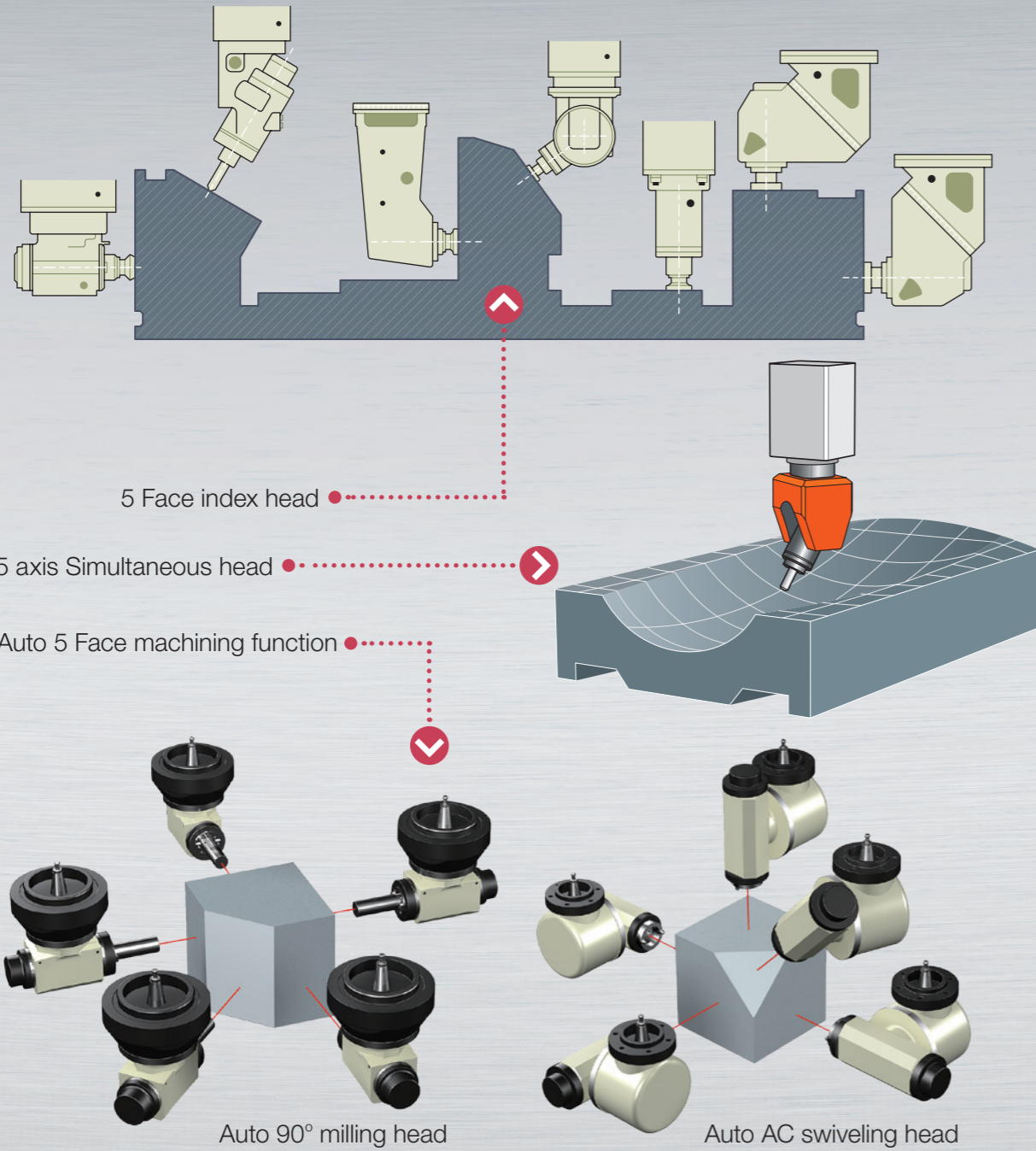




Excellent, Confident, Intellect, Service



YONG JU PRECISION TECHNOLOGY CO.,LTD.

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2014.May



CNC

FIXED DOUBLE COLUMNS MACHINING CENTER

FD&FDW series

FIXED CROSS-RAIL MOVING CROSS-RAIL

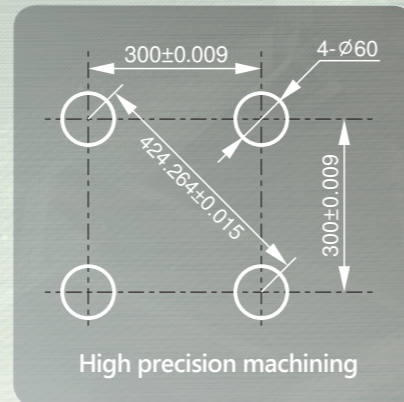


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FDW series
MOVING CROSS-RAIL

TRAVEL

- X** - travel : 3200~6000 mm
- Y** - travel : 2400/2800/3200/3600/4200 mm
- Z** - travel : 800/1100/1400 mm
- W** - travel : 1000~2000 mm



