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MANFORD 2026.01.1000E

MANFORD

POWER & DETERMINATION

CNC Lathe SBL/SBH/SBL-8MYS Series

SBL-5 / SBL-6

LINEAR GUIDEWAYS

**With linear guideways on X/Z axes and 30 M/Min rapid traverse,
SBL series is absolutely an ideal solution for high-speed turning applications.**

Features:
- 30° slant bed structure.
- Meehanite cast iron for all structural parts.
- X/Z axis are mounted with roller type linear guide ways, providing advantages of high precision, low arear and fast movement.
- The axial system uses C3 ground ball screws to ensure machining accuracy and stability.
- Fully enclosed splash guard ensures a safe and clean working environment for operators.

SBL-5M / SBL-6M

Equipped with live tooling turrets and C-axis function for spindle indexing, SBL M series is capable of performing milling, drilling and tapping applications with single workpiece setup.

Features:
- Live tooling with C-axis function enables the machine to accomplish milling, drilling, and tapping applications.
- High resolution encoder and hydraulic brake mounted on C-axis, which leads to spindle orientation efficiency and high positioning accuracy.

HYDRAULIC TURRET

- Allows bi-directional and random tool selection for fast tool change.
- Utilize high precision crowned tooth clutch for accurate tool positioning.

POWER TURRET

Powerful live tooling turret provides fast tool indexing. The milling tools in both axial and radial directions delivers low noise rotation and high-quality cutting performance.

SERVO TURRET

- The high performance turret features smooth and fast tool indexing.
- High positioning accuracy and repeatability to achieve the highest cutting accuracy. Tool indexing can be accomplished in just 1 second.

OPTIMAL STRUCTURAL DESIGN FOR LASTING PRECISION

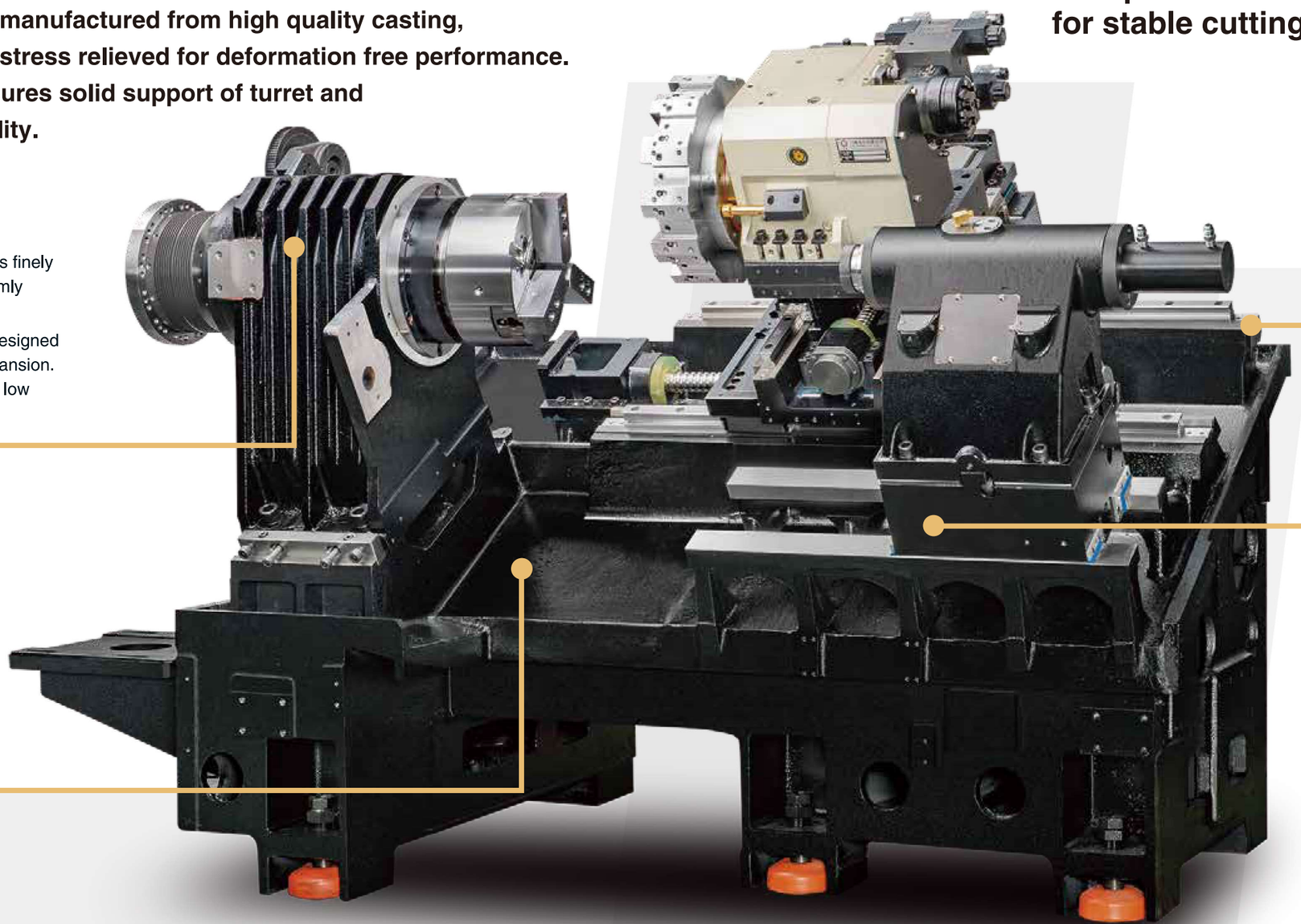
SBL series are one-piece manufactured from high quality casting, completely annealed and stress relieved for deformation free performance. The optimal structure ensures solid support of turret and outstanding turning stability.

