Productive CNC 4 Spindle Vertical Lathe

KITAKO-SHIMADA

VT4-350

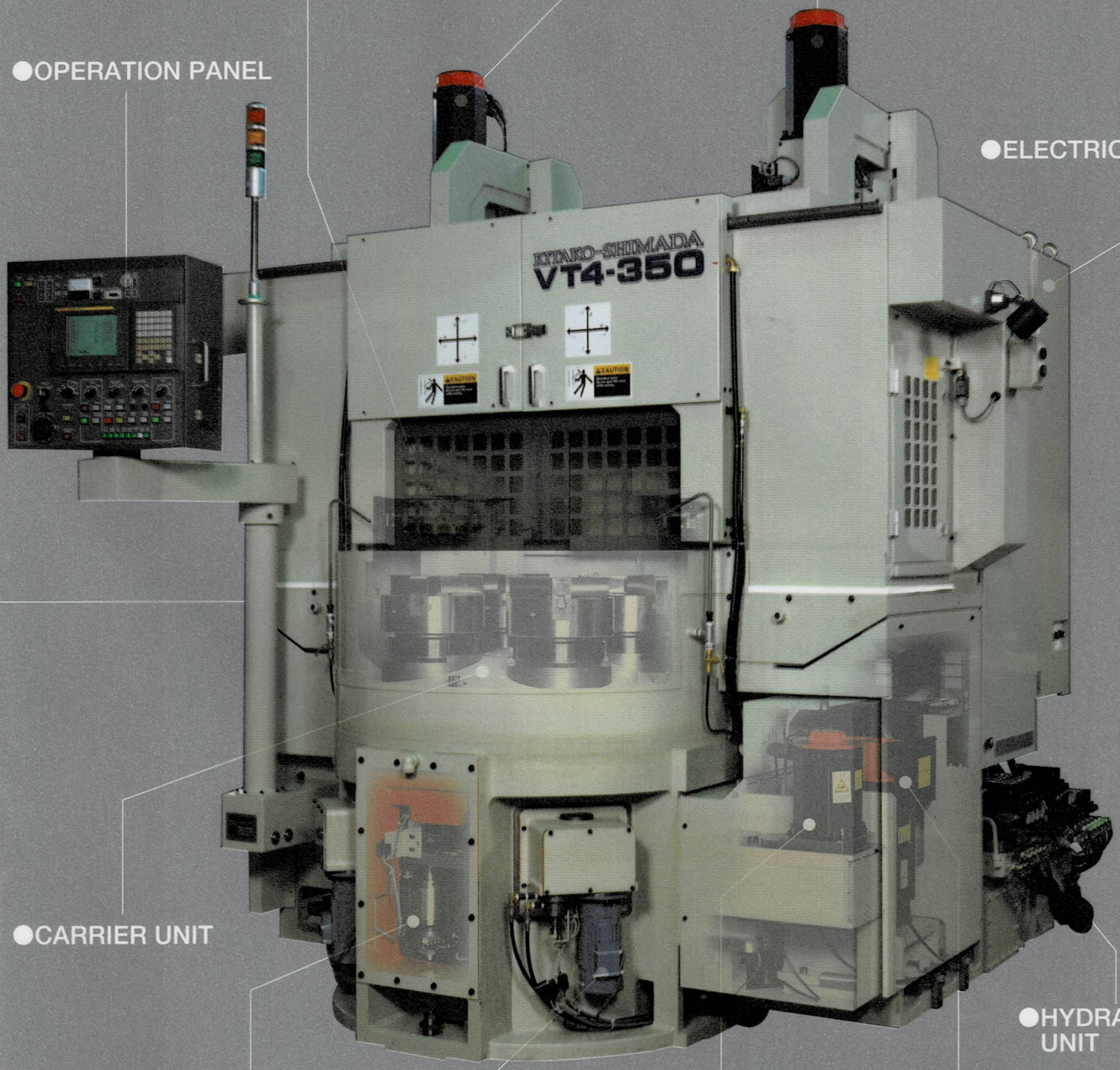
VT4-350

●Vertical Series

Productive CNC 4 Spindle Lathe

"Zero down time for loading / unloading."
The latest solutions for productivity from SHIMADA-Japan's leading Multi-spindle specialist.

- ●As a FM-cell, the machine facilitates automatization of a manufacturing line, and because of its vertical type, enables handling of heavy workpieces and a supply of auto-loading system.
- ●The loading spindle is protected against splashing coolant water and chips by a cover and provides connection with a robot or an auto-loader.
- ●An inventive spindle offset function compensates an error between each spindle in the microns.
- ●The spindle speed can be controlled independently for each spindle.
- ●The operational and mechanical alarm message reduce mental hardship of maintenance.
- ●The User Parameters of standard supply can reflect your concept toward operations.
- ●The machine offers many advantages of a vertical type including less floor space requirement for bigger working capability.



