



L.K. Machinery Corp.

PREMIUM EUROPEAN TECHNOLOGY
WITH ULTIMATE PERFORMANCE



A Global
MACHINING CENTER MANUFACTURER

EU-1000/2000/3000

**HIGH-SPEED BRIDGE-TYPE
MACHINING CENTER**



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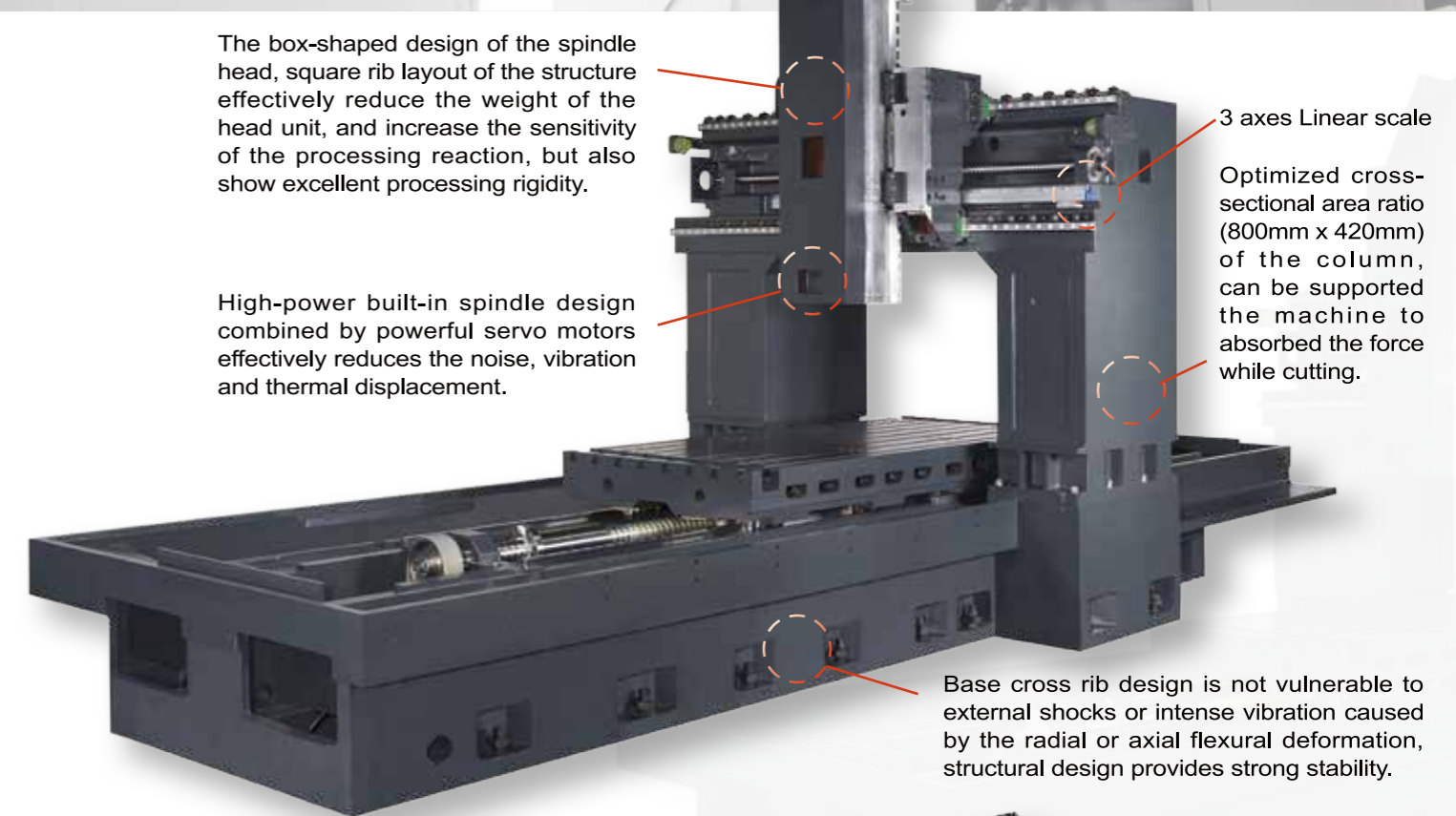
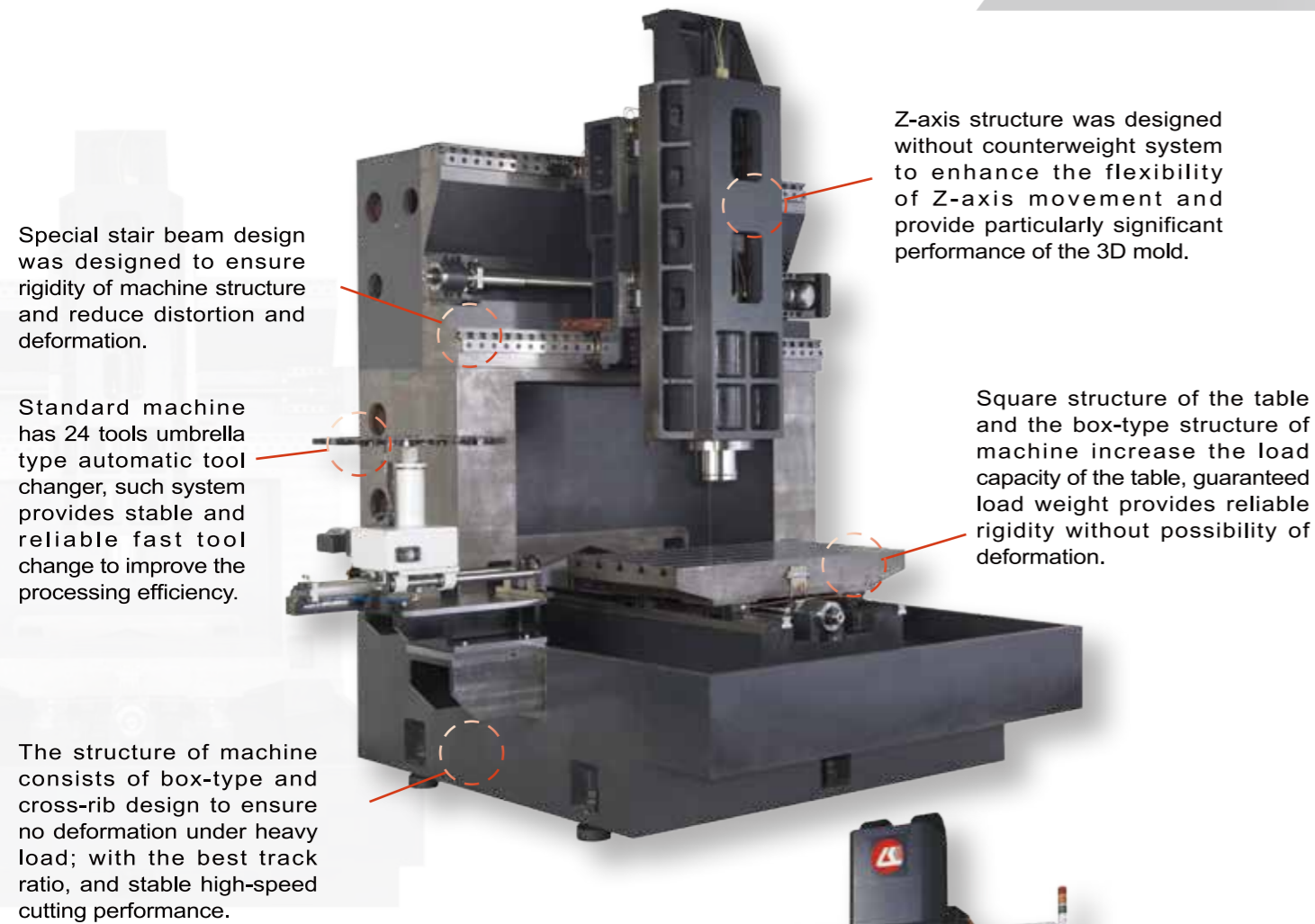
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CE ISO 9001

