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PRODUCT LINEUP

KOMATECH

MATER® tecnologia industrial

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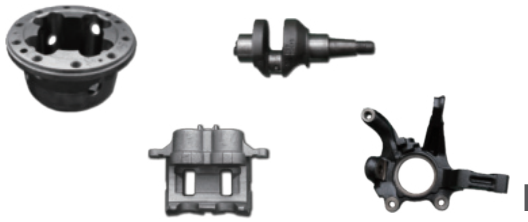
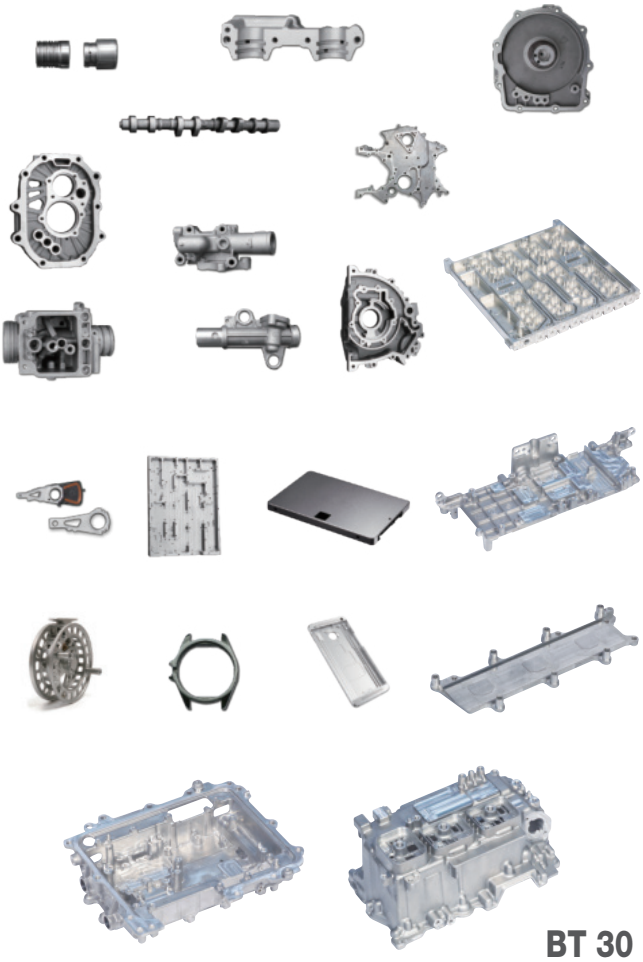
MACHINE TOOLS LINE-UP

Examples of target workpieces

I.T & 자동차부품 / 일반가공품



BT 40



BT 30

HIGH SPEED TAPPPING CENTER

KT 420

KT 420A

KT 420DH

KT 420L

KT 420AL

KT 360D

KT 500

KT 700

HIGH SPEED MACHINING CENTER

KM 430

KM 450D

KM 450DH

KM 450

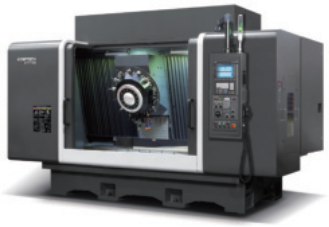
KM 500

HORIZONTAL MACHINING CENTER

KM 500H

LONG TRAVEL MACHINING CENTER

KT 2000(2100)



HIGH SPEED TAPPING CENTER

KT 420 series

High productive, high-speed tapping center with compact design, high acceleration and rapids

SPECIFICATIONS	KT 420(L)	KT 420A(AL)
X/Y/Z travels(mm)	560(700)/420/350	560(700)/420/480
Spindle taper	ISO No.30	ISO No.30
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)	10,000 / High torque 10,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)	15,000 (Opt.) / 24,000 (Opt.)
Tool storage capacity(pcs)	14 / 21 (Opt,) / 28 (Opt,)	20 / 26 (Opt,)
Machine size(mm)	1,752 (2,064) x 2,600	1,752 (2,064) x 2,600

TURRET TYPE TOOL CHANGER KT420 / KT 420L

Tool to Tool
0.96 sec

Chip to Chip
1.37 sec

*1 MITSUBISHI HIGH ACC.SPECIFICATION

The self-developed tool changer has secured high durability by the sealed structure of the drive unit, and the design optimized for high-speed rotation provides the best-in-class tool change speed.

* Tool storage capa.: 14 pcs [Opt: **21** / **28** pcs]

TWIN ARM TYPE TOOL CHANGER KT420A / KT 420AL

Tool to Tool
1.2 sec

Chip to Chip
1.8 sec

Store the tool in a side magazine box to block chip inflow, protect the taper surface, and prepare the following tool ports during processing for quick tool change without unnecessary latency.

* Tool storage capa.: 20 pcs [Opt: **26** pcs]

VARIOUS SPINDLE SPEED

STD. **10,000** rpm

OTP. **10,000** rpm
(High Torque)
15,000 rpm
24,000 rpm

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide range of machining.

*CTS is available(OPT.)

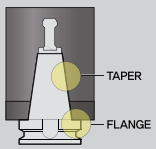
HIGH TORQUE SPECIFICATION (OPT.)
Max. torque **84.3** Nm

HIGH ACC. SPECIFICATION (OPT.)
0 rpm ↔ 10,000 rpm **0.19** sec

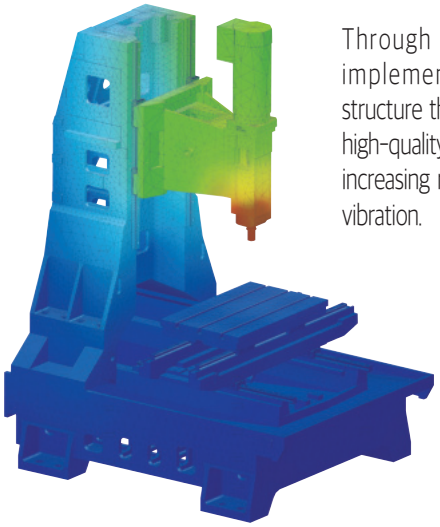
MITSUBISHI NC SPEC.

BIG PLUS BBT (Opt.)

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

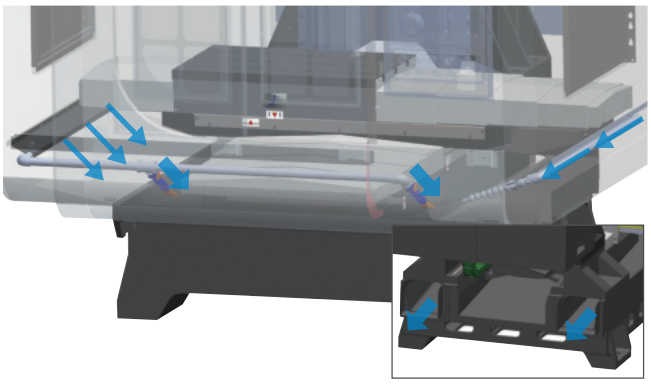


HIGH RIGIDITY STRUCTURE



Through structural analysis implemented a mechanical structure that enables stable and high-quality cutting processing by increasing rigidity and minimizing vibration.

CHIP DISCHARGE CAPABILITY



The bad structure tilted from front to rear, the optimization of chip discharge paths and bed shower nozzles, and the application of improved pumps for high-discharge bed showers enable smooth chip discharge from inside equipment to tank.

*1 Standard NC specification tool change time (T-T): SIEMENS: 1.08 sec / MITSUBISHI: 1.07 sec

HIGH SPEED TAPPING CENTER

KT 420DH / KM 450DH

High-speed tapping / machining center with overwhelming high-productivity dual spindle

KT 420DH

KM 450DH

SPECIFICATIONS	KT 420DH	KM 450DH
X/Y/Z travel(mm)	560 / 420 / 430	560 / 450 / 430
Spindle taper	ISO No.30	ISO No.40
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)	8,000 / 12,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)	
Tool storage capacity(pcs)	20 x 2 / 26 x 2 (Opt.)	20 x 2
Machine size(mm)	2,120 x 2,775	2,500 x 2,835

DUAL HEAD STRUCTURE

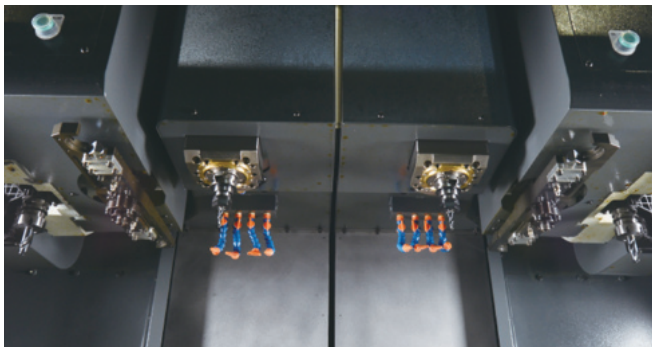
Ultra-high productivity base on 2 spindles simultaneous machining.

Minimize plant utility, floor space, optional devices.

Reduce total investment cost compared to 1 spindle machine.

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.

TWIN ARM TYPE TOOL CHANGER



KT 420DH
Tool to Tool **1.2** sec
Chip to Chip **1.8** sec

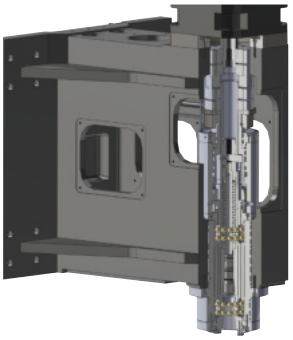
KM 450DH
Tool to Tool **1.4** sec
Chip to Chip **2.3** sec

VARIOUS SPINDLE SPEED

KT 420DH (BT30)

STD. **10,000** rpm

OTP. **10,000** rpm (High Torque)
15,000 rpm
24,000 rpm



KM 450DH (BT40)

Max. speed
STD. **8,000** rpm
OTP. **12,000** rpm

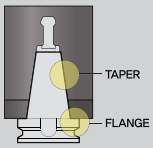
Max. torque
118.0 Nm

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide range of machining.

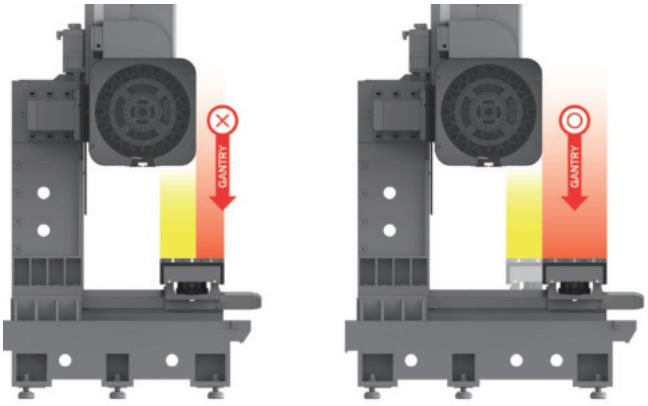
*CTS is available(OPT.)

BIG PLUS BBT (Opt.)

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

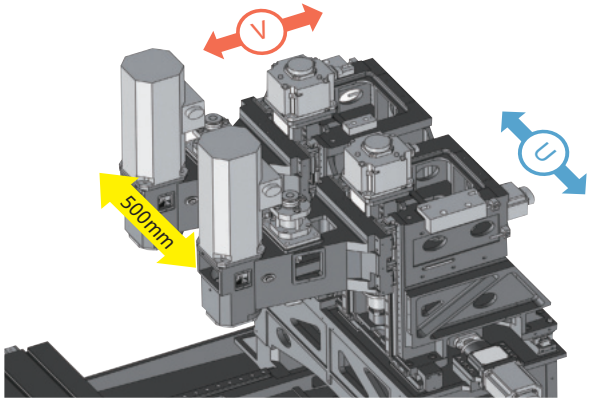


Y-AXIS EXPANSION(OPT.)



The 200mm extension is possible to the front of the Y-axis makes it easy to build automation of the gantry loader.

MICRO ADJUSTMENT OF SPINDLE DISTANCE (OPT.)



U-axis & V-axis are available for ±2mm micro-adjustment and these can flexibly cope with the jig application when applying the rotary table.

HIGH SPEED TAPPING CENTER

KT 360D

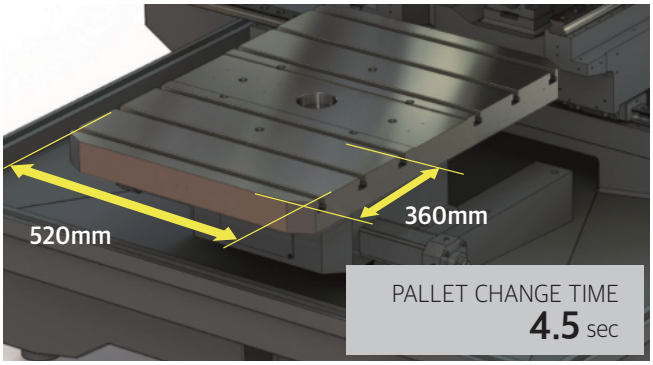
High productivity dual table tapping center with pallet changer

SPECIFICATIONS

Table size(mm)	650 x 360 (One face)
X/Y/Z travels(mm)	520 / 360 / 300
Spindle taper	ISO No.30
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)
Tool storage capacity(pcs)	14 / 21 (Opt,)
Machine size(mm)	1,760(2,060)* x 3,200

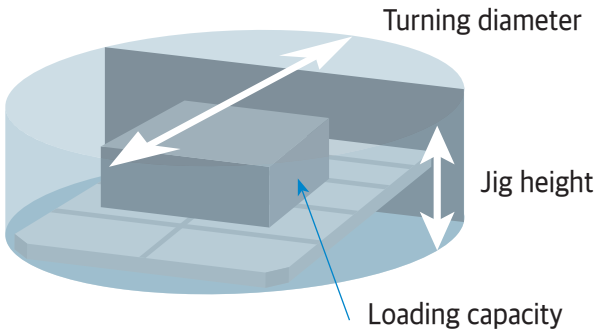
* 21T MAGAZINE SPEC.

