



System ISO 9001:2008 ISO 14001:2004

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Vcenter - 205

Pendulum Machining

High Versatility

- Long Fixed Table accommodates heavier loads and long parts.
- Traveling Column provides excellent access to work area.
- Easy installation for rotary tables or hydraulic fixtures.

High Productivity

- Rapid feed X/Y/Z-30/30/30 m/min reduces spindle idle time.
- Directly Coupled Spindle avoids belt vibration for better finish.
- Central Partition enables higher production than VMC with 2-pallet APC.



Highest Productivity And

Designed by following extensive research and feedback from numerous machine tool users, Victor's new Vcenter-205 has been designed with a long fixed table to provide multi-tasking machining precision with 30 m/min rapid traverse in all axes. The traveling column enables pendulum loading and machining in cycle to reduce load/unload times and to maximize spindle utilization.



Directly-coupled Spindle (DCS) with high torque spindle motor

- Spindle motor is directly coupled to the spindle to avoid the vibration resulted from belts and enhance surface finish on components.
- 12000 rpm spindle speed with dual winding for high torque output implements high speed machining at high feed rate.
- Oil-air lubrication with filtration system is used for spindle bearing.
- Air curtain has been added to constantly give the spindle an extra coat of protection.

Spindle oil cooler (Optional)

- While the spindle structure is built for the maximum rigidity, the spindle oil cooler can be installed optional to ensure the long bearing life.
- Cooling oil circulates around the spindle cartridge constantly to maintain the low temperature during the spindle rotation.

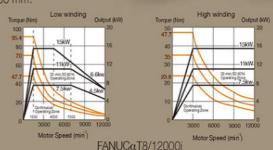


High rigidity dynamic structure

- Heavy-duty Meehanite[®] castings from Victor's licensed Meehanite foundry are used in the bed and column for maximum damping and strength.
- One piece bed castings with a heavily ribbed column minimizes machine distortion.
- CAE (computer aided engineering) design results in a maximum stiffness to ensure the minimum overhang distortion for all Y-axis traveling range 550 mm.

Column-mounted tool magazine and arm type ATC

- Tool magazine moving with column reduces the tool exchange time and ensures tools and kept out of machining area and free of swarf.
- Two arm type ATC offers quick tool changeover time and optimal reliability.
- BT-40 tooling with updated pull stud JIS-40P upgrades the cutting capability than conventional BT-40 tooling.







Traveling Column with 30 m/min rapid feed

- C-framed traveling column features easy access to load/unload the components.
- Rapid feed rate 30/30/30 m/min for 3 axes with scissor type telescopic guarding reduces spindle idle time with reliable quality guaranteed.
- Less interference between tool magazine and working area by moving the column backward.



Long Fixed Table

- Fixed worktable assures the evenly distributed loading and features for uniform accuracy at full stroke of X-axis travel even when oversized parts of off-center parts are loaded.
- Easy installation for the 4th axis rotary tables or hydraulic fixtures which cannot be activated for conventional VMC with 2 pallet APC (Auto Pallet Changer).



High damping guide ways with high stiffness

- Ballscrew holders are cast into the machine for even more rigidity and strength. This ensures a constant support for the ballscrews over the entire machine life.
- Large diameter (ø40 mm) ball screws and big size linear guides (width 45 mm) with retainer (model SHS) ensure the high structure stiffness during machining.
- Direct coupled servo motors eliminate motor backlash and noise caused by misalignment.

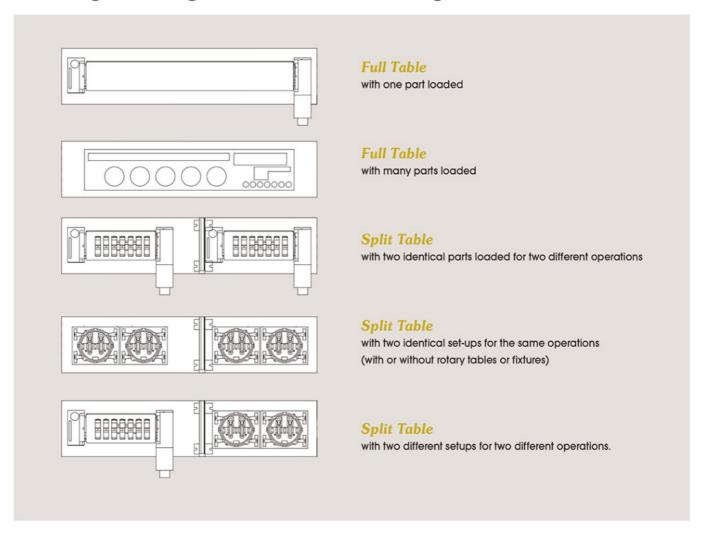
Victor NC Package

- Fanuc 0i/32i/31i controls to meet various requirement for batch production or high speed machining.
- Heidenhain iTNC-530/TNC-640 controls with user-friendly conversational function to meet mold manufacturing requirement.



