



G Series

WIRE EDM FOR ULTRA PRECISE MACHINING



 **EXCETEK**



G Series

Mechanical Structure

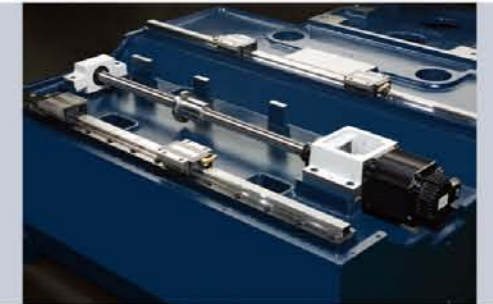
Massive Meehanite casting designed through FEM analysis offers exceptional damping property and the highest machining rigidity. To ensure thermal balance, rib location designed by Finite Element Analysis (FEA) assuring an optimized rigid structure.

To ensure thermal balance, rib location is designed by Finite Element Analysis (FEA) assuring an optimized rigid structure.

- Water Cooled lower arm prevents thermal expansion caused by heat buildup. Therefore, the accuracy will be improved.
- Stainless steel work table with hardness HRC 50°.
- High response AC servo motor for guaranteed accuracy.
- Extra wide machine base.
- Rigid U,V truss design.



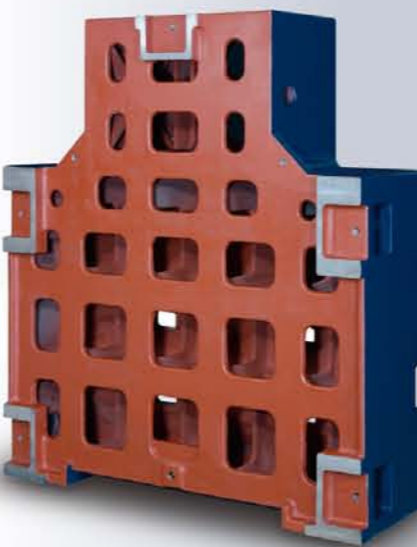
Precision is achieved through extended distance between linear guide ways. Cryogenic treatment of C1 class ball screw, supported by two sides and a high resolution AC servomotor. These outstanding features boost accuracy in micro step amounts up to 1 μm .



Laser calibration, pitch error compensation.



Close loop linear scale (Option)



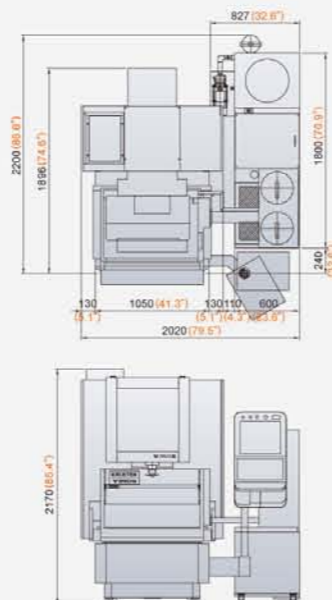
A rugged cast iron design is the foundation of precision.



SPECIFICATIONS

Maximum work piece (mm)	700 x 500 x 215 mm 27.6" x 19.7" x 8.5"
Max. Work piece weight	450 kg 992 lb
Travel of X/Y axes	350 x 250 mm 13.8" x 9.8"
Travel of U/V axes	80 x 80 mm 3.1" x 3.1"
Travel of Z axis	220 mm 8.7"
Wire Diameter	0.15~0.3 mm 0.004"~0.012"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±22°/80 mm ±22°/3.1" (with wide diamond guide and nozzle)
Machine Placement	2020 x 2200 x 2170 mm 79.5" x 86.6" x 85.4"
Machine Weight	2700 kg 5952 lb
Water Tank Capacity	600 L

