

Multi-tasking Turning Center

TD-1500Y



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MEMBER OF
TT GROUP



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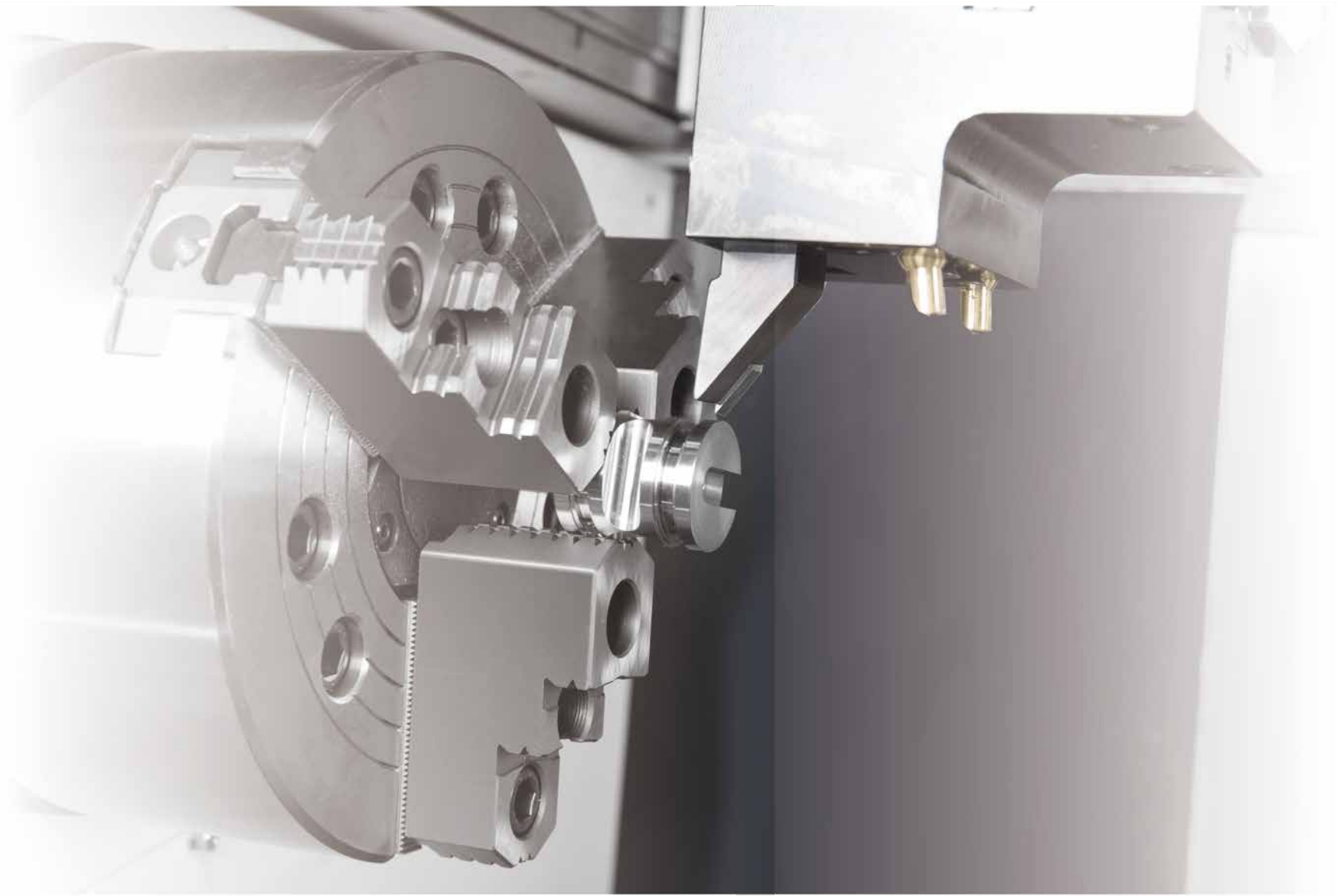
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TD-1500Y



■ High flexibility in production

Compared with the general lathes, with 8 to 12 live tools design, the TD-1500Y's turret is able to equip up to 12 or 16 live tools, this improves the flexibility in production and meets customer's demands.

