FEELER

ISO 9001
ISO 14001

CE

IT'S VERY WELL MADE IN TAIWAN

FTC-Series

Multi-Axis CNC Turning Center

Twin Spindle / Twin Turret · Twin Spindle / Single Turret

www.feeler.com

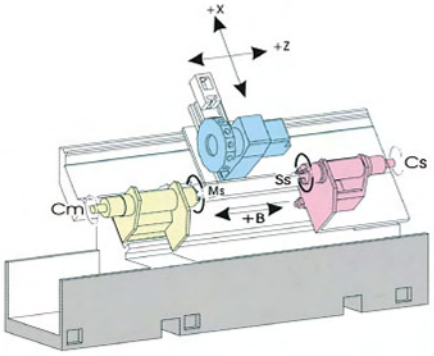
FAIR FRIEND GROUP

TWIN SPINDLE / SINGLE TURRET

FTC-450S
- Swing over bed ϕ600 mm.
- Max. turning diameter ϕ245 mm.
- Working length 260 mm.

FTC-550S
- Swing over bed ϕ650 mm.
- Max. turning diameter ϕ490 mm.
- Working length 500 mm.

FTC-580S
- Swing over bed ϕ650 mm.
- Max. turning diameter ϕ470 mm.
- Working length 460 mm.



TWIN SPINDLE
SINGLE TURRET

MODELS:
FTC-450S
FTC-550S
FTC-580S
Ms : Main Spindle
Ss : Sub-spindle
Cm : C axis / Main spindle
Cs : C axis / Sub spindle

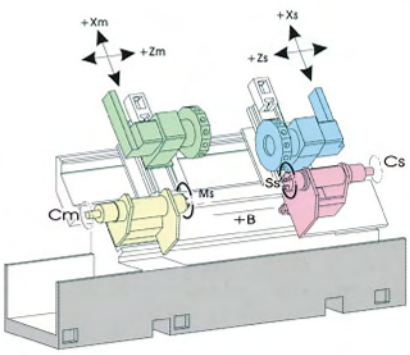
TWIN SPINDLE / TWIN TURRET

FTC-550TS

FTC-450TS
- Swing over bed ϕ620 mm.
- Max. turning diameter ϕ440 mm.
- Working length 310 mm.

FTC-550TS
- Swing over bed ϕ620 mm.
- Max. turning diameter ϕ440 mm.
- Working length 290 mm.

FTC-580TS
- Swing over bed ϕ620 mm.
- Max. turning diameter ϕ440 mm.
- Working length 270 mm.

