



Floor Type Boring Machine CBM-110F

High Accuracy

High Quality

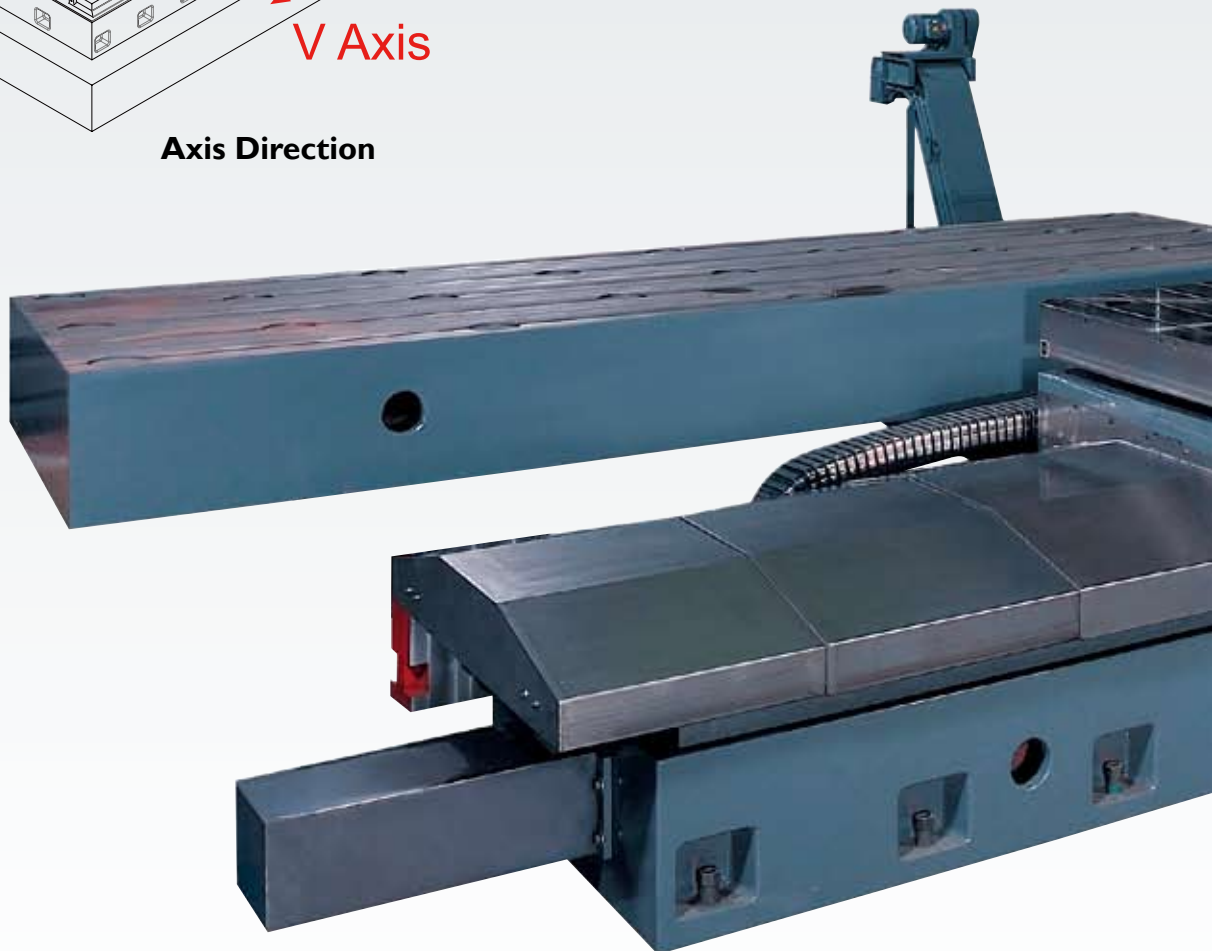
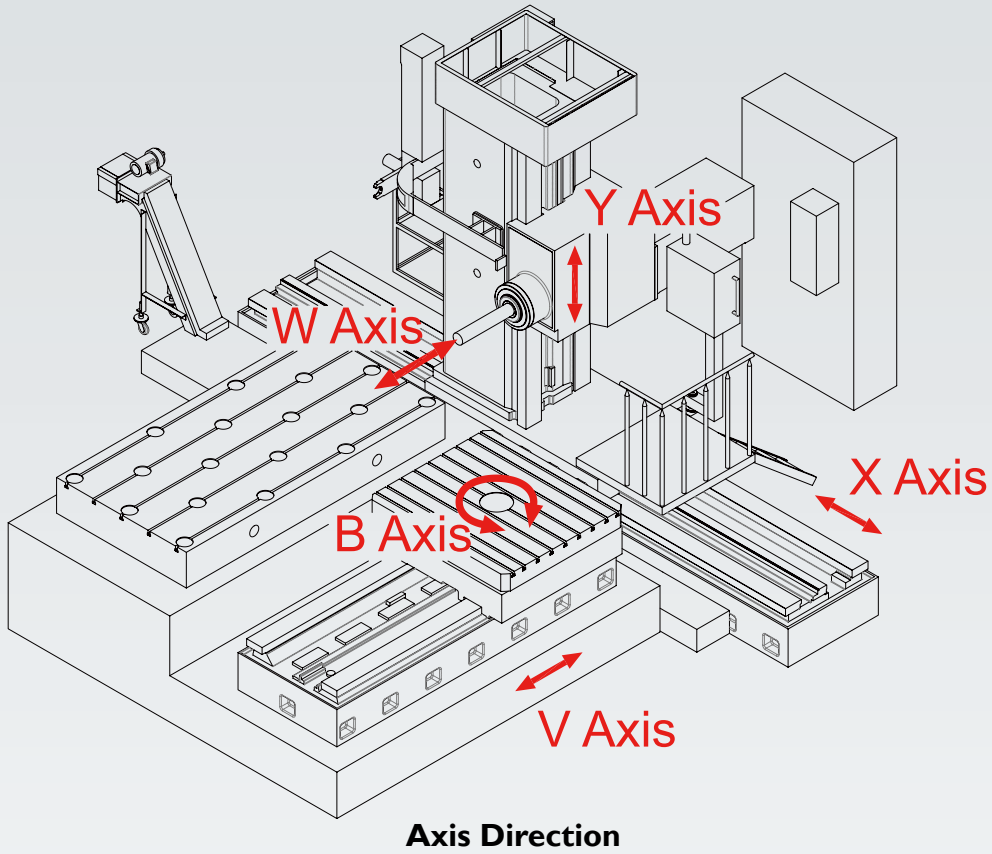
High Rigidity



