



A ONE MACHINERY EQUIPMENT

**KHATA NO-528/623, KILLNO-17/1 RAKBA NO-2
MAIN SOHNA ROAD NEAR RADHA SWAMI
SATSANG MOAD FARIDABAD.**

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Ref:- AONE/23-24/208

DATE: 20-07-2023

M/S A.C.M FABRICATORS

Subject: BENCH TYPE PLASMA /FLAME CUTTING MACHINE (4000*5000mm)





□

Bench Type Flame & Plasma Cutting Machine

□ **Machine Model, Specification & Technical Parameters**

> Model :- Gantry Type (1500*3000mm)

□	Track Width :	4000mm
]	Track length :	5000mm
□	Effective cutting width :	3500mm
□	Effective cutting length:	4500mm
□	oxy fuel torch station	



1).3 TECHNICAL STANDARD



- 1) Control Axis : 2
- 2) Control accuracy : +/- 2 mm
- 3) Coordinate range : +/- 99999.999mm
- 4) Max pulses : 200kHz Max speed : 15000 mm/m
- 5) Max lines of code : 150000lines
- 6) Max size of single code file : 4M 2100B CNC Controller 37
- 7) Time resolution : 10ms
- 8) Working Voltage : DC 24V in put
- 9) Working Temperature : -10°C-60°C. Relative Humidity, 0-95%. 1.4

SYSTEM INTERFACE

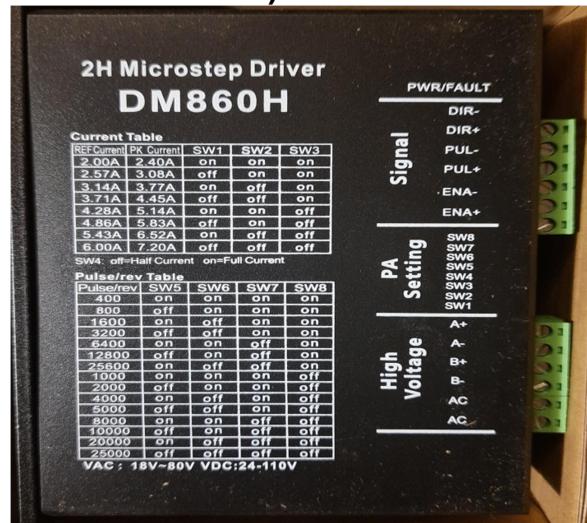
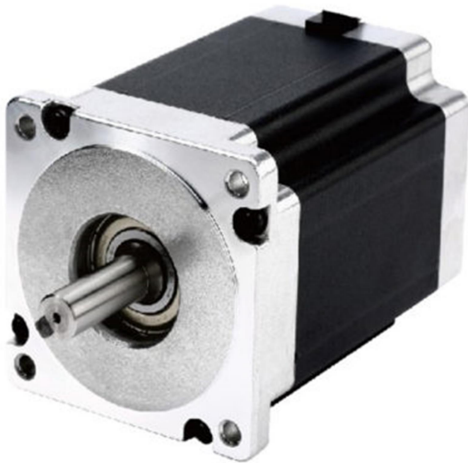
- 1) 15 pins interface of 2 axis of motor drive
- 2) 25 pins interface of 16 channels optical couple output ports max back flow current 300mA.
- 3) 25 pins interface of 16 channels optical couple input ports max output current 300mA.
- 4) USB interface on the front panel.
- 5) Extend IO input/output ports, PWM input ports, analog input ports. 1.5



HARDWARE CONFIGURATION

- 1) Monitor: 15 inch, 1024*768, high definition 16 million colors and high brightness LCD or 10.4 inch 800*600, 26 million color LCD.
- 2) Memory: 64M SDRAM
- 3) Memory available for user: 256M or 1G electronic hard disk
- 4) System master frequency: 400MHz
- 5) USB: USB 1.1 front interface
- 6) Keyboard: electronic PCB foil keyboard(one machine) or standard industrial keyboard(split type machine)
- 7) Chassis: full-steel structure completely shielded which defends electromagnetic radiation, interference and static electricity

4.2 Speed interface (operation in conjunction with NC)



Direct speed mode is the optimum solution for applications where positioning is handled by the NC. The stepper motor terminal is operated in a closed control loop, while the NC operates as a speed set value generator. The terminal follows these set values and returns the current position value as feedback to the NC.

The used ramps and controller parameters (P, I) are configured in the NC. In direct speed mode all functions and travel commands from the standard Motion Control TwinCAT CNC library are available.

