

**KENT  
USA**

**KENT  
CNC**



# **KVT-45 / 55 / 75 / 100**

## Vertical Turning Center

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# Rigid Structure

KVT-45/55/75



## Robust and Rigid Structural Design

- High grade Meehanite castings are internally reinforced with heavy ribs to dampen vibrations. Each one is thoroughly inspected prior to machining to ensure it is free of flaws. Our castings feature extensive symmetric ribs that increase rigidity and thermal stability.
- The massive base and specially designed columns further decrease harmonics, ensuring better finishes and longer tool life. Excellent chip flow design and a separate coolant tank helps to prevent thermal distortion from coolant heat.

# Main Features



## Heavy-duty Custom Spindle Design

- Using a combination of high precision angular contact and roller bearings enables the spindle to support heavy stock removal while maintaining accuracies of .0004 inch. This design provides easy loading of parts.
- Working with gravity, parts can more easily be loaded and clamped in the chuck.



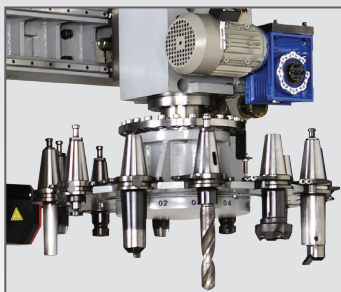
## Reliable Hydro-mechanical Turret

- Three indexing tool holder options are available. Combining a hydraulic motor with a cam mechanism delivers smooth fast and precise indexing. With our system, you can choose Bolt on, VDI or #50 tool holders.
- A large diameter Curvic coupling is used to guaranty solid clamping for the tool indexing station.



## Hybrid Machining Capability

- The hybrid ATC design offers multiple machining functions such as turning, milling, drilling and rigid tapping when integrated with a vertical spindle and live tooling option. You can eliminate secondary operations while increasing productivity by reducing loading and unloading time and the cost of building fixtures.
- The C-axis option provides an indexing resolution of 0.01 degrees per increment. Contouring complex round and multi-sided machining, rectangular slots and lettering are accomplished by synchronizing the spindle with the X and Z-axes. Rigid tapping can be done on both cylindrical and end-working surfaces.

