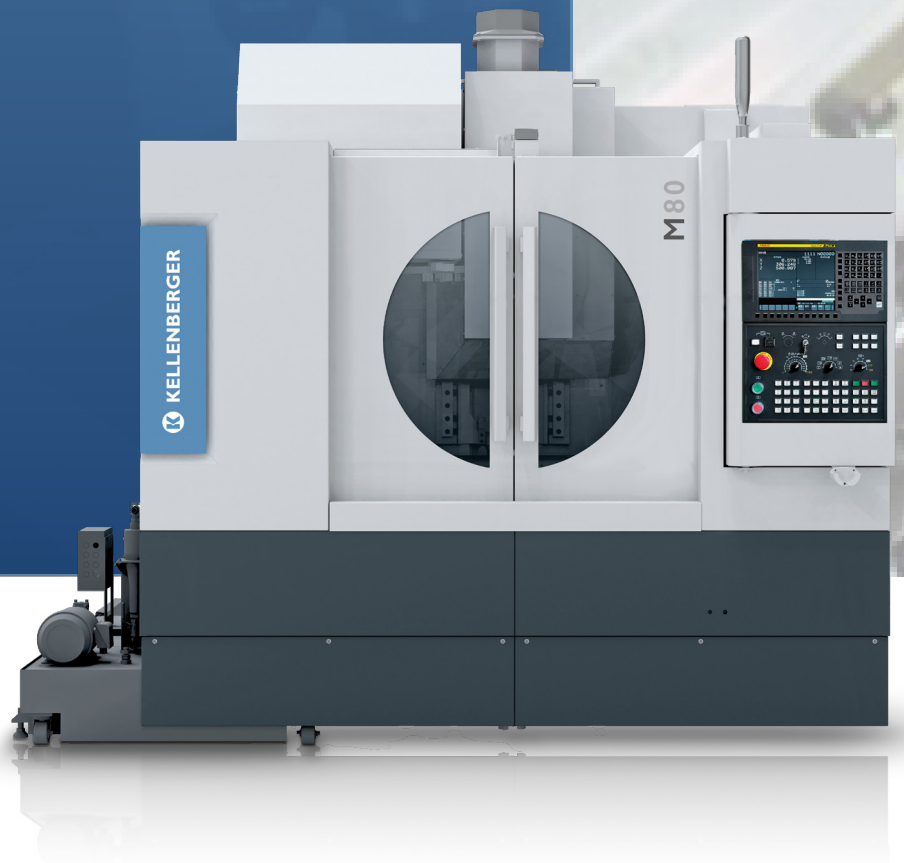
M 80

VERTICAL MACHINING CENTER



KELLENBERGER

M 80

High Efficiency

High Rigidity

High Precision

The new generation high-precision vertical machining center designed and manufactured by Kellenberger delivers outstanding performance in efficiency, rigidity and precision, and can meet the diverse processing application requirements!

Z-axis travel 650mm

Spindle output torque 191Nm

Spindle motor power 30kW

vX/Y/Z axis motor power 4/4/7kW

(Fanuc)

X/Y/Z axis positioning accuracy over

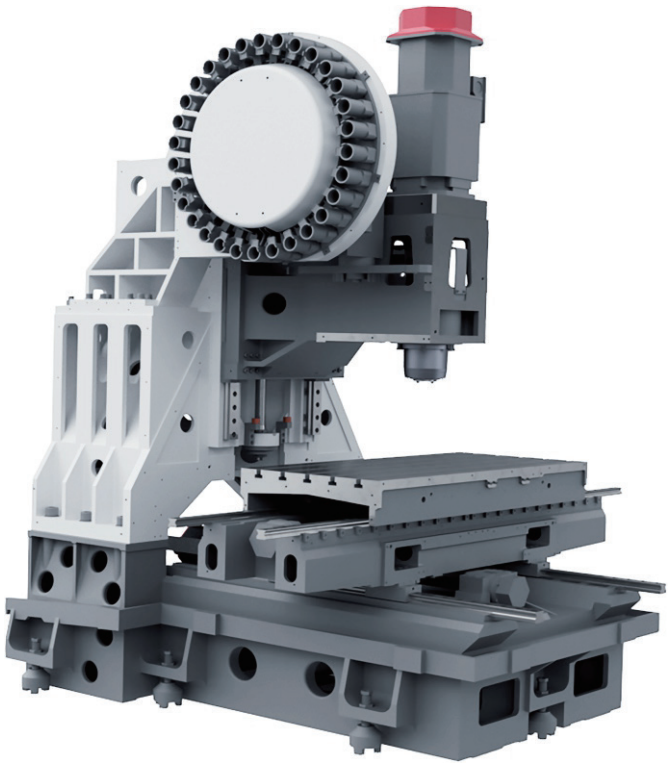
full travel 0.005mm

Tool capacity 30

X/Y axis rapid traverse rate 48m/min

STRUCTURE FEATURES

The whole machine features a rational structural design with higher overall rigidity and better thermal stability, serving as a reliable solution for machining difficult-to-cut materials and applications with high requirements for precision and surface quality.



