

## Quality & Productivity Specialist

### QUALITY ASSURANCE

Far East Machinery uses standardized manufacturing and quality control procedures tailored to the specific characteristics of each Horizontal Boring Mill model in order to maximize precision and reliability. Our Quality Assurance Specialists use the latest in inspection technology and software for optimum quality assurance.

All machines manufactured by Far East Machinery are built according to established international quality standards.

All Horizontal Boring Mills are QA inspected with the finest of precision instruments before shipment to ensure the machines' accuracy and performance.

All machines manufactured by Far East Machinery conform with ISO 9001 international quality standards.

*All machines manufactured by Far East Machinery confirm the international testing standards.*



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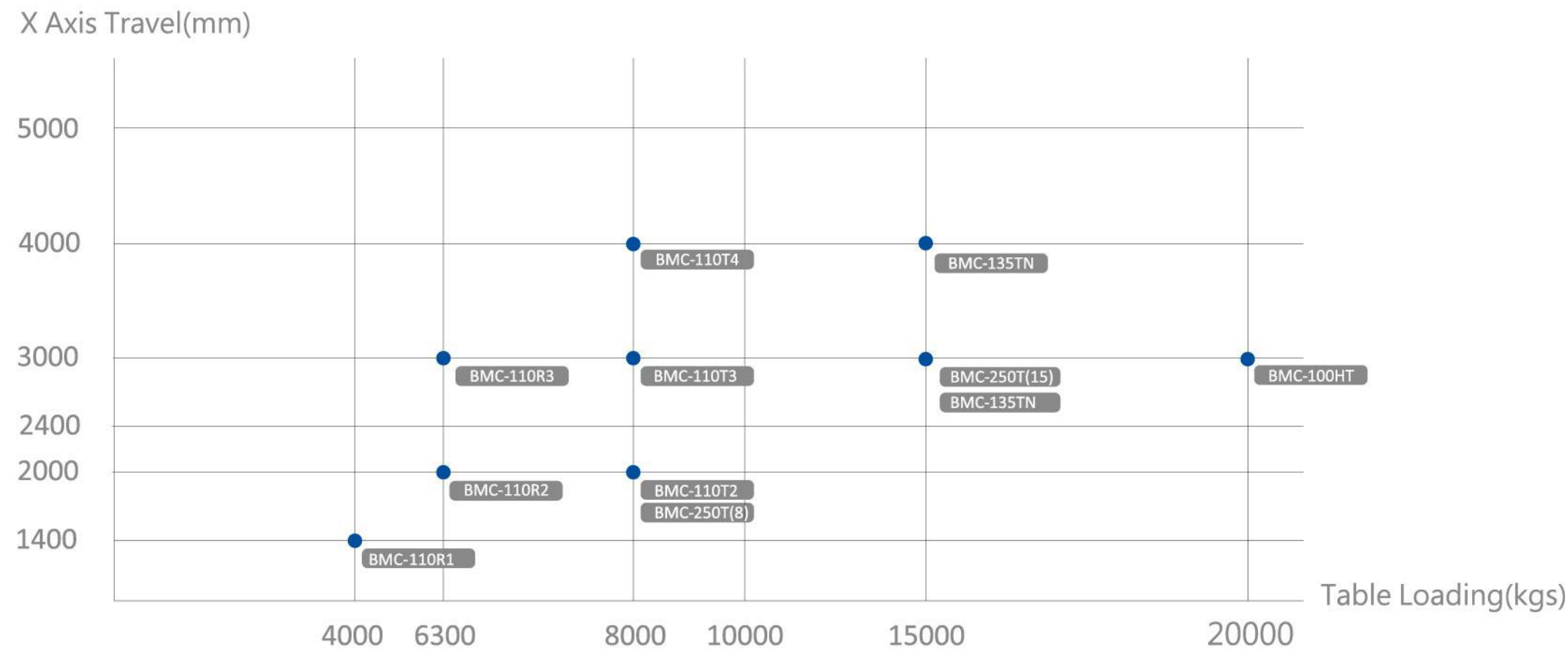
Quality & Productivity Specialist  
**FEMCO**  
SINCE 1949

**FATEK**

**FEMCO GROUP**  
MACHINE TOOLS

**CNC HORIZONTAL BORING & MILLING MACHINE**

[www.FATEK.com.tw](http://www.FATEK.com.tw)



Fixed column construction. High precision. High efficiency

BMC-R Series Features

- 1 All primary structural components are composed of high quality cast iron
- 2 Fixed column construction
- 3 Controlled 5 Axis (X,Y,Z,W,B), 4 Axis Simultaneous
- 4 Maximum table size 1440mm X 1600mm
- 5 B-Axis design integrates two worm gears to minimize backlash; incorporates high precision encoder (rotary scale) for 0.001 degree precision table rotation
- 6 X-Axis Maximum Travel to: 3000mm  
Y-Axis Maximum Travel to: 1780mm  
Z-Axis Maximum Travel to: 1650mm
- 7 W-Axis: 500mm (BMC-110series)
- 8 X, Y, Z Axis Linear Scales (Standard)
- 9 Spindle constructed of wear resistant, high tensile strength alloy steel with a Hardness of more than HV1000
- 10 Spindle Max. Speed: 2500 RPM (3000 RPM Option)
- 11 Spindle Max. Torque: 1504Nm (2792Nm 30/37 kW Spindle Motor Option)
- 12 FANUC Control Standard (Heidenhain, Siemens Option)
- 13 Table Load Max. Capacity to: 6,300 Kgs
- 14 Optional Spindle Extension Sleeve for increased rigidity with extended W-Axis

