YSP®

CNC Vertical Lathe Series

The Power To Turn The World

CUTTING DIA.

- ⊙ Ø 750
- ⊙ Ø 850
- ⊙ Ø 950
- ⊙ Ø 1000
- ⊙ Ø 1150

Yu Shine Precision Machine Co.,Ltd

封面裡 封底裡

Company Profile

High Rigidity · High Accuracy · Customized

Yu Shine established in 1983 and started from producing varied customized & special purpose machines. We develop & provide a machine for major manufacturers of Motorcycle, Automotive, Aerospace, Ship-building and Heavy Vehicles/Truck in Japan, USA, and Europe.

React to market demand, YSP gradually transfers as CNC vertical lathe manufacturer. Based on customized knowledge and experience in various industries which made YSP became the first Taiwan manufacturer who provides customer full automatic or semi-automatic robot production line in 1989 and turns the high risk, high pollution and high labor jobs to carry by robots.

YSP has a wealth of technical experience to offer customer complete solutions like customized design machines, improving work efficiency, optimizing production line layout, tooling selection, and design special tool holders…etc.

YSP has kept innovating and learning year by year to supply a machine that fulfills the customer requirement and creates profit for the customer, in order to establish win-win cooperation.
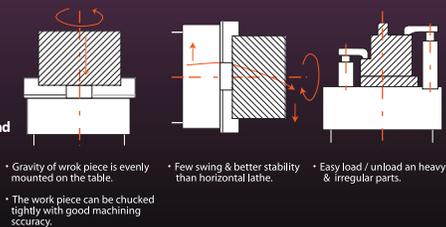
Products supplied by YSP has passed CE(European qualified certification), ISO9001(International standardization organization).

Our high precision, high rigidity, and stable quality products are reliable and recognized by worldwide customers and distributors. YSP has references over 56 countries in Germany, Japan, Russia, Italy, the United Kingdom, France, United State…etc. We also participate in major international machine tool exhibitions like Emo, CCMT, JIMTOF, IMTS, and TIMTOS which gain high evolution.

Production & Manufacturing

Why we choose VTL?

◆ **Quality Stability**
Standardization of production

◆ **Rapid Delivery**
Planned Inventory Production

◆ **Unique Machine to Meet Demand**
Customized Design Experience

· Gravity of wrok piece is evenly mounted on the table.
· The work piece can be chucked tightly with good machining sccuracy.

· Few swing & better stability than horizontal lathe.

· Easy load / unload an heavy & irregular parts.

· Save your cost in designing Fixtures & jigs. · Ring with big diameter and small thickness can be processed as well.

VL Series
Ø1000 . Ø1200 . Ø1600 . Ø2000
Ø2500 . Ø3000. Ø4000

VLF Series
Ø1000 . Ø1200 . Ø1600

VLT Series
Ø1200. Ø1600. Ø2000

2VL Series
Ø2000 . Ø2500 . Ø3000

Double Spindle
& Turning Lathe
HL-12LR+AL

Turning & Grinding
Machine For Disc

Tapping/
Drilling Center

VLGH Series

CONTENTS

Memo

www.yspcnc.com

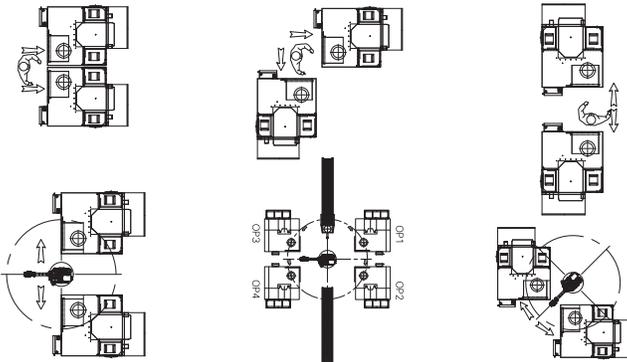| VLGH	750		ATC	+C
Gear Transmission Head Type	Max Turning Ø 750~1150 mm	Roller Guide way Box way	ATC	live tool

Twin Star Type

Single Type

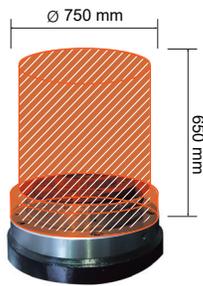**Layout Space** Save Space / Good For Aut Production Line Planning

