

SHM-W Series

FORTEX

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Once SANCO
Value Forever



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(Extendable Spindle)
SHM-W Series
CNC Horizontal Boring
& Milling Machine

SANCO[®]

SANCO Boring and Milling Machine A Tradition of Excellence

Choosing from a wide range of models, each one is quality built with many user-appreciated features.



SHM-11020RF

- Rotary table
- Fixed column
- Table size 1000 x 1200 mm
- X, Y, Z-axis travel 2000 x 1600 x 1200 mm
- W-axis travel 400 mm
- Three axes box way

SHM-11025R/11030R / 11040R

- Rotary table
- Moving column
- Table size 1400 x 1600 mm
- X-axis travel 2500 mm(SHM-11025R)
- X-axis travel 3000 mm(SHM-11030R)
- X-axis travel 4200 mm(SHM-11040R)
- W-axis travel 500 (Opt.700) mm



Photo shows machine with CE conformity chip enclosure.

SHM-11025R

SHM-13030R / 13040R

- Rotary table
- Movable column
- Table area 2000 x 1800 mm
- X-axis travel 3000 mm (SHM-13030R)
- X-axis travel 4000 mm (SHM-13040R)
- W-axis travel 700 (900) mm



Photo shows the special rotary table (Optional)

Massive Base Assures Solid Support for Heavy Loads

SHM-11025R / 11030R / 11040R

- Z-axis features 12 blocks on 3 linear ways to assure maximum smoothness of movement and excellent rigidity.
- Swiss Schneberger linear ways exhibit greater rigidity and loading capacity.
- X and Y-axis are designed with box ways, which are hardened and precision ground.

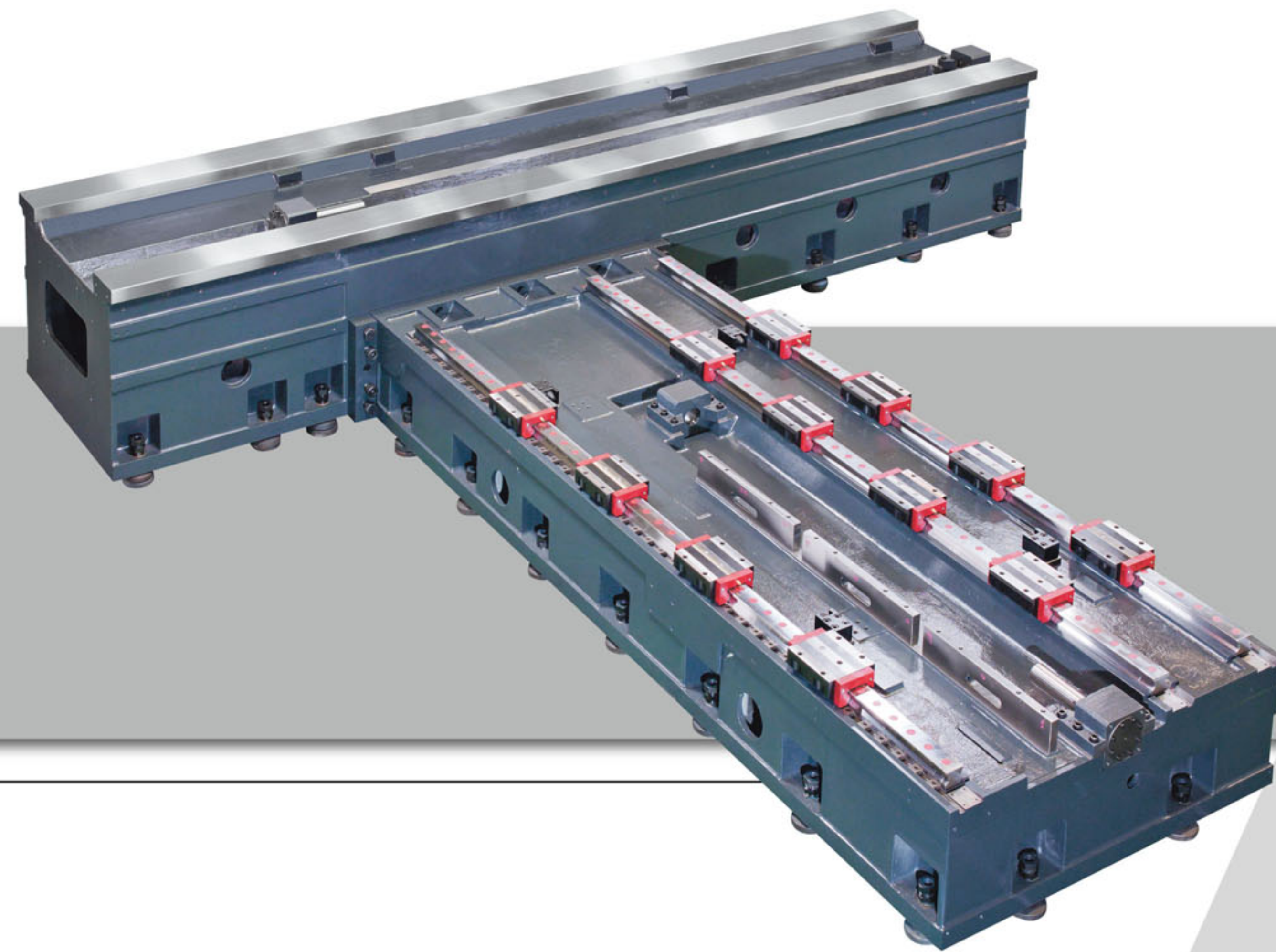


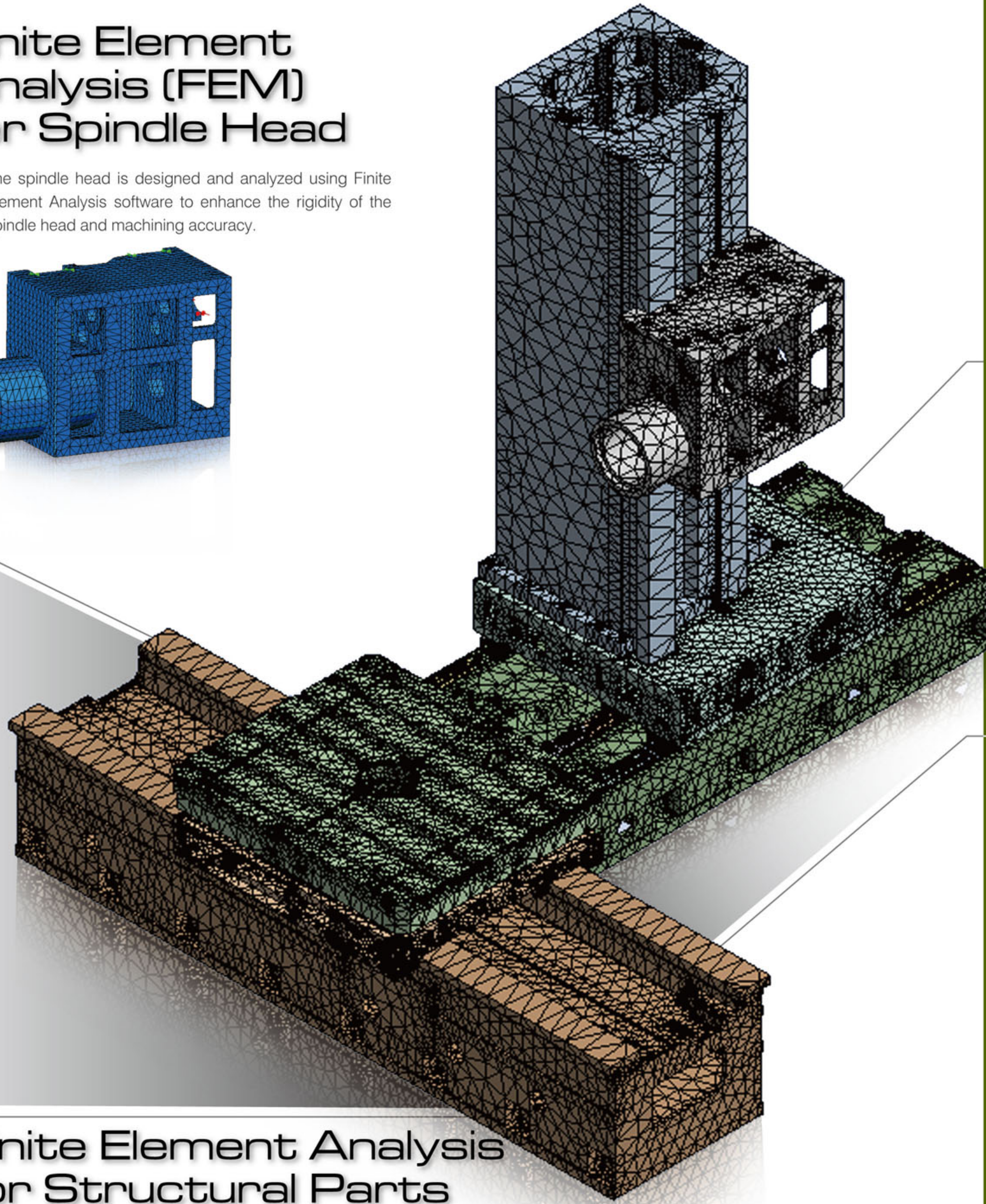
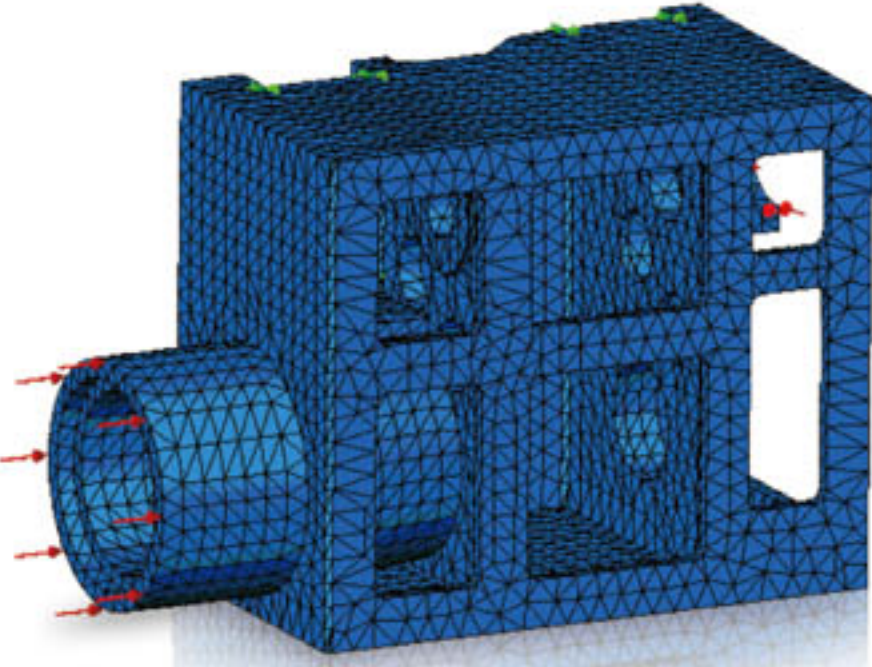
Photo shows box guideways on X axis, only applicable for machines with special rotary tables, with the auxiliary pallets attached on the both sides of rotary table.

