

NOVELL-V

Vertical Machining Center

with Automatic Rotary Pallet Changer



Enhance Flexibility. Reduce Idle Time.

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Vertical Machining Center - NOVELL

Novell is one of our best-in-class product built from our decades of experience in building Vertical Machining Centers. Moving column machining center. We have also incorporated the valuable feedback of our customers in NOVELL to make it a top notch machine.

Novell comprises of many innovative and first-in-class features listed below:

- High-speed rotary auto-pallet changer with column moving
- Isolated machine elements from chip & coolant zone.
- Stainless steel lamella covers for X axis.
- Chip disposal below the cutting zone.
- Compact foot print, single lift machine
- Maximum spindle power of 15 kW & torque upto 115 Nm
- Consistency of pallet repeatability & rigidity by cup & cone arrangement
- Online hydraulic for fixture for higher cutting parameters

Novell stands for **R**eliability, **P**erformance & **P**roductivity.

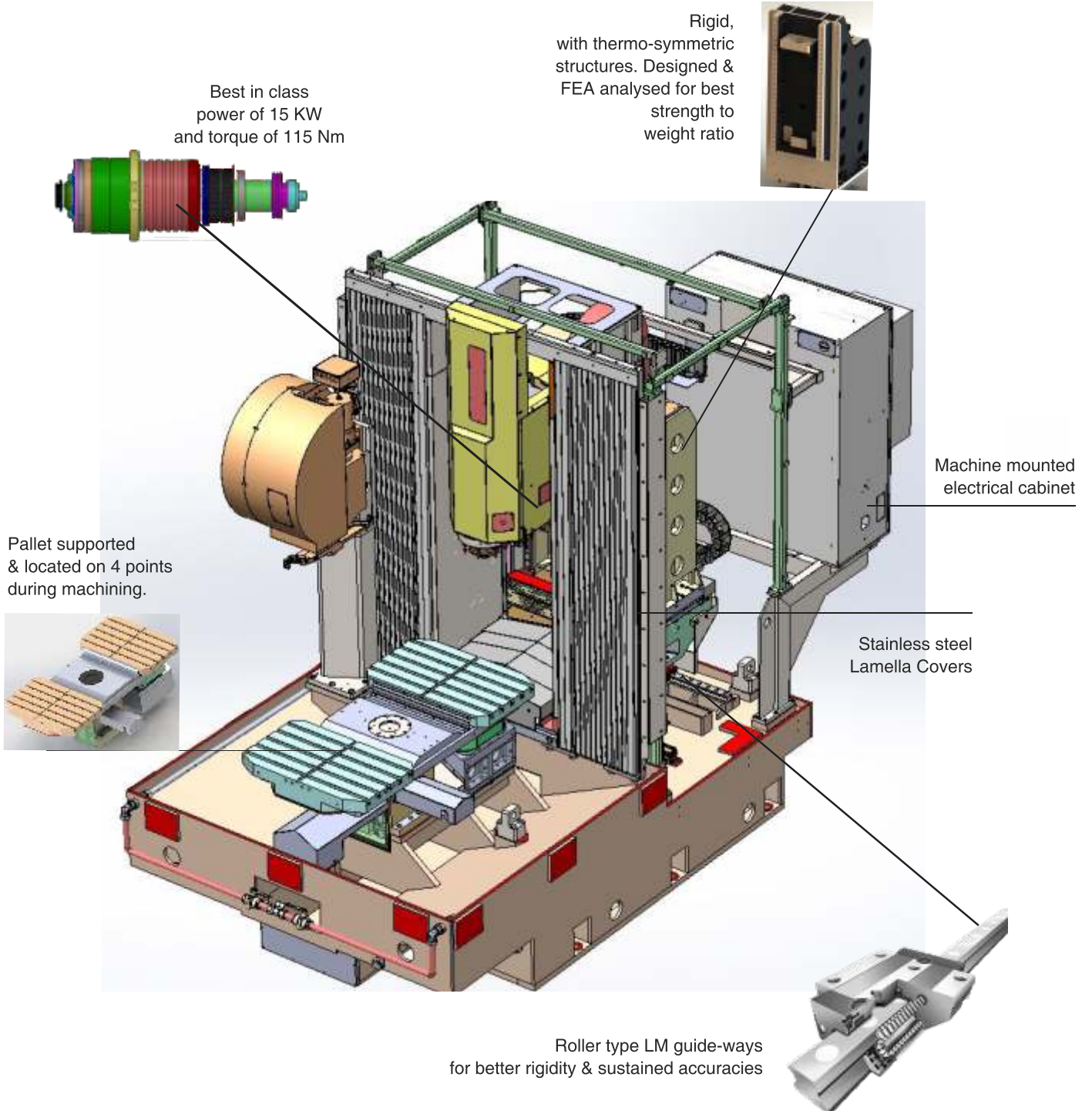


Automatic tool changer: Drum type ATC
Tool to tool: 2.5 sec
Tool storage capacity: 24T & 32T



