PRODUCT LINEUP

革新 혁신 innovation

신뢰 信賴 reliability

passion 熱情 열정

KOMATECH

KOMATECH
MACHINE TOOLS LINE-UP

Examples of target workpieces

IT, Automobile & General parts

BT 40

BT 30
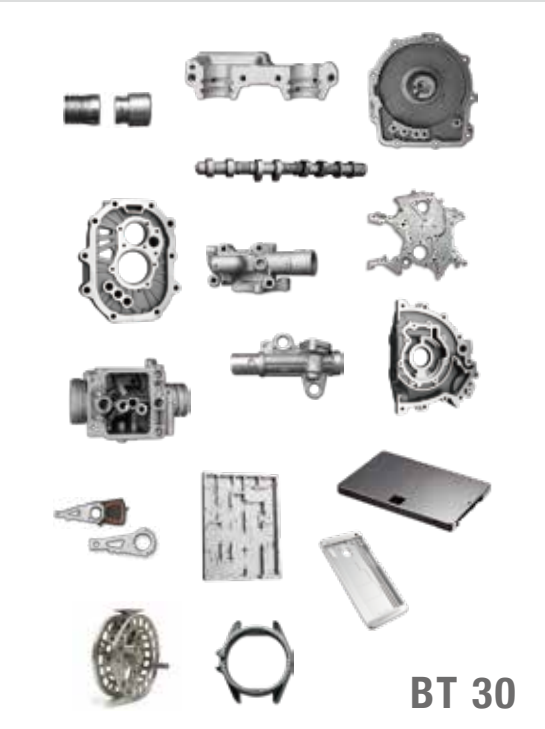
GMT 4000 / 6000

HIGH SPEED TAPPING CENTER

KT 420

KT 420A

NEW

KT 420DH

GMT 600

KT 420L

KT 420AL

KT 360D

CNC MACHINING CENTER

NEW

KM 450

KM 520

GMT 500MS

GMT 500MD

SPECIAL MACHINING CENTER

GMT 4000

GMT 6000

KT 420(420L)

THE HIGHEST PERFORMANCE TAPPING CENTER WITH THE FASTEST SPEED IN-CLASS

KT420	KT420L	60m/min		T·T 1.08 sec	C·C 1.40 sec		300 kg
660X400	800X400	X/Y/Z	14 / 21			10k/15k/24k	
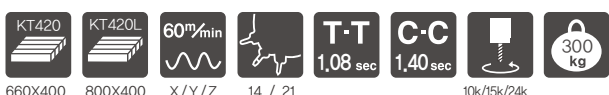
Travels(X/Y/Z)	mm	560(700) / 420 / 300
Spindle speed	rpm	10,000 [15,000], [24,000]
Spindle power	kW	21.2/4.8 [21.2/4.8], [26.2/3.5]
Spindle taper		ISO No.30 (7/24)
Tool storage	pcs	14 [21]
Rapids(X/Y/Z)	m/min	60 / 60 / 60 (50 / 50 / 60)

[   ]Opt

KT 420A(420AL)

## THE HIGHEST IN-CLASS PERFORMANCE TAPPING CENTER WITH FLEXIBLE MACHINING CAPABILITY

KT420A	KT420AL	60m/min		T·T 1.2 sec	C·C 1.8 sec		300 kg
660X400	800X400	X/Y/Z	20 / 26			10k/15k/24k	

Travels(X/Y/Z)	mm	560(700) / 420 / 430
Spindle speed	rpm	10,000 [15,000], [24,000], [High Torque10,000]
Spindle power	kW	21.2/4.8 [21.2/4.8],[26.2/3.5],[28.3/11.0]
Spindle taper		ISO No.30 (7/24)
Tool storage	pcs	20 [26]
Rapids(X/Y/Z)	m/min	60 / 60 / 60 (50 / 50 / 60)

[   ]Opt

TURRET TYPE MAGAZINE KT420(L)
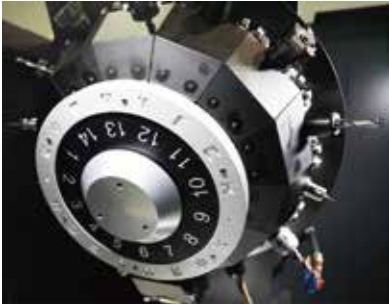
Tool to Tool

S **1.08** sec **M** **1.07** sec

Chip to Chip

S **1.40** sec **M** **1.37** sec

Magazine is improved by servo motor drive instead of the conventional cam motor. It is possible fast long distance tool change with nonstop and chip to chip time is significantly shortened by optimizing Z axis section and movement of magazine.

TWIN ARM TYPE MAGAZINE KT420A(AL)

Tool to Tool

1.2 sec

Chip to Chip

1.8 sec

Tool changer is cam motor driving type and optimized tool change section for fast and stable tool change. Magazine tool port moves next tool position during machining to reduce tool change time and various machining application is available with mass storage magazine.
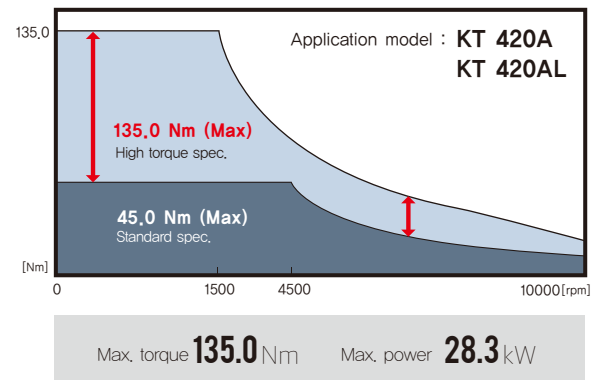
HIGH PERFORMANCE SPINDLE

STD. **10,000** rpm

OPT. **10,000** rpm **(HIGH TORQUE)**
15,000 rpm
24,000 rpm

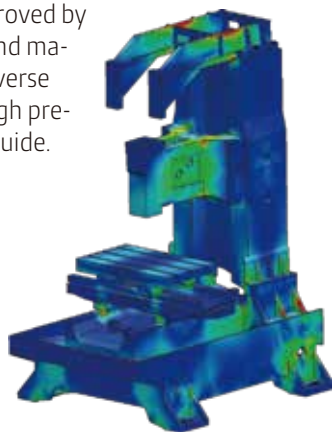A wide range spindle speed enables to variable work peice application from high speed machining to heavy duty cutting.

HIGH TORQUE SPINDLE MOTOR (Opt.)

Application model : **KT 420A**
KT 420AL

135,0

135,0 Nm (Max)
High torque spec.

45,0 Nm (Max)
Standard spec.

[Nm]

0   1500   4500   10000[rpm]

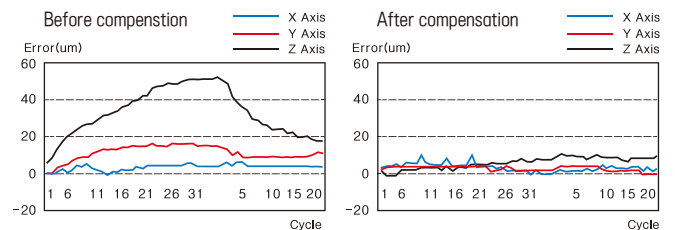Max. torque **135.0** Nm   Max. power **28.3** kW

It is possible to achieve an over BT30 grade machining capability with high torque motor.

HIGH RIGIDITY STRUCTURE

Each axis's rigidity is improved by FEM structure analysis and machine has high speed traverse capability by applying high precision ball screw & L/M guide.

HIGH ACCURACY MACHINING

Before compenstion
Error(um)

| X Axis |
| Y Axis |
| Z Axis |

60

40

20

0

-20

1 6 11 16 21 26 31   5 10 15 20
Cycle

After compensation
Error(um)

| X Axis |
| Y Axis |
| Z Axis |

60

40

20

0

-20

1 6 11 16 21 26 31   5 10 15 20
Cycle

Komatech's own test program (limitation test)

Optimized thermal deformation compensation system for Komatech's machine is realized by analyzing actualoperation/non-operation hours. The differentiated positioning control function compare with others enables high precision machining.

S **SIEMENS** 828D   **M** **MITSUBISHI** M80

KT 420DH

OVERWHELMING HIGH PRODUCTIVITY DUAL SPINDLE TAPPING CENTER

1150X400	48 m/min X/Y	60 m/min Z	20 / 26	T-T 1.2 sec	C-C 1.8 sec	400 kg 10k/15k/24k

Travels(X/Y/Z)	mm	560 / 420 / 430
Spindle speed	rpm	10,000 [15,000] [24,000], [High Torque 10,000]
Spindle power	kW	21.2/4.8 [21.2/4.8],[26.2/3.5],[28.3/11.0]
Spindle taper		ISO No.30 (7/24)
Tool storage	pcs	20 [26]
Rapids(X/Y/Z)	m/min	48 / 48 / 60

[   ]Opt

DUAL HEAD STRUCTURE

KT 420DH is optimized for same accuracy after simultaneous machining as two independent Z-axis and head structure. Convenient tool length and Z-axis work coordinate setup is available and various machining application is possible through separated motion when it is necessary.
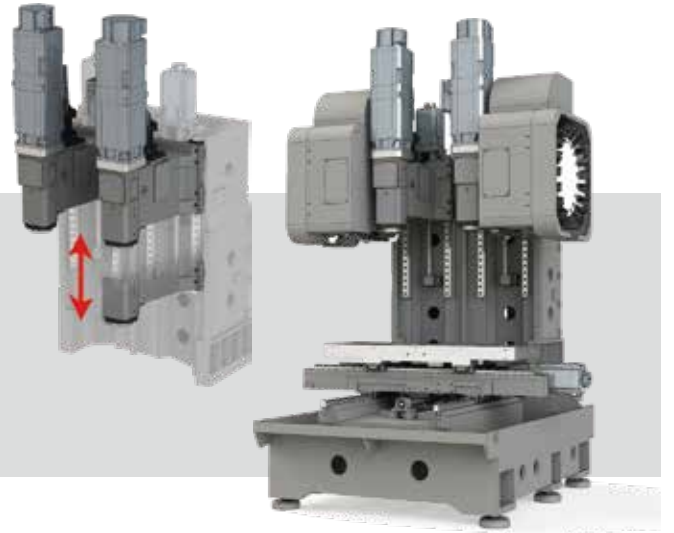
HIGH PERFORMANCE SPINDLE

DISTANCE BET-WEEN SPINDLES
500mm

Direct driven spindle applied high-precision angular ball bearing, high-tension spring and design of cutting oil inflow prevention achieves high durability, precise and stable machining. And a wide fixtures application is available through 500 mm distance between spindle.

