KENT USA®
Since 1979

KEB-304B
Sinker Type EDM
Operations Manual

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Table of Contents

1 Preface

A. Press Key Symbol Description

Texts and Symbols are used to represent Press Keys in this manual , described as follow:

Press Key	Text Symbol	Description
Function Key : F1	【F1】	Press【F1】key means Press F1 Function Key
Text Key A	Shown as : < A >	Press < A > key means press Text A key
Input (Enter) Key : ENTER	Shown as : 『Enter』	Press 『Enter』key means Press ENTER Enter Key

B. Hint Symbols

Symbols used in the manual :

Symbol	Description
□Warning	This Symbol means mis-operation will damage the operator。
! Note	This Symbol means mis-operation will cause the error or damaged the machine。
◢Hint	This Symbol means useful message is provided for convenience operation。

C. Caution:

□Danger

1. Do not touch electrode during discharge。
   There is high voltage on electrode while discharging. Touch the electrode might cause electric shut.
2. Do not open the door on power controller.
   There are high voltages between some circuits in power controller. Open the controller door while the power is on might cause electric shut.

! Note

* Please backup one copy of programs, working conditions, parameters and other parameters.

Programs, working condition, parameters and other data might be lost due to the mis operation, or machine damage. Basic Data can be save in machine's backup disk but the programs and working conditions which is designed by operators can only be saved in controller. Please

Hint

* Parameters：

Setup the parameters for machine's basic operation.

Wrong parameter might cause the machine works un-normal or mal-function. Machine parameters is very important data.

* Backup：

D. Manual

This manual is designed for KEB-606N serial – CNC EDM machine.

This manual is focus on system operation and program editing.

System specification

KEB-606N EDM machine power generator used PC-BASED controller. The system specification is described as follow :

A. Hardware

(I) Controller : Industrial PC-486PC is used , accessories are shown as follow :

CD VGA Color Monitor , or LCD screen (optional) 。

@ one 1.44M Floppy Disk Drive (optional) 。

® Power : 150W (Auto Power 220V/110V) 。

® One 486 PC Board (VGA on board , ISA bus , CPU card) 。

 DOM (Disk on Module) 。

® One single axis close loop servo control board. (optional→X、Y axis motor drive) 。

0 One PULSE & GAP Board。

(II) Servo : One DC SERVO DRIVER is used。

(III) Spark POWER : There are 3 different specifications: 60A、120A、180A

CD 60A→One high voltage board, 1 low voltage board。

@ 120A→One high voltage board, 2 low voltage board。

® 180A→One high voltage board, 3 low voltage board。

B. Software

①Chinese/ English displacement。

②Metric/ Inch displacement and program setting。

③Single screen setting for working condition and depth insert。

④2 sets if working coordinates. Can be switch and edit. Easy for base position setup.

⑤Rel. cutting depth and ABS cutting depth can be selected base on the custom.

⑥There are 200 lines of working condition. Operator can select any block as the initial or ending line. There are 50 files for operator to use.

⑦AI parameters search: Through input the size of working area, material type, working depth…, system wizard can generator the spark parameter table for operator to use.

⑧Via【FUZZY】button， the system can adjust the OFF Time, Pulse width, working time, jump high, jump speed in order to reach the ultimate spark result.

⑨4 steps of speed for manual movement. (×5、×50、×250、×500μm) .

Jog mode: Continue Jog and none protection can be selected.

⑩Z Luck function can be used for Orbitor.

㉑Z axis Align: Manual edge find is not necessary. Easy to find the edge. Current can be adjust by operator.

㉒From rough to fine finish can be done in one program.

3. Machine Power On and Power Off procedure

A. Power On Procedure

Turn the Main Power Switch to ON position.

⇩

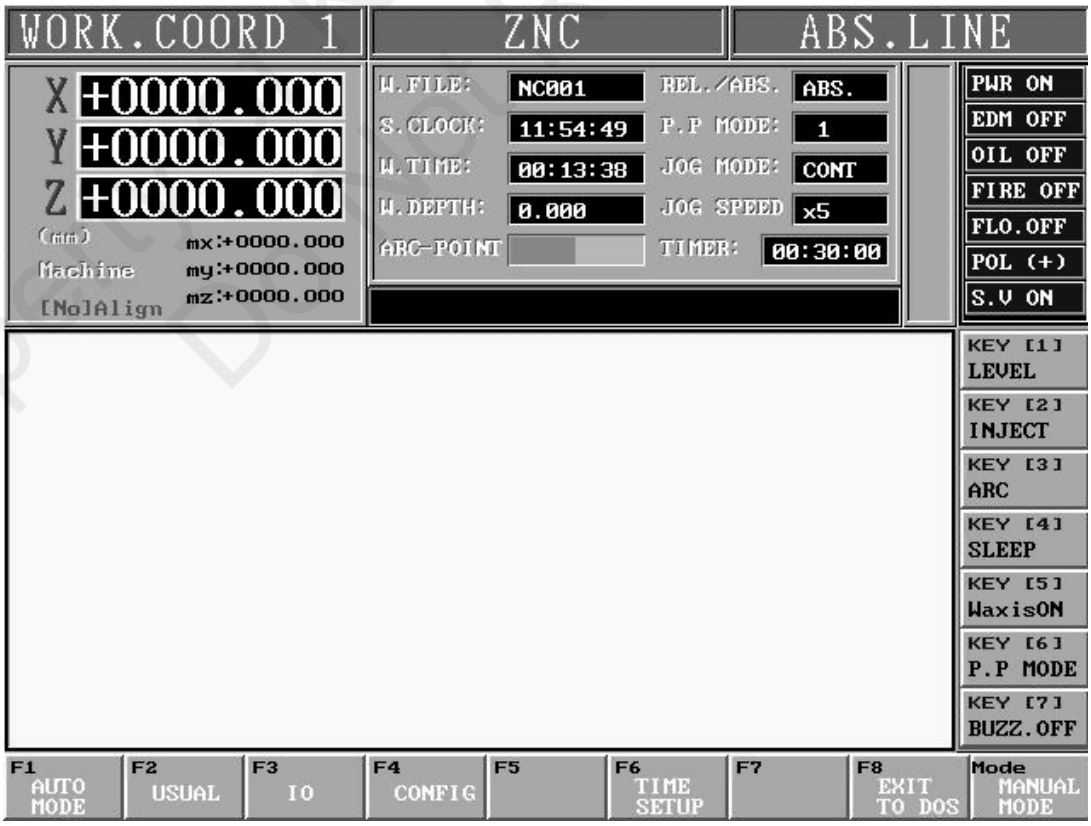
Press the Green button 【ON】 on the right side of front panel

⇩

Pull up<Emergency Stop>

⇩

Into System Screen, shown as follow:



B. Power Off Procedure

Make sure the system is not in working status.
Otherwise, press【ESC】or【F10】reset and leave the spark status。

⇩

Press <Emergency Stop>

⇩

Press the Red button【OFF】and wait for couple seconds on the right side of control panel。