■ Various automation modules

TD-1500Y is available for different automation units, such as part feeders, bar feeders, workpiece turnover units, or joint type robots.

■ Centralized daily maintenance

Centralized management of pneumatic solenoid, lubricant pump, and electrical cabinet for facilitating and shortening maintenance time.

■ Spacious operation area

The designs of swivel CRT panel with maximum 500mm frontal width of door opening make machine maintenance easier.



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- 05 Operation
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- 08 Peripheral accessories
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Basic structure

Travel

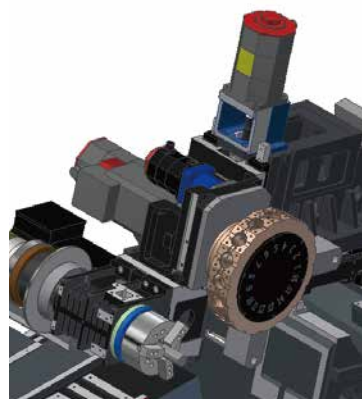
X/Y/Z axis 155/±35/250 mm

Rapid traverse

X/Y/Z axis 30/15/30 m/min

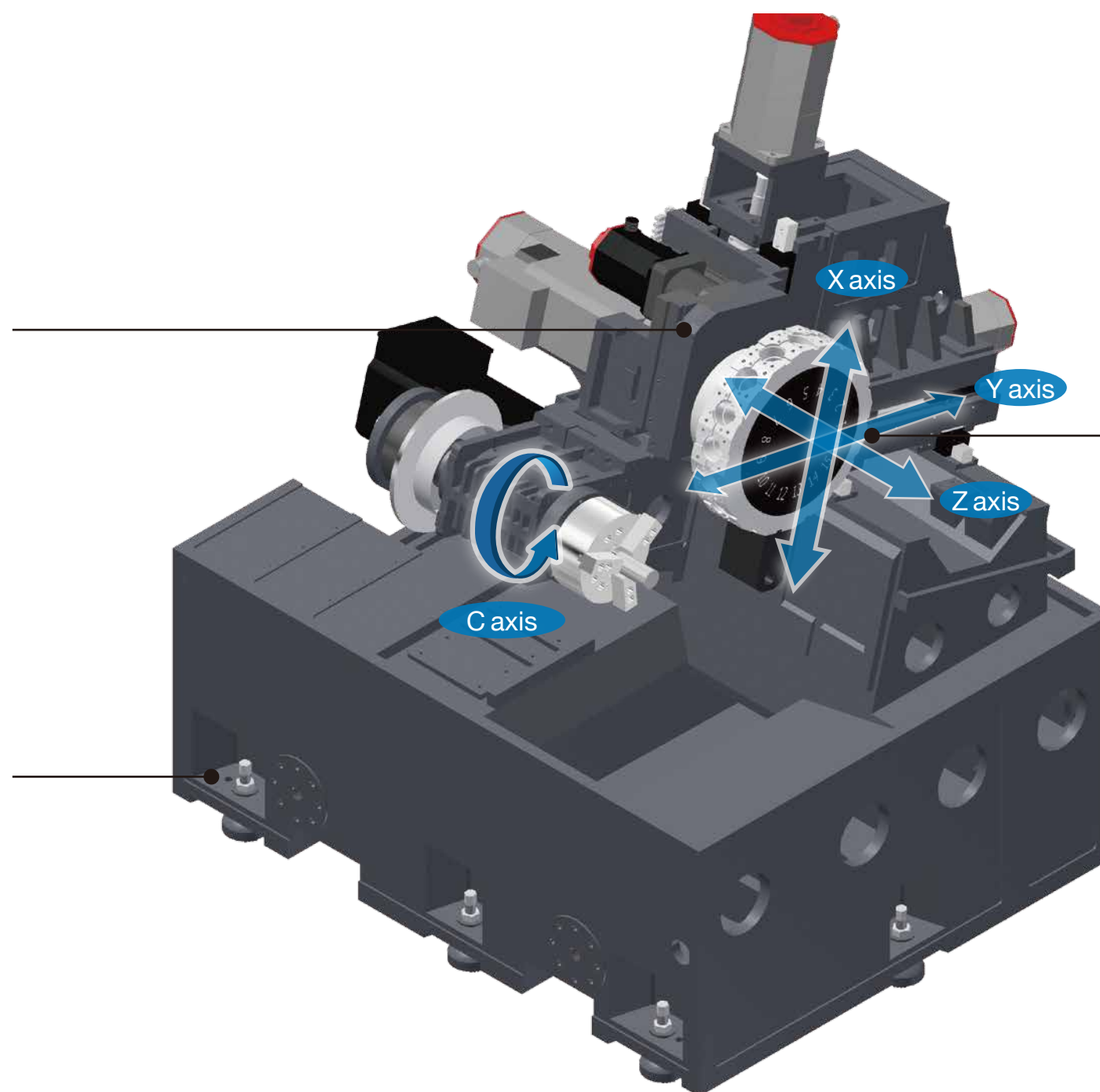
Engineering intensive design

TD-1500Y is a multi-tasking turning center with CS axis, Y axis, 16 live tools, and tailstock (optional). Gathering the multifunction of turning and machining, this single machine is able to finish the jobs which originally had to be done in two machines.



