

# Horizontal Boring and Milling Machine

## Floor Type **CBM-110F**



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IMPORT \* EXPORT \* SERVICE

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HIGH ACCURACY - HIGH RIGIDITY

# Floor type boring Machine

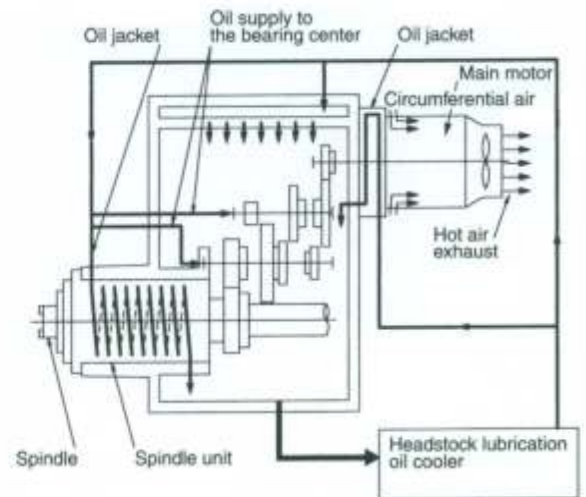




CBM-110F

### High Productivity

- Spindle continuously monitored to provide most efficient cutting conditions.
- Each axis is independently controlled to provide maximum feed as required.



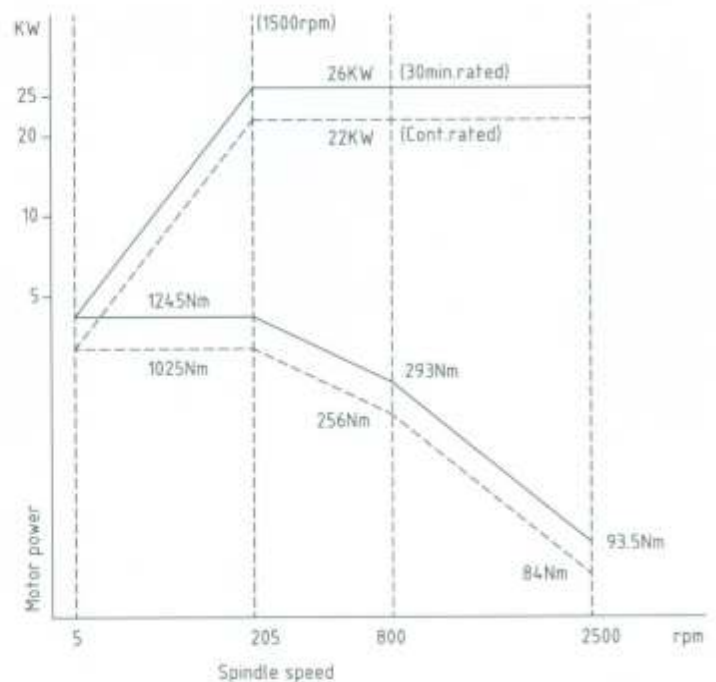
Boring Spindle



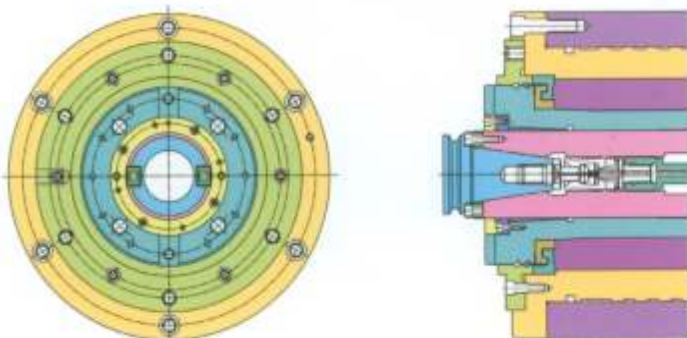
### High Power Spindle

- Variable speed and high torque are a function of the 22kw AC motor (30 min. rating).
- For the spindle bearings, super precision, highly rigid tapered roller bearings are employed. These bearings ensure high precision and high rigidity of the spindle with minimal heat generation. The machine is equipped with a cooling device for the lubricant inside the headstock.
- The spindle nose is a 7/24 taper No. 50.

