CHMER
Non-traditional Machining Solution Provider

About CHMER

Established in 1975, CHMER is the largest EDM manufacturer in Taiwan, exporting over 55 countries. Product lines include Die Sinking EDMs, Wire Cut EDMs, Small Hole Drilling EDMs, High Speed Milling Machines, and Laser Machines. A comprehensive technical support completes our services.

G&RX SERIES
CNC Wire Cut EDM

CHMER
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Wire Cut•Die Sinking•Drilling•High Speed Milling•Laser Machine

WG+RX0Ev02

■ G series

The driving system of G series is equipped with high precision ball screws.
The C-type rigid structure ensures the high accuracy. The latest i8+ power supply provides energy saving and efficient cutting.
G series have flushing type and submerged type machining choices.

■ RX series

The RX series are the large CNC wire cut EDM. The driving system of RX series is equipped with high precision ball screws.
The latest i8+ power supply provides energy saving and efficient cutting.
RX series also have flushing type and submerged type machining choices.

X, Y, Z, U, V axes are driven by ball screws

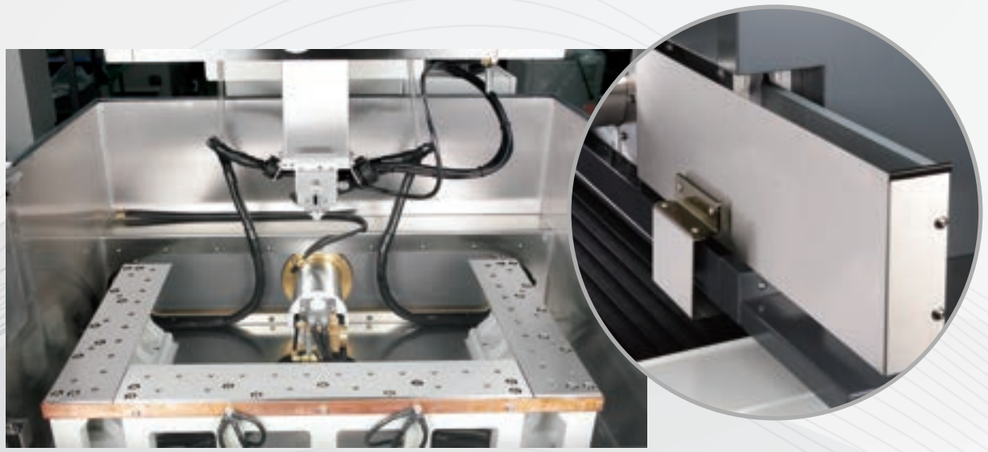
■ High Rigidity and Thermal Balanced Structure

G Series – FEM Analysis & Optimize Mechanism Design

To meet machining demands, The machine has been designed from the base frame through 3D simulation to optimize stability and extend the machine life.
Center-of-gravity position on leveling pads, maintain an enormous machine accuracy without any deformation.

■ Mechanical Features

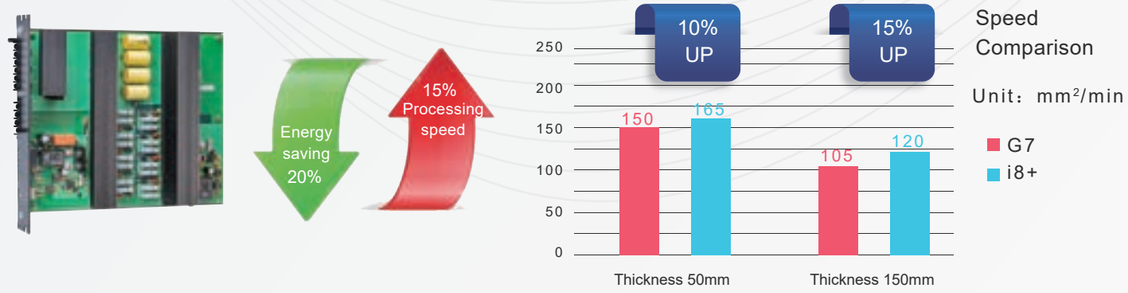
- Excellent thermal balance and rigid cast construction to ensure the best machining accuracy and durability. U-V axes , with linear guide way for accurate taper cutting.
- Using direct drive AC servo motors , high precision ball screws on linear guide ways with optional. 005mm resolution glass scale, assures precise positioning and fast response to cutting conditions.
- Stainless steel 3-sided worktable and brushed stainless work tank for long endurance and least maintenance.
- U-V axes with up to ±50mm travel for wide taper angles (± 21 degree).
  (Reach Condition: 100mm Z-axis height and DA+DB=15mm at least ; a set of wide-angle diamond guides and nozzles are required.)