HIGH RELIABLE DUAL TABLE



Hydraulic HIRTH coupling gear-type precision dual table quickly and accurately performs positioning after rotating the table without UP&DOWN motion.

APPLICATION RANGE OF JIG



Loading capacity	Ø1,000
Jig height	320 mm
Loading capacity	200 kg x 2

VARIOUS SPINDLE SPEED

STD. **10,000** rpm

OTP. **10,000** rpm
(High Torque)

15,000 rpm

24,000 rpm

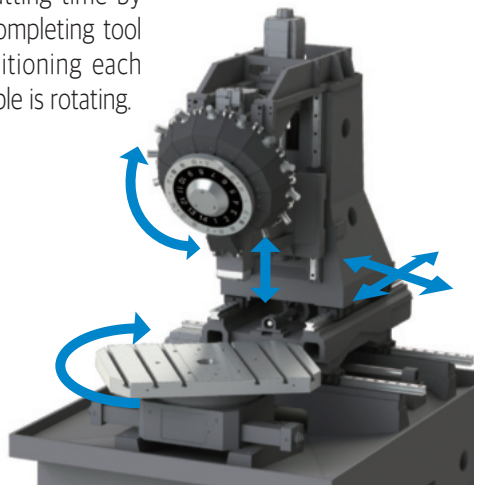
MITSUBISHI NC SPEC.

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during machining. In addition, a various spindle speed specifications can cope with a wide range of machining.

*CTS is available(OPT.)

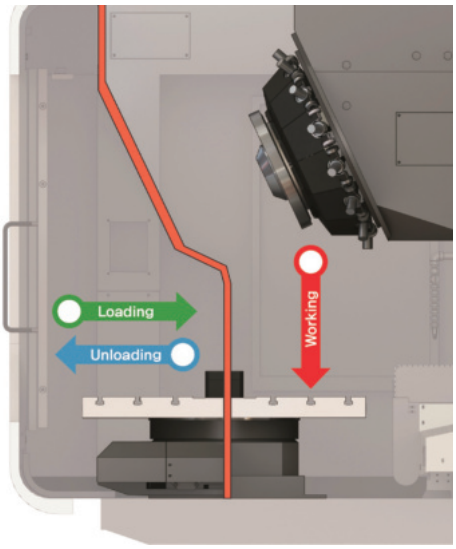
SIMULTANEOUS MOTION CONTROL

Minimize non-cutting time by simultaneously completing tool change and positioning each axes while the table is rotating.



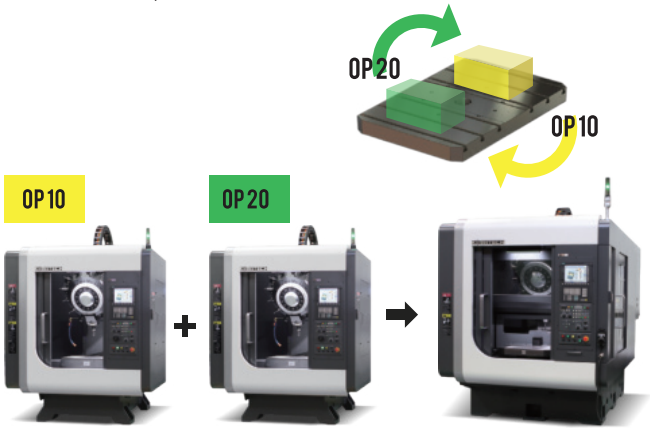
MINIMIZE NON-CUTTING TIME

The workpiece on the opposite table can be exchanged during processing, shortening non-cutting time.



PROCESS DUALIZATION

The application of the dual table and the 21 tool magazine can perform 2 processes in one machine and the line balance can be improved. And the user is available optimized investment.



HIGH SPEED TAPPING CENTER

KT 500

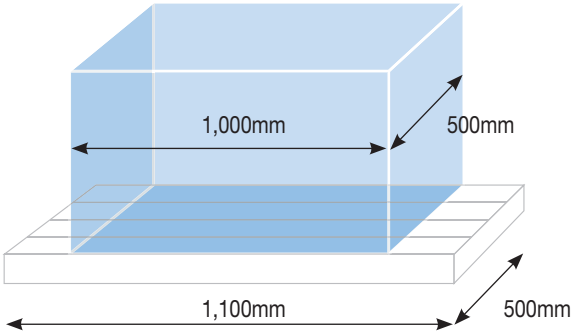
High-speed tapping center with 50 m/min rapids and wide work area.

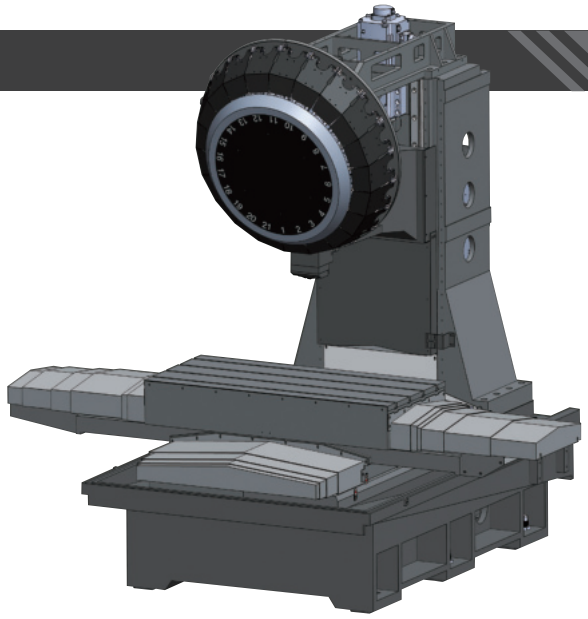
SPECIFICATIONS

X/Y/Z travel(mm)	1,000 / 500 / 300
Spindle taper	ISO No.30
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)
Tool storage capacity(pcs)	14 / 21 (Opt,) / 28 (Opt.)
Machine size(mm)	2,548 x 2,753

WIDE WORKING AREA

A wide area of X1,100 x Y500 mm can apply for a various jig, including from large light cutting workpiece used in existing machining center to a number of small workpiece.





VARIOUS SPINDLE SPEED

STD. **10,000** rpm

OTP. **10,000** rpm
(High Torque)

15,000 rpm

24,000 rpm

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and high precision during machining. In addition, a various spindle speed specifications can cope with a wide range of machining

*CTS is available (OPT.)

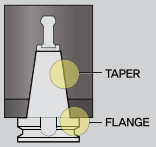
HIGH TORQUE SPECIFICATION (OPT.)
Max. torque **84.3** Nm

HIGH ACC. SPECIFICATION (OPT.)
0 rpm ↔ 10,000 rpm **0.19** sec

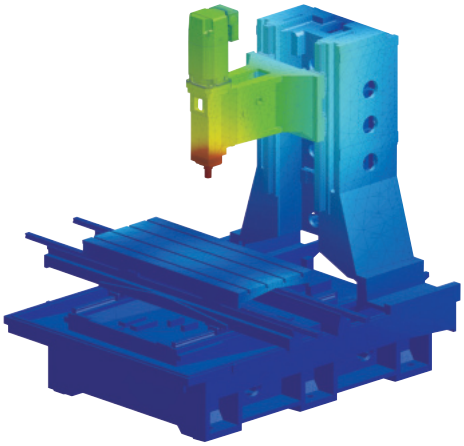
MITSUBISHI NC SPEC.

BIG PLUS BBT (Opt.)

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



HIGH RIGIDITY STRUCTURE



Through structural analysis implemented a mechanical structure that enables stable and high-quality cutting processing by increasing rigidity and minimizing vibration.

TURRET TYPE TOOL CHANGER

Tool to Tool
1.03 sec

Chip to Chip
1.37 sec

*1 MITSUBISHI HIGH ACC. SPECIFICATION

The self-developed tool changer has secured high durability by the sealed structure of the drive unit, and the design optimized for high-speed rotation provides the best-in-class tool change speed.
* Tool storage capacity: 14 pcs [Opt: 21 / 28 pcs]

*1 Standard NC specification tool change time (T-T): 1.2 sec

HIGH SPEED TAPPING CENTER

KT 700

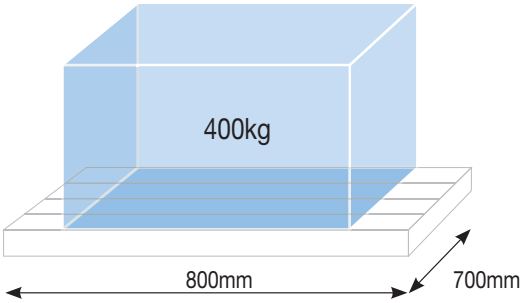
High-speed tapping center with precise and powerful machining performance

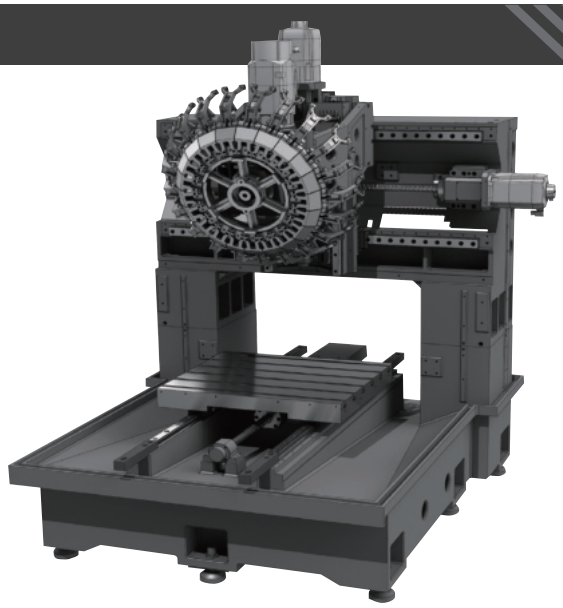
SPECIFICATIONS

X/Y/Z travel(mm)	800 / 700 / 300
Spindle taper	ISO No.30
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)
Tool storage capacity(pcs)	14 / 21 (Opt,) / 28 (Opt.)
Machine size(mm)	2,164 x 2,923

HIGH RIGIDITY STRUCTURE

X-axis and Y-axis have separate moving structures, enabling stable high-precision work, 800x700mm wide-area travel distance and up to 400kg weight can be loaded, enabling a wide range of Jig application from a large workpiece to a number of small workpiece.





VARIOUS SPINDLE SPEED

STD. **10,000** rpm

OTP. **10,000** rpm
(High Torque)

15,000 rpm

24,000 rpm

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide range of machining.

*CTS is available (OPT.)

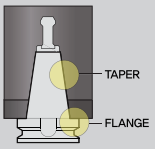
HIGH TORQUE SPECIFICATION (OPT.)
Max. torque **84.3** Nm

HIGH ACC. SPECIFICATION (OPT.)
0 rpm ↔ 10,000 rpm **0.19** sec

MITSUBISHI NC SPEC.

BIG PLUS BBT (Opt.)

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



TURRET TYPE TOOL CHANGER

Tool to Tool
1.03 sec

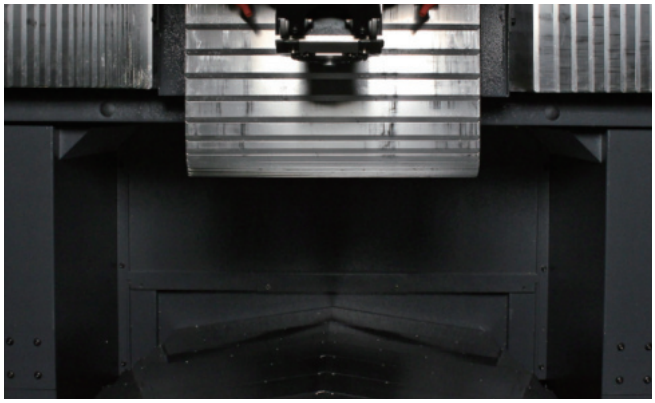
Chip to Chip
1.37 sec

*1 MITSUBISHI HIGH ACC. SPECIFICATION

The self-developed tool changer has secured high durability by the sealed structure of the drive unit, and the design optimized for high-speed rotation provides the best-in-class tool change speed.

* Tool storage capa.: 14 pcs [Opt: 21 / 28 pcs]

MULTI COVER



The travel area is sealed with a multi cover to prevent chips from the machining area, leading to improved travel area's durability and reliability.