⇩

Turn the main power switch to < OFF > 。

4 Operation

A. Screen Display

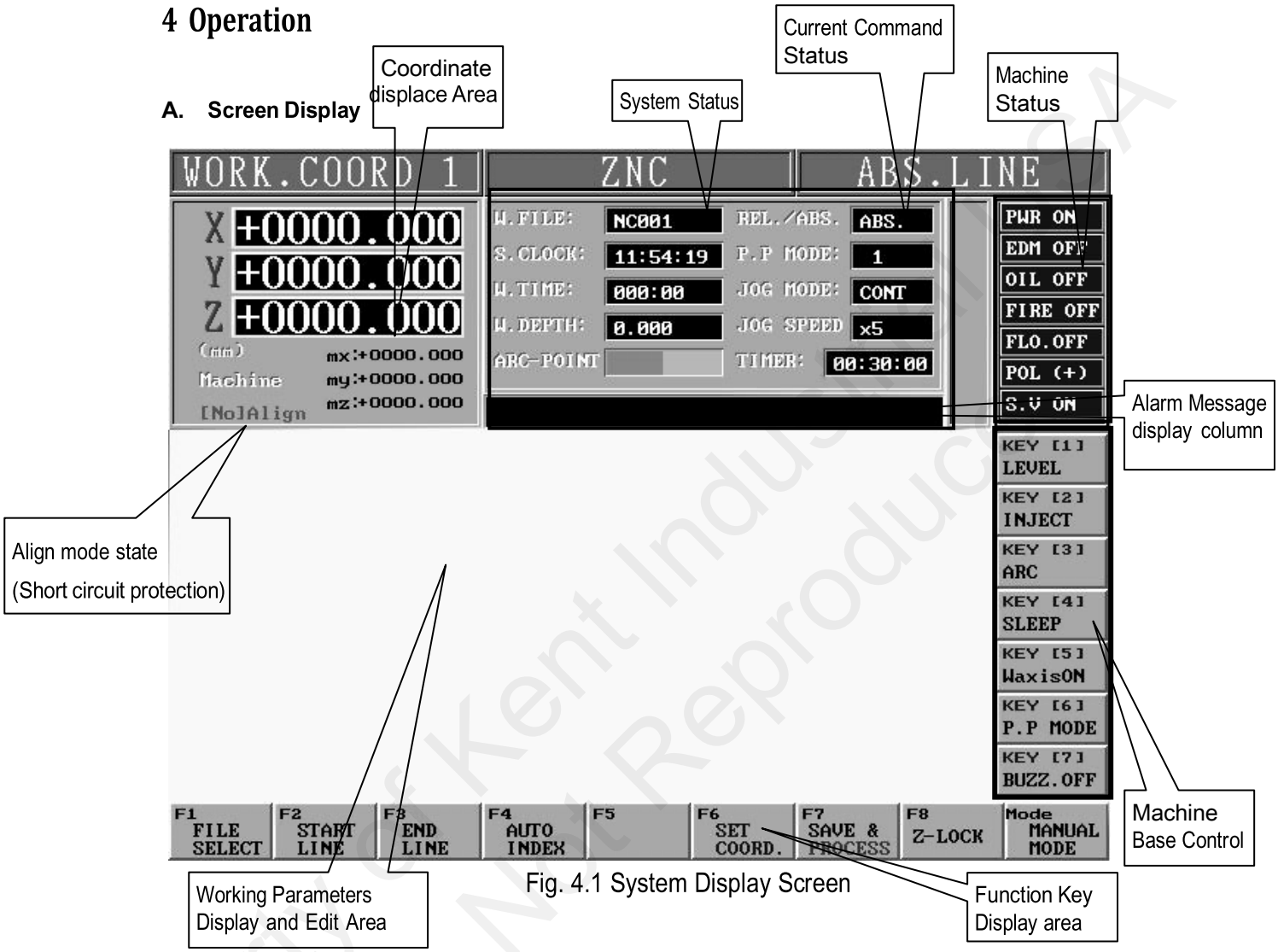


Fig. 4.1 System Display Screen

As shown above, the system screen is divided into 8 display area. Each area is described as follow:

1. Coordinate Display Area

It indicates the current working coordinate and machine coordinate of the electrode. The operator can switch between Metric (mm) and Inch (in) modes. The resolution for mm is 0.005 ㎜ ; the resolution for inch is 0.0002”.

◎Working Coordinate :

Working Coordinate is the reference coordinate of working program. The coordinate value can be set under Manual mode.

◎Machine Coordinate: The machine coordinate for customer reference only.

2. System Status Area:

◎Working Group：Showing the current working parameters group number. Operator can select other working group by pressing [F1] key under『AUTO MODE』 Screen.

◎System Time：Showing the current system time. F6】 time adjustment to edit system time.

◎Working Time：Indicates the current total working time shown as「hh：mm：ss」.

hh: hour，mm: minute，ss: second.

◎Working Depth：Indicates the current working depth been reached.

◎ Arc time display：In the column, Green is used as background color and Red as arcing indicator. The size of red area will be changed base on the arcing status. If the red area is less then half of the total column length, it means the spark status is stable. If the red area is larger than half of the column, it means the spark status is not stable. Some working parameters should be changed.

◎ABS/REL：Indicate the current coordinate system is Absolute or Relative Coordinate.

◎P.P Mode：Indicates the current P.P method.

◎Move Method：Indicates the moving method of Z axis.

◎Move Speed：Indicates the moving speed of Z axis.

◎Counter：As the counting function is activated, the remaining time will be shown on the column.

3. Machine Base Status Area:

Indicates the status of machine base hardware. Once the yellow color is shown on the column, it means the status is ON, otherwise is OFF.

◎POWER ON：Indicates PWR ON and PWR OFF

◎Spark Off：Indicates Spark status is On or OFF.

◎Pump OFF：Indicates Pump is OFF or ON。

◎Fire Protect Normal：Indicates Fire protect is Normal or Fire alarm.

◎Level Switch OFF：Indicates level switch is OFF or ON。

◎Polarity(+)：Indicates Spark Polarity (+) and Polarity (-)。

◎S.V ON : Indicates Z axis is SERVO ON or OFF.

4. Machine Base Control Area:

By entering【1】~【7】 number key to select the item and display with yellow text.

◎Oil level : Press【1】 and setup Oil level switch ON/OFF.

◎Syn. Flush : Press【2】and setup the Syn. Flush control ON/OFF.

◎Arc Protect : Press【3】 and setup arc protect function ON/OFF.

◎Sleep Control : Press【4】 and setup Sleep Control ON/OFF.

◎W axis ON：Press【5】 and setup W axis movement ON/OFF.

◎Jump Mode : Press【6】 and setup jump mode control ON/OFF.

◎Buzzer ：Press【7】 and setup Buzzer ON/OFF.

5. Working Parameters Display and Edit Area:

During discharge process that the system will show the mark of white color on the discharge parameter step, the operator could move the mark to any step by 【↑】、【↓】、【←】、【→】which the discharge parameter will be change by press the【+】、【-】 key.

The depth value setting by input the value that you need value, and press『Enter』key for setting. (The depth value setting has to before the discharge process only)

In the AUTO MODE screen, by pressing【F2】to go to start line of program，by pressing【F3】to go to end of the program. Setup working program

6. Function Key Display Area:

Display the current usable Function Keys。

7. Current Command Status Area:

Indicates the current machine command status.

8. Alarm Message Column:

Showing the current machine alarm message. Operator should troubleshoot the error and then press【ESC】 key too clear the alarm message.