■ *i8+* Power Supply System

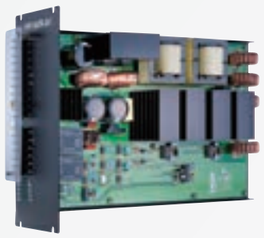
The new i8+ power supply system increases the cutting speed by 15%, compared with the last generation, saves energy by 20%, and enhances machining stability by built-in intelligent voltage stabilizer.

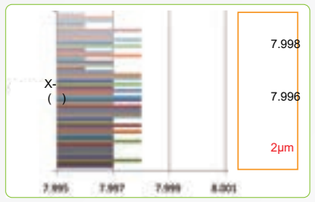
◎ Machining speed increases by 15%
◎ Wire breakage prevention function
◎ Decrease of heat generated
◎ Increase of circuit reliability



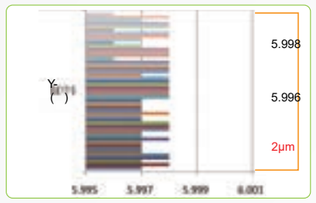
HP-IVC Intelligent Stable Power Supply

The newly developed IVC high frequency switching power supply can stabilize and regulate voltage, keep constant temperature, and separate the workload and power supply to ensure the safety of the system.
With the latest technology, it can effectively convert unstable power input to stable power for internal use. In addition, it can intelligently supply higher power for high energy consumption machining and maintain stable power supply for high precision machining.





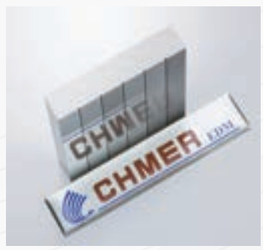
Continuous machining 50 pieces of punch



Machining size: 8x6mm T=30mm

AC Electrolysis-Free Power

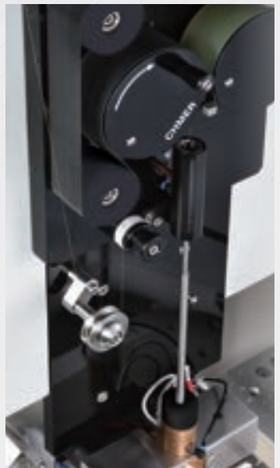
AC & DC switchable power supply. AC used for minimum cobalt depletion and best surface roughness in Carbides, also best cutting speed in PCD and PCBN materials. Also extend the life-Span of molds.



The Newest Generation AWT system

With the rich experience in automation and technology, CHMER presents the perfect AWT system.

- Concise and reliable design for easier maintenance, lowering the cost of repairs.
- Unique “EC tension control technology” for nearly 100% successful threading rate to achieve unmanned operation.
- Threading in the break point, under water, no need to return back to the start point and waste time in draining and refilling water.



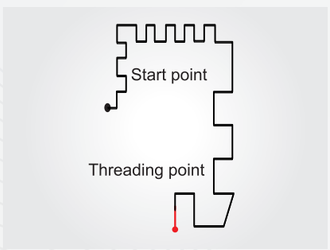
- Setting the threading mode according to the cutting condition for continuous machining.
- With the threading assistant device (Opt.), threading for high thickness workpiece is no longer troublesome.
- Automatic water level control for multiple cutting missions of different thicknesses to increase production efficiency.
- Easily and precisely threading in the holes of stepped workpiece.
- Impeccable fast and steady threading in multiple holes.

