

NEW!

Column Moving Horizontal Machining Center

The Best Value for Automotive,
Motorcycle and General Precision Parts Machining.

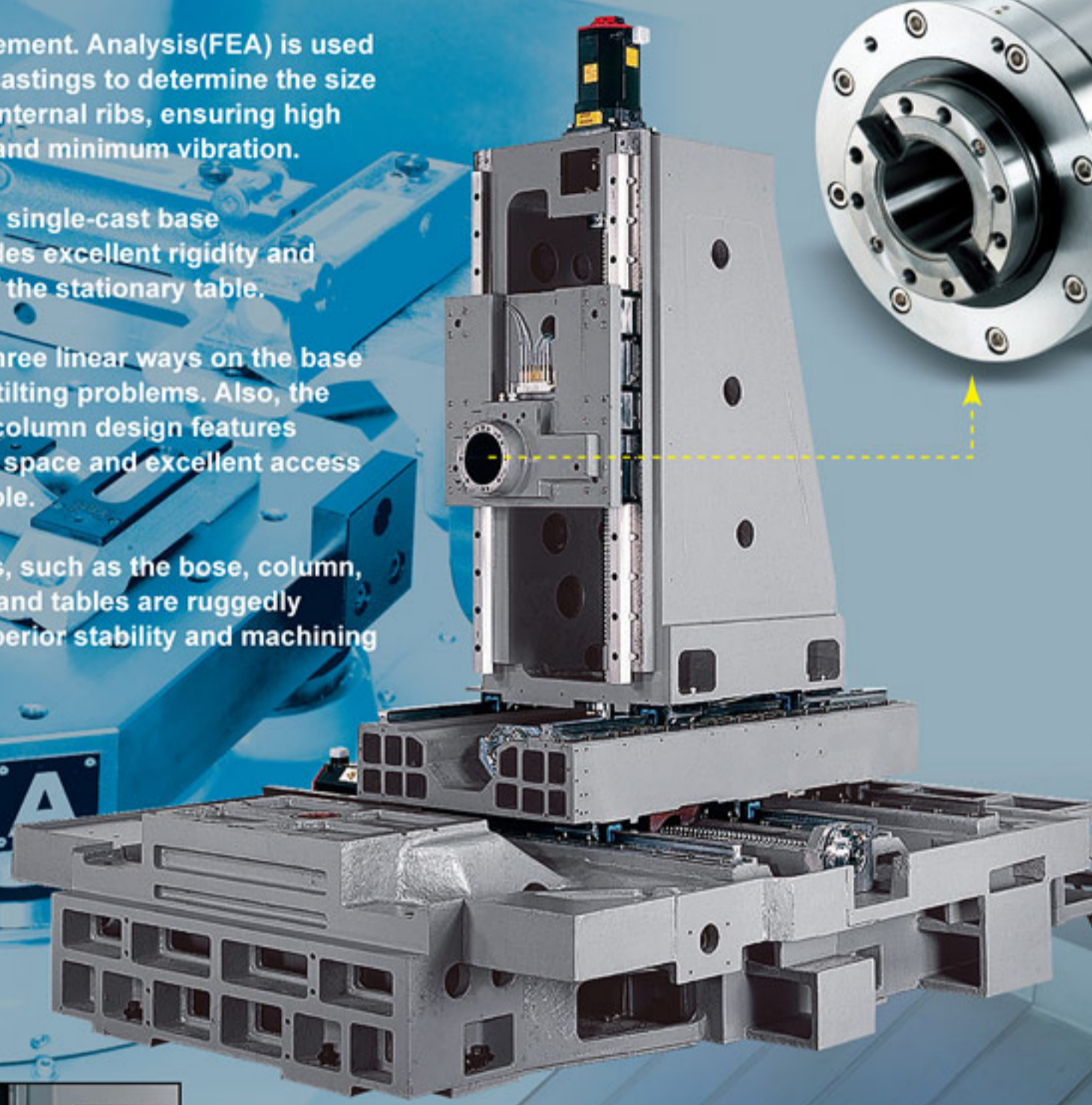
LCH-500



- Fast tool change
- Fast pallet change
- Rapid traverse rate
- High metal removal rate 330 cc/min
- Compact splash guard design
- Synchronized ATC and APC motions for increased efficiency
- Rigid 4th. Axis allows for heavy duty machining and high accuracy positioning
- User-friendly operation

