G Series

WIRE EDM FOR ULTRA PRECISE MACHINING

EXCETEK

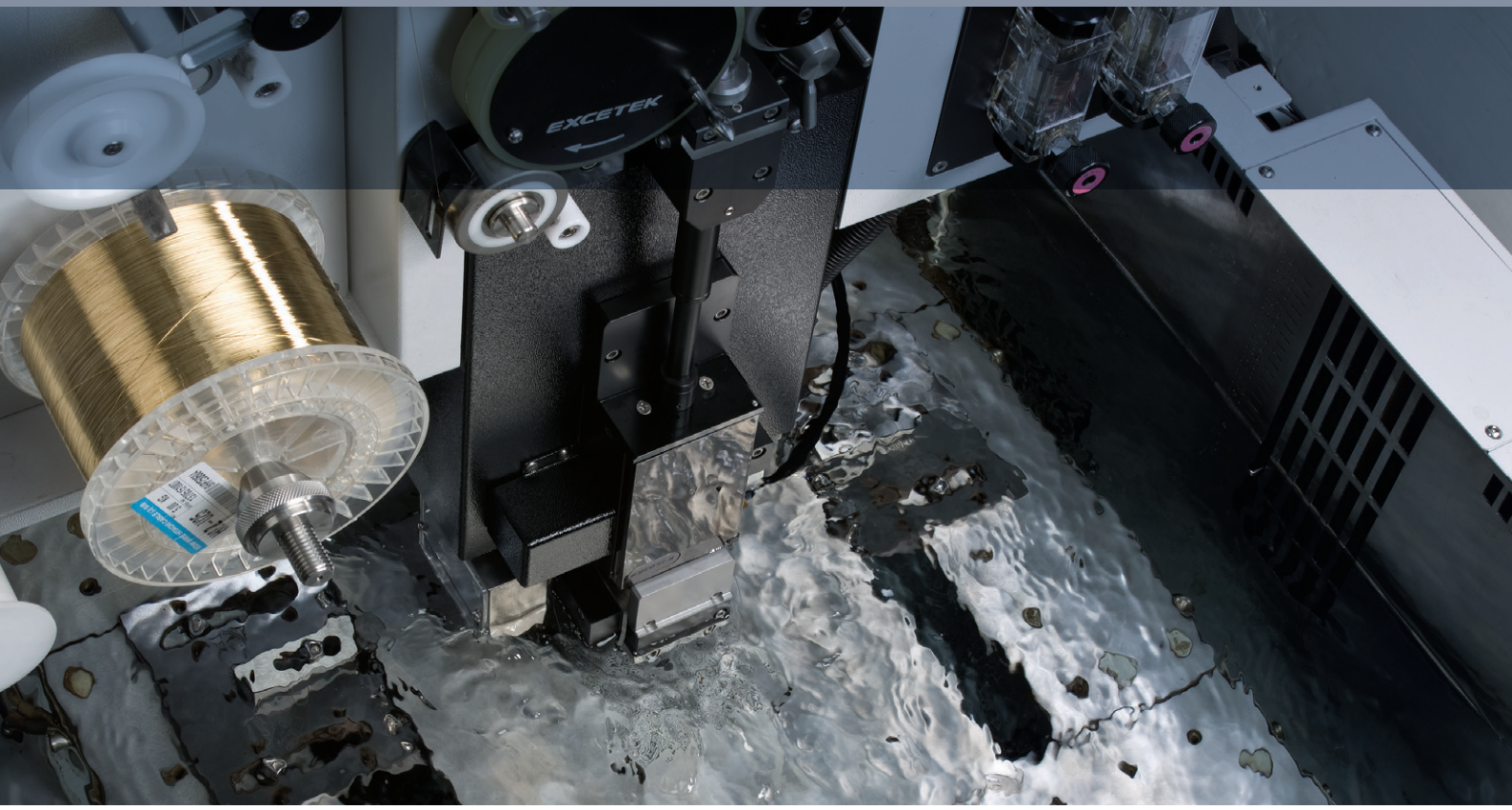
G Series

Mechanical Structure

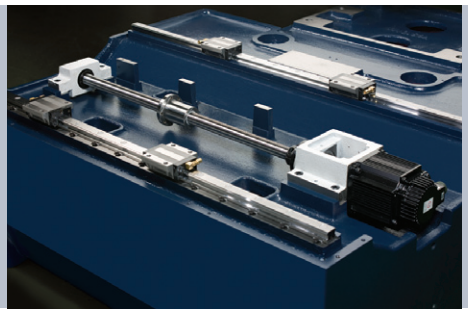
Mono bloc Meehanite cast elements designed using Finite Element Methods (FEM) provide exceptional damping properties and exceptional machining rigidity. To ensure thermal stability, rib location has been designed using Finite Element Analysis, assuring optimised structural rigidity.

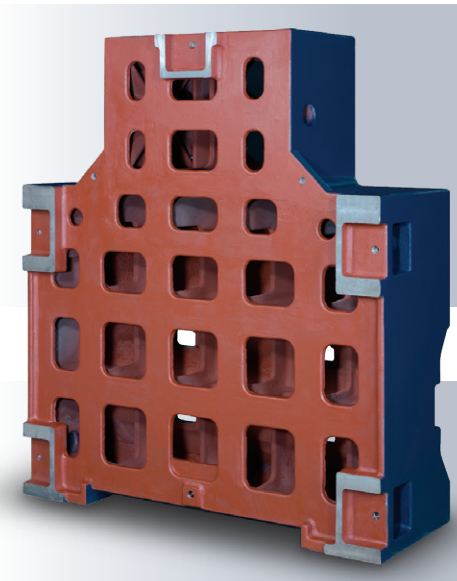
To ensure thermal balance, rib location is designed by Finite Element Analysis (FEA) assuring an optimized rigid structure.

