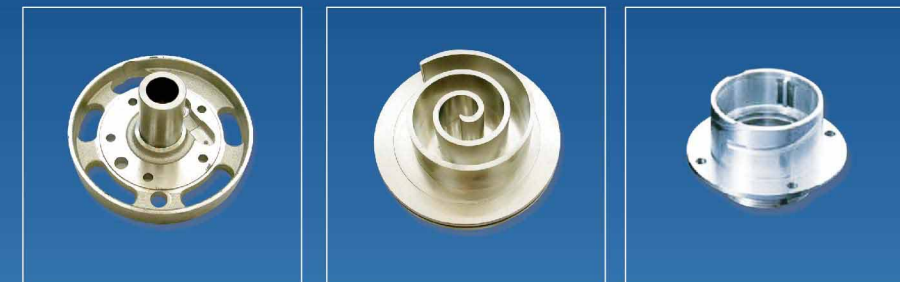




ISO 9001 ISO 14001 CE  
A Worldwide Tradition of Quality Products and Customer Service

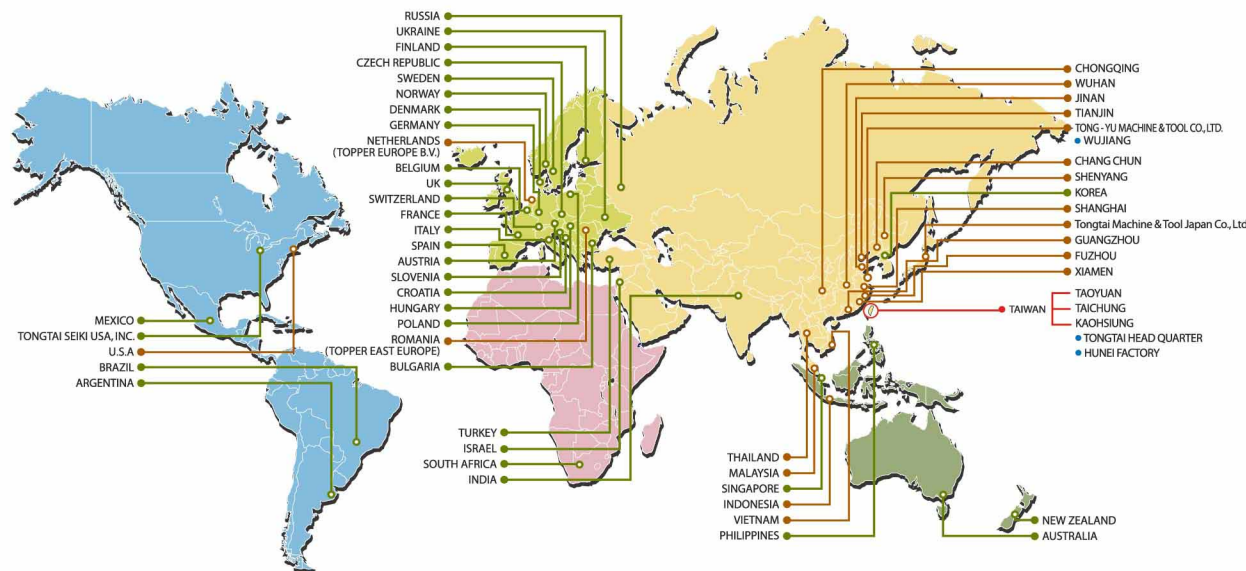
# CNC Lathe TA-20/25 Series

High ■Quality ■Precision ■Efficiency ■Economy



## Global Sales & Service Network

★ Head Office ● Branch ● Foreign Agency ● Factory



## Tongtai Machine & Tool Co., Ltd.

• HEAD OFFICE  
NO.3, LUKE 3rd. RD., LUZHU DISTRICT, KAOHSIUNG CITY, 82151, TAIWAN.  
TEL : 886-7-9761588 FAX : 886-7-9761589/886-7-9761590  
Website : <http://www.tongtai.com.tw>

• TAOYUAN OFFICE TEL : 886-3-4551399 FAX : 886-3-4559730  
• TAICHUNG OFFICE TEL : 886-4-23589313 FAX : 886-4-23588913  
• TONGTAI SEIKI U.S.A INC. TEL : 1-845-2675500 FAX : 1-845-2675546  
• Tongtai Machine & Tool Japan Co., Ltd TEL : 81-4-71438355 FAX : 81-4-71438360  
• TONGTAI SEIKI VIETNAM LIMITED TEL : 84-435112529  
• EUROPE OFFICE TEL : 31-161-454639 FAX : 31-161-454768  
• THAILAND OFFICE TEL : 66-2-7443440 FAX : 66-2-3986518  
• INDONESIA OFFICE TEL : 62-21-45850521 FAX : 62-21-45840522  
• MALAYSIA OFFICE TEL : 60-3-78456815 FAX : 60-3-78456851

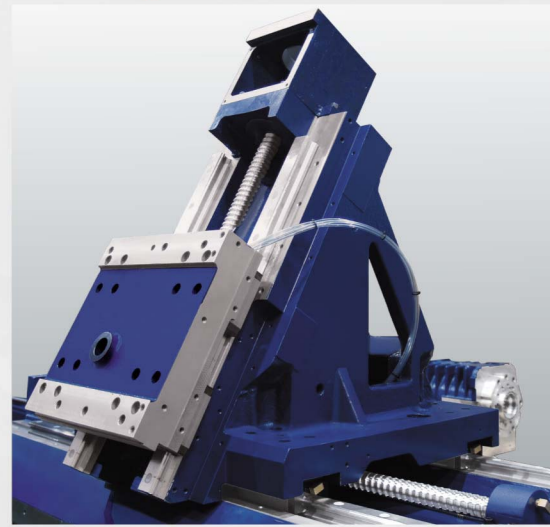
• CHINA OFFICE  
SHUZHOU TONG-YU MACHINE & TOOL CO., LTD.  
TEL : 86-512-63430168 FAX : 86-512-63431622  
E-mail : [sales@tong-yu.com.cn](mailto:sales@tong-yu.com.cn)