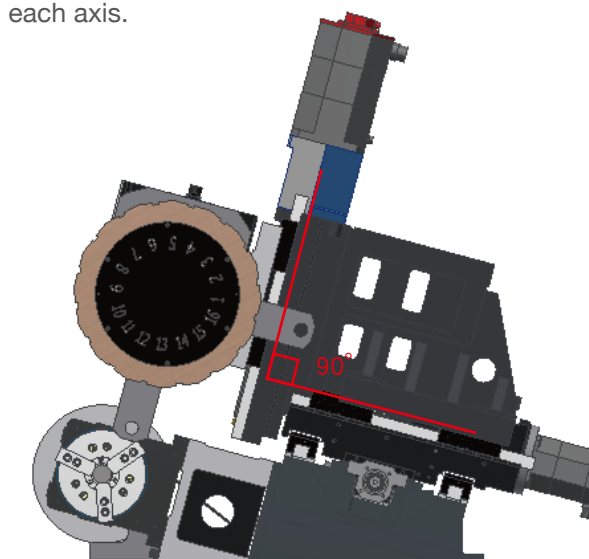
Structural rigidity optimization

Integrated machine structure adopts a 75 degrees slanted machine bed design. This not only improves the rigidity and stability, but also benefits chip disposal during machining.



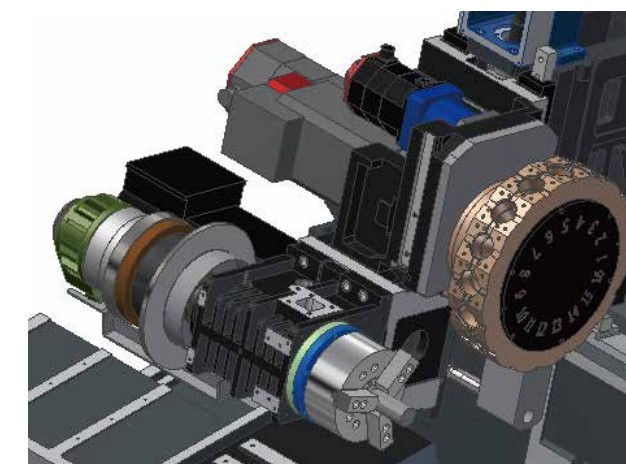
Precise machining movement

TD-1500 adopts a symmetric saddle design. The X/Y/Z axis are perpendicular to each other for minimizing the movement errors. Furthermore, the positioning accuracy can be optimized by processing servo compensation on each axis.



Downsized machine frontal width

The turret is placed in the same side of the spindle. This design decreases the frontal width and dramatically saves machine floor space.



Operation

Easy daily maintenance



Centralized management of pneumatic solenoid, lubricant pump, and electrical cabinet. Reserves enough space for facilitating daily maintenance and improving efficiency.

Operating security meets the requirements of CE standards and EMI regulations. Furthermore, intelligent clash protecting function (opt.) is available for reducing the possibilities of unit clashing and eliminates the risks of careless operation.