HIGH RIGIDITY, HIGH PRECISION & HIGH EFFICIENCY

Rough cutting and finishing of mold production could be completed on one machine

L.K. EU series are based on a reliability concept, the high speed machining center model EU2000 has been developed using the latest generation of technologies, appropriate for High Speed Machining. As a result of an exceptional rigidity, this model offers a high dynamic performance with an excellent accuracy, everything at a competitive price.



EU-1000 High-speed Bridge-type Machining Center
Axis Travel : 1050/800mm



EU-2000 High-speed Bridge-type Machining Center
Axis Travel : 2000/1250mm
EU-3000 High-speed Bridge-type Machining Center
Axis Travel : 3000/1550mm



SPINDLE



Built-in spindle with high torque and high speed machining motor provide extremely low noise and vibration, thermal stability.

18000 rpm high-speed build-in spindle is equipped with oil and gas lubrication (imported), such feature extends the bearing wear during high-speed processing operation to achieve excellent cooling and reduce warm-up effect affecting on length accuracy.

Die casting mold processing is mainly required the long-time processing, at the same time requirement of high precision is highly valued, so the cooling effect of oil and gas lubrication is the necessary equipment.

Bearing of high speed build-in spindle is able to withstand high torque and high-speed characteristics, so rough milling and finishing processes of mold processing could be reached on the same spindle, with high efficiency and high profitability.

Spindle	KESSLER	KESSLER (OPT.)
Spindle speed (RPM)	18,000	24,000
Spindle Motor (kW)	25	16
Torque	160	67
Bearing lubrication	Oil lubrication	Oil lubrication
Bearing preloading	○	×

CONTROL PANEL & ATC

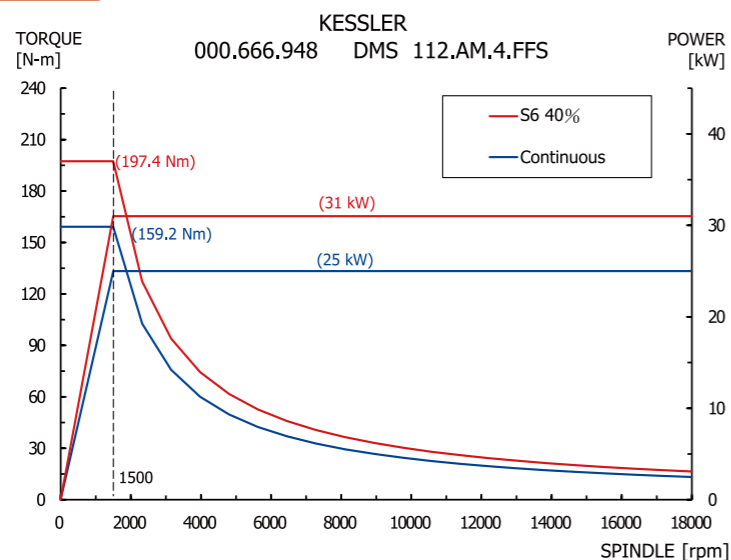


Umbrella type tool magazine, simple construction, easy to maintain, use employs indexing unit for tool indexing providing high stability and high speed tool change.



SIEMENS SINUMERIK CNC automation system 840D is used on the control panel, accessing the USB port and a 15" color display and a full keyboard.

