Since 1965

KAMIOKA

KAMIOKA CORPORATION

HSING KANG MACHINERY WORKS CO., LTD.

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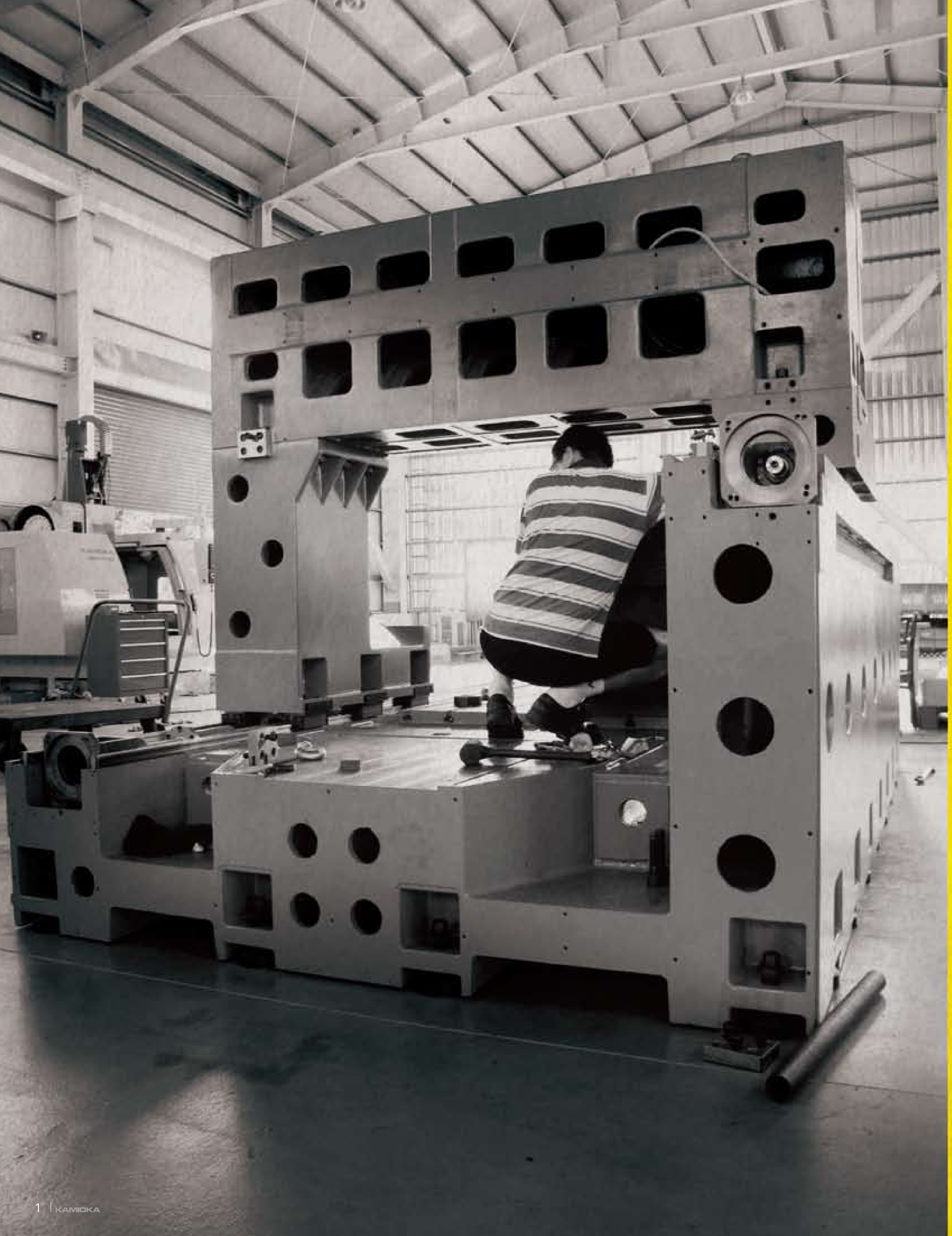
KAMIOKA MACHINE TOOLS GENERAL CATALOG

KAMIOKA

MACHINE TOOLS

GENERAL CATALOG



KAMIOKA

MACHINE TOOLS

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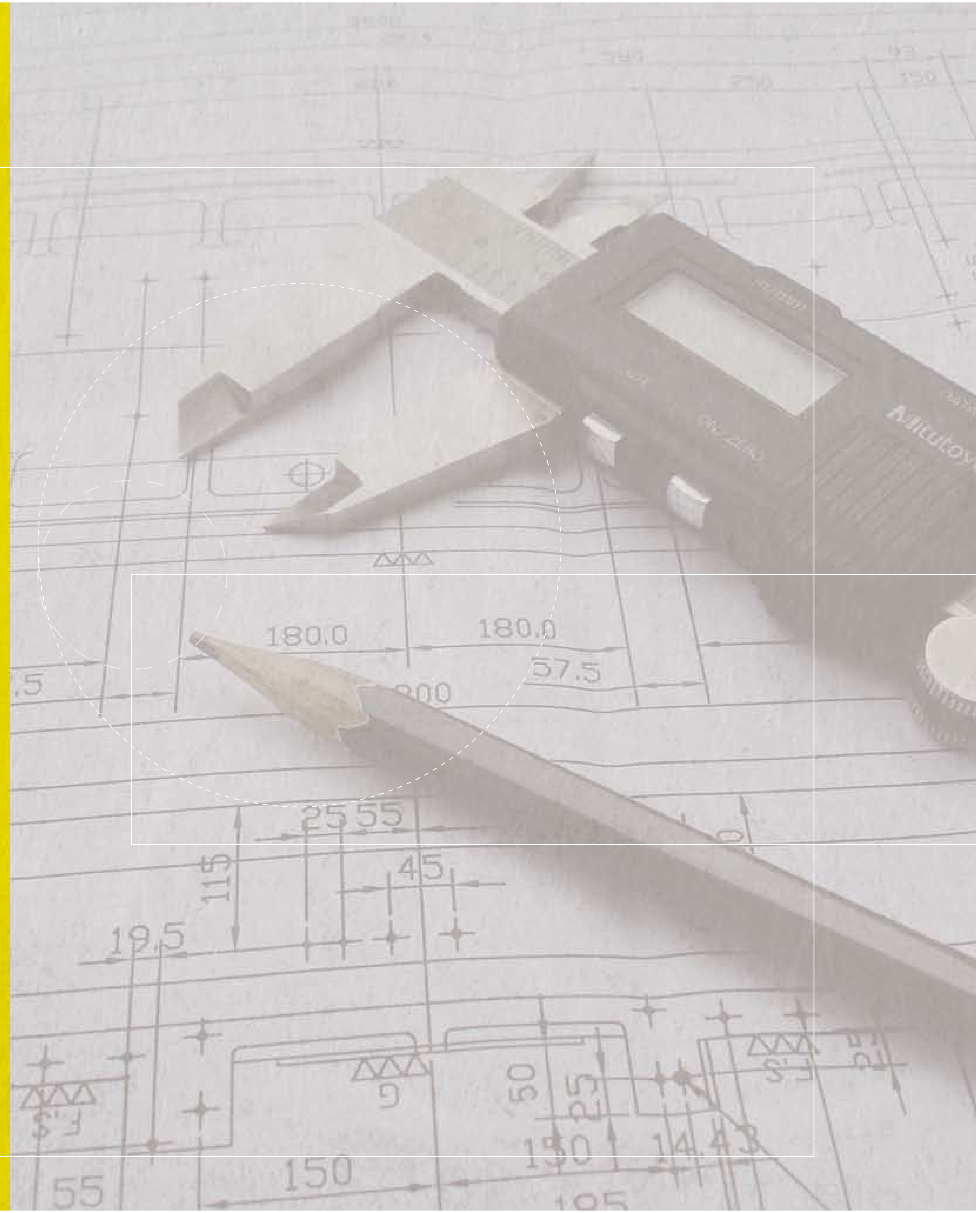


About

KAMIOKA

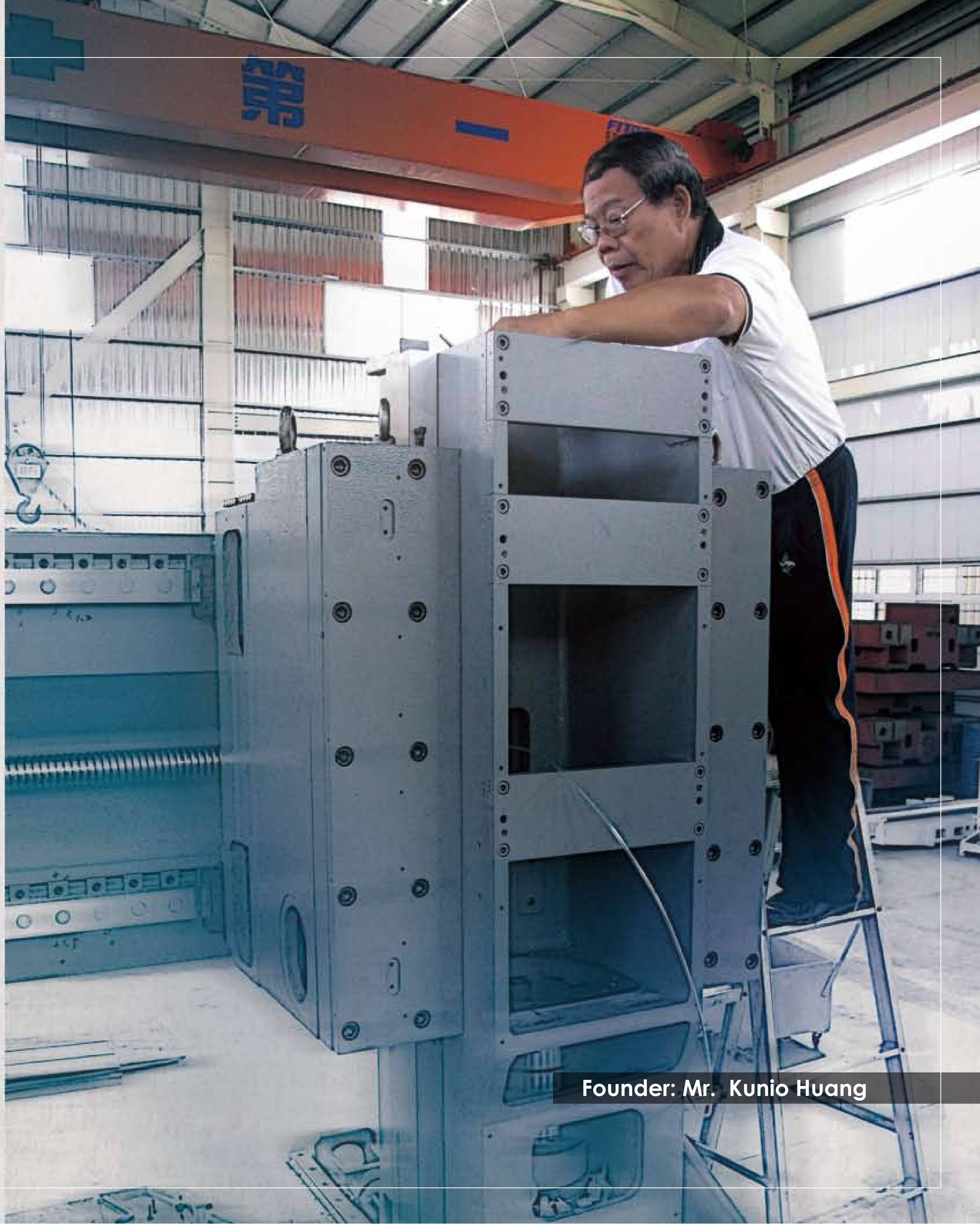
Premium Value Machine Tool Manufacturer for over 40 years

KAMIOKA is a family-run and well-experienced machinery manufacturer, which was famed for a repairer of motorcycle and machine shop called Yongfa since 1965. In the middle stages, KAMIOKA started to supply components to many machine makers including woodworking and metalworking machines. Through the development in the past decades, the company has been accumulating numerous experiences on mechanical engineering and machining applications.

In the late 90s, KAMIOKA introduced high-end CNC production equipment from Japan for advanced quality standard and consistency. In the meanwhile, the company devoted to the development of computer numerical control machine tools such as CNC machining centers, CNC lathes and precision grinders. With its excellent performance and good reputation from market in many years, KAMIOKA machines have been approved by many precision-work enterprises like job shops, mold industries, musical instrument manufacturers and linear-way manufacturers.

It is a strong point to KAMIOKA because of its owned engineering team and the full range of production facilities. All machines are mostly made in house including design, processing, machining and assembly. With abundant machining experience, moreover, the company deeply understands users needs that help its machinery design could meet industry requirements. Not only offering great design products, the quality consistency is another strong point of KAMIOKA machines because every machine has to pass the strict inspection and real-cutting examination before shipment. Every kind of machines is limited availability based on its annual planning production to ensure the best quality control.

To satisfy latest market demands, the company keeps on developing for more product details and service requirements. With the genuine craftsmanship spirit and continuous progress for over 40 years, KAMIOKA is your most reliable friend in metalworking!



Founder: Mr. Kunio Huang

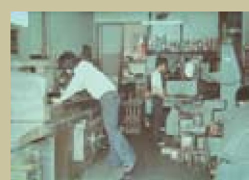
History

1965 1970 1975 1980 1985 1990 1995 2000 2005 2010

1965
Motorbike repair and machinery parts workshop was founded by Mr. Kunio Huang


1969
Starting machinery parts processing service

1975
Closing motorbike repair business and focused on machinery parts manufacturing

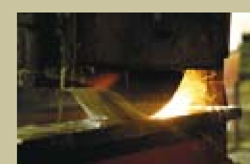
1981
Expanding the business and producing various kinds of machinery parts for woodworking machines and drilling & milling machines

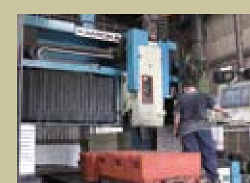
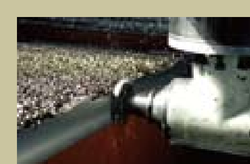



1988
Launching double-column NC grinding machine

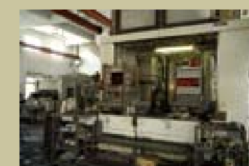
1991
Accomplishing double-column CNC machining center





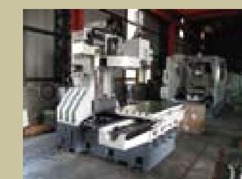
1993
Introducing high-end production equipment such as horizontal machining centers and multi-axial double column machining centers from Japan



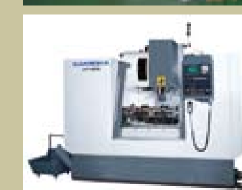


1998
Expanding OEM business on machining centers

2003
High-speed CNC machining centers were launched successfully





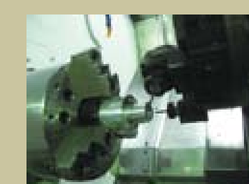


2005
High-speed CNC turning centers were launched successfully

2007
Establishing international marketing sector and fulfill complete line of machining centers including vertical, horizontal and gantry type

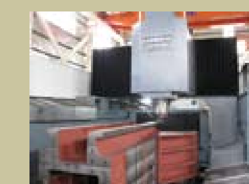
2009
Attending international machine tool shows and expending oversea sales & service network



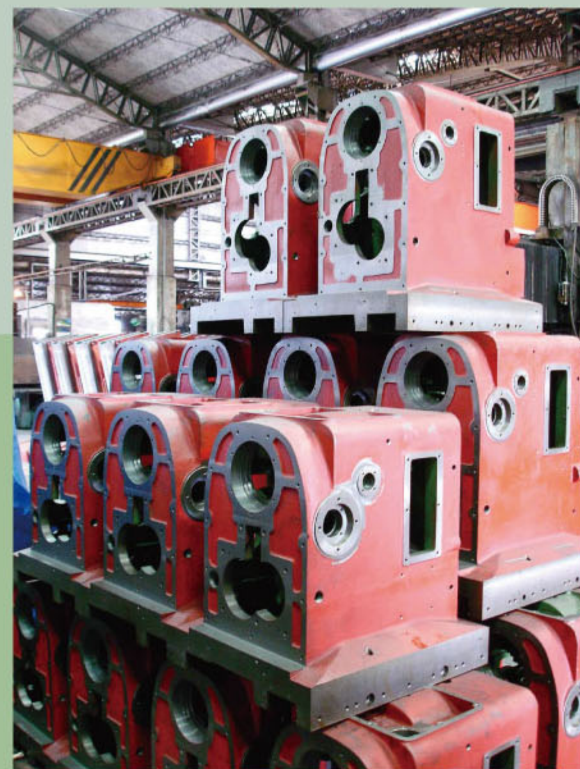


2011
Launching the brand new concept machine tool, semi-gantry portal type machining center, LG-2500

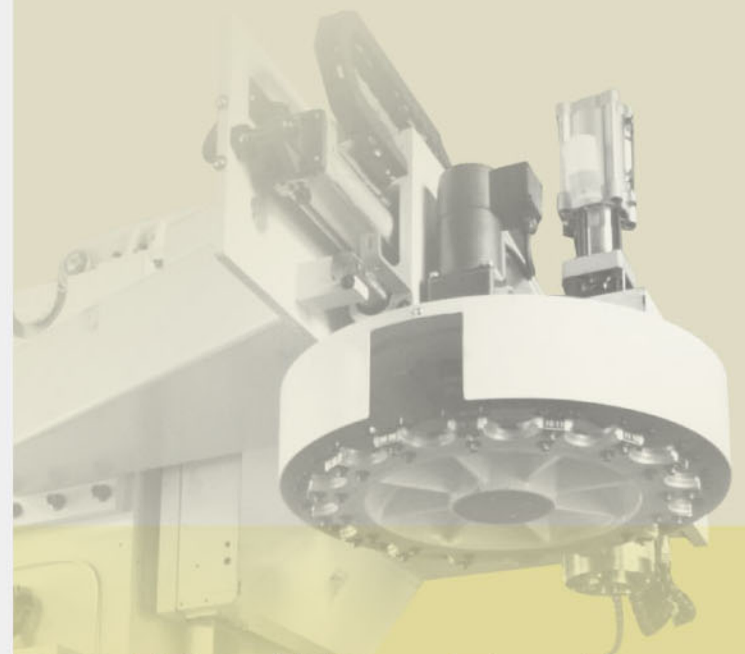
2012
Acquiring CE certificate for all products

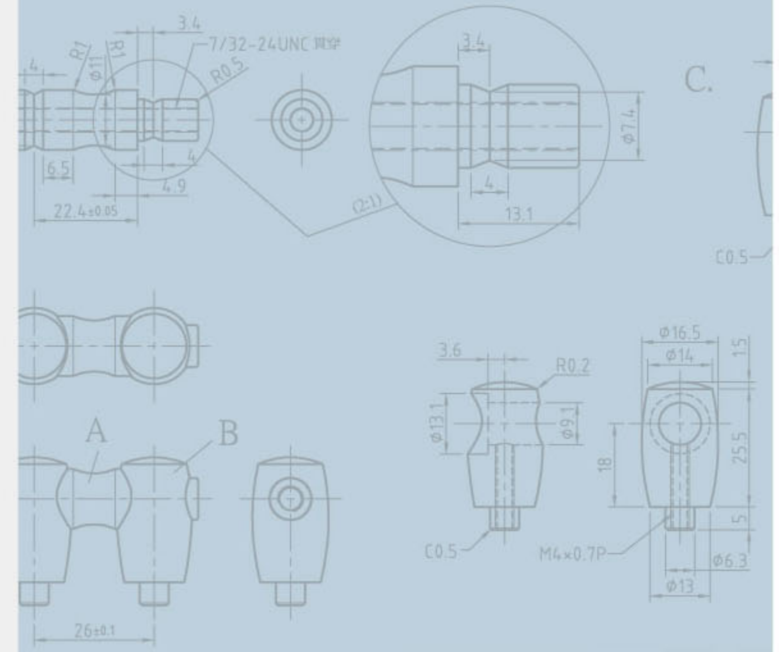
Organization



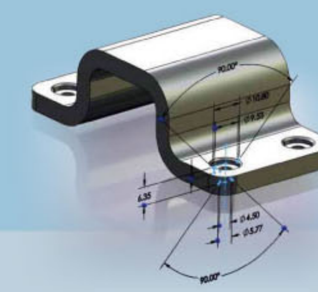
Machining & Manufacturing



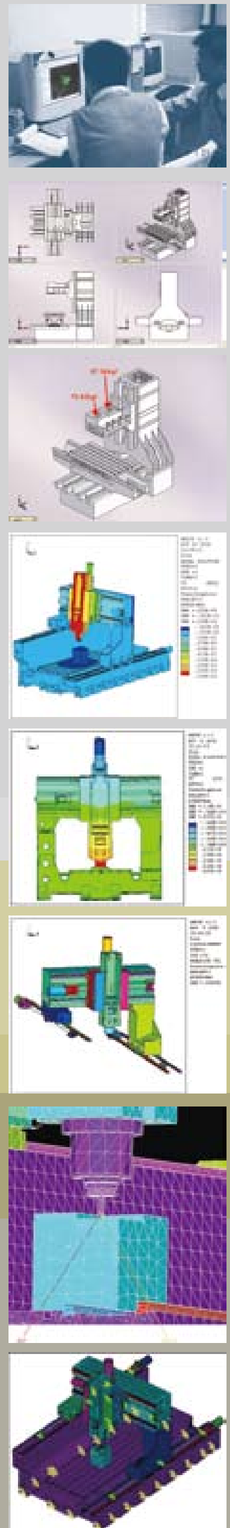
Machine Tools



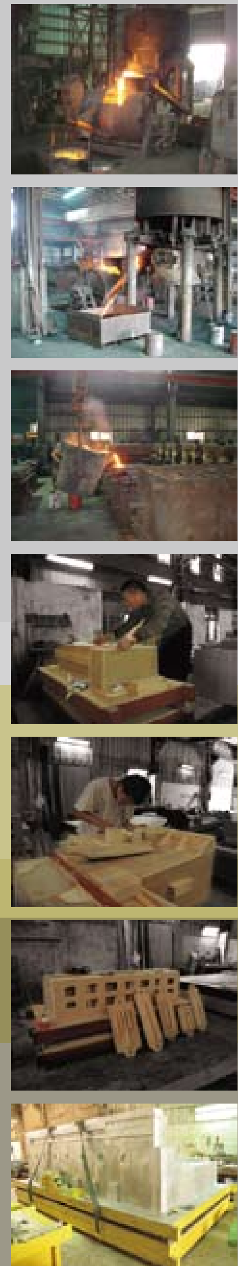
Hardware Engineering



Quality Commitment

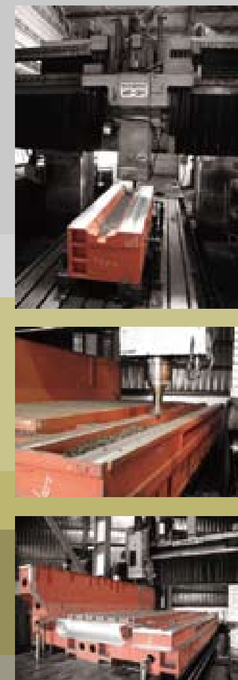


Research and Development
Started from very fundamental mechanical engineering, KAMIOKA deeply understand the machining needs which help our machinery design could fit the user's ideal. Our engineers continually refine and re-engineer our machines to be better and more reliable.



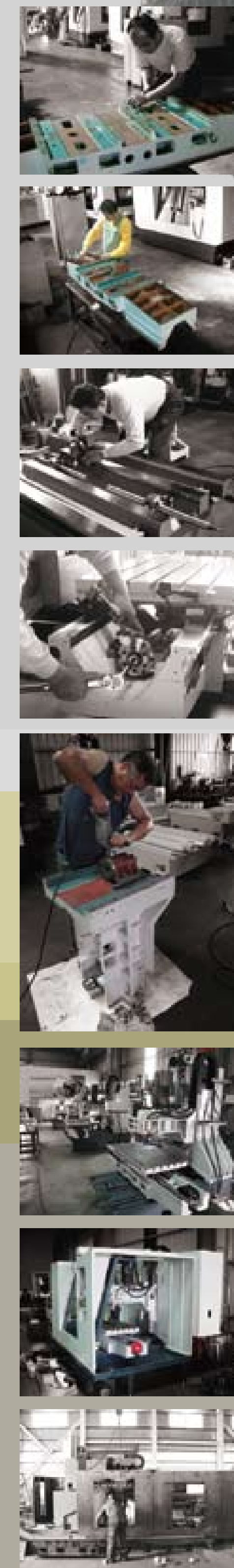
Molding and Foundry
Manufacturing a KAMIOKA machine starts at our wood-molding department and cast-iron foundry.

Components staged
Cast-iron components are staged and organized at KAMIOKA plant before they are moved into production.



Parts Machining
Applying state-of-the-art manufacturing capabilities, the cast-iron components are completely machined by our own equipment which is able to control both accuracy and production consistency.

Parts Inspection
Thousands of other parts (both purchased and manufactured) like spindle units and other precision parts are tested before final assembly.



Assembly and Adjustment
The genuine craftsmanship and technical experience go into all assembly steps such as the slideway scarfing, parts installation and micron tolerance adjustment.

Final Quality Assurance
Each KAMIOKA machine is subjected to numerous examinations, including 100% ball bar test, real cutting, (12 hours) and at least 120 hours of actual running before shipment.

Shipping Arrangement
We're always careful on packaging details and make sure the machine will be well delivered.

Before and After -Sales Service
Not only delivering high-quality machine tools, we also provide the service before and after a sale. Our customers and partners always get our suggestions and evaluation before their purchase such as how to proceed with their workpiece and how to choose a right model for their work. After their machine installation, users can connect to our authorized dealers and service network to cope with problems. Actually, our staff and dealers are quite unoccupied because there is no asking for a good machine.

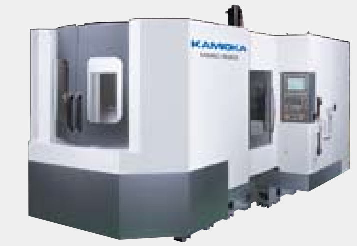
Product Line-up

Double-Column Machining Centers


LG-2500

Horizontal Machining Centers


HMC-500


HMC-630

Formula High Speed Vertical Machining Centers


VMC-1200


VMC-800


VMC-500


TMC-500

Gravity Heavy Duty Vertical Machining Centers


VMC-1300/1600


VMC-1800/2200

Performa High Performance Vertical Machining Centers

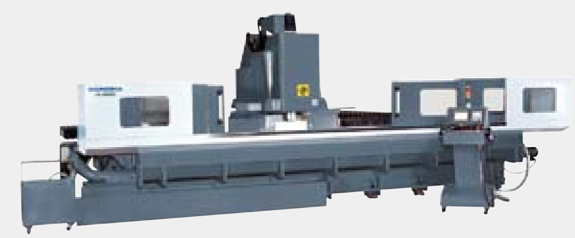

VMC-650


VMC-850


VMC-1000


VMC-1250

Longhorn Moving-Column Vertical Machining Centers


VL-4000/5000


VL-6000/7000/8000

Multi-Axis Turning Centers


YT52/52L, YT-75/75L

Multi-Tasking Turning Centers


CL-42


CL-42H


CL-52S/52/52L


CL-75/75L

Compact Lathes

Bench Lathe


BL-25/32/45

Office Lathe


OL-32

KAMIOKA

MILLING TECHNOLOGY

SEMI-GANTRY PORTAL TYPE MACHINING CENTER
LG-2500

SIMPLY FASTER AND MORE EFFICIENT...

The asymmetric structure of semi-gantry design successfully integrates with the advantage of conventional moving-column, moving-bridge and moving-table machinery designs. Comprising the rigid one-piece L-shape base and a semi-gantry structure, it effectively reduces space occupation and facilitates workpiece loading/unloading. This creation is totally on the cutting edge of machine tool trends.

Here you could find out what those advantages are.

Accessibility & Visibility

SEMI-GANTRY

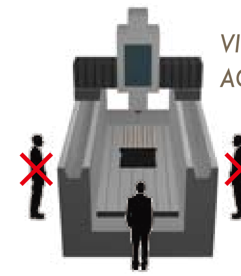
The semi-gantry structure allows the operator to control the machine ergonomically because it has an easy access for loading/unloading workpieces. The operator is always at the ideal position on both sides during the machining.

MOVING-COLUMN

VISIBILITY 3 SIDES
ACCESSIBILITY 3 SIDE

The moving-column couldn't go faster and isn't rigid enough on the axial motion.

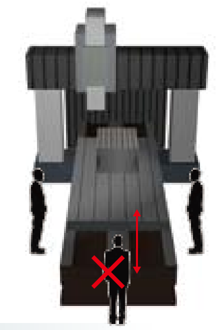
MOVING-BRIDGE



VISIBILITY 1 SIDE
ACCESSIBILITY 1 SIDE

Blocked by both walls

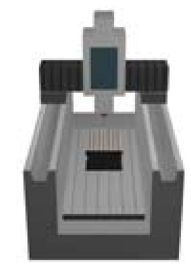
MOVING-TABLE



VISIBILITY 3 SIDES
ACCESSIBILITY 2 SIDES

The working table couldn't afford too much heavier loadings.

Machine Size

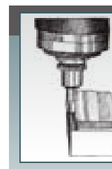
SEMI-GANTRY		MOVING-COLUMN		MOVING-BRIDGE		MOVING-TABLE
	<		≤		<	

LG2500 can be loaded into a 40' HQ container for easier transportation as well as saving much cost on packaging materials.

Superior Working Performance

FACE MILLING
S45C Steel
Material Removal Rate
630 cc/min.

Tool	Ø80
Spindle Speed	1,200 rpm
Feedrate	2,000 mm/min.
Width of Cut	70 mm
Depth of Cut	4.5 mm



END MILLING
S45C Steel
Material Removal Rate
308 cc/min.

