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MANFORD

POWER & DETERMINATION

CNC Lathe SBL/SBH Series

SBL-5 / SBL-6 / SBL-8

With linear guideways on X and Z axes and 30M/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.
- Hardened and ground ballscrews for precise travelling and consistent machining accuracy.
- Fully enclosed splash guard ensures a safe and clean working environment for operators.

LINEAR GUIDEWAYS



SBL-5M / SBL-6M / SBL-8M

Equipped with power 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 Hirth tooth coupling 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 LIFE TIME ACCURACY

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

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.

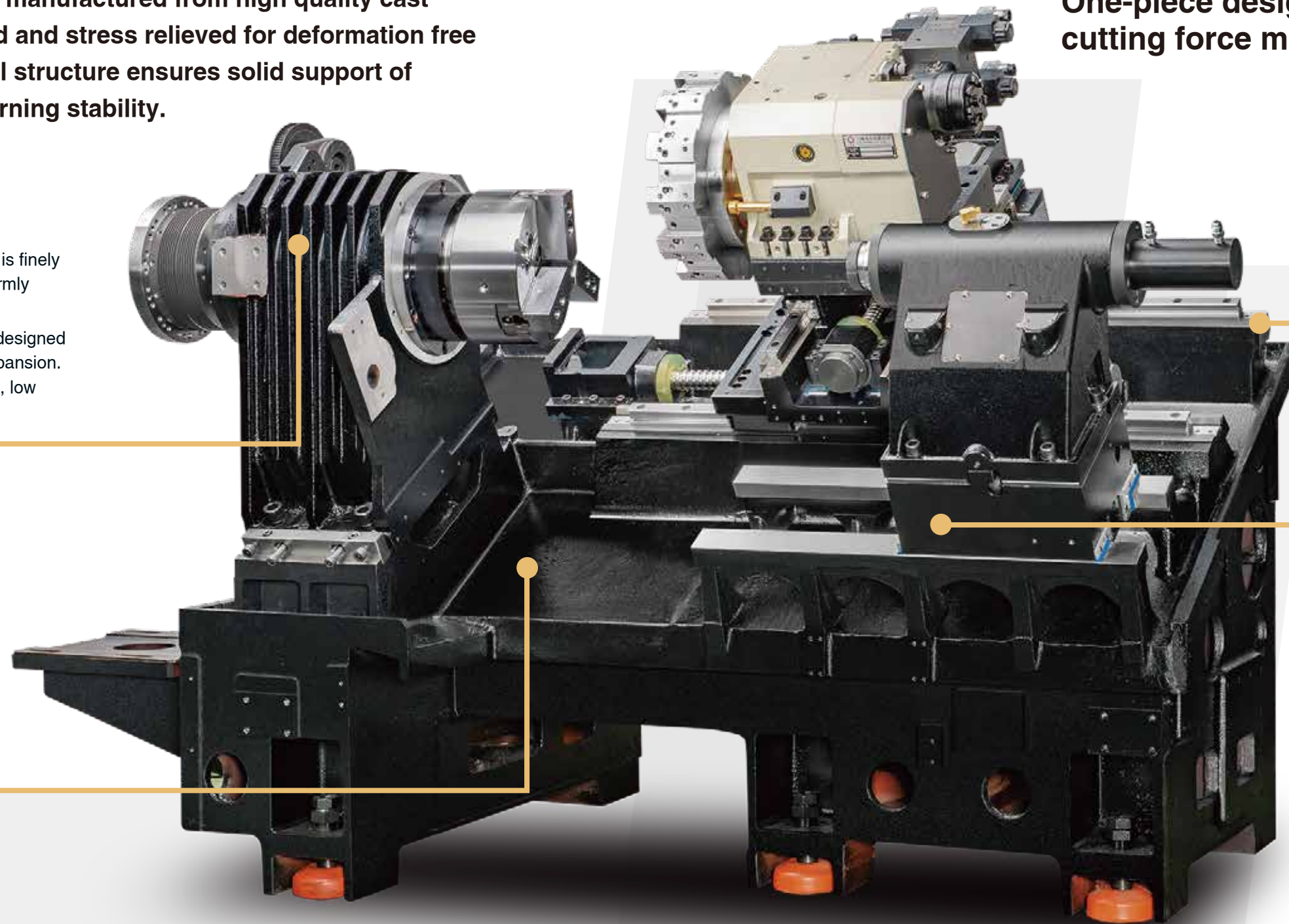
30° slant bed is one-piece manufactured from high quality Meehanite cast iron.

One-piece designed slant bed absorbs cutting force more effectively.

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

TAILSTOCK

The hydraulic tailstock can be controlled by NC via an actuating pin; the quill thrust can be adjusted manually.



Model: SBL-6

SBH-6 / 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.



