



本公司專營切削加工專用機，設計團隊累積30年以上的開發經驗，其中又以研磨加工機床為專精，磨床為高精密機械，除了機械結構需要良好的剛性，各組成零件精度及組立精度都需要以更高的規格檢驗，除此之外，我們有優良的電控及程式撰寫團隊，配合多年的研磨經驗，能夠生產出符合操作需求的研磨加工模組程式，讓客戶面對不同的生產物件均能達到效率以及精度的要求。

曙光機械本著持續研發精進的精神，除了目前所生產的立式圓筒磨床系列，立式成型磨床系列，仍持續不斷的開發其它車、銑、磨等客製化機械，依照客戶及市場需求創造更多與眾不同的機型，以達成高效率及高精度的目標。

Our company is in the business of special purpose machines for cutting and machining, Our research & design team has experience of R&D for more than 30 years.

Among our team, we possess professional expertise in grinding machining technology and systems.

Grinding machines require high precision; other than good stiffness on the machine structure, the precision for each component and assembly must be maintained to a higher specification.

In addition, we have an excellent team for CNC, software and programming.

With grinding experience for many years, we are able to help our customers by producing grinding machining modular programs that meet their operational demands to achieve efficiency and precision required for the various work pieces produced.

Dawn Machinery focuses on the spirit of continuously developing and advancing. our core business units by listening to the voice of our customers. Aside from carrying on the development of other customized machinery for lathe, milling, and grinding, we are also focusing on producing current product lines of vertical grinder series and vertical forming grinder series. We follow customers' needs and market demands to create numerous models to achieve the goal of high efficiency with high precision.



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Our customized precision versatile grinding meets customers' demands. We are capable of designing satisfying machines for each customer

Dawn Machinery offers turnkey solution services that can keep machinery operation at a higher level of standard. Moreover, we offer planing services for customers' production lines, including the choice of grinding wheels and fixture equipment, so they are able to put the plan into mass production within a relatively short period of time, gaining the optimal profits.

0 From Scratch

We begin from scratch for our customers, offering satisfying model designs of machineries.

3 Days

Within 3 days we are able to finish our primary planning and structural analysis of the selected machines.

6 Months

In 6 months we will finish our machine model production.

90 % Satisfaction

Satisfaction of precision grinding processing.