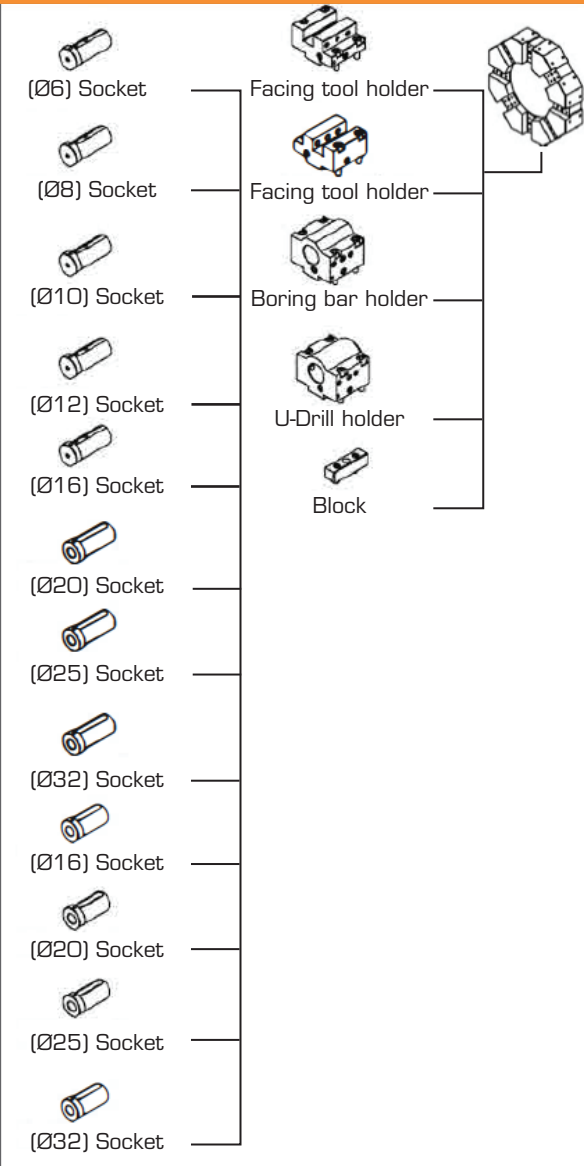


## ATC

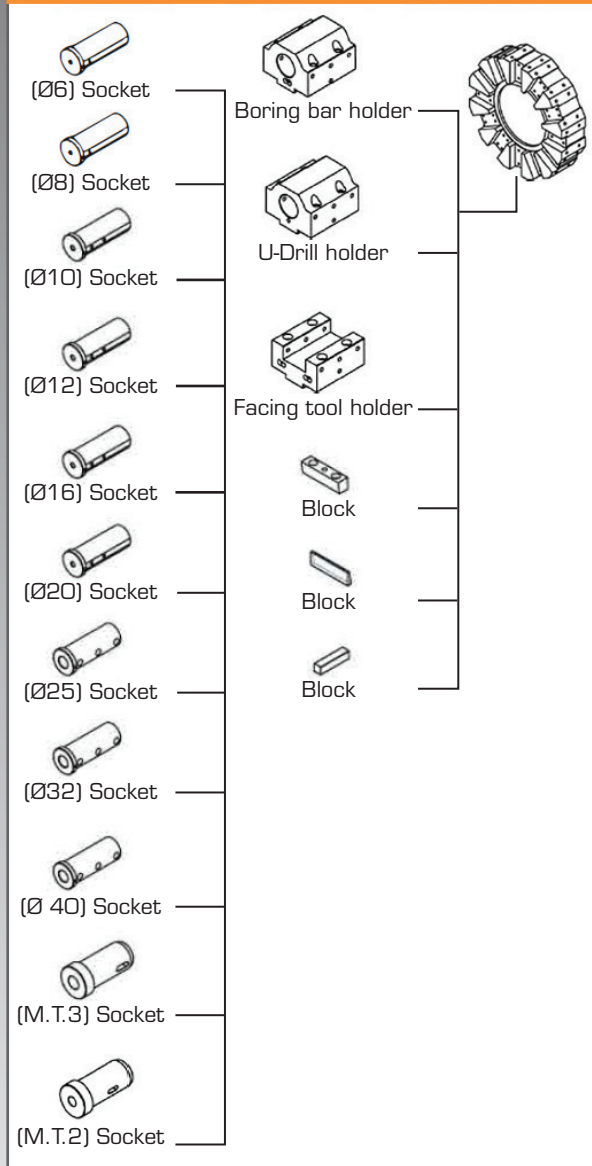
- The 12-tool turret magazine meets the demands of most machining operations and provides fast tool selection and easy operation.
- Maximum rotary tool power: 10HP (7.5kW)
- Tool holder taper: BT-50
- Tool magazine indexing mechanism: Cam

