YONG JU

FOUR-STAR

www.fourstarcnc.com

The manufacturing SBIR Innovation R&D Award
by Taiwan Ministry of Economic Affairs

Multi-Function *Giant* Double Column Machining Center

Model: SDW-48220

- Travel: X/Y/Z/W 22/7.5/1.5/2m
- Spindle: 103kW-4200rpm, 10000Nm
- Robot ATC 210 tool
- 10 auto milling head
- INA steel guide way
- CTS 70bar

High accuracy | Customization | Multi-function | Heavy duty | 5 face | 5 axis

- Taiwan 1st moving cross beam sliding columns machine to Thailand (SDW-48220+5F)
- Taiwan 1st sliding columns machine to France (SD-42090+5F)
- Taiwan 1st sliding columns machine to Russia (SD-36100+5F)
- Taiwan 1st moving cross beam sliding columns machine to Russia (SDW-36120+5F)
- Taiwan 1st moving cross beam fixed columns machine to Singapore (FDW-3660+5F)
- Taiwan 1st sliding columns machine to Korea (SD-42120+5F)
- Taiwan 1st sliding columns machine to India (SD-36070+5F)
- Taiwan 1st twin spindle sliding columns machine to USA (SD-24260+2S)
- Taiwan 1st twin spindle sliding columns machine to Australia (SD-28090+2S)

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2023/2

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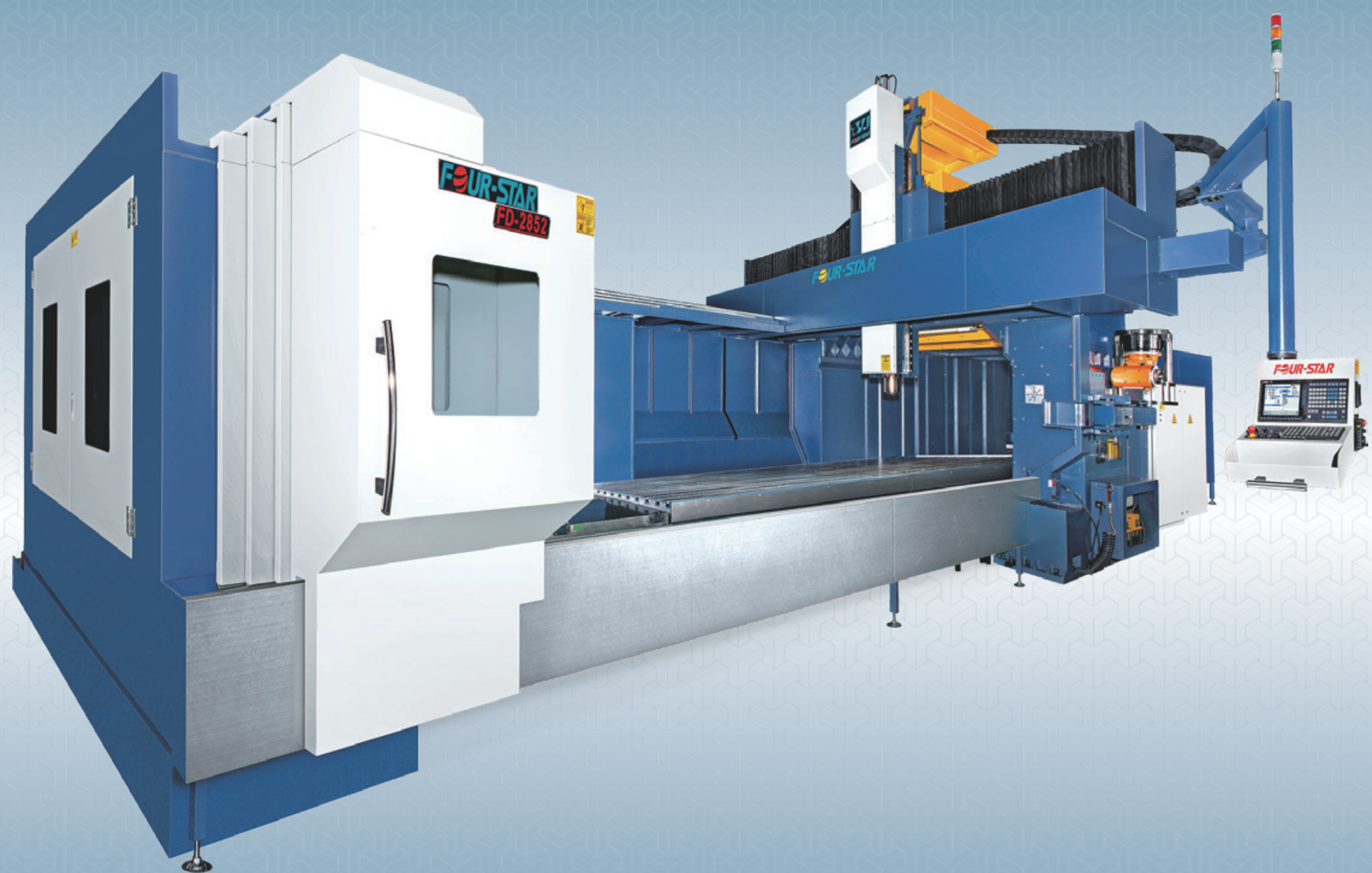
YONG JU PRECISION TECHNOLOGY CO.,LTD.

FD & FDW

FIXED DOUBLE COLUMNS MACHINING CENTER



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FIXED COLUMNS

FIXED CROSS-RAIL **FD**

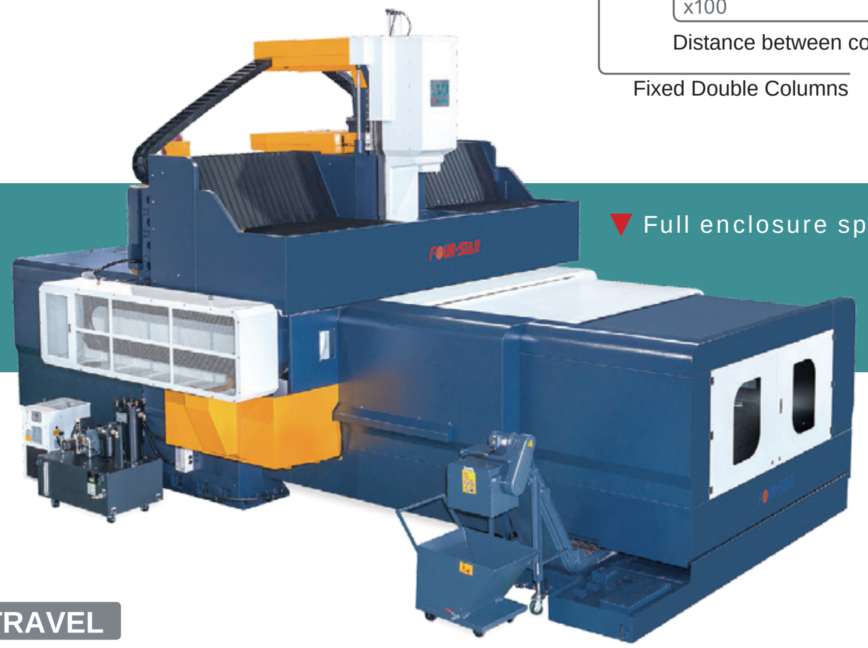
MOVING CROSS-RAIL **FDW**

FD series
FIXED DOUBLE COLUMNS

MODEL INFO

FD -42 60+5F

- +Auto angle milling head
- Y travel +650mm
- x100 X axis travel 6000mm
- x100 Distance between columns 4250mm
- Fixed Double Columns