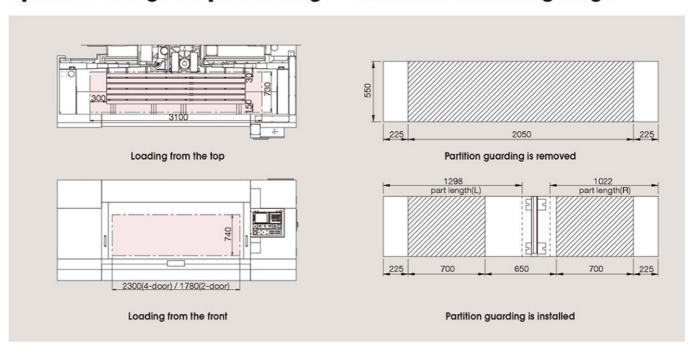


Advantages of Long Fixed Table with Traveling Column



Optimized design for part loading

Maximum machining range





4th/5th axis CNC rotary or tilting tables

Making the full use of the long fixed table feature, CNC rotary tables can be easily installed to improve the application range. Four axes simultaneous machining for multiple faces can be realized with a single set-up. The 5th axis table is also available with tilting as well as rotary function, Fanuc 31i-B5 or Heidenhain TNC-640 controls will be required for 5 axis simultaneous machining.



Workpiece measurement

To reduce time spent setting workpiece positions and then manually inspecting finished parts, automatic workpiece measurement is available with the use of Renishaw MP-10 or OMP-60 measuring probes. The workpiece position can be identified with the probe and work offsets automatically updated, enabling parts to be made right firs time. During batch production, in-process checking can be performed on the machine to maintain tight tolerance after rough machining.



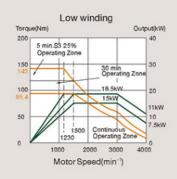
Non-central Partition System

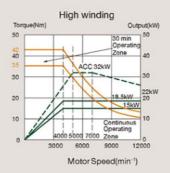
In case the central partition guarding is required to be located in different location for different setups, the partition guarding can also be re-located with the guarding options. However, two doors and the according moving stroke are unchanged to avoid any possibility for coolant leakage.



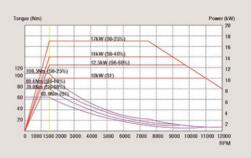
Higher power spindle

To meet heavier cutting requirement, the DCS spindle can be upgraded to higher power spindle motor or higher speed spindle.





Fanuc αL8/15000i



Heidenhain motor QAN200UH

High Versatility Through A Wide Range Of Set-ups

With a central partition guarding installed, the Vcenter-205 can effectively be turned into two smaller vertical machining centers, machining on one side while loading or unloading parts on the other side.



Pendulum machining by Central Partition System

- With the central partition guarding installed, the spindle can effectively
 machine on one side while loading or unloading parts on the other side.
- X-axis travel limit is automatically set up by interlock when partition guarding installed, and the machining area are split into the right and left area
- The interlock function assures safe setup for one side while machining is made in the other side.
- Central Partition System features higher productivity than that of vertical machining center equipped with a 2-pallet APC.

Easy installation for the 4th/5th axis tables and fixtures

- With a central partition guarding installed, the long table can be mounted with two fixtures or two CNC controlled tables.
- No complicated wiring and cabling involved as the conventional VMC with 2-pallet APC, the fixed table facilitates the ultimate reliability and much heavier loading on the tables.
- Rapid traverse speed 30 m/min by traveling column further offers much higher productivity than conventional VMC with 2-pallet APC.

Options



32 or 40 tool magazine

Optional 32 (or 40) servo driven tool magazine enables pendulum machining on two spilt tables for different set-ups or two different applications.



To reduce tool set-up time, Victor offers two automatic tool length measuring systems:

Simple tool length measurement

Metrol system T-24E is mostly used for tapping and drilling as the probe only measures the tool length.

Advance tool length measurement

Renishaw system TS-27R offers further advancement with the probe capable of measuring both tool lengths and diameters. This system is ideal for batch production where tools need to be constantly changed or replaced.



For improved deep hole drilling and boring capability, coolant can be forced through the center of the spindle under the high pressure (20 bars/60Hz by Grundfos pump MTR 3-23) directly to the cutting area. To ensure long and reliable running of this system, fine particles produced during machining must be filtered out to prevent damage to the spindle. Victor's customized cleaning system by centrifugal dispersion or replaceable filter cores is far more reliable with less maintenance than conventional system to avoid the fine particles flowing into the spindle.

Stop block for oil hole coolant

As an alternative to CTS, it is possible to supply coolant through the tool holder by using an adaptor (stop block) located on the spindle nose. High pressure(coolants) can be supplied with no need for higher cost filter system as coolant bypassed the spindle.



Linear scales for improved repeatability

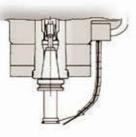
Linear scales offer exceptional positioning accuracy up to 0.005mm over full stroke. Heidenhain or Fagor linear scales with a thermal behavior similar to that of the machine are selected to compensate for the thermal expansion and to enhance repeatability. Sealed encoders with durable Aluminum housing offer improved reliability and service life.

Coolant Options

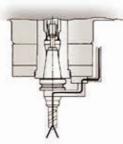
Std. - coolant ring Purpose - general



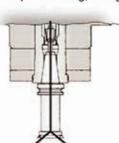
Opt. - directional pipe Purpose - general



Opt. - oil hole coolant Purpose - drilling, boring



Opt. - thru. spindle coolant Purpose - drilling, boring



Opt. - oil mist Purpose - tapping, reaming



Victor Taichung's Fanuc 0*i***-MF (Type 1)/32i-B/31i-B Control Specifications**

Standard:

1.	SPECIFICATION Hed Axes:	DESCRIPTION
	Controlled Axes	3 Axes (X, Y, Z)
2.	Simultaneous Controlled Axes	Position / Linear Interpolation / Circular Interpolation (3 / 3 / 2)
3.	Least Input Increment	0.001 mm / 0.0001 inch / 0.001 deg.
4.	Least input increment 1/10	0.0001 mm / 0.00001 inch / 0.0001 deg.
5.	Max, Command Value	± 99999.999 mm (± 9999.9999 in)
6.	Fine Acceleration & Deceleration Control	Std.
7.	High Speed HRV Control	Std.
8.	Inch / Metric Conversion	Std. (G20 / G21)
9.	interlock	All Axes / Each Axis / Cutting Block Start
10.	Machine Lock	All Axes / Each Axis
11.	Emergency Stop Over-Travel	Std.
13.	Stored Stroke Check 1 And Check 2	Std.
14.	Mirror Image	Each Axis
15.	Mirror Image M73, M74, M75, M76	X, Y Axes
16.	Follow-Up	Std.
17.	Position switch (with Victor's own PLC)	Std.
Operati	ion:	
1.	Automatic Operation	Std.
2.	MDI Operation	MDI B
3.	DNC Operation	Reader / Puncher Interface is Required
4.	DNC Operation With Memory Card	PCMCIA Card Attachment Is Required
5.	Program Number Search	Std.
6.	Sequence Number Search	Std.
7.	Sequence Number comparison and stop	Std.
8.	Buffer Register	Std.
9.	Dry Run	Std.
10.	Single Block	Std.
11.	Jog Feed Manual Reference Position Return	Std.
12.	Manual Hardrence Position Return Manual Handle Feed	1 Unit / Each Path
	Manual Handle Feed Rate	X1, X10, X100
14.	Z Axis Neglect	Std.
Interpo		0101
1.	Positioning	G00
2.	Single Direction Positioning	G60
3.	Exact Stop Mode	G61
4.	Exact Stop	G09
5.	Linear Interpolation	G01
6.	Circular Interpolation	G02, G03 (Multi-Quadrant Is Possible)
7.	Dwell	G04
8.	Helical interpolation	Std.
9.	Skip Function	G31
10.	Reference Position Return	G28
11.	Reference Position Return Check	G27
12.	2 nd / 3 nd / 4 th Reference Position Return	Std.
Feed:		
1.	Rapid Traverse Rate	Std.
2.	Rapid Traverse Override	F0, 25%, 50%, 100%
	Feed Per Minute	G94 (mm/min)
	Tangential Speed Constant Control	Std.
4.		
4. 5.	Cutting Feed Rate Clamp	Std.
4. 5. 6.	Automatic Acceleration / Deceleration	Rapid Traverse: Linear; Cutting Feed: Exponent
4. 5. 6.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration	
4. 5. 6. 7.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting	Rapid Traverse: Linear; Cutting Feed: Exponent
4. 5. 6. 7.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed interpolation	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301)
4. 5. 6. 7. 8.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Linear Acc / Deceleration Before & After Cutting Feed	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301) Std. (364)
4. 5. 8. 7. 8. 9.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Linear Acc / Deceleration Before & After Cutting Feed interpolation	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301) Std. (304) Std. (301)
4. 5. 8. 7. 8. 9.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (304) Std. (304) Std. (301) 0-150%
4. 5. 8. 7. 8. 9.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301) Std. (304) Std. (301) 0-150% 0-100%
4. 5. 6. 7. 8. 9. 10.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Linear Acc / Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (304) Std. (301) 0-150% 0-100% G92.
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4. 5. 6. 7. 8. 9. 111. 112. 133. 144. 15. 165. 177. 18. 19. 177. 177. 177. 177. 177. 177. 177.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, G05.1) (in total) AICC-2 + High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (G02/G03) Input: EIA / ISO Automatic Recognition Label Skip Pairly Check Control In / Out Coptional Block Skip Max, Programmable Dimension Program Number Sequence Number	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (0/52) with AICC-2) 600 blocks (31) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 8. 7. 7. 8. 8. 90. 110. 111. 122. 144. 155. 167. 177. 188. 199. 199. 199. 199. 199. 199. 199	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al controur control (AICC), (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GC2/GO3) In Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Optional Block Skip Mac. Programmable Dimension Program Number Sequeroo Number Absolute / Incomental Programming	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301) Std. (304) Std. (301) C=150% C=100% G62. Std. 200 blocks (0//32) with AICC-2) 600 blocks (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
4.4. 5. 8. 9. 10. 111. 112. 113. 114. 115. 116. 117. 117. 118. 119. 119. 119. 119. 119. 119. 119	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, G05.1) (in total) AICC-2 + High speed processing (G05.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (G02/G03) Input: Eld / ISC Automatic Recognition Label Skip Parity Check Control In / Out Coptional Block Skip Max, Programmable Dimension Fregram Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C=160% C=100% G92. Std. 200 blocks (0/32i with ACC-2) 600 blocks (31) Std. (31) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 6. 7. 7. 8. 8. 9. 110. 111. 115. 116. 117. 118. 119. Program 11. 2. 3. 4. 5. 6. 7. 7.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, G05.1) (in total) AICC-2 + High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (G02/G03) Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Optional Block Skip Max, Programmable Dimension Frogram Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input 1: 10 Time Multipy	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G-20; Std. 200 blocks (3/13) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOS/GOS) Input: BIA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Cptional Block Skip Max. Programmable Dimension Fregram Number Sequence Number Sequence Number Absolute / Incomental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Mutpby Plans Selection	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (0/32) with AICC-2) e00 blocks (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 6. 8. 9. 10. 111. 112. 113. 114. 115. 116. 117. 118. 119. Program 1. 1. 2. 3. 3. 4. 4. 5. 6. 8. 8. 9. 110. 111. 119. 119. 119. 119. 119.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Jog Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, G05.1) (in total) AICC-22 + High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate olamp by are radius (302/303) Input: EIA / ISO Automatic Recognition Libel Skip Parity Check Control in / Out Cyptional Block Skip Max, Programmable Dimension Program Number Sequence Number Absolute / Incremental Programming Input Unit 10 Time Multiply Plane Selection Retary Axis Designation	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (3/32) with AICC-2) 600 blocks (3/1) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 8. 8. 9. 111. 112. 113. 115. 116. 117. 119.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Feed Stop Al controur control (AICC), 605.1) (in total) AICC-2 + High speed processing (305.1) (in total) AICC-2 + High speed processing (305.1) (in total) AICC-2 + High speed processing (305.1) (in total) Bigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (602/503) In Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control in / Out Cytional Block Skip Max. Programmable Dimension Program Number Sequence Number Assolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 1 of Time Multiply Plane Selection Retary Acs Designation Retary Acs Boll-Over Function	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G-202 Std. 200 blocks (0\/32\) with AICC-2 Std. Std. (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 8. 8. 8. 10. 10. 111. 112. 13. 14. 115. 116. 117. 119.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Feed Stop Al contour control (AICC, GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GO3) Input: Ell / ISO Automatic Recognition Label Skip Parity Check Control In / Out Cytional Block Skip Max. Programmable Dimension Fregram Number Sequence Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Liant Step Decimal Point Programming Input Unit 10 Timemental Programming (Pocket Calculator Type) Decimal Point Programming Input Vales Designation Retary Axis Designation Retary Axis Poli-Over Function Polar coordinate command	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (0/32) with AICC-2) e00 blocks (311) Std. Std. Std. Std. Std. Std. Std. Std.
44. 5. 6. 6. 7. 7. 8. 9. 110. 111. 112. 113. 116. 116. 117. 118. 119. 119. 119. 119. 119. 119. 119	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Linear Acc / Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, G05.1) (in total) AICC-2 + High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (302/303) Input: EIA / ISO Automatic Recognition Libel Skip Parity Check Control in / Out Coptional Block Skip Max, Programmable Dimension Program Number Sequence Number Absolute / Incremental Programming Input Unit 10 Time Multiply Plane Selection Retary Axis Roil-Over Function Petary accounted System Setting	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (0/32) with AICC-2) 600 blocks (31) Std. (31) Std. Std. Std. Std. Std. Std. Std. Std.
4. 6. 6. 6. 7. 7. 8. 8. 9. 111. 12. 12. 111. 118. 119. 119. 119. 119. 119. 119	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICG, QOS.1) (in total) AICC-2 + High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GOS) In Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Optional Block Skip Mac. Programmable Dimension Frogram Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Frogramming Input Unit 10 Time Multiply Flane Selection Retary Aks Bell-Over Function Poiar coordinate System Setting Automatic Coordinate System Setting Automatic Coordinate System Setting	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (304) Std. (301) C-150% C-100% Ge2. Std. 200 blocks (0i/32) with AICC-2) 600 blocks (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
