

Accessories	MC Series	MW Series	MCW Series
Item			
1.5 Years Warranty_Linear Guide Way	●	●	●
2.Spindle Air Curtain	●	●	●
3.Air Blast Through Spindle	●	●	●
4.Table side air blast	●	●	●
5.Centralized Automatic Lubrication System	●	●	●
6.Screw type chip conveyor	●	●	●
7.Tool package	●	●	●
8.Without Mist coolant system	●	●	●
9.Foundation bolt	●	●	●
10.Absolute pulse coder	●	●	●
11.Spindle Oil Cooler	●	●	●
12.Auto Power Off	●	●	●
13.Operation Finish Lamp	●	●	●
14.Foot Switch For Spindle Clamp/Unclamp	●	●	●
15.Wireless MPG (Manual Pulse Generator)	○	○	○
16.Remote Manual Pulse Generator	●	●	●
17.Network Interface	●	●	●
18.Habor Convection Heat Exchanger In Control Box(For MITSUBISHI,FANUC,SYNTEC)	●	●	●
19.Fluorescent	●	●	●
20.Manual x1	●	●	●
21.6000RPM Gear Head	●	●	●
22.Full-enclosed splash guard	-	●	-
23.Fluorescent x2/4/6	○	○	○
24.Link type chip conveyor (without Coolant Tank) & portable chip bucket(1EA)	●	●	●
25.X / Y / Z -axis linear scale system_HEIDENHAIN	○	○	○
26.Manual x2/3	○	○	○
27.Hartford Manual x1/2/3	○	○	○
28.Hydraulic Hose Coolant gun	○	○	○
29.Air Gun	○	○	○
30.Oil Fluid Separator	○	○	○
31.Hoist Seat	○	○	○
32.Maintenance safety guard(Including maintenance ladder)	●	●	●
33.X/Y -axis ball screw support device	-	○	-
34.Pedal Ladder	○	○	○
35.Hybrid Spindle 10000RPM	○	○	○
36.ARM Type ATC	○	○	○
37.Coolant through spindle_Prepare	○	○	○
38.Coolant through spindle	○	○	○
39.TOUCH PROBE	○	○	○
40.Imitative Mold Cutting System	○	○	○
41.Closed Loop Linear Scale Positioning System	○	○	○
42.DNC Software	○	○	○

Standard ● Optional ○



Moving Columns / Moving Crossbeam /
Moving Columns & Crossbeam Machining Center

MC · MW · MCW Series

MC-X33	MW-X33
MC-X45	MW-X43
MC-X55	MCW-X550
	MCW-X650



01 Workpiece Machining Applications

Versatile and Complete Machining, Tailored for Every Application.

Achieve automation and high-efficiency machining across a wide range of applications.

This series is equipped with an automatic head-changing system and offers a variety of angle heads to meet different processing needs.

With just one setup, it can handle a diverse range of machining tasks with ease.

1



2



3



4



1	2
3	4

Large workpiece

- 1 Vertical Column Structure
- 2 Base

Mold

- 3 Plastic Molding
- 4 Automotive Stamping Die

02 MC Series Machine Structure Features

Featuring optimized machining performance and exceptional precision, combined with a self-developed automatic head-changing system to fully meet your diverse machining needs.

◎ Z-axis Four Linear Guideways Three Binding Structure Patented Technology

The three-binding structure technology and two-way support provide high rigidity during cutting, delivering outstanding performance.

◎ X-Axis Rack and Pinion System

- The adoption of electrical preloading allows for long-term backlash-free operation.
- Even with the use of a single drive, high positioning and accuracy can be achieved.
- With the helical / spiral tooth design, operation is smoother and quieter.
- Under closed-loop control, the mechanical transmission components also provide good vibration damping effects.

◎ Z-axis Nitrogen Accumulator Weight System

- Reduce the operating noise of the hydraulic tank.
- Reduce the hydraulic tank oil temperature by 50%.
- Achieve effective energy savings of more than 20%.

◎ Screw Support Mechanism Maintains Excellent Positioning Accuracy

- In time of the transmission of the Y axes, ensure that power is maintained.
- Improve screw dead weight sagging; enhance the positioning accuracy and life of screw.

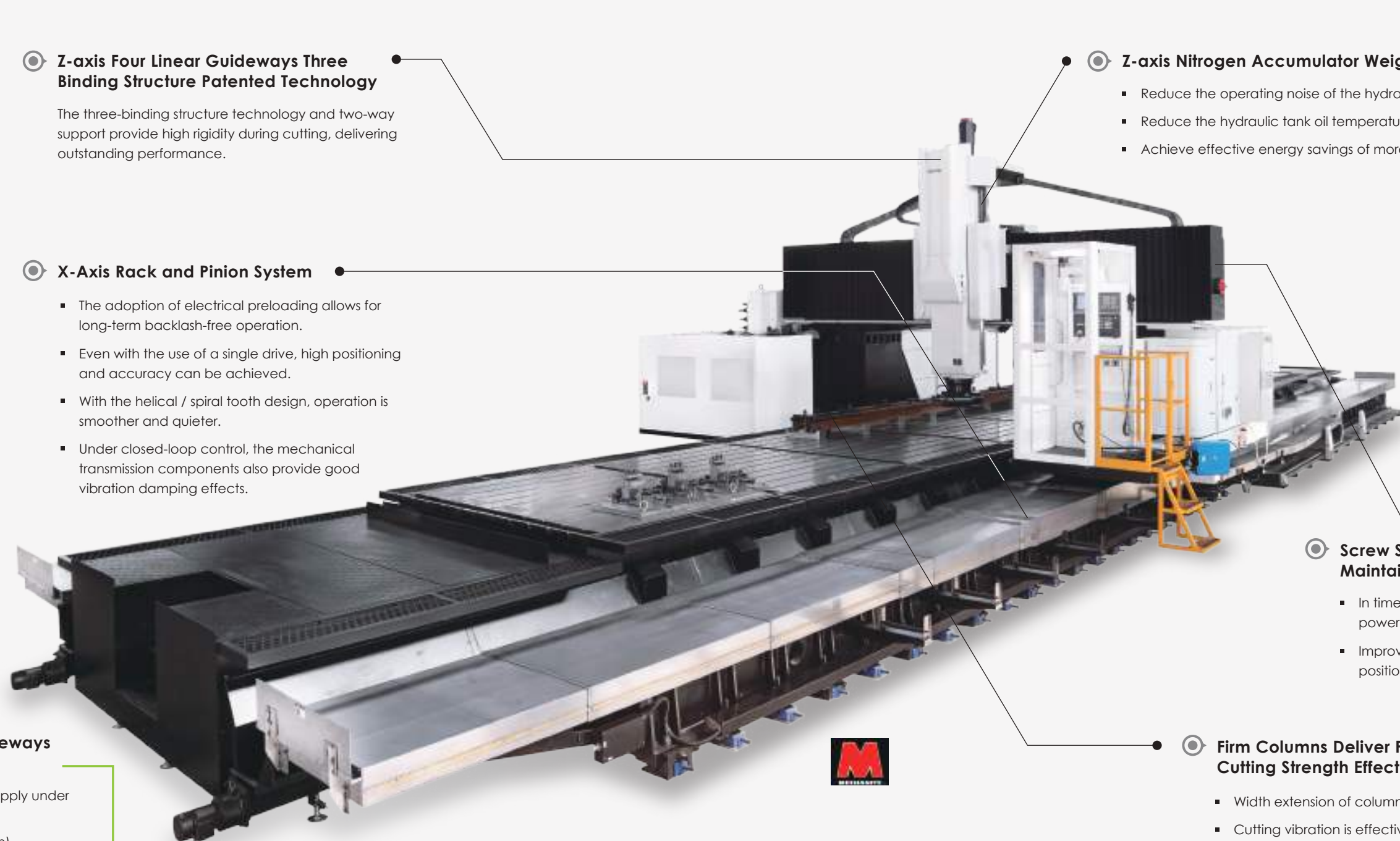
◎ Firm Columns Deliver Powerful Cutting Strength Effectively

- Width extension of column bases.
- Cutting vibration is effectively reduced.

5 YEAR Warranty on Guideways for All Models

Warranty coverage will not apply under following conditions :

- 1.Improper operation(collison)
- 2.Lack of regular cleaningof accumulated debris causing damage to the linear rails &carriages.



02 MW Series Machine Structure Features

Featuring optimized machining performance and exceptional precision, combined with a self-developed automatic head-changing system to fully meet your diverse machining needs.

◎ Z-axis Four Linear Guideways Three Binding Structure Patented Technology

The three-binding structure technology and two-way support provide high rigidity during cutting, delivering outstanding performance.

◎ W-Axis Features Twin Ball Screws and Twin Servo Motors

- Positioning accuracy performed 0.03 mm thanks to W-axis twin servo motors and direct-drive twin ball screws.
- W-axis feature is allowed for random positioning without restriction of machining area.

◎ MW Three-Axis Direct-Connected Drive Advantage

MW three-axis direct-connected drive advantage HSA series X-axis and Y-axis pair up with the planetary reducer, effectively enhancing the overall axial drive torque of the machine.

◎ Screw support Mechanism Maintains Excellent Positioning Accuracy

- In time of the transmission of the X and Y axes, ensure that power is maintained.
- Improve screw dead weight sagging; enhance the positioning accuracy and life of screw.

◎ X-Axis Three Linear Guideways Design

The X-axis three linear guideways design can be used to resist process rotation torsion and enhance rigidity by more than 50%. Moreover, the maximum load of a workbench can be 30,000kg, thus allowing you to meet your processing needs and help you reach your accuracy and quality requirements.

MW-X43



5 YEAR Warranty on Guideways for All Models

Warranty coverage will not apply under following conditions :

1. Improper operation (collision)
2. Lack of regular cleaning of accumulated debris causing damage to the linear rails & carriages.

02 MCW Series Machine Structure Features

Featuring optimized machining performance and exceptional precision, combined with a self-developed automatic head-changing system to fully meet your diverse machining needs.

● Z-axis Four Linear Guideways Three Binding Structure Patented Technology

The three-binding structure technology and two-way support provide high rigidity during cutting, delivering outstanding performance.

● W-Axis Features Twin Ball Screws and Twin Servo Motors

- Positioning accuracy performed 0.03 mm thanks to W-axis twin servo motors and direct-drive twin ball screws.
- W-axis feature is allowed for random positioning without restriction of machining area.

● Firm Columns Deliver Powerful Cutting Strength Effectively

- Width extension of column bases.
- Cutting vibration is effectively reduced.

● Screw support Mechanism Maintains Excellent Positioning Accuracy

- In time of the transmission of the Y axes, ensure that power is maintained.
- Improve screw dead weight sagging; enhance the positioning accuracy and life of screw.

● Z-axis Nitrogen Accumulator Weight System

- Reduce operating noise of hydraulic tank.
- Reduce hydraulic tank oil temperature by 50%.
- Effective energy-saving more than 20%.

5 YEAR Warranty on Guideways for All Models

Warranty coverage will not apply under following conditions :

- 1.Improper operation(collison)
- 2.Lack of regular cleaningof accumulated debris causing damage to the linear rails &carriages.

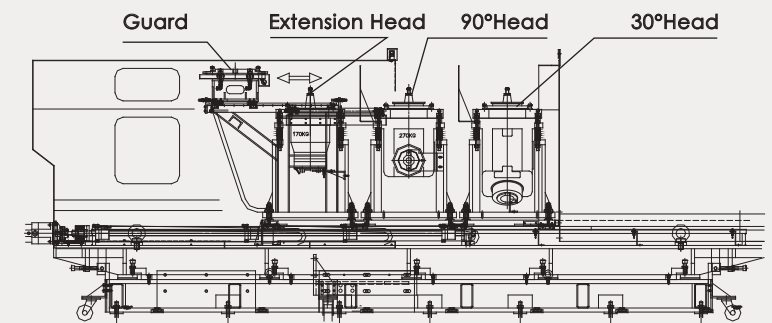


03 Full Automatic Head Changer



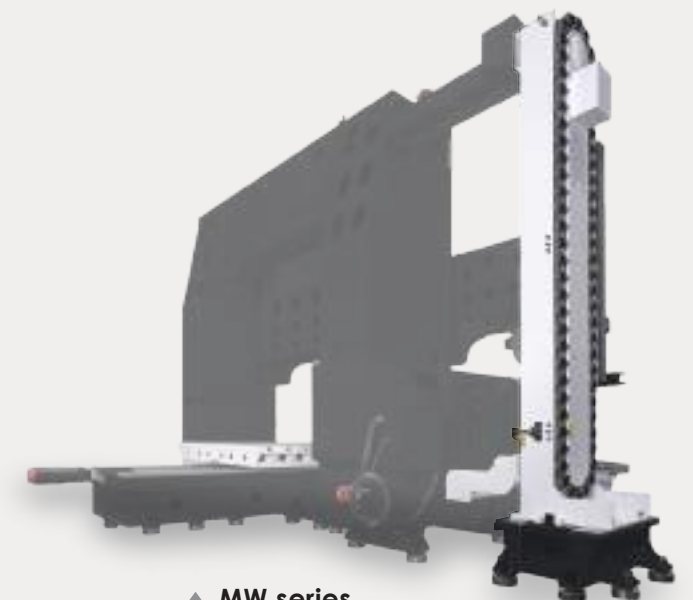
1. Efficient and Versatile Machining with Automatic Head and Tool Changers

- Can operate with the auto universal head / auto 90° head / extension head.
- The full automatic head-changer is provided with the protective cover and independent head magazine.
- The hydraulic cylinder is used for fast head changeover.
- Each magazine is provided with an independent moving door that is opened only during the head changeover to prevent debris from contaminating heads.
- Additional head magazines are also available. If you need them, contact your sales representative.