B. Screen layout for each system mode

There are 3 different modes in this system. And described as follow:

(1) Operation mode : When the machine is turn on, the screen is shown as follow:

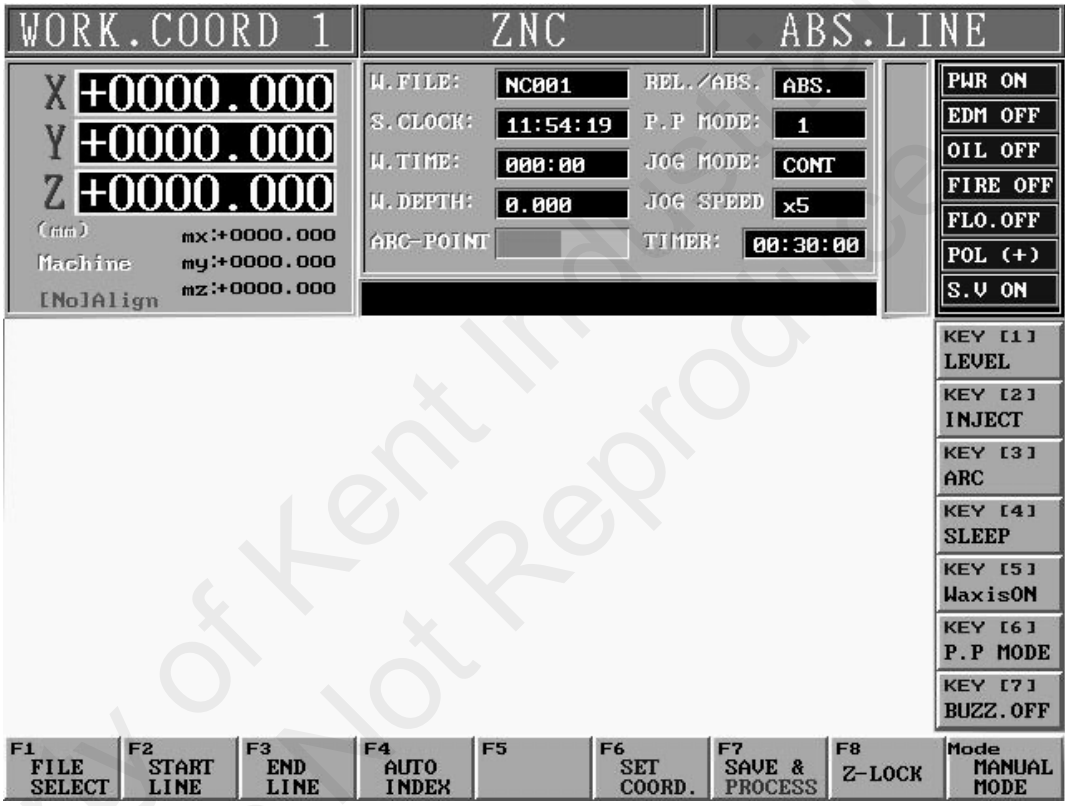


Fig. 4-2 Operation Mode Layout

(2) System Mode : Press【ESC】 under operation screen and enter the system mode.

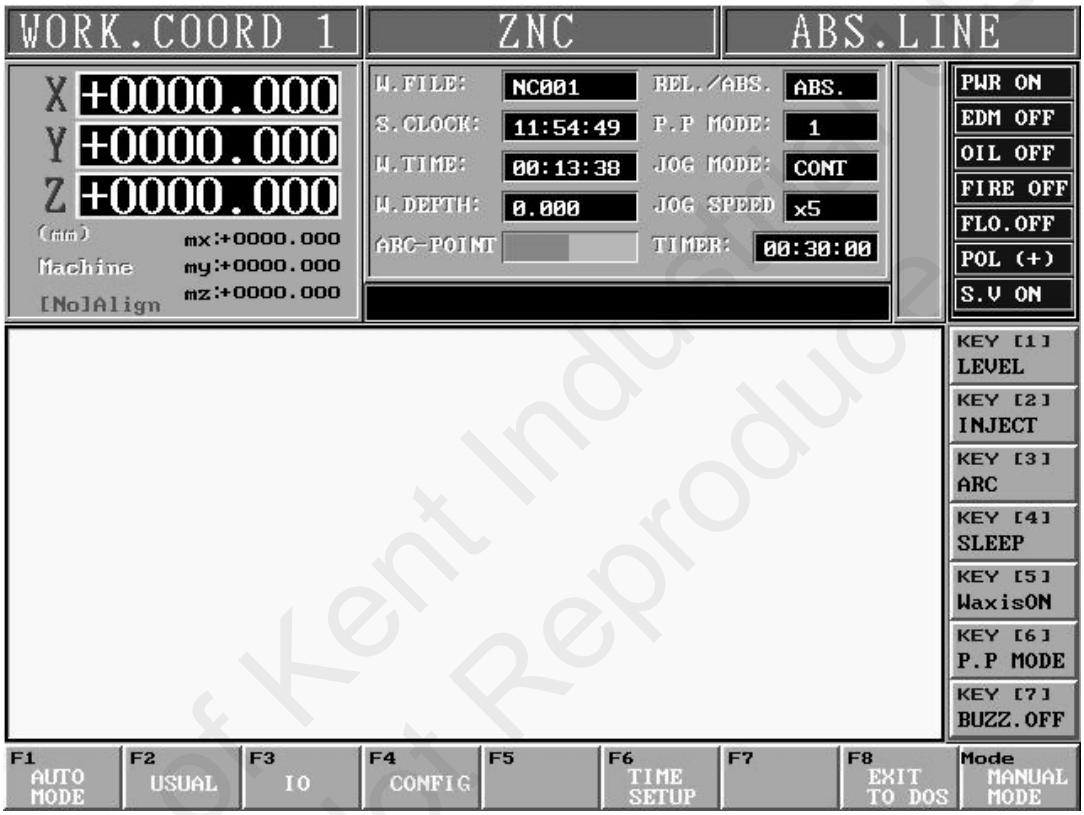


Fig. 4-3 System mode layout

(3) Manual Mode : Press【Mode】key under operation screen and entering manual mode.

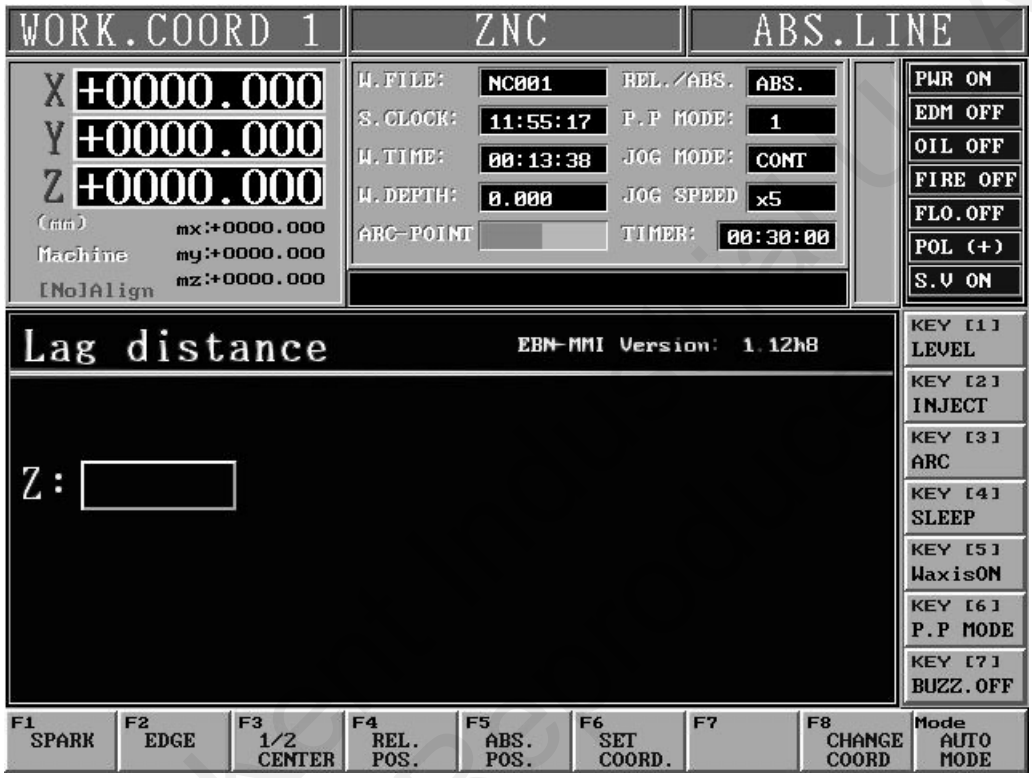


Fig. 4-4 Manual mode layout

* Press【Mode】key to enter manual mode ; pres【Mode】again and back to operation mode.

