



# VQ Series

A Practical Wire EDM to Create Your Future

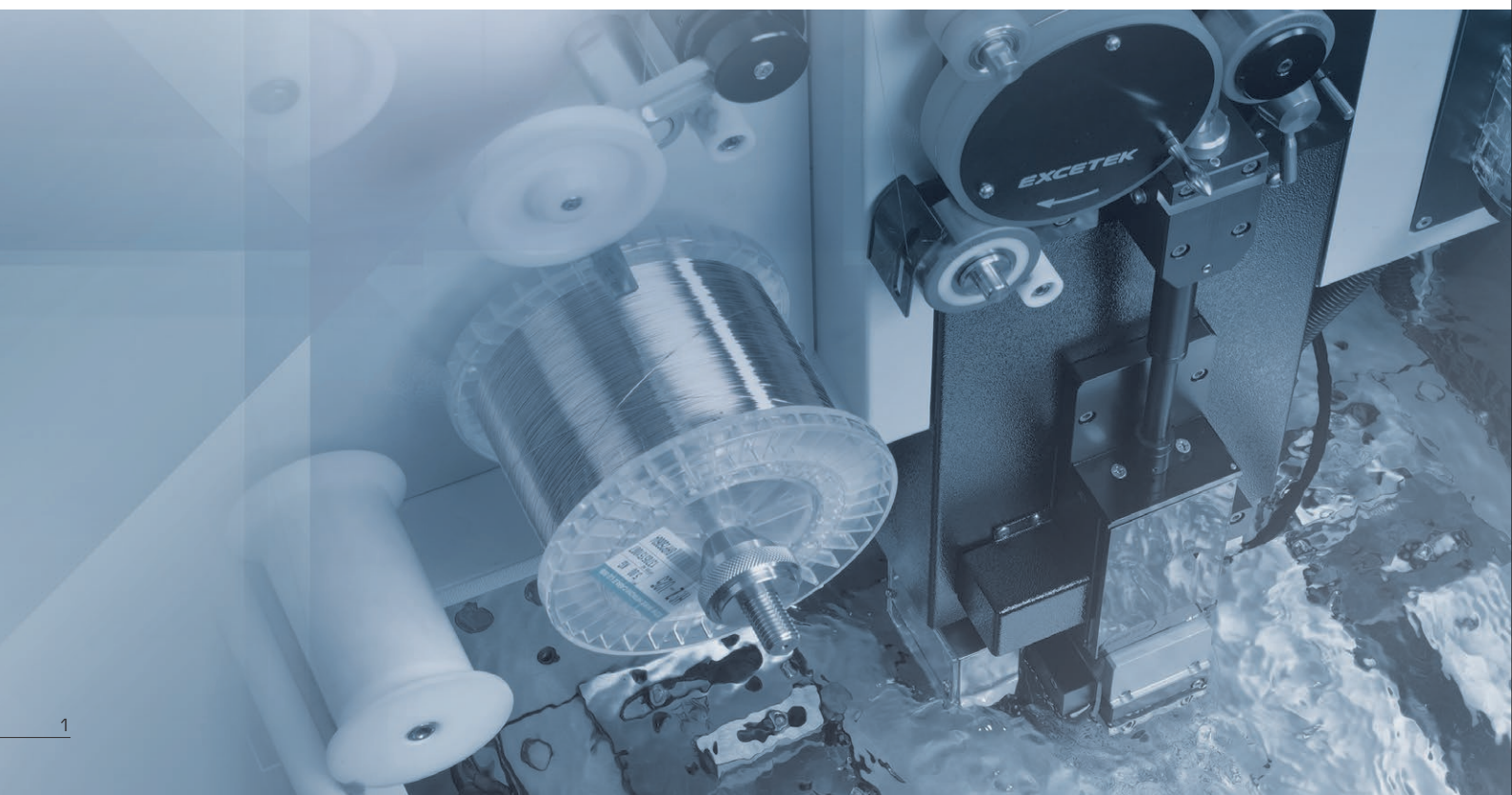


Excelsior from Professionals · Quality · Reliability



## About EXCETEK

- Innovative R&D controls core competitiveness
- Lean production and operation management gathers teamwork spirit
- Efficient and in-time after-sale service
- Trust, Innovation Sustainable happiness enterprise