Spindle motor - a 22 / 7000i



Spindle Torque Chart



CBA-110

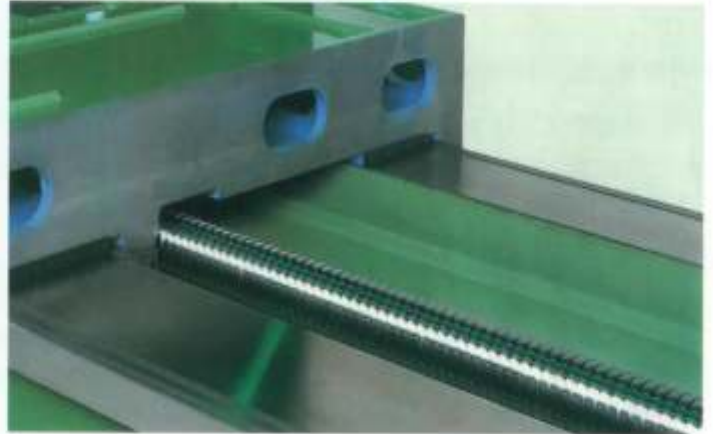
## High Positioning Accuracy through CAD designed rib casting.

- For the vertical travel of headstock, the spindle travel and the quill feed, high quality ball screws are used. All sliding surfaces are automatically lubricated at key points.
- The clamps for headstock vertical travel, column cross traverse, and quill travel are heavy-duty hydraulic type.
- The major structural members are box-shaped with best possible arrangements of ribs with a large cross-sectional area, providing highest rigidity long-term accuracy and precision.



## High Precise Slide ways

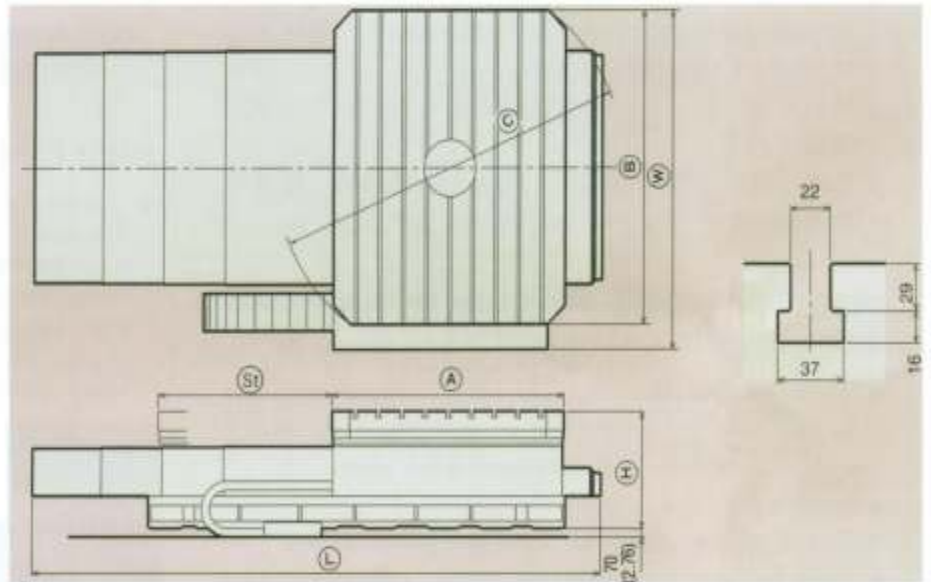
- The column and bed slide ways are hardened and ground. The mating surfaces of the moving units are coated with a special fluorine resin, and forced-lubricated so that the system for slide ways offers minimum friction resulting in high precision which will be maintained over a long period of time, this ensures a very smooth feed stroke even at low speeds without stick/slip.



