

»»»» Virat
Double Column VMC



Right Solution for Large Sized Components!

Virat Series: 1020 | 1520 | 1530 | 1540 | 2030 | 2440 | 3040



Double Column Vertical Machining Centers

Virat Series: 1020 | 1520 | 1530 | 1540 | 2030 | 2440 | 3040

The Double column VMCs Virat series symbolizes greater rigidity, exceptional power & superior cutting performance. A better choice for heavy duty machining of large sized components.

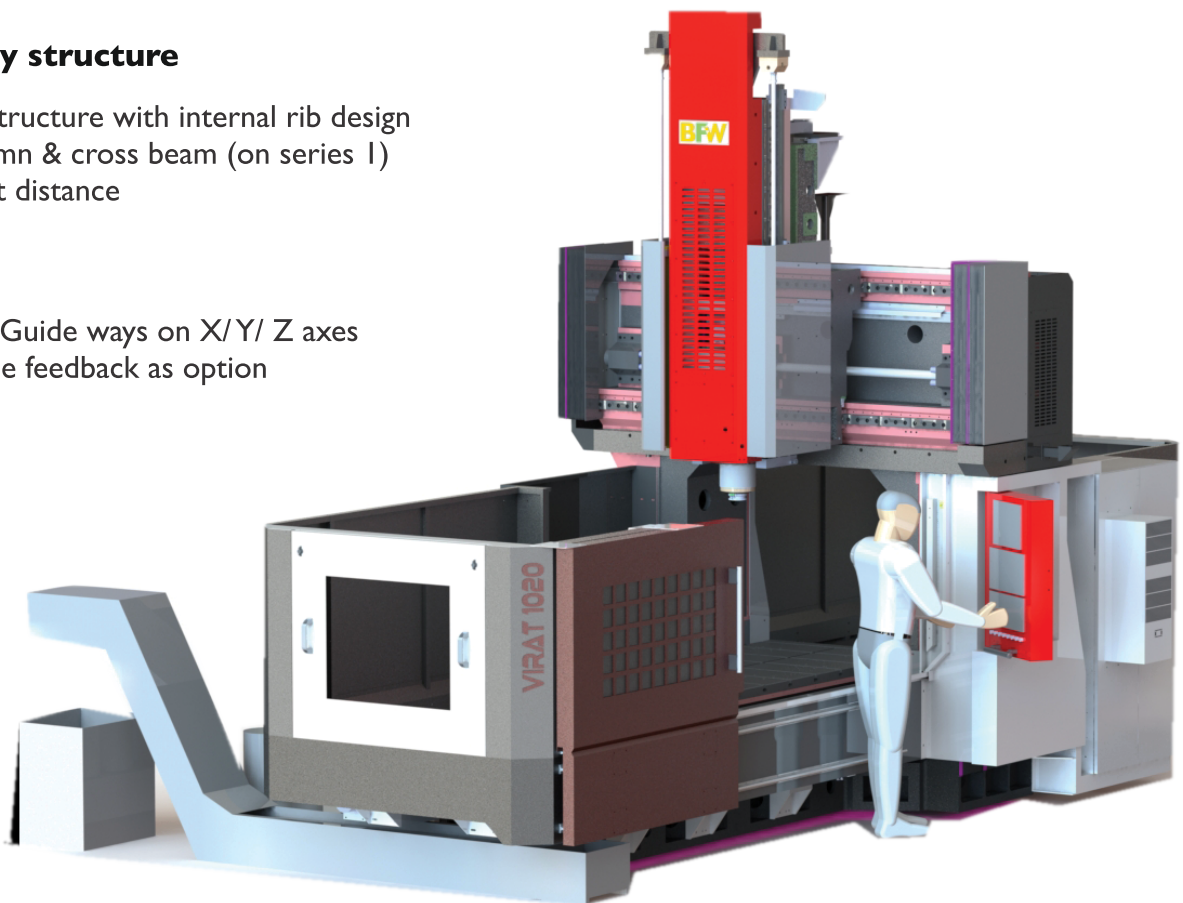
Virat series is designed for tailor made solutions & heavy work pieces for Die-Mould, Automotive, Aerospace, Mining, Agriculture and Textile Sectors to keep the pace with growing market application.

Analyzed body structure

- Strong & rigid structure with internal rib design
- Integrated column & cross beam (on series I)
- Minimum throat distance

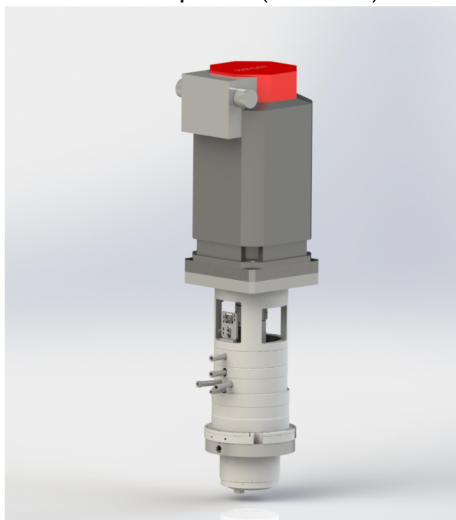
Guide-ways

- Roller type LM Guide ways on X/Y/ Z axes
- Linear glass scale feedback as option