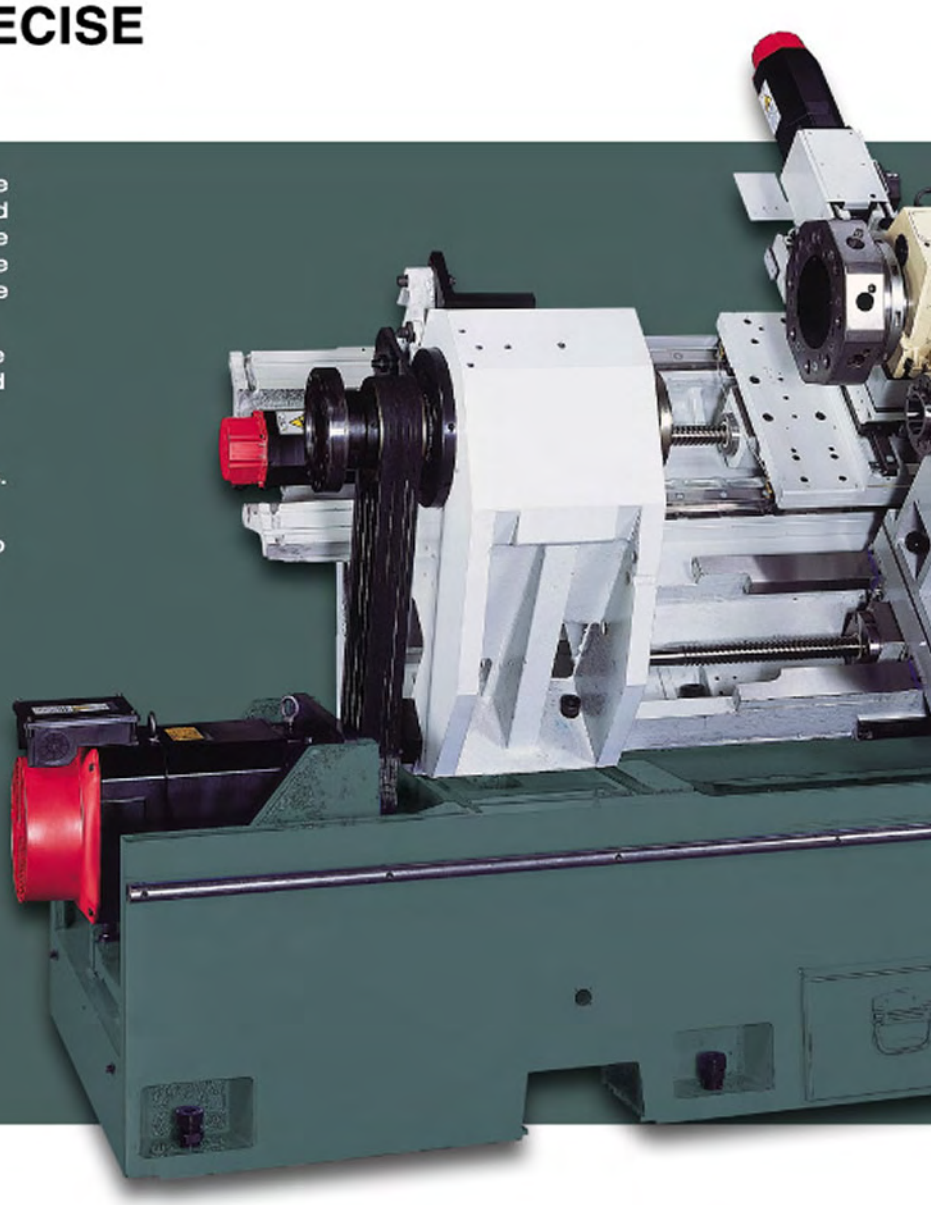


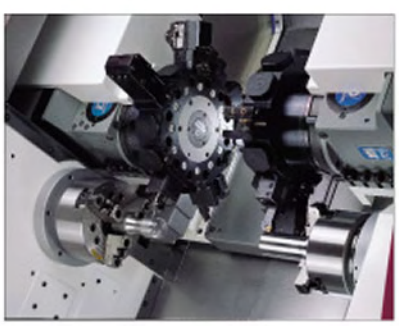
TWIN SPINDLE
TWIN TURRET

MODELS:
FTC-450TS
FTC-550TS
FTC-580TS
Ms : Main Spindle
Ss : Sub-spindle
Cm : C axis / Main spindle
Cs : C axis / Sub spindle

RUGGED AND PRECISE CONSTRUCTION

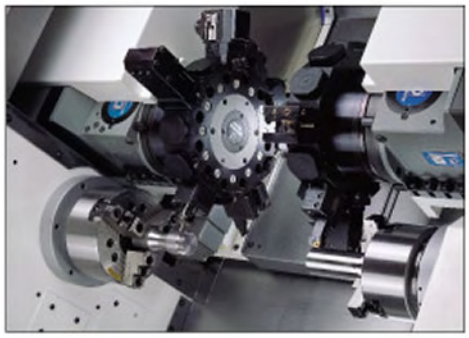
- The major machine parts, such as the base, saddle, headstock, slide and sub spindle are made of Meehanite cast iron and tempered to relieve stress thereby ensuring lifetime accuracy.
- High performance servomotors are directly coupled to the pre-tensioned ball screws.
- Box guideways on the B axis. Linear guideways on the X and Z axes.
- 45-Degree Slant Bed construction features efficient chip removal and firm support.





C-AXIS (OPTIONAL)

- Employs Duplomatic SMBR radial, VDI, 12-position power turret with FANUC servo motor. (Rotating tool holder and tools not included.)
- High indexing resolution of 0.001 for precision contour / index control.
- Hydraulic disk brake locking provides maximum stability during milling and contouring.

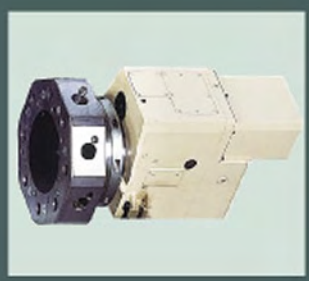


TWIN SPINDLE TWIN TURRET

- The combination of the main spindle and sub-spindle enables the entire workpiece to be machined at one time.
- Twin turrets consists of two 12-position servo turrets.

TD AXIS WITH TURRET (Duplomatic)

- TD-axis & turret with a servo motor turret. The unit allows front and back machining with fast tool change.
- The turret disk and TD axis are driven by a motor.