s

C. Operation panel display and description

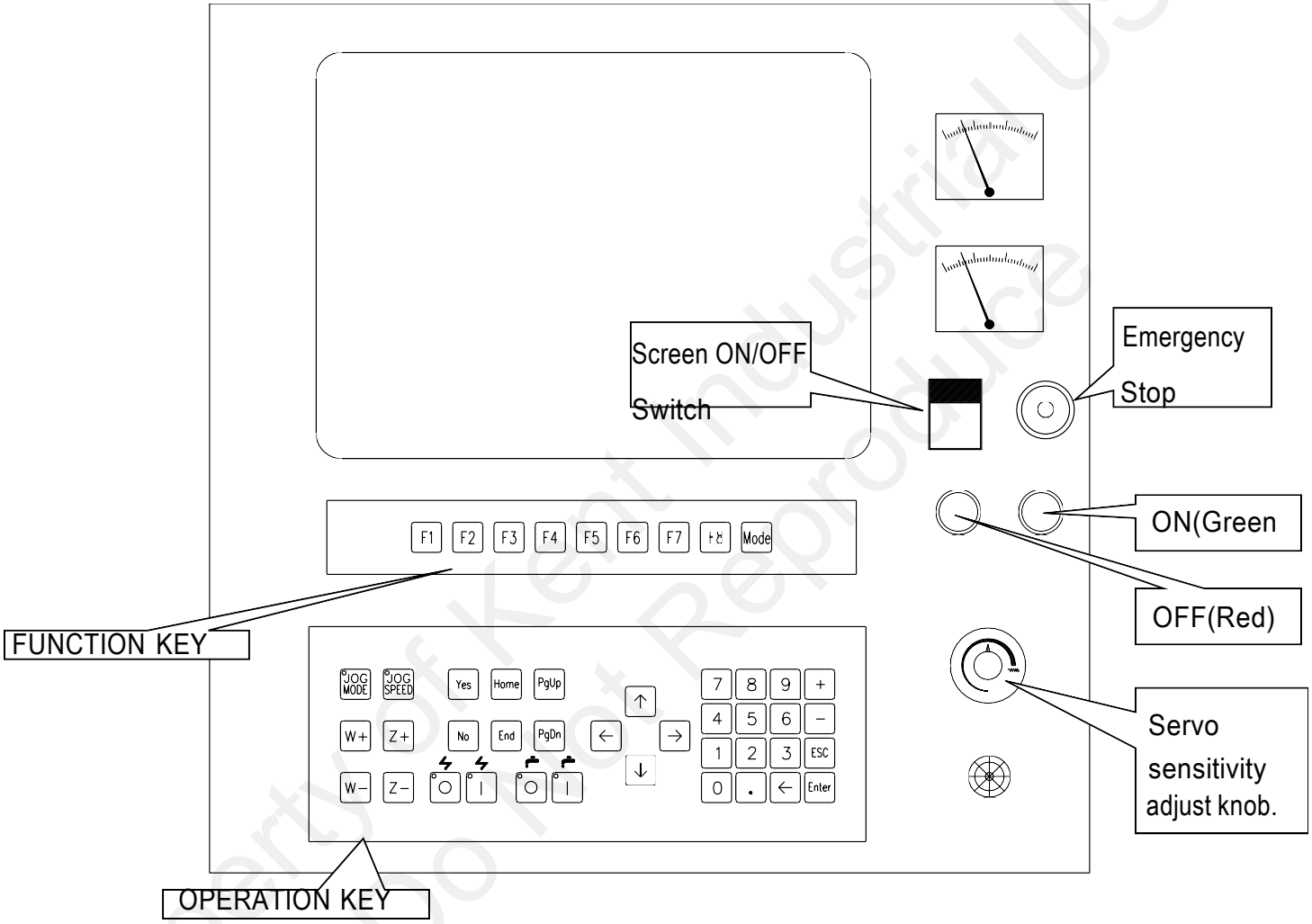


Fig. 4-5 EBN series operation panel display

(1) Description of operation panel

Software Press Key	
ESC	Press ESC key at any status will cancel the current action or return to the previous layer.
	Accept the Enter result.
←	Back key
	Page up and Page down in operation mode.
↑ ↓	Up and Down arrow keys. Move the cursor up or down in operation mode.
← > —	Right and Left arrow keys. Move the cursor right or left in operation mode.
+	Increase or Decrease parameter value in Operation Mode.
	Accept or abort the data been entered.
F1 F8	In the AUTO MODE it could move to the first discharge program and move to the last discharge program line.
~	Function keys used in each mode.
0 Mode 9	Switch between operation and manual mode.
~	User can enter text or machine hardware control setup, such as Oil level、syn. Flush.

Hardware Press Key	
	Pump ON
	Pump OFF
	Spark ON
	Spark OFF
JOG SPEED	Z axis travel speed selection. There are 4 steps of speed, ×5 , ×50 , ×250 and ×500
JOG MODE	There are 2 JOG Modes , 「Continue」and「JOG」 can be selected. While this key is pressed with【Z+】or【Z-】key , the Non-Protection mode is ON. It means operator can move the Z axis even in Short Status.
Z±	Move Z axis UP.
	Move Z axis Down.
W+	Move W axis UP.
	Move Z axis Down.

Hint

* When machine is in Short-Circuit status, Z axis can not move up and down. Press JOG MODE + Z+ or Z− and turn the Short-Circuit Off, then Z axis can move UP or DOWN.