Model explain

FD W - 36 60 - 5F

- Auto 5 Face milling
Y travel + 650mm
- x100 X travel 6000mm
- Distance between columns 3650mm
- W type moving cross-rail
- Fixed Double Columns



FD series
FIXED DOUBLE COLUMNS



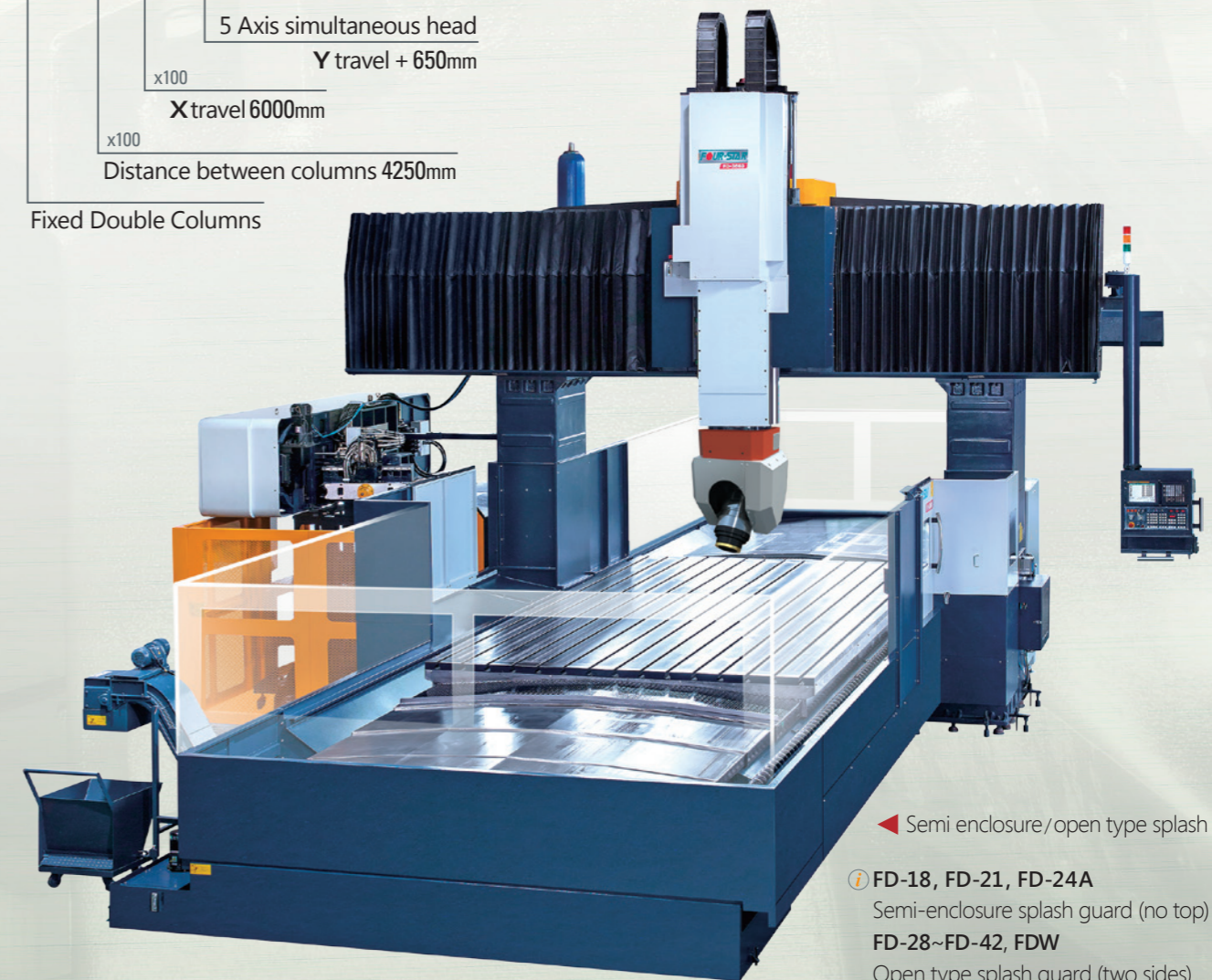
TRAVEL

- X** - travel : 2200~6000 mm
- Y** - travel : 1800/2100/2400/2800 mm
3200/3600/4200 mm
- Z** - travel : 800/1100/1400 mm