高精度 · 高鋼性 · 落地式塘床

Floor Type Boring Machine

High Quality · High Accuracy · High Rigidity



CBM-110F



特點 Features

高生產力

- AC馬達驅動主軸，可持續調整主軸轉速，即使在切削操作時，也可維持在最佳的切削狀態。
- 每一進給機構的馬達／軸多重驅動系統，均可提供最大的進給效率。

High Productivity

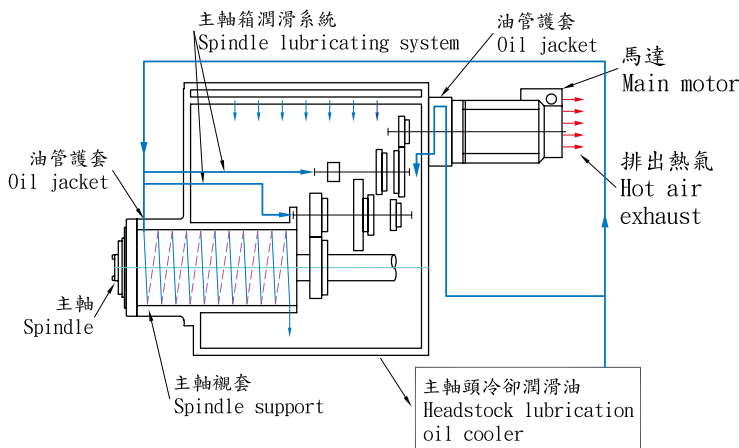
- Spindle continuously monitored to provide most efficient cutting conditions.
- Each axis is independently controlled to provide maximum feed as required.

高動力主軸

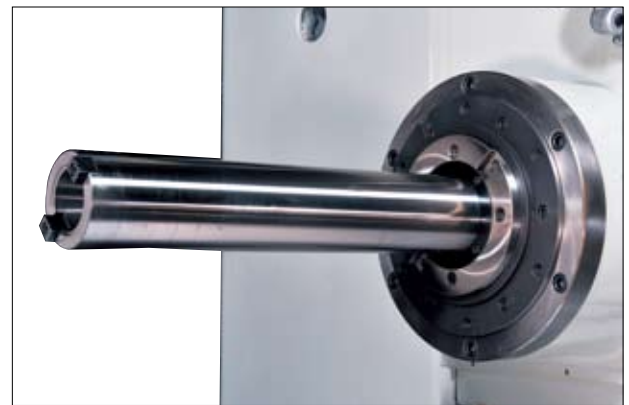
- 主軸驅動使用AC馬達，可提供22kw的輸出馬力（30分鐘額定），可適情況改速度獲得高扭矩。
- 主軸軸承採高精密、高穩定性輓軸承，軸承品質具穩定性，以確保主軸在發熱時，可維持精度。另機床配備一台冷卻設備，以利滑枕潤滑用。
- 主軸特別以高鉻化物製造完成，可使主軸在長時間使用時仍保有高精確。
- 主軸鼻端採用7/24刀具BT.50。

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.