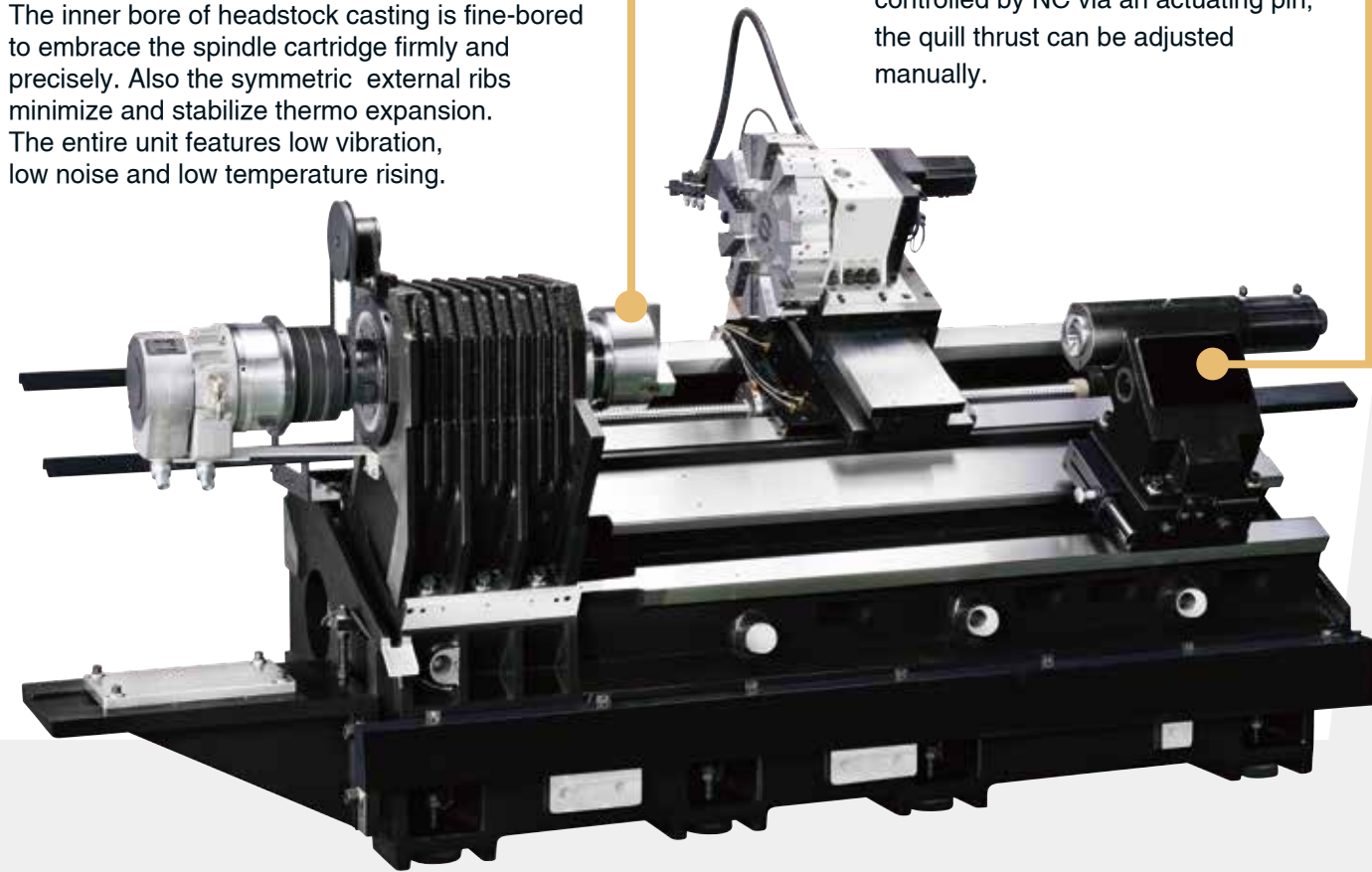
STURDY HEADSTOCK WITH SPINDLE

The dynamic balanced spindle is powered by a 20 HP (SHB-6) and 25 HP (SHB-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

The hydraulic tailstock can be controlled by NC via an actuating pin; the quill thrust can be adjusted manually.



PRECISION HAND SCRAPING

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



SBH-6M / 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.