The most common commands are listed below (the list is not exhaustive):

- Move absolute
- Move relative
- Read Position
- Referencing/homing to limit switch or 0-track (C-signal) of the encoder
- MC Reset
- Stepper motor terminal, 48 V DC, 1.5 A www.beckhoff.com/KL2531
- Stepper motor terminal, 48 V DC, 5 A, with incremental encoder www.beckhoff.com/KL2541
- The modular fieldbus system for automation www.beckhoff.com/Busterminal
- Stepper motor terminal Documentation



1.4 Technique parameter



- ↓ Work voltage: Rated DC 24V (The range is 21.6VDC-26.4VDC) .
- ↓ Lifting motor: DC 24V. ↓ Motor drive: PWM.
- ↓ Output current: 0A-3A (the electric current that motor can input is 5A).
- ↓ Load capacity: 100W. ↓ Working temperature: 0°C~50°C.
- ↓ IHS: proximity switch of IHS. ↓ Torch retaining cap of IHS.
- ↓ Voltage divide ratio: 100: 1
- ↓ The precision of arc voltage sampling: 0.2V
- ↓ The precision of arc voltage adjust: 1V
- ↓ The speed of lifting: It determines by highest speed of lifting.
- ↓ Setting range of arc voltage: 30V~600V, it can change by panel spin button.
- ↓ The biggest torch following speed: It determines by highest speed of lifting.
- ↓ Overload protect: auto overload 、 overheating 、 lack of voltage protect , making power source connect adversely to protect itself.

TECHNICAL SPECIFICATION:

A. POWER SOURCE (Diode Based)

- | | |
|---------------------------------------|--|
| 1. Input Supply | : 380 to 440V 3 Phase, 50 Hz. |
| 2. Secondary voltage | : 260-280 V |
| 3. Line Current | : 30 Amps |
| 4. Arc Current | : 80 Amps |
| 5. Output Current (Duty cycle) | : 100% at full load current of 80Amps. |
| 6. OCV (No load) | : 300 – 320 V DC |
| 7. Power rating | : 22 KVA |
| 8. Output Control | : Diode based controlled |
| 9. Cooling System | : Forced air cooled transformer. |
| 10 Class of insulation | : 'F'. |
| 11. Cutting capacity (a) SS clean cut | : 20 mm |
| (b) Continuous cutting | : 5 mm |

B. CUTTING TORCH (Hand operated)

- | | |
|--------------------------------------|--------------------|
| 1. Current Rating | : 85Amp. |
| 2. Length of cable | : 7.5 meters |
| 3. Cooling | : Air Cooled |
| 4. Air Pressure | : 50 PSI at 11 CFM |
| 5. Duty cycle | : 80% |
| 6. Cutting capacity (a) SS clean cut | : 20 mm |
| (b) Continuous cutting | : 5 mm |



Technical Specification		
1	CNC SYSTEM	FLSK2100B
2	PLASMA STATION	A ONE
3	PLASMA TORCH HIGHT CONTROLLER	THC F1621
4	PLASMA TORCH ANTICOLLISION	A ONE
5	PORTABLE LIFTER	ONE NOS
6	X-AXIS STPPER MOTOR &DRIVE 86KG	1 NOS LEADSHIN E
7	Y1 & Y2 -AXIS STEPPER MOTOR& DRIVE	2 NOS LEADSHINE
8	WATER TANK BED	5*10M COMPLETE
9	NASTING SOFTWARE	FASTCAM
10	CABLES	STANDARD BRAND
11	T- Rail	16mm
12	Rack	20-25mm

□ Control system

> CNC system

- USB interface for reading part program in USB disk
- Ability to use and display real-time motion and I/O data
- Choice of industry-standard EIA RS-274D or ISO 6582 ESSl part Programming languages
- English or metric units
- Scale part, mirror part
- Repeat shape with three grid patterns
- Plate alignment
- Kerf compensation between pierce points
- Forward and Backup along path with off-path lead-in and cut-loss recovery
- Complete built-in diagnostics for checkout and test



□ Mechanical parts

- > High tension high accuracy driven rack & pinion drive.
- > Automatic wear compensation by high tension cup spring keeps the engagement of the pinion in this rack free of backlash.

□ Drive system:

- > Dual side servo Panasonic drive.
- > Transverse driven on master carriage.