One-piece slant-bed design for stable cutting performance.

STURDY HEAD STOCK WITH SPINDLE

- The inner bore of headstock casting is finely bored to hold the spindle cartridge firmly and precisely.
- The external ribs are symmetrically designed to minimize and stabilize thermal expansion. The entire unit features low vibration, low noise and low temperature rising.

30˚ slant bed is one-piece manufactured from high quality Meehanite cast iron.



X/Z AXES HIGH PERFORMANCE LINEAR GUIDE WAY DESIGN

High performance linear guide way design on X and Z axes provides advantages of high precision, low abrasion and high speed.

TAILSTOCK

Hydraulic tailstock with programmable positioning pin (Option), and manually adjustable quill thrust.

Model: SBL-6

SBL-8MY / SBL-8MYS

Multi-Function High Precision

THE NO.1 CHOICE FOR COMPLEX PARTS MACHINING

Features:

- SBL-8MYS is a twin spindle, single turret machine with Y-axis, making it suitable for complex parts machining.
- 30° slant bed one-piece structure exhibits outstanding rigidity, easy operation, and efficient chip removal.
- Meehanite cast iron for all structural parts features high rigidity throughout the entire machine and heavy cutting capacity.
- X / Y / Z axes are mounted with roller-type linear guideways, providing high precision, low wear, and fast movement.
- Equipped with Fanuc 0iTF control.
- Fully enclosed splash guard completely isolates cutting chips and cutting fluid.

BMT LIVE TOOLING TURRET

TWIN SPINDLE & SINGLE TURRET

BOTH MAIN AND SUB-SPINDLE HAVE C-AXIS FUNCTION

TWIN SPINDLE DESIGN
(SBL-8MYS)

The SBL-8MYS combines dual spindles with a single live tooling turret featuring Y-axis capability for complex machining applications.

C-AXIS BRAKE BUFFERING

The brake buffering function on the C-axis ensures machining stability.

POWERFUL SPINDLE MOTOR

The main spindle is driven by an 11/15 kw motor that provides high torque output at low speed, making the machine suitable for heavy cutting.

SUPPORTING UNMANNED MACHINING

The machine can be equipped with a robot for parts loading and various automated functions to achieve unmanned operations.

TOOL HOLDER DESIGN

The use of the BMT-55 interface allows the power turret to accommodate various cutting tools.

MODULAR DESIGN

Upon customer request, the machine can be equipped with an automation system steady rest, and other accessories.

ROBOT

The machine can be equipped with a 6-axis robot for automatic parts loading and unloading. In addition, other automated equipment is available to achieve unmanned operations. These features substantially increase production efficiency while saving labor costs. The robot is integrated with the CNC lathe for simple installation and small footprint.

AUTOMATION SYSTEM

SBL-8MY / SBL-8MYS

TWIN SPINDLE + SINGLE TURRET

Features:

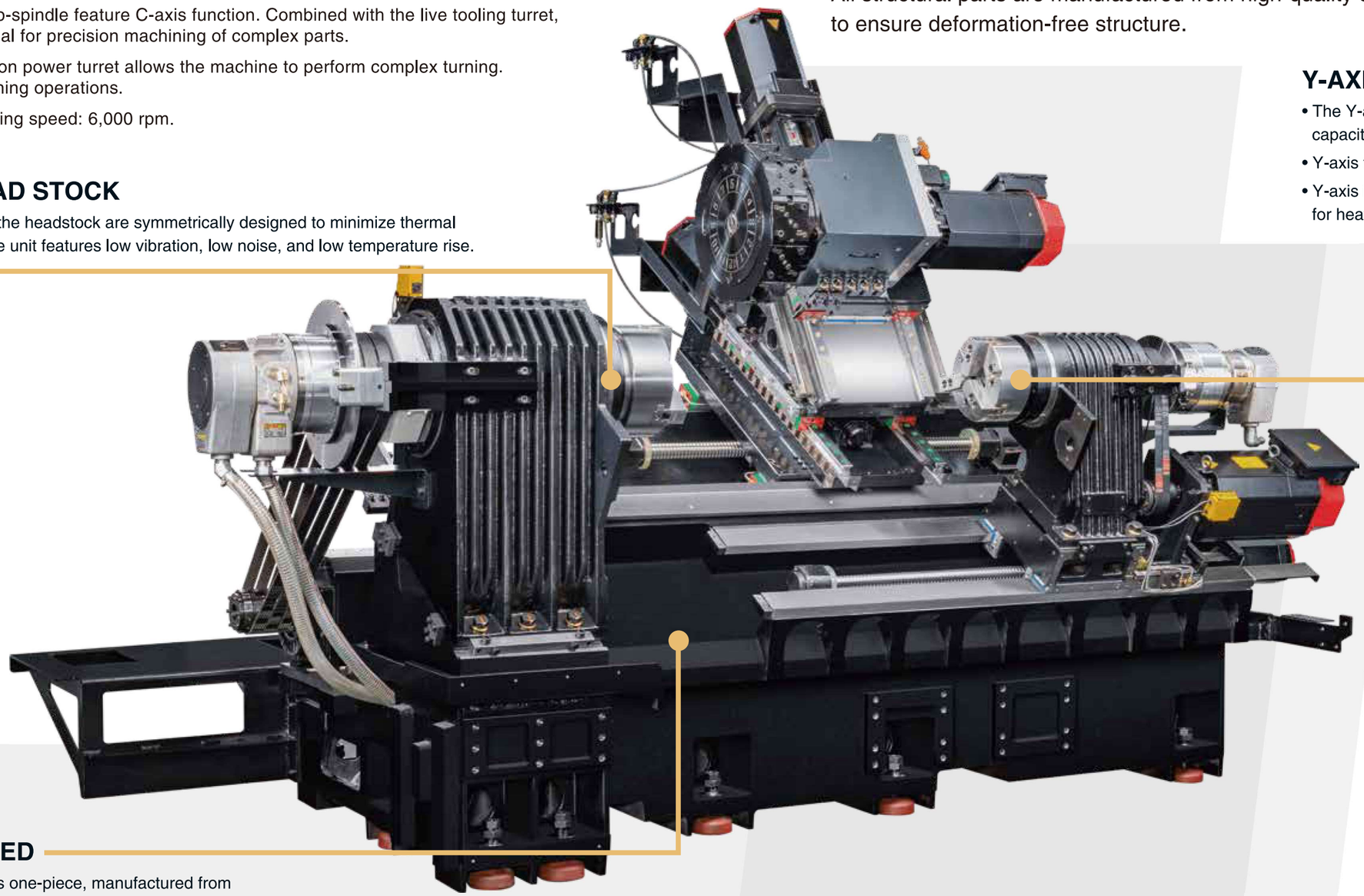
- Both main and sub-spindle feature C-axis function. Combined with the live tooling turret, the machine is ideal for precision machining of complex parts.
- BMT-55, 12-position power turret allows the machine to perform complex turning. and milling machining operations.
- Maximum live tooling speed: 6,000 rpm.