●Z AXIS SERVO MOTOR

●DRUM TURRET UNIT

●OPERATION PANEL

●ELECTRIC BOX

●CARRIER UNIT

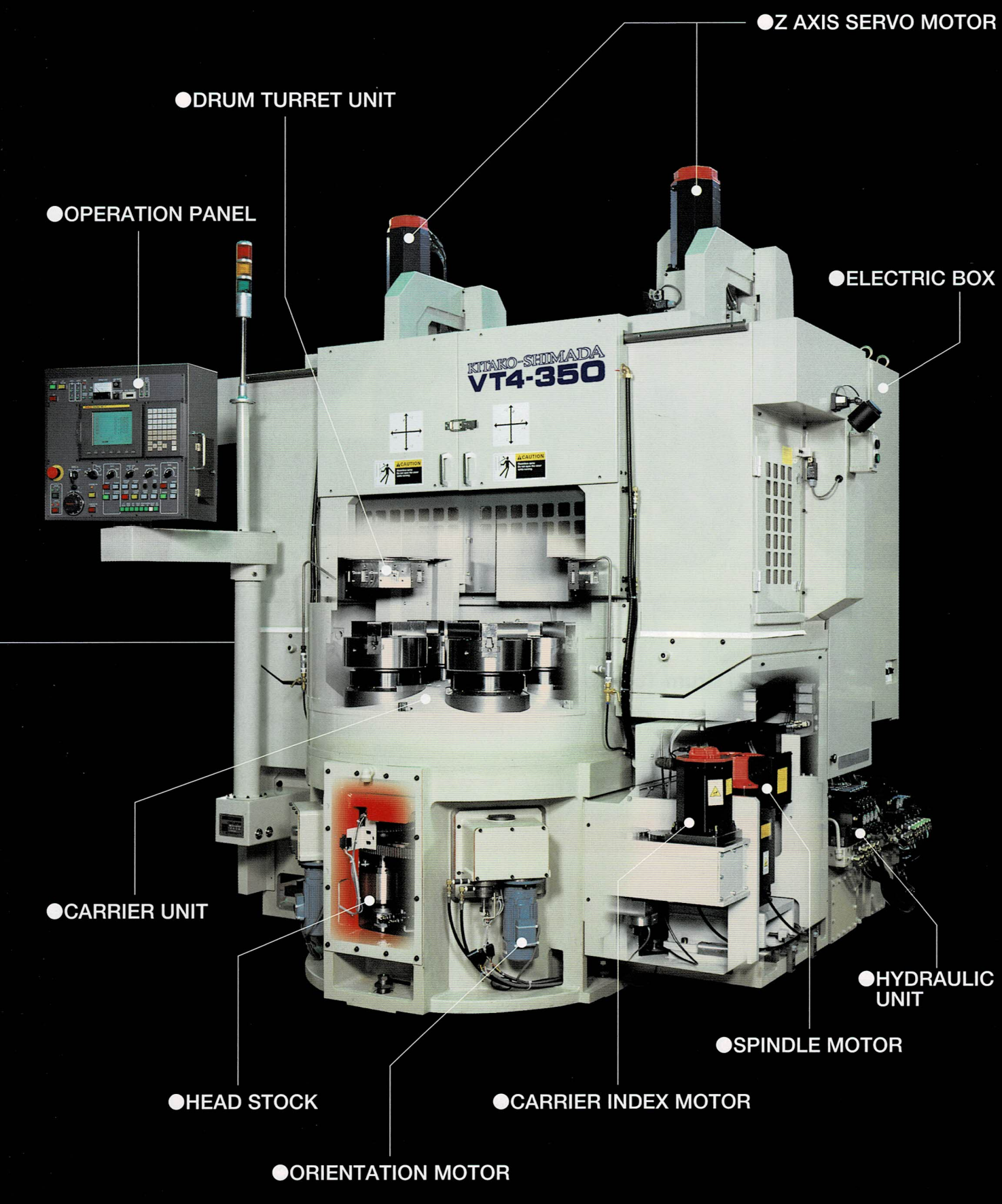
●HYDRAULIC UNIT

●SPINDLE MOTOR

●HEAD STOCK

●CARRIER INDEX MOTOR

●ORIENTATION MOTOR


●Z AXIS SERVO MOTOR
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KITAKO-SHIMADA
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●HYDRAULIC UNIT
●SPINDLE MOTOR
●HEAD STOCK
●CARRIER INDEX MOTOR
●ORIENTATION MOTOR

