

Technical data

Features	Description	Unit	117HT
Capacity	Swing over bed	mm	900(35")
	Swing over cross slide	mm	700(27")
	Max. cutting diameter	mm	700(std.)/610(TBMA VDI50)/505(TBMA VDI60)
	Max. cutting length	mm	1300(51.18")/2050(80.70")/2800(110.24")/3800(149.60")
	Slant bed degree		45 degree
Travel	Bar capacity	mm	117(4.60")
	X axis travel	mm	385(350+35)
	Y axis travel(option)	mm	100(±50)
Spindle	Z axis travel	mm	1500(59.06")/2250(88.58")/3000(118.11")/4000(157.48")
	Max. spindle speed	rpm	1500
	Spindle nose		A2-11
	Spindle bore diameter	mm	155(6")
	Drive method		2-speed gear
	Hydraulic chuck size	mm	450(18")
Turret	AC spindle motor	kW	30/37(40/50 HP)
	Turret type		HYD index motor
	Number of tools		12
Live Tooling (option)	Boring bar dia.	mm	60(2.36")
	Tool shank		VDI 50/ BMT 75/ VDI 60/ BMT 85 (w/o Y-Axis)
	Square tool holder	mm	32(1.25)
	Power rating	kW	3.7
Axes	Max. speed	rpm	4000
	X axis rapid feed	m/min	20(787ipm)
	Y axis rapid feed	m/min	20(787ipm)
	Z axis rapid feed	m/min	20(787ipm)
	X axis ballscrew	mm	Ø40xP10xC3
	Y axis ballscrew	mm	Ø40xP10xC3
	Z axis ballscrew	mm	Ø50xP12xC3
	X axis thrust force	kgf	2436
	Y axis thrust force	kgf	2821
	Z axis thrust force	kgf	2137
Motor	X axis servo motor	Nm	38
	Y axis servo motor	Nm	22
	Z axis servo motor	Nm	40
	Coolant pump motor	HP	1080 (50Hz) / 1620 (60Hz)
	Chip conveyor motor	HP	1/2
	Hydraulic pump motor	HP	3
Accuracy	Lubrication pump motor	W	28
	Positioning accuracy	mm	±0.005/300
Tailstock	Repeatability accuracy	mm	0.005
	Type		Programmable
	Quill bore taper	MT	5
	Quill diameter	mm	150(5.9")
Miscellaneous	Quill travel	mm	150(5.9")
	Tailstock travel	mm	1300(51.18")/2050(80.70")/2800(110.24")/3800(149.60")
	Machine weight w/o chip conveyor	kg	13000
	Floor space w/chip conveyor (W x D)	mm	6700x3000
	Length w/o chip conveyor	mm	5070(199.60")
	Length w/ chip covenyor	mm	5650(222.4")/6500(255.90")/7385(290.75")/8500(334.65")
	Width	mm	2,350(95.52")
	Height	mm	2,300(90.55")
	Power consumption	KVA	50

* Specifications are subject to change without notice.