OP3 OP1
OP4 OP2

ㅣSP
CNC VERTICAL LATHE
VLGH-1150HR-ATC

∅ 750 mm

650 mm

∅ 950 mm

900 mm

SPECIFICATIONS

Machine Capacity	VLGH-750R+ATC	VLGH-750R+ATC+C
Max. Swing Diameter	Ø 900	Ø 900
Max. Cutting Diameter	Ø 750	Ø 750
Max. Cutting Height	650	650

Spindle		
Spindle Nose	Ø 380	Ø 380
Spindle Speed	5~1100	5~1100
Power Tool Spindle Speed	N/A	3000
Spindle Bearing I.D.	Ø 200	Ø 200

Turret		
Turret Type	BT50	BT50
Number Of Tools	12	12
Tool Size	□32 / □25,Ø 50	□32 / □25,Ø 50
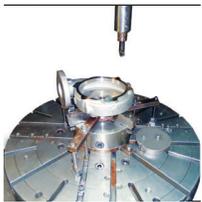
SPECIFICATIONS

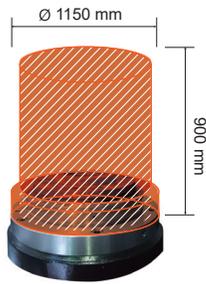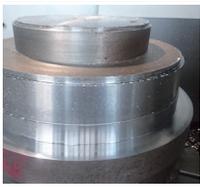| Machine Capacity	VLGH-950R+ATC	VLGH-950R+ATC+C
Max. Swing Diameter	Ø 1000	Ø 1000
Max. Cutting Diameter	Ø 950	Ø 950
Max. Cutting Height	900	900

Spindle		
Spindle Nose	Ø380	Ø380
Spindle Speed	5 ~ 900	5 ~ 900
Power Tool Spindle Speed	N/A	3000
Spindle Bearing I.D.	Ø 260	Ø 260

Turret		
Turret Type	BT50	BT50
Number Of Tools	12	12
Tool Size	□32 / □25,Ø 50	□32 / □25,Ø 50

Ø 1150 mm

900 mm

Ø850~950 mm

800 mm
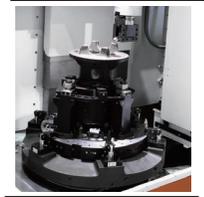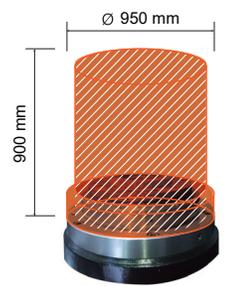
SPECIFICATIONS

Machine Capacity	VLGH-1150HR+ATC	VLGH-1150HR+ATC+C
Max. Swing Diameter	Ø 1250	Ø 1250
Max. Cutting Diameter	Ø 1150	Ø 1150
Max. Cutting Height	900	900

Spindle		
Spindle Nose	Ø520	Ø520
Spindle Speed	5 ~ 600	5 ~ 600
Power Tool Spindle Speed	N/A	3000
Spindle Bearing I.D.	Ø 325	Ø 325

Turret		
Turret Type	BT50	BT50
Number Of Tools	12	12
Tool Size	□32,Ø 60	□32,Ø 60

SPECIFICATIONS

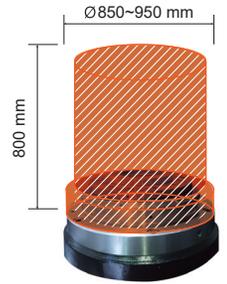| Machine Capacity	VLR-850ATC	VLR-1000ATC
Max. Swing Diameter	Ø 1000	Ø 1200
Max. Cutting Diameter	Ø 850	Ø 950
Max. Cutting Height	800	800

Spindle		
Spindle Nose	A2-11	A2-15
Spindle Speed	20~1500	20~600
Power Tool Spindle Speed	N/A	N/A
Spindle Bearing I.D.	Ø 220	Ø 220

| Turret		
Turret Type	ATC	ATC
Number Of Tools	12	12
Tool Size	□32 / □25,Ø 50	□32 / □25,Ø 50
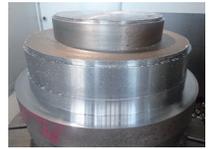
(Opt.) = Optional   N/A = Not Available   * Specifications are subject to change without notice in adavance.