*1 Standard NC specification tool change time (T-T): 1.2 sec

HIGH SPEED MACHINING CENTER

KM 430

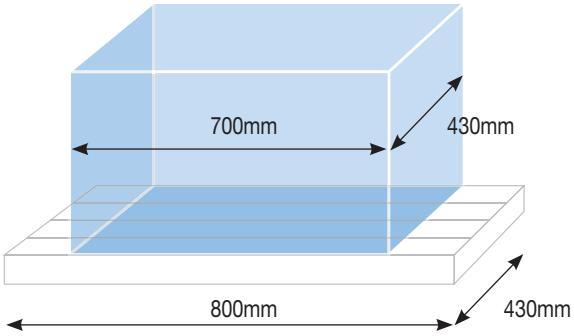
High productive, high-speed machining center with compact design and 48 m/min of rapids.

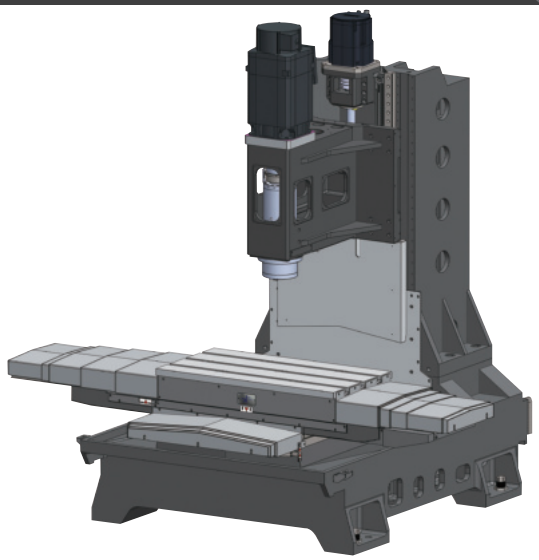
SPECIFICATIONS

Table size(mm)	800 x 430
X/Y/Z travel(mm)	700 / 430 / 430
Spindle taper	ISO No.40
Max. spindle speed(rpm)	8,000 / 12,000 (Opt.)
Tool storage capacity(pcs)	20 / 24 (Opt.)
Machine size(mm)	2,064 x 2,603

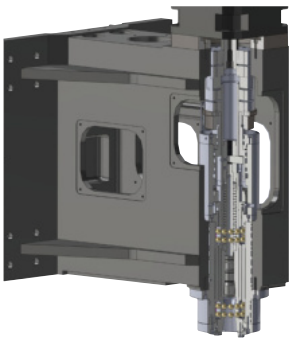
BASE FEATURE

Work area of X800 x Y430mm, rapids of 48 m/min and BT40-class spindle can cope with a various machining with high productivity and heavy-duty machining close to tapping center.





HIGH PERFORMANCE SPINDLE



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

MAX. TORQUE
118.0 Nm

MITSUBISHI NC SPEC.

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide area of machining.

*CTS is available (OPT.)

TWIN ARM TYPE TOOL CHANGER

Tool to Tool
1.4 sec

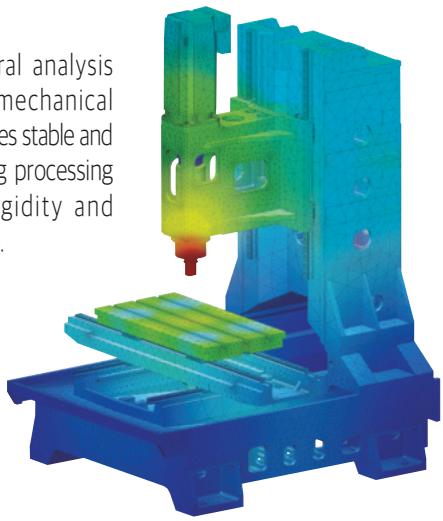
Chip to Chip
2.5 sec

* Tool storage capacity: 20 pcs [Opt: 24 pcs]

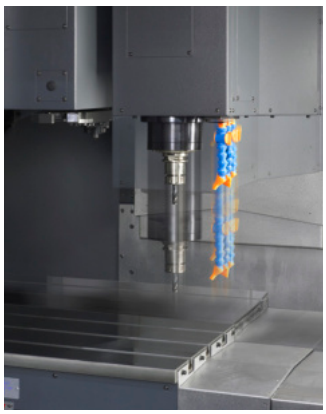
High-speed cam motor driven twin arm type tool changer. the optimized tool change sections ensure faster and more stable movement and higher durability.

HIGH RIGIDITY STRUCTURE

Through structural analysis implemented a mechanical structure that enables stable and high-quality cutting processing by increasing rigidity and minimizing vibration.



SLIDEWAY



RAPIDS (X/Y/Z)
48/48/48 m/min

High-power servo motors with excellent responsiveness, high-precision L/M guides, and ultra-precise ball screws were applied to secure high reliability and fast travel capability.

HIGH SPEED MACHINING CENTER

KM 450D

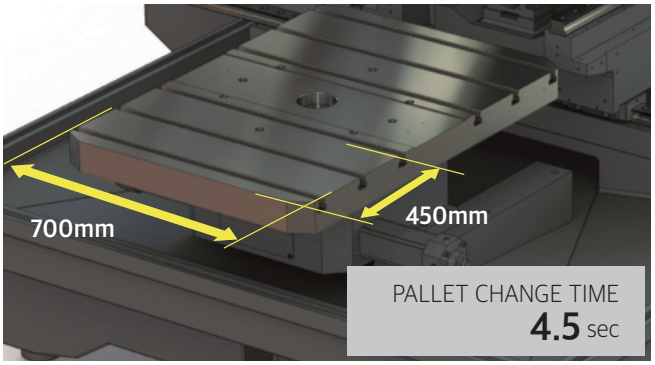
High productivity dual table machining center with pallet changer

SPECIFICATIONS

Table size(mm)	700 x 450 (One face)
X/Y/Z travels(mm)	700/450/480(420)*
Spindle taper	ISO No.40
Max. spindle speed(rpm)	8,000 / 12,000 (Opt.)
Tool storage capacity(pcs)	24 / 30 (Opt.)
Machine size(mm)	2,345 x 3,505

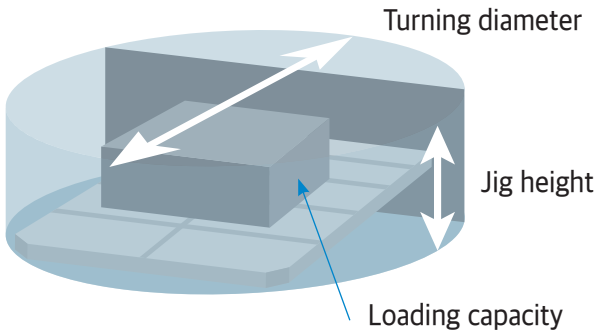
* When 30T magazine is applied.

HIGH RELIABLE DUAL TABLE



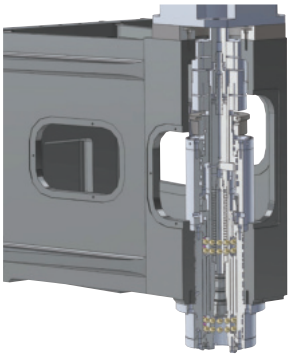
The hydraulic HIRTH coupling gear type precision dual table performs positioning quickly and accurately after rotating the table without a separate UP&DOWN operation.

APPLICATION RANGE OF JIG



Loading capacity	Ø1,280
Jig height	400 mm
Loading capacity	200 kg x 2

HIGH PERFORMANCE SPINDLE



MAX. SPEED
STD. 8,000 rpm
OTP. 12,000 rpm

MAX. TORQUE
118.0 Nm

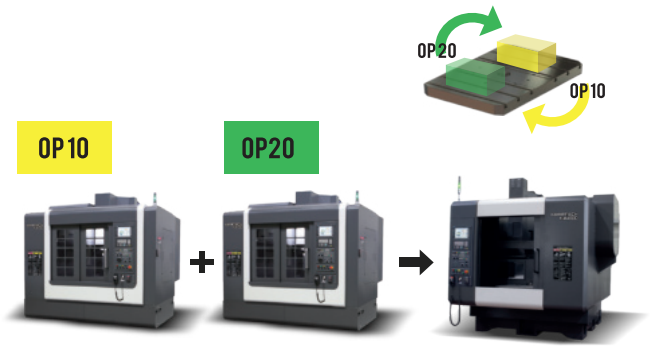
Mitsubishi NC specification.

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide area of machining.

*CTS is available (OPT.)

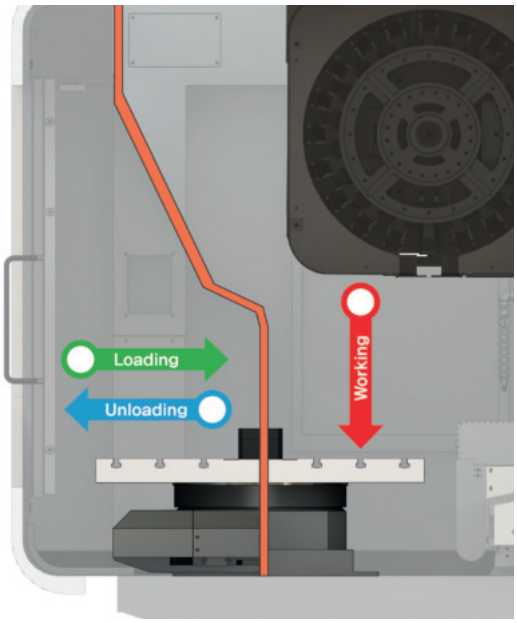
PROCESS DUALIZATION

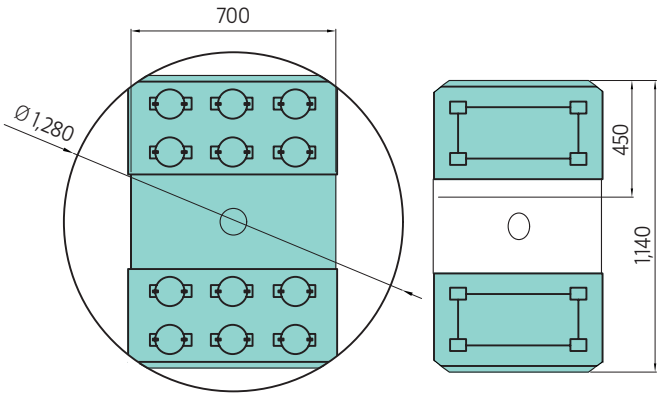
The application of the dual table and the 30 tool magazine can perform 2 processes in one machine and the line balance can be improved. And the user is available optimized investment.



REDUCTION OF NON-CUTTING TIME

The workpiece on the opposite table can be exchanged during processing, shortening non-cutting time.





[Examples of application]

HIGH SPEED MACHINING CENTER

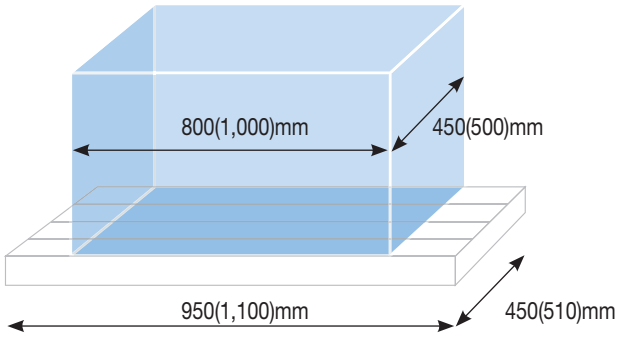
KM 450 / KM 500

High-performance machining center with powerful and precise machining capability.

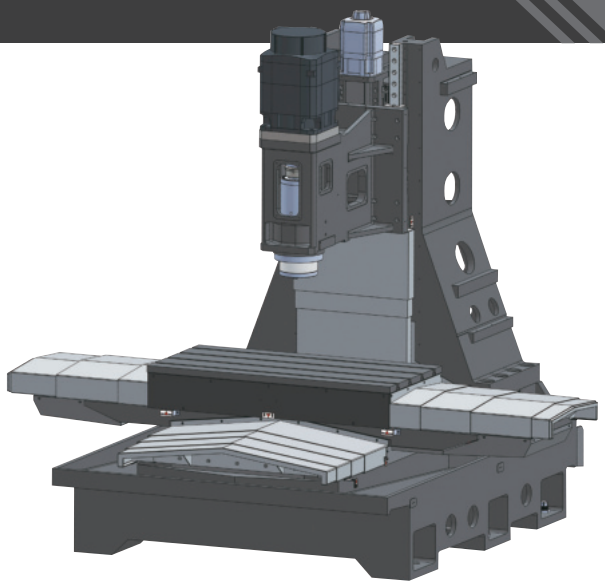
SPECIFICATIONS	KM 450	KM 500
Table size(mm)	950 x 450	1,100 x 510
X/Y/Z travel(mm)	800 / 450 / 510	1,000 / 500 / 520
Spindle taper	ISO No.40	ISO No.40
Max. spindle speed(rpm)	8,000 / 12,000 (Opt.)	8,000 / 12,000 (Opt.)
Tool storage capacity(pcs)	24 / 30 (Opt.)	24 / 30 (Opt.)
Machine size(mm)	2,500 x 2,833	2,692 x 2,886

HIGH RIGIDITY STRUCTURE

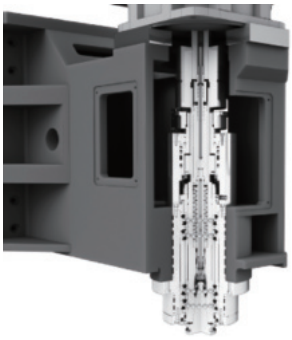
Through structural analysis implemented a mechanical structure that enables stable and high-quality cutting processing by increasing rigidity and minimizing vibration.