▼ Full enclosure splash guard

TRAVEL

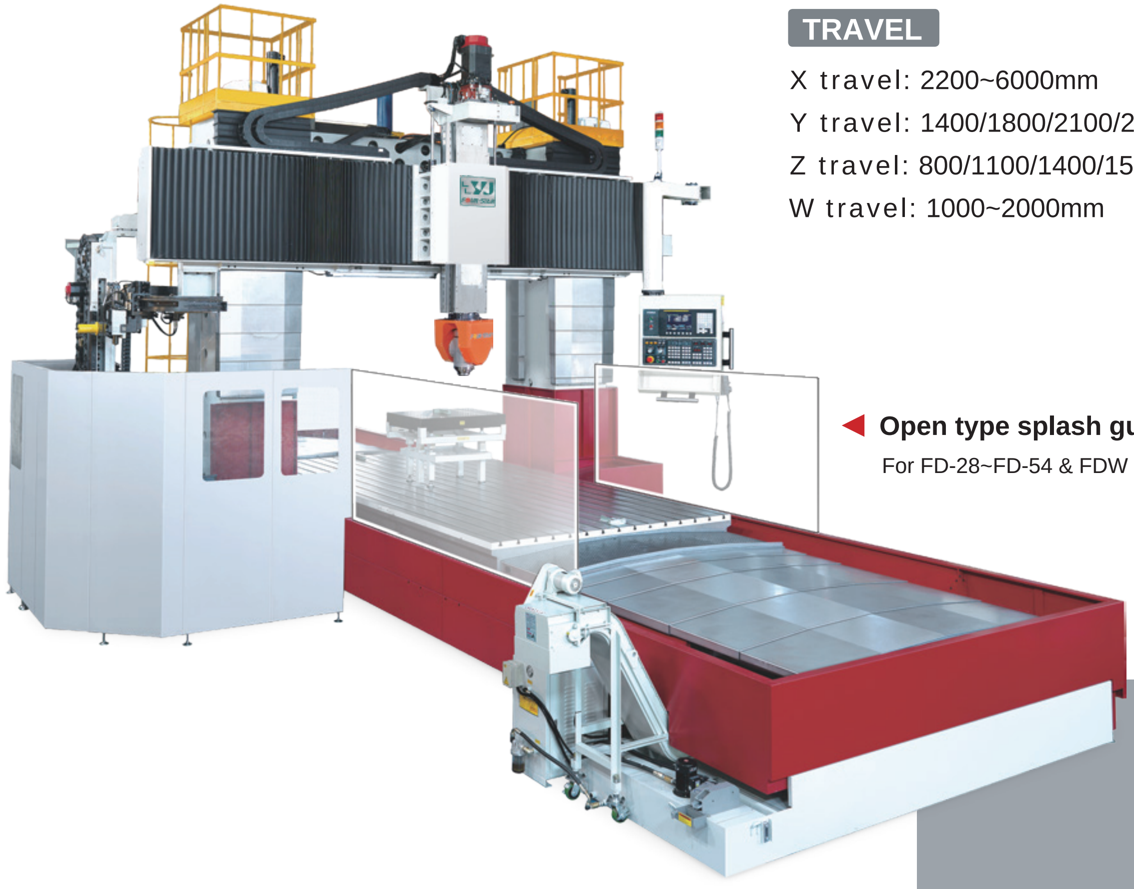
X travel: 2200~6000mm

Y travel: 1400/1800/2100/2400/2600/2800/3200/3600/4200/5400mm

Z travel: 800/1100/1400/1500mm

▲ **Semi enclosure type splash guard (no top)**

ⓘ For FD-14~FD-26A



◀ **Open type splash guard (two sides)**

For FD-28~FD-54 & FDW series

FDW series
MOVING CROSS-RAIL

TRAVEL

X travel: 2200~6000mm

Y travel: 1400/1800/2100/2400/2600/2800/3200/3600/4200/5400mm

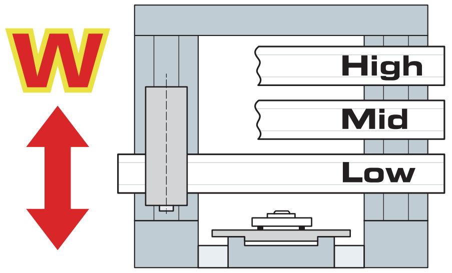
Z travel: 800/1100/1400/1500mm

W travel: 1000~2000mm

MODEL INFO

FD W-36 60+ 5F

- +Auto angle milling head
- Y travel +650mm
- x100 X travel 6000mm
- x100 Distance between columns 3652mm
- W type moving cross-rail
- Fixed Double Columns



Auto Tool Change (ATC)

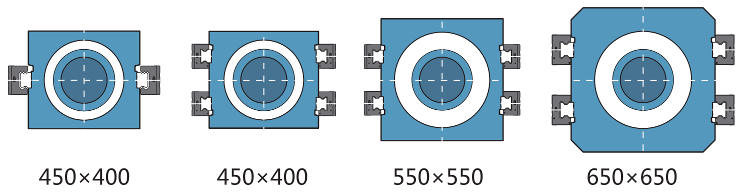
Auto Head Change (AHC)

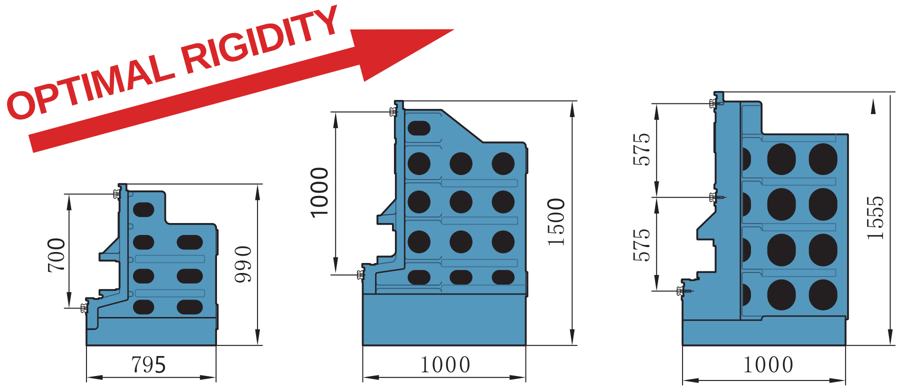
CNC Rotary Table

FD series

FIXED DOUBLE COLUMN MACHINING CENTER

SUPER HIGH RIGIDITY DESIGN





FD-14/18/21/24 Z=800/1100

FD-28/32/36A Z=1100/1400

FD-36/42 Z≧1500

Patent certificate

SPINDLE BOX (RAM)

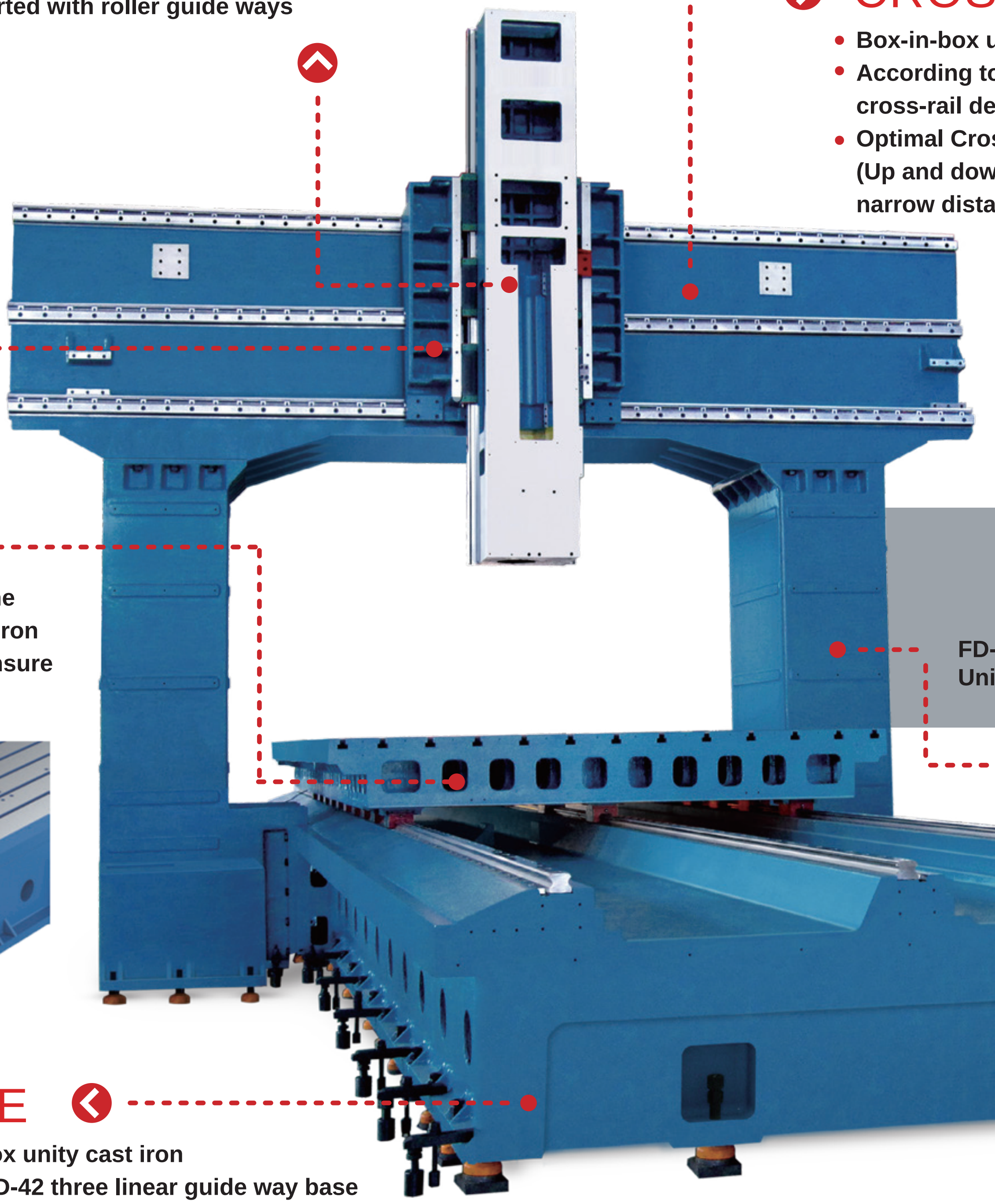
- Optimal design 450x400mm(std)
- Heavy duty RAM size 550x550mm, 650x650mm(opt)
- Supported with roller guide ways