## Easy Operation

- The switches on the pendant control box have the most efficient layouts for working respectively. This ensures improved operating efficiency.
- The contents of programs and the current positions are displayed on the CRT display. This enables to make preparation and checking of the programs easily.
- The CBM-110F series features the high performance manual operation mode added to its highly capable NC mode operation mode, thus offering almost any machining capability you would expect of the system of this category.
- Using the portable operation control box allows the work to be adjusted to be centered, and permits manual cutting operation.





## High Productivity

- The bed slide way is hardened and ground, and equipped with an automatic lubricating system. This creates good abrasion-resistance and long working life.
- NC-controlled, the saddle feed (V-axis) is driven by high-precision ball screw to provide high precise positioning capability.
- With the rotation of the rotary-table indexed to every 90 degrees controlled by the M-command, the positioning pin provides high precision indexing. The digital read-out counter is standard equipment calibrated to 1 minute.
- The use of B-axis Numerical Control as the optional specification is recommended. This enables high-precision desired indexing for each 0.001 degree and rotational milling.



## Specification

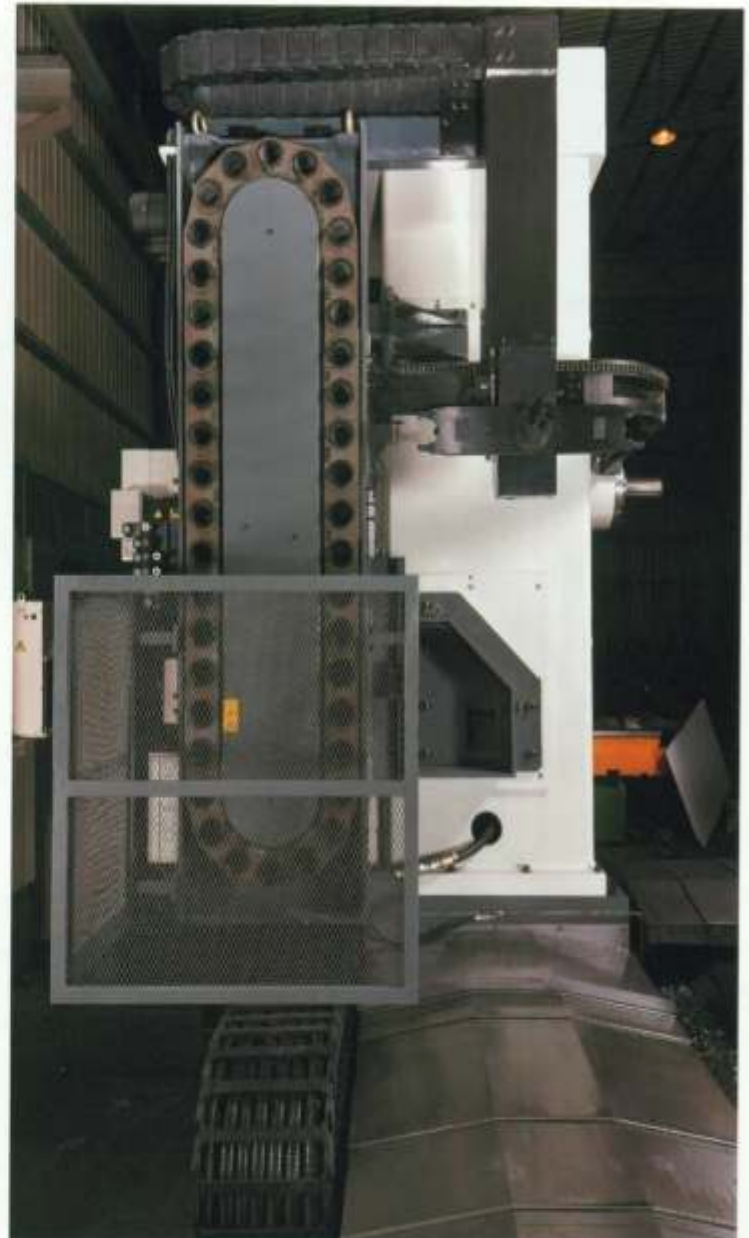
Item		CRT-18/20B	CRT-20/25B
Table size	Ⓐ×Ⓑmm (in)	1,800×2,000 (70×78)	2,000×2,500 (78×98)
Table rotating maximum dia	ψⒸmm (in)	2,565 (101)	2,970 (117)
Saddle traverse (Zaxis)	Ⓔmm (in)	1,000 (39)	1,500 (59)
Maximum load on table	Kg (lb)	12,000 (26,400)	20,000 (44,000)
Rapid rotation of table	min-1(rpm)	0.8	0.8
Saddle cutting feed	mm/min (in/min)	1-3,000 (0.04-118)	1-3,000 (0.04-118)
Saddle rapid traverse	mm/min (in/min)	6,000 (236)	6,000 (236)
Max. thrust	N (kgf/lbf)	19,600 (2,000/4,410)	29,400 (3,000/6,615)
Electric power source capacity	KVA	14	14
Machine size	Ⓓ×Ⓗ×Ⓘmm (in)	3,650×2,560×750 (143×101×30)	4,920×3,110×925 (194×122×36)
Approx. net weight	kg (lb)	8,500 (18,700)	15,000 (33,000)
T-slot	Pitch × number	185×9	200×9