STURDY HEAD STOCK

The external ribs on the headstock are symmetrically designed to minimize thermal expansion. The entire unit features low vibration, low noise, and low temperature rise.

SUPERB STRUCTURE DESIGN PRESENTS UNIQUE MACHINE RIGIDITY

The machine structure design of the Manford SBL-8MYS series emphasizes overall rigidity and maximum stability at high-speed machining.
All structural parts are manufactured from high-quality cast iron and then stress-relieved to ensure deformation-free structure.



Y-AXIS

- The Y-axis effectively upgrades parts machining capacity and accuracy.
- Y-axis travel: ±50 mm
- Y-axis is mounted with roller-type linear guideways for heavy cutting and high stability.

SUB-SPINDLE (SBL-8MYS)

- Belt-driven sub-spindle with maximum speed of 5,000 rpm.
- Massively shortens repetitive part setup time while ensuring machining accuracy.
- 8" three-jaw chuck (Standard accessory).

30° SLANT BED

- The 30° slant bed is one-piece, manufactured from high-quality cast iron, providing solid support for the turret.
- Highly rigid bed structure ensures deformation-free operation for years.

LINEAR GUIDEWAYS X & Z AXIS

X & Z axes are mounted with high-precision roller-type linear guideways, suitable for high-speed traverse. Also featuring heavy load resistance, low vibration, and low noise.

Model: SBL-8MYS

SBH-8

BOX GUIDEWAYS

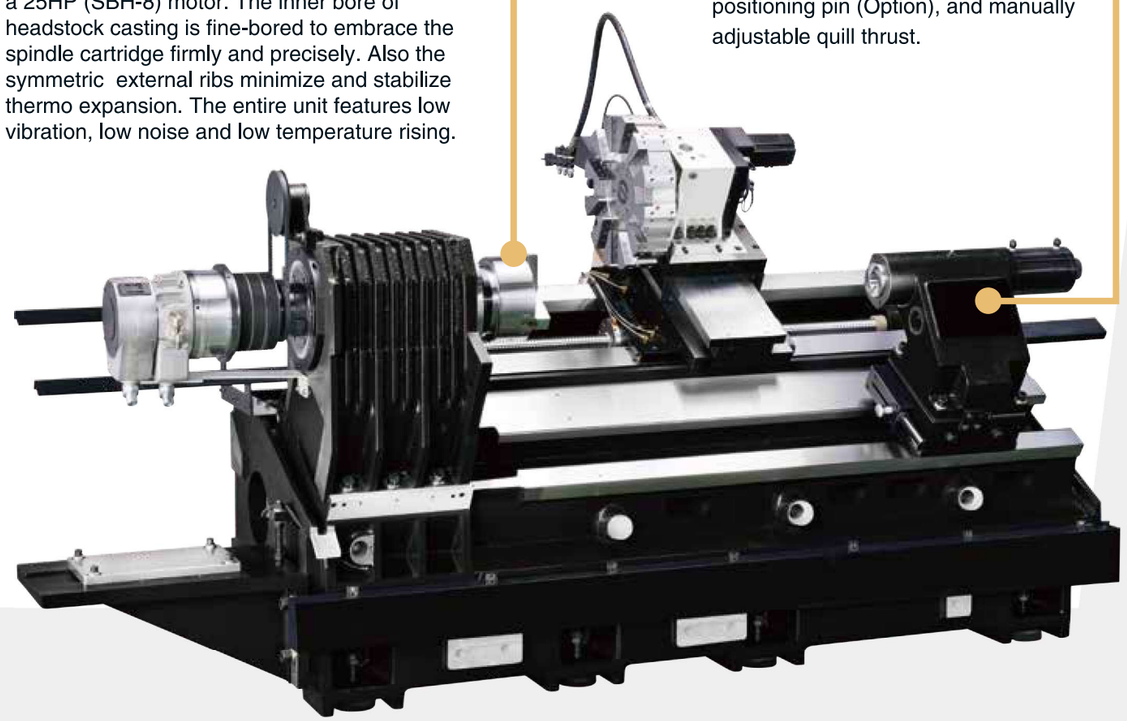
**SBH Series is high performance CNC lathe with box ways.
Coated with Turcite-B and grooved with lubrication oil channel, the box guideways design allows the most rigid performance to deal with the heavy duty cutting.**