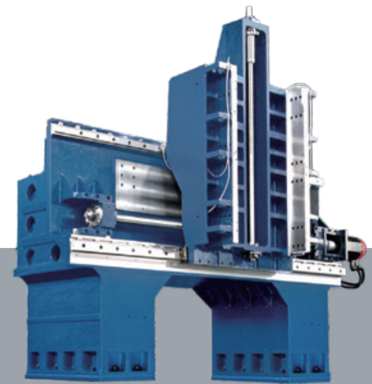
CROSS-RAIL

- Box-in-box unity cast-iron frame
- According to door width matching best cross-rail design
- Optimal Cross-rail design (Up and down span increase, front and rare narrow distance)

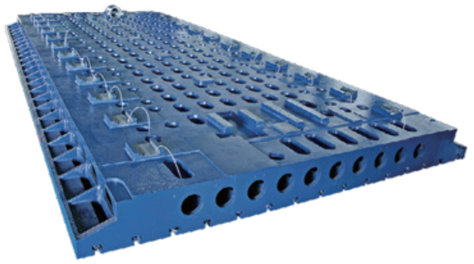
SADDLE

- Unity frame with reinforced ribs
- Stair type structural design
- Best track span 700~1150mm





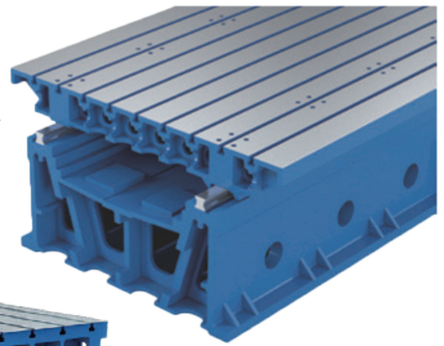
FD-14 Series Cross-rail & Column Unity frame with reinforced ribs.



TABLE

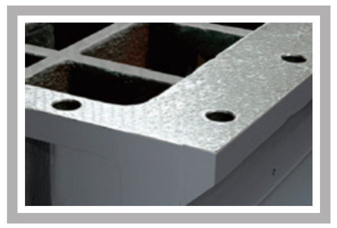
- Double layer loop frame
- Box-in-box unity cast-iron
- More linear block to ensure rigidity & accuracy

FD-14~FD-26 ▸



BASE

- Box-in-box unity cast iron
- FD-28~ FD-42 three linear guide way base
- Track with large span, High base, High rigid design

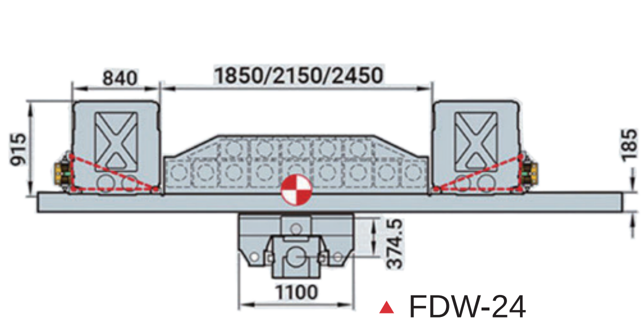


COLUMN

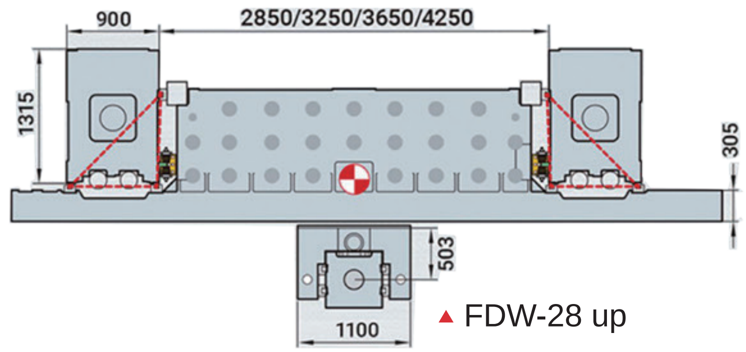
- Box-in-box unity cast iron frame
- Enlarge 50% column base increase rigidity
- All mounted surface made by precise hand-scraping

FDWseries

Moving Cross-Rail DCM

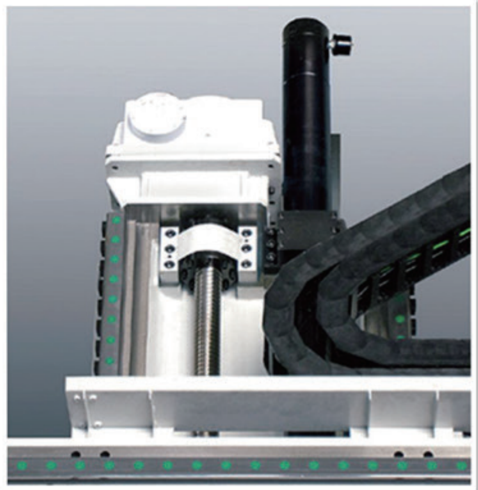


▲ FDW-24



▲ FDW-28 up

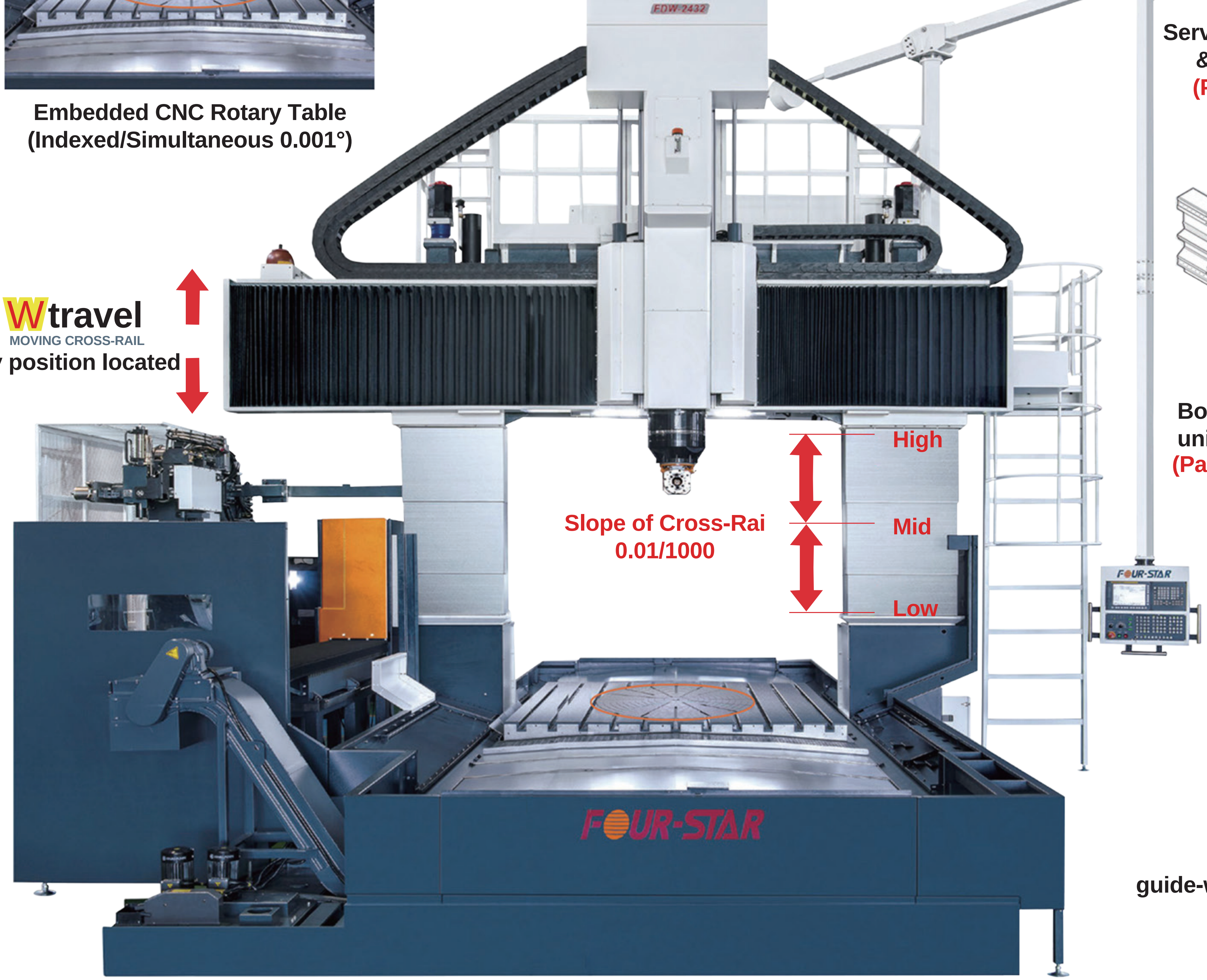
Triangular rigid supporting made gravity-center falls column inside.
(Patent NO. M498072)



