

Submerged Wire Electrical Discharge Machine

UG^{HEAT}

With CNC control Hyper *i*

Machine Description



MAKINO GmbH

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Travels

X-axis-travel	650 mm
Y-axis-travel	450 mm
Z-axis-travel	420 mm
Travel axis U (within the X-Stroke of 25-625mm)	± 75 mm
U-axis (X-axis full travel)	± 50 mm
Travel axis V (within the Y-Stroke of 25-425mm)	± 75 mm
V-axis (X-axis full travel)	± 50 mm
Axis X, Y, U and V	pulse coder

Table

Work table width x depth	910 mm x 710 mm
Maximum work size L x D x H on table	1000 mm x 800 mm x 400 mm
Maximum payload on the table	1,500 kg
Operating tank capacity	920 l
Work tank inner size	1,070 x 880 mm

Taper machining unit

Taper cut angle / work thickness	± 15° at 100 mm
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Feed Drives

Rapid feed (XYZ)	2,000 mm/min
Rapid feed (UV)	1,000 mm/min
Servo feed	0,01 – 50 mm/min
Jog feed	50, 150, 600 mm/min

Wire Feed System

Possible wire diameters 0.10 / 0.15 / 0.20 / 0.25 / 0.30 mm

Maximum wire spool mass 16 kg

Wire guide PICO - closed round guides

The new PICO closed round guides, which come with the twin jet system, provide the best threading ability in small start holes starting at dia. 0.40mm. The improved accuracy in taper cutting is good for precise landing zones in high quality stamping tools.

Wire tension range 2 – 25 N

Wire speed 50 – 360 mm / s

H.E.A.T.

High Energy Applied Technology

New technology to provide the fastest cutting rates and operating speeds available in wire EDM production. This high speed application is even possible with standard brass wire. It is specially designed for poor flushing conditions.

Wire threading unit (for PICO-system)

Minimum start hole diameter 0.4 mm

Fastest threading time 10 s

		Start hole diameter										
		0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
Work-thickness [mm]	0-30											
	0-50	X	X									
	0-100	X	X	X								
	0-200	X	X	X	X	X	X	X	X			

Ø 0.5 Jet nozzle dia.

Ø 0.7 Jet nozzle dia.

Ø 1.2 Jet nozzle dia.*

* Included in the standard machine

Power Sources

Electricity 3 Phases AC 400 V $\pm 10\%$, 50 Hz

Main electrical power capacity 18 kVA

Line fuse 3 x 35 A inert

Air pressure 6 - 10 bar

Air consumption, peak 100 l / min

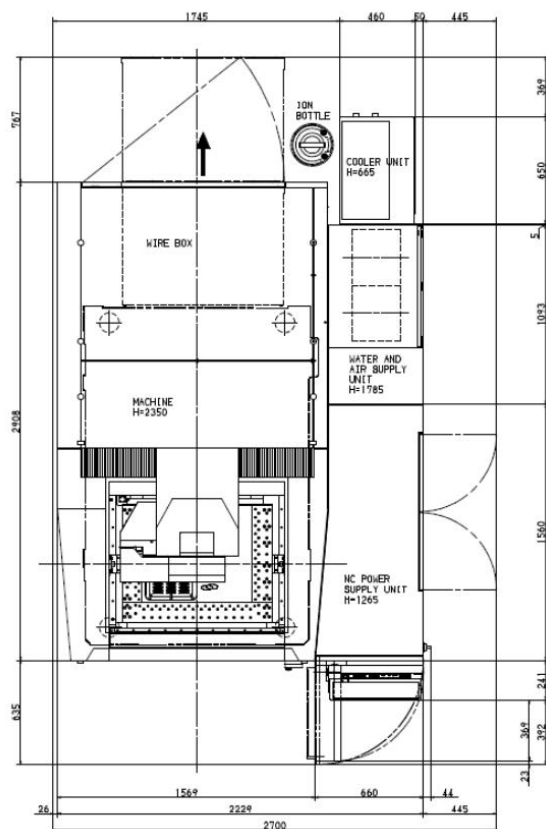
Machine Description

Status: July 2014

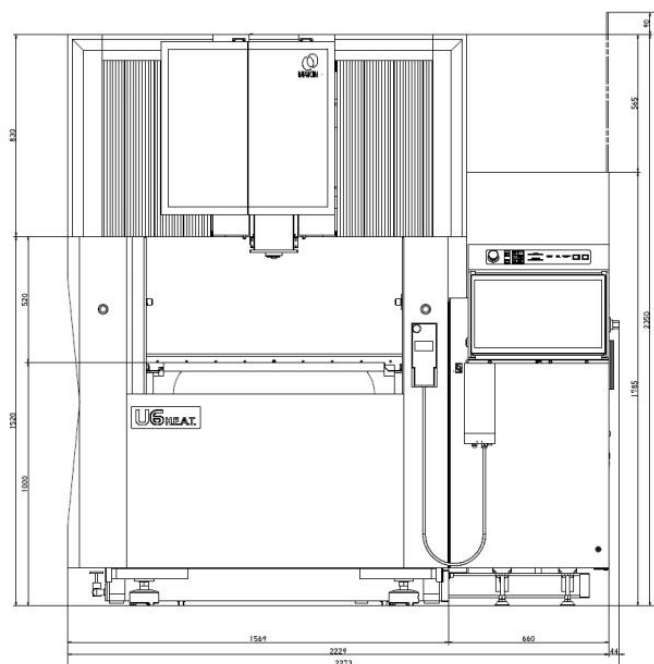
Version: 1.1

Machine Installation

Floor plan



Front view



[mm]

Dimensions:

Height.....	2,350 mm
Width.....	2,273 mm
Length	2,908 mm
Weight	ca. 5,300 kg
Required area.....	ca. 2,700 x 4,310 mm

Others

Ethernet 10/100BASE-TX
Connection for USB-Sticks
EDM Explorer standard

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Accessories

Adjusting elements for machine	1 set
Energizer plates (built-in)	1 set
PCD-wire guides 0.25 mm (built-in)	1 set
Brass-wire Ø 0.25, 5 kg	1 coil
Filter WF8.....	1 set (4 pc)
Operation and programming manual.....	1 set
Acceptance note	1 set
Painting color	Makino Snow White

Documentation

1 set of documentation including

- Operators manual
- Programmers manual
- Maintenance manual
- Spare parts manual
- Schematic diagrams
- CE-certification

These specifications may be changed by development in future. These specifications describe the standard machine. Technical data might change when additional options are selected. Please refer to the MAKINO Specification or contact to a MAKINO office.

MAKINO Services – all around support

- Complete installation and start-up of the machine
- Central warehouse for spare parts in Europe
- High number of service technicians situated both locally and close to the customer offering fast support on site
- Longtime experience of MAKINO service technicians
- High availability and high class support by MAKINO telephone support
- Maintenance of the machine during its complete life cycle