Working area lighting plan and Enlarged chip disposal design



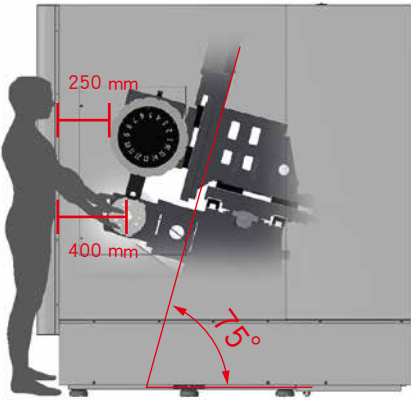
Bright working area and enlarged chip disposal designs are able to keep the machine in the best situation, it builds an outstanding foundation for processing automation solutions if necessary.

Spacious operation area



The panel is able to swivel up to 90 degrees. With the width of door opening, 500mm, the operator is able to operate and easily maintain the machine.

Accessibility



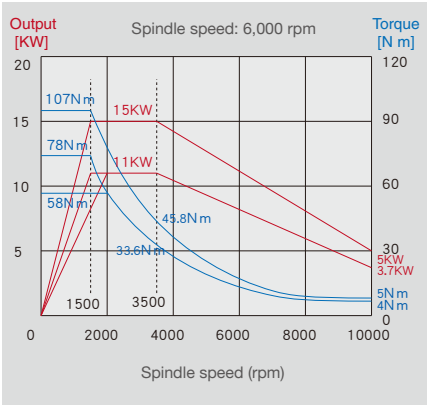
Through 75 degrees slanted machine bed design, the distances between operator and workpiece & tool is shortened to 400mm & 250mm respectively.



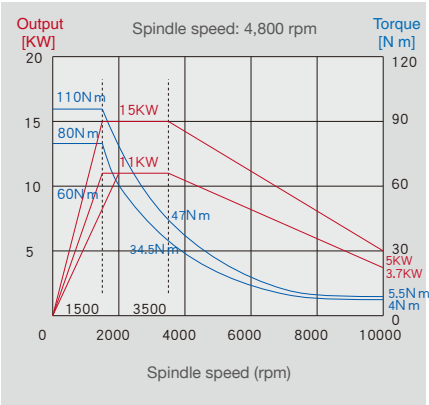
Spindle output and torque chart / Tool system diagram

Spindle output and torque chart

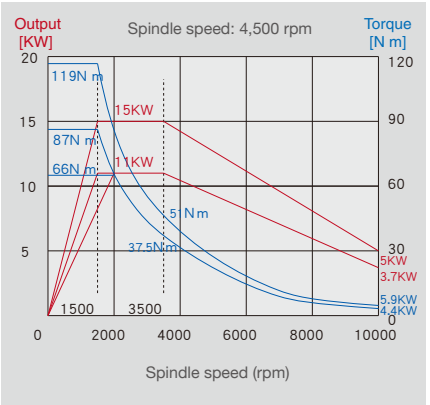
TD-1500Y Belt-drive type spindle motor
Spindle shaft diameter: Ø65 mm
Spindle speed: 6,000 rpm
Speed reduction ratio: 1 : 1.12