# Tooling System

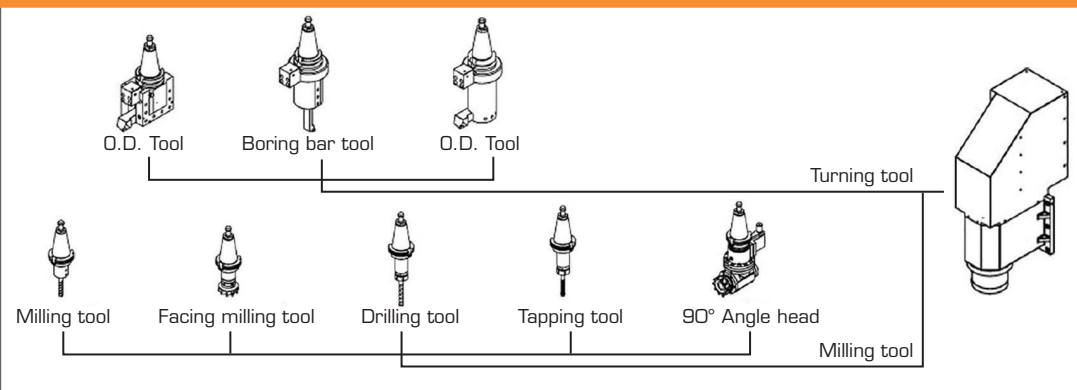
## KVT-45E/4KVT-55E



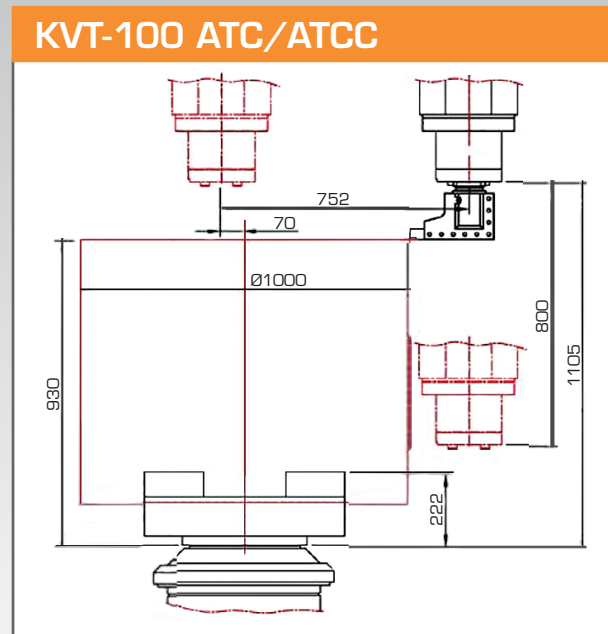
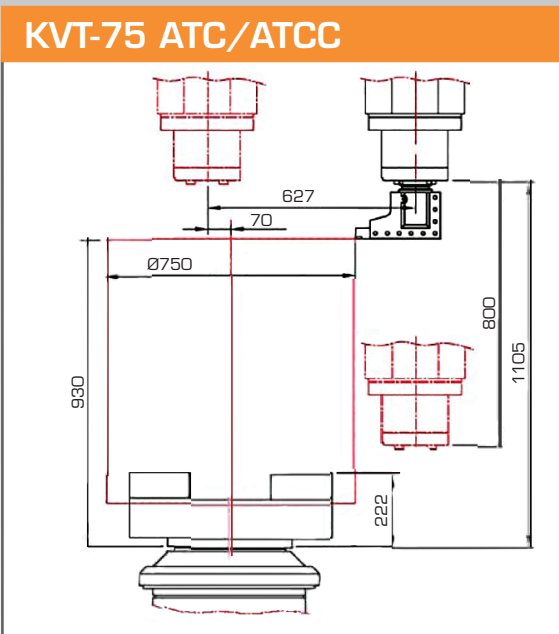
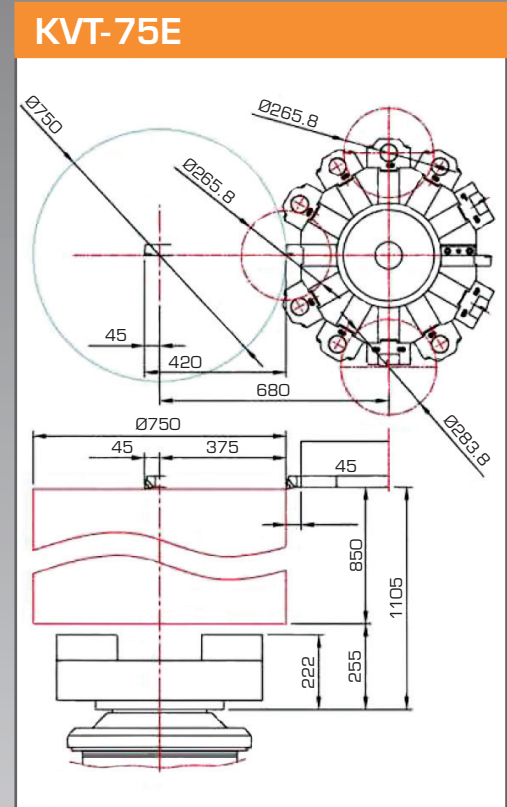
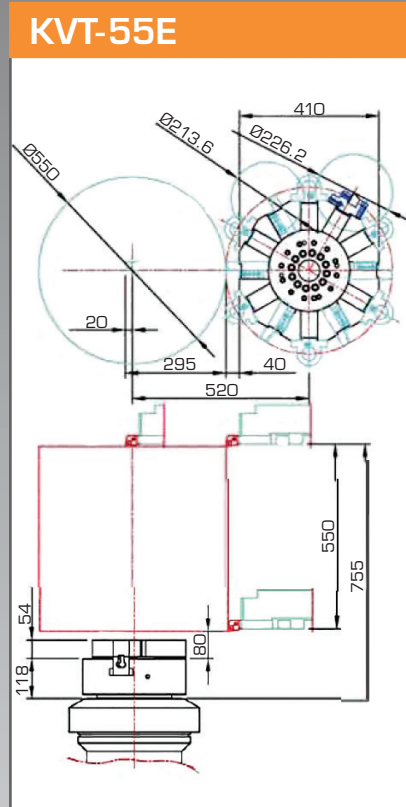
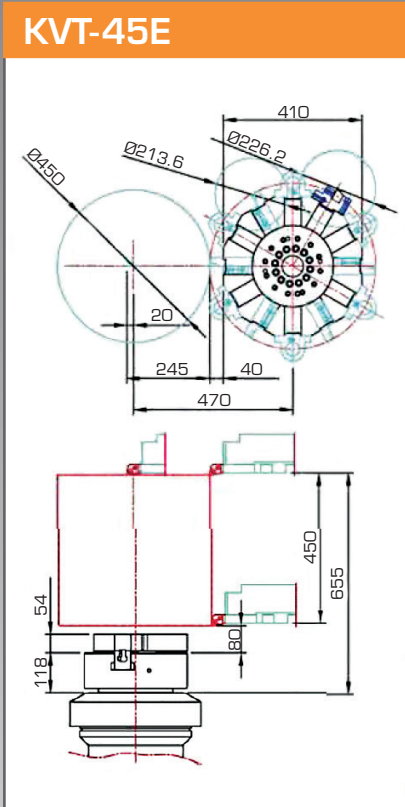
## KVT-75E