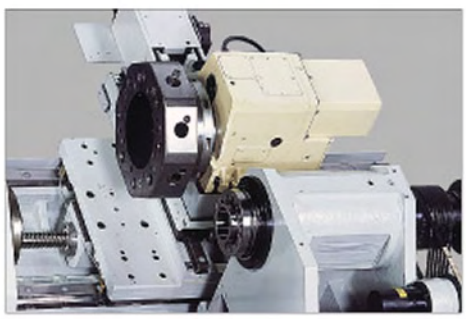
FAST TURRET INDEXING

- The 12-position turret features bi-directional random tool selection.
- Fast indexing time of 0.6 seconds.
- The turret accommodates 20 x 20 mm O.D. tooling and 32 mm I.D. tooling.

PRECISION SPINDLE

- The cartridge type is conveniently removed allowing for convenient servicing.
- The spindle runs on class P4 precision bearings providing high axial thrust capability and superior radial stability. This ensures high precision during heavy duty turning.

RUGGED AND PRECISE CONSTRUCTION



TWIN SPINDLE / SINGLE TURRET

- The combination of the main spindle and sub-spindle enable the entire workpiece to be machined at one time.
- A single 12-position hydraulic turret. (LS-240)

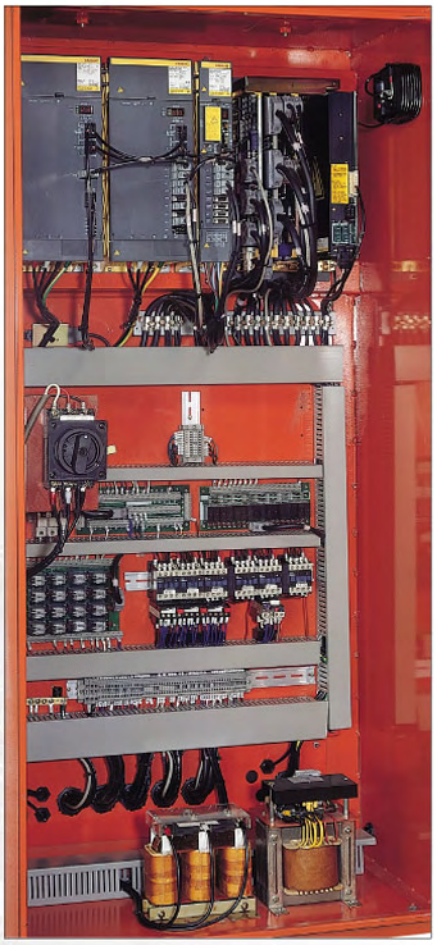
RUGGED AND PRECISE CONSTRUCTION

Advanced Design Concept Ensures User-Friendly Operations!

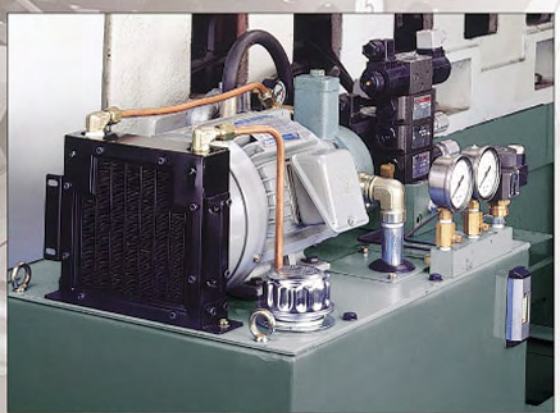
FANUC CNC

Choice of SIEMENS or FANUC CNC Control

SIEMENS CNC

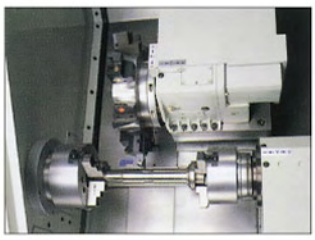


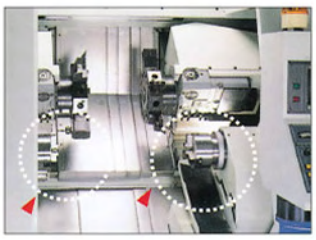
ELECTRICAL CABINET



HYDRAULIC POWER UNIT

- The hydraulic power unit employs high quality components for long service life and stable motions.
- The unit delivers high pressure to the turret, CS Brake and 3-jaw chuck.

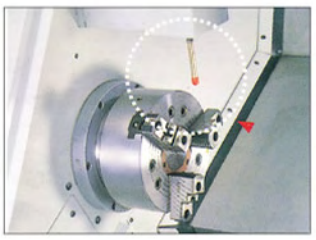


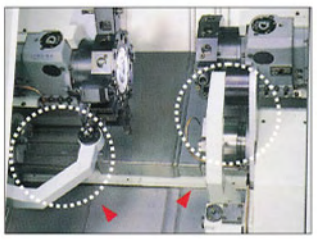


Parts Cut-off Detector

SYNCHRONIZED MACHINING ON TWO SPINDLES

The main spindle and the sub-spindle run synchronizely permitting workpiece machining at one time.