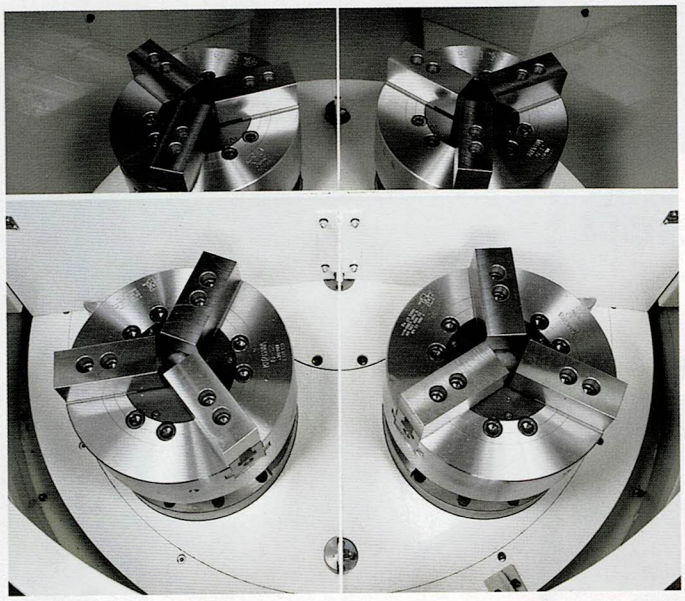
Only 4 Spindle system can. Loading and Unloading is done while

VT series (Vertical) ●Structure

4 Spindle Unit

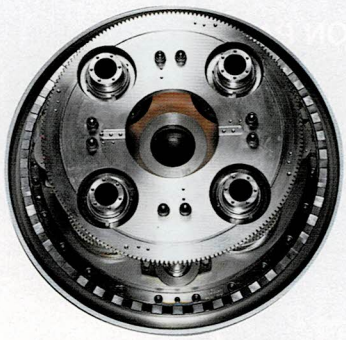
The main spindles are hardened, Precision ground and supported by precision double row cylindrical roller bearings and angular contact bearings. The cartridge type spindles are lubricated with grease and sealed less maintenance.

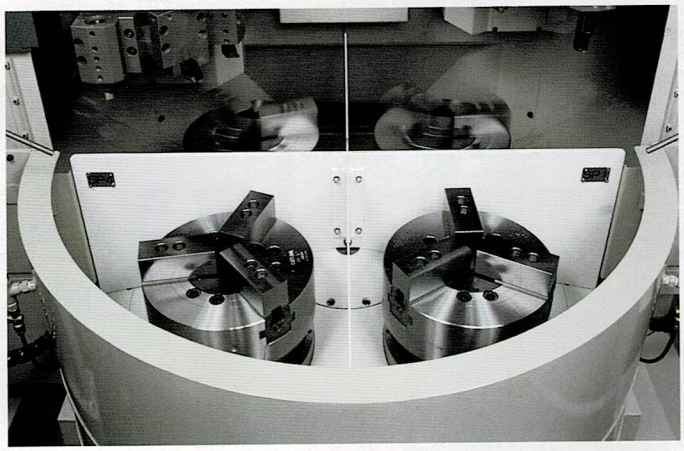
※Front : Loading/Unloading Area Back : Cutting Area



High Accuracy Indexing

The spindles are mounted in a carrier drum, Whose exterior is a large diameter curvic coupling thus insuring high accuracy, rigidity and repeatability when positioning.





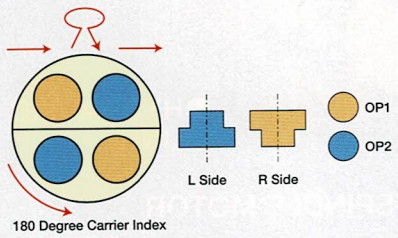
8 Station Drum Turrets

The 8 station drum turret is bi-directional random indexing.

※The 8 station drum turrets are optional selects.

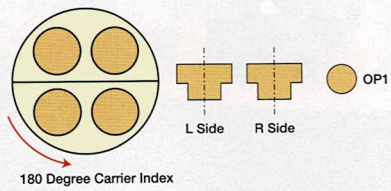
MACINING METHODS

AB/AB METHOD.
Front and back side operation



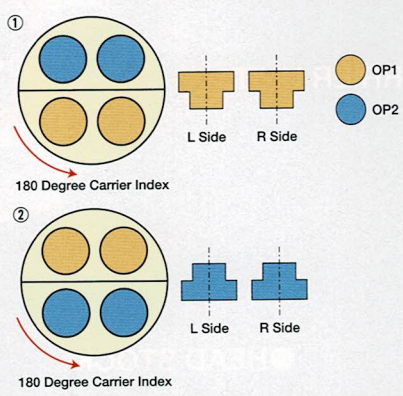
Front side by OP1, part reversed during load/unload sequence, Back side by OP2. OP1 and OP2 are independently machined at the same time. AB/AB method most effective when the OP1 and OP2 cutting times are close or identical.

AA/AA METHOD.
Twin single operation



Two single operation parts are loaded/unloaded and machined simultaneously. AA/AA method is applied when only machining one side.

AA/BB METHOD.
Twin front and back side operation with two 180 degree carrier indexes.