立式圓筒磨床 Vertical Grinding Machine



DN-1200



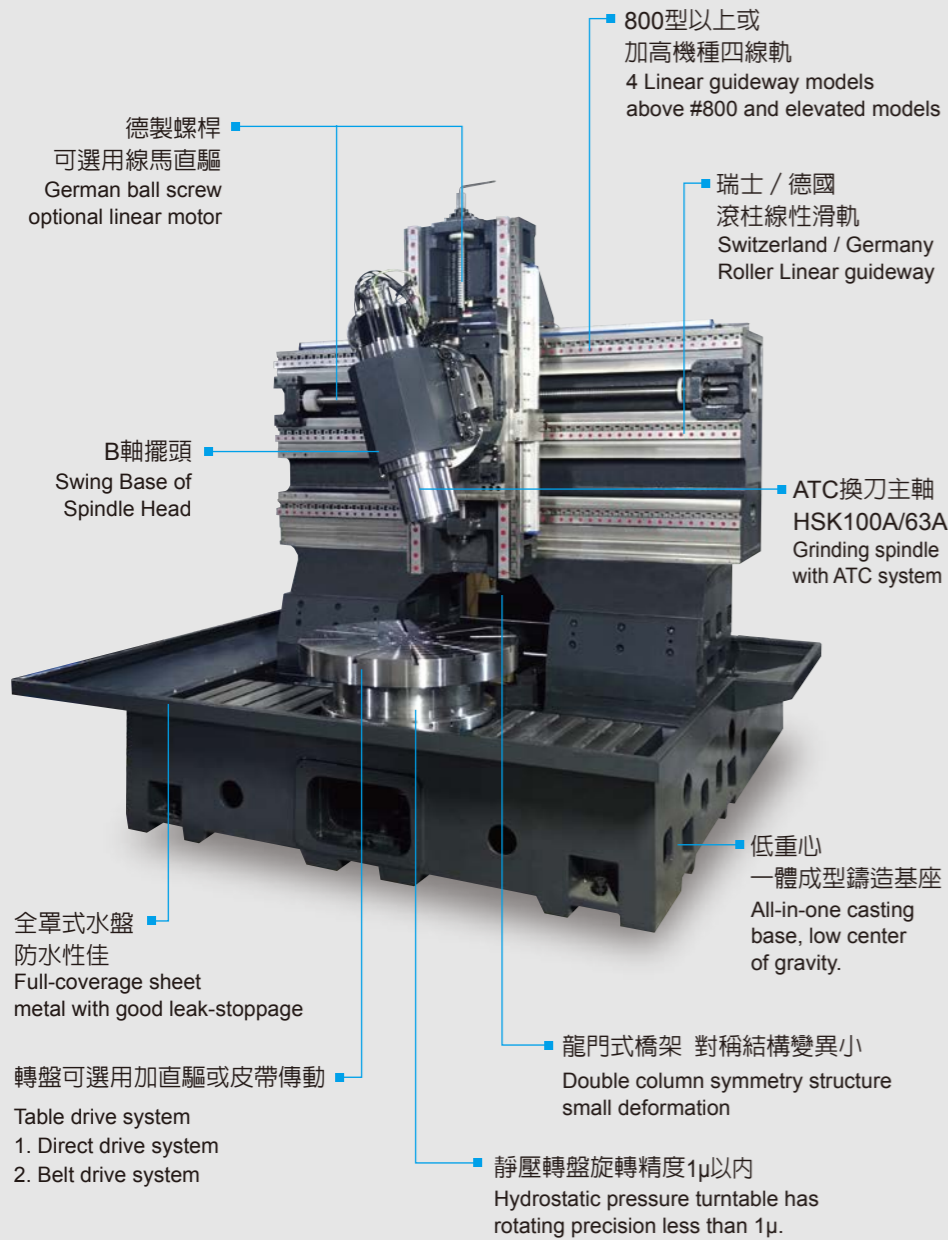
DN-800

提供研磨解決方案，可客製化 您心目中理想的立磨結構！



Offer ways of grinding, customize your ideal structure of grinding machine

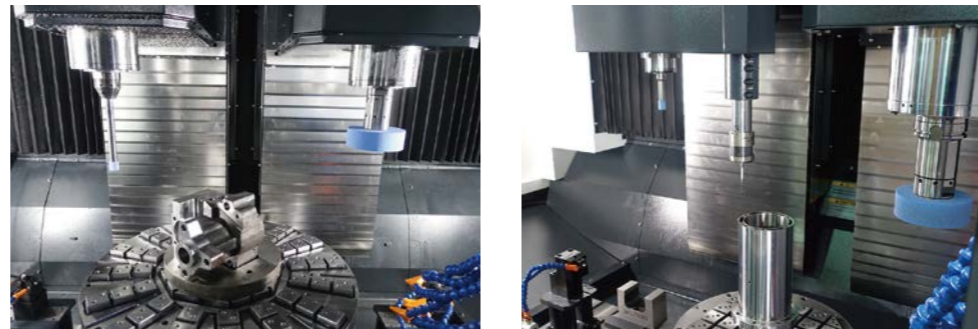
單主軸型式 Single Spindle Type



單主軸+擺頭機構
Single spindle + B axis

單主軸+換刀機構
Single spindle + ATC

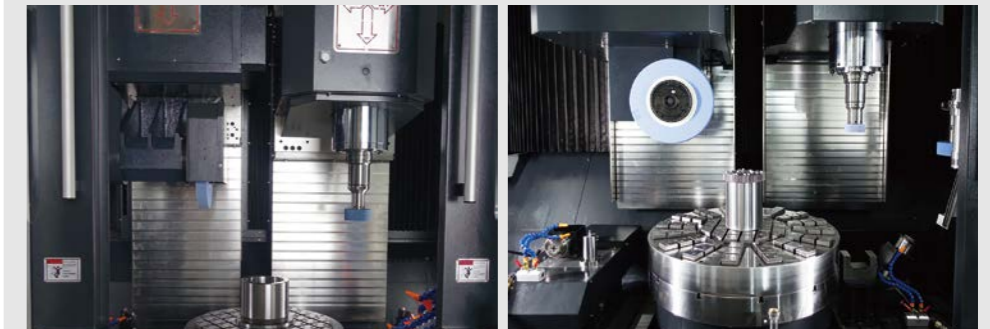
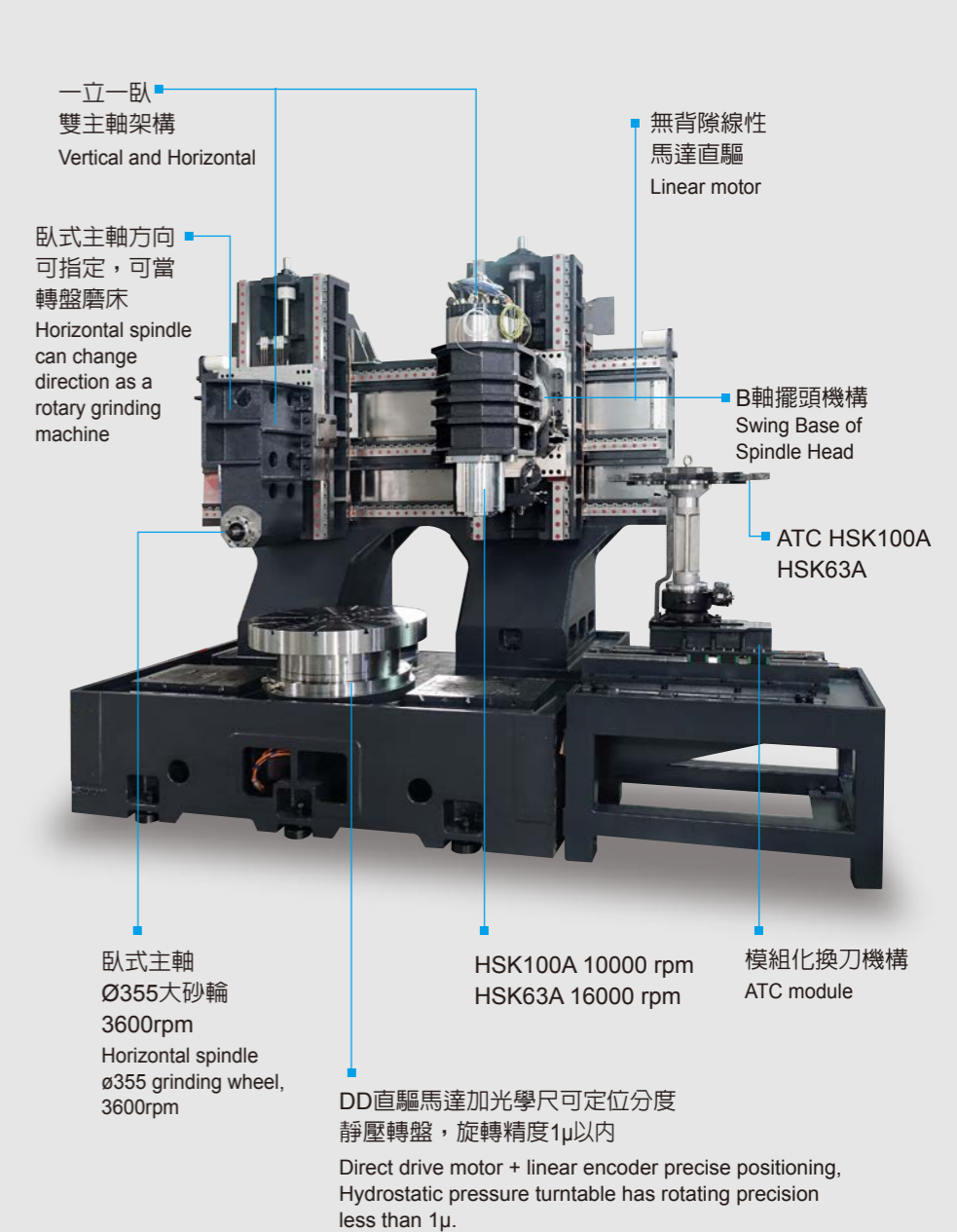
雙主軸型式 Double Spindle Type