POWER CHART



APPLICATIONS



1. Surface cutting test



2. Flatness & Thin pieces test



3. Roundness test



Rubber mold

Applicable Industry

- Automotive mold industry
- Precision components processing
- Solar energy industry
- Wind power industry
- Aerospace Industry

CUTTING PERFORMANCE



Surface cutting test

Tool specifications	D12R6 End mill
Actual F (mm)	6000 mm/min
Actual speed (rpm)	14000 rpm
Cutting depth	0.1mm
Chip removal method	Cutting Fluid
Workpiece material	AL 6061
Workpiece dimensions	500X40X120 mm



Roundness test

Tool specifications	D12 End mill
Actual F (mm)	3000 mm/min
Actual speed (rpm)	16000 rpm
Cutting depth	20 mm
Chip removal method	Blow dry cutting
Workpiece material	AL 6061
Workpiece dimensions	Diameter 280 mm
Measure the circle data	0.006 mm



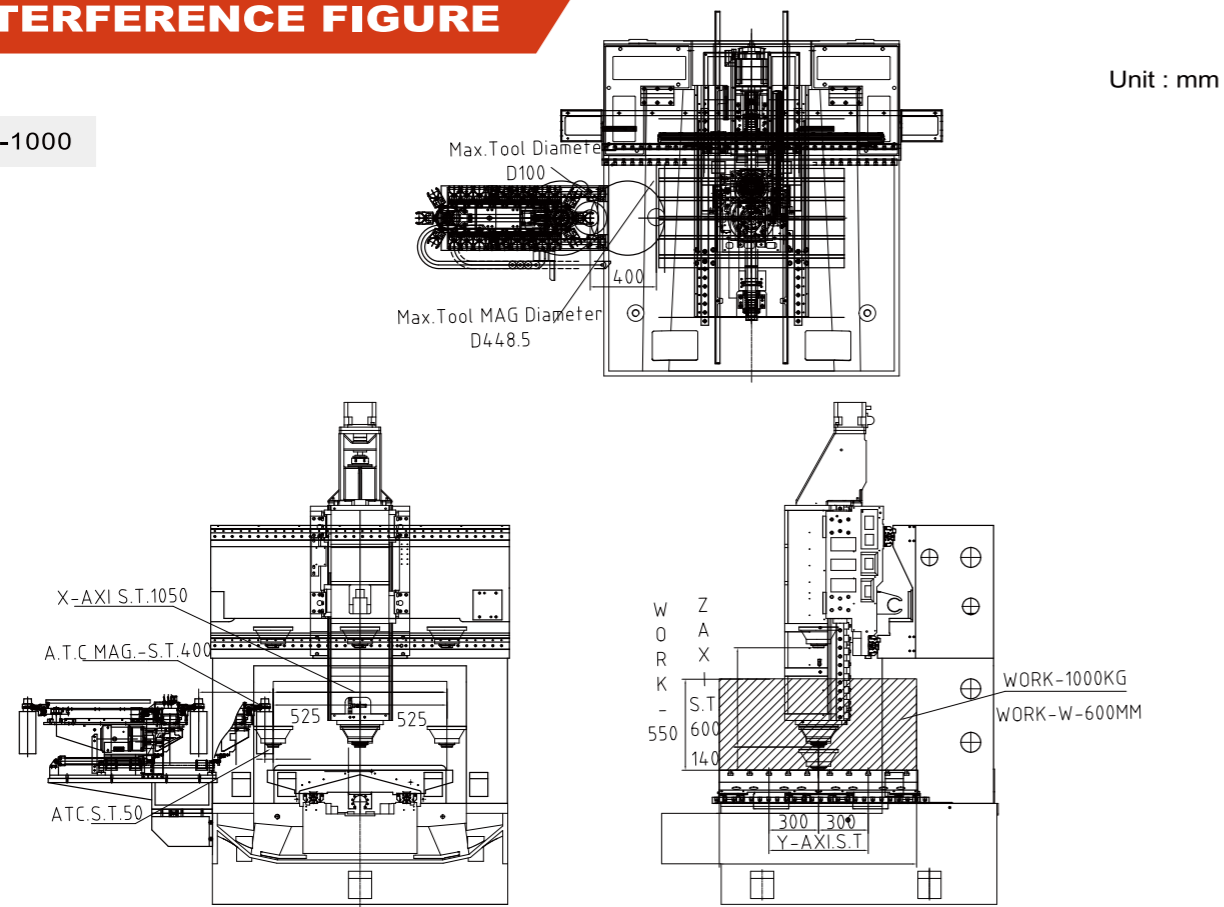
Pyramid cutting test

Tool specifications	D12 Ball end mill
Actual F (mm)	3000 mm/min
Actual speed (rpm)	3000 rpm
Cutting depth	0.1 mm Fine finishing
Chip removal method	Cutting Fluid
Workpiece material	AL 6061
Workpiece dimensions	80X80X200 mm
45° plane measurement	0.006 mm