- High-quality cast iron machine base with FEA (Finite Element Analysis) applied in design, ensuring a more rational mechanical structure, excellent rigidity, durability and thermal stability.
- Equipped with internal double-screw chip removal and external rear chip removal, enabling fast and effective chip clearing to avoid chip accumulation.
- X/Y/Z axes adopt 35/45/45mm heavy-duty roller-type linear guideways respectively, enhancing machining rigidity and antivibration performance.
- Z-axis with an ultra-large travel of 650mm and the spindle nose to the maximum height of the worktable up to 800mm, meeting the processing needs of various parts.
- Integrated motor seats and bearing blocks on the saddle and column are machined in one operation, ensuring higher assembly accuracy and long-term machining stability.
- 170-specification 12,000rpm precision direct-drive spindle with BBT40 dualcontact taper bore, achieving better clamping accuracy and clamping rigidity at high speeds.
- Vertically mounted tool magazine minimizes the impact of magazine weight and tool change vibration on machining accuracy; the external layout facilitates daily maintenance and overhaul.
- Key contact surfaces of castings such as the column and base are manually scraped and ground to ensure higher rigidity and precision of the whole machine.

CONFIGURATION

Standard

- 12.000rpm precision DDS Spindle
- Spindle Oil Chiller
- 30T swing-arm ATC
- Heavy duty Roller Guideway
- LED light
- Tri-stack Status Indicator
- Internal double-screw chip removal
- Scrape-type chip conveyor
- Coolant tank and pump
- Surround Tool Coolant

Optional

- X/Y/Z axis linear scales
- Automatic door
- Hinge Type Chip Conveyor
- In-machine tool probe
- Part Probe
- Tool broken detector
- Oil-water separator
- Air seal detector
- Through-spindle center highpressure coolant (20Bar)
- Through-spindle center highpressure coolant (50/70Bar)

BBT40 Direct-drive Spindle

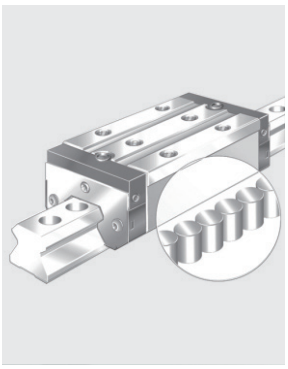
30 T ATC

High Quality Pneumatic Components

Spindle Oil Chiller

Automatic Lubrication System

Tool Probe (optional)



Heavy Duty Roller Guideway

Part Probe (optional)

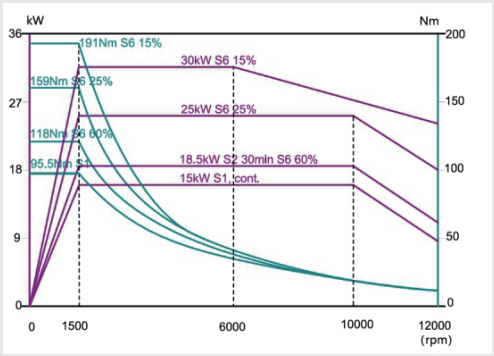
CONTROL SYSTEM

Programmable Data Input
Sub program call
Custom macro
Additional custom macro common variables
Coordinate scaling
Coordinate system rotation
Programmable mirror image
Linear interpolation

Fanuc 0i MF Plus

10.4" Display
Max. Controlled axes:5
Simultaneous Controlled axes:4 Servo Control HRV3
Programming resolution 0.001mm
Interpolation resolution: 0.0001mm (nano interpolation)
Metric/Inch Conversion
Part program sotrage size 2MB
Number of registered program 1000
Dynamic graphic display
400 tool set pairs
PCMCIA Interface
Embedded ethernet interface (100base)
Tool life management
Tangential speed constant control
Automatic acceleration / deceleration
Feed speed override
JOG magnification
Bell-shaped acceleration / deceleration for rigid tapping