- Water-cooled lower arm prevents thermal expansion caused by heat build-up, maintaining accuracy.
- Stainless steel worktable hardened to 50 HRc.
- High response AC servo motor for guaranteed accuracy.
- Extra wide machine base for stability.
- Rigid U and V truss design.



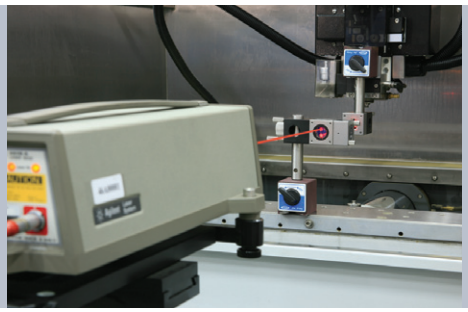
Micron level precision is achieved through the selection of class leading machine motion elements. The cryogenically treated C1 grade ball screws are driven by high resolution AC servomotors, and are supported by widely spaced linear guide ways for maximum stability.



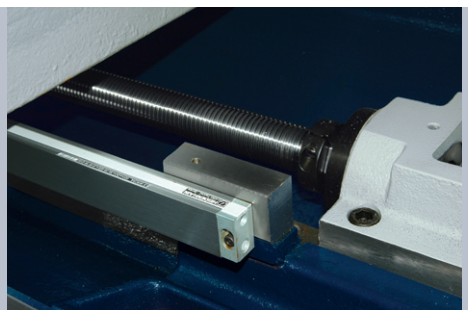


A rugged cast iron machine structure is the foundation of precision.

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



Closed loop linear scale



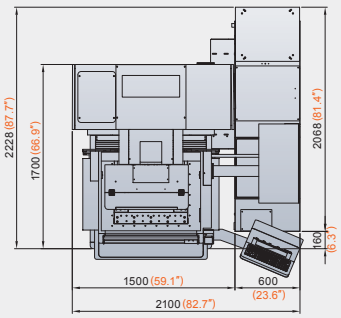
V400G

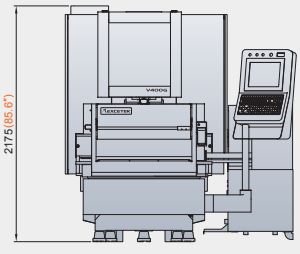
Compact size

SPECIFICATIONS

Maximum workpiece (mm)	750 x 550 x 215 mm 29.5″ x 21.7″ x 8.5″
Max workpiece weight	500 kg 1,102 lb
Travel of X/Y axes	400 x 300 mm 15.7″ x 11.8″
Travel of U/V axes	80 x 80 mm 3.1″ x 3.1″
Travel of Z axis	220 mm (Submerged height 210 mm) 8.7″ (Submerged heigh 8.3″)
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 size	2100 x 2230 x 2175 mm 82.7″ x 87.8″ x 85.6″
Machine weight	2700 kg 5952 lb
Water tank capacity	650 L

DIMENSIONS





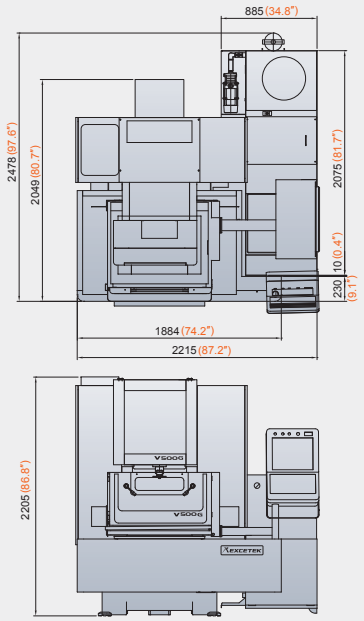
Our most popular machine size

V500G

SPECIFICATIONS

Maximum workpiece (mm)	850 x 600 x 255 mm 33.5″ x 23.6″ x 10″
Max workpiece 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 (Submerged height 220 mm) 10.2″ (Submerged heigh 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	±26°/100 mm ±26°/3.9″ (with wide diamond guide and nozzle)
Machine size	2215 x 2480 x 2205 mm 87.2″ x 97.6″ x 86.8″
Machine weight	3500 kg 7716 lb
Water tank capacity	750 L

DIMENSIONS



V650G

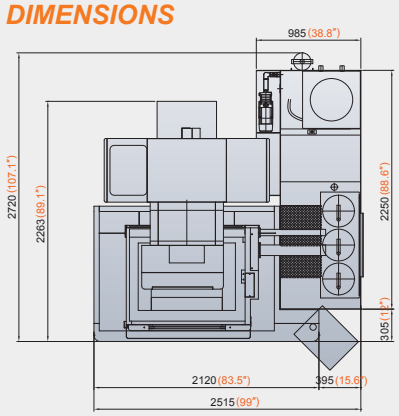
Optimum flexibility

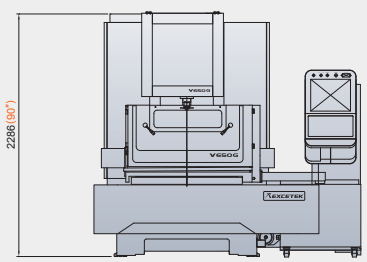
SPECIFICATIONS

Maximum workpiece (mm)	1000 x 700 x 345 mm 39.4″ x 27.6″ x 13.6″
Max workpiece weight	800 kg 1764 lb
Travel of X/Y axes	650 x 400 mm 25.6″ x15.7″
Travel of U/V axes	160 x 160 mm 6.3″ x 6.3″
Travel of Z axis	350 mm (Submerged height 310 mm) 13.8″ (Submerged heigh 12.2″)
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 size	2520 x 2720 x 2290 mm 99.2″ x 107.1″ x 90.2″ (89″)
Machine weight	4400 kg 9700 lb
Water tank capacity	850 L