• WUHAN OFFICE TEL : 86-27-59409109 FAX : 86-27-59409110  
• SHANGHAI OFFICE TEL : 86-21-24208138 FAX : 86-21-34073262  
• CHONGQING OFFICE TEL : 86-23-67865925 FAX : 86-23-67867717  
• GUANGZHOU OFFICE TEL : 86-755-27222119 FAX : 86-755-27222115  
• TIANJIN OFFICE TEL : 86-22-24417640 FAX : 86-22-24416738





■ 60 degree slant saddle



- Saddle with 60 degree slant design.
- High rigidity structure and symmetrical design for better air circulation.
- Decrease the chance of heat distortion.

■ Excellent chip-proof



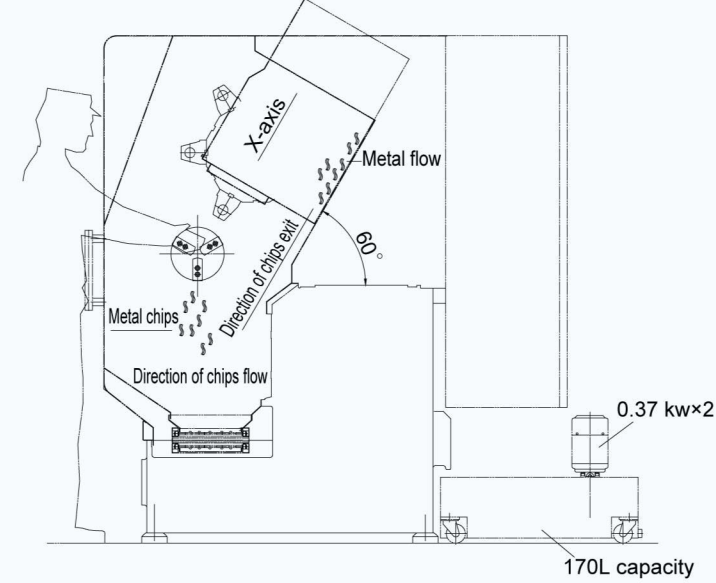
Steel telescope cover for servo axis provides long-term usage, space saving and best chip-proof which could decrease the floor space obviously.

■ Programmable tailstock



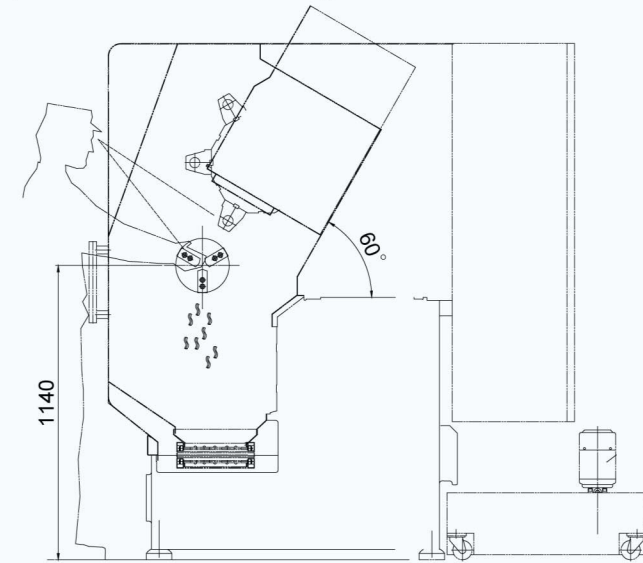
Programmable tailstock uses high rigidity linear guide way to provide excellent positioning. Three points type of sensor not only have the function of stroke sensing but can depend on the length of workpieces to adjust the decelerate system for avoiding the tailstock collided and damaging the machine.

Excellent chip flow



- Saddle designed with 60 degree angle.
- Wider chip flow exit and bigger size chip conveyor.
- 170 liter huge volumn capacity coolant tank with high pressure coolant pump.

Operational advantages



- The height of spindle from floor is 1140mm makes the procedure of loading / unloading the workpiece match the requirement of ergonomic design.
- Special slider design allows the turret closer the operator and makes the tool orientation and exchange easier.
- Easy monitoring the turning condition.