* ( ): KM 500's specifications



HIGH PERFORMANCE SPINDLE



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

MAX. TORQUE
159.0 Nm

MITSUBISHI NC SPEC.

Cutting oil inflow prevention design, ultra-precise bearing and high-tensile spring application provide high durability and precision during processing, and optimization of torque and acc./deceleration according to low-speed/high-speed sections can cope with various machining including heavy-duty cutting and high-speed milling.

*CTS is available (OPT.)

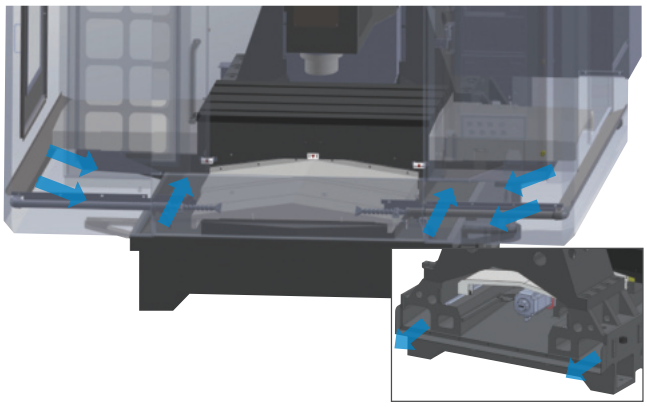
TWIN ARM TYPE TOOL CHANGER

Tool to Tool
1.7 sec

Chip to Chip
2.9 sec

High-speed cam motor driven twin arm type tool changer. the optimized tool change sections ensure faster and more stable movement and higher durability.

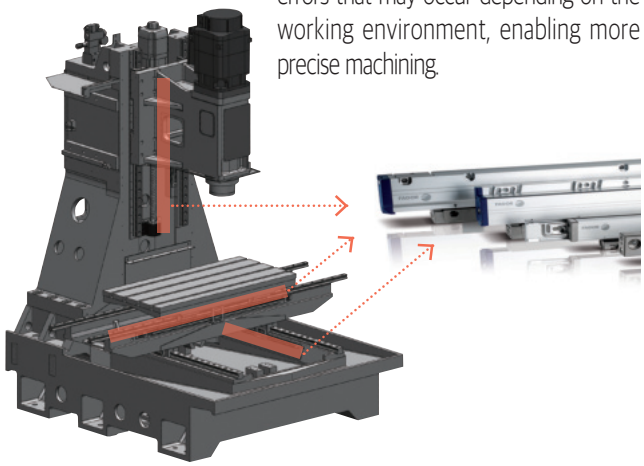
CHIP DISCHARGE CAPABILITY



The bad structure tilted from front to rear, the optimization of chip discharge paths and bed shower nozzles, and the application of improved pumps for high-discharge bed showers enable smooth chip discharge from inside equipment to tank.

HIGH PRECISION MACHINING (OPT.)

Applying linear scale to the X/Y/Z axis minimizes thermal displacement errors that may occur depending on the working environment, enabling more precise machining.



HORIZONTAL MACHINING CENTER

KM 500H

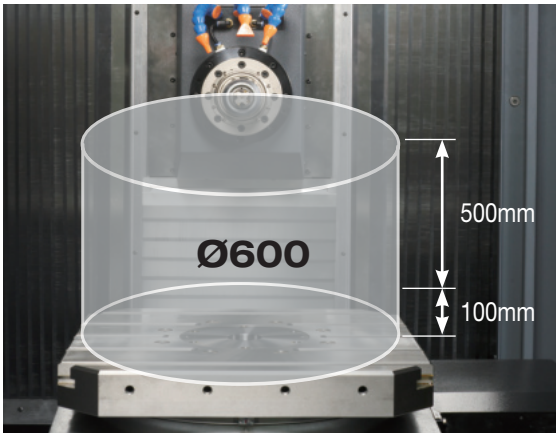
High-productivity, high-performance horizontal machining center with heavy-duty machining capability

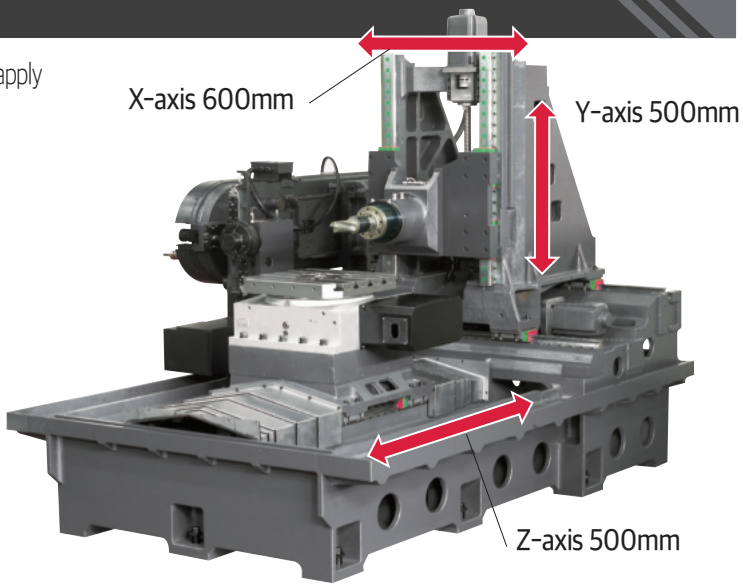
SPECIFICATIONS

Table size(mm)	500 x 500
X/Y/Z travels(mm)	600/500/500
Spindle taper	ISO No.40
Max. spindle speed(rpm)	8,000 / 12,000(Opt.)
Tool storage capacity(pcs)	60
Machine size(mm)	3,259 x 3,870

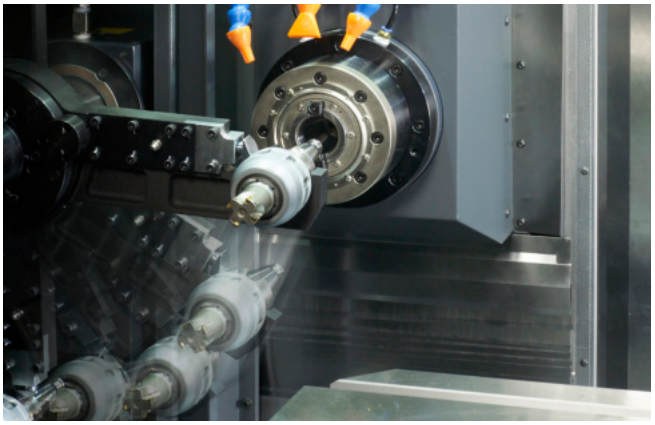
WIDE WORK AREA

A work area of 600 x 600mm and 600kg of loading capability can apply a various jig application.



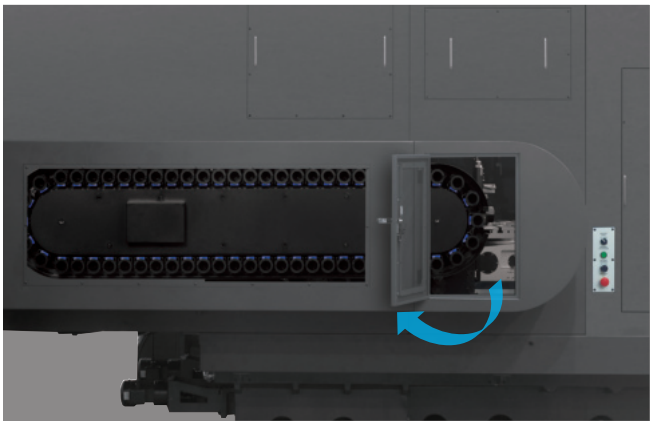


TWIN ARM TYPE TOOL CHANGER



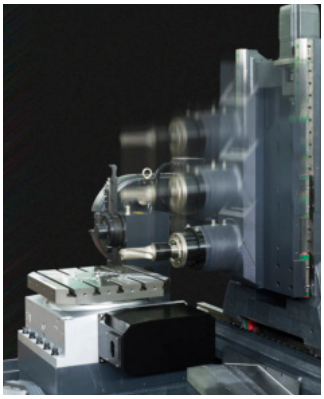
By optimizing the tool change section, fast and stable tool change is performed, and the machining area and magazine room are separated through the shutter to minimize chip entering.

60TOOL MAGAZINE



The servo motor driven type magazine can move tools quickly and store up to 60 tools and apply a various machining.

HIGH PERFORMANCE SPINDLE



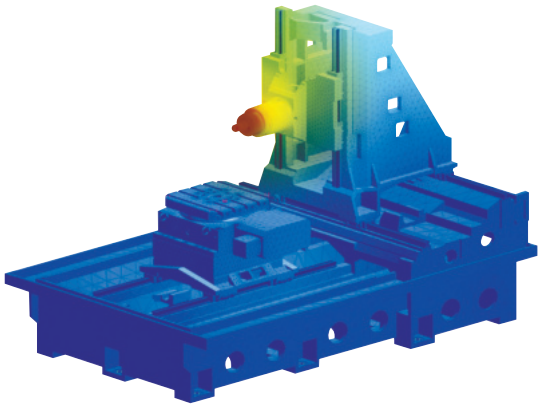
MAX. SPEED
STD. **8,000** rpm
OTP. **12,000** rpm

MAX. TORQUE
159.0 Nm

Cutting oil inflow prevention design, ultra-precise bearing and high-tensile spring application provide high durability and precision during processing.

*CTS is available (OPT.)

HIGH RIGIDITY STRUCTURE



Through structural analysis implemented a mechanical structure that enables stable and high-quality cutting processing by increasing rigidity and minimizing vibration.

LONG TRAVEL MACHINING CENTER

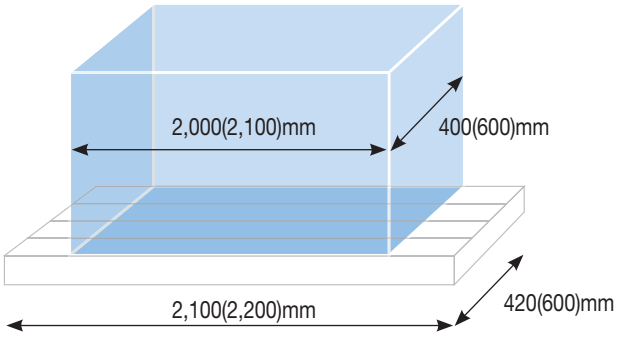
KT 2000 / KT 2100

Ultra-high speed long-distance travel machining center with X-axis 2000 mm and 70m/min of rapid.

SPECIFICATIONS	KT 2000 (KT 2100)
X/Y/Z travels(mm)	2,000/400/300 (2,100/600/350)
Spindle taper	ISO No.30
Max. spindle speed(rpm)	10,000 / High torque 10,000 (Opt.)
	15,000 (Opt.) / 24,000 (Opt.)
Tool storage capacity(pcs)	14 / 21 (Opt,)
Machine size(mm)	4,152 x 2,905 (4,358 x 2,940)

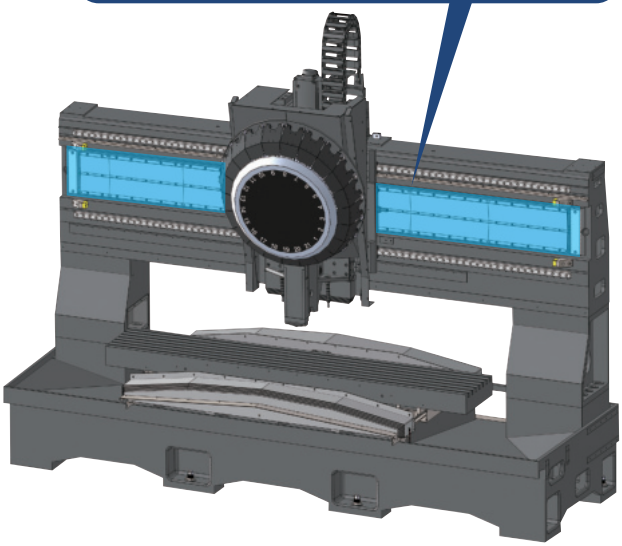
WIDE RANGE OF WORKING AREA

X-axis has secured rapid of 70 m/min as well as high reliability through linear motor, scale, and optimal cooling system, and can respond to various machining from high-speed/high-precision machining to heavy-duty machining within the work area.



*( ): KT 2100 specification

L/M GUIDE + MAGNET + COOLING SYSTEM



VARIOUS SPINDLE SPEED

STD. **10,000** rpm

OTP. **10,000** rpm
(High Torque)

15,000 rpm

24,000 rpm

The cutting oil inflow prevention design and ultra-precise bearing and high-tensile spring application provide high durability and precision during processing. In addition, a various spindle speed specifications can cope with a wide area of machining.

*CTS is available (OPT.)

HIGH TORQUE SPECIFICATION (OPT.)

Max. torque **84.3** Nm

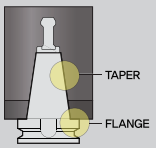
HIGH ACC. SPECIFICATION (OPT.)

