



HIGH SPEED VERTICAL MACHINING CENTER

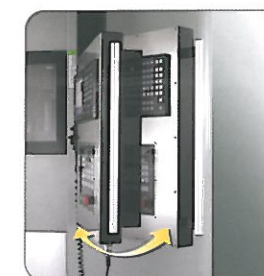
FMV-860 / 1020 / 1100 / 1250 / 1400



THE LEADER IN QUALITY AND RELIABILITY
~SINCE 1973~

CONTROL PANEL

- The control panel meets the safety requirement and rotates easily for operation.
- The automatic diagnosis function displays the malfunction on screen for quick trouble shooting.
- The portable MPG is optional for easing workpiece set-up.
- The touch switch, diagram and text on screen make the operation very convenient.



HEIDENHAIN iTNC530



FANUC 18i-MB



MITSUBISHI 720 / 730



SELCA 4045PD/4060D



SIEMENS 840D

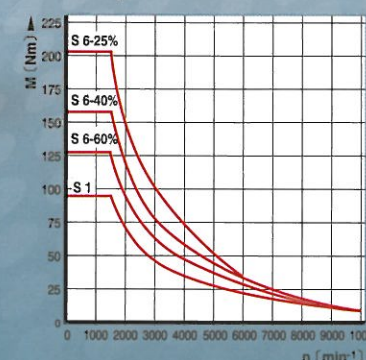


ANILAM 6000i

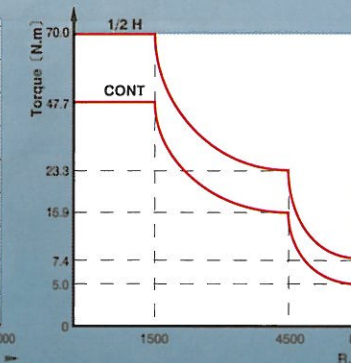


FARGO 8055/8070 CNC

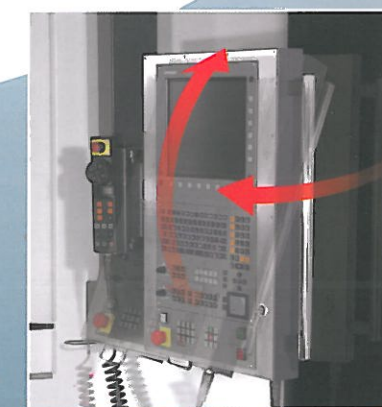
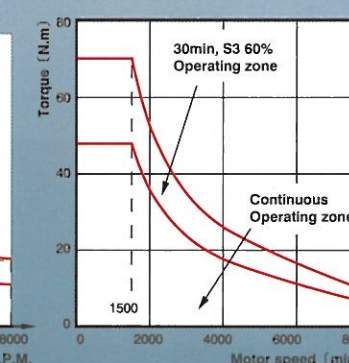
HEIDENHAIN QAN 260M SERIES
Torque characteristic curve



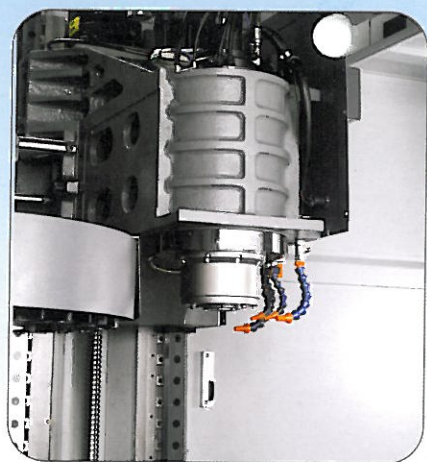
MISTUBISHI SJ-V11 SERIES



FANUC α SERIES



4-WAY SWIVELING
CONTROL BOX



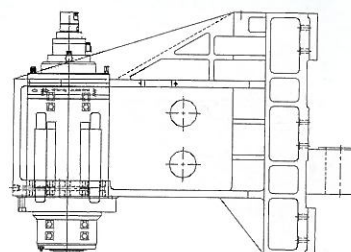
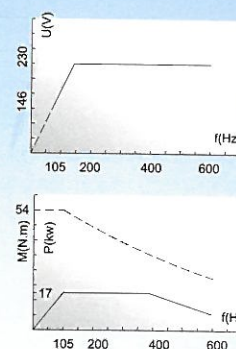
● BUILT-IN SPINDLE MACHINE HEAD

The features are powerful motor, high RPM, high accuracy and the roller linear way with 6 blocks, This unique design optimizes the precision of cutting.