Tool	Ø20
Spindle Speed	4,500 rpm
Feedrate	2,200 mm/min.
Width of Cut	7 mm
Depth of Cut	20 mm

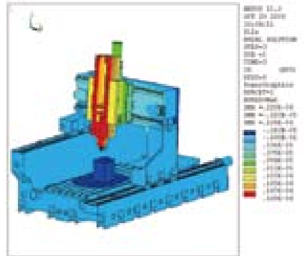
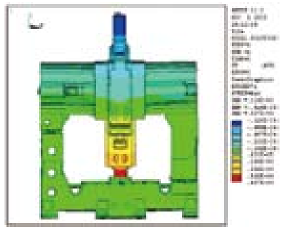
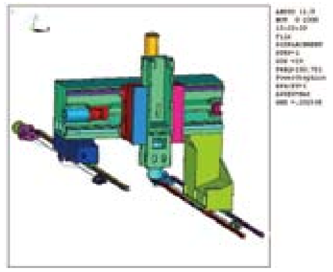
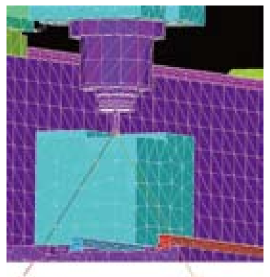
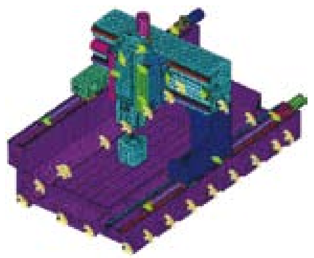
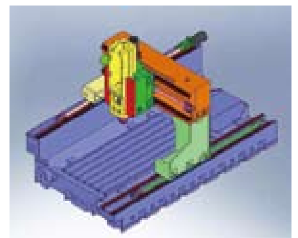
TAPPING
S45C Steel
TAP
M24

Tool	M24
Spindle Speed	100 rpm
Feedrate	300 mm/min.

DRILLING
Aluminum
Cutting Diameter
40 mm

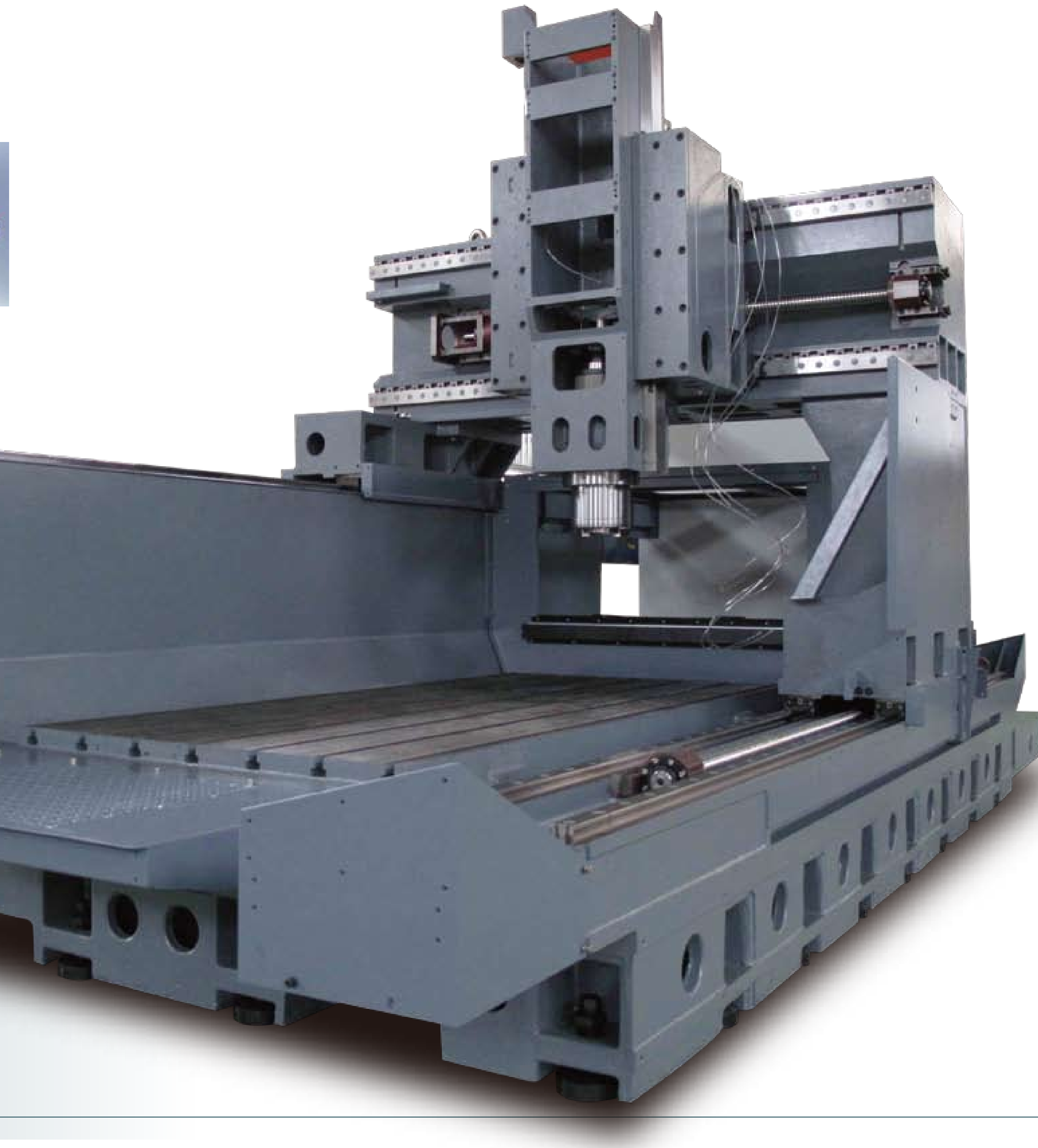
Tool	Ø40
Spindle Speed	1,200 rpm
Feedrate	240 mm/min.

GENUINE SEMI-GANTRY MACHINE CONSTRUCTION


Patent No.: M363349


Patent No.: M406479




- One Piece L-shape Machine Body
- 1.5m Span of Semi-Gantry Structure
- Duo-driven Servo Motion on X-axis
- X, Y-axis Linear Ways and Z-axis Box Way
- Travel X2500 Y1150 Z620 mm
- 20,000 mm/min Rapid Traverse

1 22kW spindle motor with max. 255Nm torque
2 8,000rpm BT50 taper direct-driven spindle
3 Safe and convenient accessibility of machining operations
4 2-side open splash guard
5 Machining Monitoring
6 User-friendly CNC control panel and easy-movable track

Item/Model No.	Unit	LG-2500
Travel X/Y/Z	mm (in.)	2,500/1,150/620 (98.43/45.28/24.41)
Max. Spindle Speed	rpm	Direct drive 8,000/10,000 (opt.) Gear drive 8,000 (opt.)
Spindle Motor	kW (HP)	22/30 (29/40)
Spindle Taper		BT50
Tools Capacity	pcs	Umbrella 30

Better

30% less floor space occupation

Stronger

30% stronger construction

Faster

30% faster machining performance

FEATURES OF LG-2500

1

Award-winning

2011 Taiwan Machine Tools Industry Award for Excellence in Research and Innovation

2011 The 18th Taiwan SMEs Innovation Award

2

3

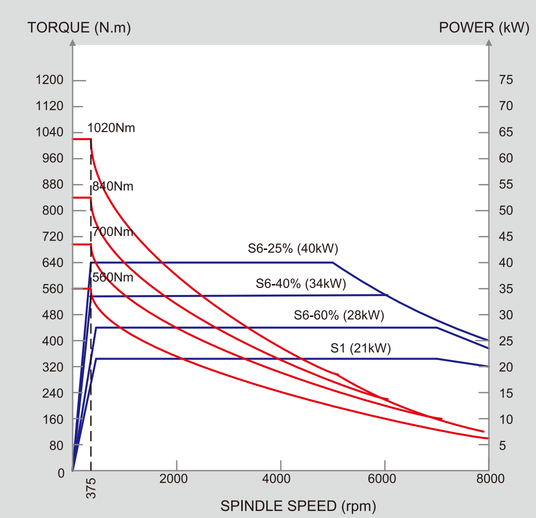
4

5

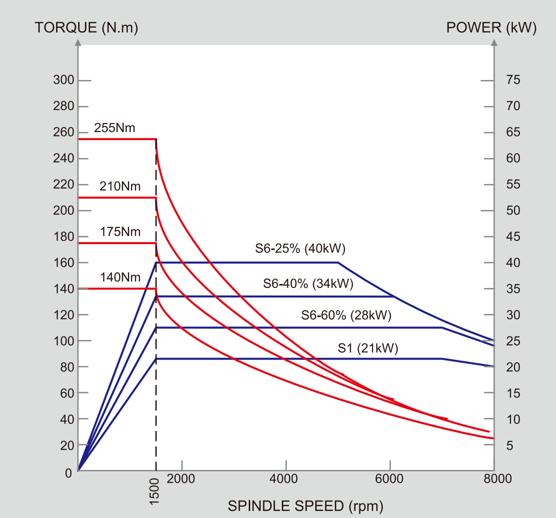
1. Best accessibility and control for users
2. SIEMENS SINUMERIK 840D NC solution with machining monitoring system
3. Sufficient working space (2400x1100mm) for middle and large size components machining
4. Powerful 8,000rpm BT50 direct-drive spindle or optional gear-drive spindle
5. Umbrella 30pcs tool magazine

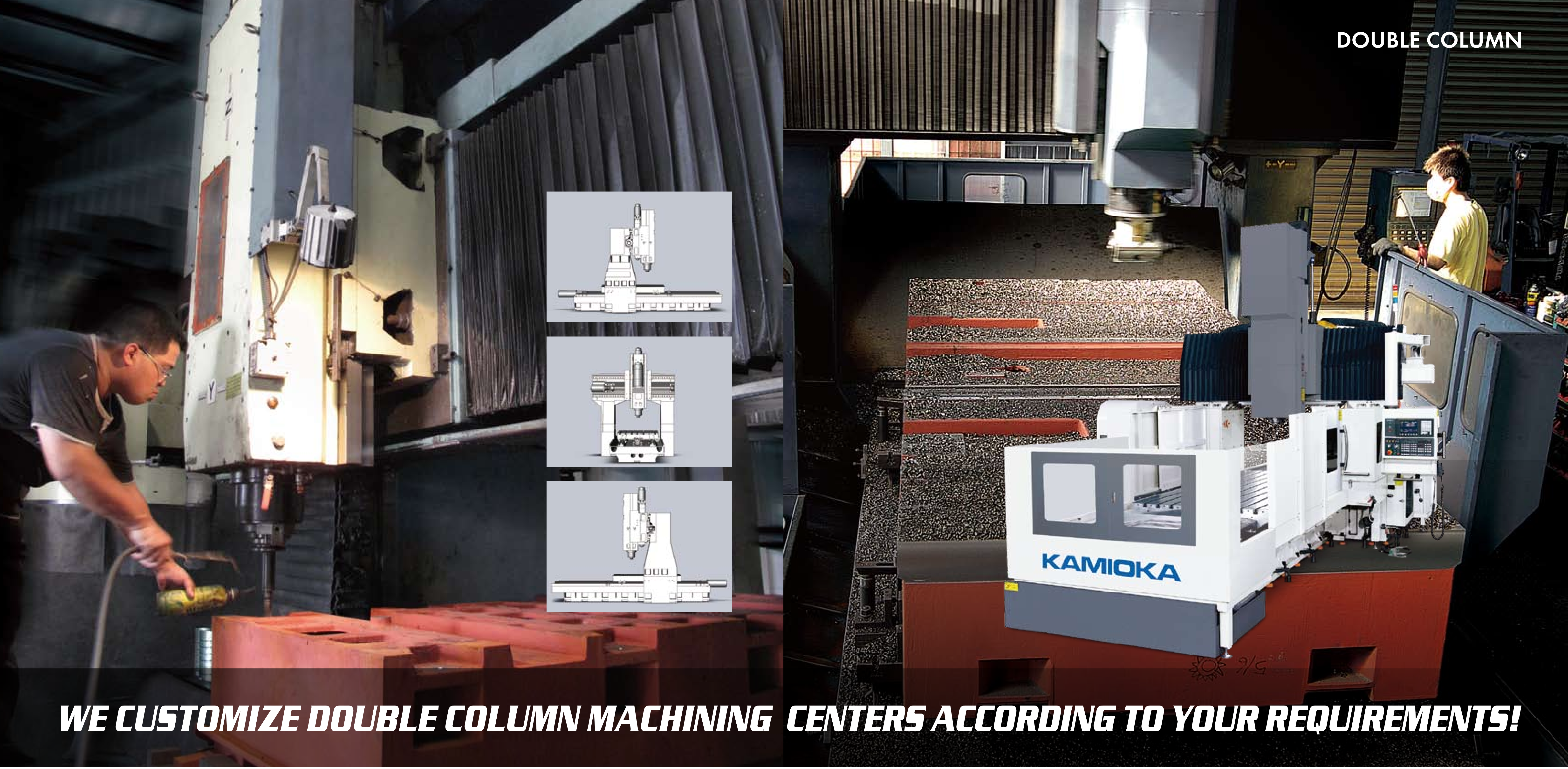
SPINDLE POWER & TORQUE OUTPUT CHART

LG-2500 ZF Gear 8000rpm SIEMENS 1PH7137



LG-2500 Direct 8000 10000rpm SIEMENS 1PH7137





WE CUSTOMIZE DOUBLE COLUMN MACHINING CENTERS ACCORDING TO YOUR REQUIREMENTS!

Item/Model No.	Unit	DMC-1518	DMC-1525	DMC-1822	DMC-1830	DMC-1840
Travel X/Y/Z	mm (in.)	1,800/1,150/620 (70.87/45.28/24.41)	2,500/1,150/620 (98.43/45.28/24.41)	2,200/1,800/800 (86.61/70.87/31.5)	3,000/1,800/800 (118.11/70.87/31.5)	4,000/1,800/800 (157.48/70.87/31.5)
Max. Spindle Speed	rpm	Direct drive 8,000/10,000 (opt.) Gear drive 8,000 (opt.)		Direct drive 8,000/10,000 (opt.) Gear drive 6,000 (opt.)		
Spindle Motor	kW (HP)	18.5/22 (25/29)				
Spindle Taper		BT50				
Tools Capacity	pcs	Swing Arm 24				

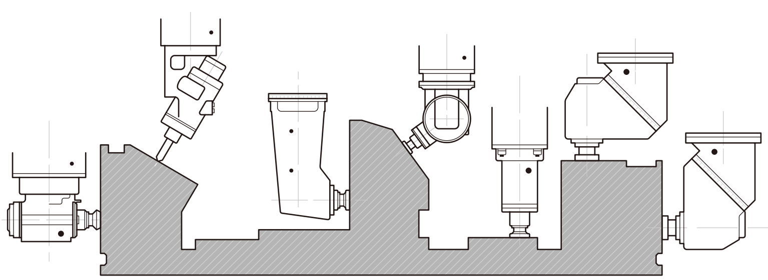
Item/Model No.	Unit	DMC-2130	DMC-2140	DMC-2150	DMC-2630	DMC-2640	DMC-2650
Travel X/Y/Z	mm (in.)	3,000/2,100/1,000 (118.11/82.68/39.37)	4,000/2,100/1,000 (157.48/82.68/39.37)	5,000/2,100/1,000 (196.85/82.68/39.37)	3,000/2,500/1,000 (118.11/98.43/39.37)	4,000/2,500/1,000 (157.48/98.43/39.37)	5,000/2,500/1,000 (196.85/98.43/39.37)
Max. Spindle Speed	rpm	Direct drive 8,000/10,000 (opt.) Gear drive 6,000 (opt.)					
Spindle Motor	kW (HP)	18.5/22 (25/29)			22/26 (29/35)		
Spindle Taper		BT50					
Tools Capacity	pcs	Swing Arm 24					

POWERFUL 5-FACE
Double-Column Machining Center

DMC-3040/3050/3060
DMC-3570/4080

Item/Model No.	Unit	DMC-3040	DMC-3050	DMC-3060	DMC-3570	DMC-4080
Travel X/Y/Z	mm (in.)	4,000/2,900/1,000 (157.48/114.17/39.37)	5,000/2,900/1,000 (196.85/114.17/39.37)	6,000/2,900/1,000 (236.22/114.17/39.37)	7,000/3,400/1,000 (275.59/133.86/39.37)	8,000/3,900/1,000 (314.96/153.54/39.37)
Max. Spindle Speed	rpm	Direct drive 8,000/10,000 (opt.) Gear drive 6,000 (opt.)				
Spindle Motor	kW (HP)	22/26 (29/35)				
Spindle Taper		BT50				
Tools Capacity	pcs	Swing Arm 24				

5 Face indexing head



5 Face head (indexed)

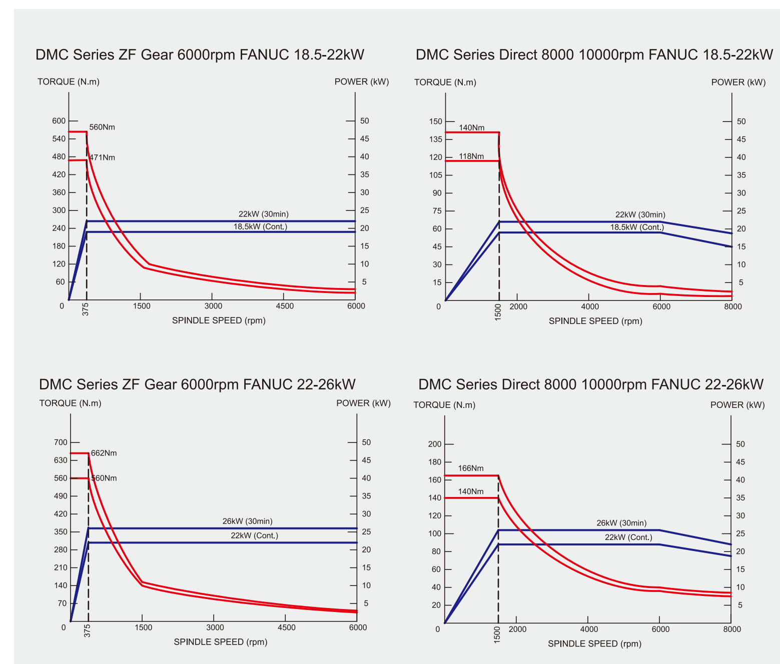
Universal head

5 Face head

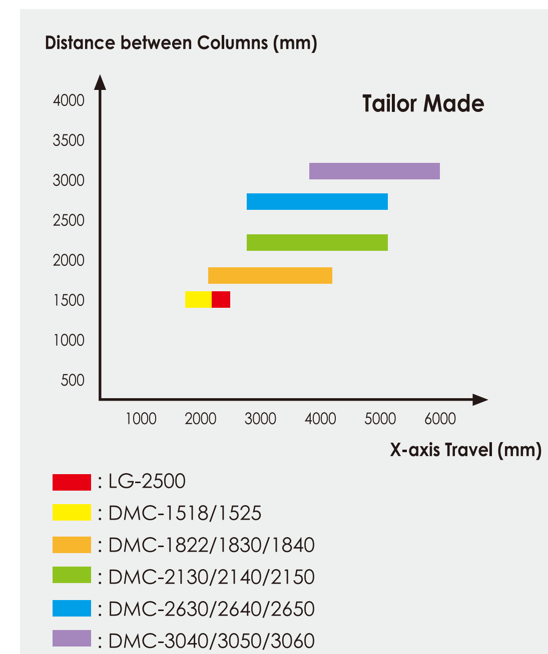
5 Axis head (Simultaneous)

AC5K

SPINDLE POWER & TORQUE OUTPUT CHART

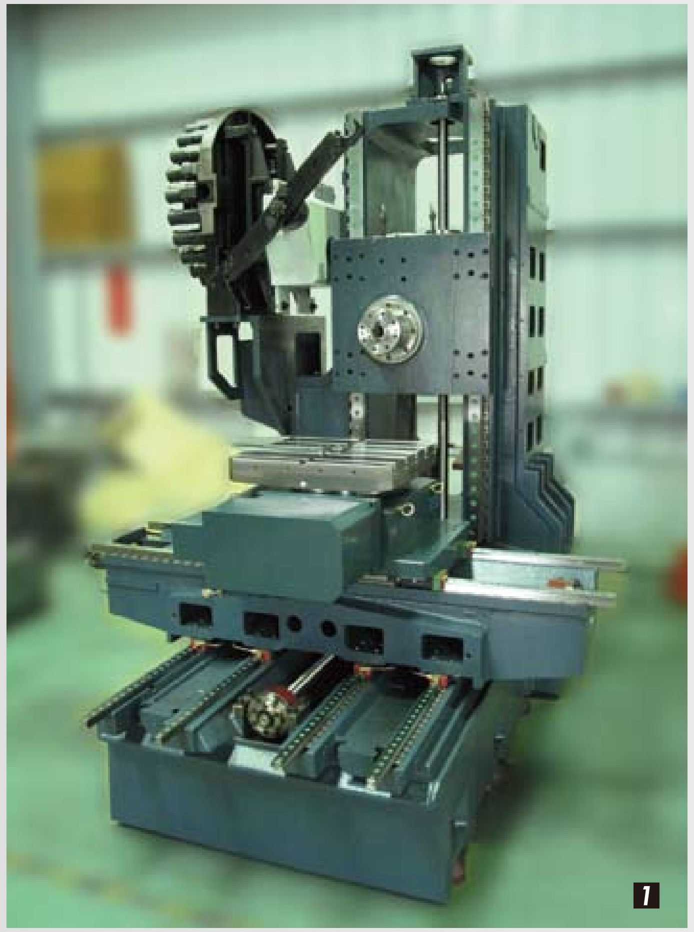


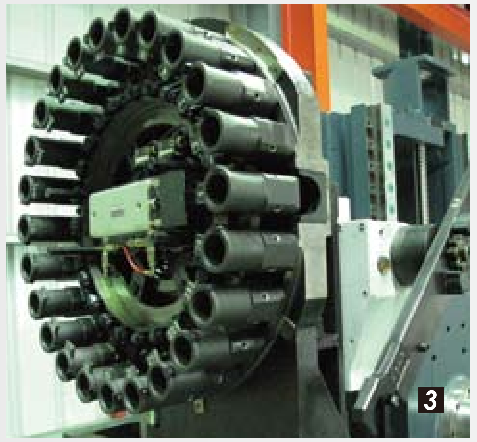
MODEL SELECTION QUICK GUIDE

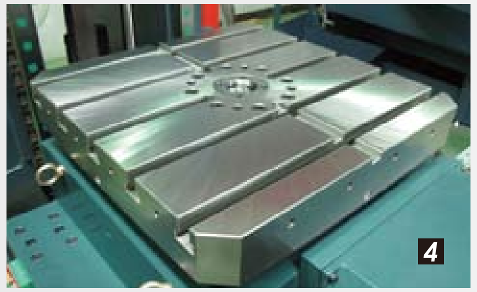


HORIZONTAL MACHINING CENTER

HMC-500







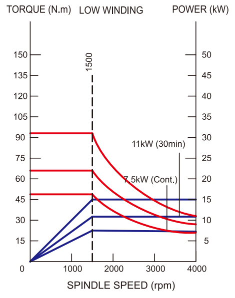
1 Compact Machine Construction with 3 axes Linear Ways
2 Powerful Direct-drive 10,000rpm Spindle
3 40-taper Arm 24pcs ATC
4 Fixed or Indexing Table (0.001° or 0.005°-opt.)

• Auto Pallet Changer available

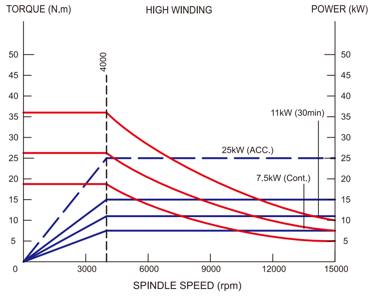
Item/Model No.	Unit	HMC-500
Travel X/Y/Z	mm (in.)	500/600/550 (19.69/23.62/21.65)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	7.5/11 (10/15)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24

SPINDLE POWER & TORQUE OUTPUT CHART

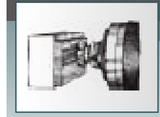
HMC-500 Direct 10000rpm
FANUC 7.5-11kW(Low Winding)



HMC-500 Direct 10000rpm
FANUC 7.5-11kW(High Winding)

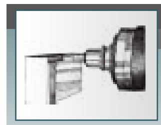


CUTTING CAPABILITY



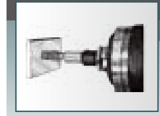
FACE MILLING
S45C Steel
Material Removal Rate
153 cc/min.

Tool	Ø80
Spindle Speed	1,200 rpm
Feedrate	850 mm/min.
Width of Cut	60 mm
Depth of Cut	3 mm



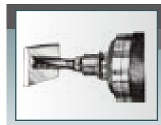
END MILLING
Aluminum
Material Removal Rate
120 cc/min.

Tool	Ø30
Spindle Speed	4,500 rpm
Feedrate	2,000 mm/min.
Width of Cut	2 mm
Depth of Cut	30 mm



TAPPING
S45C Steel
TAP
M20

Tool	M20
Spindle Speed	200 rpm
Feedrate	500 mm/min.

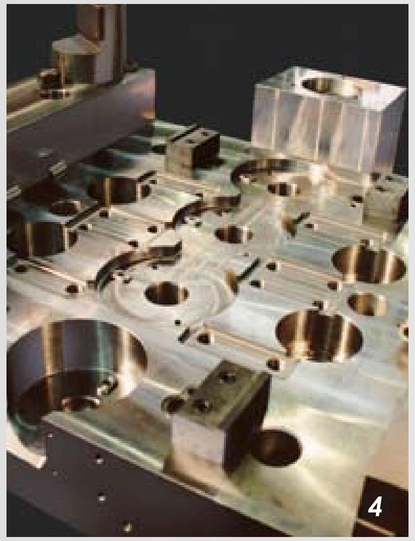


DRILLING
Aluminum
Cutting Diameter
40 mm

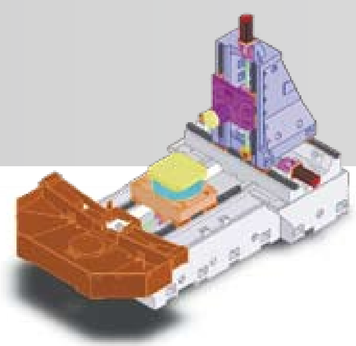
Tool	Ø40
Spindle Speed	1,200 rpm
Feedrate	180 mm/min.

HORIZONTAL MACHINING CENTER
HMC-630

PARTS APPLICATION



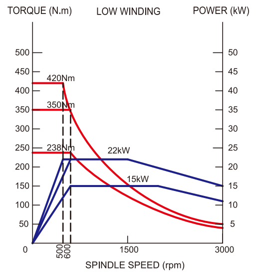
1 2 Engine Block
3 Crank Case
4 Mold
5 6 Gear Box



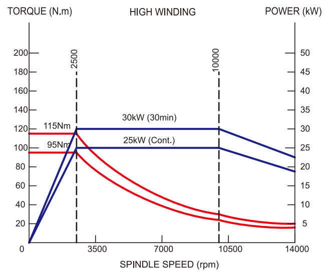
Item/Model No.	Unit	HMC-630
Travel X/Y/Z	mm (in.)	1,000/850/950 (39.37/33.46/37.4)
Max. Spindle Speed	rpm	Built-in 10,000
Spindle Motor	kW (HP)	L: 15/22 (20/29) H: 25/30 (33/40)
Spindle Taper		BT50
Tools Capacity	pcs	Chain 40

SPINDLE POWER & TORQUE OUTPUT CHART

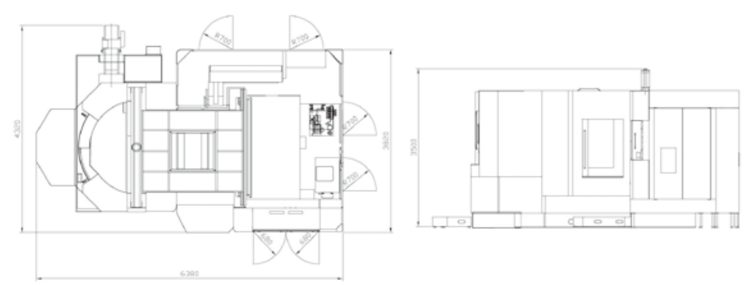
HMC-630 Built-in 10000rpm
FANUC 15-22kW(Low Winding)



HMC-630 Built-in 10000rpm
FANUC 25-30kW(High Winding)



DIMENSIONAL DRAWING



FORMULA

HIGH SPEED VERTICAL MACHINING CENTER

The aim of Formula Series is developed for high speed machining and high productivity application such as automotive, aerospace, electronic and job shop industries. For better acceleration and fastest production, machines are equipped with powerful inline direct-driven spindle and selected heavy-duty linear motion guideways on all 3-axes. This line presents four distinguishing models to satisfy various kinds of machining needs.

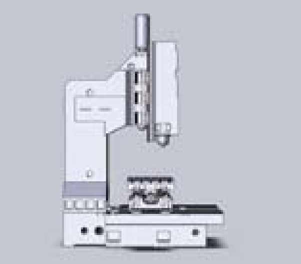
VMC-1200 is perfectly suitable for precision mold and die machining purpose. Its unique humpback column structure enables the motion smoothness and rigidity on Z-axis at high rapid traverse rate. This important design has significantly improved the surface finish quality and working efficiency compared with other typical structures.

VMC-800 is one of most popular model because this machine could easily take on any machining job shop challenges with highest possible return on investment. Its concise design and rock-solid machine construction bring the exceptional performance and reliability that make it miles ahead of any other in their price point.

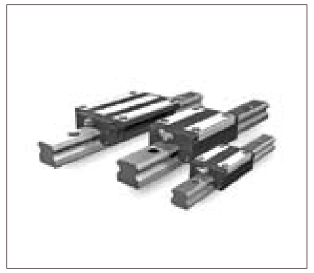
VMC-500 is a high speed milling and tapping machining center which has a powerful milling function as well as an efficient drilling/tapping performance. In the other hands, all these kinds of jobs can be done in this compact magic cube that always impresses even the most selective users.

TMC-500 is a high speed drilling & tapping center which is designed for an increase demand of high productivity milling and boring machine market. Some impressive features include the 1.5 seconds tool change time, rugged machine construction, optimal chip flow/disposal and smallest possible footprint. Its versatility meets today's diverse needs, especially in automotive and electronic industry.