INTERFERENCE FIGURE

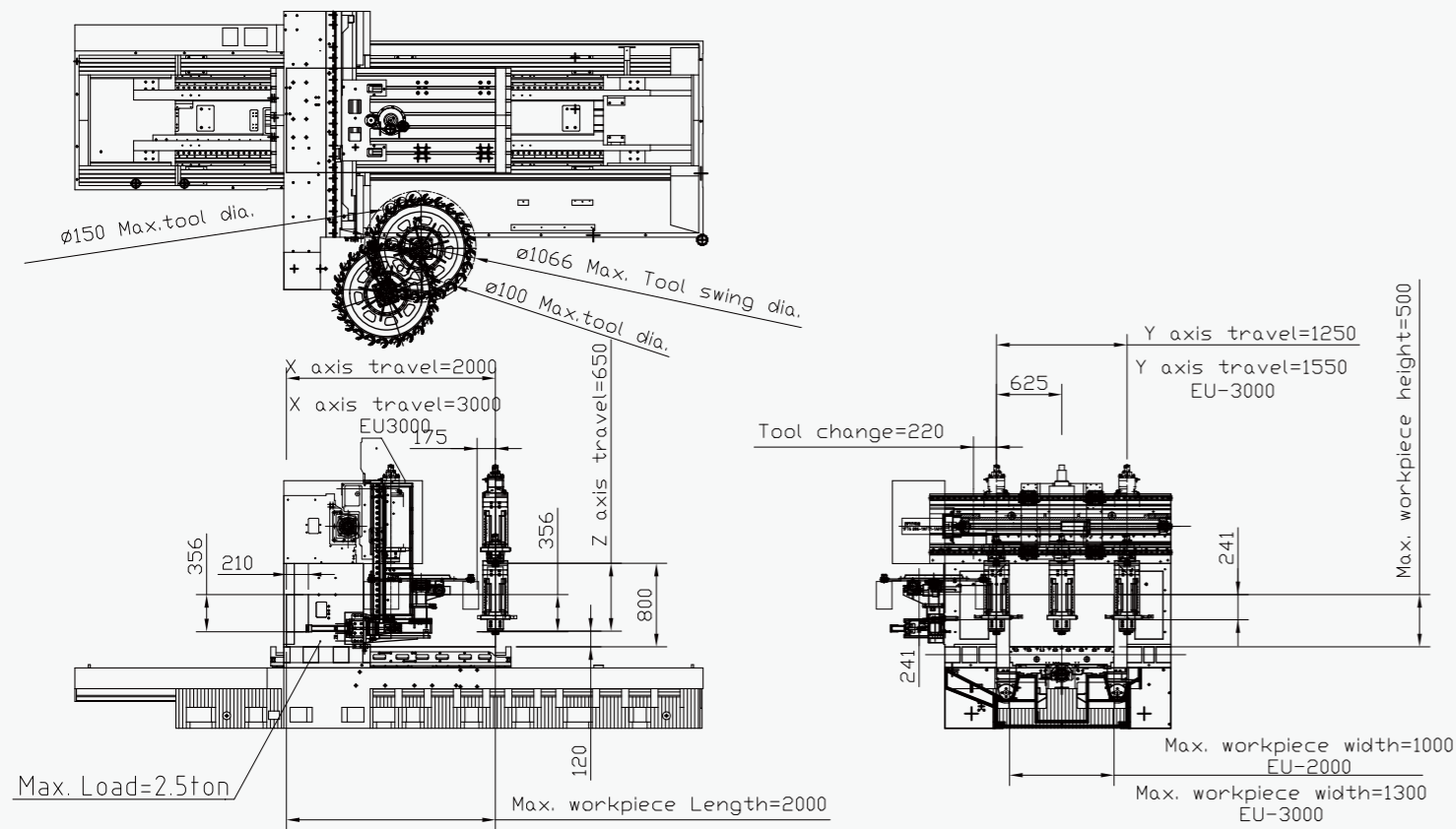
EU-1000



Unit : mm

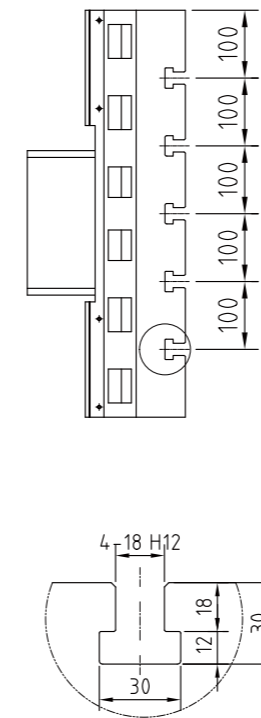
Unit : mm

EU-2000/3000

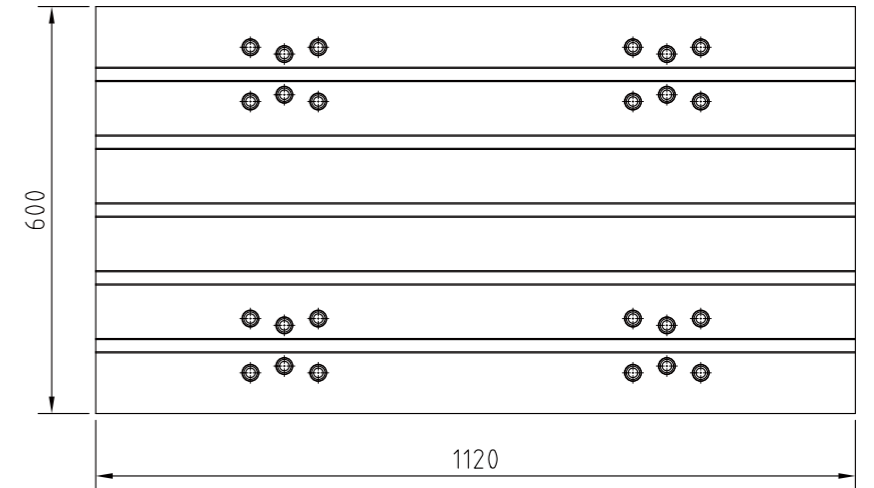


T-SLOT & TABLE

EU-1000