### Standard accessories

1. Telescopic steel cover for bed slideways
2. Installation part
3. Hydraulic power unit
4. disassembly / reassembly tools

### Automatic tool changer (optional accessory)

Tool storage capacity	40/60/90
Tool shank	MAS 403 BT-50
Pull stud	MAS 403 P50T-1
Tool weight	25kg
Max. tool length	300mm
Max. tool diameter	Φ125mm(Φ250mm)



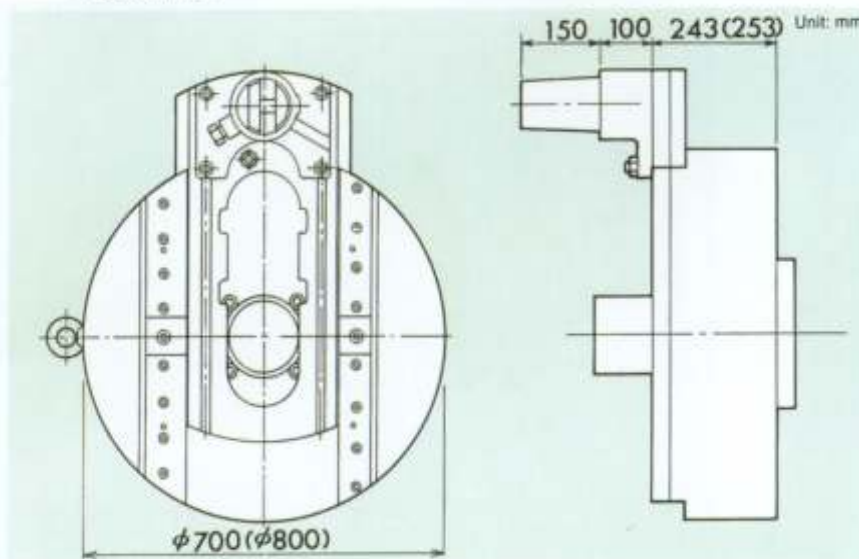
# Main Specifications & Special Accessories

ITEM			CBM-110F	
SPINDLE	Main motor (30min/Cont)	KW (HP)	AC 18/22 (24/29)	
	Spindle speed	rpm / min	5-2500	
	Spindle taper		ISO 50/BT-50	
	Spindle diameter	mm(in)	110 (4.33)	
	Max. spindle torque	Nm (kgm) (ft · lbs)	1245(127)	
	Max. thrust spindle	N (kgf) (ft · lbf)	19600(2000)	
TRAVEL	X axis (Column cross travel)	mm(in)	2000-6000 : Ball screw Above 6000 : Gear driver	
	Y axis (Spindle vertical travel)	mm(in)	2000(79) 、 2500(98) 、 3000(118)	
	W axis (Spindle travel)	mm(in)	600(23.62)	
FEEDRATE	Rapid feed	X / Y axis	mm/min(in/min)	6000(236)
		Z / W axis	mm/min(in/min)	4000(157)