STURDY HEADSTOCK WITH SPINDLE

The dynamic balanced spindle is powered by a 25HP (SBH-8) motor. The inner bore of headstock casting is fine-bored to embrace the spindle cartridge firmly and precisely. Also the symmetric external ribs minimize and stabilize thermo expansion. The entire unit features low vibration, low noise and low temperature rising.

TAILSTOCK

Hydraulic tailstock with programmable positioning pin (Option), and manually adjustable quill thrust.



PRECISION HAND SCRAPING

Every contacting surface is precision hand scraped to increase the flatness and improve geometric accuracy of the whole assembly.

SBH-8M

COMBINE TURNING AND MILLING OPERATIONS IN ONE HIGH RIGIDITY HIGH PERFORMANCE EXTRAORDINARY VERSATILITY

SBH-6M / SBH-8M is dedicated to customers who need a high quality, high performance machine with an appealing price level. By adopting a state-of-the-art power turret system from Europe, these high price-performance ratio machines from Manford are your best choice.

VDI POWER TURRET

- Equipped with a VDI40 power turret with fast tool indexing.
- Powerful 5.5 KW drive for the milling tools in the axial and radial direction delivers low noise rotation and high quality cutting performance.

BMT POWER TURRET (OPTION)

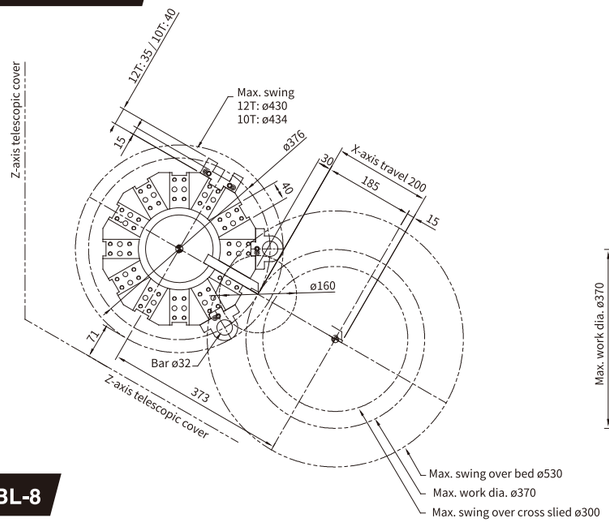
- Equipped with power turret in combination with the use of C function, this machine can perform milling, drilling, and tapping operations.
- The 12-position power turret is driven by servomotor, providing fast tool change and high positioning accuracy.

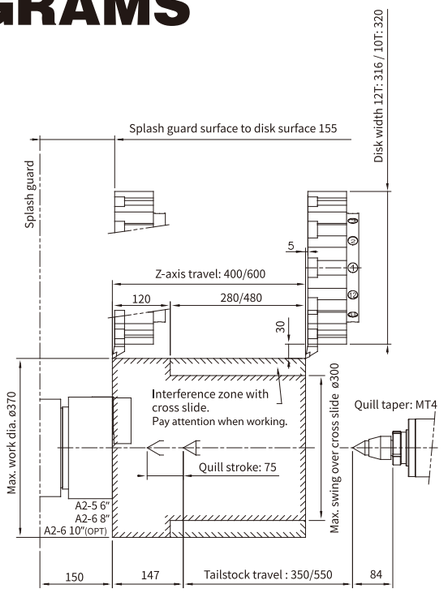
C AXIS WITH ENCODER

The C-axis is equipped with an encoder and the use of a hydraulic brake, ensuring high machining accuracy in contour machining.