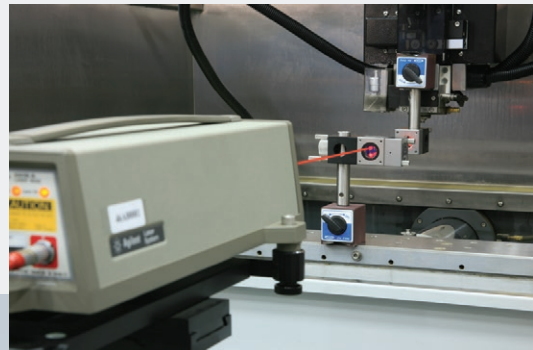




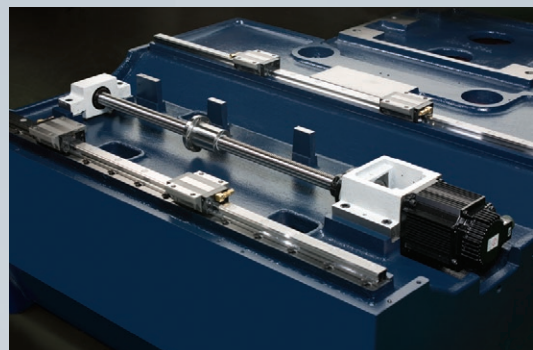
Production line: Clean, order with well organized with air-conditioning

# Mechanical Structure

- To ensure thermal balance, rib location is designed by Finite Element Analysis (FEA) assuring an optimized rigid structure.
- Rigid U and V truss design.
- High response AC servo motor for Provide accuracy.
- Stainless steel worktable hardened with HRC 50°
- Water-cooled lower arm prevents thermal expansion caused by heat build-up, maintaining accuracy.



Laser calibration - for the calibration and compensation of pitch errors or displacement errors of the machine structure.

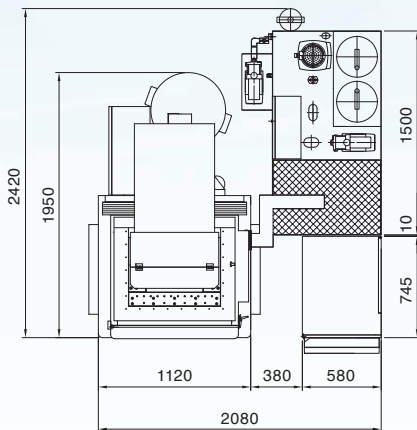


Micron level precision is achieved through the selection of class leading machine motion elements. The cryogenically treated C1 grade ball screws are driven by high resolution AC servomotors, and are supported by widely spaced linear guide ways for maximum stability.

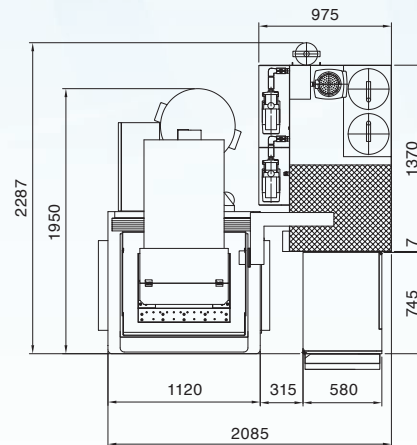
# VQ400S



## FLUSHING TYPE VQ40F



VQ400S



VQ40F

## Machine Specifications

Description	VQ400S (Submerged)	VQ40F (Flushing)
Max. Work Piece Dimension (mm)	W750xD550xH215	W800xD600xH215
Max. Work Piece Weight (kg)	500	500
Travel of X,Y (mm)	400x300	400x300
Travel of U,V (mm)	80x80	80x80
Travel of Z (mm)	220	220
WIRE Diameter (mm)	ø 0.15~0.3 mm	ø 0.15~0.3 mm
Number of Axes Control (mm)	5 Axis AC servo motor	5 Axis AC servo motor
Maxi. Taper Angle	±22°/80 mm	±22°/80 mm
Machine Dimension (mm)	W2100xD2420xH2100	W2100xD2230xH2175
Machine Weight (kg)	2800 kg	2600 kg

### Dielectric Tank Specifications

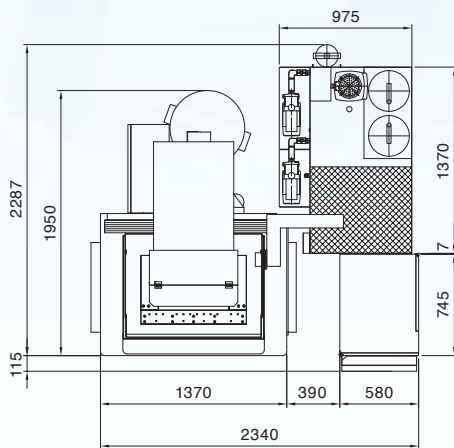
Tank Capacity (L)	650 L	300 L
Paper Filter (PCS)	2 pcs	2 pcs
Deionizer	Auto	Auto
Chiller unit	Auto (optional)	Auto (optional)