2 Chain-type Tool Magazine

This tool changing system is compatible with vertical and horizontal milling heads and supports BT50/CAT50 tool holders. It is easy to operate with a foot switch for tool loading and unloading. The tool magazine has an automatic door to prevent contamination from chips and coolant, with program-controlled opening and closing for added convenience and protection.



▲ MW series

04 Complete Angle Head Design Package

Meet Your Diverse Machining Needs

Operate With The Automatic Head



A/C Full Auto Milling Head (Auto Holding Head)

- Maximum speed : 5,000 rpm
- Maximum power : 26Kw
- The maximum torque to withstand : 930N-m
- Optional max pressure setting : 70BAR CTS

Automatic 90° Head (2.5°/ 1°)

- Maximum speed : 5,000/2,500 rpm(opt.)
- Maximum power : 26Kw
- The maximum torque to withstand : 930N-m
- Optional max pressure setting : 70 BAR CTS
- Minimum optional configuration C-axis positioning indexing : 1°



Automatically Extension Head (350 / 500mm)

- Maximum speed : 5,000 rpm
- Maximum power : 26Kw
- The maximum torque to withstand : 750N-m
- Optional max pressure setting : 70BAR CTS
- Automatic tool change function



Automatic Clamp / Unclamp + The Manual 90° Head

- Maximum speed : 2,000rpm
- Maximum power : 18.5Kw
- The maximum torque to withstand : 650N-m
- External guide pins enhance the positioning accuracy of the exchange head, with automatic grab head function and manual rotating angle function.

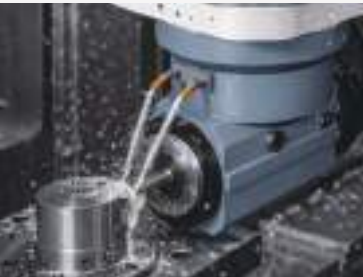


Create Customized Machining Plans

The Machining Methods Of The Full Auto Head



Composite Angular Milling



90° Side Milling



Extension Side Milling

Product types	AC universal head	90° side milling head	350/500mm extension head
Model number	HF-AU360H	HF-AU90L / H	HF-AE35 / 50L
Max. speed (rpm)	5,000	5,000	5,000
Tool type	BT50	BT50	BT50
Automatic indexing	5° / 2.5° / 1°	5° / 2.5° / 1°	-
Auto head	Auto	Auto	Auto
Automatic tool switch	Auto	Auto	Auto
Rotary angle	C : ±180° A : ±110°	±180°	-

Note : Applied to the auto 90° head

One unit capable of connecting up to 10 or 20 machines

Smart i-Factory System with Superbox (Opt.)

Through i-Factory, all machinery and equipment in the factory can be connected, and the machine connections are no longer limited to Hartford. Machines from other manufacturers can also be connected for real-time visualization and management. The system is composed of five key components: real-time monitoring, production planning, alert notifications, data analysis, and remote connectivity, allowing you to move away from traditional management models and embrace a simpler and more convenient approach to factory management.



Tailored one-to-many automation planning

Intelligent Automated Production Line Unit (Opt.)



Customizing an automated factory just for you, effectively reducing costs and enhancing competitiveness.

Easy to get started

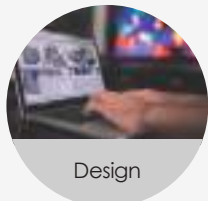
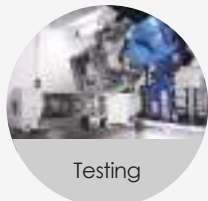
Hartford Robocell provides you a professional robot training and rich automation experience, to let you quickly learn and easily operate your automation systems.

Quality control monitoring

Automation systems have to pass all the strict Quality Control tests at every stage like design, assembly, testing, final inspection and shipment, complete quality control processes for all the products.

Professional analysis

Robocell Machining optimization service, to let you be on the top by using professional machining methods.



Hartrol Premium

Hartford Smartcenter APPS

1

Automation & Smart Factory

- Autopilot V2 Package
- Real-time Monitor Package
- Efficiency Improvement Package
- Smart Lubrication System
- Machine Play – Smartphone Remote Operation
- Wireless Network Function (Wi-Fi)

2

Monitoring & Energy Management

- Real-time Monitor Package (CCD Monitor / IP Camera)
- Energy Monitoring

3

Tool Protection & Machining Stability

- Tool Protection Suite (TPS)
- AFC – Automatic Feed Control
- Rigid Tapping Automatic Learning

4

CNC Control & Operation Enhancement

- Handwheel Simulation Mode
- HP Level R1–R10 Parameter Package

5

High-Speed / High-Accuracy Machining

- SSS High-speed High-accuracy Control
- High-speed High-accuracy Control III (G5P20000)
- High Speed Milling

6

Programming & User Interface

- Conversational Programming (HCP)

24

HR

Online Update System

Keep your operating system in optimal condition and stay up to date with the latest features from Hartford.

Hartford ZDT

Early warning before machine failure helps reduce unexpected downtime, minimizing productivity loss and cost.

AI

Chip Conveyor Opt.

Smart detection based on spindle current clears chips only when needed. The system runs on a 50% on/off cycle during cutting to save up to 50% motor power, and automatically reverses when chips build up to prevent overload and protect the conveyor.

AI

Lubrication Opt.

The system smartly delivers oil based on machine and cutting conditions, saving up to 50% oil and reducing costs while supporting eco-friendly operation.

Position

Position Opt.

When performing workpiece measurement with Hartrol Premium and Fanuc 15" IPC, operators can simply enter values through the intuitive guided interface—no need to memorize complex measurement commands, making the process effortless.

F

AFC Opt.

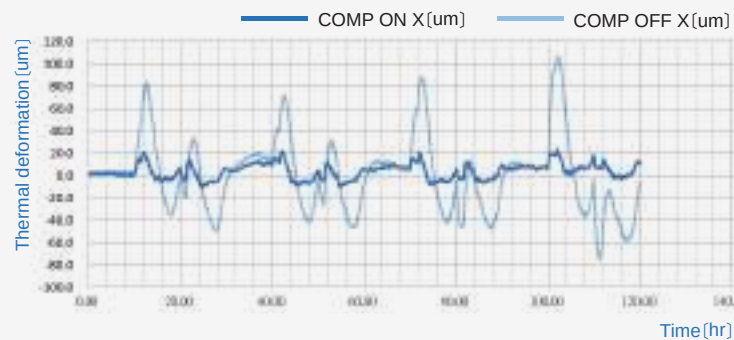
Spindle load monitoring allows users to set tool-specific load limits, boosting efficiency by up to 21% in heavy operations like face and side milling.

No More Thermal Drift –
Precision Machining, Zero Defects

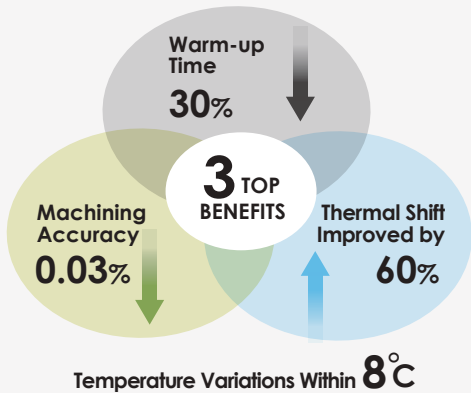
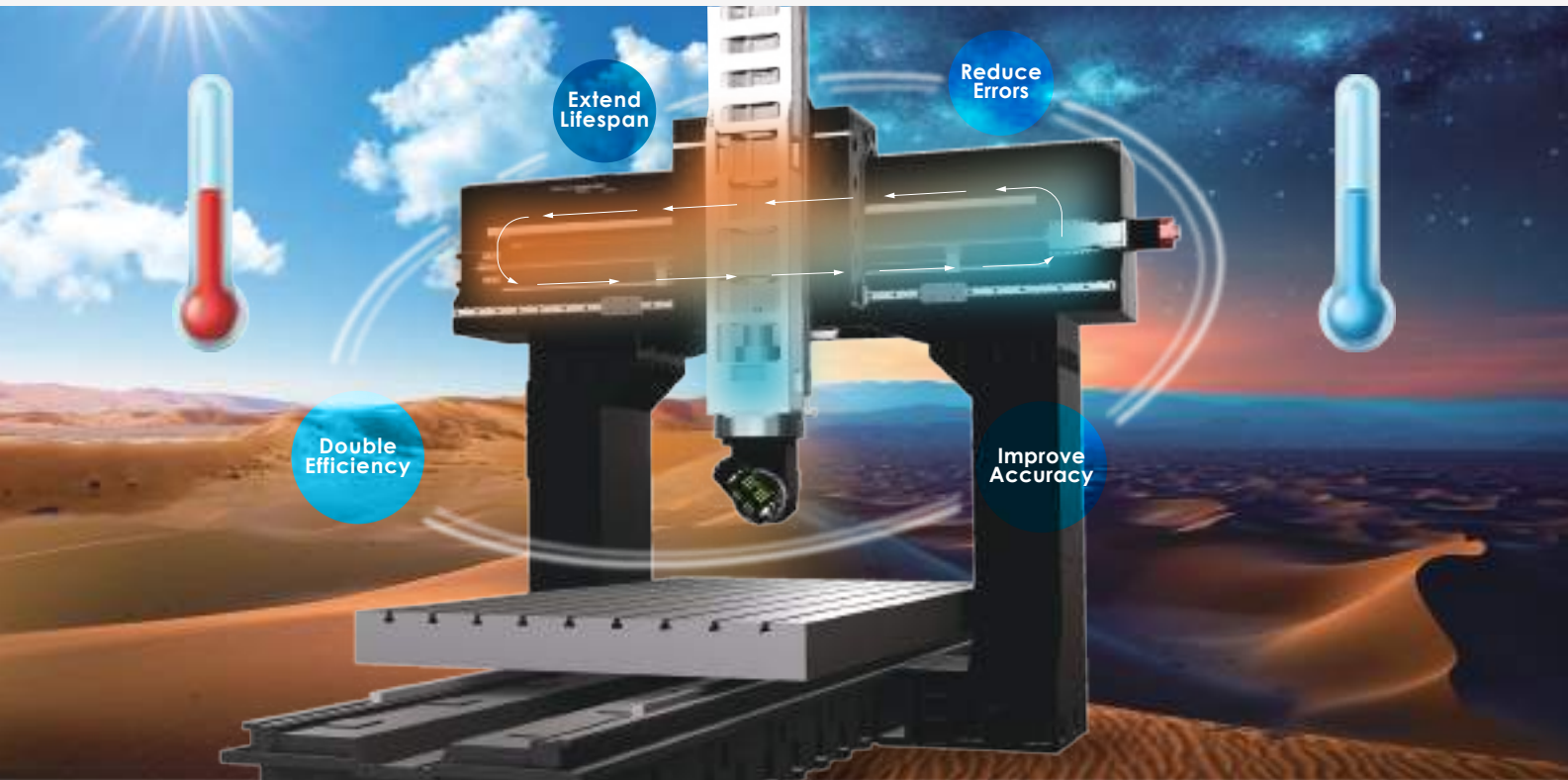
Thermal Compensation System (Opt.)

During prolonged machining or ambient temperature changes, thermal expansion can cause structural deformation and dimensional errors.

Hartford's exclusive Whole-Machine Ambient Thermal Deformation Compensation Technology uses high-precision sensing and smart algorithms to suppress thermal distortion, ensure machining accuracy, and significantly reduce warm-up and modeling time—boosting both production efficiency and yield.



HSA423-FANUCAI Thermal Compensation System X-axis



06 Hartrol Premium

Eco-Friendly Solutions for Energy Management

ECO and Energy Monitoring Dashboard (Opt.)



Gas-based weight replacement instead of hydraulic
All lighting equipment is LED
FEM analysis for structural lightweight design

Energy Monitoring Dashboard

Real-time monitoring of energy consumption for each electrical component of the machine, with the ability to query historical energy consumption data and generate reports.



Eco Mode

Helps you control five peripheral devices, including the hydraulic motor, oil cooler, mist collector, work lights, and chip conveyor, to prevent unnecessary energy consumption when the machine is idle.