## BMC-110R1



## BMC-110R2/R3



Traveling Column Design  
High Table Load Capacity

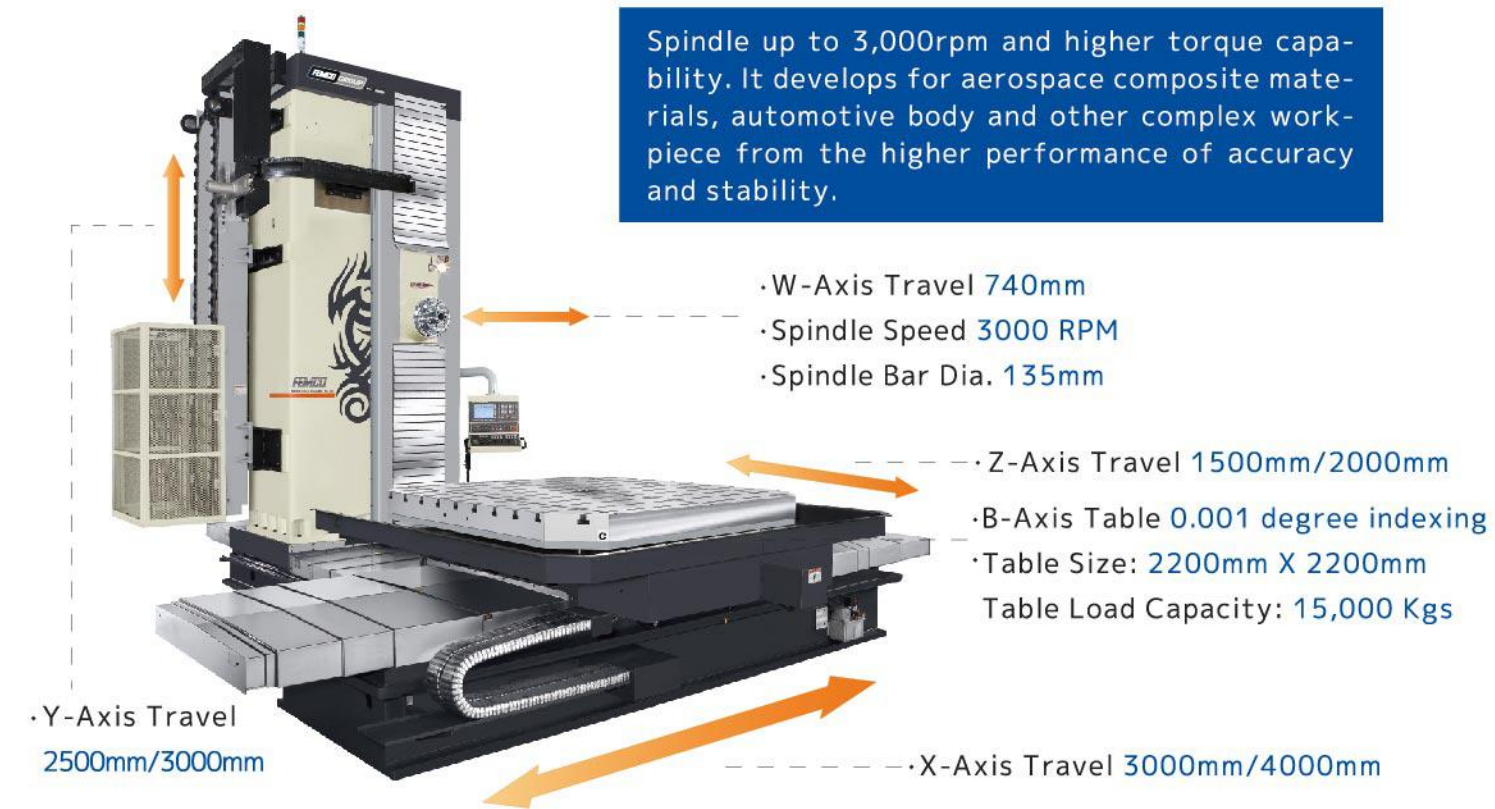
## BMC-T series Features

1	All primary structural components are composed of high quality cast iron
2	Traveling Column Design, High Table Load Capacity, Rigid Construction
3	Controlled 5 Axis (X,Y,Z,W,B), 4 Axis Simultaneous
4	Maximum table size 1440mm X 1600mm
5	B-Axis design integrates two worm gears to minimize backlash; incorporates high precision encoder (rotary scale) for 0.001 degree precision table rotation
6	X-Axis Maximum Travel to: 4000mm Y-Axis Maximum Travel to: 2050mm Z-Axis Maximum Travel to: 1500mm
7	W-Axis Travel: 500mm (BMC-110series)
8	X, Y, Z Axis Linear Scales (Standard)
9	Spindle constructed of wear resistant, high tensile strength alloy steel with a Hardness of more than HV1000
10	Spindle Max. Speed: 2500 RPM (3000 RPM Option)
11	Spindle Max. Torque: 1504Nm (2792Nm 30/37 kW Spindle Motor Option)
12	FANUC Control Standard (Heidenhain, Siemens Option)
13	Table Load Max. Capacity to: 8,000 Kgs
14	Optional Spindle Extension Sleeve for increased rigidity with extended W-Axis

BMC-110T2/T3/T4

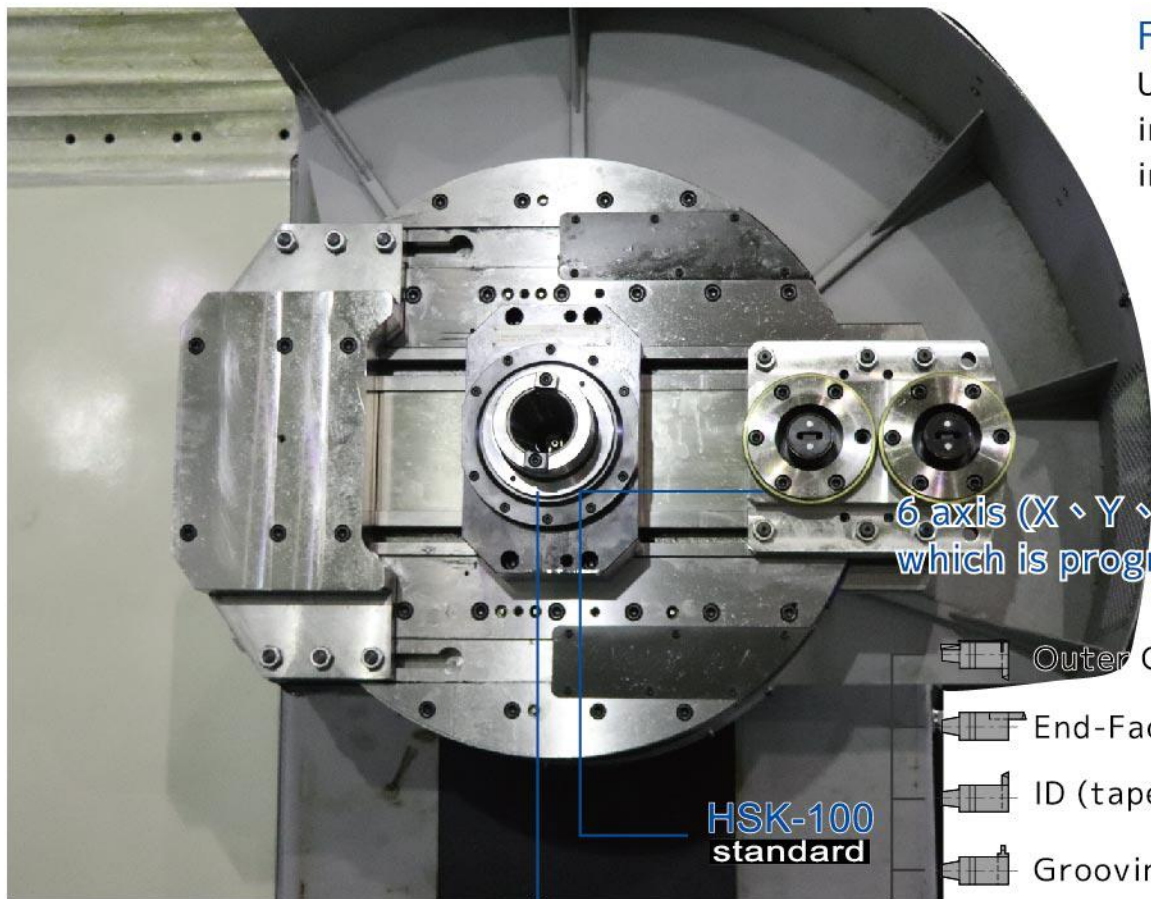


BMC-135TN



Suitable for large workpieces heavy boring and milling

Available on all models with 110mm Spindle Bar Dia.



**FT TYPE Column-Moving Special features**

Use for corner machining, internal/external taper machining, ID/OD grooving and facing on valve body, pump housing, fitting and turbine housing.

6 axis (X、Y、Z、W、B、U) independent NC which is programmable for all shapes of workpiece.

- Outer OD (taper、sphere、contour)
- End-Face (chamfer、groove)
- ID (taper、sphere、shape)
- Grooving (ID, OD groove)
- Threading (ID, OD thread)

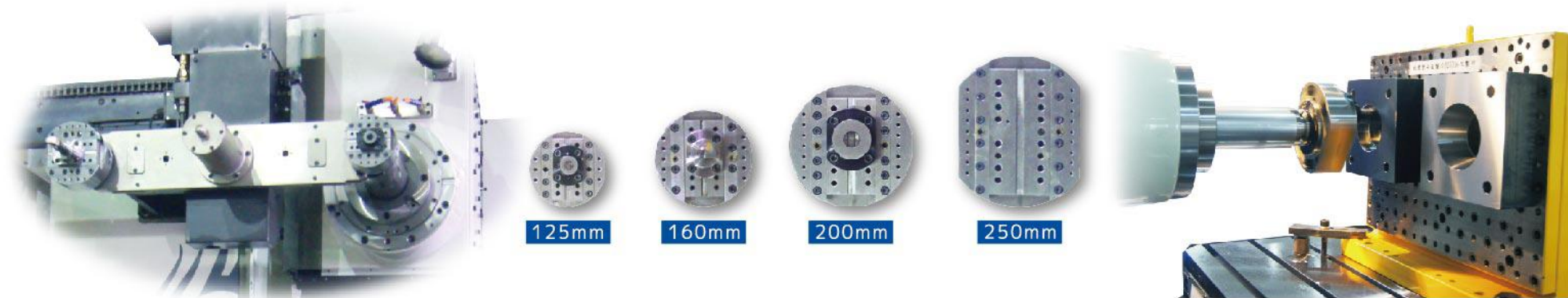
- Facing Milling
- Boring
- Tapping
- Tapping
- End-Mill
- Milling & Grooving

HSK-100 standard

standard

ISO-50

Ø125mm ~ Ø250mm, suitable for Spindle 110mm model (REMARK)



**Unique Facing Tools designed for use with Automatic Tool Changer and to be stationed in ATC Magazine for flexible part processing**

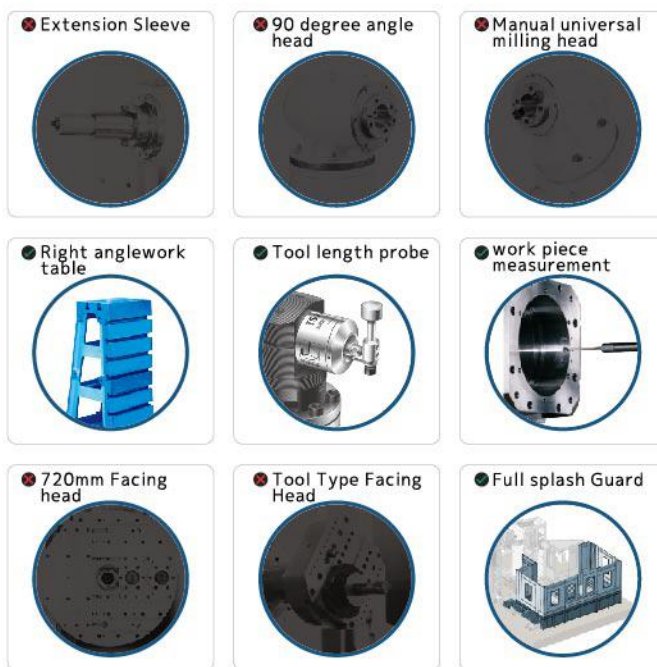
Tool Type Facing Heads of various sizes are an exclusive FEMCO patented design.