高低轉速雙主軸
High and low speed spindle

高低轉速雙主軸+線上檢測
High and low speed spindle + online detection

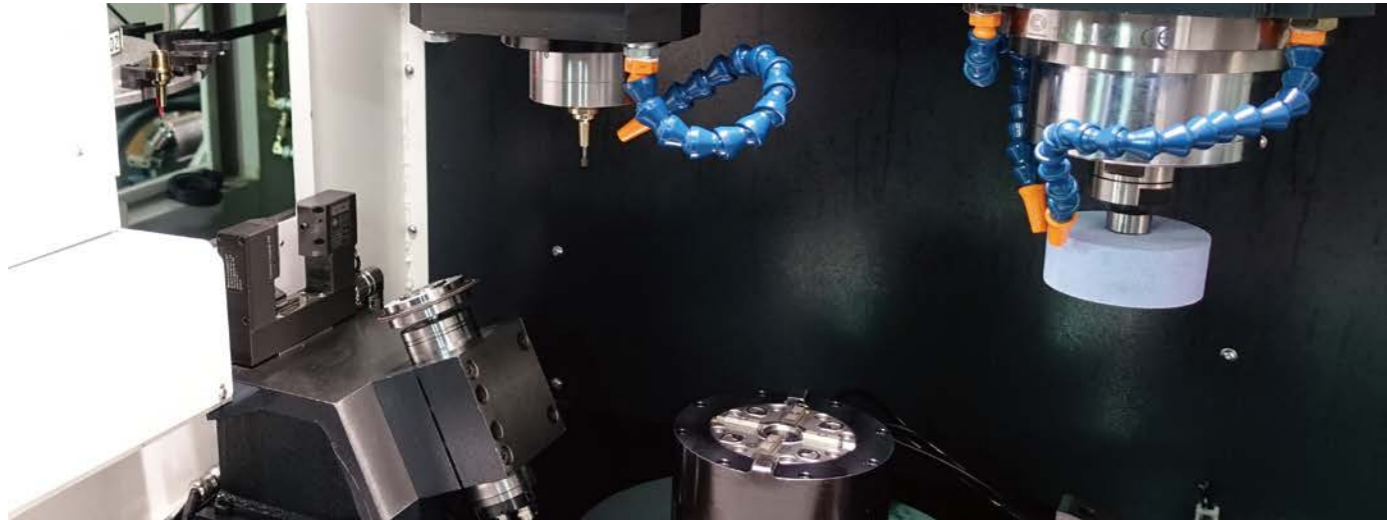
一立一臥型式 Vertical and horizontal composite Type



一立一臥(立磨+轉盤磨)
Vertical cylindrical grinder + Rotary Grinder

一立一臥(立磨+成型磨)
Vertical cylindrical grinder + Form Grinding

交鑰匙工程：以客戶體驗為核心的服務，我們能夠提供研磨加工對應最佳解決方案。
Turnkey solution: offer customer-oriented service, we offer best ways of grinding machining.



由左至右：自動換刀，刀徑測檢測，動力修砂，6萬轉主軸，原點治具，2萬轉主軸
From left to right: Automatic tool change, tool diameter measurement, power dressing, 60000rpm spindle, Origin fixture, 20000rpm spindle.