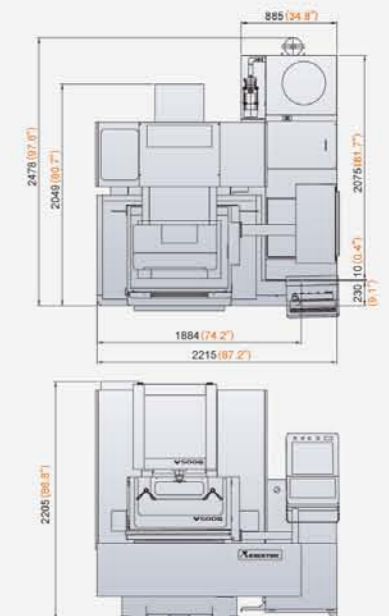
DIMENSIONS



SPECIFICATIONS

Maximum work piece (mm)	850 x 600 x 255 mm 33.5" x 23.6" x 10"
Max. Work piece weight	600 kg 1323 lb
Travel of X/Y axes	500 x 300 mm 19.7" x 11.8"
Travel of U/V axes	120 x 120 mm 4.7" x 4.7"
Travel of Z axis	260 mm 10.2"
Wire Diameter	0.15~0.3 mm 0.004"~0.012"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±26°/100 mm ±26°/3.9" (with wide diamond guide and nozzle)
Machine Placement	2215 x 2480 x 2205 mm 87.2" x 97.6" x 86.8"
Machine Weight	3200 kg 7055 lb
Water Tank Capacity	750 L

DIMENSIONS



V650G

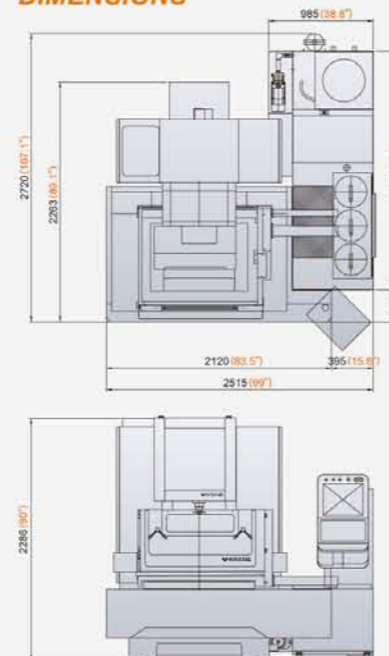
The Optimum Size



SPECIFICATIONS

Maximum work piece (mm)	1000 x 700 x 345 mm 39.4" x 27.6" x 13.6"
Max. Work piece weight	800 kg 1764 lb
Travel of X/Y axes	650 x 400 mm 25.6" x 15.7"
Travel of U/V axes	160 x 160 mm 6.3" x 6.3"
Travel of Z axis	350 mm (Option 410 mm) 13.8" (Option 16.1")
Wire Diameter	0.15~0.3 mm 0.004"~0.012"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±30°/100 mm ±30°/3.9" (with wide diamond guide and nozzle)
Machine Placement	2520 x 2720 x 2290 mm 99.2" x 107.1" x 90.2" (89")
Machine Weight	4000 kg 8818 lb
Water Tank Capacity	850 L

DIMENSIONS



V850G

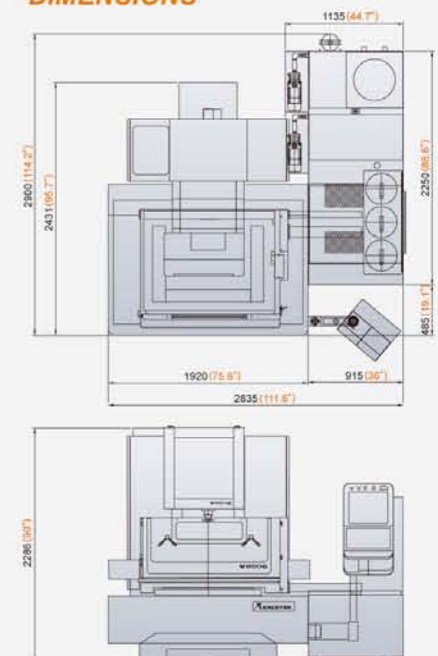
Large Travels Low Cost



SPECIFICATIONS

Maximum work piece (mm)	1100 x 850 x 345 mm 43.3" x 33.5" x 13.6"
Max. Work piece weight	1100 kg 2425 lb
Travel of X/Y axes	800 x 500 mm 31.5" x 19.7"
Travel of U/V axes	160 x 160 mm 6.3" x 6.3"
Travel of Z axis	350 mm (Option 410 mm) 13.8" (Option 16.1")
Wire Diameter	0.15~0.3 mm 0.004"~0.012"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±30°/100 mm ±30°/3.9" (with wide diamond guide and nozzle)
Machine Placement	2840 x 2900 x 2290 mm 111.8" x 114.2" x 90.2" (89")
Machine Weight	4600 kg 10141 lb
Water Tank Capacity	1050 L

DIMENSIONS



V Series

Fixed Bed Traveling
Column Design



Longer travel with Rigid U/V ribbed casting structure



Machine design by computer FEM analysis to achieve high rigidity base, provide high position depth cold C1 class ball screw, with roller type linear guide way use three support block to provide accuracy machine positioning & cutting.