Model explain

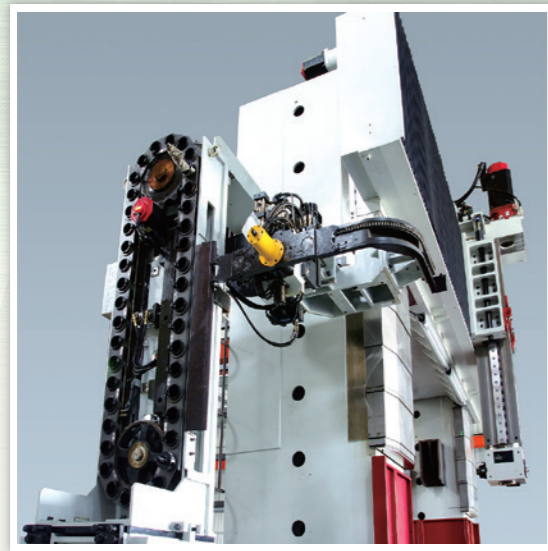
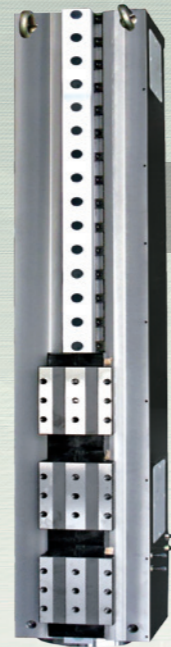
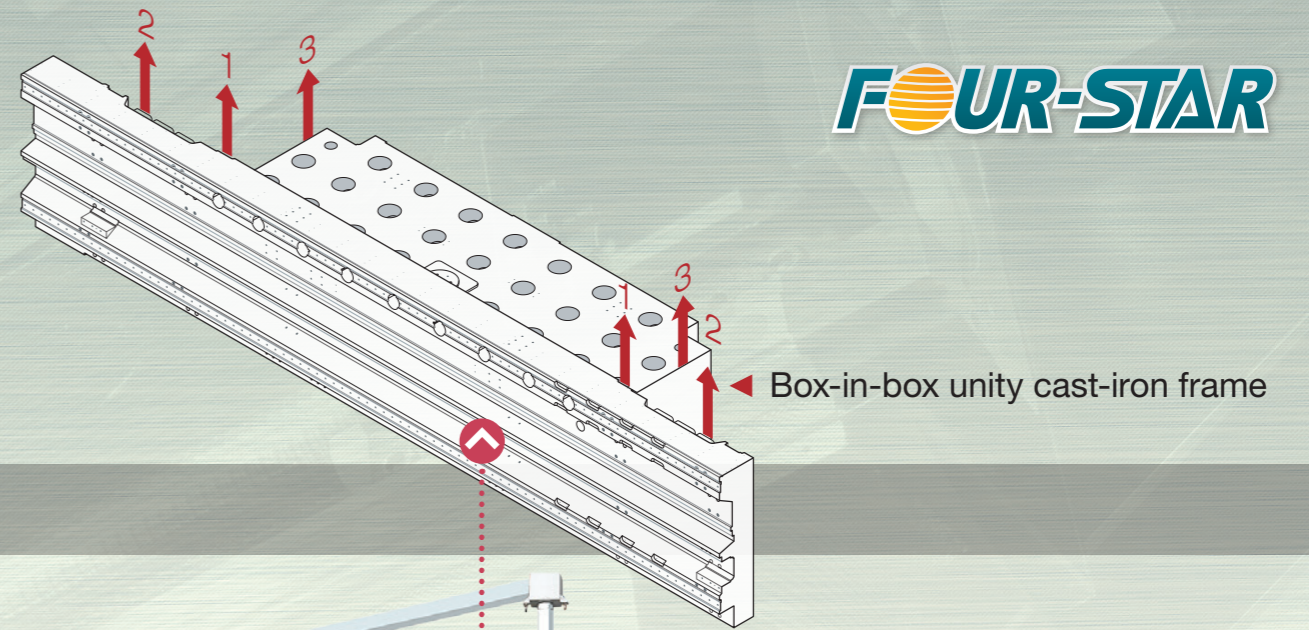
FD - 42 60 - 5A

- 5 Axis simultaneous head
Y travel + 650mm
- x100 X travel 6000mm
- Distance between columns 4250mm
- Fixed Double Columns

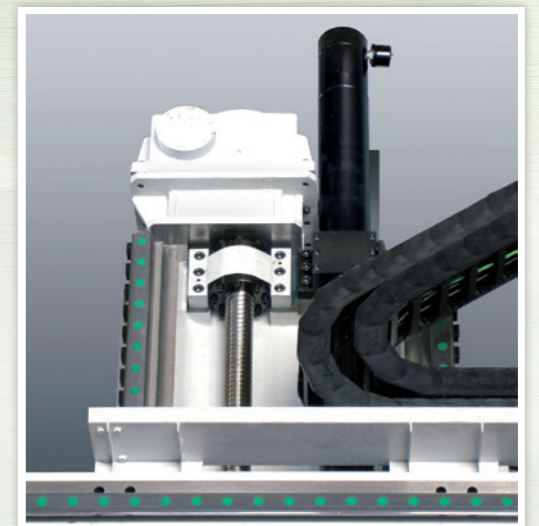


- FD-18, FD-21, FD-24A
Semi-enclosure splash guard (no top)
- FD-28~FD-42, FDW
Open type splash guard (two sides)