LINEARWAY SERIES / BOXWAY SERIES

|	Unit	VLGH-750R+ATC	VLGH-750R+ATC+C	VLGH-950R+ATC	VLGH-950R+ATC+C	VLGH-1150HR+ATC	VLGH-1150HR+ATC+C
CAPACITY							
Max. Swing Dia.	mm	Ø 900	Ø 900	Ø 1100	Ø 1100	Ø 1250	Ø 1250
Max. Cutting Dia.	mm	Ø 750	Ø 750	Ø 950	Ø 950	Ø 1150	Ø 1150
Max. Cutting Height	mm	650	650	900	900	900	900
SPINDLE							
Spindle Nose		Ø 380	Ø 380	Ø 380	Ø 380	Ø 520	Ø 520
Spindle Speed	rpm	5~1100	5~1100	5 ~ 900	5 ~ 900	5 ~ 600	5 ~ 600
Max. Load on Table	Nm	1500	1500	2000	2000	3000	3000
Max.Torque	kg	4492	4492	7776	7776	10968	10968
Spindle Bearing I.D.	mm	Ø 200	Ø 200	Ø 260	Ø 260	Ø 325	Ø 325
Max.#2 Spindle Speed	rpm	N/A	3000	N/A	3000	N/A	3000
ATC							
Turret Type		BT50	BT50	BT50	BT50	BT50	BT50
Number of Tools	pcs	12	12	12	12	16	16
Tool Size	mm	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50	□32,Ø 60	□32,Ø 60
TRAVEL/FEEDRATE							
X Axis Travel	mm	500	500	550	550	700	700
Z Axis Travel	mm	650	650	900	900	900	900
X Axis Rapid Feedrate	m/min	20	20	20	20	10	10
Z Axis Rapid Feedrate	m/min	20	20	20	20	10	10
MOTOR							
Spindle Motor (Cont./30min)	kw	αP18.5/22	αP18.5/22	αP18.5/22	αP18.5/22	α37/45/55	α37/45/55
#2 Spindle Motor	kw	N/A	7.5/11	N/A	7.5/11	N/A	7.5/11
X Axis Servo Motor	kw	3.0	3.0	7.0	7.0	7.0	7.0
Z Axis Servo Motor	kw	4.0	4.0	7.0	7.0	7.0	7.0
Hydraulic Motor	kw	2.2	2.2	2.2	2.2	2.2	2.2
Conveyor Motor	kw	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Pump	kw	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1
OTHER							
3-Jaw Power Chuck	inch	24"	24"	32"	32"	40"	40"
Tool Holder	Pcs	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
Tool Collet	Pcs	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
MACHINE BODY							
Machine(LxW)	mm	4100x2550	4100x2550	4200x2900	4200x2900	4550×2900	4550×2900
Machine(H)	mm	4380	4380	4430	4430	4500	4500
Machine Weight	kg	14000	14500	16000	16500	20000	21000
Power Requirement	kva	40	45	75	80	75	80

BOXWAY & LINEARWAY SERIES

	Unit	VLR-750ATC	VLR-750ATC+C	VLR-850ATC	VLR-850ATC+C	VLR-1000ATC	VLR-1000ATC+C
CAPACITY							
Max. Swing Dia.	mm	Ø 780	Ø 780	Ø 1000	Ø 1000	Ø 1200	Ø 1200
Max. Cutting Dia.	mm	Ø 750	Ø 750	Ø 850	Ø 850	Ø 950	Ø 950
Max. Cutting Height	mm	650	650	800	800	800	800
SPINDLE							
Spindle Nose		A2-11	A2-11	A2-11	A2-11	A2-15	A2-15
Spindle Speed	rpm	50~2000	50~2000	20~1500	20~1500	20~1200	20~1200
Spindle Bearing I.D.	mm	Ø 220	Ø 220	Ø 220	Ø 220	Ø 220	Ø 220
Max.#2 Spindle Speed	rpm	N/A	3000	N/A	3000	N/A	3000
TURRET							
Turret Type		ATC	ATC	ATC	ATC	ATC	ATC
Number of Tools	pcs	12	12	12	12	12	12
Tool Size	mm	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50	□32 / □25,Ø 50
TRAVEL/FEEDRATE							
X Axis Travel	mm	500	550	600	600	645	645
Z Axis Travel	mm	650	650	800	800	800	800
X Axis Rapid Feedrate	m/min	20	20	20	20	20	20
Z Axis Rapid Feedrate	m/min	20	20	20	20	20	20
MOTOR							
Spindle Motor (Cont./30min)	kw	αP40 (18.5/22)	αP40 (18.5/22)	αP40 (18.5/22)	αP40 (18.5/22)	α40 (37/45)	α40 (37/45)
#2 Spindle Motor	kw	N/A	α8(7.5/11)	N/A	α8(7.5/11)	N/A	α8(7.5/11)
X Axis Servo Motor	kw	3.0	3.0	4.0	4.0	4.0	4.0
Z Axis Servo Motor	kw	4.0	4.0	7.0	7.0	7.0	7.0
Hydraulic Motor	kw	2.2	2.2	2.2	2.2	2.2	2.2
Conveyor Motor	kw	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Pump	kw	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1	0.75 + 0.75 + 1.1
OTHER							
3-Jaw Power Chuck	inch	18"	18"	24"	24"	32"	32"
Tool Holder	pcs	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
Tool Collet	pcs	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
MACHINE BODY							
Machine(LxW)	mm	4200x2550	4280x2650	4280x2650	4280x2650	4280x2800	4280x2800
Machine(H)	mm	4500	4500	4680	4680	4680	4680
Machine Weight	kg	14000	14500	15000	15500	16000	16500
Power Requirement	kva	40	45	45	55	65	75
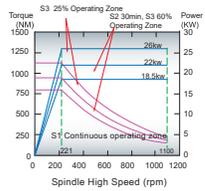
VLGH-750ATC Series