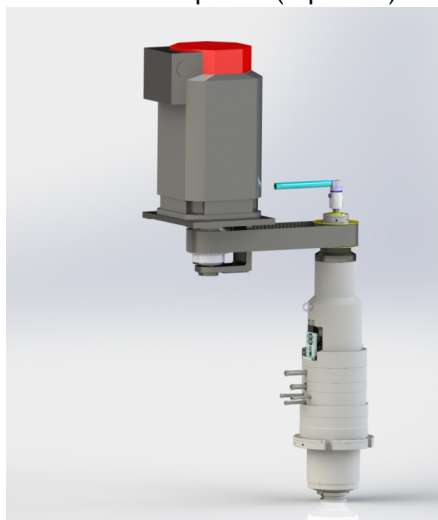


Spindle Options

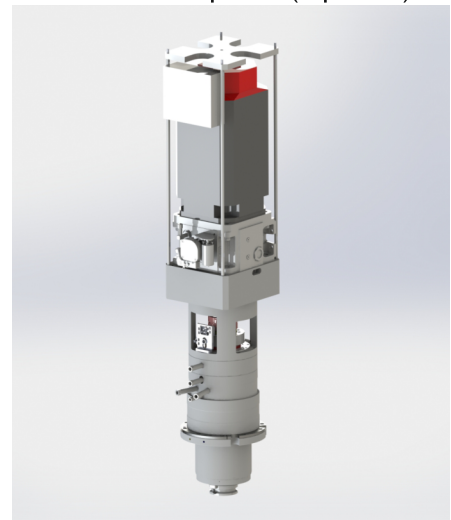
In-line spindle (Standard)



Belt drive spindle (Optional)

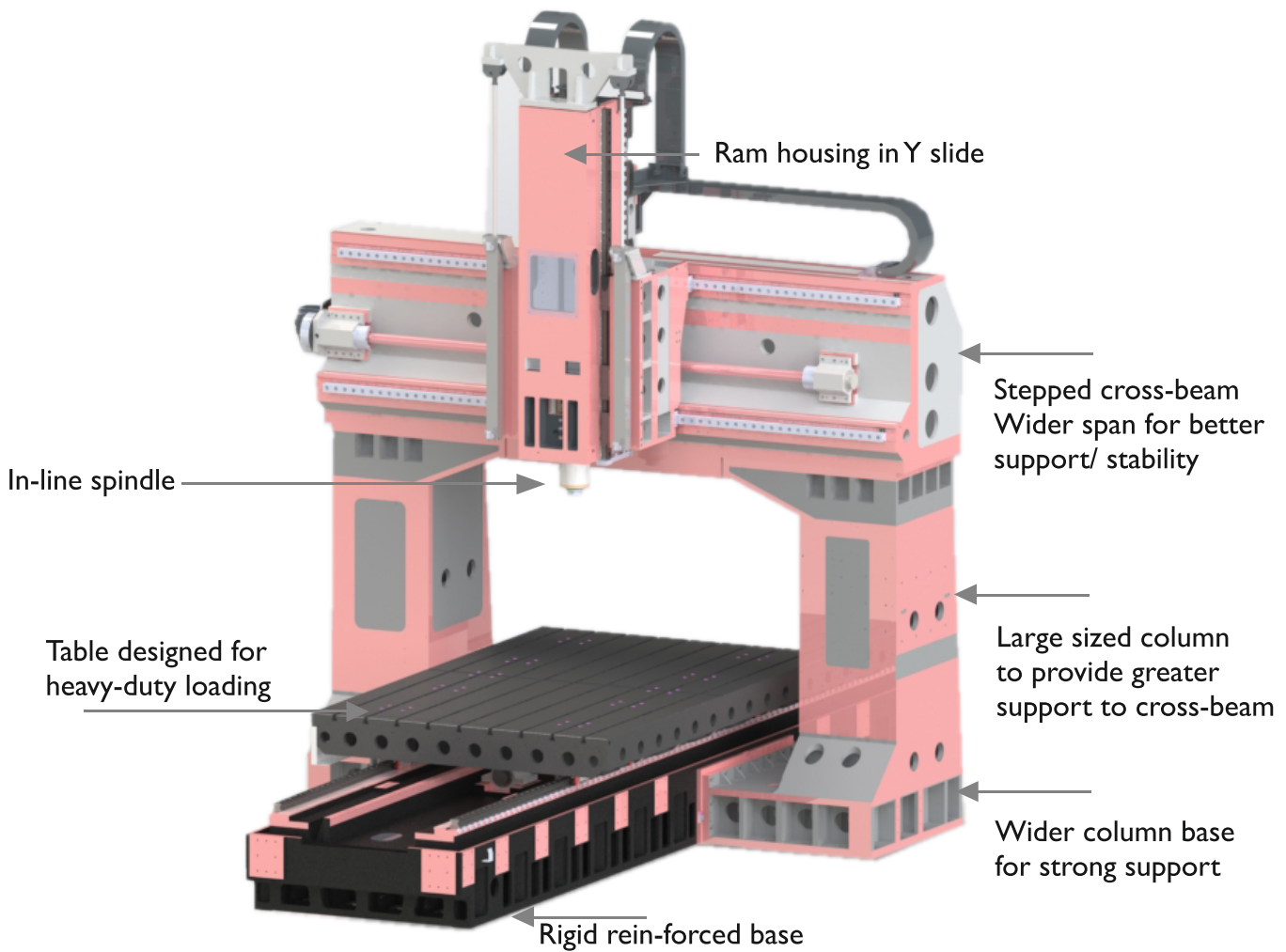


Gear drive spindle (Optional)

