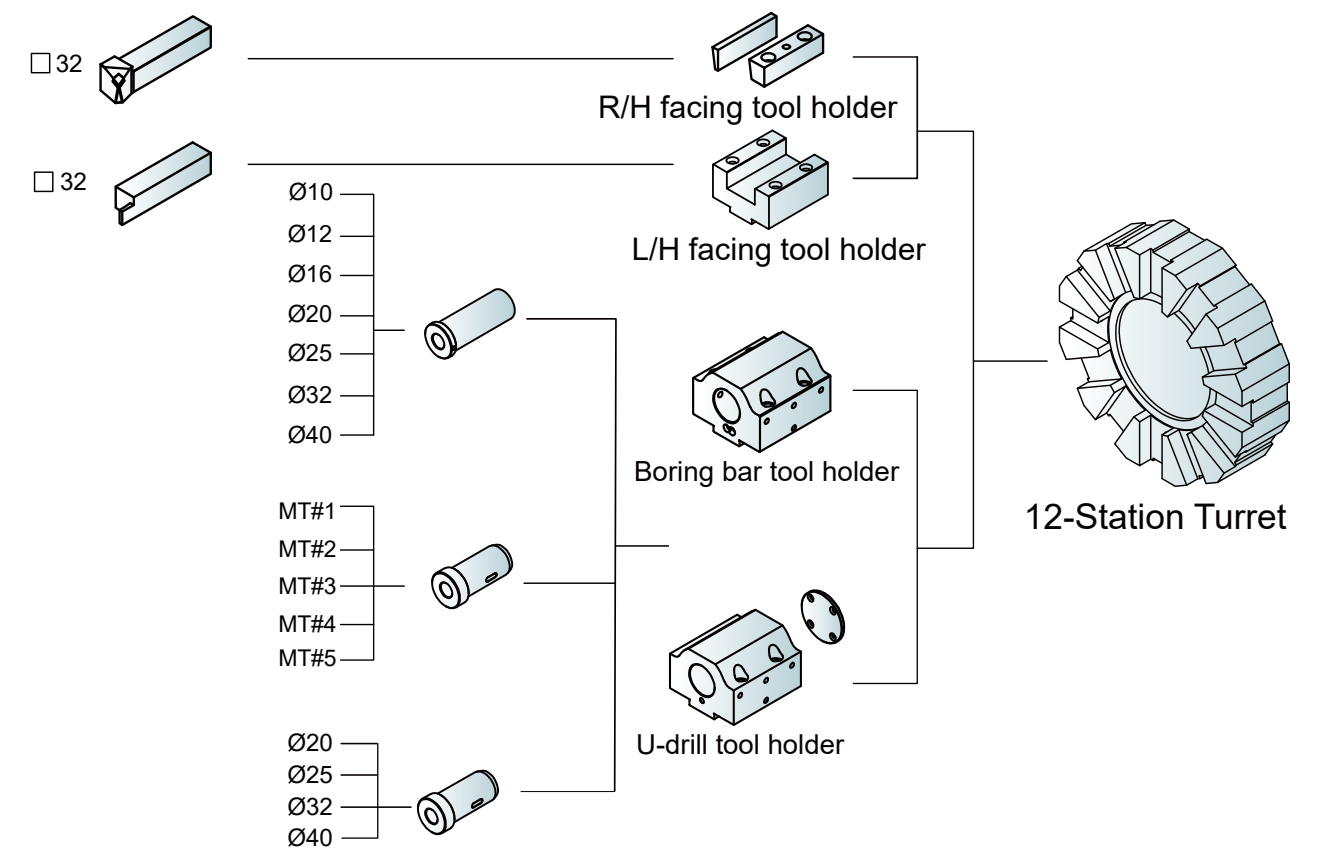
UV-55E (BOT)