- Fanuc-α40/6000ip + Gear box(1/1)
- 18.5/22/26 kw
- 5~1100 rpm (High Speed)
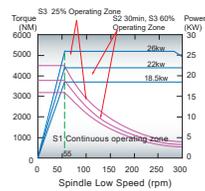
- Fanuc-α40/6000ip + Gear box(1/4)
- 18.5/22/26 kw
- 5~300 rpm (Low Speed)

VLGH-950ATC Series
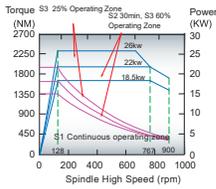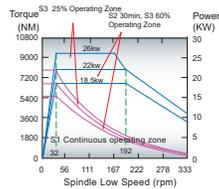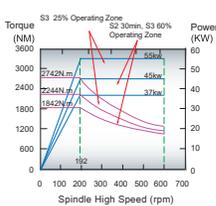

- Fanuc-α40/6000ip + Gear box(1/1)
- 18.5/22/26 kw
- 5~900 rpm (High Speed)

- Fanuc-α40/6000ip + Gear box(1/4)
- 18.5/22/26 kw
- 5~333 rpm (Low Speed)

VLGH-1150ATC Series

- Fanuc-α40/7000i + Gear box(1/1)
- 37/45/55 kw
- 5~600 rpm (High Speed)
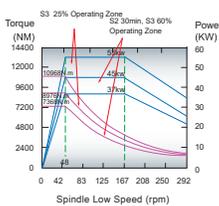
- Fanuc-α40/7000i + Gear box(1/4)
- 37/45/55 kw
- 5~292 rpm (Low Speed)

VLR-750ATC Series

- Fanuc-α40/6000ip
- 18.5/22/26 kw
- 20~2000 rpm
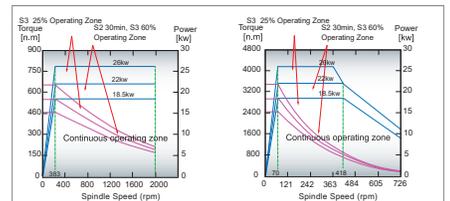
- Fanuc-α40/6000ip + Gear box(1/1)
- 18.5/22/26 kw
- 20~2000 rpm (High Speed)

- Fanuc-α40/6000ip + Gear box(1/5.5)
- 18.5/22/26 kw
- 20~726 rpm (Low Speed)

VLR-850ATC Series

- Fanuc-α40/6000ip
- 18.5/22/26 kw
- 20~1500 rpm

- Fanuc-α40/6000ip + Gear box(1/1)
- 18.5/22/26 kw
- 20~1500 rpm (High Speed)

- Fanuc-α40/6000ip + Gear box(1/5.5)
- 18.5/22/26 kw
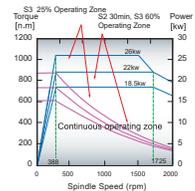- 20~300 rpm (Low Speed)