VMC-1200 with multi-axis machining


C-Frame


Direct-Drive Spindle

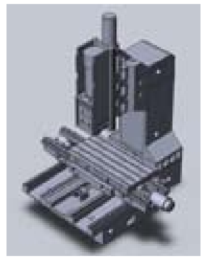

Linear Guide Way

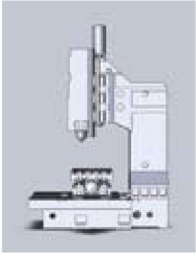

High Speed Machining

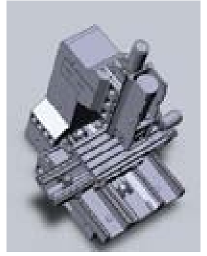
Super Mold & Die Vertical Machining Center

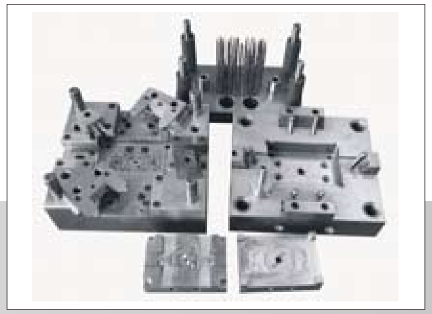
VMC-1200

Item/Model No.	Unit	VMC-1200
Travel X/Y/Z	mm (in.)	1,200/650/550 (47.24/25.59/21.65)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	11/15 (15/20)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24

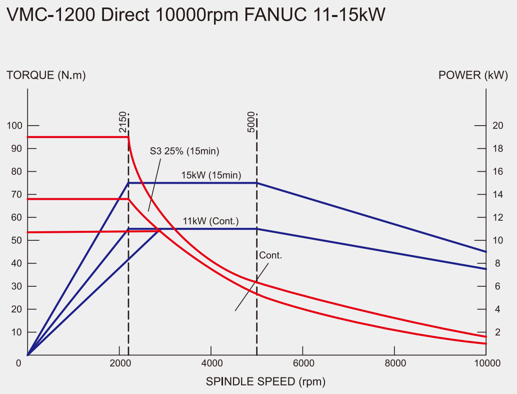




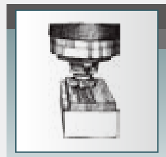




SPINDLE POWER & TORQUE OUTPUT CHART

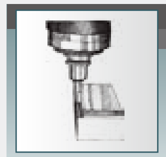


CUTTING CAPABILITY



FACE MILLING
S45C Steel
Material Removal Rate
153 cc/min.

Tool	Ø80
Spindle Speed	1,200 rpm
Feedrate	850 mm/min.
Width of Cut	60 mm
Depth of Cut	3 mm



END MILLING
Aluminum
Material Removal Rate
120 cc/min.

Tool	Ø30
Spindle Speed	4,500 rpm
Feedrate	2,000 mm/min.
Width of Cut	2 mm
Depth of Cut	30 mm

TAPPING
S45C Steel
TAP
M20

Tool	M20
Spindle Speed	200 rpm
Feedrate	500 mm/min.

DRILLING
Aluminum
Cutting Diameter
40 mm

Tool	Ø40
Spindle Speed	1,200 rpm
Feedrate	180 mm/min.

High Speed Vertical Machining Center

VMC-800


1


2


3


4

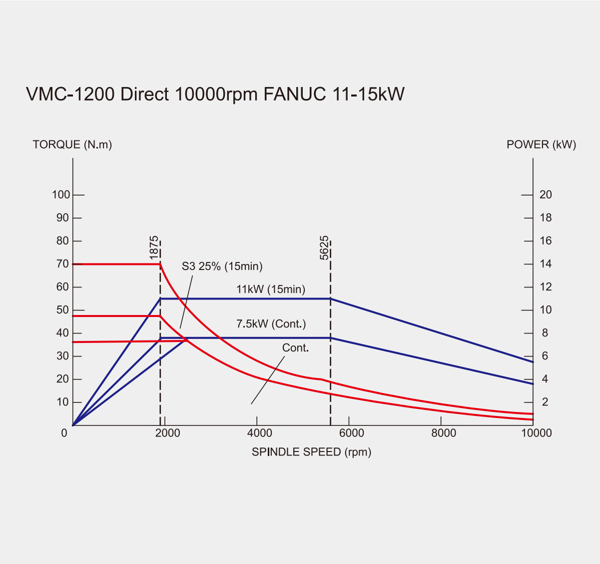

5


6


7

Item/Model No.	Unit	VMC-800
Travel X/Y/Z	mm (in.)	800/500/500 (31.5/19.69/19.69)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	M 5.5/7.5 (7/10) F 7.5/11 (10/15)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24

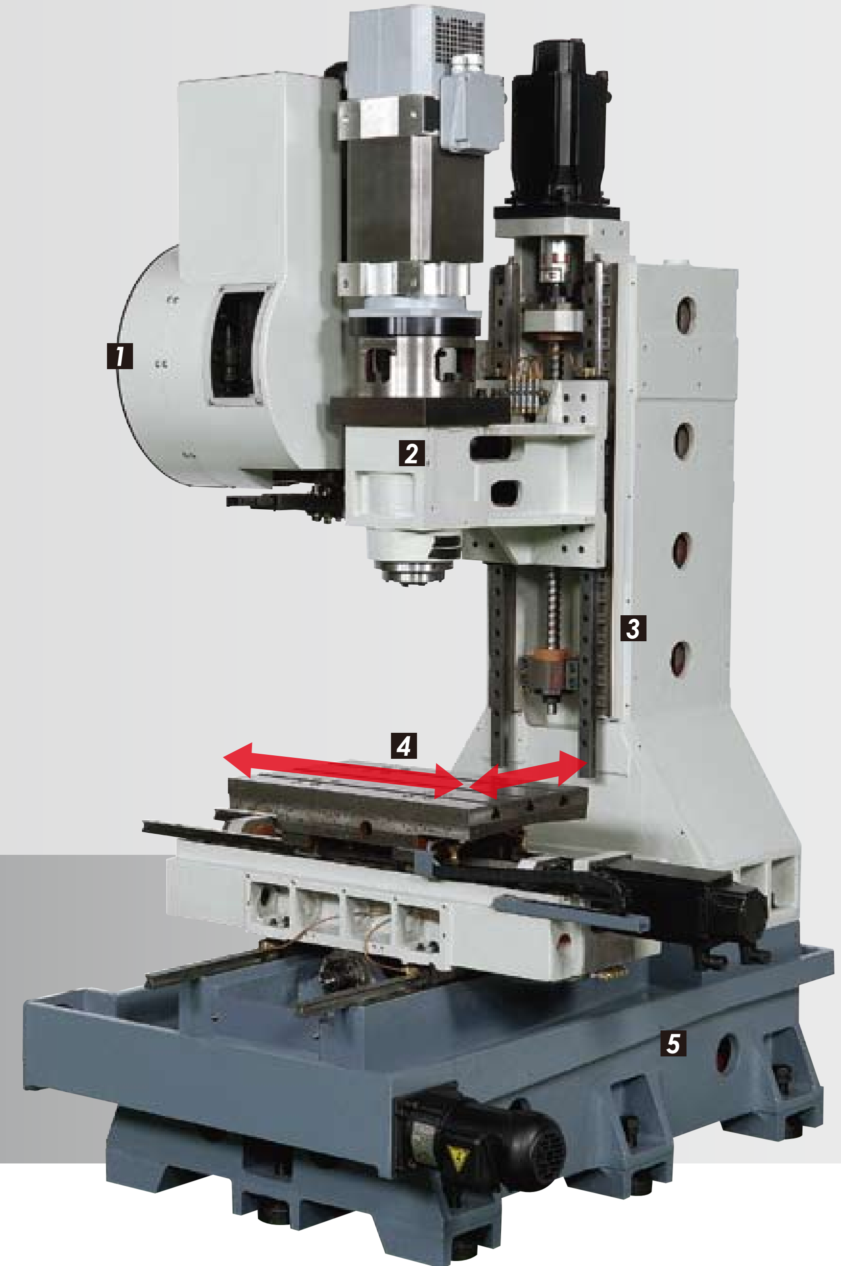
SPINDLE POWER & TORQUE OUTPUT CHART



1 Complete full enclosure guard
2 24pcs swing-arm auto tool changer
3 MITSUBISHI M70 A NC Control Package with manual pulse generator
4 Four splash nozzles on the spindle surrounded coolant unit
5 Working table size 800x480mm
6 High pressure water gun
7 Disk type oil skimmer

High Productivity Vertical Machining Center

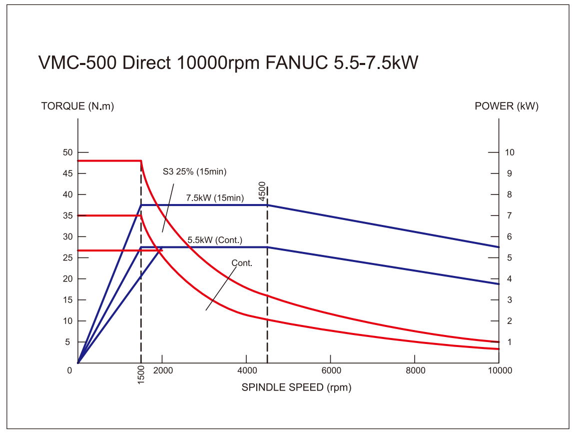
VMC-500



Item/Model No.	Unit	VMC-500
Travel X/Y/Z	mm (in.)	550/400/400 (21.65/15.75/15.75)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	5.5/7.5 (7/10)
Spindle Taper		BT30
Tools Capacity	pcs	Swing Arm 20

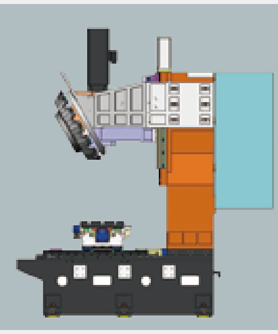
1. 30-taper swing arm 20pcs tool changer
2. Powerful direct-drive 10,000rpm spindle
3. Robust linear guide ways and ball screw
4. 600x400mm working table
5. Rigid cast-iron machine construction

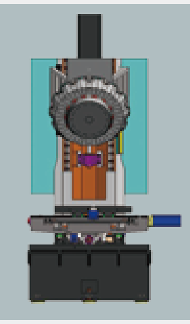
SPINDLE POWER & TORQUE OUTPUT CHART

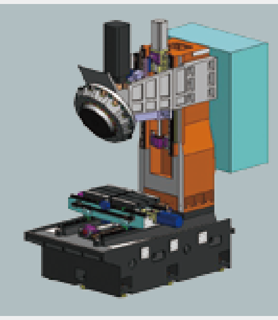


High Efficiency Drilling & Tapping Center

TMC-500

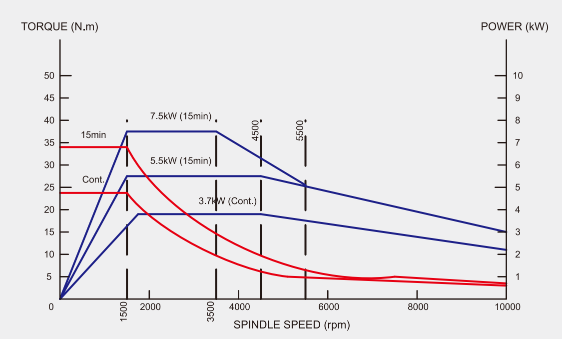






Item/Model No.	Unit	TMC-500
Travel X/Y/Z	mm (in.)	500/400/300 (19.69/15.75/11.81)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	3.7/5.5 (5/7)
Spindle Taper		BT30
Tools Capacity	pcs	Turret 16

SPINDLE POWER & TORQUE OUTPUT CHART



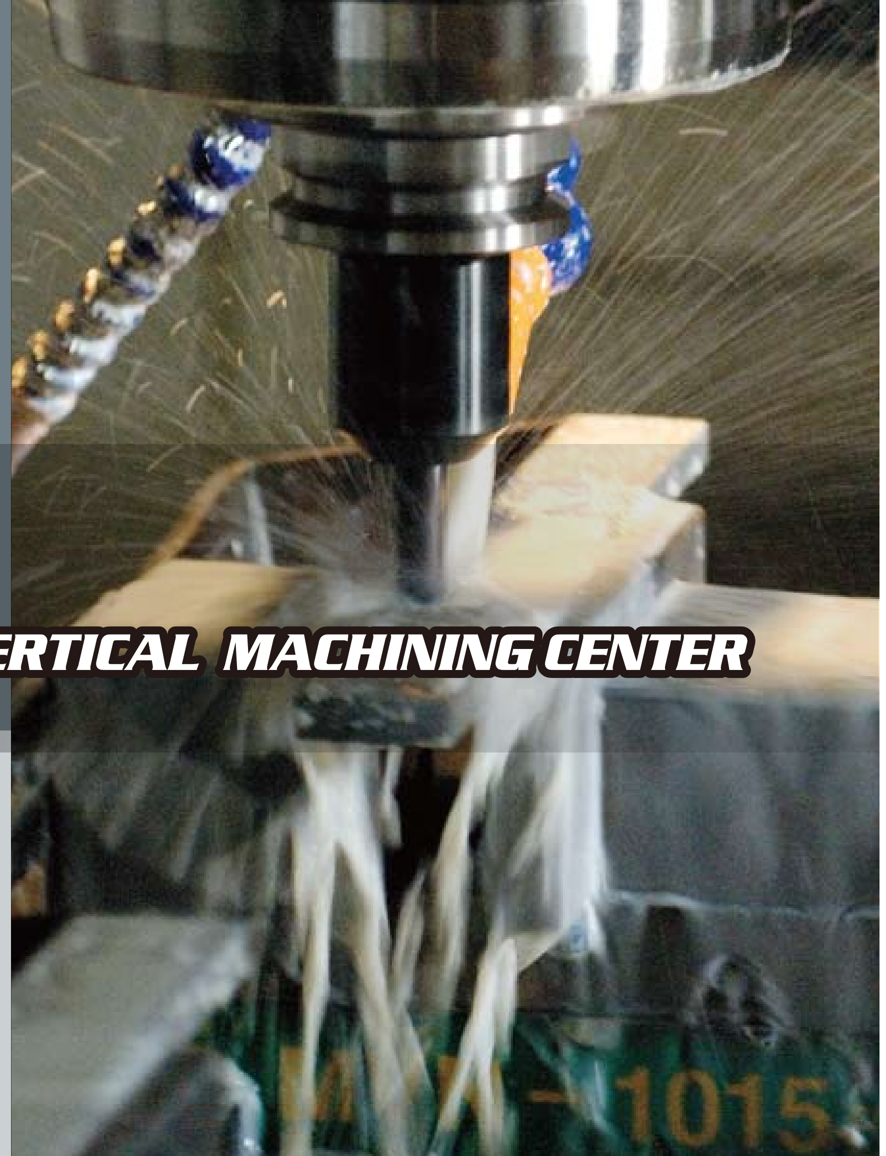
CUTTING CAPABILITY

TAPPING
Aluminum
TAP
M3

Tool	M3
Spindle Speed	3,000 rpm
Feedrate	1,500 mm/min.

DRILLING
Aluminum
Cutting Diameter
2.5 mm

Tool	Ø2.5
Spindle Speed	6,000 rpm
Feedrate	600 mm/min.



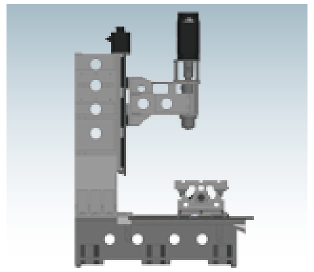
PERFORMA

HIGH PERFORMANCE VERTICAL MACHINING CENTER

The Performa Series truly lives up to its name. Compact machine design, robust cast-iron construction, selected parts application and superb mechatronic integration are built into these machines without any compromise. That is why this line is so popular and widely served in the world no matter in the complex die and mould field or complex shaped high production components.

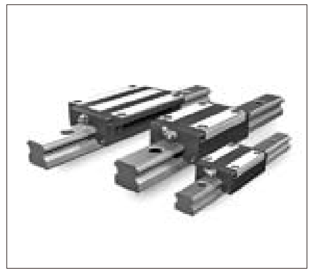
Key Features:

- Heavily ribbed machine structure and thermally stable graded cast-iron body
- Heavy duty linear motion guideways
- High torque tooth-belt driven spindle unit
- BT-40 taper shank with rugged 8,000/10,000rpm spindle speed
- Standard 16pcs auto tool changer or 24pcs swing arm ATC for option
- Ergonomic swiveling operator panel with MPG hand-wheel
- Well-balanced mechatronic installation and adjustment
- Plug-and-play installation and operation
- Low maintenance cost with highest possible return on investment



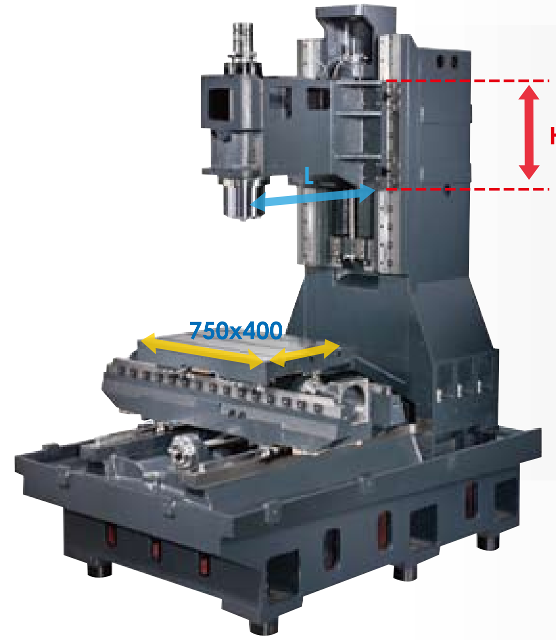
C-Frame

Belt-Drive Spindle



Linear Guide Way

Universal Machining



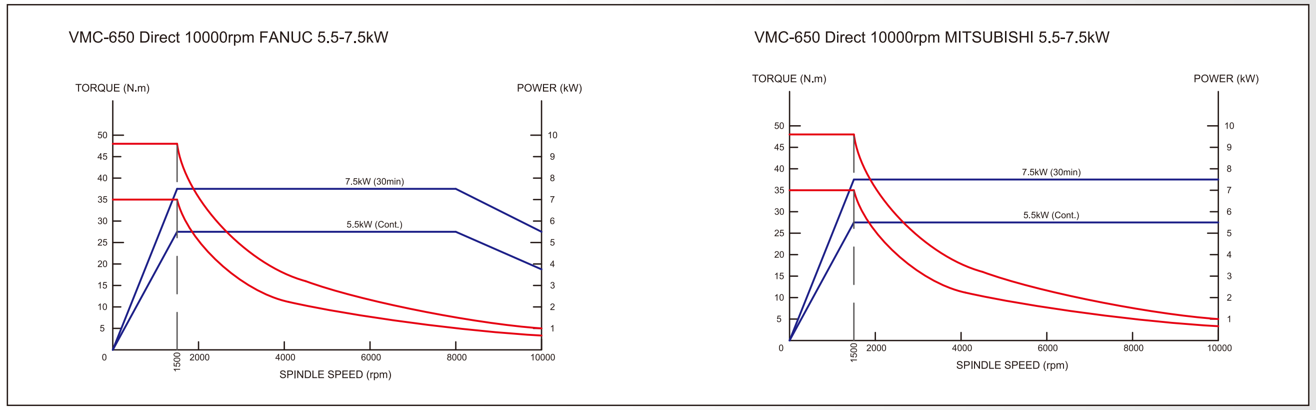
Robust Machine Structure

- The V-shaped inner ribs provide long lasting dynamic and static accuracy
- Extra wide span between linear ways exhibits exceptional stability to absorb cutting vibration
- The box type construction features anti-deformation and anti-bending
- The A-shaped machine column firmly supports ATC unit and head stock
- Optimal ratio (L/H) 1:1 spindle head results in excellent cutting capability
- Working table size 750x400mm

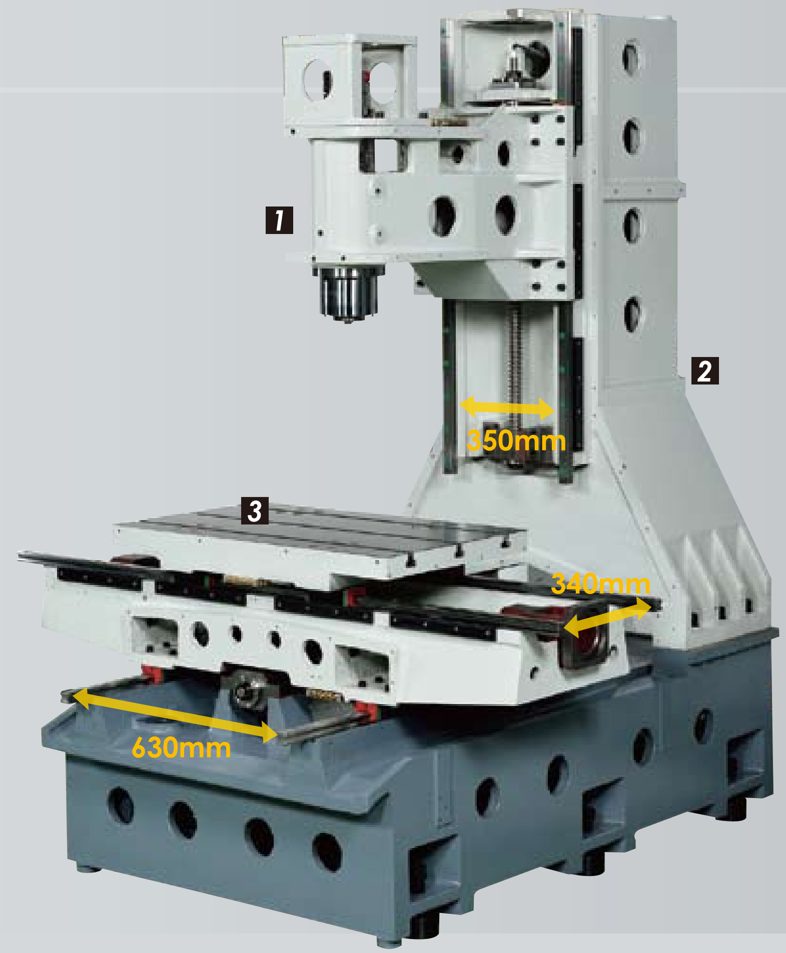
VMC-650

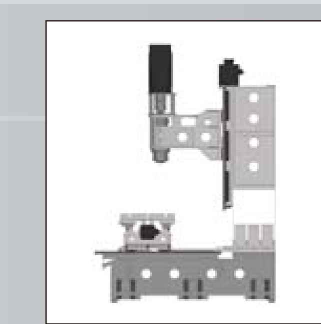
Item/Model No.	Unit	VMC-650
Travel X/Y/Z	mm (in.)	650/400/350 (25.59/15.75/13.78)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	5.5/7.5 (7/10)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 20

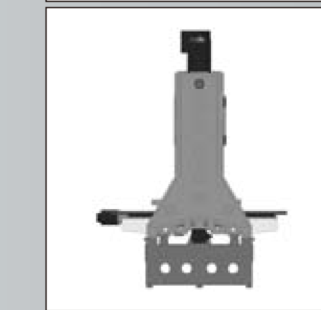
SPINDLE POWER & TORQUE OUTPUT CHART

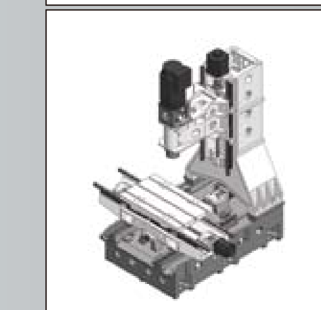


Item/Model No.	Unit	VMC-850
Travel X/Y/Z	mm (in.)	850/550/550 (33.46/21.65/21.65)
Max. Spindle Speed	rpm	Direct drive 10,000
Spindle Motor	kW (HP)	M 5.5/7.5 (7/10) F 7.5/11 (10/15)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24







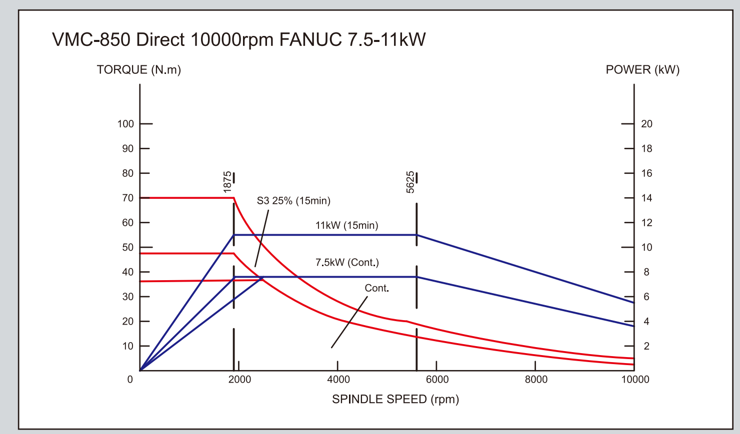


1 Direct drive BT40 taper 10,000/12,000rpm spindle

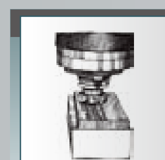
2 The A-shaped machine column firmly supports ATC unit and head stock

3 Working table size 800x480mm

SPINDLE POWER & TORQUE OUTPUT CHART



CUTTING CAPABILITY

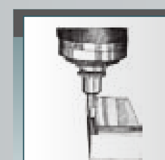


FACE MILLING
S45C Steel

Material Removal Rate

135 cc/min.

Tool	Ø80
Spindle Speed	1,200 rpm
Feedrate	750 mm/min.
Width of Cut	60 mm
Depth of Cut	3 mm

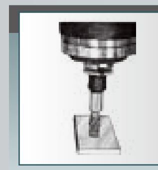


END MILLING
Aluminum

Material Removal Rate

120 cc/min.

Tool	Ø30
Spindle Speed	4,500 rpm
Feedrate	2,000 mm/min.
Width of Cut	2 mm
Depth of Cut	30 mm



TAPPING
S45C Steel

TAP

M16

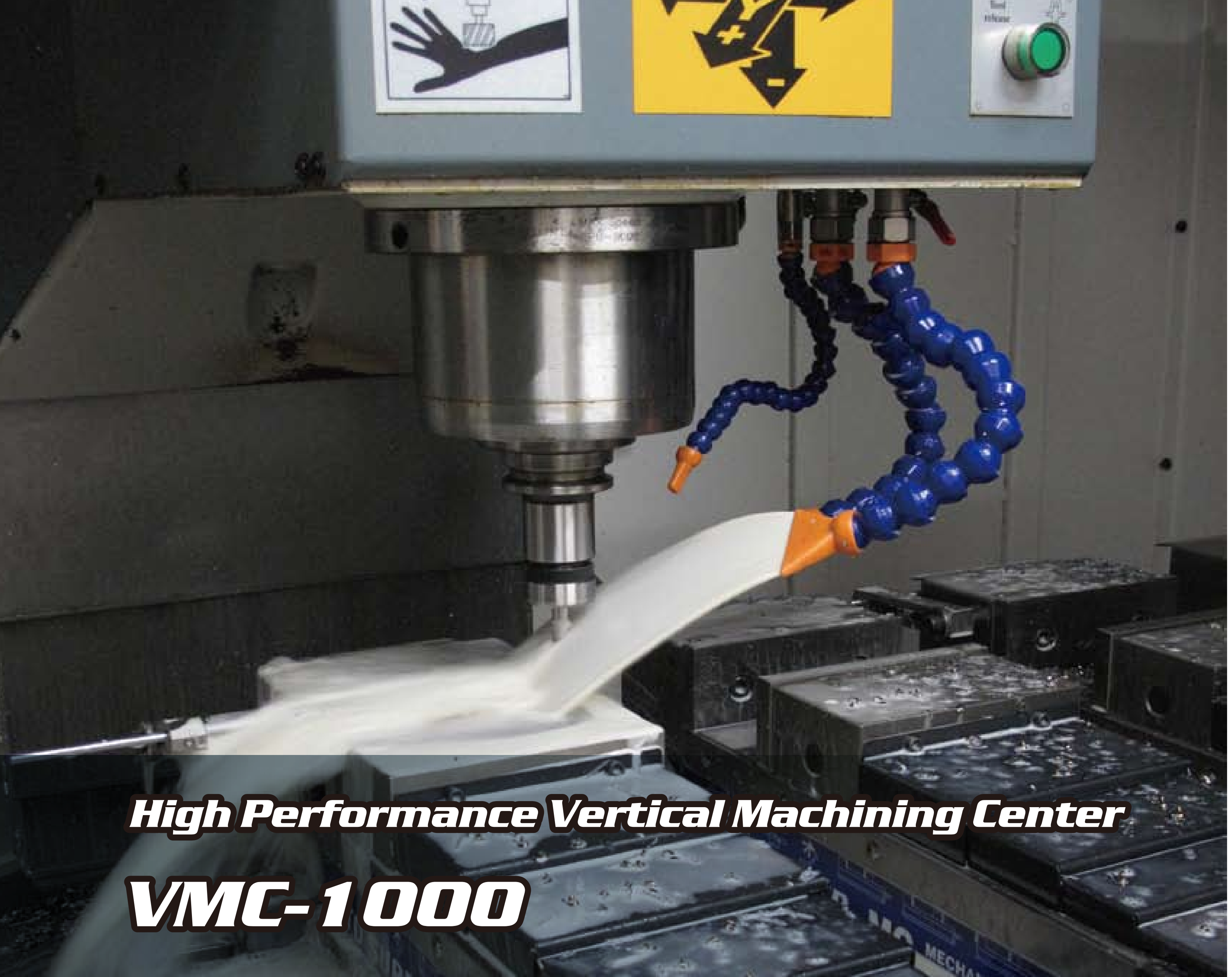
Tool	M16
Spindle Speed	300 rpm
Feedrate	600 mm/min.

DRILLING
Aluminum

Cutting Diameter

35 mm

Tool	Ø35
Spindle Speed	1,200 rpm
Feedrate	180 mm/min.