.4.4.6.6.6.6.7.7.8.8.9.9.0.111.1.12.1.11.1.15.1.11.1.1.1.1.1.1.1.1	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOS/GOS) Input: Eld / ISO Automatic Recognition Label Skip Parity Check Control In / Out Coptional Block Skip Max. Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 1 o Time Multiply Plane Selection Rotary Akis Designation Rotary Akis Designation Rotary Akis Designation Polar coordinate System Setting Automatic Coordinate System	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (301) C-150% C-100% G62. Std. 200 blocks (0/32) with ACC-2) 600 blocks (31) Std. (31) Std. Std. Std. Std. Std. Std. Std. Std.
4. 6. 6. 6. 7. 7. 8. 10. 11. 12. 12. 11. 11. 11. 11. 11. 11. 11	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Jog Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, G05.1) (in total) AICC-2+ High speed processing (305.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate olamp by are radius (G02/G03) Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control in / Out Coptional Block Skip Max, Programmable Dimension Frogram Number Sequence Number Absolute / Incremental Programming Input Unit 10 Time Multiply Plane Selection Rotary Akis Roll-Over Function Fedar System Setting Automatic Coordinate System Setting Work Piece Coordinate System Pair Mork Piece Coordinate System Pair	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (301) C-150% C-100% G02. Std. 200 blocks (0/52) with AICC-2) 600 blocks (31) Std. (31) Std. Std. Std. Std. Std. Std. Std. Std.
.4. (4. (5. (6. (6. (6. (6. (6. (6. (6. (6. (6. (6	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GOS) Input: BIPUT: BLA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Cptional Block Skip Max. Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incomental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Multiply Plans Selection Retary Axis Designation Retary Axis Designation Polar coordinate System Setting Work Piece Coordinate System Setting Work Piece Coordinate System Setting Work Piece Coordinate System Pair Manual Absolute Cn And Off	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (304) Std. (304) Std. (301) C-150% C-100% G62. Std. 200 blocks (0i/32) with AICC-2) e00 blocks (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
.4. 6. 6. 6. 6. 7. 7. 8. 9. 9. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 119. 119. 119. 119. 119. 119	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Linear Acc / Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Jog Override Automatic Corner Override Feed Stop Al control Corner Override Feed Stop Al control Corner Override Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GC2/GO3) In Input: BLA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Coptional Block Skip Max, Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 1 o Time Multiply Plane Selection Rotary Aks Roil-Over Function Polar coordinate System Addition of Work Piece Coordinate System Pair Martinal Absolute Cond And Off Coptional Chamfering / Corner R	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) C-150% C-100% G62, Std. 200 blocks (0/32) with ACC-2) 600 blocks (31) Std. Std. Std. Std. Std. Std. Std. Std.
4.4. 6.6. 8. 7. 8. 8. 100. 111. 112. 113. 114. 115. 116. 117. 118. 11. 12. 119. 119. 110. 110. 111. 110. 110. 110	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Jenear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al controur control (AICG, 605.1) (in total) AICC-2 + High speed processing (305.1) (in total) Bright Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (602/503) In Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control In / Cut Cptional Block Skip Max. Programmable Dimension Program Number Sequence Number Assolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Multiply Plane Selection Retary Acs Besignation Retary Acs Besignation Retary Acs Besignation Retary Acs Besignation Point coordinate System Setting Automatic Coordinate System Setting Automatic Coordinate System Setting Automatic Coordinate System Pair Marual Absolute Cn And Off Cyptional Chamfering / Corner R Programmable Data Input	Rapid Traverse: Linear; Cutting Feed: Exponent Std. (300) Std. (301) Std. (304) Std. (304) Std. (301) 0-150% C-100% G62. Std. 200 blocks (0//32i with AICC-2) 600 blocks (311) Std. (311) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
4.4. 4.5. 6.6. 7. 7. 8.9. 110. 111. 122. 133. 144. 156. 160. 177. 18. 8. 9. 101. 101. 111. 122. 133. 144. 145. 156. 166. 177. 167. 177. 188. 199. 199. 199. 199. 199. 199. 199	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GO3) Interpolation Input: BLA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Cotional Block Skip Max. Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incomental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Multiply Plans Selection Retary Axis Designation Retary Axis Reli-Cver Function Poiar coordinate System Setting Work Piece Coordinate System Pair Manual Absolute Cn And Off Cptional Chamfering / Corner R Programmable Data Input Sub Program Call	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (301) C=150% C=100% G62. Std. Std. Std. (301) Std. (301) Std. (301) Std. (301) Std. (301) Std. (301) Std. Std. Std. Std. Std. Std. Std. Std.
.4. 6. 6. 6. 7. 7. 8. 9. 9. 111. 122. 131. 144. 15. 15. 16. 17. 7. 8. 9. 17. 17. 17. 17. 17. 17. 17. 17. 17. 17	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Linear Acc / Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Jog Override Jog Override Automatic Corner Override Feed Stop Al contour control (AICC, GOS.1) (in total) AICC-2+ High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GO3) Input: EIA / ISO Automatic Recognition Libel Skip Parity Check Control in / Out Optional Block Skip Max. Programmable Dimension Program Number Sequence Number Absolute / Incremental Programming Input Unit 10 Time Multiply Plane Selection Retary Axis Roil-Over Function Retary Axis Roil-Over Function Polar Coordinate System Setting Automatic Coordinate System Setting Mork Piece Coordinate System Pair Manual Absolute On And Off Optional Chamfering / Corner R Programmable Data Input Sub Program Call Custom Macro B	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) C-150% C-100% G62, Std. (301) 200 blocks (3/32) with ACC-2) 600 blocks (31) Std. (311) Std. (312) Std. (313) Std. (313) Std. (314) Std. (315) Std. (315) Std. (316) Std. (316
4. 6. 6. 6. 7. 8. 8. 9. 9. 111. 12. 12. 12. 13. 14. 15. 15. 15. 15. 16. 17. 18. 19. 17. 19. 19. 17. 19. 19. 17. 19. 19. 17. 19. 19. 17. 19. 19. 17. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Automatic Corner Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Feed Stop Al control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GOZ/GO3) Interpolation Input: BLA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Cotional Block Skip Max. Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incomental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Multiply Plans Selection Retary Axis Designation Retary Axis Reli-Cver Function Poiar coordinate System Setting Work Piece Coordinate System Pair Manual Absolute Cn And Off Cptional Chamfering / Corner R Programmable Data Input Sub Program Call	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (304) Std. (301) C=150% C=100% G92. Std. 200 blocks (0/32) with AICC-2) 600 blocks (3/1) Std. Std. Std. Std. Std. Std. Std. Std.
4, 6, 6, 6, 6, 6, 6, 6, 7, 8, 8, 9, 111, 12, 13, 14, 15, 16, 17, 7, 8, 8, 9, 111, 12, 13, 14, 15, 16, 17, 17, 17, 18, 19, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110, 111, 110,	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Linear Acc / Deceleration Before & After Cutting Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Al control (AICC), QOS.11 (in total) AICC-2 + High speed processing (305.11) (in total) Jerk Control Rigid Tapping Bell-Shaped Acc. / Deceleration Feed rate clamp by are radius (GC2/GO3) In Input: EIA / ISO Automatic Recognition Label Skip Parity Check Control In / Out Optional Block Skip Max. Programmable Dimension Program Number Sequence Number Sequence Number Absolute / Incremental Programming (Pocket Calculator Type) Decimal Point Programming Input Unit 10 Time Multiply Plans Selection Retary Axis Belighanton Retary Axis Bell-Over Function Polar coordinate System Setting Work Piece Coordinate System Setting Work Piece Coordinate System Addition of Work Piece Coordinate System Pair Manual Absolute I Counter Input Sub Program Call Custom Macro B Addition of Counter Macro Common Variables	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (301) C-150% C-100% G92. Std. 200 blocks (0i/32) with AICC-2) e00 blocks (313) Std. (311) Std. Std. Std. Std. Std. Std. Std. Std.
15. 16. 17. 18.	Automatic Acceleration / Deceleration Rapid traverse Bell-shaped Acc. / Deceleration Bell-shaped Acc. / Deceleration Before & After Outling Feed Interpolation Automatic Corner Deceleration Before & After Outling Feed Interpolation Linear Acc / Deceleration Before & After Outling Feed Interpolation Feed Rate Override Jog Override Automatic Corner Override Automatic Corner Override Automatic Corner Override Feed Stop Al contour control (AICC, GOS.1) (in total) AICC-2 + High speed processing (GOS.1) (in total) AICC-2 + High speed processing (G	Rapid Traverse: Linear; Cutting Feed; Exponent Std. (300) Std. (301) Std. (301) Std. (301) Std. (301) C=150% C=100% G92. Std. 200 blocks (0/32) with ACC-2) 600 blocks (31) Std. (31) Std. Std. Std. Std. Std. Std. Std. Std.