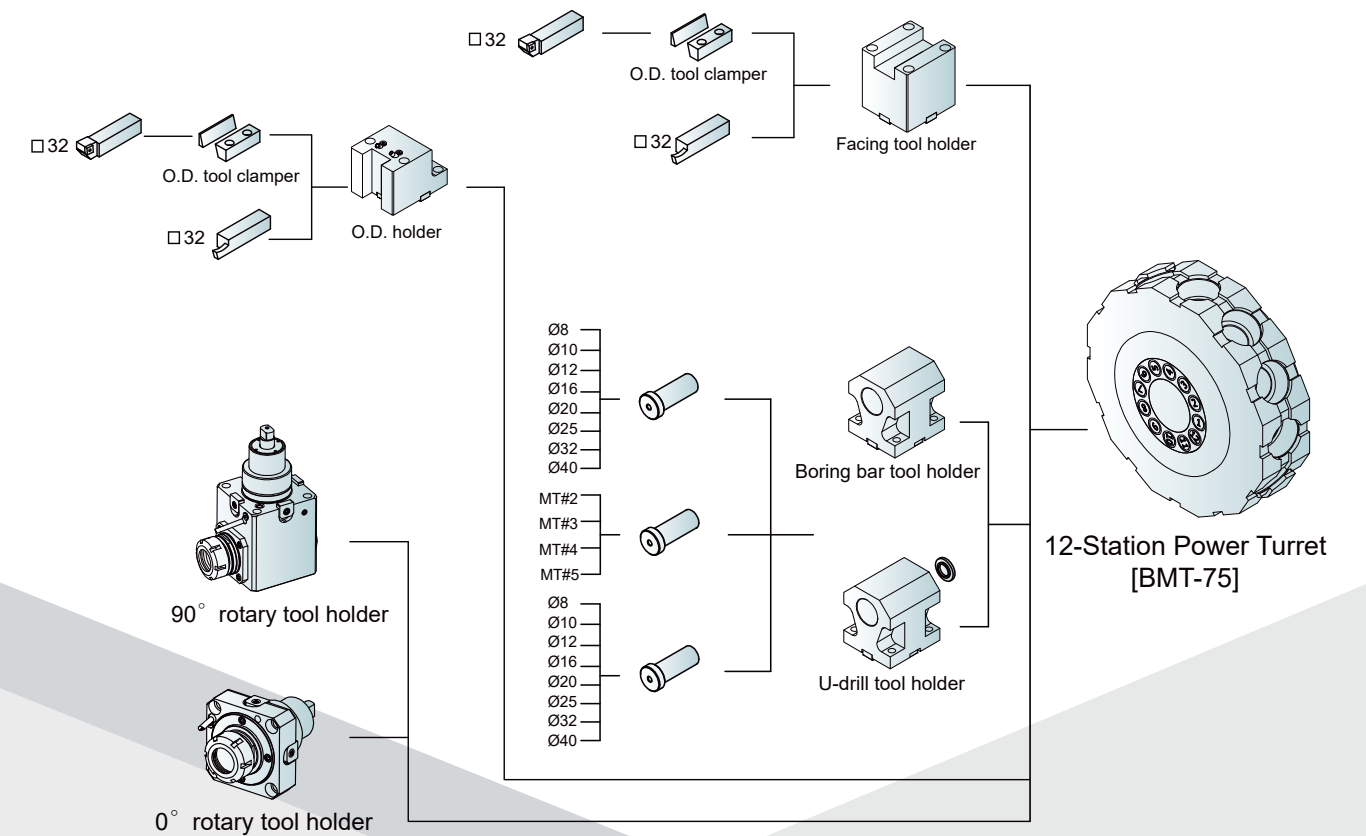
UV-55EC (BMT-40)



UV-75E、UV-100E (BOT)



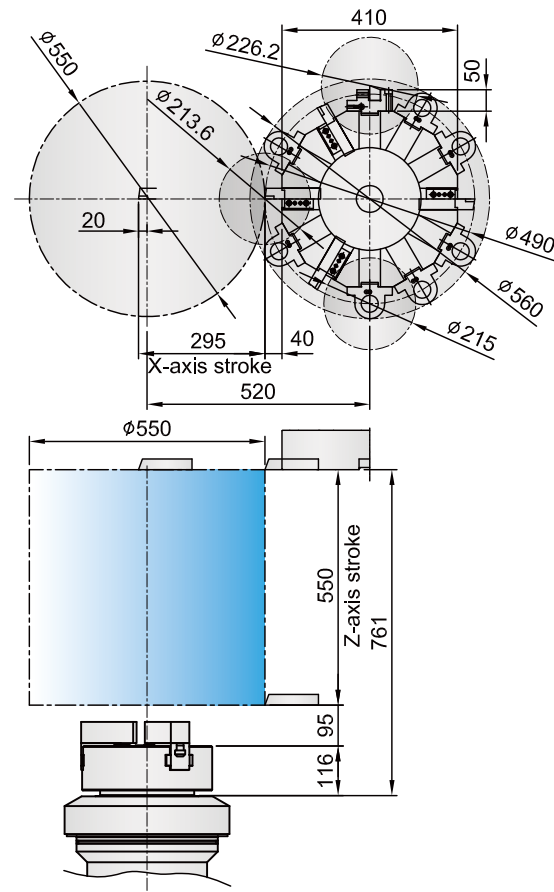
UV-75EC、UV-100EC、UV-100EY(BMT-75)