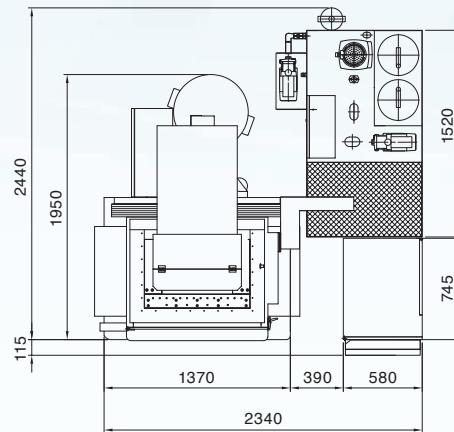
# VQ500S



FLUSHING TYPE  
**VQ50F**



VQ50F



VQ500S

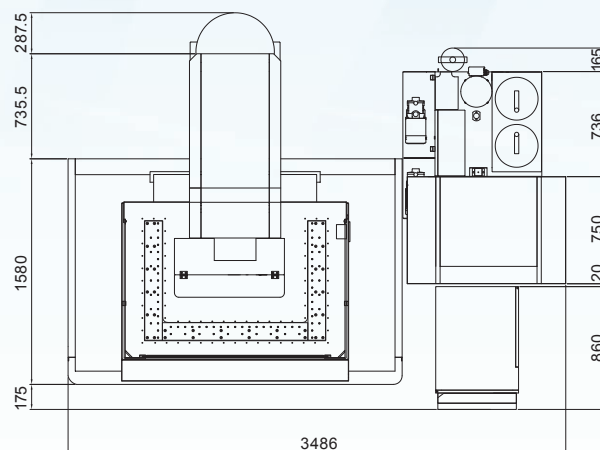
## Machine Specifications

Description	VQ500S (Submerged)	VQ50F (Flushing)
Max. Work Piece Dimension (mm)	W850xD550xH215	W900xD600xH215
Max. Work Piece Weight (kg)	500	600
Travel of X,Y (mm)	500x300	500x300
Travel of U,V (mm)	80x80	80x80
Travel of Z (mm)	220	220
WIRE Diameter (mm)	ø 0.15~0.3 mm	ø 0.15~0.3 mm
Number of Axes Control (mm)	5 Axis AC servo motor	5 Axis AC servo motor
Maxi. Taper Angle	±22°/80 mm	±22°/80 mm
Machine Dimension (mm)	W2350xD2570xH2100	W23050xD2420xH2100
Machine Weight (kg)	2900 kg	2750 kg

### Dielectric Tank Specifications

Tank Capacity (L)	650 L	300 L
Paper Filter (PCS)	2 pcs	2 pcs
Deionizer	Auto	Auto
Chiller unit	Auto (optional)	Auto (optional)

# VQ100F



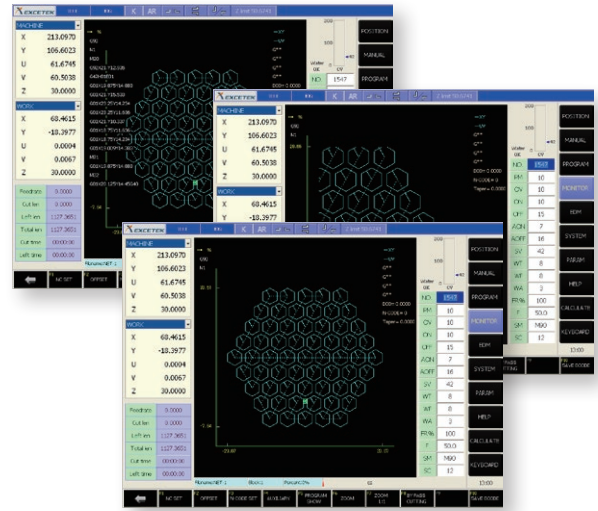
## Machine Specifications

Description	VQ100F (Flushing)
Max. Work Piece Dimension (mm)	W1500xD1000xH305
Max. Work Piece Weight (kg)	1600
Travel of X,Y (mm)	1000x600
Travel of U,V (mm)	120x120
Travel of Z (mm)	310
WIRE Diameter (mm)	ø 0.15~0.3 mm
Number of Axes Control (mm)	5 Axis AC servo motor
Maxi. Taper Angle	±26°/100 mm
Machine Dimension (mm)	W3600xD2900xH2300
Machine Weight (kg)	5200 kg
<b>Dielectric Tank Specifications</b>	
Tank Capacity (L)	300 L
Paper Filter (PCS)	2 pcs
Deionizer	Auto
Chiller unit	Auto