30.	Program Stop / Program End	M00 / M01 / M02 / M30
31.	Reset	Std.
32.	Scaling	G51
33.	Coordinate System Rotation	G68
	ary Spindle Speed Function:	
	Auxiliary Function Lock	Std.
1.		Std.
2.	High Speed M / S / T Interface	4.44
3.	Spindle Speed Function	Std.
4.	Spindle Override	50~120%
5.	1st Spindle Orientation	Std.
8,	M Code Function	M3 Digit
7.	S Code Function	S5 Digit
3.	T Code Function	T2 Digit
θ.	Rigid Tapping	Std.
Tool F	unction & Tool Compensation:	
	Tool Function	T8 Digit
2.	Tool Offset Pairs	±6-digit, 400 (0/32i), 999 (31i)
3.	Tool Offset Memory C	Std. (D / H codes are separated)
4.	Tool Length Compensation	G43-G44, G45-G48, G49
5.	Cutting Compensation C	Std.
	acy Compensation:	
		David Traverse / Outline E
1.	Backlash Compensation	Rapid Traverse / Cutting Feed
2.	Stored Pitch Error Compensation	Std.
	peration:	
1.	Part Program Storage Length (In Total)	1280m (512KB) (0i/32i), 2560m (31i)
2.	Number Of Registered Programs (In Total)	400 (0i/32), 1000 (31i)
3.	Part Program Editing / Protect	Std.
t.	Background Editing	Std.
5.	Memory card editing	Std.(0i-F)
Settin	g And Display:	
	Status Display	Std.
2.	Clock Function	Std.
3.	Current Position Display	Std.
4.	Program Display	Program Name 31 Characters
	Parameter Setting And Display	Std.
	Self Dinanosis Function	Std
в.	Self Diagnosis Function	Std.
7.	Alarm Display	Std.
3. 7.	Alarm Display Alarm History Display	Std. 25
3. 7. 3.	Alarm Display Alarm History Display Operation History Display	Std. 25 Std.
3. 7. 3. 9.	Alarm Display Alarm History Display Coperation History Display Help Function	Std. 25 Std. Std.
3. 7. 3. 9. 10.	Alarm Display Alarm History Display Operation History Display Help Function Run Hour And Parts Count Display	\$td. 25 \$td. \$td. \$td. \$td.
3. 7. 3. 9. 10.	Alarm Display Alarm History Display Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display	Std. 25 Std. Std. Std. Std.
3. 7. 3. 9. 10. 11.	Alarm Display Alarm History Display Cperation History Display Heip Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Code At All Screens	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12.	Alarm Display Alarm History Display Coperation History Clisplay Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display of Splindle Speed And T Code At All Screens Graphic Function	\$td. 25 \$td. \$td. \$td. \$td. \$td. \$td. \$td. \$td.
3. 7. 3. 9. 10. 11. 12. 13.	Alarm Display Alarm History Display Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Code At All Screens Graphic Function Dynamic Graphic Display	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14.	Alarm Display Alarm History Display Cperation History Display Heip Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spinde Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15.	Alarm Display Alarm History Display Cperation History Display Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Gode At All Screens Graphile Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15.	Alarm Display Alarm History Display Cperation History Display (Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Di Spindle Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Scftware Configuration	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15. 16.	Alarm Display Alarm History Display Coperation History Display Heip Function Run Hour And Parts Count Display Actual Cutting Feedrate Dissplay Display Of Spindle Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Scftware Configuration Multi-Language Display	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.	Alarm Display Alarm History Display Cperation History Display Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Code At All Screens Graphile Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.	Alarm Display Alarm History Display Cperation History Display Ceperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Display Experiment Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
3. 7. 3. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.	Alarm Display Alarm History Display Coperation History Display Coperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Gode At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Machining Condition Selecting Screen	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
8. 7. 8. 9. 110. 111. 122. 133. 144. 155. 160. 177. 188. 199. 200. 211. 222.	Alarm Display Alarm History Display Cperation History Display Ceperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Display Experiment Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
77. 88. 99. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 123. 124. 125. 126. 127	Alarm Display Alarm History Display Coperation History Display Coperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Gode At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Machining Condition Selecting Screen	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
77. 11. 11. 11. 11. 11. 11. 11. 11. 11.	Alarm Display Alarm History Display Coperation History Display Coperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Code At All Screens Graphile Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Matchining Condition Selecting Screen Color LOD / MDI	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
77. 11. 11. 11. 11. 11. 11. 11. 11. 11.	Alarm Display Alarm History Display Cperation History Display (Cperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Hardware And Scftware Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Machining Condition Selecting Screen Color LCD / MOI nput / Output:	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
1.	Alarm Display Alarm History Display Coperation History Display Coperation History Display Help Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Of Spindle Speed And T Gode At All Screens Graphile Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display Of Harrdware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Machining Condition Selecting Screen Color LOD / MDI nput / Output: Reader / Funcher Interface External Work Piece Number Search	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.
77. 11. 11. 11. 11. 11. 11. 11. 11. 11.	Alarm Display Alarm History Display Coperation History Display Heip Function Run Hour And Parts Count Display Actual Cutting Feedrate Display Display Display Expended And T Code At All Screens Graphic Function Dynamic Graphic Display Servo Setting Screen Spindle Setting Screen Display of Hardware And Software Configuration Multi-Language Display Data Protection Key Erase CRT Screen Display Machining Condition Selecting Screen Color LOD / MDI Input / Output: Reader / Puncher Interface	Std. 25 Std. Std. Std. Std. Std. Std. Std. Std.