Standard Spindle Type

- #50 Gear 6000 rpm

Optional Spindle Type

- #50 Gear 8000 rpm
- #50 Hybrid built-in 10000 rpm

Optimized Performance for Speed and Cutting Efficiency

Model : MC series
■ Spindle : 7,000 rpm Gear type 26kw ■ Cutting material : S45C

Face milling		End Milling		Tapping		Drilling	
Tool diameter	Ø 125 mm	Tool diameter	Ø 63 mm	Tool diameter	M36 x P4 mm	Tool diameter	Ø 53 mm
Feed rate	2,050 mm/min	Feed rate	1,350 mm/min	Feed rate	480 mm/min	Feed rate	100 mm/min
Cutting depth	4 mm	Cutting depth	40 mm	Cutting depth	40 mm	Cutting depth	50 mm
Cutting width	100 mm	Cutting width	10 mm	Spindle speed	120 rpm	Spindle speed	400 rpm
Cutting volume	820 cc/min	Cutting volume	540 cc/min				

Model : MW-13430
■ Spindle : 6,000 rpm#50 Gear type 37kw ■ Cutting material : S45C

Face milling		End Milling		Tapping		Drilling	
Tool diameter	Ø 125 mm	Tool diameter	Ø 63 mm	Tool diameter	M45 x P3.0	Tool diameter	Ø 76 mm
Feed rate	3,400 mm/min	Feed rate	1,800 mm/min	Feed rate	150 mm/min	Feed rate	100 mm/min
Cutting depth	4 mm	Cutting depth	35 mm	Cutting depth	35 mm	Cutting depth	45 mm
Cutting width	100 mm	Cutting width	10 mm	Spindle speed	50 rpm	Spindle speed	350 rpm
Cutting volume	1360 cc	Cutting volume	630 cc				

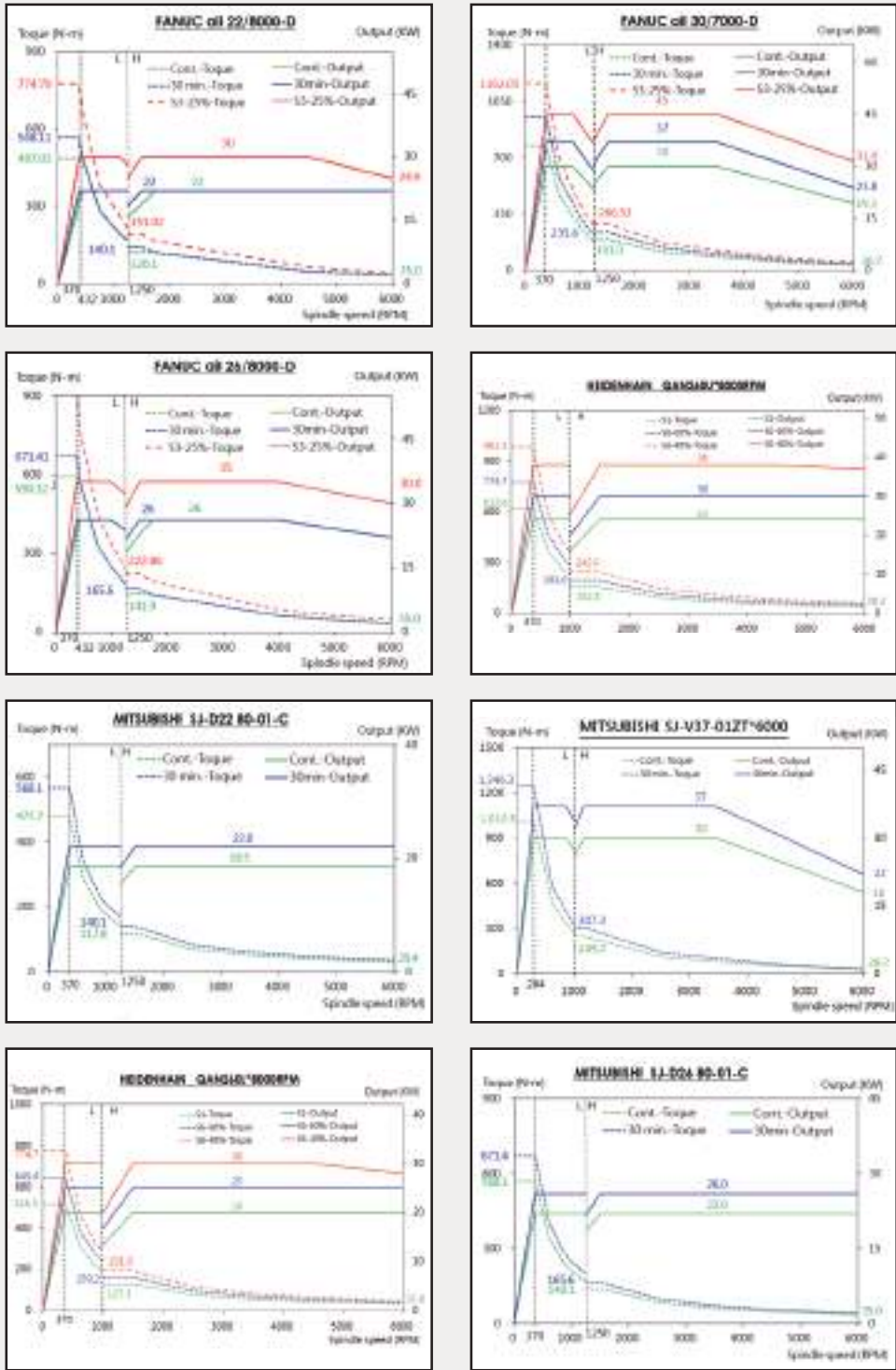
Model : MCW-14550
■ Spindle : 4,000 rpm#50 Gear type 37kw ■ Cutting material : S45C

Face milling		End Milling		Tapping		Drilling	
Tool diameter	Ø 125 mm	Tool diameter	Ø 63 mm	Tool diameter	M72 x P6	Tool diameter	Ø 76 mm
Feed rate	2,800 mm/min	Feed rate	2,800 mm/min	Feed rate	300 mm/min	Feed rate	100 mm/min
Cutting depth	4 mm	Cutting depth	35 mm	Cutting depth	144 mm	Cutting depth	45 mm
Cutting width	100 mm	Cutting width	10 mm	Spindle speed	50 rpm	Spindle speed	350 rpm
Cutting volume	1120 cc/min	Cutting volume	980 cc				

All the results featured in this catalogue were produced under shich testing condition in a special zed testing enviroment.
Under dfferent festing conditions and in less than ideal tesing environments. That the rest results vary fom those shown in this catalogue.