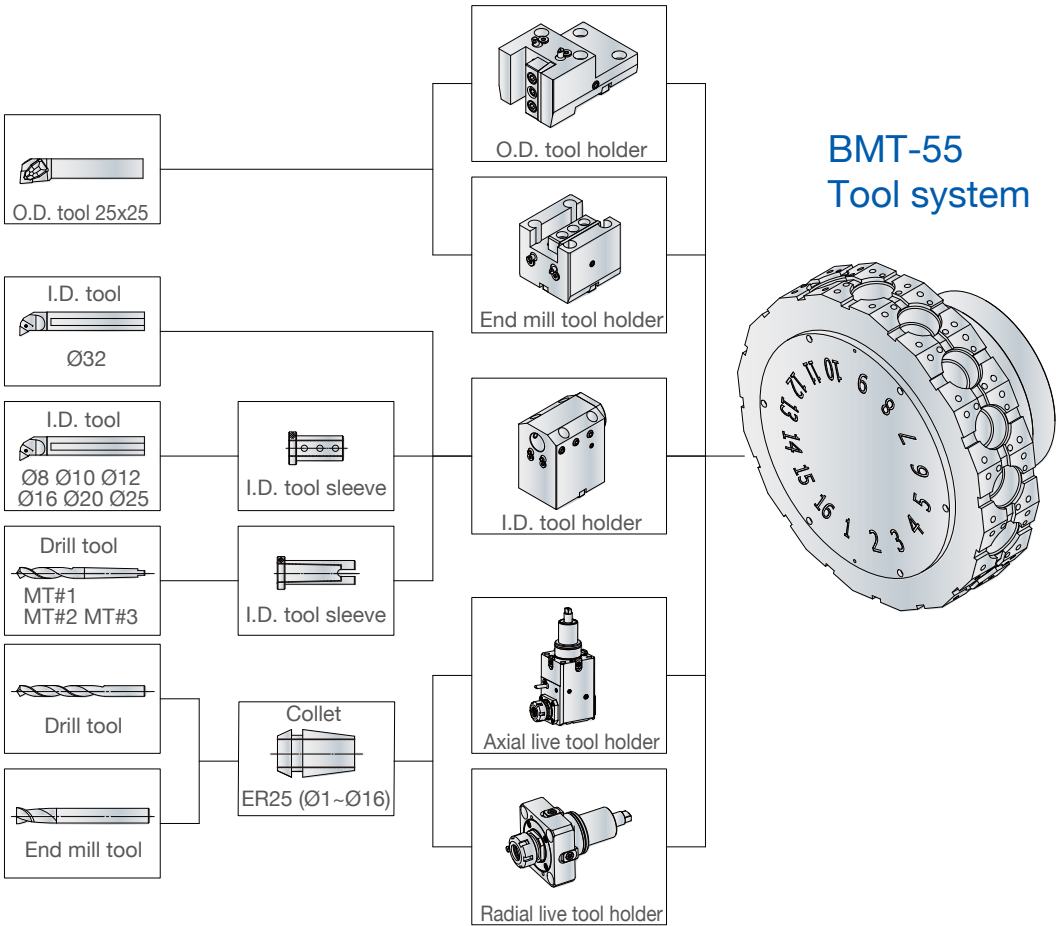
TD-1500Y Belt-drive type spindle motor
Spindle shaft diameter: Ø85 mm
Spindle speed: 4,800 rpm
Speed reduction ratio: 1 : 1.15



TD-1500Y Belt-drive type spindle motor
Spindle shaft diameter: Ø100 mm
Spindle speed: 4,500 rpm
Speed reduction ratio: 1 : 1.25