HIGH TORQUE SPINDLE MOTOR (Opt.)
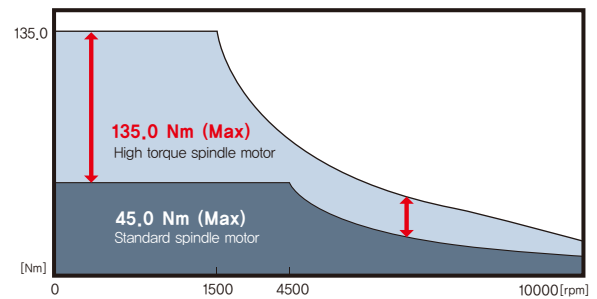
135.0 Nm (Max)
High torque spindle motor

45.0 Nm (Max)
Standard spindle motor

Max. torque **135.0** Nm　　Max. power **28.3** kW

It is possible to achieve an over BT30 grade machining capability with high torque motor.

SLIDEWAY

Table size
1,150 X 400 mm

Travels (X / Y / Z)
560 / 420 / 430 mm

Rapids (X / Y / Z)
48 / 48 / 60 m/min

Achieve silent and fast traverse capability through premium quality high-precision LM guide, ball screw and link type slide cover application. And various fixtures are available with a wide table size and travels.

HIGH SPEED TOOL CHANGER

Tool change time
Tool to Tool **1.2** sec
Chip to Chip **1.8** sec

Mass storage magazine
2 * 20PCS **40** PCS
OPT) 2 * 26PCS **52** PCS

Tool changer is cam motor driving type and optimized tool change section for fast and stable tool change. Magazine tool port moves next tool position during machining to reduce tool change time and various machining application is available with mass storage magazine.
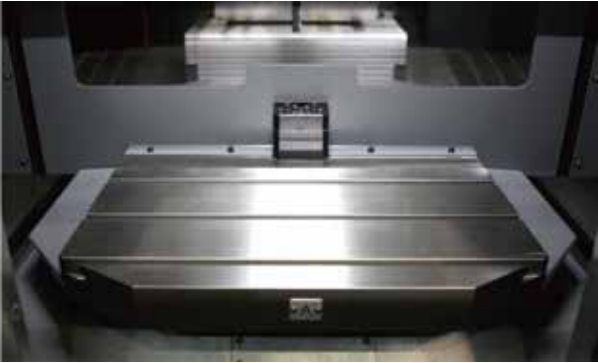
KT 360D

COLUMN TRAVERSE TYPE HIGH PRODUCTIVITY TAPPING CENTER WITH DUAL TABLE

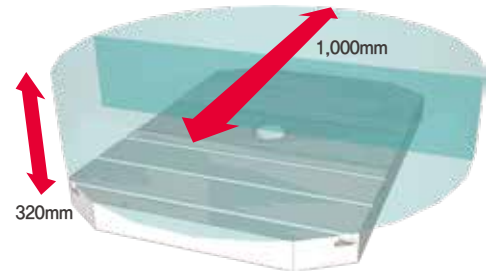| 650X900	14	T·T 1.08 sec	C·C 1.40 sec	10k/15k/24k	200 kg 200*2

Travels(X/Y/Z)	mm	520 / 360 / 300
Spindle speed	rpm	10,000 [15,000], [24,000]
Spindle power	kW	21.2/4.8 [21.2/4.8],[26.2/3.5]
Spindle taper		ISO No.30 (7/24)
Tool storage	pcs	14
Pallet change time	sec	4.5
Rapids(X/Y/Z)	m/min	50 / 50 / 60

[   ]Opt

HIGH RELIABILITY DUAL TABLE

Pallet change time
4.5 sec
(opt.) **3.2** sec

1,000mm

320mm

Turn diameter	**1,000** mm
Jig height	**320** mm
Loading weight	**200** kg x **2**

Hirth coupling gear method precision dual table is operated with oil pressure and performs positioning quickly and accurately without additional UP & DOWN operation.
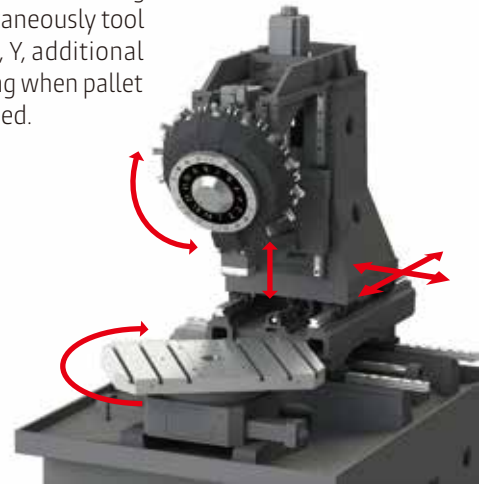
HIGH PERFIRMANCE SPINDLE

STD. **10,000** rpm

OPT. **15,000** rpm
24,000 rpm

A wide range spindle speed enables to variable work peice application from high speed machining to heavy duty machining.
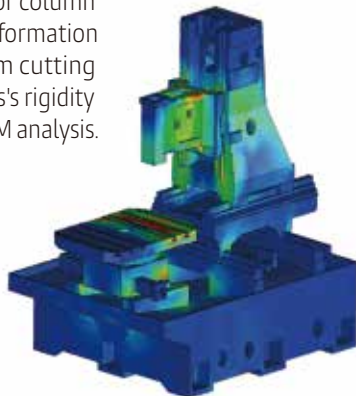
SIMULTANEOUS MOVEMENT CONTROL

It could minimize non-cutting time by simultaneously tool change and X, Y, additional axes positioning when pallet is being changed.

HIGH REIGIDITY STRUCTURE

Base structure is suitable for column moving type. Minimized deformation and vibration coming from cutting feedrate and improved axes's rigidity by structure design with FEM analysis.

HIGH SPEED ATC WITH A SERVO MOTOR

Tool to Tool

Ⓢ **1.08** sec Ⓜ **1.07** sec

Chip to Chip

Ⓢ **1.40** sec Ⓜ **1.37** sec

Magazine is improved by servo motor drive instead of the conventional cam motor. It is possible fast long-distance tool change with nonstop and C-C time is significantly shortend by optimizing Z axis section and movement of magazine.

Ⓢ **SIEMENS** 828D   Ⓜ **MITSUBISHI** M80

GMT 600

HIGH PERFORMANCE TAPPING CENTER WITH A WIDE WORKING AREA

T·T 1.08 sec	C·C 1.40 sec		
700x600	14 / 21		10k/15k/24k

Travels(X/Y/Z)	mm	700 / 600 / 300	
Spindle speed	rpm	10,000 [15,000], [24,000]	
Spindle power	kW	21.2/4.8 [21.2/4.8],[26.2/3.5]	
Spindle taper		ISO No.30 (7/24)	
Tool storage	pcs	14 [21]	
Rapids(X/Y/Z)	m/min	48 / 48 / 60	

[   ]Opt

STABLE STRUCTURE DESIGNED DOUBLE COLUMN TYPE

Stable structure designed double column type.
(X and Y axes are separate travel structure.)
Able to high precise performance and load Max.
400kg of workpeice on the Jig.

HIGH PERFORMANCE SPINDLE

STD. **10,000**rpm
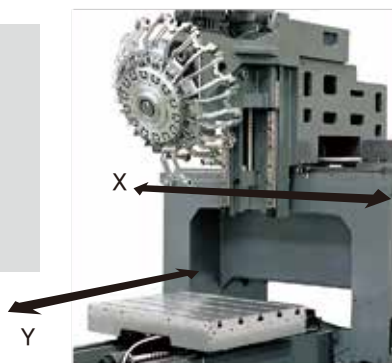
OPT. **15,000**rpm
24,000rpm

A wide range spindle speed enables to variable work peice application from high speed machining to heavy duty machining.

TURRET TYPE MAGAZINE

Tool to Tool

Ⓢ **1.08**sec Ⓜ **1.07**sec

Chip to Chip

Ⓢ **1.40**sec Ⓜ **1.37**sec

Magazine is improved by servo motor drive instead of the conventional cam motor. It is possible fast long distance tool change with nonstop and C-C time is significantly shortend by optimizing Z axis section and movement of magazine.

A WIDE WORKING AREA

STROKE

X axis **700**mm

Y axis **600**mm

X

Y

Wide area travels (X:700, Y:600) enable it to perform a various type of machining from large workpiece to multiple loading with small workpiece.

CLOSED TYPE OF BACK SIDE COVER

By applying closed type of back side cover, it protects destruction of cover from cutting chips, and easy to keep cleaning inside the machine.

Ⓢ SIEMENS 828D   Ⓜ MITSUBISHI M80

KM 450

HIGH SPEED MACHINING CENTER WITH POWERFUL CUTTING & HIGH ACCURACY MACHINING CAPABILITY

950X450	24 / 30	T·T 1.7 sec	C·C 2.9 sec	8k/12k	350 kg

|		
Travels(X/Y/Z)	mm	800 / 450 / 510
Spindle speed	rpm	8,000 [12,000]
Spindle power	kW	24.0/11.0 [24.0/11.0]
Spindle taper		ISO No.40 (7/24)
Tool storage	pcs	24 [30]
Rapids(X/Y/Z)	m/min	36 / 36 / 36

[　]Opt

HIGH RIGIDITY BASE STRUCTURE

Rigidity improved by structure analysis and design for minimize vibration and deformation achieves powerful and precise machining.