Visual Parameter Setting

50 groups of brass wire parameter selections for different wire brands and diameters.

3999 Hole Cutting sets

3999 cutting sets of processing holes for more references.



Wire Break Point Threading Function

Efficiently resuming the machining by threading in the wire break point.

CHMER BUILT CNC CONTROLLER

W5F Controller Features

- All software and hardware are developed in house by CHMER
- Industrial IPC-586 or above motherboard
- 64MB DRAM
- 512MB CF card
- Optional touch screen and optical mouse
- Support 6th axis (B axis) machining (Optional)
- Support USB and Ethernet transmission

▪ Friendly User Interface and Operate Console.

Remote Monitoring

▪ WEB page to monitor Functions (PC)

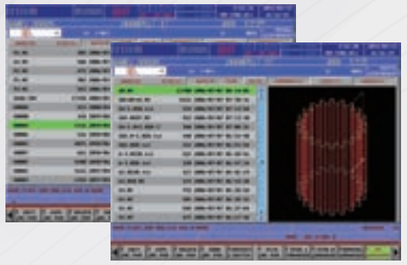
▪ Team-Viewer™ (A Pay Software, not included)

▪ Remote Monitoring Function

Install Chmer exclusive Remote Monitoring Software and authorized “Team-Viewer”for knowing real-time machine status.

Software Functions

User-Friendly File Management



3D Graphic Simulation + NC path Info.

EDM Technology Database

NC Register

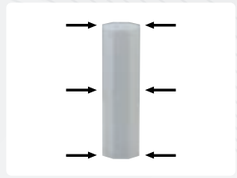
Graphic Manual Function

Power Record point and Coordinate Systems

System Device Management+ Optimum system parameter

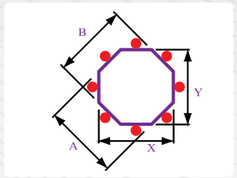
Advance Application Functions

Straightness Accuracy



Straightness

Workpiece: SKD-11
Wire diameter: Ø0.2mm
Accuracy: 2 μm
Thickness: 30 mm
No. of cut: 3 cuts



Measurement figure

Marked red color means the measured points.

Accuracy	X	A	Y	B	Error
Up	9.999	9.999	9.999	9.999	0μ
Mid.	9.997	9.999	9.999	9.999	2μ
Dn.	9.999	9.999	9.999	9.999	0μ
Error	0.002	0	0	0	

Sample Illustration

Job Material: SKD-11
Job Thickness: 30 mm
Wire diameter: Ø0.20 mm
Number Of Cut: 1+ 2 Skims
Work Hour: 1 Hour 10 Mins
Accuracy: 3μm
Surface Roughness:
Ra 0.55~0.58μm

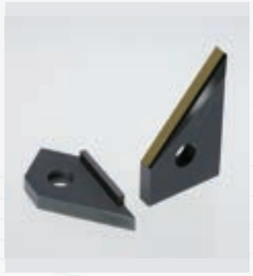
Job Material: SKD-11
Job Thickness: 17 mm
Wire diameter: Ø0.15 mm
Number Of Cut: 1+ 2 Skims
Work Hour: 1 Hour 50 Mins
Accuracy: ±3μm
Surface Roughness:
Ra 0.55~0.58μm

Job Material: SKD-11
Job Thickness: 25 mm
Wire diameter: Ø0.20 mm
Number Of Cut: 1+ 2 Skims
Work Hour: 1 Hour 50 Mins
Accuracy: ±3μm
Surface Roughness:
Ra 0.55~0.58μm