Leadwell Optimum Structure Assures Top Stability

- Leadwell uses only top quality well-ribbed castings.
- Advanced Finite Element Analysis (FEA) is used for analyzing new castings to determine the size and location of all internal ribs, ensuring high torsional stiffness and minimum vibration.
- The rigid T-shaped, single-cast base construction provides excellent rigidity and avoids overhang of the stationary table.
- Special design of three linear ways on the base eliminates column tilting problems. Also, the compact traveling column design features relatively less floor space and excellent access to the machine table.
- The structural parts, such as the base, column, saddle, headstock and tables are ruggedly constructed for superior stability and machining accuracy.



High Machine Rigidity

The long term accuracy and superior stability for heavy duty machining results from the rigid and stable machine structure. That's why Leadwell's R&D department has applied high-tech Finite Element Analysis, combined with extensive experience, to thoroughly analyze and design the machine structure. Our aim is to assure exceptional heavy cutting capabilities, outstanding stability and deformation-free for many years, for each Leadwell machine.

The Power The precision The Efficiency

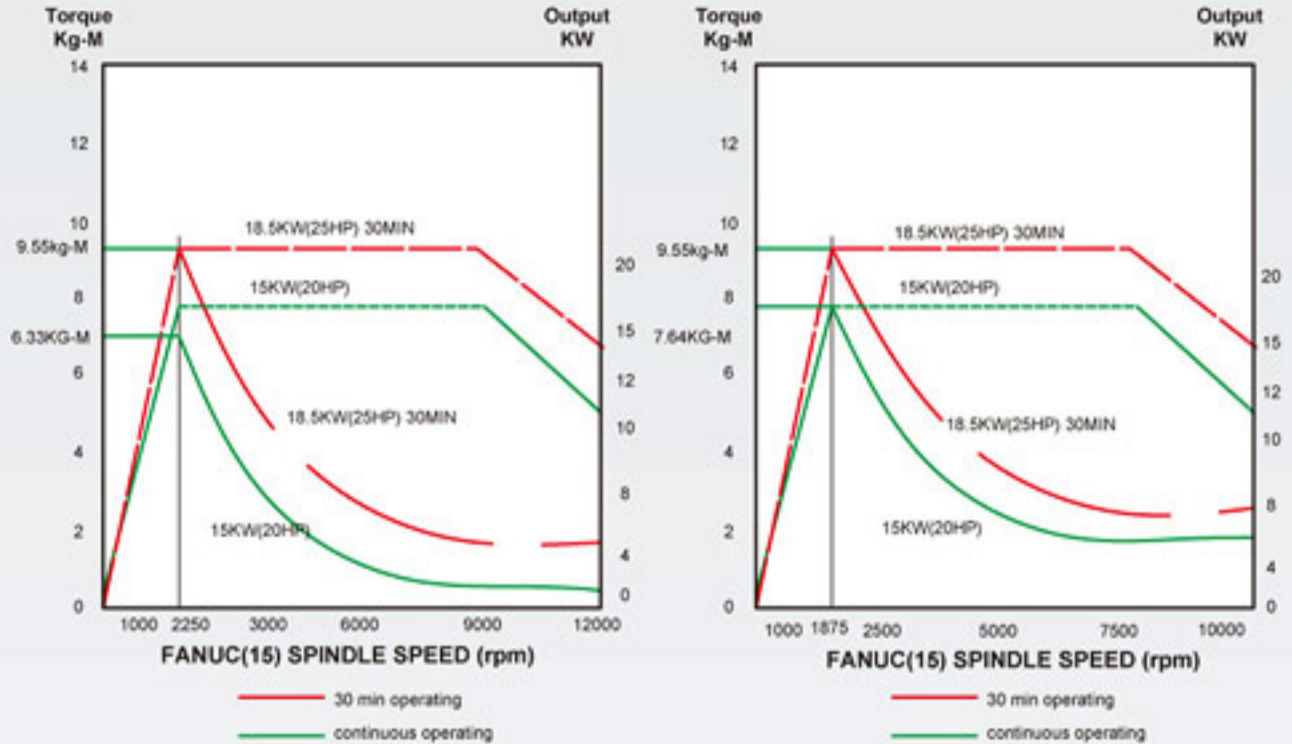


Precision Spindle Minimum Vibration in 3 μ

The spindle is driven by a powerful motor featuring high torque output. Unique spindle stability is controlled in 3 μ for any speed. The four gripper tool clamping design assures extremely stable clamping force.

10,000 or 12,000 R.P.M. Spindle Speed

The spindle provides a maximum speed of 10,000 R.P.M. as standard. Upon request, a belt transmitted 12,000 R.P.M. spindle is available as optional.