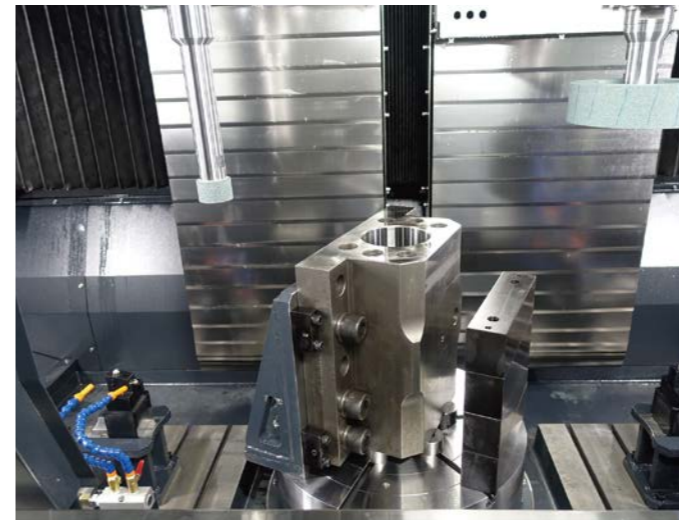
動力修砂
Power dressing



無線電線上量測
Wireless online measurement



電永磁吸盤
Electromagnetic chuck



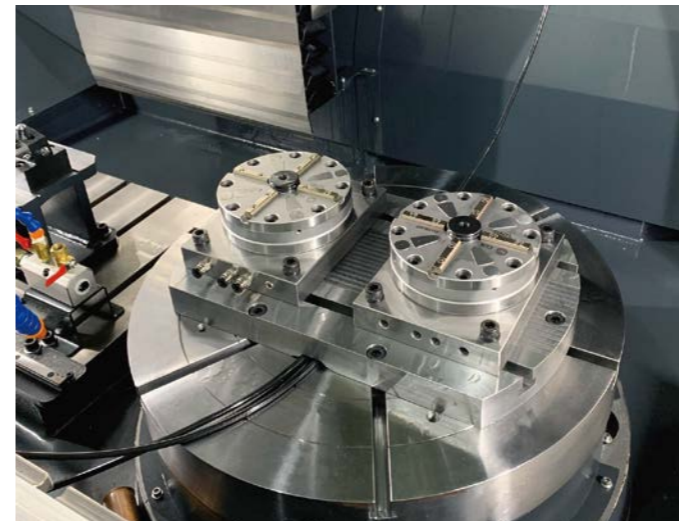
客製化治具
Customized Fixtures



油壓或手動卡盤
Hydraulic chuck



置爪
Chuck



原點治具
Origin fixture

立式圓筒磨床特點

- 適合重型、非圓外型工件做內外徑及端面研磨。
- 較重工件可用吊掛方式固定於夾具上。
- 龍門門結構，機械剛性佳。
- 全罩式板金，油霧回收裝置，研磨油霧不外洩。
- 可任意搭配單主軸，或雙主軸，換刀或不換刀結構。
- 發那科或西門子控制器15"大螢幕觸控對話畫面。
- 對話式程式設計，操作淺顯易懂，操作者不用寫程式。
- 雙主軸機型可搭配高低轉速砂輪，或一立一臥主軸擺放，高效率使用。

Vertical grinding machine features

- Suitable for grinding inside and outside diameters as well as the end surface of heavy or non circular work pieces.
- Heavier work pieces can be more easily loaded to the machine by overhead hoist.
- Double column designed structure provides better machine stiffness.
- Fully enclosed covers and oil mist reclaiming device prevent leakage of grinding oil and mist.
- Options of SINGLE-spindle or DOUBLE-spindle, with or without tool changer.
- Fanuc controller with 10-inch screen, convenient touch panel.
- Conversational programming function makes the control operation and program creation easier to understand.
- Double-spindle model can be equipped with grinding wheels for both high and low RPM's, also, both large and small grinding wheels can be used.

