

Sudarshan

FUTURE READY

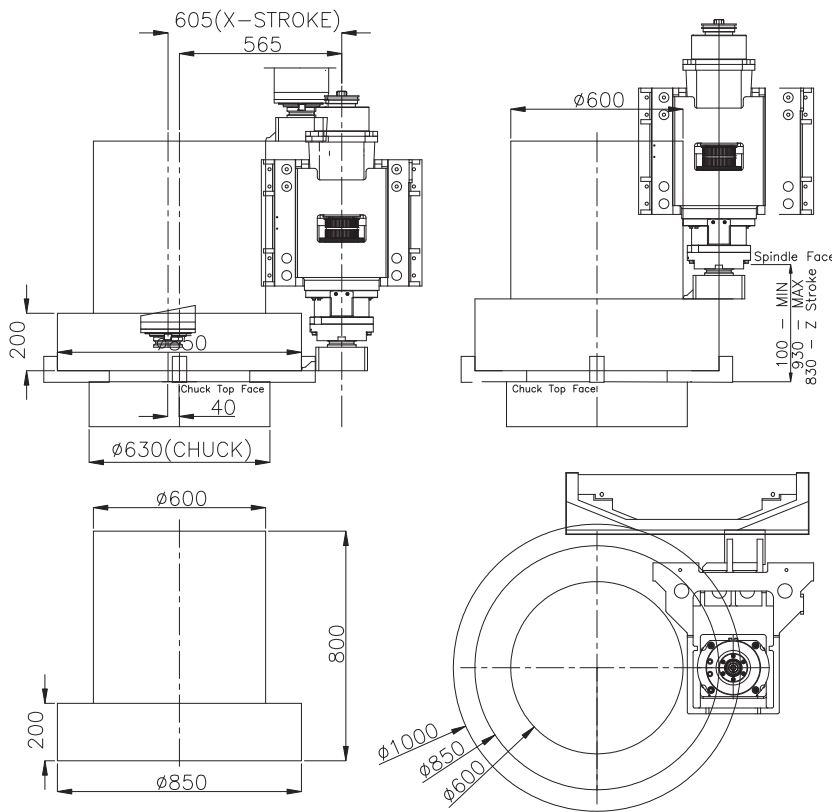


The multi-task machine!

Sudarshan

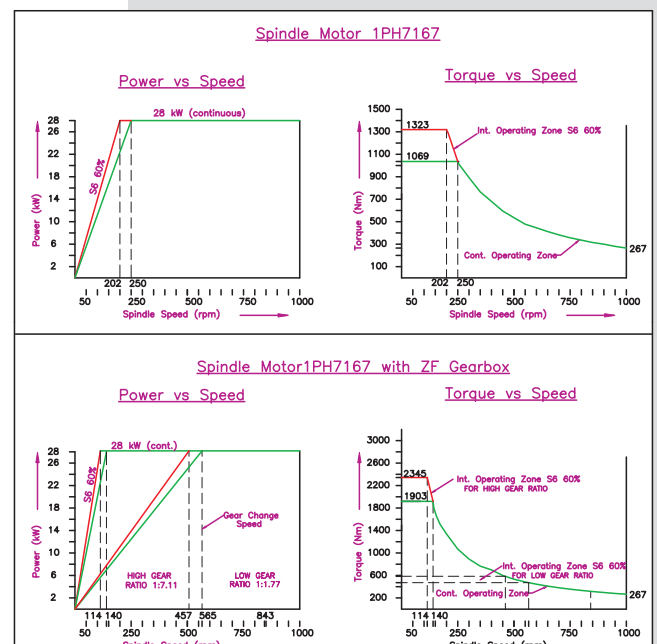
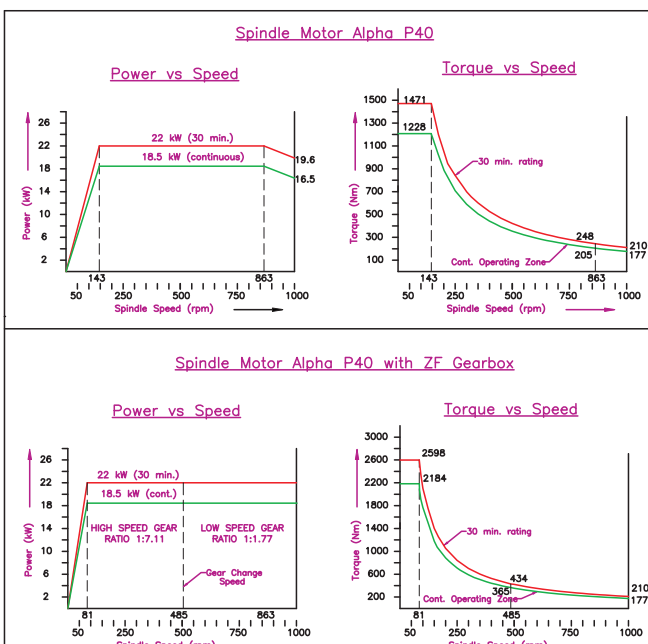
CNC Vertical Turn Mill Center Model BVL 800ML

Moving Range Diagram



Sudarshan model BVL 800ML provides solutions from simple turning to the more demanding turn-milling. With a BVL 800ML on the shop floor, you maximise productivity and combine operations in a single set-up. The BVL 800ML can also be configured for heavy duty turning with vertical turrets. Enjoy the smooth integration of multiple operations on this flexible machine. It has been built for quick adaptation of your requirements without major changes in the subassemblies.