Two-Pallet, Swing-type APC for the efficiency Minded

Swing-type APC 2-Pallet Configuration

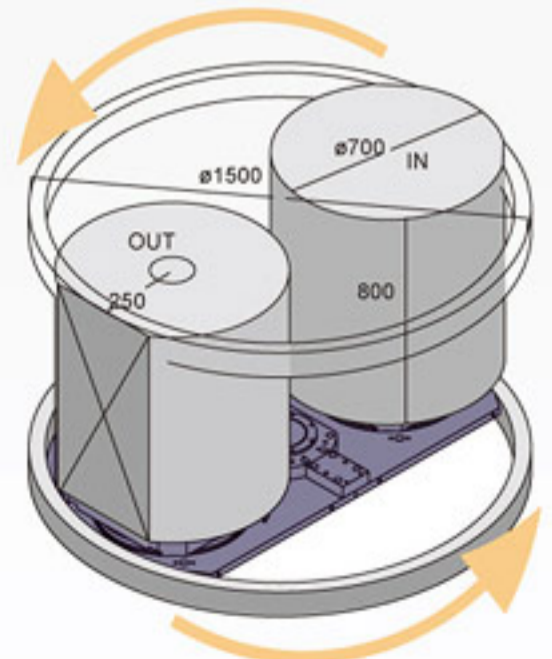
The LCH-500 has a standard 2 pallet, swing-type changer system. The lead position at the front of the machine allows for easy loading and unloading of workpieces.

- The pallets are positioned and clamped to the table with four precision taper cones to ensure accuracy and rigidity.
- During the pallet changing cycle, compressed air is blown through the cones to clean the clamping surfaces, removing chips and coolant. This air assures pallet location accuracy and long component life.
- The heavy duty APC provides 1,000 kgs loading capacity on each pallet.
- Unmatched Chip Removal Design
- A powerful chip flushing channel is equipped on both sides of Y-axis to prevent chips from entering into Y-axis linear guideways and transmission mechanism.



Accurate Table Positioning

The table is positioned and clamped by extra-large male and female cones thereby assuring high accuracy jointing and excellent rigidity. Additionally, an air leakage sensor is provided to ensure secure clamping. The swing table is fully interchangeable with the pallet.



Perfected Chip Guards and Disposal



Chip Removal in Cutting Area

- The chips drop directly the cutting area thereby preventing machine heat growth due to chip deposition and erroneous motion.

Inclined Metal Ramp

- The CE certified, fully enclosed splash guard, combined with the inclined metal ramp, exhaust chips out of the machine thoroughly and efficiently.
- This prevents machine parts from being damaged.
- The chip curtain is equipped at both sides of X-axis and synchronized telescopic guards at bottom.