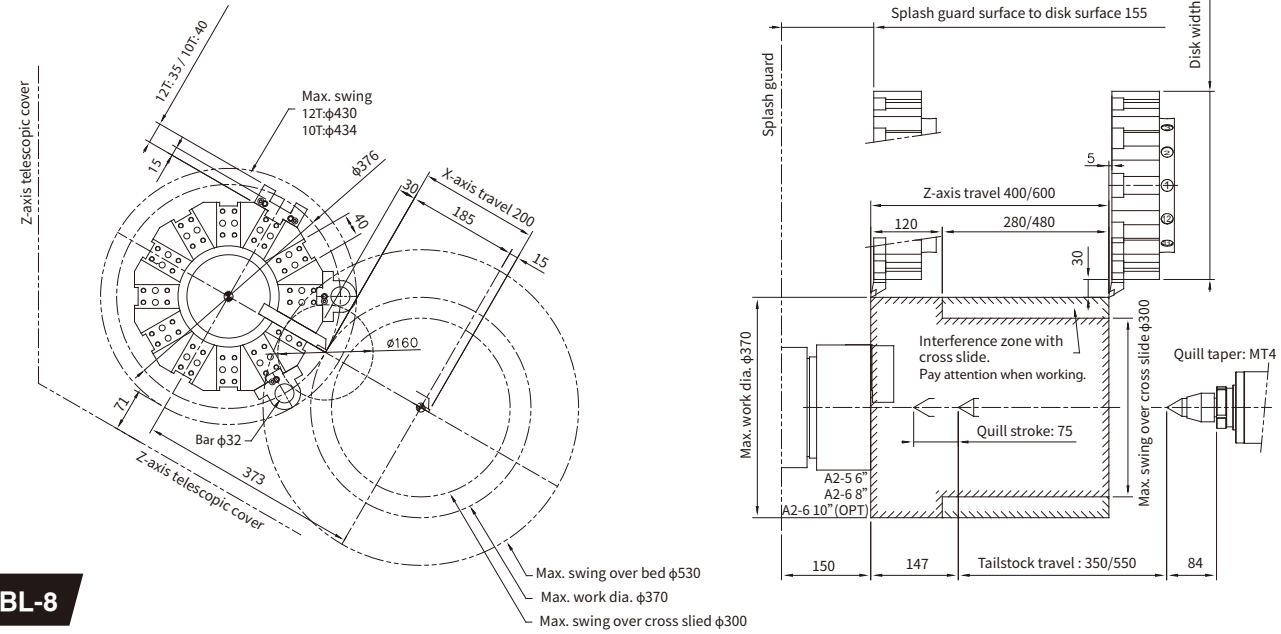
C AXIS WITH ENCODER

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

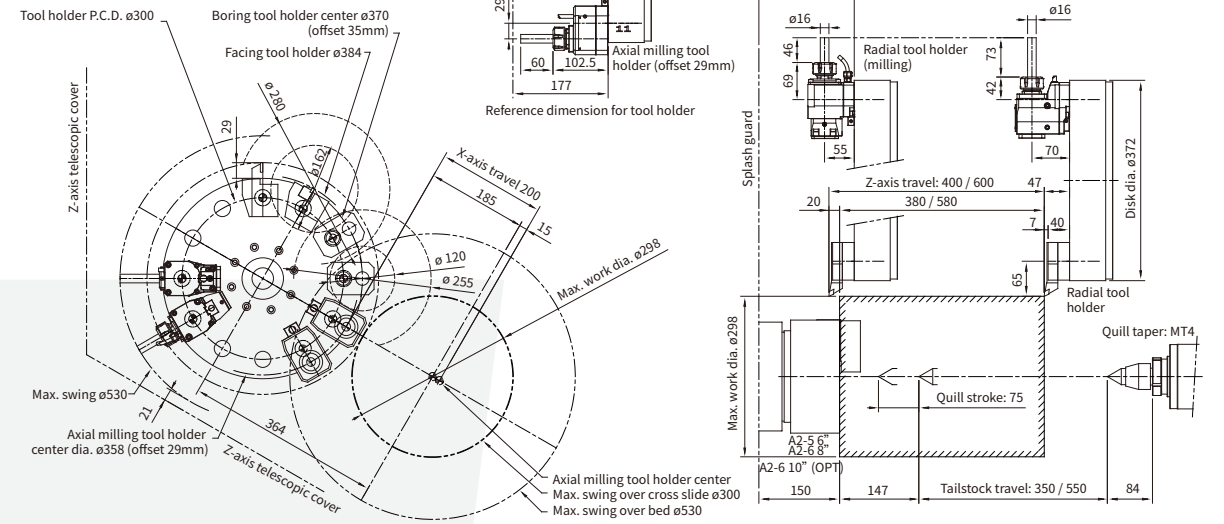