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117HT

Slant Bed Heavy Duty CNC Lathe

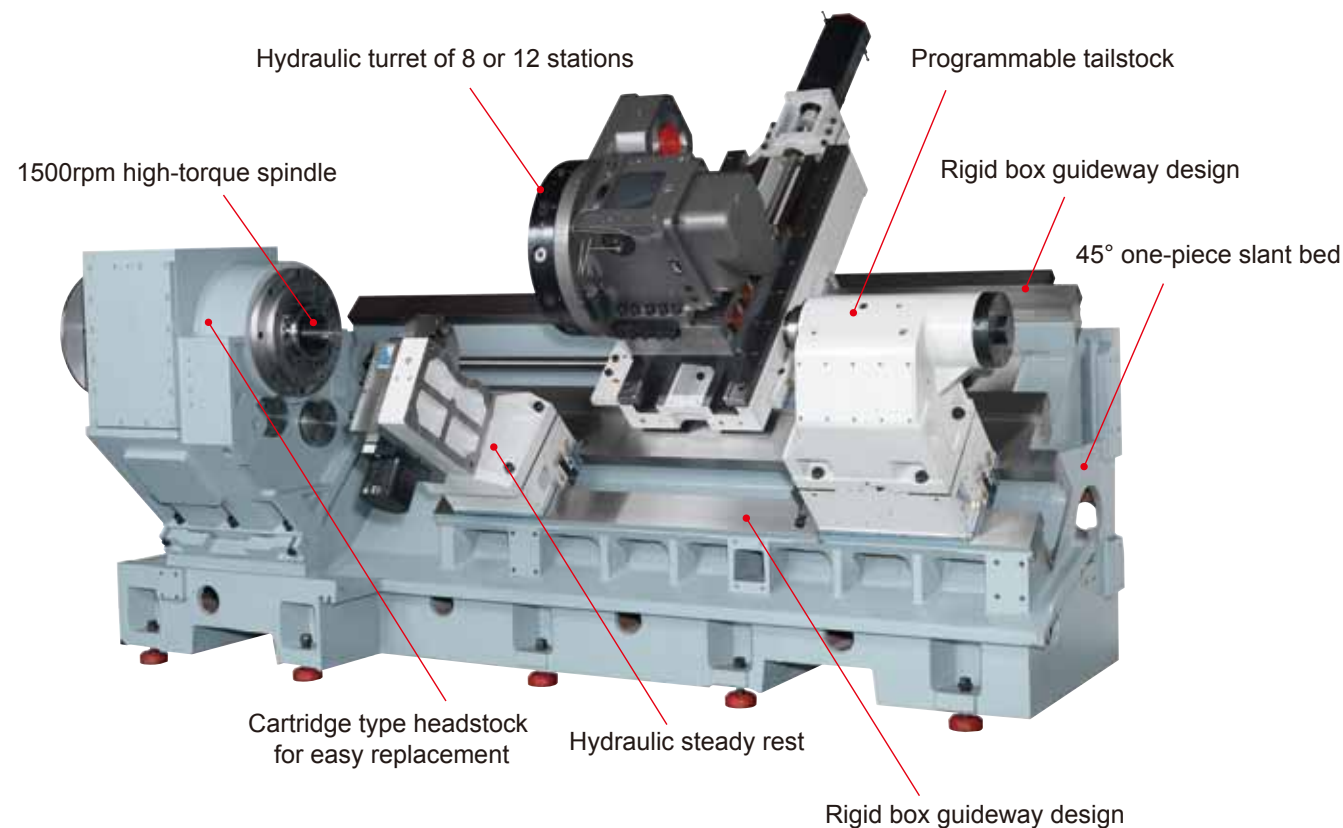


117HT

Slant Bed Heavy Duty CNC Lathe

MICROCUT 117HT is the large slant bed lathe with 18" hydraulic chuck and 117mm bar capacity, 1.3~3.8M cutting length and 700mm turning diameter. The model is suitable for wide applications in various industries such as automobile, energy, aerospace and general machining shops. Providing with greater speed, powerful cutting, accuracy machining and durability over competitors, 117HT can make the highest possible return on investment.

117HT is equipped with a fast turret which provides quick rotation time for the bidirectional 12-station hydraulic turret along with a programmable tailstock as the standard accessory. Living tool, C-axis, bar feeder, chip conveyor, and parts catcher, all are available for complex parts and automatic production.



Highlight

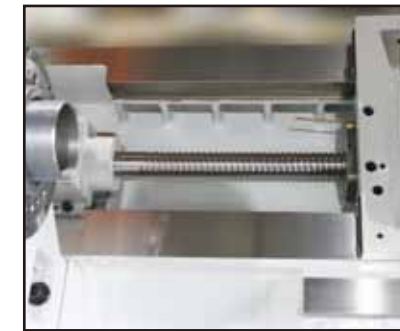
- One-piece rigid design with 45 degrees slant bed
- Large bar capacity of 117mm
- All-box-way structure
- Short distance between guarding and center line
- 2137 kgf of Z axis thrust
- 18" Hydraulic 3-jaw chuck
- 12 positions hydraulic turret
- High tool indexing accuracy and fast tool change
- Programmable tailstock
- Enhanced chip flush device
- Anti-oil-leakage lubrication monitoring system
- Support Y axis(Optional) and C axis(Optional) machining

Machine Features



Bed

One piece 45° slant bed enables easy chip falling and quick chip removal as well as saves the floor space.