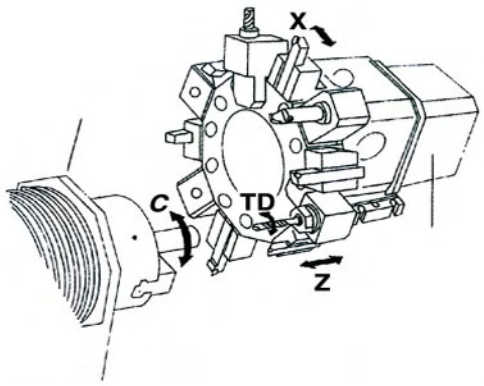


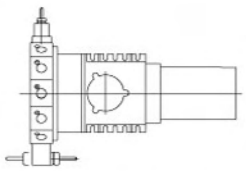


One cycle can finish front side & back machining / parts catcher

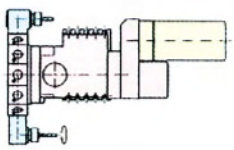
MAIN SPINDLE TOOL SETTER AND SUB-SPINDLE TOOL SETTER

Designed for reducing tool set-up time, the tool setter automatically detects tool wear condition.





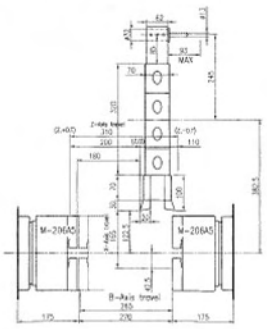
Radial VDI Turret Front and Back Machining
(Hydraulic Turret for S Series)
(Servo Turret for S Series)



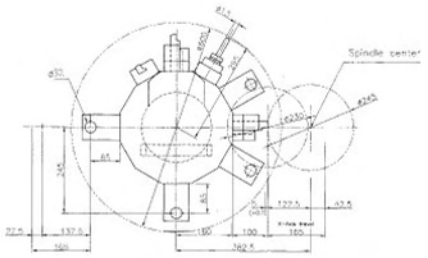
Radial Driven Tool Systerm
VDI Servo Turret
Front and Back Machining
(Opt. for S.TS Series)

FTC-450S

VDI Turret W/C-Axis Moving Range

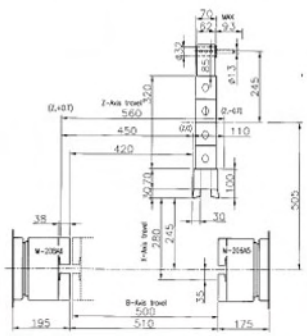


Relation Between Tool and Work Dia.(VDI Tool)

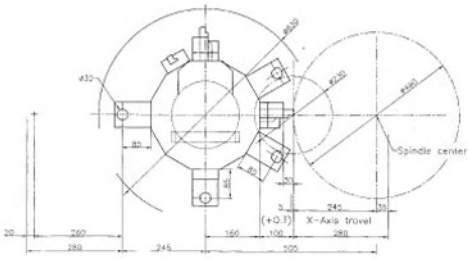


FTC-450TS

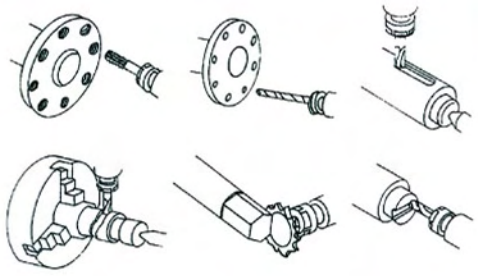
VDI Turret W/C-Axis Moving Range



Relation Between Tool and Work Dia.(VDI Tool)



C-Axis Process Drawing



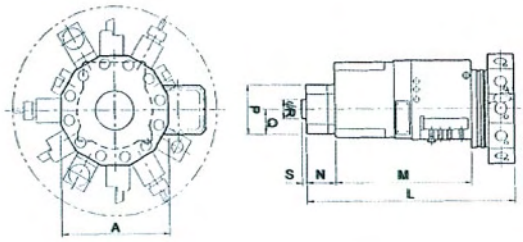
Specifications

Model	FTC-450S / 550S	FTC-580S
C-Axis Precision	0.001	
Power Turret	Type 16	Type 20
Max. Speed	4,000 rpm	4,000 rpm
Drilling	ϕ1-13 mm	ϕ2.5-20 mm
Milling	ϕ1-13 mm	ϕ2.5-20 mm
Taper	M1-M10	M3-M12
Tool Shank Size	ϕ32 mm	ϕ40 mm
Motor	AC 3.0 kW	AC 3.0 kW