* Travel of Z axis (Option): 410 mm 16.1″ (Submerged height 410 mm 16.1″)

DIMENSIONS





V850G

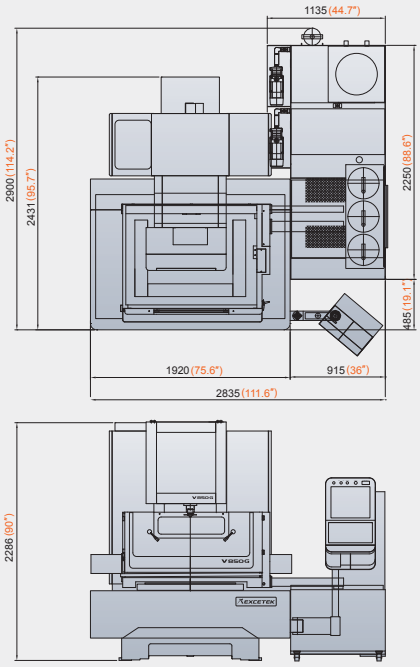
Cost-effective extended travels

SPECIFICATIONS

Maximum workpiece (mm)	1100 x 850 x 345 mm 43.3″ x 33.5″ x 13.6″
Max workpiece 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 (Submerged height 310 mm) 13.8″ (Submerged heigh 12.2″)
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 size	2840 x 2900 x 2290 mm 111.8″ x 114.2″ x 90.2″ (89″)
Machine weight	5000 kg 11023 lb
Water tank capacity	1050 L

* Travel of Z axis (Option): 410 mm 16.1″ (Submerged height 410 mm 16.1″)

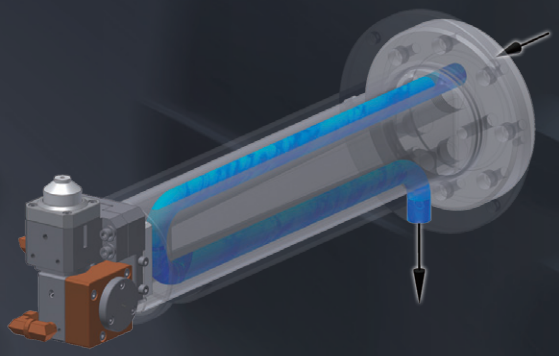
DIMENSIONS



V Series

Fixed-bed, travelling column design

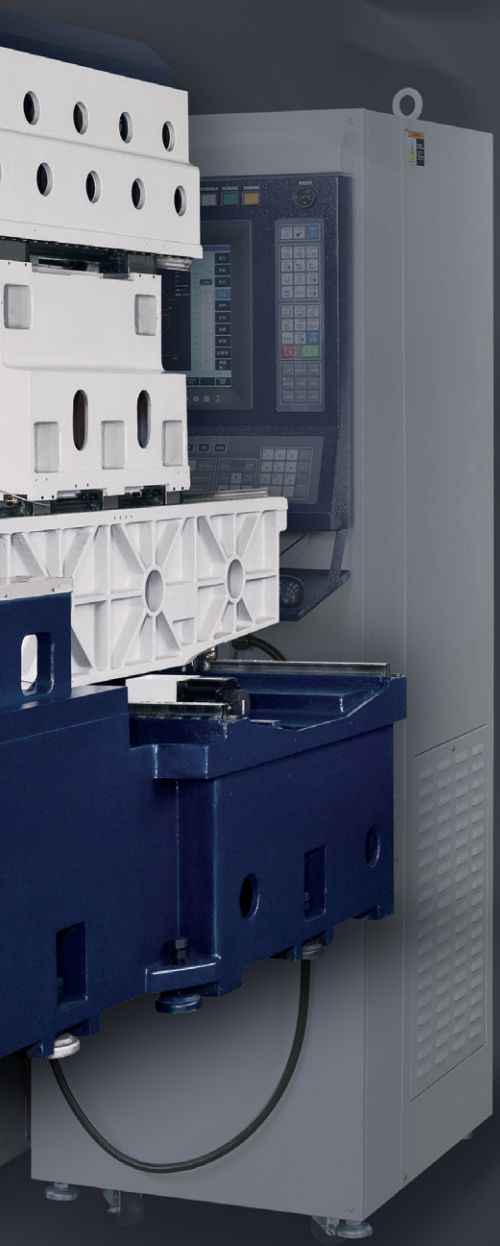
By two step droop door design, to get more easy operation and work piece upload & unload convenient.

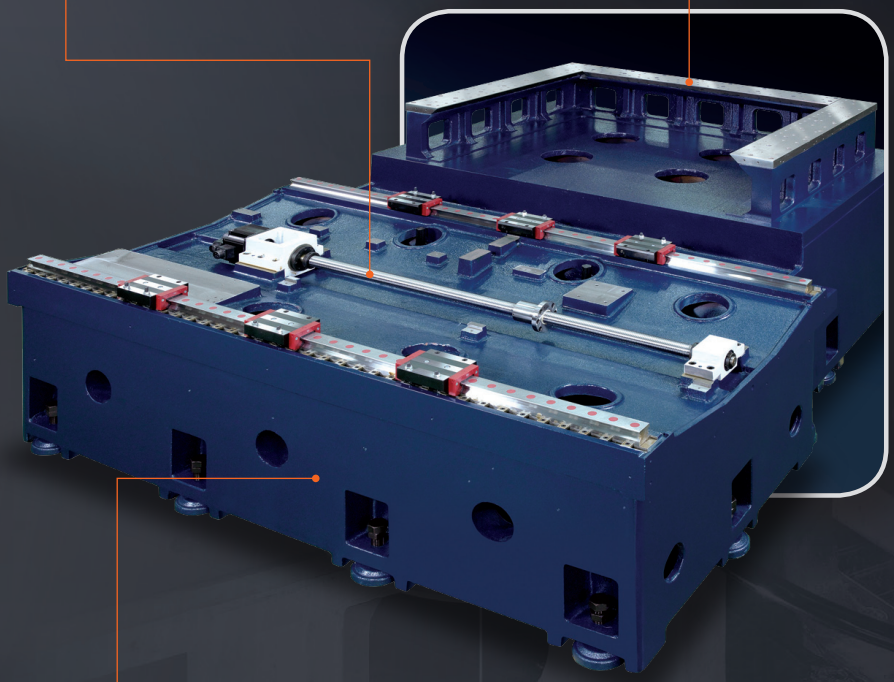


Water cooled lower arm prevents thermal expansion caused by heat buildup. Therefore the accuracy will be improve.