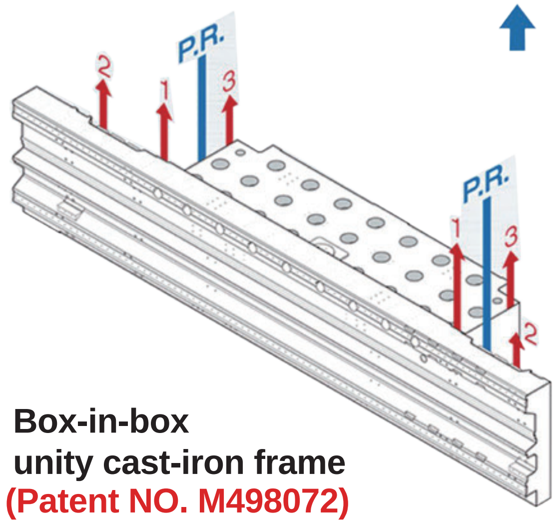
Dual Synchronous servo control
(Patent NO. M503282)

Embedded CNC Rotary Table
(Indexed/Simultaneous 0.001°)

Wtravel
MOVING CROSS-RAIL
Any position located

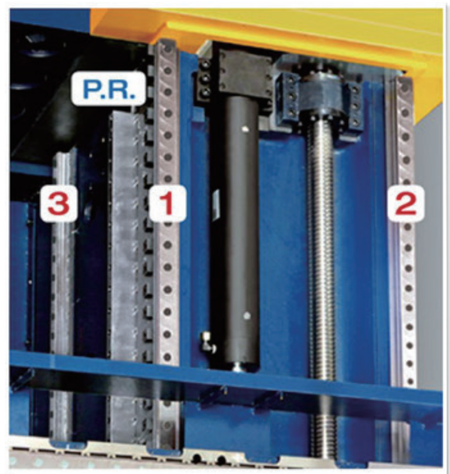


Servo synchronous located & Hydraulic clamping
(Patent NO. M511389)

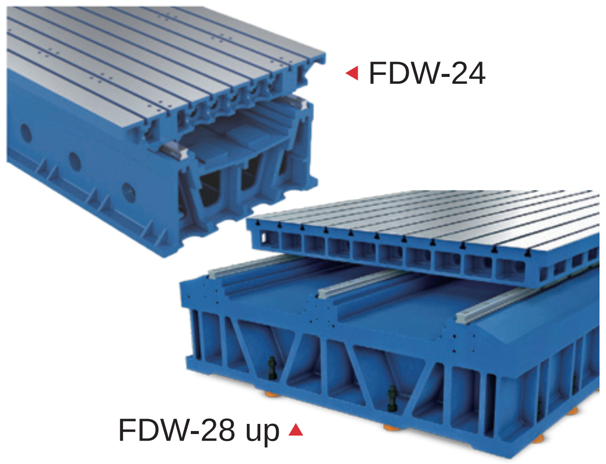


Box-in-box unity cast-iron frame
(Patent NO. M498072)

Extend column base



Each column with 3 linear guide-ways and 1 position rail (P.R.)
(Patent NO. M511389)



◂ FDW-24

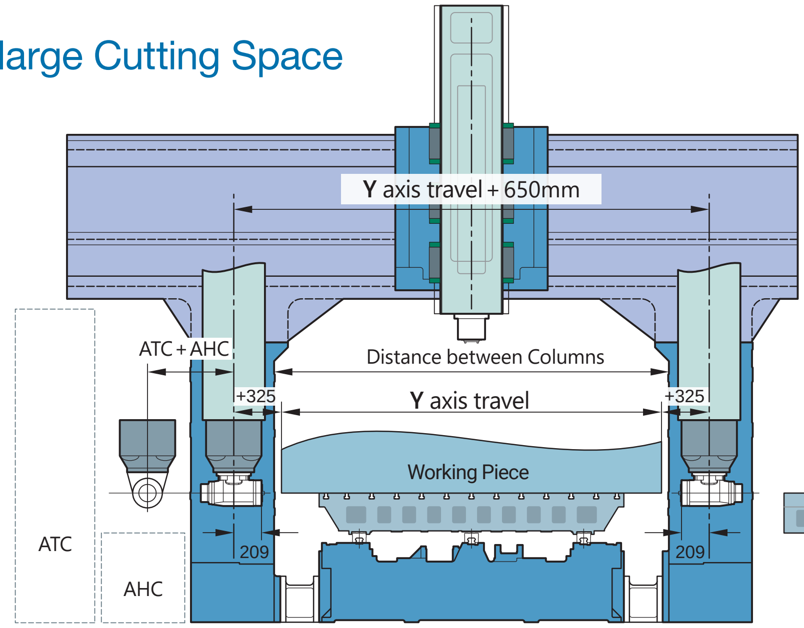
FDW-28 up ▴

Optimization design

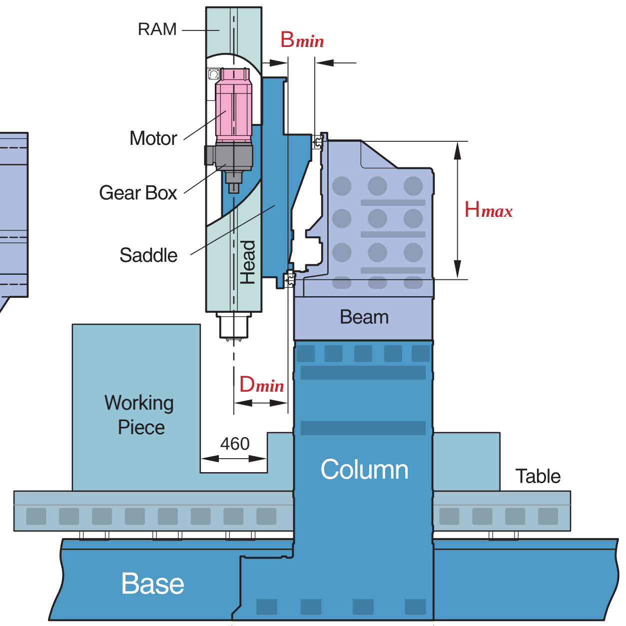
10 key indicators for Double Columns Machining Center

1 Box-in-Box unity cast-iron structure.
2 AHC and Column separate independent firm ground.
3 Columns and base separate independent firm ground.
4 Extend Y travel for auto 5F machining.
5 All linear guideways enhance rigidity and accuracy.
6 Crossbeam guideways span max H_{max} and B_{min}.
7 Distance between spindle center and crossbeam D_{min}.
8 Spindle motor placed on top, to isolate vibration and heat source.
9 With planetary gearbox efficiency over 95%.
10 Gearbox is placed on the top for deep machining.

Enlarge Cutting Space



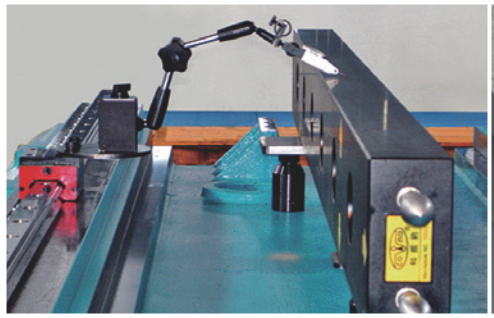
▲ Extend Y-travel for auto-5F cutting space



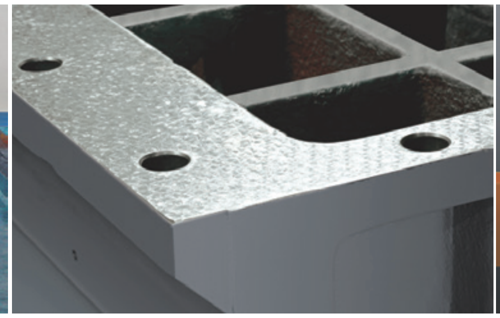
Enlarge column Base ► Extend 50%

FOUR-STAR

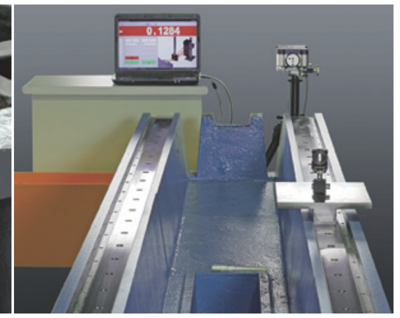
Quality Assurance



▲ High-precision assembly SOP.