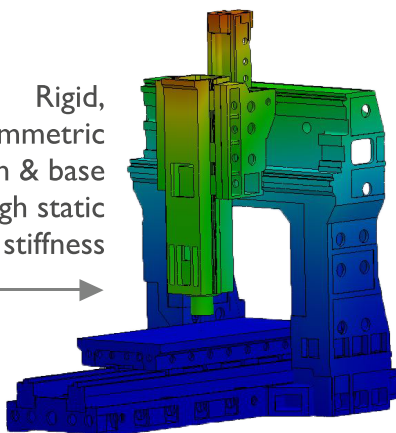


High Rigid Structure

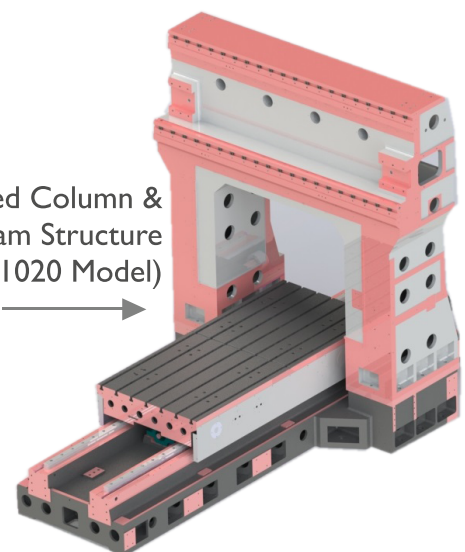
Rigid, Robust FEA analysed structure. All the structures are double stress relieved



Rigid, Thermo - symmetric design for column & base with high static and dynamic stiffness



Integrated Column & Cross beam Structure (Available for Virat 1020 Model)