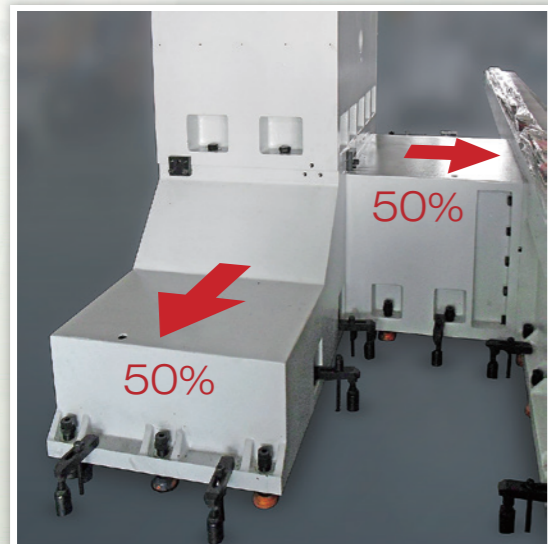
W-type Features



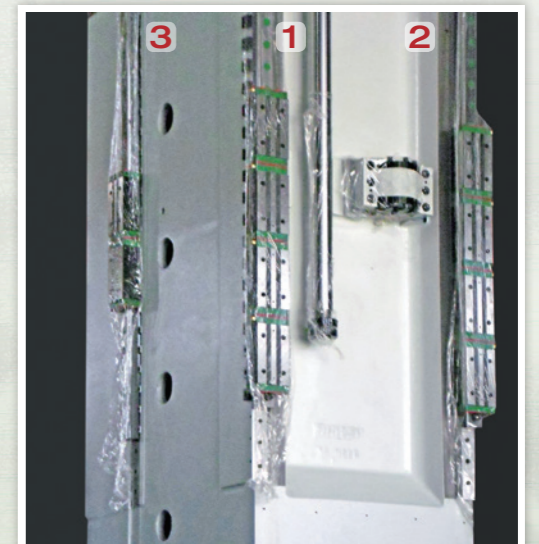
▲ Free position ATC



▲ Synchronous servo control



▲ Enlarge column base

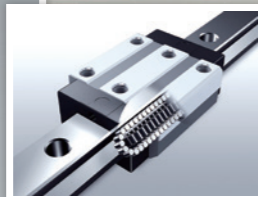


▲ Three linear guideways column

Structural Design (For FD-2852)



Rigid roller guide way



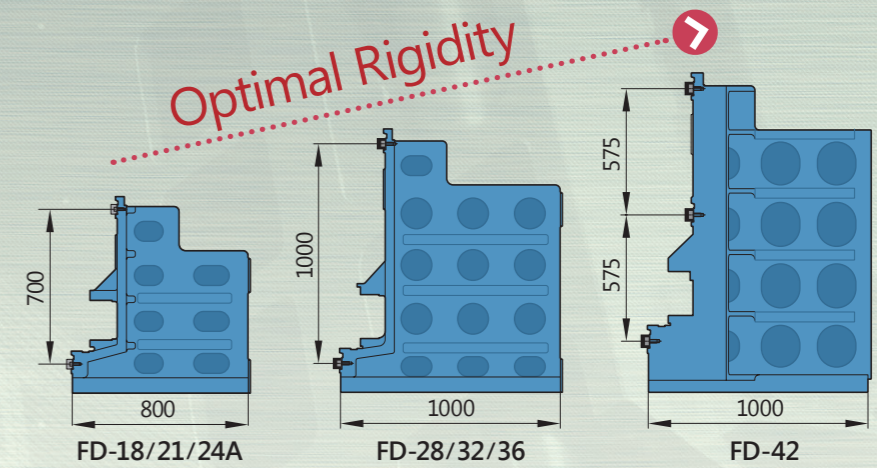
SADDLE

- 3 top / 4 bottom linear blocks
- Unity frame with reinforced ribs
- Stair type structural design

SPINDLE BOX (RAM)

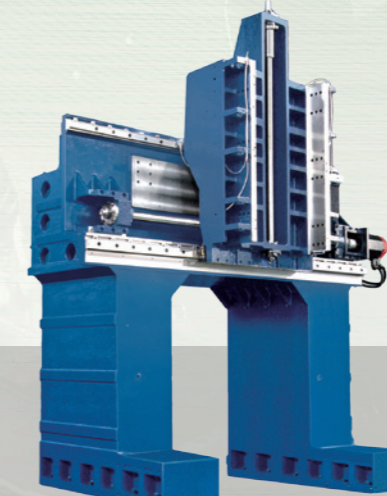
- Optimal design 400x450mm² (std) 550x550mm², 650x650mm² (opt)
- Ribs casting in key section of RAM
- Supported with RGH roller guide ways