ROLLER TYPE L/M GUIDE is available optionally to upgrade rigidity

ROLLER TYPE L/M GUIDE (OPT)
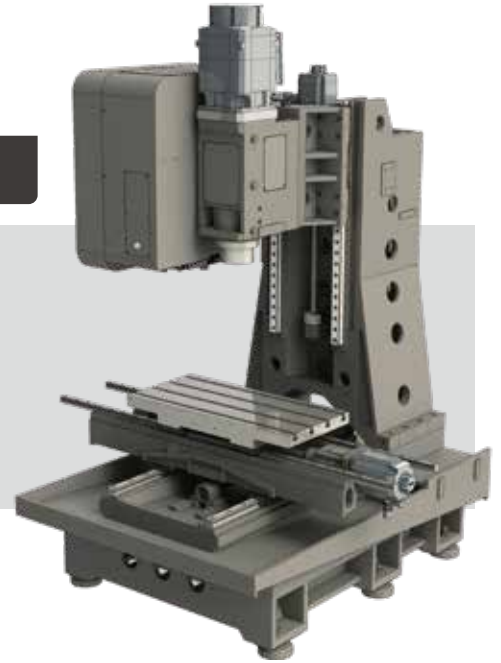
HIGH PERFORMANCE SPINDLE

MAX SPEED
STD. **8,000**rpm
OPT. **12,000**rpm

MAX TORQUE
153.0 Nm

Direct driven spindle that is applied high-precision angular ball bearing, high-tension spring and design of cutting oil inflow prevention achieves high durability, precise and stable machining. And a wide machining application is available with optimized torque and acc./dec. depends on low speed and high speed section.

HIGH SPEED TOOL CHANGER

Tool to Tool
1.7 sec

Chip to Chip
2.9 sec

Tool changer is cam motor driving type and optimized tool change section for fast and stable tool change. Magazine tool port moves next tool position during machining to reduce tool change time and various machining application is available with mass storage magazine.
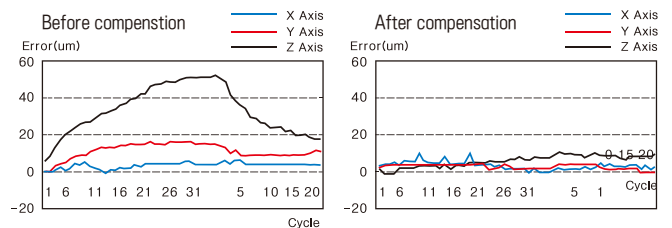
SLIDEWAY

Table size
950 x **450** mm

Travels (X / Y / Z)
800 / 450 / 580 mm

Rapids (X / Y / Z)
36 / 36 / 36 m/min

High-performance feed motor with excellent response, ultra-precise LM guide, and ball screw are used for silent and fast feed capability.

HIGH ACCURACY MACHINING

Before compenstion
X Axis
Y Axis
Z Axis
Error(um)

After compensation
X Axis
Y Axis
Z Axis
Error(um)

Cycle

Komatech's own test program (limitation test)

Optimized thermal deformaion compensation system for Komatech's machine is realized by analyzing actual operation /non-operation hours. The differentiated positioning control function compare with others enables high precision machining.

KM 520

HIGH PERFORMANCE TABLE TRAVERSE TYPE CNC MACHINING CENTER WITH A WIDE WORKING AREA

1200X520	24 / 30	**T-T** 1.7 sec	**C-C** 3.4 sec	8k/12k	800 kg

Travels(X/Y/Z)	mm	1050 / 520 / 520
Spindle speed	rpm	8,000 [12,000]
Spindle power	kW	24.0/11.0 [24.0/11.0]
Spindle taper		ISO No.40 (7/24)
Tool storage	pcs	24 [30]
Rapids(X/Y/Z)	m/min	36 / 36 / 30

[   ]Opt

HIGH RIGIDITY MACHINE STRUCTURE

ROLLER TYPE L/M GUIDE

Applying roller type L/M guide has high durability and rigidity compare with ball type L/M, so stable cutting performance is possible during heavy duty cutting.

Rigidity improved by structure analysis and design for minimize vibration and deformation achieves powerful and precise machining.

HIGH PERFORMANCE SPINDLE

MAX SPEED
STD. **8,000**rpm
OPT. **12,000**rpm

MAX TORQUE
153.0 Nm

Direct driven spindle that is applied high-precision angular ball bearing, high-tension spring and design of cutting oil inow prevention achieves high durability, precise and stable machining. And a wide machining application is available with optimized torque and acc./dec. depends on low speed and high speed section.
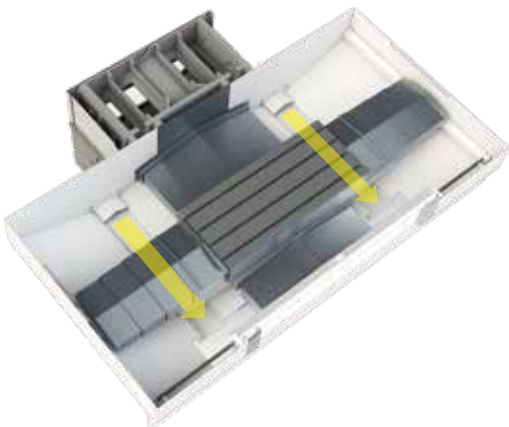
HIGH SPEED TOOL CHANGER

Tool to Tool
**1.7** sec

Chip to Chip
3.4 sec

Tool changer is cam motor driving type and optimized tool change section for fast and stable tool change. Magazine tool port moves next tool position during machining to reduce tool change time and various machining application is available with mass storage magazine.

CHIP DISCHARGING SYSTEM

Cutting chips are easily discharged by a slanted bed plate and high pressure coolant pump.

HIGH ACCURACY MACHINING
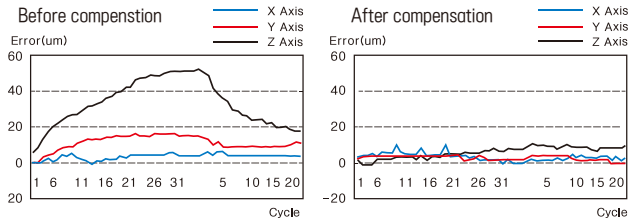
Komatech's own test program (limitation test)

Optimized thermal deformaion compensation system for Komatech's machine is realized by analyzing actual operation /non-operation hours. The differentiated positioning control function compare with others enables high precision machining.

GMT 500MS

COLUMN TRAVERSE TYPE CNC MACHINING CENTER WITH OPTIMIZED LARGE INDEX TABLE AND HEAVY JIG APPLICATION

		T·T 1.7 sec	**C·C** 4.5 sec		800 kg
1200X540	24 / 30				6k/8k

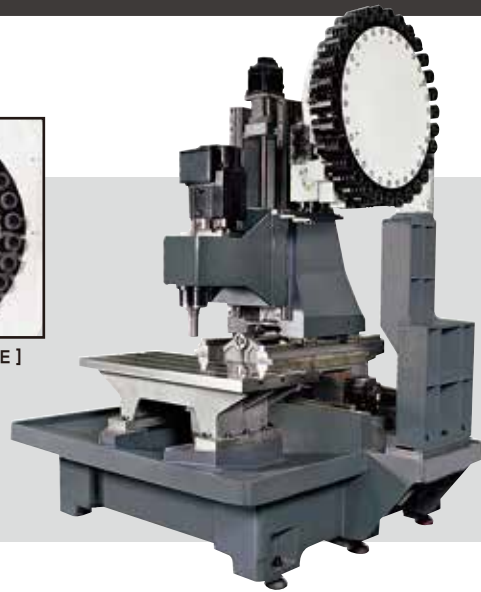|		
Travels(X/Y/Z)	mm	700 / 500 / 580
Spindle speed	rpm	6,000 [8,000]
Spindle power	kW	24.0/11.0 [24.0/11.0]
Spindle taper		ISO No.40 (7/24)
Tool storage	pcs	24 [30]
Rapids(X/Y/Z)	m/min	36 / 36 / 36

[　]Opt

HIGH RIGIDITY BASE STRUCTURE

Mass storage magazine

Closed type of magazine which can store 24 tools protects chip adhesion on internal circuits and tool taper from chip and cutting oil.

[OPT. 30 TOOL MAGAZINE]

High rigidity structure which is suitable for column moving type secures extensive space of 880mm of Z axis(travels 580mm), so it could accept large machining workpiece and heavy weight jig application.

HIGH RIGIDITY FIXED TABLE

Table size
1200×**540**mm

Max. load weight
800kg

A high rigidity fixed table with size of 1,200mm×540mm is optimized for large Jig fixture and heavy workpeice (Max.800kg) application.

HIGH SPEED TOOL CHANGER

Tool to Tool
1.7 sec

Chip to Chip
4.5 sec

Tool changer is cam motor driving type and optimized tool change section for fast and stable tool change. Magazine tool port moves next tool position during machining to reduce tool change time and various machining application is available with mass storage magazine.

HIGH PERFORMANCE SPINDLE

Max. speed
STD. **6,000**rpm
OPT. **8,000**rpm

Max. torque
153.0 Nm

Direct driven spindle that is applied high-precision angular ball bearing, high-tension spring and design of cutting oil inow prevention achieves high durability, precise and stable machining.

BIG PLUS (Opt.)
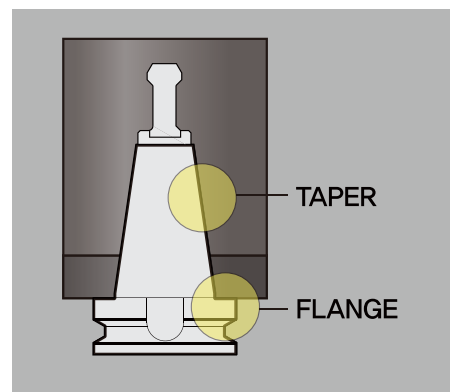
TAPER

FLANGE

The 2-face locking tool system(Big plus) is available. It offer longer tool life, higer power and more precise machining by the dual contact both flange face and taper face.