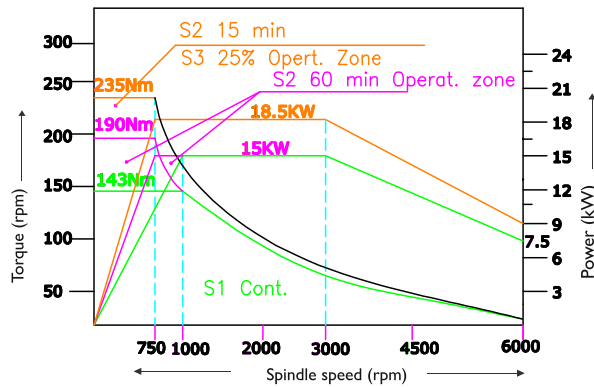


Spindle Characteristics



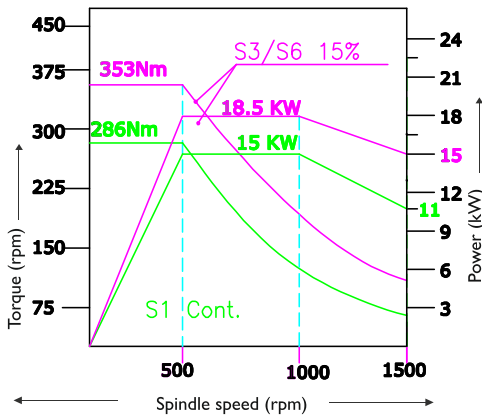
Virat I020- Fanuc

I5/ 18.5 kW inline drive

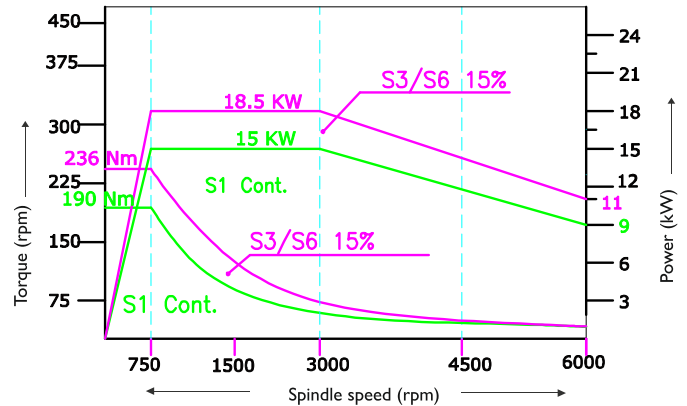


Virat I520/ I530/ I540 - Fanuc

I5/ 18.5 kW inline drive - Low speed winding

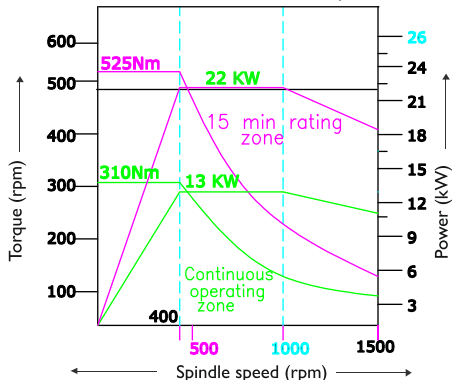


I5/ 18.5 kW inline drive - High speed winding

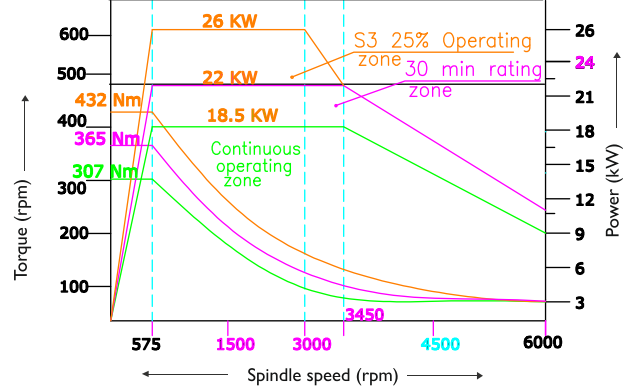


Virat 2030 - Fanuc

18.5/ 22 kW inline drive - Low speed winding

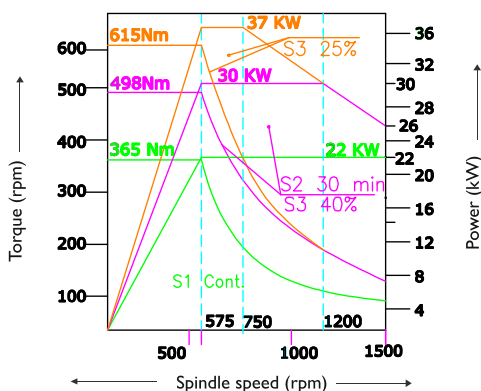


18.5/ 22 kW inline drive - High speed winding

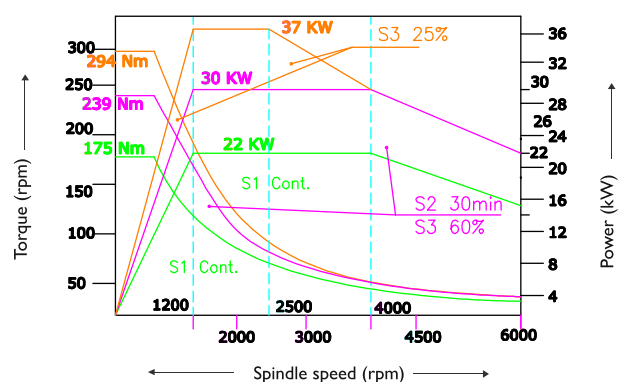


Virat 3040 - Fanuc

22/ 30 kW inline drive - Low speed winding



22/ 30 kW inline drive - High speed winding

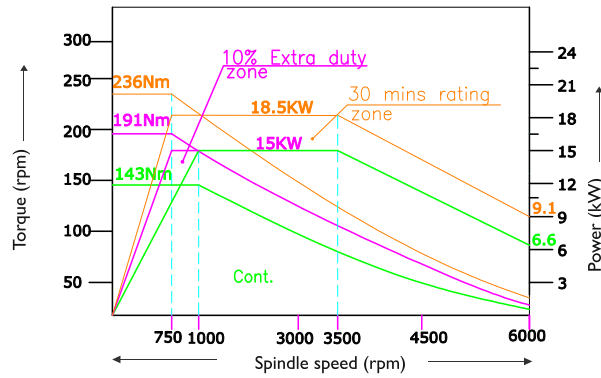


Spindle Characteristics



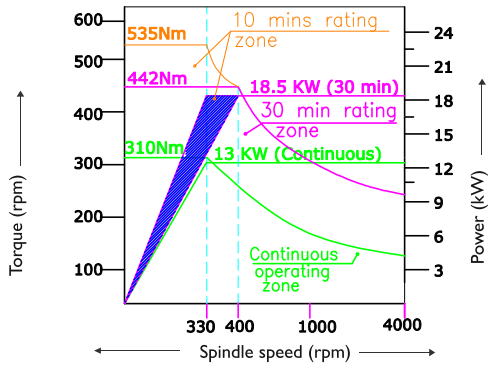
Virat I020 - Mitsubishi