SHM-13030R/13040R

- Linear ways on Z-axis.
- Swiss Schneberger linear ways exhibit greater rigidity and loading capacity.
- Y axis is designed with box ways.

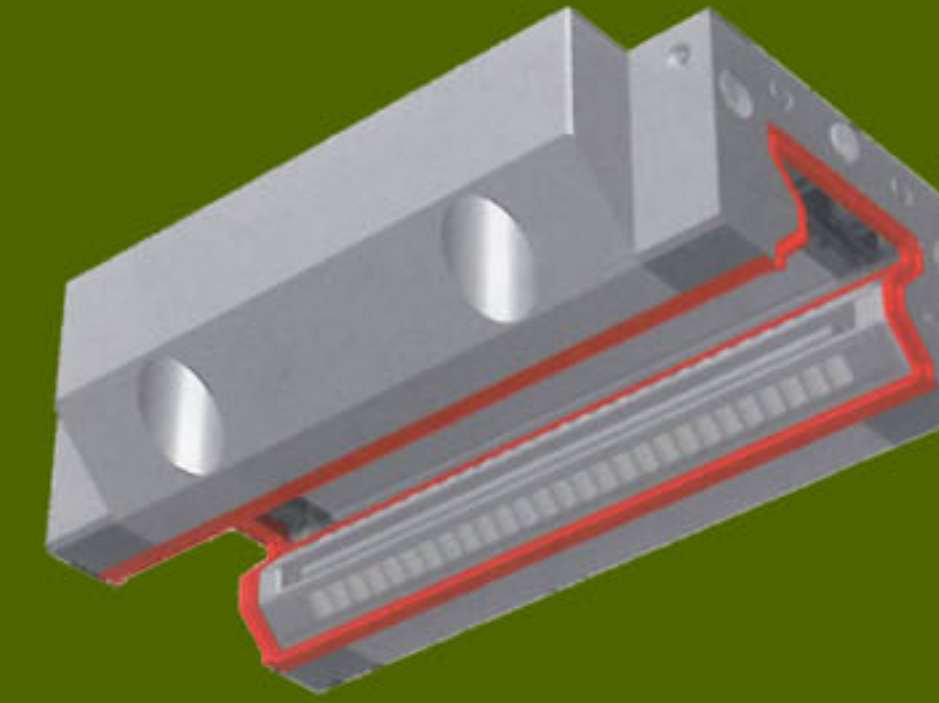
Finite Element Analysis (FEM) for Spindle Head

The spindle head is designed and analyzed using Finite Element Analysis software to enhance the rigidity of the spindle head and machining accuracy.



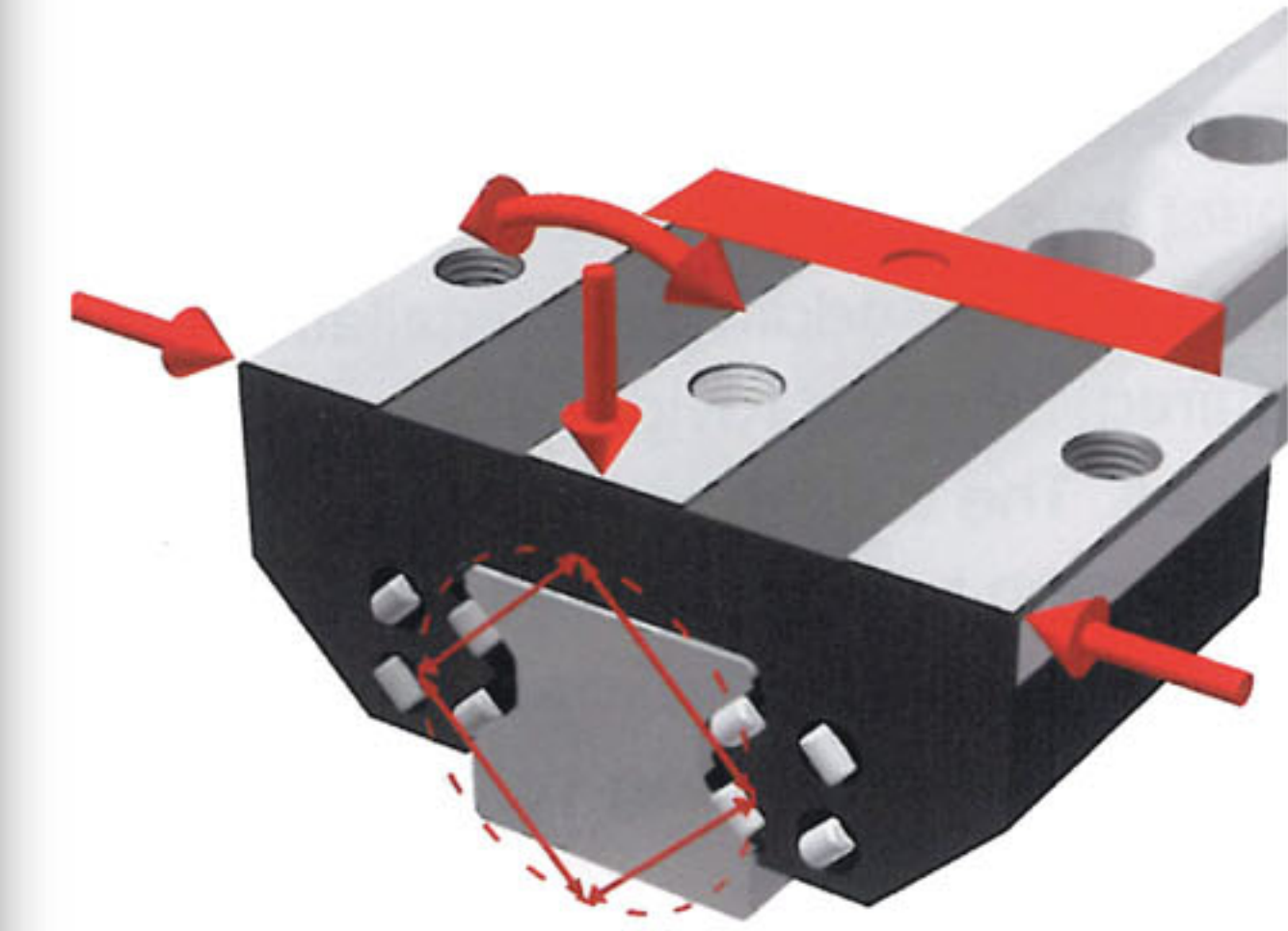
Finite Element Analysis for Structural Parts

The major structural parts on the SANCO Horizontal Boring & Milling Machine are carefully designed and analyzed using Finite Element Analysis (FEM) software. With the FEM analysis, each machine will exhibit excellent rigidity, stability and lifetime accuracy.



