

POWER SUPPLY UNIT	
Circuit system	Power MOS Transistor
Max. output current	25A
IP select	10
Off time select	50

CNC UNIT	
Data Input	keyboard, RS-232C, CF card reader
Display	15-Inch Color
Control system	32bit, 1-CPU, Semi Closed Loop Software Servo System
Control axis	X, Y, U, V, Z (5 Axis)
Measurement resolution	0.001mm
Max. command value	± 9999.999mm
Movement measuring system	Linear / Circuler
Command System	Abs / Inch
Machining feed control	Servo / Const. Feed
Scaling	0.001-9999.999
Machining EDM Condition Memory	1000-9999
Total AC Power Input	3 Phase 220 10% / 13kva

Input power AC220V ± 5V 3 Phase 50/60Hz ± 1Hz (15KVA)
Environment conditions 1. Optimun room. temperature : 20 ± 1°C Humidity: below 75% RH. 2. Minimum floor vibration. 3. Avoid being located against sunshine. 4. Systems or set in a place that received directly sunshine. 5. Clean and low dust environment.
Space Take notice of the space for machine stroke to move during normal operation and daily maintenance.
Grounding 1. It is recommended to have a grounding resistance of 10Ω or less. 2. An independent ground is recommended. 3. The grounding cable should be 14mm ² .
Demand of air pressure Air pressure of 6kg/cm ² for options of AWT and submerged machine is needed.

A lot of maintenance sites

After you buy this machine, you don't have to worry that you have to spend a lot of time on waiting when you need services. CHMER has set up many service centers in various locations, including Taipei Taiwan, Taichung Taiwan (headquarter), Tainan Taiwan, Dongguan China, Suzhou China, Shanghai China, Shenzhen China.



CHING HUNG MACHINERY & ELECTRIC INDUSTRIAL CO., LTD.

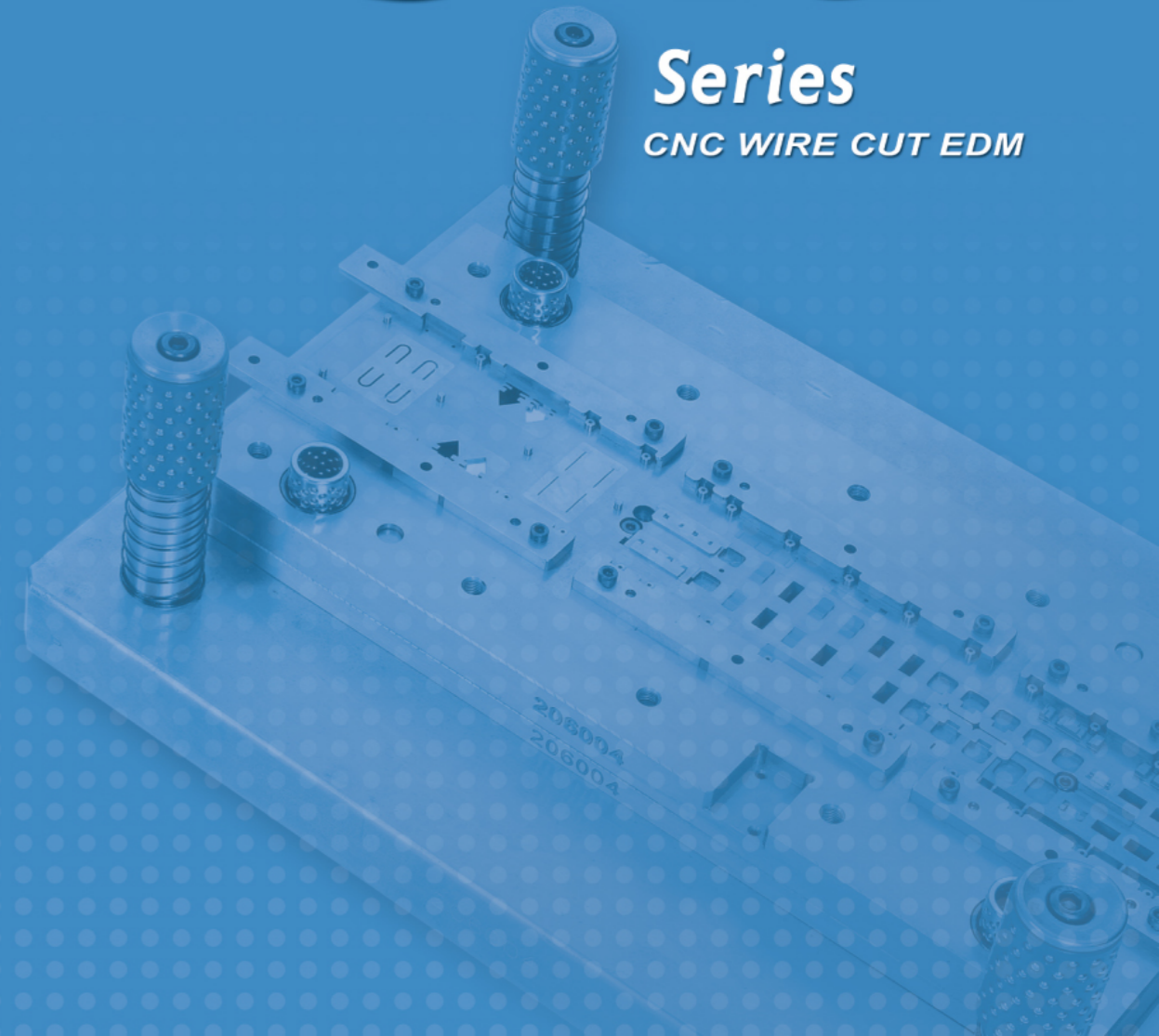
No. 3, Jing-Ke 1st Road, Nantun District, Taichung City 408, Taiwan.
TEL: +886-4-23500979 <http://www.chmer.com>
FAX: +886-4-23500977 e-mail: overseas@mail.chmer.com



