

LEADWELL
LEADWELL CNC MACHINES MFG.,CORP.

MCV Series

**MCV-1500i/ 1500i+ / 2000i
VERTICAL MACHINING CENTERS**

The Ultimate in Performance

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※ All performance are based on 220V/3PH/60HZ. Specification are subject to change without notice.



MCV SERIES

Rigid construction, unsurpassed quality, high accuracy and excellent performance under severe machining conditions.



Swivel Operator Panel

The operator panel swivels for better operator convenience.

MORE POWERFUL

- Powerful spindle motor
- Massive cast iron base for extra stability
- Wide column design for extra rigidity

INCREASED CAPACITY

- X travel from 1,520mm to 2,040mm
- Table size from 1,550x750mm to 2,100x1,000mm

FASTER / MORE PRODUCTIVE

- Rapid rates up to 20 M/minute
- 4,000 RPM standard (6,000 RPM optional)

ERGONOMIC CONSIDERATIONS

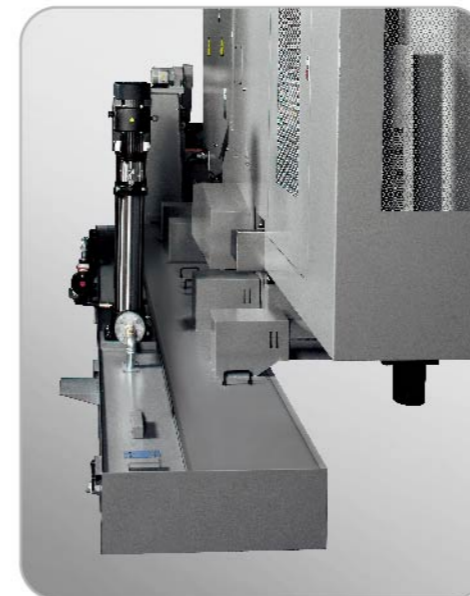
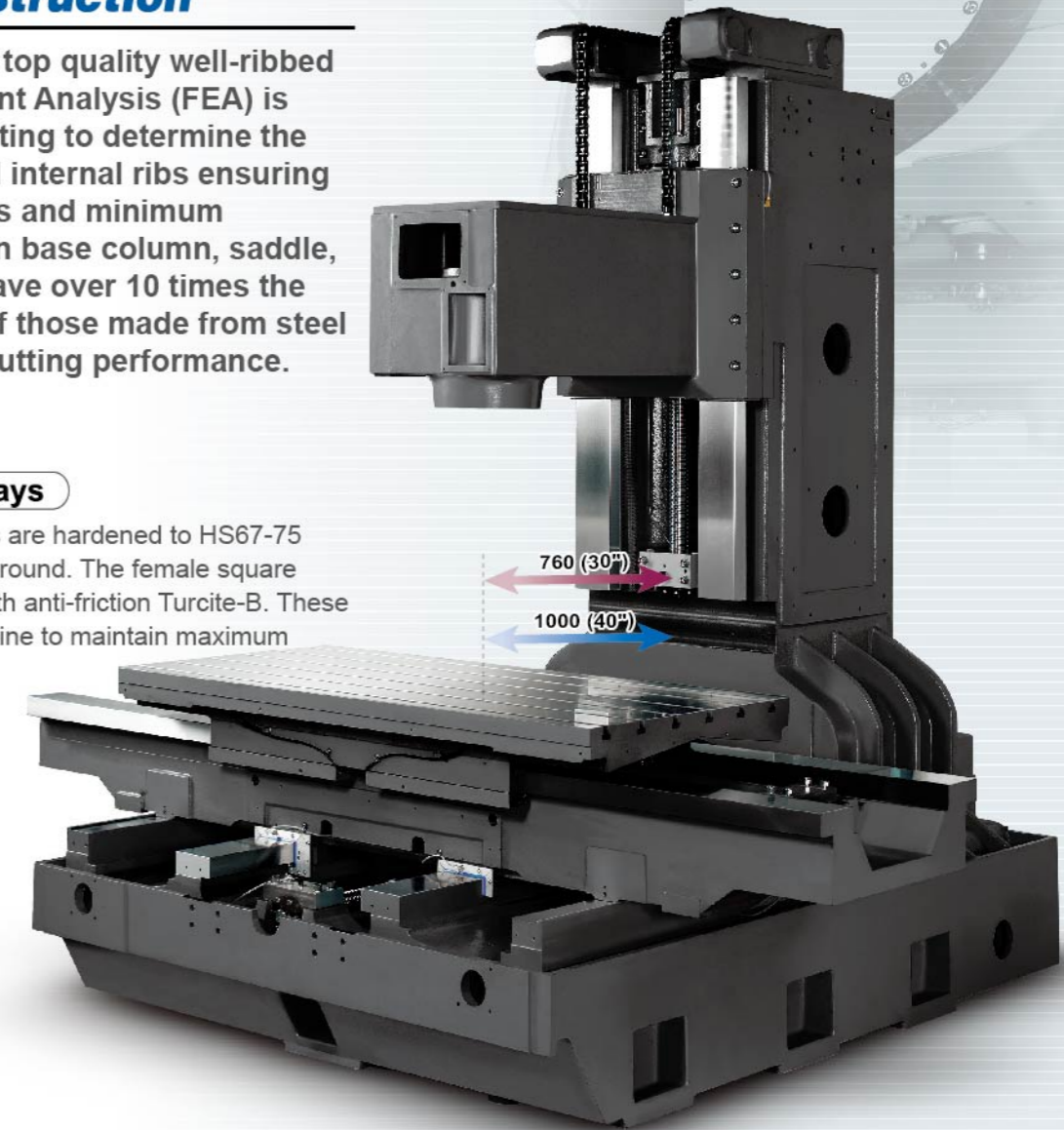
- Easy to use membrane touch-pad control station
- Easy moving operator door
- No chip or coolant leaks expensive floating tap holders and prevents thread distortion and thread pullout