Stainless steel work table with hardness HRC 50˚.

High quality cryogenic C1 grade ball screws ensure repeatable positional accuracy. Roller type linear guide ways use triple trucks to provide machine support and accuracy during positioning and cutting.





Cast machine base designed using FEA to achieve increased rigidity.

FEM MEEHANITE

V1060

Z350/Z500

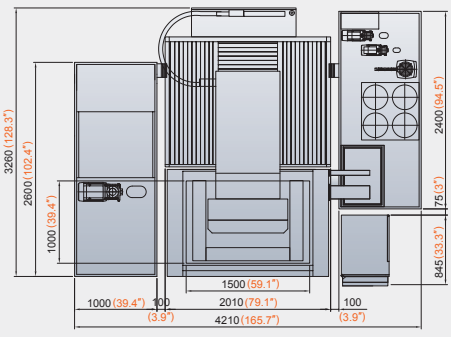
Travelling column design allows large workpieces to be loaded and machined, with optional Z-axis configuration.

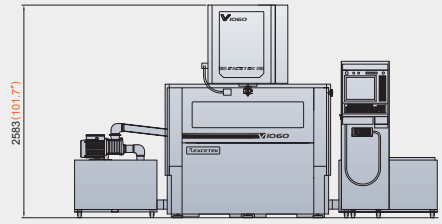
SPECIFICATIONS

Maximum workpiece (mm)	1500 x 1000 x 345 mm (495 mm) 59.1″ x 39.4″ x13.6″ (19.5″)
Max workpiece 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 (Submerged height 350 mm) 13.8″ (Submerged heigh 13.8″)
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 size	4210 x 3260 x 2310 mm (V1060-Z350) 165.7″ x 128.3″ x 90.9″ (V1060-Z350)
Machine weight	V1060-Z350/Z500: 7300/7650 kg 16094/16856 lb
Water tank capacity	V1060-Z350/Z500: 1800/2500 L

* Travel of Z axis (Option): 500 mm 19.7″ (Submerged height 500 mm 19.7″)

DIMENSIONS





Designed to take larger workpieces, up to 4,000 kg with three Z-axis configurations available. Maximum option of Z-axis extend to 800 mm (31.5")

V1280

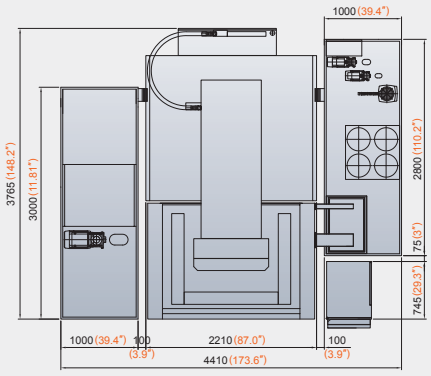
Z500/Z600/Z800

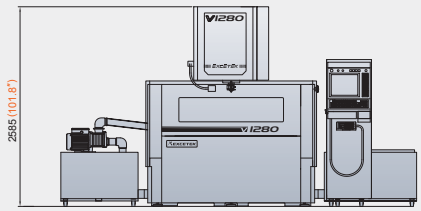
SPECIFICATIONS

Maximum workpiece (mm)	1650 x 1200 x 495 mm (Option 595/795 mm) 65" x 47.2" x 19.5" (Option 23.4"/31.3")
Max workpiece 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 (Submerged height 500 mm) 19.7" (Submerged heigh 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 size	4410 x 3765 x 2585 mm (V1280-Z500) 173.6" x 148.2" x 101.8" (V1280-Z500)
Machine weight	V1280-Z500/Z600/Z800: 10600/10850/11600 kg 23369/23920/25574 lb
Water tank capacity	V1280-Z500/Z600/Z800: 3000/3300/4000 L

* Travel of Z axis (Option): 600/800 mm 23.6/31.5" (Submerged height 560/800 mm 22.0/31.5")

DIMENSIONS





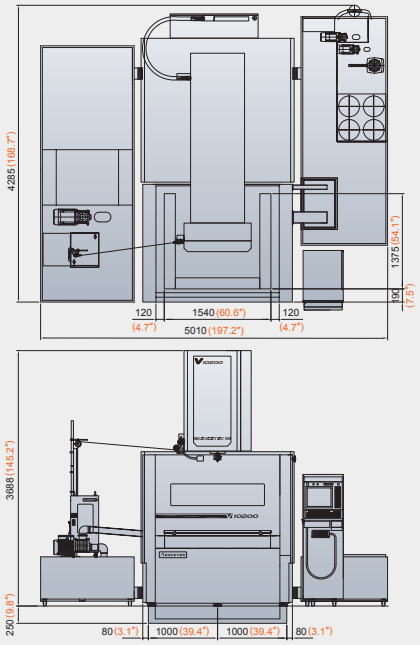
V12100-Z1000

Standard 1 m (39.4″)
Z-axis wire EDM

SPECIFICATIONS

Maximum workpiece (mm)	1650 x 1400 x 1000 mm 65″ x 55.1″ x 39.4″
Max workpiece 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	1000 mm 39.4″
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 size	5010 x 4285 x 3890 mm 197.2″ x 168.7″ x 153.1″
Machine Weight	12800 kg 28219 lb
Water tank capacity	4700 L