Excellent Sealing Effect

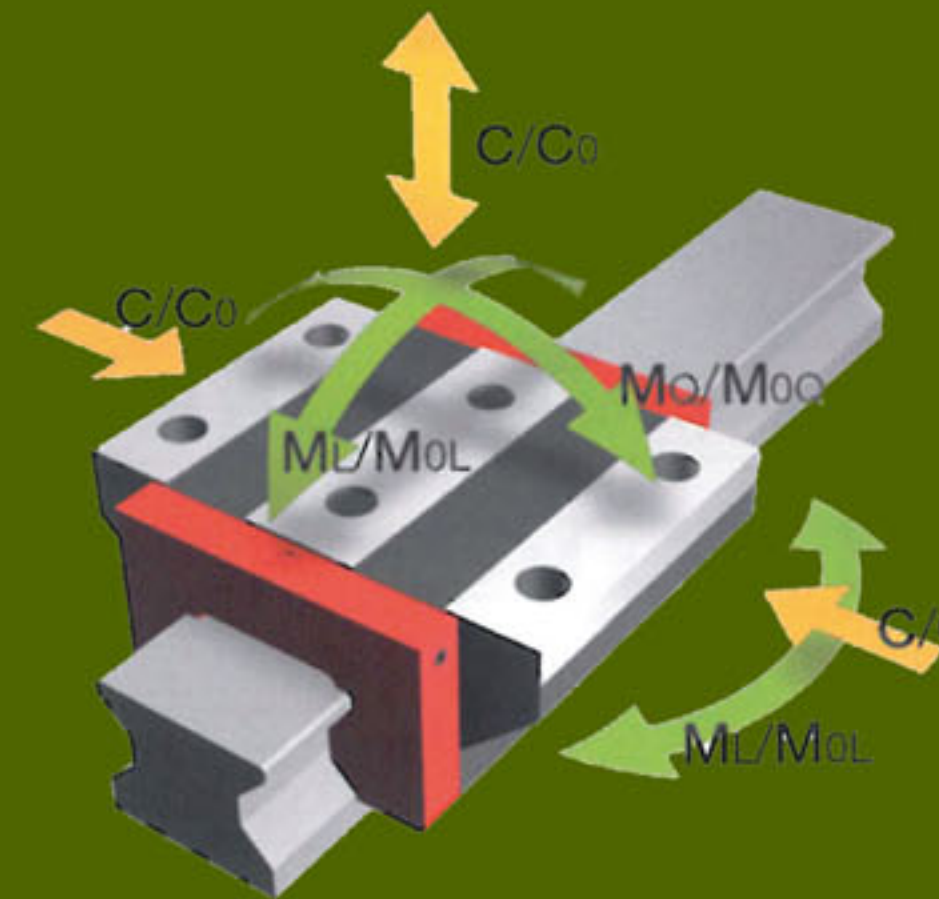
The additional sealing on the gaps between the front plate and the steel body provide an excellent sealing effect. This prevents dust from entering, maintains lubrication levels and increases machine service life.



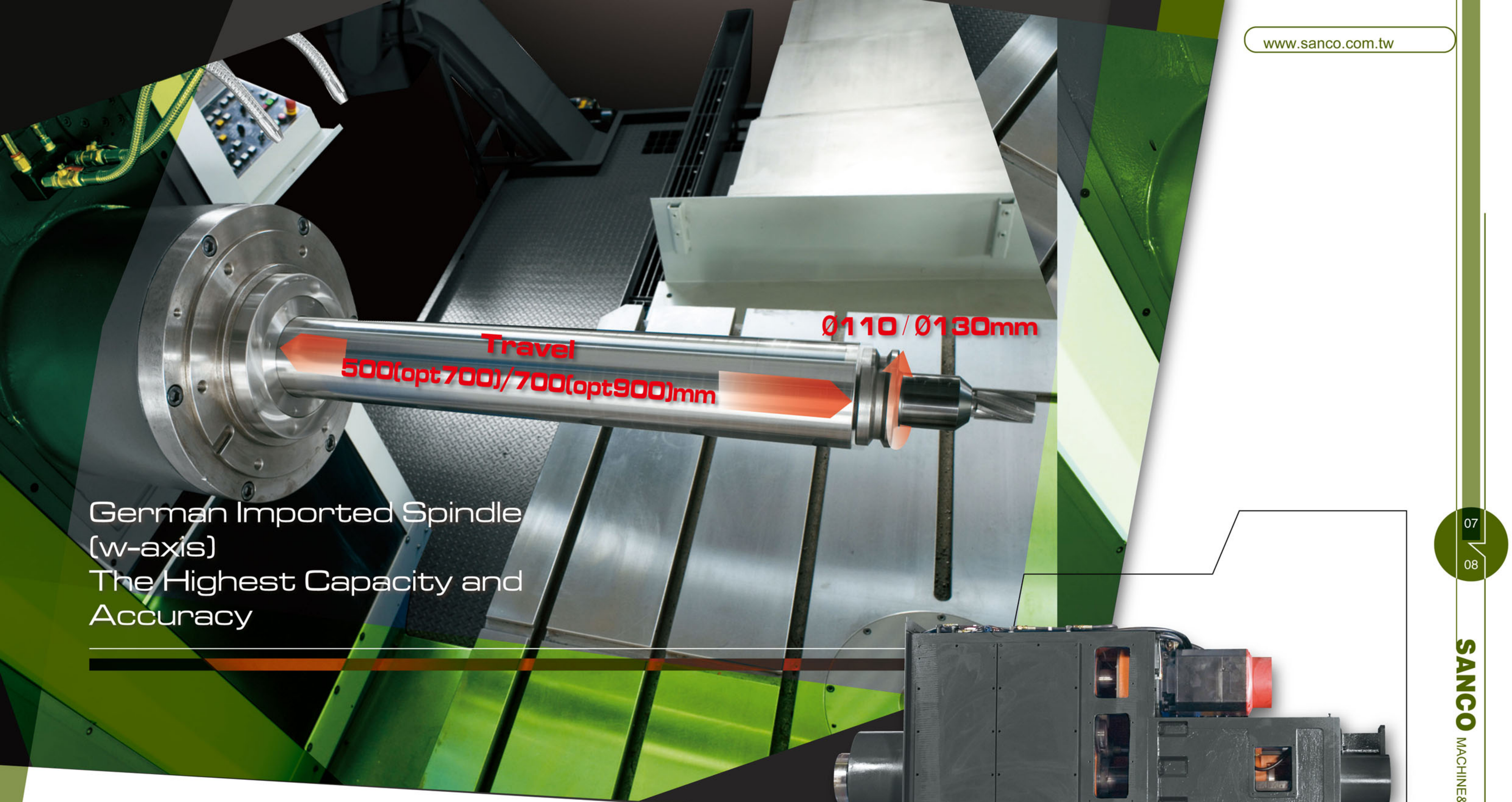
Features of the Swiss Schneebberger linear way

Unique "O" Arrangement of Guideway

Extra large internal spacing of the loading surfaces results from "O" arrangement of the guideway. This combined with 90° offset roller tracks assure uniform and greater force absorption in all directions, ensuring increased rigidity of movement.



MR65 Load Rating Figure



German Imported Spindle (w-axis) The Highest Capacity and Accuracy

Top Performance Spindle

The German imported spindle (w-axis) exhibits exceptionally high precision and rigidity. The spindle diameter is 110 mm or 130 mm, allowing heavy cutting with maximum stability.

W-axis Travel

- 400 mm on fixed column machines.
- 500 (700) mm for 110 mm spindle on moving column machines.
- 700 (900) mm for 130 mm spindle on moving column machines.