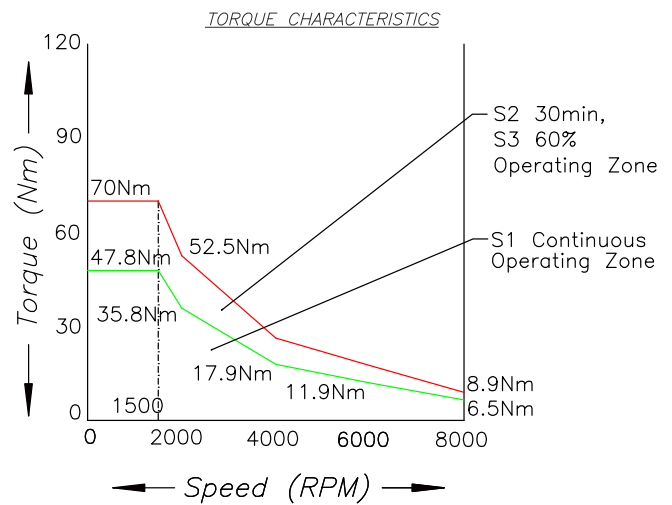
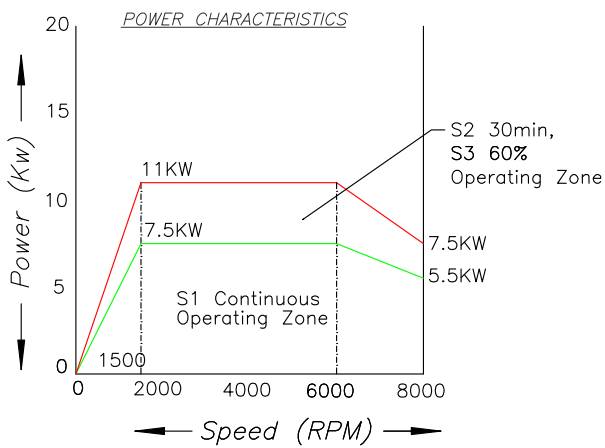
Innovative use of SS imported Lamella Covers

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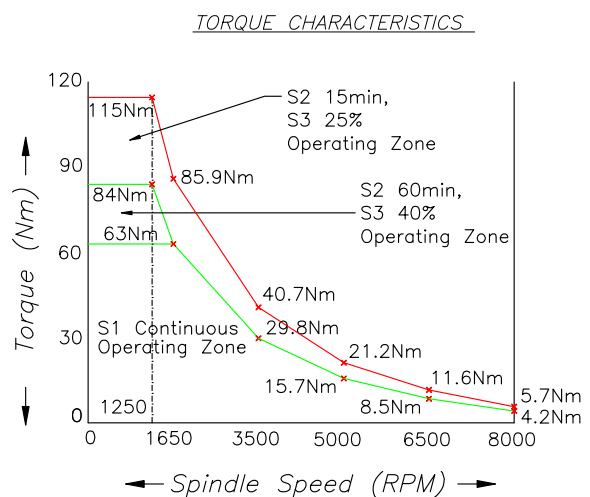
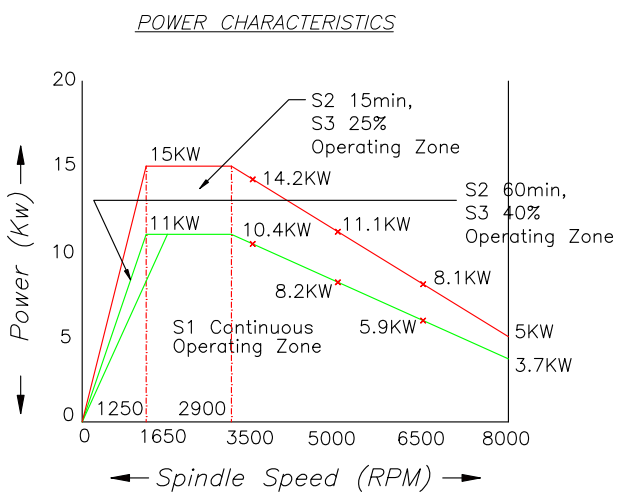


Spindle Characteristics

Standard Power: 7.5/ 11 Kw



Optional Power: 11/ 15 Kw



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Machining Capacity



Face milling

Material: Steel C45

Description	Unit	Value
Milling cutter Φ	mm	80 x 8 z
Depth of cut	mm	4
Material removal	cc / min	250
Cutter engagement	mm	64