▲ All mounted surface by precise hand-scraping.



▲ Calibration straightness and flatness by laser.

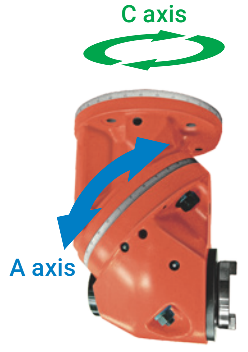
Special Angle Milling Head (Exchange Type)

Type	Automatic	Semi-Automatic	Manual
Head exchange	Auto (hydraulic)	Manual (8 bolts)	Manual (8 bolts)
Head indexed	Auto (5°/2.5°/1°)	Auto (5°)	Manual (5° / free)
Tool clamped	Booster	Booster	Bolt

90° head

Extension head

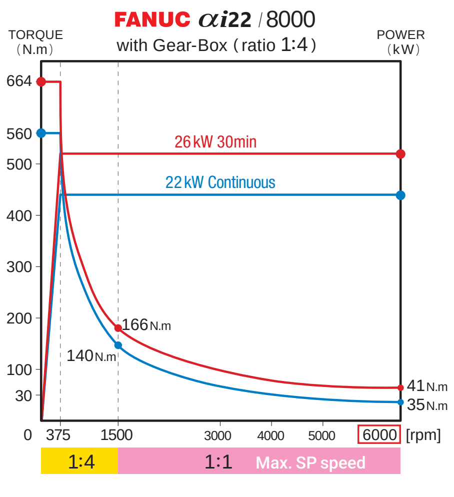
Extension 90° head

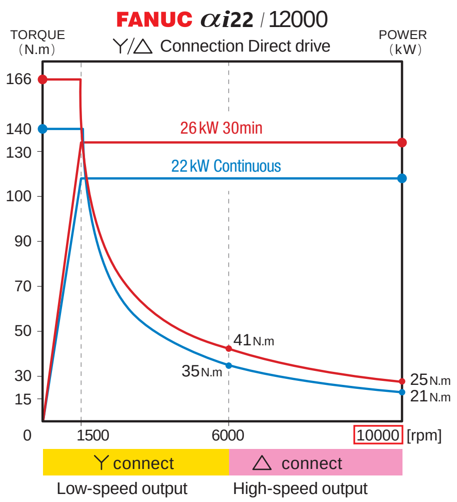


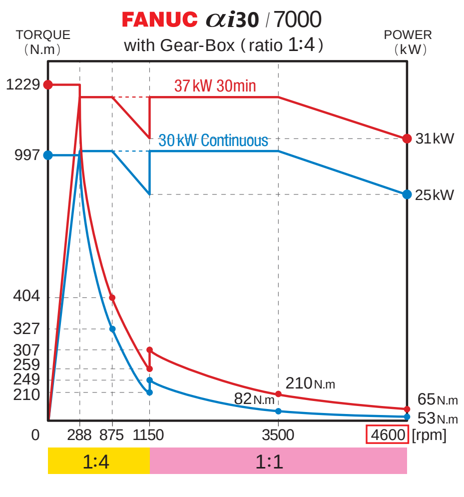
Universal head
(Only manual)

AC swiveling head

Cutting Capability

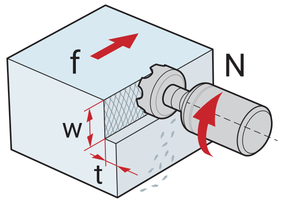




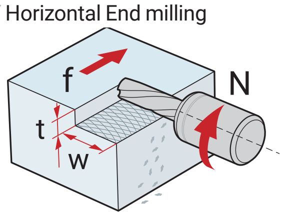


Cutting Record

▼ Horizontal Face milling



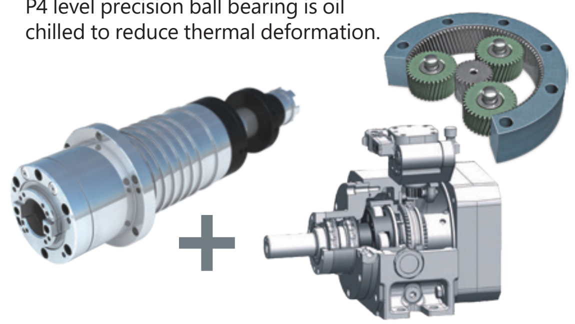
▼ Horizontal End milling



Type		Horizontal Face milling	Horizontal End milling
Material		S45C	S45C
Cutter diameter	mm	200	80
Speed	rpm	360	400
Cutting speed	m/min	226	100
Cutter width	mm	180	50
Cutter Depth	mm	5	30
Feed rate	mm/min	1250	600
Rate of metal removal	cc/min	1125	900
Power	kW	22	22
Rate of metal removal/kW	cc/kW	51	41

Optimal Efficiency Transmission

Direct drive spindle with P4 level precision ball bearing is oil chilled to reduce thermal deformation.



Two speed ratio IN-LINE gearbox
Full enclosure, high power and performance.

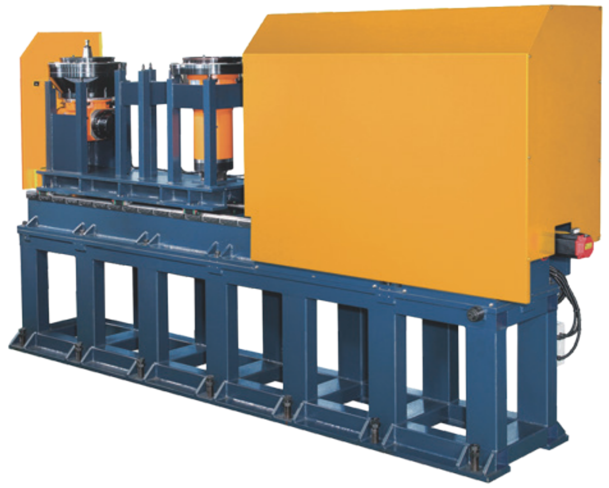
Special Milling Head (Fixed Type)

5 Face head
(dual tool shank)

Universal head
(fixed & auto indexed)

5 Axis simultaneous head

Auto Head exChanger (AHC)



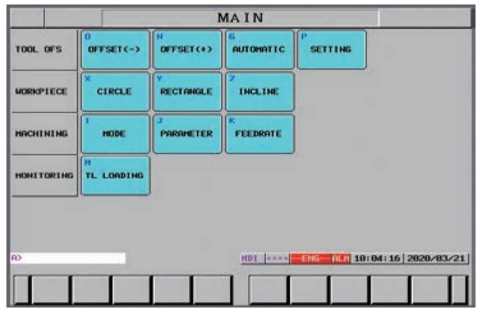
AHC for Auto angle milling heads

Auto 5F Milling Function

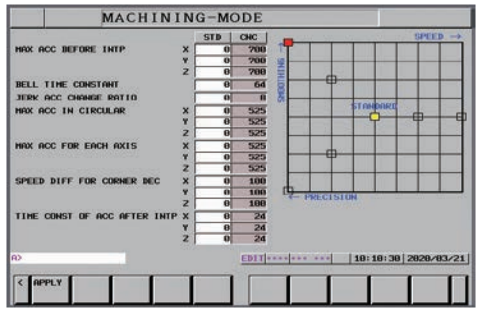
1. Smart human multi-face machining
2. Coordinate rotation function
3. 3D tilting machining function
4. 3D rigid tapping function
5. 3D manual feed function
6. AICC II high speed high precision
7. Jerk control
8. Tool life management function
9. Tool radius compensation
10. Power failure protection function

AI-HMI (A.I. Human-Machine Interaction)