FANUC

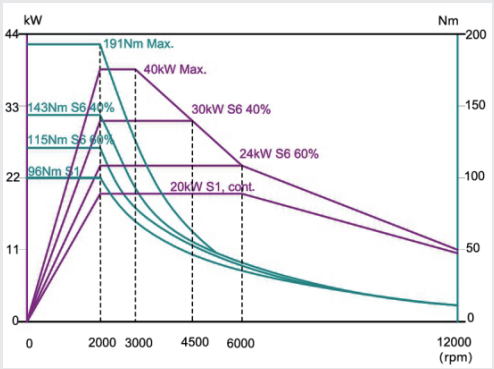


Minimum block switching time 2ms
Drilling and milling of standard geometries
Contour milling
Combined drilling and thread milling
Thread milling
Polygon milling
Letter engraving
Imperial/Metric Conversion
Alarm History
Help function
User defined cycle
User-defined global variables
Additional user public R variables
Backlash compensation
Movement time and workpiece counting Pitch error compensation

Siemens 828D

10.4 "Display
Integrated QWERTY keyboard
Advanced Surface
Program Look Ahead
Dynamic Servo Control
Jerk Control
Tool management (with tool life monitoring)
256 Tools
Workpiece coordinate set quantity (100 groups)
5MB program memory
USB/CF card expansion memory (>16G)
DNC processing
Graphical conversational programming
Feedforward control
Axis Synchronization in Mac
SINUMERIK CNC programming language
ISO language compiler
Graphics processing simulation
Polar coordinate programming
Linear/circular/helical interpolation
Coordinate System
Programmable mirror / scale/ rotate