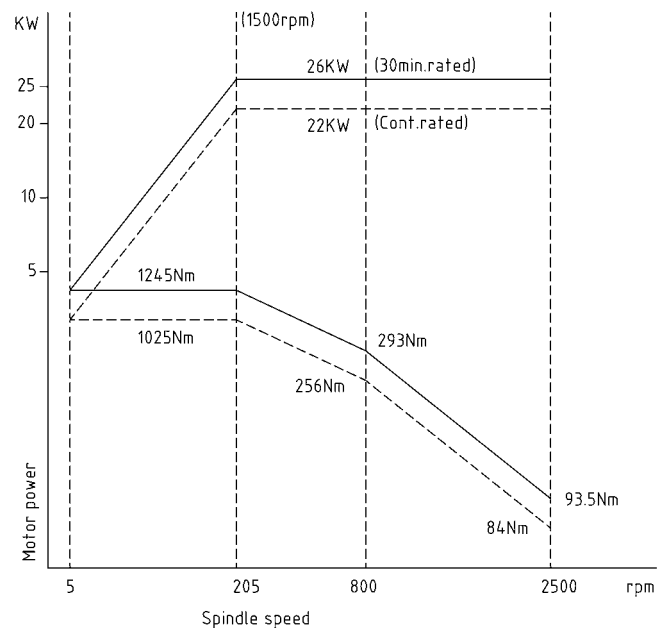
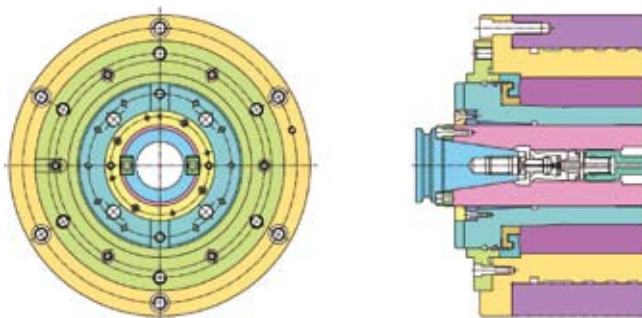


搪孔主軸 Boring Spindle



Spindle motor - a 22 / 7000i

主軸扭矩圖表 Spindle Torque Chart



CBM-110

高定位精度 & 主結構高鋼

- 滑枕垂直行程、主軸行程、離合器同心軸進給皆採用滾珠螺桿傳動，加上滑動面的潤滑系統，可獲得高定位精度，並減少供電成本。
- 滑枕垂直行程、主軸橫向移動及同心軸行程均採重力液壓平衡系統。
- 主要結構採箱型結構設計，加上大橫斷面積，提供最高的穩固性，以確保長時間運轉精度準確。

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.

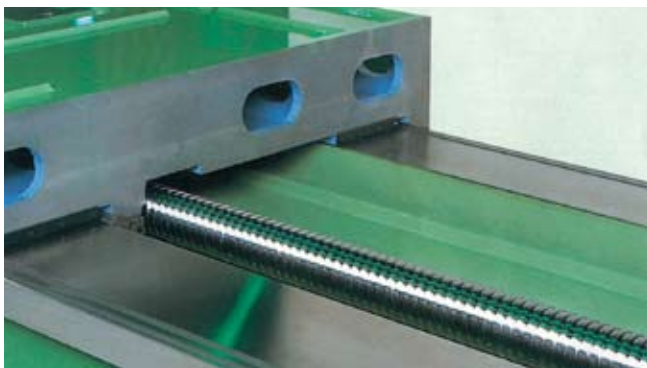


高精度滑軌

- 立柱及底座滑軌具高剛性及穩固性，滑動面有鐵氟龍黏附並強制潤滑，使滑軌系統在長時間內保持高精度，即使在低速運轉時仍可順暢滑。

High Precision Slideways

- 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.