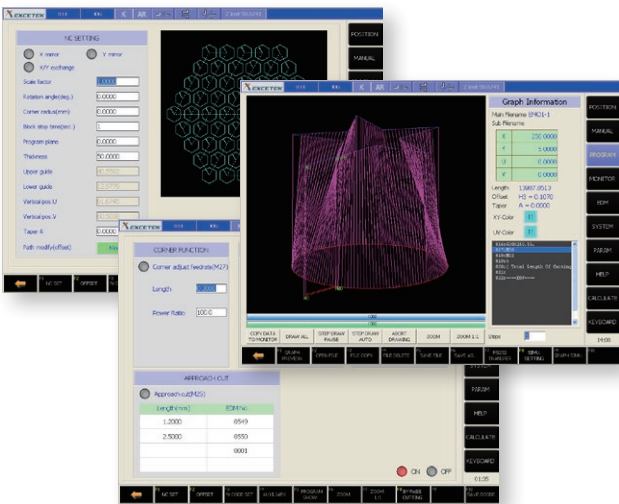
# Control

## Watchdog during machining



**Remote Control**  
(Standard Accessory)

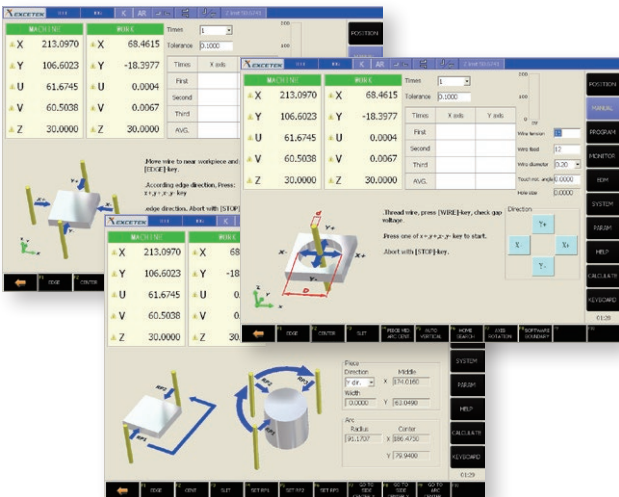
## Well considered in NC Settings



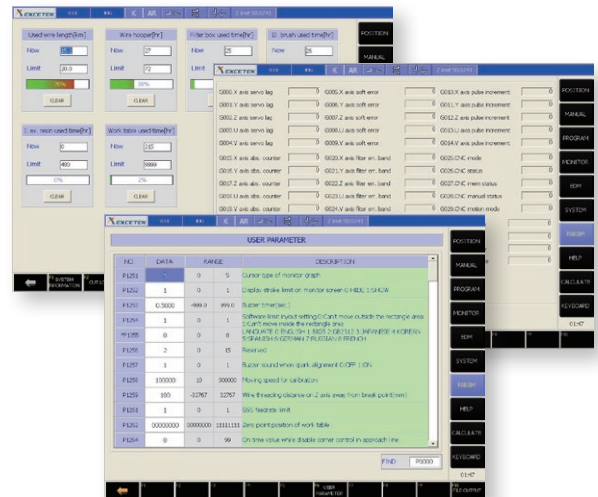
## Database Cutting Technologies



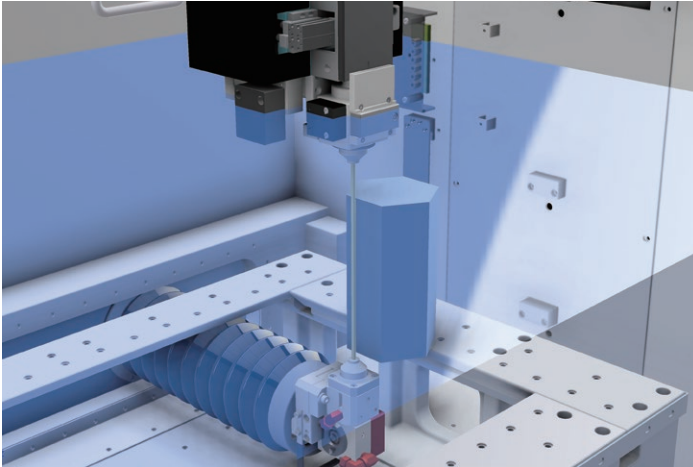
## Icons Assistant to User



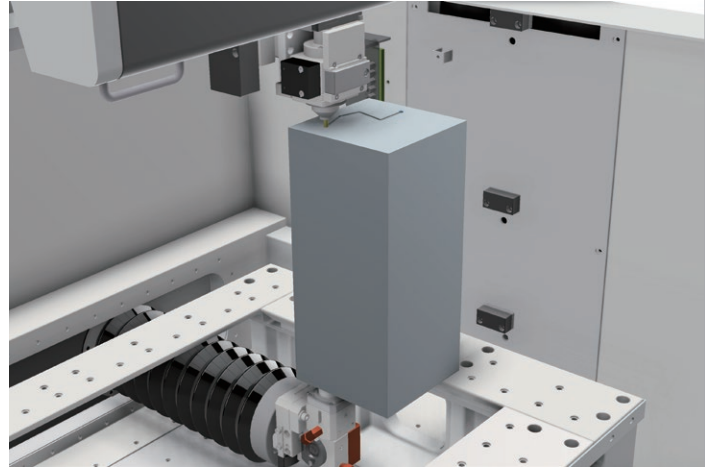
## Parameters & Maintenance information



# Auto Wire Threading



200mm Submerge threading



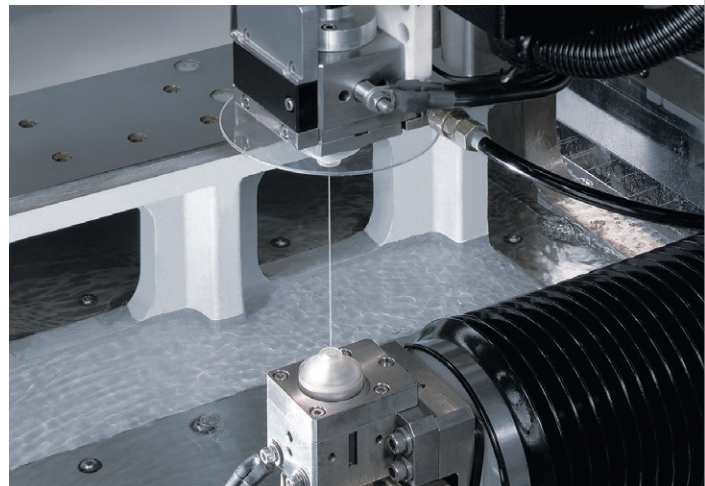