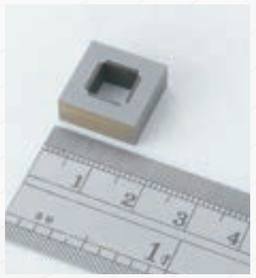
Job Material: SKD-11
Job Thickness [Punch]: 50 mm
Job Thickness [Die]: 30 mm
Wire diameter: Ø0.20 mm
Number Of Cut: 1+ 2 Skims
Work Hour: 4 Hours 00 Mins
Accuracy: 3μm
Surface Roughness:
Ra 0.58~0.63μm

Job Material: SKD-11
Job Thickness[Punch]: 50mm
Job Thickness[Die]: 20mm
Number Of Cut: 1+2 Skims
Surface Roughness:
Ra 0.58~0.63μm

Taper Cut
Job Material: SKD-11
Job Thickness: 11.45 mm
Wire diameter: Ø0.20 mm
Number Of Cut: 1 Cut
Work Hour: 1 Hour 30 Mins
Taper Angle: 21°



PCD formed milling cutters
Job Material: PCD
Job Thickness: 2.5 mm
Wire diameter: Ø0.20 mm
Feed rate: 2.0 mm/min



Dia.Ø0.1mm wire processing
Purpose: For the precision molds of IC industries etc.
Job Material: Carbide
Job Thickness: 5 mm
Wire diameter: Ø0.10 mm
Number Of Cut: 1+ 2 Skims
Accuracy: 3μm
Surface Roughness:
Ra 0.40μm (AC-μ circuit, opt)

■ Specifications

Machine Body \ Model	G32F/S	G43F/S	G53F/S	G64F/S
X , Y axis travel (mm)	360x250	400x300	500x300	600x400
U,V,Z axis travel (mm)	60x60x220	60x60x220	60x60x220	100x100x300
Max.size of working piece (WxDxH mm)	725x560x215	725x600x215	825x600x215	910x700x295
Max. weight of working piece (kg)	300	500 / 350	550 / 400	600 / 450
XY feed rate (mm/min)	Max. 800	Max. 800	Max. 800	Max. 800
Motor system (axis)	AC Servo Motor	AC Servo Motor	AC Servo Motor	AC Servo Motor
Wire diameter range (mm)	Ø0.15~0.3 (Ø0.25)	Ø0.15~0.3 (Ø0.25)	Ø0.15~0.3 (Ø0.25)	Ø0.15~0.3 (Ø0.25)
Max.wire feed rate (mm/sec)	300	300	300	300
Wire tension (gf)	300~2500	300~2500	300~2500	300~2500
Max. taper angle (°) workpiece thickness(mm)	±14.5°/80 (wide-angled nozzle, DA+DB=15mm)	±14.5°/80 (wide-angled nozzle, DA+DB=15mm)	±14.5°/80 (wide-angled nozzle, DA+DB=15mm)	±21°/100 (wide-angled nozzle, DA+DB=15mm)
Outside dimension (WxDxH mm)	2200x2100x2100 / 2300x2300x2100	2200x2130x2130 / 2200x2265x2130	2290x2130x2130 / 2290x2270x2130	2500x2450x2250 / 2500x2450x2250
N.W (including power and coolant system) (kg)	2300 / 2375	2575 / 2800	2800 / 3195	3200 / 3595
Coolant tank system (L)	300/590	340 / 650	340 / 650	340 / 760

Machine Body \ Model	RX853F/S	RX1063F/S
X , Y axis travel (mm)	800x500	1000x600
U,V,Z axis travel (mm)	150x150x300	150x150x300
Max.size of working piece (WxDxH mm)	1210x800x295	1430x900x295
Max. weight of working piece (kg)	2000/1000	3000/1500
XY feed rate (mm/min)	Max.800	Max.800
Motor system (axis)	AC Servo Motor	AC Servo Motor
Wire diameter range (mm)	Ø0.15~0.3(Ø0.25)	Ø0.15~0.3(Ø0.25)
Max.wire feed rate (mm/sec)	300	300
Wire tension (gf)	300-2500	300-2500
Max. taper angle (°) workpiece thickness(mm)	±21°/140 (wide-angled nozzle, DA+DB=15mm)	±21°/140 (wide-angled nozzle, DA+DB=15mm)
Outside dimension (WxDxH mm)	2400x2800x2350 / 3150x3500x2350	2700x3000x2200 / 4000x4000x2200
N.W (including power and coolant system) (kg)	5460/5535	6500/7100
Coolant tank system (L)	340/1370	650/2000