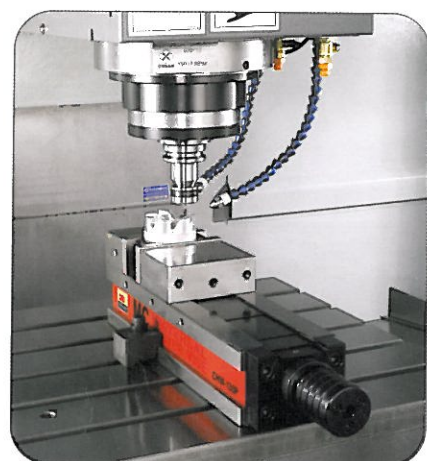


● SPINDLE HEAD

- Continuous output power: S1 17 kw
- Continuous torque: T(S1) 56.4
- Short-time output power: S6-60% 20.5 kw
- Short-time torque T(S6)68 Nm



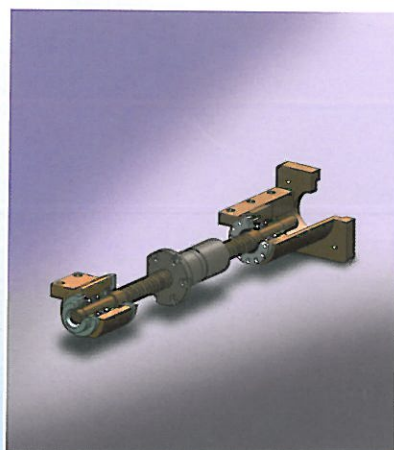
● BUILT-IN SPINDLE HEAD LAY-OUT



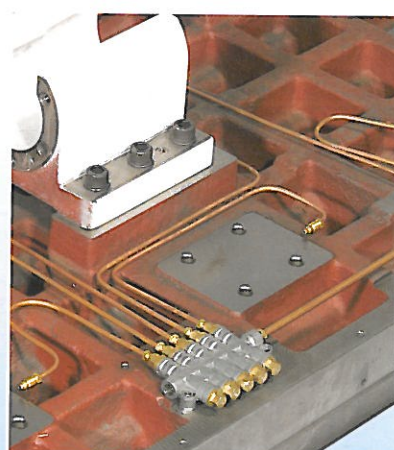
Material: **NAK 80**

Machining programs: **Fan Mold**

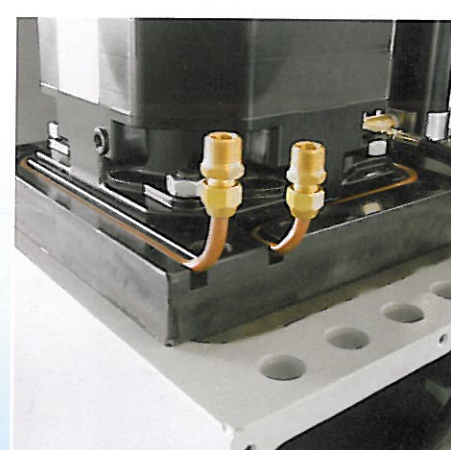
Tool	RPM	mm/min	Machining Time
Ø 10R2	4800	F3000	32 min
Ø 6R3	9000	F3000	38 min
Ø 4R2	15000	F2500	38 min