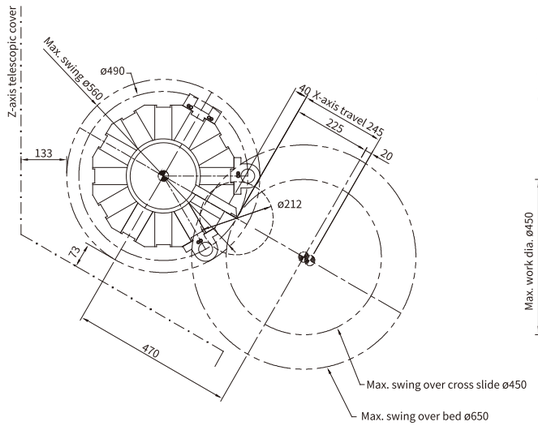
INTERFERENCE DIAGRAMS

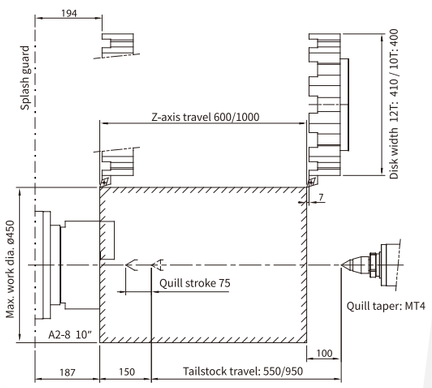
SBL-5 / SBL-6



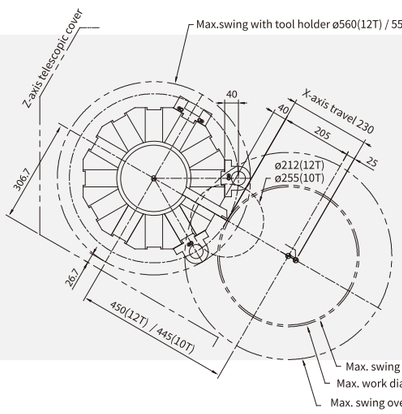


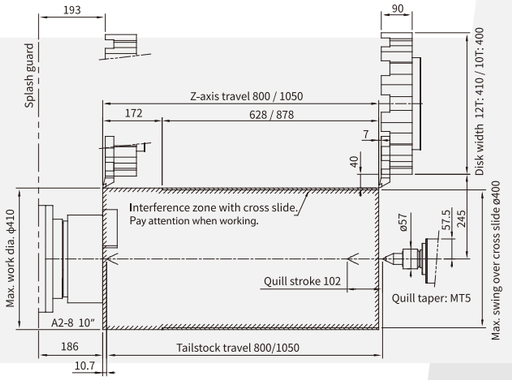
SBL-8



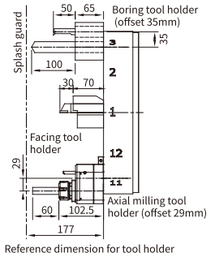


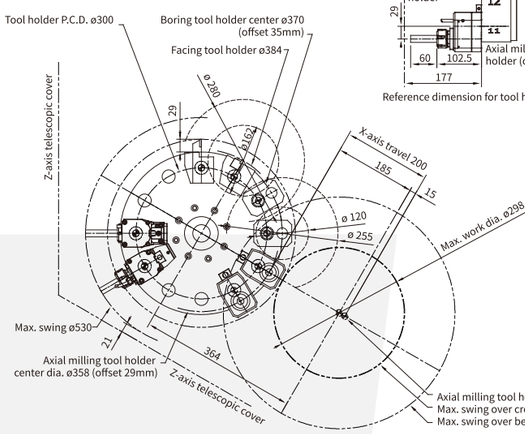
SBH-8

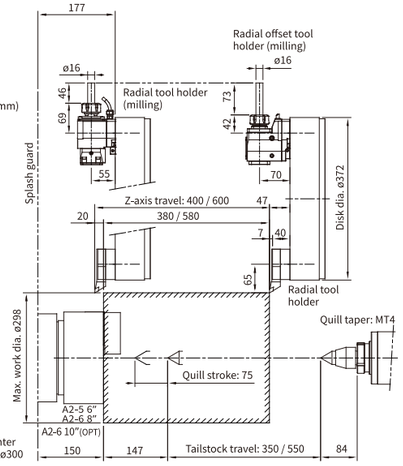




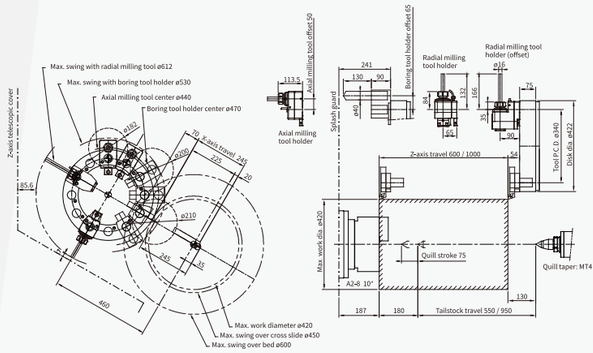
SBL-5M / SBL-6M (VDI30)