300mm thickness threading in break

## High speed Auto Wire Threading System

**Workpiece thickness 100mm**

Wire annealing and cutting: 10 sec

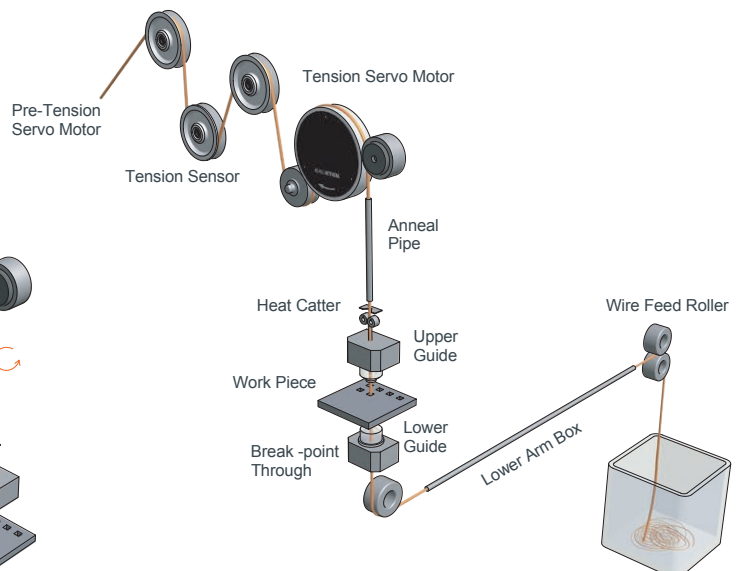
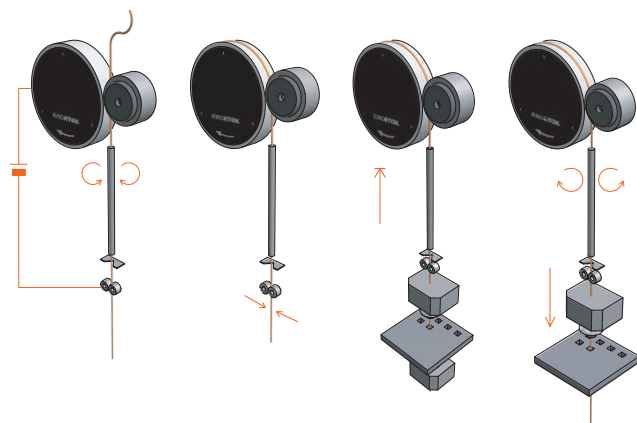
Threading: 10 sec



## Reliable Auto Wire Threading system

The EXCETEK AWT is very sophisticated design that provides continuous unmanned operation day and night. Unlike other systems it can thread at the point of the wire breakage.

A water jet function enables the machine to thread workpieces up to 300mm.