● ENHANCED SCREW PRETENSION DESUGN



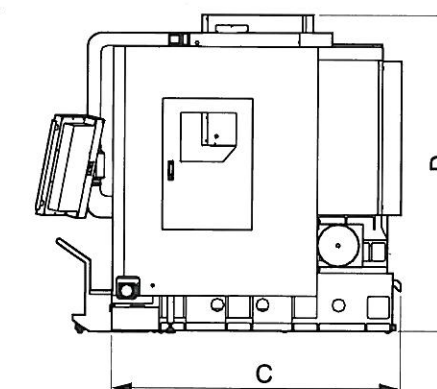
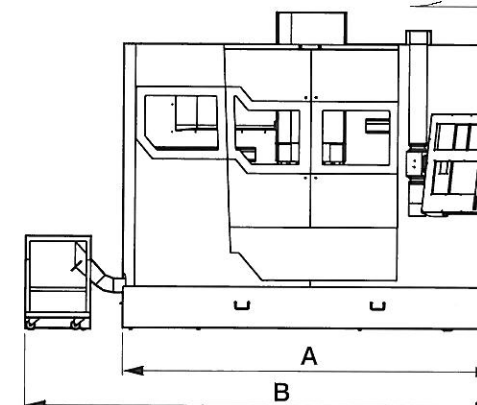
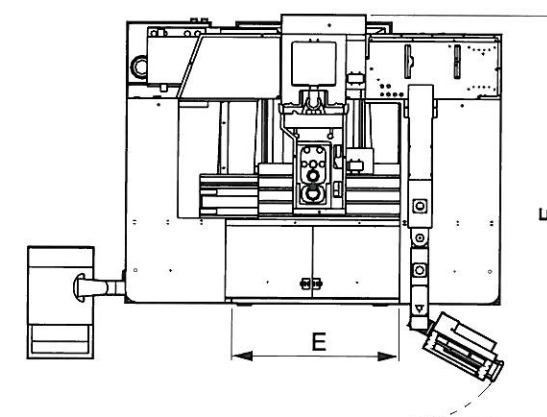
● RESERVOIR-TYPE LUBRICATOR BRONZE TUBE OIL CIRCUIT



● SPINDLE MOTOR COOLING DEVICE

MODEL	A	B	C	D	E	F
FMV-860	2200 (102.36")	2810 (132.28")	2650 (104.33")	Mini : 2340 (92.13") Max : 2980 (117.32")	900 (35.43")	3570 (140.55")
FMV-1020	2900 (114.17")	3660 (144.09")	2240 (88.19")	Mini : 2340 (92.13") Max : 2980 (117.32")	1100 (43.31")	3160 (124.4")
FMV-1100	2900 (114.17")	3660 (144.09")	2240 (88.19")	Mini : 2340 (92.13") Max : 2980 (117.32")	1100 (43.31")	3160 (124.4")
FMV-1250	3200 (125.98")	3960 (155.91")	2240 (88.19")	Mini : 2340 (92.13") Max : 2980 (117.32")	1300 (51.18")	3160 (124.4")
FMV-1400	3600 (141.73")	4360 (171.65")	2240 (88.19")	Mini : 2340 (92.13") Max : 2980 (117.32")	1500 (59.06")	3160 (124.4")