FEMCO offers 4 different Facing Head sizes with U-Axis for machining various bore features. These Facing Heads suitable for machining smaller diameters allow the use of the ATC for increased machining efficiency.



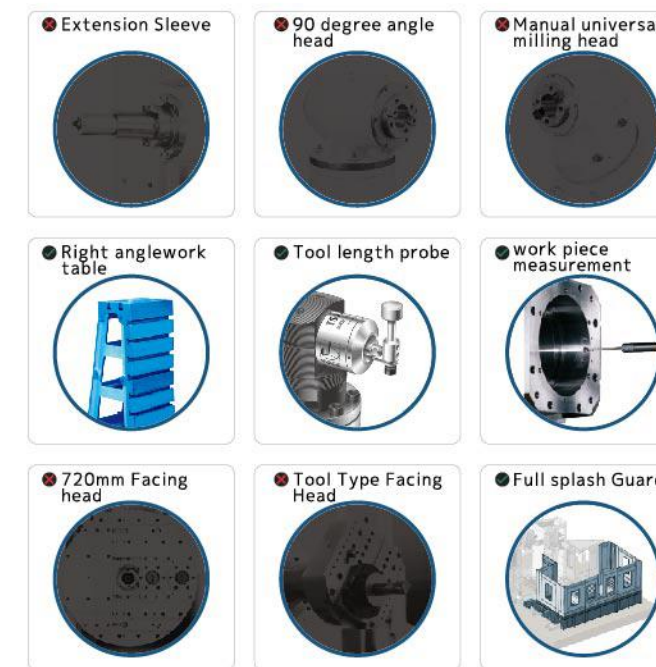
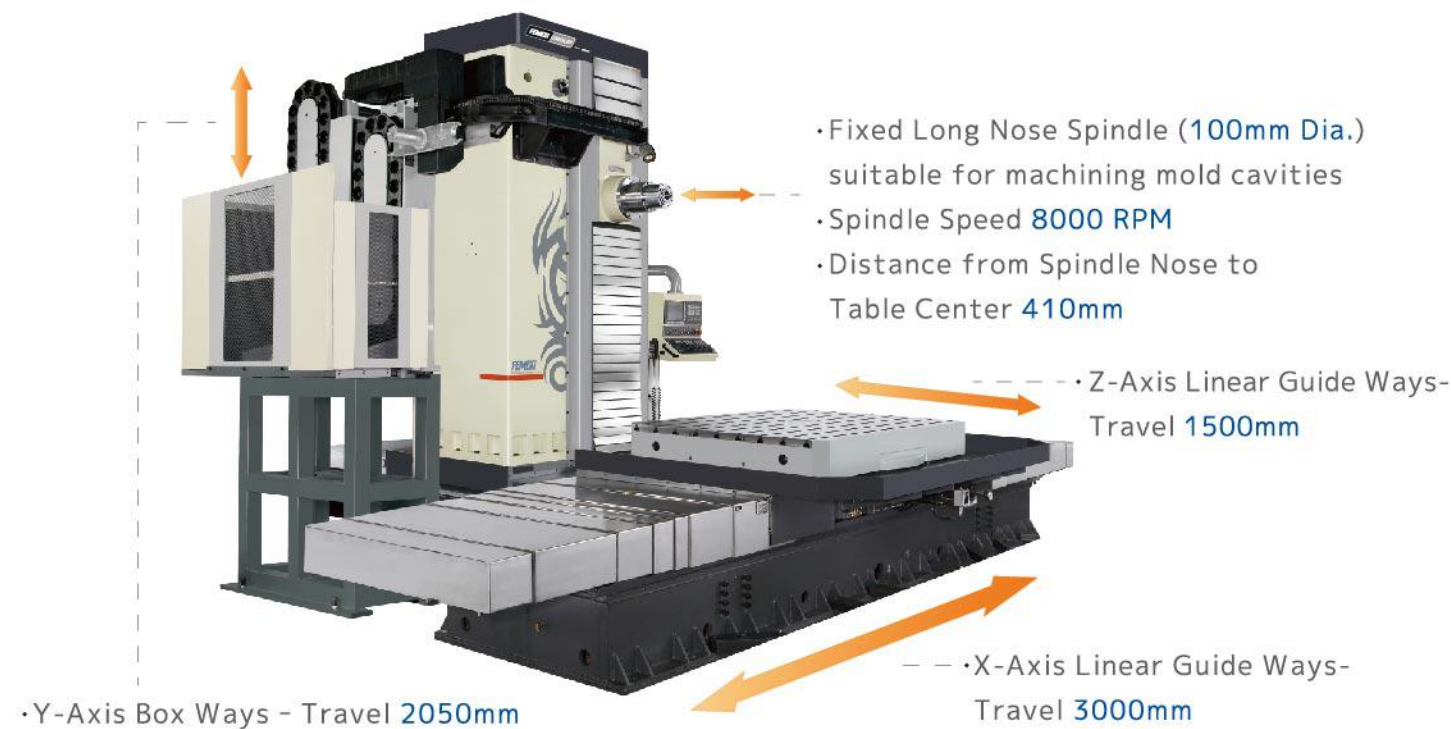
\*TOOL TYPE FACING HEAD IS NOT SUITABLE FOR STANDARD SPINDLE.

BMC-250T



High Speed Horizontal Boring Mill  
for deep cavity mold machining

BMC-100HT



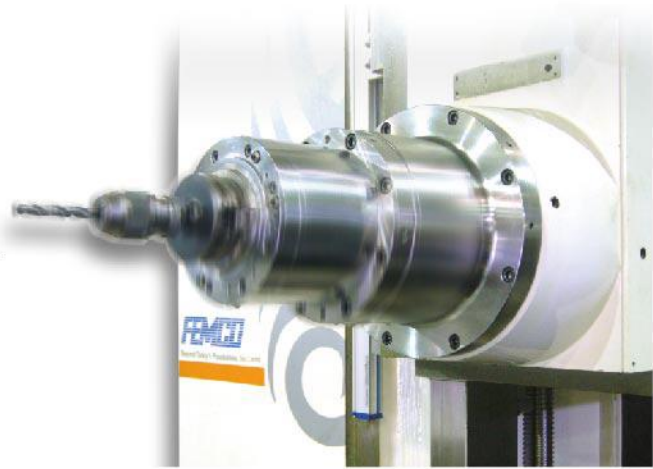
Traveling Column Design  
High Table Load Capacity

### Available for BMC-110R1, table size 1100X1100mm (remark)

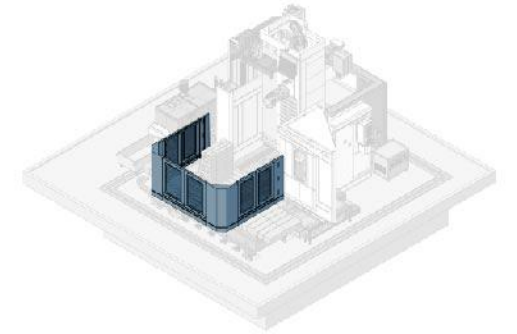


Automatic Pallet Changer (APC) for optimum efficiency. Operator can load and unload workpiece(s) on one pallet, while machining operations are in progress on second pallet thus eliminating load and unload times

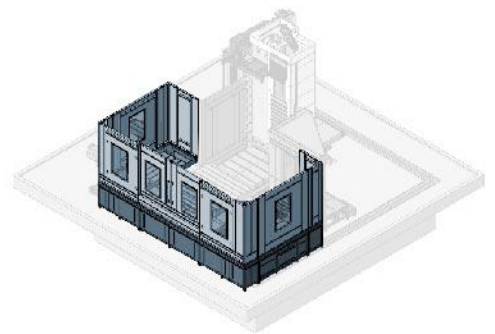
Fixed Long Nose Spindle design provides rigidity for mold cavity machining at **8000rpm**



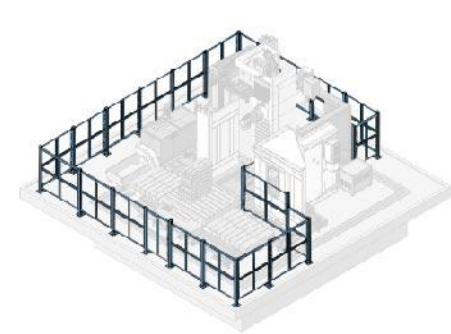
### Guarding



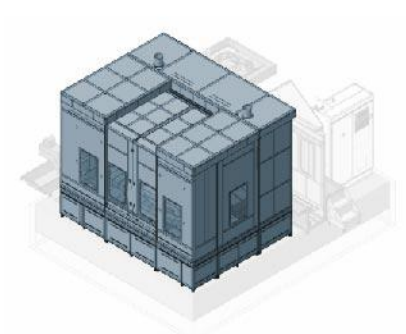
Working Table Splash Guard



Full Splash Guard (Without Roof)