Direct Mount

No.	Tool / Model	FTC-450S / 550S	FTC-580S
1	Bore	ϕ8. ϕ10. ϕ12. ϕ16. ϕ20. ϕ25. ϕ32.	ϕ8. ϕ10. ϕ12. ϕ16. ϕ20. ϕ25. ϕ32. ϕ40.
2	Shank Dia.	□20(25 opt.)	□25
3	End	□20(25 opt.)	□25
4	Cut	20	25
5	Tap	ϕ16	ϕ20
6	Drill	MT#2,#3	MT#2,#3,#4

VDI for reference only

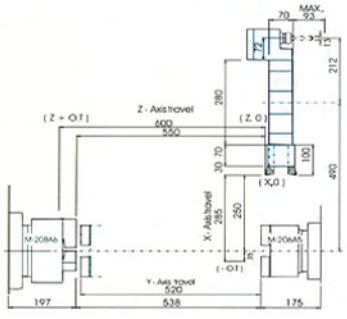


VDI

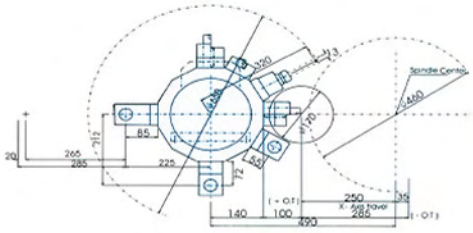
No.	Tool / Model	FTC-450S / 550S	FTC-580S
1	Bore	ϕ8. ϕ10. ϕ12. ϕ16. ϕ20. ϕ25. ϕ32.	ϕ8. ϕ10. ϕ12. ϕ16. ϕ20. ϕ25. ϕ32. ϕ40.
2	Shank Dia.	□20(25 opt.)	□25
3	End	□20(25 opt.)	□25
4	Cut	20	25
5	Tap	ϕ16	ϕ20
6	Drill	MT#1,#2,#3	MT#2,#3,#4

FTC-550S FTC-580S

VDI Turret W/C-Axis Moving Range

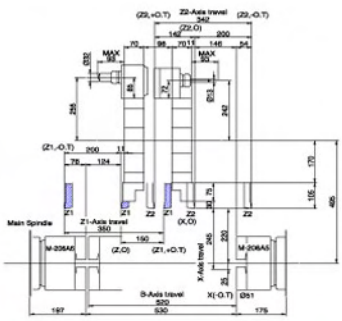


Relation Between Tool and Work Dia.(VDI Tool)



FTC-550TS FTC-580TS

VDI Turret W/C-Axis Moving Range



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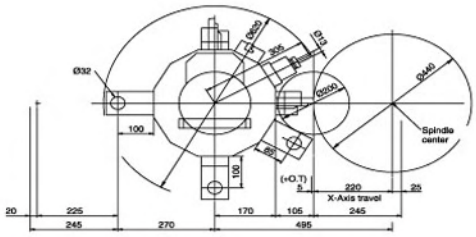
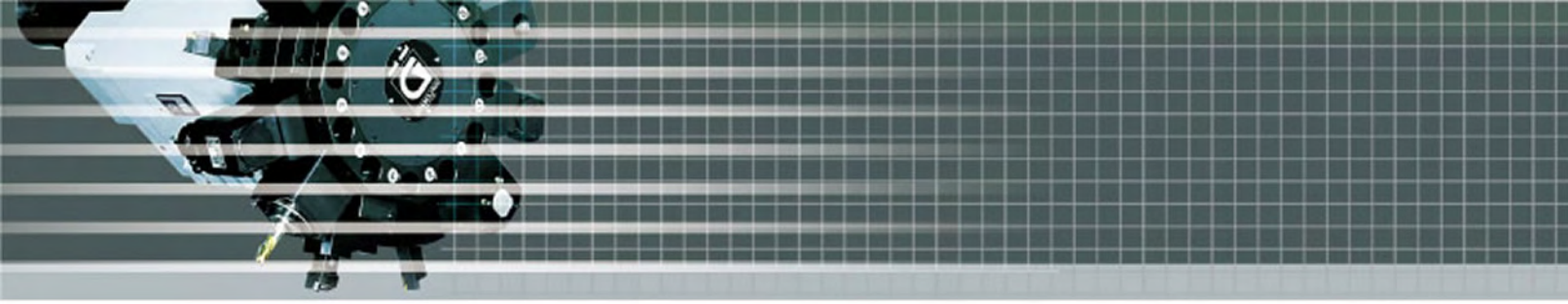