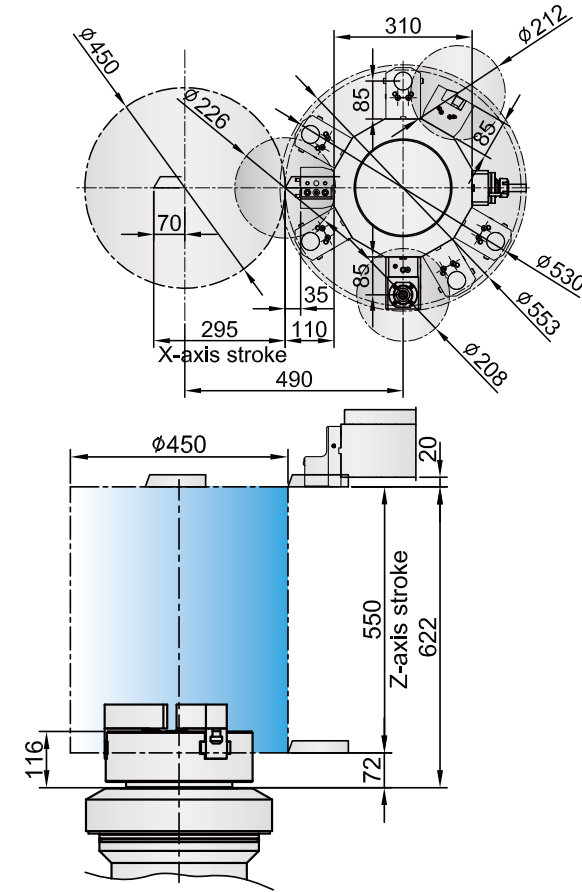
Working Range Diagram

TURRET TYPE

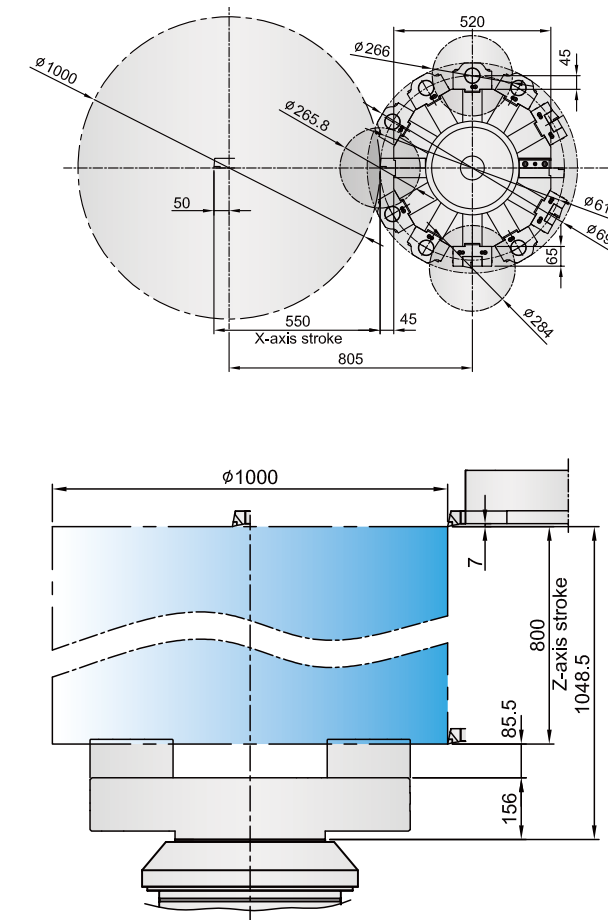
UV-55E



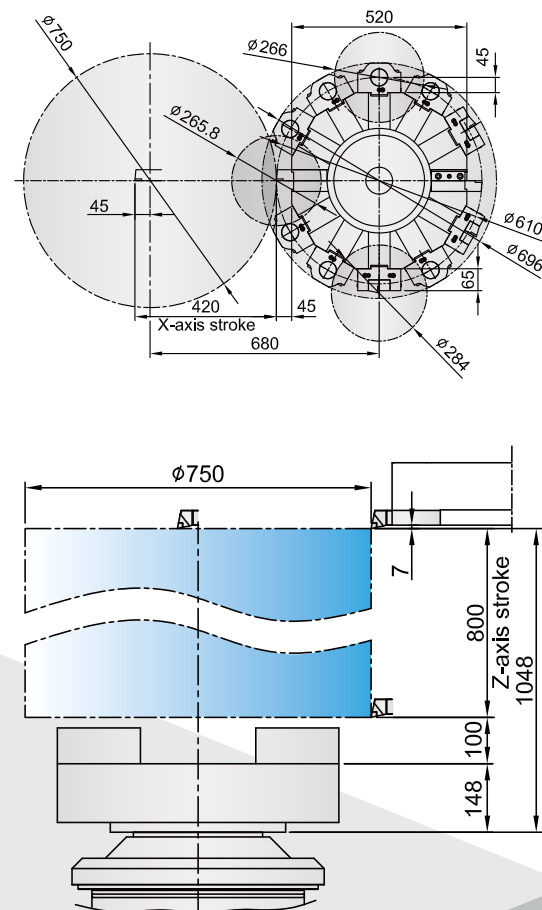
UV-55EC (BMT-40)