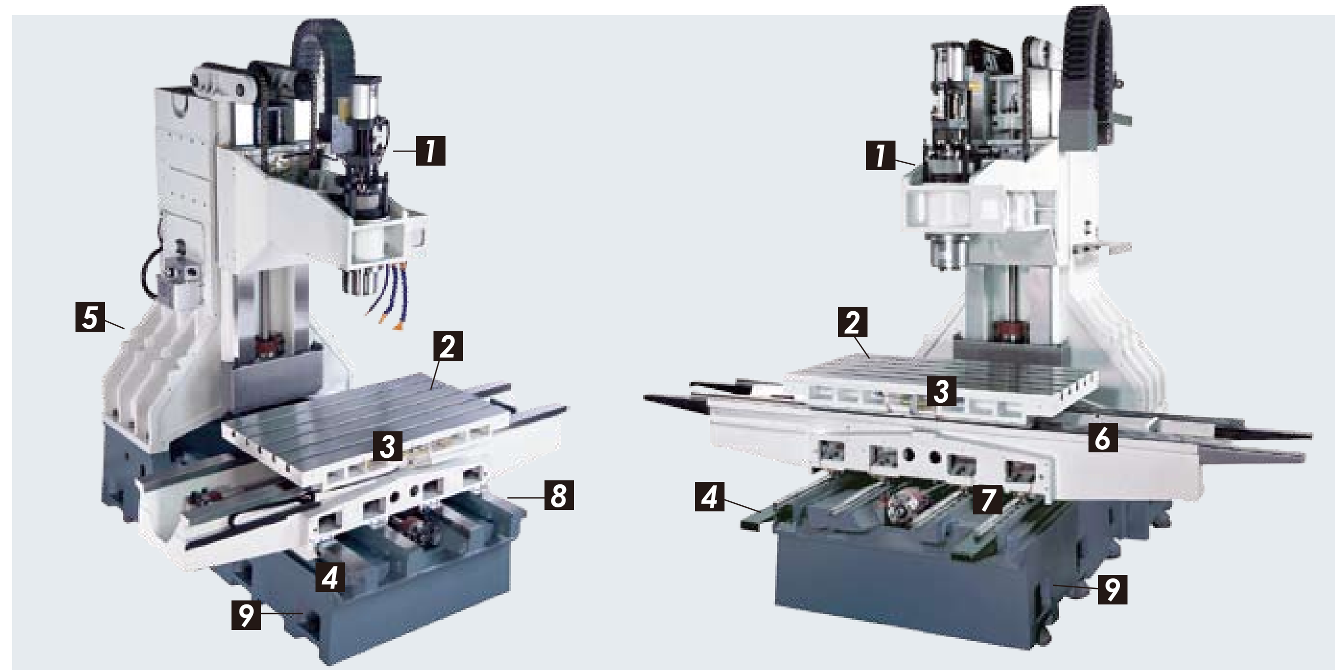


High Performance Vertical Machining Center

VMC-1000

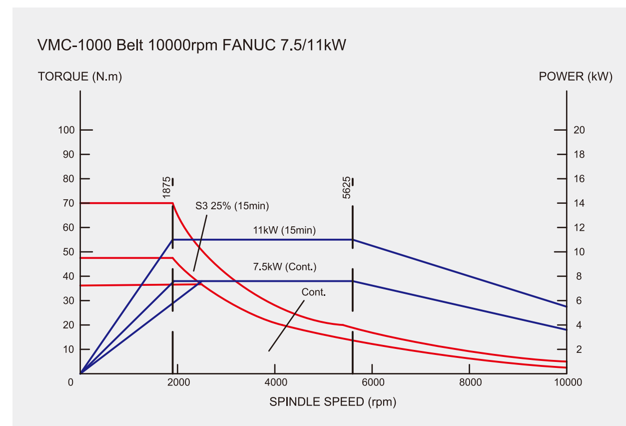
Item/Model No.	Unit	VMC-1000
Travel X/Y/Z	mm (in.)	1,000/600/600 (39.37/23.62/23.62)
Max. Spindle Speed	rpm	Belt drive 10,000 Direct drive 10,000 (opt.)
Spindle Motor	kW (HP)	7.5/11 (10/15)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24 or Carousel 16

Rock Solid Machine Construction



1. Spindle Floating Drawbar System
2. Entire Support Worktable
3. Centralized Lubrication System
4. Widest Saddle Support Base to 900mm
5. Stronger A-shape Design with Rib-braced Column Construction
6. 6 Points Contacted Support between Saddle and Worktable
7. 8 Points Contacted Support between Saddle and Base Foundation
8. Widened 4-rail Slide Construction for Rigid Y-axis Motion
9. 8 Points Contacted Leveling Bolts and Blocks

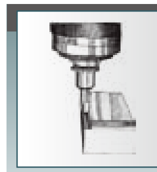
SPINDLE POWER & TORQUE OUTPUT CHART



CUTTING CAPABILITY

FACE MILLING S45C Steel — Material Removal Rate **153** cc/min.

Tool	Ø80
Spindle Speed	1,200 rpm
Feedrate	850 mm/min.
Width of Cut	60 mm
Depth of Cut	3 mm



END MILLING Aluminum — Material Removal Rate **120** cc/min.

Tool	Ø30
Spindle Speed	4,500 rpm
Feedrate	2,000 mm/min.
Width of Cut	2 mm
Depth of Cut	30 mm

TAPPING S45C Steel — TAP **M20**

Tool	M20
Spindle Speed	200 rpm
Feedrate	500 mm/min.

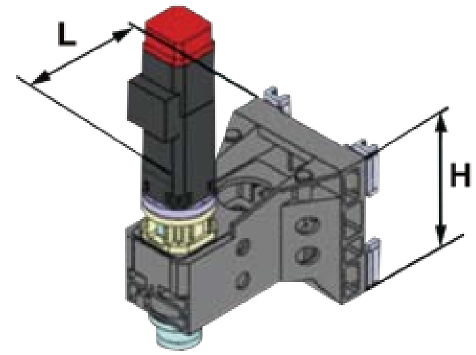
DRILLING Aluminum — Cutting Diameter **40** mm

Tool	Ø40
Spindle Speed	1,200 rpm
Feedrate	180 mm/min.

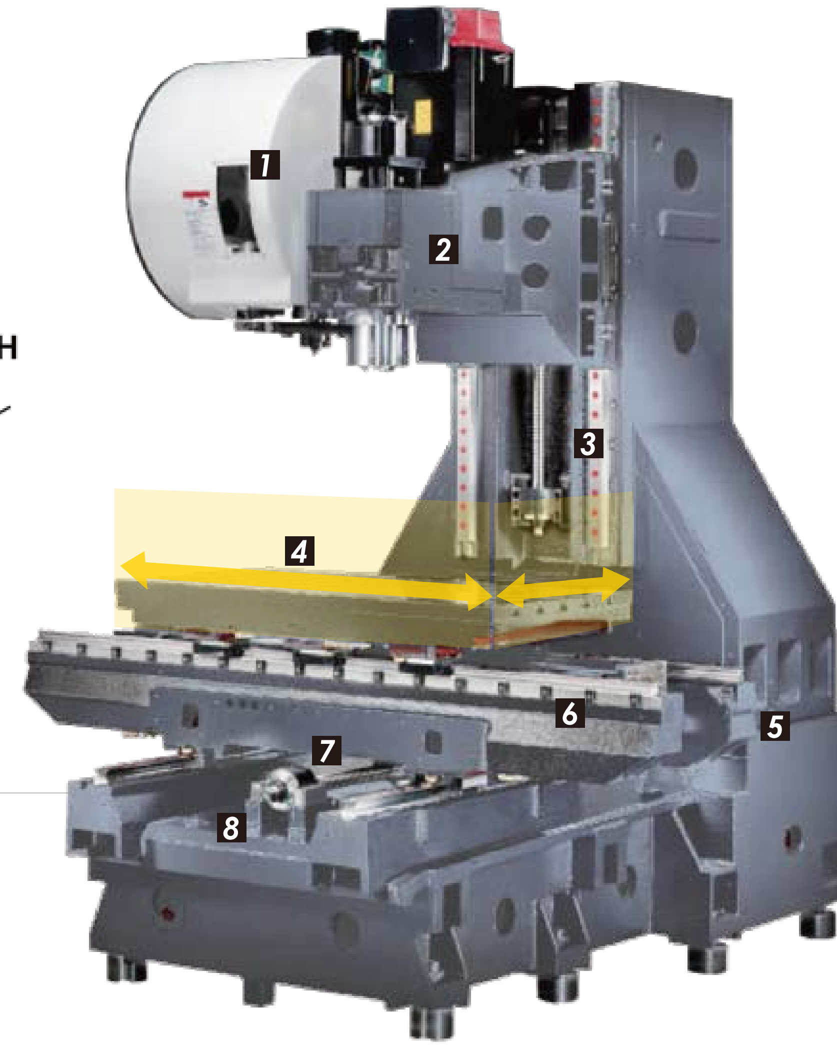
High Performance Vertical Machining Center

VMC-1250

Item/Model No.	Unit	VMC-1250
Travel X/Y/Z	mm (in.)	1,250/600/600 (49.21/23.62/23.62)
Max. Spindle Speed	rpm	Belt drive 10,000 Direct drive 10,000 (opt.)
Spindle Motor	kW (HP)	11/15 (15/20)
Spindle Taper		BT40
Tools Capacity	pcs	Swing Arm 24



Ratio L:H = 1:1

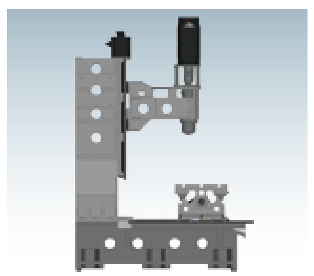


1. The swing-arm 24 pieces auto tool changer is subject to a running test of one million times to guarantee maximum dependability.
2. Optimal ratio (L/H) 1:1 spindle head results in excellent cutting capacity.
3. High precision roller type linear guide ways
4. Max. working table 1,350x600mm
5. Oversized base and column, reinforced column bottom and solid Z-axis structure assure vibration-free cutting.
6. X-axis is equipped with 6 blocks.
7. Saddle and table are a box-type construction with an increased height on structural parts, featuring light weight and high rigidity.
8. Extra wide span between linear ways effectively upgrades dynamic accuracy.

GRAVITY
HEAVY DUTY VERTICAL MACHINING CENTER

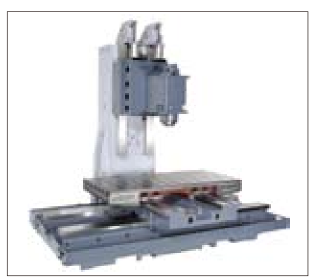
The Gravity Series is totally designed for heavy duty machining purpose especially while roughing the solid steel material or cast-iron. Not only machines are grounded on the beefy construction with high damping capacity, the major structural components are also founded from quality cast-iron with stress relieved process for better stability and consistency. In addition, three axes are equipped with well-scraped box type guideways and high precision ball screws. The spindle unit is driven by a powerful 2-step geared motor to achieve high torque performance.

The Gravity Series enable high demanding application in the die & mold industry or versatile job-shop fields.



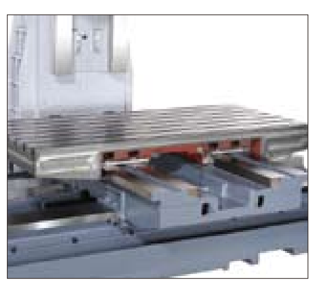
C-Frame

Gear-Drive Spindle



Unique Structure for X under Y-axis

Quadro-Guideway Support

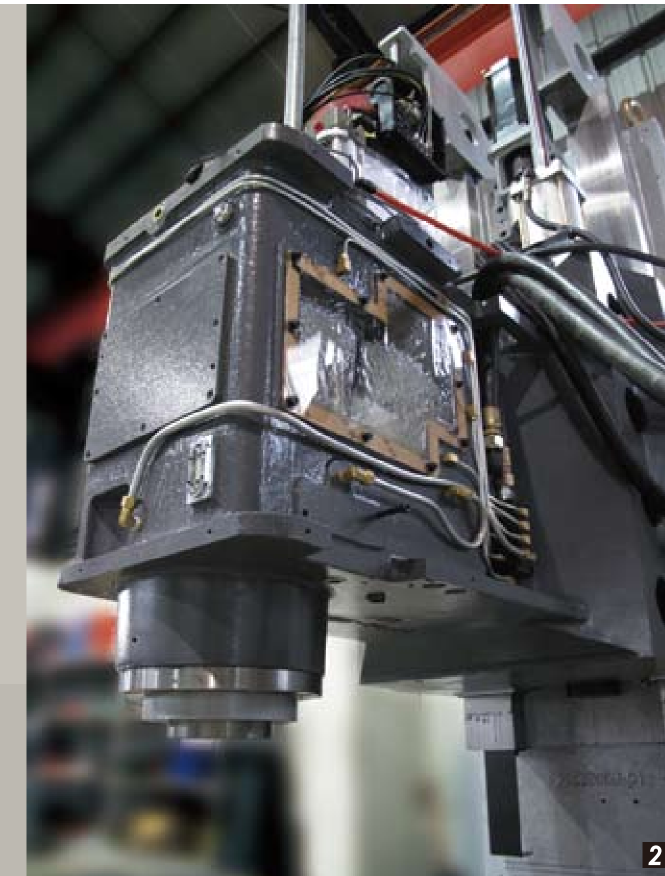


Well-Scraped Boxways

Heavy Cutting Application

Key Features:

- Beefy structural machine construction
- Heavier table loading capacity with wider working area
- Rigid quadro-guideway support
- Well-scraped box type guideways
- Powerful 2-step geared driven spindle unit
- BT-50 taper shank with rugged 4,000/6,000rpm spindle speed
- Standard 24pcs auto tool changer or 32pcs swing arm type ATC for option
- Ergonomic swiveling operator panel with MPG hand wheel
- Well-balanced mechatronic installed and adjustment
- Plug-and-play installation and operation
- Low maintenance cost with highest possible return on investment

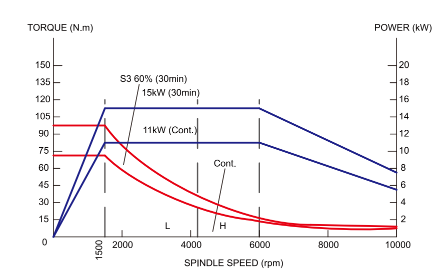


1 Robust Machine Construction for Various Machining Challenges

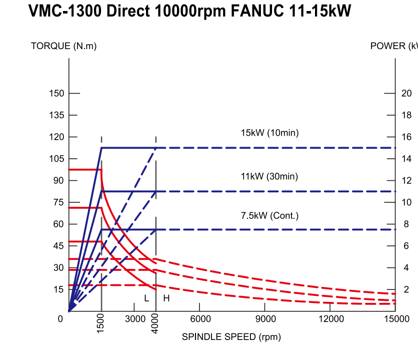
2 Powerful 4,000/6,000rpm BT50 Taper 2-step Gear-drive Spindle Head with Max. 520Nm Torque

SPINDLE POWER & TORQUE OUTPUT CHART

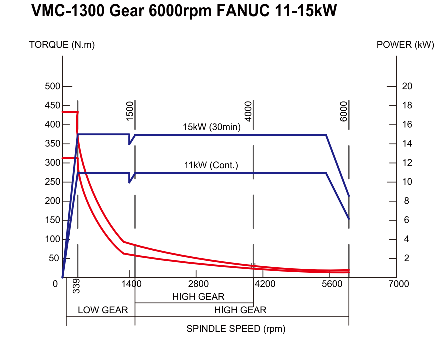
VMC-1300 Belt 8000rpm FANUC 11-15kW



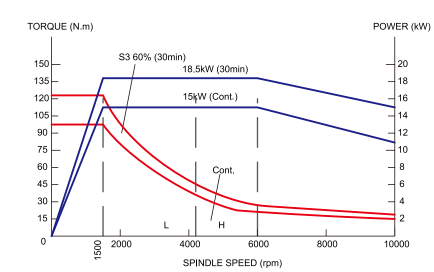
VMC-1300 Direct 10000rpm FANUC 11-15kW



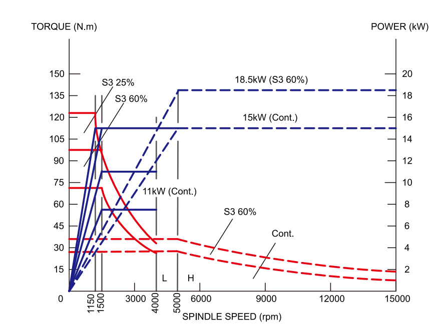
VMC-1300 Gear 6000rpm FANUC 11-15kW



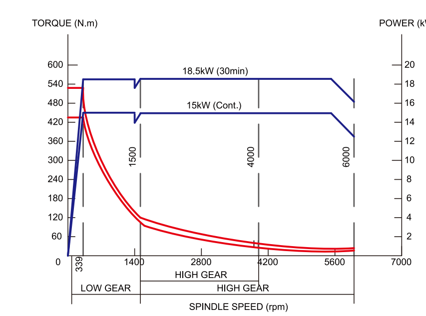
VMC-1600 1800 2200 Belt 8000rpm FANUC 15-18.5kW



VMC-1600 1800 2200 Direct 10000rpm FANUC 15-18.5kW



VMC-1600 1800 2200 Gear 6000rpm FANUC 15-18.5kW

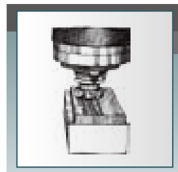


VMC-1300
VMC-1600

VMC-1800
VMC-2200

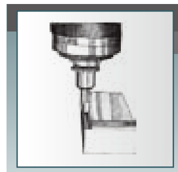
Item/Model No.	Unit	VMC-1300	VMC-1600	VMC-1800	VMC-2200
Travel X/Y/Z	mm (in.)	1300/630/635 (51.18/24.8/25)	1,600/800/700 (62.99/31.5/27.56)	1,800/850/700 (70.87/33.46/27.56)	2,200/1,000/900 (86.61/39.37/35.43)
Max. Spindle Speed	rpm	Gear drive 6,000 / Belt drive 8,000 (opt.) / Direct drive 10,000 (opt.)			
Spindle Motor	kW (HP)	11/15 (15/20)	15/18.5 (20/25)		
Spindle Taper		BT50			
Tools Capacity	pcs	Swing Arm 24			

CUTTING CAPABILITY



FACE MILLING
S45C Steel
Material Removal Rate
700 cc/min.

Tool	Ø125
Spindle Speed	650 rpm
Feedrate	1,400 mm/min.
Width of Cut	100 mm
Depth of Cut	5 mm

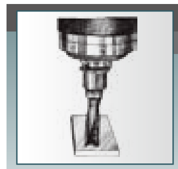


END MILLING
S45C Steel
Material Removal Rate
308 cc/min.

Tool	Ø20
Spindle Speed	4,500 rpm
Feedrate	2,200 mm/min.
Width of Cut	7 mm
Depth of Cut	20 mm

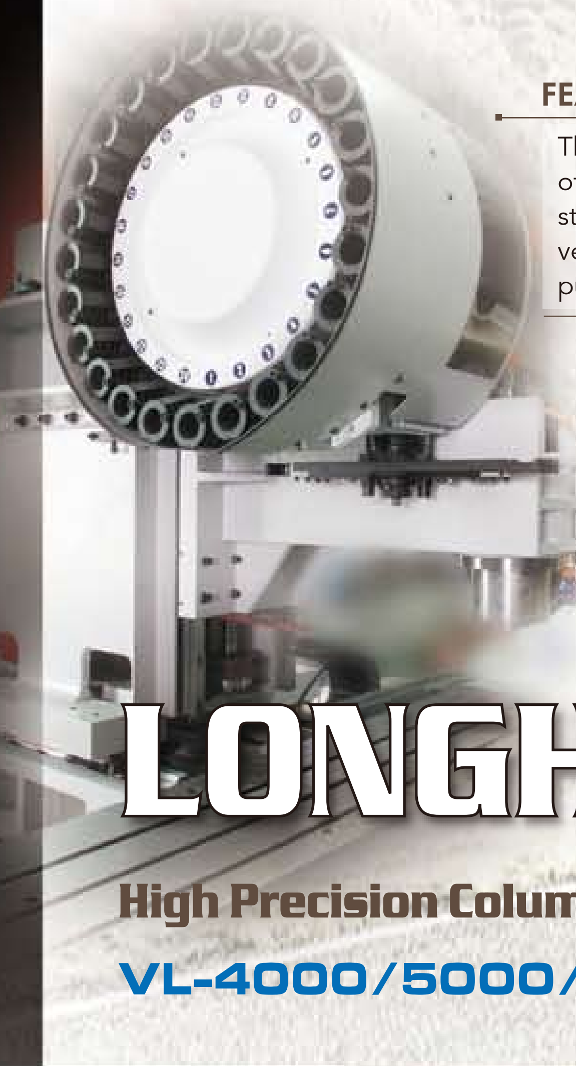
TAPPING
S45C Steel
TAP
M30

Tool	M30
Spindle Speed	120 rpm
Feedrate	360 mm/min.



DRILLING
S45C Steel
Cutting Diameter
45 mm

Tool	Ø45
Spindle Speed	900 rpm
Feedrate	180 mm/min.



FEATURES

The customization of column-moving structure for versatile machining purposes

Compatible with 90 head to process in a single setup

Ideal for slender and threadlike workpiece machining

High rigidity construction on Y and Z-axis travel

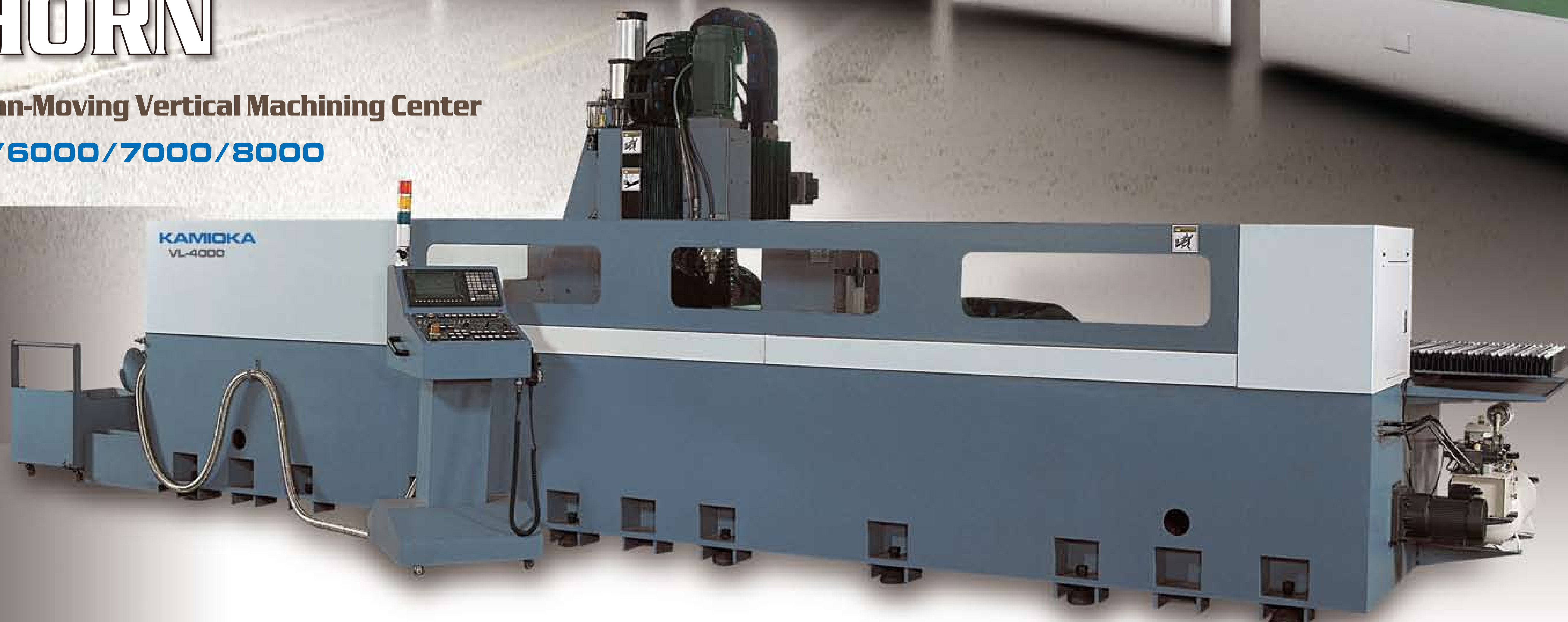
Compact machine construction with powerful working capacity

LONGHORN

High Precision Column-Moving Vertical Machining Center

VL-4000/5000/6000/7000/8000

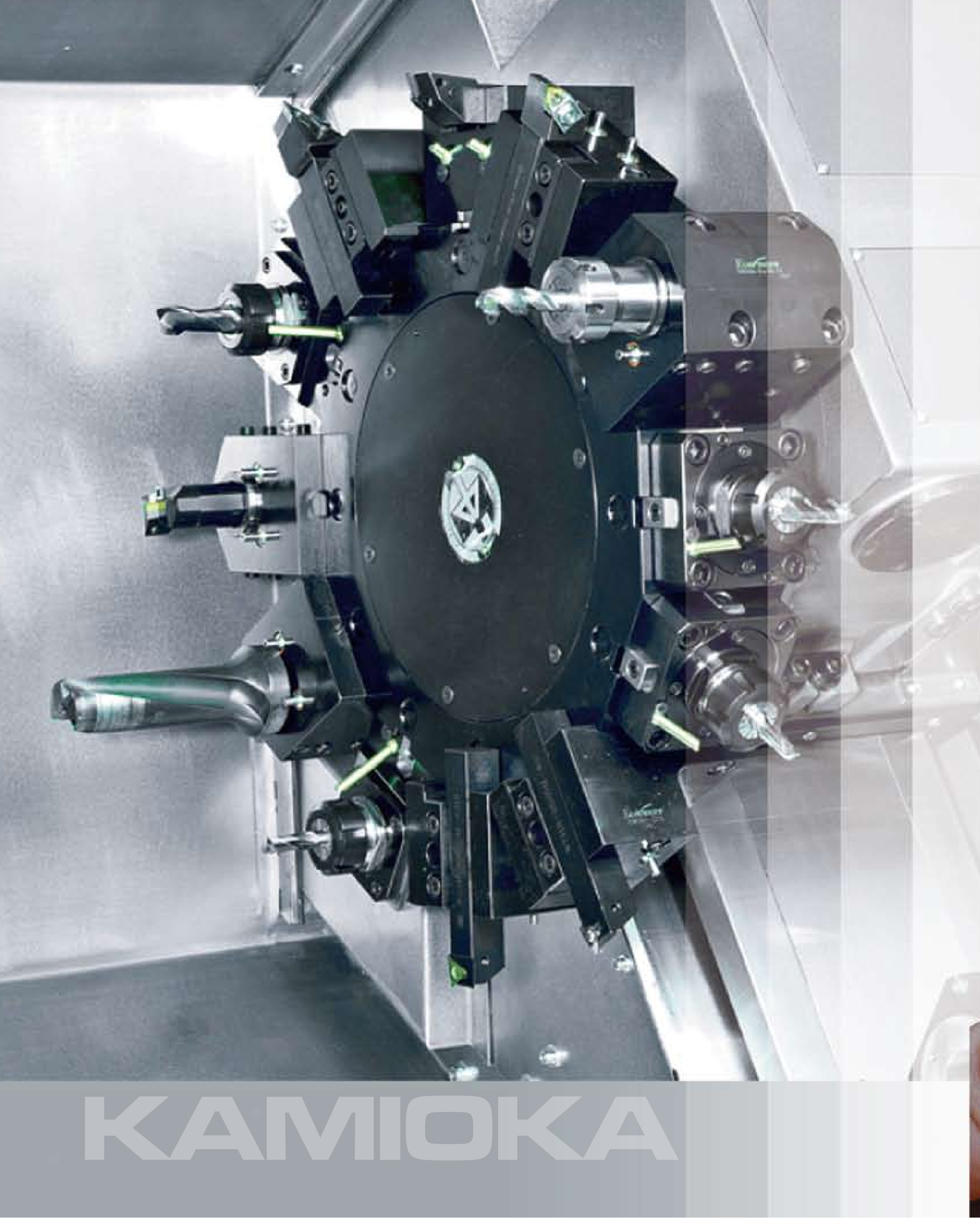
- X-axis Travel 3,000~10,000mm
- Y-axis Travel 350~600mm
- Z-axis Travel 500mm
- Belt drive Spindle 10,000rpm / Direct drive 10,000rpm (opt.)
- Tailor-made Construction



VL

KAMIOKA

TURNING TECHNOLOGY

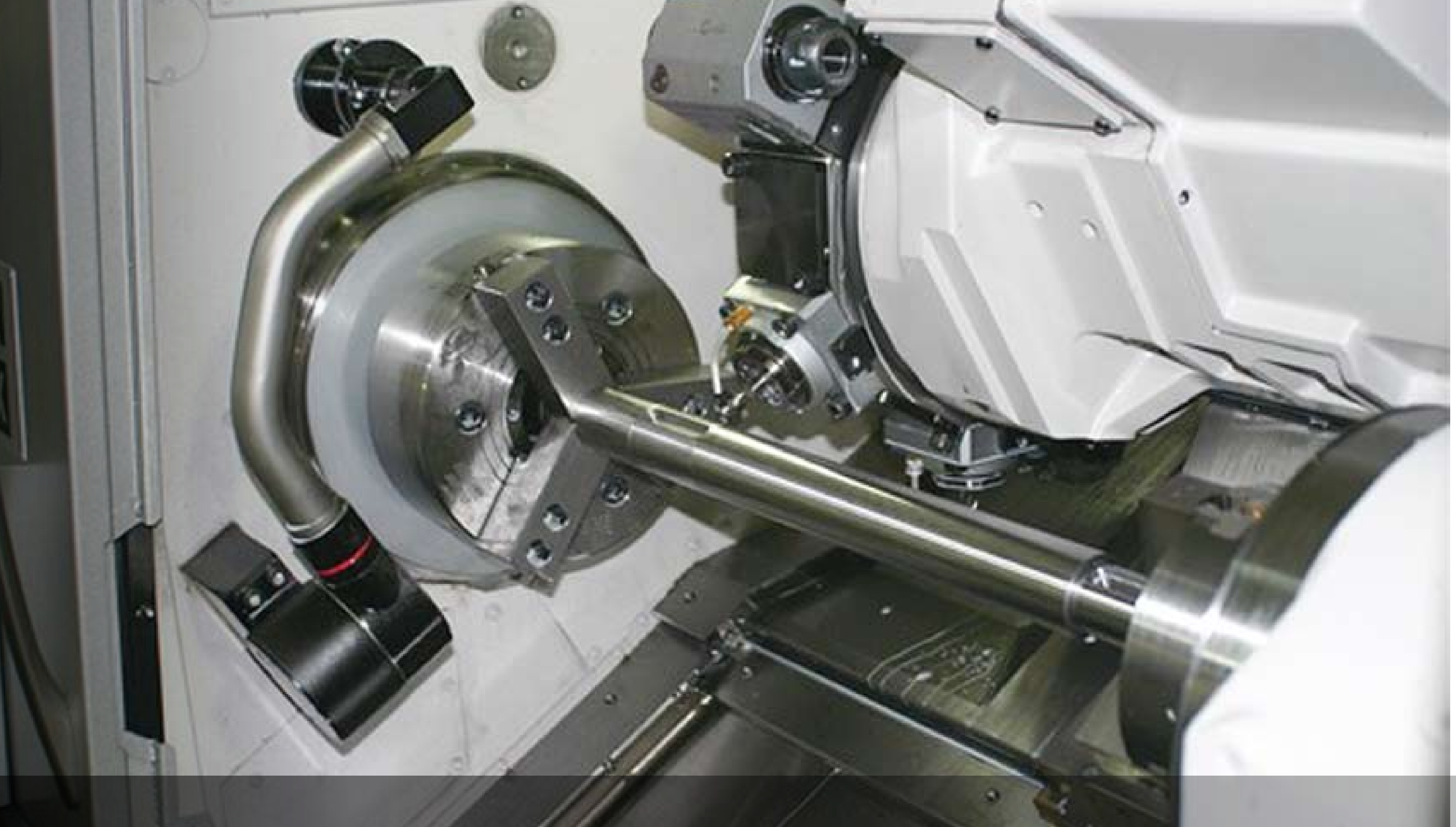


MULTI-AXIS

TURNING CENTER

Utmost in productivity and Accuracy

KAMIOKA CNC turning centers reflect our competence and know-how in manufacturing a tough machine tool. It is not allowable to any stop of production because it seriously matters in every working field. Our lathes offer the premium accuracy and most reliable machining stability for bike, motor or machinery parts factories, who demand the maximum energy and production capacity from their complex and versatile tasks.