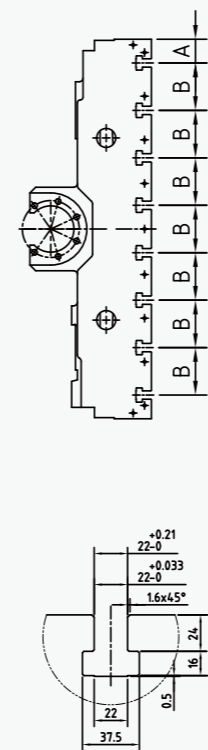


Unit : mm

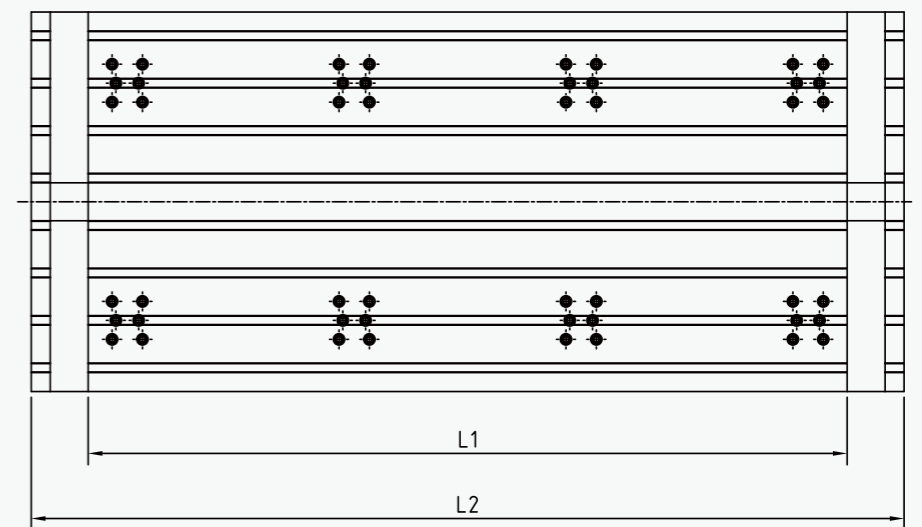


MODEL	Unit	EU-1000
Working Surface	mm	1120x600
Max. Table Load	Kg	1000
T-Slot(NumberxPitch)	mm	5x100
T-Slot Size	mm	18