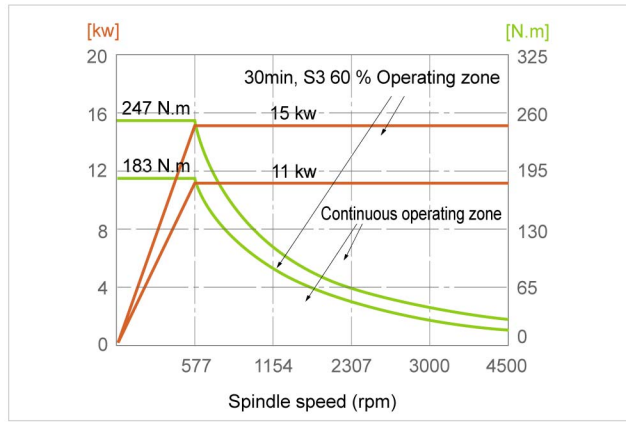
Control panel



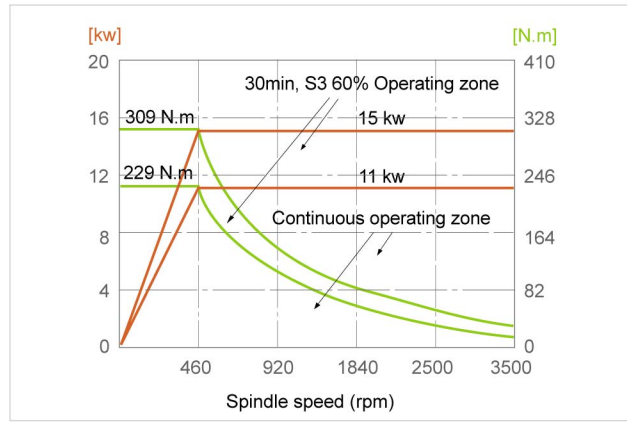
• Standard:0i-TD

- Swivel control panel design facilitates the operator in monitoring the production process during program editing.

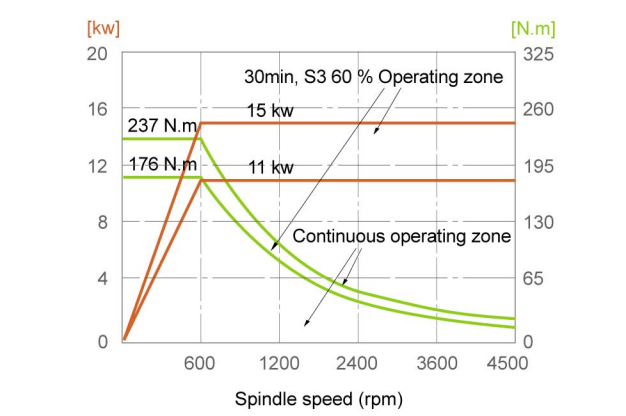
Belt type spindle αP22 (TA-20/TA-20B)



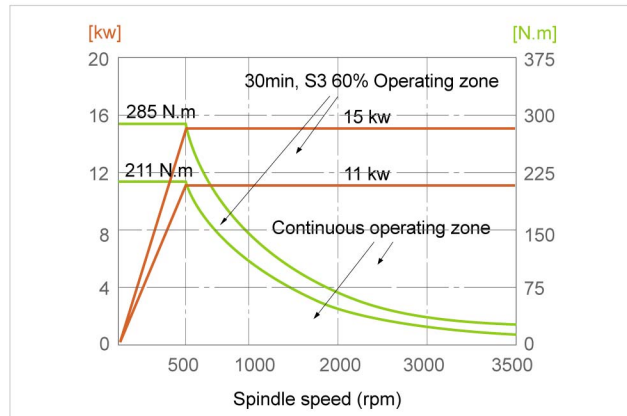
Belt type spindle αP22 (TA-25/TA-25B)



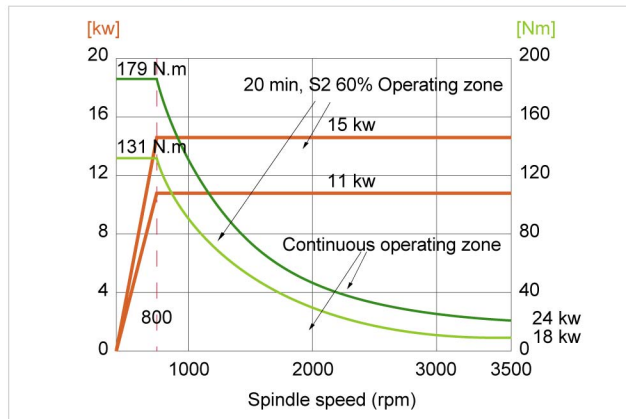
Belt type spindle+CS axis αP22 (TA-20M/TA-20MB)



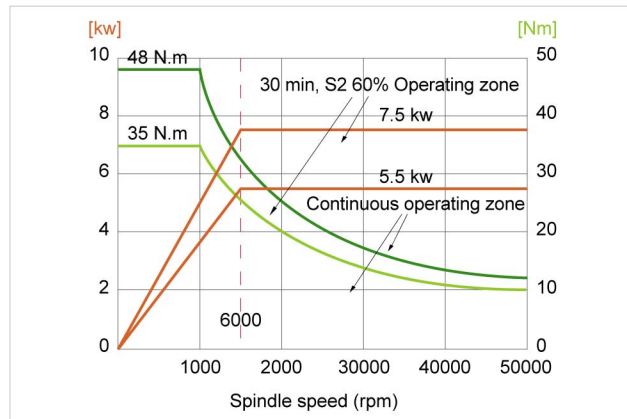
Belt type spindle+CS axis αP22 (TA-25M/TA-25MB)



Built-in spindle αB180M (TA-25M/TA-25MB)



Built-in sub-spindle αB112M (TA-20B/TA-20MB/TA-25B/TA-25MB)