Ballscrews

Axes ballscrews are supported by P4 class high precision bearings. C3 class pre-tensioned ballscrews eliminate thermal expanse and ensure axes positing and repeatability accuracy.



Guideways

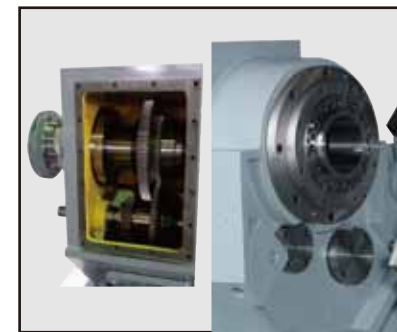
All guideways placed in the same plane which can eliminate thermal distortion effectively.

Box-way structure

All box guideways in wide rectangular shape perform great machine rigidity

Hand scraping

All bearing and carriage surfaces are coated with low-friction coatings and hand-scraped, allowing fast axis movement under minimized friction. The scraping standard is 1 bearing point contains 16 points/inch² in 1 mm². Special groove design provides better diversion of oil and makes smoothing axis movement.



Headstock

- The cartridge design headstock for easy spindle replacement.
- 2-step gear box providing high spindle power and torque output.
- Spindle constructed by a double row of cylindrical roller bearings in the front and rear with duplex angular thrust bearings in between to support heavy-duty machining.



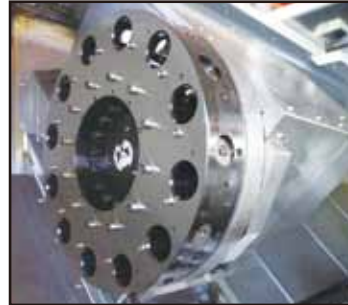
Hydraulic chuck

117 HT is equipped with 3-jaw 18" chuck as standard or 20" chuck as option to clamp workpiece. Convenient switches are installed to adjust the hydraulic pressure easily. Hydraulic chuck is ideal to use for automatic production.

Hydraulic turret

Fast turret indexing

- The hydraulic turret is installed standard fitting which offers 0.55 seconds indexing time (next tool). Each tool holder is equipped with a powerful water jet which cools the cutting points directly to enhance tooling durability and workpiece luminosity.
- Turret rotation is driven by motor with high torque output and maximum stability.
- The clamping/unclamping is driven through hydraulic power to assure smooth motion and heady duty machining.



VDI Turret



BMT Turret



Programmable tailstock

The heavy-duty design of tailstock performs ample rigidity which is driven by saddle and offers rapid positioning.

- The tailstock is activated via program or manually by foot pedal for independent working with loading/unloading the workpiece.
- The clamp pressure is set according to the size of workpiece and material.



Hydraulic steady rest (Option)

Self-centering hydraulic steady rests commanded by the CNC automatic anchoring, displacement and turning.

High Efficiency Controller



Fanuc 0iTD controller with 10.4" LCD display and Manual Guide i

The optimal ease-of-use controller with large screen provides easy operation. The screen and operation panel can swivel to an optimal position and the screen height is set to fit the ergonomic requirement of operators perfectly. USB and Ethernet connection port is designed on the front panel providing easy usage of memory card or network. The high-tech electric cabinet meets the latest CE regulation.

