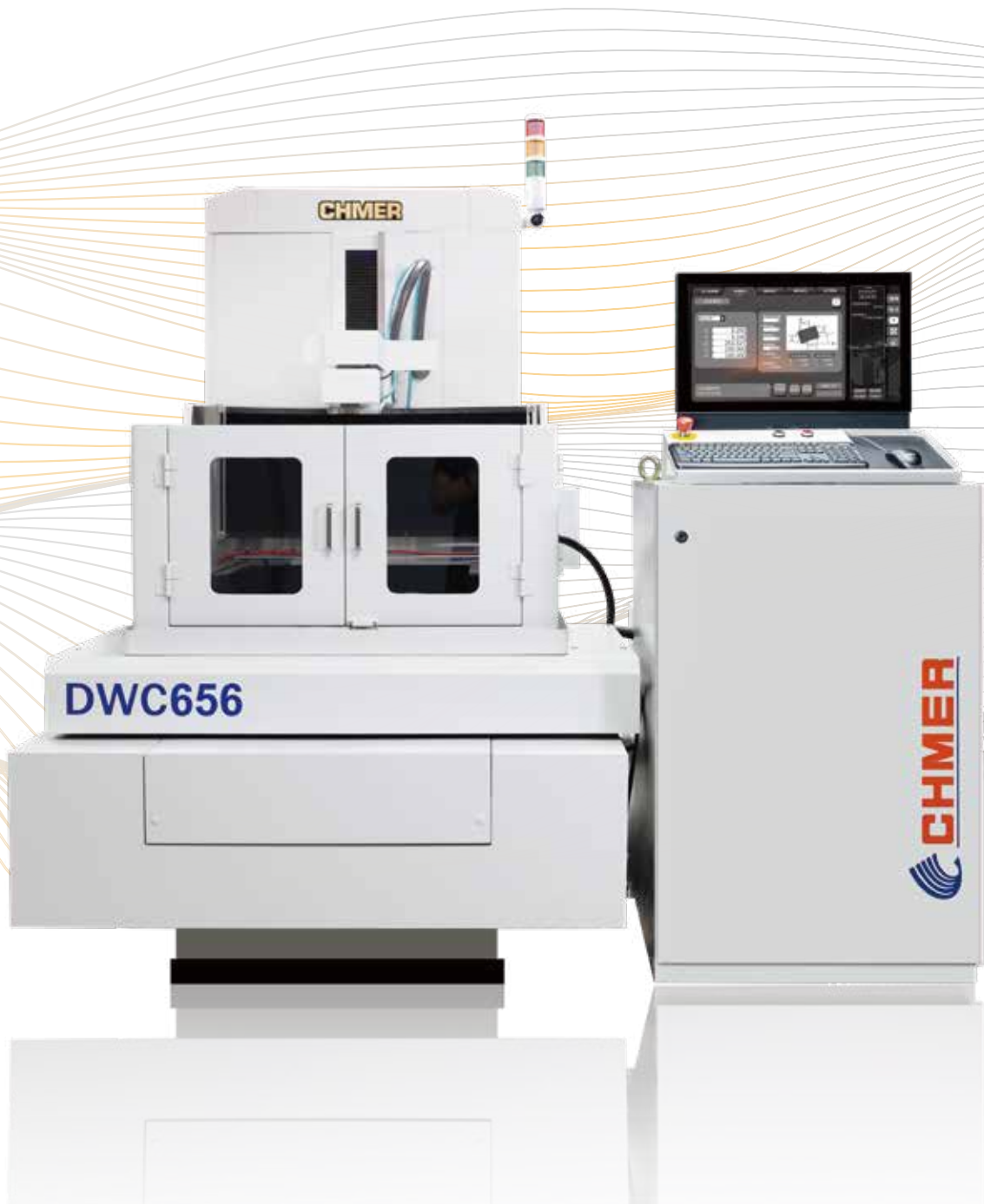




Molybdenum Wire Cut EDM
DWC Series

"Quality made in Taiwan."