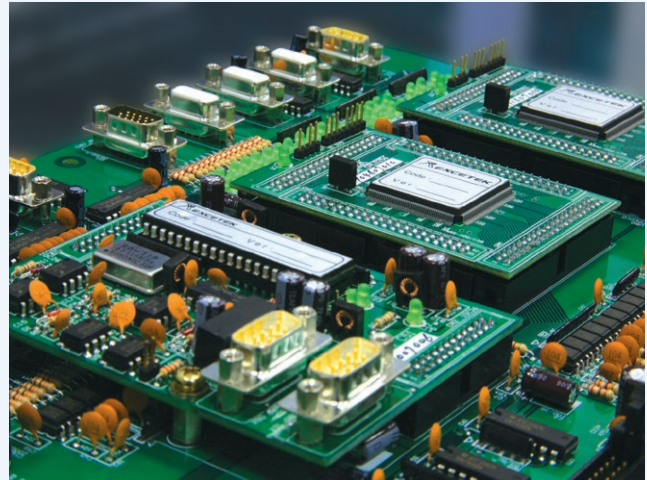




# The generator

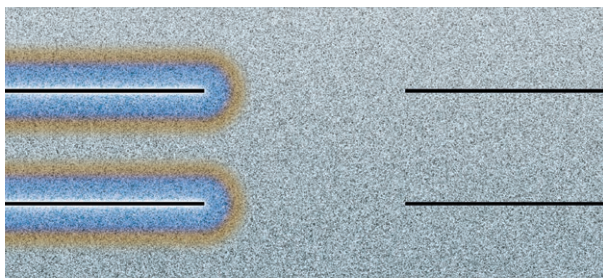
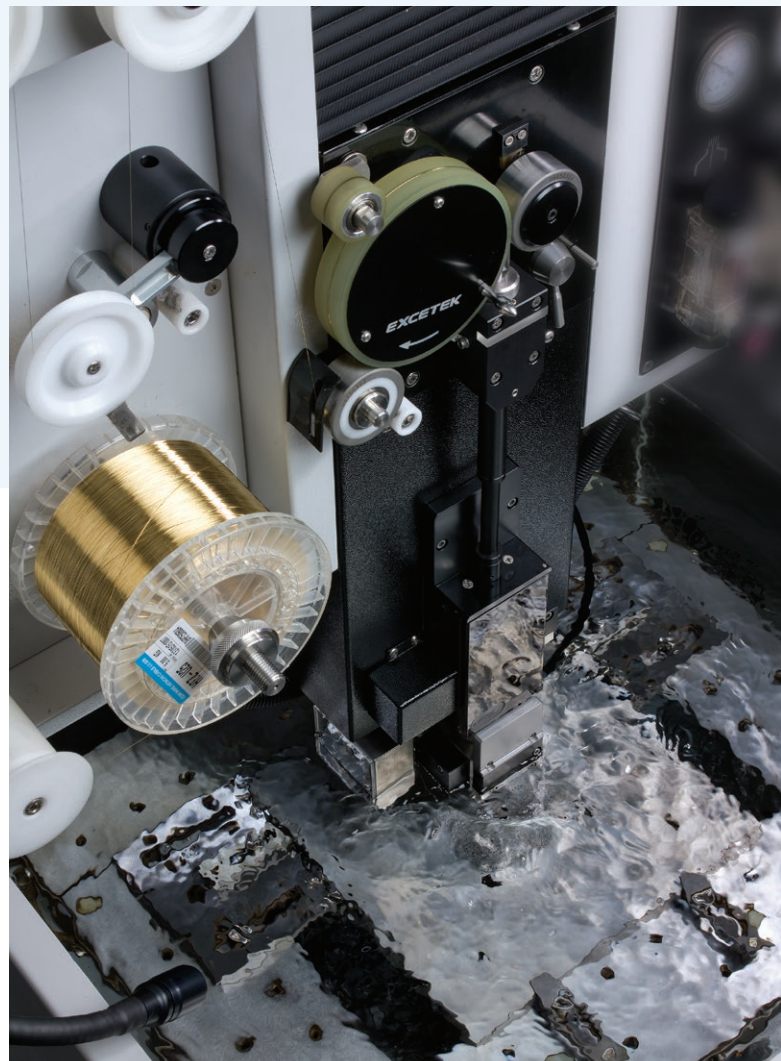
## High Frequency Calculating and Pulse Control

- Using the 'embedded system' reduces the loading on the control circuit.
- An Application-Specific Integrated Chip (ASIC) increases the stability of the circuit.
- Sparking relevant information Real-time feedback information is used to control the sparking making the erosion process very stable.



## Modular Designed System

Using optimum modular design on the electronic PCB circuits all the control functions are load shared. Each module I/O has an LED indicator, which aids trouble-shooting and makes servicing and maintenance more efficient.



