

FQ FIXED DOUBLE COLUMNS MACHINING CENTER

Item	Unit	FQ-1422	FQ-1432
Distance between columns	mm	1400	
Table size	Length	2000	3000
	Width	1200	
Maximum Table Load	ton	8	10
T-slot	Width x Pitch x NO	22 x 150 x 7	
Travel	X-axis	2200	3200
	Y-axis	1300	
	Z-axis	800	
Spindle	Nose to table	100 ~ 900	
	Speed	BBT40 - 15000rpm	
	Power	20kW	
feedrate	Cutting	15	
	X axis G00	25	
	Y/Z axis G00	25	
ATC & tool magazine	Capacity / Max Dia	ATC 24pcs / Max. dia Ø90 (full tools) ; Ø180 (Adjacent pocket empty)	
	Max tool weight / Length	7kg / 250mm	
	Tool selection	Arm-cam	
Power / Pneumatic		60 KVA / 6.5 kg/cm ²	
Machine size	Length	6680	8680
	Width	3410	
	Height	4045	
Machine Weight (app.)		20	25

ⓘ All data will change based on the actual situation without notice.

STANDARD ACCESSORIES

- | | | |
|-------------------------------------|------------------------------------|---|
| 1. SIEMENS 828D + 10.4"LCD | 9. USB / RS-232 interface | 17. X/Y/Z axis ballscrew |
| 2. Spindle cooler | 10. Air / water cleaning equipment | 18. X/Y/Z axis roller linear guideway |
| 3. Spindle air blast | 11. Dual spiral type chip remover | 19. Foot switch for tool released |
| 4. Cutting coolant system | 12. Steel belt type chip conveyor | 20. Semi enclosure splash guard (no roof) |
| 5. Auto lubrication system | 13. Operator manual | 21. X axis telescopic cover + Y axis JAVARA |
| 6. Rigid tapping | 14. Working lamp | 22. Hanging type control panel + MPG |
| 7. Electrical cabinet heat exchange | 15. Oil skimmer | 23. Transformer |
| 8. Program end alarm light | 16. Tool kits | 24. Level screw and Foundation J-bolt |

OPTIONAL ACCESSORIES

- | | | |
|---|--------------------------------|---------------------------------|
| 1. Heidenhain 530iTn | 5. All axis linear scale | 9. Coolant cooler |
| 2. Direct drive spindle (BBT50, 10000rpm) | 6. Tool piece measurement | 10. Special milling head |
| 3. Built-in spindle (BBT50, 12000rpm) | 7. Auto work piece measurement | 11. Auto head exchanger stand |
| 4. Built-in spindle (HSK A63, 20000rpm) | 8. Coolant through spindle | 12. Full enclosure splash guard |