0 rpm ↔ 10,000 rpm **0.19** sec

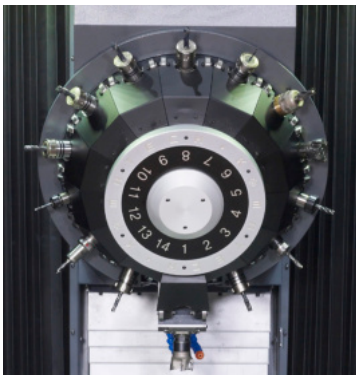
*1 MITSUBISHI NC SPEC.

BIG PLUS BBT (Opt.)

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



TURRET TYPE TOOL CHANGER



Tool to Tool

0.96 sec

Chip to Chip

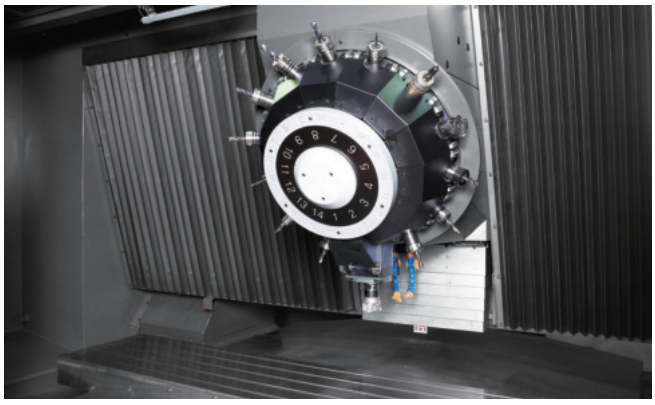
1.37 sec

*1 MITSUBISHI HIGH ACC. SPECIFICATION

The self-developed tool changer has secured high durability by the sealed structure of the drive unit, and the design optimized for high-speed rotation provides the best-in-class tool change speed.

*Tool storage capacity: 14 pcs [Opt: 21 pcs]

MULTI COVER

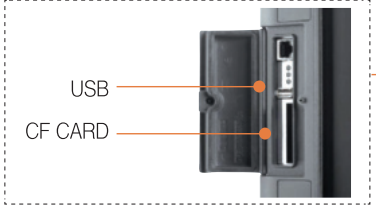


The X-axis travel area is covered by multi-cover to protect against chips generated during machining and it improves the durability and reliability of the X-axis travel area.

*1 Standard NC specification tool change time (T-T): 1.2 sec

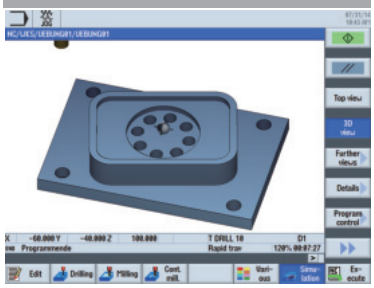
CONTROLLER

Convenient Data Expandability



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

Simple Programming



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

Administrator Edit Setting

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

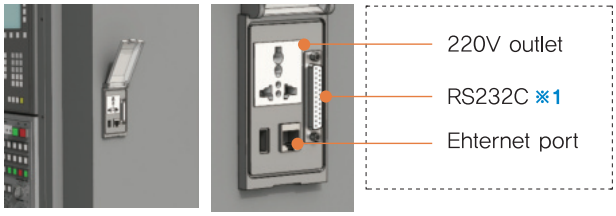
User Friendly Centralized Control Panel

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.

Switch Panel

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

External communication interface

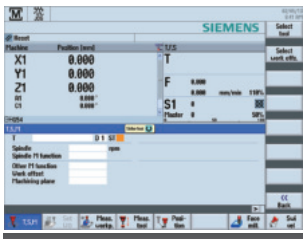


Ethernet port, 220V outlet and 25-pin connector are installed for convenient external communication devices.

※1 RS232C is available with Mitsubishi M80 and Fanuc OiMF(OPT.)

SIEMENS SINUMERIK 828D

Easy Operation

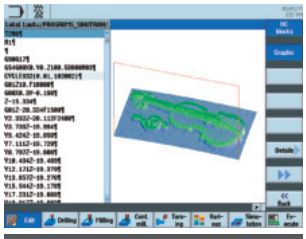


JOG functions

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

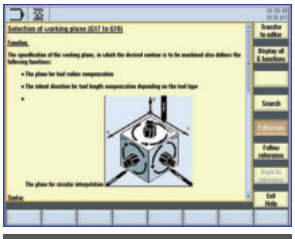
Tool management

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



Mold making Quick view

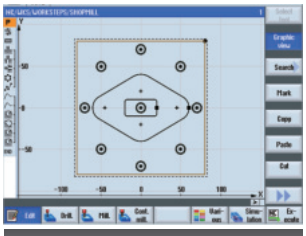
Quick and filtered view on mold & die details



Online help

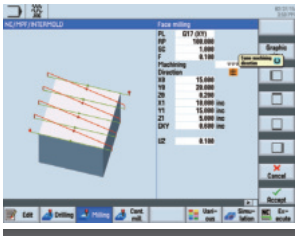
Powerful online help system including user-friendly graphics

Easy Programming



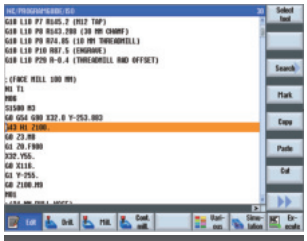
ShopMill

Interactive program input mode.
Achieving shortest programing time.



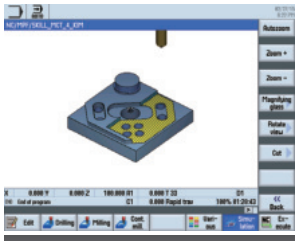
Program GUIDE

Interactive Cycle provides convenient programing.



ISO Dialect interpreter

Maximum compatibility for operators familiar with ISO codes

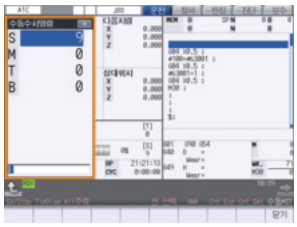


Simultaneous recording

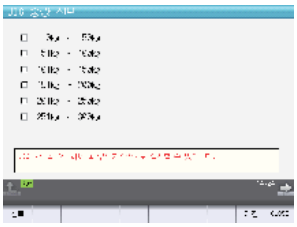
Program simulation test and Real time machining simulation are available.

MITSUBISHI ELECTRIC M800/80

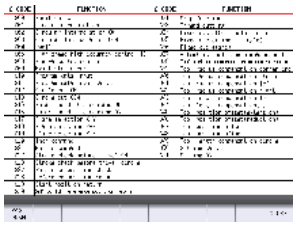
Easy Programming



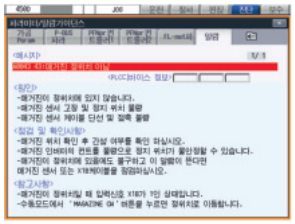
Manual M,S,T,B command
Easy command in manual mode.



Jig weight selection. According to the jig weight, setting with optimum acceleration & deceleration.



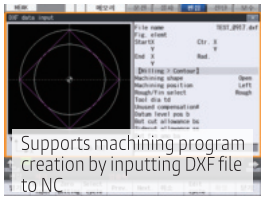
Display all G/M code



Alarm guidance function

Interactive Programming

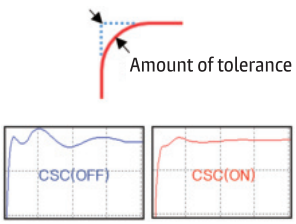
Easy machining program creation support.



Supports machining program creation by inputting DXF file to NC

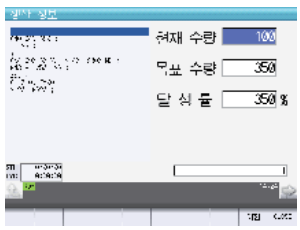
Support Machining

SELECTABLE MACHINING CONDITION



Corner smooth control by applying tolerance control

Application of tolerance control by tool (Precision, Surface accuracy)



Production information display (Calculated based on M code)

CONTROLLER

MITSUBISHI ELECTRIC M80

Control axes : 3 axes(X,Y,Z) (+2 axes)
Simultaneously control axes : 4 axes
Minimum setting unit : 0.0001mm
0.00001 inch
Display: 10.4" Touch screen
Memory capacity:500 kbte [Extesible]*1
Program forma: G/M Code
[Interactive program]

* Absolute / Incremental
* Inch / Metric
* Scailing / rotating
* Background editing
* Syncro tapping
* Block search
* Block skip
* Subprogram call
* Coordinate system setting
* Tool life management
* No. of tool correction(400 pairs)
* Tool diame. calibration
* Real time trace
* 2D program check
* Dry run
* Feed hold
* Program stop
* Emergency stop
* Tap return
* Linear/circle interpolation
* Helical interpolation
* High speed/high precise control
* SSS 4G control
* Tolerance control
* Thermal displacement compensation
* Additional axis control[OPT]
* Navi Mill[OPT]
* Interactive cycle insert [OPT]
* 3D program check [OPT]

SIEMENS SINUMERIK 828D

Control axes : 3 axes(X,Y,Z) (+2 axes)
Simultaneously control axes : 4 axes
Minimum setting unit : 0.0001mm
0.00001 inch
Display: 10.4" COLOR LCD
Memory capacity: 5MB [Extesible]*2
Program forma: G/M Code
[Interactive program]

* Absolute / Incremental
* Inch / Metric
* Scailing / rotating
* Background editing
* Syncro tapping
* Block search
* Block skip
* Subprogram call
* Coordinate system setting
* Tool life management
* Max.no of tools / cuttings(256/512)
* Max. work offset(100)
* Tool diame. calibration
* Program test
* 2D simulation
* Dry run
* Feed hold
* Program stop
* Emergency stop
* Tap return
* Linear/circle interpolation
* Helical interpolation
* High speed/high precise control
* Thermal displacement compensation
* Top surface [OPT]
* Additional axis control[OPT]
* Shop Mill[OPT]
* Network management[OPT]
* 3D simulation[OPT]

FANUC Oi-MF PLUS

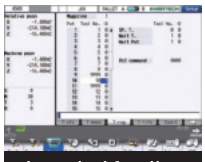
Control axes : 3 axes(X,Y,Z) (+2 axes)
Simultaneously control axes : 4 axes
Minimum setting unit : 0.0001mm
0.00001 inch
Display: 10.4" COLOR LCD
Memory capacity: 5MB[Extesible]*2
Program forma: G/M Code
[Interactive program]

* Absolute / Incremental
* Inch / Metric
* Scailing / rotating
* Background editing
* Syncro tapping
* Block search
* Block skip
* Subprogram call
* Coordinate system setting
* Tool life management
* No. of tool correction (400 pairs)
* Tool dia. calibration
* Dry run
* Feed hold
* Program stop
* Emergency stop
* Tap return
* Linear/circle interpolation
* Helical interpolation
* AICCII (200 BLK)
* Look a head 400 BLK[OPT]
* Manual Guide I [OPT]
* Additional axis control[OPT]
* Data server [OPT]

EASY MAINTENANCE FUNCTIONS (Fanuc/Mitsubishi)


Energy saving mode


Optimal acc. setting


Large tool function

1. Optimal acceleration / deceleration setting
   In case of table travel tapping center, it is available the optimized X/Y axis acceleration setting value by weight.

2. Large tool function (Twin arm tool changer only)
   It keeps both pockets empty to prevent interference when a large tool is applied.

3. ATC arm speed control (Twin arm tool changer only)
   The twin-arm type ATC ARM can be used by slowly adjusting the rotational speed in maintenance mode.

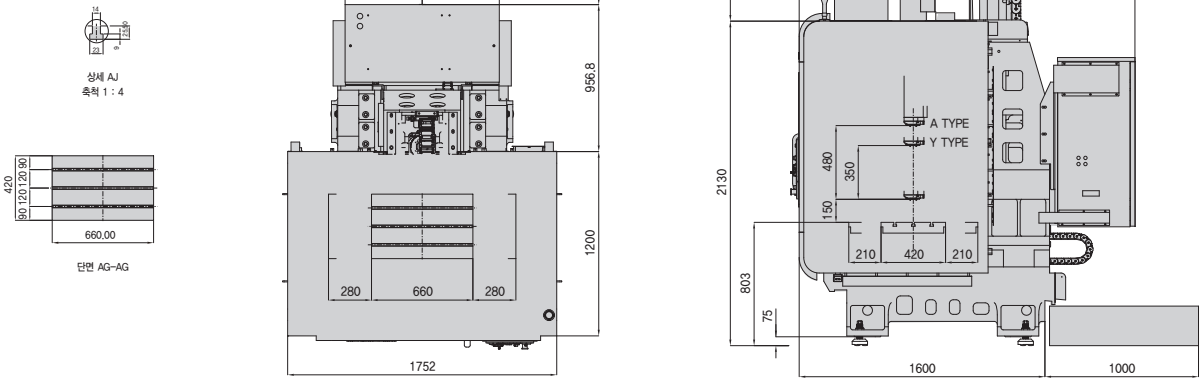
4. Energy-saving function
   If mcahine does not operate for the time set by the user, all functions turned off to save electricity use.

*1 Memory capacity can be extended up to 32GB with SD card.