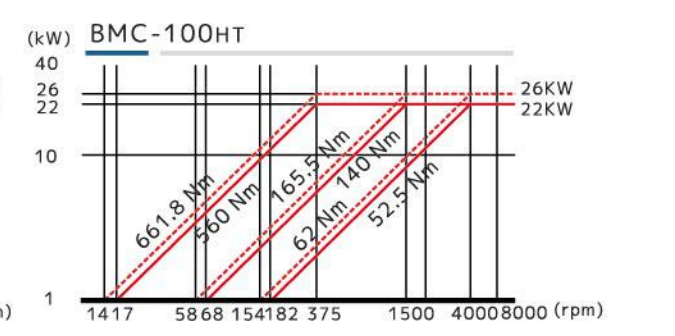
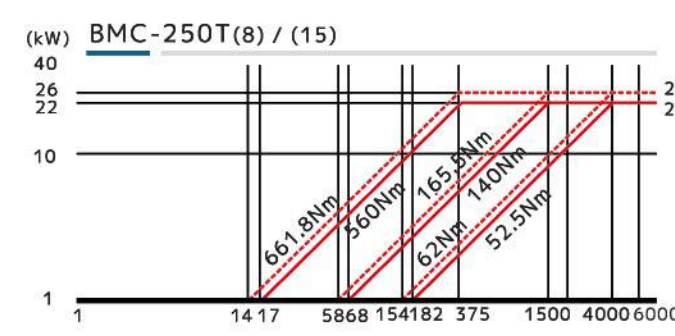
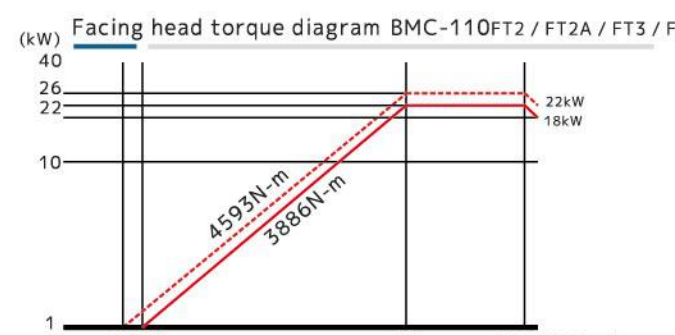
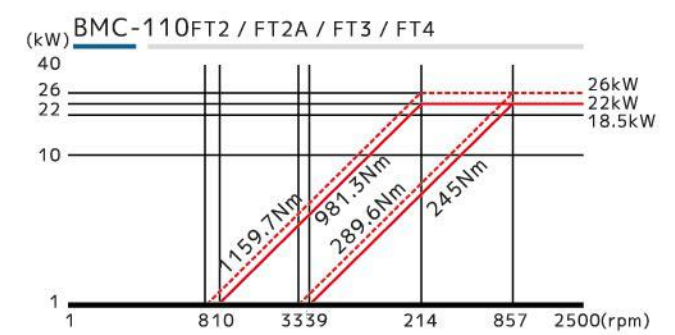
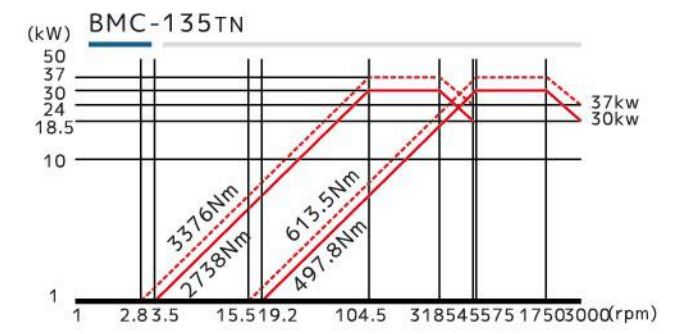
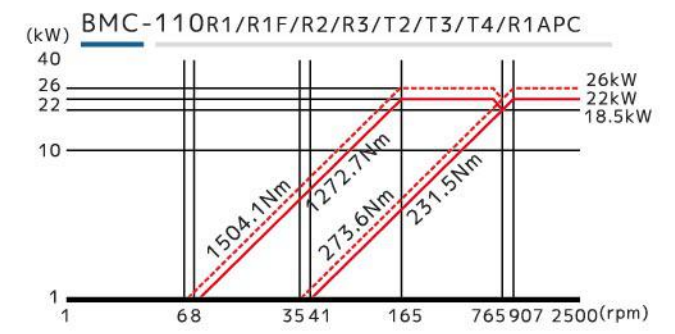


CE Safety Fence

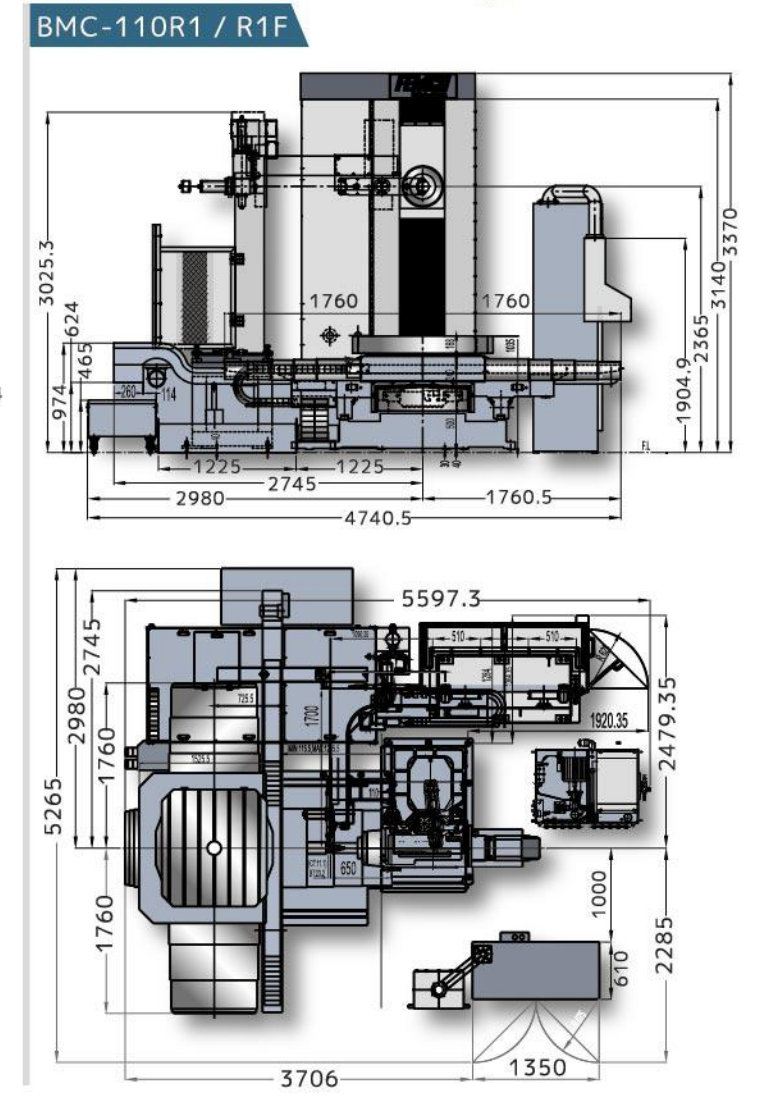


Full Splash Guard (With Roof)