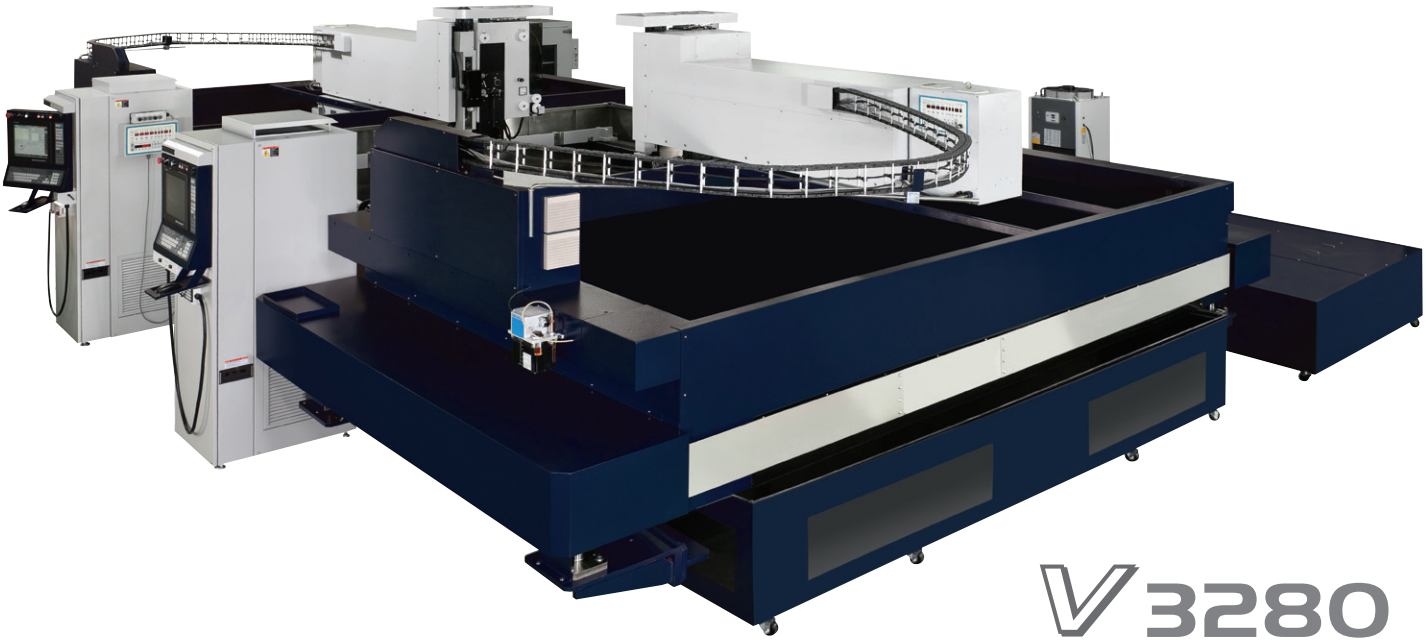
DIMENSIONS



Large modular wire EDM
industry specific solutions

V2000
V3280

V2000



V3280

SPECIFICATIONS

	V2000	V3280
Maximum workpiece (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 workpiece 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 size	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

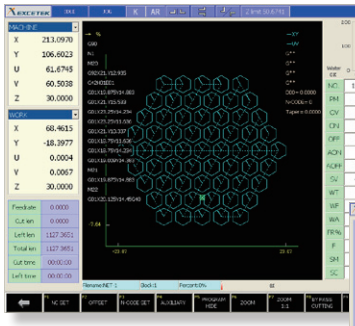
The generator & CNC Control

The HMI panel is easy to operate, using class leading ergonomic technology

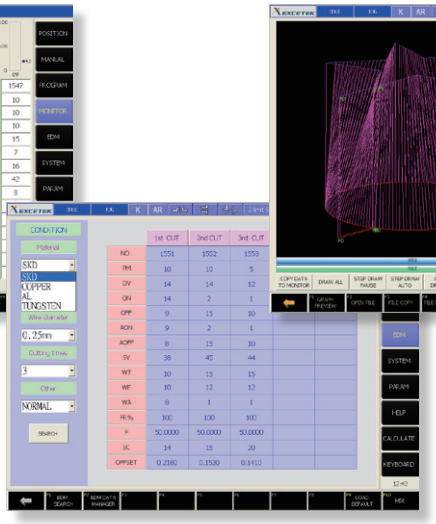
- 15” LCD touch-screen operate
- Easy to follow on-screen functions
- Easy to use mouse & keyboard

VG Series - The W6 control is designed to deliver.

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

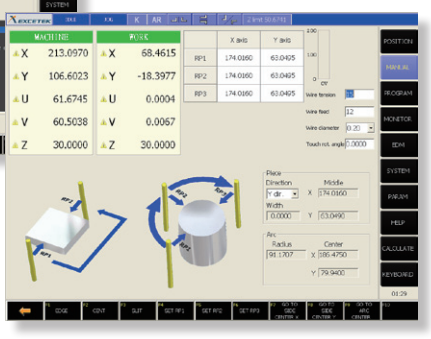


Watchdog monitors machine during operation



Database Cutting Technologies

Programming using ISO standard G code



Icons Assistant for conversational programming

Modular Designed System

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

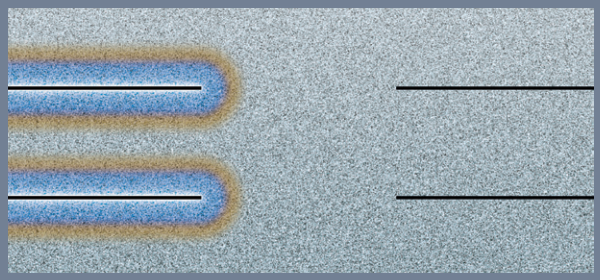
High Frequency Calculating and Pulse Control

- 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.