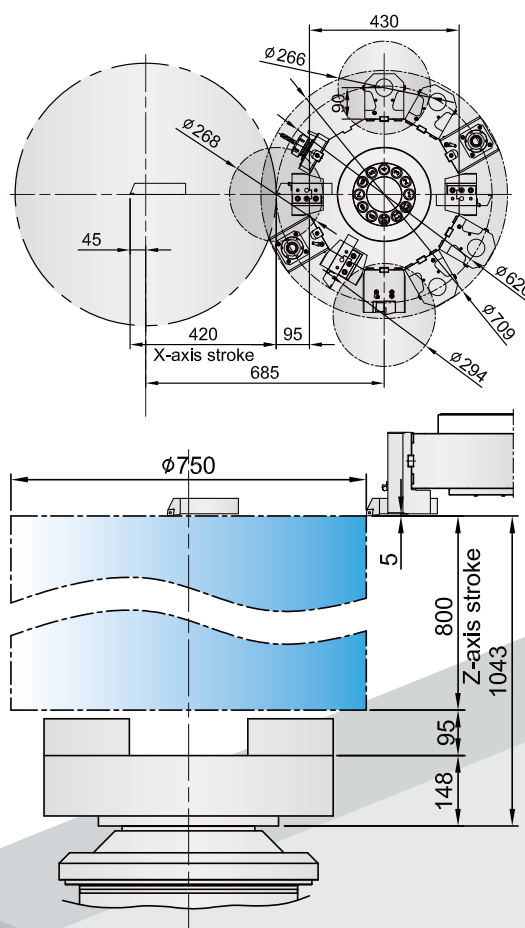
UV-100E



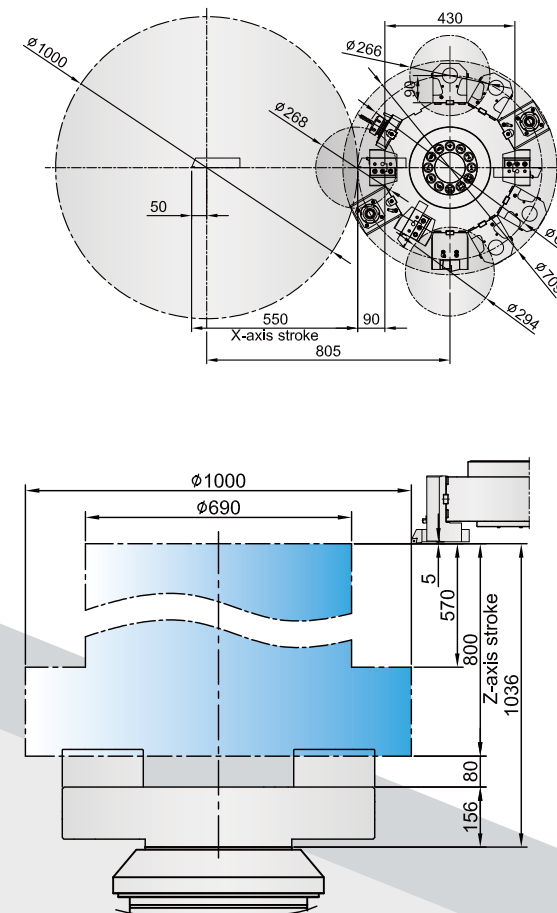
UV-75E



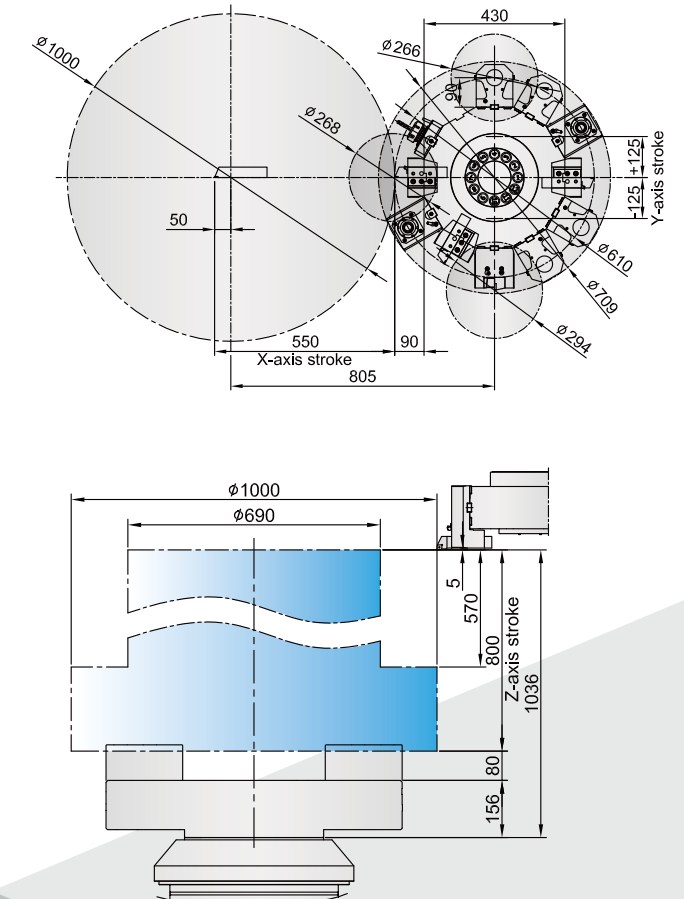
UV-75EC (BMT-75)



UV-100EC (BMT-75)