Chip Augers

- Leadwell's simple and efficient design uses chip augers on the base of the machine and provides high volume coolant to wash the chips from the work area. The auger moves the chips into the disposal container, which eliminates the need for an operator to manually remove chips.
- A safety foot step is provided in the machine for added safety for the operator or maintenance.

Coolant Gun

- The powerful coolant gun is used for efficient cleaning and preventing chips from jumping into spindle.



Air Gun

- Furnished as a standard accessory, this air gun is used for efficient cleaning.



Directly Coupled Servo Motor

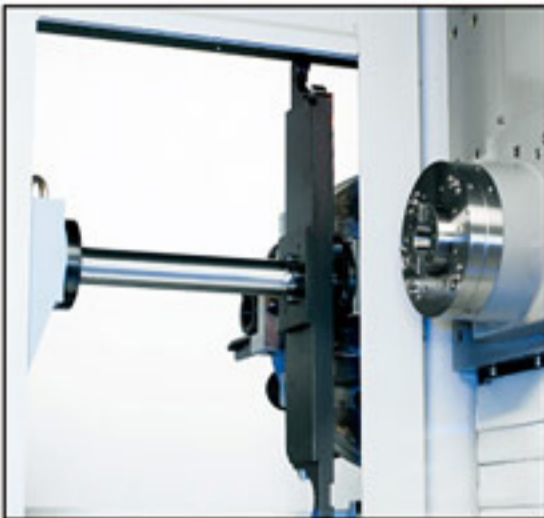
- The servomotors are connected to the ball screws with rigid shaft couplings. These couplings ensure that, even under severe loading from sharp machining, precise interpolation is achieved. This design is superior to both belt driven and flexible shaft coupling designs (with Pre-tension).



Quality Features Give You Better Quality Machining

Side Mounted ATC

The compact ATC is mounted at the side of the machine base for reducing packing volume and saving freight.



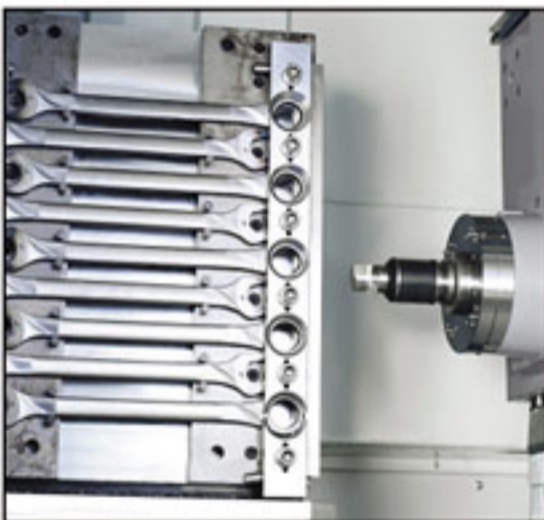
Coolant Through Ball Screw (Std.)

The cooling oil is circulated through the three axes' ball screws. Ball screws are pre-tensioned and combined with the use of double-nuts to reduce thermal strain and keep backlash to a minimum. Extremely smooth motion is assured, even under rapid traverse of 40 meters per minute.