Cast Iron Construction

LEADWELL uses only top quality well-ribbed castings. Finite Element Analysis (FEA) is used on each new casting to determine the size and location of all internal ribs ensuring high torsional stiffness and minimum vibration. The cast iron base column, saddle, headstock, & tables have over 10 times the dampening capacity of those made from steel resulting in superior cutting performance.

Heavy-Duty Square Ways

The heavy-duty square ways are hardened to HS67-75 (HRC 50-60) and precision ground. The female square ways and gibs are coated with anti-friction Turcite-B. These features help allow the machine to maintain maximum accuracy levels.



Chip Removal

LEADWELL's simple and efficient design uses chip augers and provides high volume coolant to wash the chips from the work area. The augers move the chips into the disposal container, which eliminates the need for an operator to manually remove chips. This system eliminates operation intervention and reduces non-cutting time.

MCV SERIES

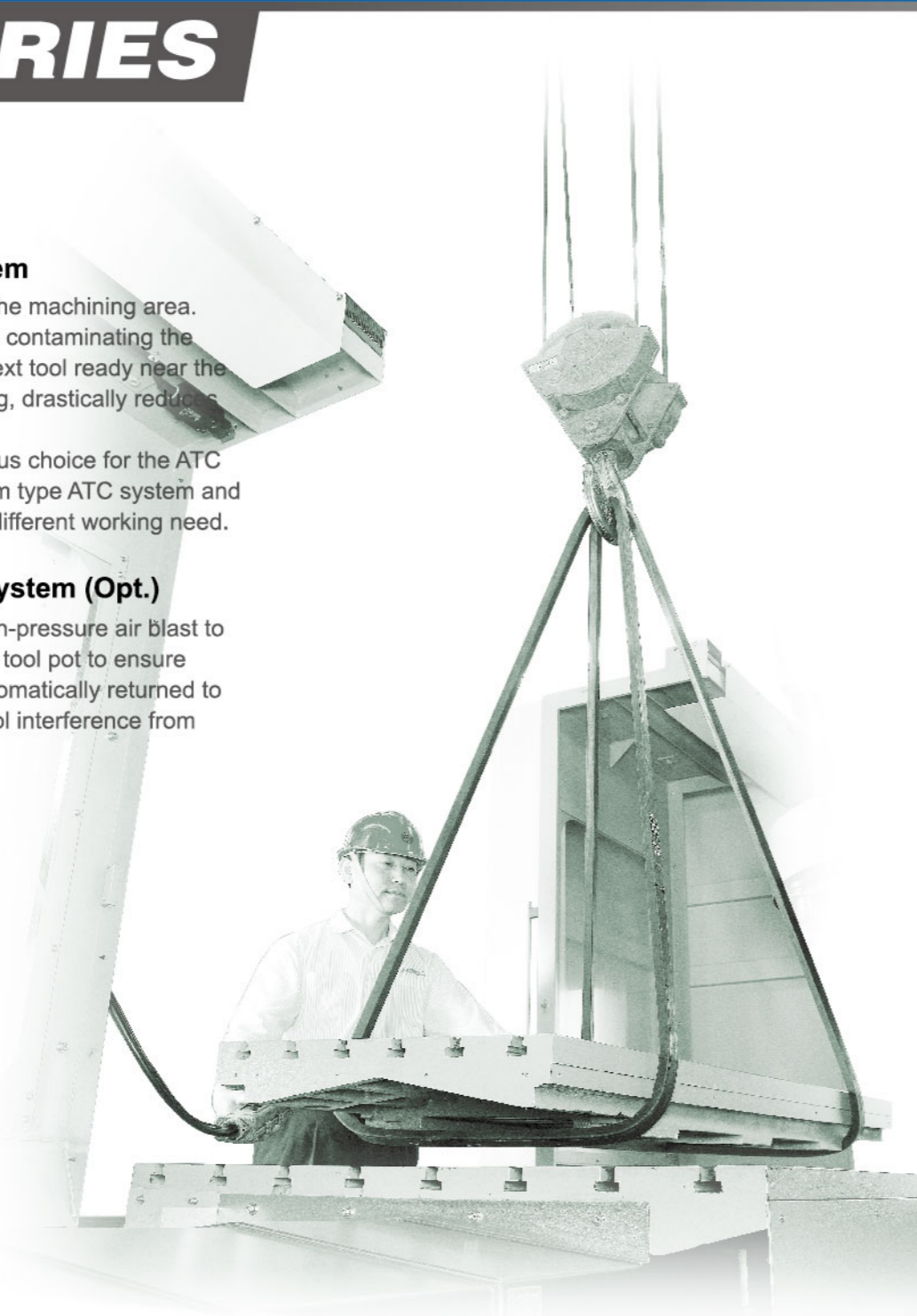
Side-Mounted Tooling System