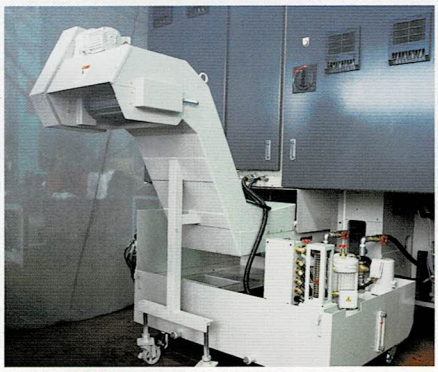


Two front sides machined simultaneously by OP1, both parts reversed during load/unload sequence, two back sides machined simultaneously by OP2. With this method two parts are completed every other carrier index. AA/BB method is effective if the OP1 and OP2 cutting times are unbalanced and sufficient tooling for both OPs can be mounted in each turret.

machining for high productivity.

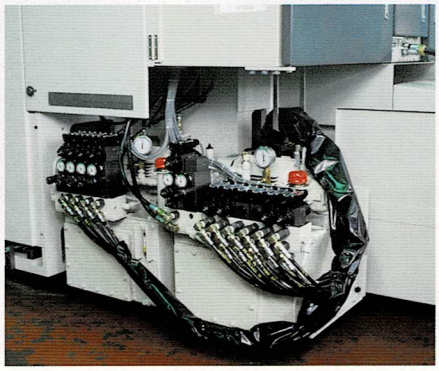
Chip Conveyor

Hinge type chip conveyor is standard.
Other type chip conveyor is available as an option.
※Magnet Scraper, Rolling Drum Filter, etc.



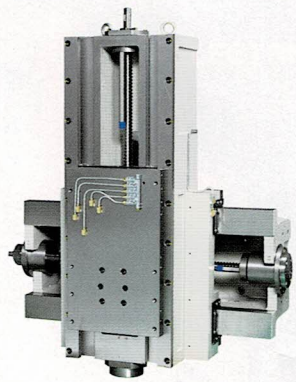
Hydraulic Unit

Hydraulic unit is mounted on the machine andzpressure is monitored.



Box Slideways

To ensure high accuracies and long life, each model is equipped with Box-Shaped slide ways. Mating surfaces are covered with special synthetic resin. The ball screws are forced lubricated. Telescoping steel covers protect the ways and screws from chips, coolant, and debris.

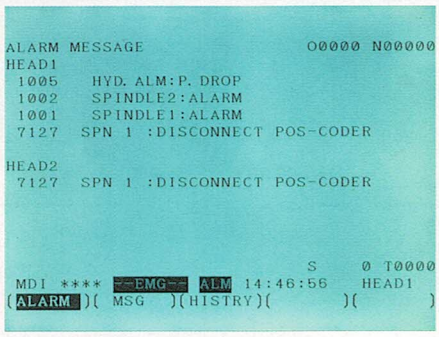


Centralized operation panel

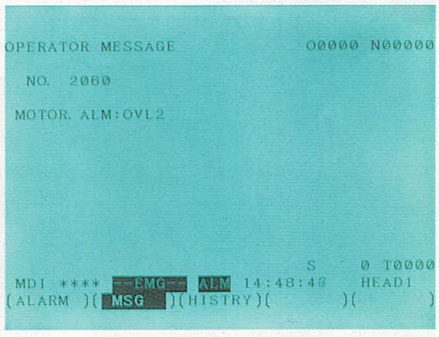
The centralized operation panel can be swung to the suitable position. The operationability is outstanding by practically arranged CRT and operation switches.

Preventive Maintenance Message

- Various user parameters of standard supply allow system setting for operation according to customers needs.
- Alarm message are displayed CRT enabling self-diagnoses of machine and CNC device and tell about operational errors and faults for maintenance.