EF Electrolysis Free

(AC Power Generator)

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

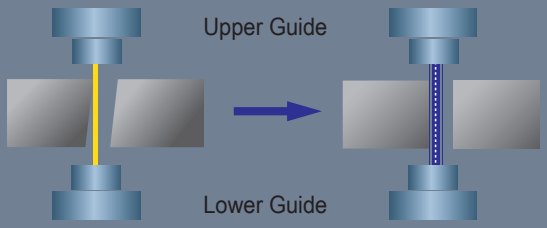


DC discharge

EF (non-electrolytic) discharge

Short Circuit Solution

When a short circuit takes place after threading due to misalignment, a special discharge circuits A special discharge circuit will eliminate this condition and will improve machining efficiency.

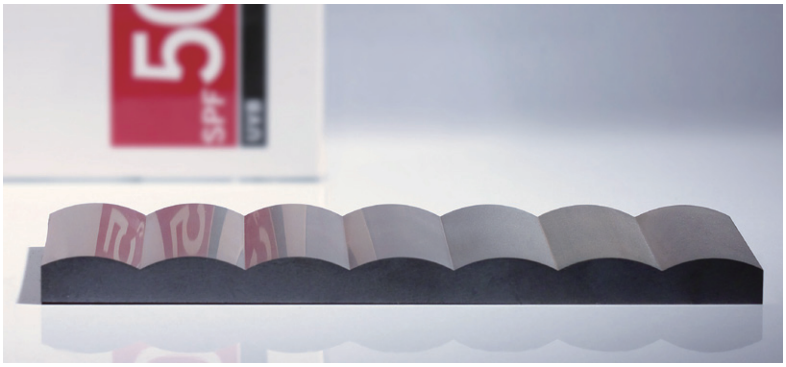


A short circuit occurs due to a start hole position error or the hole is on an angle.

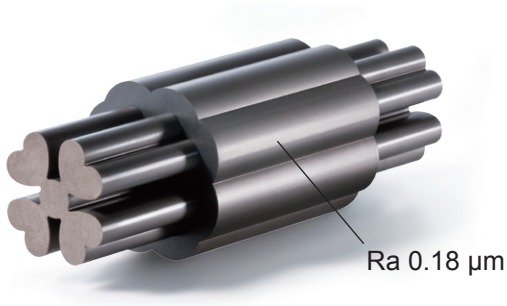
Short circuit feature eliminate this condition.

SFC-Super Finish Circuit

High frequency sparking energy provides Ra 0.2 µm surface roughness with 1 rough cut plus 6 sking cuts.



Material: Tungsten Carbide
Thickness: 30 mm (1.2″) Best Surface Roughness Ra 0.14 µm



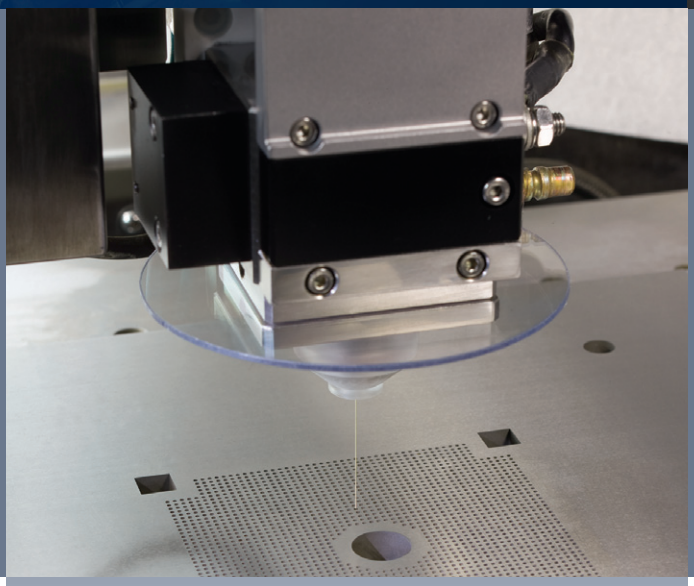
Tungsten carbide, Thickness: 50 mm (2″)

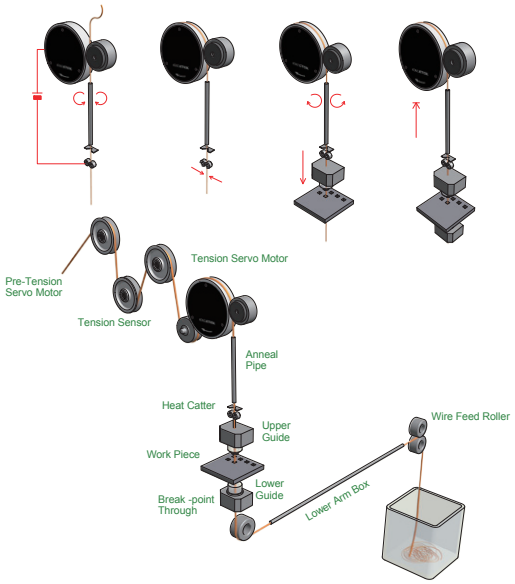
(Optional on V400G/V500G/V650G only)

Auto Wire Threading

Continuous unmanned operation day and night

Non stop machining with ideal break point automatic wire threading





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 500 mm.

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, removing the no need drain and refill the work tank.
- Multi-hole machining function: On the rare occasion 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.