- Spefications subject to change bsaed on R&D results without prior notice.
- Remark: In submerged condition, maximum height of work-piece recommended is Z stroke minus 45mm.

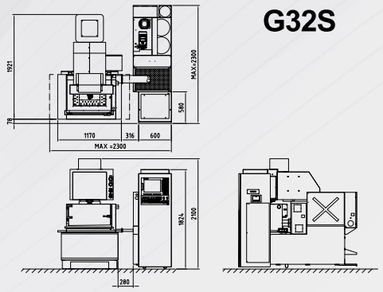
■ Standard / Optional Accessories

Standard ● Optional ○ None —

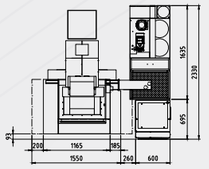
ITEMS		SPECIFICATION	AMOUNT	G32	G43	G53	G64	G96F	RX853 F/S	RX1063
Paper Filter			2 pcs	●	●	●	●	●	● /S-3 pcs	—
			4 pcs	—	—	—	—	—	—	●
			6 pcs	—	—	—	—	—	—	—
UPPER / LOWER Diamond Guides		0.26mm	2 pcs	●	●	●	●	●	●	●
UPPER / LOWER Flushing Nozzles			2 pcs	●	●	●	●	●	●	●
Energizing Carbides			2 pcs	●	●	●	●	●	●	●
Diamond Guide Remove Jig			1 pc	●	●	●	●	●	●	●
Brass Wire		Ø0.25mmx5kgs	1 roll	●	●	●	●	●	●	●
Tools			1 set	●	●	●	●	●	●	●
AC power				●	●	●	●	●	●	●
Alignment Jig			1 pc	●	●	●	●	●	●	●
Ion Exchange Resins		Flushing	3L	●	●	●	●	●	●	●
		Submerged	6L	●	●	●	●	—	●	●
			12L	—	—	—	—	—	—	—
Swinging panel				○	○	○	○	○	●	●
2-in-1 Transformer +AVR				○	○	○	○	○	○	○
Auto Data Recovery after Blackout				●	●	●	●	●	●	●
Auto Wire Threading (AWT)				○	○	○	○	○	○	○
30kgs Wire feeder				○	○	○	○	○	○	○
Wire chopper		30kgs		○	○	○	○	○	○	○
Z axis travel 400MM				—	—	—	—	—	○	○
Water chiller	Flushing	1T	1 set	●	●	●	—	—	—	—
		2T	1 set	—	—	—	●	●	●	●
	Submerged	1T	1 set	●	—	—	—	—	—	—
		2T	1 set	—	●	●	●	●	●	●
		3T	1 set	—	—	—	—	—	—	—
DC Invert Chiller		2T	1 set	○	○	○	○	○	○	○

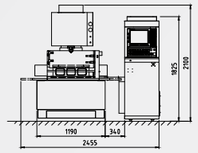
■ G Series Floor Layout

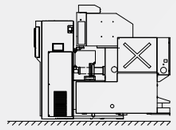
G32S



G43S







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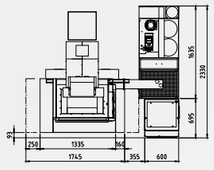