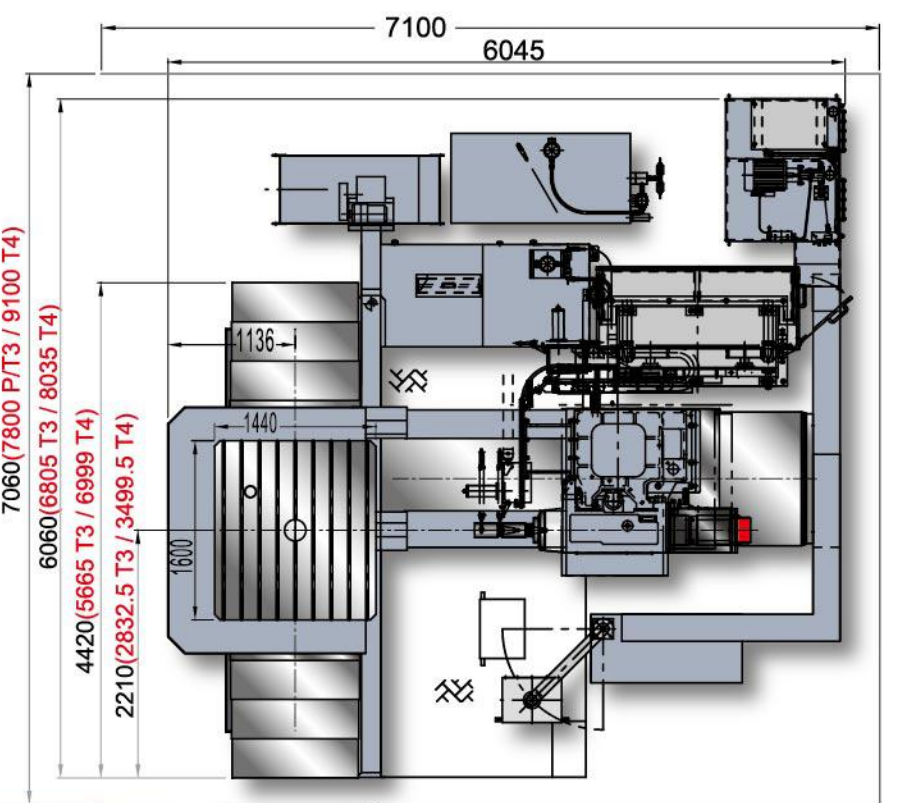
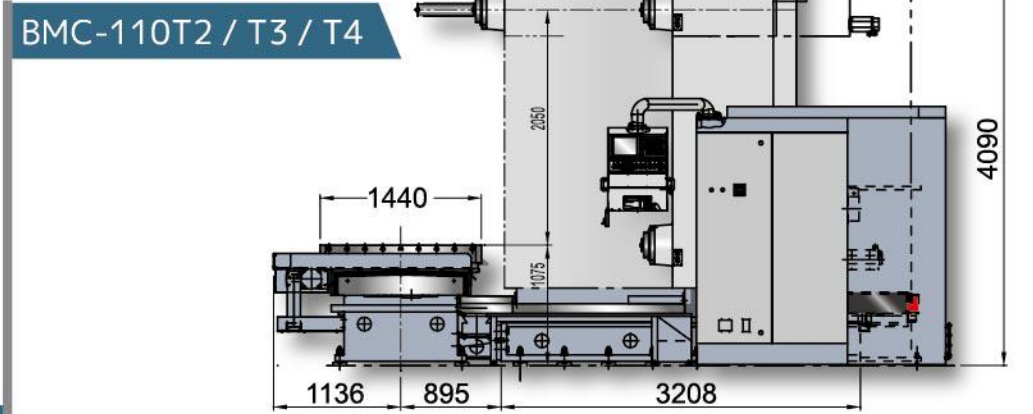
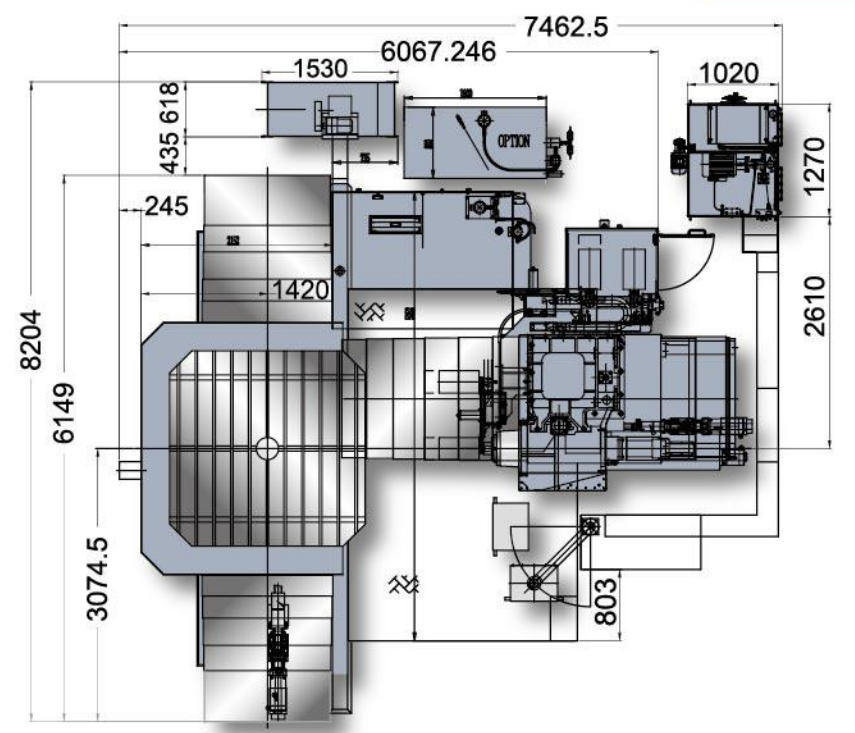
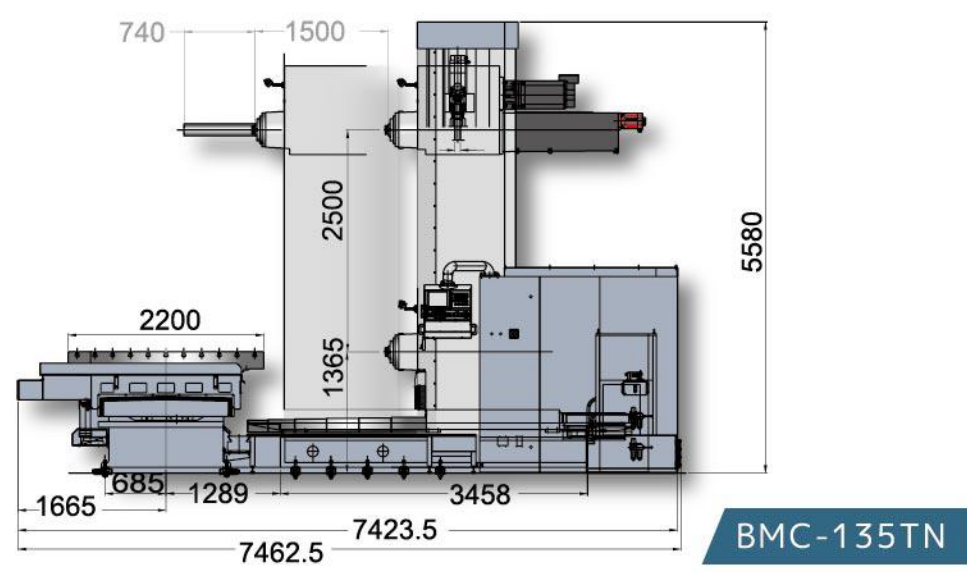
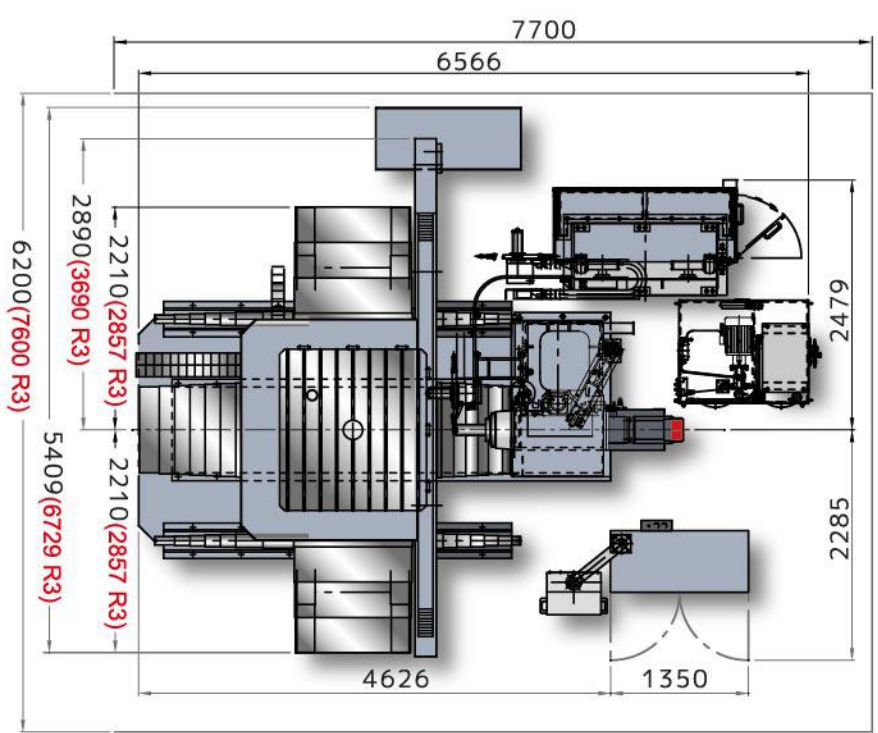
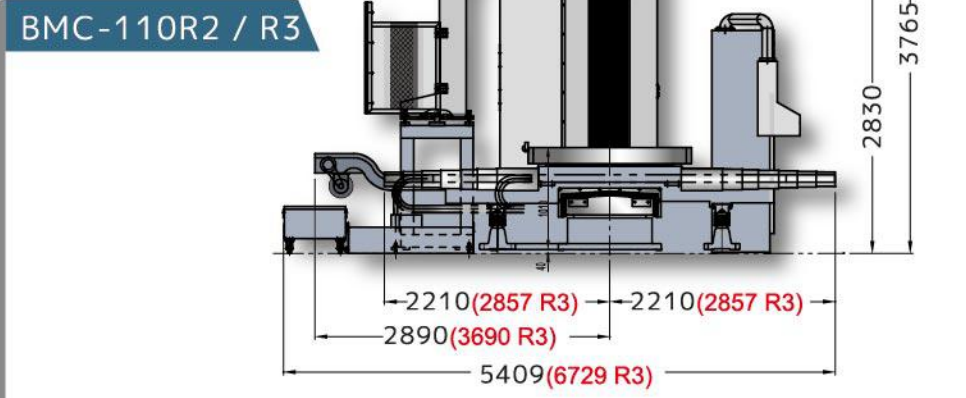
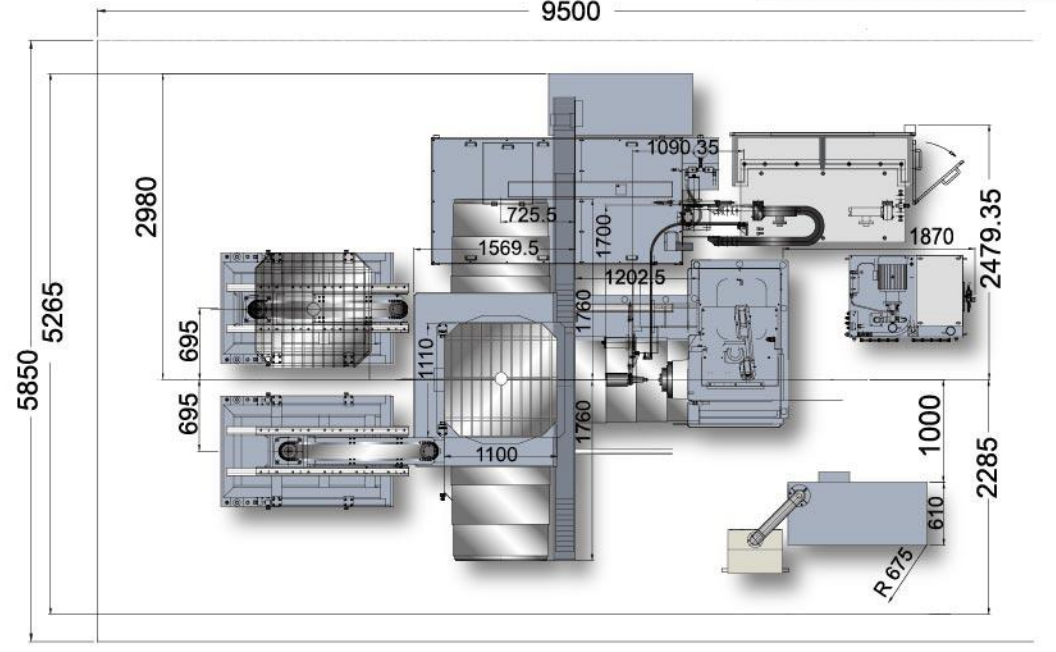
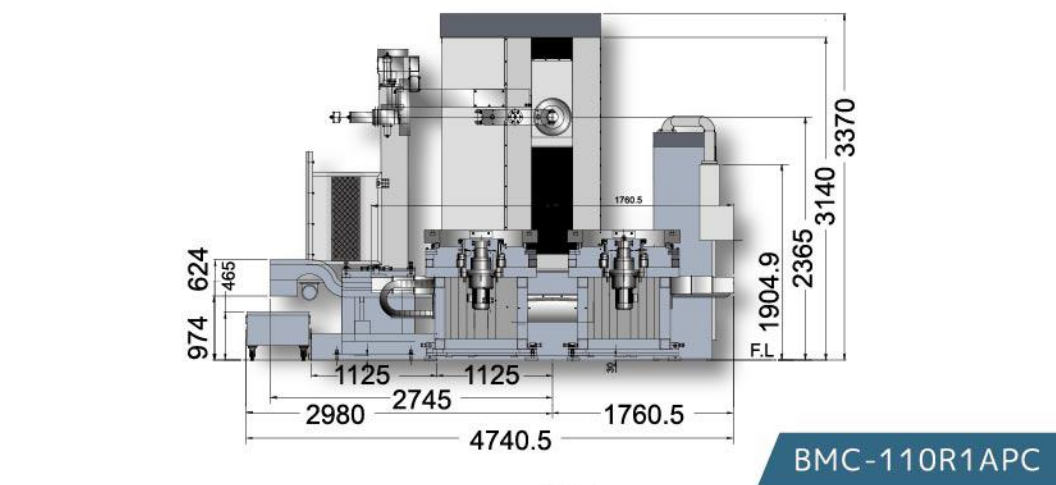
\*APC SYSTEM IS AVAILABLE FOR DIFFERENT MODEL, PLEASE CHECK WITH PRODUCER FOR MORE INFO