UV-100EY

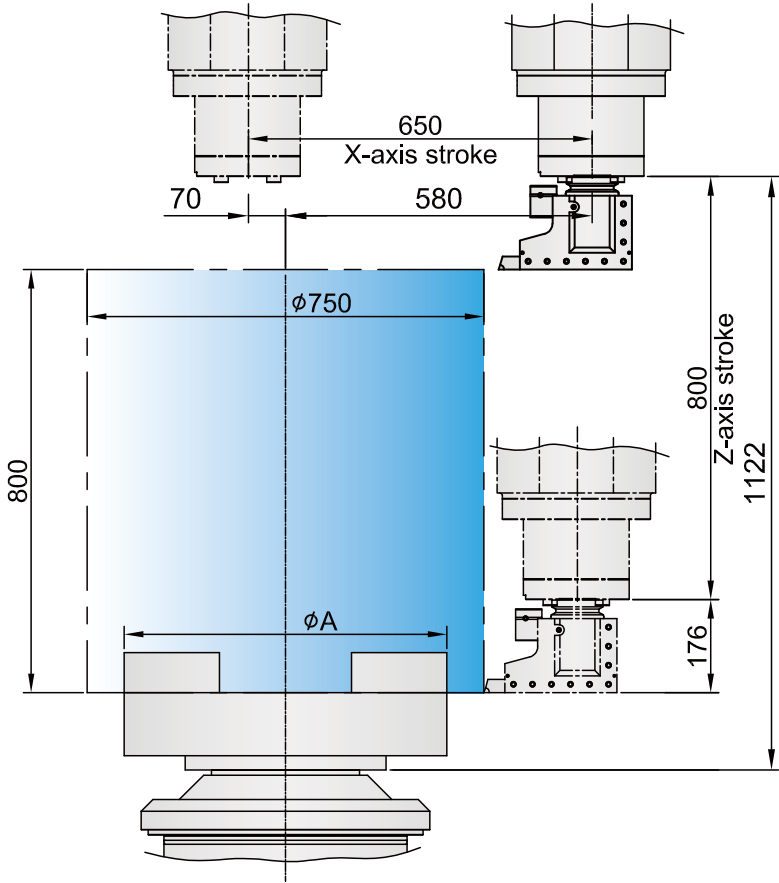


Working Range Diagram

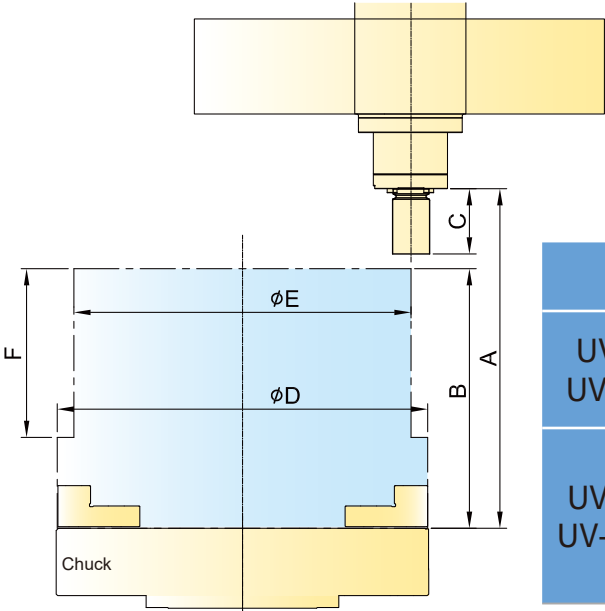
ATC TYPE

UV-75ATC、75ATCC

Model	Type	A
UV-75ATC	24"	610
UV-75ATCC	32"	810



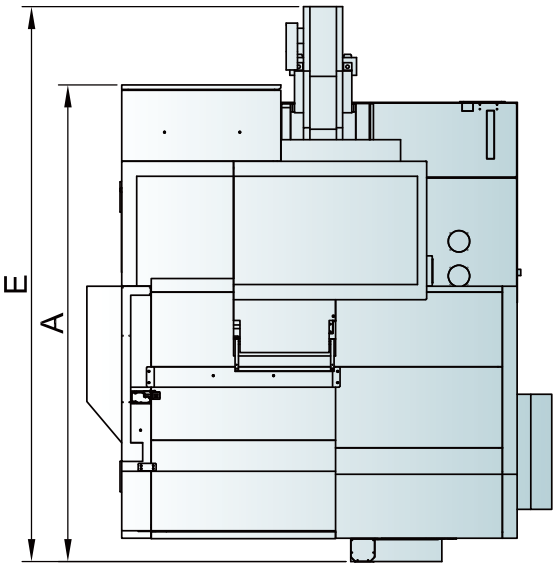
Max. Cutting Capabilities



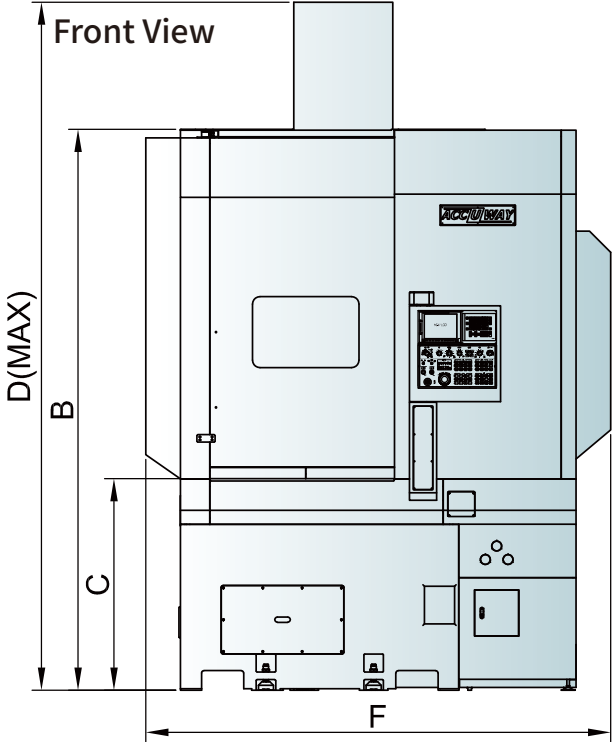