The tool magazine is isolated from the machining area. An automatic door keeps chips from contaminating the tools' tapered shanks. Having the next tool ready near the spindle during current tool machining, drastically reduces tool change time.

Our MCV series also offer multifarious choice for the ATC system option. We have 24 tools arm type ATC system and 20 tools drum type system ATC for different working need.

Automatic Tool Changing System (Opt.)

The high-speed ATC activates a high-pressure air blast to clean the spindle taper and the ATC tool pot to ensure accurate tool holding. Tools are automatically returned to their original location, eliminating tool interference from oversized tools in the magazine.



High Productivity Options

4th Axis Rotary Table Option

This 4th axis rotary table option boosts productivity by allowing more machining with a single set-up. It also can turn the MCV-Series machine into a 4 Axis contouring machine which adds versatility.

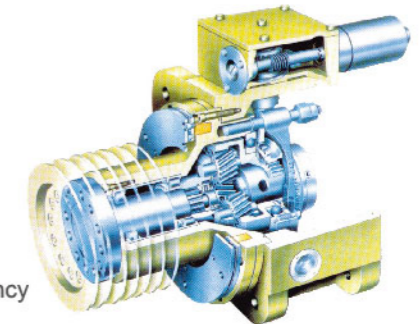


High Torque Spindle Option

The cutting torque is maximized by combining the German ZF-2-speed gear box with the oil cooled main spindle. The gearbox has its own separate lubrication system.

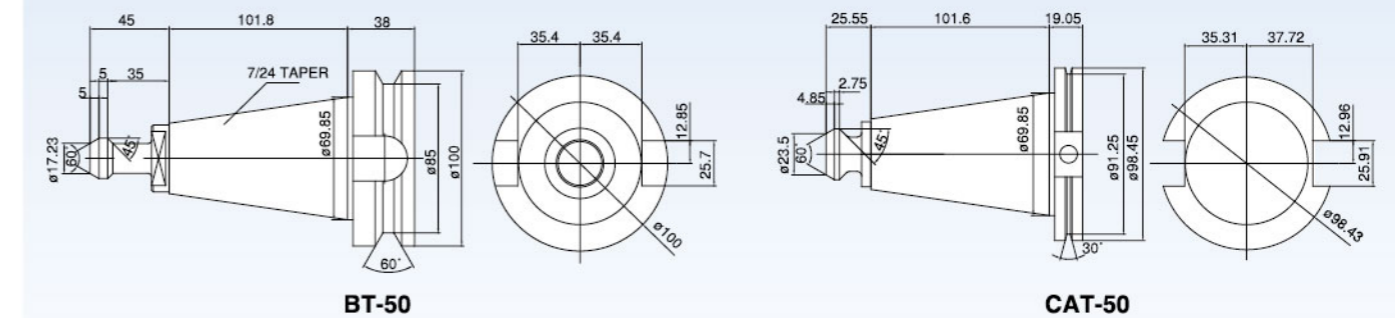
The two speed spindle option advantages are:

- Over 95% efficiency
- Quiet gears
- Heat is not transmitted to the main spindle
- Gear vibration is not transmitted to the main spindle
- Minimum backlash



Tool Drawing

BT-50 & CAT-50



Spindle Motor Torque Drawing

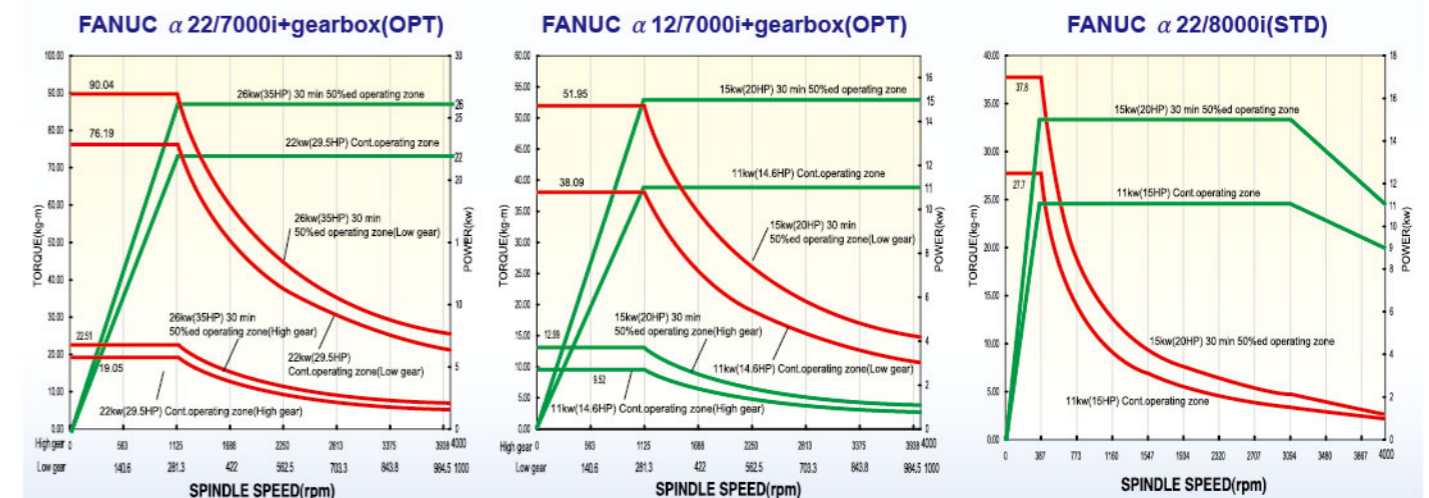
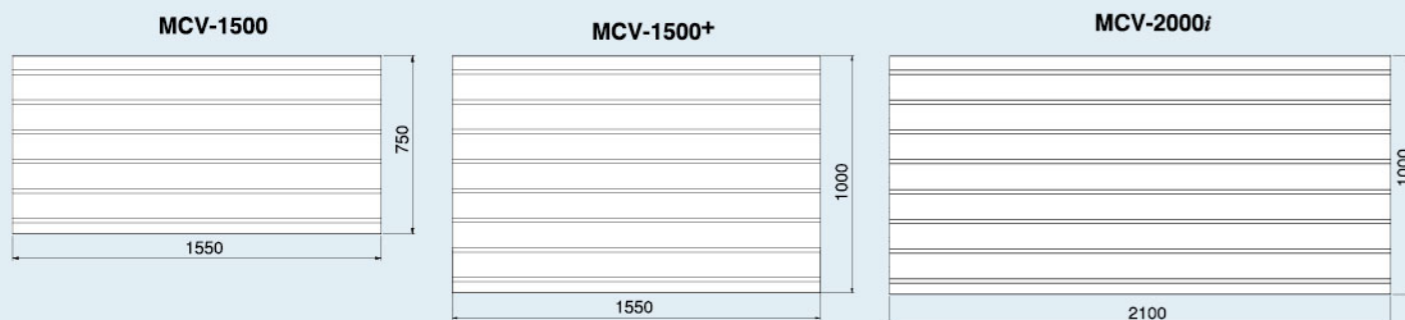