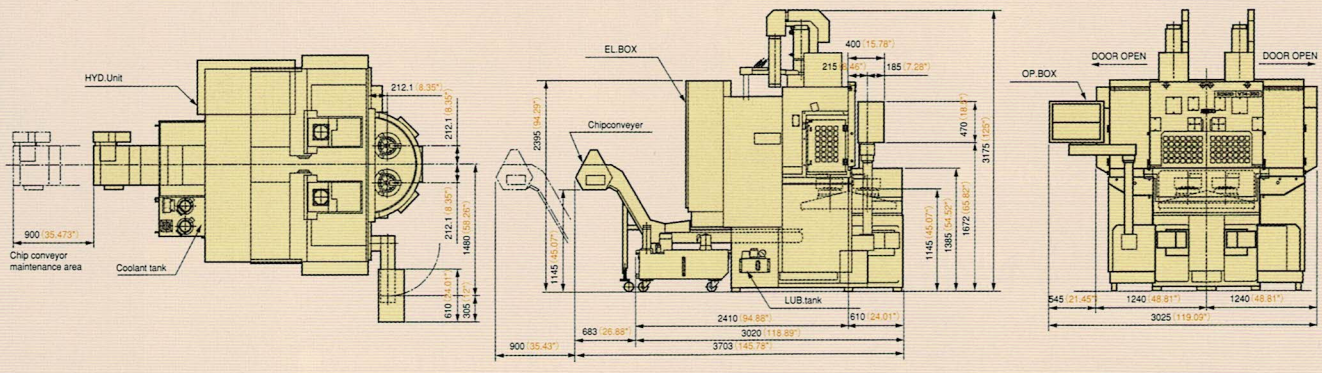


Machine alarm messages



Operation error messages

Floor space



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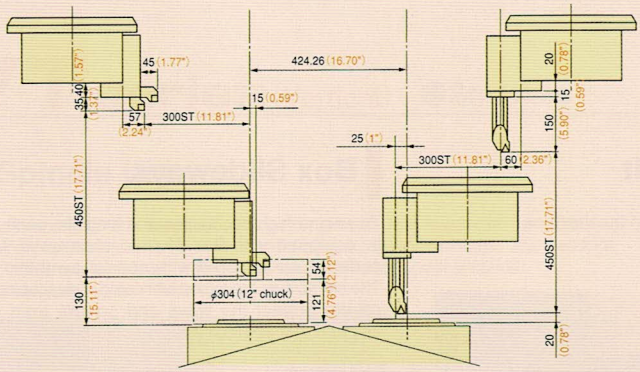
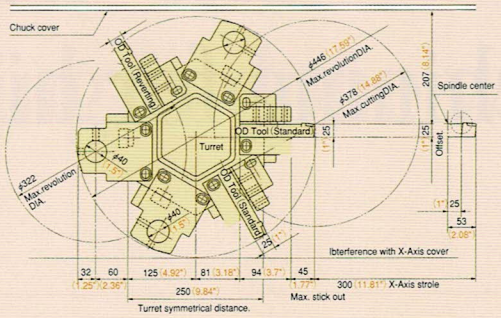
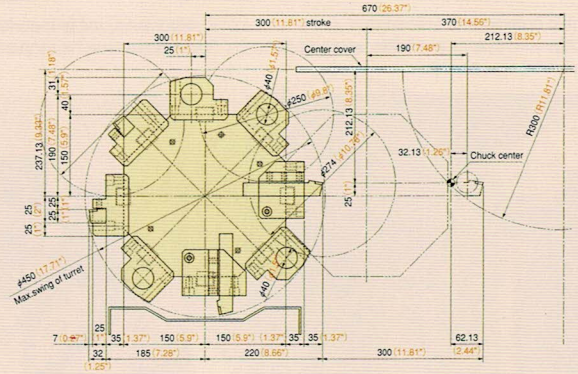
Tooling stroke



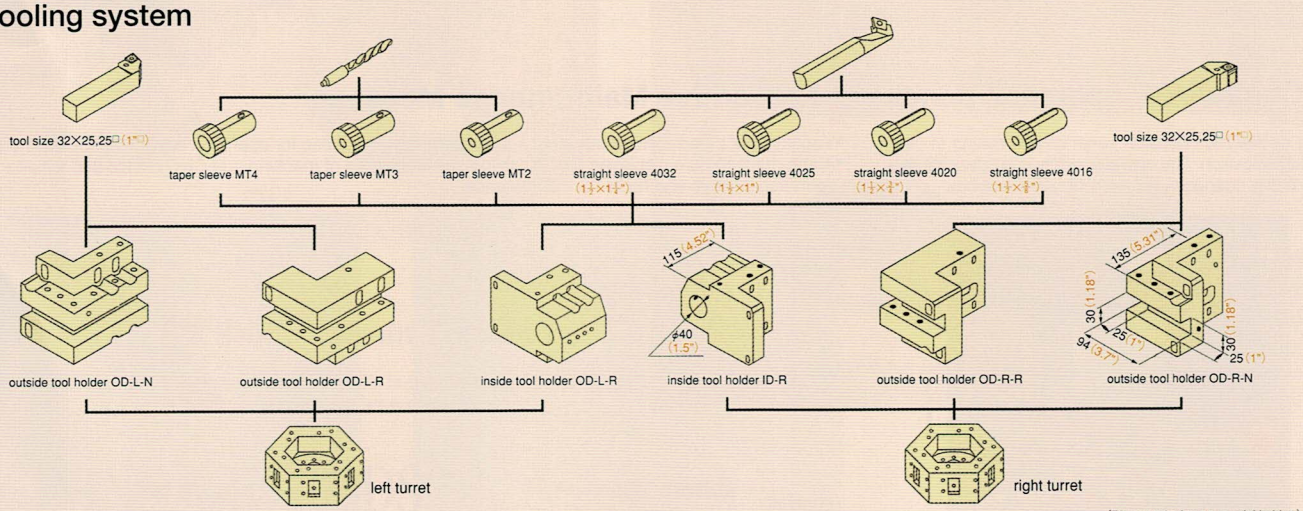
6 station drum turret



8 station drum turret (option)