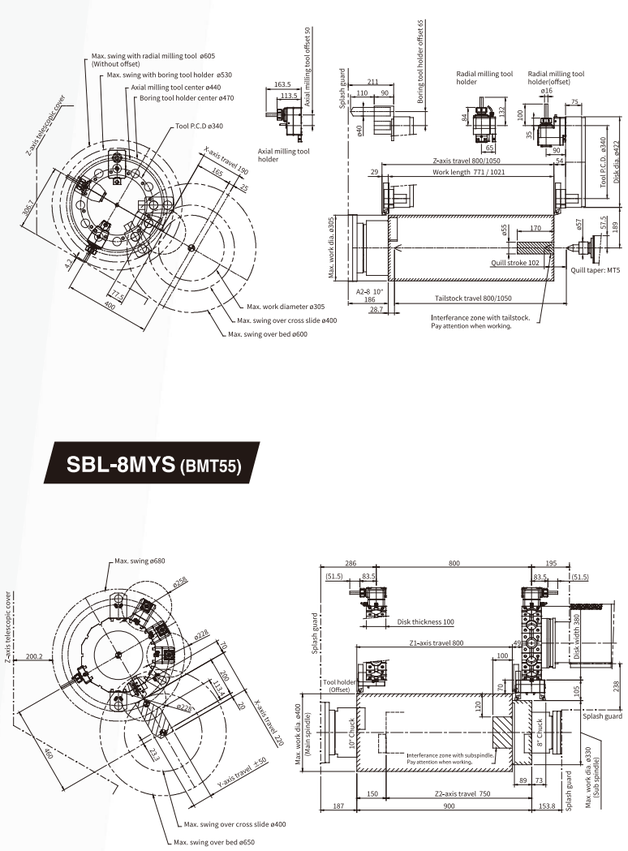




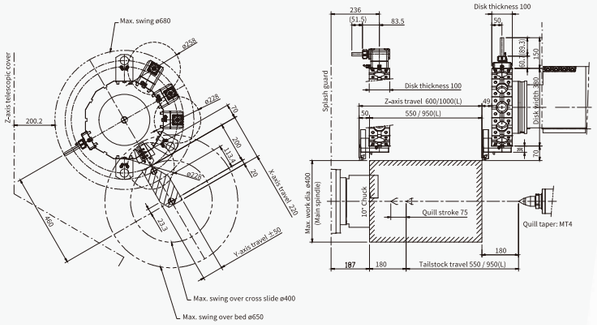
SBL-8M (VDI40)



SBH-8M (VDI40)



SBL-8MY (BMT55)

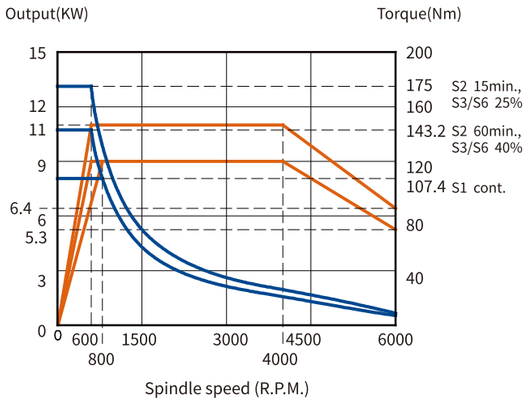


SBL-8MYS (BMT55)