V1060

Z350/Z500

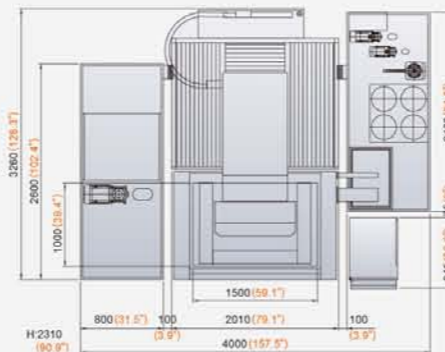
The large size of standard column move WX series; it talks the specification of a big size & heavy load workpiece of Wire Cutting EDM.



SPECIFICATIONS

Maximum work piece (mm)	1500 x 1000 x 345 mm (495 mm) 59.1" x 39.4" x 13.6" (19.5")
Max. Work piece weight	3000 kg 6614 lb
Travel of X/Y axes	1000 x 600 mm 39.4" x 23.6"
Travel of U/V axes	160 x 160 mm (260 x 260 mm) 6.3" x 6.3" (10.2" x 10.2")
Travel of Z axis	350 mm (Option 500 mm) 13.8" (Option 19.7")
Wire Diameter	0.2~0.33 mm 0.0078"~0.0129"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±30°/100 mm ±30°/3.9" (with wide diamond guide and nozzle)
Machine Placement	4160 x 3570 x 2310 mm 163.8" x 140.6" x 90.9"
Machine Weight	6200 kg 13669 lb
Water Tank Capacity	WX1060-Z350/Z500: 1800 L/2500 L

DIMENSIONS



The largest standard size of column move WX series; it talks the specification of a big size & heavy load work piece of Wire Cutting EDM. Maximum option of Z-axis extend to 800 mm (31.5")

V1280

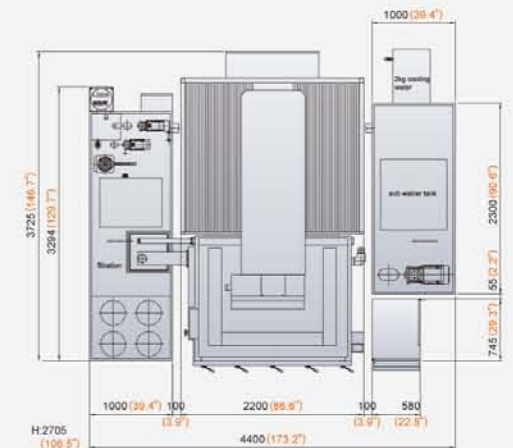
Z500/Z600/Z800



SPECIFICATIONS

Maximum work piece (mm)	1650 x 1200 x 495 mm (Option 595/795 mm) 65" x 47.2" x 19.5" (Option 23.4"/31.3")
Max. Work piece weight	4000 kg 8818 lb
Travel of X/Y axes	1200 x 800 mm 47.2" x 31.5"
Travel of U/V axes	260 x 260 mm 10.2" x 10.2"
Travel of Z axis	500 mm (Option 600/800 mm) 19.7" (Option 23.6"/31.5")
Wire Diameter	0.2~0.33 mm 0.0078"~0.0129"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±30°/100 mm ±30°/3.9" (with wide diamond guide and nozzle)
Machine Placement	4400 x 3725 x 2705 mm 173.2" x 146.7" x 106.5"
Machine Weight	10600 kg 23369 lb
Water Tank Capacity	WX1280-Z500/Z600/Z800: 3000 L/3300 L/4000 L

DIMENSIONS



V12100-Z1000

World biggest Z-axis
machining 1 meter (39.4")
Wire EDM



SPECIFICATIONS

Maximum work piece (mm)	1650 x 1400 x 1000 mm 65" x 55.1" x 39.4"
Max. Work piece weight	4000 kg 8818 lb
Travel of X/Y axes	1200 x 1000 mm 47.2" x 39.4"
Travel of U/V axes	260 x 260 mm 10.2" x 10.2"
Travel of Z axis	1005 mm 39.6"
Wire Diameter	0.2~0.33 mm 0.0078"~0.0129"
Number of axes controlled	5 Axis AC servo motor
Max. Taper Angle	±30°/100 mm ±30°/3.9" (with wide diamond guide and nozzle)
Machine Placement	4400 x 3925 x 3205 mm 173.2" x 154.5" x 126.2"
Machine Weight	12600 kg 27778 lb
Water Tank Capacity	4700 L