INTERFERENCE DIAGRAMS

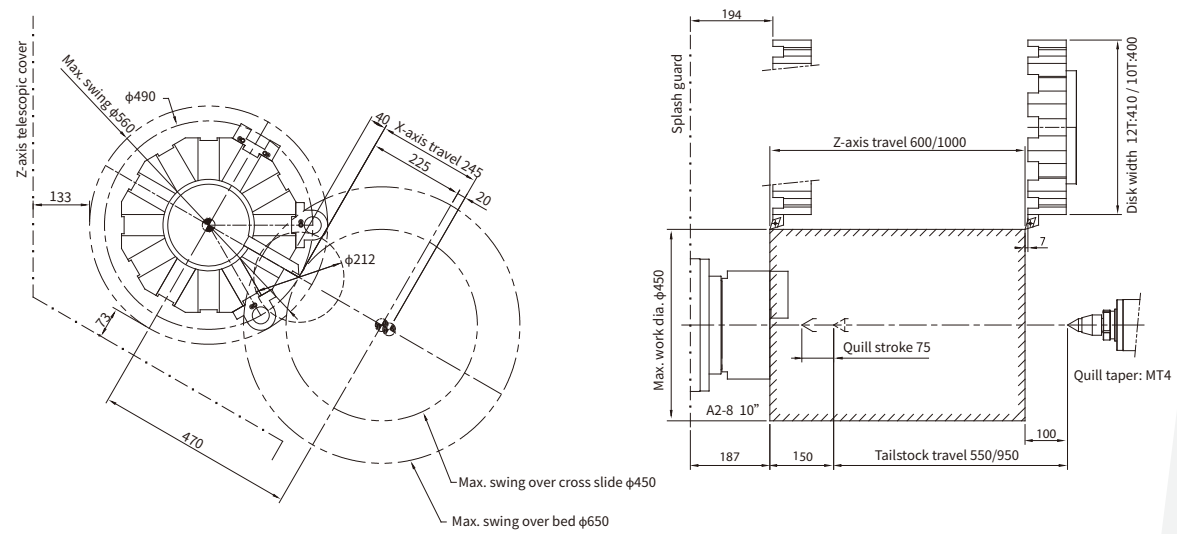
SBL-5 / SBL-6



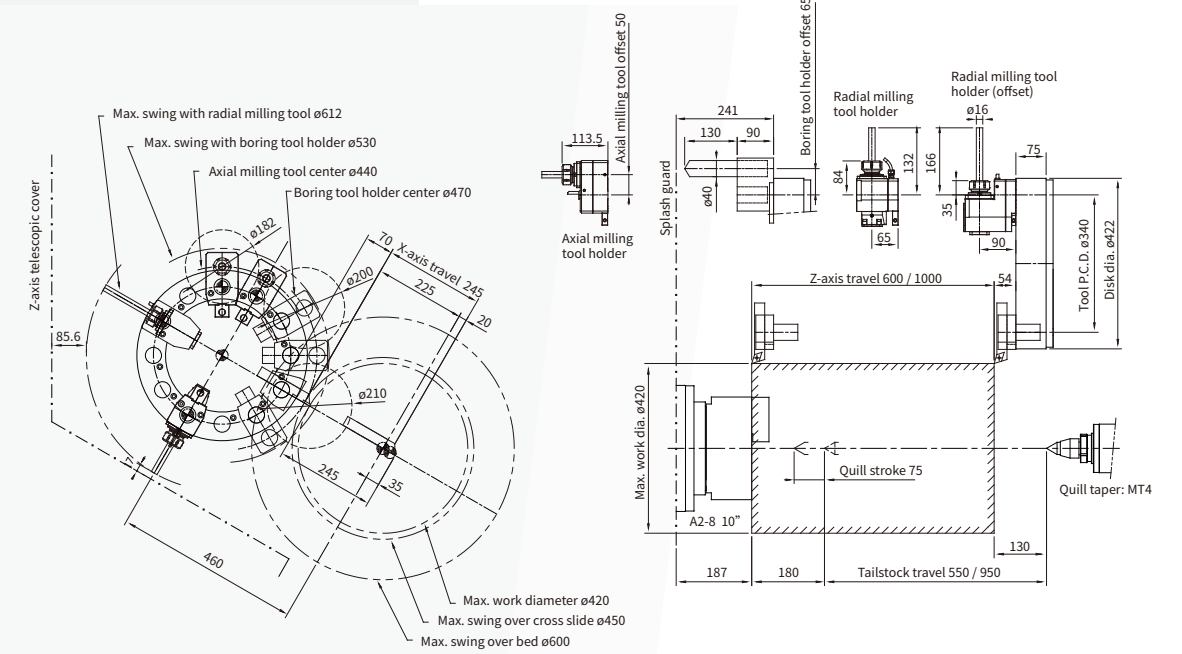
SBL-5M / SBL-6M (VDI30)