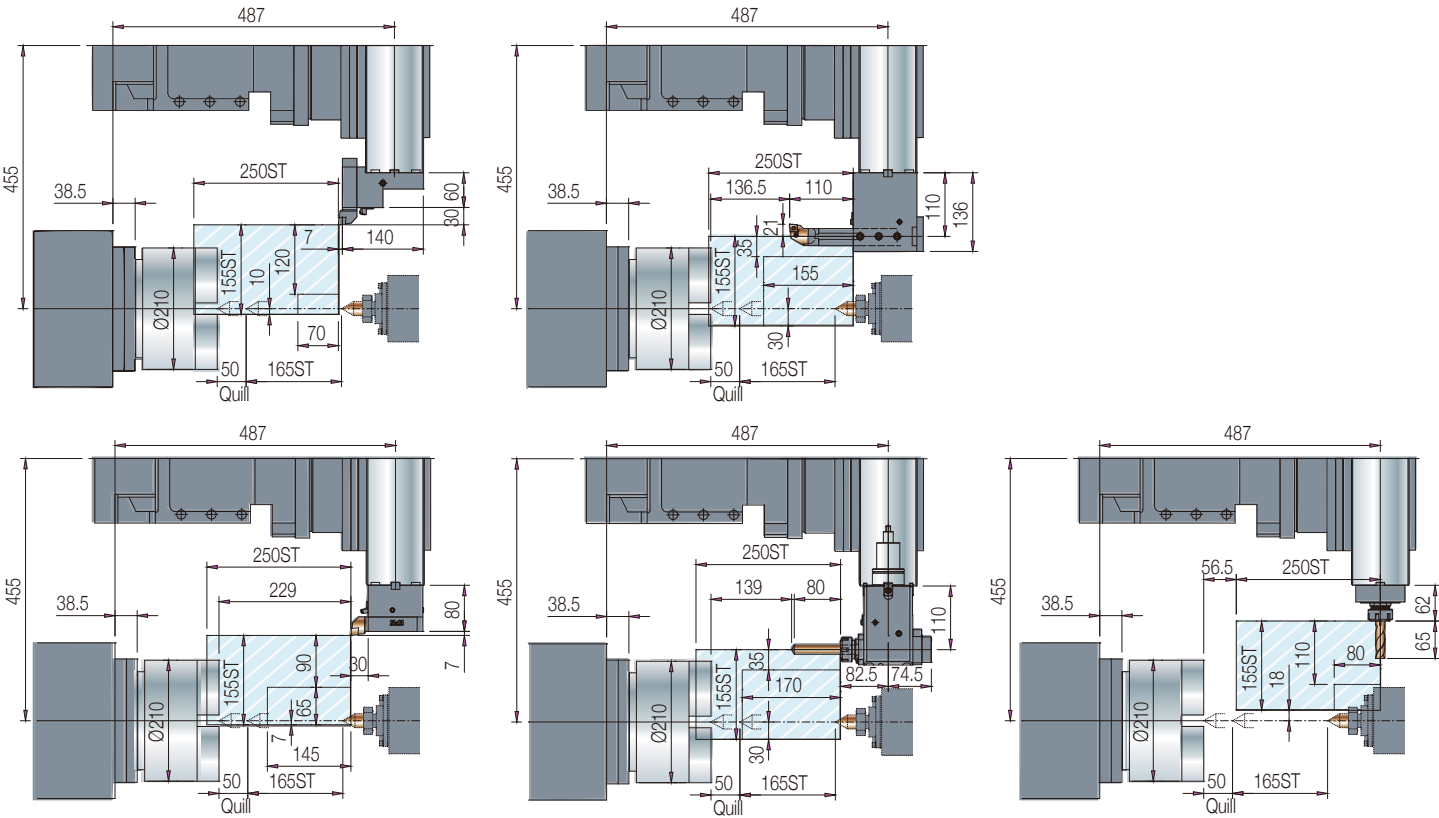


Tool system diagram – 16V power turret (BMT55)