Material: Cast Iron

Description	Unit	Value
Milling cutter Φ	mm	80 x 8 z
Depth of cut	mm	6
Material removal	cc / min	300
Cutter engagement	mm	64



Drilling

Material: Steel C45

Description	Unit	Value
Drill Φ	mm	40
Cutting Speed	m/min	125
Speed	rpm	1000
Spindle load	%	80

Material: Cast Iron

Description	Unit	Value
Drill Φ	mm	55
Cutting Speed	m/min	150
Speed	rpm	1200
Spindle load	%	100



Tapping

Material: Steel C45

Description	Unit	Value
Tap size	mm	M24 x 3
Speed	rpm	20
Cutting Speed	m/min	265
Spindle load	%	70

Material: Cast Iron

Description	Unit	Value
Tap size	mm	M30 x 3
Speed	rpm	318
Cutting Speed	m/min	30
Spindle load	%	85

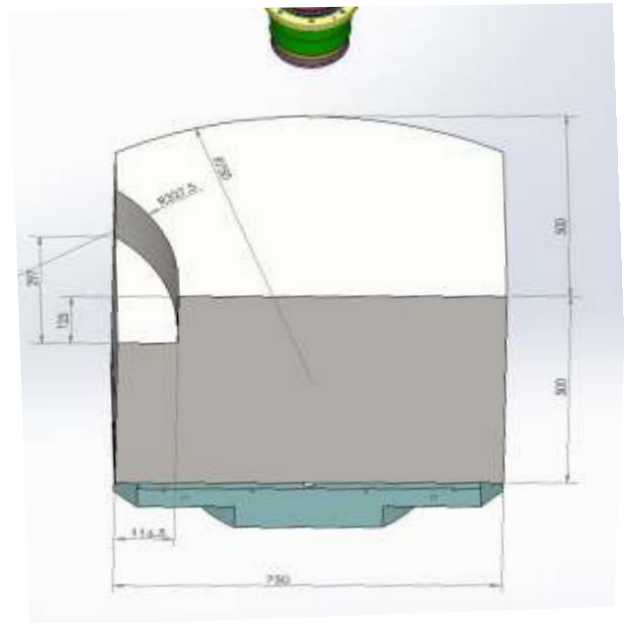
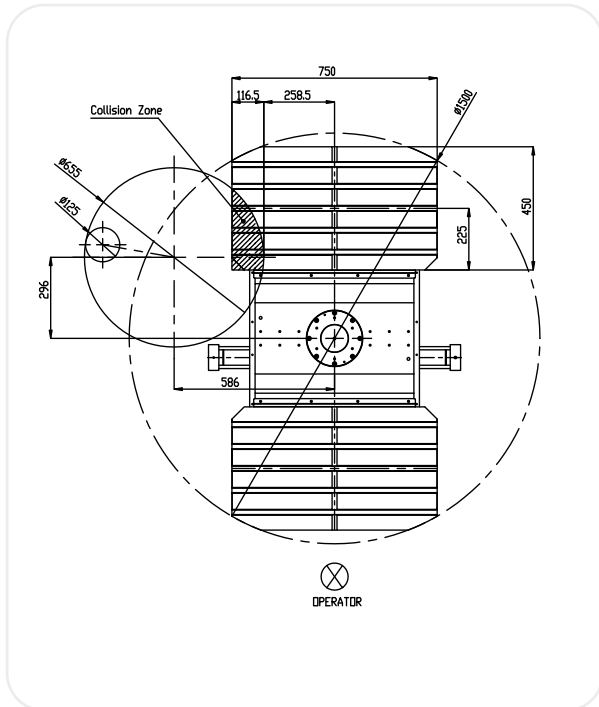
Applications



Many more..

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Capacity / Collision Zone Diagram



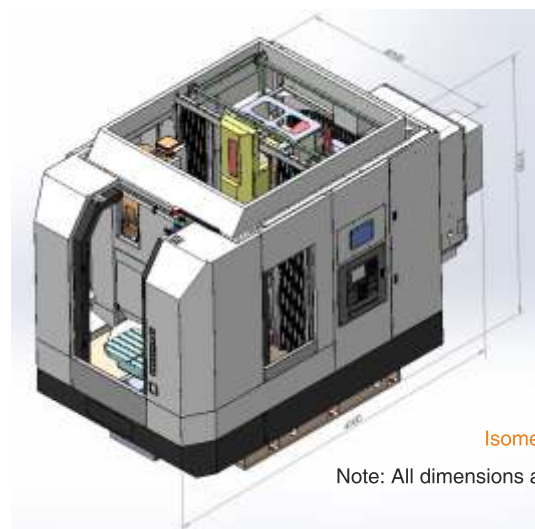
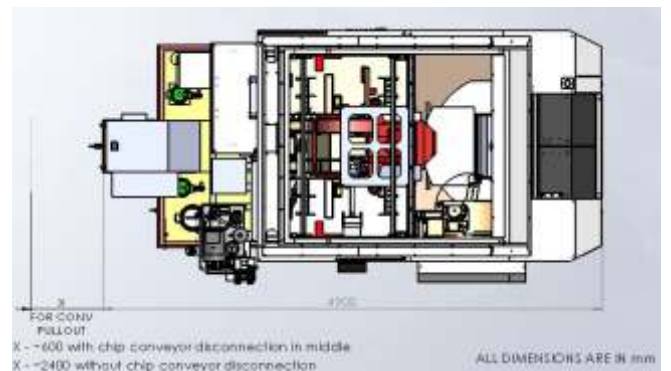
Maximum job height with 210 mm clearance between spindle face and job