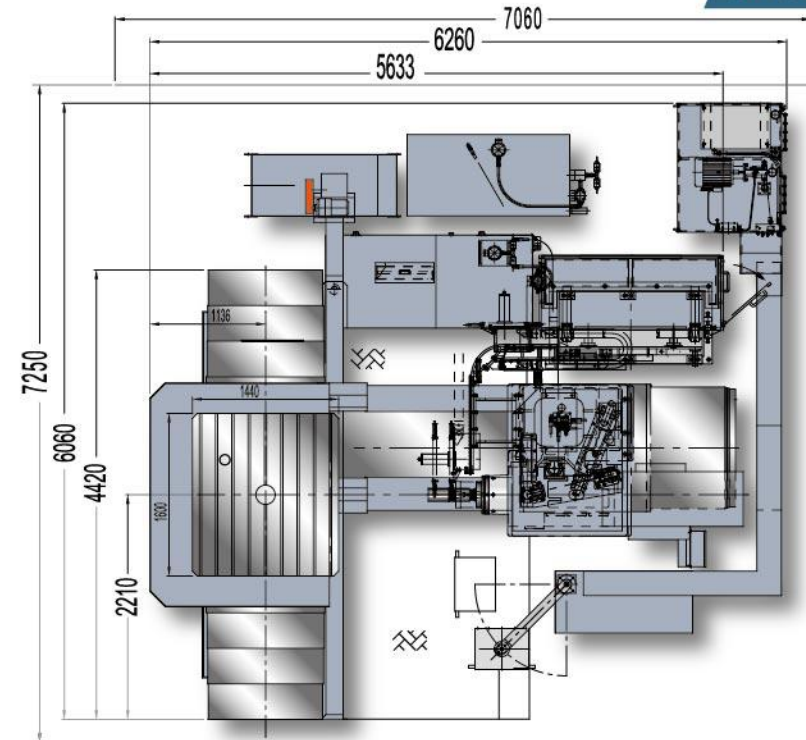
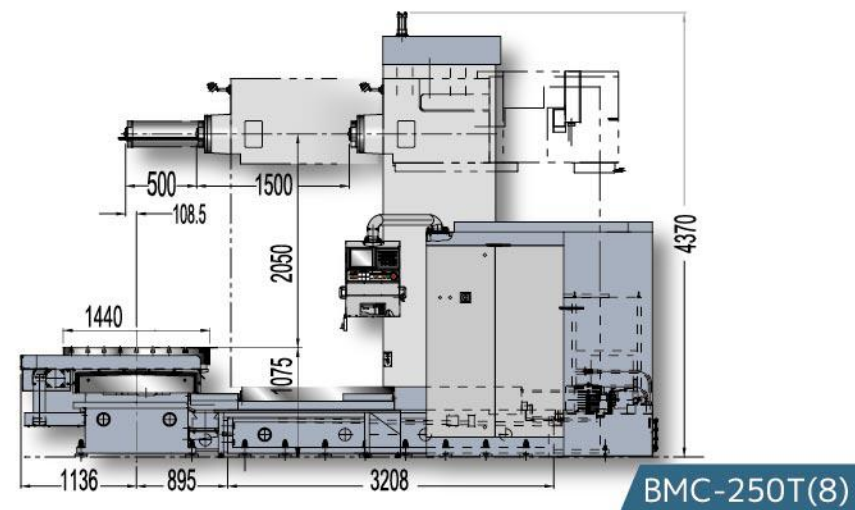
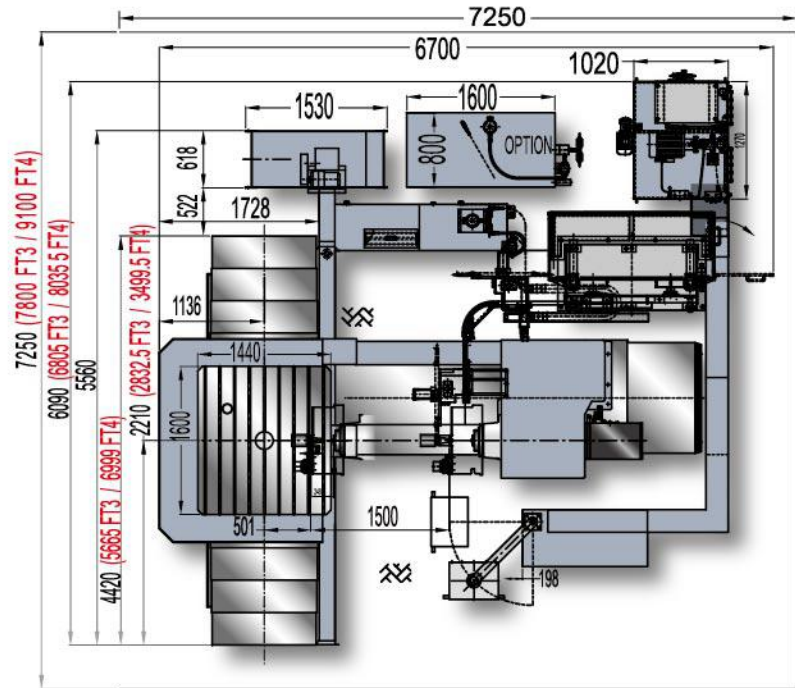
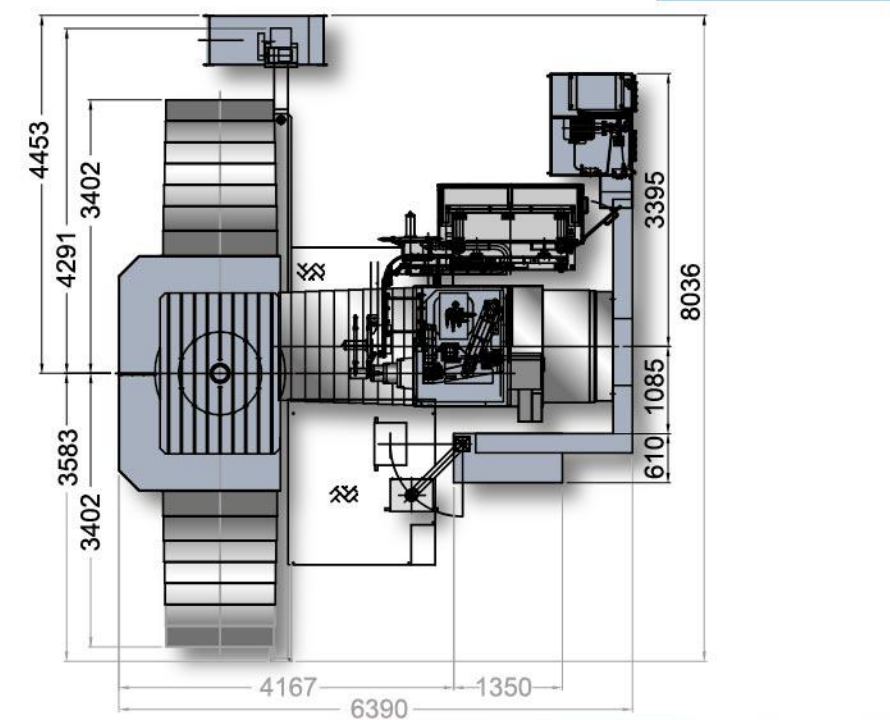
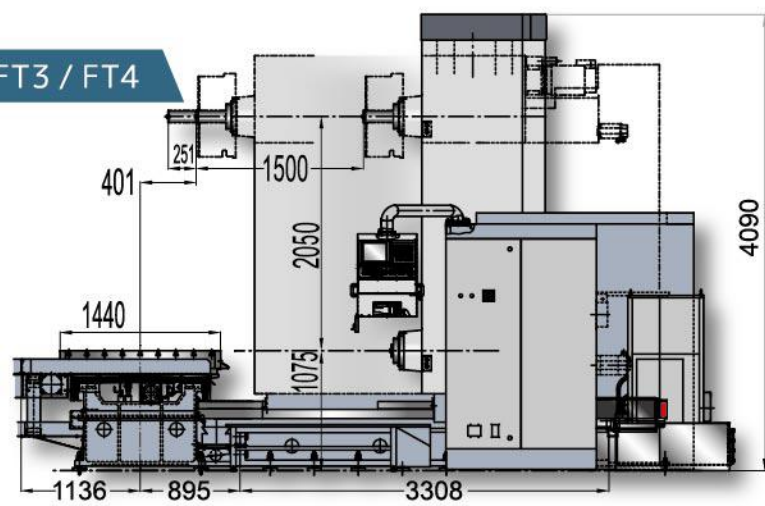
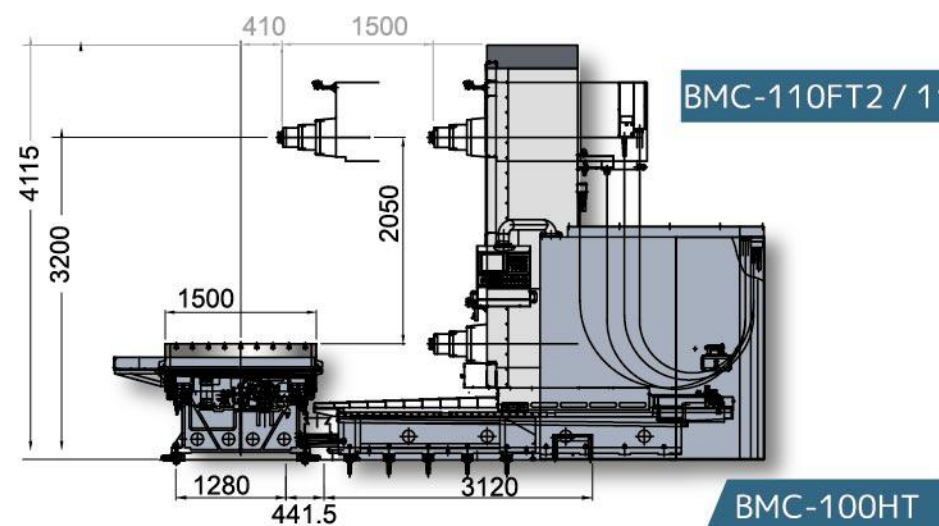
### Dimension & Layout