Short Distance from Spindle Nose to Table Center

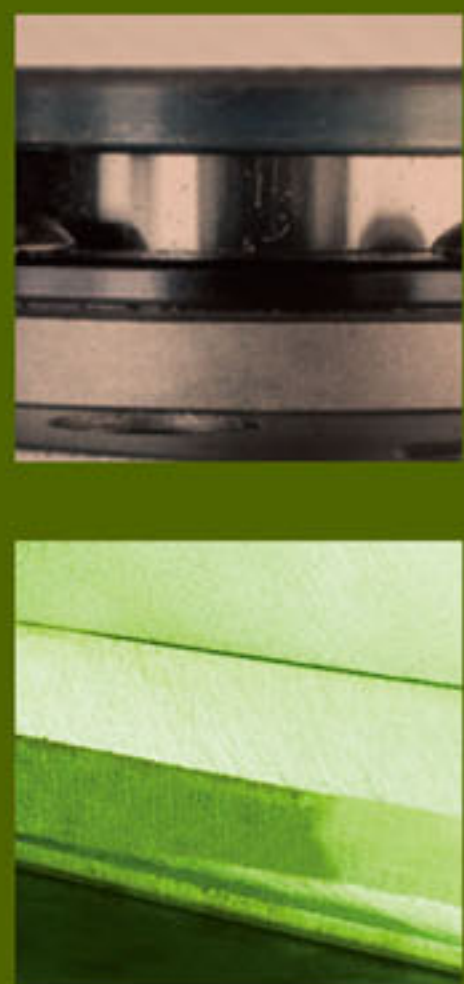
- The 350 mm spindle sleeve allows for a shortened distance from the spindle nose to the center of the table. This feature provides improved stability when performing heavy cutting.

Powerful Gearbox

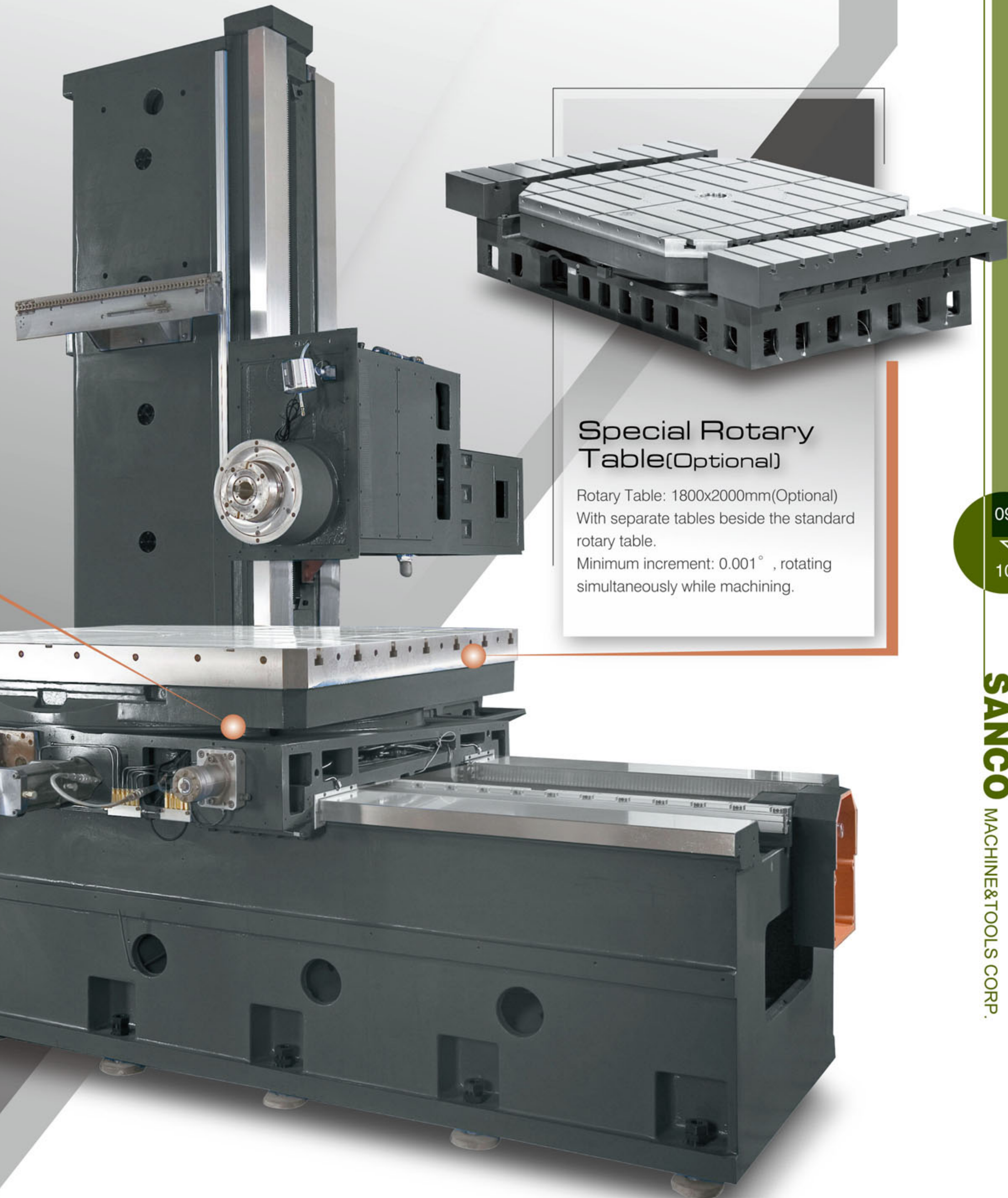
- The spindle head driven via gear box enables the machine to perform heavy cutting with ease.
- All gears used in the gearbox are of the highest quality, featuring smooth and quiet transmission at all times.

High Positioning Accuracy on Rotary Table

The rotary table is driven by dual lead worm gear and worm shaft to minimize backlash, resulting in high positioning accuracy on the rotary table.

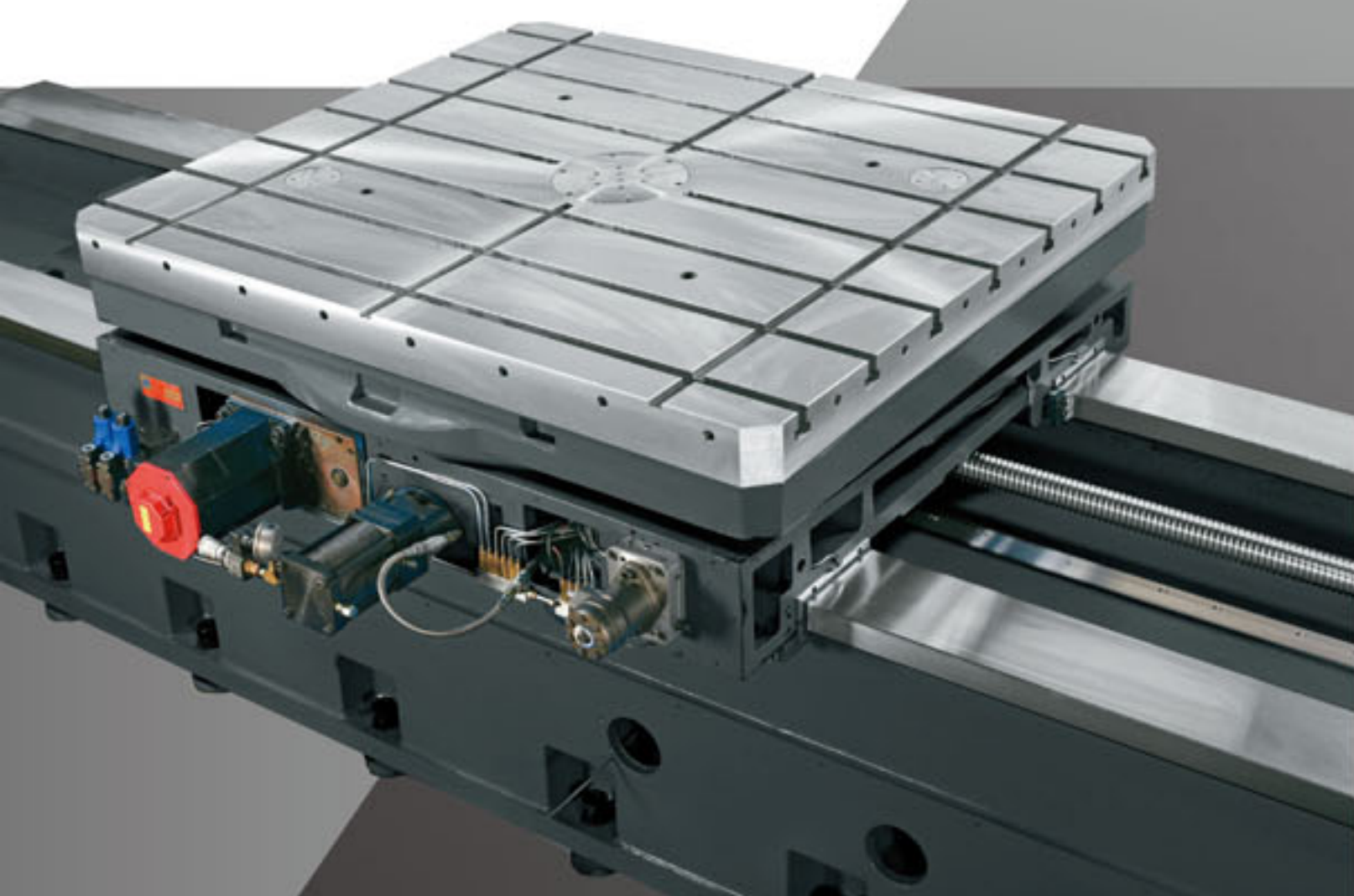


The optional special rotary table is available for models: SHM-13030R and SHM-13040R only.