(3) Remote Control Box Layout

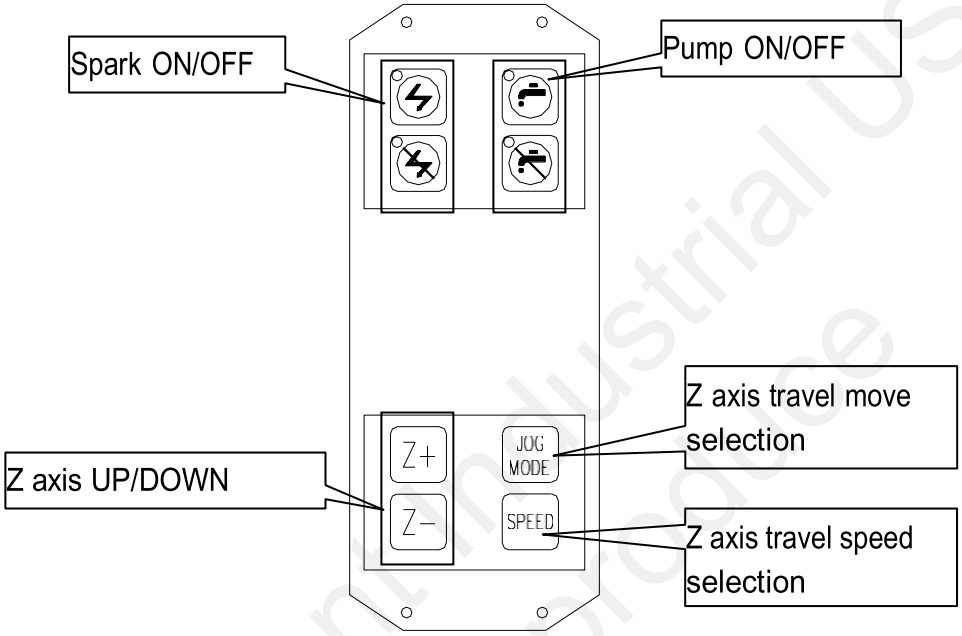


Fig. 4-6 Remote control Box Layout

5 Operation Mode

In this chapter, we would like to introduce Auto Mode and its functions. This mode provides the environment for users to edit, save and execute working program. Into this mode, the auto mode status column is shown as bellow:

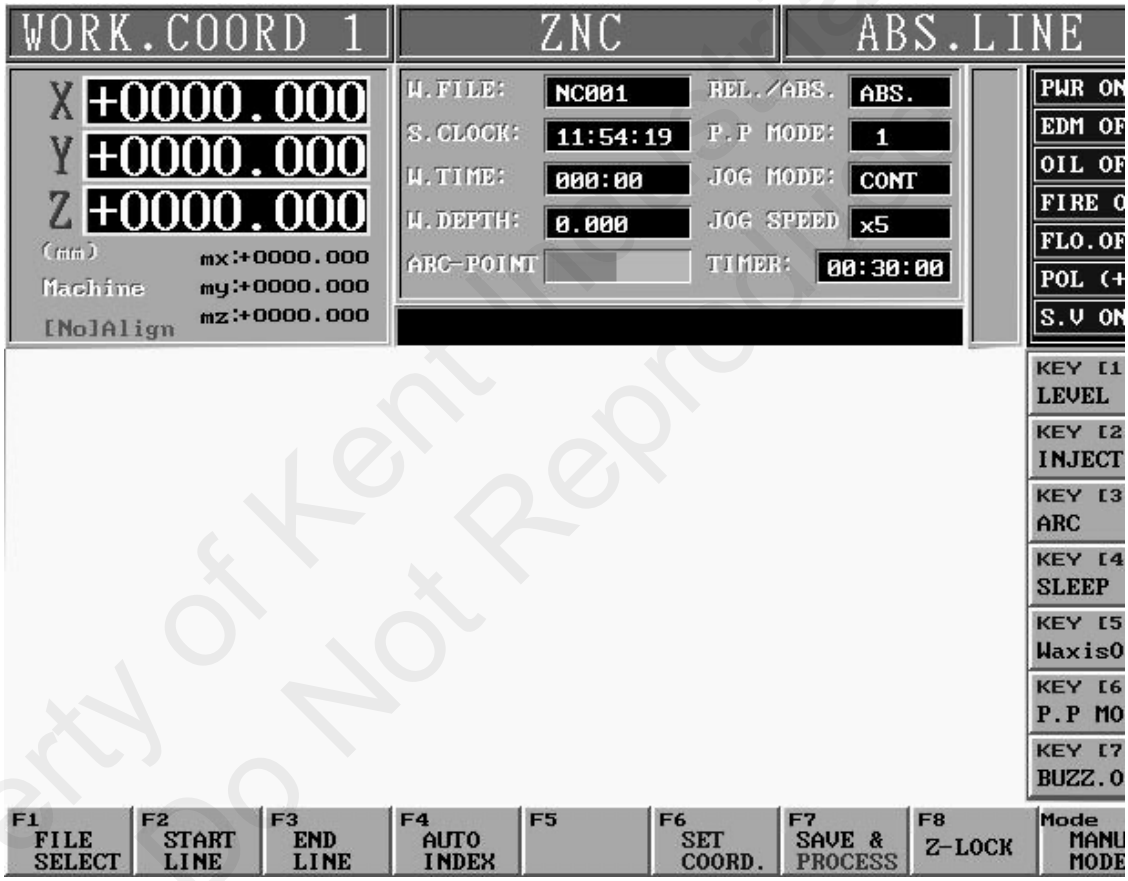


Fig. 5.1 Auto mode Screen

While the system is in operation mode, the function keys display column is shown as Fig. 5.1, and each function key is described as follow:

(1) Group Selection : Press【F1】Group Selection , use【↑】、【↓】、【←】、【→】key to select Group. Press【Enter】 to accept.

(2) Program Start Line : Press【F2】to setup Program Start Line.

(3) Program End Line : Press【F3】to setup Program End Line.

(4) Index : Press【F4】INDEX and enter Index Working Function.

(5) ABS / REL coordinate setting: Press 【F6】ABS/RED and switch ABS or REL Coordinate that the function as same as manual mode【F6】coordinate setting, but, the coordinate setting one axis one time only.

(6) SAVE : Press【F7】SAVE and save the program and into Working Status.

(7) Z Luck : Press【F8】Z LUCK and luck the Z axis while Orbiting.

A. Group Selection

Press【F1】Group Selection under Operation Screen.

Function Description：

（1）Press【↑】、【↓】、【←】、【→】key. Select the desired working group.

Example：Select group NC031

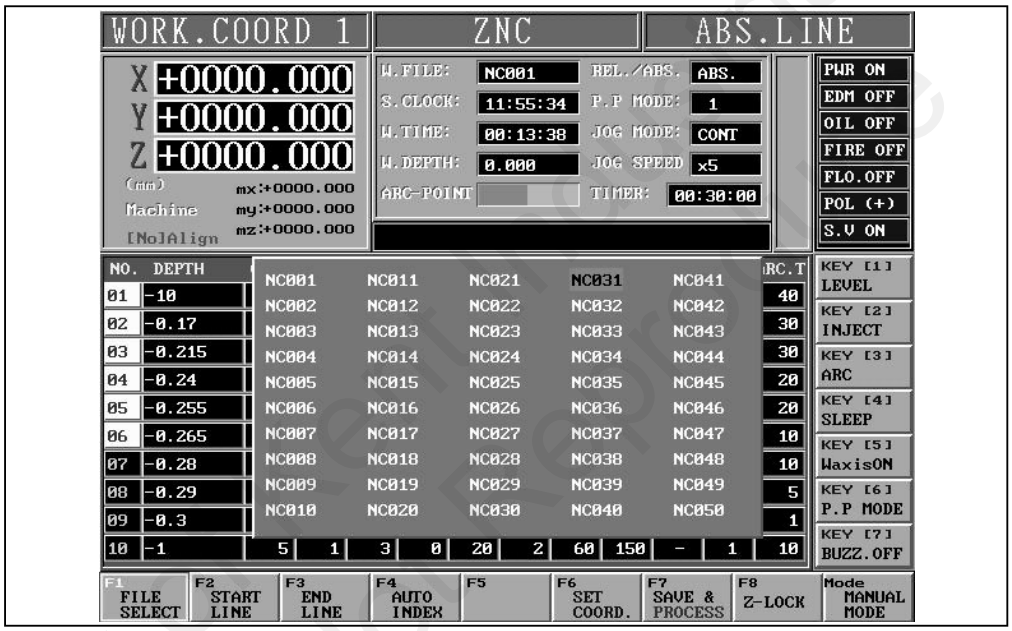


Fig. 5.2 Group Selection Function Screen

(2) Press【Enter】to accept.