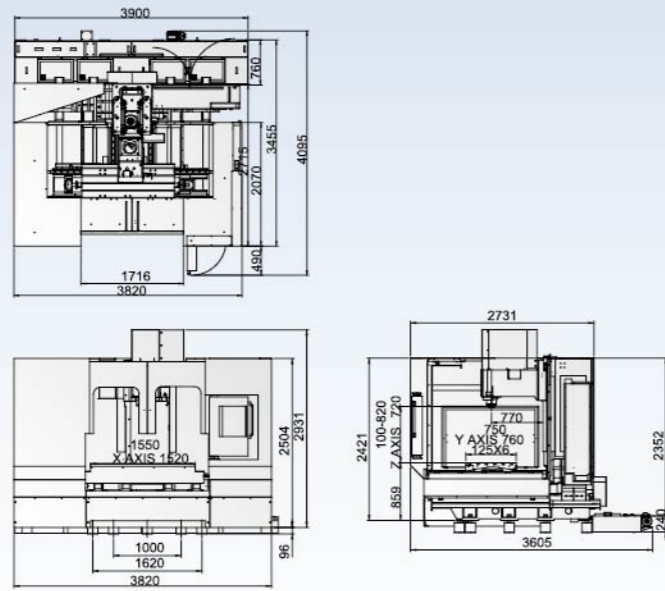
Table Dimension Drawing



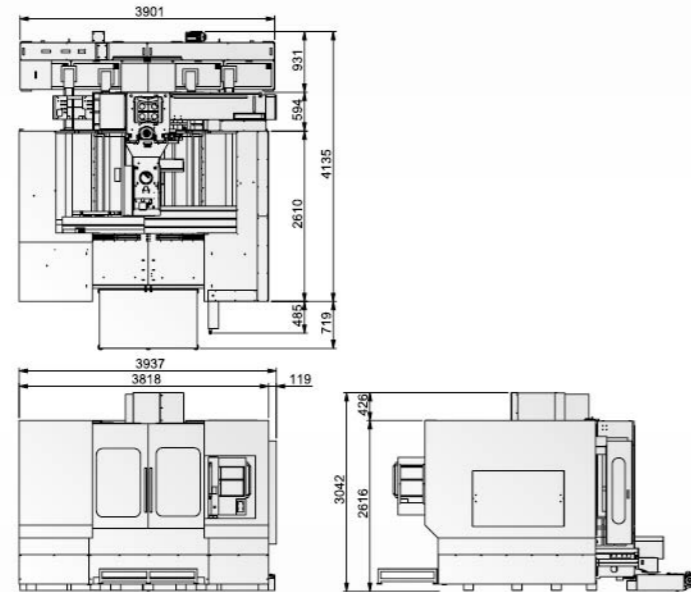
Outline Dimensional Drawing

Unit:mm

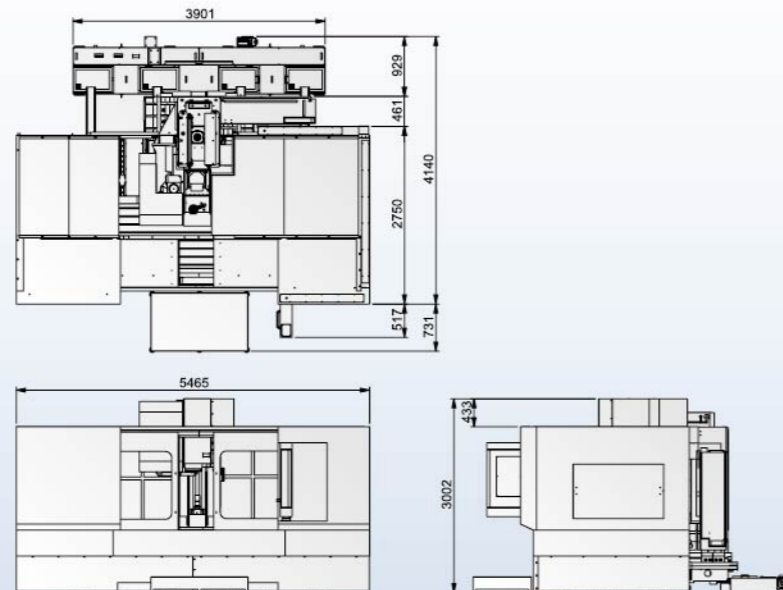
MCV-1500i



MCV-1500i+



MCV-2000i



Machine Specifications

ITEM	MODEL	MCV-1500i	MCV-1500i+	MCV-2000i
A.T.C.	Type	ARM	ARM	ARM
CAPACITY	Unit			
X axis travel	mm (in)	1520 (59.8)	1520 (59.8)	2040 (80.3)
Y axis travel	mm (in)	760 (29.9)	1000 (40)	1000 (40)
Z axis travel	mm (in)	720 (28.3)	720 (28.3)	720 (28.3)
Distance from spindle nose to table surface	mm (in)	120-840 (4.8-33)	120-840 (4.8-33)	120-840 (4.8-33)
Distance from spindle nose to column surface	mm (in)	760 (29.9)	1000 (40)	1000 (40)
TABLE				
Table size (LxW)	mm (in)	1550x750 (61x29.5)	1550x1000 (61x40)	2100x1000 (72.7x40)
Max. table load weight	kg (lb)	1300 (2863)	1300 (2863)	2000 (4405)
T-slot size	mm	18Tx125x6	18Tx125x8	18Tx125x8
SPINDLE				
Spindle speeds	rpm	4000	4000	4000
Spindle nose (nominal size, No.)		7/24 Taper, No.50	7/24 Taper, No.50	7/24 Taper, No.50
Spindle bearing inner diameter	mm	90 (3.54)	90 (3.54)	90 (3.54)
FEEDRATE				
Rapid traverse X,Y,Z	M/min (IPM)	20 (787.4)	20 (787.4)	20 (787.4)
Max. cutting feedrate	M/min (IPM)	5 (196.8)	5 (196.8)	5 (196.8)
A.T.C.				
Tool storage capacity	pcs	24	24	24
Max. tool diameter (with adjacent tools)	mm (in)	100 (3.9)	100 (3.9)	100 (3.9)
Max. tool length	mm (in)	300 (11.8)	300 (11.8)	300 (11.8)