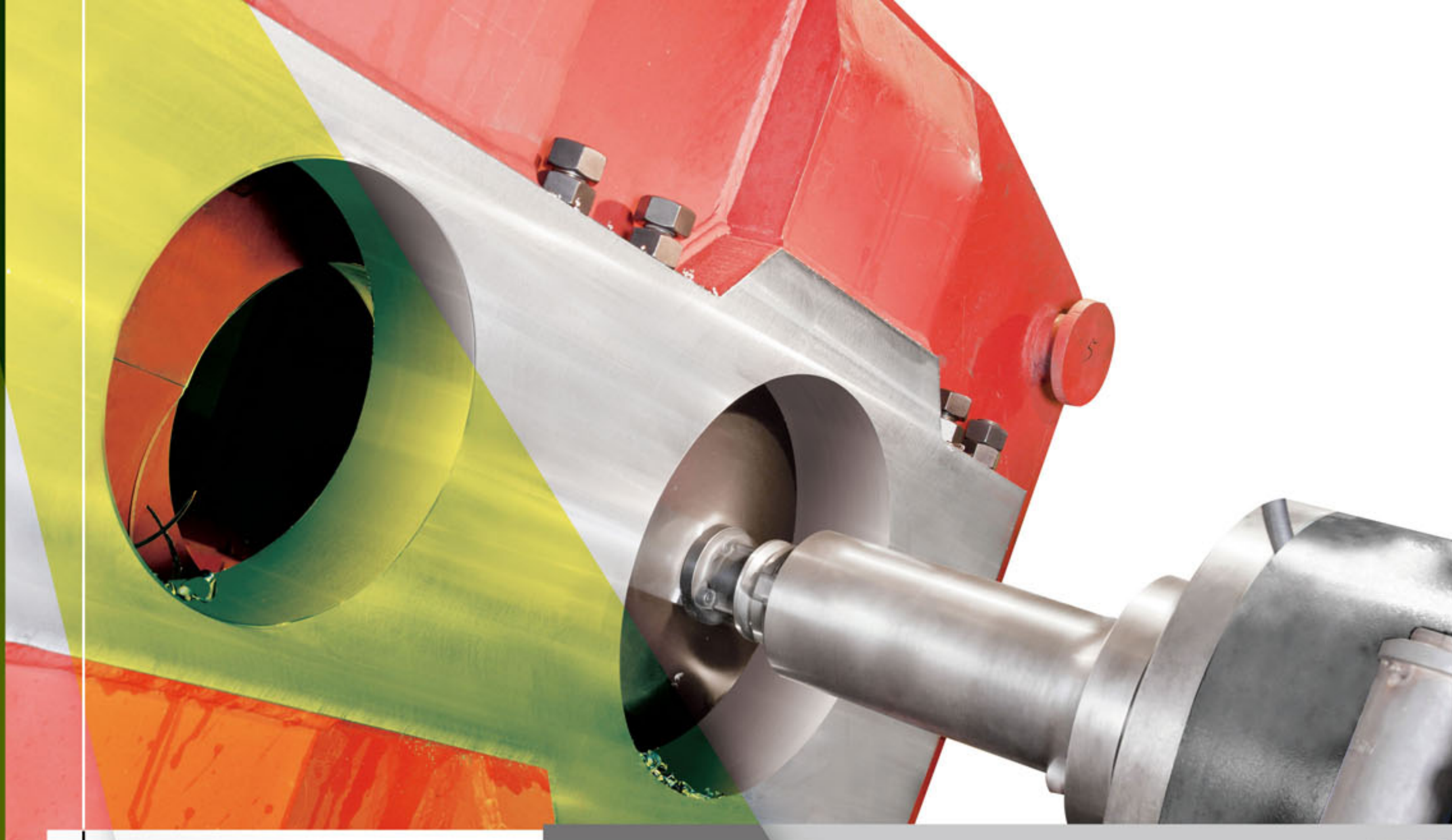
Special Rotary Table(Optional)

Rotary Table: 1800x2000mm(Optional)
With separate tables beside the standard rotary table.
Minimum increment: 0.001°, rotating simultaneously while machining.



Direct Drive Rotary Table

- The rotary table size is 1600 x 1400 mm
- 0.001° table indexing
- Additional table locking at every 90° to improve angular accuracy
- Table loading capacity is up to 7000 kg