15/ 18.5 kw inline drive

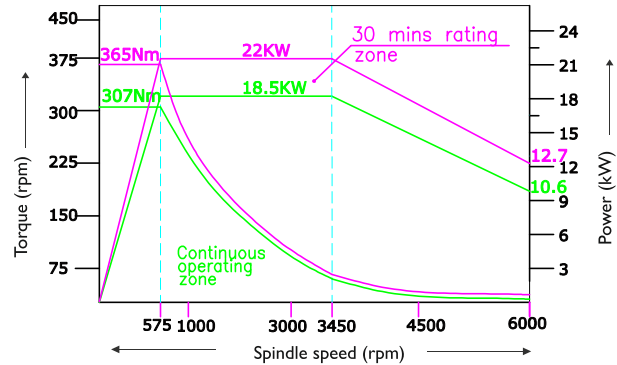


Virat I500 series / 2000 series/ 3000 series - Mitsubishi

15/ 18.5 kw inline drive
Low speed winding

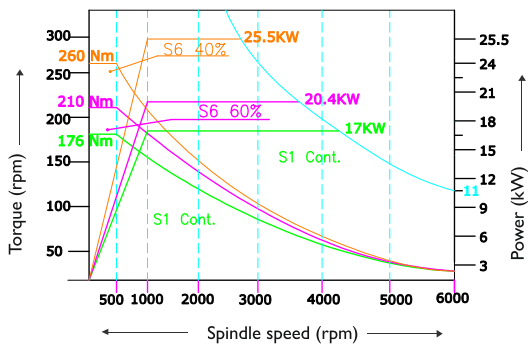


18.5/ 22 kw inline drive
High speed winding



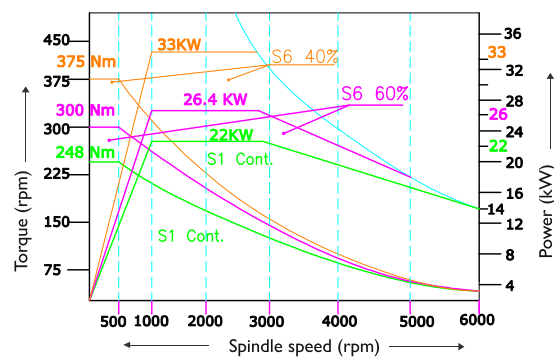
Virat I020 - Siemens

17/ 25.5 kW inline drive

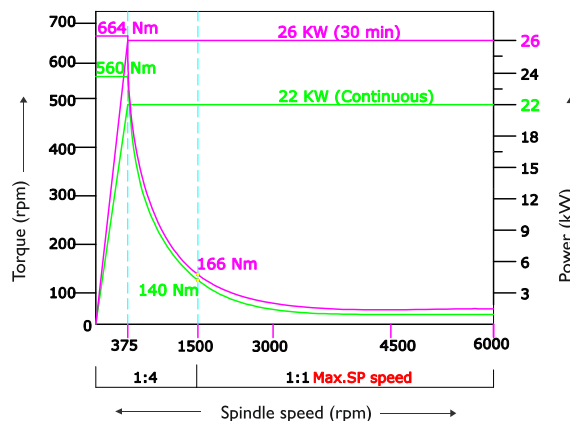


Virat I500 series / 2000 series - Siemens

22/ 26 kW inline drive

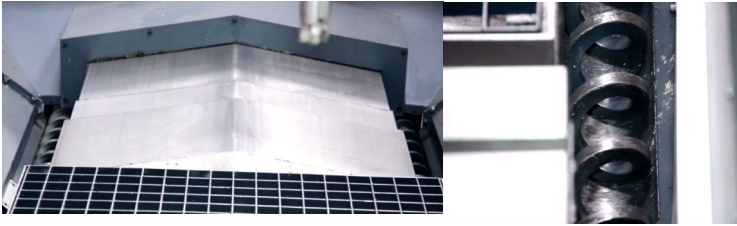


Virat I000/ I500/ 2000/ 3000/ - Fanuc Mitsubishi/ Siemens - Inline 1:4 Gear box



Virat

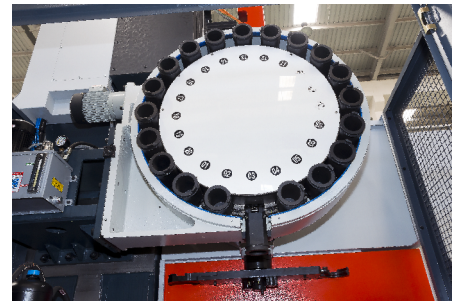
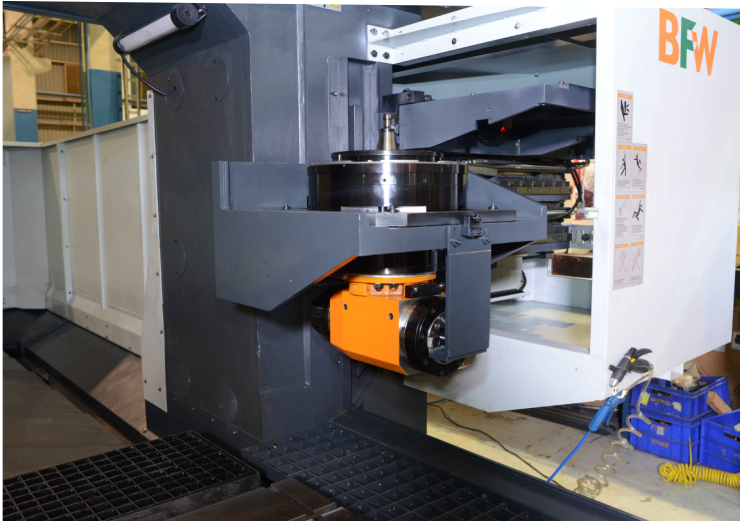
- ▼ Coil conveyor on both side of the table for easy chip flow management



- ▼ Operator panel with swing arm for easy accessibility to working area enabling better operator friendliness