HIGH-PRECISION HIGH-SPEED

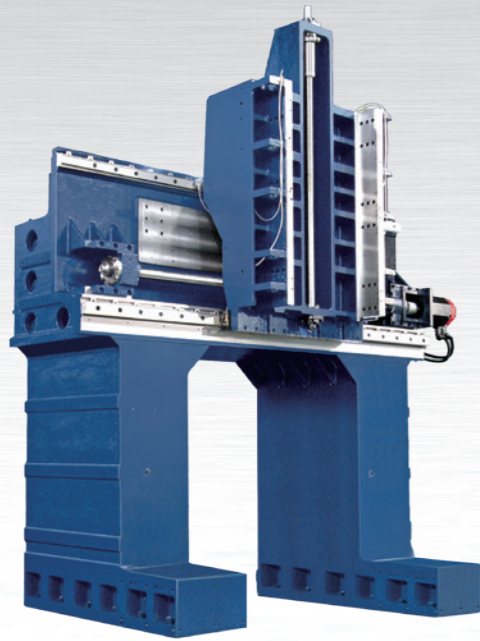
CNC DOUBLE COLUMNS MACHINING CENTER

FQ

SERIES



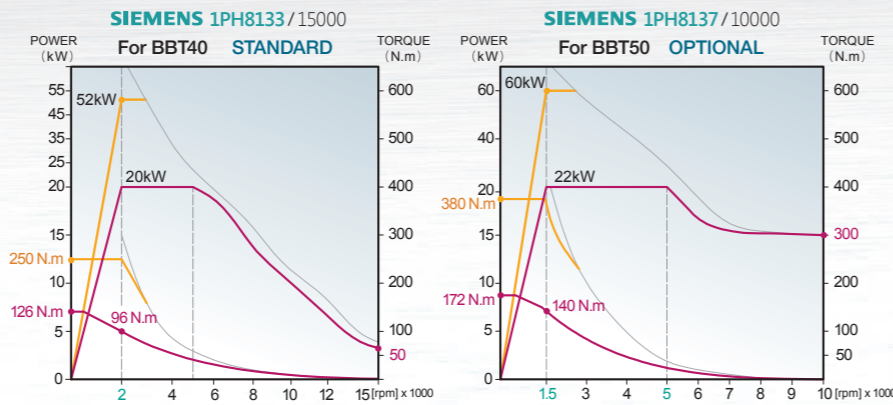
Optimal rigidity design



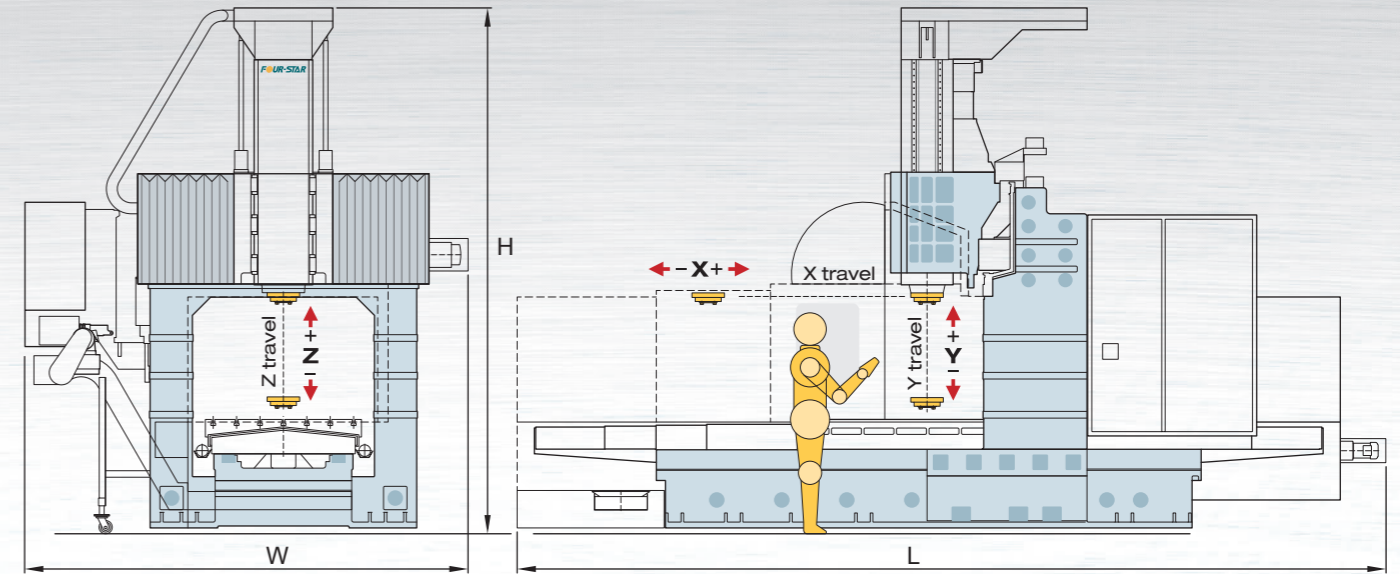
▲ Columns and Cross beam one-piece casting



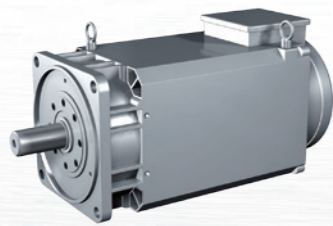
**BBT40/50 Direct Drive Spindle
SIEMENS 1PH8 high speed motor**