VLR-1000ATC Series
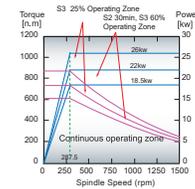

- Fanuc-α40/6000ip
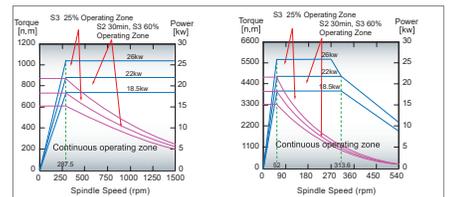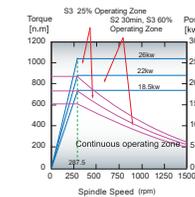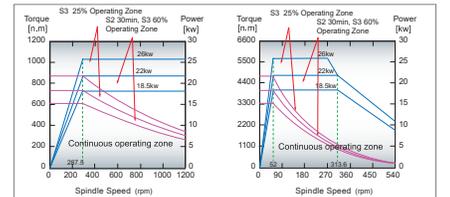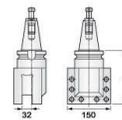- 18.5/22/26 kw
- 20~1200 rpm

- Fanuc-α40/6000ip + Gear box(1/1)
- 18.5/22/26 kw
- 20~1200 rpm (High Speed)

- Fanuc-α40/6000ip + Gear box(1/5.5)
- 18.5/22/26 kw
- 20~300 rpm (Low Speed)

Tooling System

Standard:BT50
Option:DIN50/CAT50

ATC:Standard | ATC+C:Power Spindle(C-Axis)

O.D Turning   Face Turning   I.D Turning   Tapping   End Milling   Face Milling   90° Milling Drilling Tapping   Grinding

Drilling   Drilling

ATC Tool Holder

	L
32	150

	L
ZA0-32-180	180
ZA0-32-220	220

ø50	ø100
	L

	L
ZB0-50-175	175
ZB0-50-275	275

45° 23
ø17 85
M24
ø38

25	ø100
	L

	L
ZC0-25-210	210
ZC0-25-360	360

25	ø110
	L

	L
ZD0-25-210	210
ZD0-25-360	360

	ø110
	L
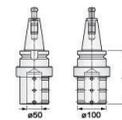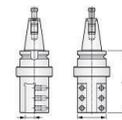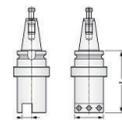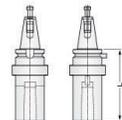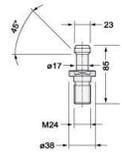
	L
ZE0-MT5-210	210
ZE0-MT6-360	360

ATC +C Tool Holder

	L
32	150
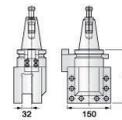
	L
ZAC-32-180	180
ZAC-32-220	220

ø50	ø100
	L
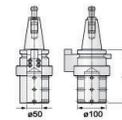
	L
ZBC-50-175	175
ZBC-50-275	275

25	ø100
	L
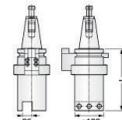
	L
ZCC-25-210	210
ZCC-25-360	360

25	ø110
	L
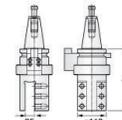
	L
ZDC-25-210	210
ZDC-25-360	360

	ø110
	L
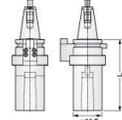
	L
ZEC-MT5-210	210
ZEC-MT6-360	360