DIMENSIONAL DRAWING



STAND ACCESSORIES

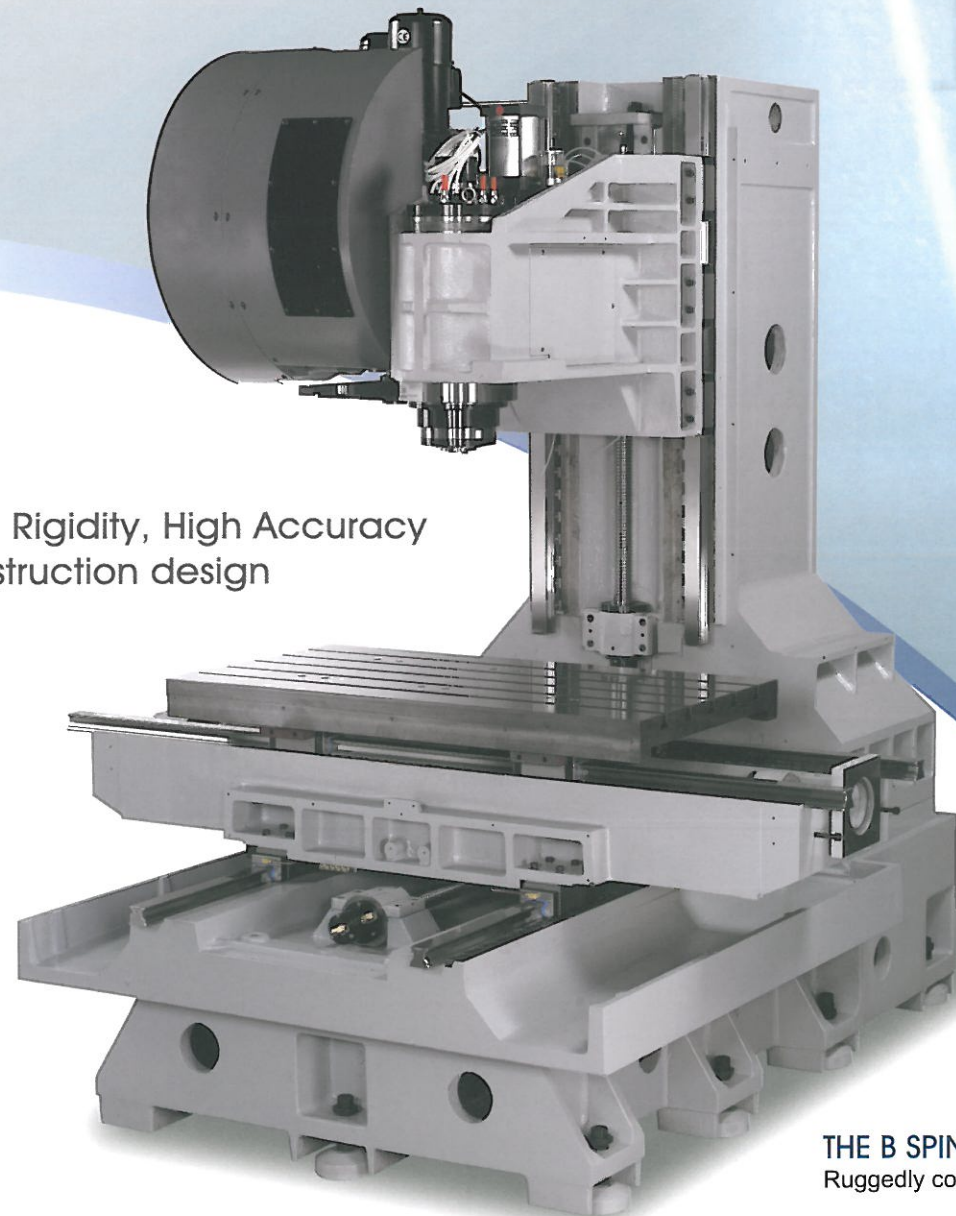
- Arm type automatic tool changer (24 tools)
- Fully enclosed guard
- Swiveling control box
- Work light and alarm light
- Volumetric type automatic lubricator
- Coolant and chip flushing system
- Auto power off
- Rigid tapping
- Tool box
- Leveling screws & blocks
- Operation manual
- Mechanical oil coolant separator

OPTIONAL ACCESSORIES

- Air gun
- Coolant gun
- Coolant through tool holder
- Coolant through spindle (CTS)
- Transformer
- Chip conveyor
- Linear scale
- CNC rotary table
- Automatic tool probe
- ZF gearbox
- Spin window

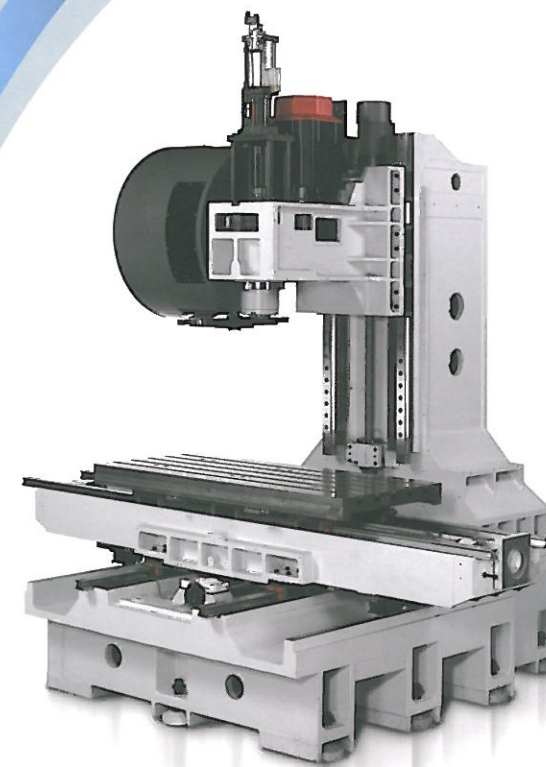
High Rigidity, High Speed transmission system