- Automatic/ Semi automatic head as optional ▼



- ▼ Tool magazine - robust tool changer, 20 tools ATC

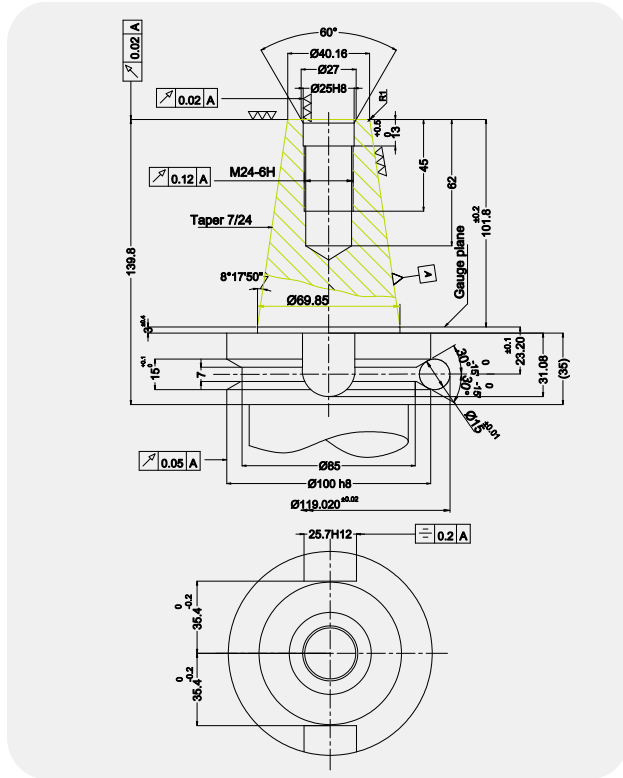
Standard Features

- BT 50 Spindle - 6000 rpm
- AC Servo Drives
- Hardened and ground LM Roller Guide-ways for X/Y/ Z Axes
- Hardened and ground ball screws for all the 3 axes
- Inline spindle
- Air blast for spindle taper cleaning
- Tool clamping through disc spring & declamp by hydraulics
- Air curtain for spindle
- Centralised lubrication system
- Hydraulic counter balance for vertical axis
- Feedback through absolute encoder
- Rigid tapping facility
- RS 232 Serial interface for PC connection
- Ring coolant
- Instruction Manuals
- 3 - tier lamp, Machine lamp, Leveling & Foundation Kits
- Mobile MPG
- Standard coolant system with chip tray
- Coil conveyor on either side of the bed
- Maintenance tool kit
- Semi enclosure splash guard
- LCD display
- Coolant gun
- Air gun
- Coolant nozzle at spindle
- AC for Electrical cabinet
- Oil Skimmer

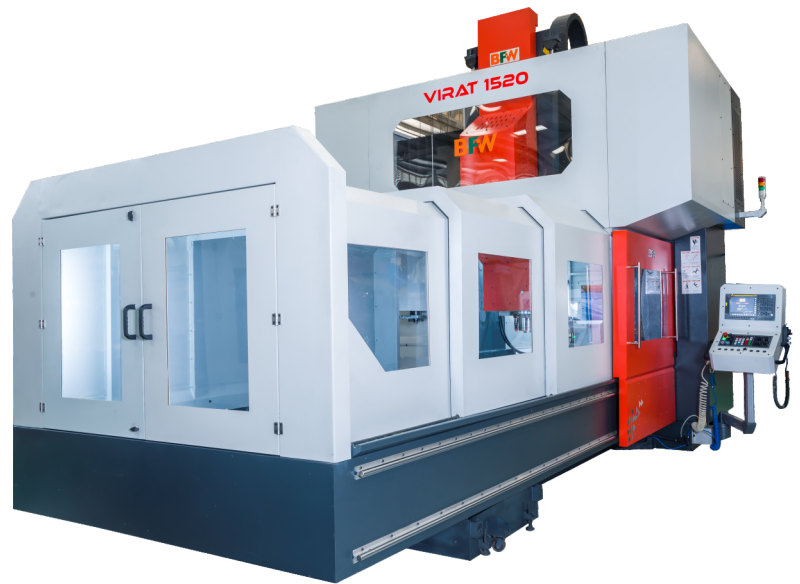
Optional Features

- ATC for BT 50 tool holder
- Linear glass scale for XY & Z axes
- Full splash Guard for Virat 1020, 1520 only
- Scrapper or slat or dual type conveyors with chip trolley
- Universal Milling Head (Manual)
- Voltage stabilizer
- Spindle mounted probe or tool probe
- Coolant through spindle
- Machine color as per customer requirement
- Auto work piece measurement
- Inline spindle with gearbox
- 90 deg automatic head/ semi automatic head
- Transformer
- Spindle chiller
- Power failure back up module(PFBM)

Tool shank details



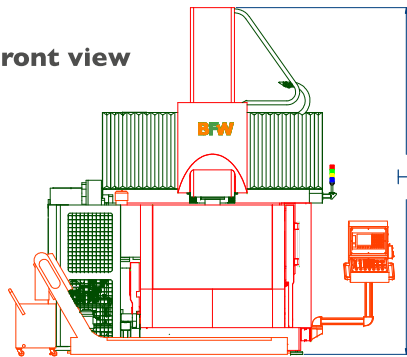
Machine with full guard



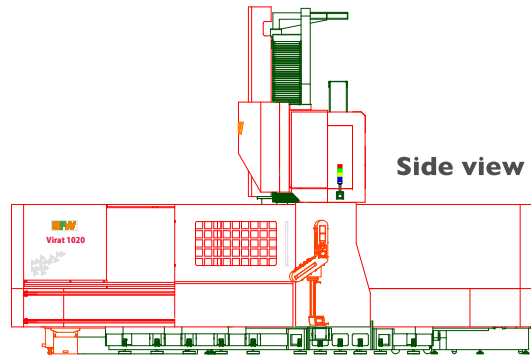
Machine with full guard as optional for coolant through spindle @ 40 bars and above

Machine dimensions

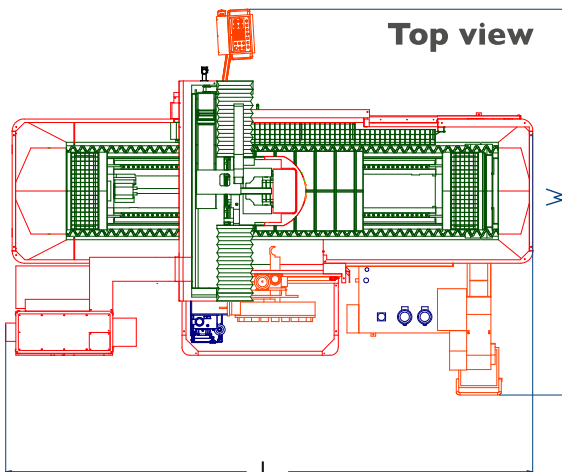
Front view



Side view



Top view



	Virat 1020	Virat 1520	Virat 1530	Virat 1540
W mm	~ 4900	~ 5500	~ 5500	~ 5500
L mm	~ 6900	~ 6900	~ 9900	~ 13000
H mm	~ 4400	~ 5200	~ 5200	~ 5200