EU-2000/3000

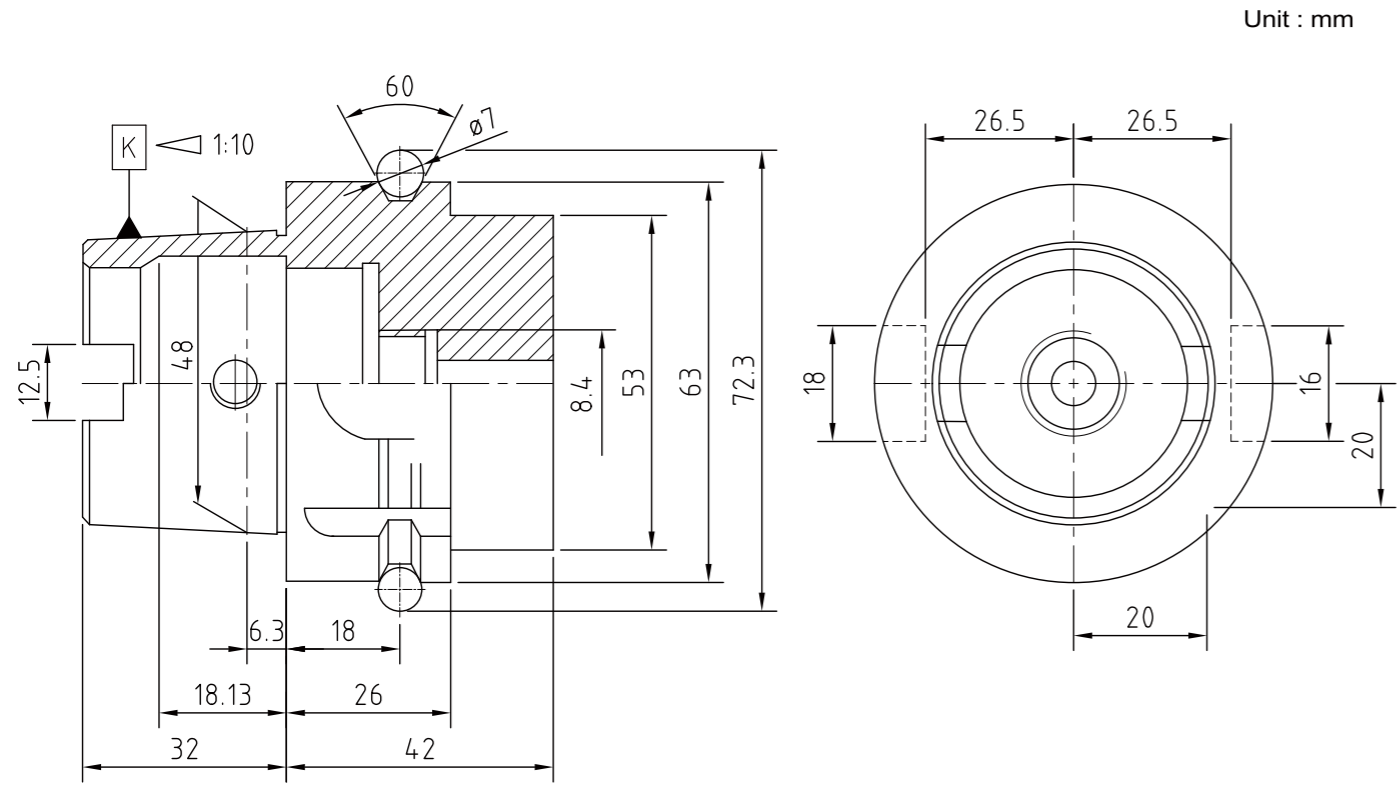


Unit : mm

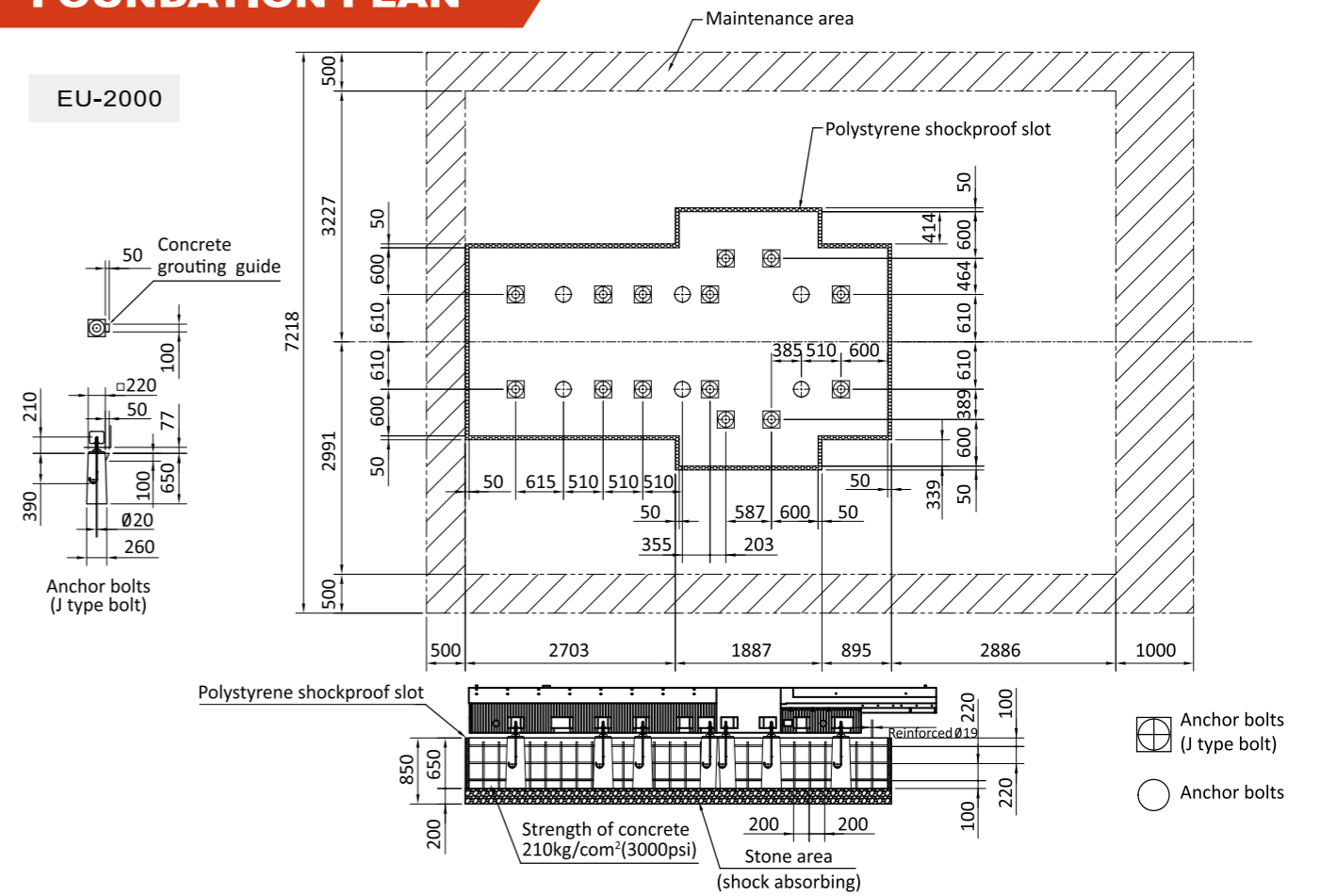


MODEL	T-slot number	W	L1	L2	A	B
EU-2000	8	1000	2000	2300	62.5	125
EU-3000	10	1300	3000	3300	87.5	125