Pursuit of Remarkable Advance Prudent and Pragmatic Management

G-RX

Series
CNC WIRE CUT EDM



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G/RX SERIES

CHMER have maintained the spirit of innovation & revolution and continuous improved, re-concern some points, such as Stress Deformation, Customer convenience etc., to create more available and easy operating Brand New W-EDM typed G Series.

New type model is saving nearly 40% landing space. It revealed the maximum productivity in a limited space.

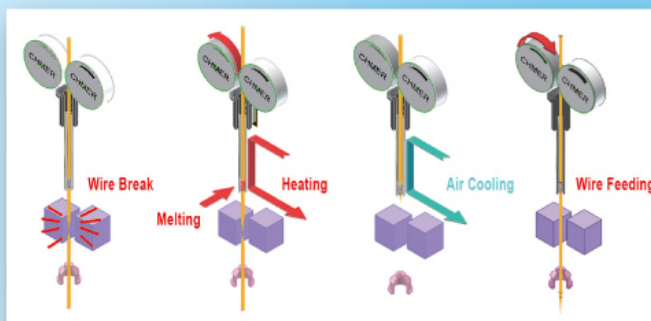
NEW USER FRIENDLY PANEL

15" TFT display.
Water proof PVC film panel for low maintenance.



5th Generation AWT system

EC Tension Control Technology ensures a constant tension to obtain superb threading rate. No need to return back to start point and trace back. Simple design of mechanism to make maintenance easy and cost less. Available to thread wire at stepped workpiece.



NUMERICAL DIELECTRIC CONTROL

Easy to read and operate.

NEW LCD REMOTE CONTROL

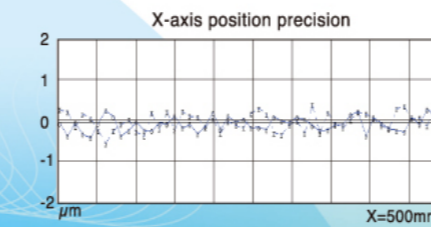
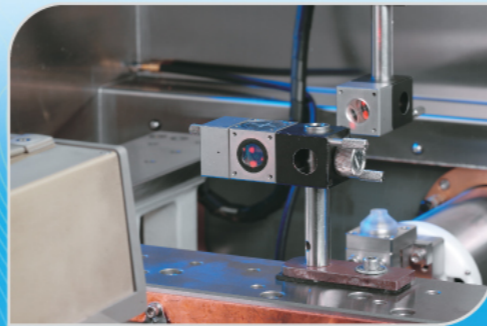
Full Function.
X, Y, U, V, Z Positioning Display.
Center & Edge Finding.
Cut and Thread function.