DIMENSIONS

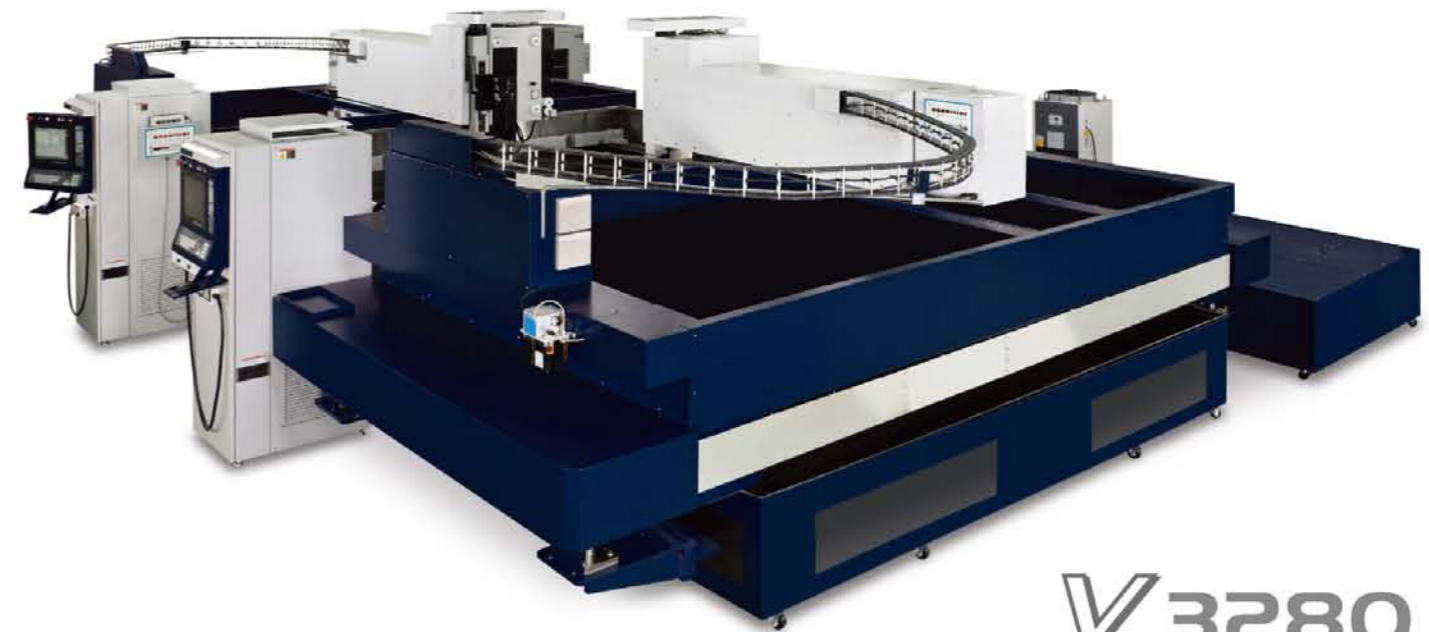


V2000

Customization world
big size Wire EDM

V3280

V2000



V3280

SPECIFICATIONS

	V2000	V3280
Maximum work piece (mm)	2500 x 700 x 345 mm 98.4" x 27.6" x 13.6"	3200 x 3000 x 300 mm 126" x 118.1" x 11.8"
Max. Work piece weight	2500 kg 5512 lb	10000 kg 22046 lb
Travel of X/Y axes	2000 x 450 mm 78.7" x 17.7"	3000 x 2800 mm (1400+1400) 118.1" x 110.2" (55.1"+55.1")
Travel of U/V axes	160 x 160 mm 6.3" x 6.3"	---
Travel of Z axis	350 mm 13.8"	320 mm 12.6"
Machine Placement	3135 x 5260 x 2200 mm 123.4" x 207.1" x 86.6"	7820 x 9100 x 2450 mm 307.9" x 358.3" x 96.5"
Water Tank Capacity	2500 L	7500 L

The generator & CNC Control

The operation panel it is easy to operate, which adopt an ergonomic technology

- 15" TFT touch screen operate
- Easy confirm screen design
- Easy to use mouse & keyboard



Modular Designed System

An optimal module on the electric circuit PCB, each module I/O gives an LED indication which benefits after sales, service and provides more efficient maintenance.