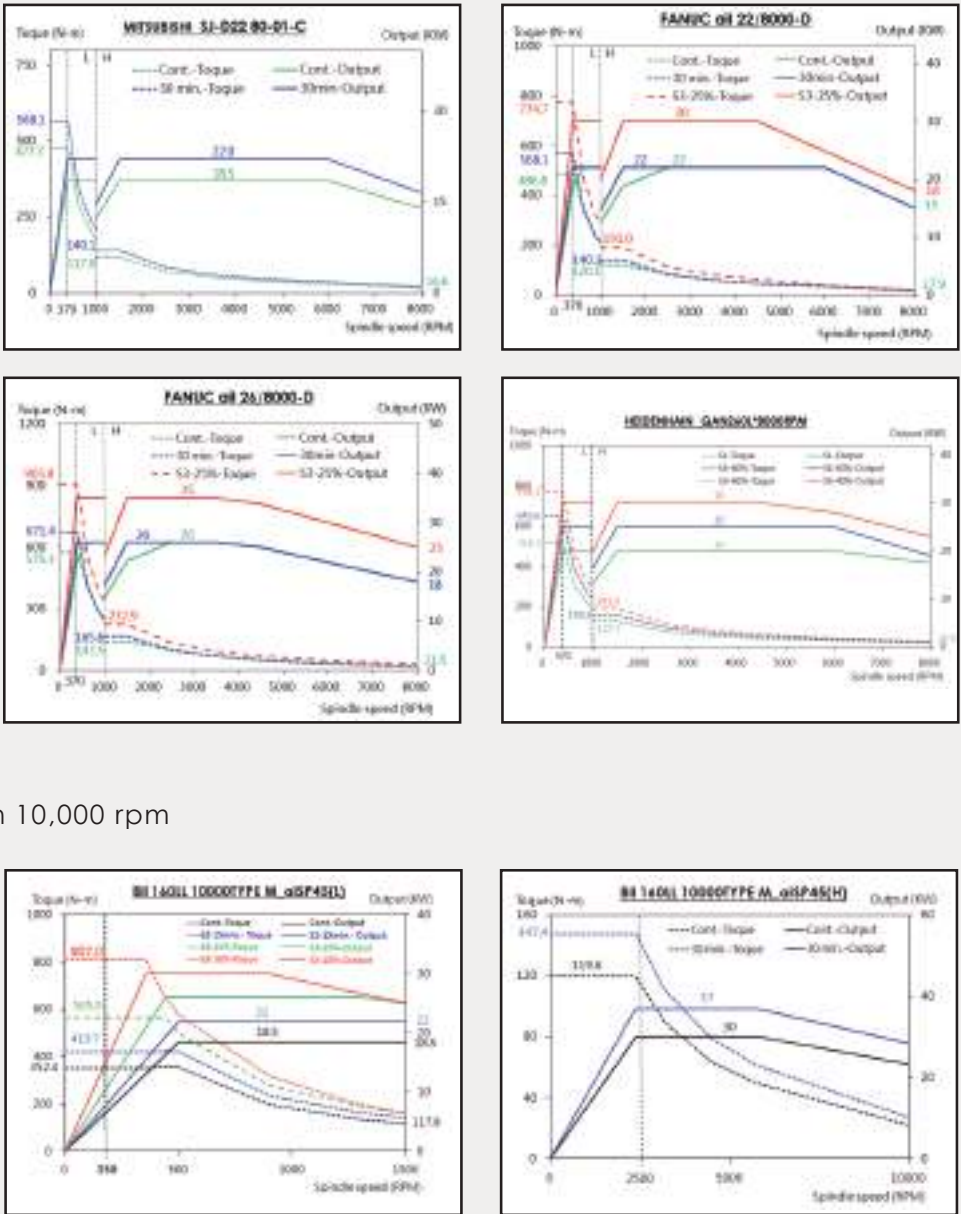
Spindle torque diagrams

- Gear 6,000 rpm



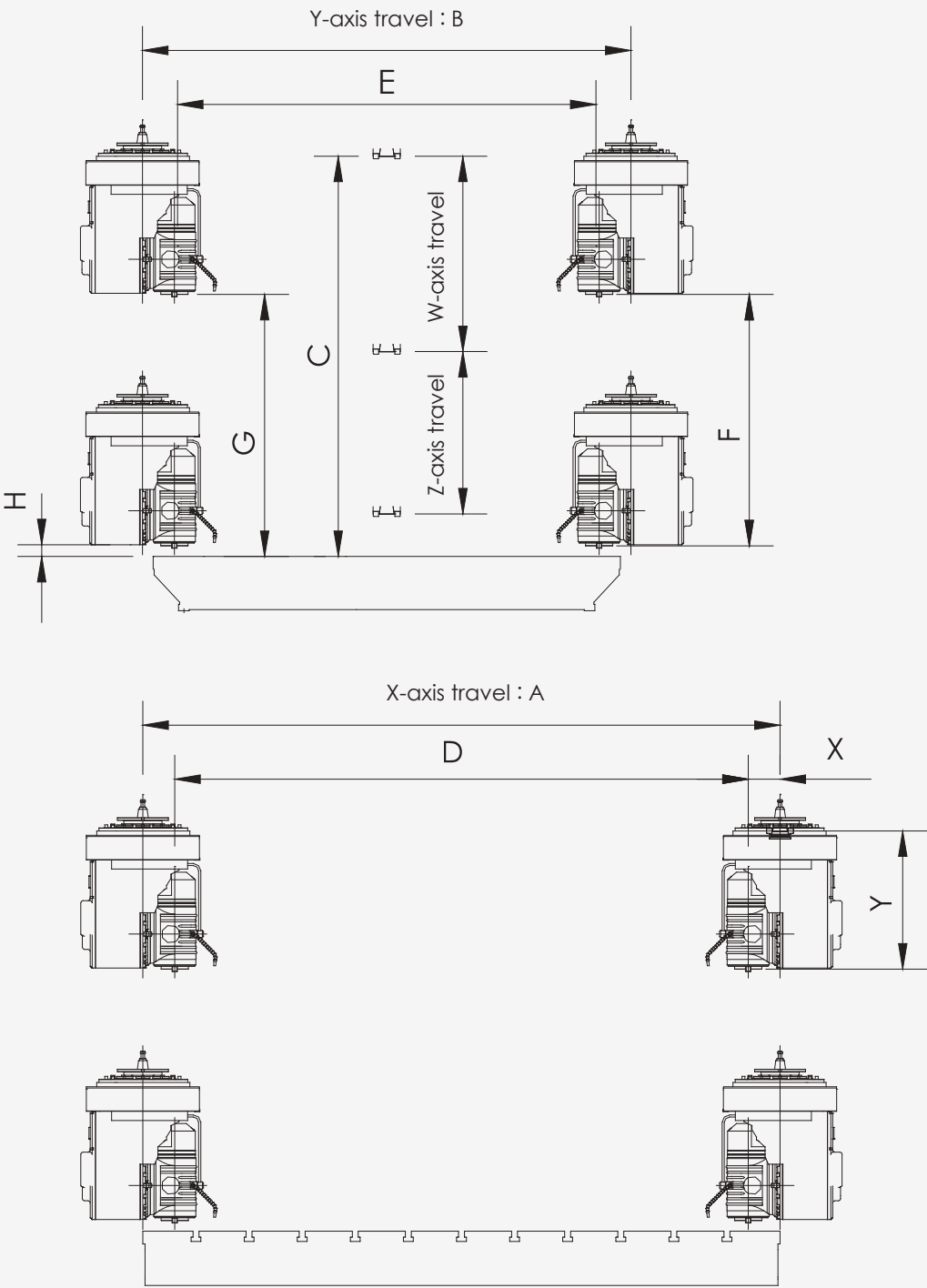
Spindle torque diagrams

- Gear 8,000 rpm



- Hybrid built-in 10,000 rpm

■ Automatic universal head_HF-AU360_V



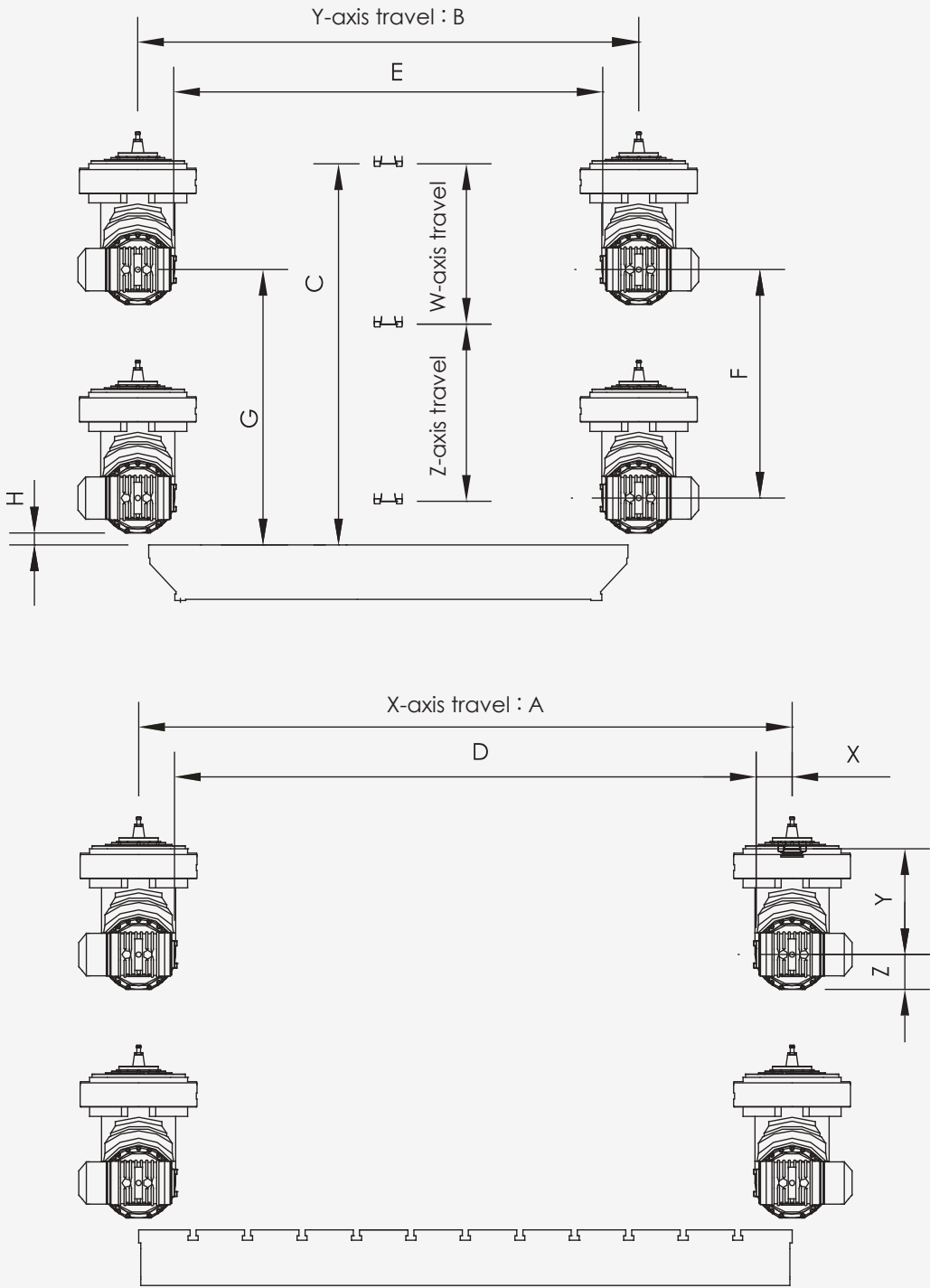
unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	G	H	Reference	
							A-(X*2)	B-(X*2)	C-(Y+H)	C-Y		X	Y
MW-433				4000		2400	3700		1700	1750			
MW-533			2000	5000	3300	2700	4700	3000	2000	2020			
MW-633				6000		3200	5700		2500	2550			
MW-543	1000	1200		5000			4700						
MW-643		1500		6000	4300	2660	5700	4000	1660	1710			
MW-743		1800	3500	7000		2860	6700		2160	2210			
MW-843				8000		3160	7700		2460	2510			
MC-833				8000			7700						
MC-1033				10000			9700						
MC-1233				12000			11700						
MC-1433			3300	14000	3300		13700	3000					
MC-1633				16000			15700						
MC-1833				18000			17700						
MC-2033				20000			19700						
MC-845				8000			7700						
MC-1045				10000			9700						
MC-1245	1000			12000		1400	11700						
MC-1445	1200	-	4500	14000	4500	1600	13700	4200	700	750			
MC-1645	1400			16000		1800	15700		900	950			
MC-1845				18000			17700		1100	1150			
MC-2045				20000			19700				50	150	650
MC-855				8000			7700						
MC-1055				10000			9700						
MC-1255				12000			11700						
MC-1455			5500	14000			13700						
MC-1655				16000			15700						
MC-1855				18000			17700						
MC-2055				20000			19700						
MCW-8550				8000	5500		7700	5200					
MCW-10550				10000			9700						
MCW-12550				12000			11700						
MCW-14550			4500	14000			13700						
MCW-16550				16000			15700						
MCW-18550				18000			17700						
MCW-20550	1000	1800		20000		3250	19700		2550	2600			
MCW-8650	1200	2100		8000		3750	7700		3050	3100			
MCW-10650				10000			9700						
MCW-12650				12000			11700						
MCW-14650			5500	14000	6500		13700	6200					
MCW-16650				16000			15700						
MCW-18650				18000			17700						
MCW-20650				20000			19700						

09

Machining Range Of The Angle Head

Automatic universal head_HF-AU360_H



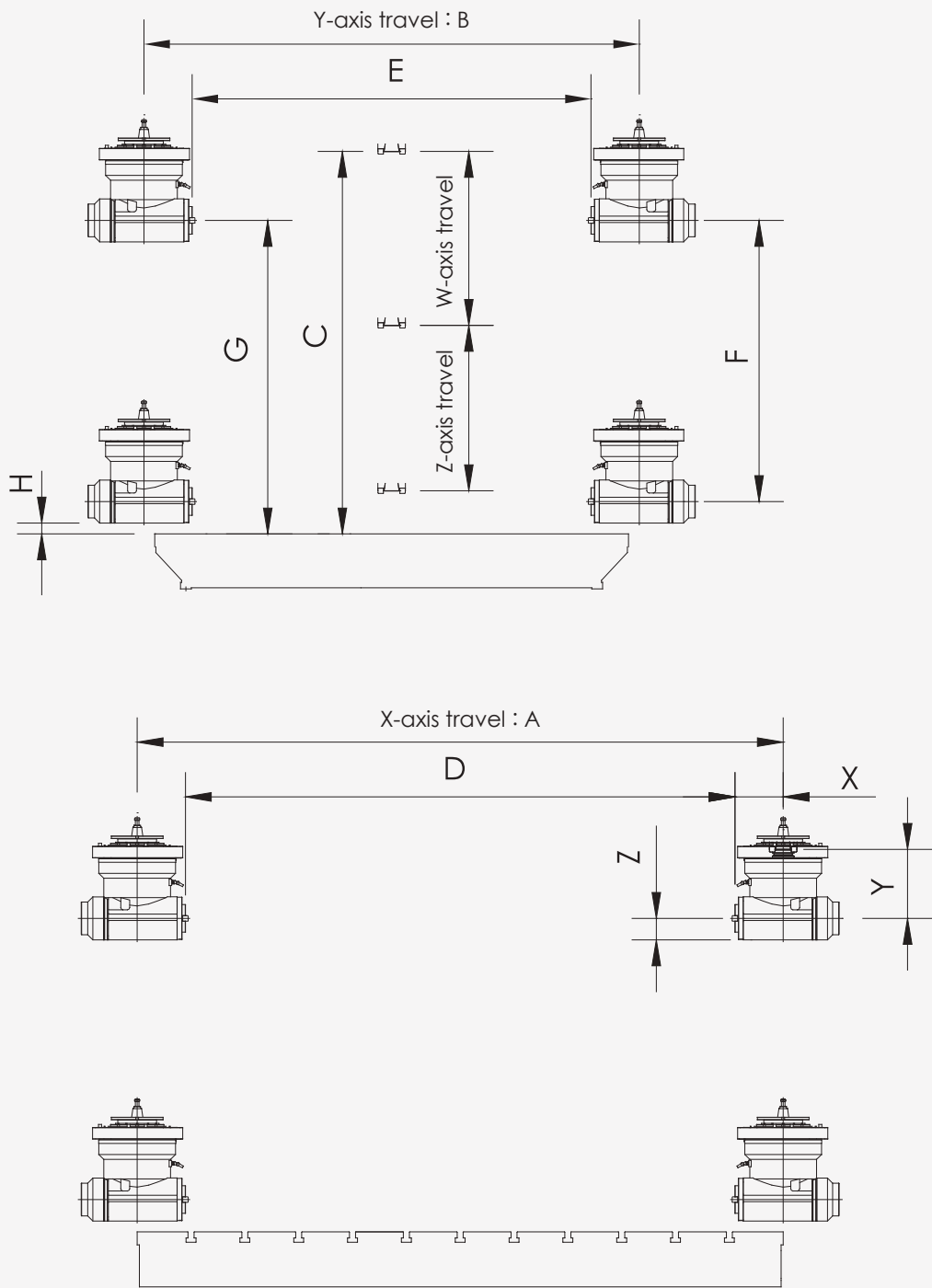
unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	G	H	Reference		
							A-(X*2)	B-(X*2)	C-(Y+H)	C-Y		X	Y	Z
MW-433				4000		2400	3670		1705	1915				
MW-533				5000	3300	2700	4670	2970	2005	2215				
MW-633				6000		3200	5670		2505	2715				
MW-543	1000 1200	1200 1500 1800		5000		2360	4670		1665	1875				
MW-643				6000	4300	2660	5670	3970	2965	2175				
MW-743				7000		2860	6670		2165	2375				
MW-843				8000		3160	7670		2465	2675				
MC-833			3300	8000			7670							
MC-1033				10000			9670							
MC-1233				12000			11670							
MC-1433				14000	3300		13670	2970						
MC-1633				16000			15670							
MC-1833				18000			17670							
MC-2033				20000			19670							
MC-845				8000			7670							
MC-1045				10000			9670							
MC-1245	1000 1200 1400	-	4500	12000	4500	1400	11670		705	915				
MC-1445				14000		1600	13670	4170	905	1115				
MC-1645				16000		1800	15670		1105	1315				
MC-1845				18000			17670							
MC-2045				20000			19670				50	165	485	160
MC-855				8000			7670							
MC-1055				10000			9670							
MC-1255				12000			11670							
MC-1455			5500	14000			13670							
MC-1655				16000			15670							
MC-1855				18000			17670							
MC-2055				20000			19670							
MCW-8550				8000	5500		7670	5170						
MCW-10550				10000			9670							
MCW-12550				12000			11670							
MCW-14550			4500	14000			13670							
MCW-16550				16000			15670							
MCW-18550				18000			17670							
MCW-20550	1000 1200	1800 2100		20000		3250	19670		2555	2765				
MCW-8650				8000		3750	7670		3055	3265				
MCW-10650				10000			9670							
MCW-12650				12000			11670							
MCW-14650			5500	14000	6500		13670	6170						
MCW-16650				16000			15670							
MCW-18650				18000			17670							
MCW-20650				20000			19670							