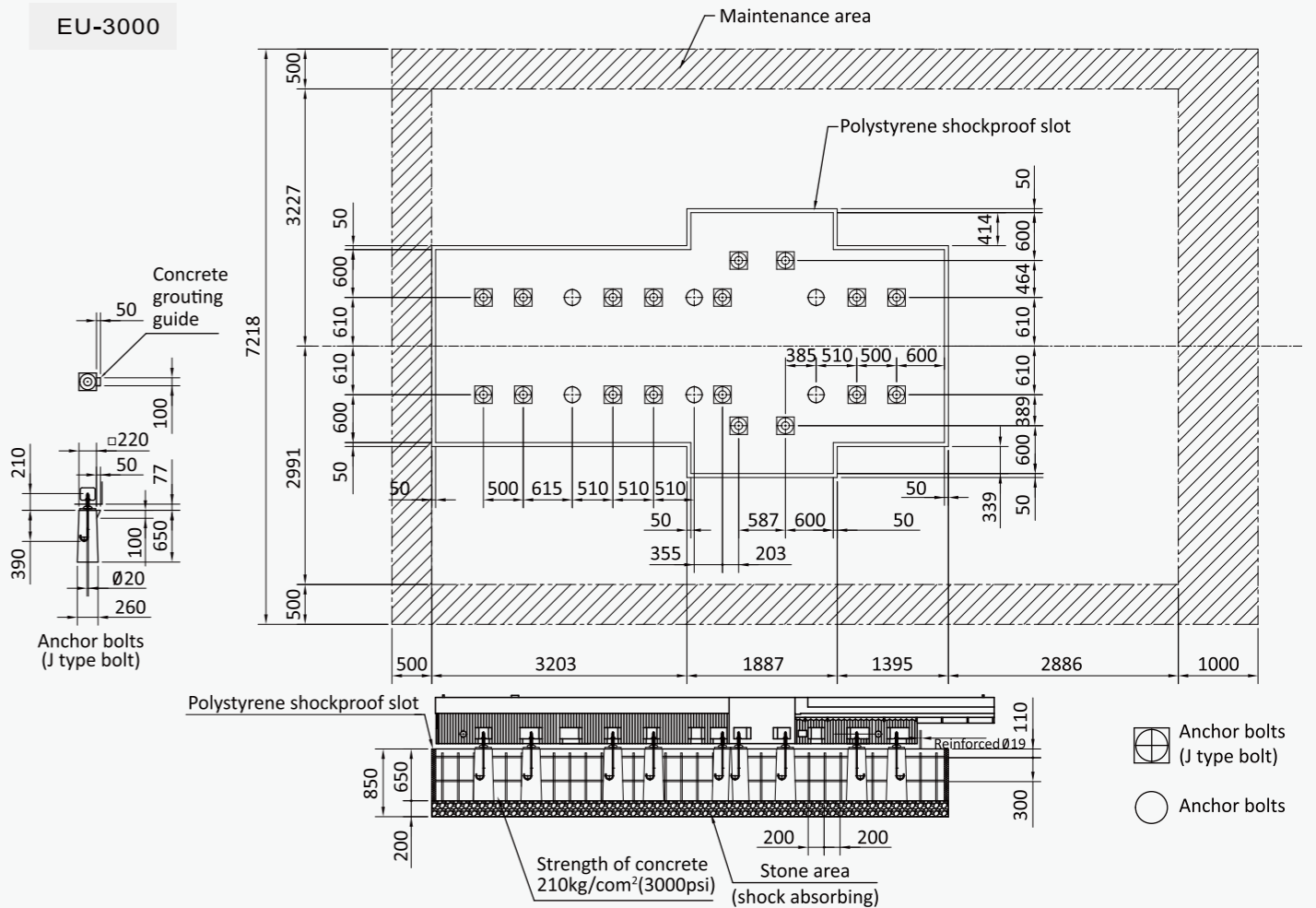
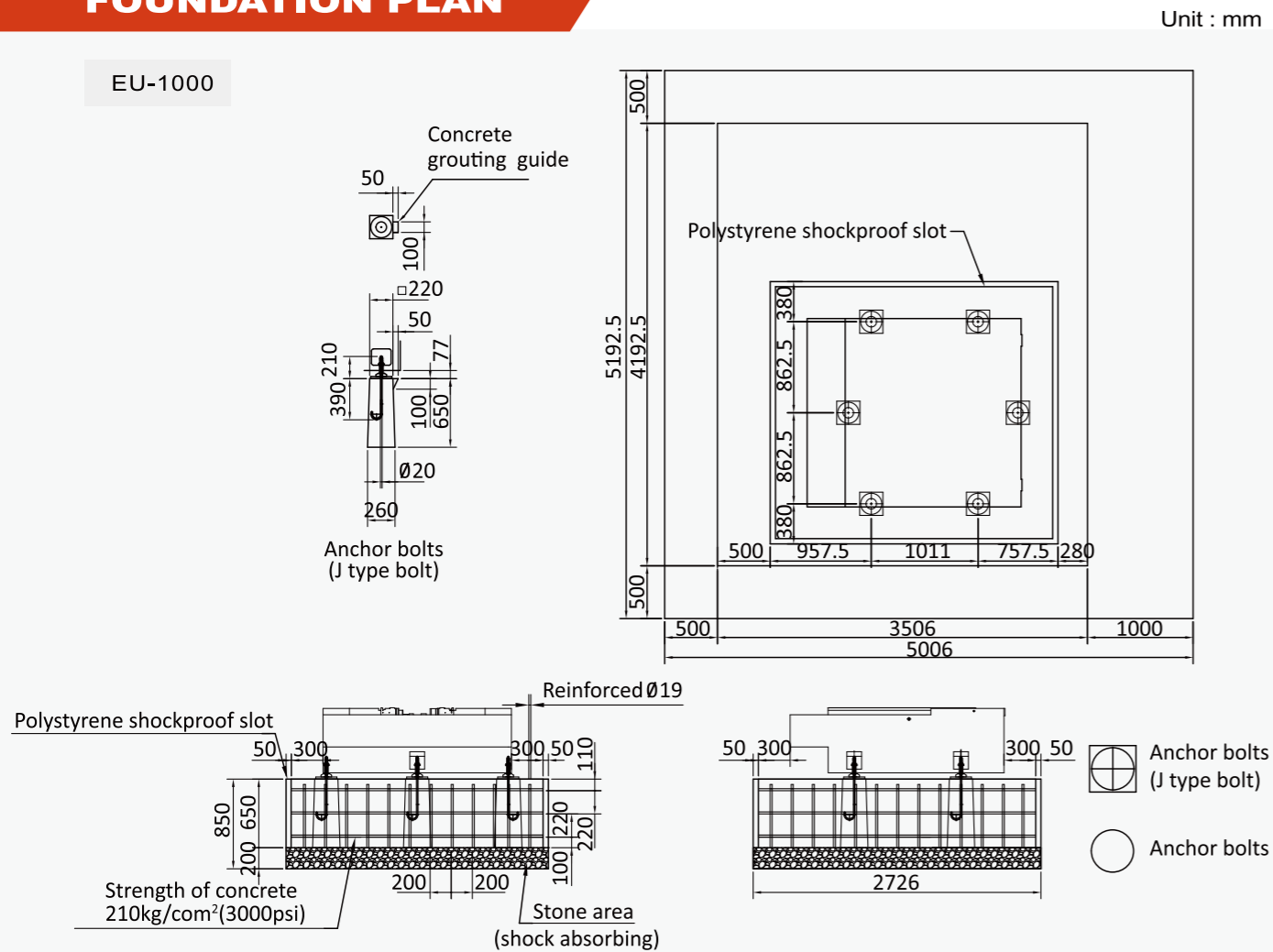
SPINDLE DIMENSION