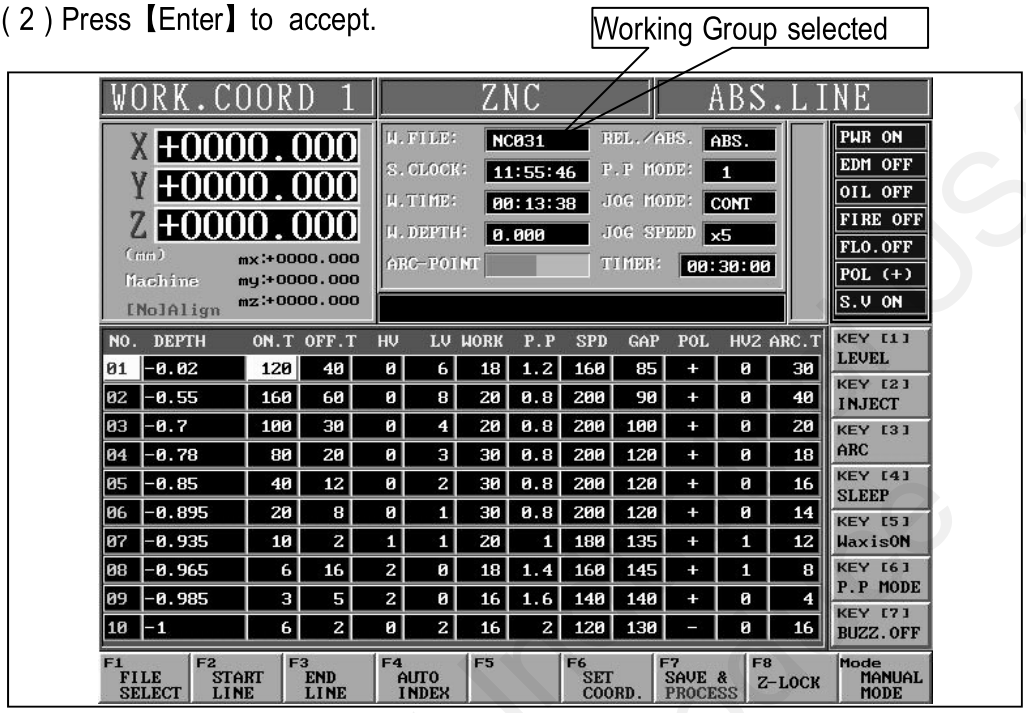


Fig. 5.3 Group Selection Screen

B. Edit Program

(1) Press【↑】、【↓】、【←】、【→】key under Operation Mode , select the parameter column need to be edited.

(2) Press【 + 】or【 - 】key , edit the parameter value.

(3) Press【F2】Program Start Line , setup program start line.

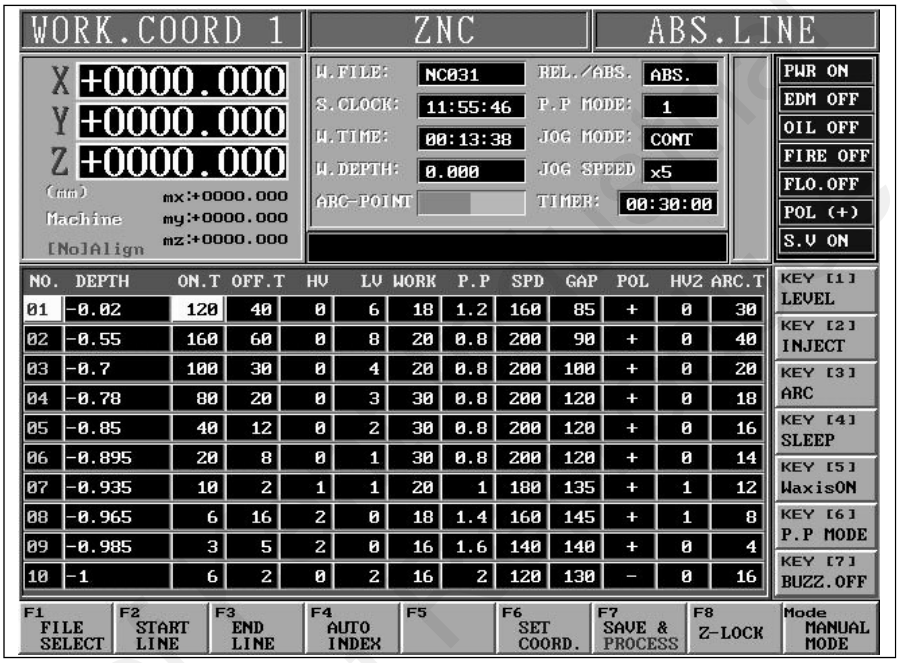


Fig. 5.4 Setup Program Start Line

(4) Press【F3】Program End Line , setup Program End Line.

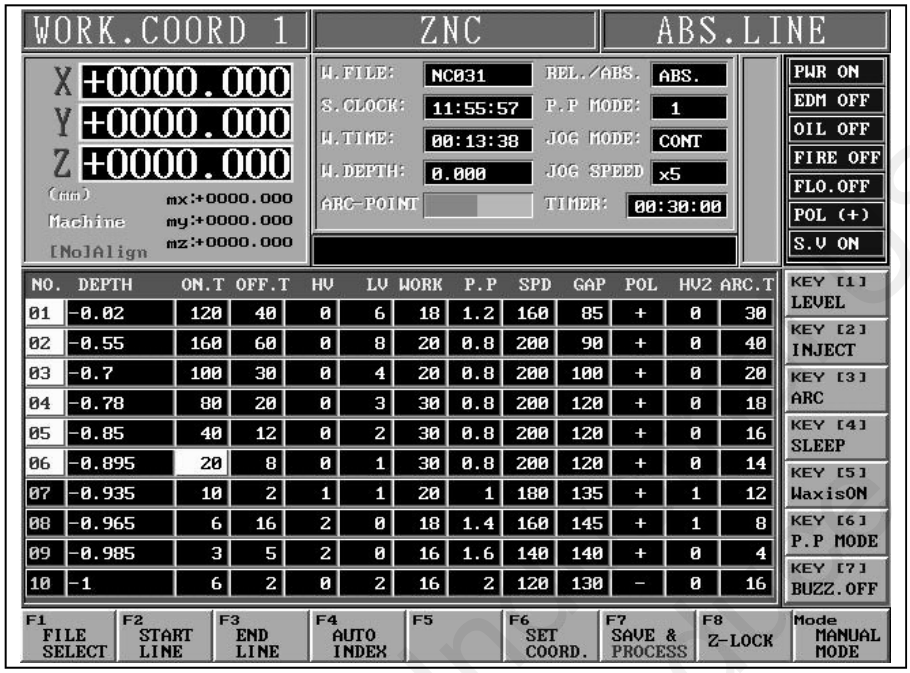


Fig. 5.5 Setup Program End Line

C. Auto Index Function

Press【F4】Auto Index and enter auto index function.

Description：This function, AI(artificial Intelligent), is designed for user to setup working program easily.