09

Machining Range Of The Angle Head

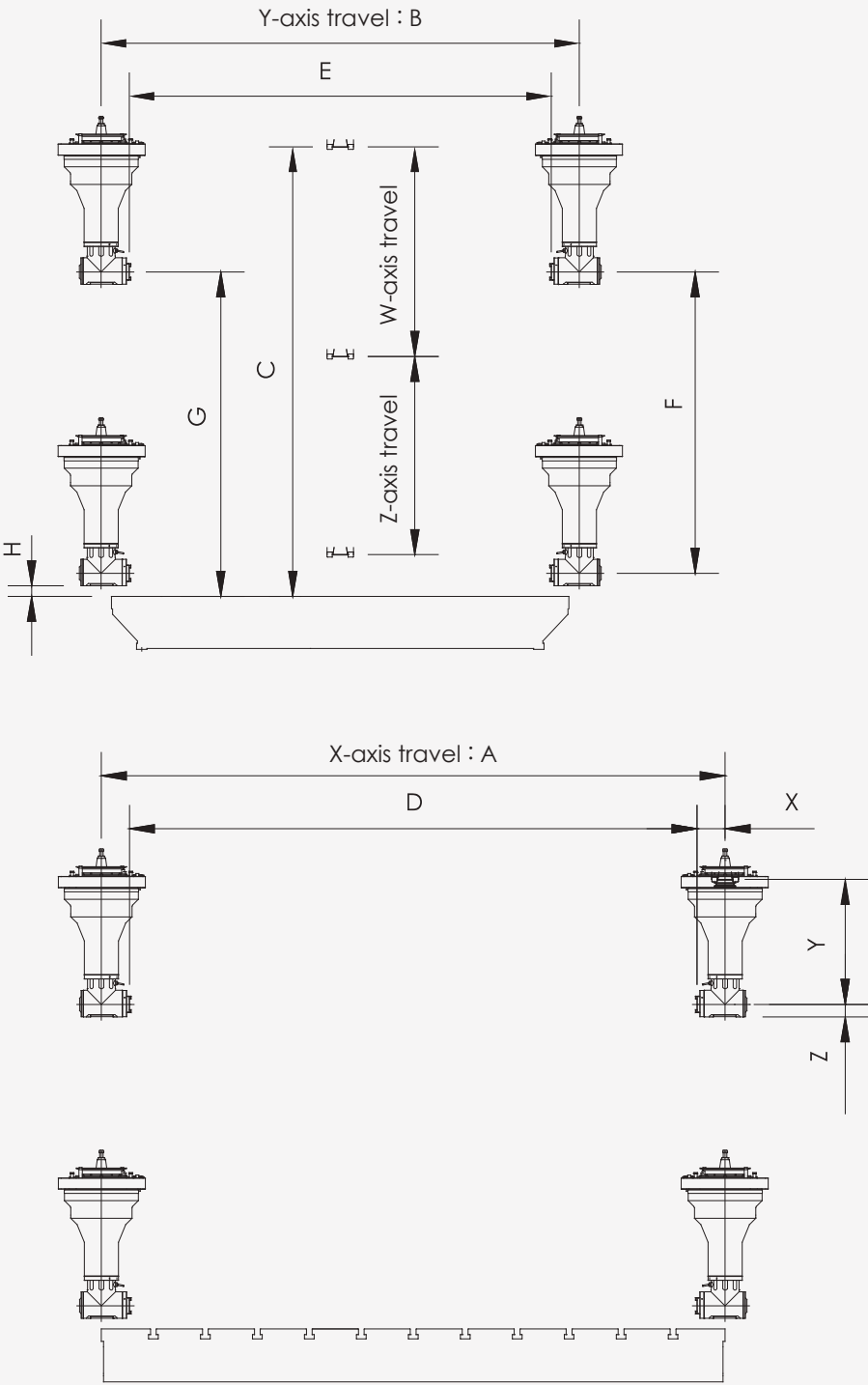
Extensive 90 degree head_HF-A90



unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	G	H	Reference		
							A-(X*2)	B-(X*2)	C-(Y+H)	C-Y		X	Y	Z
MW-433				4000		2400	3552		1930	2080				
MW-533				5000	3300	2700	4552	2852	2230	2380				
MW-633				6000		3200	5552		2430	2580				
MW-543	1000	1200	2500	5000			4552		1890	2040				
MW-643	1200	1500		6000	4300	2360	5552	3852	2190	2340				
MW-743		1800		7000		2860	6552		2390	2540				
MW-843				8000		3160	7552		2690	2840				
MC-833				8000			7552							
MC-1033				10000			9552							
MC-1233				12000			11552							
MC-1433			3300	14000	3300		13552	2852						
MC-1633				16000			15552							
MC-1833				18000			17552							
MC-2033				20000			19552							
MC-845				8000			7552							
MC-1045				10000			9552							
MC-1245	1000			12000		1400	11552		930	1080				
MC-1445	1200		4500	14000	4500	1600	13552	4052	1130	1280				
MC-1645	1400			16000		1800	15552		1330	1480				
MC-1845				18000			17552							
MC-2045				20000			19552				50	224	320	100
MC-855				8000			7552							
MC-1055				10000			9552							
MC-1255				12000			11552							
MC-1455			5500	14000			13552							
MC-1655				16000			15552							
MC-1855				18000			17552							
MC-2055				20000			19552							
MCW-8550				8000	5500		7552	5052						
MCW-10550				10000			9552							
MCW-12550				12000			11552							
MCW-14550			4500	14000			13552							
MCW-16550				16000			15552							
MCW-18550				18000			17552							
MCW-20550	1000	1800		20000		3250	19552		2780	2930				
MCW-8650	1200	2100		8000		3750	7552		3280	3430				
MCW-10650				10000			9552							
MCW-12650				12000			11552							
MCW-14650			5500	14000	6500		13552	6052						
MCW-16650				16000			15552							
MCW-18650				18000			17552							
MCW-20650				20000			19552							

Automatic 90 degree head_HF-AR90



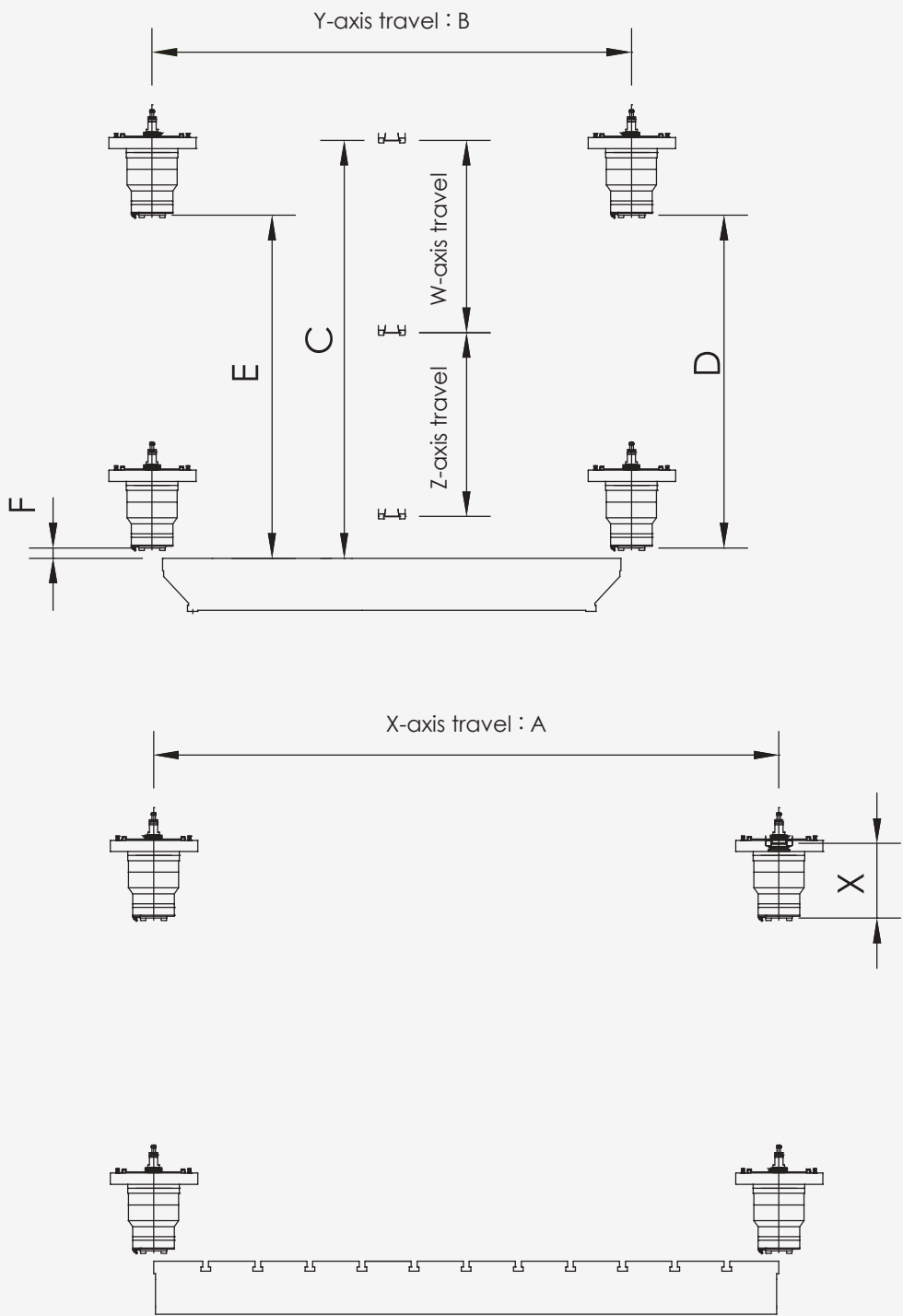
unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	G	H	Reference		
							A-(X*2)	B-(X*2)	C-(Y+H)	C-Y		X	Y	Z
MW-433				4000		2400	3730		1690	1800				
MW-533			2500	5000	3300	2700	4730	3030	1990	2100				
MW-633				6000		3200	5730		2490	2600				
MW-543	1000 1200	1200 1500 1800		5000			4730							
MW-643				6000			5730							
MW-743			3500	7000	4300	2860 3160	6730	4030	2150 2450	2260 2560				
MW-843				8000			7730							
MC-833				8000			7730							
MC-1033				10000			9730							
MC-1233				12000			11730							
MC-1433			3300	14000	3300		13730	3030						
MC-1633				16000			15730							
MC-1833				18000			17730							
MC-2033				20000			19730							
MC-845				8000			7730							
MC-1045				10000			9730							
MC-1245	1000 1200 1400			12000		1400 1600 1800	11730							
MC-1445		-	4500	14000	4500		13730	4230	690 890 1090	800 1000 1200				
MC-1645				16000			15730							
MC-1845				18000			17730							
MC-2045				20000			19730							
MC-855				8000			7730				50	135	600	60
MC-1055				10000			9730							
MC-1255				12000			11730							
MC-1455			5500	14000			13730							
MC-1655				16000			15730							
MC-1855				18000			17730							
MC-2055				20000			19730							
MCW-8550				8000	5500		7730	5230						
MCW-10550				10000			9730							
MCW-12550				12000			11730							
MCW-14550			4500	14000			13730							
MCW-16550				16000			15730							
MCW-18550				18000			17730							
MCW-20550	1000 1200	1800 2100		20000		3250 3750	19730		2540 3040	2650 3150				
MCW-8650				8000			7730							
MCW-10650				10000			9730							
MCW-12650				12000			11730							
MCW-14650			5500	14000	6500		13730	6230						
MCW-16650				16000			15730							
MCW-18650				18000			17730							
MCW-20650				20000			19730							

09

Machining Range Of The Angle Head

■ Automatically extension head_HF-AE35L



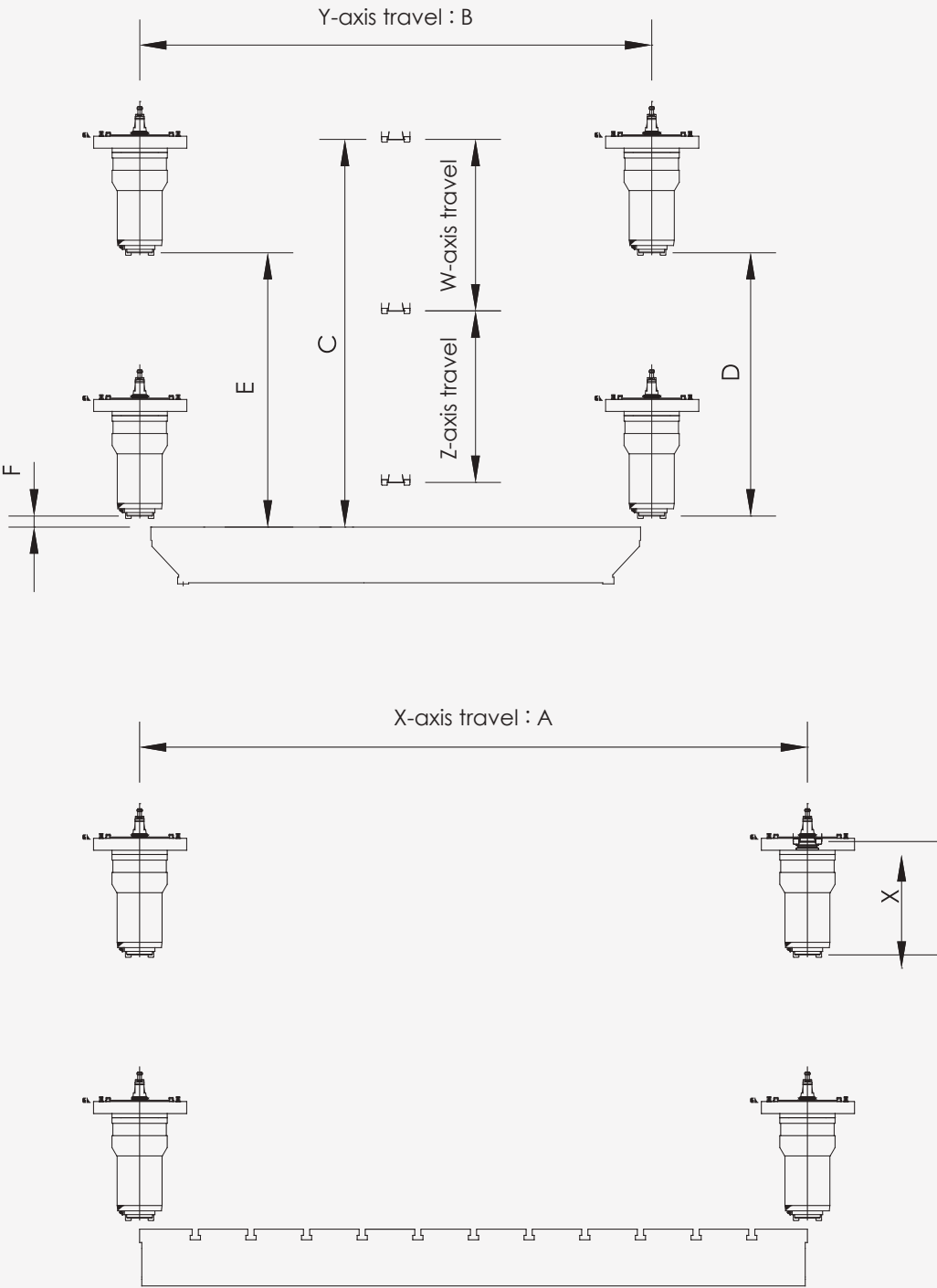
unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	Reference
							C-(X+F)	C-X		X
MW-433				4000		2400	1992	2042		
MW-533			2500	5000	3300	2700	2292	2342		
MW-633				6000		2900	2492	2542		
MW-543	1000	1200		5000		3200	2792	2842		
MW-643	1200	1500		6000						
MW-743		1800		7000	4300	2360	1952	2002		
MW-843			3500	8000		2660	2252	2302		
MC-833				8000		2860	2452	2502		
MC-1033				10000		3160	2752	2802		
MC-1233				12000						
MC-1433			3300	14000	3300					
MC-1633				16000						
MC-1833				18000						
MC-2033				20000						
MC-845				8000						
MC-1045				10000						
MC-1245	1000			12000		1400	992	1042		
MC-1445	1200	-	4500	14000	4500	1600	1192	1242		
MC-1645	1400			16000		1800	1392	1442		
MC-1845				18000						
MC-2045				20000						
MC-855				8000					50	358
MC-1055				10000						
MC-1255				12000						
MC-1455			5500	14000						
MC-1655				16000						
MC-1855				18000						
MC-2055				20000						
MCW-8550				8000	5500					
MCW-10550				10000						
MCW-12550				12000						
MCW-14550			4500	14000						
MCW-16550				16000						
MCW-18550				18000						
MCW-20550	1000	1800		20000		3250	2842	2892		
MCW-8650	1200	2100		8000		3750	3342	3392		
MCW-10650				10000						
MCW-12650				12000						
MCW-14650			5500	14000	6500					
MCW-16650				16000						
MCW-18650				18000						
MCW-20650				20000						