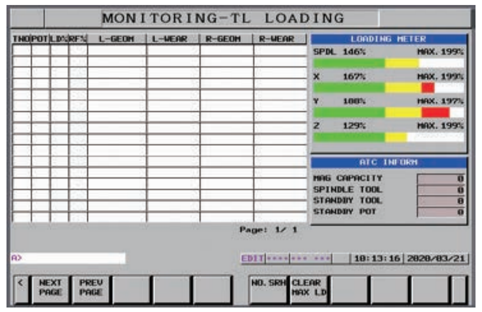
▼ Main screen MAIN



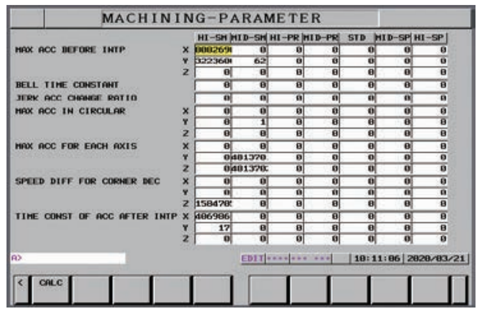
▼ Efficiency machining EM



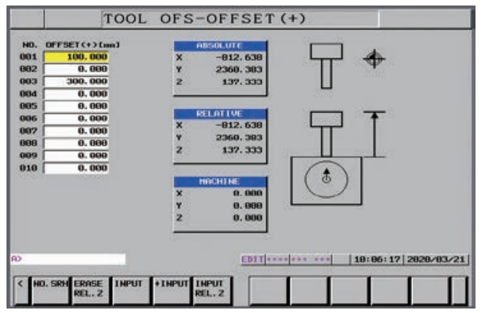
▼ Tool load monitor TLM



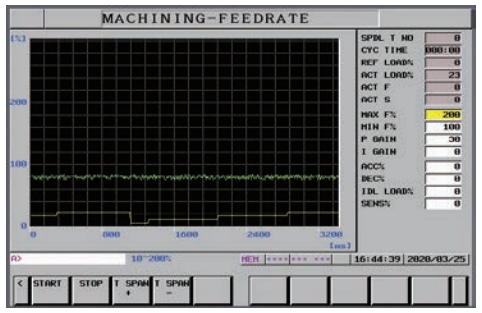
▼ Tuning EMT



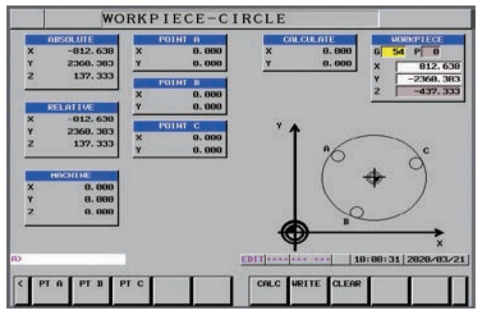
▼ Tool measurement TM



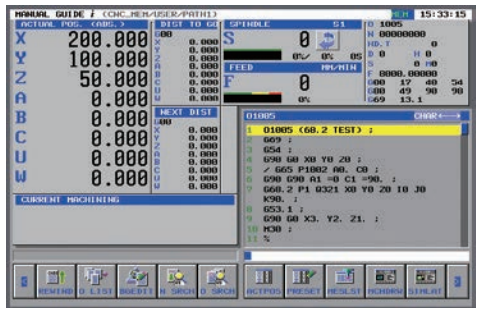
▼ Auto feed control AFC



▼ Workpiece center Measurement WM



▼ Manual Guide *i* MG



FANUC 0*i*MF PLUS & 31*i*MB Function List

Specifications	0iMF-P	31iMB
Max controlled axes number	7	20
Max simultaneous controlled axis	4	4
Tandem / Torque control	○	○
Increment system	○	★
Dual position feedback *1	★	★
Linear scale I/F with absolute address reference mark *1	★	★
HRV2 / HRV3 control	○	○
Inch / metric conversion	○	○
Interlock	○	○
Machine lock	○	○
Emergency stop	○	○
Over travel	○	○
Stroke limit check before move	○	○
Mirror image	○	○
Position switch	○	○
Operation		
MDI operation	○	○
DNC operation	○	○
Program restart	○	○
Retraction for rigid tapping	○	○
Retraction for 3D rigid tapping *2	★	★
Buffer register	○	○
Dry run	○	○
Single block	○	○
Jog feed	○	○
Manual operation in 3D conversion mode	★	★
Manual handle interruption	○	○
Incremental feed	○	○
Auxiliary/Spindle speed function		
Auxiliary function	○	○
High-speed M/S/T/B interface	○	○
Spindle override	○	○
Spindle orientation	○	○
Rigid tapping	○	○
Rigid tapping by manual handle	★	★
Interpolation functions		
Nano interpolation	○	○
Positioning	○	○
Exact stop	○	○
Linear interpolation	○	○
Circular interpolation	○	○
Dwell	○	○
Cylindrical interpolation	○	★
Helical interpolation	○	★
Machining quality level adjustment	○	★
Jerk control *3	○	★
Tolerance control *3	○	★
Thread cutting, synchronous cutting	○	○
Skip function	○	○
Optional block skip	○	○
Reference position return check	○	○
Editing Operation		
Part program storage size	2M	512KB
Part program editing	○	○
Program protect	○	○
Extended part program editing	○	○
Background editing	○	○
Data server editing / operation	○	○
Accuracy compensation function		
Stored pitch error compensation	○	○
Smooth backlash compensation	○	○
Interpolation type straightness compensation	○	○

Specifications	0iMF-P	31iMB
Guidance function		
Manual Guide *i*	○	○
Program input		
Absolute / incremental programming	○	○
Decimal point programming calculator type	○	○
Polar coordinate command	○	○
Coordinate system setting	○	○
Automatic coordinate system setting	○	○
Workpiece coordinate system	○	○
Addition of workpiece coordinate system	○	○
Programmable data input	○	○
Sub program call	○	○
Custom macro	○	○
Addition of custom macro common variables	○	○
Canned cycles for drilling	○	○
Circular interpolation by R programming	○	○
Scaling	○	○
Automatic corner override	○	○
Tilted work plane indexing (G68.2) *2	○	○
Setting and display		
Parameter setting and display	○	○
Alarm display	○	○
Alarm history display	○	○
Operator message history display	○	○
Operator history display	○	○
Run hour and parts count display	○	○
Multi-language display	○	○
Dynamic display language switching	○	○
Erase CRT screen display	○	○
Self-diagnosis function	○	○
Graphic display	○	○
Machining condition selection function	○	○
Feed function		
Rapid traverse rate	○	○
Rapid traverse override	○	○
Feed per minute	○	○
Federate override	○	○
Jog override	○	○
AI contour control II (AICC II)	400B	200B
Data input/output		
Memory card input / output	○	○
Screen hard copy	○	○
Power Mate CNC manager	○	○
External I/O device control	○	○
Fast data server	○	○
Tool function/Tool compensation		
Tool offset pairs	○	○
Tool offset memory C	○	○
Tool offset	○	○
Tool length measurement	○	○
Automatic tool length measurement	○	○
Tool life management	○	★
Other Function		
Embedded Ethernet	○	○
Fast Ethernet	○	○
PMC system	○	○
PMC function	○	○
I/O Link DI/DO points	○	○
Backlash compensation	○	○
Stored pitch error compensation	○	○

○ Standard ★ Optional accessories function *1 For linear scale. *2 For auto milling head. *3 For mold cutting.

FD Series Specification list

Item		Unit	FD-14			FD-18					
Model		FD	1422	1427	1432	1822	1827	1832	1842	1852	1860
Distance between columns		mm	1400			1850					
Table size	Length	mm	2000	2500	3000	2000	2500	3000	4000	5000	6000
	Width	mm	1200			1500					
Max. table load		ton	10	12	15	12	13	15	18	20	22
T slot	WidthxPitchxNo.	mm	18x150x7			22x150x9					
Travel	X-axis	mm	2200	2700	3200	2200	2700	3200	4200	5200	6000
	Y-axis	mm	1300			1800					
	Z-axis	mm	800			800 / (opt. 1100)					
Spindle	Nose to table	mm	80-880 (and other options)			180~980 (and other options)			120~920 (and other options)		
	Taper/Speed/Power	rpm/kW				BBT-50 - 6000rpm - 22/26kW + 2 stage gearbox					
Feedrate	Cutting	m/min	10			8			7		
	X-axis	m/min	22	20	20	18	15	15	10	8	8
	Y/Z-axis (standard)	m/min	18/18 (standard)			18/15 (standard)					
	Y/Z-axis (+5F)	m/min	18/18 (5F)			10/15 (5F)					
ATC& tool magazine	Capacity / Dia.	mm				24 tools / max. dia φ110 (full tool); φ200 (adjacent empty)					
	Max. Length /Weight	mm				380mm/ 18 kg					
	Tool selection					Random shortest direction / M24 P3.0-45°					
Machine size	Length	mm	6.4	7.4	8.4	6.4	7.4	8.4	11.1	13.1	15.1
	Width	mm	4.00			4.55					
	Height	mm	4.10			4.57 (5.47)					
Machine weight (app.)		ton	20	22	24	24	26	28	32	36	40
Accuracy		mm				Positioning ±0.015/full travel ; Pepeatability ±0.003					