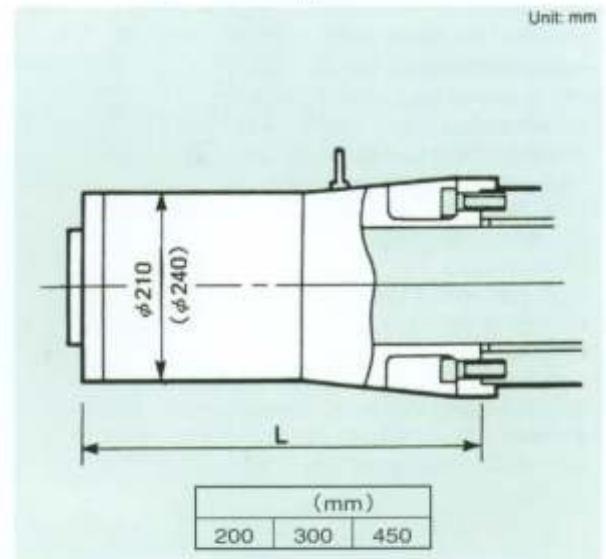
: 85KVA

Electric power capacity : 85KVA

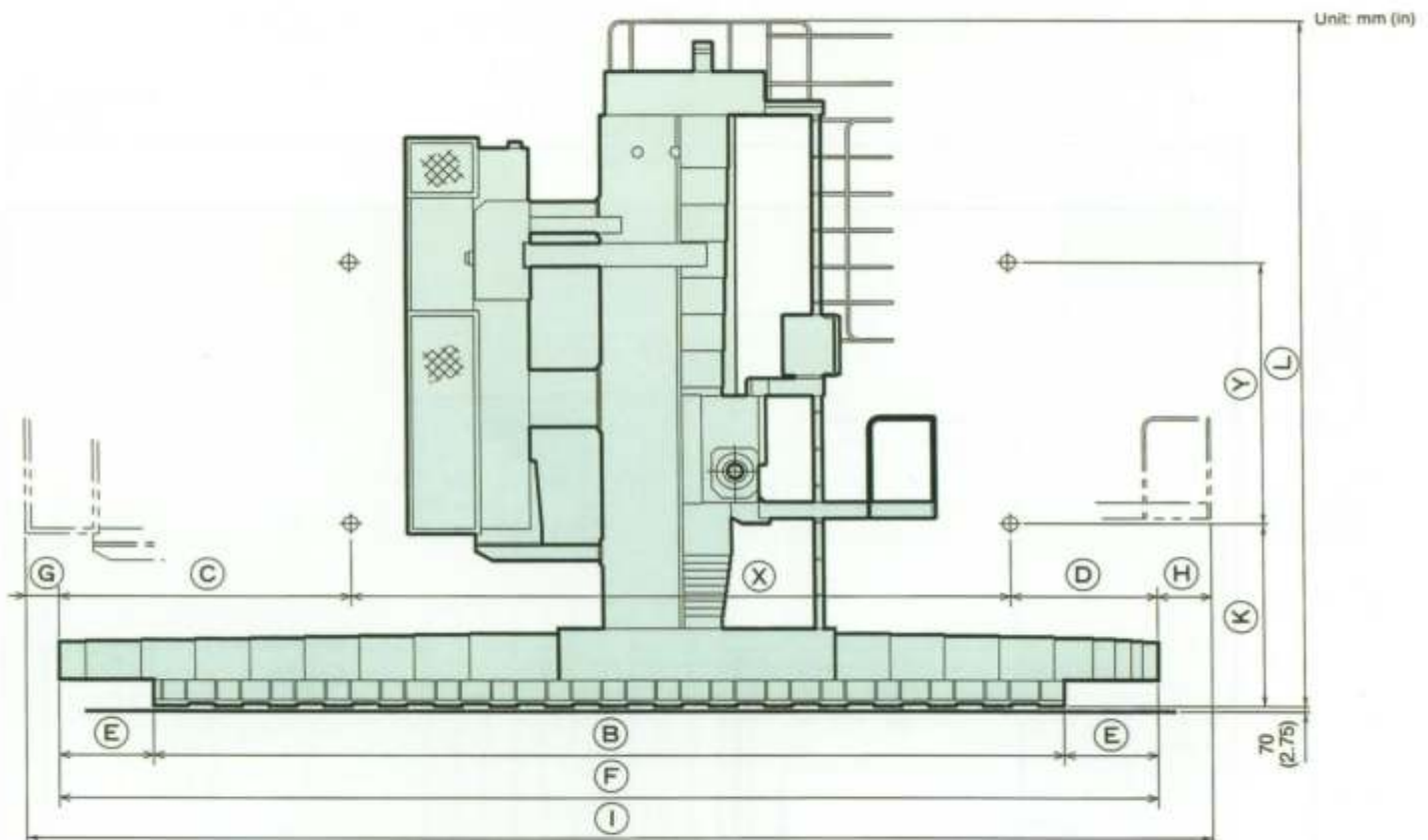
Face plate



Spindle support



# Dimensions



## CBM-110F

Unit : mm (in)

(X)	4,000(157)	5,000(196)	6,000(236)	7,000(275)	8,000(314)	9,000(354)	10,000(393)
(B)	6,300(248)	7,300(287)	8,300(327)	9,800(386)	10,800(425)	11,800(465)	12,800(504)
(C)	2,670(105)	2,670(105)	2,670(105)	2,590(102)	2,590(102)	2,660(104)	2,600(102)
(D)	1,330(52)	1,330(52)	1,330(52)	1,710(67)	1,710(67)	1,780(70)	1,780(70)
(E)	850(33.5)	850(33.5)	850(33.5)	750(29.5)	750(29.5)	820(32.3)	820(32.3)
(F)	8,000(315)	9,000(354)	10,000(394)	11,300(445)	12,300(484)	13,440(529)	14,400(569)
(G)	130(5.1)	130(5.1)	130(5.1)	210(8.3)	210(8.3)	140(5.5)	140(5.5)
(H)	490(19.3)	490(19.3)	490(19.3)	110(4.3)	110(4.3)	40(1.57)	40(1.57)
(I)	8,620(339)	9,620(379)	10,620(418)	11,620(457)	12,620(497)	13,620(537)	14,620(576)