* Life of cutting tools & Machining roughness & Machining ability improvement

GMT 500MD

COLUMN TRAVERSE TYPE HIGH PRODUCTIVITY MACHINING CENTER WITH DUAL TABLE

		T·T 1.7 sec	**C·C** 4.5 sec		**300 kg**
700X1000	24 / 30			6k/8k	300 * 2

Travels(X/Y/Z)	mm	700 / 500 / 580
Spindle speed	rpm	6,000 [8,000]
Spindle power	kW	24.0/11.0 [24.0/11.0]
Spindle taper		ISO No.40 (7/24)
Tool storage	pcs	24 [30]
Rapids(X/Y/Z)	m/min	36 / 36 / 36

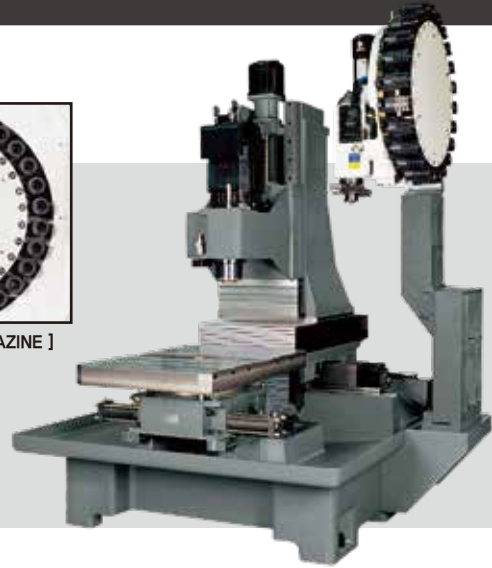[   ]Opt

HIGH RIGIDITY BASE STRUCTURE

Mass storage magazine

Closed type of magazine which can store 24 tools protects chip adhesion on internal circuits and tool taper from chip and cutting oil.

[OPT. 30 TOOL MAGAZINE]

High rigidity structure which is suitable for column moving type secures extensive space of 880mm of Z axis(travels 580mm), so it could accept large machining workpiece and heavy weight jig application.
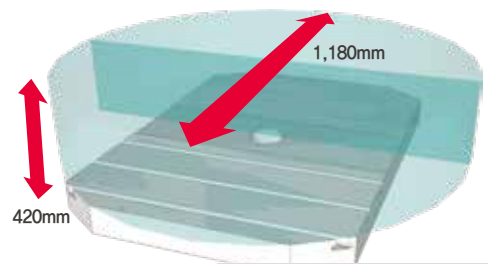
HIGH RELIABILITY DUAL TABLE

Pallet change time
4.5 sec

1,180mm

420mm

Turn diameter	**1,180**	mm
Jig height	**420**	mm
Loading weight	**300** kg x	**2**

Hirth coupling gear method precision dual table is operated with oil pressure and performs positioning quickly and accurately without additional UP & DOWN operation.

HIGH PERFORMANCE SPINDLE

Max. speed
STD. **6,000** rpm
OPT. **8,000** rpm
Max. torque
153.0 Nm

Applied high precision 4 pieces angular ball bearing. It is designed to able precise and stable cutting by high tension spring and cutting oil protection structure.

HIGH SPEED TOOL CHANGER

Tool to Tool
1.7 sec

Chip to Chip
4.5 sec

Tool changer is cam motor driving type. Magazine moves to next tool port during machining, it minimizes non-cutting time and it could various machining application since it stores 24 [Opt.30] tools.

GMT 4000 / KM 4000

HIGH PRECISION LONG TABLE MACHINING CENTER WITH X, Y, Z AXES BALL SCREW TYPE OPTIMIZED FOR LARGE WORKPIECES MACHINING

GMT 4000

		T·T 1.1 sec	C·C 1.9 sec	
4,200x500	14			10K / 15K

KM 4000

		T·T 1.7 sec	C·C 3.4 sec	
4,200x550	8			8K / 12K

Item		Unit	GMT 4000	KM 4000	Std. specification	Opt. specification
Table size		mm	4,200 X 500	4,200 X 550	Splash guard	Chip conveyor & bucket
Travels(X/Y/Z)		mm	4,000 / 400 / 300	4,000 / 500 / 510	Work light	Auto door
Spindle taper		—	ISO No.30 (7/24)	ISO No.40 (7/24)	Indicator light	Broken tool detector
Spindle speed		rpm	10,000 [15,000]	8,000 [12,000]	Work counter	Rotary table
Spindle motor power (Max. / Cont.)		kW	21.2 / 4.8 [21.2 / 4.8]	24.0 / 11.0 [24.0 /11.0]	Sub. Operation panel	Spindle cooler unit
Rapid feedrate (X/Y/Z)		m / min	20 / 36 / 60	20 / 36 / 36	Bed shower	Air blow
Tool storage		pcs	14	24	Coolant tank	Oil mist cleaner
Tool change time	T − T	sec	1.1	1.7	Instruction manual	Coolant through spindle
	C − C		1.9	3.4	Std.toolkit	Air conditioner
CNC System		—	Siemens 828D	Siemens 828D		Splash guard removal

[ ] Opt.

GMT 6000

HIGH PRECISION CNC PROFILE MACHINING CENTER WITH X AXIS 6,000 STROKE

**" X-axis length is selectable from 3,000 mm to 8,000mm"**

GMT 3000
3,000X425   14   T·T 1.1 sec   C·C 1.9 sec   10K / 15K

GMT 6000
6,000X425   14   T·T 1.1 sec   C·C 1.9 sec   10K / 15K

Item		Unit	GMT 3000	GMT 6000	Std. specification	Opt. specification
Table size		mm	3,000 X 425	6,000 X 425	Work light	Chip conveyor & bucket
Travels(X/Y/Z)		mm	3,000 / 350 / 300	6,000 / 350 / 300	Indicator light	Splash guard
Spindle taper		–	ISO No. 30	ISO No. 30	Work counter	Tool presetter
Spindle speed		rpm	10,000 [15,000]	10,000 [15,000]	Sub. Operation panel	Broken tool detector
Spindle motor power(Max. / Cont.)		kW	21.2 / 4.8 [21.2 / 4.8]	21.2 / 4.8 [21.2 / 4.8]	Work shower	Rotary table
Vise width		mm	420	420	Coolant tank	Air blow
Rapid feedrate (X/Y/Z)		m / min	36 / 36 / 60	36 / 36 / 60	Instruction manual	Coolant through spindle
Tool storage		pcs	14	14	Std.toolkit	Air conditioner
Tool change time	T – T	sec	1.1	1.1	Clamp vise	Table type
	C – C		1.9	1.9		
CNC System		–	Siemens 828D	Siemens 828D		

[   ] Opt.

Convenient Data Expandability

USB

CF CARD
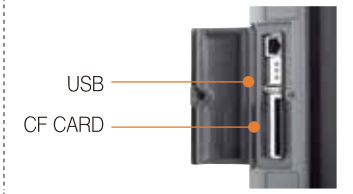
USB driver and CF memory card interface are standard for expansion of memory, easy for file copy & save.

Administrator Edit Setting

NC Control lock function is applied to prevent operation mistake and lock level setting is available upon operator's level.

Switch Panel

CL/UNCL, START, FEED HOLD, SINGLE BLOCK and EMERGENCY STOP buttons are separately configured on the SWITCH PANEL, ensuring ease of operation.

Simple Programming

G-Code, M-Code and interactive program input mode (Shop Mill) are available including user friendly function, copy, cut, paste, search etc.
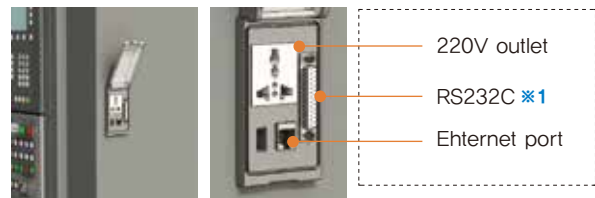
User Friendly Centralized Control Panel

Rotary switch and On/Off buttons are added on each function for operator's convenience and common buttons are user friendly located for easy to operate and access.

External communication interface
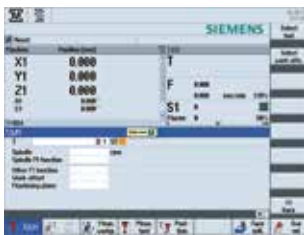
220V outlet

RS232C ※1

Ehternet port

Ethernet port, 220V outlet and 25-pin connector are installed for convenient external communication devices.

※1 RS232C is available with Mitsubishi M80 and Fanuc OiMF (OPT.)
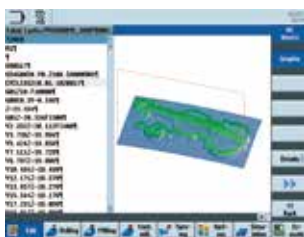
SIEMENS SINUMERIK 828D

Easy Operation

JOG functions

Tool, spindle, M Commands without coding on JOG mode, saves your time

Tool management

Intuitive tool screen with icons. Tool life monitoring function is provided as a Standard.

Mold making Quick view

Quick and filtered view on mold & die details

Online help

Powerful online help system including user-friendly graphics

Easy Programming

ShopMill

Interactive program input mode. Achieving shortest programing time.

Program GUIDE

Interactive Cycle provides convenient programing.

ISO Dialect interpreter

Maximum compatibility for operators familiar with ISO codes

Simultaneous recording

Program simulation test and Real time machining simulation are available.

NC specifiation

* Controllable axes : 6 axes (8 axes)
* Simultaneous controlled axes : 4 axes
* Minimum setting unit : 0.0001mm
　　　　　　　　　　　　　　0.00001 inch
* Display: 10.4" TFT COLOR
* User memory: 3MB [Extensible] ※1
* Program format : G/M code
　[Conversational program]

NC function

* Absolute / Incremental
* Scaling / Rotating
* Background editing
* Mirror image
* Program guide
* Optional stop
* Tool dimension interpolation
* Tool life management
* JOG/MDI (Manual operation)
* Single block
* Dry run
* Linear interpolation
* Circular interpolation
* Synchro Tapping
* Auto servo tuning function
* Auto servo tuning function
* Emergency stop
* Thermal displacement compensation

* Inch / Metric
* Block search
* ISO program (G291)
* Program stop
* Progarm test
* 2D simulation
* Max. work offset (100)
* Max.no of tools / cuttings (128/256)
* Ref.1,2 position
* Feed hold
* Block skip
* Helical interpolation
* Advanced surface
* Jerk limitation
* Feed forward control
* Tap return
* soft limit

NC optional specification

* Shop mill
* 3D simulation
* Additional axis control
* Real time simulation
* Network drive

※1　Memory capacity is extensible with USB memory and CF card

[　]: OPT

OPTIONAL CONTROLLER

FANUC Oi–MF

MITSUBISHI ELECTRIC M80

NC specifiation

* Controllable axes : 6 axes
* Simultaneous controlled axes : 4 axes
* Minimum setting unit : 0.001mm
  0.0001 inch
* Display : 8.4"[10.4"] TFT COLOR
* User memory : 512kbte [Extensible] ※1
* Program format : G/M code
  [Conversational program]