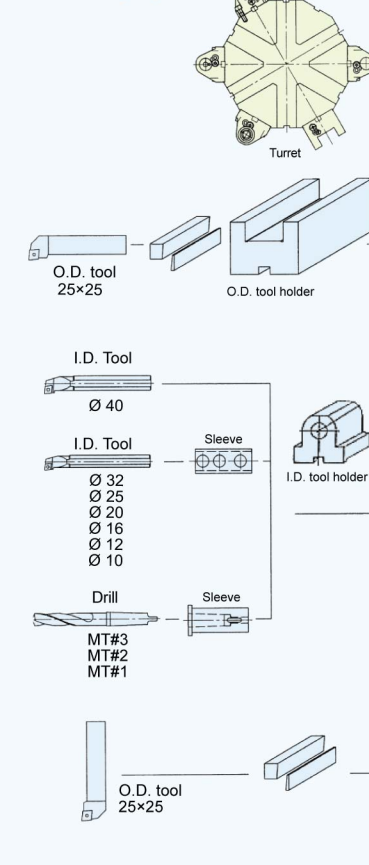


TA-20 Cutting Ability Material : S45C			
First spindle (S1)			
* Outer dia. turning	4×0.5 mm×mm/rev	* Inner dia. turning	5.5×0.3 mm×mm/rev
* Face turning	4×0.5 mm×mm/rev	Outer dia. grooving	8×0.1 mm×mm/rev
Inner dia. grooving	6×0.1 mm×mm/rev	Center drilling	Ø32×0.35 mm×mm/rev
Spindle output	15/11 kw	Max. spindle speed	4500 rpm

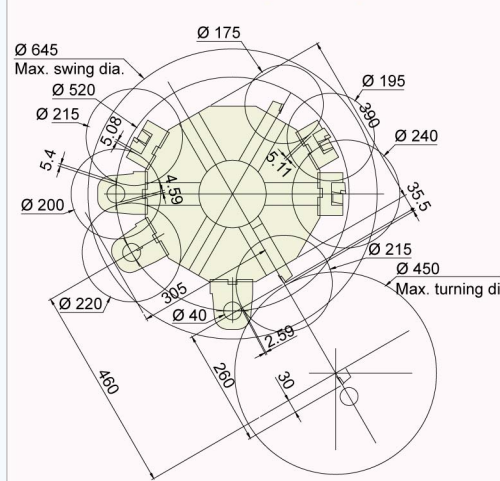
\* Spindle's load arounds 110~120 %

B/H

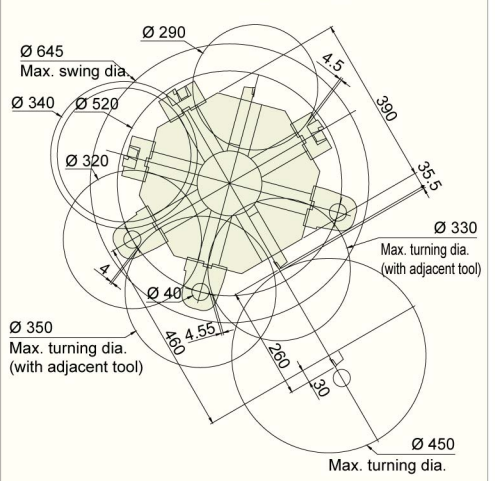
Tooling system



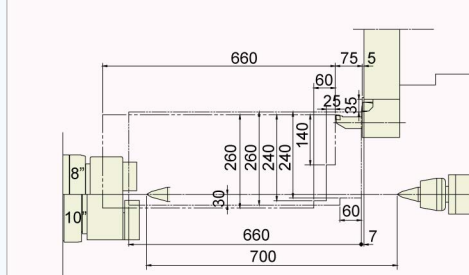
Tool interference (12 tools)



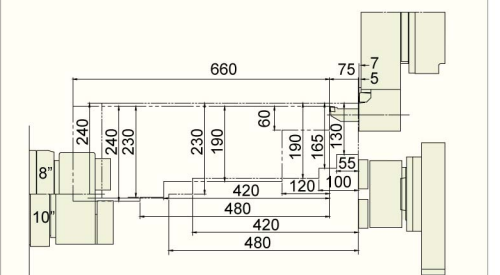
Tool interference (8 tools)



Working area (TA-20/TA-25)

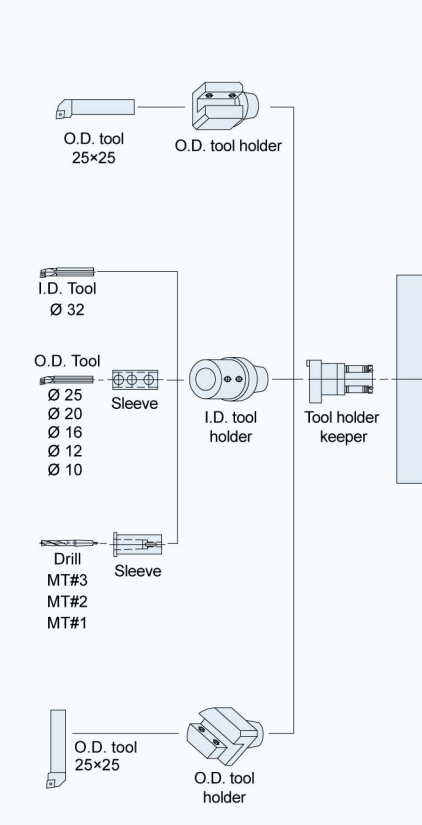


Working area (TA-20B/TA-25B)