VLGH&VLR Series

Unit: mm

A (Spindle Nose) **O.D. Cutting**   A (Spindle Nose) **Face Cutting**   A (Spindle Nose) **I.D. Cutting**
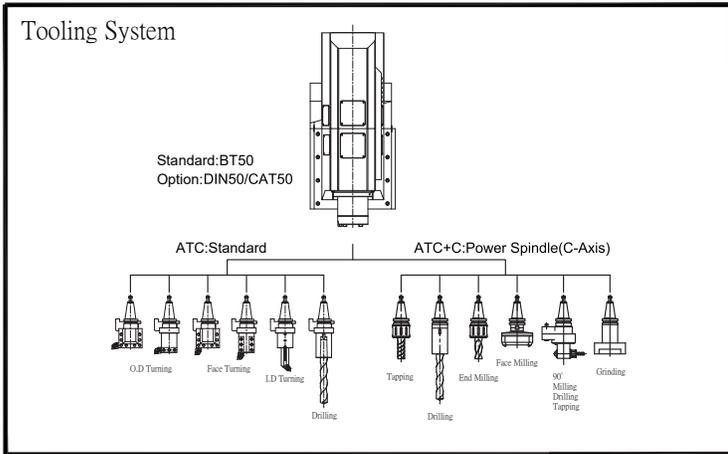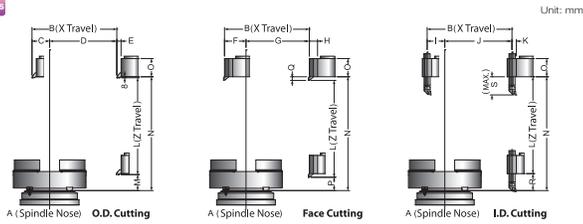
	A	B	C	D	E	F	G	H	I	J
VLGH -750 ATC	Ø 380	505	130	375	120	93	412	83	10	495
VLGH -950 ATC	Ø 595	595	130	475	120	93	512	83	10	605
VLGH -1150 ATC	Ø 520	705	130	575	120	93	612	83	10	695
VLR -750 ATC	Ø 380	505	130	375	120	93	412	83	10	495
VLR -850 ATC	A2-11	550	170	430	120	133	467	83	50	585
VLR -1000 ATC	A2-15	645	170	475	120	133	512	83	50	595

	K	L	M	N	O	P	Q	R	S
VLGH -750ATC	35	650	145	795/758/653	193/230/335	108	45	150	150
VLGH -950ATC	35	900	145	1045/1008/903	193/230/335	108	45	150	150
VLGH -1150ATC	35	900	186	1086/1049/944	193/230/335	149	45	150	150
VLR -750ATC	35	650	145	795/758/653	193/230/335	108	45	150	150
VLR -850 ATC	35	800	175	975/938/833	193/230/335	138	45	150	150
VLR -1000 ATC	35	800	175	975/938/833	193/230/335	138	45	150	150

Twin Star Type

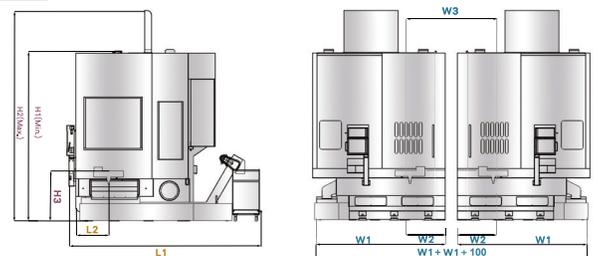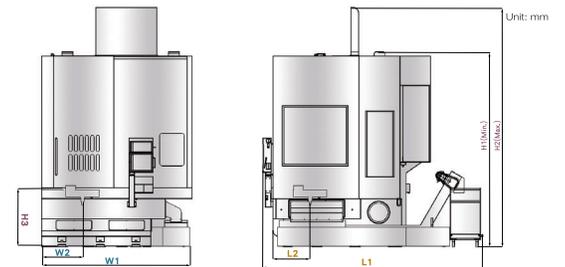|	L1	L2	W1	W2	W3	H1	H2	H3
VLGH -750 ATC	4100	677	2550	750	1500	3569	4380	1094
VLGH -950 ATC	4200	677	2900	820	1640	3620	4430	1094
VLGH -1150 ATC	4550	725	2900	700	1400	3590	4500	1087
VLR -750 ATC	4200	677	2550	750	1500	3690	4500	1000
VLR -850 ATC	4280	677	2650	600	1200	3719	4680	1094
VLR -1000 ATC	4280	677	2800	600	1200	3719	4680	1094

Single Type

Unit: mm

	L1	L2	W1	W2	H1	H2	H3
VLGH -750 ATC	4100	677	2550	750	3569	4380	1094
VLGH -950 ATC	4200	677	2900	820	3620	4430	1094
VLGH -1150 ATC	4550	725	2900	700	3590	4450	1087
VLR -750 ATC	4200	677	2550	750	3590	4500	1000
VLR -850 ATC	4280	677	2650	600	3719	4680	1094
VLR -1000 ATC	4280	677	2800	600	3719	4680	1094

Optional Accessories

A . Tool Pre-Setter

Instant tooling measuring.

B . Probing System for Workpiece

Saving operating time.

C . Linear Scale

Resolution 0.001mm.

D. Magazine

E . Siemens CNC Unit

F . Air-Conditioner

For electric box.