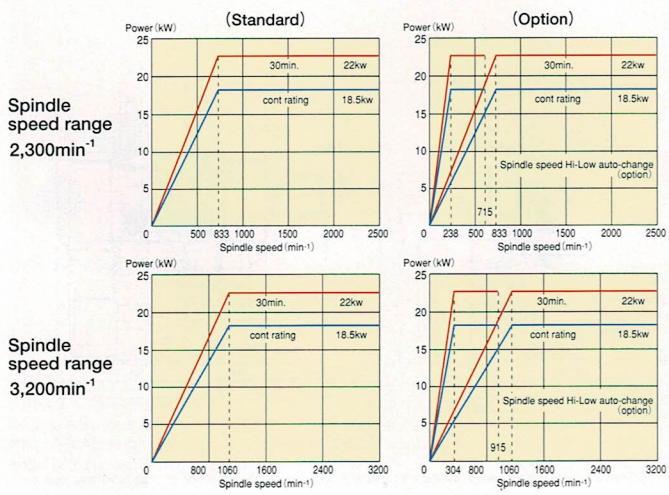


Tooling system



(Please ask about a special holder.)

Spindle motor AC18.5/22kW (Cont./30min.)



Main spindle & Bearing Construction

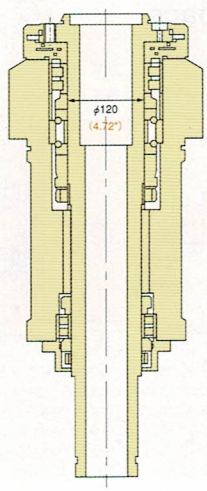
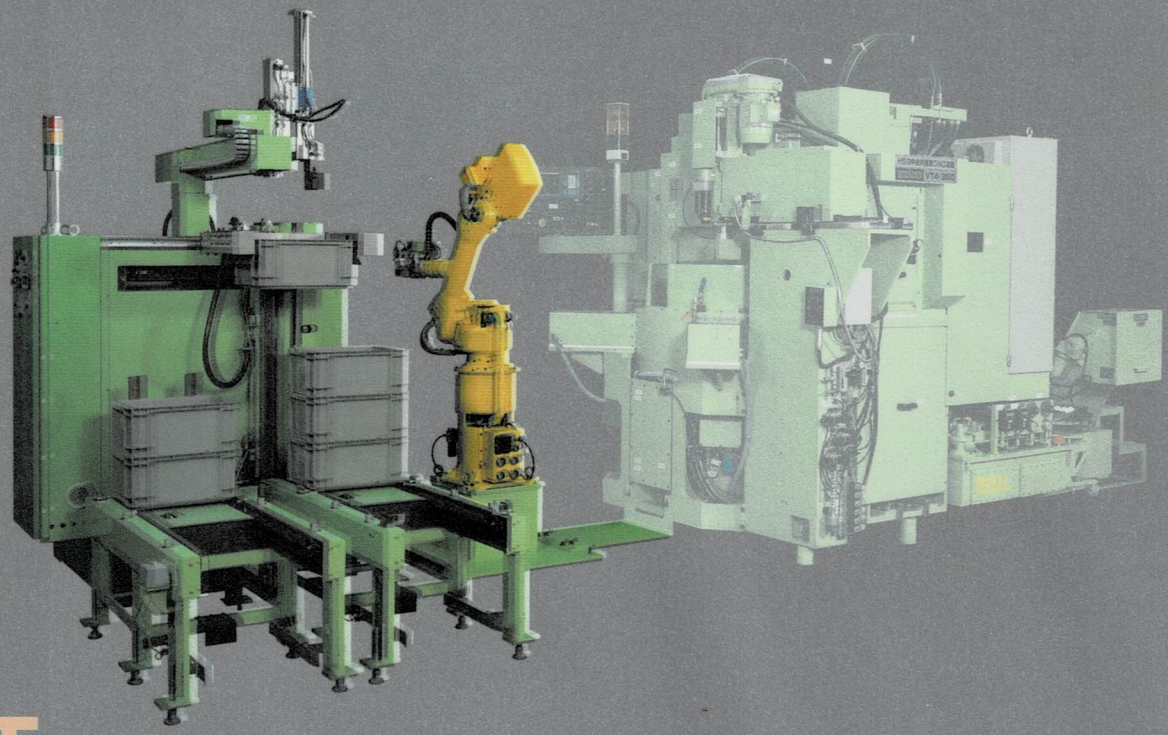
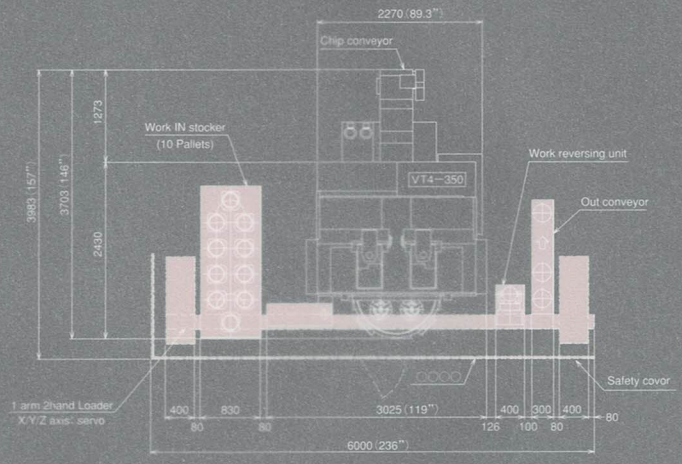