The DWC Series by CHMER represents a new generation of high-performance 3D precision Wire Cut EDM solutions. It offers exceptional rigidity, thermal stability, energy efficiency, and smart machining capabilities — providing users with excellent cost-effectiveness and production reliability.

Powered by the latest Linux-based GenOS controller and EtherCAT high-speed communication technology, the system significantly enhances machining efficiency and performance while maintaining accuracy. The high-stability frame structure and intelligent system integration enable users to optimize process management and improve overall productivity.

The smart manufacturing journey begins with the DWC Series.

Features

01

High-Rigidity C-Type Frame Structure

Designed with FEA and rib reinforcement, the structure boosts rigidity and stability—ensuring precise machining across workpiece sizes.

02

Large UV Axis Travel Upgrade

The UV axis has been upgraded from 60mm to 100mm, providing a wider machining range and improved workpiece compatibility.

03



AD/DC Machining Power Supply

Delivers precise energy control and stable machining with reduced electrode wear and excellent surface finishes.

04

Active Wire Tensioning Wheel

Maintains consistent tension on molybdenum wire to prevent loosening during operation.

05

Wire Tension Design Device

Enhances wire tension during installation to improve threading efficiency and reduce wire-related errors.

06

Electronic Detection System

Equipped with sensors and an LED alert system to detect wire breakage or slack in real time—eliminating issues common in mechanical designs.



07

Z-Axis Electric Lifting Motor

Offers automatic, motor-driven lifting for the Z-axis, replacing manual mechanisms for enhanced convenience.

08

Diamond Guide Assembly

Uses an enclosed water flow and guide mechanism to stabilize cutting. An open-type spray plate supports easy wire threading during general machining.

09

XY-Axis Direct Drive Transmission

Incorporates AC servo motors, linear guides, and precision ball screws to ensure high-speed, backlash-free movement and accurate positioning.

10

19-Inch Human-Machine Interface

A large, ergonomic touch display provides intuitive operation and excellent visibility, improving the overall user experience.

Power Supply

01

Discharge Control System

The system uses an embedded current-reducing control architecture and ASIC chips to improve discharge efficiency. It monitors the gap in real time, effectively suppresses arc discharge, and stabilizes the cutting conditions, resulting in up to 15% faster cutting speed.



02

IVC High-frequency Switching Inverter Power Supply



The upgraded IVC high-frequency switching inverter offers wide-range power output adjustment, allowing operators to fine-tune the discharge energy for better cutting performance and system safety.

It also adopts advanced filtering technology to reduce external interference and output more accurate energy pulses, ensuring precise discharge judgment and stable cutting performance.

Standard/Optional

Standard ● Optional ○ Not Available —

Features & Item	Unit	DWC434	DWC656	DWC868
Power Supply & Control System				
Machine Lubrication System	1 set	●	●	●
Electronic Wire Breakage & Wire Detection Function	1 set	●	●	●
Ø0.18 mm Wire with Compatible Processing Fluid	1 set	●	●	●
Machine Signal Light & Filter Tank Assembly	1 set	●	●	●
Toolbox, Tool Kit & Operation Manual	1 set	●	●	●
USB Port	1 set	●	●	●
XY Axis Ball Screw Protection Cover	1 set	●	●	●
UV Axis Stabilizing Device & Z Axis Motorized Lift	1 set	●	●	●
Wire Tension Feeder Device	1 set	●	●	●
Waterproof Main Guide Pulley & Discharge Roller	1 set	●	●	●