NC function

* Absolute / Incrementa
* Coordinate system rotating
* Skip / High speed skip
* Background editing
* Mirror image
* Linear interpolation
* Circular interpolation
* Tool dimension interpolation
* Tool offest amount interpolation
* Tool life management
* Single block
* Feed hold
* Dry run
* Tap return
* Pitch error compensation
* Stored stroke check II
* Interlock

* Inch / Metric
* Canned cycle
* Optional block skip
* Program stop
* Sbu.program call
* Helical interpolation
* Nano interpolation
* Tool length interpolation
* Tool offset pairs (400 pairs)
* MDI operation
* Progarm test
* Optional stop
* Rigid tapping
* Backlash compensation
* Stored stroke check I
* Emergency stop
* Machine lock

NC optional specification

* Manual guide OI
* AI contour control I (40 block)
* Nano soomthing
* Additional axis control

* Manual guide I
* AI contour control II (200 block)
* Data server (1GB)

NC specifiation

* Controllable axes : 8 axes
* Simultaneous controlled axes : 4 axes
* Minimum setting unit : 0.0001mm
  0.00001 inch
* Display : 8.4"[10.4"] TFT COLOR
* User memory : 500kbte [Extensible] ※1
* Program format : G/M code
  [Conversational program]

NC function

* Absolute / Incrementa
* Coordinate system rotating
* Background editing
* Mirror image
* Linear interpolation
* Circular interpolation
* High speed&accuracy control I
* SSS control
* Tool dimension interpolation
* Tool offset pairs (400 pairs)
* MDI operation
* Single block
* Feed hold
* Rigid tapping
* Block skeep
* Backlash compensation
* Emergency stop

* Inch / Metric
* Canned cycle
* Program stop
* Optional block skip
* Helical interpolation
* High accuracy control
* High speed&accuracy control II
* Tolerance control
* Tool length interpolation
* Rapid traverse block overlap
* Auto. Operation
* Dry run
* Tap return
* 3D program check
* Pitch error compensation
* Soft limit
* Interlock

NC optional specification

* Additional axis control

※1 Memory capacity is extensible with USB memory and CF card

[   ]: OPT

MACHINE DIMENSIONS

KT−420(A)

KT−420L(AL)
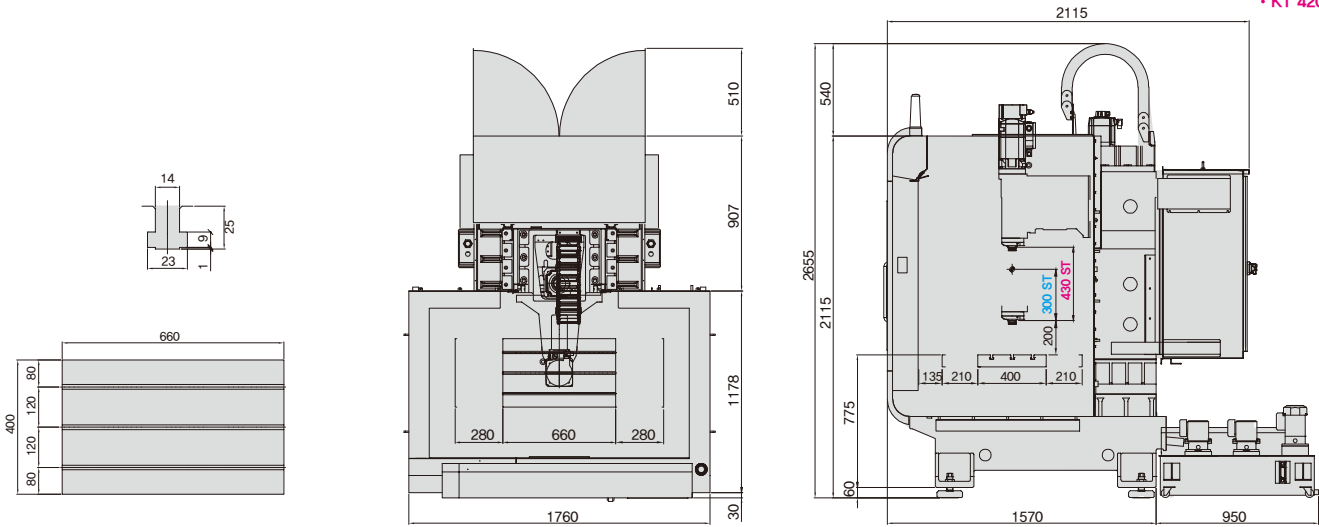
KT−420 DH
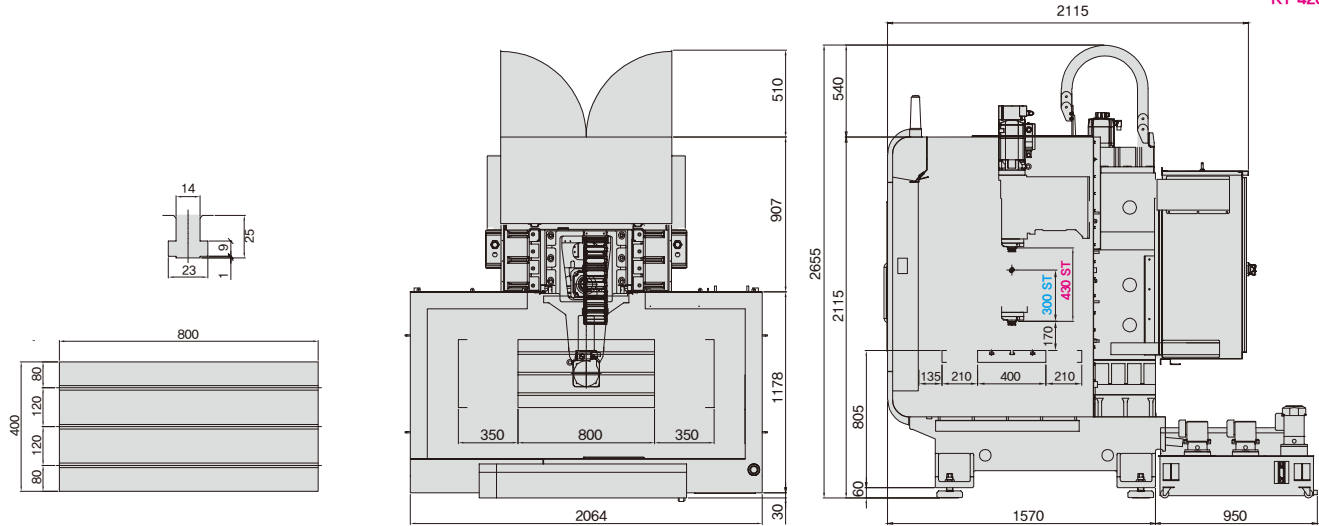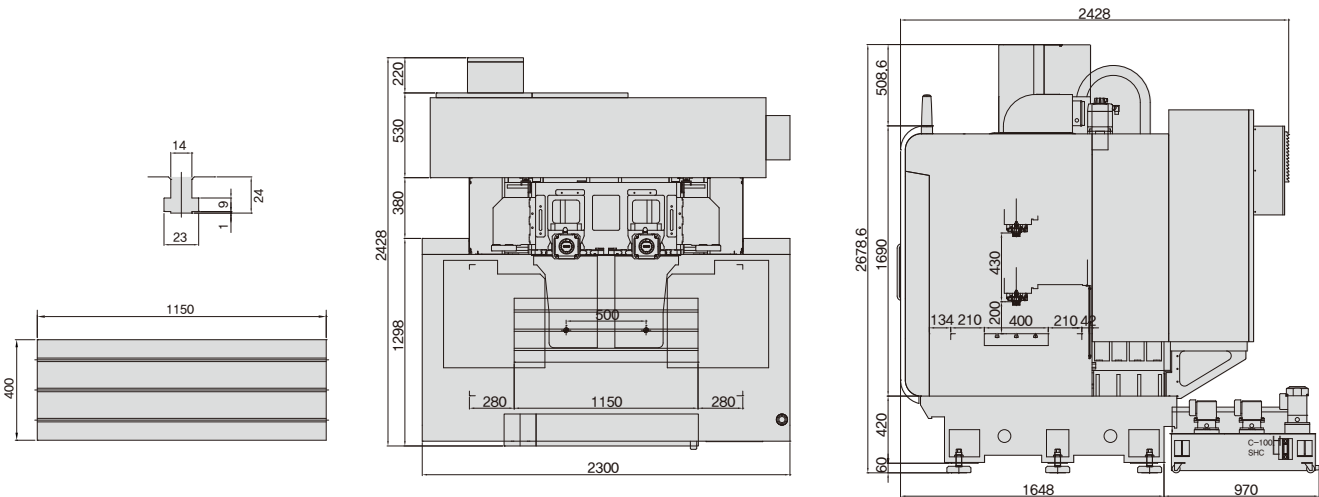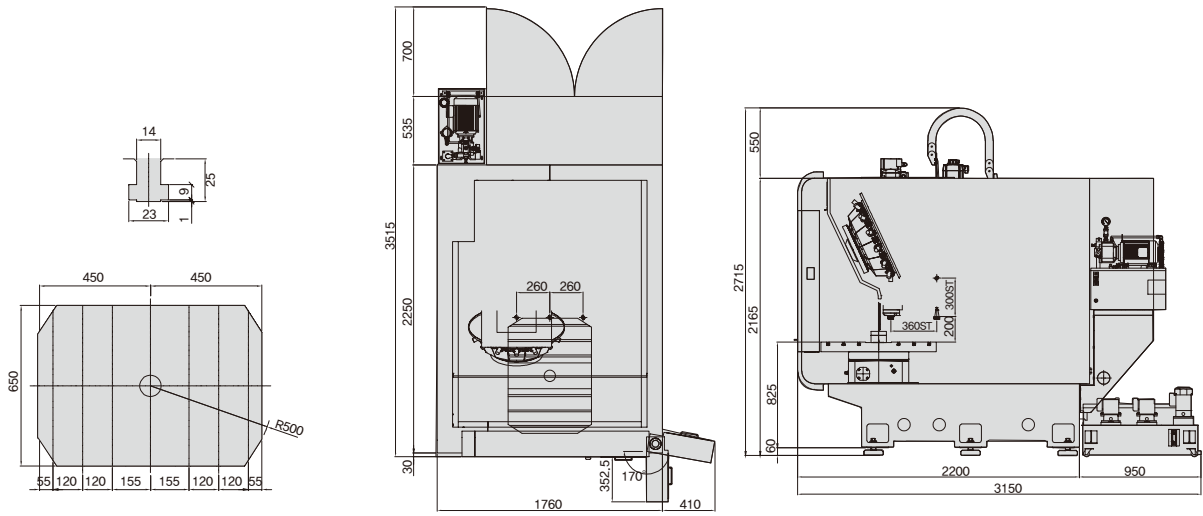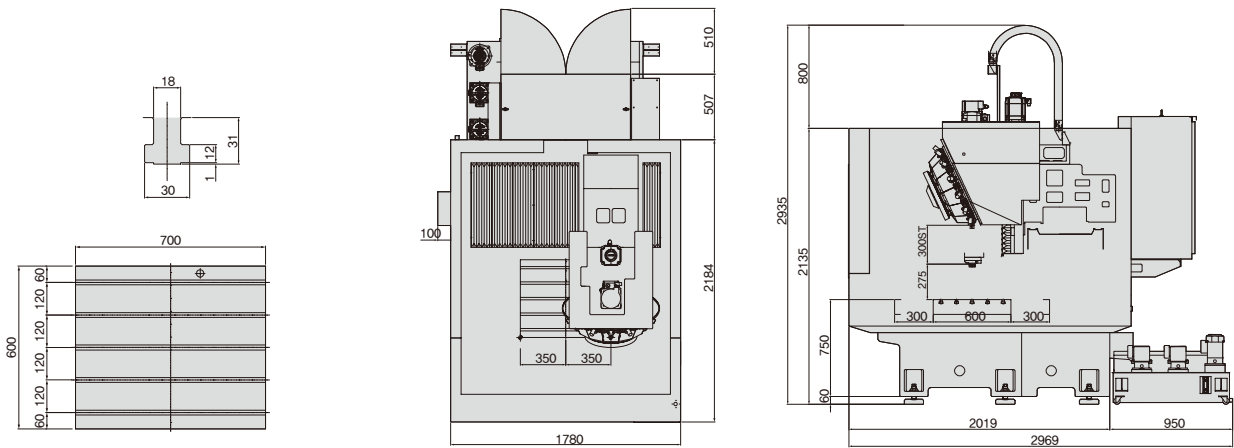
KT−360D
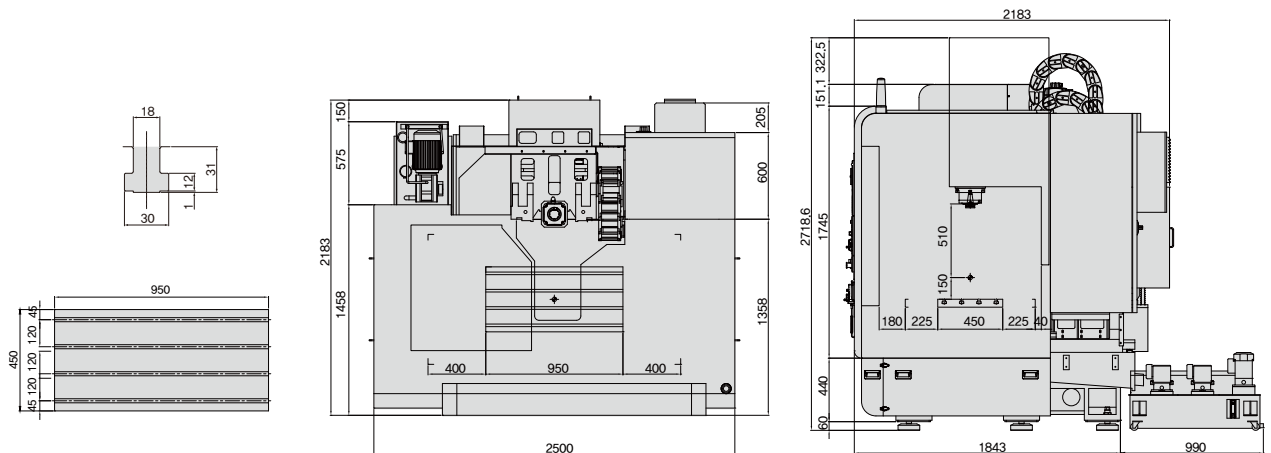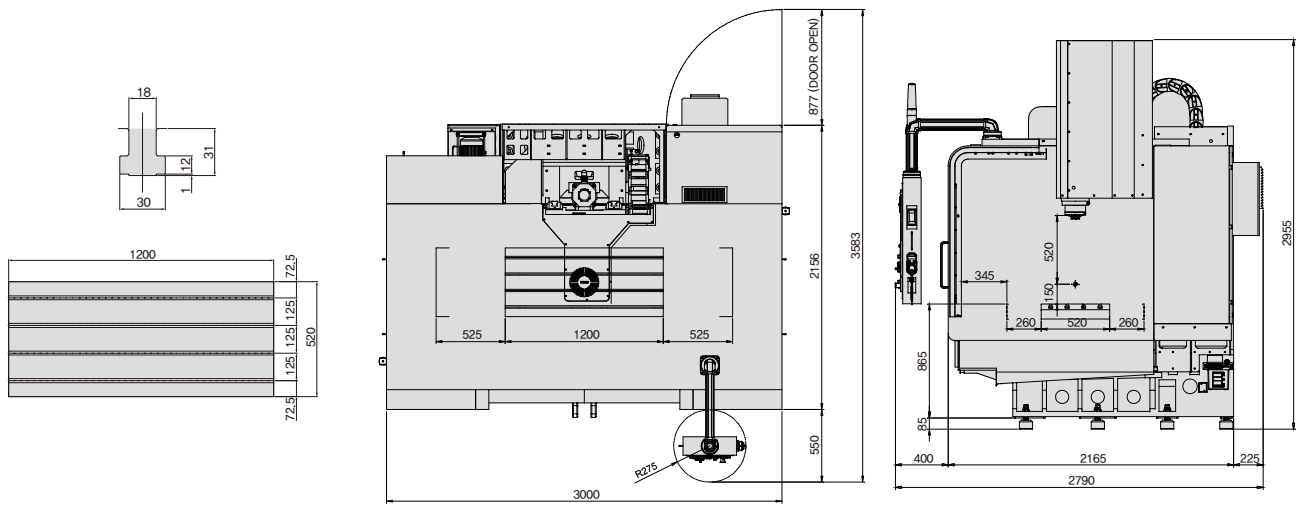
GMT−600