## KVT-75ATCC/KTV-100ATCC

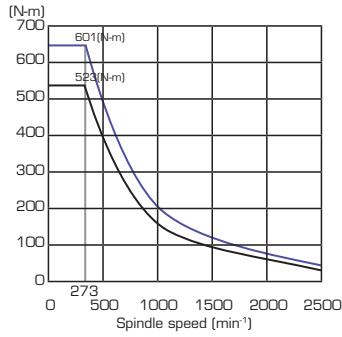
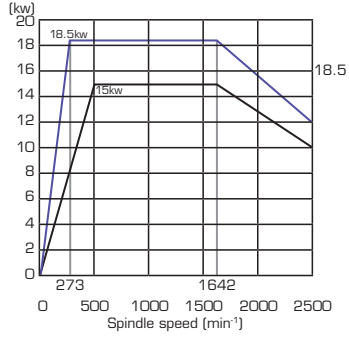


# Tool Interference & Working Range Diagram

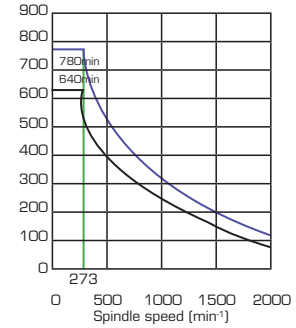
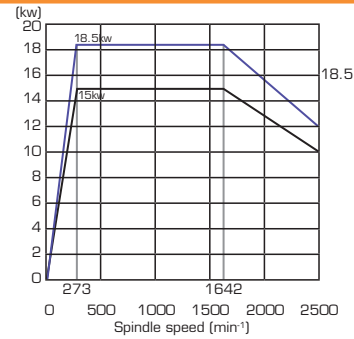