High Frequency Calculating and Pulse Control

- Use "the embedded system" to reduce the loading of the control.
- Adapts ASIC chip to increase the stability of the circuit.
- Sparking relevant information real-time feedback and it makes spark erosion steady.

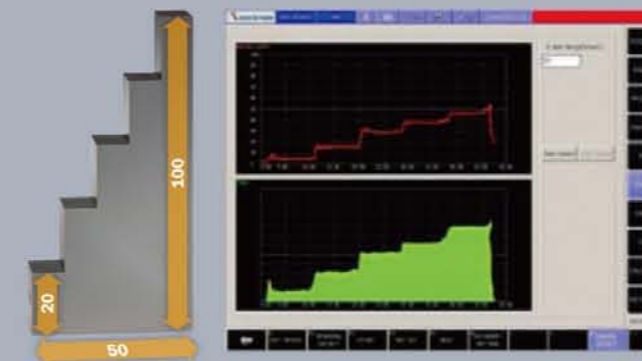


W Series - The control of W6 takes care of users.

- CNC Device: Industrial PC
- CPU: Pentium 64-bit 64 bits high speed CPU
- Operation Interface: 15" LCD touch screen, Keyboard, Mouse
- Input Interface: LAN, USB driver, RS-232
- Memory capacity: 1 GB CF card
- Min. command unit: 0.0001 mm
- Max. programmable dimension: ±9999.9999 mm
- Unit: Metric / Inch Switch able



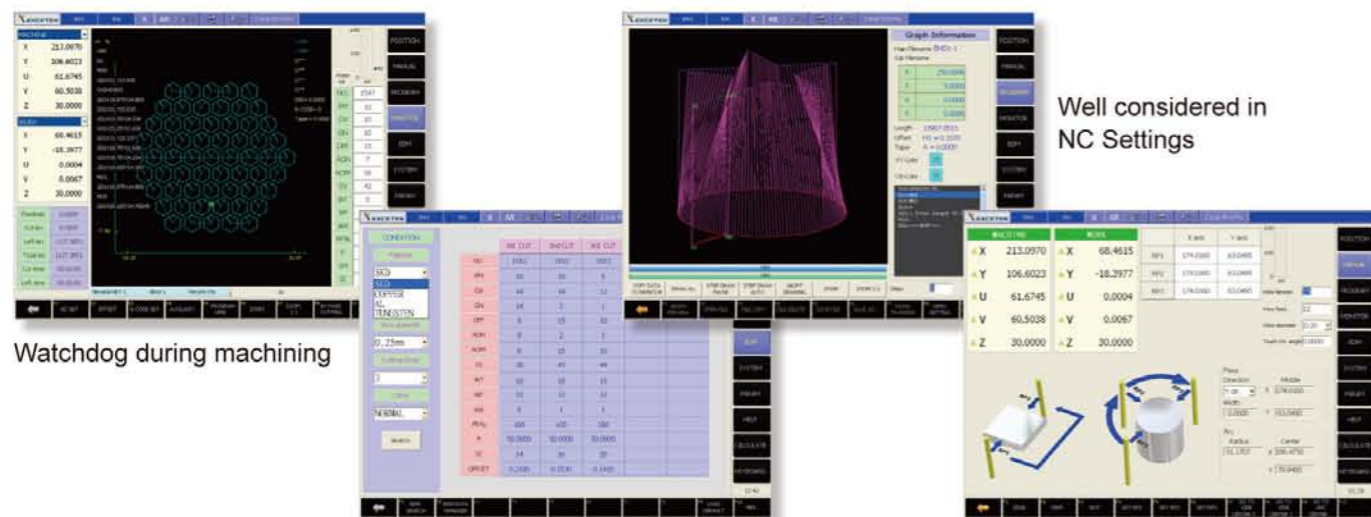
DPM - Digital Power Manager (option)



Capable of detecting digital signals of sparking density, feedback to CNC and calculating the sparking size. Thus to control the sparking energy, wire tension force and water pressure more precisely; increases cutting speed and accuracy when cutting on irregular thickness workpieces.