Tool

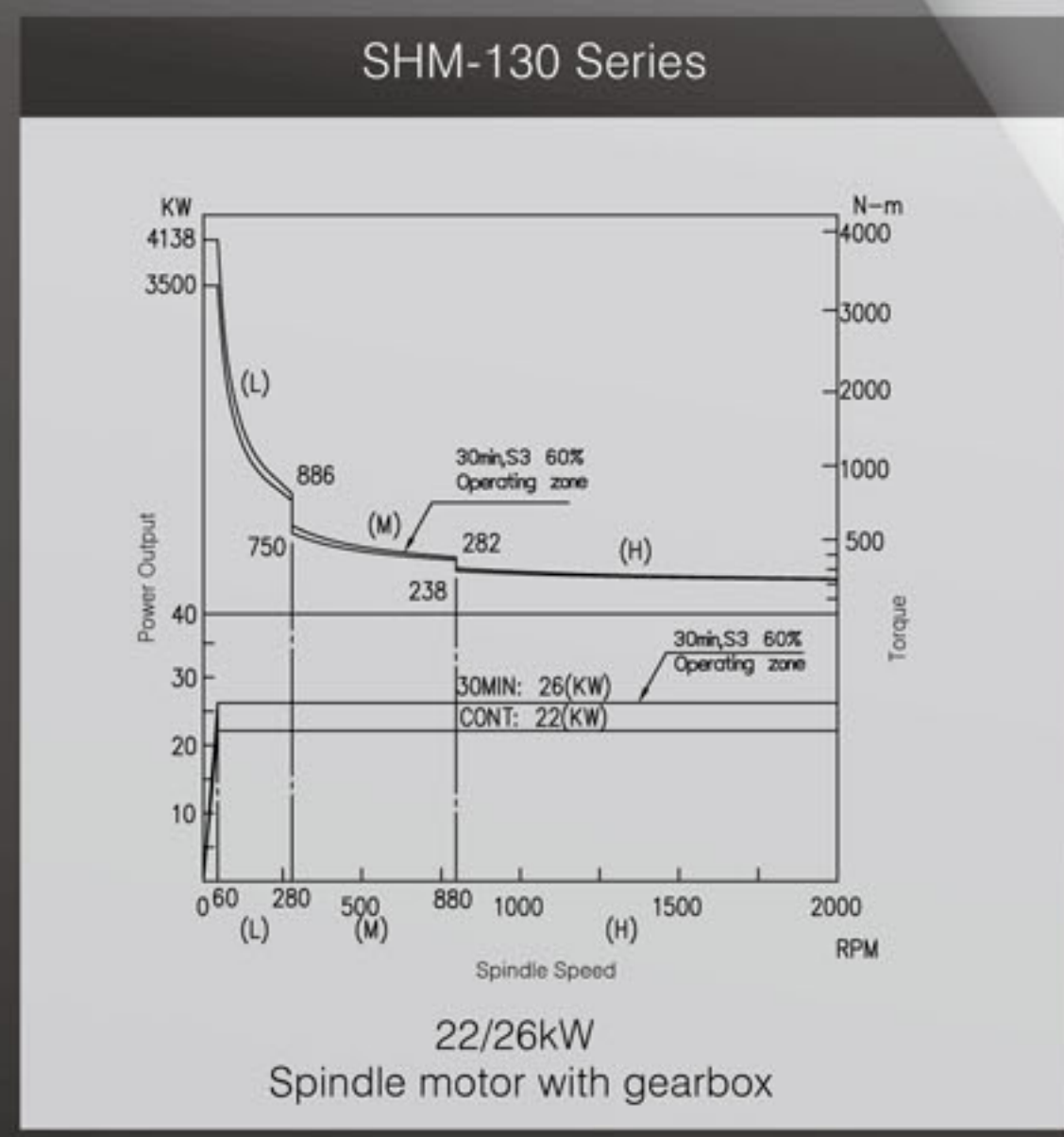
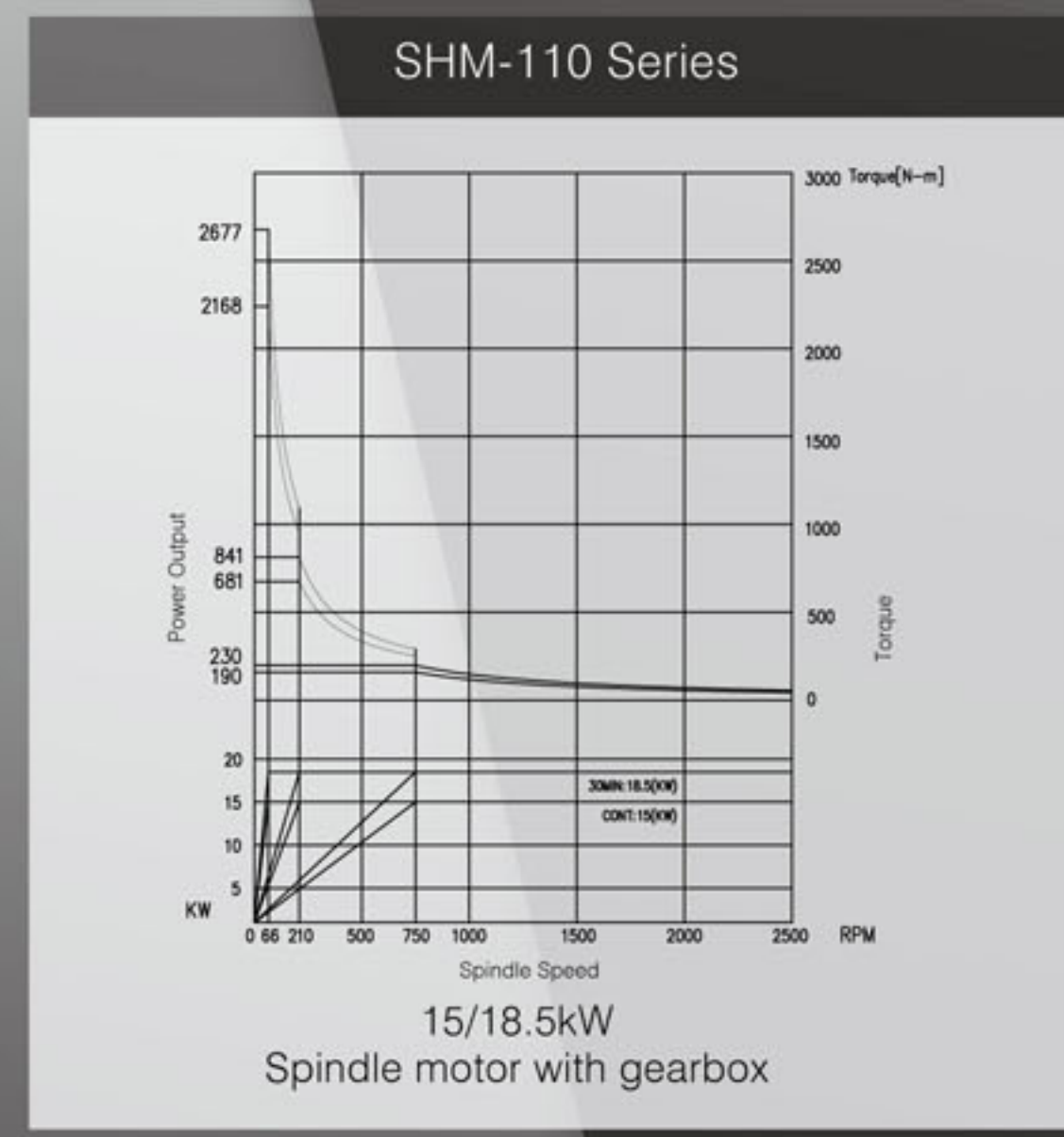
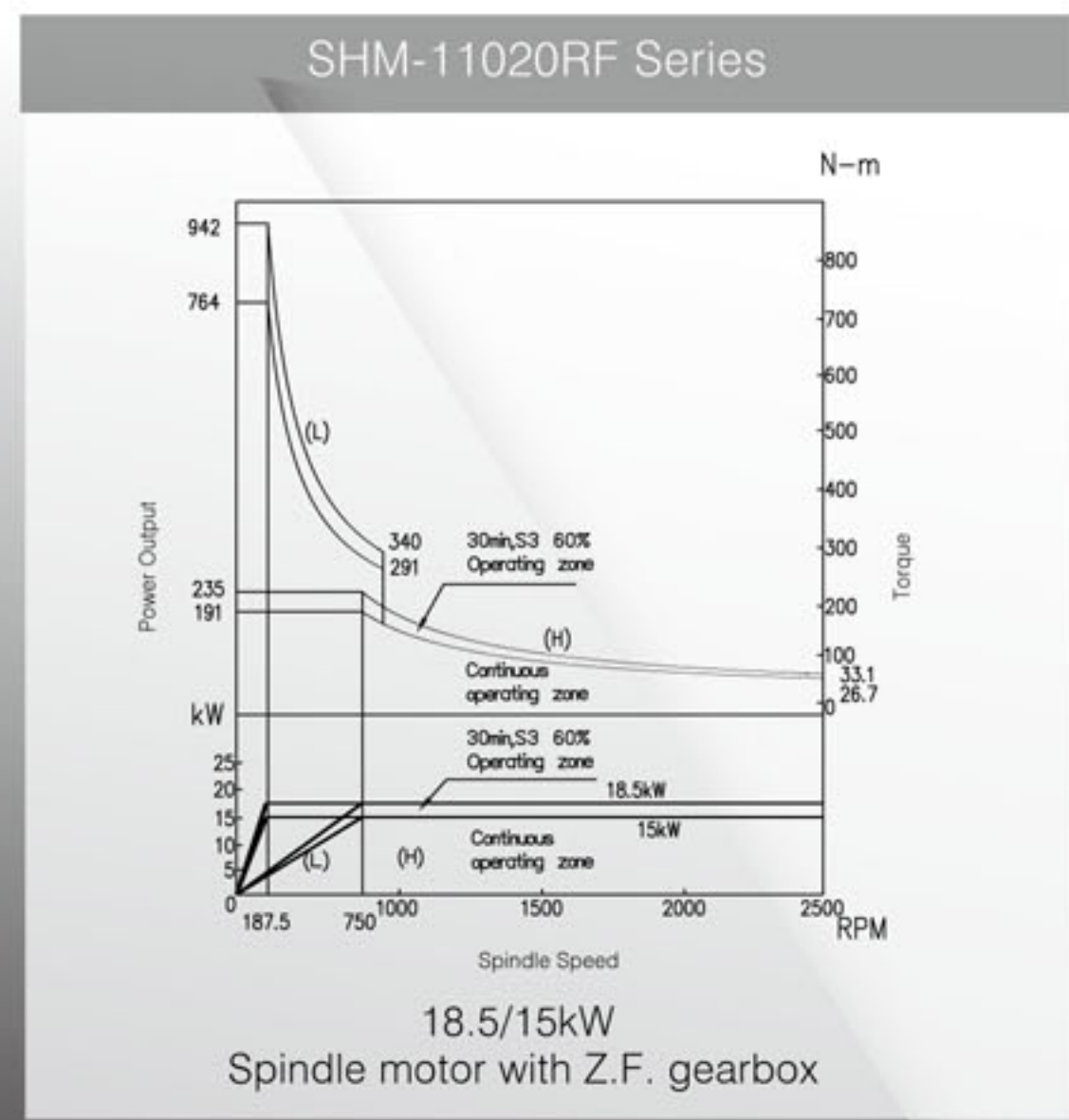
- Choice of 40, 60, 90 or 120 tools magazine.
- BT-50 or CAT-50 tool shank is available.