Spindle Characteristics



FEATURE\ SYSTEM	Fanuc Oi-TD	Siemens 828D Basic T
Display and keyboard	8.4" colour LCD	8.4" Colour TFT with full QWERTY
Maximum number of axes including spindle	4 (7)	3 (8)
Maximum number of spindle axes	2 (3)	3 (8)
Number of simultaneously controllable axes	4	4
Minimum input increment	0.001 mm/degree	0.001 mm/degree
Spindle speed function	5-digit S code	5-digit S code
Spindle speed override	50% ~ 120%, in steps of 10%	50% ~ 120%, in steps of 10%
Feed override	0-120%	0-120%
Feed rate command	4-digit F code	4-digit F code
Inch - mm conversion	Yes	Yes
Part programme storage length	512 kB (1 MB)	1 MB, expandable with CF card/ USB
Number of part programmes	400	300 internal, expandable with CF card/ USB
Sub-programme call levels	10	11
Number of tool offsets	400	160
Search for programme/ sequence number	Yes	Yes
Single block	Yes	Yes
Optional stop	Yes	Yes
Dry run	Yes	Yes
DNC operations	RS232C/ PCMCIA/ data server	USB/ CF/ Ethernet, RS232C only for programme/ data load, not for direct execution
Run hour and part count	Yes	Yes
Online help	Yes	Yes
Graphic display	Yes	Yes
Embedded Ethernet	Yes	Yes
Front USB interface	O	Yes
Fast Ethernet/ data server	O	O
Remote diagnosis	O (available with fast Ethernet)	O
High speed skip or probe	Yes	Yes
Dynamic graphic display	O	Yes
Animated cycle support	O	Yes
Simulation - 3D and real time simulation	O, dynamic graphics	O
Machine maintenance planner	Yes, periodic maintenance	Yes
Easy message (SMS alert)	NA	Option
Programme editor	ISO/ manual guide Oi/ manual guide I	ISO/ Programme guide (shopturn)
2D simulation	Yes	Yes
ISO dialect interpreter	Yes (CAP)	Yes
Tool monitoring	Yes	Yes
Management of files in external memory	O (memory card editing)	Yes; Open, Edit, Save, Execute, etc., from CF/ USB/ Ethernet possible
Energy monitoring function	Yes	Yes
Operation history function	Yes	Alarm history
Trouble shooting guidance function	Yes	Yes
Password protected data level	4 (8)	Lower 4 - PLC, upper 3 password

O: Optional, NA: not applicable, data within parentheses denotes option available

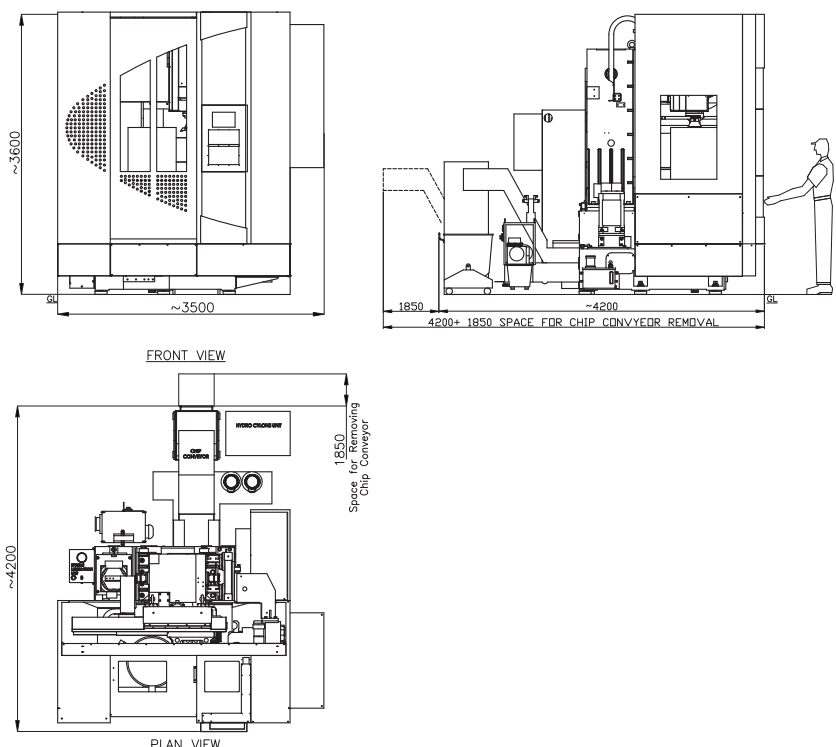
CNC Functions - Standard

- Linear interpolation
- Circular interpolation
- Cylindrical interpolation
- Absolute/ incremental programming
- Canned cycles
- Work-piece co-ordinate system
- Background editing
- Backlash compensation
- Pitch-error compensation
- Polar co-ordinate
- Scaling, mirroring
- Rigid tapping
- History of operator alarms and messages
- Look-ahead function
- Custom macro B/ parametric programming
- Simple tool-life management
- Multi-language display
- Programme restart/ block search

