



In Constant Pursuit of Technological Advancement

AH *SERIES*

High Speed Small Hole Drilling Machines

Developed for Aerospace, Gas Turbine and Medical applications



Gantry Style for Rigidity Submerged for Faster Drilling.

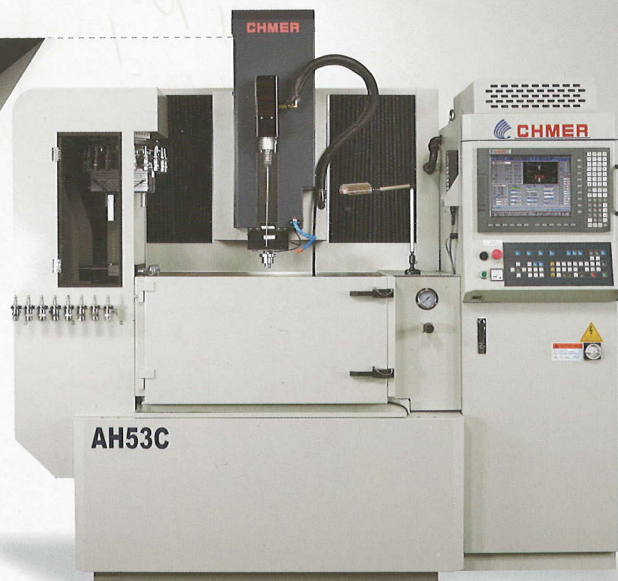
Large workpiece capacity for A/B Indexers and work pieces.



Features:

- Gantry type construction assures excellent rigidity and stability.
- All XYZ axis use AC Servo Drive + linear guide ways Precision Encoders (scales opt).
- $\pm 0.01\text{mm}$ pitch accuracy.
- Available to equip with A / B axis.
- Accurate Fine Feeding is controlled for stable machining and faster Break-Through.
- Automatic Depth Measurement Function is available for blind-hole drilling.
- Drills Deep, angled holes in hardened alloy (Stainless Steel, Titanium, Nickle-based superalloy) using electrode from special $\varnothing 0.2\sim 3.0\text{mm}$ (optional from $\varnothing 3.1\sim 6.0\text{mm}$).

AH53C
AH64C



AH1260CL





- ✓ **Advanced Design**
- ✓ **Excellent Performance**
- ✓ **Ideal for drilling Aerospace, Power Generation and Medical parts**
- ✓ **3D Shape machining for Micro EDMing**



AH1080CL

AH SERIES

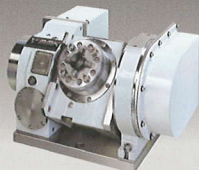


Hardware Features

LCM_BSL-125



MMK-MDWAT102B



PARKSON-PAR131R



YUKIWA-TRT140

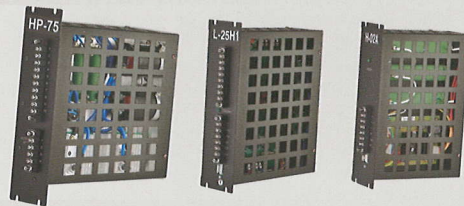


Flexible working range, suitable for all kinds of jet engine turbine blades

Optional submersible A and AB indexers from MMK, Yukiwa, and others, allow for full 6 axes positioning and edming. All 6 axes X,Y,Z,W and optional A and B axis, are controlled from the CHMER CNC Control. No extra PLC control box required.

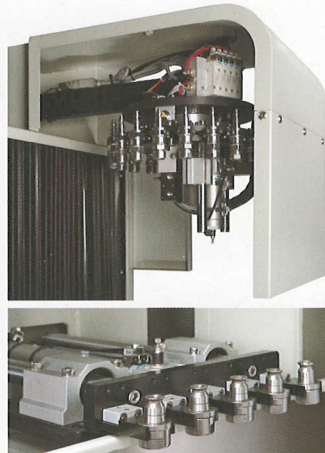
Superior Electronic Hardware

New 140 Volts High Voltage power supply is standard for improving performance in special alloy like nickle-based material. Optional 25 amp booster for 75 amps total with ER spindle for larger electrodes 3~6.0 mm dia.



Electrode Stabilizer

Automatically stabilizes the electrode by securing it in the middle and moving down as it wears, with the 400 mm electrodes and the optional 600 mm.