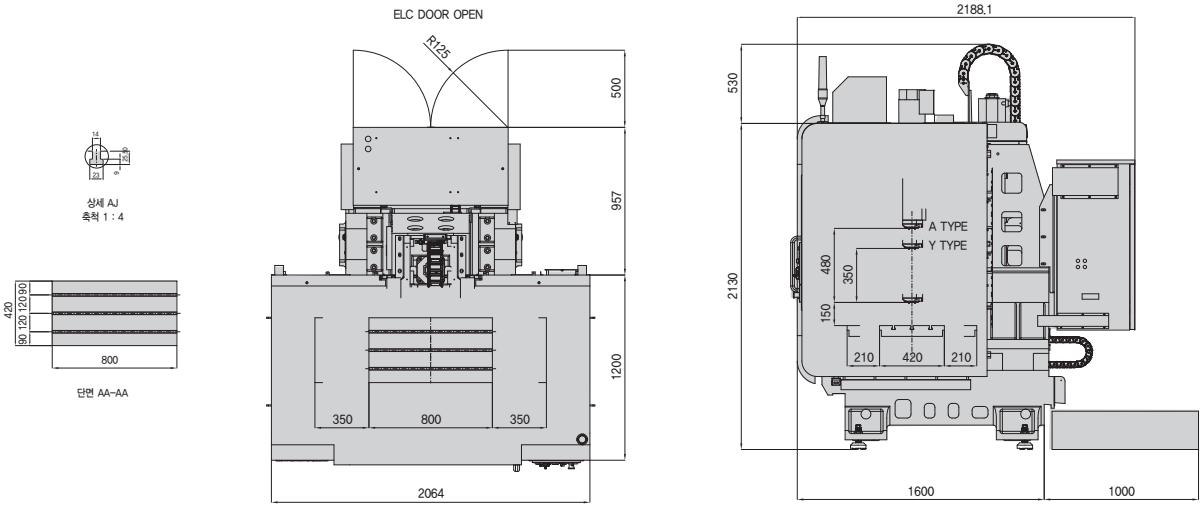
*2 Memory capacity is extensible with USB and CF card.

MACHINE DIMENSIONS

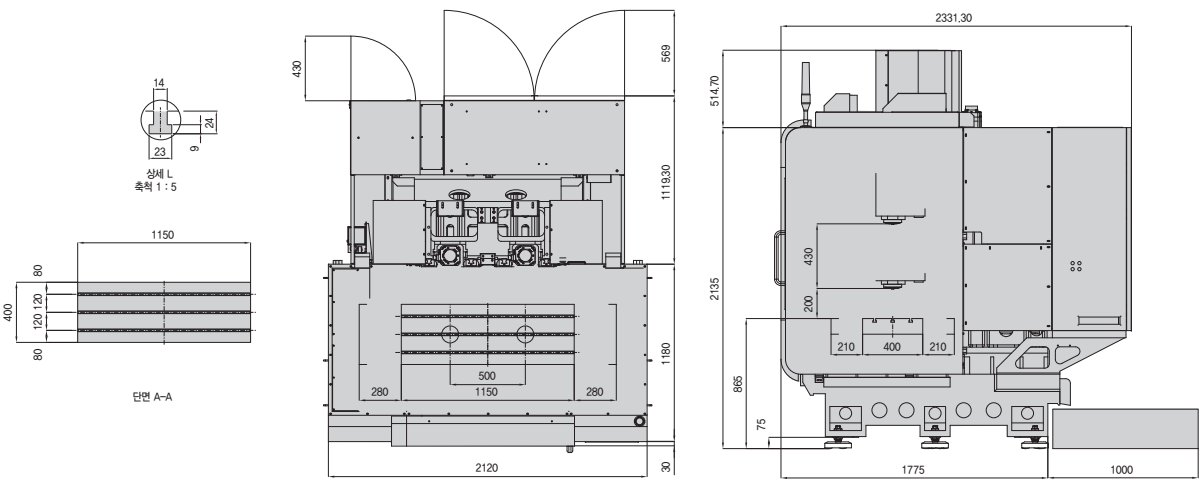
KT 420(A)



KT 420L(AL)