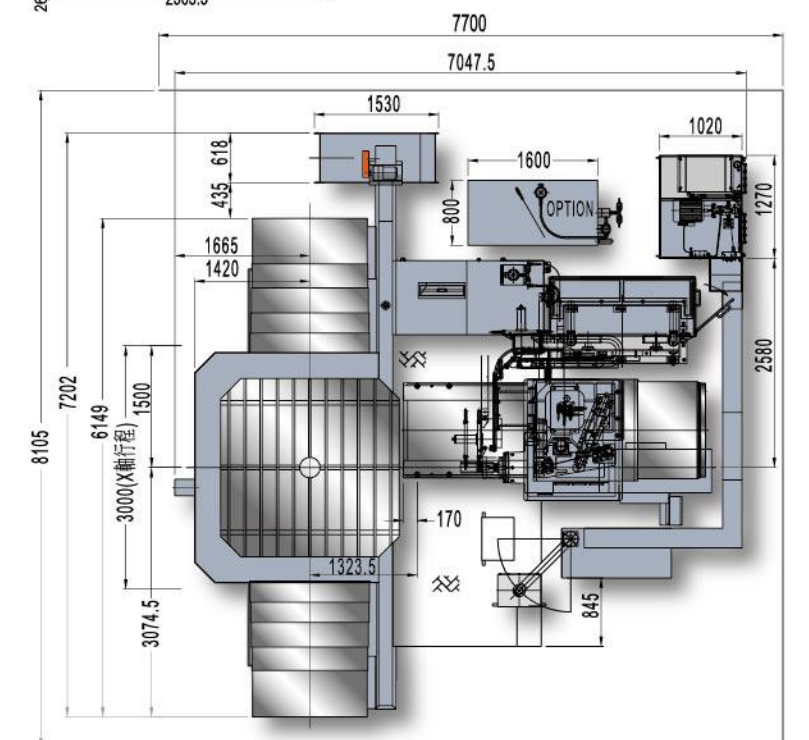
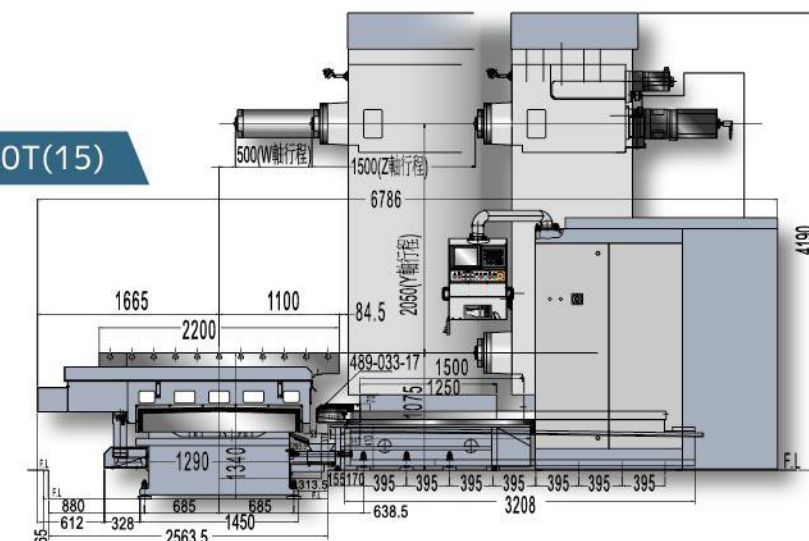
FEMCO BMC Series