09

Machining Range Of The Angle Head

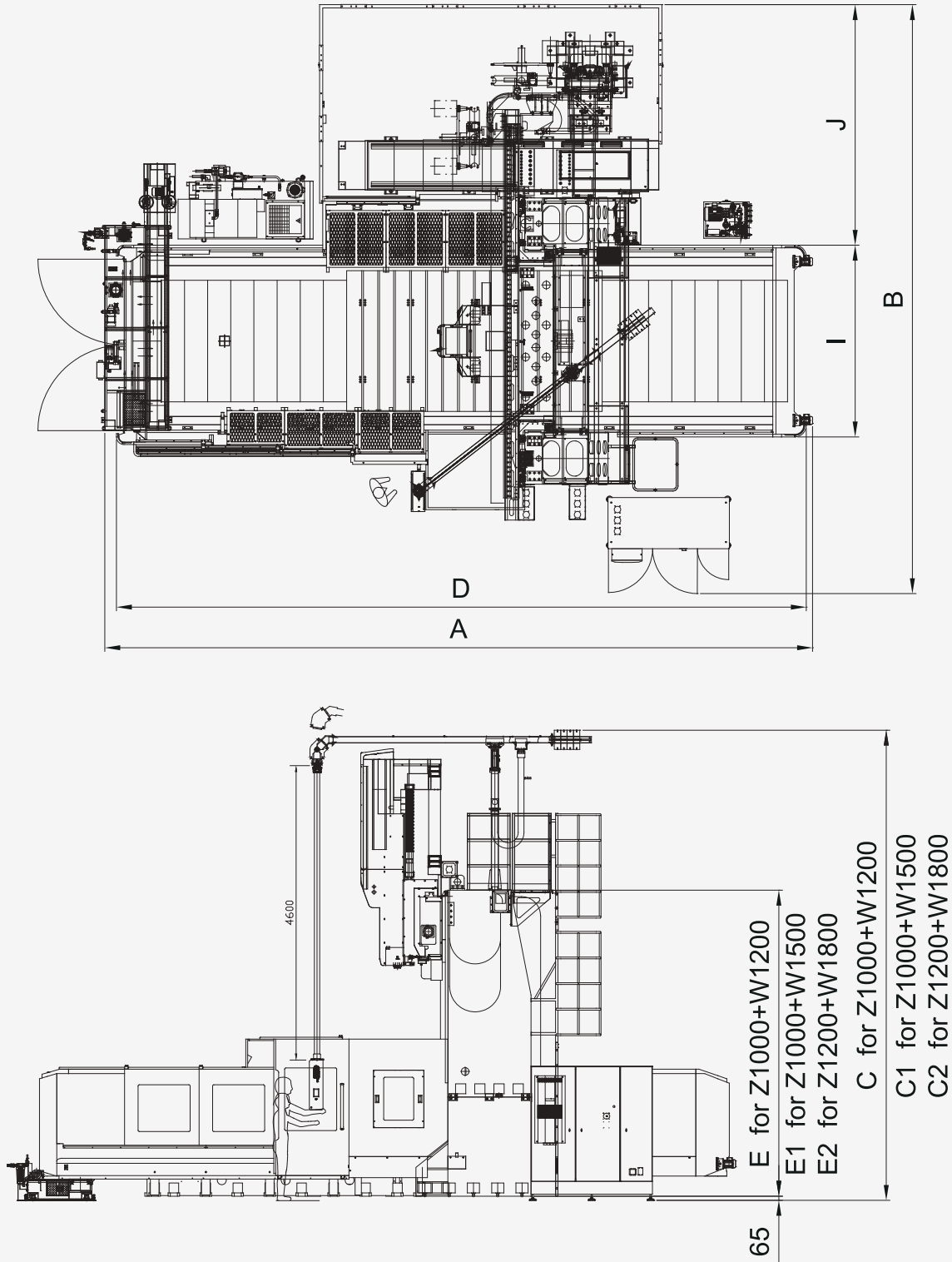
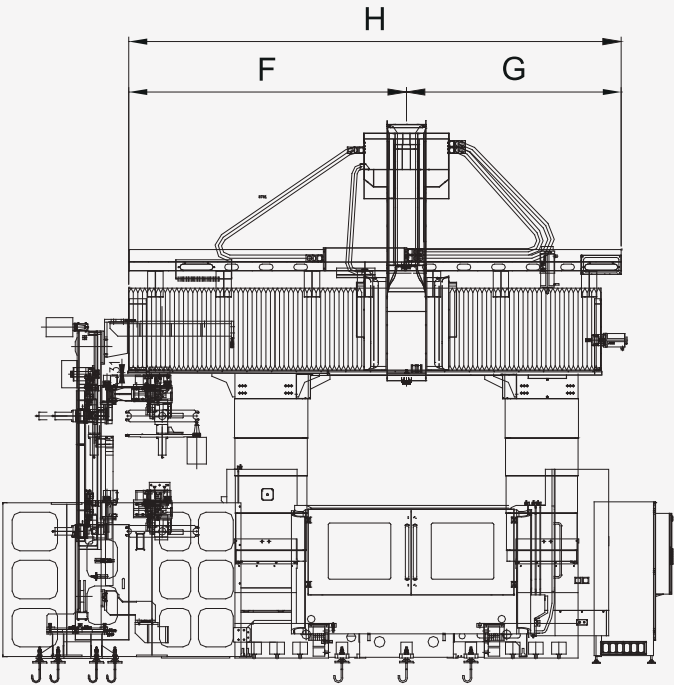
■ Automatically extension head_HF-AE50L



unit : mm () : opt

MODEL	Z-TRAVEL	W-TRAVEL	Distance from column to column	A	B	C	D	E	F	Reference
							C-(X+F)	C-X		X
MW-433				4000		2400	1842	1892		
MW-533			2500	5000	3300	2700	2142	2192		
MW-633				6000		2900	2342	2392		
MW-543	1000	1200		5000		3200	2642	2692		
MW-643	1200	1500		6000						
MW-743		1800		7000	4300	2360	1802	1852		
MW-843			3500	8000		2660	2102	2152		
MC-833				8000		2860	2302	2352		
MC-1033				10000		3160	2602	2652		
MC-1233				12000						
MC-1433			3300	14000	3300					
MC-1633				16000						
MC-1833				18000						
MC-2033				20000						
MC-845				8000						
MC-1045				10000						
MC-1245	1000			12000		1400	842	892		
MC-1445	1200	-	4500	14000	4500	1600	1042	1092		
MC-1645	1400			16000		1800	1242	1292		
MC-1845				18000						
MC-2045				20000						
MC-855				8000					50	508
MC-1055				10000						
MC-1255				12000						
MC-1455			5500	14000						
MC-1655				16000						
MC-1855				18000						
MC-2055				20000						
MCW-8550				8000	5500					
MCW-10550				10000						
MCW-12550				12000						
MCW-14550			4500	14000						
MCW-16550				16000						
MCW-18550				18000						
MCW-20550	1000	1800		20000		3250	2692	2742		
MCW-8650	1200	2100		8000		3750	3192	3242		
MCW-10650				10000						
MCW-12650				12000						
MCW-14650			5500	14000	6500					
MCW-16650				16000						
MCW-18650				18000						
MCW-20650				20000						

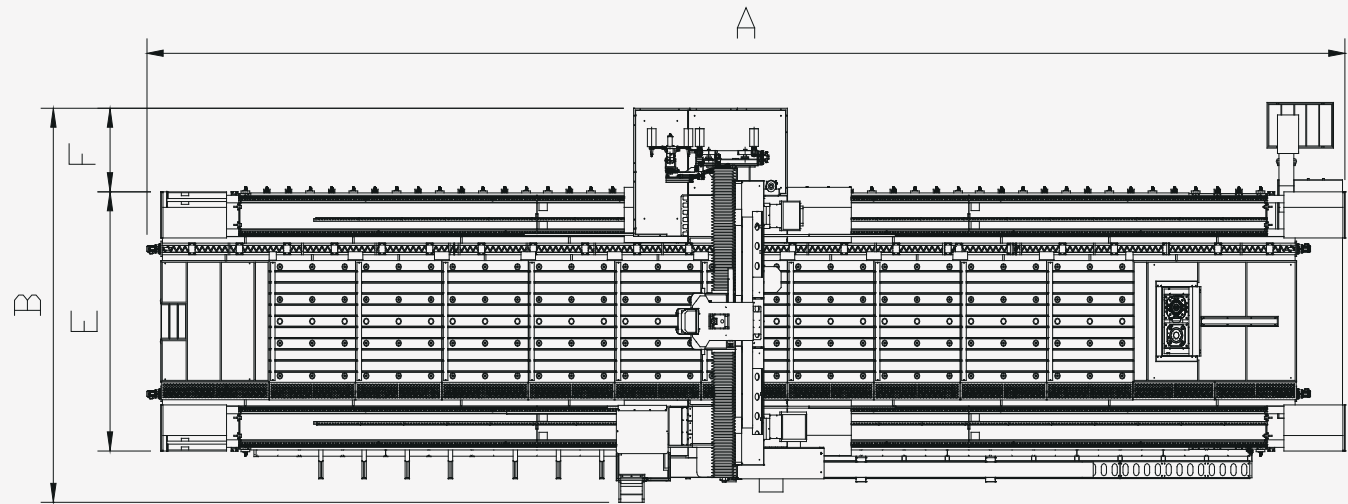
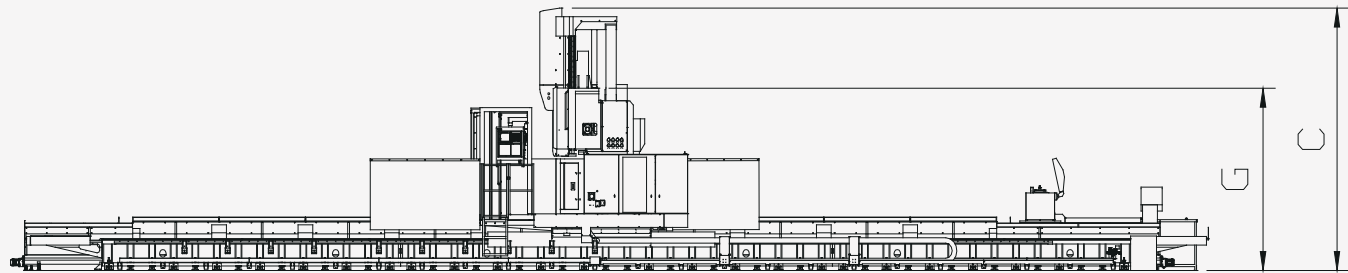
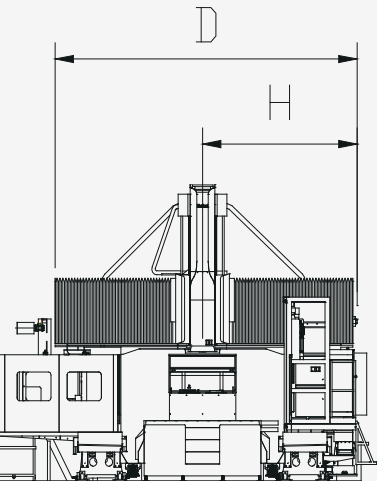
■ MW series