G . 2 Steps Gear Box

Low speed, high torque.

H . Oilmist Collector

I . Full Open Side Door

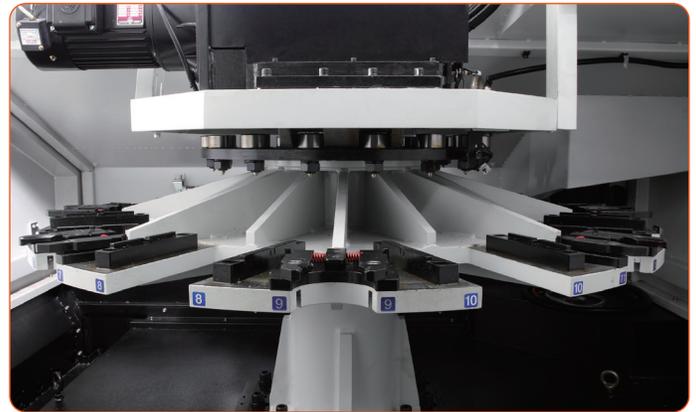Good for large size comports and auto loading.

J . Oil Water Separator

K . HPC

L . Compound Chip Conveyor

FANUC CNC 0i-TF Specifications

■ STANDARD

AXIS CONTROL

1. Max. Control Feed Axes	4 Axes
2. Max. Control Spindle Axes	2 Axes
3. Axis Synchronous Control	STD
4. Increment System	IS-A, IS-B
5. Increment System C	0.0001 mm
	0.0001 deg
	0.00001 inch
6. HRV 3 Control	STD
7. Inch / Metric Conversion	STD
8. Interlock	STD
9. Machine Lock	STD
10. Emergency Stop	STD
11. Overtravel	STD
12. Mirror Image	STD
13. Follow Up	STD

OPERATION

1. Automatic Operation (Memory)	STD
2. MDI Operation	STD
3. DNC Operation	STD
4. DNC Operation with Memory Card (CF Card and Card Attachment is Required)	STD
5. Schedule Function	STD
6. Sequence Number Search	STD
7. Sequence Number Comparison and Stop	STD
8. Peogram Restart	STD
9. Manual Intervention and Return	STD
10. Wrong Operation Prevention	STD
11. Buffer Register	STD
12. Dry Run	STD
13. Single Block	STD
14. Jog Feed	STD
15. Manual Reference Position Return	STD
16. Manual Handle Feed Rate	×1,×10,×100

ACCURACY COMPENSATION FUNCTION

1. Backlash Compensation	STD
2. Backlash Compensation for Each Rapid Traverse and Cutting feed	STD
3. Smooth Backlash Compensation	STD
4. Smart Backlash Compensation	STD

INTERPOLATION FUNCTIONS

1. Nano Interpolatoin	STD
2. Exat Stop Mode	G61
3. Tapping Mode	G63
4. Cutting Mode	G64
5. Exat Stop	G09
6. Linear Interpoltion	STD
7. Circular Interpoltion	STD
8. Dwell	Dwell in Seconds and dwell in revolution
9. Polar Coordinate Interpoltion	STD
10. Cylindrical Interpoltion	STD
11. Thread Cutting, Synchronous Cutting	STD
12. Muti Threaing	STD
13. Thread Cutting Retract	STD
14. Continuous Threading	STD
15. Variable Lead Thread Cutting	STD
16. Polgon Turning	STD
17. Polygon Machining With Two Spindles	STD
18. Skip	G31
19. Multi-Step Skip	STD
20. High-Speed Skip	STD
21. Torque Limit Skip	STD
22. Reference Position Return	G28
23. Reference Position Return Check	G27
24. 2nd Reference Position Return	STD
25. 3rd/4th Reference Position Return	STD

FEED FUNCTION

1. Rapid Traverse Override F0、25、50、100%	
2. Feed per Minute	G98
3. Feed per Revolution	G99
4. Tangential Speed Constant Control	STD
5. Cutting Feedrate Clamp	STD
6. Automatic Acceleration/Deceleration	STD
7. Linear Acceleration / Deceleration After Cutting feed Interpolation	STD
8. Bell-Type Acceleration / Deceleration After Cutting Feed Interpolation	STD
9. Feedrate Override	0～150%
10. Override Cancel	STD