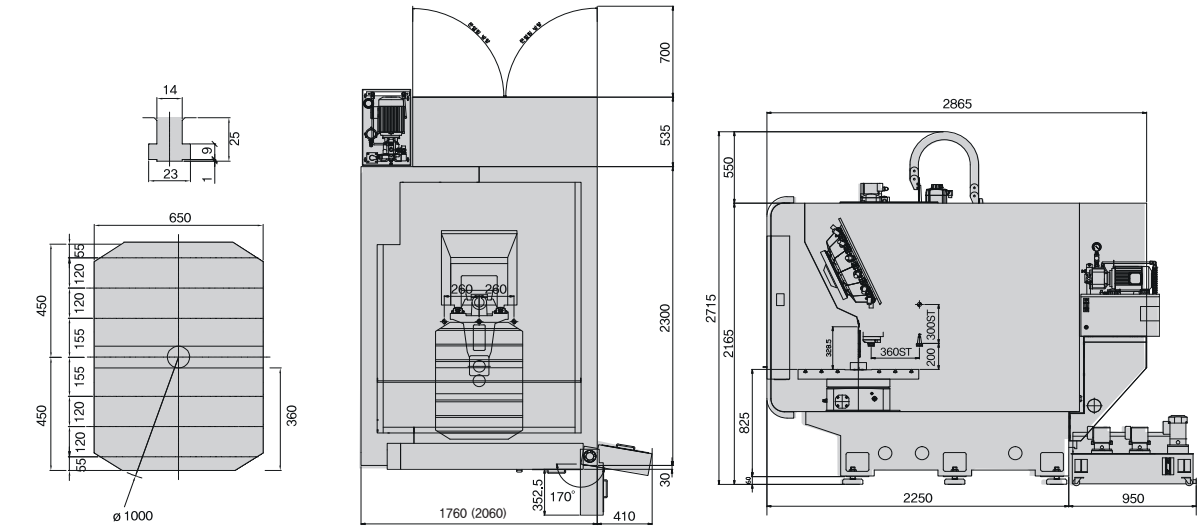


KT 420DH

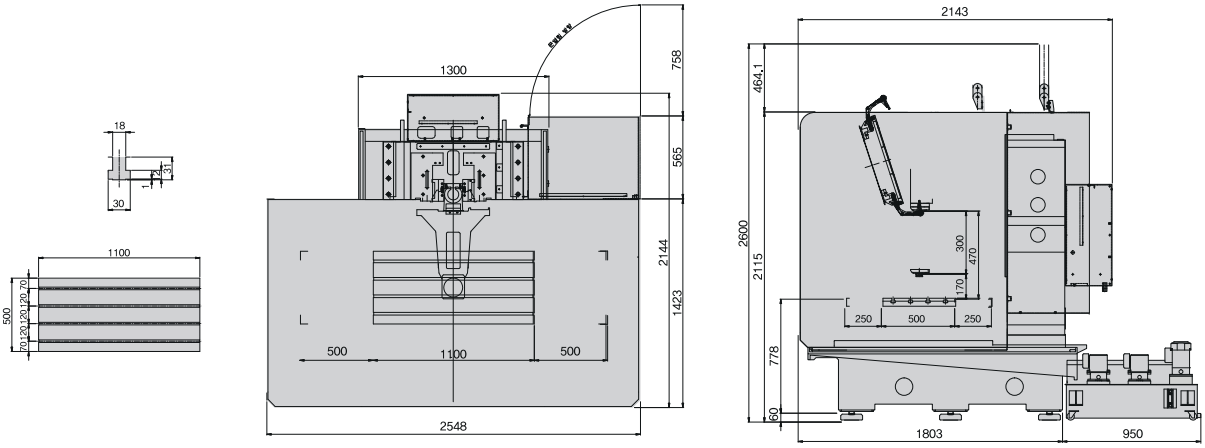


MACHINE DIMENSIONS

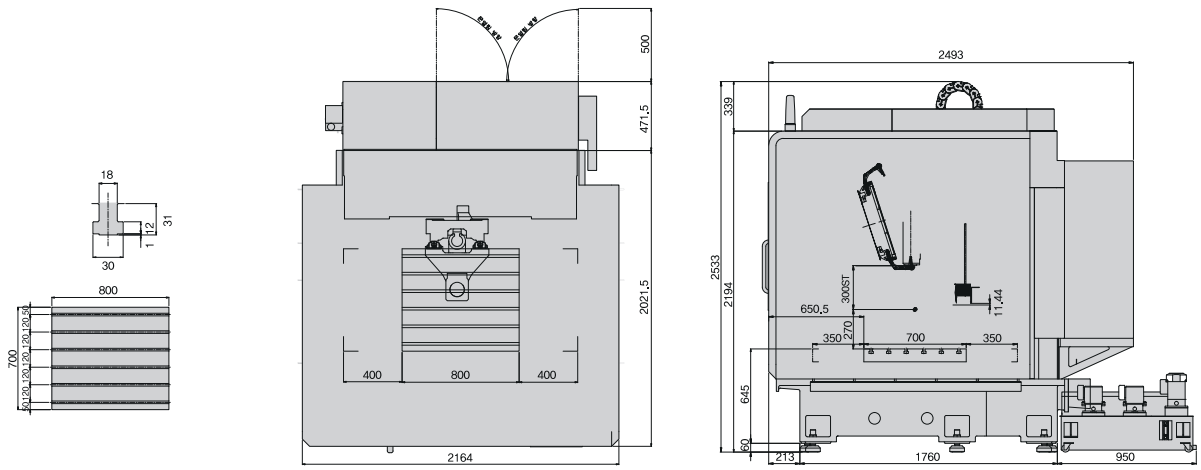
KT 360D



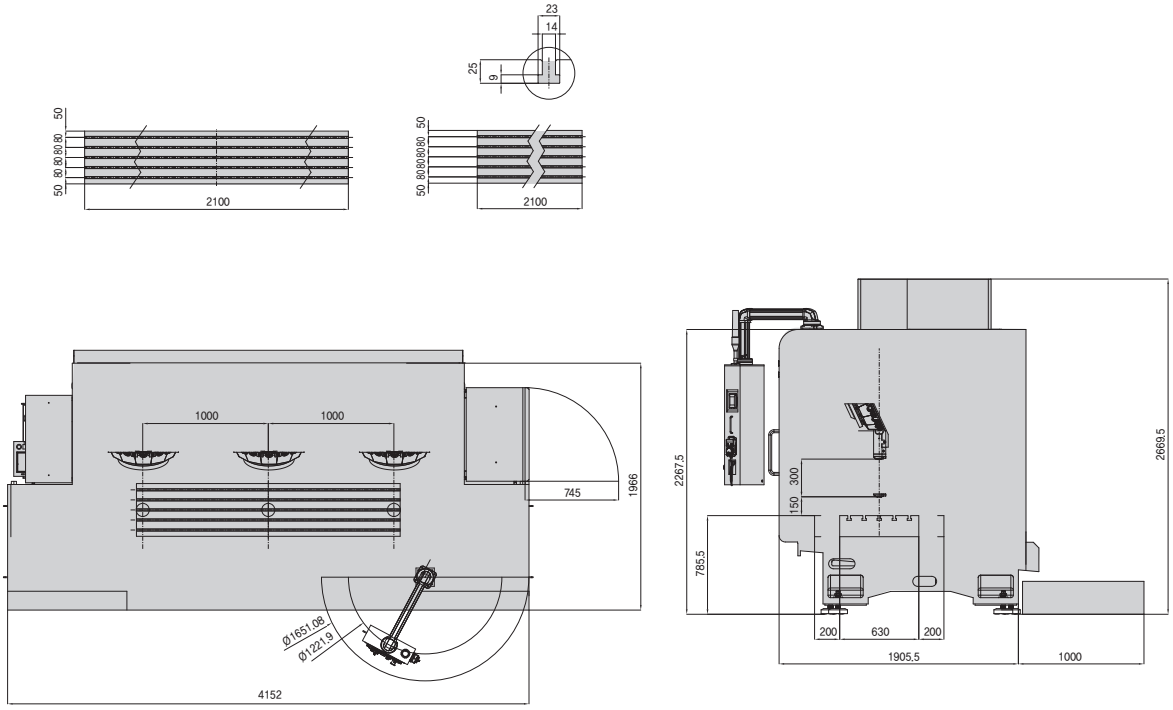
KT 500



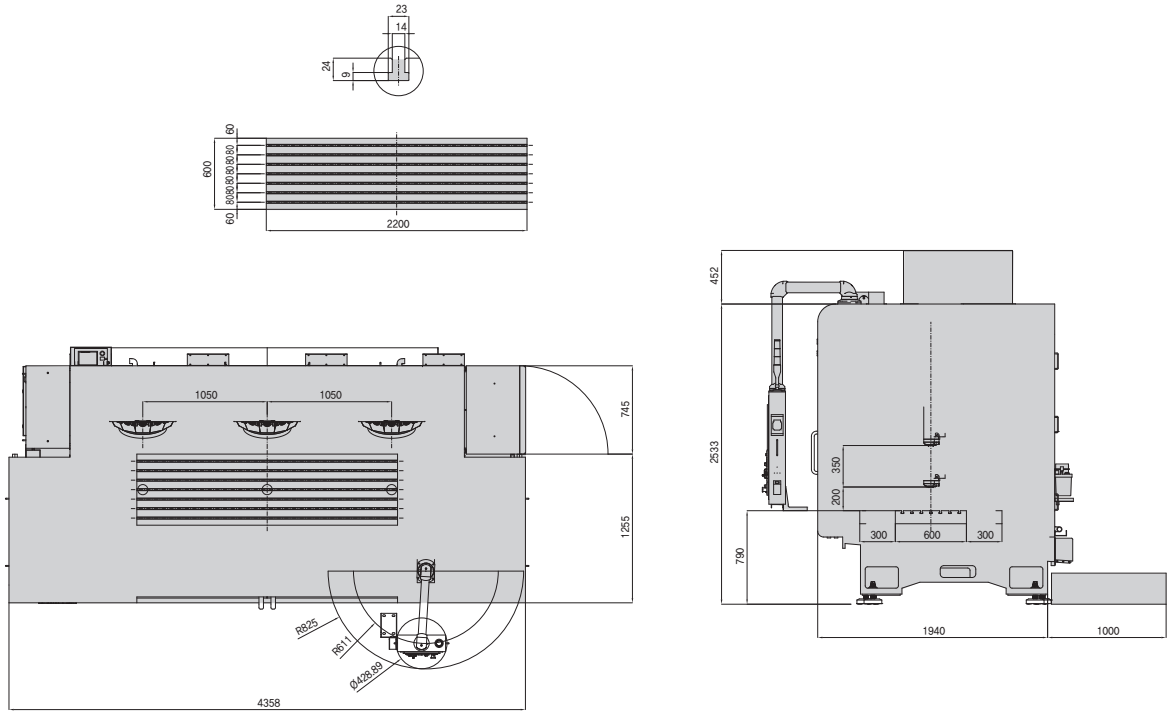
KT 700



KT 2000

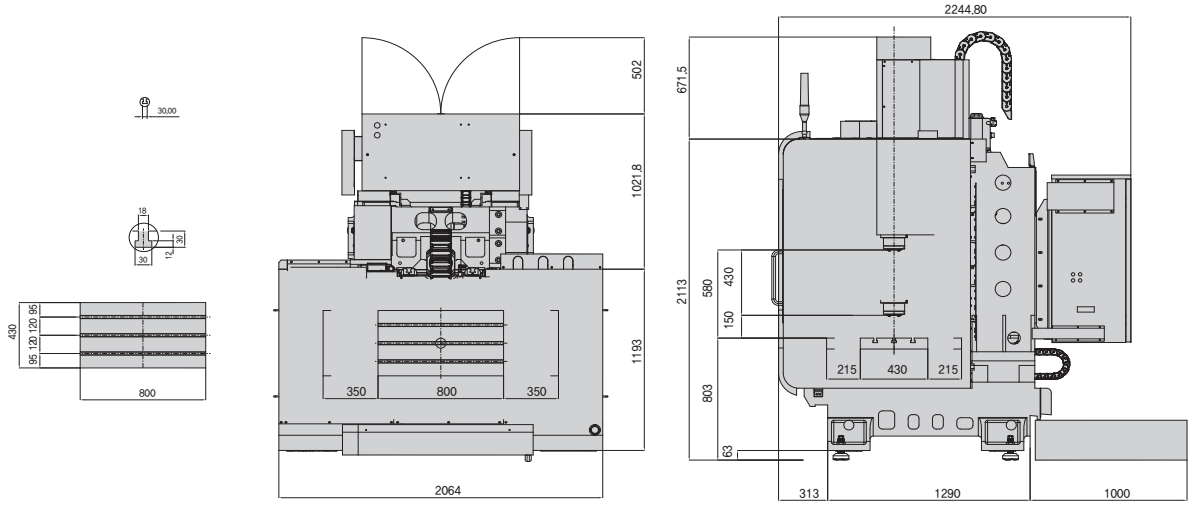


KT 2100

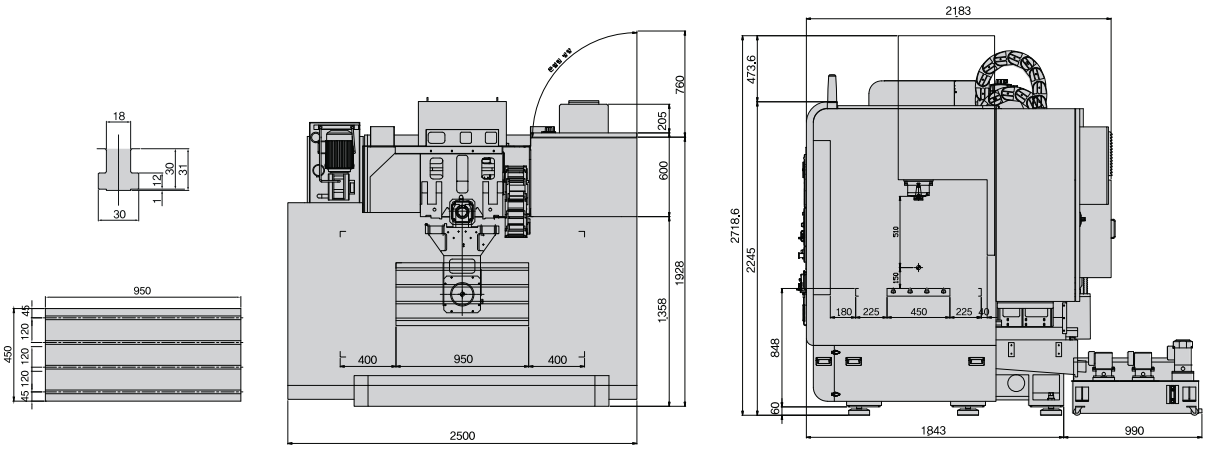


MACHINE DIMENSIONS

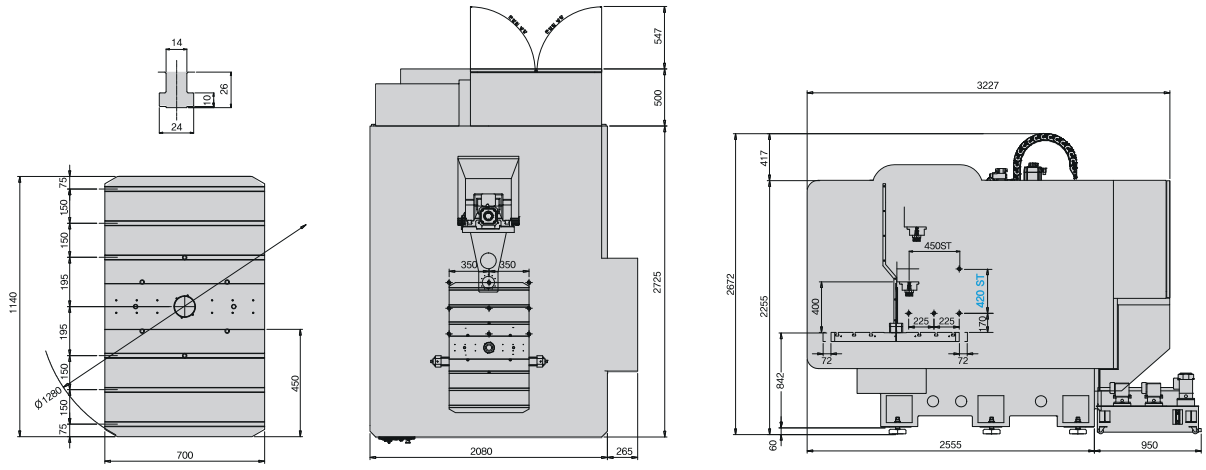
KM 430



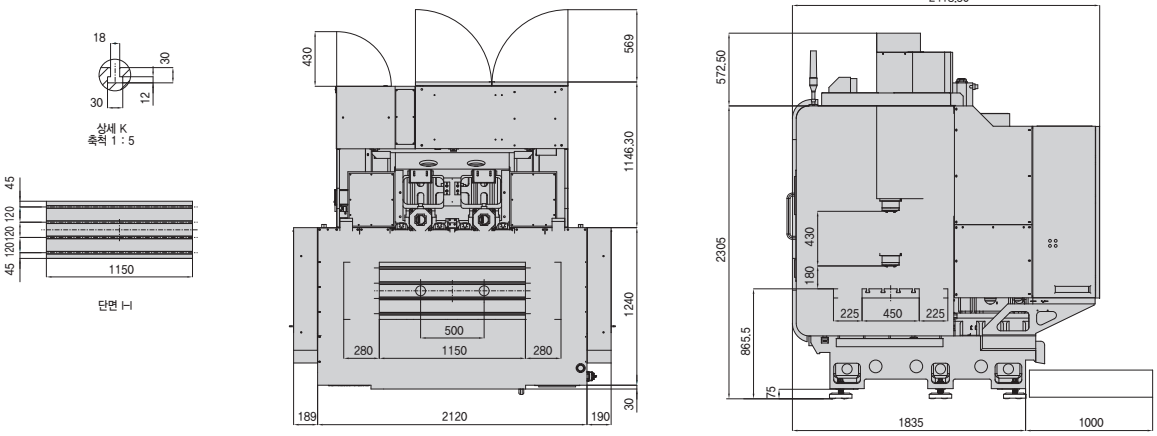
KM 450



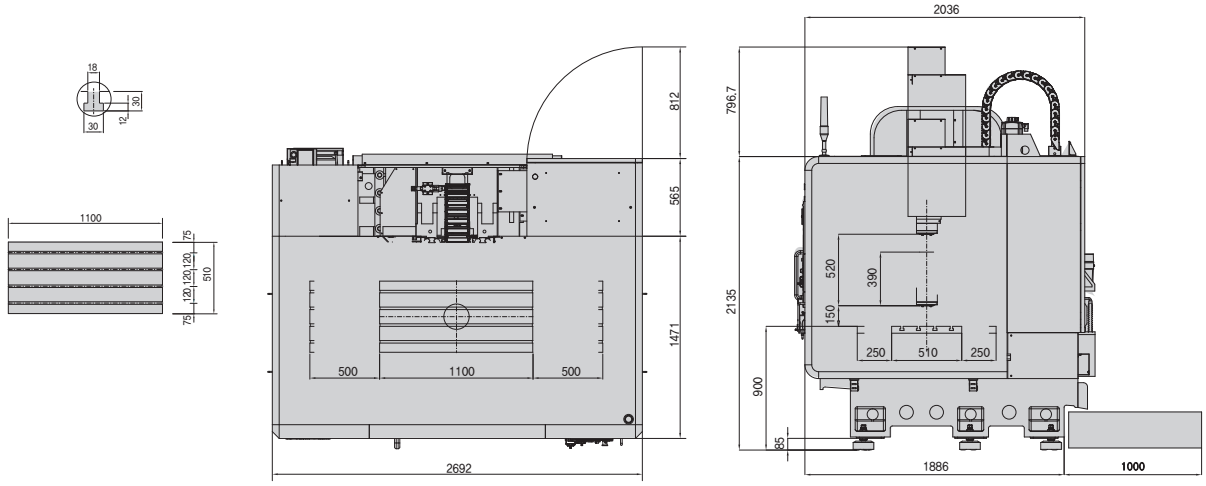
KM 450D



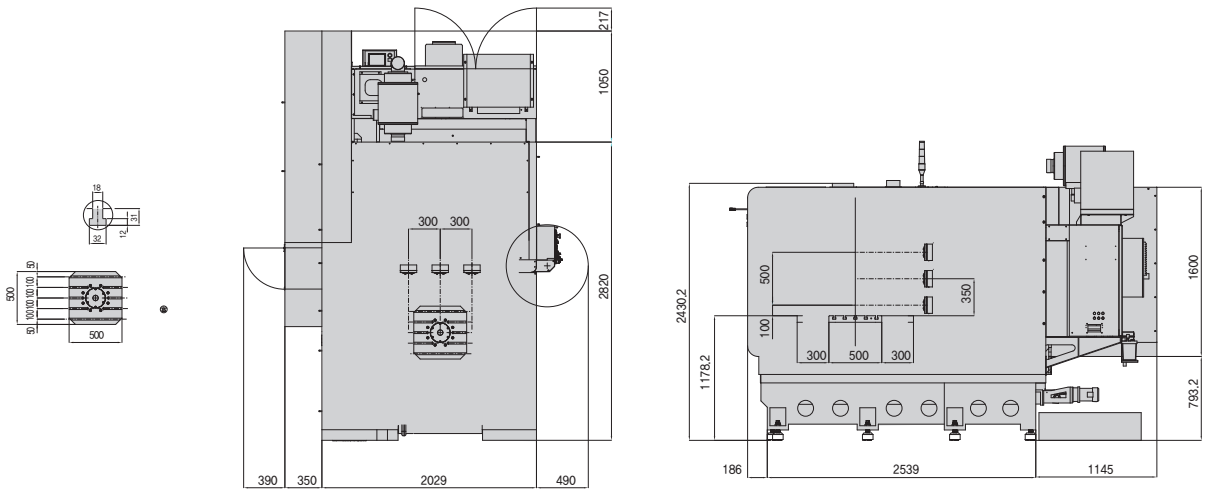
KM 450DH



KM 500



KM 500H



MACHINE STECIFICATIONS

BT30 BT40

ITEM			UNIT	KT 420 (420L)	KT 420A (420AL)
Table	Size		mm	660(800) x 400	
	Max.loading capacity		kg	250 [300]*6	
Travel	X / Y / Z		mm	560(700)/420/350	560(700)/420/480
	Distance between table top and spindle nose end		mm	150~500	150~630
Spindle	Taper			ISO No.30 (7/24)	
	BIG-PLUS(BBT)			Optional	
	Max. speed		rpm	10,000 [high torque 10,000], [15,000], [24,000]	
	Spindle motor *1	Max/Cont	kW	10,000rpm: 11.0/3.7 [high torque 10,000rpm:15.0/5.5] [15,000rpm: 11.0/3.7], [24,000rpm: 15.0/2.2]	
Feed rate	X / Y / Z		m/min	60/60/60 (50/50/60)	
ATC	Took shank			MAS403-BT30	
	Pull stud			MAS403-P30T-1	
	Tool storage capacity		pcs	14 [21] [28]	20 [26]
	Max. diameter		mm	100	80 [64]
	Max. length		mm	200	
	Max. weight		kg	3.0	
	Tool selection method			Turret (Fixed address)	Twin arm(Random memory)
	Tool change time *2	T-T	sec	0.96	1.2
		C-C		1.37	1.8
Power source*8	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz	
	Power capacity(Continuous)		kVA	15.4	17.5
Machine dimension	Size *3	W x L	mm	1,752 (2,064) x 2,600	
	Height		mm	2,660	
	Weight		kg	2,300 (2,666)	2,500 (2,800)
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]	
	Program format			G/M code [Interactive program]	
	Display		inch	10.4" COLOR LCD	