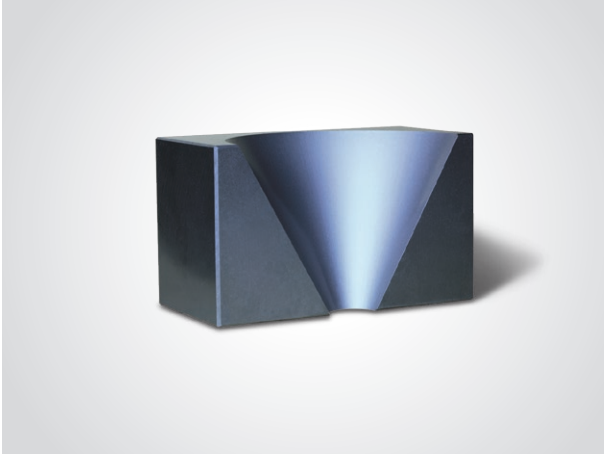
DC discharge

EF (non-electrolytic) discharge

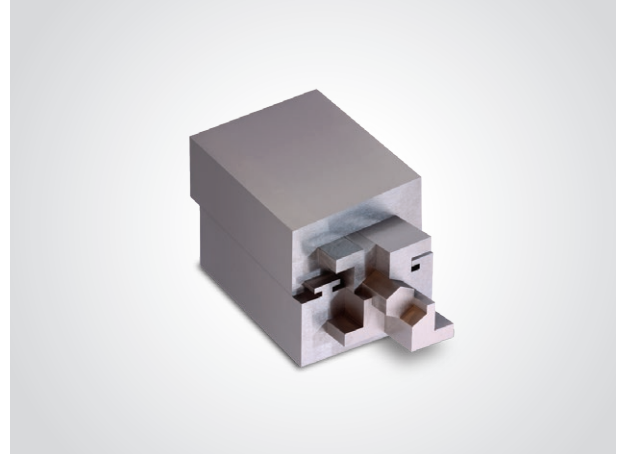
## EF Electrolysis Free (AC Power Generator)

EF Electrolysis Free Generator System is a new design which provides cutting performance.

# Cutting Technology



Workpiece	SKD-11
Wire	0.25 mm / Brass
Angle of taper	30°
Thickness	50 mm
No. of cut	1 cut 3 skim

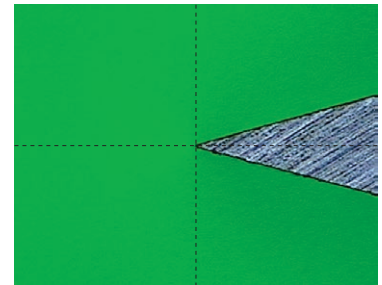
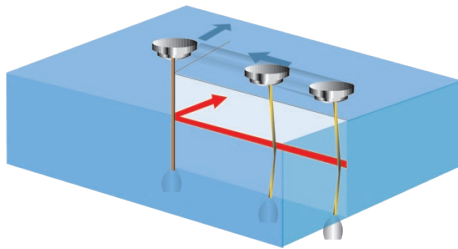


Workpiece	SKD-11
Wire	0.2 mm / Brass
Thickness	Punch 50 mm
No. of cut	1 cut 2 skim

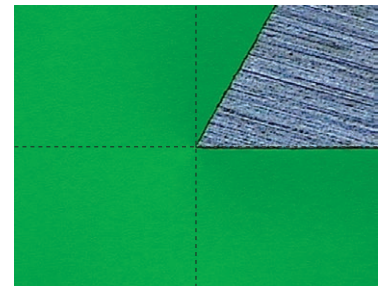
## The Corner Control

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.

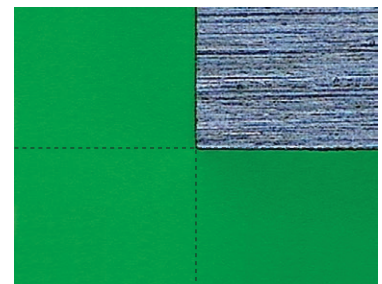
Operator can adjust quality priority or speed priority according to wire diameter or thickness selector.