RUGGED AND PRECISE CONSTRUCTION



Specifications:

	MODEL	FTC-450TS		FTC-550TS		FTC-580TS	
Capacity	No. of Axes	STD:5-Axis OPT:7-Axis (C-Axis)		STD:5-Axis OPT:7-Axis (C-Axis)		STD:5-Axis OPT:7-Axis (C-Axis)	
	Swing Over Bed	ϕ620mm (24.41")		ϕ620mm (24.41")		ϕ620mm (24.41")	
	Max. Turning Dia.	ϕ440mm (17.32")		ϕ440mm (17.32")		ϕ440mm (17.32")	
	Working Length	310mm (12.20")		290mm (11.41")		270mm (10.62")	
Main and Sub. Spindle	Spindle Nose Bar Internal Taper	L:ASA A2-5 R:ASA A2-5		L:ASA A2-6 R:ASA A2-5		L:ASA A2-6 R:ASA A2-6	
	Spindle Bore	ϕ56mm (2.2")	ϕ56mm (2.2")	ϕ61mm (2.4")	ϕ56mm (2.2")	ϕ77mm (3")	ϕ61mm (2.4")
	Bar Capacity	ϕ45mm (1.7")	ϕ45mm (1.7")	ϕ51mm (2")	ϕ45mm (1.7")	ϕ65mm (2.6")	ϕ51mm (2")
	Range of Spindle Speed	60-6000rpm	60-6000rpm	60-4200rpm	60-6000rpm	60-4200rpm	60-4200rpm
	Living Tools Speed	25-4500rpm		25-4000rpm		25-4000rpm	
	No. of Spindle Speed	Infinitely variable		Infinitely variable		Infinitely variable	
Chuck	Hydraulic Chuck	ϕ169mm (6")	ϕ169mm (6")	ϕ210mm (8")	ϕ169mm (6")	ϕ254mm (10")	ϕ210mm (8")
Turret (L/R)	Tool Station (Random)	Servo V12 160x2		Servo V12 160x2		Servo V12 160x2	
	O.D. Tooling	20x20mm		20x20mm		20x20mm	
	I.D. Tooling	ϕ32mm (1.26")		ϕ32mm (1.26")		ϕ32mm (1.26")	
Cross Slide (X Axis) and Carriage (Z-Axis, B-Axis)	X-Axis Travel	245mm (9.64")		245mm (9.64")		245mm (9.64")	
	Z-Axis Travel	350mm (13.97")		350mm (13.97")		350mm (13.97")	
	B-Axis Travel	520mm (20.47")		500mm (19.68")		500mm (19.68")	
	Rapid Traverse Speed (X-Axis)	20m/min (787ipm)		20m/min (787ipm)		20m/min (787ipm)	
	Rapid Traverse Speed (Z-Axis)	20m/min (787ipm)		20m/min (787ipm)		20m/min (787ipm)	
	Rapid Traverse Speed (B-Axis)	20m/min (787ipm)		20m/min (787ipm)		20m/min (787ipm)	
	Cutting Feed Rate (X and Z Axis)	0.001-500mm/rev.		0.001-500mm/rev.		0.001-500mm/rev.	
Motor	Main Spindle (Continuous)	α p12i 1500 / 6000 rpm	5.5kw (7.5HP)	α P18i 750 / 6000 rpm	9kw (12HP)	α P22i1500 / 6000 rpm	11kw (15HP)
	Main Spindle (30 min.Rating)		7.5kw (10HP)		11kw (15HP)		15kw (20HP)
	Sub Spindle (Continuous)	α 6i 1500 / 6000 rpm	5.5kw (7.5HP)	α 6i 1500 / 6000 rpm	5.5kw (7.5HP)	α 8i 1500 / 6000 rpm	7.5kw (10HP)
	Sub Spindle (30 min.Rating)		7.5kw (10HP)		7.5kw (10HP)		11kw (15HP)
	Xm, Xs-Axis	α 8Bi/3000 1.6kw (2.15HP)x2		α 8Bi/3000 1.6kw (2.15HP)x2		α 12Bi/3000 3kw (4HP)x2	
	Zm, Zs-Axis	α 8i/3000 1.6kw (2.15HP)x2		α 8i/3000 1.6kw (2.15HP)x2		α 8i/3000 1.6kw (2.15HP)x2	
	B-axis	α 8i/3000 1.6kw (2.15HP)		α 8i/3000 1.6kw (2.15HP)		α 8i/3000 1.6kw (2.15HP)	
	Hydraulic Pump	1.5kw (2HP)		1.5kw (2HP)		1.5kw (2HP)	
	Coolant Pump	750w (1HP)x2		750w (1HP)x2		750w (1HP)x2	
Tank Capacity	Hydraulic Tank	60 Liter		60 Liter		60 Liter	
	Coolant Tank	100 Liter		100 Liter		100 Liter	
Measurements	Floor Space (L x W)	4150 x 2100mm		4150 x 2100mm		4150 x 2100mm	
	Height	2350mm		2350mm		2350mm	
	Weight (Nw / GW)	6080kgf / 6700kgf		6130kgf / 6750kgf		6230kgf / 6850kgf	