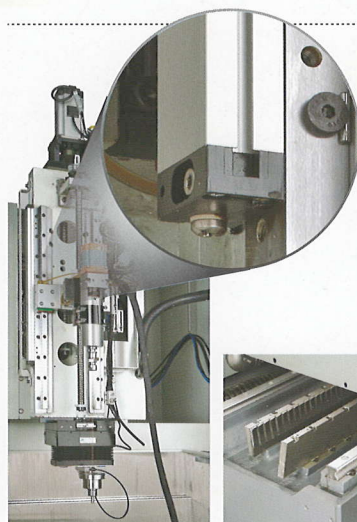
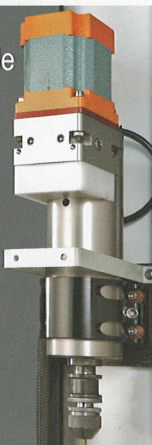
AEC, AGC DEVICE

Automatic Electrode Changer and Automatic Guide Changer are optional features that allow for unattended operation and greater productivity. AEC 20 loaded with Electrodes and AGC with 5-10 Guides up to 6" long.

*Controller will automatically compensate for depth if an electrode change is required in the middle of the burn.

1,000 RPM Spindle

Programmed speeds from 10-1000 RPMs for increased speed and reduced electrode wear



All XYZ axis use AC Servo Drive + linear guide ways precision encoders (scales opt)

All X,Y and Z axes use AC servo drives with Linear guideways that are automatically lubricated. Precision rotary encoders provide the semi-closed loop feedback. Linear glass scales are optional.

Linear Motor (opt for X,Y axis)

Linear motors are optional on the AH1080 and AH1260 models with glass scale feedback.



Water Chiller optional

An essential hardware function for a precision

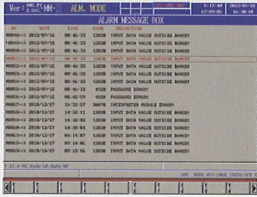


Large Water Reservoir

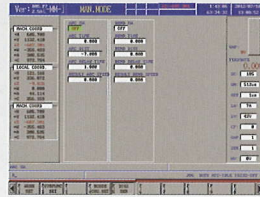
Standard 250 liter (65 gallon) reservoir with 2 filters and Deionization system for supplying dielectric. (larger units are available for the AH 1080 and AH 1260

Software Features

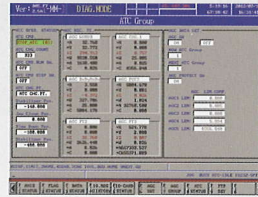
• ALARM



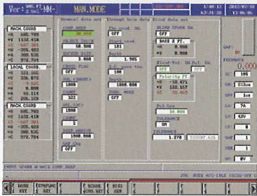
• ARC_OFF



• ATC+AGC SET



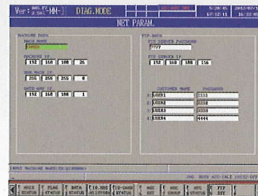
• Counter and Blind Hole



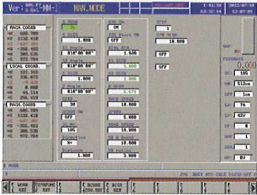
• FILE BROWSER



• FTP ETHERNET



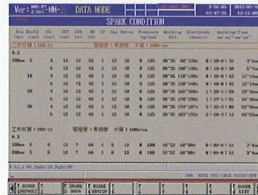
• G70 Orbit Function



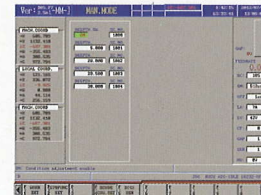
• Multi-Hole_NC



• S CODE DATABASE

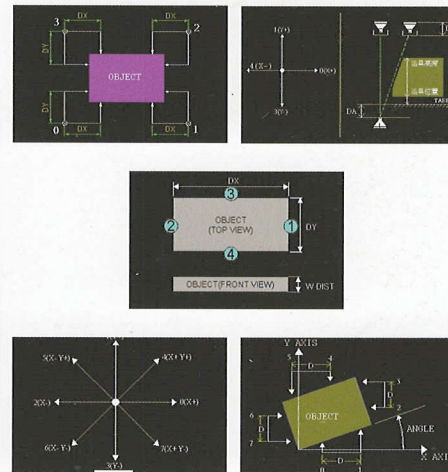
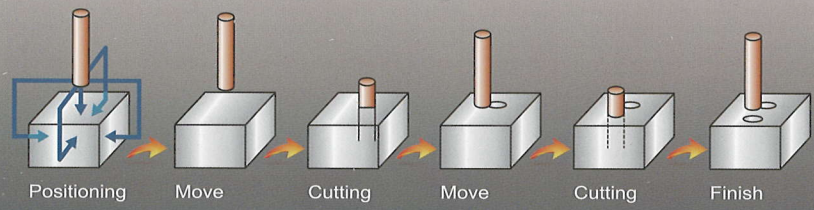