Item		Unit	FD-21						FD-24A				
Model		FD	2122	2127	2132	2142	2152	2160	2427A	2432A	2442A	2452A	2460A
Distance between columns		mm	2150						2450				
Table size	Length	mm	2000	2500	3000	4000	5000	6000	2500	3000	4000	5000	6000
	Width	mm	1800						2000				
Max. table load		ton	12	13	15	18	20	22	13	15	18	20	22
T slot	WidthxPitchxNo.	mm	22x150x11						22x150x13				
Travel	X-axis	mm	2200	2700	3200	4200	5200	6000	2700	3200	4200	5200	6000
	Y-axis	mm	2100						2400				
	Z-axis	mm											
Spindle	Nose to table	mm	180~980 (and other options)			120~920 (and other options)			120~920 (and other options)				
	Taper/Speed/Power	rpm/kW											
Feedrate	Cutting	m/min	7			6			6				
	X-axis	m/min	18	15	15	10	8	8	15	15	10	8	8
	Y/Z-axis (standard)	m/min	18/15 (standard)			15/12 (standard)			15/12 (standard)				
	Y/Z-axis (+5F)	m/min	10/15 (5F)			8/12 (5F)			8/12 (5F)				
ATC& tool magazine	Capacity / Dia.	mm											
	Max. Length /Weight	mm											
	Tool selection												
Machine size	Length	mm	6.4	7.4	8.4	11.1	13.1	15.1	7.4	8.4	11.1	13.1	15.1
	Width	mm	4.85						5.15				
	Height	mm											
Machine weight (app.)		ton	25	27	29	33	37	41	28	30	35	40	45
Accuracy		mm											

Item		Unit	FD-26A			
Model		FD	2632A	2642A	2652A	2660A
Distance between columns		mm	2650			
Table size	Length	mm	3000	4000	5000	6000
	Width	mm	2200			
Max. table load		ton	15	18	20	22
T slot	WidthxPitchxNo.	mm	22x150x14			
Travel	X-axis	mm	3200	4200	5200	6000
	Y-axis	mm	2600			
	Z-axis	mm				
Spindle	Nose to table	mm	120~920 (and other options)			
	Taper/Speed/Power	rpm/kW				
Feedrate	Cutting	m/min	6			
	X-axis	m/min	15	10	8	8
	Y/Z-axis (standard)	m/min	15/12 (standard)			
	Y/Z-axis (+5F)	m/min	8/12 (5F)			
ATC& tool magazine	Capacity / Dia.	mm				
	Max. Length /Weight	mm				
	Tool selection					
Machine size	Length	mm	8.4	11.1	13.1	15.1
	Width	mm	5.50			
	Height	mm	4.57 (5.47)			
Machine weight (app.)		ton	32	37	42	47
Accuracy		mm				

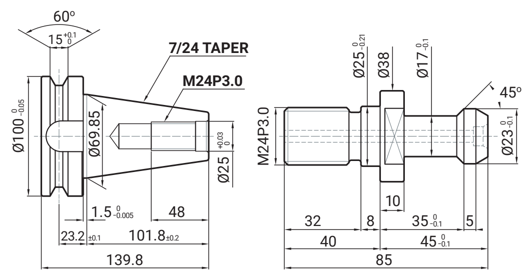
Item		Unit	FD-28				FD-32			
Model		FD	2832	2842	2852	2860	3232	3242	3252	3260
Distance between columns		mm	2850				3250			
Table size	Length	mm	3000	4000	5000	6000	3000	4000	5000	6000
	Width	mm	2200				2600			
Max. table load		ton	18	20	22	24	18	20	22	24
T slot	WidthxPitchxNo.	mm	28x180x13				28x200x13			
Travel	X-axis	mm	3200	4200	5200	6000	3200	4200	5200	6000
	Y-axis	mm	2800				3200			
	Z-axis	mm	1100 (opt. 1400)							
Spindle	Nose to table	mm	180~1280 (and other options)				150~1250 (and other options)			
	Taper/Speed/Power	rpm/kW	BBT-50 - 6000rpm - 22/26kW + 2 stage gearbox							
Feedrate	Cutting	m/min	6				6			
	X-axis	m/min	14	10	8	8	14	10	8	8
	Y/Z-axis (standard)	m/min	15/10 (standard)				12/10 (standard)			
	Y/Z-axis (+5F)	m/min	8/10 (5F)				8/10 (5F)			
ATC& tool magazine	Capacity / Dia.	mm	32 tools / max. dia φ125 (full tool); φ220 (adjacent empty)							
	Max. Length /Weight	mm	400mm / 20 kg							
	Tool selection		Random shortest direction / M24 P3.0-45°							
Machine size	Length	mm	9.4	11.4	13.4	15.4	9.4	11.4	13.4	15.4
	Width	mm	6.00				6.40			
	Height	mm	5.2(6.1)							
Machine weight (app.)		ton	44	49	54	59	50	55	60	65
Accuracy		mm	Positioning ±0.015/full travel ; Pepeatability ±0.003							

Item		Unit	FD-36			FD-42			FD-54	
Model		FD	3642	3652	3660	4242	4252	4260	5452	5460
Distance between columns		mm	3650			4250			5450	
Table size	Length	mm	4000	5000	6000	4000	5000	6000	5000	6000
	Width	mm	3000			3000 (opt. 3400)			3000 (opt. 5000)	
Max. table load		ton	20	22	24	22	24	26	24	26
T slot	WidthxPitchxNo.	mm	28x200x15						28x200x15	
Travel	X-axis	mm	4200	5200	6000	4200	5200	6000	5200	6000
	Y-axis	mm	3600			4200			5400	
	Z-axis	mm	1100 (opt. 1400 / 1500)							
Spindle	Nose to table	mm	260~1360mm (and other options)						260~1360mm (and other options)	
	Taper/Speed/Power	rpm/kW								
Feedrate	Cutting	m/min	6			6			6	
	X-axis	m/min	10	8	8	10	8	8	8	8
	Y/Z-axis (standard)	m/min	10/10 (standard)			8/10 (standard)			6/10 (standard)	
	Y/Z-axis (+5F)	m/min	8/10 (5F)			8/10 (5F)			6/10 (5F)	
ATC& tool magazine	Capacity / Dia.	mm								
	Max. Length /Weight	mm								
	Tool selection									
Machine size	Length	mm	11.4	13.4	15.4	11.4	13.4	15.4	13.4	15.4
	Width	mm	6.80			7.40			8.7	
	Height	mm	5.55(6.45)						5.55(6.45)	
Machine weight (app.)		ton	62	67	72	68	73	78	76	82
Accuracy		mm								

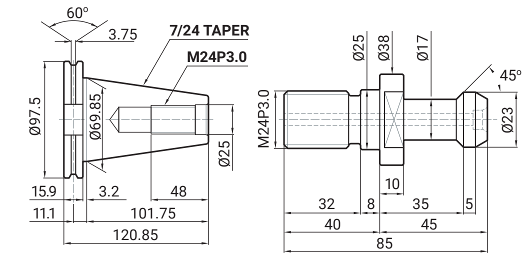
(i) All data will change based on the actual situation without notice.

Tool shank & Pull stud dimension

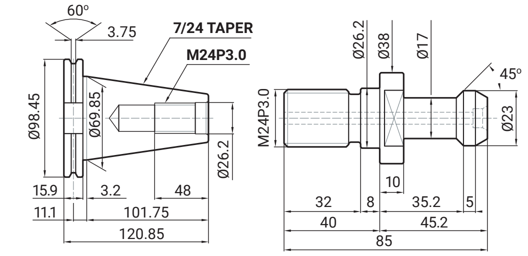
Standard : **BT-50** （JIS MAS 403 / MAS 403 P50T-1）



Standard : **ISO-50**/**SK-50** (DIN69871A / MAS 403 P50T-1)



Standard : **CAT-50** (ANSI B5.50 CAT50 / CAT-MAS 403 P50T-1)



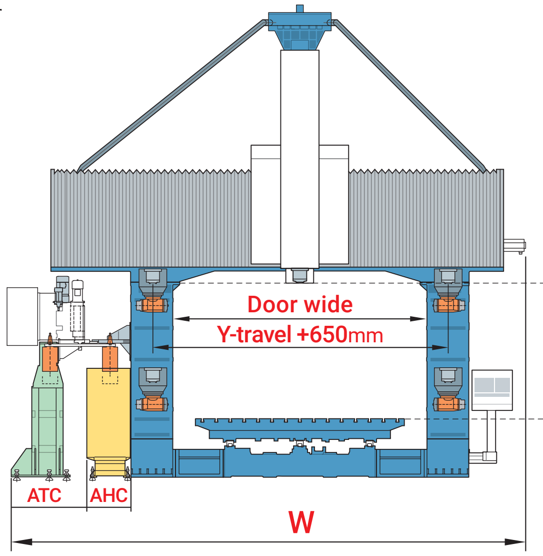
Standard Accessories

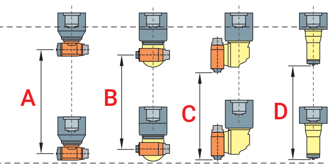
1. Fanuc 0iMF + 10.4"LCD
2. Spindle oil cooler
3. Spindle air blast
4. N2 counter balance system
5. Two stage H/L planetary gearbox
6. Auto lubrication system
7. Program end alarm lamp
8. Rigid tapping
9. Electrical cabinet heat exchanger
10. USB/RJ-45/Ethernet interface
11. Cutting coolant system
12. Dual screw type chip remover
13. Steel-belt type chip conveyor with cart
14. Chain type 32T ATC
15. Semi-enclosure splash guard (FD-14/18/21/24A/26A)
16. Open type splash guard (FD-28/32/36/42/54)
17. ATC auto door
18. Foot pedal switch
19. Working lamp
20. Base leveling screw & foundation bolts
21. Tool kit & operation's manual
22. Air / water cleaning equipment