Pallet Details



Description	Unit	Value
Pallet size	mm	750 x 450 (2 Nos)
T slot size	mm	18
Pitch	mm	80
T slot no	nos	5 No in X-axis, 1 No in Y axis
Load carrying capacity	kg	350 On each pallet

Machine Dimensions



Technical specification

Specifications	Unit	NOVELL V
Spindle		
Spindle taper	type	BT 40 (HSK A 63)
Spindle power - cont/int Std (Option)	kW	7.5/ 11 (11/ 15)
Spindle speed - Std (option)	RPM	8000 (10000)
Spindle torque cont/ S3, 25% [std]	Nm	48/ 70
Spindle torque cont/ S3, 25% [opt]	Nm	84/ 115
Axes		
X/Y/Z axes	mm	650/ 510/ 510
Feed rate	mm/ min	1 - 20000
Rapid traverse X/ Y/ Z axes	mm/ min	40000
Pallet top to spindle face (min./ max)	mm	200 - 710
Spindle center to column front distance	mm	510
Automatic Pallet Changer - Rotary type		
Pallet size	mm	750 x 450
T slot (No./ size/ pitch)	type	5 / 18 / 80
Pallet swing	mm	1500
Load capacity of each pallet	kg	350
Pallet rotation - Std. (Opt)	-	Hyd (Servo)
Pallet change time - Hyd (Servo)	sec	10 (7)
Pallet top from ground level	mm	1100
Automatic Tool Changer		
No of tools - Std (Option 1, Option 2)	No	24 (32)
Maximum tool dia with adjacent pockets empty	mm	80/ 125
Maximum tool length	mm	200
Tool Weight	kg	8
Tool change time	sec	2.5
Chip to chip time (mm) as per ISO 10791 - 9	sec	5.0
Pull stud		MAS403 PT40 - 1
Accuracy as per ISO 230 - 2		
Linear axes		
Positioning A	mm	0.012
Repeatability R	mm	0.008
Automatic pallet changer		
CNC system		Fanuc oi MF/ Siemens 828 D
Installation data		
Basic weight of machine	kg	~ 7500
Floor Area for Std. Machine W x D x H	mm	2200 x 4100 x 3100
Total connected load	kVA	25
Compressed air	bar	30
Power supply		415 V ± 10 % AC, 50 ± 2 % Hz, 3 phase

Figures within brackets are optional

Standard Features

- ✓ AC servo drives
- ✓ AC variable speed spindle motor
- ✓ LM Roller guides
- ✓ Hardened and ground ball screws
- ✓ Feedback through absolute encoder
- ✓ Automatic tool clamping-unclamping
- ✓ Centralised automatic lubrication
- ✓ Spindle taper air blow
- ✓ Electronic counterbalance
- ✓ 3 Tier lamp
- ✓ Hydraulic pallet changer
- ✓ Rear chip disposal
- ✓ Rigid tapping
- ✓ Hydraulic power pack for pallet changer
- ✓ Coolant for bed flush

Optional Features

- ✓ Ring coolant around spindle
- ✓ Coolant gun, air gun & maintenance tool kit
- ✓ Higher spindle power
- ✓ Linear glass scale for X/ Y/ Z
- ✓ 16/ 25/ 40 bar coolant through spindle
- ✓ AC for electrical cabinet
- ✓ Provision for 4th and 5th axis rotary table
- ✓ 4th axis rotary table on each pallet
- ✓ Servo rotary auto pallet changer
- ✓ Voltage stabiliser
- ✓ Air nozzle
- ✓ Air nozzle with M code
- ✓ Automatic front door
- ✓ Spindle mounted probe
- ✓ Tool breakage sensor
- ✓ 10000 rpm with spindle chiller
- ✓ Thermal compensation sensors for linear axes
- ✓ 2P + 2T/ 4P + 4T online hydraulic rotary distributor

Associates in India

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