CNC Functions - Optional

- Helical interpolation
- Ethernet and data server facility
- Remote diagnostics
- Total connected load 50 kVA

Machine Dimensions



Parameter	Unit	Specification
Capacity		
Maximum swing diameter	mm	1,000
Maximum turning diameter	mm	850 for 200 mm
Standard turning diameter	mm	600 for 800 mm
Maximum turning length	mm	800
Maximum boring length	mm	350
Standard chuck size	mm	630 (530)
Maximum weight of work-holding and job on the spindle	kg	1,500
Spindle		
Nose		A2-11
Power, cont./ 15 min. rating	kW	18.5/ 22
Front bearing inner diameter	mm	190 (200)
Maximum continuous torque	Nm	1,228 (614, 2,184)
Speed	rpm	50 - 1,000 (50 - 1,500)
Constant power range	rpm	143 - 863 (288 - 1,500, 81 - 1,000)
Live Tool Spindle		
Taper		BT 50
Speed	rpm	50 - 4,500
Power (S1/ 30 min)	kW	11/ 15
Maximum S1 duty torque	Nm	100/ 136
OD turning tool shank size	mm	32 x 32
X Axis		
Type of guide-way		Linear motion
Horizontal travel stroke	mm	605 (565 + 40)
Maximum rapid traverse	m/min	20
Z Axis		
Type of guide-way		Linear motion
Vertical travel stroke	mm	830
Maximum rapid traverse	m/min	20
Automatic Tool Changer		
Taper		BT50 (with DIN 96872 pull stud)
Tools	Nos.	24 (20)
Maximum tool weight	kg	25
Maximum tool weight on ATC disc	kg	240 (200)
Maximum tool holder size on ATC	mm	160 W x 160 T x 175 L
Maximum boring bar size	mm	Ø 110 x 300 L
Turning tool shank size	mm	32 x 32
Tool to tool	s	6.5
Chip to chip	s	12
Accuracy on X and Z Axes as per JIS 6336 - 1986		
Positioning	mm	±0.005
Repeatability	mm	±0.003
Accuracy on X and Z Axes as per ISO 230 - 2		
Positioning uncertainty	mm	0.012
Maximum positioning scatter	mm	0.008
C Axis Accuracy		
Indexing resolution	°	±0.02
Installation Data		
Machine weight	kg	10,000
Total connected load	kVA	50
CNC System		
Fanuc OiTD/ Siemens 828 D		

Data within parentheses denotes option available.

Torque and power as per Fanuc supply

Standard Features

- Rigid cast structure for machine base, column and carriage
- Table spindle with face plate of 630 mm diameter with manually operated 4-jaw assembly
- Cartridge spindle system with re-circulating oil lubrication
- BT50 milling head with 11/ 15 kW motor for live tool
- ATC with 24-tool magazine
- Hydraulic counterbalance for carriage/ Z-axis
- Automatic oil lubrication for slides
- Standard coolant system for cutting with tank, manual chip tray, and pump
- Flush coolant system around the base
- Totally enclosed machine guards
- Manual pulse generator (MPG)
- 3-Tier lamp
- Machine lamp
- Mounting pads with levelling screws
- Maintenance tool kit consisting of allen keys, spanners and screw drivers
- One set of static tool holders (axial, radial & boring tool one no each)
- Machine manual

Optional Accessories

- Power operated, wedge type, closed-centre chuck with a set of hard jaws and soft jaws with closed-centre rotary cylinder with non-return safety valve
530 mm x 3 jaws/ 630 mm x 3 jaws
- Voltage stabiliser
- Chip conveyor with bin in-lieu of standard coolant system
- Machine packing
- 22/ 30 kW spindle in lieu of 18.5/ 22 kW spindle
- Spindle speed up to 1,500 rpm
- ZF gearbox for table spindle
- Panel cooler for electrical cabinet
- +220 mm day-light column
- High-low dual pressure circuit for hydraulic chuck
- Linear scale on X-axis
- Linear scales on X and Z-axis
- Coolant gun
- Air gun
- Extra set of static tool holder
- ATC with 20-tool magazine
- Work probe

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Representatives at Aurangabad, Chandigarh and Jamshedpur.

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Dealer/ Representative

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