Optimal Rigidity



CROSSBEAM

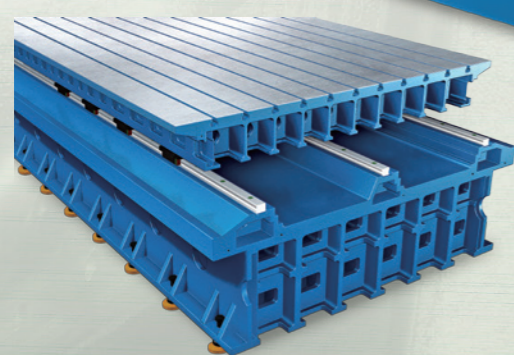
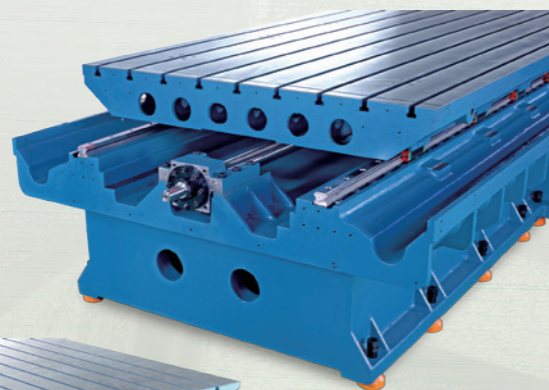
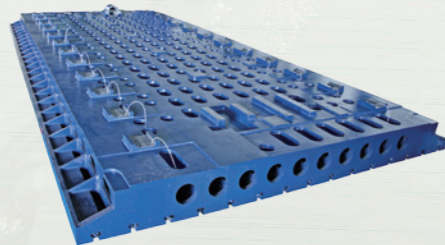
- Box in box unity cast-iron frame
- According to door width matching best crossbeam design



▲ FD-14 Series Crossbeam & Column Unity frame with reinforced ribs.

TABLE

- Double layer loop frame
- High rigid & heavy duty loading
- More linear blocks to ensure rigidity & accuracy

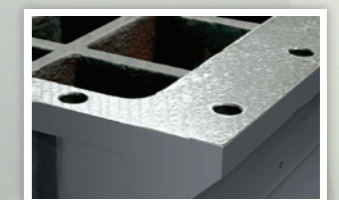


BASE

- Box-in-box unity cast-iron frame
- FD-28 ~ FD-42 three linear guide way base
- Interior loop ribs reinforcement

COLUMN

- Box in box unity cast-iron frame
- Hand scraped mounted surface
- Enlarge column for stability design



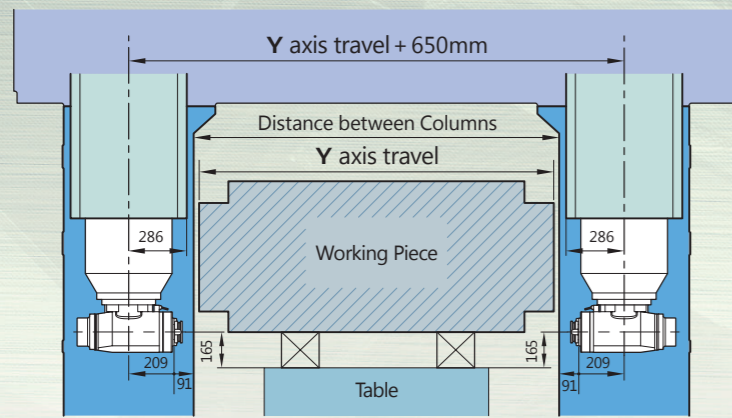
50% 50%

Enlarge Cutting Space

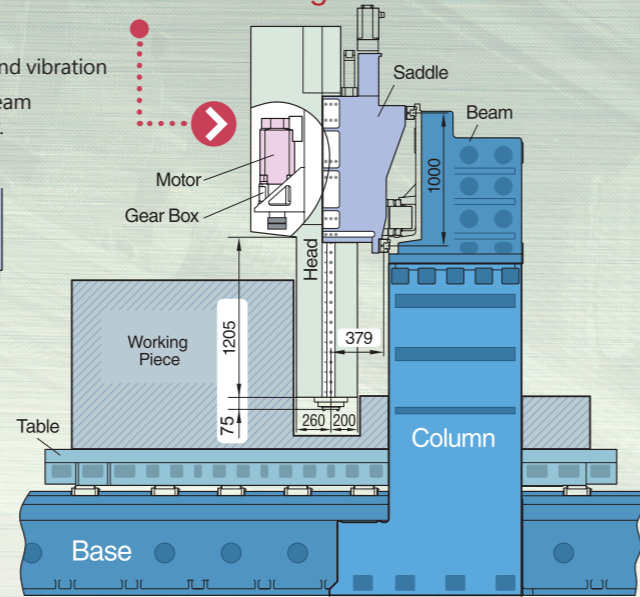
Spindle motor on Top RAM

- Work piece depth machining
- Isolates the motor effectively the heat source and vibration
- Spindle center position is closed to the cross beam to strength for heavy duty cutting and stability.