MECHANICAL FEATURES

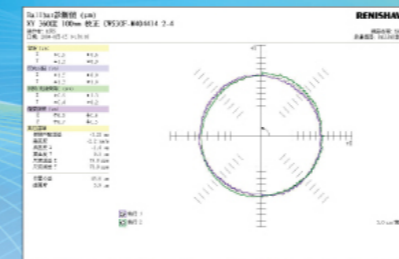
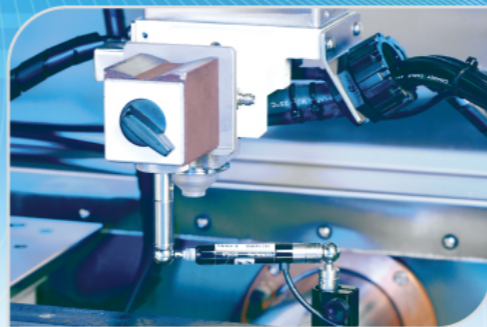
For customer satisfaction, CHMER produces high quality EDM, undergoing a series of Q.C. inspection.

LASER ALIGNMENT



Laser measurement of X, Y and U, V axes. Highest quality super precision linear guide ways, 32mm or 40mm diameter X, Y precision ball screws (depending on model) assures precise positioning, accuracy and long endurance.

BALL BAR TEST

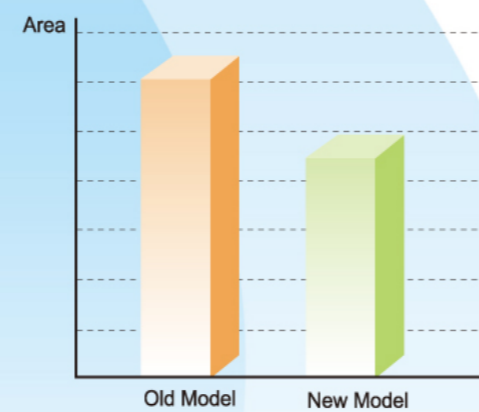


Renishaw ball bar testing used to test and record each machine's X, Y simultaneous movements. This guarantees ideal table squareness and ball screw backlash. (option)



Each EDM undergoes over eight hours of continuous machining to verify correct electronic functions and mechanical accuracy. And it must pass the sample test cut by 1st Cut, 2nd Cut and 3rd Cut that also measured by Mitsutoyo micrometer and surface tester. For sure both accuracy and surface roughness are qualified to meet the standard.

LAYOUT

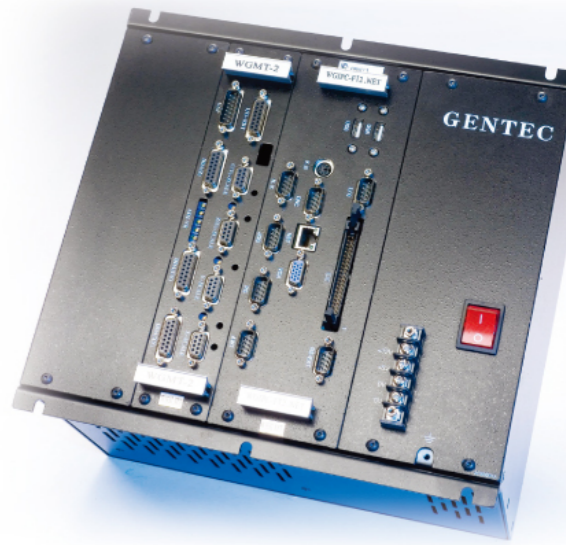


COMPARISON	CW 430F	G43F
W(mm)	3000	2200
D(mm)	2050	2130
H(mm)	2100	2130
Area (WxD) (Cm ²)	615	468.6

CNC CONTROLLER

All Software and Hardware are with full authorized. (Copyright Reserved by CHMER)

- Adopted IPC 586 Mother Board.
- Adopted Compatible 5x86 grade Processor (CPU).
- 64 M Bytes DRAM.
- High capacity storage device CF Card 128 M Bytes.
- Touch Screen and Optical Mouse Support (OPT).
- Synchronized 6TH Axis (B axis) Support (OPT).
- External USB Card Reader and Intranet Data Exchange Support (OPT)
- Using CHMER's exclusive CNC controller and proprietary software; CHMER provide the latest software version and updates to optimize the machine functions and Cutting technology.
- All software functions built-in and controller are fully compatible with FANUC™ post processor in CAM software.