High speed Auto Wire Threading System

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

Workpiece thickness 100 mm

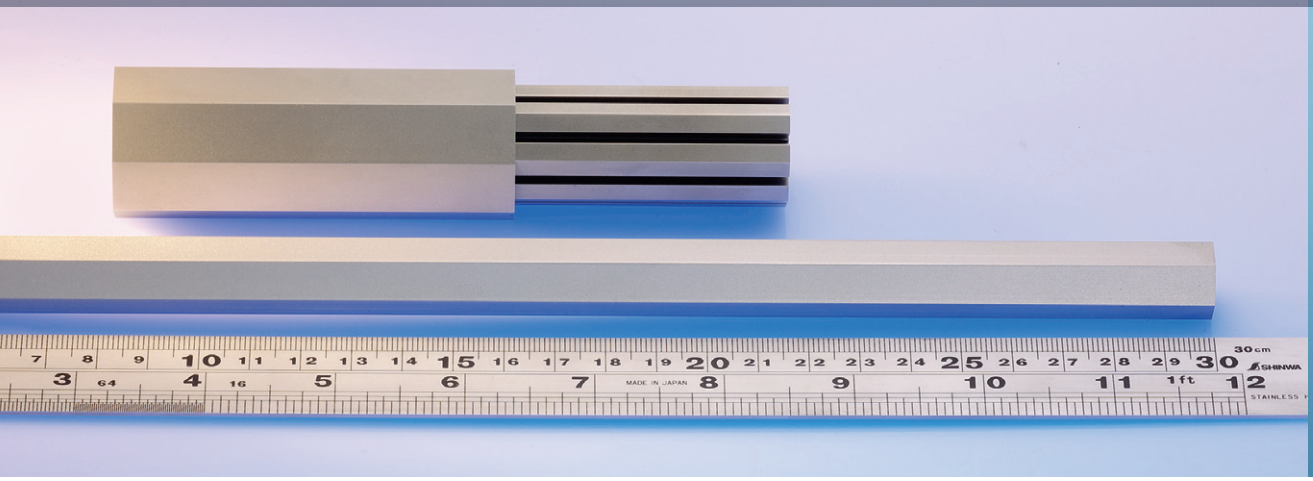
Wire annealing and cutting : 10 sec
Threading : 10 sec

Workpiece thickness 800 mm

Threading under the water
at break point

EXCETEK	YES
OTHER	??

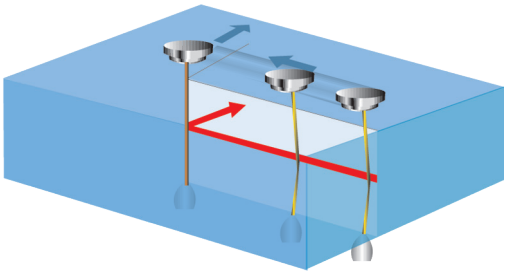
Cutting Technology

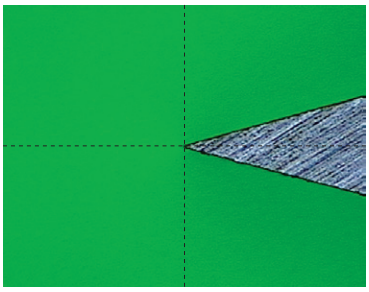


The Corner Control

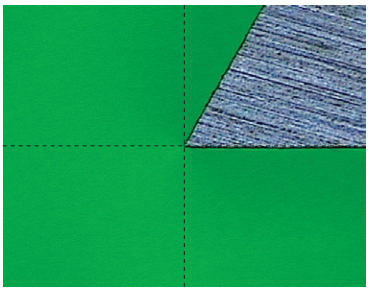
Corner control machining parameter controls the machining speed and inhibits the wire twisting phenomenon, thereby reducing corner 'washout'. It ensures machining accuracy and moulding compatibility, efficiently and effectively improving mould machining quality and speed.

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

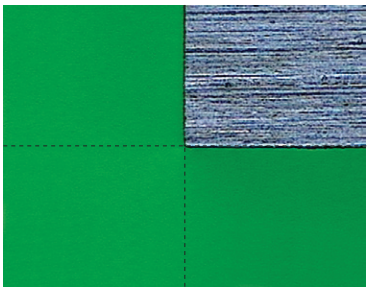




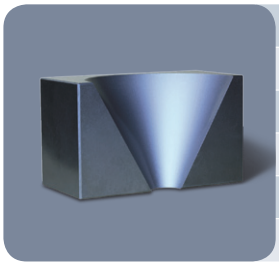
Corner angle 30° / Zoom-in x 100



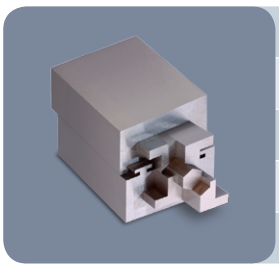
Corner angle 60° / Zoom-in x 100



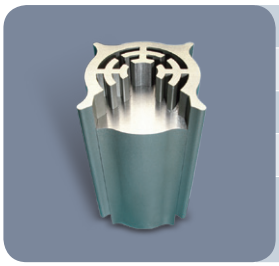
Corner angle 90° / Zoom-in x 100



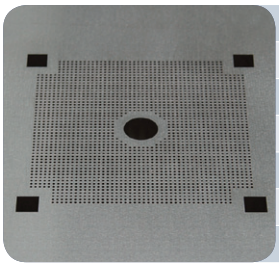
Workpiece	SKD-11
Wire	0.25 mm / Brass
Angle of taper	30°
Thickness	50 mm
No. of cut	1 cut 3 skim
Cutting Time	5 hour 30 min