	Virat 2030	Virat 2440	Virat 3040
W mm	~ 6200	~ 6800	~ 8000
L mm	~ 9900	~ 13000	~ 14000
H mm	~ 5500	~ 5500	~ 6000

All dimensions in mm

Technical Specifications

Item	Unit	Virat - 1000	Virat - 1500				Virat - 2000		Virat - 3000
Models		Virat 1020	Virat 1520	Virat 1530	Virat 1540	Virat 2030	Virat 2440	Virat 3040	
X - Axis Travel (Table longitudinal)	mm	2000	2000	3000	4000	3000	4000	4000	
Y-Axis Travel (Saddle Traverse)	mm	1200	1700	1700	1700	2400	2600	3400	
Z-Axis Travel (Ram Vertical)	mm	800	1000	1000	1000	1000	1000	1000	
Spindle nose face to table top	mm	150~950	200~1200	200~1200	200~1200	200~1200	200~1200	350~1350	
Increased daylight with column HT (option)	mm	200	300	300	300	300	300	350	
Distance from Floor to table	mm	~820	~870	~870	~870	~1020	~1020	~1020	
Distance Between Column	mm	~1270	~1780	~1780	~1780	~2480	~2680	~3480	
Table									
Table size	mm	1000 x 2200	1500 x 2200	1500 x 3200	1500 x 4200	2000 x 3200	2000 x 4200	3000 x 4200	
Table working Area	mm	1000x 2000	1500 x 2000	1500 x 3000	1500 x 4000	2000 x 3000	2000 x 4000	3000 x 4000	
TSLOT (No./ Size / Pitch) [Parallel to X axis]	mm	7 x 22 x 150	9 x 22 x 160	9 x 22x 160	9 x 22 x 160	9 x 22 x 210	11 x 22 x 210	15 x 28 x 200	
Max. Load on table Std.	kgs	4000	6000	8000	10000	10000	12000	16000	
Axes									
Rapid traverse - X/Y/ Z	m/ min	20/ 20/ 15	18/ 20/ 15	15/ 20/ 15	12/ 20/ 15	15/ 15/ 12	12/ 15/ 12	10/ 10/ 10	
Feed rate	mm/ min	1 - 10000	1 - 10000	1 - 10000	1 - 10000	1 - 10000	1 - 8000	1 - 8000	
Spindle Taper, Power - Torque & Speed Details									
Spindle: Inline Drive: STD(*Coolant through with Belt driven only)									
Spindle Taper	Type	BT50	BT50	BT50	BT50	BT50	Bt50	BT50	
Fanuc Power-Cont/ 15min (Torque)	kw (Nm)	15/ 18.5 (143/ 235)	15/ 18.5 (286/ 353)	15/ 18.5 (286/ 353)	15/ 18.5 (286/ 353)	18.5/ 22 (310/ 525)	18.5/ 22 (310/ 525)	22/ 30 (365/ 498)	
Mitsubishi Power-Cont/ 30min (Torque)	kw (Nm)	15/ 18.5 kw (143/ 236)	18.5/ 22 (310/ 442)	18.5/ 22 (310/ 442)	18.5/ 22 (310/ 442)	18.5/ 22 (310/ 442)	18.5/ 22 (310/ 442)	18.5/ 22 (310/ 442)	
Siemens Power-Cont/ S6 (Torque)	kw (Nm)	17/ 25.5 (176/ 210)	22/ 26 (248/ 300)	22/ 26 (248/ 300)	22/ 26 (248/ 300)	22/ 26 (248/ 300)	22/ 26 (248/ 300)	22/ 26 (248/ 300)	
Speed: Std	rpm	6000	6000	6000	6000	6000	6000	6000	
Spindle: Inline Gear Box Drive 1:4 Gear Ratio: Option									
Fanuc Power - Cont/ 30 min (Torque)	kw (Nm)	22/26 (560/ 664)	22/26 (560/ 664)	22/26 (560/ 664)	22/26 (560/ 664)	22/ 26 (560/ 664)	22/ 26 (560/ 664)	22/ 26 (560/ 664)	
Mitsubishi Power-Cont/ 30 min (Torque)	kw (Nm)	22/26 (560/ 664)	22/26 (560/ 664)	22/26 (560/ 664)	22/26 (560/ 664)	22/ 26 (560/ 664)	22/ 26 (560/ 664)	22/ 26 (560/ 664)	
Siemens Power-Cont/30 min(Torque)	kw (Nm)	22/26 (560/ 688)	22/26 (560/ 688)	22/26 (560/ 688)	22/26 (560/ 688)	22/ 26 (560/ 688)	22/ 26 (560/ 688)	22/ 26 (560/ 688)	
Speed: Std(Chiller for gearbox)	rpm	6000	6000	6000	6000	6000	6000	6000	
Automatic Tool Changer: Twin Arm									
Tool Change system	Type	Arm type	Arm type	Arm type	Arm type	Arm type	Arm type	Arm type	
Tool storage capacity - Std./ Opt	Nos.	20 (30 with Height block)	20 (30 / 40)	20 (30 / 40)	20 (30 / 40/ 60)	40 (60)	20 (30 / 40/ 60)	20 (30 / 40/ 60)	
Max tool dia with all pockets full	mm	125	125	125	125	125	125	125	
Max tool dia with adjacent pockets empty	mm	220	220	220	220	200	220	220	
Max tool length	mm	350	350	350	350	350	350	350	
Pull stud	Type	MAS 403 PS0T-I	MAS 403 PS0T-I	MAS 403 PS0T-I	MAS 403 PS0T-I	MAS 403 PS0T-I	MAS 403 PS0T-I	MAS 403 PS0T-I	
Accuracy as per ISO-230-2 (Full Stroke)									
Positioning Accuracy (without scale/ with scale)	mm	0.020/ 0.010	0.020/ 0.010	0.025/ 0.015	0.035/ 0.020	0.025/ 0.015	0.035/ 0.020	0.020 with scale	
Repeatability Accuracy (without scale/ with scale)	mm	0.015/ 0.008	0.015/ 0.008	0.020/ 0.012	0.025/ 0.015	0.020/ 0.012	0.025/ 0.015	0.015 with scale	
Installation Data									
Floor space (W x D)	mmxmm	~4900 x 6900	~5500 x 6900	~5500 x 9900	~5500 x 13000	~6200 x 9900	~6800 x 13000	~8000 x 14000	
Machine height (H)	mm	~4400	~5200	~5200	~5200	~5500	~5500	~6000	
Basic Machine Weight (approximate)	kgs	~22000	~26000	~30000	~34000	~36000	~40000	~55000	