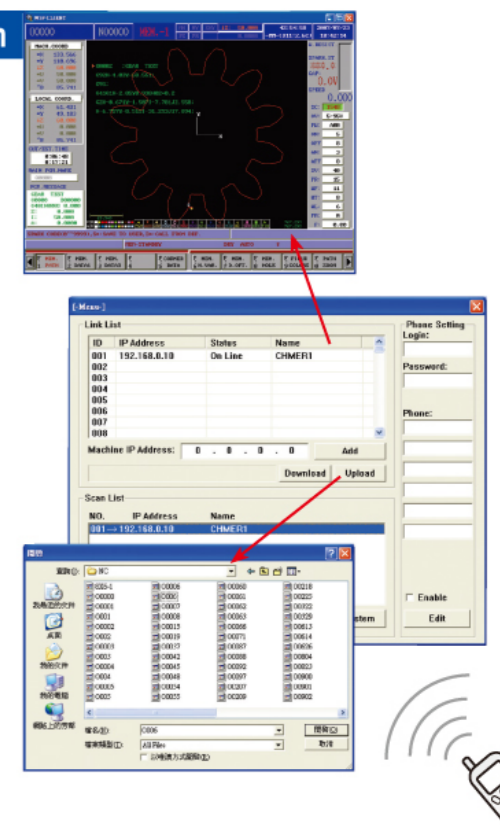
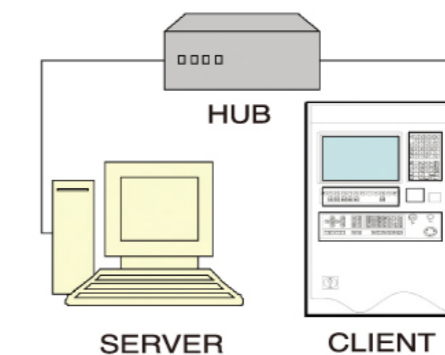


The USB and CF port allows to load and down data easily.



Cutting Edge Remote Monitoring Function

Real time monitoring of machine operation without attending to the work-shop! You see what the operator sees on the CNC controller from anywhere on your home PC or laptop. It definitely gives you more freedom! Quick, spontaneous technical assistance or trouble-shoot through Remote Monitoring plus telephone conversation with your technical people reduce down time and increase your productivity! Easy set up! Just install the software on your computer and get immediate access via existing network. Programming N.C file with your CAD/CAM system and up-load it to the CNC controller.

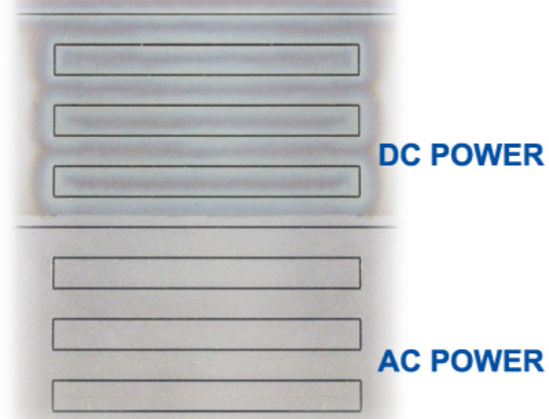


DISCHARGING POWER CONTROL

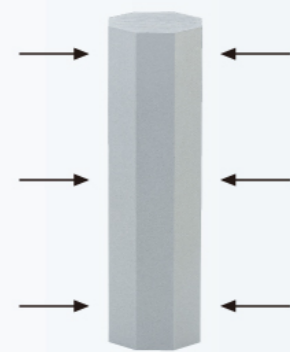
Computerized power supply system provides efficient and stable machining technology for excellent cutting speed and consistent spark energy, consistent speed, and surface finishes.

Ti-6Al-4V

AC and DC switchable power supply. DC is recommended for tool steels, dies and molds for best cutting speeds. AC is used for maximum surface finishes in steel, minimum cobalt depletion and best surface finishes in carbides, and best cutting speed with minimum "pit depth and undercut" in PCD and PCBN materials. AC power also allows high-speed cutting of steels while maintaining the surface hardness to extend tool life. The dual AC/DC switchable power supply provides suitable power choices for every application.

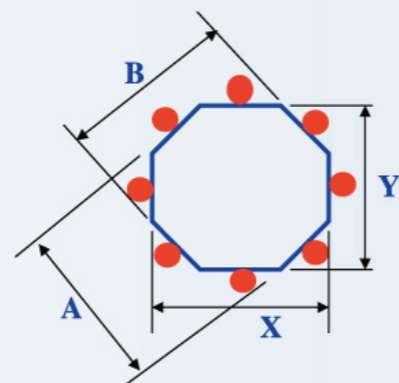


POSITIONING ACCURACY



Straightness accuracy (punch)

- Accuracy: $\pm 2\mu\text{m}$
- Numbers of cut: 1+2 skims
- Wire diameter: 0.20mm
- Job thickness: 50 mm



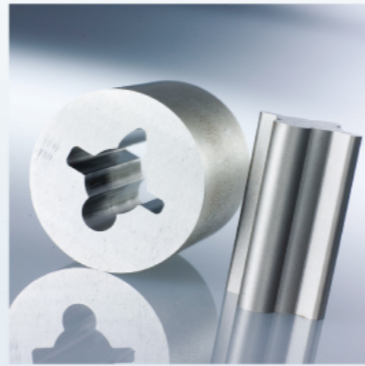
Measurement figure

Marked by red color means the measured points.