Spindle Speed / Output Diagram

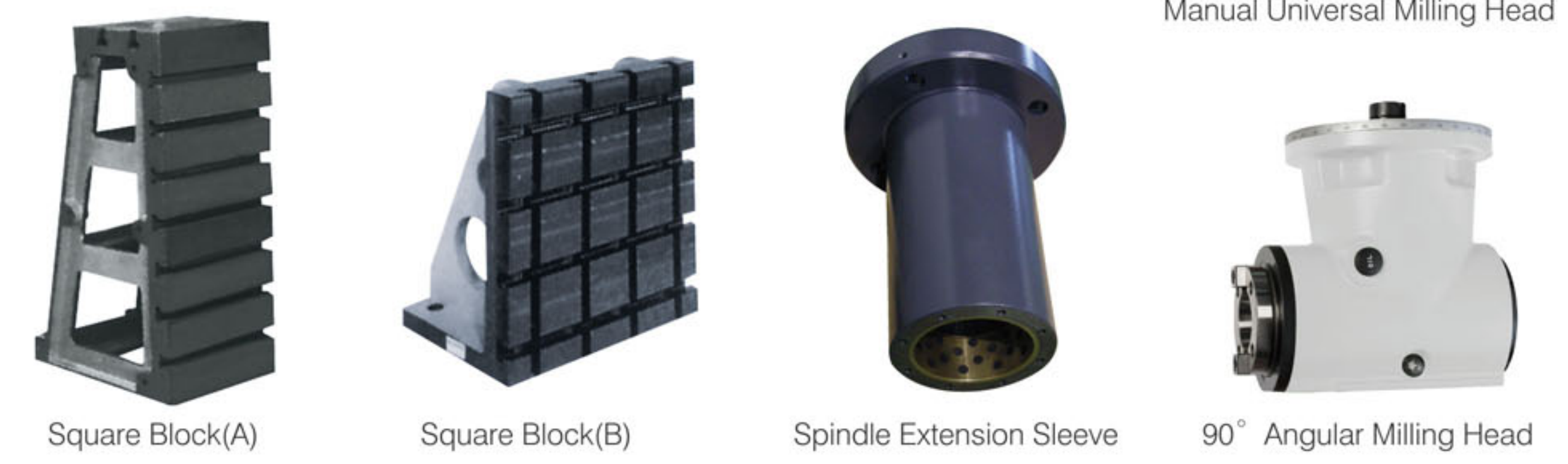
SPINDLE 2,500 RPM
SHM-110 series

SPINDLE 2,000 RPM
SHM-130 series

FANUC i Series
Spindle Motor



Optional Accessories



Various State-of-The-Art CNC Controllers to Choose From



CNC Horizontal Boring & Milling Machine with Extendable Spindle

This model is available with optional rectangular type work tables

- SHM-11020**
- SHM-11030**
- SHM-11040**

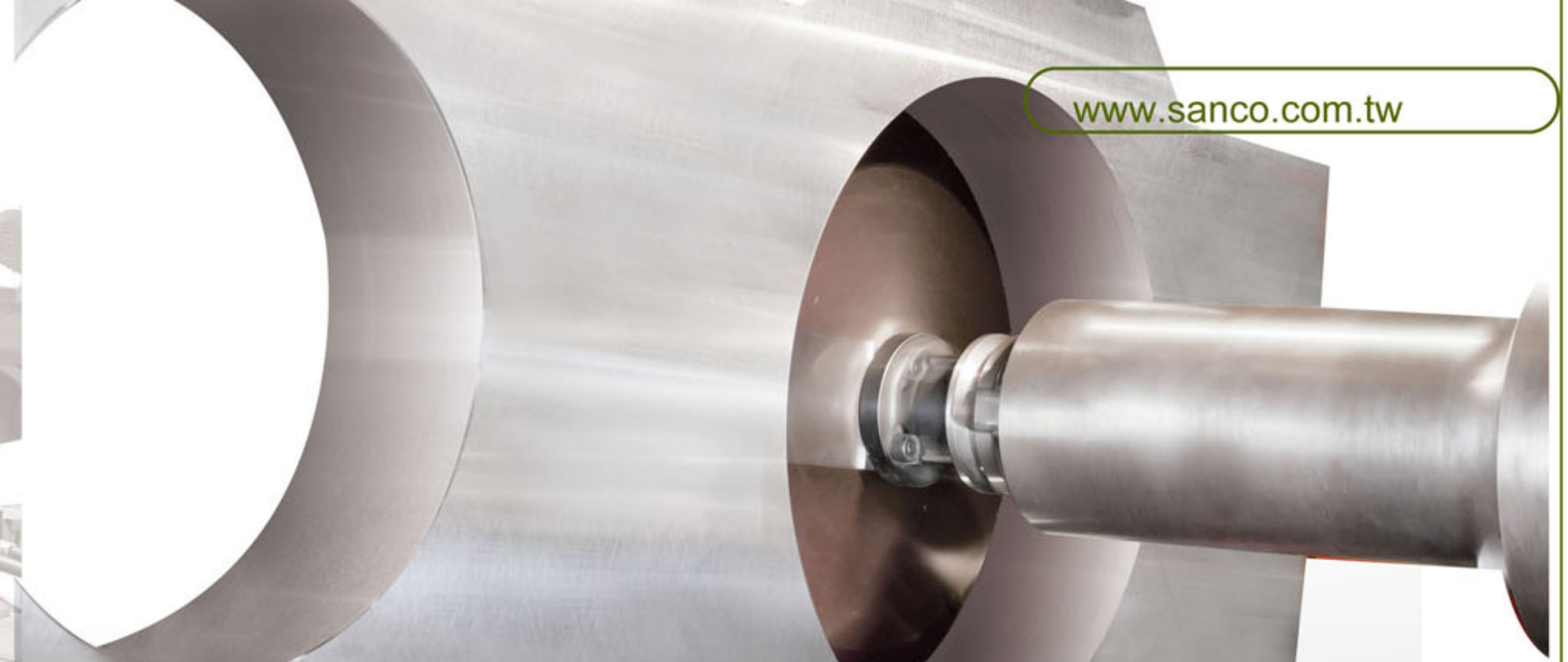


Table Dimensions

- 2000x1400(mm), X Axis Travel 2160 mm
- 3000x1400(mm), X Axis Travel 3200 mm
- 4000x1400(mm), X Axis Travel 4200 mm

Note: X axis with linear guide way when using rectangular table.