KM−450

KM-520

GMT-500MS

GMT-500MD

GMT-4000

4,200

500

M12 TAP
(Space : 100 X 100)

3189 · 210

965
2855
1890
992
898 (DOOR)
595
1056
290
253
497
703
1393
690

215 · 2300 · 846
308 · 3361
3669

6648
6148
500
2984 · 180 · 2984
820 · 2164 · 2164 · 820
1979 [OPEN AREA] · 160

605
816
2 · 100 · 4

GMT-6000

590
34
(425,5)
50 STROKE

360
2212
300
130
771

313 · 1754
2067

8335
1446 · 6000 (X STROKE) · 889
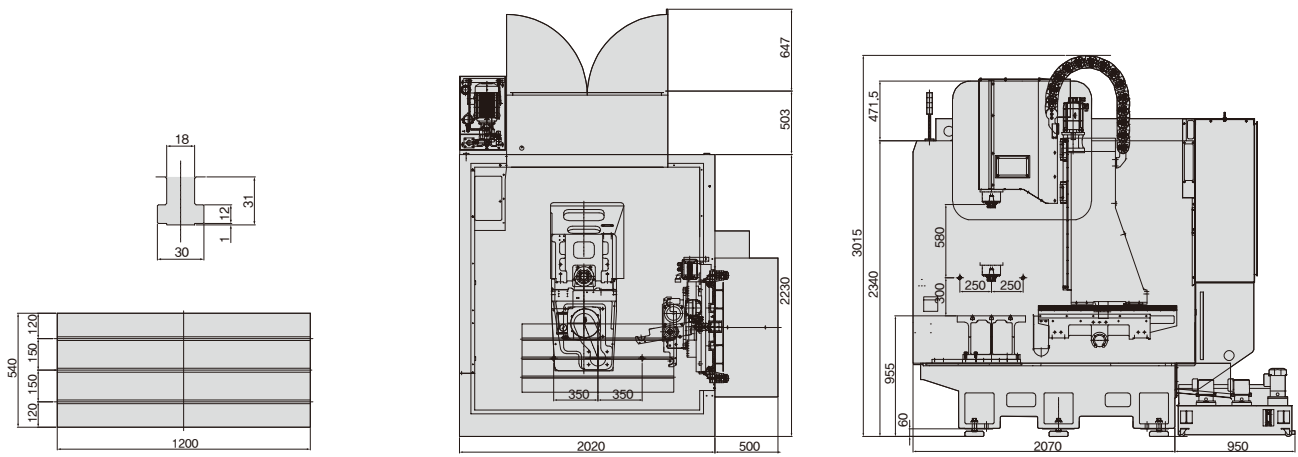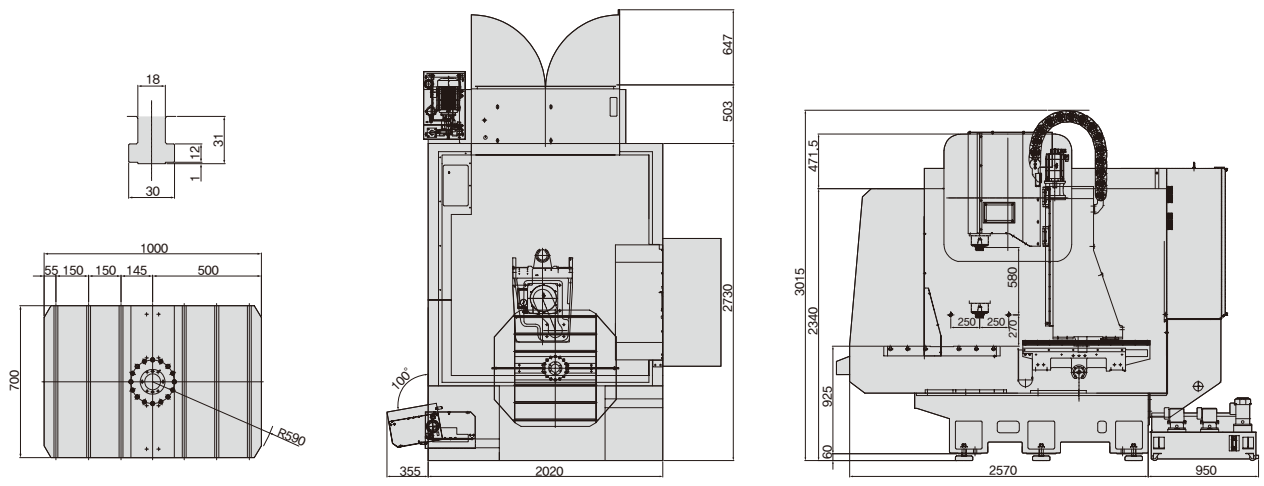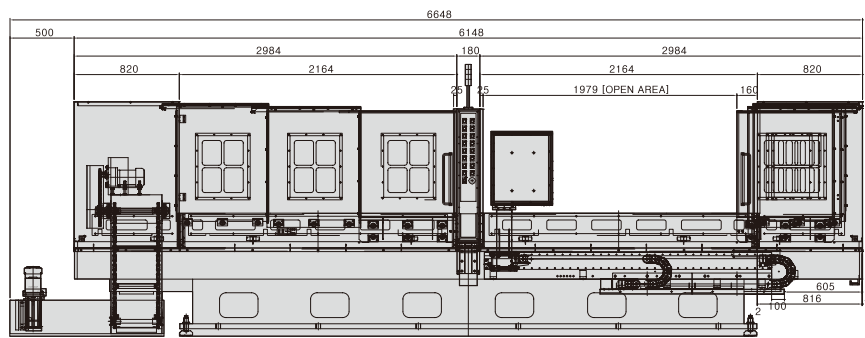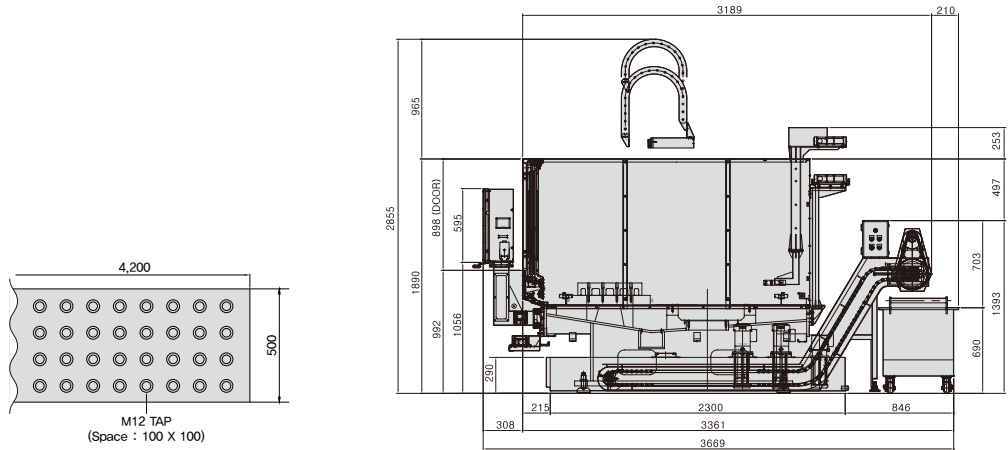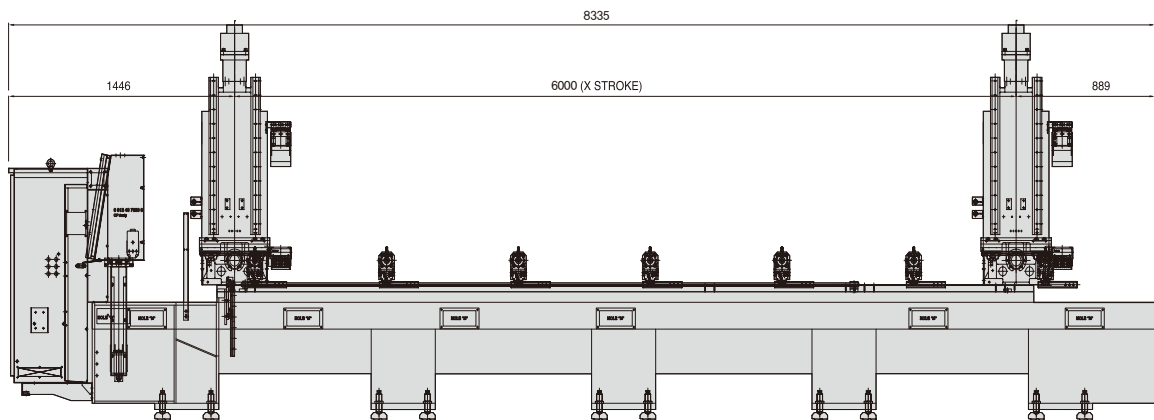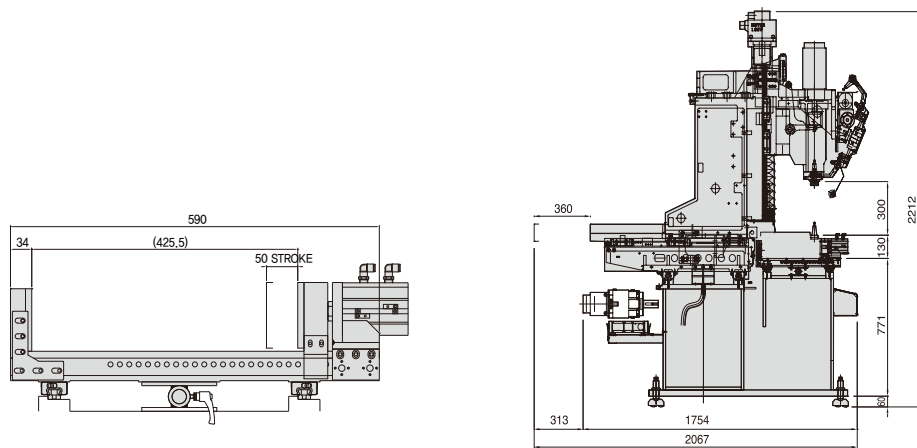
STD & OPT SPECIFICATIONS

	KT 420	KT 420L	KT 420A	KT 420AL	KT 420DH	KT 360D	GMT 600	KM 450	KM 520	GMT 500MS	GMT 500MD	KM 4000 GMT 4000	GMT 6000
Splash guard	●	●	●	●	●	●	●	●	●	●	●	●	x
Coolant tank	●	●	●	●	●	●	●	●	●	●	●	●	x
Work light	●	●	●	●	●	●	●	●	●	●	●	●	●
Indicator light	●	●	●	●	●	●	●	●	●	●	●	●	●
Leveling bolt and Nut	●	●	●	●	●	●	●	●	●	●	●	●	●
Instruction manual	●	●	●	●	●	●	●	●	●	●	●	●	●
Fixed MPG handle	●	●	●	●	●	x	x	x	x	x	x	x	x
Portable MPG handle	O	O	O	O	O	●	●	●	●	●	●	●	●
High column 150mm	O	O	O	O	O	x	O	O	O	x	x	x	x
High column 250mm	O	O	O	O	O	x	O	O	O	x	x	x	x
Coolant through spindle 20bar	O	O	O	O	O	O	O	O	O	O	O	O	x
Coolant through spindle 30bar	O	O	O	O	O	O	O	O	O	O	O	O	x
Coolant through spindle 70bar	O	O	O	O	O	O	O	O	O	O	O	O	x
Bed Shower	O	O	O	O	O	O	O	O	O	O	O	O	x
Coolant gun	O	O	O	O	O	O	O	O	O	O	O	O	x
Air gun	O	O	O	O	O	O	O	O	O	O	O	O	O
Chip conveyor Scrapper Type	O	O	O	O	O	O	O	O	O	O	O	O	x
Chip conveyor Hinge Type	O	O	O	O	O	O	O	O	O	O	O	O	x
Chip conveyor Drum Filter Type	O	O	O	O	O	O	O	O	O	O	O	O	x
Chip bucket Fixed Type	O	O	O	O	O	O	O	O	O	O	O	O	x
Chip bucket Swing Type	O	O	O	O	O	O	O	O	O	O	O	O	x
Auto door	O	O	O	O	O	O	O	O	O	O	O	O	x
Interface for Gantry Loader	O	O	O	O	O	O	O	O	O	O	O	O	x
Interface for multi-Joint robot	O	O	O	O	O	O	O	O	O	O	O	O	x
Auto power off	O	O	O	O	O	O	O	O	O	O	O	O	O
Oil mist cleaner	O	O	O	O	O	O	O	O	O	O	O	O	x
Oil Skimmer	O	O	O	O	O	O	O	O	O	O	O	O	x
MQL(Minimum Quantity Lubircation)	O	O	O	O	O	O	O	O	O	O	O	O	O
Air conditioner in main box	O	O	O	O	O	O	O	●	●	●	●	O	O
TOP COVER	O	O	O	O	O	O	O	O	O	O	O	x	x
Rotary table	O	O	O	O	O	O	O	O	O	O	O	O	O
Additional axis	O	O	O	O	O	O	O	O	O	O	O	O	O
Hydraulic Jig interface	O	O	O	O	O	O	O	O	O	O	O	O	O
Pnumatic Jig interface	O	O	O	O	O	O	O	O	O	O	O	O	O
Air confirm	O	O	O	O	O	O	O	O	O	O	O	O	O
Air blow	O	O	O	O	O	O	O	O	O	O	O	O	O
Tool Presetter	O	O	O	O	O	O	O	O	O	O	O	O	O
Broken tool detector	O	O	O	O	O	O	O	O	O	O	O	O	O
Workpeice probe	O	O	O	O	O	O	O	O	O	O	O	O	O
Tool monitering system	O	O	O	O	O	O	O	O	O	O	O	O	O
Spindle cooler unit	O	O	O	O	O	O	O	O	O	O	O	O	O
Transformer	O	O	O	O	O	O	O	O	O	O	O	O	O
Hydro Unit	O	O	O	O	O	●	O	●	●	●	●	O	O
Heat expansion compensation	●	●	●	●	●	x	x	●	●	x	x	x	x
Tool counter	●	●	●	●	●	●	●	●	●	●	●	●	●
Work counter	●	●	●	●	●	●	●	●	●	●	●	●	●
Tool life management	●	●	●	●	●	●	●	●	●	●	●	●	●
Memory expansion	O	O	O	O	O	O	O	O	O	O	O	O	O
Conversation program	O	O	O	O	O	O	O	O	O	O	O	O	O
Interlock	●	●	●	●	●	●	●	●	●	●	●	●	●
Door lock	O	O	O	O	O	O	O	O	O	O	O	O	x