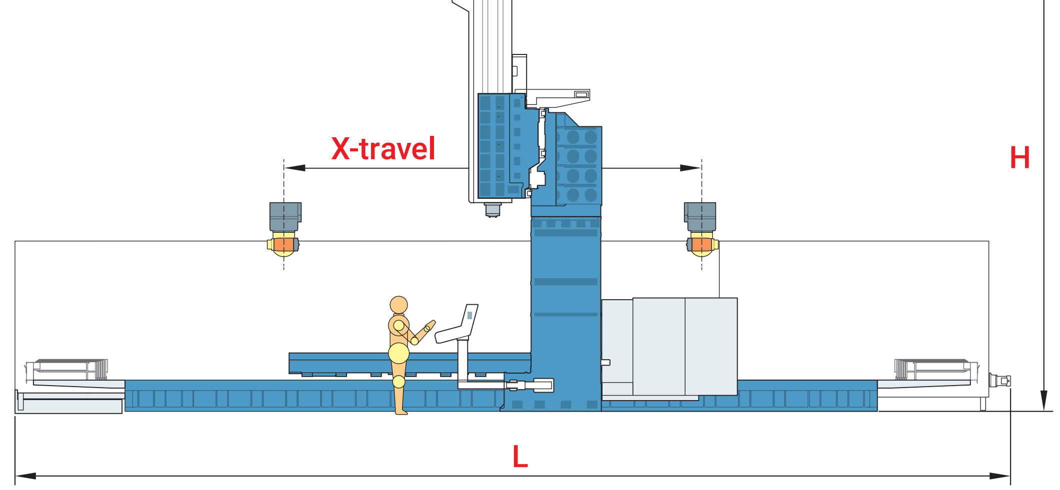
Optional Accessories

1. X travel 7/8/9/10m
2. Fanuc 0iMF Plus / Mitsubishi / Siemens / Heidenhain controller
3. Spindle power 30/37kW with gearbox
4. High speed spindle (8000~24000rpm)
5. Coolant through spindle (CTS)
6. 90° milling head (Auto, semi-auto, manual)
7. Extend milling head (Auto, semi-auto, manual)
8. AC swiveling milling head (Auto, semi-auto, manual)
9. AHC system (for auto milling head)
10. Toggle head stand (for semi-auto, manual milling head)
11. Five face milling head (Fixed type)
12. Universal milling head (Fixed type)
13. 5 axis simultaneous milling head
14. Y travel extend 650mm(for auto 5F machining)
15. Heavy duty RAM550x550mm (FD-36 and up)
16. Heavy duty RAM650x650mm (FD-36 and up)
17. X, Y, Z axis linear scale
18. Tool length measurement
19. Auto workpiece measurement
20. CNC rotary table (indexed, simultaneous)
21. Coolant through tool holder device
22. Full enclosure splash guard (with top)
23. Transformer
24. Oil skimmer

Machine Layout & Dimension







FDW Series Specification list

Item		Unit	FDW-24				FDW-28			
Model		FD	2432	2442	2452	2460	2832	2842	2852	2860
Distance between columns		mm	2450				2850			
Table size	Length	mm	3000	4000	5000	6000	3000	4000	5000	6000
	Width	mm	2000				2200			
Max. table load		ton	15	18	20	22	18	20	22	24
T slot	WidthxPitchxNo.	mm	22X150X13				28X180X13			
Travel	X-axis	mm	3200	4200	5200	6000	3200	4200	5200	6000
	Y-axis	mm	2400				2800			
	Z-axis	mm	1100/1400				1100/1400/1500			
Spindle	Nose to table	mm	120-2220 (and other option)				120-2220 (and other option)			
	Taper/Speed/Power	rpm/kW	BBT-50-22/26kW-6000rpm + 2 stage gearbox							
Feedrate	Cutting	m/min	6				6			
	X-axis	m/min	15	10	8	8	14	10	8	8
	Y/Z-axis (standard)	m/min	15/12 (standard)				15/10 (standard)			
	Y/Z-axis (+5F)	m/min	8/12 (5F)				8/12 (5F)			
ATC& tool magazine	Capacity / Dia.	mm	32 tools / max. dia φ125 (full tool); φ220 (adjacent empty)							
	Max. Length /Weight	mm	400mm / 20 kg							
	Tool selection	-	Random shortest direction / M24 P3.0-45°							
Machine size	Length	mm	8.4	11.1	13.1	15.1	9.4	11.4	13.4	15.4
	Width	mm	5.70				6.00			
	Height	mm	5.10				5.90			
Machine weight (app.)		ton	48	53	58	63	55	60	65	70

Item		Unit	FDW-32				FDW-36			FDW-42			FDW-54	
Model		FD	3232	3242	3252	3260	3642	3652	3660	4242	4252	4260	5452	5460
Distance between columns		mm	3250				3650			4250			5450	
Table size	Length	mm	3000	4000	5000	6000	4000	5000	6000	4000	5000	6000	5000	6000
	Width	mm	2600				3000			3000(opt. 3400)			3000(opt. 5000)	
Max. table load		ton	18	20	22	24	20	22	24	22	24	26	24	26
T slot	WidthxPitchxNo.	mm	28X180X13				28X200X15			28X200X15			28X200X15	
Travel	X-axis	mm	3200	4200	5200	6000	4200	5200	6000	4200	5200	6000	5200	6000
	Y-axis	mm	3200				3600			4200			5400	
	Z-axis	mm	1100/1400/1500											
Spindle	Nose to table	mm	120-2220 (and other option)											
	Taper/Speed/Power	rpm/kW	BBT-50-22/26kW-6000rpm + 2 stage gearbox											
Feedrate	Cutting	m/min	6				6			6			6	
	X-axis	m/min	14	10	8	8	10	8	8	10	8	8	8	8
	Y/Z-axis (standard)	m/min	12/10 (standard)				10/10 (standard)			8/10 (standard)			6/10 (standard)	
	Y/Z-axis (+5F)	m/min	8/12 (5F)				8/10 (5F)			8/10 (5F)			6/10 (5F)	
ATC& tool magazine	Capacity / Dia.	mm	32 tools / max. dia φ125 (full tool); φ220 (adjacent empty)											
	Max. Length /Weight	mm	400mm / 20 kg											
	Tool selection	-	Random shortest direction / M24 P3.0-45°											
Machine size	Length	mm	9.4	11.4	13.4	15.4	11.4	13.4	15.4	11.4	13.4	15.4	13.4	15.4
	Width	mm	6.40				6.80			7.40			8.60	
	Height	mm	5.90											
Machine weight (app.)		ton	58	63	68	73	67	72	77	72	76	80	82	86

All data will change based on the actual situation without notice.

Standard Accessories

1. Fanuc 0iMF + 10.4"LCD
2. Spindle oil cooler
3. Spindle air blast
4. N2 counter balance system
5. Two stage H/L planetary gearbox
6. Auto lubrication system
7. Program end alarm lamp
8. Rigid tapping
9. Electrical cabinet heat exchanger
10. USB/RJ-45/Ethernet interface
11. Cutting coolant system
12. Dual screw type chip remover
13. Steel-belt type chip conveyor with cart
14. Chain type 32T ATC
15. Semi-enclosure splash guard (FDW-24)
16. Open type splash guard (FDW-28/32/36/42/54)
17. ATC auto door
18. Foot pedal switch
19. Working lamp
20. Base leveling screw & foundation bolts
21. Tool kit & operation's manual
22. Air / water cleaning equipment
23. W axis linear scale (2 pcs)

Optional Accessories

1. X travel 7/8/9/10m
2. Fanuc 0iMF Plus / Mitsubishi / Siemens / Heidenhain controller
3. Spindle power 30/37kW with gearbox
4. High speed spindle (8000~24000rpm)
5. Coolant through spindle (CTS)
6. 90° milling head (Auto, semi-auto, manual)
7. Extend milling head (Auto, semi-auto, manual)
8. AC swiveling milling head (Auto, semi-auto, manual)
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16. Heavy duty RAM650x650mm (FDW-28 and up)
17. X, Y, Z axis linear scale
18. Tool length measurement
19. Auto workpiece measurement
20. CNC rotary table (indexed, simultaneous)
21. Coolant through tool holder device
22. Full enclosure splash guard (with top)
23. Transformer
24. Oil skimmer

Machine Layout & Dimension