範例 EXAMPLE



搪孔+內孔研磨
Boring + ID grinding



齒輪內外徑端面研磨
Gear ID, OD and flat grinding



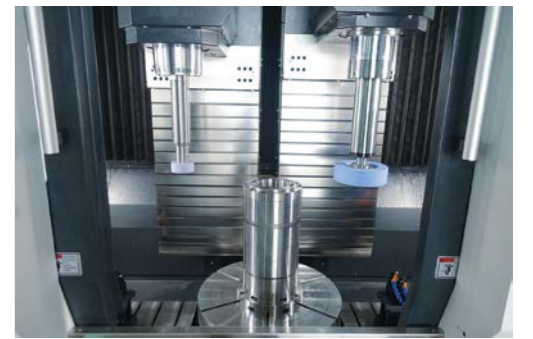
主軸箱內徑研磨
Spindle Housing grinding



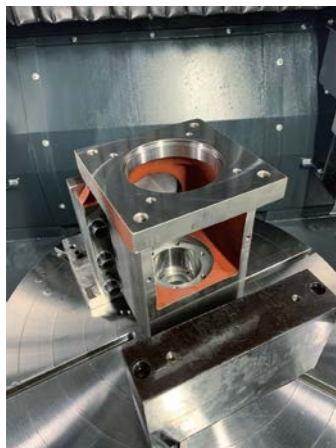
方形工件研磨內孔
Square workpiece grinding



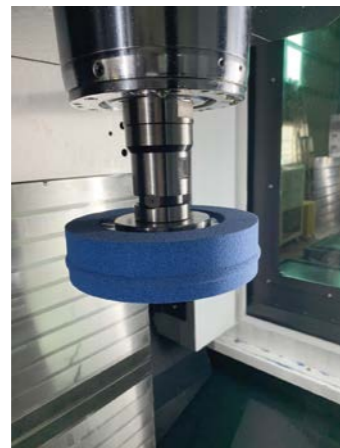
高細長比深孔研磨
Deep hole small inner diameter grinding