Options:

With Hardware Included:		0i-MF	32i-B	31i-B
1.	Conversational Programming (Manual Guide i)*3		Std.	Std.
2.	Conversational Programming (Super Cap i)	N.A.	N.A.	N.A.
3.	Data server (with PCB and CF card 1 GB)			Std.
4.	Fast Ethernet (100 Mbps, Available In Data Server)		Std.	Std.
5.	Tool life management (2 buttons on control panel)			
6.	Part Program Storage Length 5120 m (2MB in total)			
7.	Part Program Storage Length 8MB in total	N.A.	N.A.	
8.	Program restart			
9.	Optional block skip 9 blocks			
10.	High Precision Contour Control (with RISC board)	N.A.	N.A.	Std.
11.	Profibus			
12.	5-Axis Simultaneous Control	N.A.	N.A.	☐ (31i-B5
13.	Al contour control II (AICC-2, G05.1, 200 blocks)		Std.	Std.
14.	Look ahead block expansion (400 blocks in total)			N.A.
Witho	ut Hardware Included:			
15.	Tool Load Monitoring (With Victor Own PLC)			
16.	Programmable Mirror Image (G50.1)			
17.	Bi-directional Pitch Error Compensation			
18.	Addition Of Tool Pairs For Tool Life Management 512 Sets	N.A.		
19.	Cylindrical Interpolation (G7.1) (Used On 4th-Axis)	Std.		
20.	Interruption Type Custom Macro	N.A.		
21.	Addition Of Work-Piece Coordinate Systems 300 Sets	N.A.	N.A.	
22.	Exponential Interpolation (G2.3)	N.A.	N.A.	
23.	Smooth Interpolation	N.A.	N.A.	
24.	Spiral / Conical Interpolation	N.A.	N.A.	
25.	Polar coordinate interpolation	N.A.		
26.	Floating Reference Position Return	N.A.	N.A.	
27.	Hypothetical Axis Interpolation (G07)	N.A.	N.A.	
28.	Tool Retract And Return (G10.6 With Victor Own PLC)	N.A.	N.A.	
29.	NURBS Interpolation (Only Avail, In HPCC / RISC)	N.A.	N.A.	