• S-CODE CHANGE



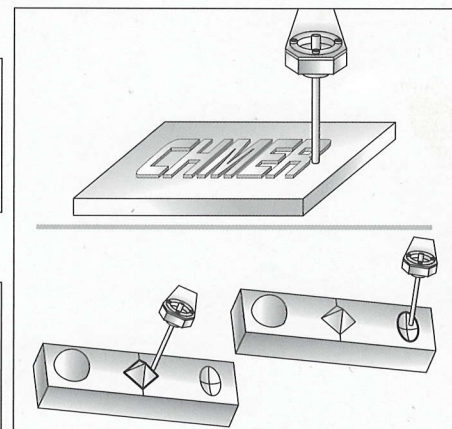
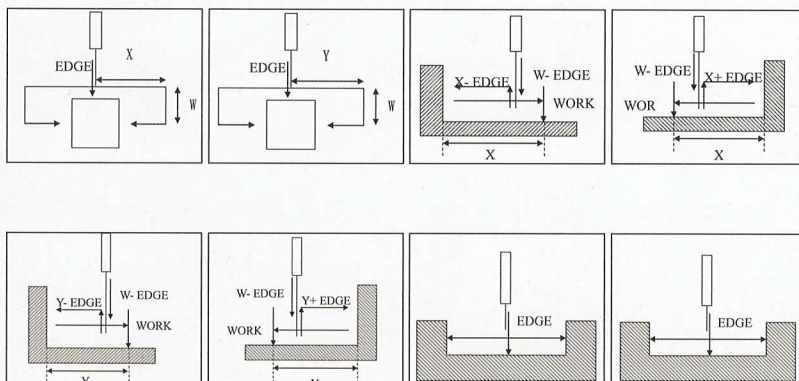
H5F CNC Controller

Conversational Graphic CNC Controller for Easy operation From Automatic edge, center and outside pick up and compensation, to Move commands and Burn commands, including Macro functions, the H5F is simple to program.



G01 ISO Machining Command

G46 Macro Command example



A4 SERIES

Wide Range Of Cutting Conditions

In order to cover potentially limitless demands from customers ;
CHMER offered a wide range of discharging conditions. (S code Database)
Work-piece : SKD-11, WC, Aluminum, Copper, Stainless Steel, Graphite.
Material thickness: 10,20,50,80,100mm etc.

Start Hole Drilling

A start hole for wire cut EDM can be easily
and quickly made by the AH series;
No specialized skills or experience is required.

Machining Samples

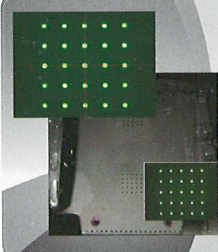
Parts of Aircraft

Work-piece Material : Nimonic 75
Job Thickness: 0.8mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 0.6mm
Recast Layer Accuracy: 0.018mm
Machining Time: 10 sec/per



Powder ZrO2 Ceramic Material

Work-piece Material : Zirconia
Job Thickness: 1.0mm
Electrode Material: Copper Tube
Electrode Diameter: Dia. 0.15mm
Hole Accuracy: 0.19~0.20mm
Machining Time: 30 sec/per



High Thickness Steel Material

Work-piece Material : SKD-11
Job Thickness: 100 mm
Electrode Material: Copper Tube
Electrode Diameter: Dia. 2.0 mm
Hole Accuracy: 2.12~2.13mm
Machining Time: 24Min 18 Sec/per



Cooling Hole of Cutting Tool

Work-piece Material : SK5M
Job Thickness: Dia. 82.6 mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 1.0mm
Hole Accuracy: 1.12~1.13mm
Machining Time: 3Min 30 Sec/pe



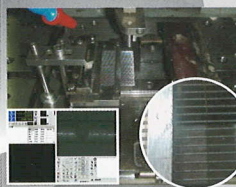
Turbine Blade Cooling Hole

Work-piece Material : Nickel Alloy
Job Thickness: 73 mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 1.0mm
Recast Layer Accuracy: 0.027mm
Machining Time: 5Min 33 Sec/ per part.



Medical Surgery Pattern

Work-piece Material : Unknown
Job Thickness: Dia. Ø0.52mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 0.20mm
Hole Accuracy: 0.25~0.26mm
Machining Time: 15 sec/per



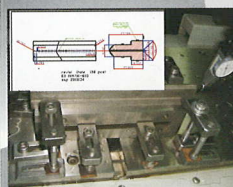
Precision Blind Hole Discharging

Work-piece Material : SKD-61
Job Thickness: Dia. 70 mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 0.40mm
Hole Accuracy: 0.45~0.56mm
Machining Time: 6Min 50 Sec/pe



Multi-Cavities 158 Holes Tool Steel

Work-piece Material : HRC 50 Steel
Job Thickness: Dia. 30 mm
Electrode Material: Brass Tube
Electrode Diameter: Dia. 0.7 mm
Hole Accuracy: 0.77~0.78mm
Machining Time: 2Min 26 Sec/pe