Modle	MW-433	MW-533	MW-633	MW-543	MW-643	MW-743	MW-843
A	11076	13076	15076	13076	15076	17076	19076
B	9200	9200	9200	10200	10200	10200	10200
C	7046	7046	7046	7046	7046	7046	7046
C1	7346	7346	7346	7346	7346	7346	7346
C2	8046	8046	8046	8046	8046	8046	8046
D	10796	12796	14796	12796	14796	16796	18796
E	4480	4480	4480	4480	4480	4480	4480
E1	4780	4780	4780	4780	4780	4780	4780
E2	5280	5280	5280	5280	5280	5280	5280
F	3617	3617	3617	4117	4117	4117	4117
G	2797	2797	2797	3297	3297	3297	3297
H	6414	6414	6414	7414	7414	7414	7414
I	2994	2994	2994	3994	3994	3994	3994
J	3758	3758	3758	3758	3758	3758	3758

Unit : mm

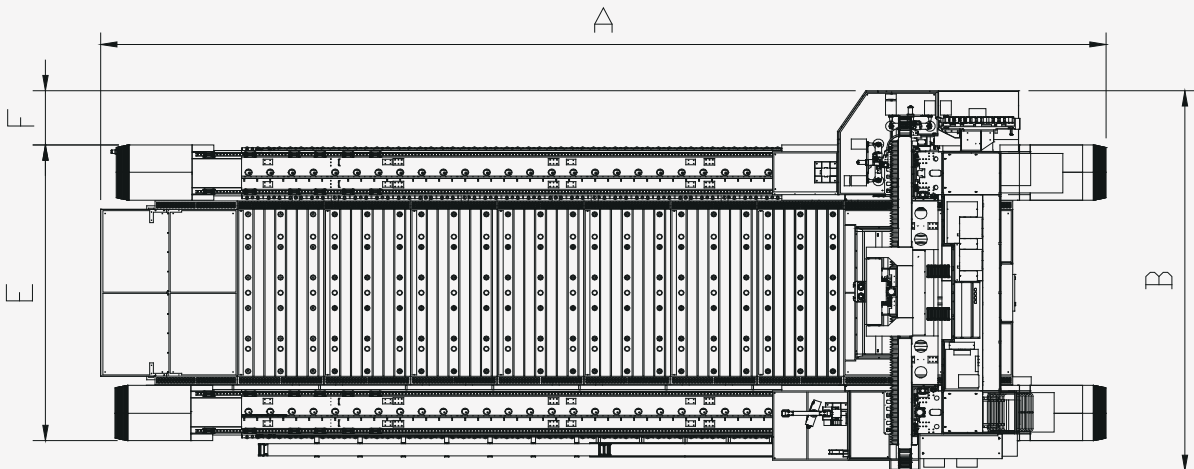
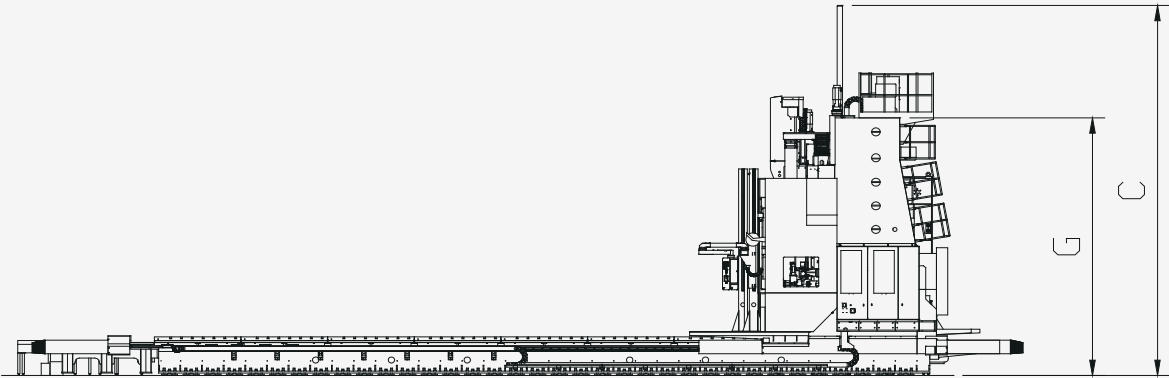
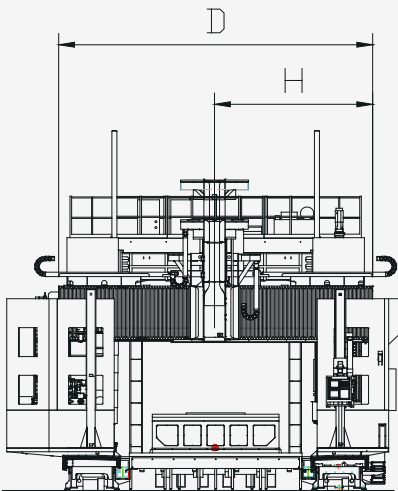
MC-2031



Modle	MC-2031
A	27730
B	7774
C	5175
D	6190
E	5112
F	1648
G	3596
H	3168

Unit : mm

MCW-14550



Modle	MCW-14550
A	23213
B	9320
C	9082
D	7456
E	7259
F	1330
G	6325
H	3755

Unit : mm

11

MW Mechanical Specifications Table

		Unit	MW - 433	MW - 533	MW - 633
Table	Working surface	mm	4000 × 2200	5000 × 2200	6000 × 2200
	T-slot Width x pitch(number)	mm	28 x 250	28 x 250	28 x 250
	Max.load (Average)	kg/m²	12000	15000	18000
Travel	X-axis travel	mm	4000	5000	6000
	Y-axis travel	mm	3300	3300	3300
	Z-axis travel	mm	1000 (opt.1200)	1000 (opt.1200)	1000 (opt.1200)
	W-axis travel	mm	1200 (opt.1500 / 1800)	1200 (opt.1500 / 1800)	1200 (opt.1500 / 1800)
	Distance from spindle to table #50	mm	200 ~ 2400 (Z : 1000_W : 1200) 200 ~ 2900 (Z : 1200_W : 1500)	200 ~ 2400 (Z : 1000_W : 1200) 200 ~ 2900 (Z : 1200_W : 1500)	200 ~ 2400 (Z : 1000_W : 1200) 200 ~ 2900 (Z : 1200_W : 1500)
	Distance from spindle center to column	mm	750	750	750
Distance between two columns		mm	2500	2500	2500
Spindle	Spindle nose taper		#50	#50	#50
	Spindle speed(Built-in)	rpm	10000	10000	10000
	Spindle speed(Gear)	rpm	6000 / 8000	6000 / 8000	6000 / 8000
Feed	Cutting feedrate(X/Y/Z)	m/min	10 / 10 / 10	8 / 10 / 10	8 / 10 / 10
	Rapid traverse rate (X/Y/Z)	m/min	20 / 16 / 16 / 3	14 / 16 / 16 / 3	12 / 16 / 16 / 3
ATC	Capacity	pcs	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
	Max.tool weight	kg	20	20	20
	Max.tool size(dia.x length)	mm	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
	Tool shank		BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
	Pull stub bolt		P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
Motor	Spindle drive motor (cont./30 min)	kw	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
Pos. Acc.	Positioning Accuracy (JIS B6330),No Scale	mm	±0.012	±0.012	±0.012
	Repeatability (JIS B6330),No Scale	mm	±0.003	±0.003	±0.003
	Positioning Accuracy(JIS B6330),With Scale	mm	±0.010	±0.010	±0.010
	Repeatability(JIS B6330),With Scale	mm	±0.003	±0.003	±0.003
	Positioning accuracy (VDI 3441)	mm	0.018	0.026	0.028
	Repeatability(VDI 3441)	mm	0.015	0.021	0.024
Other	Required air pressure	kg/cm²	6.5	6.5	6.5
	Electric power requirement	KVA	-	-	-
	Floor space(standard tank)	mm	13000 x 10700	15000 x 10700	17000 x 10700
	Machine dimension(LxWxH)	mm	Z1000 / W1200 : 11076 x 9200 x 7046 Z1000 / W1500 : 11076 x 9200 x 7346	Z1000 / W1200 : 13076 x 9200 x 7046 Z1000 / W1500 : 13076 x 9200 x 7346	Z1000 / W1200 : 15076 x 9200 x 7046 Z1000 / W1500 : 15076 x 9200 x 7346

MW - 543	MW - 643	MW - 743	MW - 843
5000 × 3000	6000 x 3000	7000 x 3000	8000 x 3000
28 x 250	28 x 250	28 x 250	28 x 250
21000	24000	27000	30000
5000	6000	7000	8000
4300	4300	4300	4300
1000 (opt.1200)	1000 (opt.1200)	1000 (opt.1200)	1000 (opt.1200)
1200 (opt.1500 / 1800)	1200 (opt.1500 / 1800)	1200 (opt.1500 / 1800)	1200 (opt.1500 / 1800)
160~2360 (Z : 1000_W : 1200) 160~2860 (Z : 1200_W : 1500)	160 ~ 2360 (Z : 1000_W : 1200) 160 ~ 2860 (Z : 1200_W : 1500)	160 ~ 2360 (Z : 1000_W : 1200) 160 ~ 2860 (Z : 1200_W : 1500)	160 ~ 2360 (Z : 1000_W : 1200) 160 ~ 2860 (Z : 1200_W : 1500)
750	750	750	750
3500	3500	3500	3500
#50	#50	#50	#50
10000	10000	10000	10000
6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000
8 / 8 / 10	8 / 8 / 10	8 / 8 / 10	6 / 8 / 10
14 / 14 / 16 / 3	14 / 14 / 16 / 3	10 / 14 / 16 / 3	8 / 14 / 16 / 3
32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
20	20	20	20
A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
±0.012	±0.012	±0.012	±0.012
±0.003	±0.003	±0.003	±0.003
±0.010	±0.010	±0.010	±0.010
±0.003	±0.003	±0.003	±0.003
0.026	0.028	0.028	0.030
0.021	0.024	0.024	0.026
6.5	6.5	6.5	6.5
-	-	-	-
15000 x 11700	17000 x 11700	19000 x 11700	21000 x 11700
Z1000 / W1200 : 13076 x 10200 x 7046 Z1000 / W1500 : 13076 x 10200 x 7346	Z1000 / W1200 : 15076 x 10200 x 7046 Z1000 / W1500 : 15076 x 10200 x 7346	Z1000 / W1200 : 17076 x 10200 x 7046 Z1000 / W1500 : 17076 x 10200 x 7346	Z1000 / W1200 : 19076 x 10200 x 7046 Z1000 / W1500 : 19076 x 10200 x 7346

Note : 1. Factory laser accuracy is based on JIS standards. For VDI 3441 compliance, please specify separately.
2. Product specifications and accessories are subject to change without notice.
3. Machine weight is based on standard configuration.
4. Maximum tool size refers to full-tool loading condition.

11

MC Mechanical Specifications Table

		Unit	MC-833 / MC-1033	MC-1233 / MC-1433	MC - 1633 / MC - 1833
Table	Working surface	mm	8000 / 10000 × 2500	12000 / 14000 × 2500	16000 / 18000 × 2500
	T-slot Width x pitch(number)	mm	28 x 250	28 x 250	28 x 250
	Max.load (Average)	kg/m²	3000	3000	3000
Travel	X-axis travel	mm	8000 / 10000	12000 / 14000	16000 / 18000
	Y-axis travel	mm	3300	3300	3300
	Z-axis travel	mm	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)
	W-axis travel	mm	-	-	-
	Distance from spindle to table #50	mm	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800
	Distance from spindle center to column	mm	450	450	450
Distance between two columns		mm	3300	3300	3300
Spindle	Spindle nose taper		#50	#50	#50
	Spindle speed(Built-in)	rpm	10000	10000	10000
	Spindle speed(Gear)	rpm	6000 / 8000	6000 / 8000	6000 / 8000
Feed	Cutting feedrate(X/Y/Z)	m/min	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5
	Rapid traverse rate (X/Y/Z)	m/min	8 / 12 / 12	8 / 12 / 12	8 / 12 / 12
ATC	Capacity	pcs	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
	Max.tool weight	kg	20	20	20
	Max.tool size(dia.x length)	mm	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
	Tool shank		BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
	Pull stub bolt		P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
Motor	Spindle drive motor (cont./30 min)	kw	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
Pos. Acc.	Positioning Accuracy (JIS B6330),No Scale	mm	±0.017 / ±0.019	±0.021 / ±0.023	±0.025 / ±0.027
	Repeatability (JIS B6330),No Scale	mm	±0.011 / ±0.011	±0.011 / ±0.011	±0.012 / ±0.013
	Positioning Accuracy(JIS B6330),With Scale	mm	±0.015 / ± 0.017	±0.019 / ±0.021	±0.023 / ±0.025
	Repeatability(JIS B6330),With Scale	mm	±0.011 / ± 0.011	±0.011 / ±0.011	±0.012 / ±0.013
	Positioning accuracy (VDI 3441)	mm	0.035/0.037	0.039 / 0.041	0.043 / 0.045
	Repeatability(VDI 3441)	mm	0.031/0.033	0.035 / 0.037	0.039 / 0.041
Other	Required air pressure	kg/cm²	6.5	6.5	6.5
	Electric power requirement	KVA	-	-	-
	Floor space(standard tank)	mm	17000 / 19000 x 9500	21000 / 23000 x 9500	25000 / 27000 x 9500
	Machine dimension(LxWxH)	mm	Z1000 : 15730 x 7974 x 5175 / 17730 x 7974 x 5175	Z1000 : 19730 x 7974 x 5175 / 21730 x 7974 x 5175	Z1000 : 23730 x 7974 x 5175 / 25730 x 7974 x 5175
			Z1200 : 15730 x 7974 x 5575 / 17730 x 7974 x 5575	Z1200 : 19730 x 7974 x 5575 / 21730 x 7974 x 5575	Z1200 : 23730 x 7974 x 5575 / 25730 x 7974 x 5575