Figure of automation system

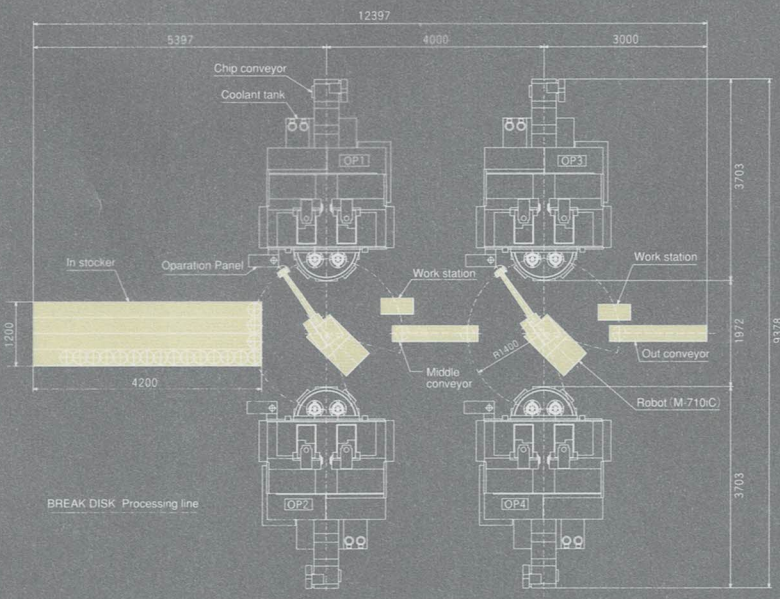


VT series

VT4-350 + Loader System



VT4-350 + Robot System



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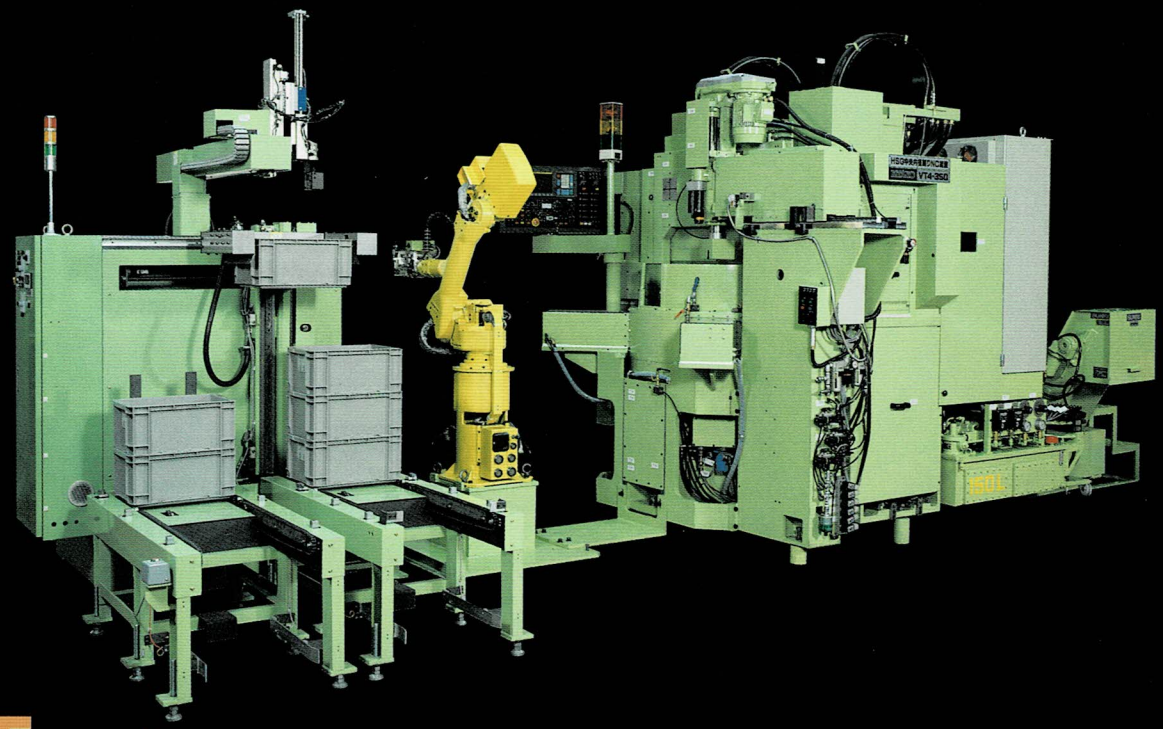
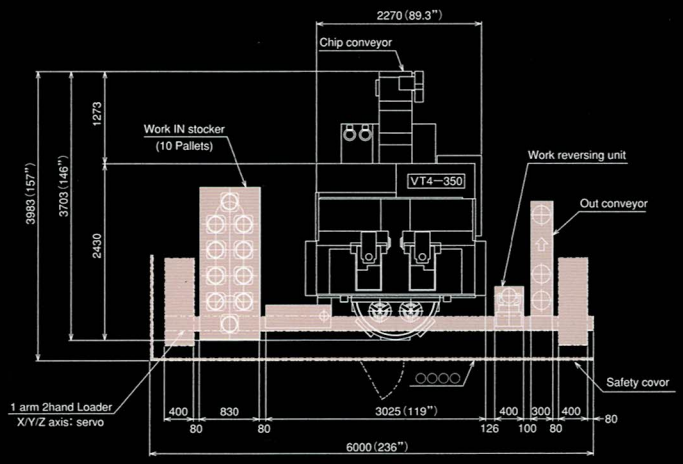
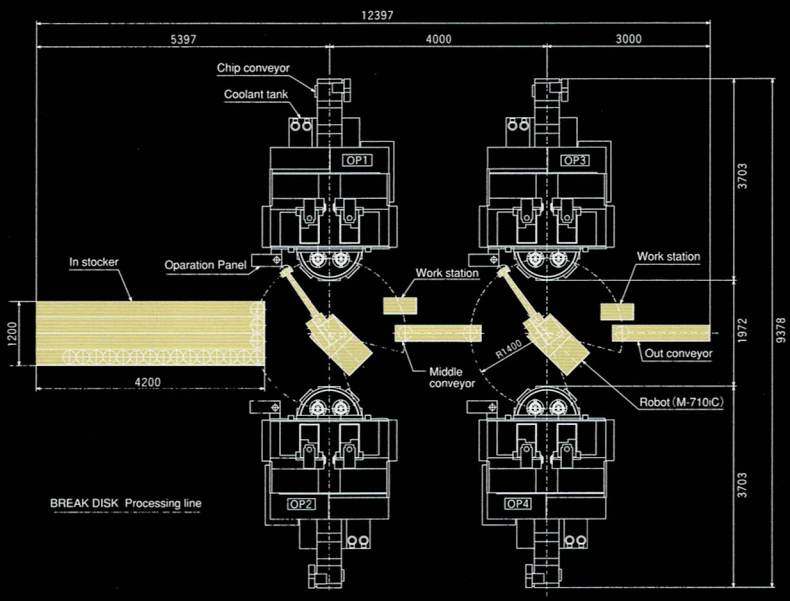