In-House Controller

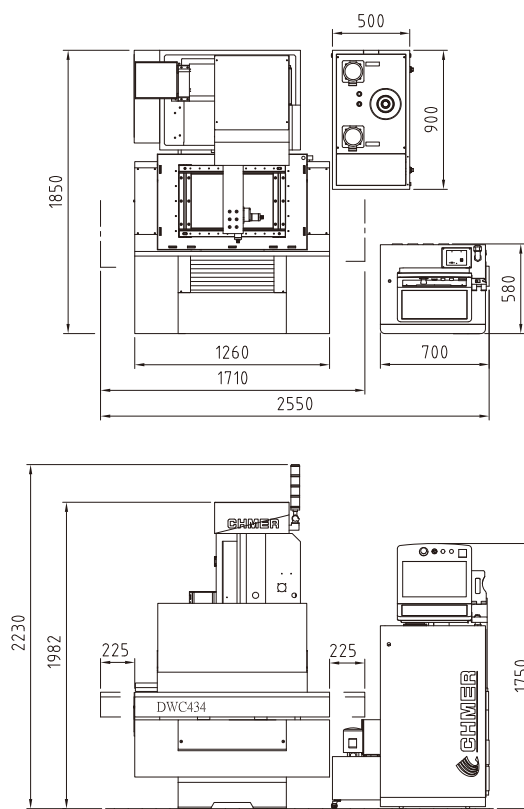
Features of the W5N Control System

The W5N GenOS controller integrates a high-performance Linux-based system with an Intel quad-core 2.0GHz CPU, delivering 10× computing power. It supports Database, FTP, OPC UA, and remote desktop for seamless connectivity. Modular hardware design enhances automation and machining efficiency.

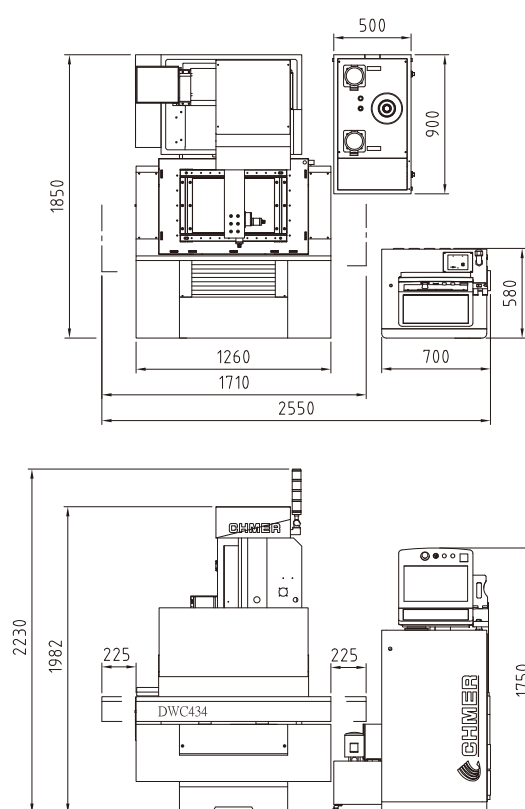
- 01** Linux-Based OS
- 02** Digital Water Level Adjustment
- 03** QR Code Program Input
- 04** EtherCAT Communication
- 05** Temperature Monitoring
- 06** Enhanced Performance