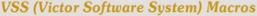
[&]quot;1. Fanuc "Manual Guide I" is only available on 10.4" screen.

VICTOR Taichung's NC PACKAGE

Fanuc 0i/32i/31i controls

With 8.4" color display included as standard on Victor Taichung's Fanuc control package, Fanuc Oi-MF control is capable of addressing look-ahead up to 40 blocks to offer optimal reliability with the highest level of machine integration. With PLC developed in-house by highly experienced engineers, Vcenter-205 offers numerous safety features and maximizes the machine efficiency to meet the demands for most productions.

Through the option of 10.4" color display upgrade on the controller, Victor Taichung's Fanuc control package includes not only the conversational function MANUAL GUIDE I to reduce the programming time for easier operation, but control option AICC-2 capable of addressing look-ahead 200 blocks to shorten the cutting time for high speed machining. The control option Data Server board can be installed to extend the memory length for upgrading the data transfer rate. The machine controller can be upgraded to 31i-B control which is capable of addressing 600 blocks as standard and optionally 1000 blocks available by the so-called AICC-2 with HSP function (High Speed Processing) to further reduce the block addressing time for better surface finish.



With exclusive software developed in-house by highly experienced engineers, VSS macros (Victor GUI), which is included when the controller is upgraded with 10.4" monitor, enhance not only machine operation to reduce tool set-up time but also safety features to protect costly spindle. Productivity can be further increased when the adaptive controlled cutting is implemented.







Smart workpiece measurement

Renishaw® GUI

Heidenhain TNC-620/640 control

Powerful dialog programming with fully alphanumeric keyboard, Heidenhain control is also available. Without remembering complicated G-codes, sophisticated graphics functions with 15" screen make programming check easy. TNC-620/640 controller is capable of addressing 5000 blocks and further makes use of hard drive memory for advanced 4 or 5 axis simultaneous control.



90088 **9000**

Control features for fast contour milling

Factors \ Controller	Fanuc			Heidenhain	
Feature \ Controller	0 <i>i</i> -MF	32 <i>i</i> -B	31 <i>i</i> -B	TNC-620	TNC-640
Block addressing time	2 ms* (with AICC-2)	2 ms	1 ms (Opt. 0.4 ms by HSP)	1.5 ms	0.5 ms
Preview contouring (look ahead blocks)	200* (with AICC-2) (Opt. 400)	200 (Opt. 400)	600 (Opt. 1000 by HSP)	5000	5000
Graphic display	10.4" (Opt. 15")	10.4" (Opt. 15")	10.4" (Opt. 15")	15"	15" (opt. 19")
Data storage	1280m (512kB) Opt. 5120m (2MB)	1280m (512kB) Opt. 5120m (2MB)	2560m (1MB) Opt. 10240m (8MB)	Min. 2 GB	Min. 2 GB
Data server (Memory extension)	Opt. (by CF Card)	Opt. (by CF card)	Std. (with CF card)	N.A. (8 GB with CFR)	Std. 21 GB (by SSRD) Opt. 144 GB (by HRD)
Ethernet link	Std.	Std.	Std.	Std.	Std.
Conversational function	Manual guide i + VSS macros	Manual guide i	Manual guide i	Std.	Std.
Data transfer interface	PCMCIA + USB	PCMCIA + USB	PCMCIA + USB	USB	USB