● : Std.   O : Opt.   X : Can not apply

MACHINE SPECIFICATIONS

	ITEM		UNIT	KT 420 (420L)	KT 420A (420AL)
TABLE	SIZE		mm	660(800) x 400	660(800) x 400
	Max. loading capacity		kg	250 [300] ※1	250 [300] ※1
	Pallet change time		sec.	—	—
TRAVELS	X / Y / Z		mm	560(700) / 420 / 300	560(700) / 420 / 430
	Distance from table surface to spindle nose			200~500 (170~470)	200~630 (170~600)
SPINDLE	Spindle taper		BT	ISO No.30 (7/24)	ISO No.30 (7/24)
	Big–plus (BBT)			OPTIONAL	OPTIONAL
	Distance between spindles				
	Max. speed		rpm	10,000 [15,000], [24,000]	10,000 [10,000 High–torque], [15,000], [24,000]
	Spindle motor	Max. / Cont.	kW	10,000rpm : 21.2 / 4.8	10,000rpm:21.2/4.8 [High–torque10,000rpm:28.2/11.0]
				[15,000rpm : 21.2 / 4.8], [24000rpm: 26.2/3.5]	[15,000rpm:21.2/4.8], [24,000rpm:26.2/3.5]
FEED RATE	X / Y / Z		m/min	60 / 60 / 60 (50 / 50 / 60)	60 / 60 / 60 (50 / 50 / 60)
ATC	Tool shank type			MAS403–BT30	MAS403–BT30
	Pull stud type			MAS403–P30T–1	MAS403–P30T–1
	Tool storage capacity		pcs	14 [21]	20 [26]
	Max. tool diameter		mm	110	80 [64]
	Max. tool length			200	200
	Max. tool weight		kg	3.0 (Total tool weight 25kg for 14tools, 35kg for 21tools)	3.0 (Total tool weight 40kg)
	Tool selection method			Turret (Fixed address)	Twin Arm (Random memory)
	Tool chang time	T – T	sec	Ⓢ 1.08 Ⓜ 1.07	1.2
		C – C		Ⓢ 1.40 Ⓜ 1.36	1.8
POWER SOURCE	Power supply			AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz
	Power capacity		kVA	25	25
MACHINE DIMENSION	Size (Tank included)	W x L	mm	1,760(2,064) x 2,520	1,760(2,064) x 2,520
	Height	H	mm	2,655	2,655
	Weight		kg	2300 (2,600)	2,500 (2,800)
NC UNIT	Model			S–828D [M80], [F–OiMF]	S–828D [M80], [F–OiMF]
	Program format			G–code, M–code [Conversation]	G–code, M–code [Conversation]
	Display		inch	10.4" TFT Color	10.4" TFT Color

	ITEM		UNIT	KM 450	KM 520
TABLE	SIZE		mm	950 x 450	1,200 x 520
	Max. loading capacity		kg	350	800
	Pallet change time		sec.	—	—
TRAVELS	X / Y / Z		mm	800 / 450 / 510	1,050 / 520 / 520
	Distance from table surface to spindle nose			150~660	150~670
SPINDLE	Spindle taper		BT	ISO No.40 (7/24)	ISO No.40 (7/24)
	Big–plus (BBT)			OPTIONAL	OPTIONAL
	Max. speed		rpm	8,000 [12,000]	8,000 [12,000]
	Spindle motor	Max. / Cont.	kW	8,000rpm : 24.0 / 11.0	8,000rpm : 24.0 / 11.0
				12,000rpm : 24.0 / 11.0	[12,000rpm : 24.0 / 11.0]
FEED RATE	X / Y / Z		m/min	36 / 36 / 36	36 / 36 / 30
ATC	Tool shank type			MAS–BT40	MAS–BT40
	Pull stud type			PS–805	PS–805
	Tool storage capacity		pcs	24 [30]	24 [30]
	Max. tool diameter		mm	80	80
	Max. tool length			300	300
	Max. tool weight		kg	7.0 (Total tool weight 84kg)	7.0 (Total tool weight 84kg)
	Tool selection method			Twin Arm (Random memory)	Twin Arm (Random memory)
	Tool chang time	T – T	sec	1.7	1.7
		C – C		2.9	3.4
POWER SOURCE	Power supply			AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz
	Power capacity		kVA	35	35
MACHINE DIMENSION	Size (Tank included)	W x L	mm	2,500 x 2,833	3,000 x 2,790
	Height	H	mm	2,718	2,955
	Weight		kg	5,000	6,000
NC UNIT	Model			S–828D [M80], [F–OiMF]	S–828D [M80], [F–OiMF]
	Program format			G–code, M–code [Conversation]	G–code, M–code [Conversation]
	Display		inch	10.4" TFT Color	10.4" TFT Color

※1 : Acceleration for X and Y axes must be adjusted. ※2 : AC motor type pallet change time. ※3 : Only the length of the Y axis front part is extended, no stroke change.

Ⓢ SIEMENS 828D Ⓜ MITSUBISHI M80

KT 420DH	KT 360D	GMT 600	GMT 6000
1,150 x 400	650 x 900	700 x 600	6,000 x 425(vise)
400	200 x 2	400	
—	4.5 [3.2] ※2	—	—
560 / 420 / 430	520 / 360 / 300	700 / 600 / 300	6,000 / 350 / 300
200〜630	200〜500	275〜575	130〜430
ISO No.30 (7/24)	ISO No.30 (7/24)	ISO No.30 (7/24)	ISO No.30 (7/24)
OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
500	—	—	—
10,000 [High-torque10,000], [15,000], [24,000]	10,000, [15,000], [24,000]	10,000 [15,000], [24,000]	10,000 [15,000]
10,000rpm: 21.2/4.8 [High-torque10,000rpm: 28.2/11.0]	10,000rpm : 21.2 / 4.8	10,000rpm : 21.2 / 4.8	10,000rpm : 21.2 / 4.8
[15,000rpm: 21.2/4.8], [24,000rpm: 26.2/3.5]	[15,000rpm : 21.2 / 4.8] [24,000rpm : 26.2 / 3.5]	[15,000rpm : 21.2 / 4.8] [24,000rpm : 26.2 / 3.5]	[15,000rpm : 21.2 / 4.8]
48 / 48 / 60	50 / 50 / 60	48 / 48 / 60	36 / 36 / 60
MAS403-BT30	MAS403-BT30	MAS403-BT30	MAS403-BT30
MAS403-P30T-1	MAS403-P30T-1	MAS403-P30T-1	MAS403-P30T-1
20 x 2 [26 x 2]	14	14 [21]	14
80 [64]	110	110	80
200	200	200	200
3.0 (Total tool weight 40kg)	3.0 (Total tool weight 25kg)	3.0 (Total tool weight 25kg for 14tools, 35kg for 21tools)	3.0 (Total tool weight 25kg)
Twin Arm (Random memory)	Turret (Fixed address)	Turret (Fixed address)	Turret (Fixed address)
1.2	Ⓢ1.08 Ⓜ1.07	Ⓢ1.08 Ⓜ1.07	1.1
1.8	Ⓢ1.40 Ⓜ1.36	Ⓢ1.40 Ⓜ1.37	1.9
AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz
25	25	25	25
2,300 x 2,618 [2,818] ※3	1,760 x 3,200	1,880 x 2,969	7,820 x 1,754
2,678	2,715	2,935	2,700
5,500	4,300	4,000	10,000
S-828D [M80]	S-828D [M80], [F-OiMF]	S-828D [M80], [F-OiMF]	S-828D
G-code, M-code [Conversation]	G-code, M-code [Conversation]	G-code, M-code [Conversation]	G-code, M-code [Conversation]
10.4" TFT Color	10.4" TFT Color	10.4" TFT Color	10.4" TFT Color

GMT 500MS	GMT 500MD	KM 4000	GMT 4000
1,200 x 540	700 x 1,000	4,200 x 550	4,200 x 500
800	300 x 2	—	—
—	4.5	—	—
700 / 500 / 580	700 / 500 / 580	4,000 / 500 / 450	4,000 / 400 / 300
300〜880	270〜850	150〜600	200〜500
ISO No.40 (7/24)	ISO No.40 (7/24)	ISO No.40 (7/24)	ISO No.30 (7/24)
OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
6,000 [8,000]	6,000 [8,000]	8,000 [12,000]	10,000 [15,000]
6,000rpm : 24.0 / 11.0	6,000rpm : 24.0 / 11.0	8,000rpm : 24.0 / 11.0	10,000rpm : 21.2 / 4.8
[8,000rpm : 24.0 / 11.0]	[8,000rpm : 24.0 / 11.0]	[12,000rpm : 24.0 / 11.0]	[15,000rpm : 21.2 / 4.8]
36 / 36 / 36	36 / 36 / 36	20 / 36 / 36	20 / 36 / 60
MAS-BT40	MAS-BT40	MAS-BT40	MAS403-BT30
PS-805	PS-805	PS-805	MAS403-P30T-1
24 [30]	24 [30]	24	14
100	100	80	80
300	300	300	200
7.0 (Total tool weight 84kg)	7.0 (Total tool weight 84kg)	7.0 (Total tool weight 28kg)	3.0 (Total tool weight 25kg)
Twin Arm (Random memory)	Twin Arm (Random memory)	Twin Arm (Random memory)	Turret (Fixed address)
1.7	1.7	1.7	1.1
4.5	4.5	3.4	1.9
AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz	AC380V±10%, 55Hz ±5Hz
35	35	35	25
2,520 x 3,020	2,875 x 3,520	6,500 x 4,300	6,648 x 3,669
3,015	3,015	3,100	2,855
5,700	6,000	11,000	10,000
S-828D	S-828D	S-828D	S-828D
G-code, M-code [Conversation]	G-code, M-code [Conversation]	G-code, M-code [Conversation]	G-code, M-code [Conversation]
10.4" TFT Color	10.4" TFT Color	10.4" TFT Color	10.4" TFT Color

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