Comparison concerning DPM technology	Mode	Enable	Disable
	Speed mode		39 Min.
Accuracy mode		±3 μm	±15 μm

(According factory test condition)



Watchdog during machining

Database Cutting Technologies

Well considered in NC Settings

Icons Assistant to User

SFC-Super Finish Circuit (option)

High frequency sparking energy provides Ra 0.14 μm surface roughness by 1 rough cut plus 5 trim cuts.



5' cut	4' cut	3' cut	2' cut	1' cut
0.14 μm	0.25 μm	0.49 μm	0.83 μm	2.56 μm

Material: Steel SKD-11 with hardness
Thickness: 30 mm (1.2") (V350G/V500G/V650G)



Ra 0.18 μm

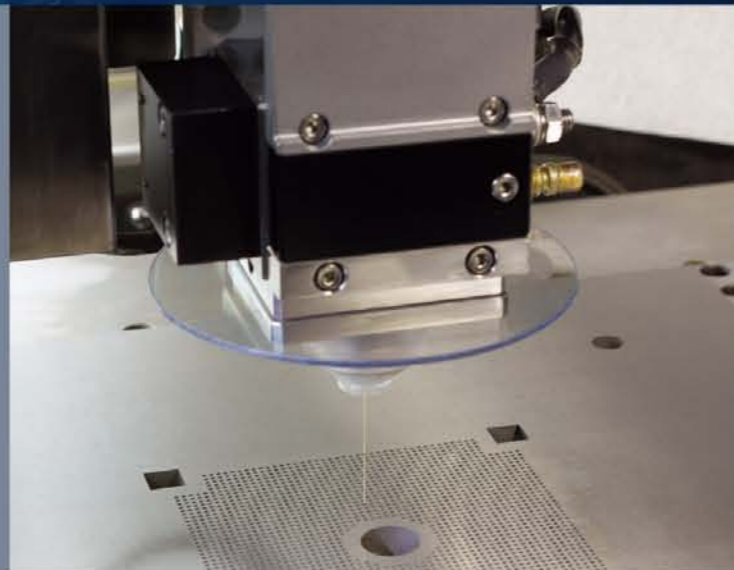
Tungsten carbide, Thickness: 50 mm (2")

(The Option only V350G/V500G/V650G)

Auto Wire Threading

Continuous unmanned operation day and night

Non stop machining ideal break point auto wire threading



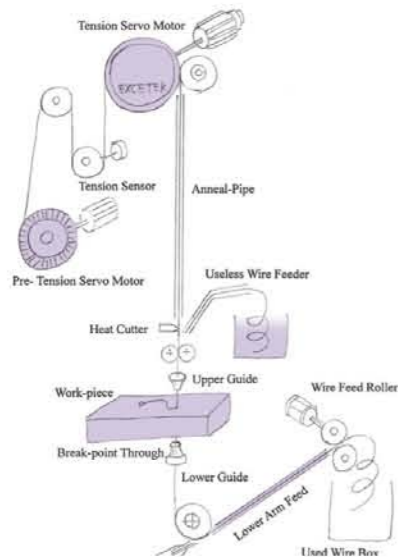
Annealing wire threading

- Threading at the wire break point: Annealing is used to improve the straightness of the wire. The wire can be threaded at the break point during machining, with virtually 100% reliability and without the need to return to the start hole.
- Submerged Wire Threading: Wire Threading is also easily executed during submerged machining, no need drain and refill the work tank.
- Multi-hole machining function: In race events when the machine fails to rethread during multi-hole machining, the system will skip to the next hole. The location of the skipped hole is automatically stored in memory and can be recalled later to complete the cut.

Reliable Auto Wire Threading system

The EXCETEK AWT is very useful design that provides continuous unmanned operation day and night, its outstanding feature by comparison to other competitors is threading at the point of wire breakage.

Water jet function enables the machine to thread a thickness of 500 mm.