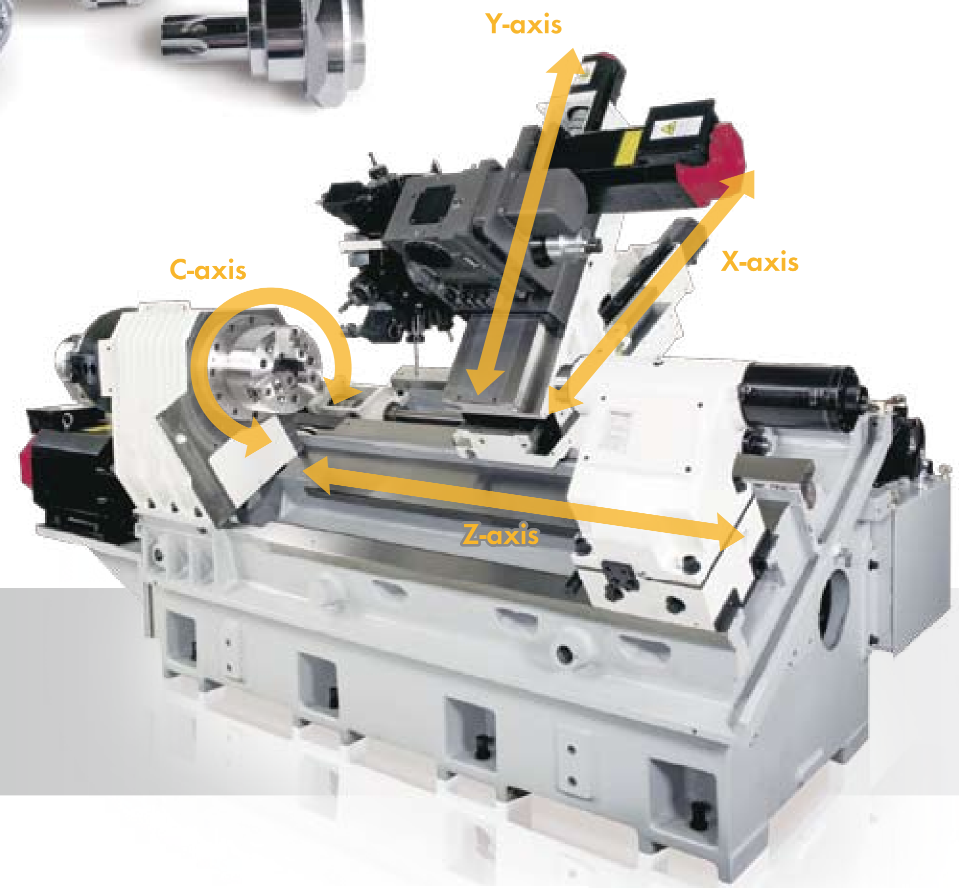
YT-52 / 75

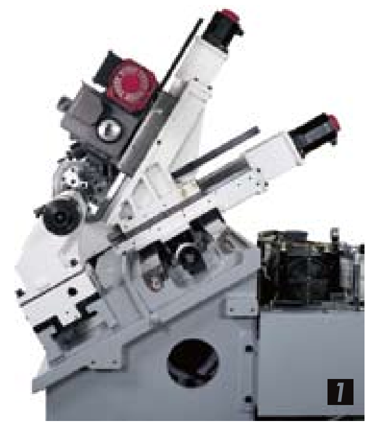
Item/Model No.	Unit	YT-52	YT-52L	YT-75	YT-75L
Travel X/Z/Y	mm (in.)	200/790/100±50 (7.87/31.1/3.94±1.97)	200/1,000/100±50 (7.87/39.37/3.94±1.97)	200/790/100±50 (7.87/31.1/3.94±1.97)	200/1,000/100±50 (7.87/39.37/3.94±1.97)
Max. Turning Dia.	mm (in.)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)
Max. Turning Length	mm (in.)	730 (28.74)	980 (38.58)	730 (28.74)	980 (38.58)
Through Bar Capacity	mm (in.)	ø52 (ø2.05)	ø52 (ø2.05)	ø75 (ø2.95)	ø75 (ø2.95)
Spindle Motor	kW (HP)	15 (20)	15 (20)	18.5 (25)	18.5 (25)
Spindle Bore	mm (in.)	ø62 (ø2.44)	ø62 (ø2.44)	ø85 (ø3.35)	ø85 (ø3.35)
Chuck Dia.		8"	8"	10"	10"

MULTI-AXIS

Features:

- The superb body structure provides excellent damping capacity and turning accuracy.
- One piece construction with 30 degree box way structure offers heavy duty milling and turning capability.




1


2


3

1 30-degree Slant Bed with Y-axis
- Integrated milling with Y axis
- Complex processing purpose
- Multi-tasking live tooling capabilities
- High precision grooving and X-axis off-center drilling

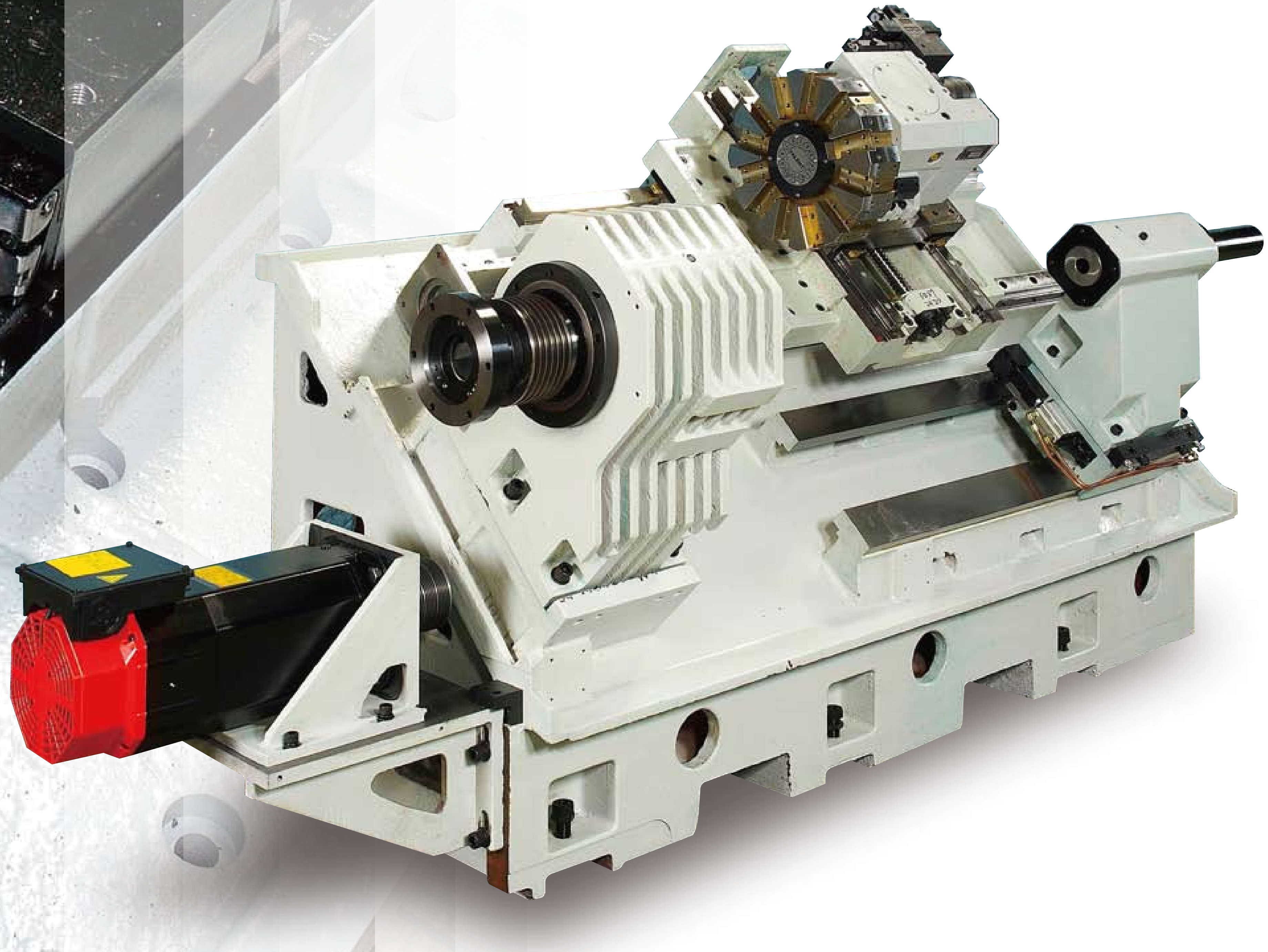
2 Cs Axis System
- High precision encoder sensor and hydraulic disc brake system reach high accuracy positioning.
- Positioning accuracy 15 seconds
- Repeatability accuracy 5 seconds

3 Radial Motorized Turret
- BARUFFALDI brand VDI40/BMT65 power turret
- 12 station turret with Cs axis for milling, boring, drilling and tapping
- Larger turning and milling capacity with less tool interference

CL-52/75

MULTI-TASKING

TURNING CENTER



MULTI-TASKING

▶ Programmable tailstock (option)

▲ 10 or 12-station hydraulic turret (standard)

▲ 6 or 12-station VDI power turret (options, LIO SHING, SAUTER, DUPLOMATIC or BARUFFALDI brand)

▲ Versatile working applications

CL-52/52L

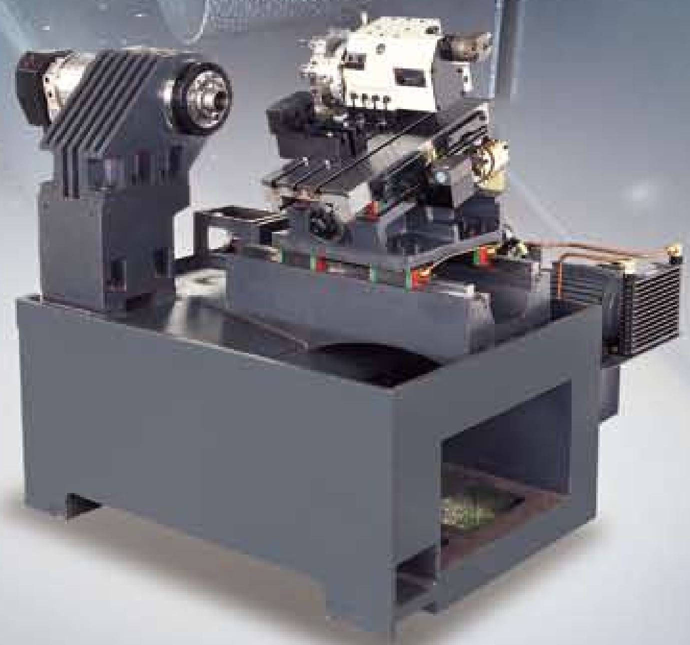
CL-75/75L

CL-52/75

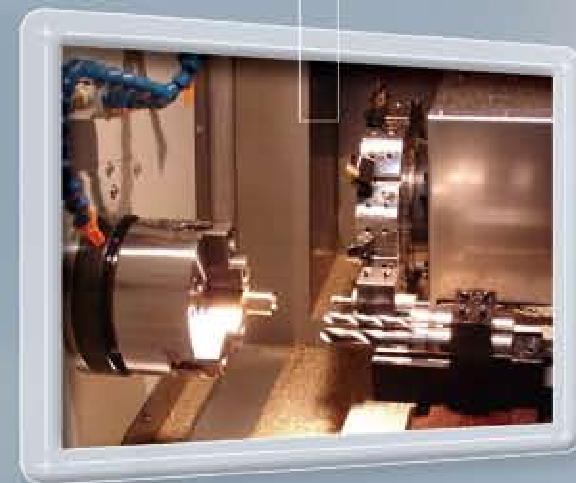
Item/Model No.	Unit	CL-52S	CL-52	CL-52L	CL-75	CL-75L
Travel X/Z	mm (in.)	175/540 (6.89/21.26)	190/630 (7.48/24.8)	190/1,030 (7.48/40.55)	220/630 (8.66/24.8)	220/1,030 (8.66/40.55)
Max. Turning Dia.	mm (in.)	ø310 (ø12.2)	ø350 (ø13.78)	ø350 (ø13.78)	ø420 (ø16.54)	ø420 (ø16.54)
Max. Turning Length	mm (in.)	500 (19.69)	600 (23.62)	1,000 (39.37)	600 (23.62)	1,000 (39.37)
Through Bar Capacity	mm (in.)	ø52 (ø2.05)	ø51 (ø2.01)	ø51 (ø2.01)	ø72 (ø2.83)	ø72 (ø2.83)
Spindle Motor	kW (HP)	11 (15)	11 (15)	11 (15)	15 (20)	15 (20)
Spindle Bore	mm (in.)	ø62 (ø2.44)	ø61 (ø2.4)	ø61 (ø2.4)	ø91 (ø3.58)	ø91 (ø3.58)
Chuck Dia.		8"	8"/10"(opt.)	8"/10"(opt.)	10"/12"(opt.)	10"/12"(opt.)

MULTI-TASKING

CL-42
CL-42H



CL-42H Machine Construction



▲ Efficient gang-type tooling device

▲ Manual Tailstock (MT-3) installed on CL-42H

▲ Versatile working applications

Item/Model No.	Unit	CL-42	CL-42H
Travel X/Z	mm (in.)	350/210 (13.78/8.27)	170/350 (6.69/13.78)
Max. Turning Dia.	mm (in.)	ø150 (ø5.91)	ø280 (ø11.02)
Max. Turning Length	mm (in.)	120 (4.72)	300 (11.81)
Through Bar Capacity	mm (in.)	ø42 (ø1.65)	ø42 (ø1.65)
Spindle Motor	kW (HP)	7 (10)	7 (10)
Spindle Bore	mm (in.)	ø52 (ø2.05)	ø52 (ø2.05)
Chuck Dia.		6"	6"

CL-42

BENCH LATHE

▲ Tool holders equipped at front & rear side

▲ Pneumatical auto. Clamping device

▲ Pneumatical hydraulic rotating cylinder with collet chuck

▲ Collets are available for options upon request

BL-25/32/45

Item/Model No.	Unit	BL-25	BL-32	BL-45
Max. Dia. of Processing	Bar Stock Square Hexagonal	ø25 (ø0.98) 18 (0.71) 22 (0.87)	ø32 (ø1.26) 22 (0.87) 27 (1.06)	ø45 (ø1.77) 32 (1.26) 38 (1.50)
Main Spindle Rotating Speed	rpm	1,300/1,720/2,800	1,300/1,650/2,650	1,200/1,600/2,650
Main Sliding Travel (F)(R)	mm (in.)	110 (4.33)	130 (5.12)	130 (5.12)
Front Aux. Sliding Travel	mm (in.)	75 (2.95)	130 (5.12)	130 (5.12)
Front Aux. Sliding Rotating Angle		360°		
Rear Aux. Sliding Travel	mm (in.)	60 (2.36)	80 (3.15)	80 (3.15)
Lateral Adjustment of Rear Aux. Sliding	mm (in.)	60 (2.36)	70 (2.76)	70 (2.76)
Outer Dia. of Tailstock	mm (in.)	ø30 (ø1.18)	ø30 (ø1.18)	ø30 (ø1.18)
Morse Taper		MT#2	MT#2	MT#2
Tailstock Quill Travel	mm (in.)	100 (3.94)	130 (5.12)	130 (5.12)
Driving Power	HP	2	2	3
Dimension (LxWxH)	mm (in.)	1,000x450x1,000 (39.37x17.72x39.37)	1,000x500x1,000 (39.37x19.69x39.37)	1,000x500x1,000 (39.37x19.69x39.37)
Net Weight	kg (lb.)	220 (484)	320 (704)	320 (704)

※KAMIOKA reserves the right to change design, color or spec without prior notice.
Not responsible for misprints or typographical errors.

Standard Accessories
- Drill Sleeves
- Chuck Arbor
- Adjusting Tools
- Clutch Motor

Optional Accessories
- Up-cutting Tool Rack
- Coolant Equipment
- Comprehensive Collet Chucks
- Pneumatical Hydraulic Rotating Cylinder
- Pneumatical Auto. Clamping Device

OFFICE LATHE

▲ SYNTEC PC-based NC

▲ INTEK PC-based NC

▲ Hydraulic chuck (option)

▲ Compact machine with bigger working capacity

▲ Versatile production applications

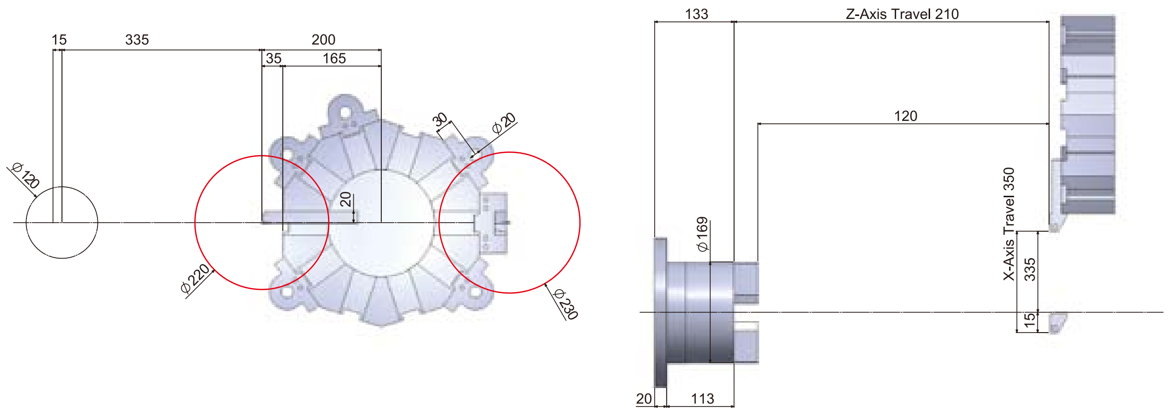
OL-32

Item/Model No.	Unit	OL-32
Spindle Rotation Speed	rpm	2,500
Motor	HP	3
X-axis Servo Motor	W	750
Z-axis Servo Motor	W	750
Elastic Clamp	mm (in.)	ø32 (ø1.26)
PC-Based NC Controller		SYNTEC EZ3T INTEK T210
Dimension(LxWxH)	mm (in.)	1,350x1,350x1,800 (53.15x53.15x70.87)
Machine Weight	kg (lb.)	650 (1,430)