□ Anti collision system & proximity protection

- > Limit switch on both side of longitudinal track end, with mechanical bumpers, provide emergency collision protection.
- > Electrical limit switches installed on both end side of transverse track & torch suspension, together with mechanical bumper, provide emergency collision protection
- > Track wiper device
- > Transverse drag chain & floor type longitudinal drag chain, including drag chain support

□ FastCam standard version software 1set

- > For automatic programming on separate PC
- > Professional drawing and Pathing software
- > With integrated post processors
- > NC graphic verification and intelligent nesting
- > Software with interactive, array and high speed
- > Block nesting including plate remnant nesting
- > Fully automatic true shape nesting module
- > Automatic & Intelligent Pathing Module, including DXF/IGES interface for CAD



□ Technical documentation

Supplier will provide following documentation

- 1 set of English version documentation for CNC system.
- 2 sets of English version instruction manuals for other parts including installation instructions, foundation drawing (including earthing), utility connection diagram, mechanical instruction, electrical instruction, CNC instruction, wiring diagram,
- Instruction manual of Fast CAM programming software
- Operation & service manual with wiring diagram.
- Customer acceptance certificate, etc.
- Supplier will provide installation instructions, foundation drawing (including earthing), utility connection diagram within 10 days after contract come into effect. Other documentation will be provided to customer together with machine shipment.

**COMMERCIAL:-**

S.No.	Description of Goods	Qty.	Unit price (RS)	Amount (RS)
1.	Bench plasma cutting machine	1 NOS	5,50,000/-	5,50,000/-
2.	CUT 131	1 NOS		
3.	1KVA UPS			
Total				5,50,000/-
GSTN%18				99,000/-
Total Price				6,49,000/-

COMMERCIAL TERMS AND CONDITIONS:

Payment Condition: 100 % in advance.

Validity: 15 days from the date of quotation

Tax- GST 18% extra

Transport:-As per actual borne by the customer side



Engineer expensive: Food and stay in customer scope

Mode of Delivery: - By Road or as suggested by Purchaser.

Delivery Period: - Within 3 to 4 weeks from the date of the letter of intent if placed, Should have accompanied with advance. The delivery date will be counted from the receipt of your clear Purchase order with advance.

Warranty: The repair or replacement due to defects arising out of faulty design, materials or workmanship will be applicable within 12 months from the date of Supply, provided that if we so require the parts in respect of which a claim is made, must be sent to our works at the Purchasers expenses before the Warranty period. Electrical & Electronics components like motors, switches etc are not covered under this Warranty However any defect caused by wrong treatment or mal operation of the equipment will not be covered by the warranty team and purchaser shall born related cost supplier will provide service of the equipment after warranty period.

Training & Installation: - One time training for 5 working days will be provided at free of professional fees but travelling, Lodging, boarding and incidental expenses to be born by Buyer or payable in advance. Installation will be done by us but provision of civil work, fabrication work & other necessary labour work to be made by Buyer with materials.

Consumables: - One set consumables will be provided for Installation & trial, Additional required consumables will be supplied against 100% payment in advance on the prevailing prices of the consumables.

General: - The order received by us shall not be subject to cancellation wholly or Partly for any reason without our consent Similarly, the advance given to us again this order is not refundable. In case, due to any reason order received by us is get cancelled, then total advance will be forfeited.

Design Services: - To draw drawings will not in our scope of supply or not a part of services. Drawing file in .dwg or .dxf format is must for nesting by purchaser if customer doesn't have drawings & would like to draw that by



our Engineer then it will be chargeable extra as applicable.

PRE INSTALLATION ACTIVITIES USER SCOPE OF WORK.

THE CUSTOMER MUST FINISH FOLLOWING WORK BEFORE OUR TEAM ARRIVES

Customer Scope Estimate

S.no.	Product Name	Qty.
1.	Earthing	3

MATERIAL PROVIDED BY USER :-

- (a) Water Level.
- (b) Lifting equipment.
- (c) Welding machine.
- (d) Cotton Yarn, Oil etc.
- (e) Material for cutting test.
- (f) Operating persons and other concerned co-operating Person.

THE USER MUST FINISH FOLLOWING WORK BEFORE OUR TEAM ARRIVES:-

User Must finish the installation of:

- (i) Power Supply MCCB (as per requirement) Box.
- (ii) UPS 3 kva, Online, Installation with Incomer 25A MCB, DP & output at 16 A, MCB , DP. AND Servo stabilizer as per plasmacore power source.
- (iii) User must finish installation of the gas supply system.
- (iv) User must finish the installation of compressed air line system. Included: - (i) 7.5 HP motor compressor with 200 liter tank capacity.
 - (ii) Incomer supply 3Phase, 25 A MCB, 3 P.
 - (iii) Dryer of 25 CFM.
 - (iv) Incomer supply, 1 Phase, 25 AMP, 2P
- (v) Incomer supply for Plasma m/c, MCCB/ MCB (as per requirement) .
- (vi) Incomer spare: - 25 Amp MCB, DP.
- (vii) Make a work piece supporting table as per Drawing-1 supplied.
- (viii) Earthing for Plasma as per Drawing-3 supplied.
- (ix) Foundation for machine track as per Drawing-3 supplied



If you require any further clarification, feel free to contact us.

Yours Faithfully

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