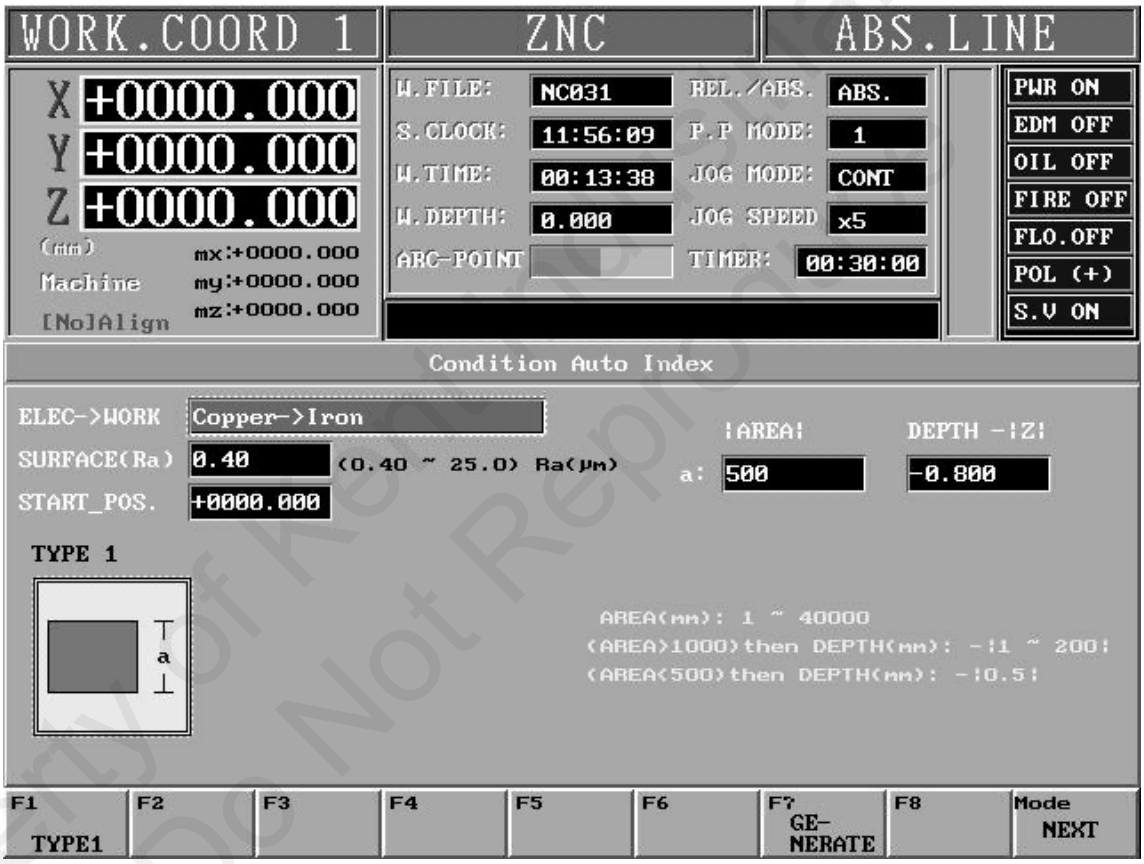


Fig. 5.6 Auto Index Screen

Description：

（1）Press【F1】~【F3】Key , select the electrode material and shape.

（2）Press【Mode】key , use【+】or【-】to setup data in following column:

CD Electrode→Workpiece：Setup the material of electrode and workpiece.

CI SURFACE Ra：Setup the final roughness.

® Start Position (START_ POS): According the system condition that it will product the discharge parameter information with absolution coordinate.

Working Area（mm^2）：Electrode burning area setup.

- Working Depth-|Z| (㎜) : Working depth setup.

(3) Press【F7】 Working Table Generate and generate one group of working program and return to Operation Mode Screen.

D. SAVE&PROCESS

Press【F7】SAVE&PROCESS under operation mode and enter Save Screen.

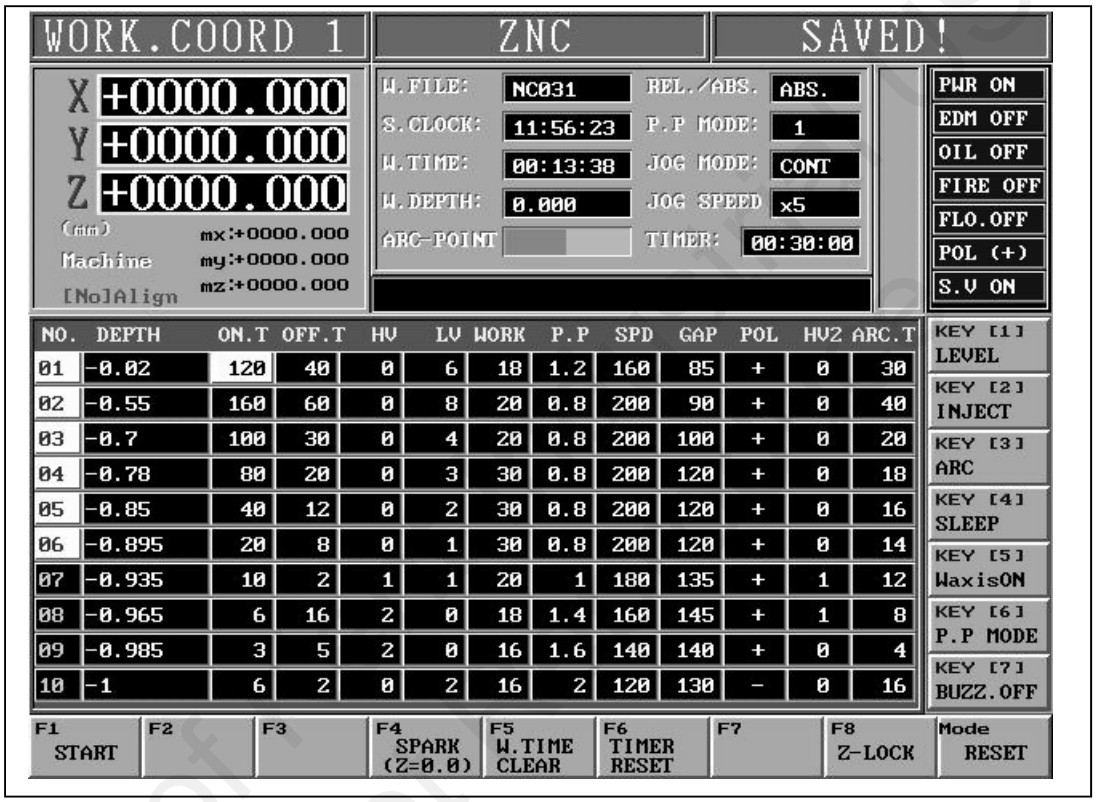


Fig. 5.7 Save Screen

Description :

(1) START : Press【F1】Power ON , or press green spark button to start discharge.。

(2) Spark(Z=0.0) : Press【F4】Spark (Z=0.0) and machine will use Line 200 parameter to spark. As electrode touch workpiece, press【F1】Power ON . Reset Z axis coordinate to zero and begin to discharge.

(3) W.TIMER CLEAR : Press【F5】W.TIMER CLEAR and clear work Timer to zero.

(4) Z Luck : As using Orbitor , Press【F8】Z-LUCK and luck the Z axis for orbiting.

(5) Return : Press【Mode】Return and return to operation mode for select new program group or edit program.

(6) TIMER REST : Press【F6】key could re-set the count down timekeeper.

E. START

Press【F1】 Spark ON under SAVE&PROCESS screen and enter Spark screen.