Installation Dimensions

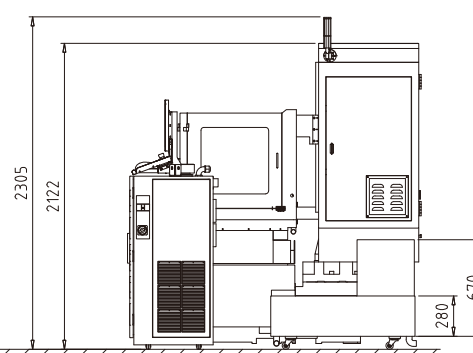
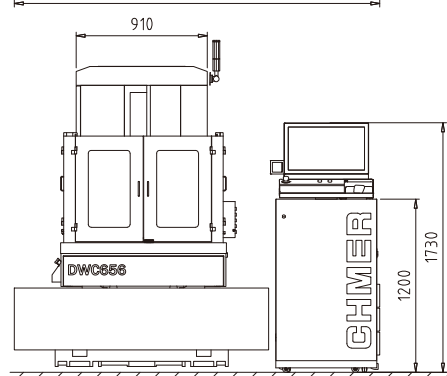
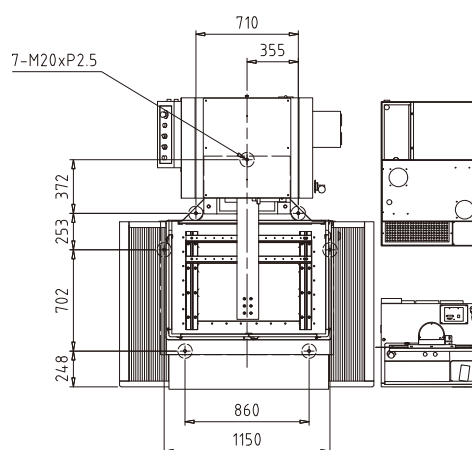
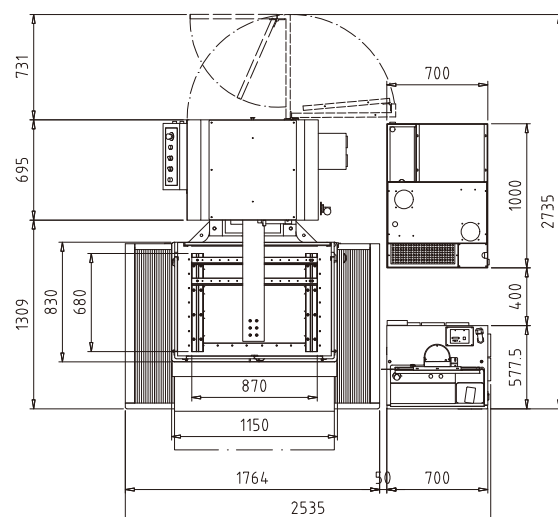
DWC434



DWC868



DWC656



Standard Specifications

Model		DWC434	DWC656	DWC868
X, Y, Z Travel	mm	450x350x450	630x500x625	800x600x800
U, V Travel	mm	30x30	30x30	30x30
Max. Workpiece Size	mm	450x350x450	625x500x625	800x600x800
Max. Workpiece Weight	kg	350	800	1200
Axis Drive System	axis	X, Y, U, V, Z Axes Driven by AC Servo Motors		
Wire Diameter	mm	Ø 0.18~0.2		
Max. Wire Feeding Speed	mm/sec			
Max. Cutting Taper		±3°/50	±3°/50	±3°/50
Machine Dimension(WxDxH)	mm	1770x1480x2012	1770x2100x2350	1900x2130x2200
Packing Dimension(WxDxH)	mm	1820x1610x2185	1820x2230x2523	2200x2430x2500
Net Weight	kg	1700	2650	3500

Dielectric Filtration System				
Dielectric Capacity	L	100	160	180
Filter		Multi-stage Filtration	Multi-stage Filtration	Multi-stage Filtration
Tank Dimension	mm	500x900x760	700x1000x760	600x1200x300

Power Supply Unit				
Max.Output Current	A	10		
Discharge Voltage Levels	part	27		
Pause Time Levels	us	1 - 255		
High-Frequency Voltage	V	50、80、100		
Discharge Mode		AC/DC		
Machining Accuracy	mm	0.15		
Machining Speed	mm/min	250		

CNC Unit				
Controller Version	N-type Controller		Max. Display Value	mm ±9999.9999 mm
Operating System	GenOS (Linux)		Compensation Functions	Linear / Circular
Processor	bit	32	Position Command	Absolute (ABS) / Incremental (INC)
CPU Core Count	Quad-Core		Command Unit	Metric (mm) / Imperial (inch)
RAM	GB	4GB	Machining Speed Control	Servo / Constant Feed
Storage	GB	32GB	Interpolation Rate	0.001 – 9,999.999
Input Method	2-in-1 Keyboard, USB, LAN		Program Storage Capacity	1,000 – 9,999
Display	19" Color Screen (Non-Touch)		Power Input	V 3 Phase 220V ± 5%
Servo Control	EtherCAT – Semi-Closed Loop		Max.Input Power	kVA 3
Controlled Axes	5 Axes: X, Y, U, V, Z			
Resolution Unit	mm	0.0001 mm		

※Due to continuous improvements, the design and specifications are subject to change without prior notice

MDWC00Ev01