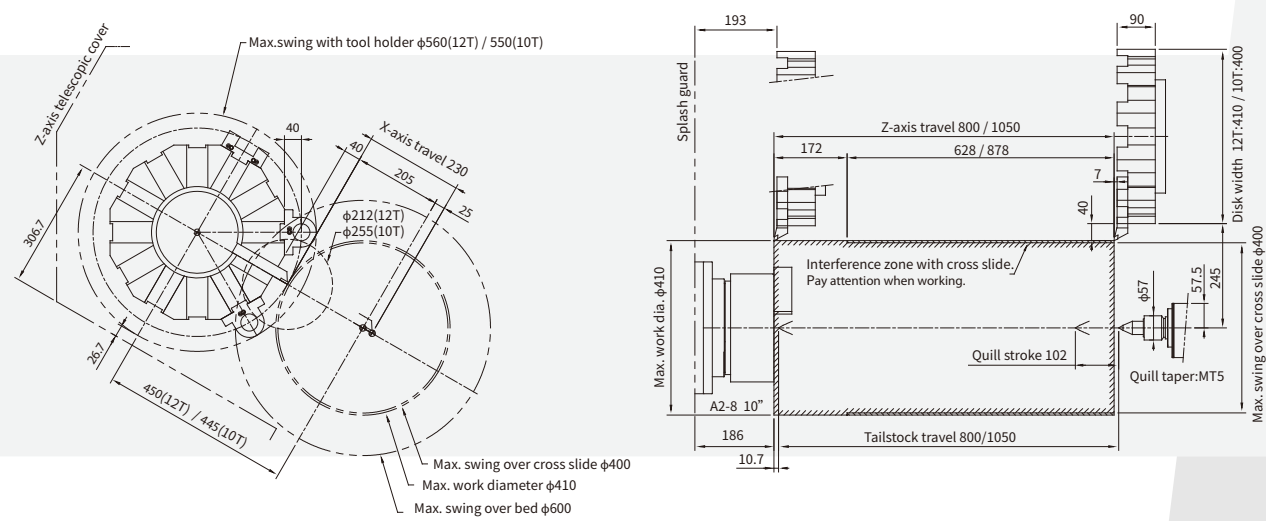
SBL-8



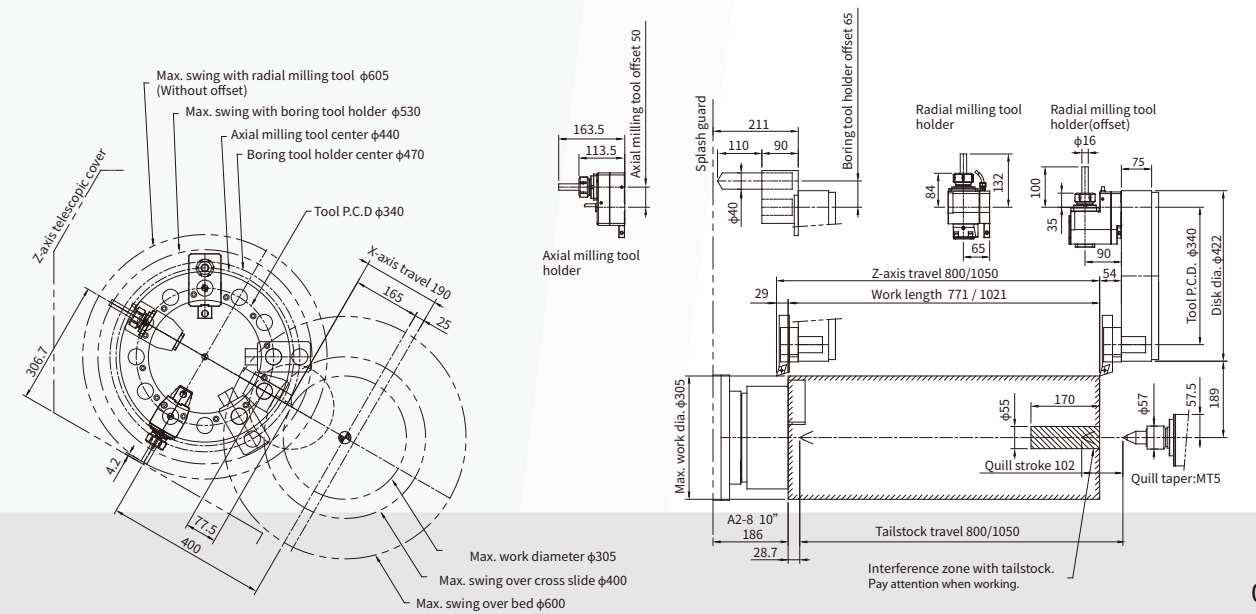
SBL-8M (VDI40)



SBH-8



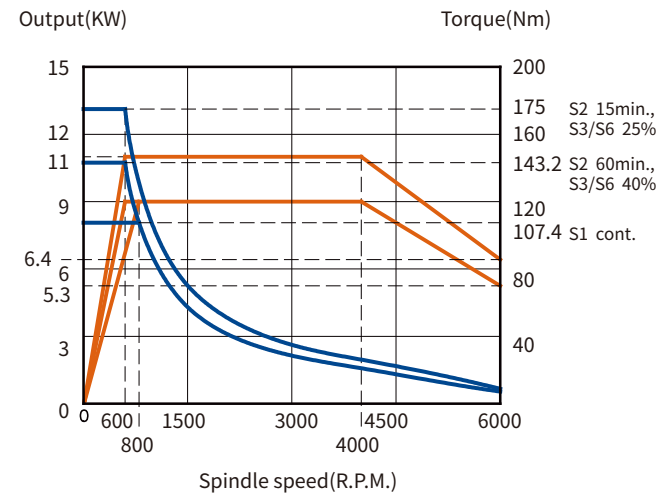
SBH-8M (VDI40)