High speed Auto Wire Threading System

Multi-hole operation : Finish cutting → Cut Wire → Re-treading → Machining



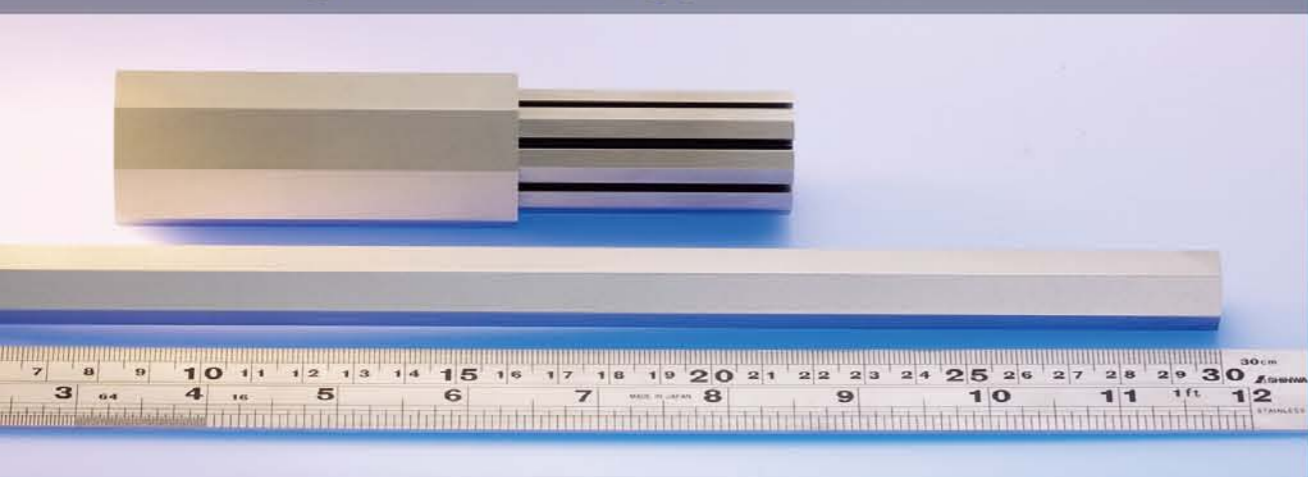
Workpiece thickness 100 mm
Wire annealing and cutting : 10 sec
Threading : 10 sec



Workpiece thickness 800 mm
Threading under the water at break point

YCM EXCETEK	YES
OTHER	??

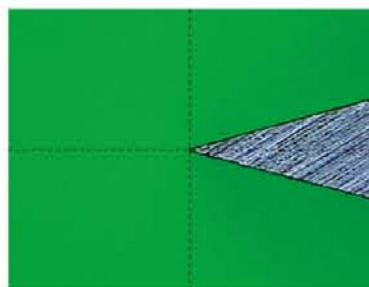
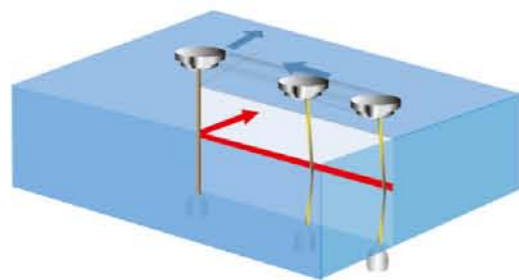
Cutting Technology



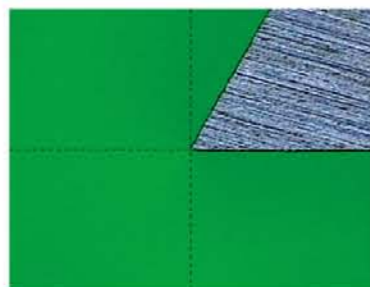
The Corner Control

Corner control machining parameter controls the machining speed and inhibiting the wire twisting phenomenon, hence reduce cornered 'washout', ensuring machining accuracy and molding compatibility, hence effectively improve molding machining quality and speed.

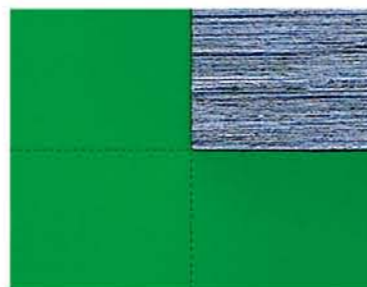
Operator can adjust quality priority or speed priority according to wire diameter or thickness selector.