FOUNDATION PLAN



FOUNDATION PLAN



OPTIONAL EQUIPMENT



Tool Length Measurement System



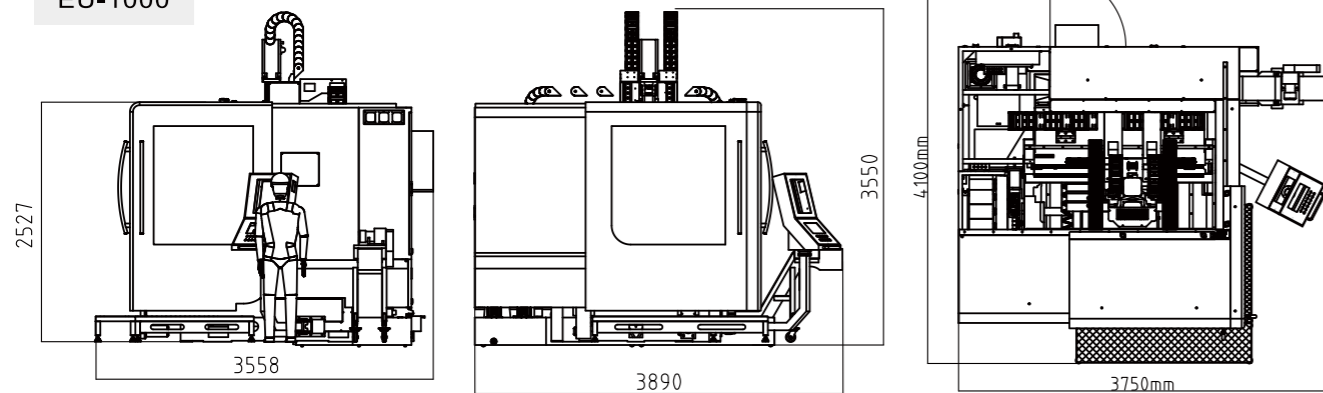
CNC Tilting Rotary Table



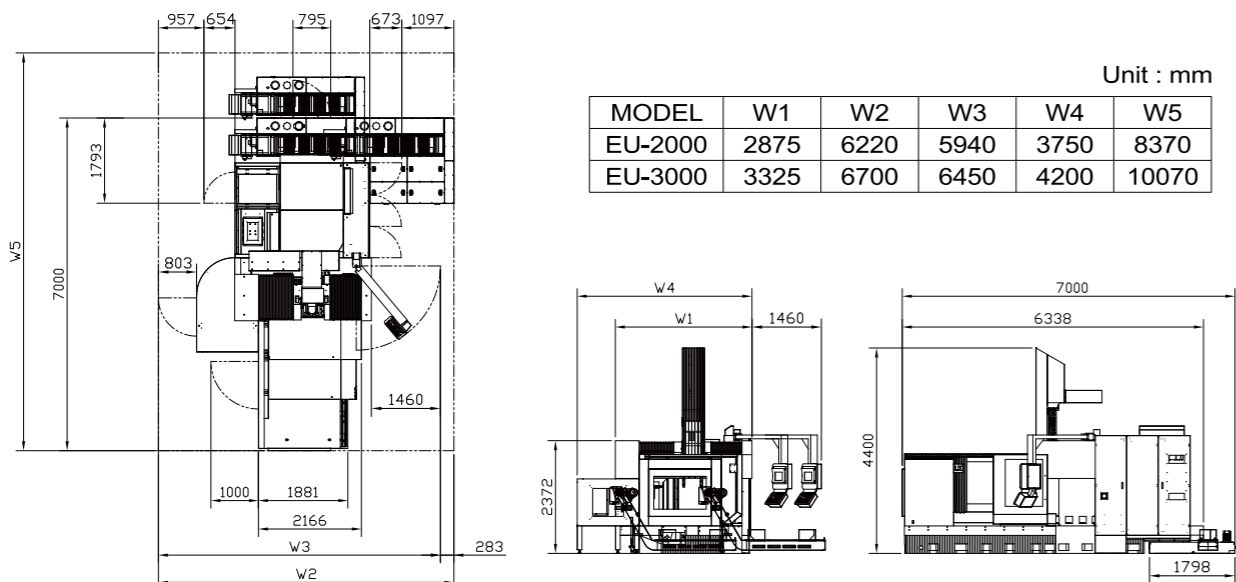
Chip Conveyor

MACHINE SIZE / EXTERIOR SIZE

EU-1000



EU-2000/3000



SPECIFICATION

Model	Unit	EU-1000	EU-2000	EU-3000
CNC Control System		Siemens 828D	Siemens 840D	Siemens 840D
3 axis Travel				
X axis Travel	mm	1050	2000	3000
Y axis Travel	mm	800 / 1300(OPT)	1250	1550
Z axis Travel	mm	600	650	650
Distance from Spindle Center to Table	mm	145~745	150~800	150~800
Spindle				
Spindle Speed	rpm	Built-in 18,000 (Kessler)	Built-in 18,000 (Kessler)	Built-in 18,000 (Kessler)
Spindle Nose	BT	HSK-63	HSK-63	HSK-63
Spindle Motor(Cont./30min)	kw	25 / 31	25 / 31	25 / 31
Table				
Table Size	mm	1120 x 800	2300 x 1000	3000 x 1300
T Slot(Width x No. x Pitch)	mm	18 x 7 x 100	22 x 8 x 125	22 x 10 x 125
Max. Table Capacity	kg	1,000	2,500	4,000
Rapid Travel				
Rapid Travel(X/Y/Z)	mm/min	30 / 30 / 30	30 / 30 / 30	30 / 30 / 30
Cutting Speed Rate	mm/min	1-30	1-30	1-30
X/Y/Z Feed Motor	kw	4.87 / 4.87 / 4.87	10.47 / 5.65 / 7.96	10.47 / 5.65 / 7.96
Tool Magazine				
Tool Change Type	-	Chain	Round-Rail	Round-Rail
Tool Capacity	set	24	24	24
Max. Tool Weight	kg	8	8	8
Max. Tool Length Distance	mm	300	300	300
Max. Tool Diameter	mm	Ø75 / Ø100	Ø100 / Ø115	Ø100 / Ø115
Tool Change Time(T-T)	sec	8	8	8
Tool Change Time(C-C)	sec	13	13	13
Others				
Compress Air Supply	kg/cm ²	5~7	5~7	5~7
Machine Size(LxWxH)	mm	4100 x 3750 x 3550	8370 x 6220 x 4400	10070 x 6700 x 4400
Net Weight	kg	10,500	19,000	28,000

STANDARD & OPTIONAL EQUIPMENT

- Siemens Controller
- Built-in 18,000 (Kessler)
- HSK-63
- Bearing Preloading
- Rollers Linear Ways
- Linear Scale on X/Y/Z axes (Fagor)
- Spindle Water Cooling Unit
- Spindle Air Blast
- Automatic Lubrication System
- Cutting Coolant System
- Auto Tool Changer
- Automatic Tool Length Measurement System (Marposs TS-30)
- Rigid Tapping
- Separate Hand Wheel (MPG)
- Full Splash Guard
- Standard Water Tank
- Flushing Device
- Air/Water Cleaning Equipment
- Twin Screw Type Chip Conveyors
- Screw Type Chip Conveyor & Portable Chip Bucket
- Electrical Cabinet Heat Exchanger
- M30 Automatic Power-off Function
- Tri-color Indicator Lamp
- Internet & RS-232 Interface
- Working Light
- Tool Box
- Transformer
- Mechanical Operation Manual
- Mitsubishi M80
- Fanuc 0i-MF
- Built-in 25,000rpm (Kessler)
- DDS 10,000rpm (BT-50)
- DDS 12,000/15,000rpm (BT-40)
- BBT-40
- Arm Type 24 tools
- CTS
- Oil Mist Cooling System
- Oil Skimmer
- Automatic Workpiece Measurement System
- 4th axis CNC Rotary Table
- 5th axis CNC Tilting Table
- 4th axis Interface