Optimal transmission design

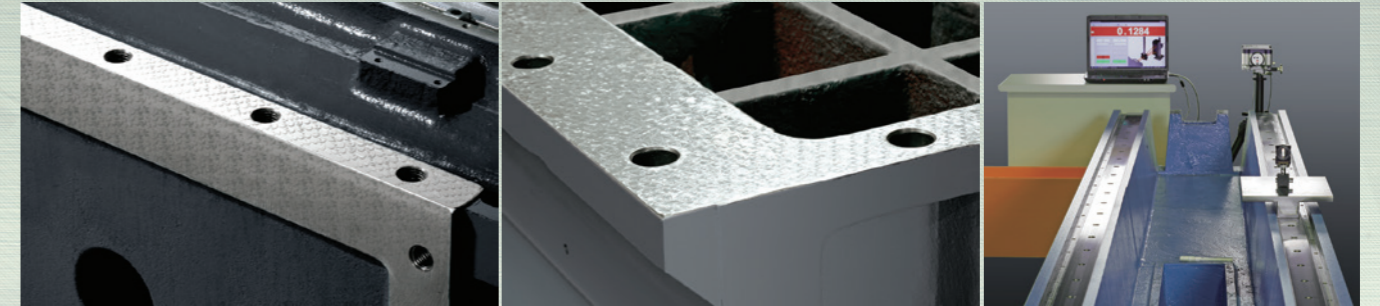


▲ Extend Y-travel for auto-5F cutting space



Enlarge column in base ▶ Extend 50%

Quality Assurance



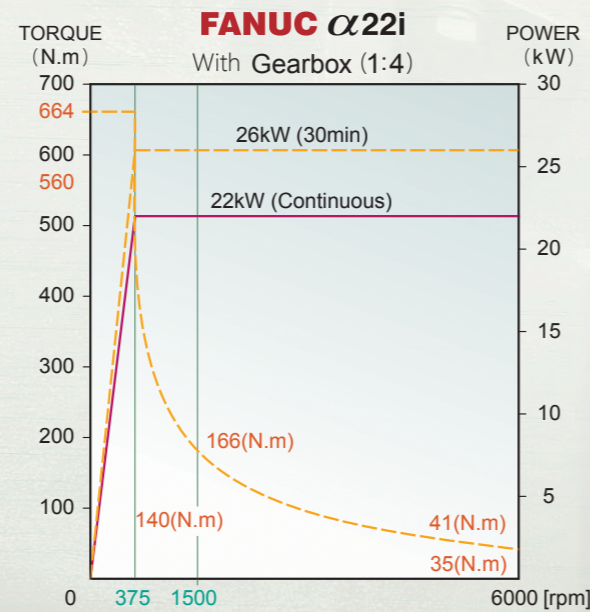
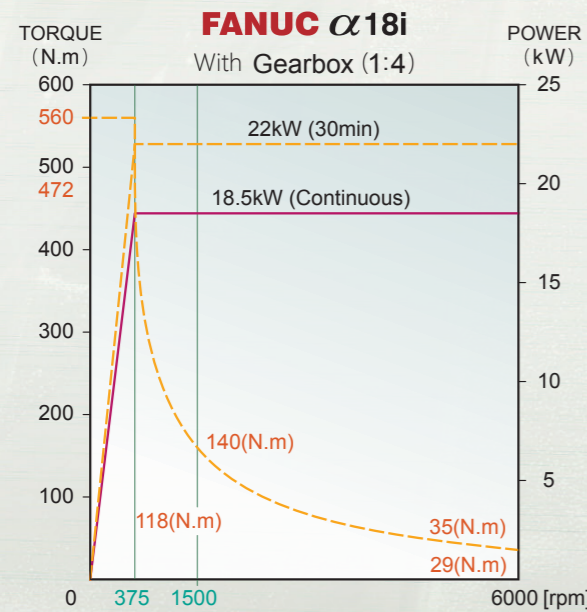
▲ All mounted surface (base-columns-crossbeam) made by precision hand-scraped.

Calibration by laser for straightness ▲ in vertical and horizontal plane

Special Head (Exchange Type)

Type	Automatic	Semi-Automatic	Manual
Head exchange	Auto (hydraulic)	Manual (8 bolts)	Manual (8 bolts)
Head indexed	Auto (5°)	Auto (5°)	Manual (5° / 15°)
Tool clamped	Booster	Booster	Bolt

Cutting Capability



Cutting Record (from FD-1832)



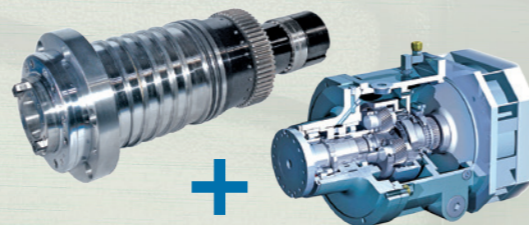
Face cutting S45C
Ø150mm, 350rpm, t=8mm
400mm/min, SP load 70%
X axis load 28%, RMS 12s