MC - 2033	MC- 845 / MC - 1045	MC - 1245 / MC - 1445	MC - 1645 / MC - 1845
20000 × 2500	8000 / 10000 x 3700	12000 / 14000 x 3700	16000 / 18000 x 3700
28 x 250	28 x 250	28 x 250	28 x 250
3000	3000	3000	3000
20000	8000 / 10000	12000 / 14000	16000 / 18000
3300	4500	4500	4500
1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)
-	-	-	-
Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800
450	450	450	450
3300	4500	4500	4500
#50	#50	#50	#50
10000	10000	10000	10000
6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000
5 / 5 / 5	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5
8 / 12 / 12	8 / 10 / 12	8 / 10 / 12	8 / 10 / 12
32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
20	20	20	20
A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
±0.029	±0.017 / ±0.019	±0.021 / ±0.023	±0.025 / ±0.027
±0.014	±0.011	±0.011	±0.012 / ±0.013
±0.027	±0.015 / ±0.017	±0.019 / ±0.021	±0.023 / ±0.025
±0.014	±0.011	±0.011	±0.012 / ±0.013
0.047	0.035 / 0.037	0.039 / 0.041	0.043 / 0.045
0.043	0.031 / 0.033	0.035 / 0.037	0.039 / 0.041
6.5	6.5	6.5	6.5
-	-	-	-
29000 x 9500	17000 / 19000 x 10700	21000 / 23000 x 10700	25000 / 27000 x 10700
Z1000 : 27730 x 7974 x 5175 Z1200 : 27730 x 7974 x 5575	Z1000 : 15730 x 9174 x 5175 / 17730 x 9174 x 5175 Z1200 : 15730 x 9174 x 5575 / 17730 x 9174 x 5575	Z1000 : 19730 x 9174 x 5175 / 21730 x 9174 x 5175 Z1200 : 19730 x 9174 x 5575 / 21730 x 9174 x 5575	Z1000 : 23730 x 9174 x 5175 / 25730 x 9174 x 5175 Z1200 : 23730 x 9174 x 5575 / 25730 x 9174 x 5575

Note : 1. Factory laser accuracy is based on JIS standards. For VDI 3441 compliance, please specify separately.
2. Product specifications and accessories are subject to change without notice.
3. Machine weight is based on standard configuration.
4. Maximum tool size refers to full-tool loading condition.

11

MC Mechanical Specifications Table

		Unit	MC-2045	MC-855 / MC-1055	MC-1255/MC-1455	MC - 1655 / MC - 1855	MC - 2055
Table	Working surface	mm	20000 × 3700	8000 / 10000 × 4700	12000 / 14000 × 4700	16000 / 18000 × 4700	20000 x 3700
	T-slot Width x pitch(number)	mm	28 x 250	28 x 250	28 x 250	28 x 250	28 x 250
	Max.load (Average)	kg/m²	3000	3000	3000	3000	3000
Travel	X-axis travel	mm	20000	8000 / 10000	12000 / 14000	16000 / 18000	20000
	Y-axis travel	mm	4500	5500	5500	5500	5500
	Z-axis travel	mm	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)
	W-axis travel	mm	-	-	-	-	-
	Distance from spindle to table #50	mm	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800	Z : 1000 : 400~1400 Z : 1200 : 400~1600 Z : 1400 : 400~1800
	Distance from spindle center to column	mm	450	450	450	450	450
		mm	4500	5500	5500	5500	5500
Spindle	Spindle nose taper		#50	#50	#50	#50	#50
	Spindle speed(Built-in)	rpm	10000	10000	10000	10000	10000
	Spindle speed(Gear)	rpm	6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000
Feed	Cutting feedrate(X/Y/Z)	m/min	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5
	Rapid traverse rate (X/Y/Z)	m/min	8 / 10 / 12	8 / 8 / 12	8 / 8 / 12	8 / 8 / 12	8 / 8 / 12
ATC	Capacity	pcs	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
	Max.tool weight	kg	20	20	20	20	20
	Max.tool size(dia.x length)	mm	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
	Tool shank		BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
	Pull stub bolt		P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
Motor	Spindle drive motor (cont./30 min)	kw	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
Pos. Acc.	Positioning Accuracy (JIS B6330),No Scale	mm	±0.025 / ±0.027	±0.017 / ±0.019	±0.021 / ±0.023	±0.025 / ±0.027	±0.029
	Repeatability (JIS B6330),No Scale	mm	±0.012 / ±0.013	±0.011	±0.011	±0.012 / ±0.013	±0.014
	Positioning Accuracy(JIS B6330),With Scale	mm	±0.023 / ±0.025	±0.015 / ±0.017	±0.019 / ±0.021	±0.023 / ±0.025	±0.027
	Repeatability(JIS B6330),With Scale	mm	±0.012 / ±0.013	±0.011	±0.011	±0.012 / ±0.013	±0.014
	Positioning accuracy (VDI 3441)	mm	0.043 / 0.045	0.035 / 0.037	0.039 / 0.041	0.043 / 0.045	0.047
	Repeatability(VDI 3441)	mm	0.039 / 0.041	0.031 / 0.033	0.035 / 0.037	0.039 / 0.041	0.043
Other	Required air pressure	kg/cm²	6.5	6.5	6.5	6.5	6.5
	Electric power requirement	KVA	-	-	-	-	-
	Floor space(standard tank)	mm	29000 x 10700	17000 / 19000 x 11700	21000 / 23000 x 11700	25000 / 27000 x 11700	29000 x 11700
	Machine dimension(LxWxH)	mm	Z1000 : 27730 x 9174 x 5175 Z1200 : 27730 x 9174 x 5575	Z1000 : 15730 x 10174 x 5175 / 17730 x 10174 x 5175 Z1200 : 15730 x 10174 x 5575 / 17730 x 10174 x 5575	Z1000 : 19730 x 10174 x 5175 / 21730 x 10174 x 5175 Z1200 : 19730 x 10174 x 5575 / 21730 x 10174 x 5575	Z1000 : 23730 x 10174 x 5175 / 25730 x 10174 x 5175 Z1200 : 23730 x 10174 x 5575 / 25730 x 10174 x 5575	Z1000 : 27730 x 10174 x 5175 Z1200 : 27730 x 10174 x 5575



Note : 1. Factory laser accuracy is based on JIS standards. For VDI 3441 compliance, please specify separately.
2. Product specifications and accessories are subject to change without notice.
3. Machine weight is based on standard configuration.
4. Maximum tool size refers to full-tool loading condition.

11

MCW Mechanical Specifications Table

		Unit	MCW - 8550 / MCW - 10550	MCW - 12550 / MCW - 14550	MCW - 16550 / MCW - 18550
Table	Working surface	mm	8000 / 10000 × 4000	12000 / 14000 × 4000	16000 / 18000 × 4000
	T-slot Width x pitch(number)	mm	28 x 250	28 x 250	28 x 250
	Max.load (Average)	kg/m²	3000	3000	3000
Travel	X-axis travel	mm	8000 / 10000	12000 / 14000	16000 / 18000
	Y-axis travel	mm	5500	5500	5500
	Z-axis travel	mm	1000 (opt. 1200 / 1400)	1000 (opt. 1200 / 1400)	1000 (opt.1200 / 1400)
	W-axis travel	mm	1800 (opt. 2100)	1800 (opt. 2100)	1800 (opt. 2100)
	Distance from spindle to table #50	mm	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750
	Distance between two columns	mm	4500	4500	4500
Spindle	Spindle nose taper		#50	#50	#50
	Spindle speed(Built-in)	rpm	10000	10000	10000
	Spindle speed(Gear)	rpm	6000 / 8000	6000 / 8000	6000 / 8000
Feed	Cutting feedrate(X/Y/Z)	m/min	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5
	Rapid traverse rate (X/Y/Z)	m/min	8 / 10 / 12 / 3	8 / 10 / 12 / 3	8 / 10 / 12 / 3
ATC	Capacity	pcs	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
	Max.tool weight	kg	20	20	20
	Max.tool size(dia.x length)	mm	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
	Tool shank		BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
	Pull stub bolt		P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
Motor	Spindle drive motor (cont./30 min)	kw	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
Pos. Acc.	Positioning Accuracy (JIS B6330),No Scale	mm	±0.014 / ±0.016	±0.018 / ±0.020	±0.022 / ±0.024
	Repeatability (JIS B6330),No Scale	mm	±0.008	±0.008 / ±0.008	±0.009 / ±0.010
	Positioning Accuracy(JIS B6330),With Scale	mm	±0.012 / ±0.014	±0.016 / ±0.018	±0.020 / ±0.022
	Repeatability(JIS B6330),With Scale	mm	±0.008	±0.008 / ±0.008	±0.009 / ±0.010
	Positioning accuracy (VDI 3441)	mm	0.032 / 0.034	0.036 / 0.038	0.040 / 0.042
	Repeatability(VDI 3441)	mm	0.028 / 0.030	0.032 / 0.034	0.036 / 0.038
Other	Required air pressure	kg/cm²	6.5	6.5	6.5
	Electric power requirement	KVA	-	-	-
	Floor space(standard tank)	mm	23200 x 14000 (for MCW-12550)	23200 x 14000 (for MCW-12550)	23200 x 14000 (for MCW-12550)
	Machine dimension(LxWxH)	mm	Z1000_W1800 : 11213 x 9320 x 8902 / 13213 x 9320 x 8902 Z1200_W2100 : 11213 x 9320 x 9402 / 13213 x 9320 x 9402	Z1000_W1800 : 15213 x 9320 x 8902 / 17213 x 9320 x 8902 Z1200_W2100 : 15213 x 9320 x 9402 / 17213 x 9320 x 9402	Z1000_W1800 : 19213 x 9320 x 8902 / 21213 x 9320 x 8902 Z1200_W2100 : 19213 x 9320 x 9402 / 21213 x 9320 x 9402

MCW - 20550	MCW - 8650 / MCW - 10650	MCW - 12650 / MCW - 14650	MCW - 16650 / MCW - 18650	MCW - 20650
20000 × 4000	8000 / 10000 × 5000	12000 / 14000 × 5000	16000 / 18000 × 5000	20000 × 4000
28 x 250	28 x 250	28 x 250	28 x 250	28 x 250
3000	3000	3000	3000	3000
20000	8000 / 10000	12000 / 14000	16000 / 18000	20000
5500	6500	6500	6500	6500
1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)	1000 (opt.1200 / 1400)
1800 (opt. 2100)	1800 (opt. 2100)	1800 (opt. 2100)	1800 (opt. 2100)	1800 (opt. 2100)
Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750	Z : 1000_W : 1800 : 450~3250 Z : 1200_W : 2100 : 450~3750
4500	5500	5500	5500	5500
#50	#50	#50	#50	#50
10000	10000	10000	10000	10000
6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000	6000 / 8000
5 / 5 / 5	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5	5 / 5 / 5
8 / 10 / 12 / 3	8 / 8 / 12 / 3	8 / 8 / 12 / 3	8 / 8 / 12 / 3	8 / 8 / 12 / 3
32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90	32 / 40 / 62 / 90
20	20	20	20	20
A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L	A : Ø125 x 400L
BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)	BT-50 (opt. CAT50 / DIN / BBT50)
P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)	P50T-1 (opt. CAT-50 / DIN 69872)
22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)	22 (opt. 26 / 37)
±0.026	±0.014 / ±0.016	±0.018 / ±0.020	±0.022 / ±0.024	±0.026
±0.011	±0.008	±0.008	±0.009 / ±0.010	±0.011
±0.024	±0.012 / ±0.014	±0.016 / ±0.018	±0.020 / ±0.022	±0.024
±0.011	±0.008	±0.008 / ±0.008	±0.009 / ±0.010	±0.011
0.044	0.032 / 0.034	0.036 / 0.038	0.040 / 0.042	0.044
0.040	0.028 / 0.030	0.032 / 0.034	0.036 / 0.038	0.040
6.5	6.5	6.5	6.5	6.5
-	-	-	-	-
23200 x 14000 (for MCW-12550)	23200X15000 (for MCW-12650)	23200X15000 (for MCW-12650)	23200X15000 (for MCW-12650)	23200X15000 (for MCW-12650)
Z1000_W1800 : 23213 x 9320 x 8902 Z1200_W2100 : 23213 x 9320 x 9402	Z1000_W1800 : 11213 x 10320 x 8902 / 13213 x 10320 x 8902 Z1200_W2100 : 11213 x 10320 x 9402 / 13213 x 10320 x 9402	Z1000_W1800 : 15213 x 10320 x 8902 / 17213 x 10320 x 8902 Z1200_W2100 : 15213 x 10320 x 9402 / 17213 x 10320 x 9402	Z1000_W1800 : 19213 x 10320 x 8902 / 21213 x 10320 x 8902 Z1200_W2100 : 19213 x 10320 x 9402 / 21213 x 10320 x 9402	Z1000_W1800 : 23213 x 10320 x 8902 Z1200_W2100 : 23213 x 10320 x 9402

Note : 1. Factory laser accuracy is based on JIS standards. For VDI 3441 compliance, please specify separately.
2. Product specifications and accessories are subject to change without notice.
3. Machine weight is based on standard configuration.
4. Maximum tool size refers to full-tool loading condition.