Corner angle 30° / Zoom-in x 100



Corner angle 60° / Zoom-in x 100



Corner angle 90° / Zoom-in x 100

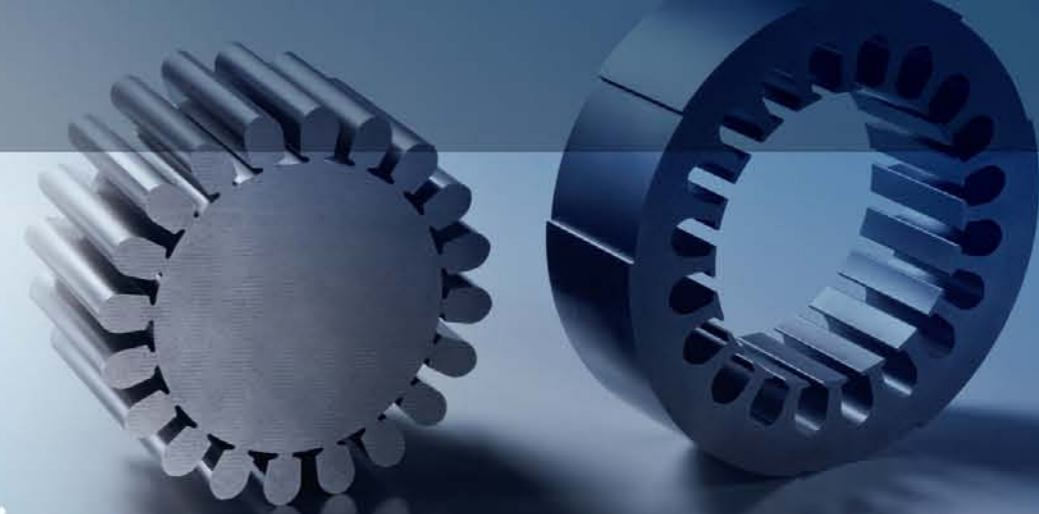
	Work piece	SKD-11
	Wire	0.25 mm / Brass
	Taper of Angle	30°
	Thickness	50 mm
	No. of cut	1 cut 3 skim
	Cutting Time	5 hour 30 min

	Work piece	SKD-11
	Wire	0.2 mm / Brass
	Thickness	Punch 50 mm
	No. of cut	1 cut 2 skim
	Cutting Time	Punch 45 min

	Work piece	SKD-11
	Wire	0.2 mm / Brass
	Thickness	50 mm
	No. of cut	1 cut 2 skim
	Cutting Time	Punch 3h 40min Die 4h 35min

	Work piece	SKD-11
	Wire	0.2 mm / Brass
	Start Hole	0.7 mm
	Thickness	15 mm
	No. of cut	No cone cut
	Cutting Time	Each hole cycle 70 sec 48h 35min

Feature Options



Standard Accessories

- Ion exchange resin x 10L
- Paper filter x 2 pcs
- Diamond guide x 2 pcs
- Upper and lower flushing nozzle x 2 sets
- Energizing plates x 2 pcs
- Brass Wire x 1 spool
- Clamping tool 1 set
- Vertical Alignment Jig 1 set

Option Accessories

- XY axis linear scale
- Clamping Beam
- AWT
- AVR 15KVA
- Transformer 15KVA
- Short Message Service (SMS)
- Remote Monitor
- Super Finish Circuit
- W-Axis
- Jumbo Feeder L-50A
- Double Door
- Power Slide Door (Only V650G & V850G)
- Signal Tower

W-axis



Double Door



Power Slide Door



(Only V650G & V850G)

Jumbo Feeder



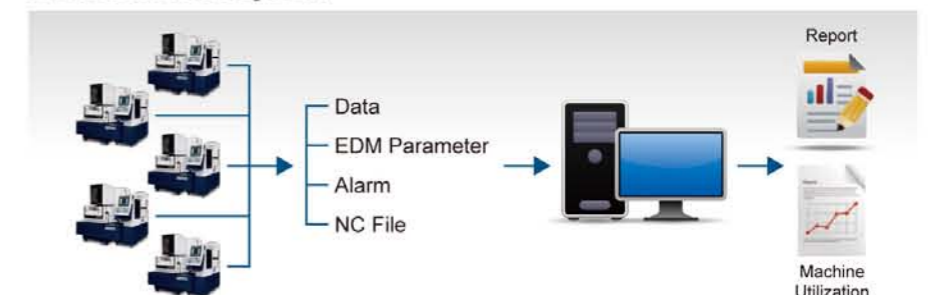
Short Message Service (SMS)



Clamping Beam



Remote Monitor System





Global network

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