Model	Type	A	B	C	D	E	F
UV-75ATC UV-75ATCC	24"	986	800	176	750	750	-
	32"	976					
UV-100ATC UV-100ATCC	24"	986	700	176	1000	910	495
	32"	976					
	40"	916					

Machine Dimension

Top View

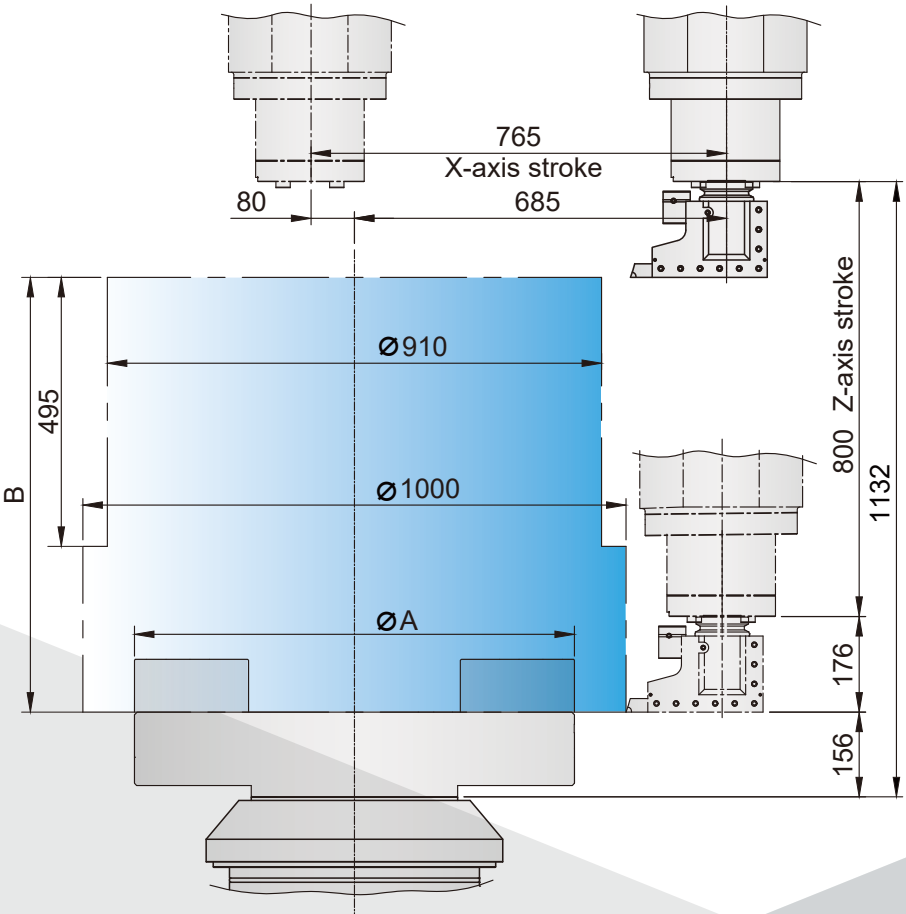


Front View



UV-100ATC、100ATCC

Model	Type	A	B
UV-100ATC UV-100ATCC	24"	610	800
	32"	810	800
	40"	1005	700



	UV-55E UV-55EC	UV-75E UV-75EC	UV-100E UV-100EC	UV-100EY	UV-75ATC UV-75ATCC	UV-100ATC UV-100ATCC
A	2400	3050	3050	3900	3050	3200
B	2600	3350	3350	3750	3550	3750
C	1050	1350	1350	1400	1350	1400
D	3000	4200	4200	4600	4000	4600
E	3000	3700	3700	4400	3700	3700
F	2300	2600	3100	3500	2700	3100