Interference Diagram and Working Range

CL-42

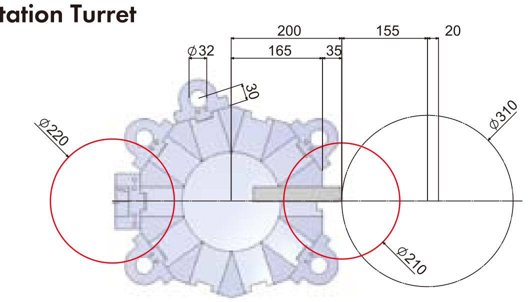
Unit: mm



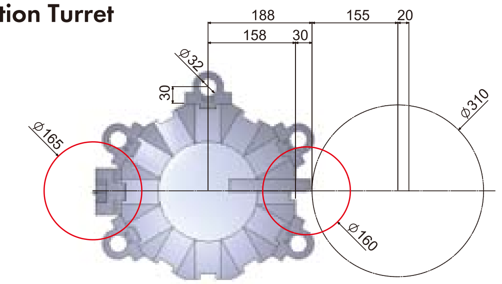
CL-52S

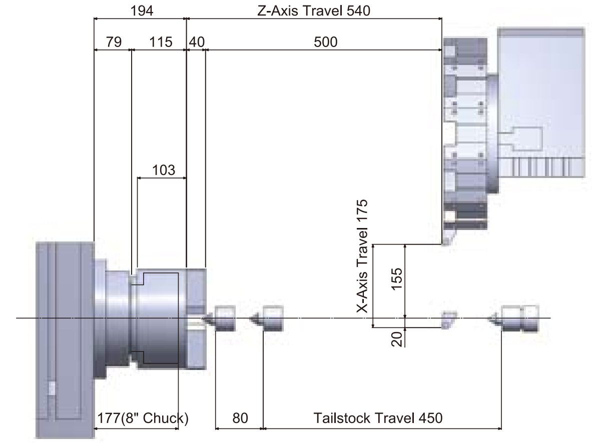
Unit: mm

10-station Turret



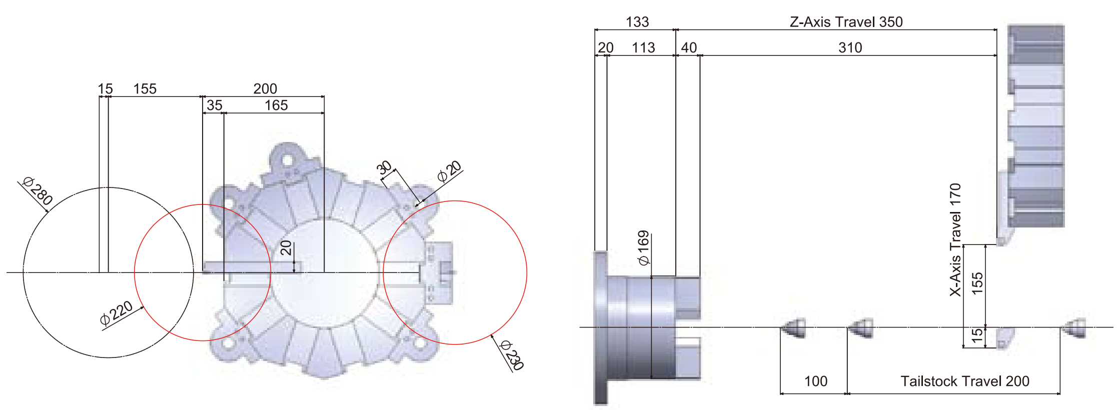
12-station Turret





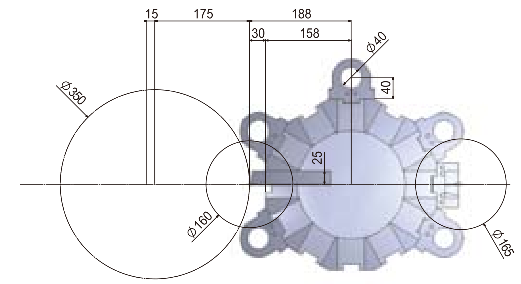
CL-42H

Unit: mm

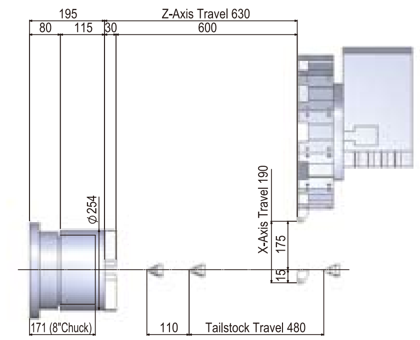


CL-52/52L

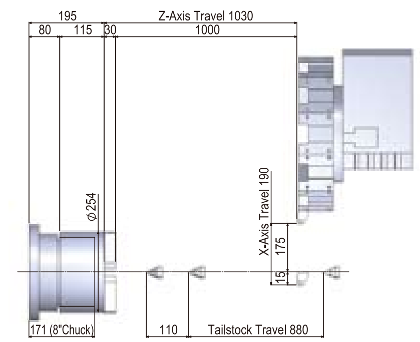
Unit: mm



CL-52



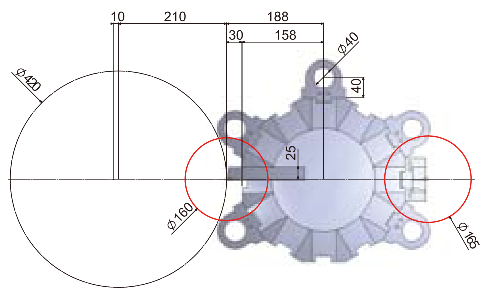
CL-52L



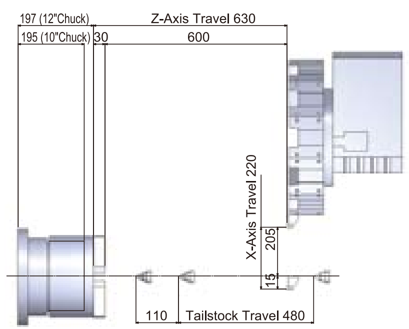
Interference Diagram and Working Range

CL-75/75L

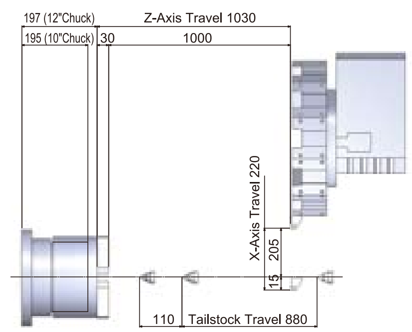
Unit: mm



CL-75

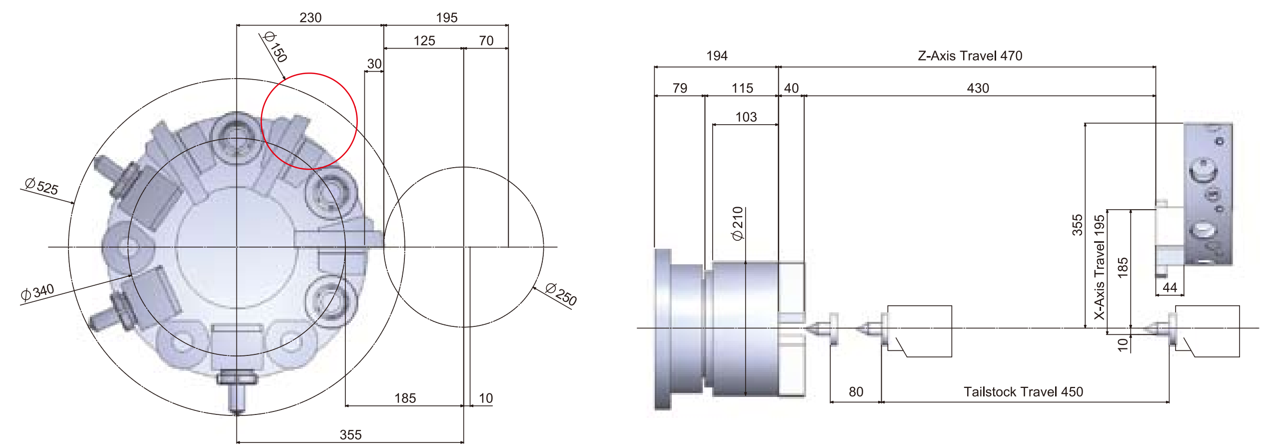


CL-75L



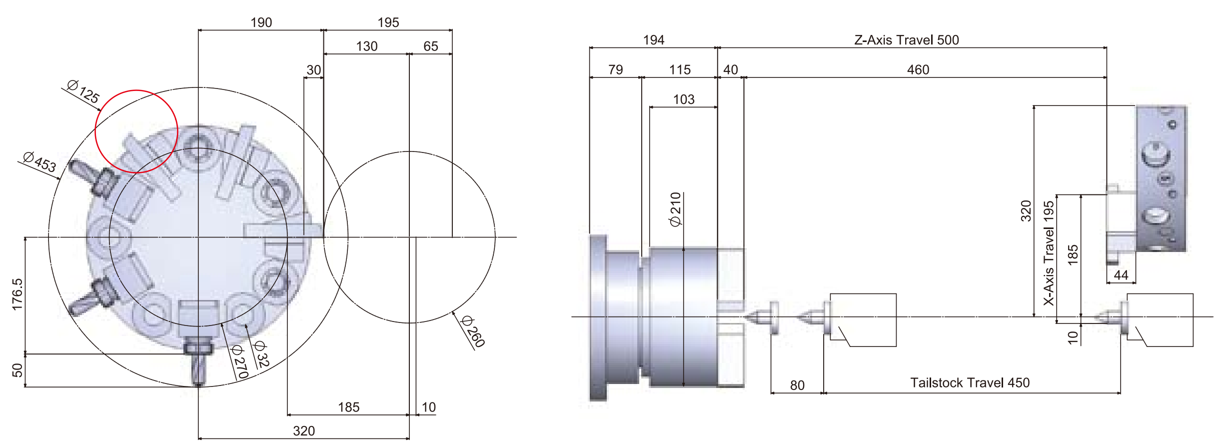
VDI 40 LS200SP

Unit: mm



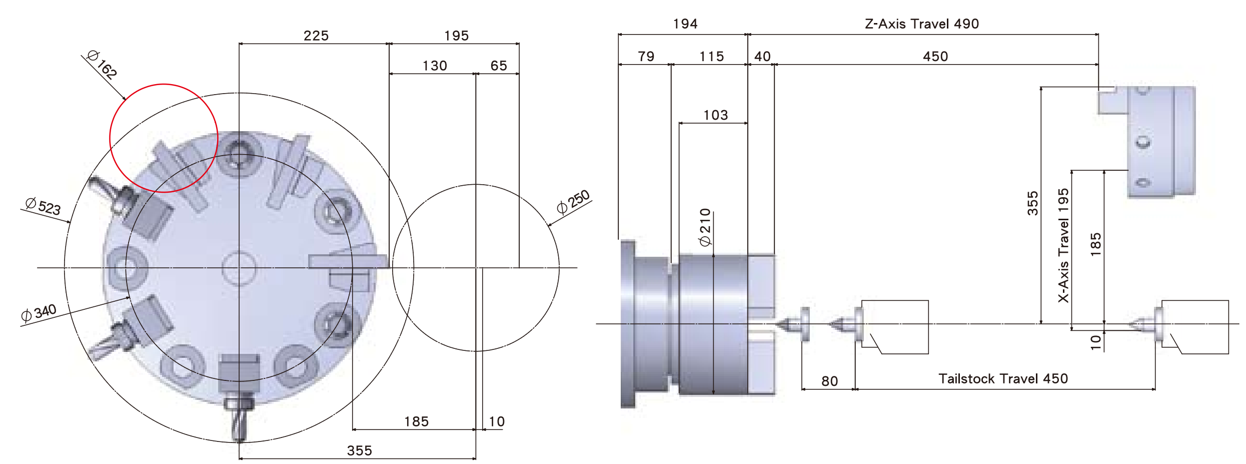
VDI 30 LS160SP

Unit: mm



VDI 30 SAUTER 436.216

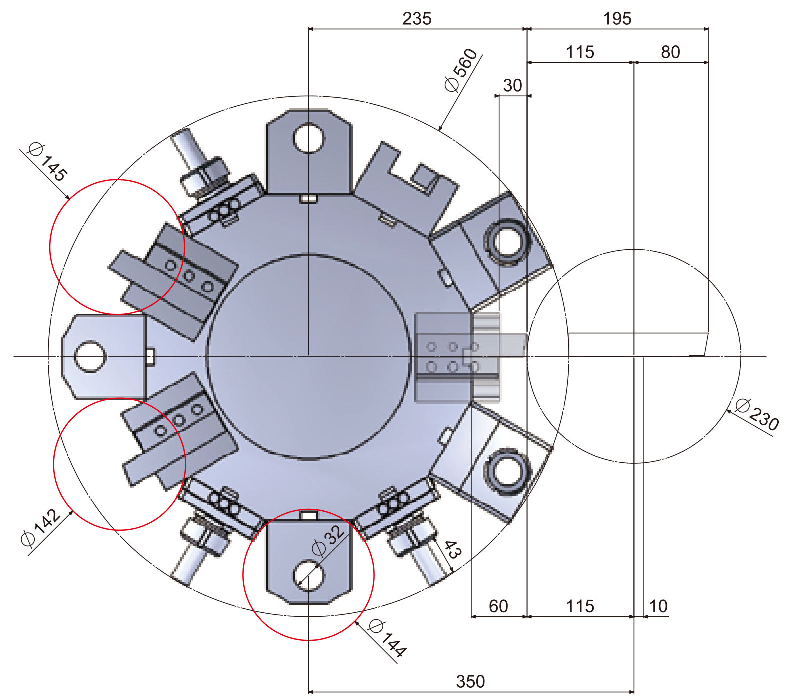
Unit: mm

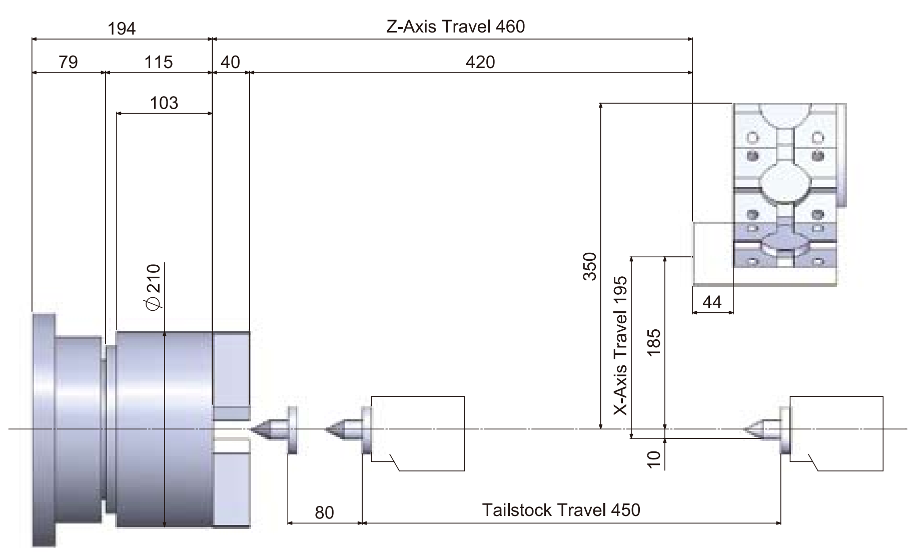


Interference Diagram and Working Range

BMT 55 BARUFFALDI TBMR 200

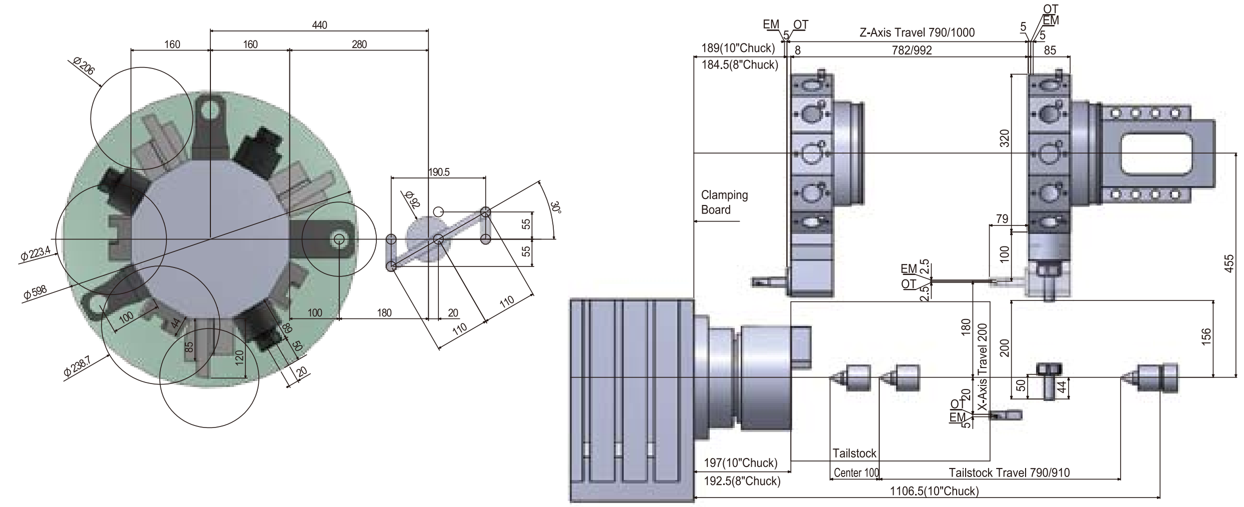
Unit: mm





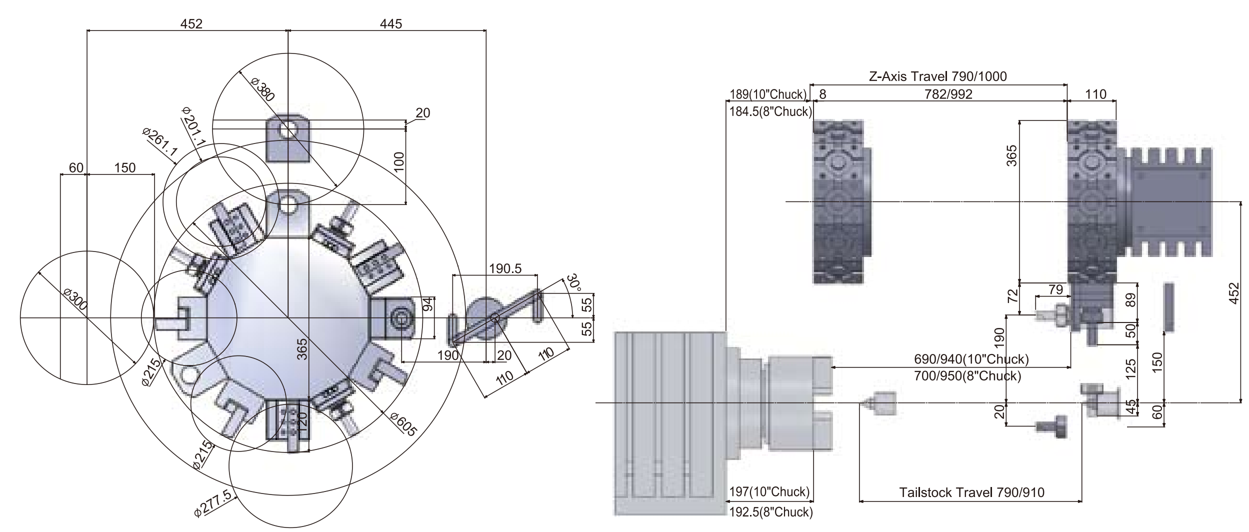
VDI40 for YT-52/75

Unit: mm



BMT 65 for YT-52/75

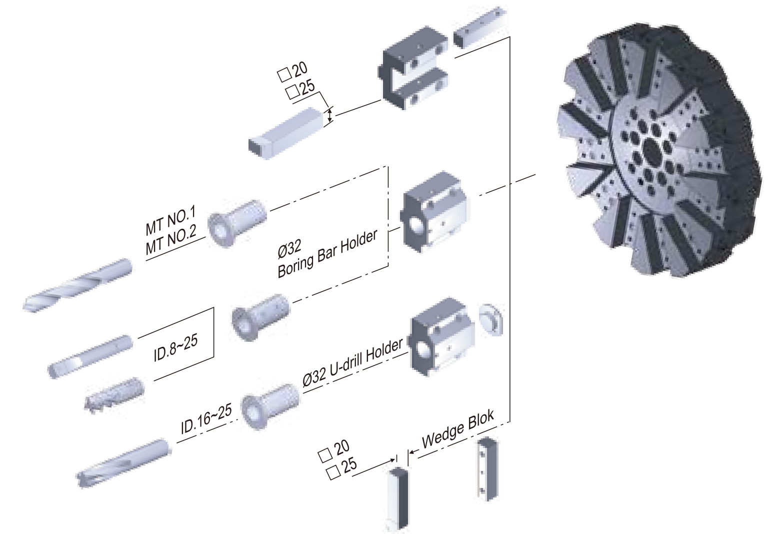
Unit: mm



TOOLING SYSTEM

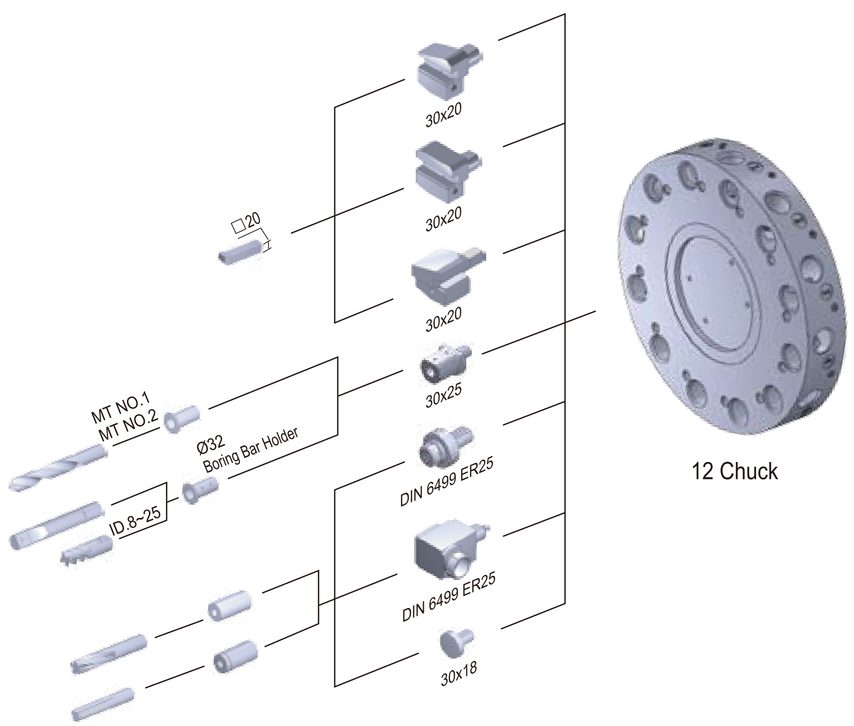
STANDARD

Unit: mm



VDI30

Unit: mm

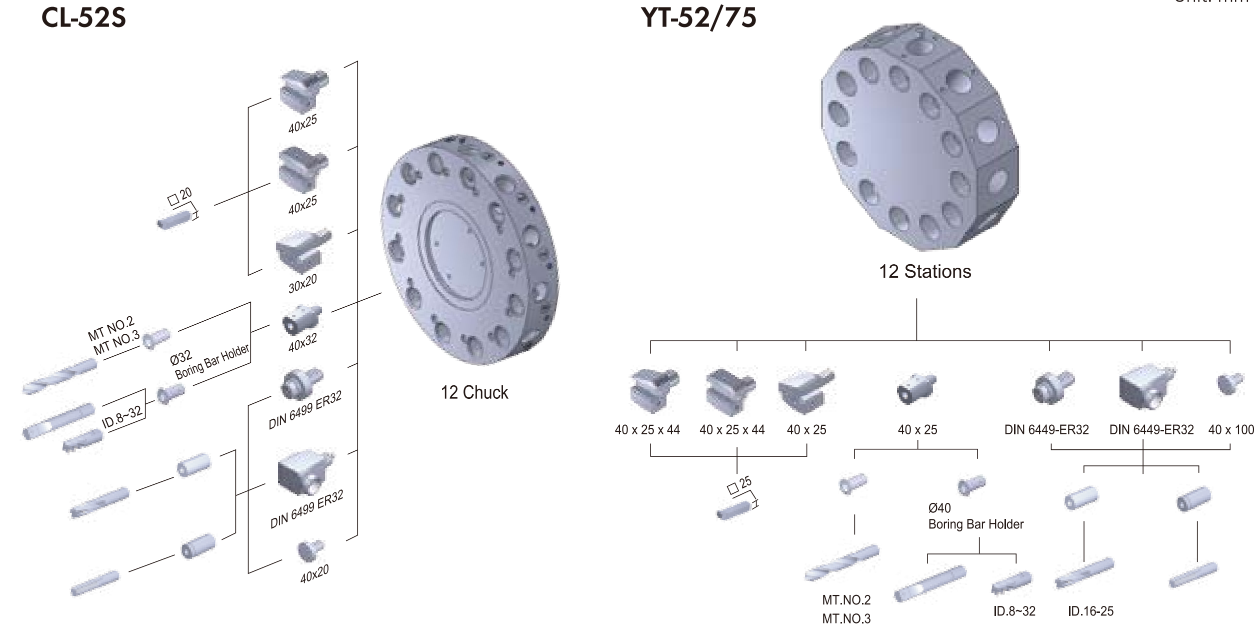


VDI40

Unit: mm

CL-52S

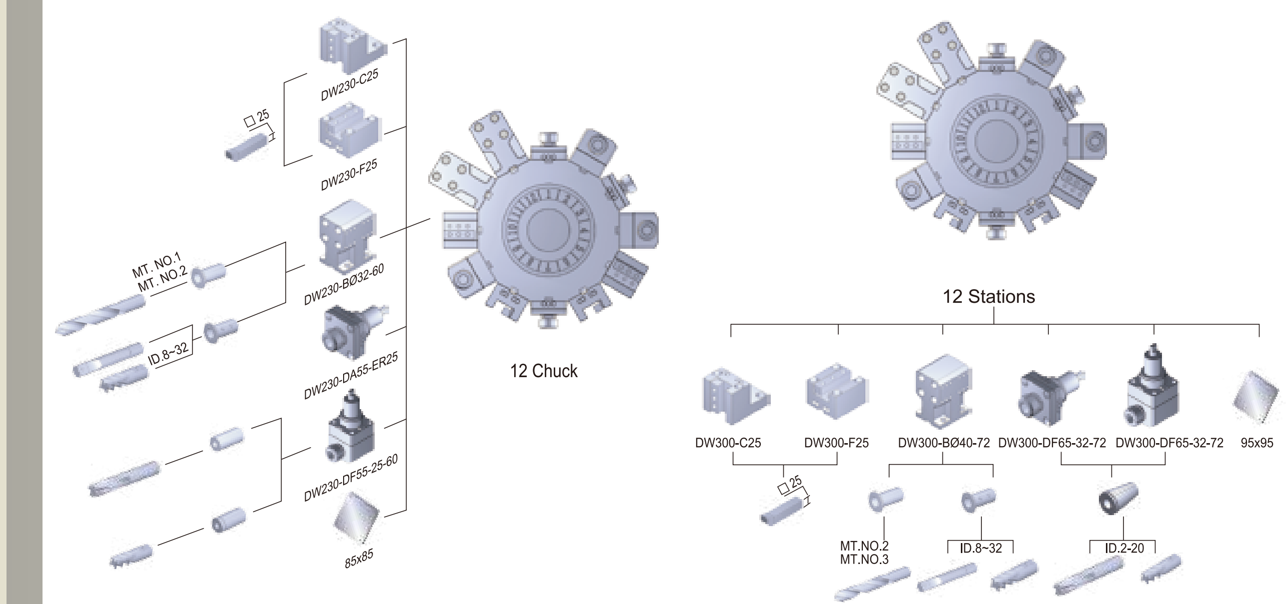
YT-52/75



BMT 55

BMT 65

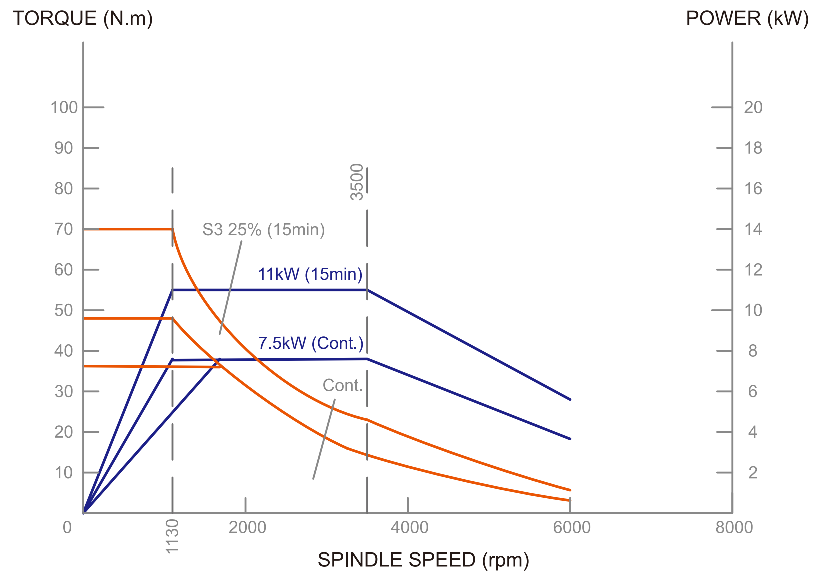
Unit: mm



SPINDLE POWER & TORQUE OUTPUT

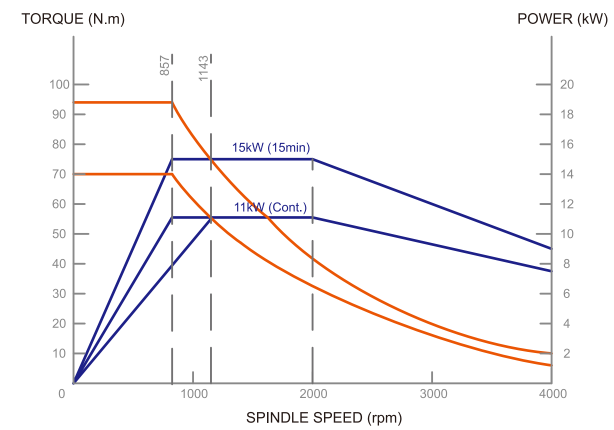
CL-42/42H

6000rpm FANUC 10HP



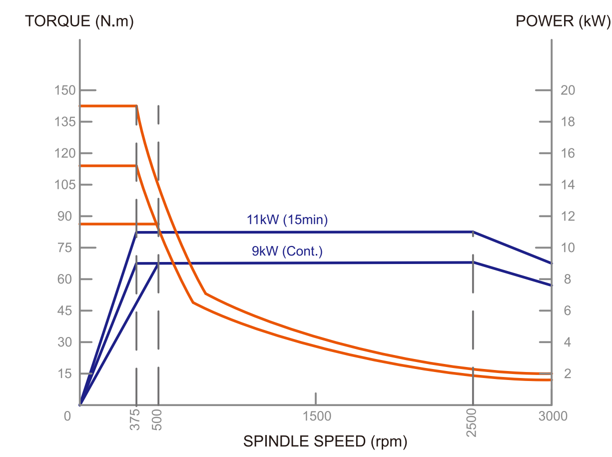
CL-52/52L

4000rpm FANUC 15HP



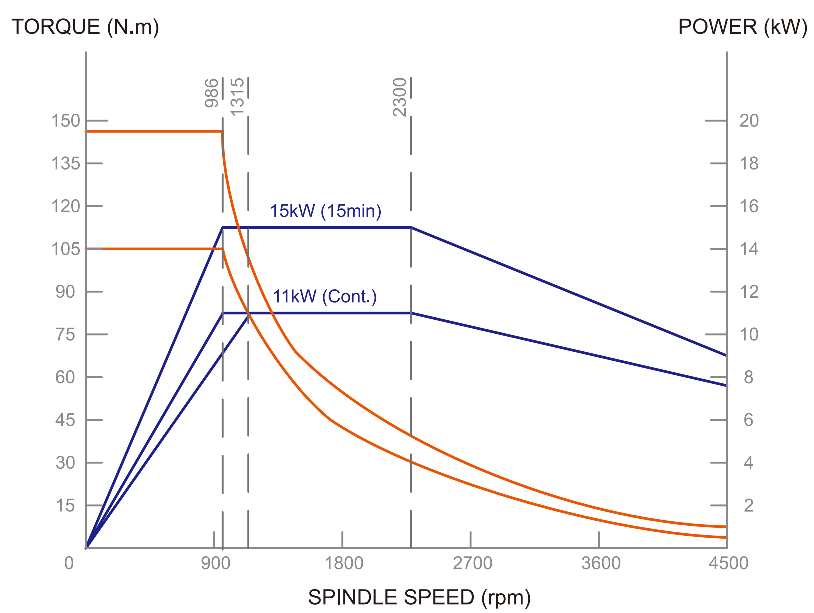
CL-75/75L

3000rpm FANUC 20HP



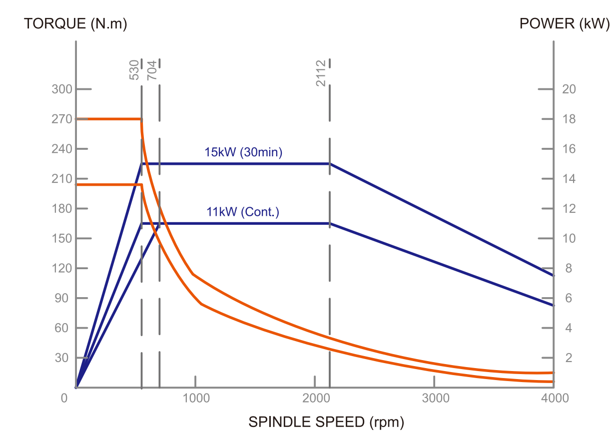
CL-52S

4500rpm FANUC 15HP



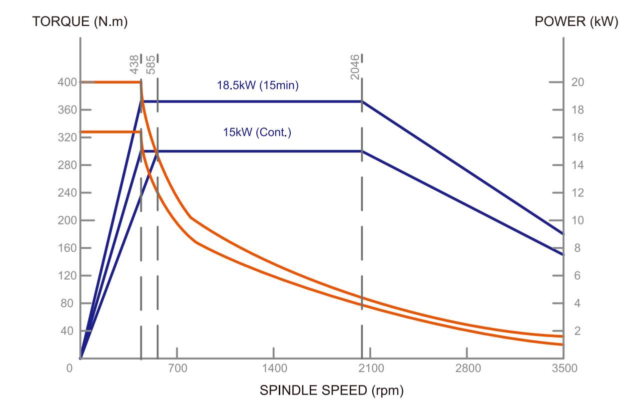
YT-52/52L

4000rpm FANUC 20HP



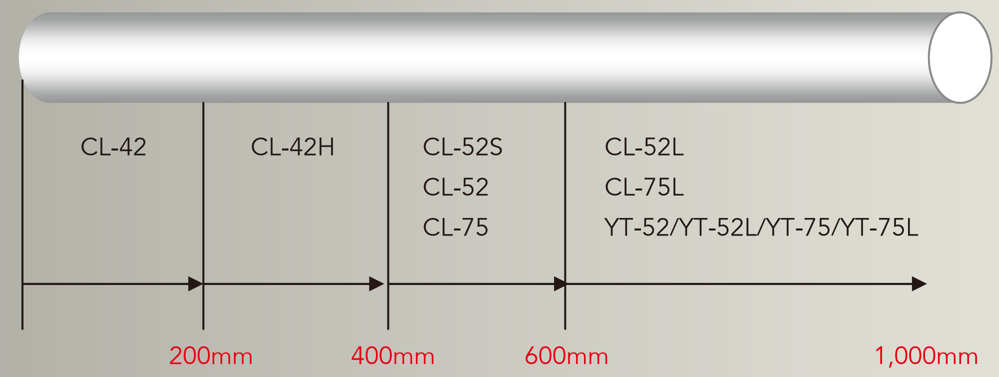
YT-75/75L

3500rpm FANUC 25HP

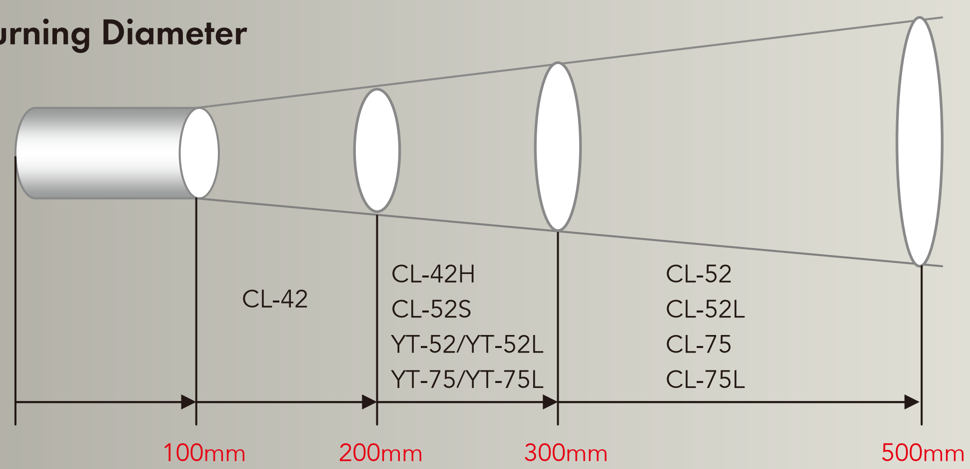


MODEL SELECTION QUICK GUIDE

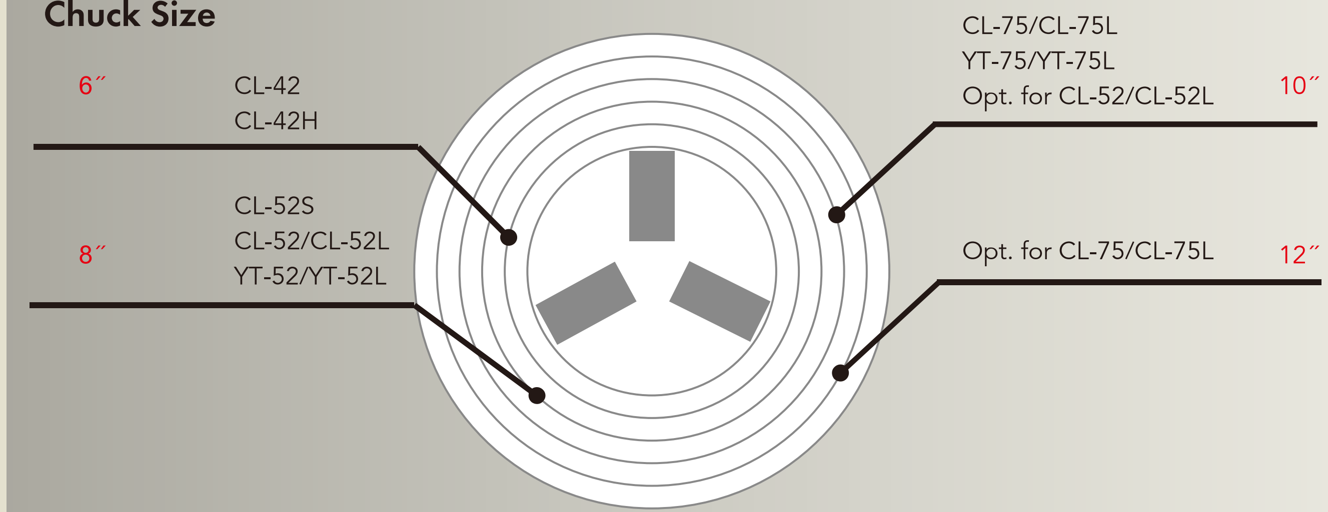
Max. Turning Length



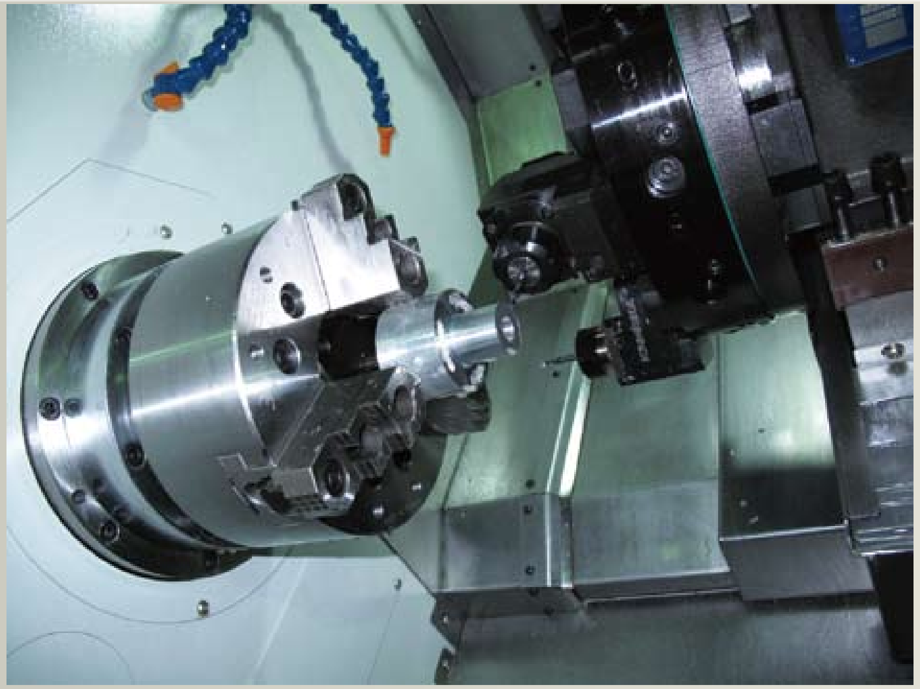
Max. Turning Diameter

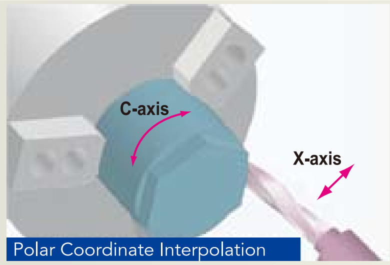


Chuck Size

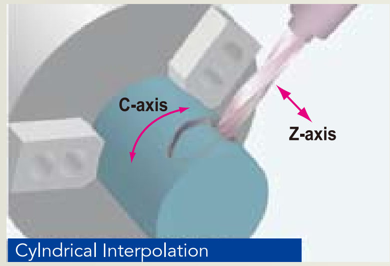


Cs & Y-AXIS MACHINING CAPABILITY



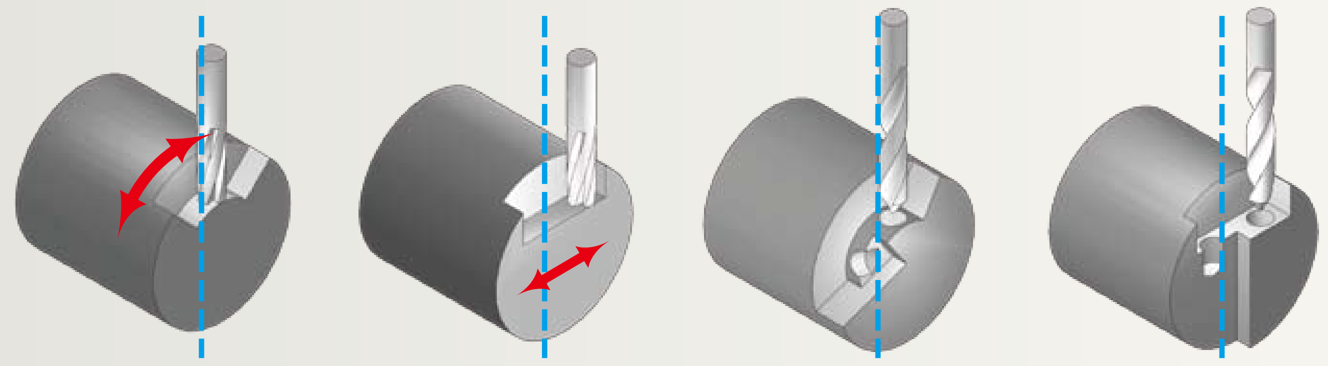


Polar Coordinate Interpolation



Cylndrical Interpolation

Working with live tooling turret, the Cs axis and disk brake system enables the machine to perform multiple tasks, such as drilling, tapping and milling operations, including cylindrical and polar coordinate interpolations



C-axis Machining | Y-axis Machining | C-axis Drilling | Y-axis Drilling

- The addition of a Y axis on a mill-turn center eliminated many required secondary operations and allowed many parts to be finished with a single set-up. It allows for simple programming and better tool selection in the milling of simple flats or a hex on the outside diameter of a part.
- With the Y axis, a true flat surface can be generated by traversing over the entire surface, which also allows for much better control of dimensional tolerance. Additionally, off-center features such as perimeter hole drilling on a flat can be completed easily.