**BMC-250T(15)**



# Standard&Option

## FEMCO BMC Series

ITEM	BMC-110R1	BMC-110R2/R3	BMC-110T2/T3/T4	BMC-135TN	BMC-100HT	BMC-250T(8)/(15)
1 X / Y / Z Axis linear scales	●	●	●	●	●	●
2 Working Light	●	●	●	●	●	●
3 Coolant circulation system	●	●	●	●	●	●
4 Bolts & leveling pads for installation	●	●	●	●	●	●
5 Operation's manual	●	●	●	●	●	●
6 FANUC 0iM control system	●	●	●	●	●	●
7 B axis working table with dual worm gear mechanism	●	●	●	●	●	●
8 Spindle extension sleeve(250mm)	●	●	●	○	×	×
9 Saddle slide cover	●	●	×	×	×	×
10 Assit guideway cover	●	●	×	×	×	×
10 Bed guideway cover	●	●	●	●	●	●
11 FANUC 31iM control system	○	○	○	○	○	○
12 SIEMENS 840D control system	○	○	○	○	○	○
13 Heidenhain control system	○	○	○	○	○	○
14 Automatic tool changer system(60/90)	○	○	○	○	○	○
15 90° angular milling head	○	○	○	○	×	×
16 Universal milling head	○	○	○	○	×	×
17 Angular block (350x800x1000mm)	○	○	○	○	○	○
18 Spindle through coolant (5 Bar / 15 Bar / 40 Bar / 70 Bar)	○	○	○	○	○	○
19 Anti-splash table guarding (must with 18)	○	○	○	○	○	○
20 Half cover with operator's guarding	×	×	○	×	×	○
21 Full cover with operator's guarding	○	○	×	×	×	×
22 Chip conveyor	○	○	○	○	○	○
23 Transformer	○	○	○	○	○	○
24 Semi-Automation facing head (600mm O.D.)	○	○	○	×	×	×
25 U axis facing head (720mm O.D.)	○ (Ext. model : BMC-110FR1)	○ (Ext. model : BMC-110FR2/FR3)	○ (Ext. model : BMC-110FT2/FT3/FT4)	×	×	×
26 ATC system for Facing head 720mm (HSK/BT coordinated)	○ (Ext. model : BMC-110FR1A)	○ (Ext. model : BMC-110FR2A/FR3A)	○ (Ext. model : BMC-110FT2A/FT3A/FT4A)	×	×	×
27 U axis tool type facing plate(125, 160, 200, 250mm)	○ (Ext. model : BMC-110R1F)	○ (Ext. model : BMC-110R2F/R3F)	○ (Ext. model : BMC-110T2F/T3F/T4F)	×	×	×
28 8000rpm built-in spindle(no W axis)	○ (Ext. model : BMC-100HR1)	○ (Ext. model : BMC-100HR2/HR3)	○ (Ext. model : BMC-100HT2/HT3/HT4)	×	●	×
29 APC - Automatic pallet changer system (1100x1100mm)	○ (Ext. model : BMC-110R1APC)	×	×	×	×	×

# Specifications

## FEMCO BMC Series

ITEM			BMC-110R1	BMC-110R2/R3	BMC-110T2/T3 / T4	BMC-135TN	BMC-100HT	BMC-250T(8)/(15)
Travel	Table cross travel ( X )	mm	1400	2000/3000	2000/3000 / 4000	3000/4000	3000 (Linear Way)	2000/3000
	Head stock travel (Y)	mm	1390	1780	2050	2500/3000	2050 (Box Way)	2050
	Table longitudinal travel (Z)	mm	1050	1650	1500	1500/2000	1500(Linear Way)	1500
Table	Size	mm	1120 x 1250	1440 x 1600	1440 x 1600	2200 x 2200	1500x2000	1440 x 1600/ 2200 x 2200
	Table Load	kg	4000	6300	8000	15000	20000	8000/15000
	Table rotation	RPM	1	1	1	1	1	1
Spindle	Stroke(W)	mm	500	500	500	740	-	500
	Diameter	mm	110	110	110	135	100	100 (RAM:250)
	Taper	ISO	50	50	50	50	50	50
	tool shank	BT	50	50	50	50	50	50
	Pull Stud		MAS II (I*)/ISO/CAT/DIN	MAS II (I*)/ISO/CAT/DIN	MAS II (I*)/ISO/CAT/DIN	MAS II (I*)/ISO/CAT/DIN	MAS II (I*)/ISO	MAS II (I*)/ISO/CAT/DIN
	Milling Spindle Diameter	mm	225	225	225	250	-	RAM TYPE: 250
	Motor (cont/30 mins)	kW	22 / 26	22 / 26	22 / 26	30/37	22/26	22 / 26
	Speed Range Low	rpm	8-454	8-454	8-454	10-575	17-1500	17-2000/17-1500
	Speed Range High	rpm	455-2500	455-2500	455-2500	576-3000	1501-8000	2001-6000/1501-6000
	Storage		60	60 / 90	60 / 90	60(Side Mounted)	60/90	60 / 90
Automatic tool (Changer)	Max. Tool Dia(Adjacent)	mm	245 ( 125 )	245 ( 125 )	250 ( 125 )	250 ( 125 )	250 ( 125 )	250 ( 125 )
	Max. tool length	mm	400	400	400	400	400	400
	Max. tool weight	kg	25	25	25	25	25	25
	Tool to tool time	sec	13	13	13	15	13	13
Contral	Controlled axis		5(4 SIM.)	5(4 SIM.)	5(4 SIM.)	5(4 SIM.)	4	5(4 SIM.)
	Simultaneous axis		4	4	4	4	4	4
Rapid	X/Y/Z axis	m/min	10	10	10/12/12	10/6/6	12	10/10/12
	W axis	m/min	4	4	4	4	-	4
Feed Rate	Feed rate of every Axis	mm/min	0 - 4000	0 - 4000	0 - 4000	0 - 3000	0-4000	0 - 4000
Machine Weight	Net Weight	kg	16000	19000/21000	24000/25000 / 26000	33000/34000	24300	25000 / 32000
	Height	mm	3370	3800	4100	5080/5525	4100	4370
Dimension	Floor Space	mm	6600 x 5700	7700 x 6200/7700 x7600	7100 x 7060/7100 x 7800 / 7100 x 9100	8105x8400/9105x5475	7100x6500/8100x6500	7250 x 7060 / 7700 x 8100
	Linear Scales		X/Y/Z	X/Y/Z	X/Y/Z	X/Y/Z	X/Y/Z	X/Y/Z
Total Power Rating		kVA	76	76	77	102	70	80
Controller System			FANUC (0iM) *OPT: SIEMENS, HEIDENHAIN	FANUC (0iM) *OPT: SIEMENS, HEIDENHAIN	FANUC (0iM) *OPT: SIEMENS, HEIDENHAIN	FANUC (0iM) *OPT: SIEMENS, HEIDENHAIN	FANUC (0iM)	FANUC (0iM) *OPT: SIEMENS, HEIDENHAIN

Facing Head (U axis)	O.D.	mm	720	720	720
	Slide stroke	mm	230	230	230
	Max. face machining dia.	mm	1050	1050	1050
	Speed Range	rpm	5 - 250	5 - 250	5 - 250
	Max. torque	Nm	4593	4593	4593
	Silide Rapid Traverse	mm/min	1500	1500	1500
Tool type face Plate (U axis)	Servo Motors	kw	1.6(α iF8/3000)	1.6(α iF8/3000)	1.6(α iF8/3000)
	O.D.	mm	125/160/200/250	125/160/200/250	125/160/200/250
	Slide stroke	mm	25/35/45/55	25/35/45/55	25/35/45/55
	Max. face machining dia.	mm	200/250/320/400	200/250/320/400	200/250/320/400
	Servo Motors	kw	1kw (ais4/5000)	1kw (ais4/5000)	1kw (ais4/5000)