PROGRAM INPUT

1. Program Code	EIA / ISO
2. Label Skip	STD
3. Parity Check (Horizontal and Vertical Parity)	STD
4. Control In/Out	STD
5. Optional Block Skip	9
6. Max. Programmable Dimension	±9 Digit
7. Program File Name	32 Characters
8. Sequence Number	N8 Digit
9. Absolute / Incremental Programming	STD
10. Decimal Point Programming / Pocket CalaculatorType Decimal Point Proogramming	STD
11. Input Unit 10 time Multiply	STD
12. Diameter/Radius Programming	STD
13. Plane Selection	G17、G18、G19
14. Rotary Axis Designation	STD
15. Rotary Axis Roll-Over	STD
16. Coordinate System Setting	STD
17. Automatic Coordinate System Setting	STD
18. Workpiece Coordinate System	G52～G59
19. Workpiece Coordinate System Preset	STD
20. Direct Input of Workpiece Origin Offset Value Measured	STD
21. Manual Absolute On and Off	STD
22. Direct Drawing Dimension Programming	STD
23. G Code System	A/B/C
24. Chamfering / Corner R	STD
25. Programmable Data Input	G10
26. Programmable Parameter Input	STD
27. Sub Program Call	10 Folds Nested
28. Custom Macro	STD
29. Addition of Custom Macro Common Variables	#100～#199 #500～#999
30. Canned Cycle	STD
31. Multiple Repetitive Cycle	STD
32. Multiple repetitive CycleⅡ (Pocket Profile)	STD
33. Canned Cycles for Drilling	STD
34. Circular Interpolation by R Programming	R,I,J,K 12 Digit
35. Coordinate System Rotation	STD
36. Pattern Data Input	STD
37. Conversational Programming with Graphic Function	STD

AUXILIARY / SPINDLE SPEED FUCNCTION

1. Costant Surface Speed Control	STD
2. Spindle Override	50～120%
3. Actual Spindle Speed Output	STD
4. Spindle Orientation	STD
5. Spindle Output Switching Function	STD
6. Spindle Positioning	STD
7. Ragid Tapping	STD
8. M Code Function	M2 Digit
9. S Code Function	S5 Digit
10. T Code Function	T4 Digit

TOOL FUNCTION / TOOL COMPENSATION

1. Tool Function	T7+1/T6+2/T5+3
2. Tool Offset Pairs	128
3. Tool Radius / Tool Nose Radius Compensation	STD
4. Tool Geometry / Wear Compensation	STD
5. Tool Offset Value Counter Input	STD
6. AutomaticTool Offset	STD
7. Direct Input of Tool Offset Value Mearsured	STD
8. Direct Input of Tool Offset Value Measured B	STD
9. Tool Life Management	STD
10. Extended Tool Life Management	STD

EDITING OPERATION

1. Pant Program Storage Size	1Mbyte
2. Number of Registerable Programs	800
3. Part Program Editing	STD
4. Extended Part Program Editing	STD
5. Program Protect	STD
6. Password Function	STD
7. Background Editing	STD
8. High Speed Program Management	STD

SETTING AND DISPLAY

1. Status Display	STD
2. Clock Function	STD
3. Current Position Display	STD

SETTING AND DISPLAY

4. Program Comment Display Program Name31Characters	
5. Parameter Setting and Display	STD
6. Parameter Check Sum Function	STD
7. Alarm Display	STD
8. Alarm History Display	STD
9. Run Hour and Parts Count Display	STD
10. Actual Cutting FeedrateDispaly	STD
11. Dispaly of Spindle Speed and T Code at All Screens	STD
12. Operation Monitor Screen	STD
13. Maintenance Information Screen	STD
14. Trouble Diagnosis	STD
15. Multi - Language Display	25 Kinds
16. Data Protection Key	STD
17. Erase CRT Screen Display	Manual or Automatic
18. Parameter Setting Support Screen	STD
19. Help Function	STD
20. Self - Diagnosis Function	STD
21. Periodic Manitenance Screen	STD
22. Servo Information Screen	STD
23. Spindle Information Screen	STD
24. Graphic Display	STD

DATA INPUT / OUTPUT

1. Memory Card Input / Output	STD
2. Interface	RS-232
3. External Workpiece Number	9999
4. Automatic Data Backup	STD

INTERFACE FUNCTION

1. Ethernet	STD
2. Enhanced Embedded Ethernet Function	STD

■ OPTIONAL

1. Manual Guide Function	
2. Part Program Storage Size	2 Mbyte