Accessory

Standard

- Fanuc 0iTD Controller with 10.4" LCD monitor with Manual Guide i
- 12-Position hydraulic turret, regular type
- Tool holder package
- 18" Hydraulic 3-jaw chuck with hard jaws
- High pressure cooling system
- Automatic lubrication system
- Work lamp
- Hydraulic unit
- Programmable tailstock
- Fully enclosed splash guard with interlock safety device
- Chip conveyor without bucket
- Heat exchanger for electric cabinet

Optional

- C-axis
- Y-axis
- Renishaw tool setter (Automatic / Manual)
- Power turret
- Live tool holders (Axial / Radial / Seat back radial)
- Spindle reduction tube
- Current leakage detector
- Enlarged chuck
- Soft jaw
- Chip bucket
- Power transformer
- Air conditioner for electric cabinet
- Safety module
- EMC
- 20 bar high pressure coolant through tool
- Hydraulic steady rest
- Bar feeder and interface
- Automatic parts catcher
- Oil skimmer
- Automatic door



Live tooling

- 12 stations of VDI type disc or BMT 75 or 85 type.
- The Y-axis with live tooling turret enhances multi-tasking machining and eliminates secondary operation.



Y-axis

Provide perpendicular motion to the X-axis to enable diverse and off-center machining for complicated parts.



C-axis

C axis with hydraulic braking system provides spindle angle indexing and superior machining performance.



Bar feeder interface

Ergonomic Design

Safety reinforcement

- Full enclosure front door with interlock
- Window is secured with 2 layers of safety glass and polycarbonate. Large window with safety approved protection window provides easy checking of cutting condition.

Panel design

Comfortable eye-level monitor for optimal operator convenience

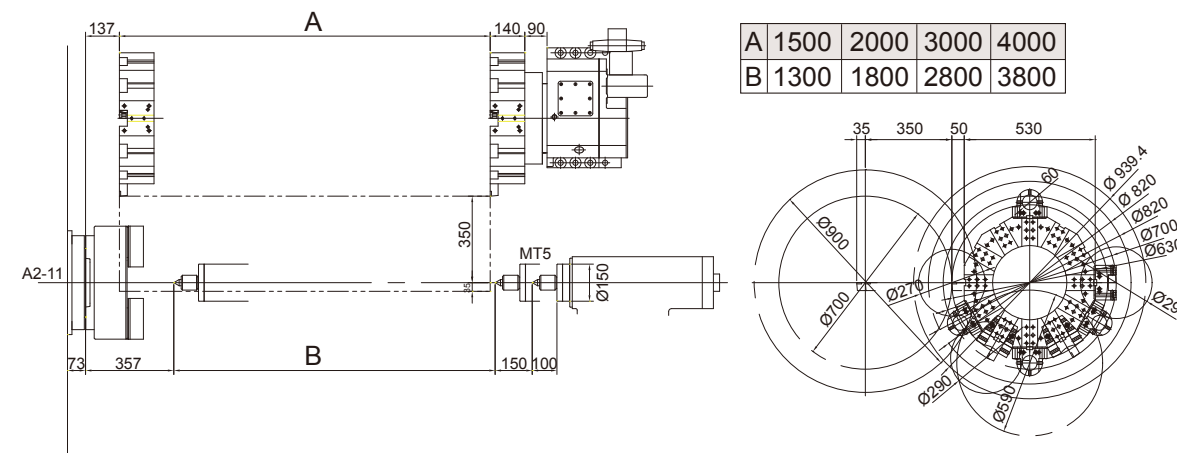
Optimum accessibility

- The short distance between machine guarding and center line
- Special door design enables the crane or lifting device easy loading/unloading and capable of reaching the working area for operation.