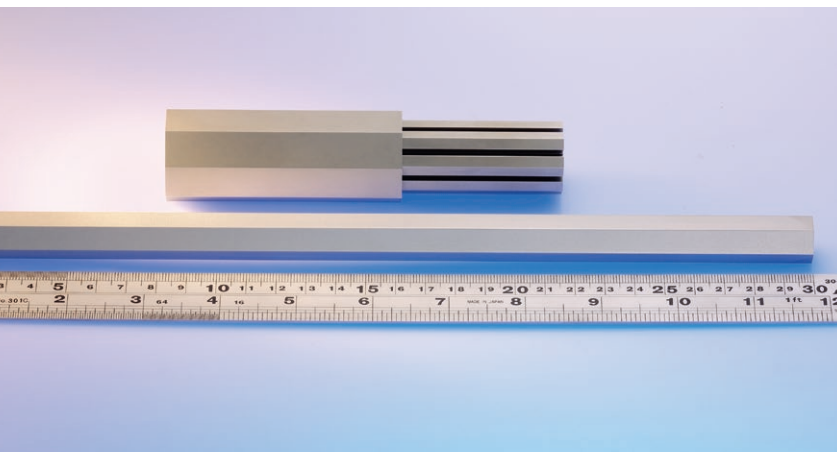
Corner angle 30°  
Zoom-in x 100



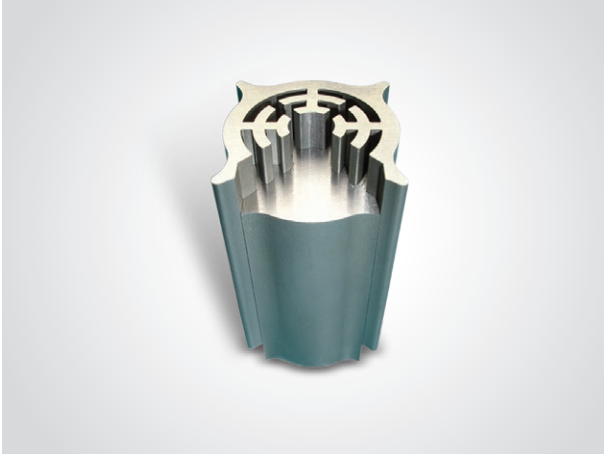
Corner angle 60°  
Zoom-in x 100



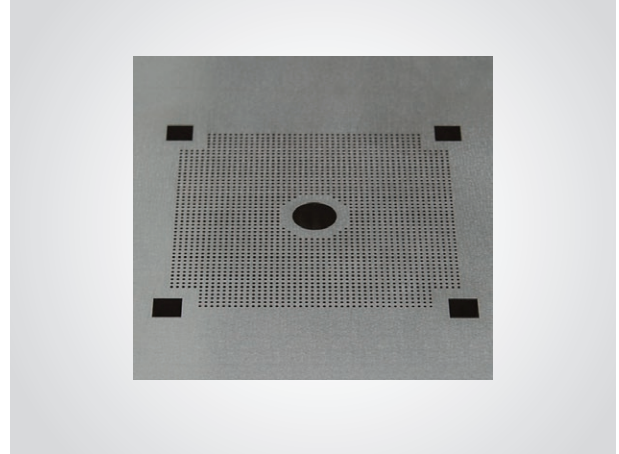
Corner angle 90°  
Zoom-in x 100







Workpiece	SKD-11
Wire	0.25 mm / Brass
Thickness	50 mm
No. of cut	1 cut 2 skim



Workpiece	SKD-11
Wire	0.2 mm / Brass
Start Hole	0.7 mm
Thickness	15 mm
No. of cut	No core cut

# Accessories

## Standard Accessories

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

## Options

- Auto Wire Threading
- XY axis linear scale
- Clamping Beam
- AVR 15KVA
- Chiller Unit



50 kg Jumbo Feeder

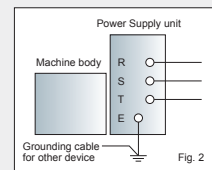
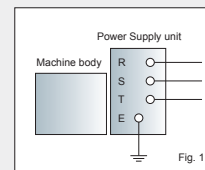


## Installation condition

Select a location that satisfies the following conditions for installing the Wire Cut EDM.

## Environment condition

1. Surroundings Temperature : Usable temperature range 15 ~ 30 °C  
Note: Recommended room temperature within 20 ± 1 °C
2. Humidity: Within 30 ~ 75% RH. (with no dew condensation)
3. Installation floor vibration: Tolerable floor vibration level value is acceleration 0.5m/s<sup>2</sup> or less, maximum amplitude 5µm or less.
4. Ground connection: The wire cut EDM must always be grounded to prevent external noise and prevent radio disturbance, and prevent earth leakage.  
Class C grounding (grounding resistance 10 Ω or less) as set forth in the Electric Facility Standards is recommended for the EDM. (Fig. 1)  
Common grounding can be used if noise from other device will not enter through the common grounding; the grounding cable must be connected independently to the grounding location, and use a 14mm<sup>2</sup> grounding wire. (Fig. 2)
5. Shield room: Install a shield room if the wire-cut EDM affects television or other communication device in the area, observe the following points when installing the wire cut EDM in the shield room and grounding the Wire cut EDM in the shield room is necessary.





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Dealer :