# Spindle Torque Diagram

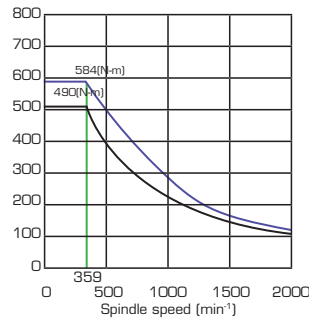
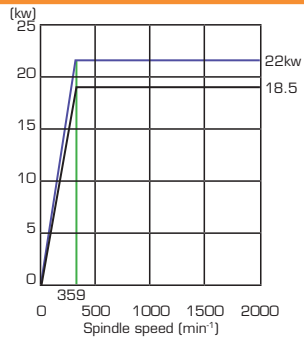
## KVT-45



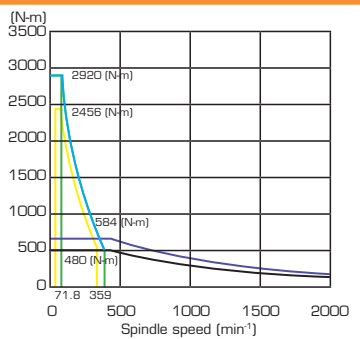
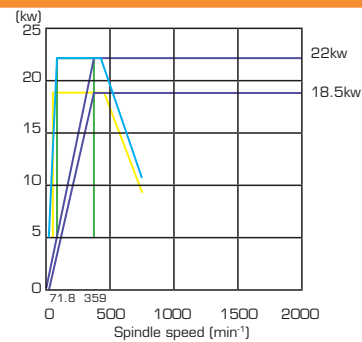
## KVT-55