Note: checked by mitutoyo micro meter

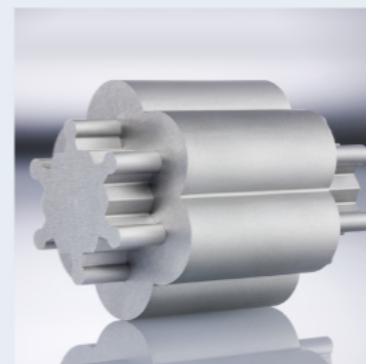
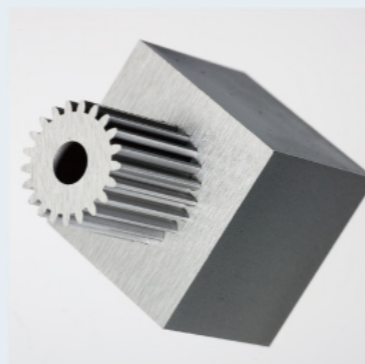
SAMPLE ILLUSTRATION

Job material: SKD-11
Job thickness: 30 mm
Work hour: 1hr 10 min
Wire diameter: 0.20 mm
Numbers of cut: 1+2 skims
Accuracy: $3\mu\text{m}$
Surface roughness: Ra0.55~0.58 μm



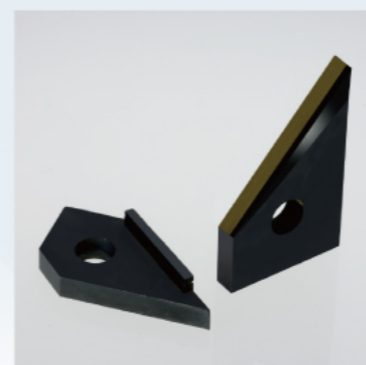
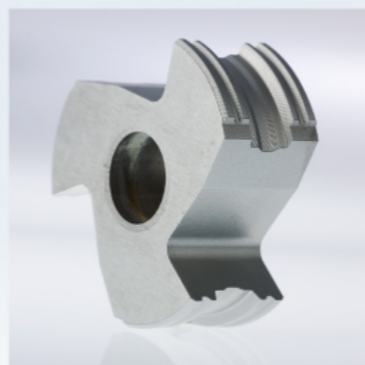
Job material: SKD-11
Job thickness: 25 mm
Work hour: 5hr 30 min
Wire diameter: 0.20mm
Numbers of cut: 1+2 skims
Accuracy: $3\mu\text{m}$
Surface roughness: Ra0.55~0.58 μm

Job material: SKD-11
Job thickness: 17 mm
Work hour: 1hr 50 min
Wire diameter: 0.15mm
Numbers of cut: 1+2 skims
Accuracy: $\pm 3\mu\text{m}$
Surface roughness: Ra0.55~0.58 μm



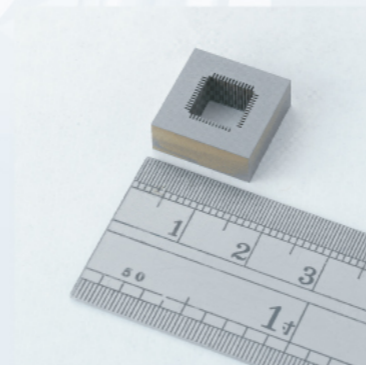
Job material: SKD-11
Job thickness [punch]: 50 mm
Job thickness [die]: 30 mm
Work hour: 4hr 00 min
Wire diameter: 0.20mm
Numbers of cut: 1+2 skims
Accuracy: $3\mu\text{m}$
Surface roughness: Ra0.58~0.63 μm

B-axis formed milling cutters
Job material: SKD-11
Job thickness: 10 mm
Max. Outer dia.: 27 mm
Wire diameter: 0.20 mm
Surface roughness: Ra0.58~0.60 μm
Numbers of cut:
A. 1 Cut / 2 hrs
B. 1+1 Skims / 1hr
C. 1+2 Skims / 50 min