操作容易

- 懸吊式開關操控箱，分別為加工操作提供最有效率的設計，使操作更具有效率。
- 程式編輯及運用功能都陳列在CRT，可使程式編輯及確認更容易。
- CBM-110F系列的特色在NC模式中增加維修模式，因此您可對此功能有所預期。
- 使用此種輕便的操作控制箱，可讓加工工作調整於中心及允許分斷操作。

Ease of 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.



迴轉工作台（可自動切換角度）

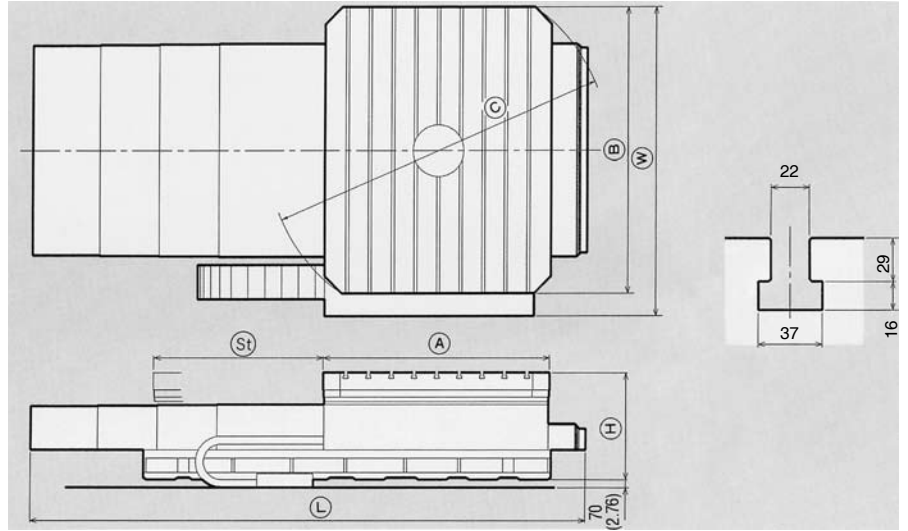
Rotary Table

迴轉工作台：CRT Series

- 底座滑道具穩固性及經過研磨，配備自動潤滑系統，提供良好的抗磨性及確保高精度性。
- NC控制，V軸滑動進給採用高精度滾珠螺桿，可提供高定位精度。
- 迴轉工作台以每 90° 為一迴轉度，位置顯示器可提供精確的數字，數位讀出計數器可在一分鐘內測定。
- 推薦可另外選擇使用B軸NC作為選擇附件，它能顯示到每0.001°的高精確度。

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.



規格 Specification

Description		CRT-18/20B	CRT-20/25B
工作台尺寸 Table Size	Ⓐ×Ⓑ mm (in)	1,800×2,000 (70×78)	2,000×2,500 (78×98)
工作台最大迴轉直徑 Table Rotating Maximum Dia	ψ Ⓒ mm (in)	2,565 (101)	2,970 (117)
滑動行程 Saddle Traverse (V Axis)	Ⓢ mm (in)	1,000 (39)	1,500 (59)
工作台最大承載重量 Work Table Max. Loading Weight	Kg (lb)	12,000 (26,400)	20,000 (44,000)
工作台旋轉速度 Work Table Rotation Speed	min-1 (rpm)	0.8	0.8
滑動切削進給 Saddle Cutting Feed	mm/min (in/min)	1~3,000 (0.04~118)	1~3,000 (0.04~118)
滑動行程速度 Saddle Rapid Traverse	mm/min (in/min)	6,000 (236)	6,000 (236)
最大推力 Max. Thrust	N (kgf/lbf)	19,600 (2,000/4,410)	29,400 (3,000/6,615)
電容量 Electric Power Source Capacity	KVA	14	14
機械尺寸 Machine Size	Ⓓ×Ⓔ×Ⓜ mm (in)	3,650×2,560×750 (143×101×30)	4,920×3,110×925 (194×122×36)
淨重約 Work Table Weight (est)	kg (lb)	8,500 (18,700)	15,000 (33,000)
T型槽 T-slot	Pitch × number	185×9	200×9