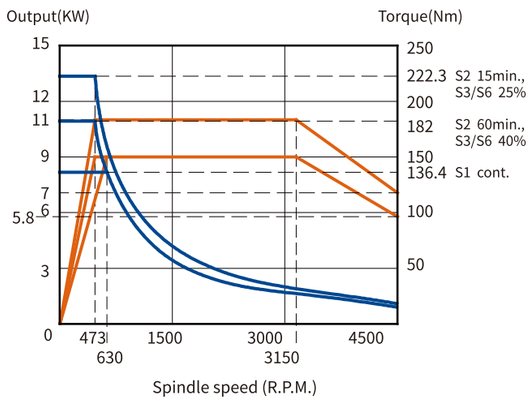
SPINDLE POWER-TORQUE DIAGRAM

Output
Torque

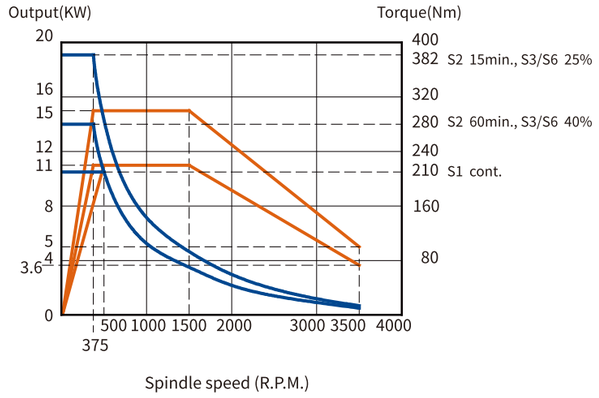
SBL-5/SBL-5M
Fanuc βiIP18/8000-B



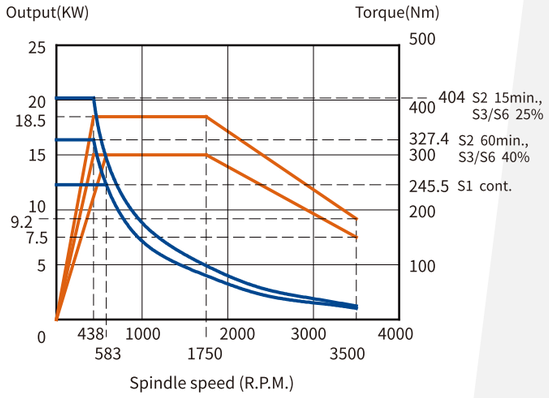
SBL-6/SBL-6M
Fanuc βiIP18/8000-B



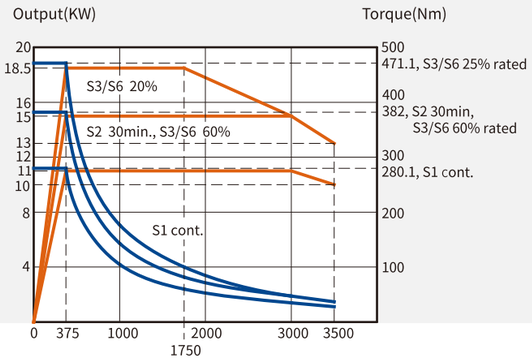
SBL-8/SBL-8M
Fanuc βiIP22/8000-B



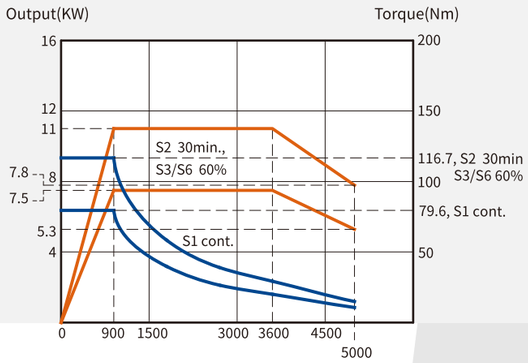
SBH-8/SBH-8M
Fanuc βiIP30/8000-B



SBL-8MYS (MAIN SPINDLE)
Fanuc αiIP22/8000-B

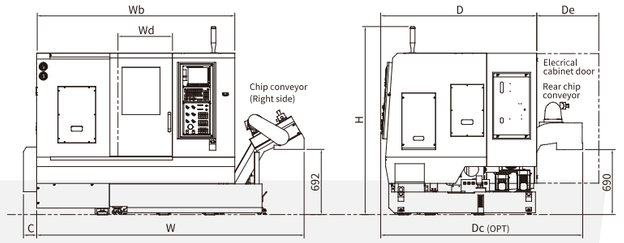


SBL-8MYS (SUB SPINDLE)
Fanuc αil8/10000-B

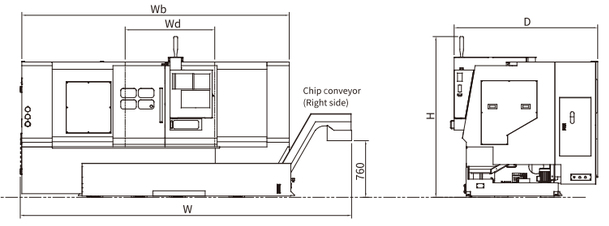


EXTERNAL DIMENSIONS

SBL-5(M) & 6(M) & 8(M)



SBH-8(M)



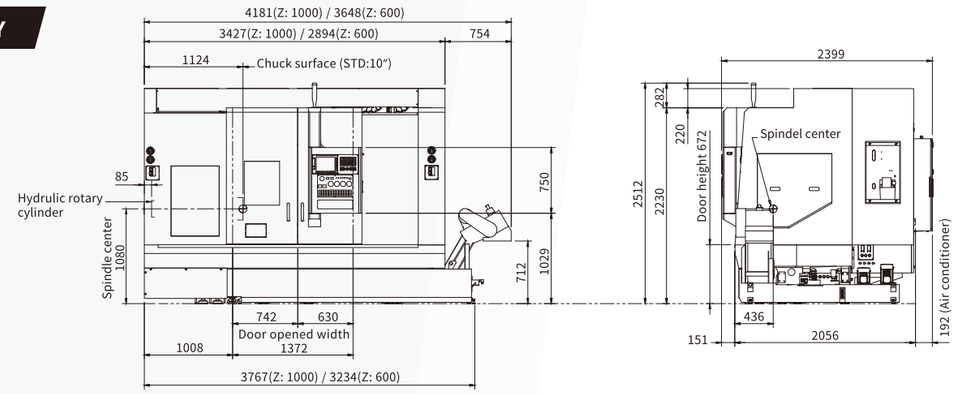
Corresponding to the specification sheet W Unit: mm

MODEL	SBL-5/SBL-5M		SBL-6/SBL-6M		SBL-8/SBL-8M	
Z axis travel	400	600	400	600	600	1000
W	2840	3040	2840	3040	3550	3950
D	1655				2050	
H	2000				2250	
Wd	580				750	1050
Wb	2100	2300	2100	2300	2800	3200
C	140		178		N/A	
De	660				880	
Dc	2140				N/A	

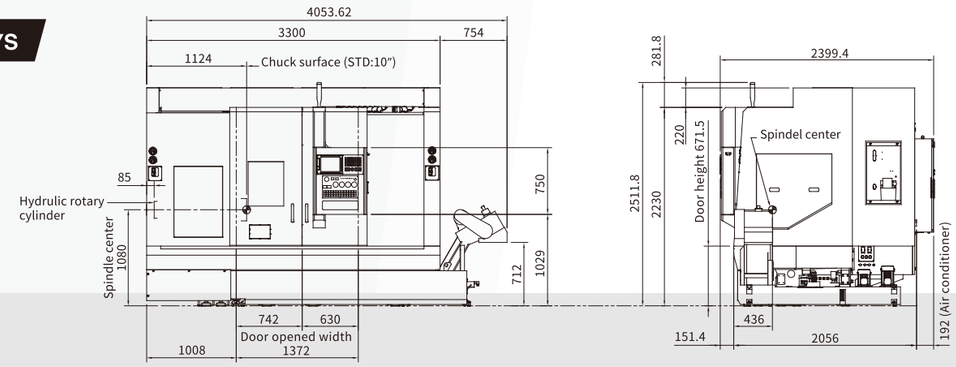
Unit: mm

MODEL	SBH- 8 /SBH-8M	
Z axis travel	800	1050
W	4170	4480
D	1930	
H	2160	
Wd	918	1206
Wb	3270	3595

SBL-8MY



SBL-8MYS



OPTIONAL ACCESSORIES

AUTOMATION SYSTEM WITH ROBOT

FEATURES:

- Integrated design for quick installation.
- Small footprint.
- Separate infeed and outfeed for raw materials and finished parts, optimized for operator access.
- Configurable modular gripper.