Tool change time T-T(C-C)	sec	3 (10)	3 (10)	3 (10)
MOTORS				
Spindle motor (30min) FANUC	kW (HP)	11/15 (14.7/20.1)	11/15 (14.7/20.1)	11/15 (14.7/20.1)
X,Y,Z axis motor	kW (HP)	4 (5)	4 (5)	4 (5)
MACHINE SIZE				
Height of machine (H)	mm (in)	3006 (118)	3006 (118)	3006 (118)
Floor space (LxW)	mm (in)	3820x4365 (150x171.8)	3937x4135 (115x162.8)	5466x4135 (215x162.8)
Total machine weight	kg (lb)	11000 (24230)	13370 (29414)	14400 (31720)
Power requirement	KVA	35	35	35
Control	FANUC	0i	0i	0i

STANDARD ACCESSORIES

- RS232 interface
- Rigid tapping
- Fully enclosure guarding
- Chip conveyor(auger type)
- Work light
- Alarm lamp
- Heat exchanger
- Remote MPG
- Coolant system including coolant tank
- Lubrication system
- Leveling screws and pads
- Maintenance tool box
- 4000rpm spindle
- Tool tip air blow system
- Air purge
- Shower coolant system

OPTIONAL ACCESSORIES

- Extra coolant tank
- 6,000rpm spindle
- Spindle oil chiller
- Two speed gearbox
- C.T.S preparation
- Linear scales
- Tool overload detection
- Auto tool length measurement
- Automatic workpiece measurement
- Simple tool life management
- Chip conveyor outside machine & chip bucket
- Oil skimmer
- Coolant gun
- Rotary table preparation
- Manual tail stock for rotary table
- Through hole drill kit
- Auto counter for work piece
- DNC link software
- Arm A.T.C with 24 tools magazine
- Drum A.T.C with 20 tools magazine(BT50)
- Automatic power off
- Oil collector