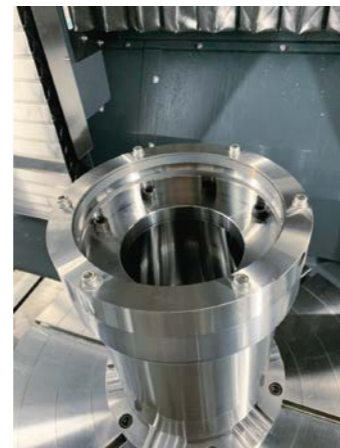
主軸套管孔研磨
Spindle housing grinding



馬達軸承座研磨
Motor base grinding



成型修砂
Form dressing



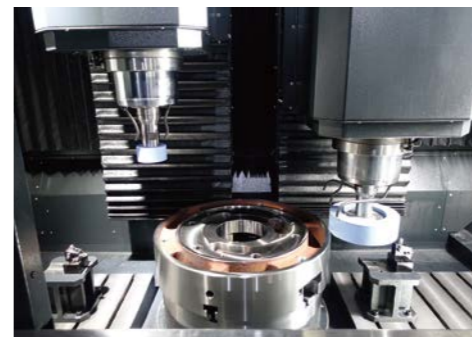
軸承球軌成型研磨
Bearing race shape grinding



第四軸盤面研磨
Table grinding



端齒圈內外徑研磨
End gear ring ID and OD grinding



卡盤內外徑端面研磨
Chuck ID, OD and flat grinding



夾治具零件研磨
Fixture workpiece grinding



錐度及圓周上平面(逃邊)研磨
Taper and flat grinding



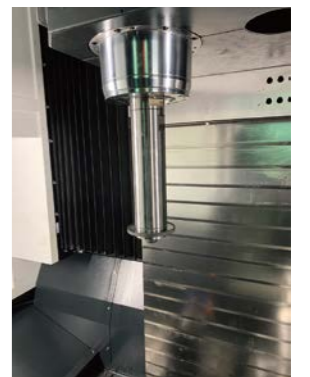
四邊研磨(異形研磨)
Square profile grinding

凸輪輪廓研磨(異形研磨)
Cam profile grinding



缸體研磨
Hydraulic cylinder grinding

溝槽研磨
Groove grinding



溝槽研磨
Groove grinding

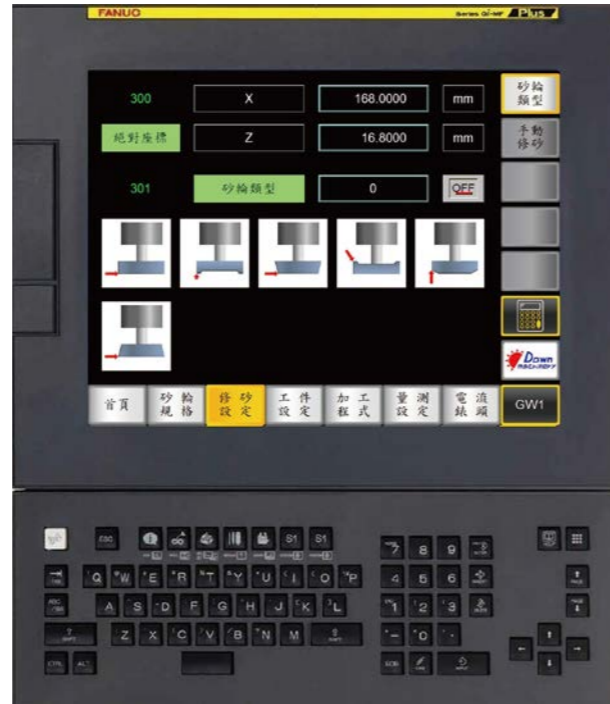


先車再磨
Turning + Grinding

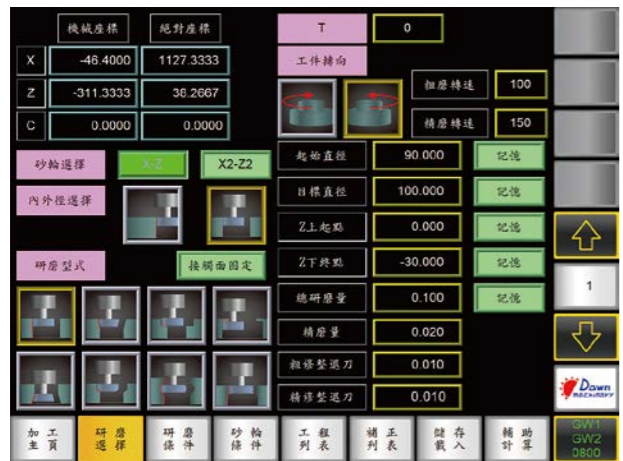
控制器&對話畫面 CONTROLLER



西門子828D+15"觸控整合式畫面
SIEMENS Integrated Operation HMI



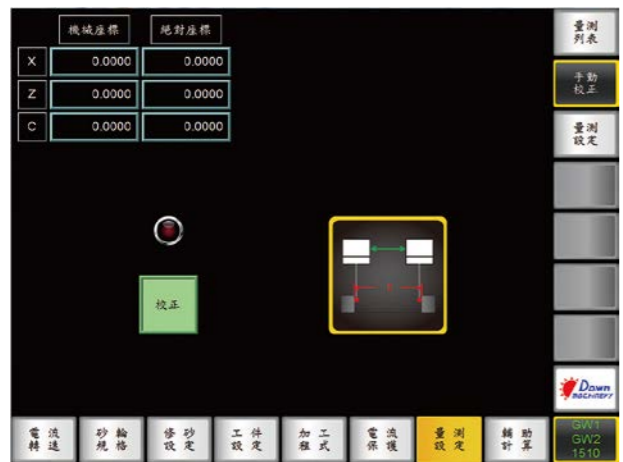
發那科0i+15"觸控整合式畫面
FANUC Integrated Operation HMI



研磨選擇
Grind setting



研磨條件
Grind Condition

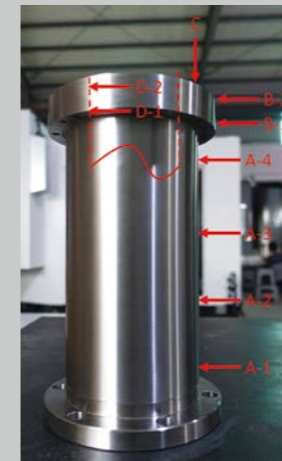


量測設定
Measure setting

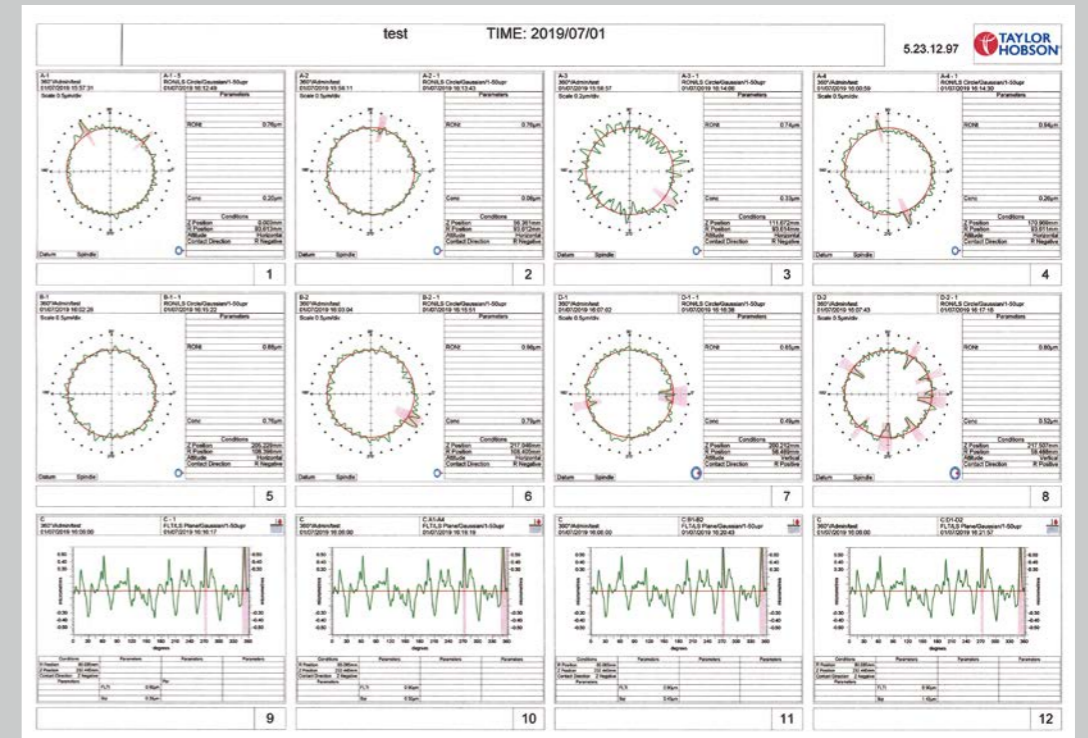


工程列表
Process List

檢測 TESTING



主軸套管研磨範例
Spindle housing grinding example



研磨範例量測報告
Measure report (measure by TAYLOR HOBSON Roundness measurement machine)