Specification

Item	Model	AH53C	AH64C	AH1080CL	AH1260CL
Work Table Specification (mm Inch)		630x310 (24.8 x 12.2 inch)	630x470 (24.8 x 18.5)	950x1100 (37.4 x 43.3)	2020x1110 (79.5 x 43.7)
X,Y axis travel (mm) (INCH)		500x300 (19.7 x 11.8)	600x400 (23.6 x 15.7)	800x1000 (31.5 x 39.4)	1200x1000 (47.2 x 39.4)
Max. Job Load Size (WxDxH) (mm Inch)		700x600x250 (27.6 x 23.6 x 9.8)	800x600x250 (31.5 x 23.6 x 9.8)	1100x1400x600 (43.3 x 55.1 x 23.6)	2300x1500x600 (90.6 x 59.1 x 23.6)
Max. Job Load Weight (kgw) (lb)		1000 (2205)	1200 (2646)	3000 (6614)	4000 (8818)
Z-axis Ram Travel (mm) (INCH)		250 (9.8) opt 600mm	350 (13.8) opt 600mm	600 (23.6)	600 (23.6)
W-axis Travel (mm) (INCH)		360 (14.2) opt 600mm	400 (15.7) opt 600mm	600 (23.6)	600 (23.6)
A axis (Degree) opt		360	360	360	360
A-axis Job Load Weight (kgw)		50	50	500	900
Automatic Tool Change (nos) opt		20	20	20	42
Max. Electrode Diameter (mm) (INCH)		Ø0.2~Ø3.0 * Ø0.008~0.12	Ø0.2~Ø3.0 * Ø0.008~0.12	Ø0.2~Ø3.0 * Ø0.008~0.12	Ø0.2~Ø3.0 * Ø0.008~0.12
Max. Electrode Length (mm) (INCH)		400 (15.7) opt 600mm	500 (19.7) opt 600mm	600 (23.6)	600 (23.6)
Distance from Guide to Table (INCH)		210~460 (8.3 x 18.1)	220~570 (8.7 x 22.4)	200~810 (7.9 x 31.9)	500~1100 (19.7 x 43.3)
Dielectric Capacity (L) (GALLON)		550 (145)	600 (158.5)	2500 (660.5)	4700 (1242)
Dielectric Type		Deionized Water	Deionized Water	Deionized Water	Deionized Water
Outlook Layout (WxDxH mm) (INCH)		2550x2250x2050 (100.4x88.6x80.7)	2630x2350x2150 (103.5x92.5x84.6)	4300x3350x2350 (169.3x131.9x92.5)	5500x5200x3600 (216.5x204.7x141.7)
Machine Body Net Weight (kgw) (lb)		3000 (6614)	3800 (8378)	5500 (12125)	6000 (13227)

※ Remark: Electrode Diameter of ATC can use around in dia.Ø0.2~Ø3mm(opt,Ø3~6mm)

The manufacturer reserves the right to modify the design, specifications, mechanisms....etc. to improve the performance of the machine without prior notice, all the specification as above for reference.

STANDARD ACCESSORIES

- Guide Dia.0.5mm x 1
- Insert Rubber Dia.0.5mm x 1
- Electrode Brass Tube Dia.0.5mm x 1
- Flushing Pipe x 1
- Fluid Filtration System x 1
- Work Lamp x 1
- Remote Control x 1
- Single Axis Linear Motor (AH1080CL/AH1260CL)
- Guide Dia.1.0mm x 1
- Insert Rubber Dia.1.0mm x 1
- Electrode Brass Tube Dia.1.0mm x 1
- Air Fast Connector x 1
- Air Pipe x 1
- Machine Pad x 1
- Tool Box x 1
- Digital Water Conductivity

POWER UNIT

INPUT POWER KVA	3
PULSE GENERATION	Power MOSFET switching
CURRENT AMPERE	47 (OPT. 75A)
CURRENT SETTING	17 Steps
PULSE WIDTH	32 Steps each

OPTIONAL ACCESSORIES

- 1,000 RPM ER Spindle x 1
- Rotary Table (Yukiwa./MMK./LCM) x 1
- Generator HV Modules x 1
- Electrode Tool Holder Set (ER Type) x 1
- AEC SYSTEM (Auto Electrode Changer) x 1
- AGC SYSTEM (Auto Guide Holder Changer)x 1
- Generator 75A current x 1
- Water Chiller x 1
- Electrode Tool Holder Set (Precision 3 JAWS Type) x 1
- X,Y axis Linear Motor (AH53C / AH64C)
- Single Axis Linear Motor (AH1080CL/AH1260CL)



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National Award



Rising Star Award

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