PCD formed milling cutters
Job material: PCD
Job thickness: 2.5 mm
Wire diameter: 0.20 mm
Feed rate: 2.0 mm / min

Taper cut
Job material: SKD-11
Job thickness: 11.45 mm
Work hour: 1hr 30 min
Wire diameter: 0.20 mm
Numbers of cut: 1 cut
Taper angle: 21°



Dia. 0.1mm wire processing
For the precision molds of IC industries etc. (Optional)
Job material: carbide
Job thickness: 5 mm
Wire diameter: 0.10mm
Numbers of cut: 1+2 skims
Accuracy: $3\mu\text{m}$
Surface roughness: Ra0.40 μm (Ac- μ circuit, opt)

GRAPHIC OF CONTROLLER FUNCTIONS



Complete Corner control Aided Function
An expert mode to make a precise corner cut.
Mode detail setting such as: Increase/ Decrease S-code, Max. Feed; Dwell Time...etc.
To reach a perfect corner expectation under a strictly control setting.



Automatic Edge-Find function
Various automatic edge-find functions, prompting users to get central point of holes, a range of slotted hole, external cylindrical column, board profile and also can acquire the relative coordinates information as reference on screen. Those can shorten times to correct molds, even though the pattern plate is not corrected yet, [AR]angular shift function to rotate the cutting angle automatically, assuring orientated cutting.



NC program register
This function can preload the cutting technology and offset value in NC program beforehand.



Unique and Friendly File Management
Real-time graphic reproduction; while searching files user can select mode to look up the needed NC program which arranged by "Graphic Reproduction", "File Size", "Built Date", "File Size" or "Text Review". Moreover, instead of floppy diskette & RS-232 file transmission, we recommend user may choose the optional intranet function to add the work efficiency.



Excellent automatically slimming function
An advanced operation for skim cut be simply. User can operate from 1~5 skim cut in one single cut program.



Flexible Cutting Database
A powerful cutting data search function brings users a greatly efficiency at the work. Also 10,000 Nos. data were built-in, just directly input job requirements like as: Material, Thickness, Wire diameter and Cut number, then controller can find the needed cutting technology automatically. Besides, user may define a customized data base for 2000 sets himself. Moreover, [REGISTER] can preload the cutting technology and offset value in NC program beforehand.

MULTI-FUNCTIONAL CORNER AIDED SYSTEM

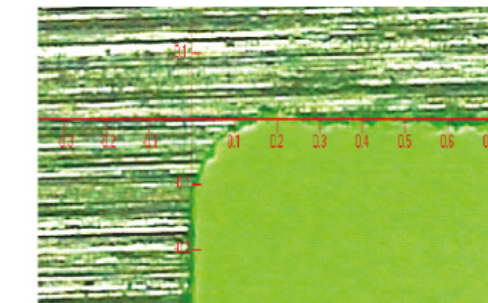
Full-functional Corner Aided System

Corner aided system utilizes special technology to obtain clean inferior / exterior angle for stamping mould.

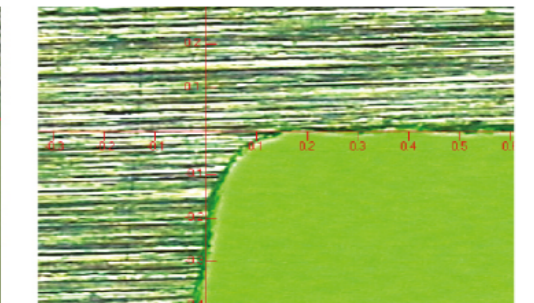
About sample in the picture.

Work condition:
Wire Diameter = 0.20mm
Work-piece material = SKD-11
Cut No. = 1 cut

Measured test result = 150X scales by profession optical projector.
Follow the detail corner setting of users. IPC will compute the optimize power Output and change the servo gain to drive the feed speed be precisely.
Eliminate the corner burst through software path calculation about the curve distortion.
To bring the perfect corner comes out.