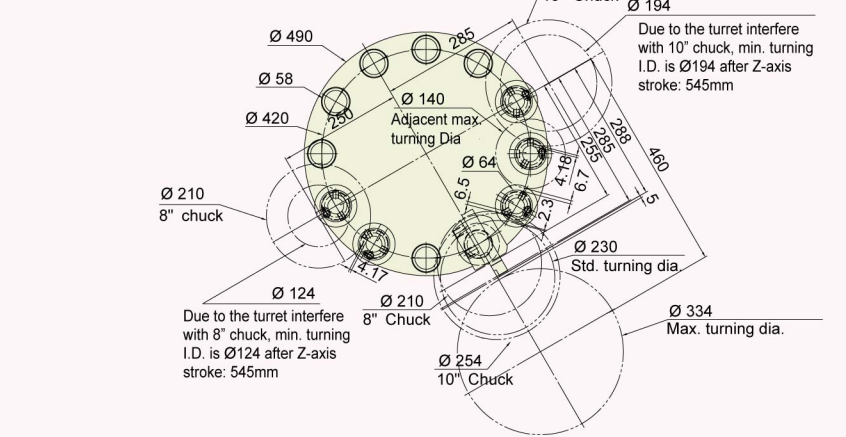


QCT

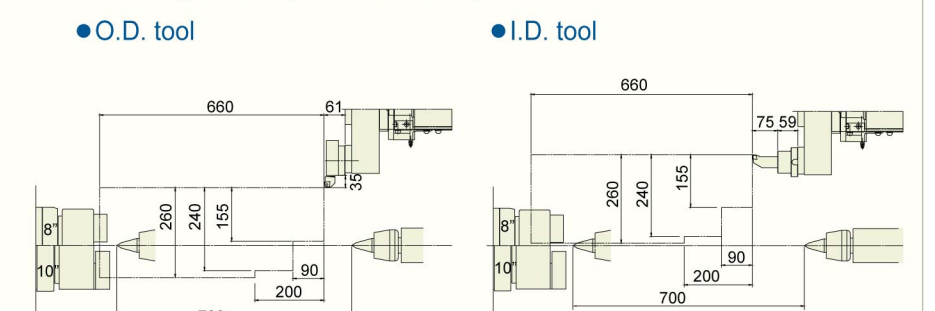
Tooling system



QCT tool interference



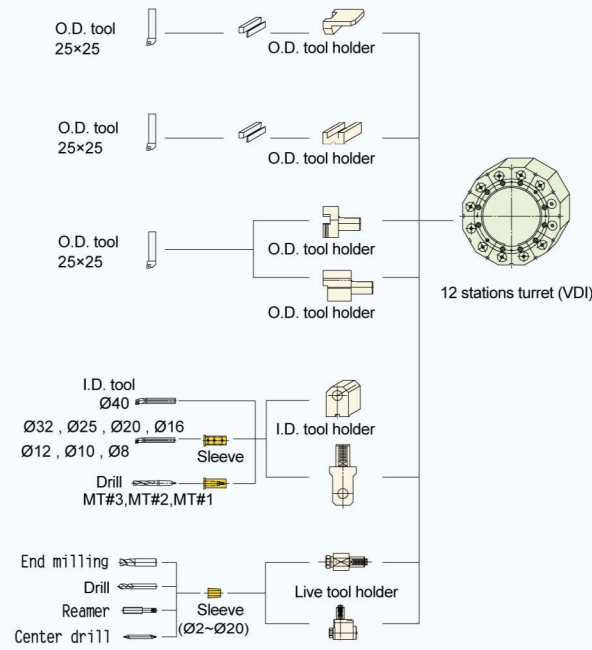
Working area (TA-20/TA-25)



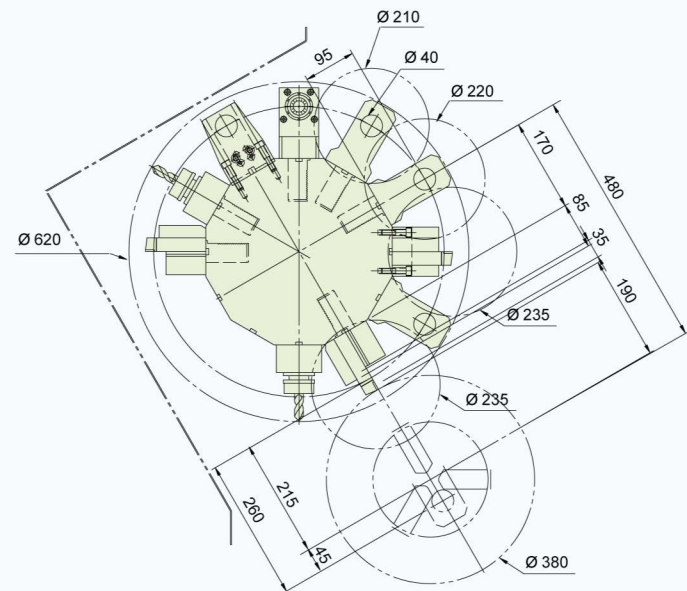
Radial power turret (VDI-40)

Unit : mm

■ Tooling system

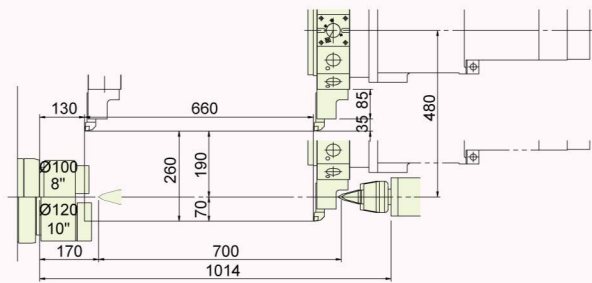


■ Tool interference

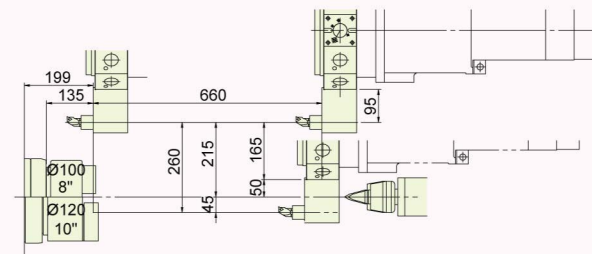


■ Working area

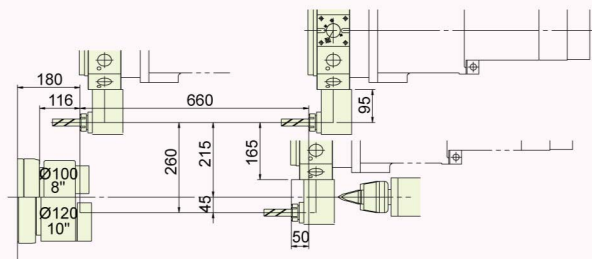
● O.D. tool (TA-20M/TA-25M)