VT series

VT4-350
+
Loader System



VT4-350
+
Robot System



KITAKO-SHIMADA
VT4-350

Machine spesifications

No. of spindle	4
Chuck size	12 inch
Max. turning Dia. X Length	ϕ375mm (14.7") × 200mm (7.8")
Max. distance between spindles	424.26mm (16.7")
Spindle nose	ASA A2-8
Spindle bore	ϕ60mm (2.36")
Spindle motor (Standard)	18.5/22kw (25/30HP) ×2
Spindle motor (Option)	22/26kw (30/35HP) ×2
Spindle R.P.M (A)	23-2300
Spindle R.P.M (B)	32-3200
Turret (standard)	6st.×2
Turret (option)	8st.×2
X-axis stroke	300mm (11.8")
Z-axis stroke	450mm (17.7")
Rapid feed rate	20m/min
Floor space	3025 (119") ×2980 (117.3")
Weight	12000kg (26620 lb)

Standard Accessories

- Hydra.unit
- Coolant device
- Total splash guard
- Production counter
- Chip conveyor
- Work light
- Door Interlock
- Alarm message (CRT)
- Hand tool kit

Special Accesories

- Spindle orientation device
- Spindle speed 2 steps auto change
- Power chuck
- Chuck pressure high-low change
- High-pressure coolant
- Robot
- Gantry loader
- In / Out conveyor
- Measurement unit
- others

CNC Specifications

Model	Fanuc 0i-TD
Simultaneous controlled axes	2axes×2
Command increment	0.001mm
Override	0-100%
Sequence	Fanuc
Part program strage size	512kbyte
Number of registerable programs	800
Tool offset pairs	200
Between spindle Compensation function	Spindle offset
Multi-language display	English・Chinese・French・German・Italian・Russian・Spanish・Portuguese・Swedish・Turkish・Korean・Japanese etc.

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CNC Other Standard Functions

- Inch/Metric conversion
- Graphic display
- Dry run
- Single block
- Machine lock
- Direct drawing dimension programming
- Tool geometry / wear conpensation
- Tool nose radius compensation
- Variable Lead thread cutting
- Custom macro
- Canned cycles
- Multiple repetitive cycle
- Optional chamfering / corner R
- Tool life management
- Spindle info. Screen display
- Alarm history display

SMD

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