入退出管理システム 指紋認証され
た人を画像収集しカードキーで管
理する。

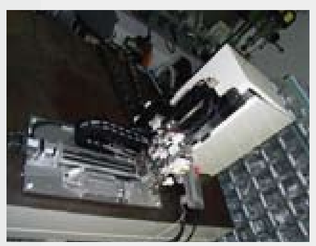
3ピースのダンボールをホットメル
トにて接着し製缶する

アクリル製導光板の板厚部を鏡面加
工する回転刃２軸+固定刃１０軸（2
軸シーケンスNC 制御）

パンヤ綿クッションを空気搬送して
袋詰めをおこなう（クッション用）

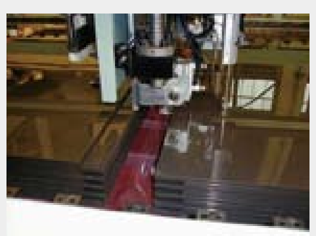
直動ガイドのボール保持リテーナ加工
機。 ワークを複数個並べておくと、
加工完了後で自動排出

多間接ロボットを用いた3 次元ル
ーターボーリング加工システム



マウントテスト機 放熱ゲルシート
3×3×1 ㎜を各種条件で貼り付ける機械

ドリルインサーター 5 軸を使用した
ハンドドリル用自動組立機



アクリル板製造ライン 搬送機
板の位置と高さを計測し爪の位置決め後ホストデータに基づいて搬送 左右
にずらした板の高さ測定し爪位置決め中

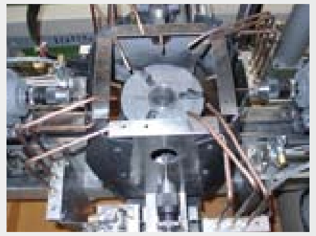
Plant in Japan

CNC 加工機の設計・製作
Design and Manufacture of CNC Machining Centers

CNC 専用機の開発・設計・製作
Design and Development of Special CNC Machines

パソコン及びNC のソフトウェア企画・開発
Planning and Development of NC Software

研究機関向け実験装置・試験装置の開発
Development of Experimental & Test Equipment
for Research Institution



ハウジングアッパ連続加工機 ローダアンローダ付
– 車用エアーバッグ部品の穴あけをおこない穴が開いていることを確認して
ストックする
- プレスされたお椀の形状の側面に４方向から穴を１２箇所あける

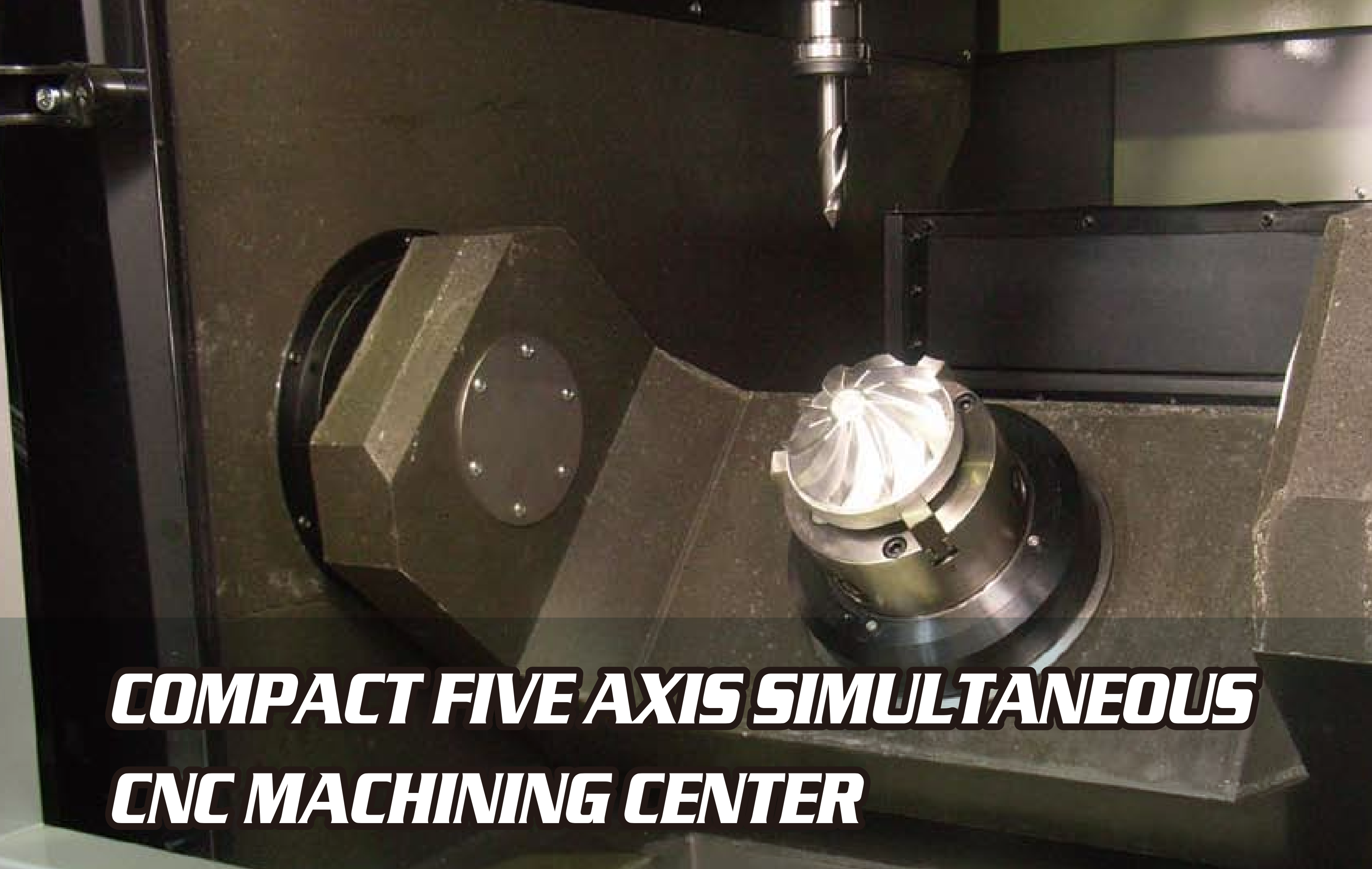
バリ取 円筒状ギアケースのバリをﾌﾞﾗｼで取り除く。産業用多間接ロボット
のギアをこのバリ取機でおこなっている

ギアの外周面取りをおこなう 砥石の押付け角制御ﾄﾙｸ制御などをおこない
均一な面取り量を設定可能

V 溝加工機 ｱﾙﾐ複合板アルポリックにV 型の溝を掘る。切り粉が出な
いエコマシン

燃料電池製造設備 SOFC 電池シール
５軸制御塗布機

原子力設備用 YAG レーザー溶接装置
隔離された部屋でレーザー溶接をおこ
ない放射能影響のテストをおこなう



COMPACT FIVE AXIS SIMULTANEOUS CNC MACHINING CENTER

Item/Model No.	Unit	FNS-5AG
Travel		
X/Y/Z	mm (in.)	450/500/200 (17.72/19.69/7.87)
A/C		+180º ~ -180º / 360º
Table		
Chuck Size	mm (in.)	ø130 (ø5.12)
Max. Working Size	mm (in.)	ø480 x t180 (ø18.9 x t7.09)
Spindle		
Max. Speed	rpm	Built-in 40,000
Spindle Motor	kW (HP)	5.5 (7.37)
Spindle Taper		HSK32
Spindle to Table Surface	mm (in.)	265 (10.43)
Feedrate		
X/Y/Z axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)
A axis Rapid Traverse	min-1	30
C axis Rapid Traverse	min-1	60
Drive System		Ball Screw (No Backlash)
ATC		
Tools Capacity	pcs	Umbrella 12
General Information		
Repeatability Accuracy		X,Y,Z ±0.002mm A,C±1.8 sec
Resolution (A,C)		1,000,000 pulse/round
Power Supply		AC200V
Oil Mist System		Oil Mist or Air Blow Selectable
Interface		100 Base TX RS232C
Dimension W D H	mm (in.)	1,216x1,450x2,070 (47.87x57.09x81.5)
Machinery Weight (Net)	kg (lb.)	1,500 (3,300)

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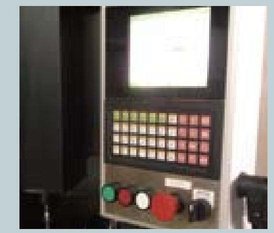
鎧カバー、ジャバラにより駆動部と
加工室を完全に分離。
切粉の侵入をシャットアウトします。
Armored covers and bellows protect against intrusion of chips

最大12本工具交換可能な
ロータリーテーブル式ATC
12 tools ATC capacity



同時5軸CNCコントローラ搭載
Original five-axis simultaneous CNC controller developed by KAMIOKA Japan plant

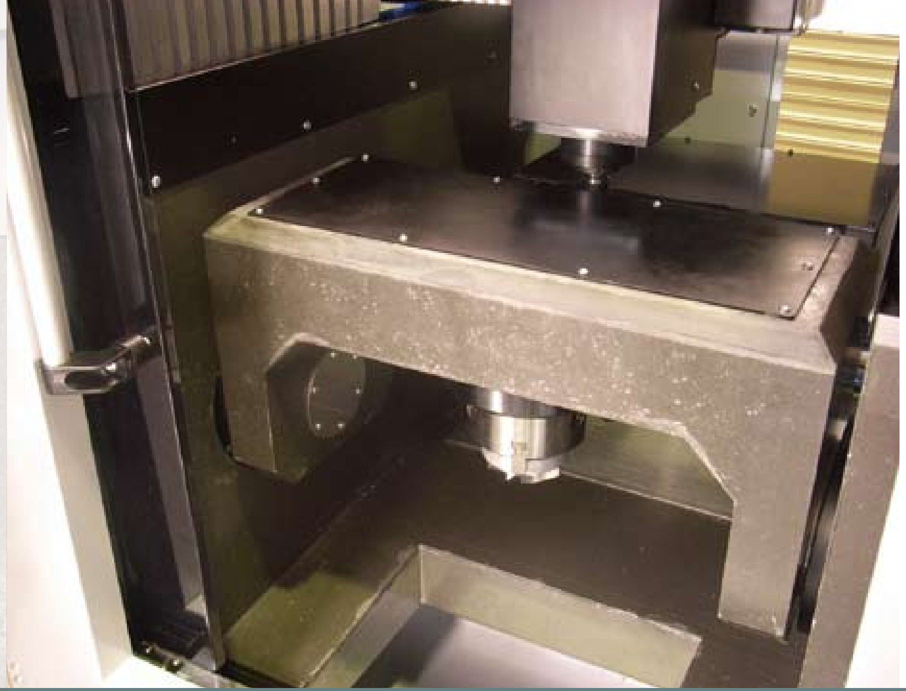
Z軸スライダーはH形構造により捻れ、
たわみに強く、全方向からの負荷に対して
威力を発揮します。
High rigidity Z-axis structure

This compact machine is equipped with our original 5-axis simultaneous CNC controller and applied the mineral-base casting for main frame, X-beam and trunnion. It has 8 times of anti-vibration and 1/20 of thermal conduction comparing with cast-iron.

For better axes allocation and biggest machine rigidity, 3-axis (X/Y/Z) and 2-axis (A/C) are installed on the upper gantry columns and lower part of main frame respectively. That is the reason why its compact size (about 1.5m cube) has greater working space (450/500/200mm on X/Y/Z-axis travel).

In addition, the resolution of A and C-axis can reach to 1,000,000 pulse/round and the repeatability accuracy of rotary is ±0.0005°. For more powerful drive on Y-axis, this model are outfitted with twin servo system which means two servomotors and two ballscrews are set on both left and right side of Y direction. For best quality assurance, FNS-5AG is designed and produced in KAMIOKA Japan R&D plant completely.

デスクトップサイズで金属加工を可能にしたFNS　のマシニングセンタは従来の小型加工機の概念を大きく覆した革新的なマシンとして、各方面から高い評価を頂きました。そして今、ユニークなガントリー構造、Y 軸ツインドライブ、チューニングテクニック等、これまで数多くの製品開発で培ったテクニック、ノウハウを惜しみなく投入し、遂に同時5　軸制御マシニングセンタ「FNS-5AG」を完成させました。
5 軸加工機は、「剛性が低い」「精度が低い」「設置スペースをとる」「導入コストが高い」。
「FNS-5AG」は、これらの課題を克服する機能と構造を持った新世代の5 軸加工機です。



FIVE AXIS M/C

トラニオンが180度回転し、ワークやテーブルに付着した切粉を直下にセットされたダストボックスへ効率良く排出します。

STROKE (AC)	WORK SIZE
A ±180° C 360°	φ480mm

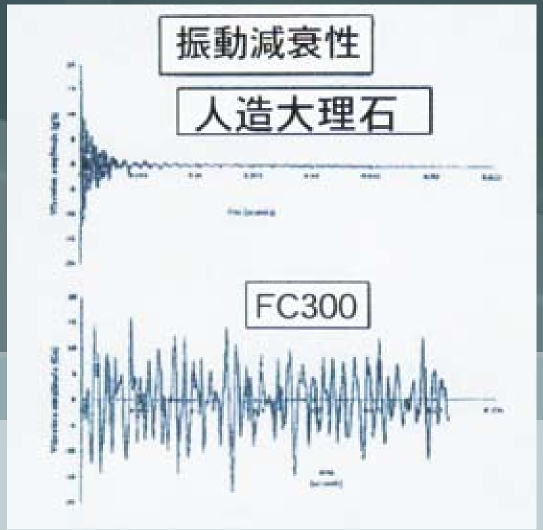
■全軸ノンバックラッシュ、高分解能

分解能	100万パルス/回転
AC軸　繰返し回転位置決め精度	±0.0005度(無負荷時)

■高速旋回/回転を実現

トラニオン旋回(A軸)切削送り速度	30min-1
テーブル回転(C軸)切削送り速度	60min-1

■ 鋳鉄と比較し8倍の振動減衰性、1/20の熱伝導性。
フレームに、花崗岩ベース人造石を採用



FNS-5AG uses "mineral base" casting for main frame, X beam, and trunnion. It has 8 times of anti-vibration and 1/20 of thermal conduction comparing with cast-iron.

	花崗岩人造石 Mineral Base Casting	鋳鉄鋳物 Iron Casting
比熱 Specific Heat	Cp=0.90kJ/kgK	Cp=0.45kJ/kgK
熱傳導率 Thermal Conduction	λ=1.6W/mK	λ=50W/mK

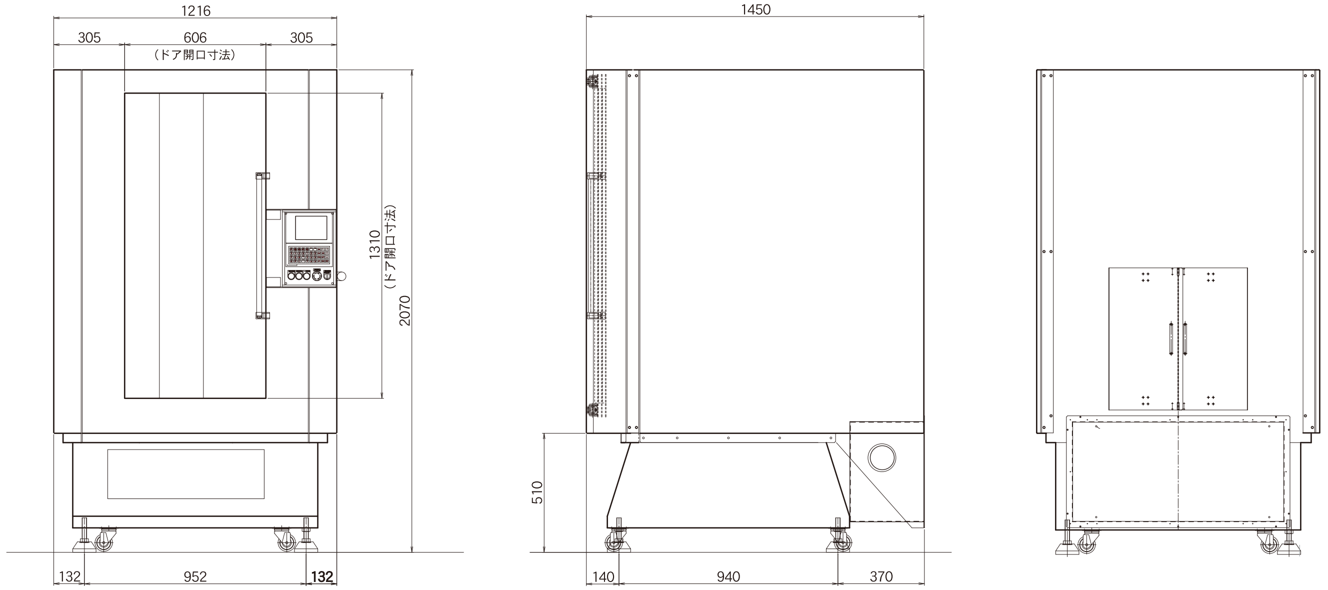
Sample Application

ACCESSORIES LIST	FNS-5AG
24 Tools ATC	○
Touch Sensor	○
Sony Linear Scale	○
Coolant System	○
Transformer	○
CE	C
Adjusting Tools and Tool Box	●
Telescopic Cover for 3-axes	●
Full Splash Guard	●
Operation Manual	●
Precision Check Data	●

●: Standard ○: Optional —: N/A C: Contact KAMIOKA

Dimensional Drawing

Unit: mm



KAMIOKA

MACHINE SPECIFICATIONS

		DMC Semi-Gantry Portal Type M/C	DMC High Speed Double-Column M/C				
Item/Model No.	Unit	LG-2500	DMC-1518	DMC-1525	DMC-1822	DMC-1830	DMC-1840
Travel							
X/Y/Z	mm (in.)	2,500/1,150/620 (98.43/45.28/24.41)	1,800/1,150/620 (70.87/45.28/24.41)	2,500/1,150/620 (98.43/45.28/24.41)	2,200/1,800/800 (86.61/70.87/31.5)	3,000/1,800/800 (118.11/70.87/31.5)	4,000/1,800/800 (157.48/70.87/31.5)
Z axis-Optional	mm (in.)	-	-		1,100 (43.31)		
Distance between Columns	mm (in.)	1,500 (59.06)	1,500 (59.06)		1,850 (72.83)		
Table							
Dimension	mm (in.)	2,400×1,100 (94.49×43.31)	1,700×1,200 (66.93×47.24)	2,400×1,200 (94.49×47.24)	2,300×1,500 (90.55×59.06)	3,200×1,500 (125.98×59.06)	4,200×1,500 (165.35×59.06)
T-slot (W×No.×CD)	mm	22×7×170	22×7×150		22×9×150		22×5×200
Max. Table Loading	kg (lb.)	9,000 (19,800)	4,200 (9,240)	6,000 (13,200)	10,000 (22,000)		12,000 (26,400)
Spindle							
Max. Speed-Standard	rpm	Direct drive 8,000	Direct drive 8,000		Direct drive 8,000		
Max. Speed-Optional	rpm	Direct drive 10,000 or Gear drive 8,000	Direct drive 10,000 or Gear drive 8,000		Direct drive 10,000 or Gear drive 6,000		
Spindle Motor	kW (HP)	22/30 (29/40)	18.5/22 (25/29)		18.5/22 (25/29)		
Spindle Taper		BT50	BT50		BT50		
Spindle Nose to Table Center	mm (in.)	150~770 (5.91~30.31)	150~770 (5.91~30.31)		200~1,000 (7.87~39.37)		380~1,180 (14.96~46.46)
Spindle Center to Column	mm (in.)	400 (15.75)	400 (15.75)		427 (16.81)		
Feedrate							
Cutting Feedrate	mm/min (ipm)	1~10,000 (0.04~393.7)	1~10,000 (0.04~393.7)		1~10,000 (0.04~393.7)		
X axis Rapid Traverse	mm/min (ipm)	20,000 (787.4)	20,000 (787.4)		15,000 (590.55)		
Y axis Rapid Traverse	mm/min (ipm)	20,000 (787.4)	20,000 (787.4)		15,000 (590.55)		
Z axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)	15,000 (590.55)		12,000 (472.44)		
ATC							
Tools Capacity-Standard	pcs	Umbrella 30	Swing Arm 24		Swing Arm 24		
Tools Capacity-Optional	pcs	-	Swing Arm 30		Chain 32,40,60,80		
Max. Tool Dia.	mm (in.)	ø110 (ø4.33)	ø110 (ø4.33)		ø110 (ø4.33)		
Max. Tool Length	mm (in.)	300 (11.81)	300 (11.81)		350 (13.78)		
Max. Tool Weight	kg (lb.)	15 (33)	15 (33)		18 (39.6)		
General Information							
Electrical Power Capacity	kVA	40	40		40		
Dimension (L×W×H)	mm (in.)	7,000×4,150×3,200 (275.59×163.39×125.98)	6,050×3,627×3,098 (238.19×142.8×121.97)	7,470×3,627×3,098 (294.09×142.8×121.97)	6,400×4,550×4,570 (251.97×179.13×179.92)	8,400×4,550×4,570 (330.71×179.13×179.92)	10,400×4,550×4,570 (409.45×179.13×179.92)
Machinery Weight (Net)	kg (lb.)	18,000 (39,600)	15,000 (33,000)	16,500 (36,300)	23,000 (50,600)	28,000 (61,600)	35,000 (77,000)

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KAMIOKA

MACHINE SPECIFICATIONS

		DMC High Performance Double-Column M/C						DMC Powerful 5-Face Double-Column M/C				
Item/Model No.	Unit	DMC-2130	DMC-2140	DMC-2150	DMC-2630	DMC-2640	DMC-2650	DMC-3040	DMC-3050	DMC-3060	DMC-3570	DMC-4080
Travel												
X/Y/Z	mm (in.)	3,000/2,100/1,000 (118.11/82.68/39.37)	4,000/2,100/1,000 (157.48/82.68/39.37)	5,000/2,100/1,000 (196.85/82.68/39.37)	3,000/2,500/1,000 (118.11/98.43/39.37)	4,000/2,500/1,000 (157.48/98.43/39.37)	5,000/2,500/1,000 (196.85/98.43/39.37)	4,000/2,900/1,000 (157.48/114.17/39.37)	5,000/2,900/1,000 (196.85/114.17/39.37)	6,000/2,900/1,000 (236.22/114.17/39.37)	7,000/3,400/1,000 (275.59/133.86/39.37)	8,000/3,900/1,000 (314.96/153.54/39.37)
Z axis-Optional	mm (in.)	-						1,200 (47.24) or 1,400 (55.12)				
Distance between Columns	mm (in.)	2,150 (84.65)			2,600 (102.36)			3,000 (118.11)			3,500 (137.8)	4,000 (157.48)
Table												
Dimension	mm (in.)	3,200×1,800 (125.98×70.87)	4,200×1,800 (165.35×70.87)	5,200×1,800 (204.72×70.87)	3,200×2,150 (125.98×84.65)	4,200×2,150 (165.35×84.65)	5,200×2,150 (204.72×84.65)	4,200×2,600 (165.35×102.36)	5,200×2,600 (204.72×102.36)	6,200×2,600 (244.09×102.36)	7,200×3,200 (283.46×125.98)	8,200×3,700 (322.83×145.67)
T-slot (W×No.×CD)	mm	22×7×200			22×11×200			28×14×200			30×16×200	32×18×200
Max. Table Loading	kg (lb.)	15,000 (33,000)			12,000 (26,400)	15,000 (33,000)	18,000 (39,600)	15,000 (33,000)	18,000 (39,600)	20,000 (44,000)	20,000 (44,000)	20,000 (44,000)
Spindle												
Max. Speed-Standard	rpm	Direct drive 8,000						Direct drive 8,000				
Max. Speed-Optional	rpm	Direct drive 10,000 or Gear drive 6,000						Direct drive 10,000 or Gear drive 6,000				
Spindle Motor	kW (HP)	18.5/22 (25/29)			22/26 (29/35)			22/26 (29/35)			22/26 (29/35)	
Spindle Taper		BT50			BT50			BT50			BT50	
Spindle Nose to Table Center	mm (in.)	380~1,180 (14.96~46.46)			300~1,100 (11.81~43.31)			300~1,100 (11.81~43.31)			300~1,400 (11.81~55.12)	
Spindle Center to Column	mm (in.)	427 (16.81)			435 (17.13)			435 (17.13)			473 (18.62)	
Feedrate												
Cutting Feedrate	mm/min (ipm)	1~10,000 (0.04~393.7)			1~10,000 (0.04~393.7)			1~10,000 (0.04~393.7)				
X axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)			12,000 (472.44)			12,000 (472.44)			12,000 (472.44)	
Y axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)			12,000 (472.44)			12,000 (472.44)			12,000 (472.44)	
Z axis Rapid Traverse	mm/min (ipm)	12,000 (472.44)			10,000 (393.7)			10,000 (393.7)			10,000 (393.7)	
ATC												
Tools Capacity-Standard	pcs	Swing Arm 24						Swing Arm 24				
Tools Capacity-Optional	pcs	Chain 32,40,60,80						Chain 32,40,60,80				
Max. Tool Dia.	mm (in.)	ø110 (ø4.33)			ø110 (ø4.33)			ø110 (ø4.33)			ø120 (ø4.72)	
Max. Tool Length	mm (in.)	350 (13.78)			350 (13.78)			350 (13.78)			350 (13.78)	
Max. Tool Weight	kg (lb.)	18 (39.6)			18 (39.6)			18 (39.6)			18 (39.6)	
General Information												
Electrical Power Capacity	kVA	40			50			50			50	
Dimension (L×W×H)	mm (in.)	8,400×4,850×4,850 (330.71×190.94×190.94)	10,400×4,850×4,850 (409.45×190.94×190.94)	12,400×4,850×4,850 (488.19×190.94×190.94)	9,400×6,000×4,700 (370.08×236.22×185.04)	11,400×6,000×4,700 (448.82×236.22×185.04)	13,400×6,000×4,700 (527.56×236.22×185.04)	11,400×6,500×4,700 (448.82×255.91×185.04)	13,400×6,500×4,700 (527.56×255.91×185.04)	15,400×6,500×4,700 (606.3×255.91×185.04)	15,400×7,000×5,600 (606.3×275.59×220.47)	17,500×7,200×5,800 (688.98×283.46×228.35)
Machinery Weight (Net)	kg (lb.)	30,000 (66,000)	37,000 (81,400)	42,000 (92,400)	45,000 (99,000)	50,000 (110,000)	56,000 (123,200)	54,000 (118,800)	60,000 (132,000)	67,000 (147,400)	70,000 (154,000)	90,000 (198,000)