Corner Aided Function Enabled

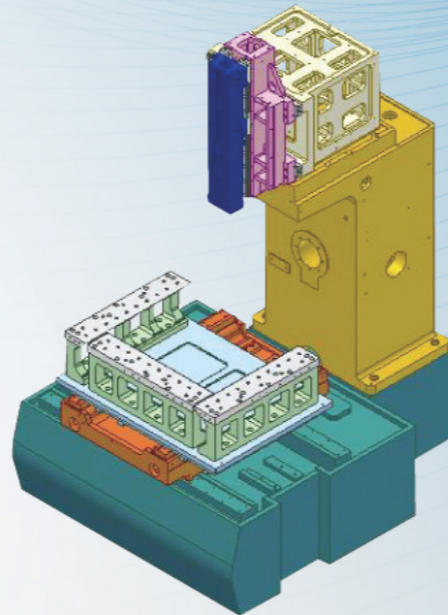
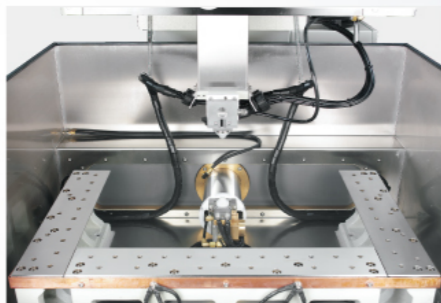


Corner Aided Function Disabled



MECHANICAL FEATURES

- ❶ 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.
- ❷ 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.
- ❸ Stainless steel 3-sided worktable and brushed stainless work tank for long endurance and least maintenance.
- ❹ U-V axes with up to $\pm 50\text{mm}$ travel for wide taper angles (± 21 degree).
(Reach Condition: 100mm Z-axis height and $DA+DB=15\text{mm}$ at least ; a set of wide-angle diamond guides and nozzles are required.)





▶▶▶▶▶ **RX853F**



▶▶▶▶▶ **RX853S**
(Optional For AWT system)



▶▶▶▶▶ **RX1063F**



▶▶▶▶▶ **RX1063S**
(Optional For AWT system)



▶▶▶▶▶ **RX1065S**
(Optional For AWT system)



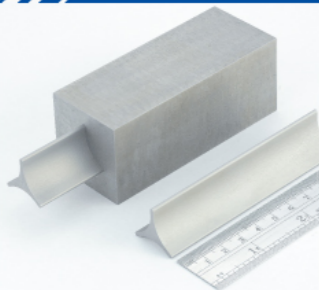
▶▶▶▶▶ **RX1283S**
(Optional For AWT system)

The Best Solution for Molds of the Automobile and Household Appliances Industries

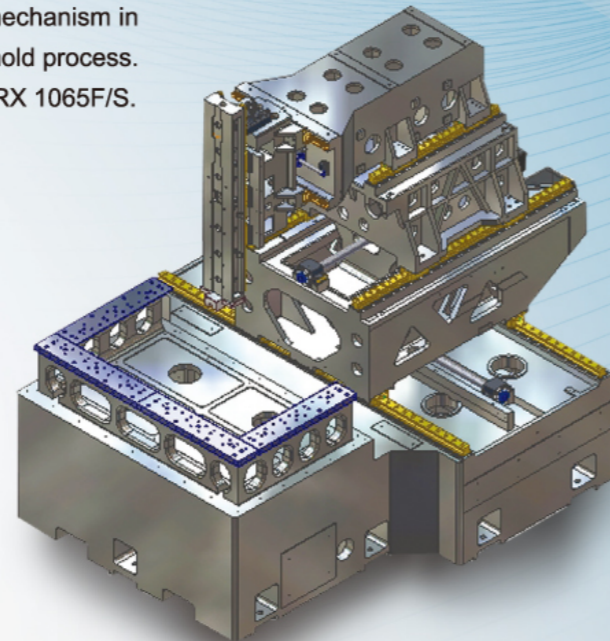
INTEGRATED CONSTRUCTION DESIGN

- ❶ To meet all kinds of processing purpose features. Specially designated based on mechanism expertise. Adopt the Column moving mechanism in RX 1065F/S model that could able to afford a heavy weight mold process.
- ❷ As to the longer Cuboids processing could be done in Model RX 1065F/S. Construction Design cooperated with PMC (Precision Machinery Reserch & Development Center) by F.E.A. (Finite Element Analysis) to secure ideal integral mechanism rigidity.