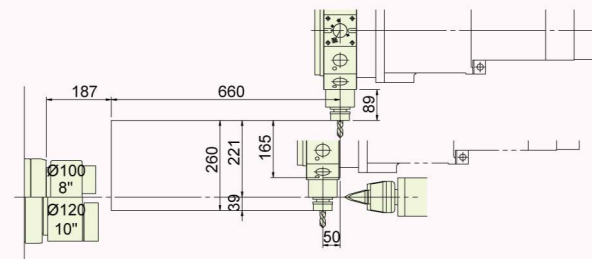
● I.D. tool (TA-20M/TA-25M)



● Axial live tool (TA-20M/TA-25M)



● Radial live tool (TA-20M/TA-25M)

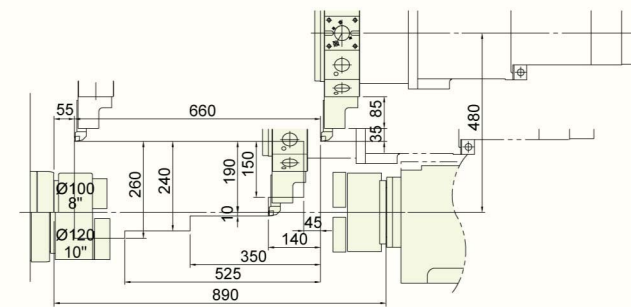


Radial power turret

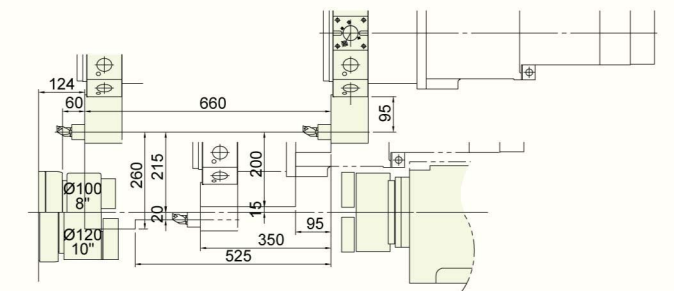
Unit : mm

■ Working area (Spindle)

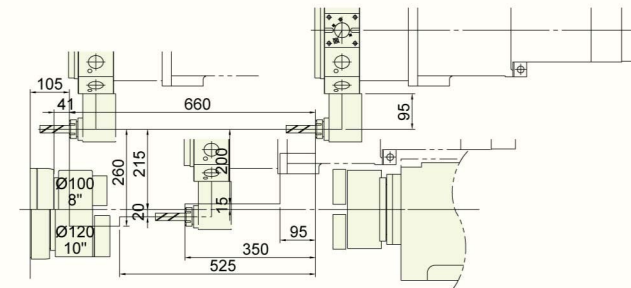
● O.D. tool (TA-20MB/TA-25MB)



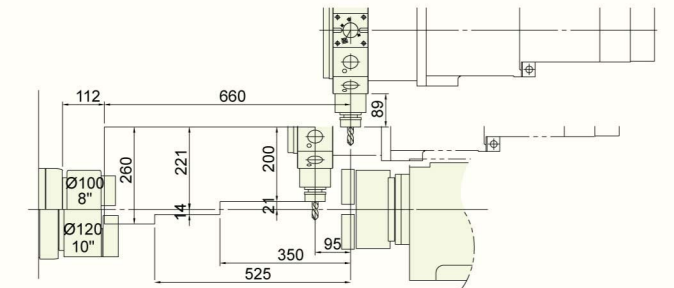
● I.D. tool (TA-20MB/TA-25MB)



● Axial live tool (TA-20MB/TA-25MB)

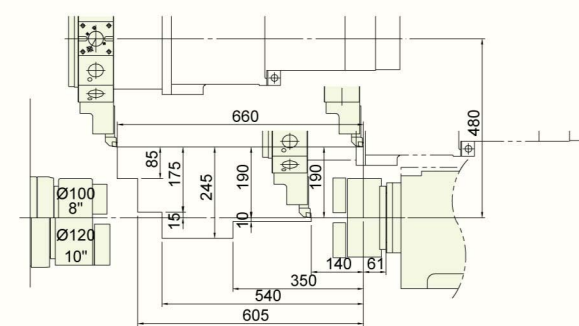


● Radial live tool (TA-20MB/TA-25MB)

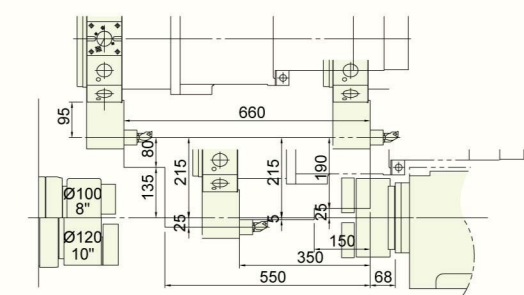


■ Working area (Sub-spindle)