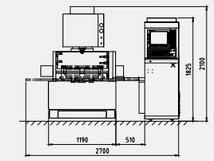

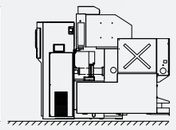

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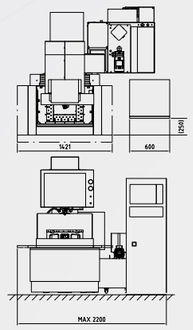

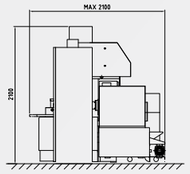

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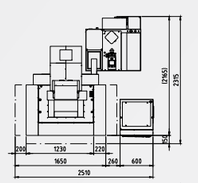

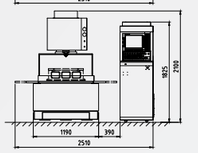

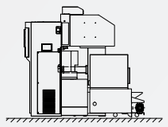

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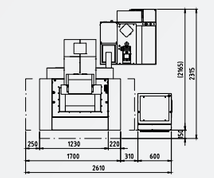
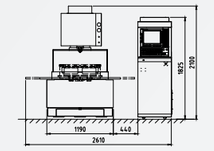
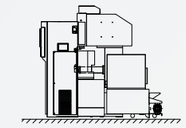
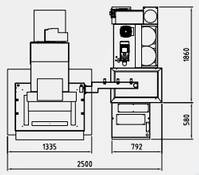
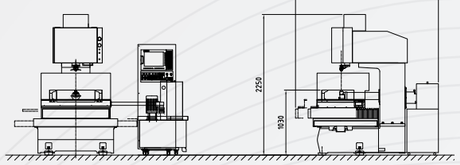






G64S





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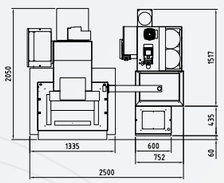
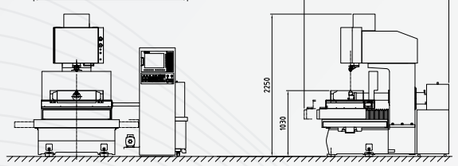
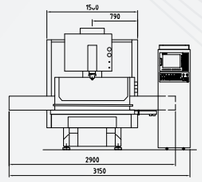
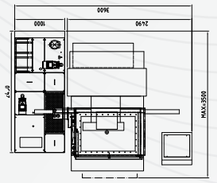


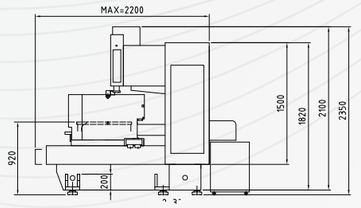


■ RX Series Floor Layout

RX853S







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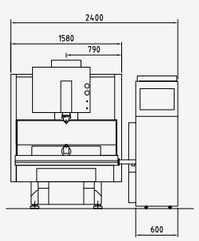

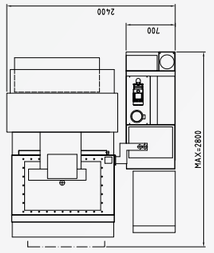

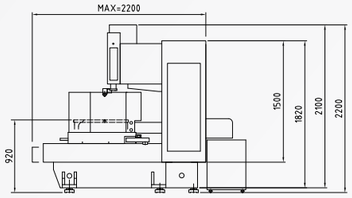

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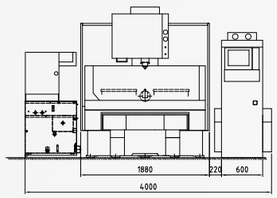

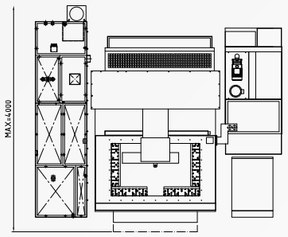

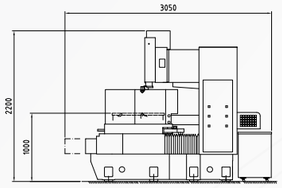

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