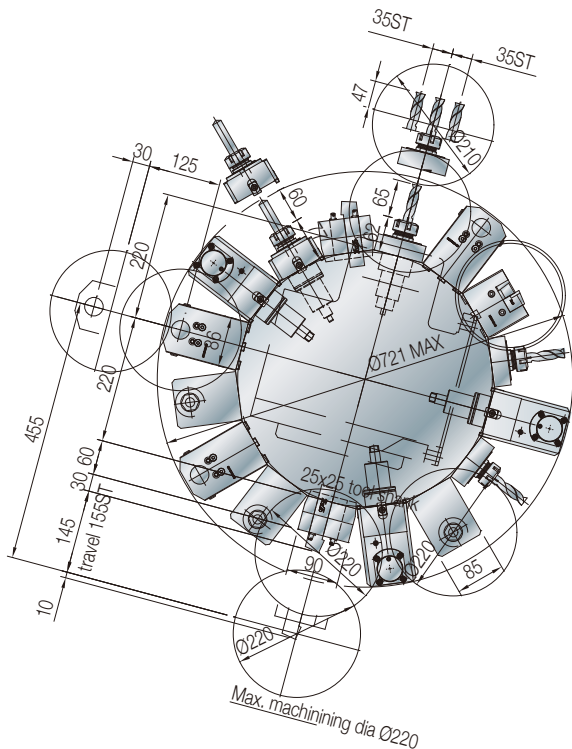


Working area · Tool interference

Working area

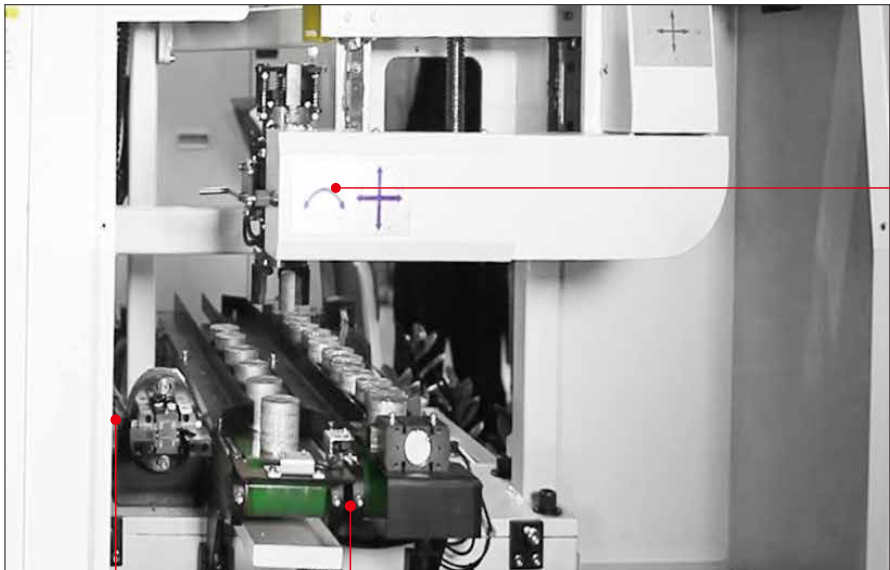


Tool interference

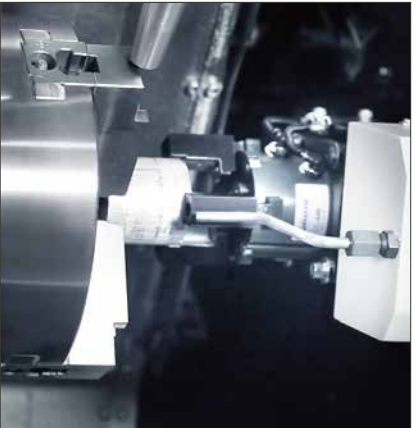


Automation system / Peripheral accessories

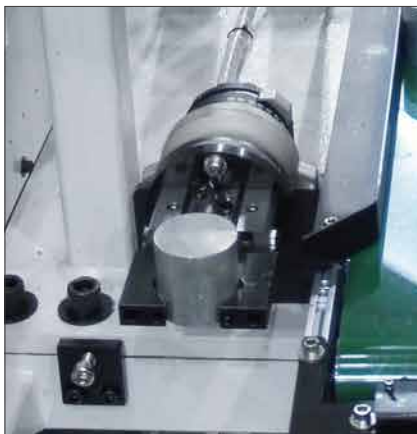
Automation system



Workpiece exchanging unit (opt.)



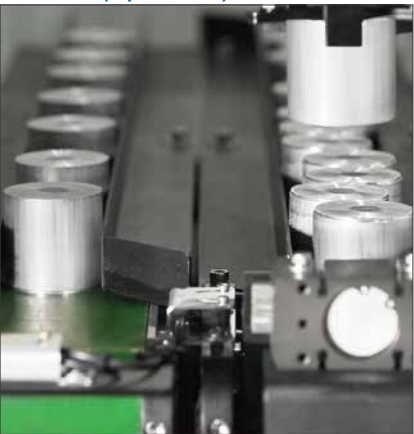
Workpiece turnover unit (opt.)



Pallet stacking type part feeder (optional)



Conveyor type part feeder (optional)



Manual tool presetter (opt.)



Oil-mist collector (opt.)



Bar feeder (opt.)