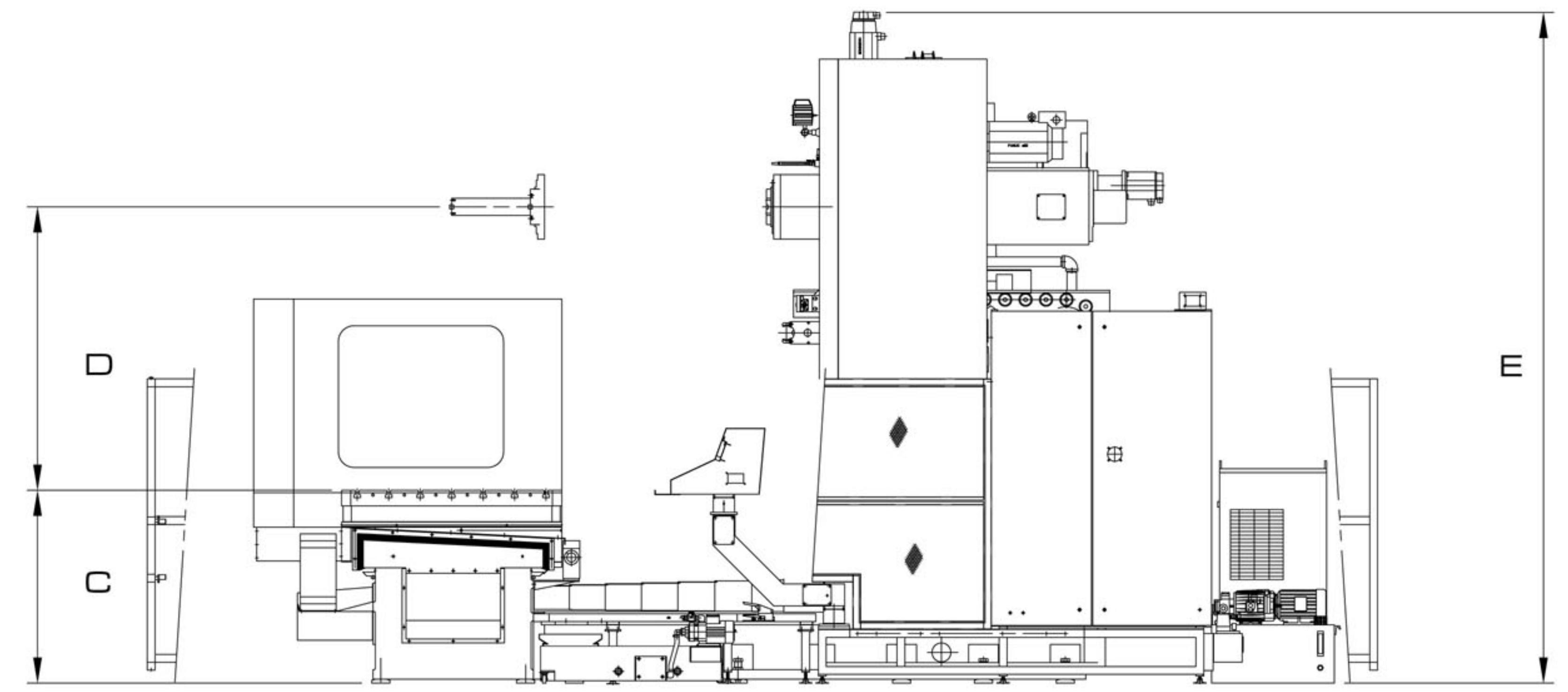
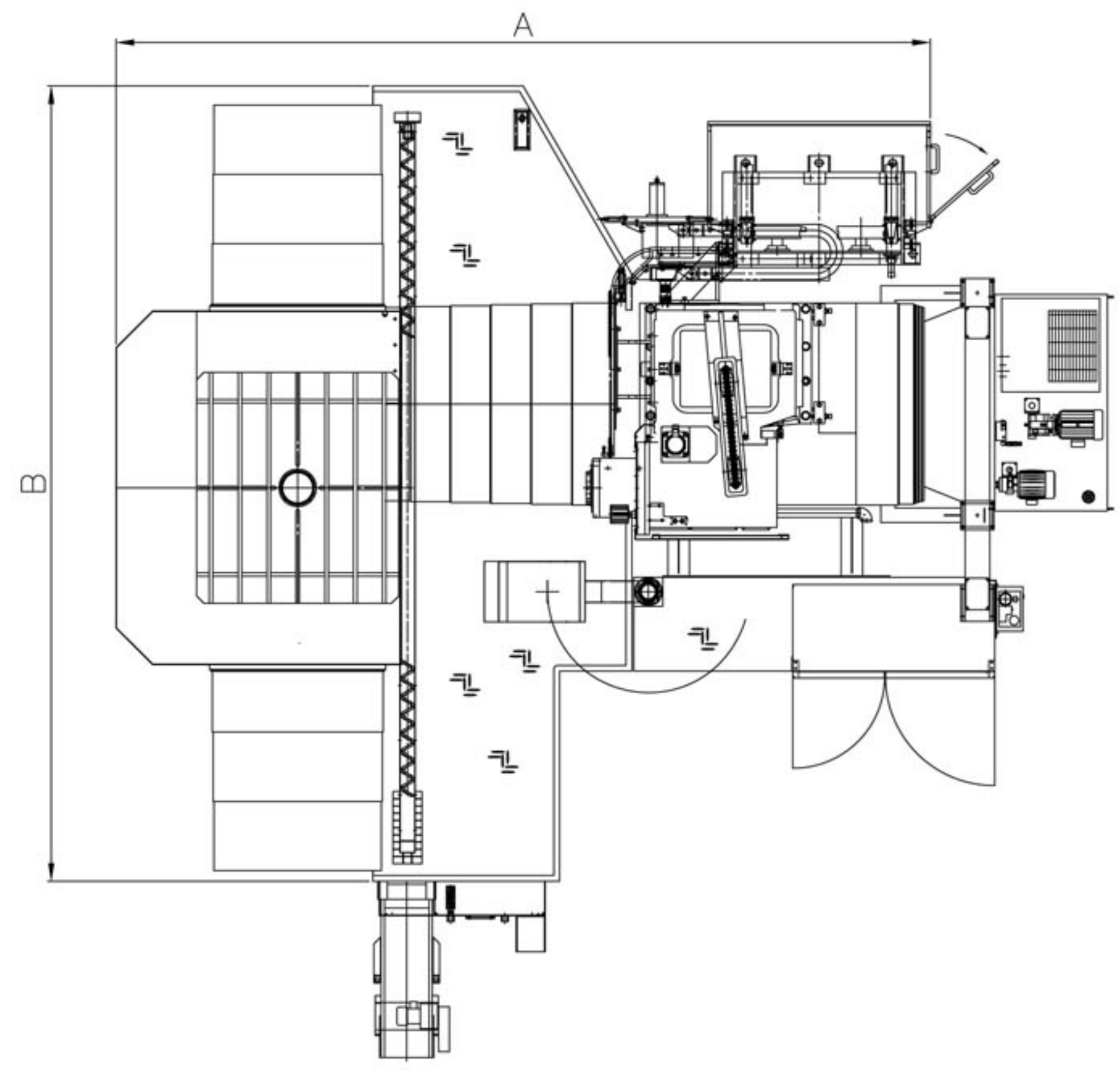


Optional: Separate rotary table on rectangular table.

SANCO CNC Horizontal Boring & Milling Machine (Extendable Spindle)

Designed and built to deliver unparalleled capacity, accuracy and efficiency.

Machine Dimensions



Floor Space & Layout:

單位 : mm

Floor Space	A	B	C	D	E
	Machine Length	Machine Width	Table Height	Spindle Nose to Table Top	Machine Height
SHM-11020	6910	5925	1225	1800	4300
SHM-11030	7110	8035			
SHM-11040			10490	1225	1800
SHM-11025R	6820	6200			
SHM-11030R		6700			
SHM-11040R		7910			
SHM-13030R	7600	8000	1430	2500	5250
SHM-13040R		9000			

Machine Specifications

MODEL	UNIT	SHM-11025R	SHM-11030R	SHM-11040R	SHM-11020RF	SHM-11020	SHM-11030	SHM-11040	SHM-13030R	SHM-13040R				
工作台														
Overall size	mm	1,400 x 1,600			1,000 x 1,200		2,000 x 1,400		3,000 x 1,400		4,000 x 1,400		2,000 x 1,800	
T-Slots	mm	24 x 7			22 x 9		22 x 9		22 x 9		28 x 9		28 x 9	
Height from ground	mm	1,225			1,240		1,225		1,225		1,430		1,430	
Maximum load	kg	7,000			4,000		7,000		9,000		10,000		15,000	
B-Axis min. Increment	°	0.001° Automatic 4 Positions (90°)									0.001° Automatic 4 Positions (90°)			
TRAVEL														
X axis travel	mm	2,500	3,000	4,200	2,000	2,160	3,200	4,200	3,000	4,000				
Y axis travel	mm	1,800 (2,000)			1,600		1,800(2,000)		2,500 (3,000)					
Z axis travel	mm	1,500 (1,700)			1,200 (1,400)		1,500(1,700)		1,700					
W axis travel	mm	500 (700)			400		500(700)		700 (900)					
SPINDLE														
Diameter	mm	∅ 110					∅ 110		∅ 130					
Speed	rpm	5-2,500					5-2,500		2,000					
Taper	mm	TAPER 7/24					TAPER 7/24		TAPER 7/24					
FEED RATE														
Rapid feedrate X / Y / Z	mm/min	10,000					10,000		10,000					
Rapid feedrate W	mm/min	5,000					5,000		2,000					
Minimum setting	mm/min	0.001					0.001		0.001					
Cutting feedrate	mm/min	5,000					5,000		5,000					
MOTOR														
Spindle (30 min. cont.)	kW	15 / 18.5 (22 / 26)					15 / 18.5 (22 / 26)		22 / 26					
Axis X / Y / Z / W / B	kW	7 / 7 / 9 / 3 / 7			7 / 7 / 7 / 3 / 7		7 / 7 / 9 / 3		9 / 7 / 9 / 3 / 7					
ATC														
No. of tools	Tools	40 (60 / 90 / 120)					40 (60 / 90 / 120)		40 (60 / 90 / 120)					
Taper		MAS BT-50 (DIN69871)					MAS BT-50 (DIN69871)		MAS BT-50					
Pull stud		MAS P50T-1 (DIN69872)					MAS P50T-1 (DIN69872)		MAS P50T-1					
Tool Selection		Absolute					Absolute		Absolute					
Tool change (Tool to Tool)	sec	15					15		15					
Diameter of Max. tool	mm	∅ 125 / ∅ 245					∅ 125 / ∅ 245		∅ 125 / ∅ 245					
Max. tool length	mm	400					400		400					
Max tool weight	kg	35					35		35					
MISCELLANEOUS														
Power Supply	kVA	45					45		55					
Hydraulic tank capacity	L	260					260		260					
Coolant tank capacity	L	400					400		400					
Lubrication unit	L	8					8		8					
Machine weight (Approx.)	kg	32,000	33,000	34,000	21,000	31,000	33,000	35,000	42,000	46,000				
CNC control		32i-B					32i-B		32i-B					

Standard Accessories

- Coolant tank
- Spindle lubrication system
- Linear scale on X, Y, & Z axes
- Lubrication system
- Chip augers & conveyor
- NC pilot lamp
- RS-232 & RJ-45 Socket
- Operator manual with electrical circuit diagram
- Foundation bolts & pad
- Tool box

Optional Accessories

- Air conditioned electrical cabinet
- Square block: (A) 600 x 600 x 900 mm
(B) 800 x 500 x 800 mm
- Rotary table (Simultaneously rotating while machining)
- ATC with 60, 90 or 120 tools
- Various type of controller
- Spindle extension sleeve
- 90° milling head
- Universal milling head (VAR-3, Spanish)
- W-axis travel extendable to 700 mm
(Except FBM-11020RF)
- Coolant through spindle