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MACHINE SPECIFICATIONS

		HORIZON Horizontal Machining Center	
Item/Model No.	Unit	HMC-500	HMC-630
Travel			
X/Y/Z	mm (in.)	500/600/550 (19.69/23.62/21.65)	1,000/850/950 (39.37/33.46/37.4)
Z axis-Optional	mm (in.)	-	-
Distance between Columns	mm (in.)	-	-
Gear Index			
Dimension	mm (in.)	500×500 (19.69×19.69)	630×630 (24.8×24.8)
Rotation Speed	rpm	16.6	11
Min. Indexing		0.001° or 0.005° (opt.)	1° or 0.001° (opt.) or 0.005° (opt.)
T-slot		18H7	M16×2P×25D
Max. Loading Capacity	kg (lb.)	800 (1,760)	1,000 (2,200)
Spindle			
Max. Speed	rpm	Direct drive 10,000	Built-in 10,000
Spindle Motor	kW (HP)	7.5/11 (10/15)	L: 15/22 (20/29) H: 25/30 (33/40)
Spindle Taper		BT40	BT50
Spindle Nose to Table Center	mm (in.)	160~710 (6.3~27.95)	150~1,100 (5.91~43.31)
Spindle Center to Table Surface	mm (in.)	90~690 (3.54~27.17)	100~950 (3.94~37.4)
Feedrate			
Cutting Feedrate	mm/min (ipm)	1~6,000 (0.04~236.22)	1~10,000 (0.04~393.7)
X axis Rapid Traverse	mm/min (ipm)	24,000 (944.88)	36,000 (1417.32)
Y axis Rapid Traverse	mm/min (ipm)	16,000 (629.92)	36,000 (1417.32)
Z axis Rapid Traverse	mm/min (ipm)	24,000 (944.88)	36,000 (1417.32)
ATC			
Tools Capacity-Standard	pcs	Swing Arm 24	Chain 40
Tools Capacity-Optional	pcs	-	Chain 60
Max. Tool Dia.	mm (in.)	ø80 (ø3.15)	ø120 (ø4.72)
Max. Tool Length	mm (in.)	200 (7.87)	500 (19.69)
Max. Tool Weight	kg (lb.)	7 (15.4)	20 (44)
General Information			
Electrical Power Capacity	kVA	45	60
Dimension (L×W×H)	mm (in.)	3,500×3,900×3,000 (137.8×153.54×118.11)	5,080×7,135×3,550 (200×280.91×139.76)
Machinery Weight (Net)	kg (lb.)	7,800 (17,160)	23,500 (51,700)

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MACHINE SPECIFICATIONS

		FORMULA High Speed VMC			
Item/Model No.	Unit	VMC-1200	VMC-800	VMC-500	TMC-500
Travel					
X/Y/Z	mm (in.)	1,200/650/550 (47.24/25.59/21.65)	800/500/500 (31.5/19.69/19.69)	550/400/400 (21.65/15.75/15.75)	500/400/300 (19.69/15.75/11.81)
Z axis-Optional	mm (in.)	-	-	-	-
Distance between Columns	mm (in.)	-	-	-	-
Table					
Dimension	mm (in.)	1,200×600 (47.24×23.62)	800×480 (31.5×18.9)	600×400 (23.62×15.75)	550×400 (21.65×15.75)
T-slot (W×No.×CD)	mm	18×5×120	18×3×160	14×3×100	14×3×125
Max. Table Loading	kg (lb.)	1,000 (2,200)	500 (1,100)	200 (440)	250 (550)
Spindle					
Max. Speed-Standard	rpm	Direct drive 10,000	Direct drive 10,000	Direct drive 10,000	Direct drive 10,000
Max. Speed-Optional	rpm	-	-	Built-in 24,000 or 30,000	-
Spindle Motor	kW (HP)	11/15 (15/20)	M: 5.5/7.5 (7/10) F: 7.5/11 (10/15)	5.5/7.5 (7/10)	3.7/5.5 (5/7)
Spindle Taper		BT40	BT40	BT30	BT30
Spindle Nose to Table Cener	mm (in.)	100~650 (3.94~25.59)	120~620 (4.72~24.41)	120~520 (4.72~20.47)	160~460 (6.3~18.11)
Spindle Center to Column	mm (in.)	820 (32.28)	520 (20.47)	430 (16.93)	470 (18.5)
Feedrate					
Cutting Feedrate	mm/min (ipm)	1~10,000 (0.04~393.7)			
X axis Rapid Traverse	mm/min (ipm)	30,000 (1181.1)	30,000 (1181.1)	48,000 (1889.76)	48,000 (1889.76)
Y axis Rapid Traverse	mm/min (ipm)	30,000 (1181.1)	30,000 (1181.1)	48,000 (1889.76)	48,000 (1889.76)
Z axis Rapid Traverse	mm/min (ipm)	24,000 (944.88)	24,000 (944.88)	48,000 (1889.76)	48,000 (1889.76)
ATC					
Tools Capacity-Standard	pcs	Swing Arm 24	Swing Arm 24	Swing Arm 20 (Not applied to Built-in Spindle)	Turret 16
Tools Capacity-Optional	pcs	-	-	Carousel 12	-
Max. Tool Dia.	mm (in.)	ø80 (ø3.15)	ø80 (ø3.15)	ø65 (ø2.56)	ø80 (ø3.15)
Max. Tool Length	mm (in.)	300 (11.81)	300 (11.81)	200 (7.87)	200 (7.87)
Max. Tool Weight	kg (lb.)	7 (15.4)	7 (15.4)	4 (8.8)	3 (6.6)
General Information					
Electrical Power Capacity	kVA	30	20	15	15
Dimension (L×W×H)	mm (in.)	3,600×3,520×3,220 (141.73×138.58×126.77)	2,650x2,200x2,550 (104.33x86.61x100.39)	1,850×2,290×2,155 (72.83×90.16×84.84)	1,650x2,500x2,450 (64.96x98.43x96.46)
Machinery Weight (Net)	kg (lb.)	8,000 (17,600)	3,800 (8,360)	3,000 (6,600)	2,500 (5,500)

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MACHINE SPECIFICATIONS

		PERFORMA High Performance VMC			
Item/Model No.	Unit	VMC-650	VMC-850	VMC-1000	VMC-1250
Travel					
X/Y/Z	mm (in.)	650/400/350 (25.59/15.75/13.78)	850/550/550 (33.46/21.65/21.65)	1,000/600/600 (39.37/23.62/23.62)	1,250/600/600 (49.21/23.62/23.62)
Z axis-Optional	mm (in.)	-	-	-	-
Distance between Columns	mm (in.)	-	-	-	-
Table					
Dimension	mm (in.)	750×400 (29.53×15.75)	800×480 (31.5×18.9)	1,100×600 (43.31×23.62)	1,350×600 (53.15×23.62)
T-slot (W×No.×CD)	mm	14×3×125	18×3×160	18×5×100	18×5×100
Max. Table Loading	kg (lb.)	250 (550)	600 (1,320)	900 (1,980)	1,200 (2,640)
Spindle					
Max. Speed-Standard	rpm	Direct drive 10,000	Direct drive 10,000	Belt drive 10,000	Belt drive 10,000
Max. Speed-Optional	rpm	-	-	Direct drive 10,000	Direct drive 10,000
Spindle Motor	kW (HP)	5.5/7.5 (7/10)	M: 5.5/7.5 (7/10) F: 7.5/11 (10/15)	7.5/11 (10/15)	11/15 (15/20)
Spindle Taper		BT40	BT40	BT40	BT40
Spindle Nose to Table Cener	mm (in.)	150~500 (5.91~19.69)	90~640 (3.54~25.2)	90~690 (3.54~27.17)	100~700 (3.94~27.56)
Spindle Center to Column	mm (in.)	470 (18.5)	550 (21.65)	650 (22.59)	650 (22.59)
Feedrate					
Cutting Feedrate	mm/min (ipm)	1~10,000 (0.04~393.7)			
X axis Rapid Traverse	mm/min (ipm)	36,000 (1417.32)	30,000 (1181.1)	24,000 (944.88)	30,000 (1181.1)
Y axis Rapid Traverse	mm/min (ipm)	36,000 (1417.32)	30,000 (1181.1)	24,000 (944.88)	30,000 (1181.1)
Z axis Rapid Traverse	mm/min (ipm)	36,000 (1417.32)	24,000 (944.88)	18,000 (708.66)	24,000 (944.88)
ATC					
Tools Capacity-Standard	pcs	Swing Arm 20	Swing Arm 24	Swing Arm 24	Swing Arm 24
Tools Capacity-Optional	pcs	-	-	-	-
Max. Tool Dia.	mm (in.)	ø78 (ø3.07)	ø80 (ø3.15)	ø75 (ø2.95)	ø75 (ø2.95)
Max. Tool Length	mm (in.)	200 (7.87)	300 (11.81)	250 (9.84)	250 (9.84)
Max. Tool Weight	kg (lb.)	7 (15.4)	7 (15.4)	7 (15.4)	7 (15.4)
General Information					
Electrical Power Capacity	kVA	15	20	22.5	25
Dimension (L×W×H)	mm (in.)	2,150x2,500x2,370 (84.65x98.43x93.31)	2,650x2,200x2,550 (104.33x86.61x100.39)	3,000×2,615×2,535 (118.11×102.95×99.8)	3,450×2,160×2,850 (135.83×85.04×112.2)
Machinery Weight (Net)	kg (lb.)	2,600 (5,720)	4,000 (8,800)	6,350 (13,970)	7,500 (16,500)

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MACHINE SPECIFICATIONS

		GRAVITY Heavy Duty VMC			
Item/Model No.	Unit	VMC-1300	VMC-1600	VMC-1800	VMC-2200
Travel					
X/Y/Z	mm (in.)	1,300/630/635 (51.18/24.8/25)	1,600/800/700 (62.99/31.5/27.56)	1,800/850/700 (70.87/33.46/27.56)	2,200/1,000/900 (86.61/39.37/35.43)
Z axis-Optional	mm (in.)	-	-	-	-
Distance between Columns	mm (in.)	-	-	-	-
Table					
Dimension	mm (in.)	1,450×600 (57.09×23.62)	1,600×700 (62.99×27.56)	1,800×850 (70.87×33.46)	2,200×1,000 (86.61×39.37)
T-slot (W×No.×CD)	mm	18×5×100	18×7×100	22×5×150	22×7×150
Max. Table Loading	kg (lb.)	1,200 (2,640)	2,000 (4,400)	2,000 (4,400)	3,000 (6,600)
Spindle					
Max. Speed-Standard	rpm	Gear drive 6,000			
Max. Speed-Optional	rpm	Belt drive 8,000 or Direct drive 10,000			
Spindle Motor	kW (HP)	11/15 (15/20)	15/18.5 (20/25)		
Spindle Taper		BT50	BT50		
Spindle Nose to Table Cener	mm (in.)	150~785 (5.91~30.91)	170~870 (6.69~34.25)	200~900 (7.87~35.43)	165~1,065 (6.5~41.93)
Spindle Center to Column	mm (in.)	690 (27.17)	800 (31.5)	930 (36.61)	1,060 (41.73)
Feedrate					
Cutting Feedrate	mm/min (ipm)	1~15,000 (0.04~590.55)			
X axis Rapid Traverse	mm/min (ipm)	24,000 (944.88)	18,000 (708.66)		12,000 (472.44)
Y axis Rapid Traverse	mm/min (ipm)	24,000 (944.88)	18,000 (708.66)		12,000 (472.44)
Z axis Rapid Traverse	mm/min (ipm)	20,000 (787.4)	15,000 (590.55)		12,000 (472.44)
ATC					
Tools Capacity-Standard	pcs	Swing Arm 24			
Tools Capacity-Optional	pcs	Swing Arm 32/40 (Chain)			
Max. Tool Dia.	mm (in.)	ø110 (ø4.33)			
Max. Tool Length	mm (in.)	300 (11.81)			
Max. Tool Weight	kg (lb.)	15 (33)			
General Information					
Electrical Power Capacity	kVA	30	40		45
Dimension (L×W×H)	mm (in.)	4,000×3,200×3,500 (157.48×125.98×137.8)	4,500×3,450×3,600 (177.17×135.83×141.73)	5,000×3,650×3,700 (196.85×143.7×145.67)	5,800×4,200×4,000 (228.35×165.35×157.48)
Machinery Weight (Net)	kg (lb.)	9,500 (20,900)	13,500 (29,700)	14,500 (31,900)	16,500 (36,300)

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MACHINE SPECIFICATIONS

Item/Model No.	Unit	LONGHORN Moving-Column VMC VL-4000	VL-5000	VL-6000	VL-7000	VL-8000
Travel						
X/Y/Z	mm (in.)	4,000/450/500 (157.48/17.72/19.69)	5,000/450/500 (196.85/17.72/19.69)	6,000/450/500 (236.22/17.72/19.69)	7,000/450/500 (275.59/17.72/19.69)	8,000/450/500 (314.96/17.72/19.69)
Z axis-Optional	mm (in.)	-				
Distance between Columns	mm (in.)	-				
Table						
Dimension	mm (in.)	4,000×400 (157.48×15.75)	5,000×400 (196.85×15.75)	6,000×400 (236.22×15.75)	7,000×400 (275.59×15.75)	8,000×400 (314.96×15.75)
T-slot (W×No.×CD)	mm	18×3×150				
Max. Table Loading	kg (lb.)	1,600 (3,520)	1,600 (3,520)	1,800 (3,960)	1,800 (3,960)	2,000 (4,400)
Spindle						
Max. Speed-Standard	rpm	Belt drive 10,000				
Max. Speed-Optional	rpm	Direct drive 10,000				
Spindle Motor	kW (HP)	7.5/11 (10/15)				
Spindle Taper		BT40				
Spindle Nose to Table Cener	mm (in.)	180~530 (7.09~20.87)				
Spindle Center to Column	mm (in.)	520 (20.47)				
Feedrate						
Cutting Feedrate	mm/min (ipm)	1~6,000 (0.04~236.22)				
X axis Rapid Traverse	mm/min (ipm)	12,000 (472.44)	10,000 (393.7)			
Y axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)	12,000 (472.44)			
Z axis Rapid Traverse	mm/min (ipm)	15,000 (590.55)	12,000 (472.44)			
ATC						
Tools Capacity-Standard	pcs	Swing Arm 24				
Tools Capacity-Optional	pcs	-				
Max. Tool Dia.	mm (in.)	ø100 (ø3.94)				
Max. Tool Length	mm (in.)	250 (9.84)				
Max. Tool Weight	kg (lb.)	7 (15.4)				
General Information						
Electrical Power Capacity	kVA	40~50				
Dimension (L×W×H)	mm (in.)	7,500×2,700×2,500 (295.28×106.3×98.43)	8,600×2,700×2,500 (338.58×106.3×98.43)	9,700×2,700×2,500 (381.89×106.3×98.43)	10,800×2,700×2,500 (425.2×106.3×98.43)	11,900×2,700×2,500 (468.5×106.3×98.43)
Machinery Weight (Net)	kg (lb.)	16,500 (36,300)	18,800 (41,360)	21,100 (46,420)	23,400 (51,480)	25,700 (56,540)

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MACHINE SPECIFICATIONS

		Multi-Axis CNC Turning Center			
Item/Model No.	Unit	YT-52	YT-52L	YT-75	YT-75L
Capacity					
Max. Swing Over Bed	mm (in.)	ø600 (ø23.62)	ø600 (ø23.62)	ø600 (ø23.62)	ø600 (ø23.62)
Max. Over Cross Slide	mm (in.)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)
Max. Turning Dia.	mm (in.)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)	ø300 (ø11.81)
Max. Turning Length	mm (in.)	730 (28.74)	980 (38.58)	730 (28.74)	980 (38.58)
Through Bar Capacity	mm (in.)	ø52 (ø2.05)	ø52 (ø2.05)	ø75 (ø2.95)	ø75 (ø2.95)
Spindle					
Spindle Motor	kW (HP)	15 (20)	15 (20)	18.5 (25)	18.5 (25)
Spindle Speed	rpm	4,000	4,000	3,500	3,500
Spindle Nose	ASA	A2-6	A2-6	A2-8	A2-8
Spindle Bore	mm (in.)	ø62 (ø2.44)	ø62 (ø2.44)	ø85 (ø3.35)	ø85 (ø3.35)
Chuck Dia.		8"	8"	10"	10"
Axis Travel					
X-axis Travel	mm (in.)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)
Z-axis Travel	mm (in.)	790 (31.1)	1,000 (39.37)	790 (31.1)	1,000 (39.37)
Y-axis Travel	mm (in.)	100±50 (3.94±1.97)			
X-axis Rapid Feedrate	mm/min (ipm)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)
Z-axis Rapid Feedrate	mm/min (ipm)	24,000 (944.88)	24,000 (944.88)	24,000 (944.88)	24,000 (944.88)
Y-axis Rapid Feedrate	mm/min (ipm)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)
Turret					
Tool Station Capacity	pcs	12	12	12	12
Square Shank Tool Size	mm (in.)	□25 (□0.98)	□25 (□0.98)	□25 (□0.98)	□25 (□0.98)
Boring Tool Size	mm (in.)	ø40 (ø1.57)	ø40 (ø1.57)	ø40 (ø1.57)	ø40 (ø1.57)
Indexing Type		Servo & Power Turret (BARUFFALDI-TBMR 200)			
Tool Holder		VDI40			
Tailstock					
Travel of Tailstock	mm (in.)	790 (31.1)	910 (35.83)	790 (31.1)	910 (35.83)
Dia. Of Tailstock Hole	mm (in.)	ø85 (ø3.35)	ø85 (ø3.35)	ø85 (ø3.35)	ø85 (ø3.35)
Travel of Tailstock Shaft	mm (in.)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)
Taper of Tailstock		MT5	MT5	MT5	MT5
General Information					
Dimension (L×W×H)	mm (in.)	3,250×1,800×2,300 (127.95×70.87×90.55)	3,600×1,800×2,300 (141.73×70.87×90.55)	3,250×1,800×2,300 (127.95×70.87×90.55)	3,600×1,800×2,300 (141.73×70.87×90.55)
Machinery Weight (Net)	kg (lb.)	6,000 (13,200)	6,500 (14,300)	6,200 (13,640)	6,800 (14,960)

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MACHINE SPECIFICATIONS

Item/Model No.	Unit	Multi-Tasking CNC Turning Center						
		CL-42	CL-42H	CL-52S	CL-52	CL-52L	CL-75	CL-75L
Capacity								
Max. Swing Over Bed	mm (in.)	ø400 (ø15.75)	ø400 (ø15.75)	ø570 (ø22.44)	ø690 (ø27.17)	ø690 (ø27.17)	ø690 (ø27.17)	ø690 (ø27.17)
Max. Over Cross Slide	mm (in.)	ø180 (ø7.09)	ø180 (ø7.09)	ø350 (ø13.78)	ø530 (ø20.87)	ø530 (ø20.87)	ø530 (ø20.87)	ø530 (ø20.87)
Max. Turning Dia.	mm (in.)	ø150 (ø5.91)	ø280 (ø11.02)	ø310 (ø12.2)	ø350 (ø13.78)	ø350 (ø13.78)	ø420 (ø16.54)	ø420 (ø16.54)
Max. Turning Length	mm (in.)	120 (4.72)	300 (11.81)	500 (19.69)	600 (23.62)	1,000 (39.37)	600 (23.62)	1,000 (39.37)
Through Bar Capacity	mm (in.)	ø42 (ø1.65)	ø42 (ø1.65)	ø52 (ø2.05)	ø51 (ø2.01)	ø51 (ø2.01)	ø72 (ø2.83)	ø72 (ø2.83)
Spindle								
Spindle Motor	kW (HP)	7 (10)	7 (10)	11 (15)	11 (15)	11 (15)	15 (20)	15 (20)
Spindle Speed	rpm	6,000	6,000	4,500	4,000	4,000	3,000	3,000
Spindle Nose	ASA	A2-5	A2-5	A2-6	A2-6	A2-6	A2-8	A2-8
Spindle Bore	mm (in.)	ø52 (ø2.05)	ø52 (ø2.05)	ø62 (ø2.44)	ø61 (ø2.4)	ø61 (ø2.4)	ø91 (ø3.58)	ø91 (ø3.58)
Chuck Dia.		6"	6"	8"	8"/10" (opt.)	8"/10" (opt.)	10"/12" (opt.)	10"/12" (opt.)
Axis Travel								
X-axis Travel	mm (in.)	350 (13.78)	170 (6.69)	175 (6.89)	190 (7.48)	190 (7.48)	220 (8.66)	220 (8.66)
Z-axis Travel	mm (in.)	210 (8.27)	350 (13.78)	540 (21.26)	630 (24.8)	1,030 (40.55)	630 (24.8)	1,030 (40.55)
Y-axis Travel	mm (in.)	–						
X-axis Rapid Feedrate	mm/min (ipm)	20,000 (787.4)	15,000 (590.55)	30,000 (1181.1)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)
Z-axis Rapid Feedrate	mm/min (ipm)	20,000 (787.4)	15,000 (590.55)	30,000 (1181.1)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)	20,000 (787.4)
Y-axis Rapid Feedrate	mm/min (ipm)	–						
Turret								
Tool Station Capacity	pcs	10	10	10	12	12	12	12
Square Shank Tool Size	mm (in.)	□20 (□0.79)	□20 (□0.79)	□20 (□0.79)	□25 (□0.98)	□25 (□0.98)	□25 (□0.98)	□25 (□0.98)
Boring Tool Size	mm (in.)	ø20 (ø0.79)	ø20 (ø0.79)	ø32 (ø1.26)	ø40 (ø1.57)	ø40 (ø1.57)	ø40 (ø1.57)	ø40 (ø1.57)
Indexing Type		Hydraulic / Servo(opt.) / Power Turret(opt.)						
Tool Holder-Optional		-	VDI30	VDI30 / VDI40	VDI30 / VDI40	VDI30 / VDI40	VDI40	VDI40
Tailstock								
Travel of Tailstock	mm (in.)	-	200 (7.87)	450 (17.72)	480 (18.9)	880 (34.65)	480 (18.9)	880 (34.65)
Dia. Of Tailstock Hole	mm (in.)	-	ø50 (ø1.97)	ø70 (ø2.76)	ø85 (ø3.35)	ø85 (ø3.35)	ø110 (ø4.33)	ø110 (ø4.33)
Travel of Tailstock Shaft	mm (in.)	-	100 (3.94)	80 (3.15)	110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)
Taper of Tailstock		-	MT3	MT4	MT4	MT4	MT5	MT5
General Information								
Dimension (L×W×H)	mm (in.)	3,200×1,550×1,700 (125.98×61.02×66.93)	3,100×1,450×1,700 (122.05×57.09×66.93)	2,800×1,700×2,000 (110.24×66.93×78.74)	4,100×1,950×2,330 (161.42×76.77×91.73)	4,860×1,950×2,350 (191.34×76.77×92.52)	4,100×1,950×2,330 (161.42×76.77×91.73)	4,860×1,950×2,350 (191.34×76.77×92.52)
Machinery Weight (Net)	kg (lb.)	2,800 (6,160)	2,800 (6,160)	4,000 (8,800)	4,500 (9,900)	5,000 (11,000)	4,700 (10,340)	5,400 (11,880)

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MACHINE OUTFITS & ACCESSORIES

M : CNC Machining Centers T : CNC Turning Centers

Linear Guide Ways

M T

Box Ways

M T

Ball Screw

M T

Bearing

M T

Auto Door Interlock

M T

Belt drive Spindle

M

Direct drive Spindle

M

Built-in Spindle

M

Gear drive Spindle

M

ZF Gear Box

M

Universal Head

M

90-degree Angle Head

M

Extension Head

M

Extension 90-degree Head

M

Five Axis Simultaneous Head

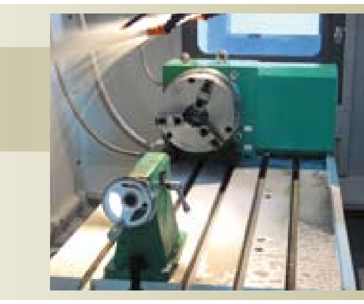
M

Five Face Head

M

4th Axis Rotary Table

M

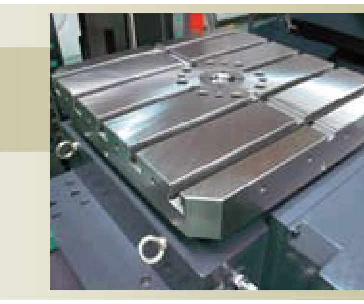


Tilting Rotary Table

M

Indexing Table (B Axis)

M



APC (Auto Pallet Changer)

M

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- Some items shown here are optional accessories. Please contact your local dealer for more details.

MACHINE OUTFITS & ACCESSORIES

M : CNC Machining Centers   T : CNC Turning Centers

Carousel Type ATC
M

Umbrella Type ATC
M

Arm Type ATC
M

Chain Type ATC
M

Cs Axis
T

Hydraulic Turret
T

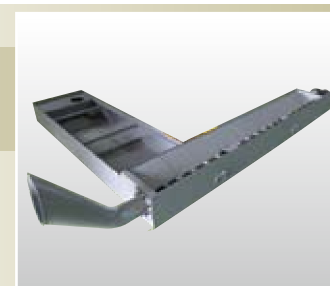
Servo Turret
T

Power Turret
T

Soft & Hard Jaw
T

Various Tool Holders
M T

Spiral Type Chip Conveyor
M T



Hinge Type Chip Conveyor
M T

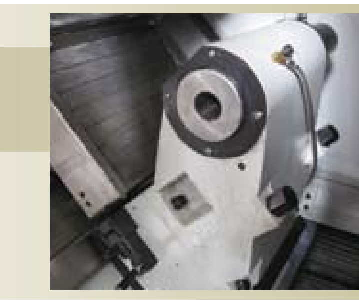
Scraper Type Chip Conveyor
M T

F.R.L Combination
M T

Oil Skimmer
M T

Hydraulic Tailstock
T

Manual Tailstock
T



Programmable Tailstock
T

Foot Switch
T

Bar Feeder
T

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MACHINE OUTFITS & ACCESSORIES

M : CNC Machining Centers T : CNC Turning Centers

Workpiece Measurement

M

Auto Lubrication System

M T

Workpiece Measurement

T

Spindle Oil Chiller

M

Tool Setting Probe

M

CTS (Coolant Through Spindle)

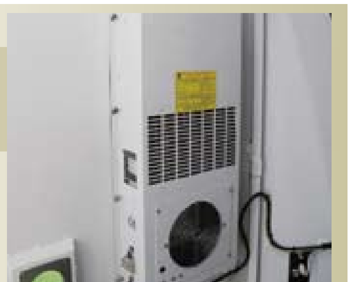
M

Tool Setting Probe

T

Heat Exchanger

M T



Linear Scale

M

Air Conditioner

M T

Tool Box with Service Tools

M T

Transformer

M T

Lamp

M T

Live Tools

T

Three Color Alarm Indicator

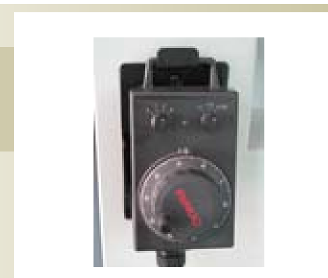
M T

Face Drivers

T

MPG (Manual Pulse Generator)

M T



Steady Rest

T

Leveling Bolts and Blocks

M T

Parts Catcher

T

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Messages from the Founder

10 simple reasons why KAMIOKA is your reliable friend in your metalworking business

1. We are Japanese and Taiwanese factory

We are the Japanese and Taiwanese engineered machine tool manufacturer. We are very professional in various kinds of machinery works and machine tool. We are very proud of our machine quality and production consistency.

2. We have a well-experienced engineering team

Our staffs are located in Japan, Taiwan and USA. Not only machine tool products, our business ranges also include machining service, metalworking consultancy and hardware engineering.

3. You are dealing with a dedicated machinery maker

Who are you dealing with this serious business? Yes, we have a very comprehensive machine tool production line including machining, producing, assembling and inspection. Many machine tool suppliers are just assembling factories or trading companies. All components are bought from outside and most of them don't know real building skills of a machine. They may offer you a very good price but you need to worry the future maintenance and machine life.

4. We are in this industry for over 40 years

KAMIOKA started from the very fundamental mechanical basis since 1965. We experienced different kinds of tasks in the past decades. Many machinery companies have been still our partners because we provided them much engineering knowledge and key machinery components since our earlier development stage.

5. We are not going to anywhere

We saw many speculators devoted into this industry. However, many machine tool companies went bankrupt in Taiwan (or Japan). We won't let your machine without support. We are a small company but our business operation and development are very moderate. We understand it is an equipment manufacture business which has to take a lot of responsibilities instead of over expansion. The business continuity is the most important thing to us and we are not going to anywhere.

6. We have the most responsible attitude

Not only building high-quality machine tools, we also provide great services before and after sales. Our customers and partners always get our suggestions such as how to process their workpiece or how to choose a right machine model for their work before buying our machines. After their machine installation, users can connect to our authorized dealers and our service network to resolve problems.

7. Our products have the most possible quality confidence

Our genuine craftsmanship and technical experience go into all machine building steps such as the sideways scraping, parts installation and micron tolerance adjustment. Each KAMIOKA machine is subjected to numerous quality assurance tests, including the exam during parts machining, 100% ball bar tested, real cutting (12 hours) and 120 hours of actual running before shipment.

8. Our machines have the most reliable performance

How to achieve the highest productivity is the most important issue to every working field. With a good and reliable machine support is certainly the most crucial tool to make the working productive. No matter mold making or parts machining, our machines feature impressive cutting abilities in various kinds of purposes. They have been approved by many precision-work industries like mold processing, musical instrument and linear-way manufacturers.

9. We commit our products to have longer machining lives

Building a good quality machine is just a basic principle to us. Giving our customers a longer life of machinery is our goal. According to our sales and service experience, KAMIOKA machine tools have at least 10-year life time and 30,000 hours or more of no fault operation under normal use.

10. We have the continuous upgrade ambition

It is risky to cooperate with a company without vision. You can see new machine makers every year but they cannot give you any promising vision (maybe cheapest price?! but how long can they survive?). We always develop the best value performance machines to customers. We still keep on upgrading our facilities, service and knowledge. Yes, you are working with a self-discipline company that you can trust!

Sincerely,
Kunio Huang
President

黃國雄

KAMIOKA CORPORATION

Since 1965

KAMIOKA

KAMIOKA CORPORATION

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