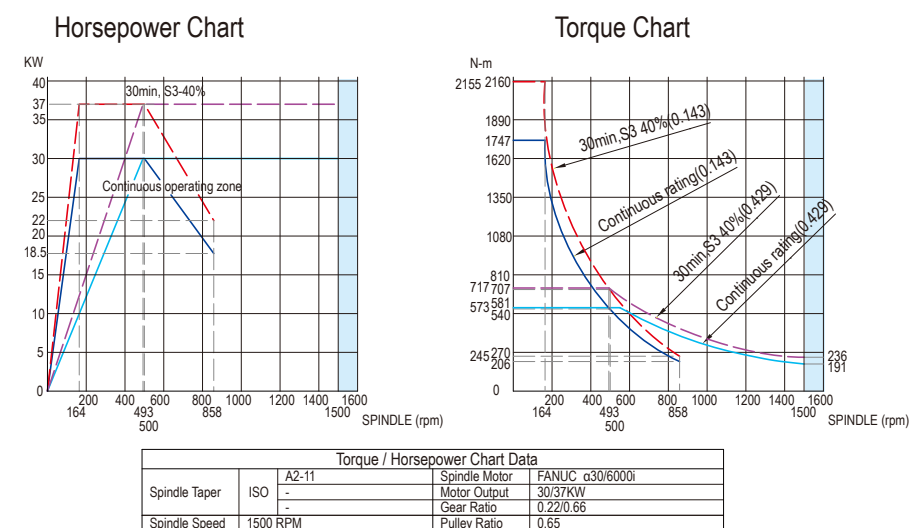
Efficient chip removal

Powerful chip flush removes chips efficiently.

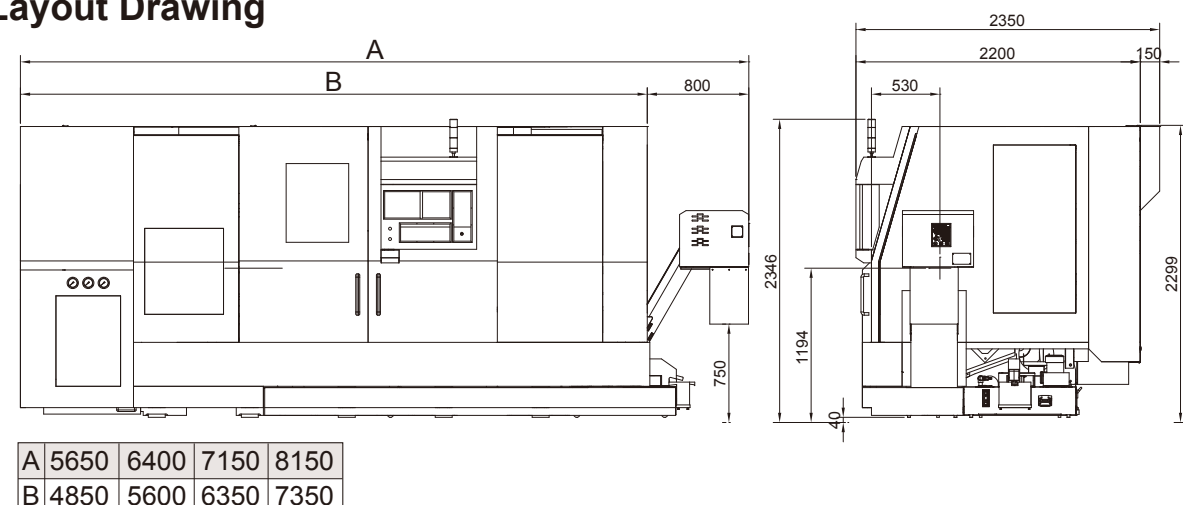
Interference Drawing



Torque & Horsepower Chart



Layout Drawing



Tooling System 32mm

Face and O.D. cutting 32mm		* 42117-60012	* 42117-60011	
Face and I.D. cutting 32mm		* 42117-60014	* 42117-60015	Face and I.D. cutting holder
Face and O.D. cutting 32mm		42117-60014	42117-60016	Face and O.D. cutting holder
I.D. cutting 60mm			* 42117-60017	I.D. cutting holder
Boring bar ø8 ø20 ø10 ø25 ø12 ø32 ø16		Boring bar sleeve * 42117-60022		
Throw-away bar ø20 ø25 ø32		Throw-away drill socket 42117-60021		
Drill socket MT#3 MT#4		Drill bar sleeve 42117-60023		
I.D. cutting 75mm				
Boring bar ø8 ø20 ø10 ø25 ø12 ø32 ø16 ø40		Boring bar sleeve		
Throw-away bar ø20 ø25 ø32 ø40		Throw-away drill socket		
Drill socket MT#3 MT#4		Drill bar sleeve		