WORKING WITH MOST BRANDS OF ROBOTIC ARMS

BAR FEEDER

OIL MIST COLLECTOR

OPTIONAL ACCESSORIES

TOOL LENGTH MEASUREMENT (Optional)

VDI or BMT TOOL HOLDER (Optional)

WORKPIECE MEASUREMENT (Optional)

HYDRAULIC STEADY REST (Optional)

STANDARD ACCESSORIES

- 3-jaw hydraulic chuck
- Soft jaws one set
- Hard jaws one set
- Full enclosed splash gurad
- Heat exchanger for electrical cabinet
- Chain type chip conveyor with chip cart
- Work light
- Program light
- Tailstock
- Hydraulic system
- Coolant system
- Auto lubrication system
- Tool box
- Leveling bolts and pads
- Cutting tool holder (Exclude power turret model)
- Boring bar holder (Exclude power turret model)
- Boring bar bushing 1 set (Exclude power turret model)
- Driller bushing 1 set (Exclude power turret model)

OPTIONAL ACCESSORIES

- Hydraulic steady rest
- Collet chuck & collets
- Auto tool length measurement
- Parts catcher
- Bar feeder
- Programmable tailstock (Exclude SBL-8MYS)
- Auto Door
- Oil mist collector
- Oil skimmer
- Auto loader
- Air conditioner (For electrical box)
- Axial milling tool holder (Power)
- BMT tool holder
- Axial radial milling tool holder (Power)

SPECIFICATIONS

	MODEL	Unit	SBL-5	SBL-6	SBL-5M	SBL-6M	SBL-8	SBL-8M	SBL-8MY	SBL-8MYS		SBH-8	SBH-8M
Working capacity	Max. swing over bed	mm	Ø530				Ø650			Ø650		Ø600	
	Max. swing over cross slide	mm	Ø300				Ø450		Ø400	Ø400		Ø400	
	Max. machining diameter	mm	Ø370		Ø298		Ø450 (Opt. VDI40: Ø420)	Ø420 (Opt. BMT55: Ø450)	Ø400	Ø400		410	Ø305 (Opt. BMT55:Ø 410)
	Max. machining length	mm	400 / 600		380 / 580 (Opt.)		600 / 1000		550 / 950	800		750 / 1000	750 / 1000 (Opt. BMT55: 700 / 950)
Spindle	Chuck size	inch	6	8	6	8	10		10	10	/ 8	10	
	Spindle nose	—	A2-5	A2-6	A2-5	A2-6	A2-8			A2-8	A2-6	A2-8	
	Max. speed	RPM	6000	4500	6000	4500	3500			3500	5000	3500	
	Spindle bearing I.D	mm	80	100	80	100	130			130	90	130	
	Spindle bore diameter	mm	56	66	56	66	92.2			92.2	72	92.2	
	Bar capacity	mm	44	51	44	51	77			77	51	77	
	Motor power	KW	9 / 11				11 / 15			11 / 15	7.5 / 11	15 / 18.5	
Travel	X axis	mm	185+15				225+20		200+20	200+20		205+25	165+25 (Opt. BMT55: 205+25)
	Z axis	mm	400 / 600				600 / 1000			800		800 / 1050	
	Y axis	mm	N/A				N/A		±50	±50		N/A	
	W axis	mm	N/A				N/A		N/A	750		N/A	
Axial feed	Rapid feed	M/min	X / Z: 30				X / Z: 30		X/Z: 30 / Y:10	X/Z: 30 Y:10 W:24		X: 20 / Z: 24	
	Cutting feed	M/min	X / Z: 10				X / Z: 10		X / Z / Y: 10	X / Z / Y / W: 10		X / Z: 10	
Turret	Type	—	Hydraulic (Opt. Servo)		VDI30 servo (Opt. BMT45)		Servo	VDI40 servo (Opt. BMT55)	BMT55			Servo	VDI40 servo (Opt. BMT55)
	Number of tools station	pcs	12				12					12	
	O.D tool shank size	mm	2 0				2 5					2 5	
	I.D boring bar diameter	mm	Ø32				Ø40					Ø40	
Power turret	Max. milling speed	RPM	N/A		5000		N/A	4000	6000			N/A	4000
	Motor	KW	N/A		2.2 / 3.7		N/A	3.7 / 5.5	3.7 / 5.5			N/A	3.7 / 5.5
Tailstock	Taper	mm	MT4				MT4			N/A		MT5	
	Quill diameter	mm	75				75			N/A		90	
	Quill stroke	mm	75				75			N/A		102	
	Travel	mm	350 / 550				550 / 950			N/A		800 / 1050	
Hydraulic system	Max. work pressure	Mpa	3				5					3	
	Max. flow rate	L/min	20				30		40			20	
	Tank capacity	L	30				60		70			30	
Others	Coolant tank capacity	L	160				250					200	
	Lubrication tank capacity	L	2				2		4			2	
	Air source	Mpa	0.6				0.6		0.6			0.6	
	Power requirement	KVA	25				30		45			35	
Machine size	Size (L x W x H)	mm	3000x1700x2020 3200x1700x2020	3050x1700x2020 3250x1700x2020	3000x1700x2020 3200x1700x2020	3050x1700x2020 3250x1700x2020	3550x2100x2250 3950x2100x2250		3650x2400x2515 4185x2400x2515	4055x2400x2515		4170x1930x1850 4480x1930x1850	
	Weight	Kg	2800 / 3100		2800 / 3100		3600 / 3900		4100 / 4400	4600		5400 / 6200	

• Specifications are subject to change without notice.