## KVT-75

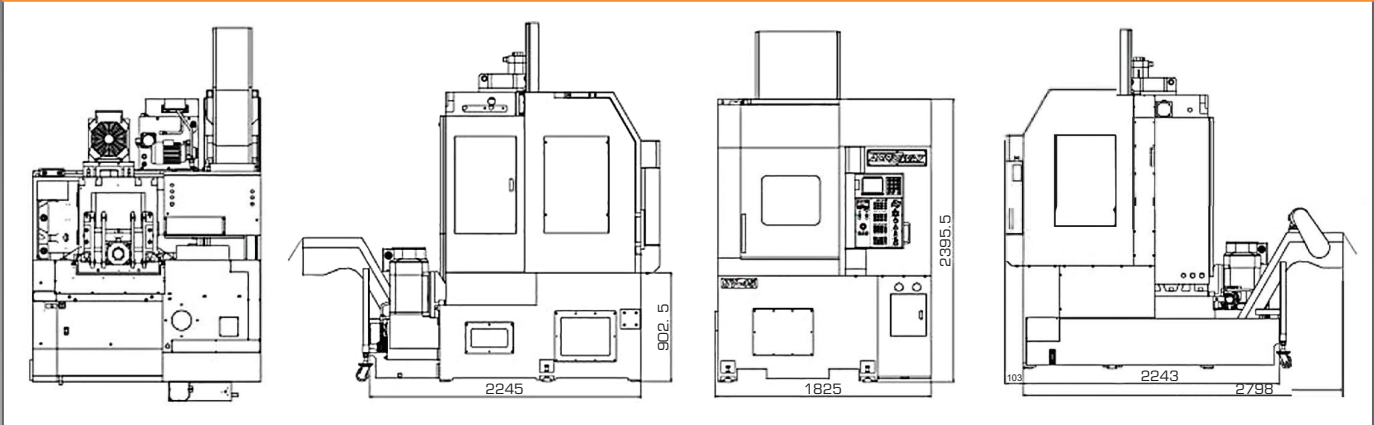


## KVT-100

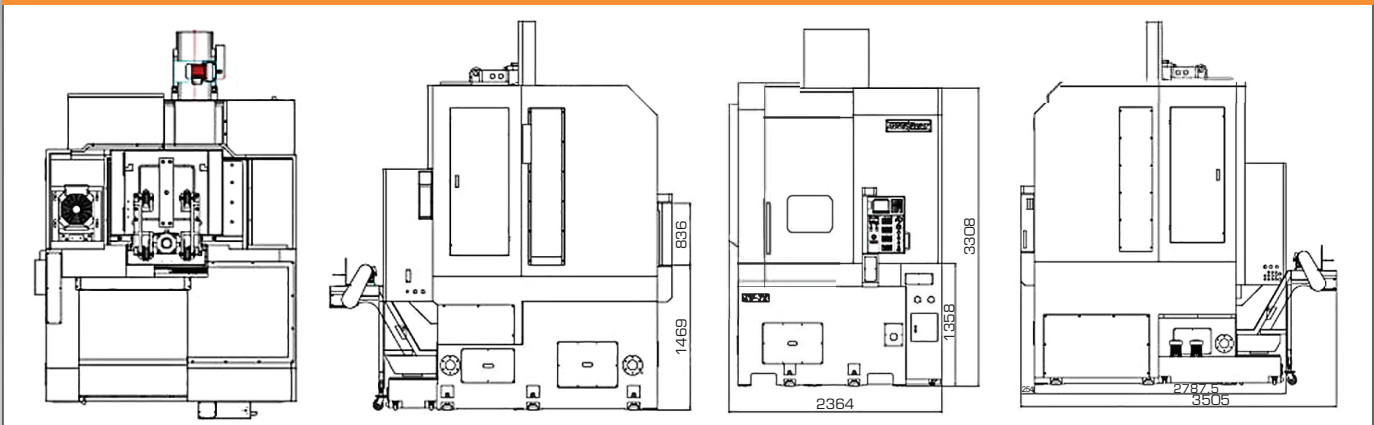


# Machine Dimensions

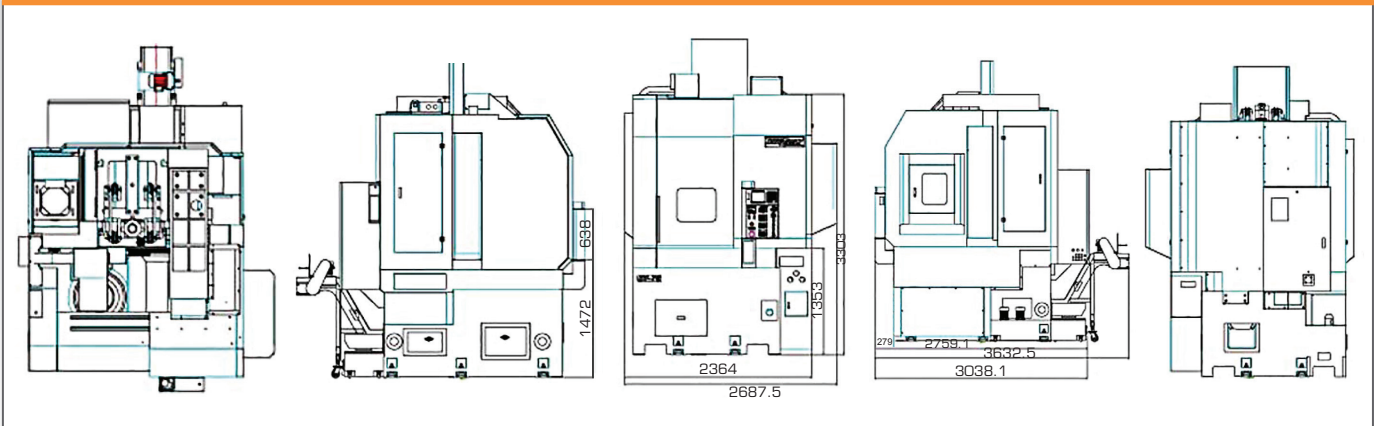
## KVT-45/KTV-55



## KVT-75



## KVT-100



# KVT-45 Specifications

Item/Model		KVT-45E	KVT-45EC
Capacity			
Max. swing	mm	ø600	ø600
Max. turning diameter	mm	ø450	ø450
Max. turning length	mm	400	400
Spindle			
Spindle speed	rpm	50 – 2500	50 – 2500
Spindle bearing diameter	mm	130	130
Spindle nose	ASA	A2-8	A2-8
Chuck diameter	in	12/15(OP.)	12/15(OP.)
Turret			
Type		Bolt-on tool	Bolt-on tool/VDI
Number of tools	pcs	12	12
Tool shank size	mm	□ 25/ø40	□ 25/ø40
Travels			
X-axis travel	mm	-20 – + 225	-20 – + 225
Z-axis travel	mm	450	450
Rapid traverse- X-axis	m/min	20	20
Rapid traverse- Z-axis	m/min	24	24
Motor			
Spindle motor power	kW	15/18.5	15/18.5
X-axis motor	kW	3	3
Z-axis motor	kW	3	3
Hydraulic motor	kW	2.2	2.2
Coolant pump motor	kW	0.5 + 1	0.5 + 1
Rotary tool driving motor	kW	-	3.7/5.5
Machine Dimensions			
Floor space (L x W)	mm	1850 x 3000	1850 x 3000