ITEM			UNIT	KT 420DH	KM 450DH
Table	Size		mm	1,150 x 400	1,150 x 450
	Max.loading capacity		kg	400	400
Travel	X / Y / Z (U / V)*4		mm	560 / 420 / 430 / (±2/±2)	560 / 450 / 430 / (±2/±2)
	Distance between table top and spindle nose end		mm	200~630	180~610
Spindle	Taper			ISO No.30 (7/24)	ISO No.40 (7/24)
	BIG-PLUS(BBT)			Optional	
	Distance between spindles		mm	500	
	Max. speed		rpm	10,000 [[high torque 10,000], [15,000], [24,000]	8,000 [12,000]
	Spindle motor *1	Max/Cont	kW	10,000rpm: 11.0/3.7 [high torque10,000rpm:15.0/5.5] [15,000rpm: 11.0/3.7], [24,000rpm: 15.0/2.2]	8,000rpm: 18.0/7.5 [12,000rpm: 18.0/7.5]
Feed rate	X / Y / Z		m/min	48/48/48	42/42/42
ATC	Took shank			MAS403-BT30	MAS403-BT40
	Pull stud			MAS403-P30T-1	PS-805
	Tool storage capacity		pcs	20x2 [26x2]	20 x 2
	Max. diameter		mm	80 [64]	80
	Max. length		mm	200	300
	Max. weight		kg	3.0	7.0
	Tool selection method			Twin arm (Random memory)	
	Tool change time	T-T	sec	1.2	1.7
		C-C		1.8	2.3
Power source	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz	
	Power capacity(Continuous)		kVA	41.5(47.6)*7	44.2(50.3)*7
Machine dimension	Size *3	W x L	mm	2,120 x 2,775	2,500 x 2,835
	Height		mm	2,650	2,877
	Weight		kg	5,500	7,000
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]	
	Program format			G/M code [Interactive program]	
	Display		inch	10.4" COLOR LCD	

*1 Mitsubishi CNC specification. Siemens and Fanuc specifications can be found at each sales office if necessary.
*2 Mitsubishi high acc. specification. Tool change time for std. specification(T-T) 1.2 sec. / KT 420(L): Siemens 1.08s, Mitsubishi: 1.07s

MACHINE STECIFICATIONS

BT30 BT40

ITEM			UNIT	KT 500	KT 700
Table	Size		mm	1,100 x 500	800 x 700
	Max.loading capacity		kg	400	400
Travel	X / Y / Z		mm	1,000/500/300	800/700/300
	Distance between table top and spindle nose end		mm	170~470	270~570
Spindle	Taper			ISO No.30 (7/24)	
	BIG-PLUS(BBT)			Optional	
	Max. speed		rpm	10,000 [high torque 10,000], [15,000], [24,000]	
	Spindle motor *1	Max/Cont	kW	10,000rpm: 11.0/3.7 [high torque 10,000rpm:15.0/5.5], [15,000rpm: 11.0/3.7], [24,000rpm: 15.0/2.2]	
Feed rate	X / Y / Z		m/min	50/50/50	48/48/60
ATC	Took shank			MAS403-BT30	
	Pull stud			MAS403-P30T-1	
	Tool storage capacity		pcs	14 [21] [28]	
	Max. diameter		mm	100	
	Max. length		mm	200	
	Max. weight		kg	3.0	
	Tool selection method			Turret (Fixed address)	
	Tool change time *2	T-T	sec	1.03	
		C-C		1.37	
Power source	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz	
	Power capacity(Continuous)		kVA	18.5	20.8
Machine dimension	Size *3	W x L	mm	2,548 x 2,753	2,164 x 2,923
	Height		mm	2,600	2,533
	Weight		kg	4,300	6,000
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]	
	Program format			G/M code [Interactive program]	
	Display		inch	10.4" COLOR LCD	

ITEM			UNIT	KT 360D	KM 450D
Table	Size (One face)		mm	650 x 360	700 x 450
	Max.loading capacity		kg	200 (One face)	
	Pallet change time		sec	4.5	
Travel	X / Y / Z		mm	520 / 360 / 300	700 / 450 / 480[420]*5
	테이블 상면에서 주축 끝단까리 거리		mm	200~500	170~650 [170~590]*5
Spindle	Taper			ISO No.30 (7/24)	ISO No.40 (7/24)
	BIG-PLUS(BBT)			Optional	
	Max. speed		rpm	10,000 [high torque 10,000], [15,000], [24,000]	8,000 [12,000]
	Spindle motor *1	Max/Cont	kW	10,000rpm: 11.0/3.7 [high torque 10,000rpm:15.0/5.5] [15,000rpm: 11.0/3.7], [24,000rpm: 15.0/2.2]	8,000rpm: 18.0/7.5 [12,000rpm: 18.0/7.5]
Feed rate	X / Y / Z		m/min	48/48/60	42/42/42
ATC	Took shank			MAS403-BT30	MAS403-BT40
	Pull stud			MAS403-P30T-1	PS-805
	Tool storage capacity		pcs	14 [21]	24 [30]
	Max. diameter		mm	100	80
	Max. length		mm	200	300
	Max. weight		kg	3.0	7.0
	Tool selection method			Turret (Fixed address)	Twin arm (Random memory)
	Tool change time *2	T-T	sec	0.96	1.7
		C-C		1.37	2.3
Power source	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz	
	Power capacity(Continuous)		kVA	23.3	31.3
Machine dimension	Size *3	W x L	mm	1,760[2,060] x 3,200	2,345 x 3,505
	Height		mm	2,715	2,672
	Weight		kg	4,500	7,500
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]	
	Program format			G/M code [Interactive program]	
	Display		inch	10.4" COLOR LCD	

*3. Dimensions include tank. *4. U-axis and V-axis are available additionally. (Optional) *5. 30T magazine specification
*6. Parameter adjustment is required by weight *7. Power capacity when U-axis and V-axis are applied.

MACHINE STECIFICATIONS

BT30 BT40

ITEM			UNIT	KM430	KM 450	KM 500
Table	Size		mm	800 x 430	950 x 450	1,100 x 510
	Max.loading capacity		kg	300	400	800
Travel	X / Y / Z		mm	700/430/430	800/450/510	1,000/500/520
	Distance between table top and spindle nose end		mm	150~580	150~660	150~670
Spindle	Taper			ISO No.40 (7/24)		
	BIG-PLUS(BBT)			Optional		
	Max. speed		rpm	8,000 [12,000]		
	Spindle motor *1	Max/Cont	kW	8,000rpm: 18.5/9.0 [12,000rpm: 18.5/9.0]	8,000rpm: 25.0/11.0 [12,000rpm: 25.0/11.0]	
Feed rate	X / Y / Z		m/min	48/48/48	36/36/36	36/36/30
ATC	Took shank			MAS403-BT40		
	Pull stud			PS-805		
	Tool storage capacity		pcs	20 [24]	24 [30]	
	Max. diameter		mm	80		
	Max. length		mm	300		
	Max. weight		kg	7.0		
	Tool selection method			Twin arm (Random memory)		
	Tool change time *2	T-T	sec	1.4	1.5	1.7
		C-C		2.5	2.9	3.4
Power source	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz		
	Power capacity(Continuous)		kVA	2,784	35.1	35.1
Machine dimension	Size *3	W x L	mm	2,064 x 2603	2,500 x 2,833	2,692 x 2,886
	Height		mm	2,784	2,718	2,931
	Weight		kg	3,600	5,000	6,000
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]		
	Program format			G/M code [Interactive program]		
	Display		inch	10.4" COLOR LCD		

ITEM			UNIT	KT 2000	KT 2100	KM 500H
Table	Size		mm	2,100 x 420	2,200 x 600	500 x 500
	Max.loading capacity		kg	1,000		600
Travel	X / Y / Z		mm	2,000/400/300	2,100/600/350	600/500/500
	Distance between table top and spindle nose end		mm	150~450	200~550	-
	Distance between table top and spindle center		mm	-	-	100~600
	Distance between table center and spindle nose end		mm	-	-	149~649
Spindle	Taper			ISO No.30 (7/24)		ISO No.40 (7/24)
	BIG-PLUS(BBT)			Optional		Optional
	Max. speed		rpm	10,000 [high torque 10,000], [15,000], [24,000]		8,000 [12,000]
	Spindle motor *1	Max/Cont	kW	10,000rpm: 11.0/3.7 [high torque 10,000rpm:15.0/5.5] [15,000rpm: 11.0/3.7], [24,000rpm: 15.0/2.2]		8,000rpm: 25.0/11.0 [12,000rpm: 25.0/11.0]
Feed rate	X / Y / Z		m/min	70/48/48		36/36/36
ATC	Took shank			MAS403-BT30		MAS403-BT40
	Pull stud			MAS403-P30T-1		PS-805
	Tool storage capacity		pcs	14 [21]		60
	Max. dia. / length		mm	100 / 200		80 / 300
	Max. weight		kg	3.0		7.0
	Tool selection method			Turret (Fixed address)		Twin arm (Random memory)
	Tool change time *2	T-T	sec	1.03		-
		C-C		1.37		-
Power source	Power supply			AC220V[380V]±10%, 50/60Hz±1Hz		
	Power capacity(Continuous)		kVA	40.4		38.3
Machine dimension	Size *3	W x L	mm	4,152x2,905	4,358x2,940	3,259x3,870
	Height		mm	2,669	2,985	2,430
	Weight		kg	8,500	10,000	9,000
CNC	Model			Mitsubishi M80 [Siemens 828D], [Fanuc 0iMF plus]		
	Program format			G/M code [Interactive program]		
	Display		inch	10.4" COLOR LCD		

*1 Mitsubishi CNC specification. Siemens and Fanuc specifications can be found at each sales office if necessary.
*2 Mitsubishi high acc. specification. Tool change time for std. specification(T-T): 1.2 sec *3. Dimensions include tank.

STD & OPT SPECIFICATIONS

BT30 BT40

		420(L)	420A(AL)	420DH	360D	500	700	2000	2100	430	450	450D	450DH	500	500H
Basic machine component															
Splash guard		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coolant tank		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Work light		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Indicator light		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Leveling bolt and Nut		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Instruction munual		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fixed MPG handle		●	●	●	X	●	●	●	●	●	●	X	●	●	●
Portable MPG handle		○	○	●	●	●	●	●	●	○	○	●	●	●	●
Jig interperance prevention															
High column	150mm	○	○	○	X	○	○	X	X	○	○	X	○	○	X
	250mm	○	○	○	X	○	○	X	X	○	○	X	○	○	X
Deep hole and roughness improvement															
Coolant through spindle	20bar	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	30bar	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	70bar	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Cleaning device															
Bed Shower		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Taper washing system		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Coolant gun / Air gun		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chip disposal															
Chip conveyor	Scrapper Type	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Hinge Type	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Drum Filter Type	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chip bucket	Fixed Type	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Swing Type	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Automation															
Auto door		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Gantry loader interface		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Robot interface		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Auto power off		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Working environment															
Oil mist cleaner		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Oil Skimmer		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Minimum Quantity Lubircation		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Air conditioner in main box		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Top cover		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Jig interface															
Rotary table		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Additional axis control		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hydraulic Jig interface		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Pneumatic Jig interface		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Air confirm		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Air blow		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Measurement															
Tool length measurement device		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Broken tool detector		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Workpiece measurement device		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Tool monitering system		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Assist device															
Spindle cooler		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Transformer		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hydraulic unit		○	●	●	●	○	○	○	○	●	●	●	●	●	●
Software															
Heat expansion compensation		●	●	●	X	●	X	X	X	●	●	X	●	●	X
Tool counter		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Work counter		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tool life management		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Memory expansion		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Interactive program		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Safety device															
Interlock		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Door lock		○	○	○	○	○	○	○	○	○	○	○	○	○	○

●: STD ○: OPT X: Not available

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