機械幾何誤差檢驗報告
Machine geometric error measurement

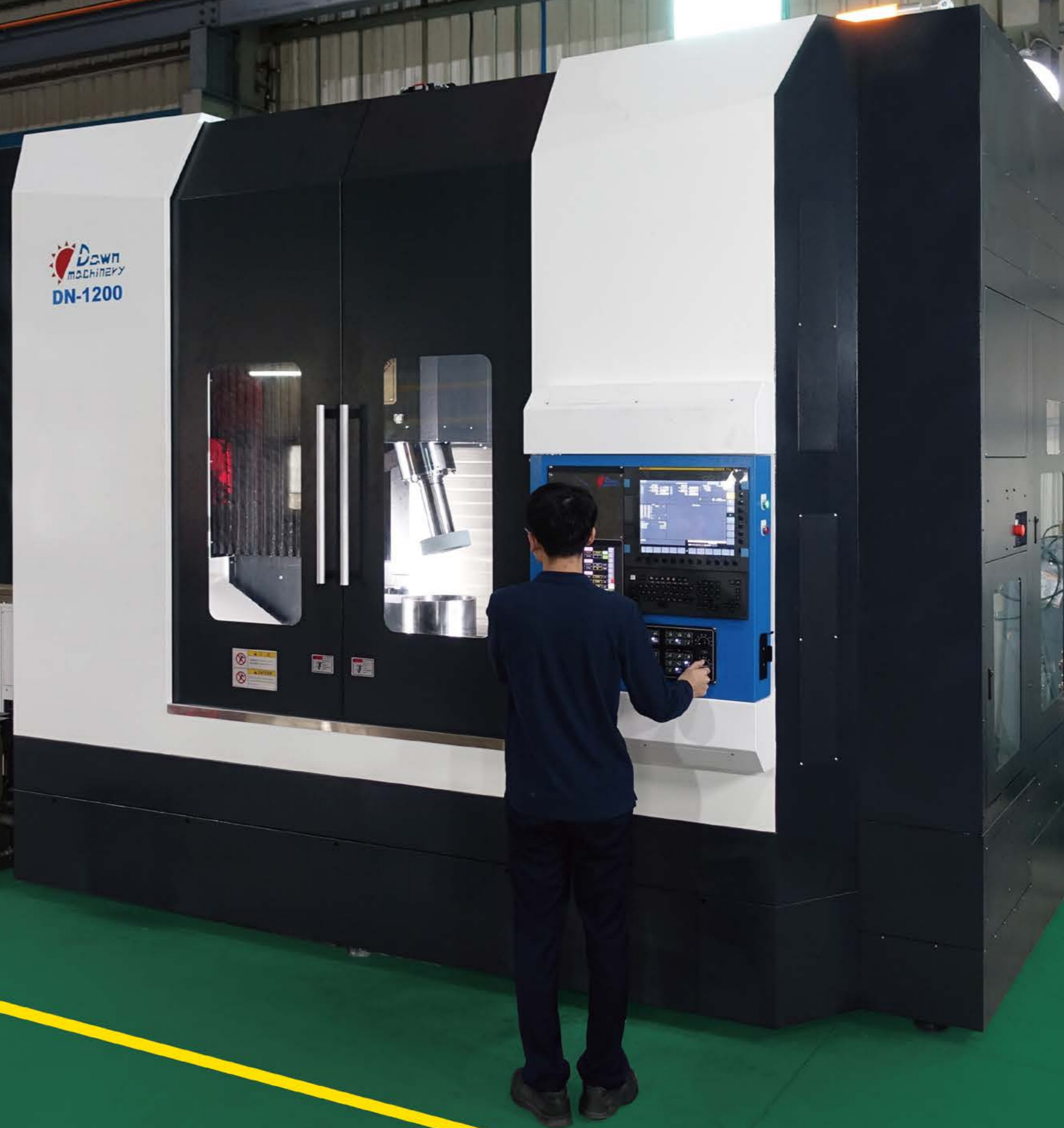
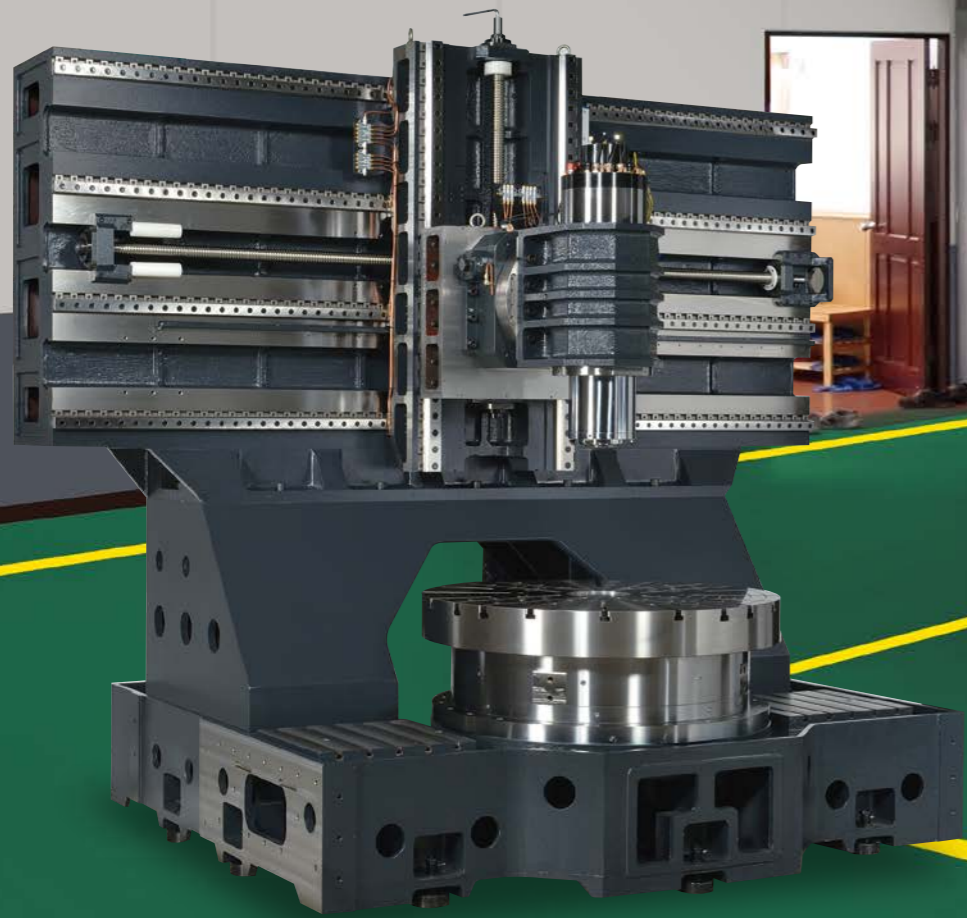