Height	mm	3060	3060
Net weight	kgs	5000	5500



# KVT-55 Specifications

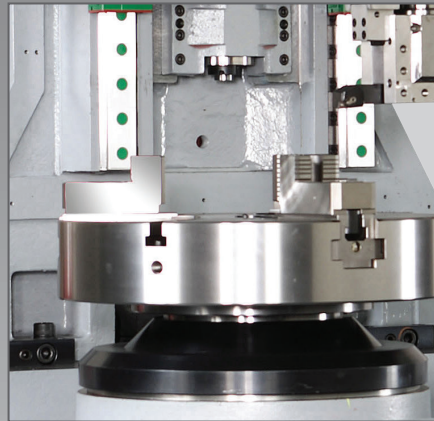
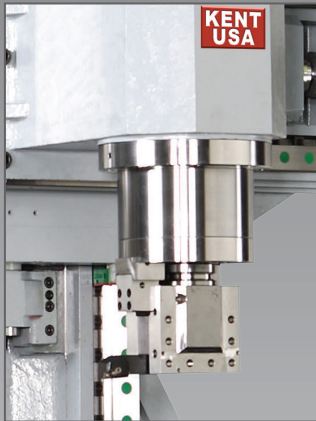
Item/Model		KVT-55E	KVT-55EC
Capacity			
Max. swing	mm	ø750	ø750
Max. turning diameter	mm	ø550	ø550
Max. turning length	mm	550	550
Spindle			
Spindle speed	rpm	50 - 2500	50 - 2500
Spindle bearing diameter	mm	130	130
Spindle nose	ASA	A2-8	A2-8
Chuck diameter	in	12/15(OP.)	12/15(OP.)
Turret			
Type		Bolt-on tool	Bolt-on tool/VDI
Number of tools	pcs	12	12
Tool shank size	mm	□ 25/ø40	□ 25/ø40
Travels			
X-axis travel	mm	-20 - + 275	-20 - + 275
Z-axis travel	mm	550	550
Rapid traverse- X-axis	m/min	20	20
Rapid traverse- Z-axis	m/min	24	24
Motor			
Spindle motor power	kW	15/18.5	15/18.5
X-axis motor	kW	3	3
Z-axis motor	kW	3	3
Hydraulic motor	kW	2.2	2.2
Coolant pump motor	kW	0.5 + 1	0.5+1
Rotary tool driving motor	kW	-	3.7/5.5
Machine Dimensions			
Floor space (L x W)	mm	1850 x 3000	1850 x 3000
Height	mm	3060	3060
Net weight	kgs	5300	5800