42117-60018 (option)

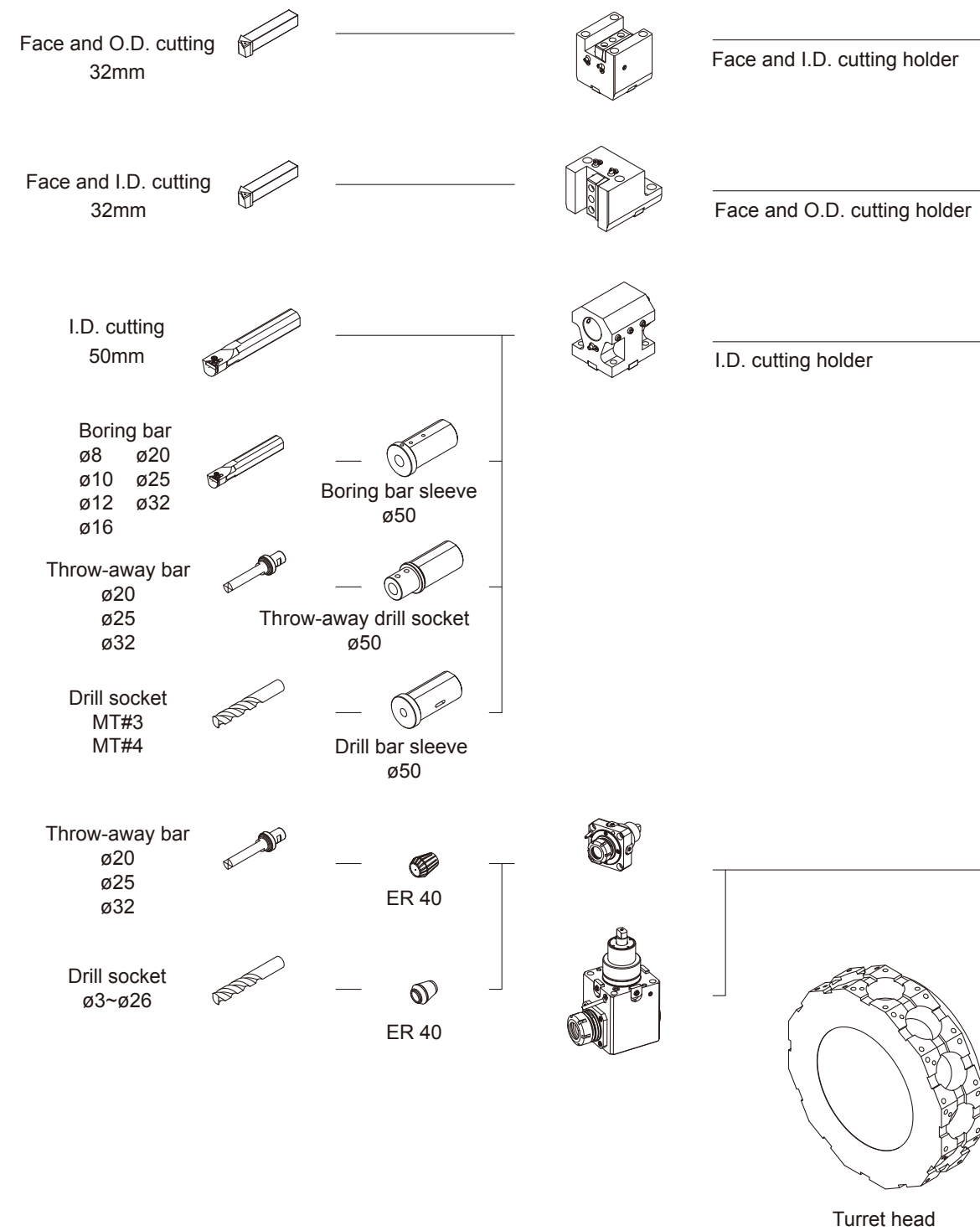
Turret head
* 42117-60010
32mm

* 42117-60019