RENISHAW直線度 / 平行度 / 垂直度雷射檢驗儀
Parallelism / Straightness / Perpendicularity (RENISHAW)



定位精度雷射檢驗
Position error measurement

 Dawn
MACHINERY 曙光機械



項目 Item	型號 Model No.	DN-500	DN-600	DN-800	DN-1200	DN-1600
加工能力 Machining capacity	旋徑-可研磨外徑 Swing diameter- outside diameter that can be ground	Ø610		Ø810	Ø1210	Ø1610
	機械開口高度(*註2) Mechanical opening height (*Remark 2) mm	950		950	1050	1050
	外徑可研磨長度 Length of the outside diameter that can be ground mm	400		400	550	550
	內徑可研磨長度 Length of the inside diameter that can be ground mm	350		350	400	400
砂輪軸 Grinding wheel spindle	工作台載重 Max. load on table KG	300	400	800	5000	6000
	刀柄形式(註*3) Type of tool holder	HSK-A63/A100		HSK-A100	HSK-A100	HSK-A100
	功率(kw) Power (S1/S6-40%) kw	18/23	18/25	18/25	25/33	25/33
	最高轉速 Max. speed rpm	2500~15000		2500~10000	2500~10000	2500~10000
工作台 Work Table	砂輪徑 Diameter of grinding wheel mm	Ø40~ Ø255		Ø50~ Ø255	Ø50~ Ø255	Ø50~ Ø305
	轉盤直徑 Diameter of turntable mm	Ø500	Ø600	Ø800	Ø1200	Ø1600
	工作台轉速 Revolution of worktable rpm	300	250	200	100	80
X軸 X-axis	行程 Travel mm	1200		1400	2400	2400
	最小設定單位 Min. unit of measurement mm	Ø0.0001		Ø0.0001	Ø0.0001	Ø0.0001
	光學尺 Optical scale	有		有	有	有
Z軸 Z-axis	行程 Travel mm	800		800	900	900
	最小設定單位 Min. unit of measurement mm	0.0001		0.0001	0.0001	0.0001
	光學尺 Optical scale	有		有	有	有
NC	FANUC/SIEMENS	Oi-TF(+)/828D		Oi-TF(+)/828D	Oi-TF(+)/828D	Oi-TF(+)/828D
	驅動 Drive	絲桿+伺服馬達 可選線馬		絲桿+伺服馬達 可選線馬	絲桿+伺服馬達 可選線馬	絲桿+伺服馬達 可選線馬
刀塔 Turret		HSK-A63- 6T HSK-A100-6T		HSK-A100-6T	HSK-A100-6T	HSK-A100-6T

標準配件

- 油霧回收機
- 紙帶過濾機
- 磁鐵過濾機
- 刀把3把
- 鑽石筆修刀
- 六槽T溝工作台
- 工具箱

STANDARD ACCESSORIES

- Oil mist reclaiming device
- Paper type filter
- Magnetic separator
- 3 x outer diameter handles
- Diamond dresser pens
- Table groove
- Tool box

選擇配件

- 線上檢測
- 自動門裝置
- 電磁盤
- 油壓三爪
- 動力修砂單元
- 防撞偵測
- 主軸監控

OPTIONAL ACCESSORIES

- Online detection
- Automatic gate device
- Electromagnetic chuck
- Power Chucks
- Power diamond dresser
- Collision avoidance detection
- Spindle monitoring

*註1:以上規格以轉盤盤面尺寸為主標示,可選擇單主軸或雙主軸,或依立一臥主軸配置,換刀或不換刀。

客製化配置依雙方技術協議為準。

*註2:機械開口高度是指主軸鼻端至工作台最大距離。

*Note: 1. The spindle type can be customized.
2. Mechanical opening height: Maximum distance from spindle nose to table