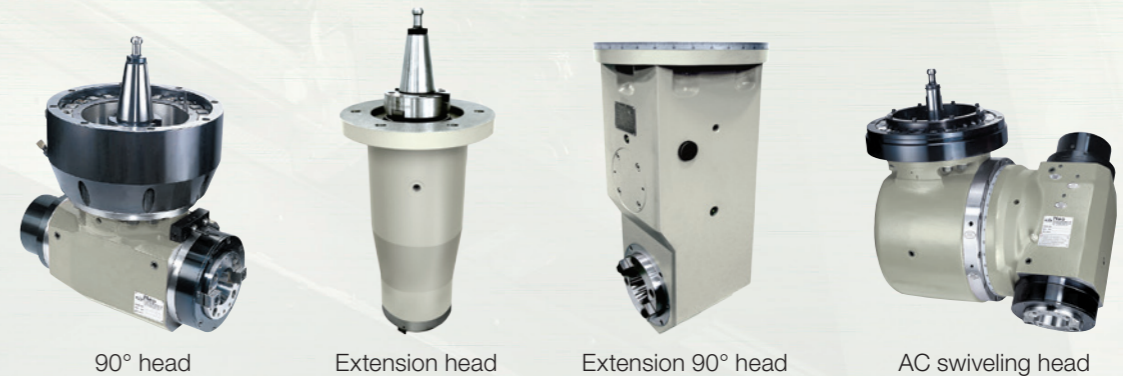
Drilling S45
Ø48mm, 1200rpm, h=100mm
30mm/min, Z axis load 80%,
tolerance +0.1mm

Optimal Efficiency Transmission

P4 level precision ball bearing is oil chilled to reduce thermal deformation.



Two speed ZF 2K 250 gearbox
Full enclosure, high performance.



Special Milling Head (Fixed Type)

Auto Head exChanger (AHC)



Full Auto-Special Milling Head

FD FIXED DOUBLE COLUMNS MACHINING CENTER

Item	Unit	FD-14 Series				FD-18 Series					FD-21 Series		
Model	FD-	1422	1427	1432	1822	1827	1832	1842	1852	2132	2142	2152	
Distance between columns (without splash guard)	mm	1400				1850					2150		
Table size	Length	2000	2500	3000	2000	2500	3000	4000	5000	3000	4000	5000	
	Width	1200				1500					1800		
Maximum Table Load	ton	8	9	10	12	13	15	18	20	15	18	20	
T-slot	Width x Pitch x NO	22 x 150 x 7				22 x 150 x 9					22 x 150 x 11		
Travel	X-axis	2200	2700	3200	2200	2700	3200	4200	5200	3200	4200	5200	
	Y-axis	1300				1800					2100		
	Z-axis	800				800 (Optional 1100)							
Spindle	Nose to table	100~900				200~1000 (200~1300)			100~900 (100~1200)		200~1000 (200~1300)		100~900 (100~1200)
	Center to column	380				430							
	Taper / Speed / Power	BT50-6,000-18.5/22kW											
feedrate	Cutting	5~12,000											
	X axis G00	24	22	22	24	22	20	18	15	20	18	15	
	Y/Z axis G00	24/20				20/15							
Accuracy (JIS 6338)	mm	Positioning ±0.015 / full travel ; Repeatability ±0.003											
ATC & tool magazine	Capacity / Dia	Cam type ATC 24pcs / Max. dia Ø110 (full tools) ; Ø200 (Adjacent pocket empty)											
	Max tool weight / Length	18kg / 350mm											
	Tool selection	Take shortest direction / M24 P3.0-45°											
Power / Pneumatic		40~50 KVA / 6.5 kg/cm ²											
Machine size	Length	6400	7400	8400	6400	7400	8400	11100	13100	8400	11100	13100	
	Width	3450				4550					4850		
	Height	4050				4570 (5470)							
Machine Weight (app.)	ton	20	22	25	25	28	32	38	43	33	38	43	

FD-24A Series			FD-28 Series				FD-32 Series				FD-36 Series			FD-42 Series		
2432A	2442A	2452A	2832	2842	2852	2860	3232	3242	3252	3260	3642	3652	3660	4242	4252	4260
2450			2850				3250				3650			4250		
3000	4000	5000	3000	4000	5000	6000	3000	4000	5000	6000	4000	5000	6000	4000	5000	6000
2000			2200				2600				3000					
15	18	20	18	18	20	22	18	18	20	22	20	22	24	20	22	24
22 x 150 x 13			28 x 180 x 11				28 x 200 x 13				28 x 200 x 15					
3200	4200	5200	3200	4200	5200	6000	3200	4200	5200	6000	4200	5200	6000	4200	5200	6000
2400			2800				3200				3600			4200		
800 (Optional 1100)			1100 (Optional 1400)													
100~900 (100~1200)			300~1400 (300~1700)													
430			430													
BT50-6,000-18.5/22kW			BT50-6,000-22/26kW													
5~12,000			5~10,000													
20	18	15	15	12	10	10	15	12	10	10	12	10	10	12	10	10
20/15			15/15						12/15							
Positioning ±0.015 / full travel ; Repeatability ±0.003																
Cam type ATC 24pcs			Chain type ATC 32pcs / Max. dia Ø125 (full tools) ; Ø220 (Adjacent pocket empty)													
18kg / 350mm			20kg / 400mm													
Take shortest direction / M24 P3.0-45°																
40~50 KVA / 6.5 kg/cm ²			50~60 KVA / 6.5 kg/cm ²													
8400	11100	13100	9400	11400	13400	15400	9400	11400	13400	15400	11400	13400	15400	11400	13400	15400
5150			6000				6400				6800			7400		
4570 (5470)			5500 (6400)													
35	42	45	47	52	57	62	50	55	60	65	58	63	68	63	68	73