- The major construction parts are based on mechanic cast iron. They are stable and precision-proved in structure.
- The enhanced ribs in major construction parts provide the super rigidity for heavy duty cutting or for high speed cutting.
- The linear guide way is applied in X, Y and Z axis. It is free from load deformation. High speed feedrate and repeatability accuracy are guaranteed.
- The reasonable length proportion is designed in between spindle center to rail and supported span at spindle head.
- Wide base, box-shaped column, enhanced saddle and full supported workpiece structure all contribute to the ability for heavy duty machining.
- Servo motor and high precision ballscrew are directly coupled in 3 axes.
- The Z axis is equipped with brake type servo motor. It especially contributes to its high motion response in fast machining.
- Three axes adopt heavy duty linear guide way. It ensures the characteristics of high rigidity, low noise and low friction. High speed feedrate and contour cutting accuracy are achieved.
- Feedrate is 36 m/min X / Y axis, 24 m/min in Z axis.
- The ball bar measurement and parameter turning are executed in every machine to ensure the dynamic accuracy.



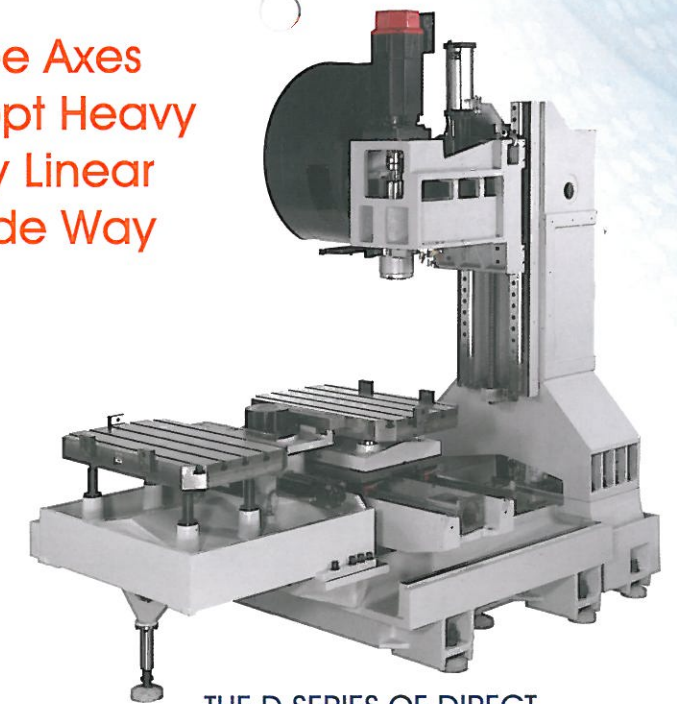
High Rigidity, High Accuracy construction design

THE B SPINDLE OF BUILT IN BL
Ruggedly constructed throughout.



THE P SERIES OF BELT PL
Arm type ATC provides fast tool change.