(M)	11,000(443)	12,000(472)	13,000(512)	14,300(563)	15,300(602)	16,440(647)	17,440(687)

(Y)	Spindle vertical travel	2,000(78)	2,500(98)	3,000(118)
(K)	Standard	1,405(55)	1,405(55)	1,405(55)
	Steel cover for slideway	1,635(64)	1,635(64)	1,635(64)
(L)	Standard	6,000(236)	6,000(236)	6,500(256)
	Steel cover for slideway	6,000(236)	6,650(262)	7,250(285)

## Machine net weight

Unit : kg (lb)

Item		CBM-110F						
Column cross travel	(X) mm(in)	4000	5000	6000	7000	8000	9000	10000
		(157)	(196)	(236)	(275)	(314)	(354)	(393)
Spindle vertical travel	2000	24300	25550	26800	28100	29350	30610	31870
	(78)	(53571)	(56327)	(59080)	(61950)	(64700)	(67480)	(70260)
	2500	25200	26400	27650	28950	30200	31460	32720
	(98)	(55556)	(58200)	(60957)	(63820)	(66578)	(69356)	(72134)
	3000	26200	27250	28500	29800	31050	32310	33570
	(118)	(57760)	(60075)	(62830)	(65697)	(68450)	(71230)	(74000)

# Installation Plan (For reference only)

Model: CBM-110F  
Unit: mm (in)