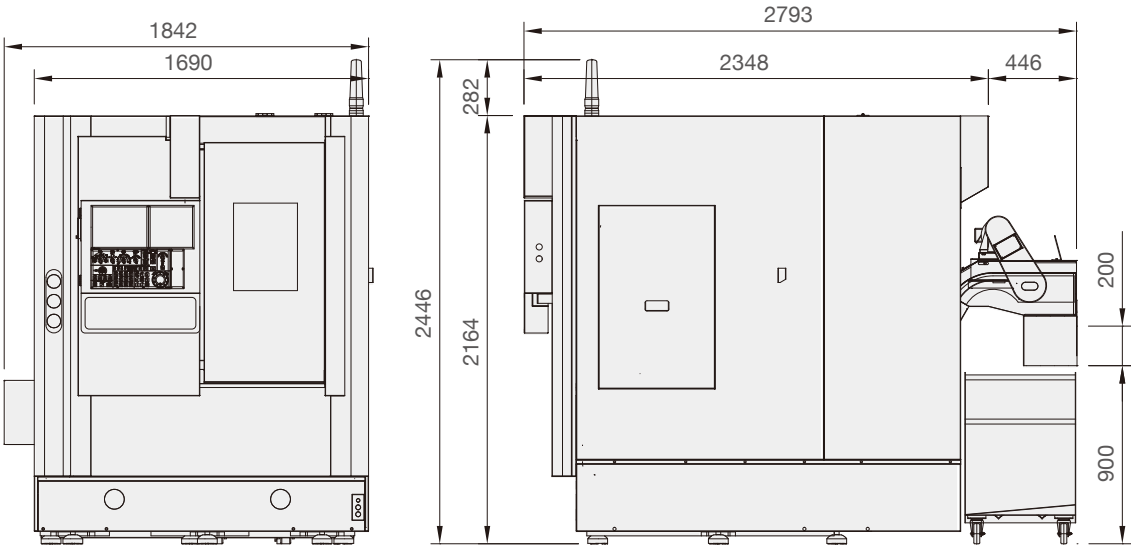


Standard/ optional accessories / Machine dimensions

		Standard	Optional
Spindle chuck	3 jaws through hole chuck	●	
	Collet type through hole chuck		○
Power turret	16V BMT-55	●	
	12V BMT-55		○
Chip conveyor	Hinge type	●	
	Scraper type		○
	Magnetic scraper type		○
Coolant and air blow	Coolant through spindle		○
	Air blow through spindle		○
	Coolant nozzle		○
	Air nozzle		○
Automation unit	Bar feeder		○
	Part catcher		○
	Part conveyor		○
	14 pallets automatic feeding unit		○
	Automatic door (frontal door)		○
Tool holder/ Sleeve	O.D. tool holder		○
	I.D. tool holder		○
	Boring bar tool holder		○
	Axial driven tool holder		○
	Radial driven tool holder		○
	I.D tool sleeve Ø8,Ø10,Ø12,Ø16,Ø20,Ø25		○
	Drill tool sleeve MT#1, MT#2, MT#3		○
Tailstock	Hydraulic driving		○
Other accessories	Oil skimmer		○
	Oil-mist collector		○
	Air conditioner for electrical cabinet		○
	Manual tool presetter		○
	Air gun		○
	Coolant gun		○
Controller	FANUC 0i-TF	●	

Machine dimensions

Unit: mm



Specifications

Item	Specification	Unit	TD-1500Y
Turning capacity	Max. swing diameter	mm	Ø280
	Max. swing diameter over saddle	mm	Ø280
	Max. turning diameter	mm	Ø280
	Max. turning lenght	mm	250
Spindle	Spindle nose		A2-5 (A2-6)
	Spindle speed	rpm	6,000 (4,800) (4,500)
	Chuck size	inch	6" (8")
	Through-spindle hole diameter	mm	Ø35 (Ø56) (Ø62)
	Bar capacity	mm	Ø26 (Ø44) (Ø51)
	Spindle bearing diameter	mm	Ø65 (Ø85) (Ø100)
	Spindle center to floor	mm	1,000
Power turret	Min. CS axis indexing increment	deg	0.001°
	Tool shank		BMT-55
	Tool capacity	pc	16 (12)
	O.D. tool	mm	25x25
	I.D. tool	mm	Ø32
	Max. speed	rpm	6,000
	Spindle motor	kW	5.5/3.7
Travel	Max. tool diameter		Dia. 16/M14
	X1/X2/X3 axis travel	mm	155
	Y1/Y2/Y3 axis travel	mm	±35
	Z1/Z2/Z3/B axis travel	mm	250
Feed	X/Y/Z/B axis rapid traverse	m/min	30/15/30
	X/Z axis cutting feedrate	mm/rev	0.001-500
Hydraulic unit	Hydraulic tank capacity	L	30
	Hydraulic motor	kW	1.5
Coolant unit	Coolant tank capacity	L	120
	Coolant pump motor	kW	0.55
Motor	Spindle motor	kW	18.5/15/11
	Sub-spindle motor	kW	-
	X/Y/Z/B axis servo motor	kW	3/1.8/3
Machine size	Width×depth×height	mm	1,842x2,793x2,446
	Weight	kg	5,000
Controller			Fanuc 0i-TF

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