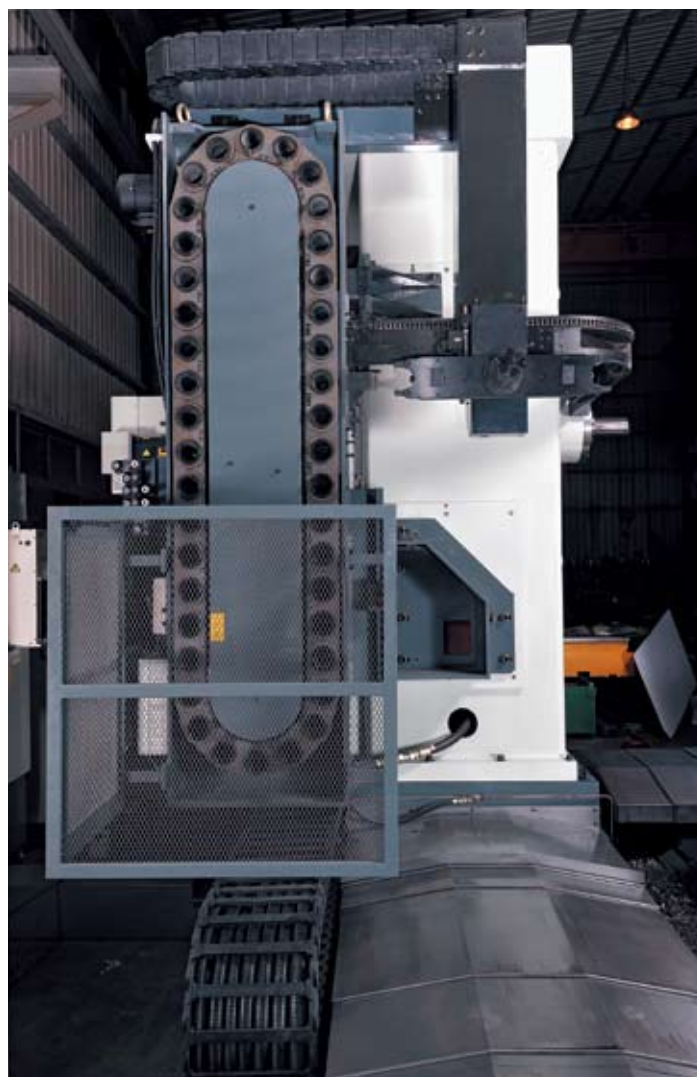
標準附件

1. 底座滑軌護蓋
2. 安裝零件
3. 液壓 力組
4. 拆/裝工具

Standard Accessories

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

自動工具交換 Automatic Tool Changer (Optional Accessory)		
刀具容量	ATC Capacity	40/60/90
刀柄	Tool Shank	MAS 403 BT-50
拉刀裝置	Pull Stud	MAS 403 P50T-1
刀具重量	Tool Weight	25kg
刀具最大長度	Max. Tool Length	300mm
刀具最大直徑	Max. Tool Diameter	Φ 125mm(Φ 250mm)



主要規格 & 特別附件

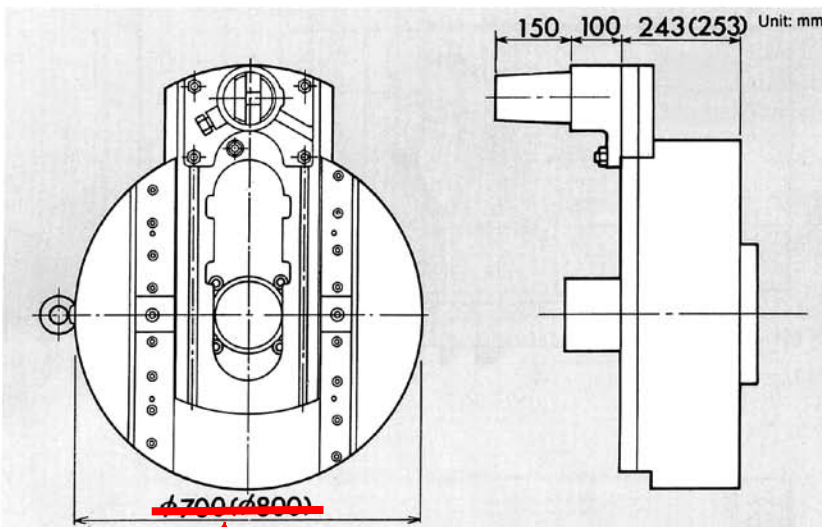
Specifications & Optional Accessories

Description			CBM-110F
主軸 Spindle	馬達 Main Motor (30min/cont.)	kw (HP)	AC 18/22 (24/29)
	主軸轉速 Spindle Speed	rpm / min	5-2500
	主軸錐度 Spindle Tapper		ISO 50/BT-50
	主軸直徑 Spindle Diameter	mm(in)	110(4.33)
	主軸最大扭矩 Max. Spindle Torque	Nm(kgm) (ft, lbs)	1245(127)
	主軸最大驅動力 Max. Spindle Thrust	N(kgf), (ft,lbf)	19600(2000)
行程 Travel	X軸(立柱橫向行程) Column Travel X axis (Horizontal)	mm(in)	2000-6000: Ball Screw Above 6000: Rack
	Y軸(主軸垂直行程) Spindle Vertical Travel Y axis	mm(in)	2000(79) 2500(98) 3000(118)
	W軸(主軸行程) Spindle Travel W axis	mm(in)	600(23.62)
進給 Feed Rate	X / Y axis	mm/min(in/min)	6000(236)
	V / W axis	mm/min(in/min)	4000(157)