SIEMENS

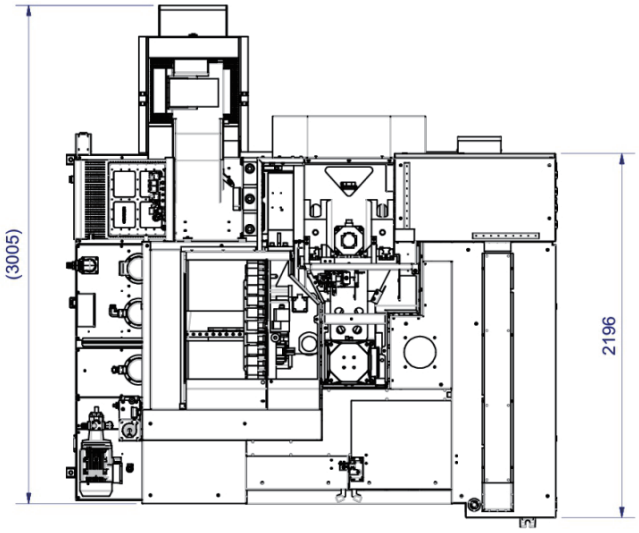


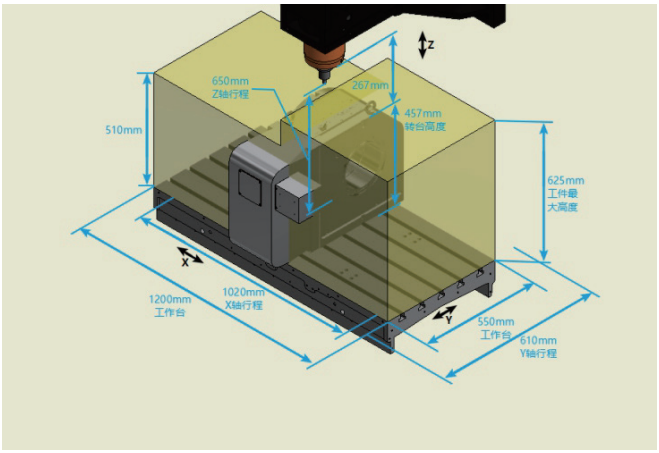
SPECIFICATIONS

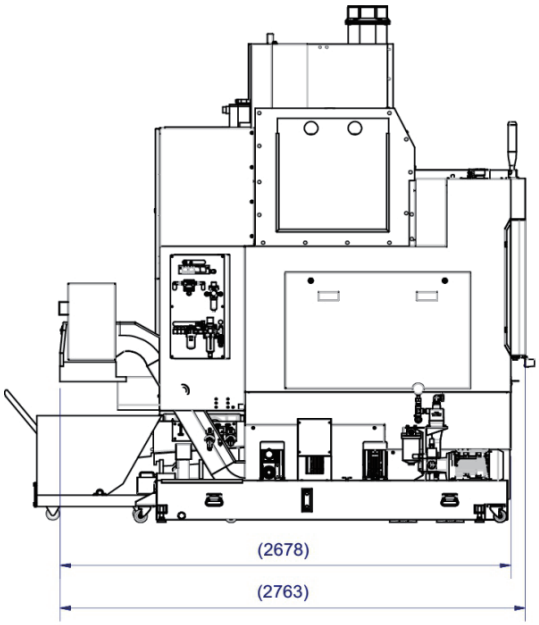
	Fanuc 0i MF Plus	Siemens 828D
Working Area		
X/ Y/ Z Axis Travel	1020×610×650mm	
Spindle Nose To Table	150- 800mm	
Spindle Center to Column	658mm	
Table		
Length ×Width	1200×550mm	
Max. Load Capacity	1000kg	
T- slot (Size ×Qty×Spacing)	18mm×5×100mm	
Spindle		
Taper ISO No.	BBT40	
Power	30 kW	40 kW
Spindle Max. Speed	12000rpm	
Torque	191Nm	191Nm
Ball Screw		
Ball Screw Size	40mm	
Ball Screw Pitch(X/Y/Z)	16/16/12mm	
Axis Drivers		
Rapid Traverse Rate (X/Y/Z)	48/48/36m/min	
Max. Feed Rates	15m/min	
Servo motor(X/Y/Z)	4.0/4.0/7.0 kW	2.9/2.9/3.55 kW
Automatic Tool Changer		
Tool Capacity	30	
Method Of Tool Selection	Bi- directional Nearest Tool Selection	
Max. Tool Diameter (Full Drum)	76mm	
Max. Tool Diameter (Adj. Pockets Empty)	150mm	
Max. Tool Length	300mm	
Max. Tool Weight	7kg	
Tool Change Time	T-T: 1.5sec / C-C:3.2sec	
Accuracy ISO230-2		
Positioning X, Y, Z	0.005mm	
Repeatability X, Y, Z	0.003/0.003/0.004mm	
Coolant System		
Capacity	300L	
Flow	40L/min	
Others		
Compressed Air	6~8kg/cm ^{2} ,600L/min	
Power Requirement	40 KVA,3~380V	
Weight	6300Kg	
Machine Dimensions (LWH)	3000*3000*3004 (with chip conveyor)	

Note :Data is based on the printing period only, Any technical and parameter changes without prior notice .

LAYOUT







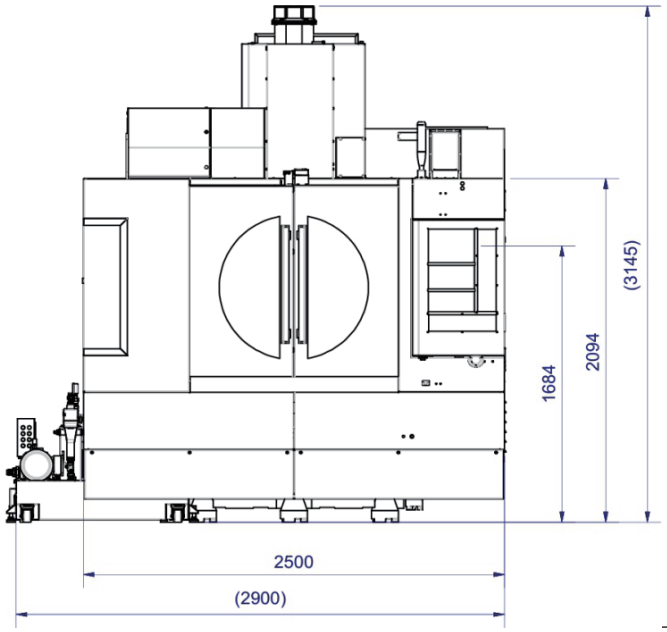
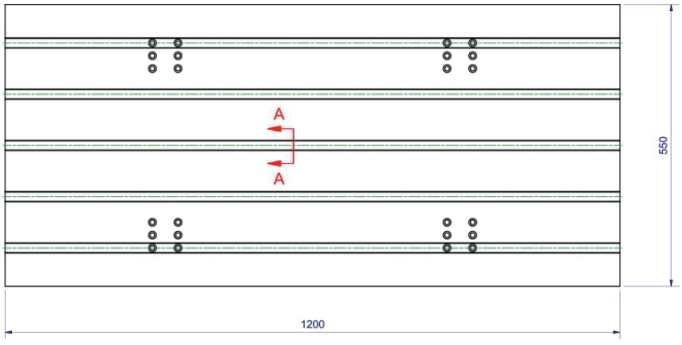
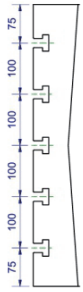
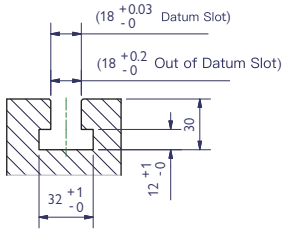


Table Size







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