Specifications

TURRET TYPE

Item / Model		UV-55E	UV-55EC	UV-75E	UV-75EC	UV-100E	UV-100EC	UV-100EY
Controller		FANUC 0i-T						
Swing over bed	mm	750		850		1100		
Max. turning diameter	mm	550		750		1000		
Max. turning length	mm	550		700				
Guideway type		Linear		Linear (Box way)		Box way		
Spindle nose	ASA	A2-8		A2-11		A2-15		
Chuck diameter	inch	12 (15)		24 (32)		24 (32/40)		
Spindle speed	rpm	2500		1600(630)		1200 (2-Speed gearbox)		
Spindle drive system		Belt				2-step gearbox + Belt		
Spindle motor power Cont. / 30min	kW	15/18.5		18.5/22		30/37 (37/45, 45/55)		
X-axis travel	mm	295		420		550		
Z-axis travel	mm	550		800		800		
Y-axis travel	mm	-		-		-		±125
X-axis rapid traverse	m/min	20				15		
Z-axis rapid traverse	m/min	7						
Y-axis rapid traverse	m/min	-						7
Tooling system		BOT	BMT-40	BOT	BMT-75	BOT	BMT-75	
Turret indexing method		Hydraulic	Servo	Hydraulic	Servo	Hydraulic	Servo	
Tooling capacity	station	12						
Square tool shank size	mm	25		32				
Round tool shank size	mm	40		50				
Rotary tool spindle power	kW	-	3.7/5.5	-	5.5/7.5	-	7.5/11	
X-axis motor power	kW	3		4				
Z-axis motor power	kW	3		4				
Y-axis motor power	kW	-						4
Hydraulic motor power	kW	2.2						
Coolant pump motor power	kW	0.5+1						
Machine dimension L x W x H	m	2.3 x 3.0 x 3.0		2.6 x 3.7 x 4.2		3.1 x 3.7 x 4.2		3.5 x4.4x 4.5
Net weight	kg	5300		15000		16000		19000

* Design and specifications are subject to change without prior notice.

ATC TYPE

Item / Model		UV-75ATC	UV-75ATCC	UV-100ATC	UV-100ATCC
Controller		FANUC 0i-T			
Swing over bed	mm	850		1100	
Max. turning diameter	mm	750		1000	
Max. turning length	mm	800		800(700)	
Guideway type		Linear (Box way)		Box way	
Spindle nose taper	ASA	A2-11		A2-15	
Chuck diameter	inch	24 (32)		24 (32/40)	
Spindle speed	rpm	1600		1200	
Spindle drive system		Belt		2-step gearbox + Belt	
Spindle motor power (Cont. / 30min)	kW	18.5/22		30/37 (37/45, 45/55)	
Tool spindle taper		BT/BBT 50			
Tool spindle speed	rpm	-	3000	-	3000
Tool spindle drive system		-	Belt	-	Belt
Tool spindle bearing diameter	mm	-	100	-	100
Tool spindle Motor Power Cont. /30min	kW	-	5.5/7.5	-	7.5/11
Tool spindle max. torque	N-m	-	105	-	140
X-axis travel	mm	650		765	
Z-axis travel	mm	800			
X-axis rapid traverse	m/min	20		15	
Z-axis rapid traverse	m/min	7		7	
Magazine indexing method		Servo mechanical			
Tooling capacity	station	12			
Tool holder taper size		BT/BBT 50			
Max. tool length	mm	400			
Max. tool weight	kg	50			
Max. magazine loading capacity	kg	420			
X-axis motor power	kW	3		4	
Z-axis motor power	kW	4			
Hydraulic motor power	kW	2.2			
Coolant pump motor power	kW	0.5+1			
Machine dimension (L x W x H)	m	2.7 x 3.7 x 4.0		3.1 x 3.7 x 4.6	
Net weight	kg	16000	16500		17000