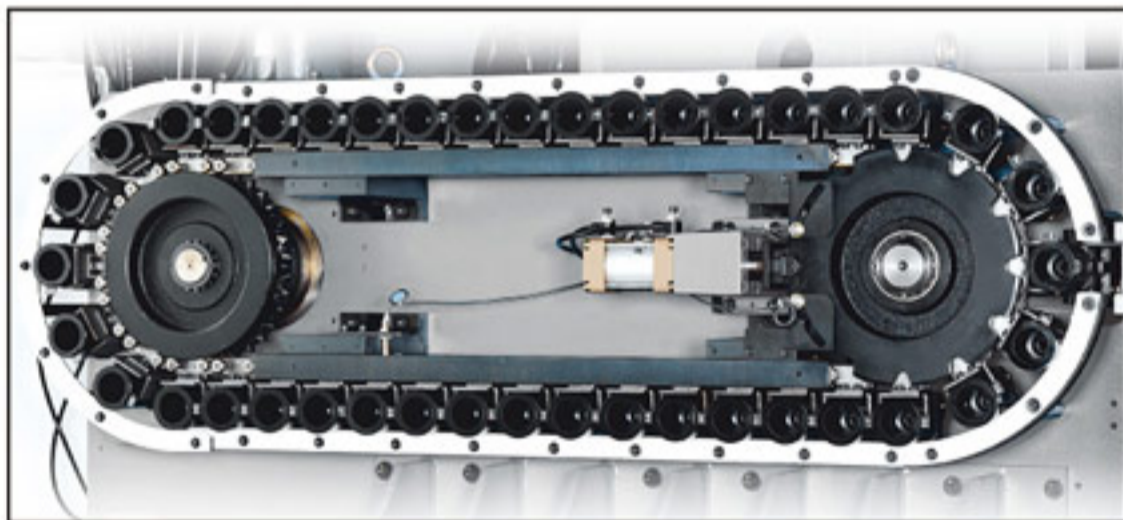
Chip Guard on Magazine

The auto door for the tool magazine completely prevents chips from damaging the magazine.



Chain-type Magazine

The LCH-500 is equipped with a 40 tool chain-type magazine combined with an arm-type tool change system. Fast tool change can be accomplished in 3.5 seconds (tool to tool) and 10 seconds (chip to chip).



Controller

- Controlled axis
- Simultaneously controlled axes
- Least input increment
- Emergency stop
- Mirror image
- Follow up
- Servo off
- Backlash compensation
- DNC operation
- Manual reference position return
- Exact stop
- Rapid traverse override
- Automatic acceleration / deceleration
- Override cancel
- Tape code: EIA RS244/ISO840
- Label skip
- Optional block skip
- Decimal point programming
- Rotary axis designation
- Automatic coordinate system setting
- Workpiece coordinate system
- Programmable data input
- Rigid tapping
- Tool function
- Cutter compensation C
- Canned cycles
- Background editing
- Status display
- Clock function
- Self-diagnosis function
- Alarm display
- 8.4" color TFT
- Part program storage length: 640M
- Chinese language display
- HPCC (18i-MB/OPT)
- NURBS interpolation (18i-MB/OPT)
- Data service & CF card
- 4th Rotary
- 10.4" color TFT (0i-C/18i-MB)
- Tool length and broken measurement



Machine Specifications

| ITEM | MODEL | | LCH-500 |
|---|-------------|------|---------------------------|
| CAPACITY | | Unit | |
| X axis travel | mm (in) | | 700 (27.56) |
| Y axis travel | mm (in) | | 610 (24) |
| Z axis travel | mm (in) | | 610 (24) |
| Distance form table top to spindle centre | mm (in) | | 50-660 (1.96-25.98) |
| Distance form table centre to spindle end | mm (in) | | 175-785 (6.90-30.91) |
| TABLE | | | |
| Pallet size (LxW) | mm (in) | | 500x500 (20x20) |
| Max. table load weight | kg (lb) | | 500 Tum |
| SPINDLE | | | |
| Spindle speeds | rpm | | 10000 |
| Spindle nose (nominal size, No.) | | | 7/24 Taper, No.40 |
| Spindle bearing inner diameter | mm (in) | | 70 (2.75) |
| FEEDRATE | | | |
| Rapid traverse X/Z/Y | M/min (IPM) | | 32/32/28 (1260/1260/1100) |
| Max. cutting feedrate | M/min (IPM) | | 10 (393.7) |
| A.T.C. | | | |
| Tool storage capacity | pcs | | 40 |
| Max. tool diameter (with adjacent tools) | mm (in) | | 100 (3.9) |
| Max. tool length | mm (in) | | 270 (10.63) |
| Tool change time (T-T/C-C) | sec | | 3.5/10 |
| A.P.C. | | | |
| Number of pallets | pcs | | 2 |
| Pallet changing time | sec | | 12 |
| MOTORS | | | |
| Spindle motor (30min/cont) FANUC | kW (HP) | | 18.5 (24.8) |
| X/Y/Z axis feed motors | kW (HP) | | 7/4/4 (9/5.4/5.4) |
| MACHINE SIZE | | | |
| Height of machine | mm (in) | | 2980 (117.3) |
| Floor space (LxW) | mm (in) | | 3320x4800 (130.7x189) |
| Total machine weight | kg (lb) | | 11500 (452.7) |
| Power requirement | KVA | | 55 |
| Computer control | FANUC | | Oi-MC |