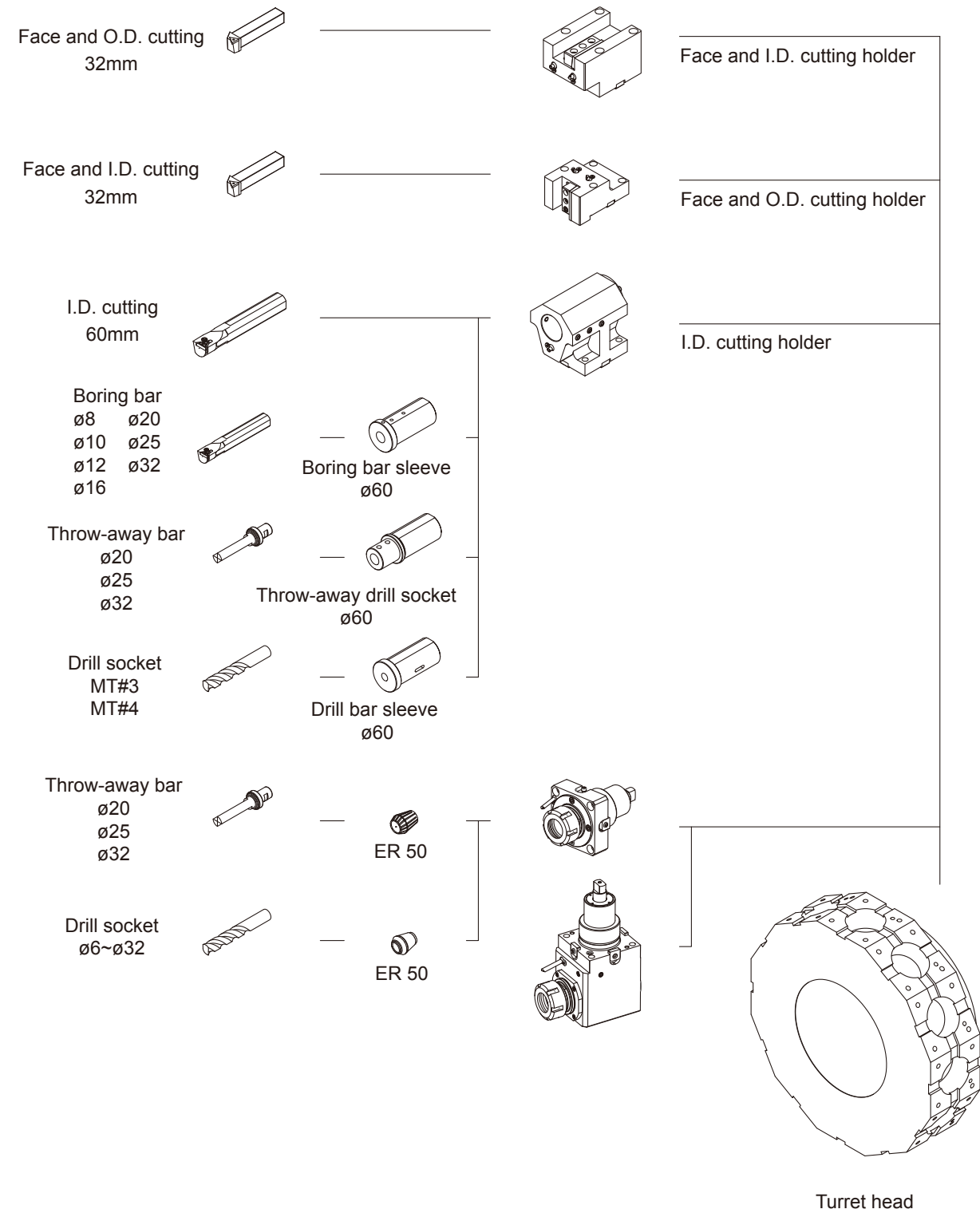
* 42117-60013

* 42117-60030

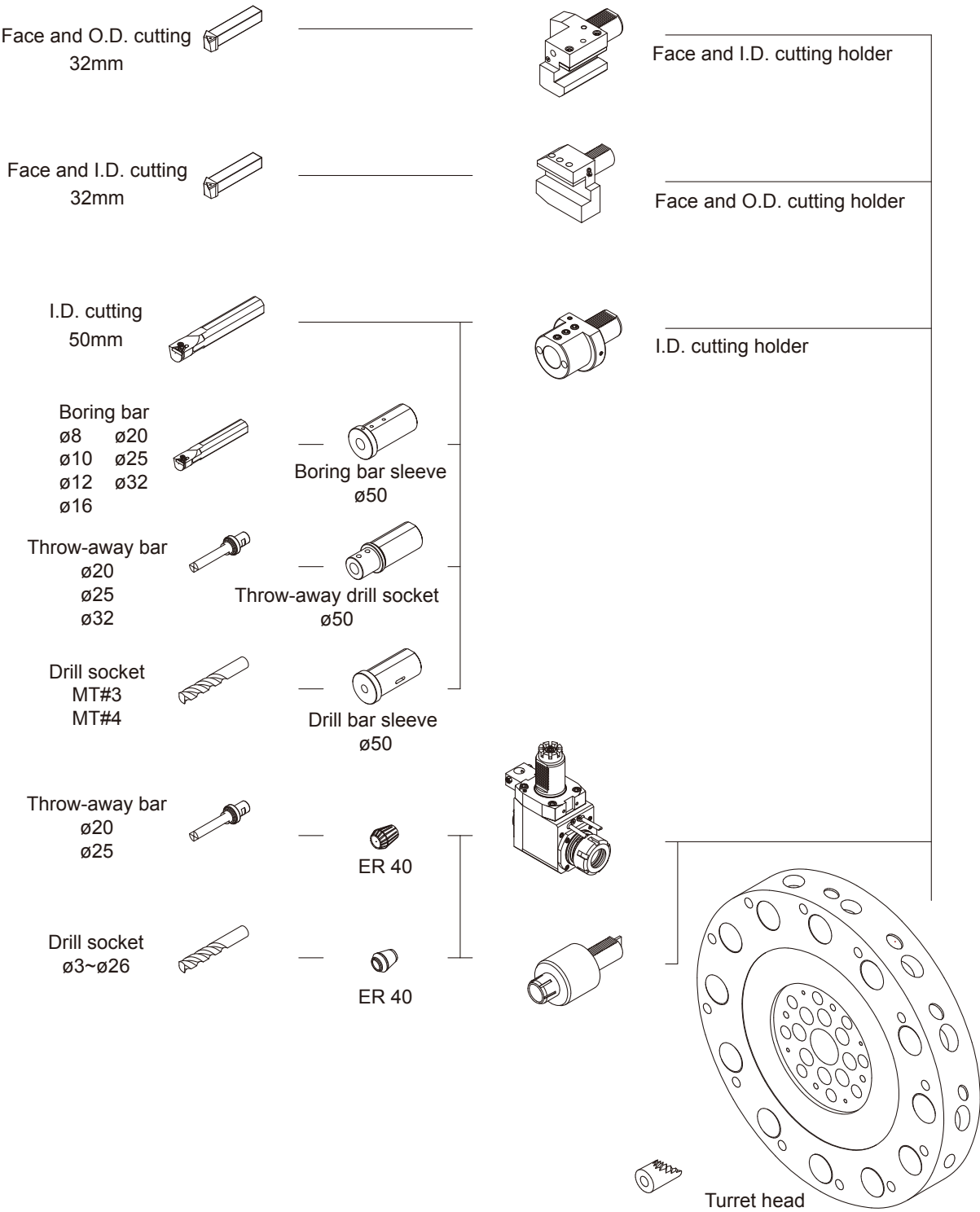
Tooling System BMT-75(32mm) (option)



Tooling System BMT-85(32mm) (option)



Tooling System VDI-50(32mm) (option)



Tooling System VDI-60(32mm) (option)