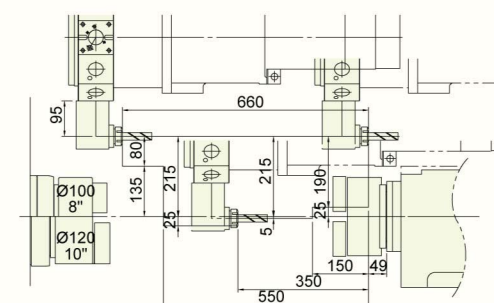
● O.D. tool (TA-20MB/TA-25MB)



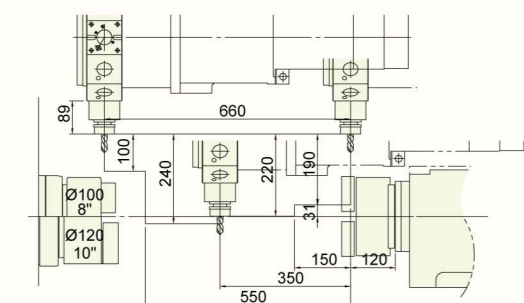
● I.D. tool (TA-20MB/TA-25MB)



● Axial live tool (TA-20MB/TA-25MB)



● Radial live tool (TA-20MB/TA-25MB)



Item	Specification	Unit	TA-20 [TA-20B]	TA-20M [TA-20MB]	TA-25 [TA-25B]	TA-25M [TA-25MB]	
Turning capacity	Max. swing diameter	mm	Ø620	Ø620	Ø620	Ø620	
	Max. swing diameter over saddle	mm	Ø440	Ø440	Ø440	Ø440	
	Max. turning diameter	mm	Ø450	Ø380	Ø450	Ø380	
	Max. turning length	mm	630	630	630	630	
Spindle	Spindle nose		A2-6	A2-6	A2-8	A2-8	
	Spindle speed	rpm	4500	4500	3500	3500	
	Chuck O.D.	inch	8"	8"	10"	10"	
	Through-spindle hole diameter	mm	Ø62	Ø62	Ø78	Ø78	
	Bar capacity	mm	Ø51	Ø51	Ø64	Ø64	
	Spindle bearing diameter	mm	Ø100	Ø100	Ø120	Ø120	
	Spindle center to floor	mm	1140	1140	1140	1140	
	Min. CS axis indexing increment	deg	-	0.001°	-	0.001°	
	Sub-spindle	Spindle nose		- [A2-5]	- [A2-5]	- [A2-5]	- [A2-5]
		Spindle speed	rpm	- [5000]	- [5000]	- [5000]	- [5000]
Through-spindle hole diameter		mm	- [Ø35]	- [Ø35]	- [Ø35]	- [Ø35]	
Spindle bearing diameter		mm	- [Ø90]	- [Ø90]	- [Ø90]	- [Ø90]	
Min. CS axis (Opt.)		deg	-	- [0.001°]	-	- [0.001°]	
Turret	Tool capacity	pc	12 B/H (Opt. QCT)	-	12 B/H (Opt. QCT)	-	
	O.D. tool	mm	25×25	-	25×25	-	
	I.D. tool	mm	Ø40	-	Ø40	-	
	Driving system		Servo	-	Servo	-	
Power turret	Tool shank		-	VDI 40	-	VDI 40	
	Tool capacity	pc	-	12	-	12	
	O.D. tool	mm	-	25×25	-	25×25	
	I.D. tool	mm	-	Ø40	-	Ø40	
	Max. speed	rpm	-	6000	-	6000	
	Motor	kw	-	5.5/3.7	-	5.5/3.7	
	Max. tool diameter	mm	-	Dia. 20/M16	-	Dia. 20/M16	
	Index time	sec	-	0.6	-	0.6	
	Driving system		-	Servo	-	Servo	
Stroke	X/Z/B axis stroke	mm	260/660/- [700]	260/660/- [700]	260/660/- [700]	260/660/- [700]	
	X/Z/B axis rapid traverse	m/min	30/30/- [24]	30/30/- [24]	30/30/- [24]	30/30/- [24]	
Feed	Cutting feedrate	mm/rev	0.01-500	0.01-500	0.01-500	0.01-500	
	Tailstock stroke	mm	700	700	700	700	
Tailstock	Tailstock taper		MT#5	MT#5	MT#5	MT#5	
	Driving system		Hydraulic (Opt. servo)	Hydraulic (Opt. servo)	Hydraulic (Opt. servo)	Hydraulic (Opt. servo)	
Hydraulic unit	Hydraulic tank capacity	L	30	30	30	30	
	Hydraulic motor	kw	1.5	1.5	1.5	1.5	
Coolant unit	Coolant tank capacity	L	170	170	170	170	
	Coolant motor	kw	0.37	0.37	0.37	0.37	
Motor	Spindle motor (50% ED)	kw	15/11	15/11	15/11	15/11	
	Sub-spindle motor (50% ED)	kw	- [7.5/5.5]	- [7.5/5.5]	- [7.5/5.5]	- [7.5/5.5]	
	X/Z/B axis servo motor	kw	4.0/3.0/- [1.6]	4.0/3.0/- [1.6]	4.0/3.0/- [1.6]	4.0/3.0/- [1.6]	
Machine size	L×W×H	mm	2940×1850×2140 [3540×2050×2210]	2940×1850×2140 [3540×2050×2210]	2940×1850×2140 [3540×2050×2210]	2940×1850×2140 [3540×2050×2210]	
	Weight	kg	4700	4900	5500	5700	