FDW FIXED DOUBLE COLUMNS MACHINING CENTER W-type

Item	Unit	FDW-24 Series				FDW-28 Series				FDW-32 Series		
Model	FDW-	2432	2442	2452	2460	2832	2842	2852	2860	3242	3252	3260
Distance between columns (without splash guard)	mm	2450				2850				3250		
Table size	Length	3000	4000	5000	6000	3000	4000	5000	6000	4000	5000	6000
	Width	2000				2200				2600		
Maximum Table Load	ton	18	18	20	22	18	18	20	22	18	20	22
T-slot	Width x Pitch x NO	28 x 180 x 11				28 x 180 x 11				28 x 200 x 13		
Travel	X-axis	3200	4200	5200	6000	3200	4200	5200	6000	4200	5200	6000
	Y-axis	2400				2800				3200		
	Z-axis	800 (1100)										
	W-axis	1000 (1500) Every 250mm positing										
Spindle	Nose to table	100~1800 (2100)										
	Taper / Speed / Power	BT50 - 6,000 - 22 / 26kW										
feedrate	Cutting	5~8000										
	X/Y/Z/W axis G00	10 / 10 / 10 / 2										
Accuracy (JIS 6338)	mm	Positioning ±0.015 / full travel ; Repeatability ±0.003										
ATC & tool magazine	Capacity / Dia	32pcs / Max. dia Ø125 (full tools) ; Ø220 (Adjacent pocket empty)										
	Max tool weight / Length	20kg / 400mm										
	Tool selection	Free position take shortest direction / M24 P3.0-45°										
Power / Pneumatic		60~70 KVA / 6.5 kg/cm ²										
Machine size	Length	9400	11400	13400	15400	9400	11400	13400	15400	11400	13400	15400
	Width	7300				7700				8100		
	Height	7500 (8400)										
Machine Weight (app.)	ton	52	57	62	67	55	60	65	70	63	68	73

FDW-36 Series			FDW-42 Series		
3642	3652	3660	4242	4252	4260
3650			4250		
4000	5000	6000	4000	5000	6000
3000					
20	22	24	20	22	24
28 x 200 x 15					
4200	5200	6000	4200	5200	6000
3600			4200		
1100 (1400)					
1000 (1500/2000) Every 250mm positing					
100~2100 (2400)					
BT50 - 6,000 - 22 / 26kW					
5~8000					
8 / 8 / 10 / 1					
Rail Level accuracy 0.01 / 1000					
20kg / 400mm					
60~70 KVA / 6.5 kg/cm ²					
11400	13400	15400	11400	13400	15400
8500			9100		
8400 (9300)					
65	70	75	70	75	80

Standard Accessories	Optional Accessories
1. FANUC 0iMD + 10.4" LCD	1. Mitsubishi / Siemens / Heidenhain
2. Spindle cooler	2. High pressure coolant thru spindle (CTS)
3. Spindle air blast	3. Direct drive spindle (8000~15000rpm)
4. N2 Counter balance	4. Built-in Spindle (15000~24000rpm)
5. ZF 2K250 H/L gearbox	5. ZF 2K250 in-line gearbox
6. Independent auto lubrication system	6. 90° head (Auto, Semi, Manual)
7. Program end alarm lamp	7. Extend head (Auto, Manual)
8. Rigid tapping	8. AC swiveling head (Auto, Manual)
9. Electric cabinet heat exchanger	9. AHC system (for auto head)
10. USB/RS232/Inet interface	10. Toggle head stand (for semi/manual head)
11. Coolant system	11. Five face head (Fixed type)
12. Twin spiral type chip remover	12. Universal head (Fixed type, Manual)
13. Metal belt chip conveyor with cart	13. Y travel extend 650mm
14. Cam type ATC 24pcs (FD14~FD24A)	14. Transformer
15. Chain type ATC 32pcs (FD28~FD42, FDW)	15. X, Y, Z axis linear scale
16. Semi-enclosure splash guard (FD18~FD24A)	16. Tool length measurement
17. Open type splash guard (FD28~FD42, FDW)	17. Auto work piece measurement
18. ATC auto door	18. CNC rotary (index) table
19. Foot switch for tool away	19. Coolant thru tool holder device
20. Working lamp	20. Full enclosure splash guard
21. Leveling screw + foundation bolts	21. Oil skimmer
22. Tool kit & Operator's manual	22. Power 30/37 kW + ZF 2K300 (4500rpm)
23. Air/water cleaning equipment	23. Heavy duty RAM 550x550 (above FD-28)
24. W axis linear scales (2 pcs)	24. Heavy duty RAM 650x650 (above FD-42)

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