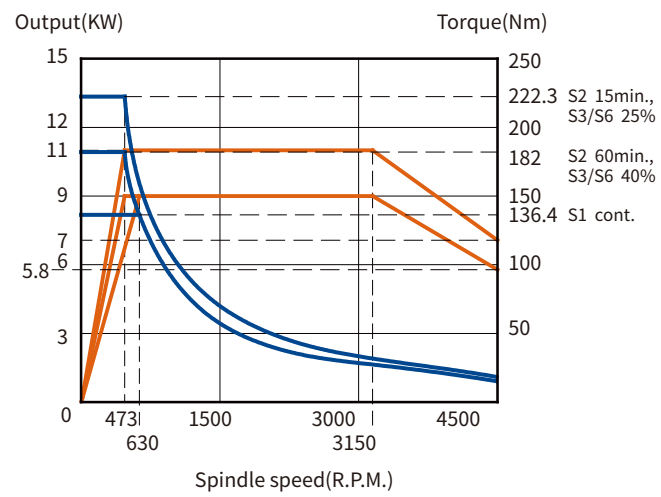
POWER CHART

— Output
— Torque

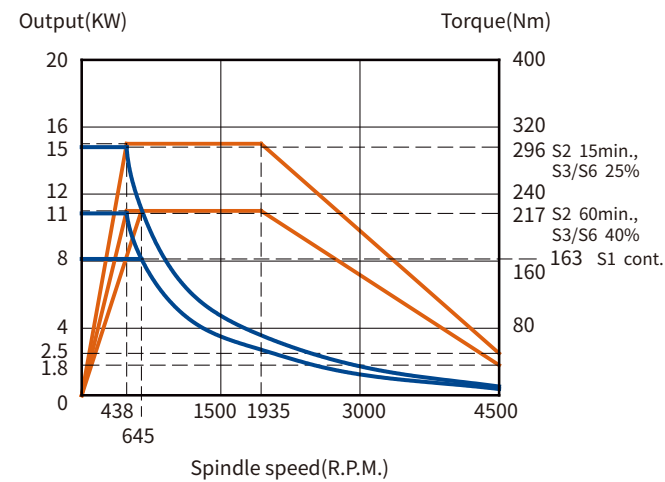
SBL-5/SBL-5M
Fanuc β iIP18/8000-B



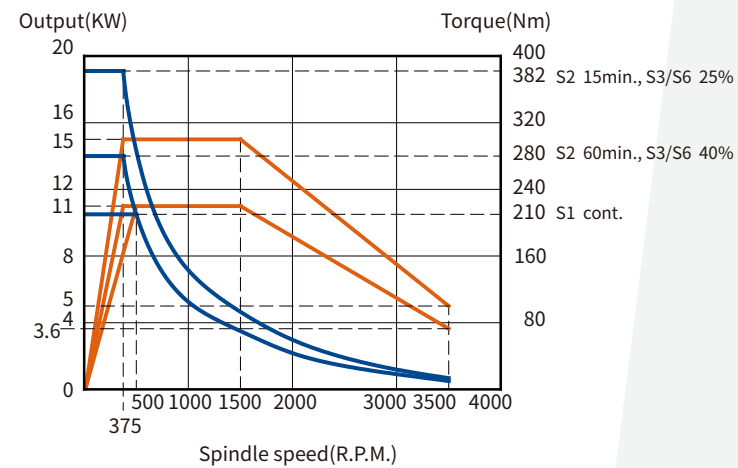
SBL-6/SBL-6M
Fanuc β iIP18/8000-B



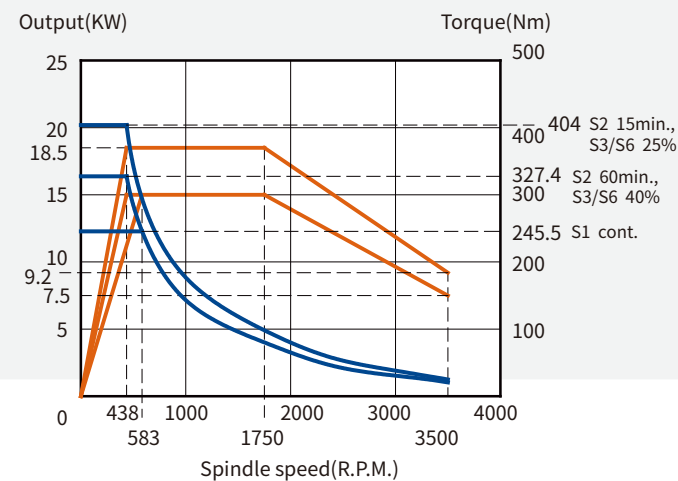
SBH-6/SBH-6M
Fanuc β iIP22/8000-B



SBL-8/SBL-8M
Fanuc β iIP22/8000-B

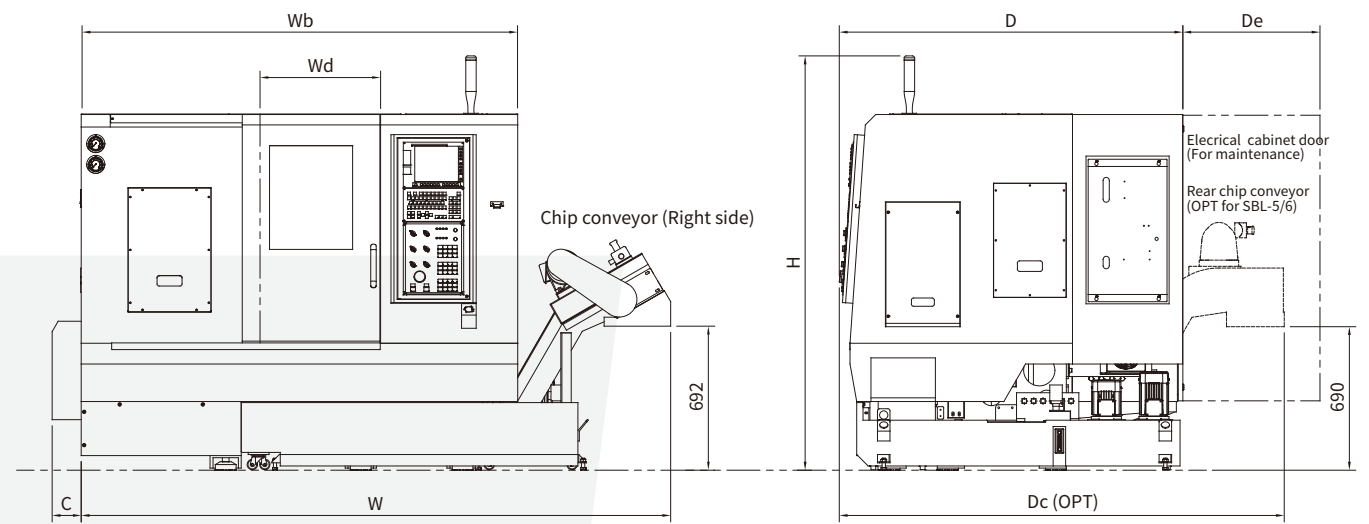


SBH-8/SBH-8M
Fanuc β iIP30/8000-B

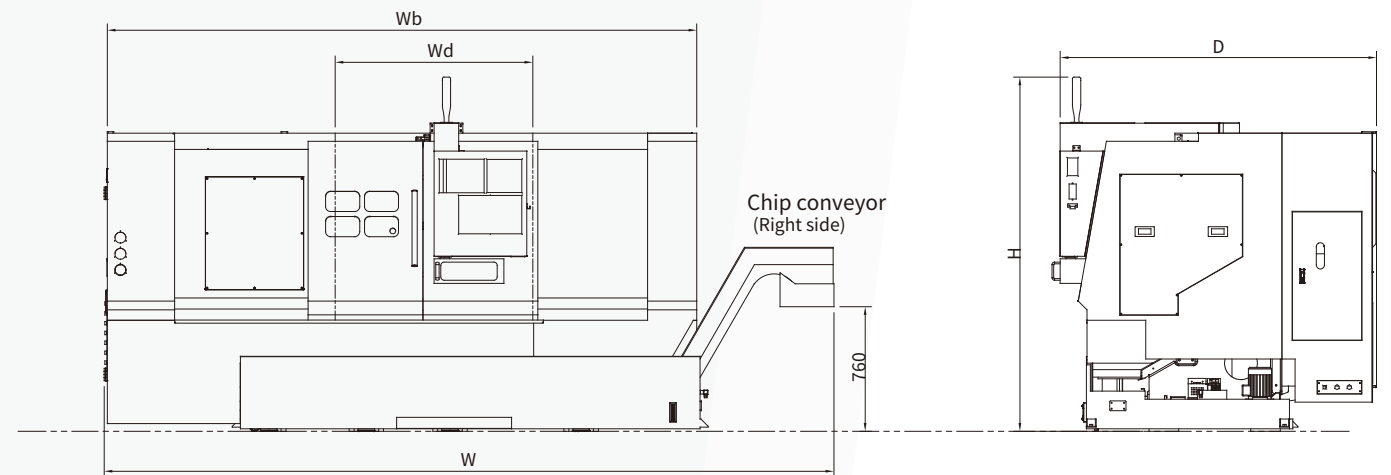


FLOOR SPACE

SBL SERIES



SBL SERIES



Unit: mm

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

Unit: mm

MODEL	SBH-6/SBH-6M	SBH-6/SBH-6M	SBH-8/SBH-8M
Z axis travel	550	800	1050
W	3880	4170	4480
D	1930		
H	2160		
Wd	820	918	1206
Wb	3020	3270	3595

Auto Loader (Optional)

FEATURES:

- Small footprint.
- Integrated structure for easy installation.
- Interchangeable work piece loading cart for high efficiency.
- Safety protection guard.
- Modularized jaw adjustment for speedy setting.