Machine Specification

Item \ model		Units	Vcenter-205
	X axis travel	mm	2050
Travel	Y axis travel	mm	550
	Z axis travel	mm	560
Distance	Spindle center to column	mm	638
	Spindle nose to table surface	mm	180 ~ 740
Table	Table work area	mm	2500 x 550
	Dimension of T-slot	mm	5 x 18 x 100
	Max. table load	kg	1200
	Spindle taper		BT-40
Spindle	Spindle motor - cont / 30 / 10 min	kW	7.5 / 11 / 15 (opt. 15 / 18.5 / -)
	Spindle speed	rpm	12000
	Rapid feed rate - X/Y/Z	m/min	30 / 30 / 30
	Axis feed motor - X/Y/Z	kW	4/3/4
	Cutting feedrate by table	m/min	20
Feed rate	X ballscrew diameter	mm	50
	Y ballscrew diameter	mm	40
	Z ballscrew diameter	mm	40
	Linear guide width (X/Y/Z)	mm	45 / 45 / 45
	Max. tool length	mm	350
	Max. tool weight	kg	8
	Magazine capacity		24 disc (opt. 32, 40)
Tools	Max. tool diameter (without adjacent tools)	mm	ø80 (ø127)
	Tool exchange time	sec.	2.9 (T-T), 7.2 (C-C)
	Pull stud angle	deg.	15
	Tool selection method		Random
	Power requirement	kVA	40
	Air pressure requirement	kg/cm²	5.5 ~ 6.5
	Coolant tank capacity	L.	600
Machine	Std. NC controller		Fanuc 0i-MD
	Floor space requirement	mm	5300 x 3430
	Max. machine height	mm	3045
	Machine weight	kg	9840

Standard accessories

- · Chip conveyor with cart
- · Air dryer for DCS spindle
- · Central partition system
- · Fully enclosed splash guard
- · Rigid tapping
- · Remote MPG
- · Hand tools and toolbox
- · T nuts for table slot
- · Built-in work light
- · Auto power off system
- · Leveling blocks
- · Air conditioner for electric cabinet
- · Moving CRT

Optional accessories

- · Spindle oil cooler
- · High-powered spindle motor
- · Coolant through spindle
- · Linear scale (X-axis)
- · Auto tool length measurement
- · Stop block for special tool
- · 4th/5th axis interface
- · Hydraulic interface
- · Rotary tables
- · 32, 40 tool magazine
- · Workpiece measurement
- · Table shower system
- · Auto door

- Fanuc 31i or Heidenhain TNC-640 control
- · SK-40 / CAT-40 tooling system
- · Non-central partition system

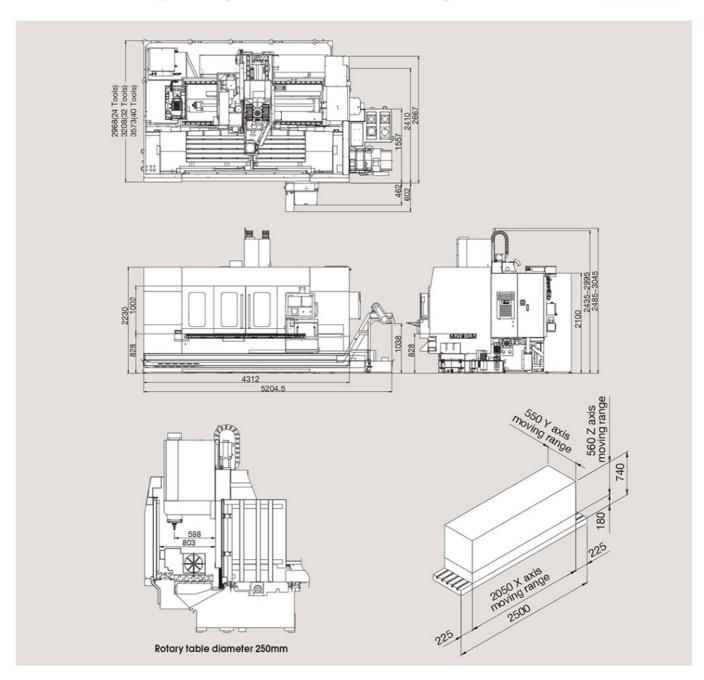




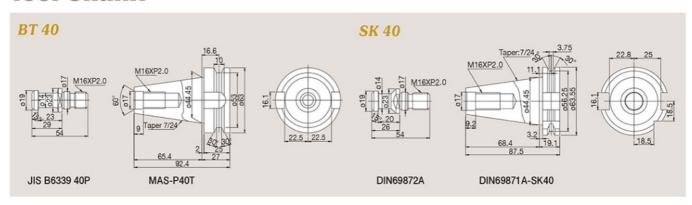


Machine Layout (excl. transformer)





Tool Shank





Vcenter-AX800

Vcenter-P136

Vcenter-H500/H500HS

VictorTaiching profile:
Sales turnover: USD 145 mil's (in 2018)*
No. of employees: 836
*Exchange rate: 1 USD=30 TWD.



PIM



THE VICTOR-TAICHUNG COMPANIES



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