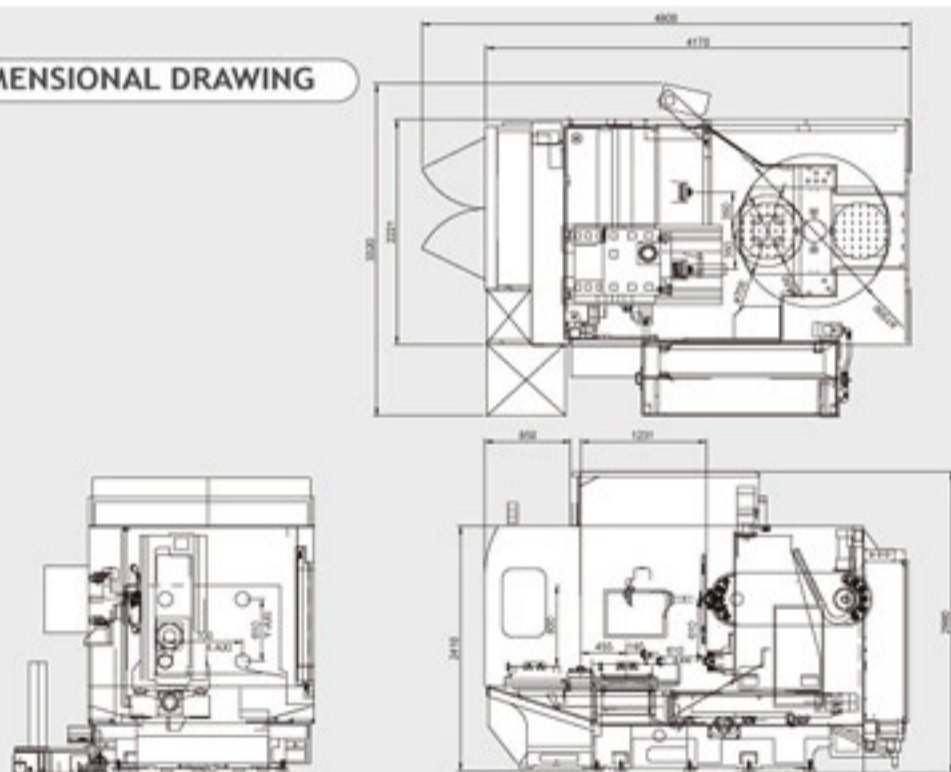
STANDARD ACCESSORIES

- RS232 interface
- Right 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
- Spindle oil collar (chiller)
- Rotary table 0.001"
- 10,000 RPM spindle
- Air purge
- Coolant gun
- Auto counter for work piece
- Arm A.T.C. with 40 tool magazine
- Auto power off

OPTIONAL ACCESSORIES

- 8,000RPM spindle
- 12,000 RPM spindle
- C.T.S. preparation
- Tool tip air blow system
- Linear scale
- Tool overload detection
- Auto tool length measurement
- Automatic workpiece measurement
- Simple tool life management
- Chip conveyor outside machine & chip bucket
- Oil skimmer
- Rotary table preparation
- Manual tail stock for rotary table
- Through hole drill kit
- Auto door
- DNC link software
- Arm A.T.C. with 24 tool magazine
- Arm A.T.C. with 30 tool magazine
- Air conditioner in cabinet
- Oil collector
- Programmable coolant nozzle

DIMENSIONAL DRAWING



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