# KVT-75 Specifications

Item/Model		KVT-75E	KVT-75EC	KVT-75ATC	KVT-75ATCC
Capacity					
Max. swing	mm	ø850	ø850	ø850	ø850
Max. turning diameter	mm	ø750	ø750	ø750	ø750
Max. turning length	mm	800	800	700	700
Spindle					
Spindle speed	rpm	20 – 1400	20 – 1400	20 – 1400	20 – 1400
Spindle bearing diameter	mm	160	160	160	160
Spindle nose	ASA	A2-11	A2-11	A2-11	A2-11
Chuck diameter	in	24/32(OP.)	24/32(OP.)	24/32(OP.)	24/32(OP.)
Sub spindle					
Spindle taper		–	–	BT-50	BT-50
Spindle speed	rpm	–	–	–	2000
Spindle bearing diameter	mm	–	–	–	ø100
Turret					
Type		Bolt-on tool	Bolt-on too/VDI	ATC	ATC
Number of tools	pcs	12	12	12	12
Tool shank size		32/ø50	32/ø50	BT-50	BT-50
Travels					
X-axis travel	mm	-45 – +375	-45 – +375	-70 – +580	-70 – +580
Z-axis travel	mm	800	800	800	800
Rapid traverse- X-axis	m/min	20	20	20	20
Rapid traverse- Z-axis	m/min	24	24	24	24
Motor					
Spindle motor power	kW	18.5/22	18.5/22	18.5/22	18.5/22
X-axis motor	kW	4	4	4	4
Z-axis motor	kW	4	4	4	4
Hydraulic motor	kW	2.2	2.2	2.2	2.2
Coolant pump motor	kW	0.5 + 1	0.5 + 1	0.5 + 1	0.5 + 1
Sub spindle motor	kW	–	5.5/7.5	–	5.5/7.5
Machine Dimensions					
Floor space (L x W)	mm	3500 x 2364	3500 x 2364	3650 x 2700	3650 x 2700
Height	mm	4037	4037	4037	4037
Net weight	kgs	15,000	15,000	16,000	16,500

# KVT-100 Specifications

Item/Model		KVT-100ATC	KVT-100ATCC
<b>Capacity</b>			
Max. swing	mm	ø1100	ø1100
Max. turning diameter	mm	ø1000	ø1000
Max. turning length	mm	700	700
<b>Spindle</b>			
Spindle speed	rpm	10 – 600 (2-Speed gear)	10 – 600 (2-Speed gear)
Spindle bearing diameter	mm	220	220
Spindle nose	ASA	A2-11	A2-11
Chuck diameter	in	24 (32)	24 (32)
<b>Sub spindle</b>			
Spindle taper		BT-50	BT-50
Spindle speed	rpm	–	2000
Spindle bearing diameter	mm	–	ø100
<b>Turret</b>			
Type		ATC	ATC
Number of tools	pcs	12	12
Tool shank size		BT-50	BT-50
<b>Travels</b>			
X-axis travel	mm	-70 – +705	-70 – +705
Z-axis travel	mm	800	800
Rapid traverse- X-axis	m/min	20	20
Rapid traverse- Z-axis	m/min	24	24
<b>Motor</b>			
Spindle motor power	kW	18.5/22	18.5/22
X-axis motor	kW	4	4
Z-axis motor	kW	4	4
Hydraulic motor	kW	2.2	2.2
Coolant pump motor	kW	0.5 + 1	0.5 + 1
Sub spindle motor	kW	–	5.5/7.5
<b>Machine Dimensions</b>			
Floor space (L x W)	mm	3750 x 2550	3750 x 2550
Height	mm	4037	4037
Net weight	kgs	16,500	17,000



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