SAMPLE ILLUSTRATION



- ❶ **Great Thickness Combined Cutting**
Cutting times: 3
Workpiece material: SKD-11
Workpiece thickness: 100mm
Wire diameter: 0.25mm



▲ RX1065 rigid cast base construction

MACHINE SPECIFICATIONS

Machine Body	Model	G32F/S	G43F/S	G53F/S	G64F/S
X, Y axis (mm)		360x250	400x300	500x300	600x400
U,V,Z travel (mm)		60x60x220	60x60x220	60x60x220	100x100x300
Max.size of working piece (WxDxH mm)		725x560x215	725x600x215	825x600x215	910x700x295
Max. weight of working piece (kgw)		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) (kgw)		2300 / 2375	2575 / 2800	2800 / 3195	3200 / 3595
Coolant tank system (L)		300/590	340 / 650	340 / 650	340 / 650

Machine Body	Model	RX853F/S	RX1063F/S	RX1065F/S	RX1283/S
X, Y axis (mm)		800x500	1000x600	1000x600	1200x800
U,V,Z travel (mm)		150x150x300	150x150x300	160x160x500	120x120x300
Max.size of working piece (WxDxH mm)		1210x800x295	1450x900x295	1240x900x495	1550x1100x295
Max. weight of working piece (kgw)		2000/1000	3000/1500	5000/3000	6000/4000
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)		400-2500	300-2500	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)	±21°/180 (wide-angled nozzle, DA+DB=15mm)	±21°/130 (wide-angled nozzle, DA+DB=15mm)
Outside dimension (WxDxH mm)		2400x2800x2350 / 3150x3500x2350	2700x3000x2200 / 4000x4000x2200	3200x3600x2800 / 4000x3600x2800	4350x4100x2300
N.W (including power and coolant system) (kgw)		5000/5600	6500/7100	7500/7600	11000/15000
Coolant tank system (L)		340/1495	650/2000	650/2400	760/3000

● Specifications subject to change based on R&D results without prior notice.

● Remark: In submerged condition, maximum height of work-piece recommended is Z stroke minus 45mm.

OPTION

IMPROVE PRODUCTIVITY AND AVAILABILITY



▶ ULTRA FAST AWT SYSTEM

World's fastest AWT (8 seconds, 50mm height) Threads in the cavity.

▶ A better steady wire thread performance

Power failure last break point recovery. Through the linear scale and UPS, user can free and resume to work at same break point even power failure is occurred beyond the expectation.



STANDARD / OPTIONAL ACCESSORIES

Standard ● Optional ○ None —

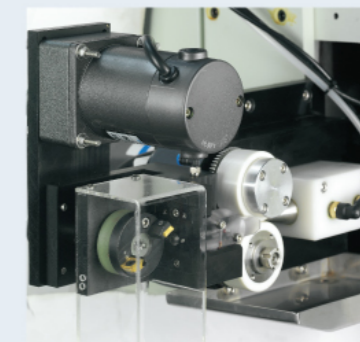
ITEMS	SPECIFICATION	AMOUNT	G32	G43	G53	G64	RX853	RX1063	RX1065	RX1283
Paper Filter		2 pcs	●	●	●	●	●	—	—	—
		4 pcs	—	—	—	—	—	●	●	—
		6 pcs	—	—	—	—	—	—	—	●
UPPER / LOWER Diamond Guides	0.26mm	2 pcs	●	●	●	●	●	●	●	●
UPPER / LOWER Flushing Nozzles		2 pcs	●	●	●	●	●	●	●	
Energizing Carbides		2 pcs	●	●	●	●	●	●	●	
Diamond Guide Remove Jig		1 pcs	●	●	●	●	●	●	●	
Brass Wire	Ø0.25mmx5kg	1 roll	●	●	●	●	●	●	●	
Tools		1 set	●	●	●	●	●	●	●	
AC power			●	●	●	●	●	●	●	
Alignment Jig		1 pcs	○	●	●	●	●	●	●	●
	Flush type	3L	●	●	●	●	●	●	●	●
	Submarine type	6L	●	●	●	●	●	—	—	
Ion Exchange Resins	Submarine type	12L	—	—	—	—	—	—	●	●
Swinging panel			○	○	○	○	●	●	●	●
2-in-1 Transformer +AVR			○	○	○	○	○	○	○	○
Linear scale			○	○	○	○	○	○	○	○
Auto Wire Threading (AWT)			○	○	○	○	○	○	○	○
30KG Wire feeder	30KG		○	○	○	○	○	○	○	○
Wire chopper			○	○	○	○	○	○	○	○
Z axis travel 400MM			—	—	—	—	○	○	—	○
Water chiller	Flush type	1T	1set	●	●	●	—	—	—	—
		2T	1set	—	—	—	●	●	●	●
	Submarine type	1T	1 set	●	●	—	—	—	—	—
		2T	1set	—	—	●	●	●	●	—
		3T	1set	—	—	—	—	—	—	●

▶ In-house Rotary B-axis

6th Axis continuous cut or indexing (optional) with in-house submergible rotary B-Axis for turns and burns.



● Wire feeder



● Wire chopper