WORKPIECE MEASUREMENT (Optional)



TOOL LENGTH MEASUREMENT (Optional)



STANDARD / OPTIONAL ACCESSORIES



OIL MIST COLLECTOR (Optional)



VDI or BMT TOOL HOLDER (Optional)



BAR FEEDER (Optional)



HYDRAULIC STEADY REST (Optional)

STANDARD ACCESSORIES

- FANUC 0iTF controller
- 3-jaw hydraulic chuck
- Soft jaws one set
- Hard jaws one set
- Full enclosed splash guard
- 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 kit
- 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
- 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	SBH-6	SBH-6M	SBH-8	SBH-8M	
Working capacity	Max. swing over bed	mm	530		530		650	650	600		600		
	Max. swing over cross slide	mm	300		300		450	450	400		400		
	Max. machining diameter	mm	370		298		450 (Opt. VDI40: 420)	VDI40: 420 (Opt. BMT55: 450)	410	VDI40: 305 (Opt. BMT55: 410)		410	VDI40: 305 (Opt. BMT55: 410)
	Max. machining length	mm	400 / 600		380 / 580		600 / 1000	600 / 1000	500 / 750 / 1000	VDI40: 500 / 750 / 1000 (Opt. BMT55: 450 / 700 / 950)		750 / 1000	VDI40: 750 / 1000 (Opt. BMT55: 700 / 950)
Spindle	Chuck size	inch	6	8	6	8	10		8		10		
	Spindle nose	—	A2-5	A2-6	A2-5	A2-6	A2-8		A2-6		A2-8		
	Max. speed	RPM	6000	4500	6000	4500	3500		4500		3500		
	Spindle bearing I.D	mm	80	100	80	100	130		110		130		
	Spindle bore diameter	mm	56	66	56	66	92.2		76.2		92.2		
	Bar capacity	mm	44	51	44	51	77		65		77		
	Motor power	KW	9 / 11		9 / 11		11 / 15		11 / 15		15 / 18.5		
Travel	X axis	mm	185+15		185+15		225+20		205+25	VDI40: 165+25 (Opt. BMT55: 205+25)		205+25	VDI40: 165+25 (Opt. BMT55: 205+25)
	Z axis	mm	400 / 600		400 / 600		600 / 1000		550 / 800 / 1050		800 / 1050		
Axial feed	Rapid feed X/Z	M/min	30 / 30		30 / 30		30 / 30		20 / 24		20 / 24		
	Cutting feed X/Z	M/min	10 / 10		10 / 10		10 / 10		10 / 10		10 / 10		
Turret	Type	—	Hydraulic (Opt. Servo)		VDI30 servo (Opt. BMT45)		Servo	VDI40 servo (Opt. BMT55)	Servo	VDI40 servo (Opt. BMT55)		Servo	VDI40 servo (Opt. BMT55)
	Number of tools station	pcs	12		12		12		12		12		
	O.D tool shank size	mm	□ 20		□ 20		□ 25	□ 25	□ 25	□ 25		□ 25	□ 25
	I.D boring bar diameter	mm	Ø32		Ø25		Ø40		Ø40		Ø40		
Power turret	Max. milling speed	RPM	N/A		5000		N/A	4000	N/A	4000		N/A	4000
	Motor	KW	N/A		2.2 / 3.7		N/A	3.7 / 5.5	N/A	3.7 / 5.5		N/A	3.7 / 5.5
Tailstock	Taper	mm	MT4		MT4		MT4		MT5		MT5		
	Quill diameter	mm	75		75		75		90		90		
	Quill stroke	mm	75		75		75		102		102		
	Travel	mm	350 / 550		350 / 550		550 / 950		550 / 800 / 1050		800 / 1050		
Hydraulic system	Max. work pressure	Mpa	3		3		5		5		5		
	Max. flow rate	L/min	20		20		30		35		35		
	Tank capacity	L	30		30		50		50		50		
Others	Coolant tank capacity	L	160		160		200		250		250		
	Lubrication tank capacity	L	2		2		2		2		2		
	Air source	Mpa	0.6		0.6		0.6		0.6		0.6		
	Power requirement	KVA	25		25		30		35		35		
Machine size	Size (LxWxH)	mm	2240x1700x2020 2440x1700x2020	2300x1700x2020 2500x1700x2020	2240x1700x2020 2440x1700x2020	2300x1700x2020 2500x1700x2020	2800x2050x2250 3200x2050x2250		2900x1930x2160 3270x1930x2160 3595x1930x2160		3270x1930x2160 3595x1930x2160		
	Weight	Kg	2300 / 2500		2400 / 2600		3600 / 3900		4900 / 5400 / 6200	5400 / 6200		4900 / 5400 / 6200	5400 / 6200

• Specifications are subject to change without notice.