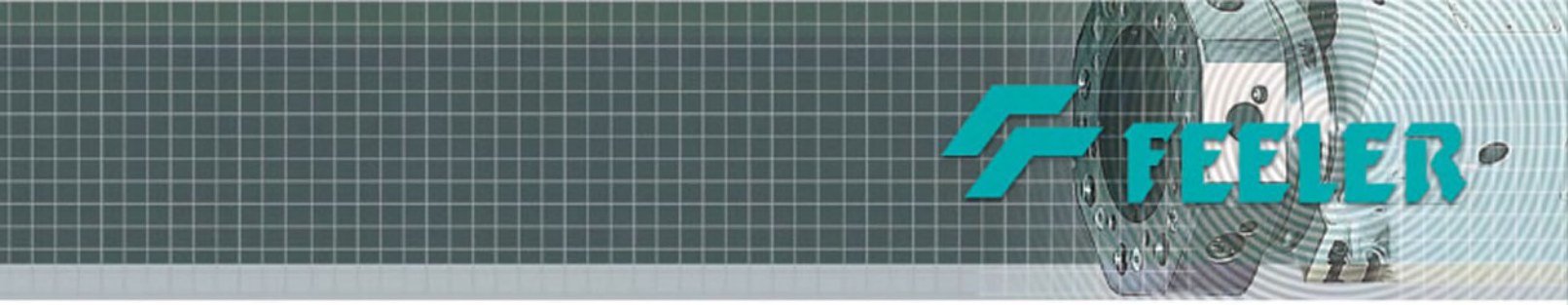
* Specifications are subject to change without prior notice.

Standard Accessories:

1. High Pressure Cooling System (3 Bar)
2. 100 Liter Capacity Cooling Tank
3. Servo Turret 12-Position
4. Auto Lubrication System
5. Tool Kit
6. Work Light
7. Tricolor Alarm Light
8. Hydraulic Unit
9. Heat Exchanger for Electric Cabinet
10. Chip Conveyor and Bucket

Optional Accessories:

1. C.E. Electric Control
2. Auto Tool Setter Measurement
3. Manual Tool Setter Measurement
4. C-Axis Contour Capability
   a. Duplomatic SMBR-16 Radial, VDI 30, 12-Position Power Turret
   b. High Resolution Magnetic Pulse Coder
   c. Hydraulic Disk Brake for Locking and Stabilization
5. Main Transformer
6. Safety Door Interlocker
7. Auto Parts Catcher
8. Prevent Crash Install of Each Axes (Safety Equipment)
9. Bar Feed Interface
10. Parts Cut off Detector



Specifications:

	MODEL	FTC-450S		FTC-550S		FTC-580S	
Capacity	No. of Axes	STD:3-Axis OPT:5-Axis (C-Axis)		STD:3-Axis OPT:5-Axis (C-Axis)		STD:3-Axis OPT:5-Axis (C-Axis)	
	Swing Over Bed	φ600mm (23.62")		φ650mm (25.59")		φ650mm (25.59")	
	Max. Turning Dia.	φ245mm (9.64")		φ490mm (19.29")		φ470mm (18.5")	
	Working Length	260mm (10.23")		500mm (19.68")		470mm (18.5")	
Main and Sub. Spindle	Spindle Nose Bar Internal Taper	L:ASA A2-5 R:ASA A2-5		L:ASA A2-6 R:ASA A2-5		L:ASA A2-8 R:ASA A2-6	
	Spindle Bore	φ56mm (2.2")	φ56mm (2.2")	φ61mm (2.4")	φ56mm (2.2")	φ90mm (3.54")	φ61mm (2.4")
	Bar Capacity	φ45mm (1.7")	φ45mm (1.7")	φ51mm (2")	φ45mm (1.7")	φ77mm (3")	φ51mm (2")
	Range of Spindle Speed	60-6000rpm	60-6000rpm	45-4200rpm	60-6000rpm	35-3500rpm	42-4200rpm
	Living Tools Speed	OPT:25-4000rpm		25-4000rpm		25-4000rpm	
	No. of Spindle Speed	Infinitely variable		Infinitely variable		Infinitely variable	
Chuck	Hydraulic Chuck	φ169mm (6")	φ169mm (6")	φ210mm (8")	φ169mm (6")	φ254mm (10")	φ210mm (8")
Turret	Tool Station (Random)	STD:Hyd LS-200-12T OPT:Servo LS-200-12T		STD:Hyd LS-240-12T OPT:Servo LS-240-12T		STD:Hyd LS-240-12T OPT:Servo LS-240-12T	
	O.D. Tooling	20x20mm		20x20mm		25x25mm	
	I.D. Tooling	φ32mm (1.26")		φ32mm (1.26")		φ40mm (1.57")	
Cross Slide (X Axis) and Carriage (Z-Axis, B-Axis)	X-Axis Travel	165mm (6.5")		280mm (11.02")		280mm (11.02")	
	Z-Axis Travel	310mm (12.2")		560mm (22.05")		540mm (21.26")	
	B-Axis Travel	265mm (10.43")		500mm (19.68")		470mm (18.5")	
	Rapid Traverse Speed (X-Axis)	30m/min (1180ipm)		30m/min (1180ipm)		30m/min (1180ipm)	
	Rapid Traverse Speed (Z-Axis)	30m/min (1180ipm)		30m/min (1180ipm)		30m/min (1180ipm)	
	Rapid Traverse Speed (B-Axis)	20m/min (787ipm)		20m/min (787ipm)		20m/min (787ipm)	
	Cutting Feed Rate (X and Z Axis)	0.001-500mm/rev.		0.001-500mm/rev.		0.001-500mm/rev.	
Motor	Main Spindle (Continuous)	α P12i 1500-6000 rpm	5.5kw (7.5HP)	α P18i 1500-6000 rpm	9kw (12HP)	α P22i 750-6000 rpm	11kw (15HP)
	Main Spindle (30 min.Rating)		7.5kw (10HP)		11kw (5HP)		15kw (20HP)
	Sub Spindle (Continuous)	α 6i 1500-6000 rpm	5.5kw (7.5HP)	α 6i 1500-6000 rpm	5.5kw (7.5HP)	α 8i 1500-6000 rpm	7.5kw (10HP)
	Sub Spindle (30 min.Rating)		7.5kw (10HP)		7.5kw (10HP)		11kw (15HP)
	X-Axis	α 8Bi/3000 1.6kw (2.15HP)		α 8Bi/3000 1.6kw (2.15HP)		α 12Bi/3000 3.0kw (4HP)	
	Z-Axis	α 8i/3000 1.6kw (2.15HP)		α 8i/3000 1.6kw (2.15HP)		α 12i/3000 3.0kw (4HP)	
	B-axis	α 8i/3000 1.6kw (2.15HP)		α 8i/3000 1.6kw (2.15HP)		α 8i/3000 1.6kw (2.15HP)	
	Hydraulic Pump	1.5kw (2HP)		1.5kw (2HP)		1.5kw (2HP)	
	Coolant Pump	750w (1HP)		750w (1HP)		750w (1HP)	
Tank Capacity	Hydraulic Tank	60 Liter		60 Liter		60 Liter	
	Coolant Tank	100 Liter		100 Liter		100 Liter	
Measurements	Floor Space (L x W)	3750 x 2000mm		4150 x 2100mm		4150 x 2100mm	
	Height	2000mm		2100mm		2100mm	
	Weight (Nw / GW)	4550kg / 5470kg		5210kg / 6600kg		6080kg / 6700kg	

* Specifications are subject to change without prior notice.

Standard Accessories:

1. High Pressure Cooling System (3 Bar)
2. 100 Liter Capacity Cooling Tank
3. Hydraulic Turret 12-Position
4. Auto Lubrication System
5. Tool Kit
6. Work Light
7. Triocolor Alarm Light
8. Hydraulic Unit
9. Heat Exchanger for Electric Cabinet
10. Chip Conveyor and Bucket

Optional Accessories:

1. C. E. Electric Control
2. Auto Tool Setter Measurement
3. Manual Tool Setter Measurement
4. C-axis Contour Capability
   a. Duplomatic SMBR Radial, VDI, 12-Position Power Turret
   b. High Resolution Magnetic Pulse Coder
   c. Hydraulic Disk Brake for Locking and Stabilization
5. Main Transformer
6. Door Interlock
7. Auto Parts Catcher
8. Prevent Crash Install of Each Axis (Safety Equipment)
9. Bar Feed Interface
10. Parts Cut off Detector
11. Servo Turret

FAIR FRIEND GROUP

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