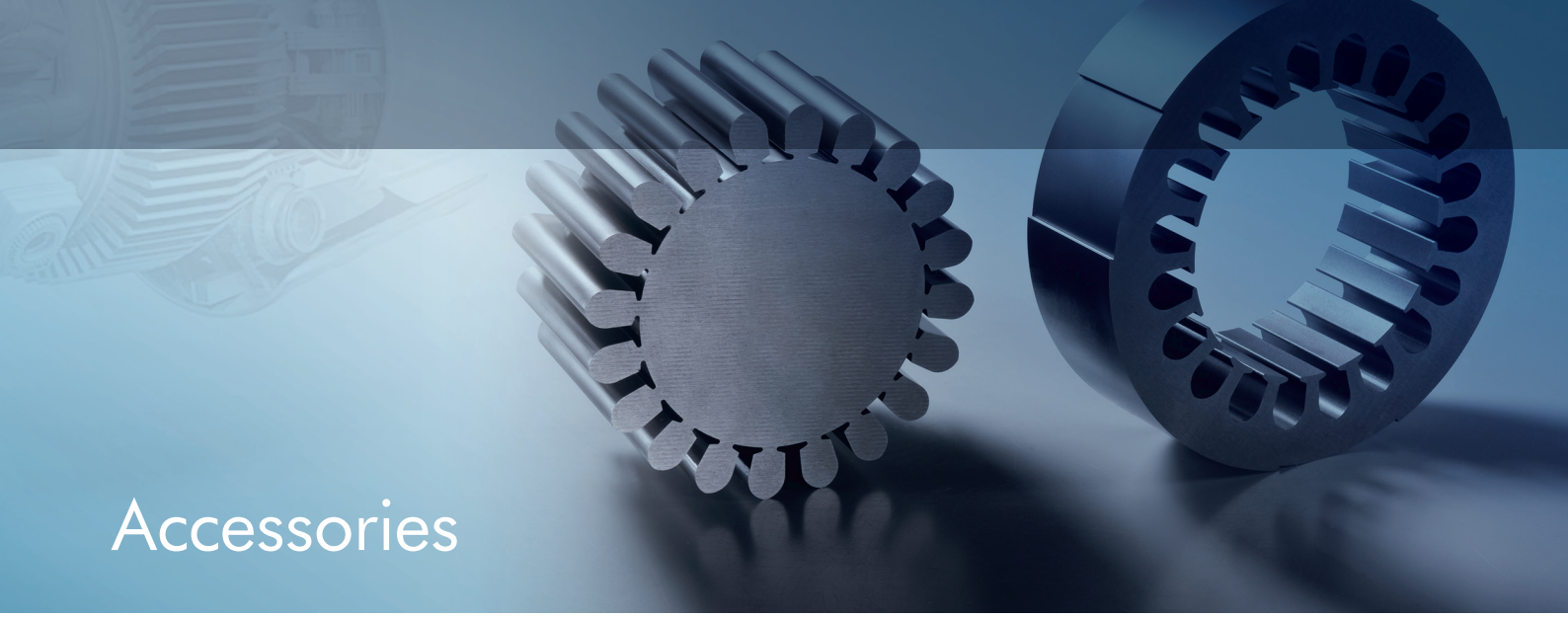
Workpiece	SKD-11
Wire	0.2 mm / Brass
Thickness	Punch 50 mm
No. of cut	1 cut 2 skim
Cutting Time	Punch 45 min



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



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



Accessories

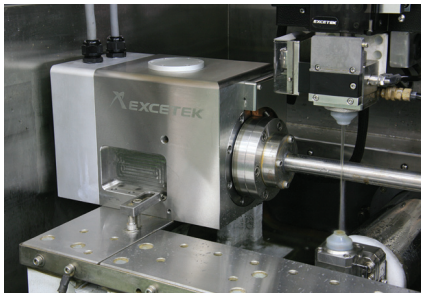
Standard Accessories

- 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 x 1 set
- Vertical alignment jig x 1 set

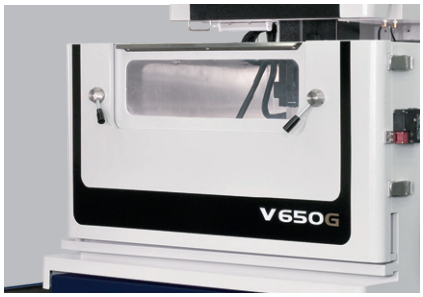
Option Accessories

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

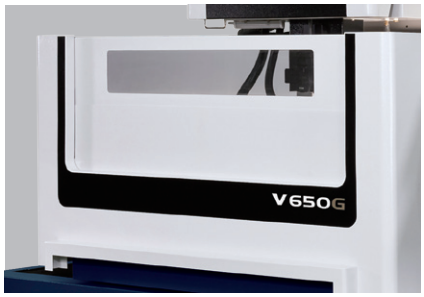
W-axis



Double Door



Power Slide Door



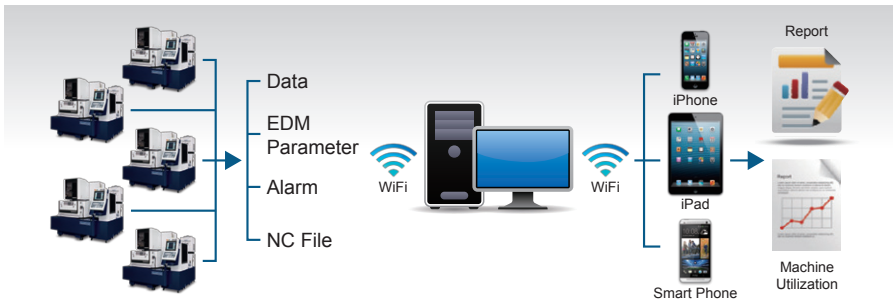
(Only V650G & V850G)

Jumbo Feeder

Short Message Service (SMS)

Clamping Beam

Remote Monitor System



Option

Global network

www.excetek.com.tw

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