Three Axes Adopt Heavy Duty Linear Guide Way

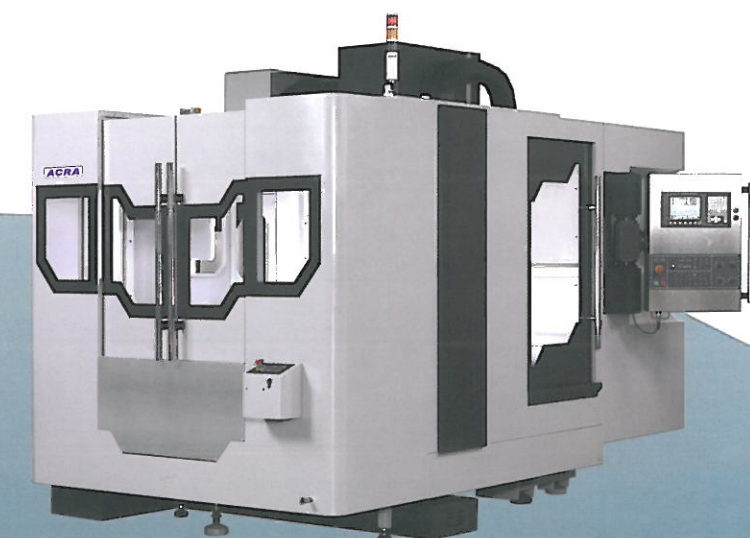


THE D SERIES OF DIRECT COUPLED TRANSMISSION DL

- High speed ball screws are directly driven and pretensioned.
- With pallet changer (optional accessory)

AUTO PALLET CHANGE

Pallet dimension	850 × 500 mm
No. of pallet	2
pallet change time	7 sec. ± 1 sec.
Load of table	250 kgs
Net weight	550 kgs
Gross weight	700 kgs
Floor space	2810 × 800 × 3300 mm



FMV-860 (APC)

FREJO TH INTERNATIONAL LTD.

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www.acra.com.tw

MODEL	FMV-860 (APC)	FMV-1020 (1100)	FMV-1250	FMV-1400
Table				
Area of table (mm)	910×560	1100×560 (1160×600)	1350×600	1500×600
Working area (mm)	860×560	1020×600 (1160×600)	1250×600	1400×600
T-slot (mm)	18×5×100	18×5×100	18×5×100	18×5×100
Max. table loading capacity (kgs)	600	750 (1000)	1200	1500
Travel				
X / Y / Z - axis travel (mm)	860 / 560 (600) / 600	1020 / 560 (600) / 600	1250 / 600 (700) / 600	1400 / 600 (700) / 600
Spindle nose to table surface (mm)	120~720	120~720	120~720 (760)	120~720 (760)
Spindle				
Spindle taper	ISO 40	ISO 40	ISO 40 (ISO50)	ISO 40 (ISO50)
Spindle R.P.M.	8000 rpm (10000, 12000, 15000, 18000, 20000 rpm)			
Transmission method	Belt (Direct, Built-in)		Belt (Direct, Built-in, ZF Gearbox)	
Spindle motor (kw)	5.5 / 7.5 (7.5 / 11)	7.5 / 11 (11 / 15)	11 / 15 (15 / 18.5)	
Automatic Tool Changer				
Tool loading capacity	24 tools (30 tools)			
Tool selection method	Bi-directional, random			
Max. tool diameter / length (adjacent)	ø80 / 300 mm			
Max. tool weight (kgs)	7			
Tool shank specif	BT-40 (CAT-40, DIN, HSK, SK)		BT-40 (BT-50)	
Tool Change time	T-T : 2.3 sec. ; C-C : 4.5 sec.			
Three-axis Motor				
X / Y / Z-axis servo motor (kw)	2 / 2 / 3.5	2 / 2 (3.5) / 3.5	2 / 3.5 / 3.5	2 / 3.5 / 3.5
3-axis cutting feed rate (mm/min)	12000	12000	12000	12000
3-axis rapid traverse (M/min)	30 / 30 / 24 (36 / 36 / 30, 48 / 48 / 36)	24 (30 / 30 / 24)	24 (30 / 30 / 24)	
Motor				
Chip auger motor	1/4 HP			
Chip conveyor motor	1/4 HP			
Coolant pump motor	1/2 HP			
Chip flushing pump motor	1/2 (3/4) HP			
Coolant Tank				
Coolant tank capacity	350 L	400 L	400 L	450 L
Coolant flow	200 L/min	200 L/min	200 L/min	200 L/min
Others				
Machine dimensions (L×W×H) (mm)	2810×3570×3300	3660×3160×3300	3960×3160×3300	4360×3160×3300
Machine weight / Gross weight (kgs)	6000 / 6600	6700 / 7300 (7300 / 7800)	8000 / 8500	10000 / 10600

- We reserve the right to modify the design and specifications without notice in advance. Above specifications are for reference onlt. Correct specifications are based on actual machine.
- Description in () are optional accessories.