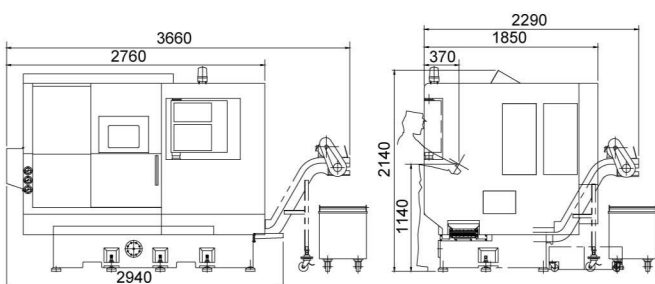
QCT : Quick Change Tooling System

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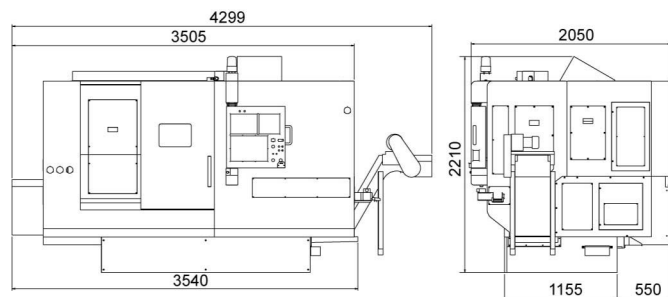
Machine Dimensions

Unit : mm

• TA-20/20M/TA-25/25M



• TA-20B/20MB/TA-25B/25MB

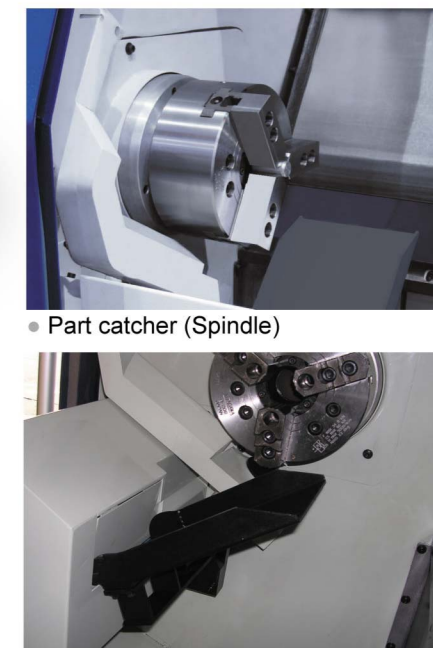


- Controlled axes : Simultaneous controllable 2-axes
- Interpolation : Straight, Spiral, Round
- Data input : Key in
- Automatic recognition : EIA/ISO
- Decimal point setting : Standard
- Least command : 0.001 m/m 0.0001 inch
- Lease increment : X/Z-axes 0.001 m/m 0.0001 inch
- Max. programmable dimension : ±99999.999 m/m
- Cutting feed override : 0.001-999.999 mm/rev
- Tool offset memory : ±6 digits / 64 pairs
- Compensation (M.S.T) : Standard
- Dwell : 0-99999.999 sec
- Canned cycle : G90;G92;G93
- Part program storage length : 640 M
- Backlash compensation : 0-0.255 mm
- Dry run : Standard
- Optional block skip : Standard
- Singal block : Standard
- Machine block : Standard
- Program number search : Standard
- Spindle orientation : Standard
- Stroke restrict : Standard
- Inch / metric conversion : Standard
- Spindle speed : Standard
- Multiple repetitive cycle : G70-G76
- Tool breakage compensation : Standard
- Cutter compensation : G40-G42
- Run hour display : Standard
- Graphic display : Standard
- Drawing dimension input : Standard
- Program of compensation data input : Standard

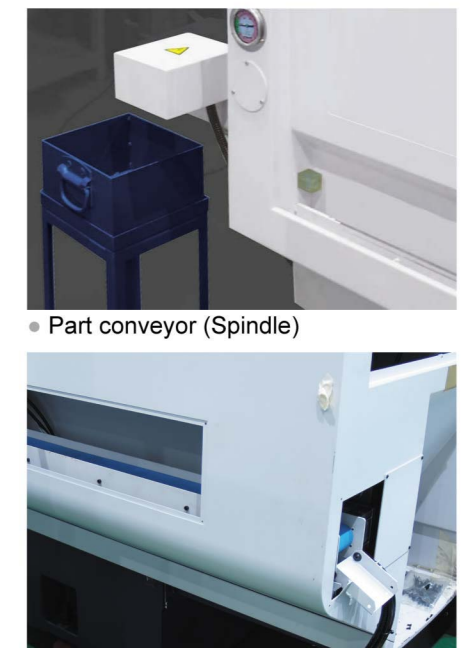
Optional Equipments



• Auto bar feeder



• Part catcher (Spindle)



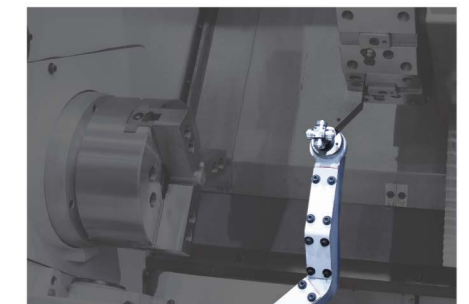
• Part conveyor (Sub-spindle)



• A/C for electrical cabinet



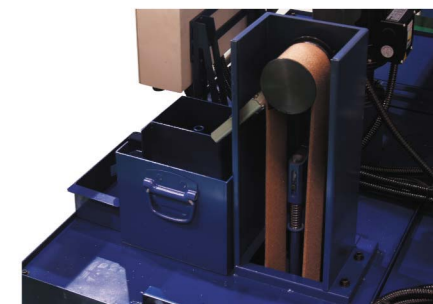
• Transformer



• Tool presetter



• Oil skimmer (Disc type)



• Oil skimmer (Belt type)



• Oil mist collector