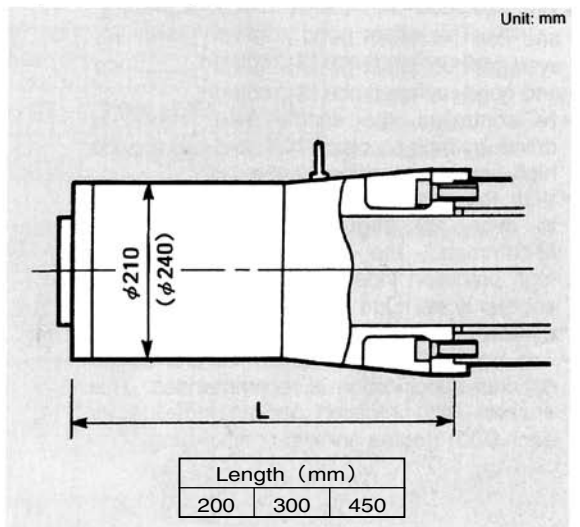
◎ 電容量：85KVA

Electric power capacity：85KVA

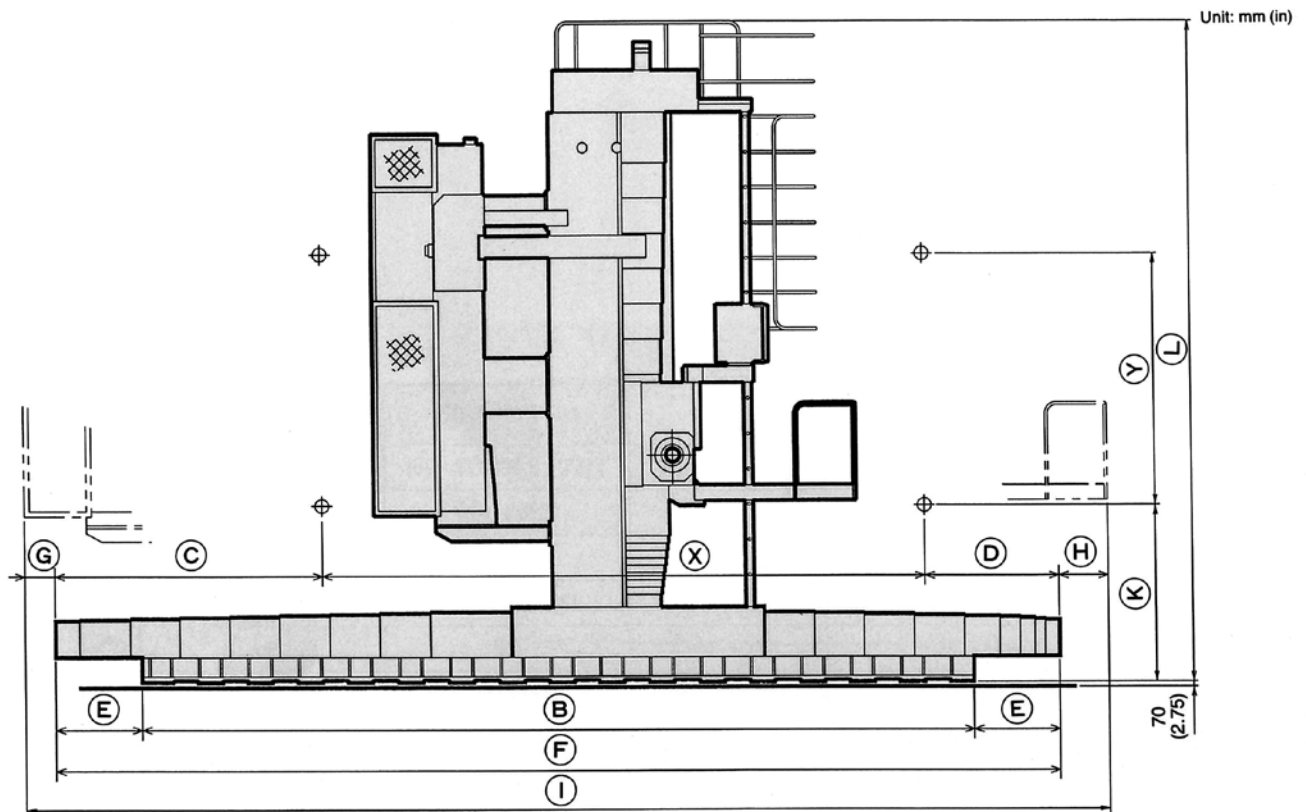
面板 Face Plate



主軸襯套 Spindle Support



尺寸 Dimensions



CBM-110F

單位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)	主軸垂直行程 Spindle Vertical Travel	2,000(78)	2,500(98)	3,000(118)
(K)	標準 Standard	1,405(55)	1,405(55)	1,405(55)
	滑軌防塵蓋 Slideway Dust Cover	1,635(64)	1,635(64)	1,635(64)
(L)	標準 Standard	6,000(236)	6,000(236)	6,500(256)
	滑軌防塵蓋 Slideway Dust Cover	6,000(236)	6,650(262)	7,250(285)