Note: Values within parentheses are subject to change

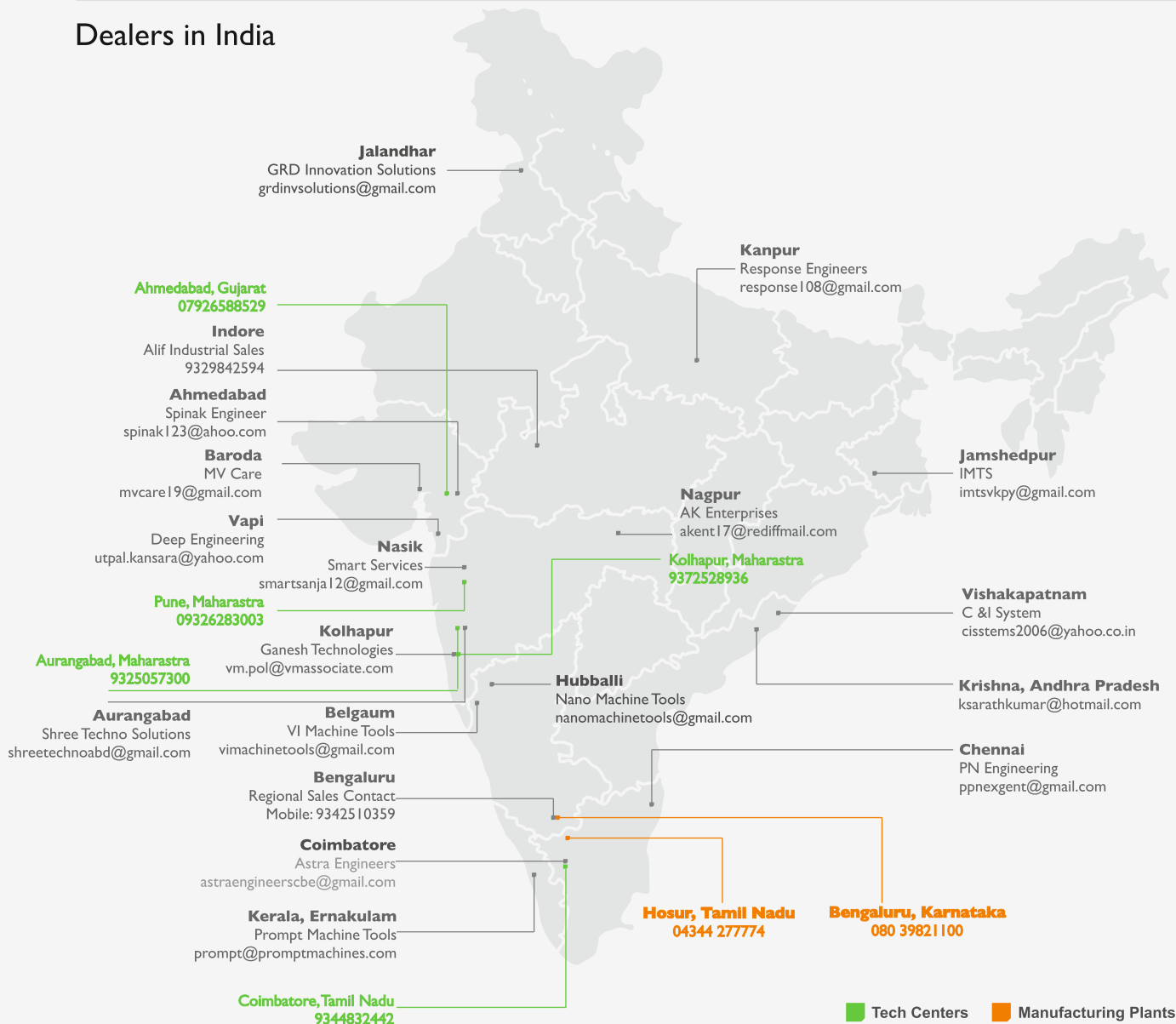


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