Machine Layout & Technical data



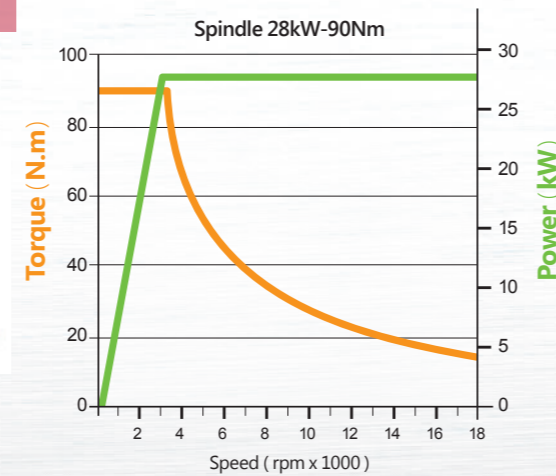
Professional for Die & mold process



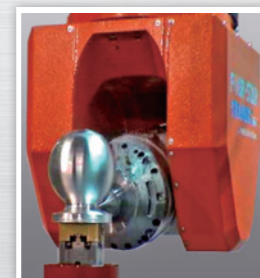
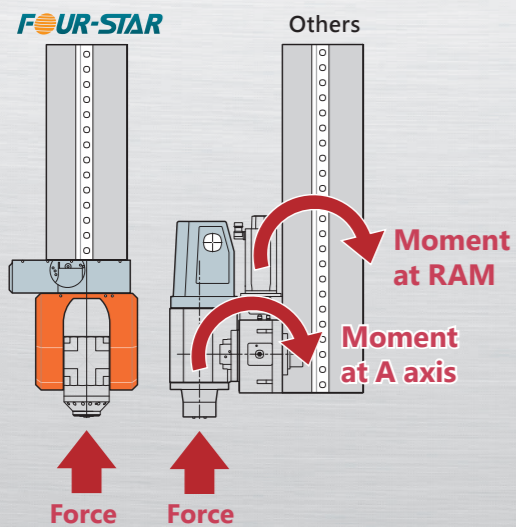
▲ High Efficiency 1PH8 spindle motor



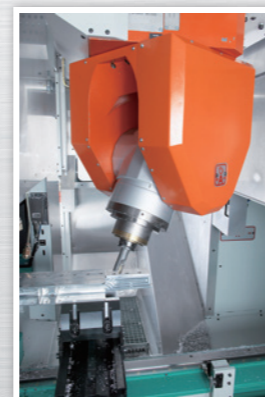
▲ Die Mold & multi-process parts



4/5 axis simultaneous head (TRAMEC)



C/A axis $\pm 225^\circ / \pm 110^\circ$
Clamping 2000Nm
Precision $\pm 15'' / \pm 10''$



Tramec head with a low weight design guarantees best machine dynamic
Water-cooled A&C-axis to guarantee stable machining processes

Technical data of SIEMENS 828D

System performance

Basic quantity of axes/spindles/auxiliary axes	4
Each additional axis/spindle	●
Each additional axis/spindle	●
Max. configuration axes/spindles/auxiliary axes	6
Max. number of interpolating axes	4
Max. number of machining channels	1
Minimum block cycle time	2 ms
CNC user memory (extendable by user-CF-card)	3M byte

CNC Functions

Tool management with monitoring of tool life and workpiece count	○
Replacement tools	●
Max. number of tools/cutting edges	128/256
Number of settable zero-offsets	100
Asynchronous subroutines ASUB	○
Synchronized actions and high-speed auxiliary function output	○
Acceleration with jerk limitation	○
Look Ahead (number of blocks)	100
Compressor for 3-axis machining	○
Advanced Surface	○
A, B, C spline interpolation	●
TRANSMIT and peripheral surface transformation	●
Travel to fixed stop	○
Travel to fixed stop with Force Control	●
Inclined axis for nonorthogonal Y-axis	NA
Synchronous spindle function for subspindle (CP Static)	NA
Synchronous spindle function multiedge turning (CP Basic)	NA
Pair of synchronized axes Gantry	●
Temperature compensation	○
Bidirectional leadscrew error compensation	●
Multi-dimensional sag compensation	●
Master/slave for drives	NA
Analysis of internal drive values	NA

○ Standard ● Optional NA not available

CNC Programming and Operation

Programming language (DIN 66025 and high-level language expansion)	○
Online ISO dialect interpreter	○
Technology cycles for drilling and milling	○
Residual material detection and machining	●
Programming support for technology cycles (programGUIDE)	○
ShopTurn/ShopMill machining step programming	●
Measuring cycles for drilling/milling and turning	●
Simulation in plane display	○
Simulation in 3-D display	●
Simultaneous recording (real-time simulation of current machining operation)	●
Extended operator functions for complex turning and milling tasks	●
Contour handwheel	●
Network drive management	●
Remote diagnostics function RCS Host	●

PLC Functions

Integrated PLC based on SIMATIC S7-200	○
PLC periphery modules PP72/48D PN, PP72/48D 2/2A PN	●
Ladder viewer and add-on editor on board	○
Processing time per PLC command	0.025μs
Max. number of PLC ladder steps	24000
Servo-synchronous High Speed PLC Task	○
Reaction time to process events (terminal to terminal)	~7.5 ms
Max. number of digital inputs/outputs	288/192
Max. number of analogue inputs/outputs	8/8
PN/PN coupler	●

Commissioning and Service Functions

Easy Screen easy creation of user screens (OA Runtime License from 5 user screens)	●
Service Planner planner for maintenance tasks	○
Easy Extend management of machine components	○
Easy Archive data archiving	○