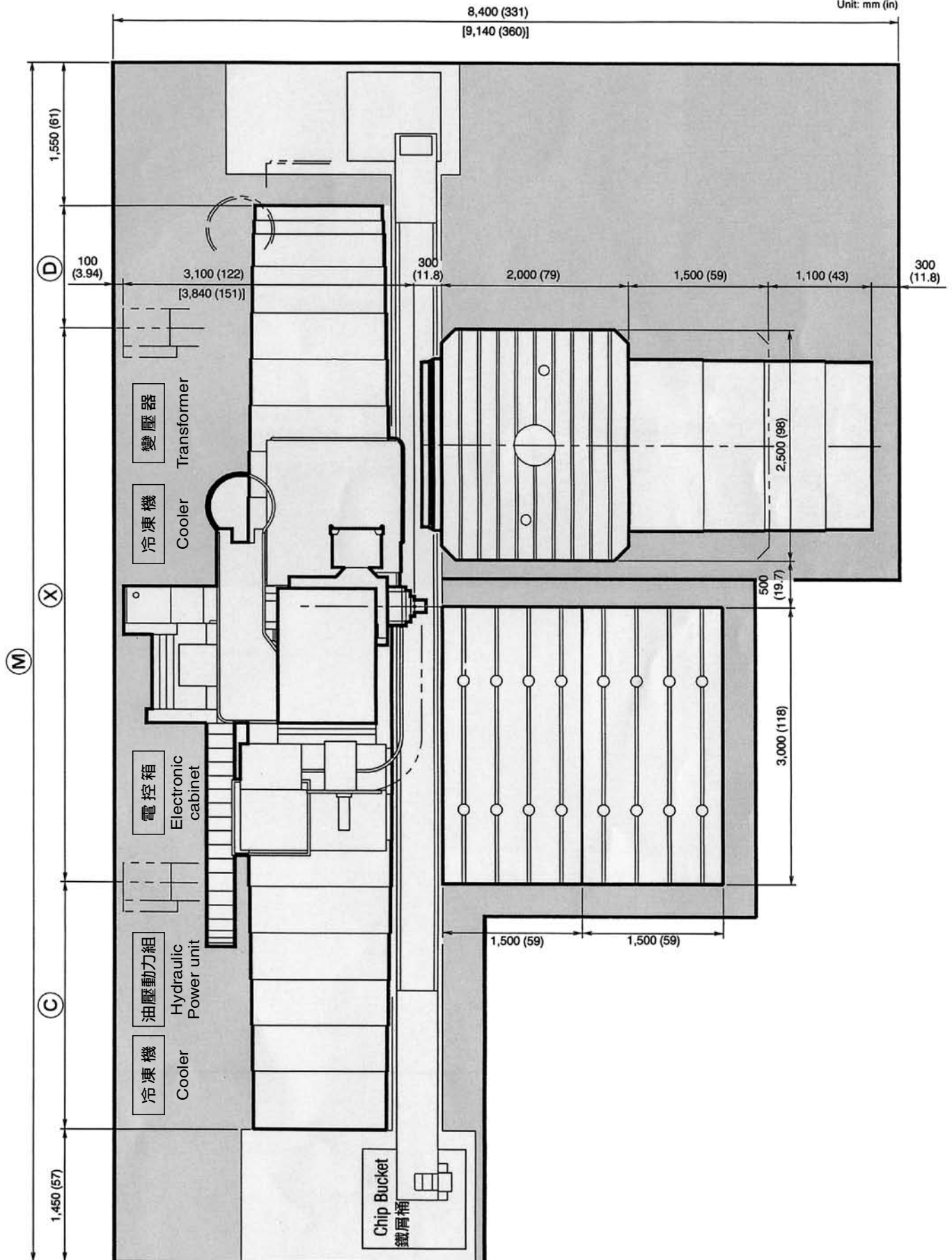
機械淨重 Machine Weight

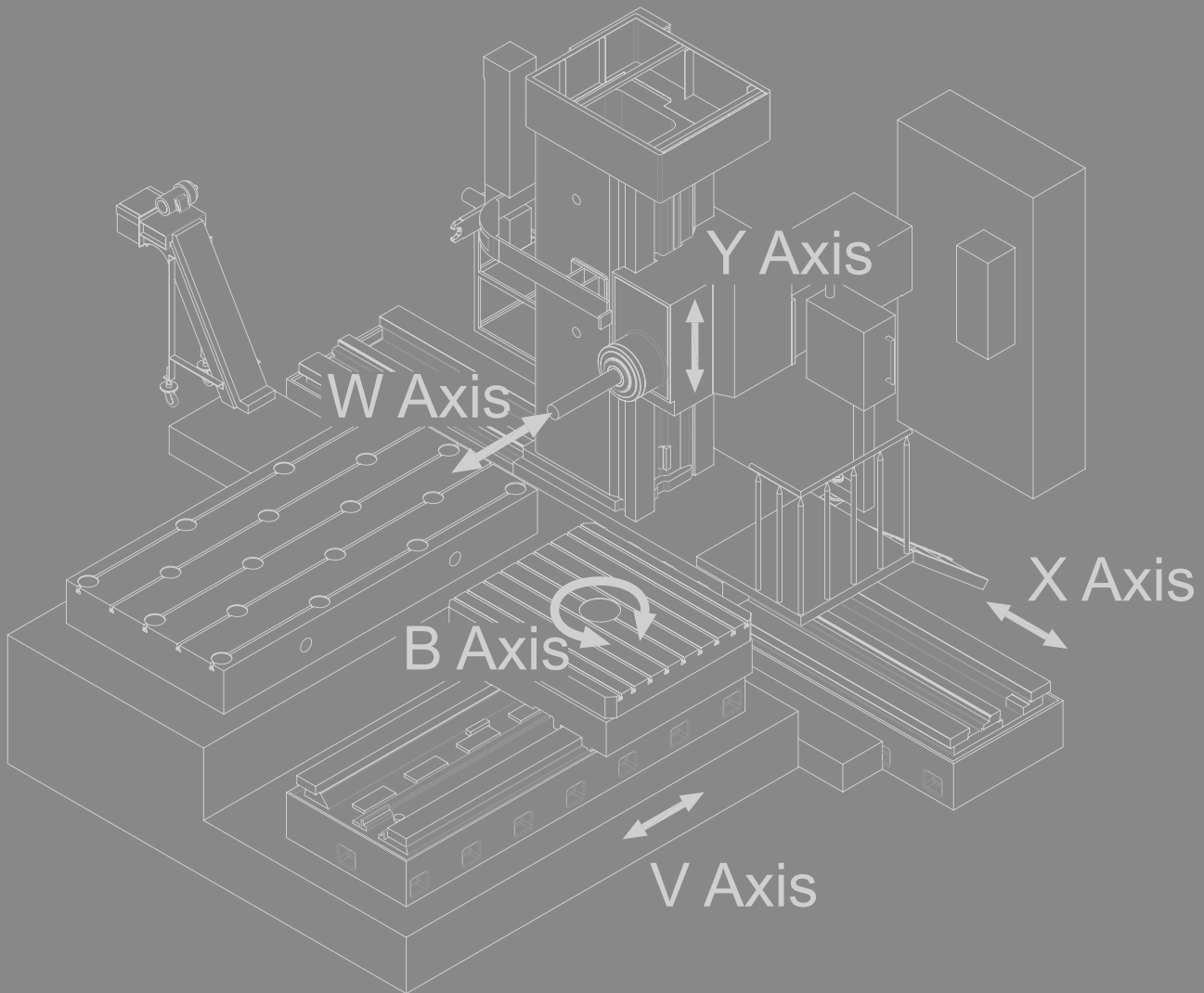
單位Unit : kg (lb)

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

安裝圖 Installation Plan (Reference Only)

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





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