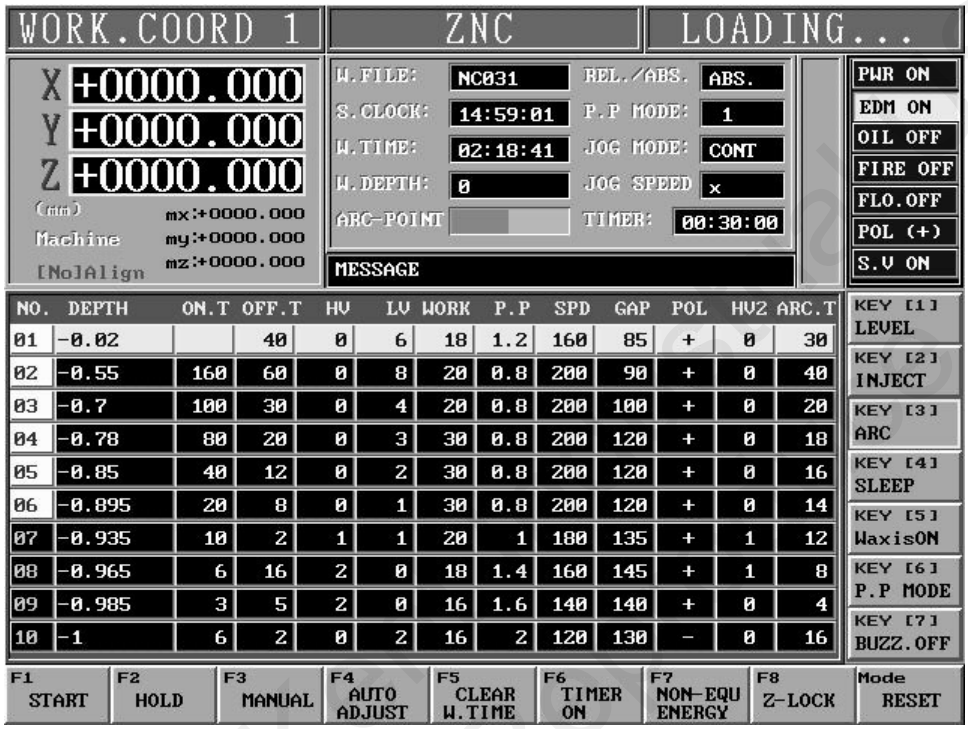


Fig. 5.8 Activate spark screen

Description：

（1） Start : Press【F1】Start while Spark is pause, and start spark again.

（2） Pause : Press【F2】Pause while Spark and pause discharge.

（3） Manual : Press【F3】Manual and switch to Manual status.

（4） Auto Adjust : Press【F4】Auto Adjust while discharge, controller will adjust Pulse, Spark, P.P ARC.T etc… base on Arcing Status in order to remove the arcing.

（5） Clear Work Timer : Press【F5】CLEAR WORK TIMER and reset timer to zero.

（6） Timer Start : Press【F6】TIMER ON while sparking and counter will be activated. Counter will count to zero when job is finish.

（7） Not-EQU Circuit : Press 【F7】NON-EQU Circuit and system will spark base on ON Time parameter without monitor spark energy.

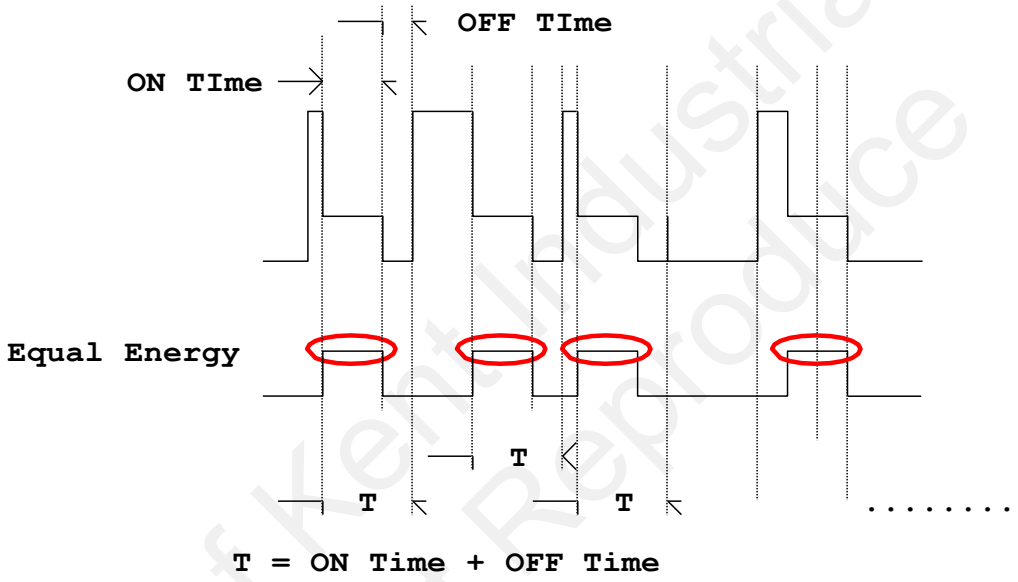
（8）Z Luck : Press【F8】Z LUCK and luck the Z axis while Orbiting.

※ Non-EQU circuit is used for fine finish process and ON Time is less than or equal to 2μS。

Equal Energy and Non - Equal Energy introduction

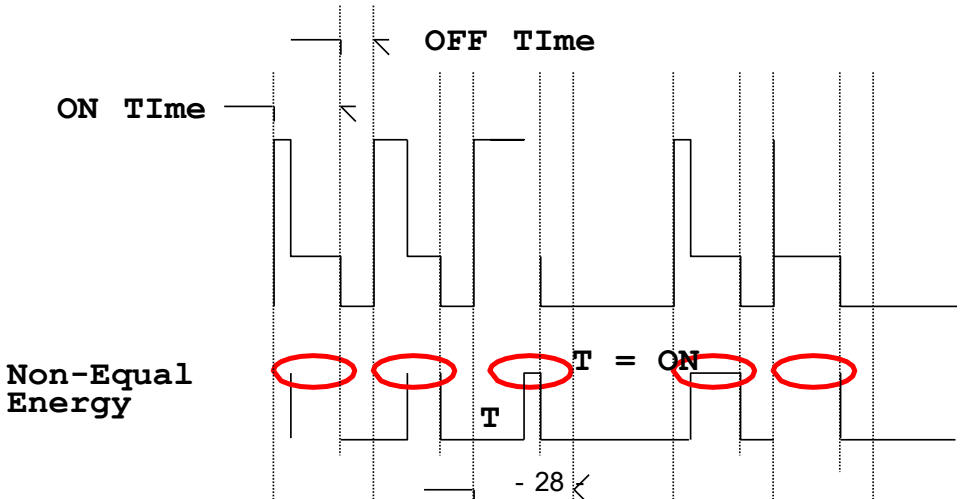
(a.) Equal Energy :

The ON Time calculate time after the ignite succeed time, it is mean the ON TIME on the C_CODE parameter time and addition the OFF time, The On Time + OFF Time = T cycle



(b.) NONE - Equal Energy :

The ON Time calculate time included the ignite succeed time, it is mean the ON TIME on the C_CODE parameter time and addition the OFF time, The On Time + OFF Time= T cycle



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Time +

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OFF
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※ The NONE - Equal Energy Suitable for use time:

During general sparking process, the system all in the Equal Energy condition discharge process not in the none - Equal Energy condition discharge process. The none - Equal Energy condition discharge process suitable for use the special discharge condition or application on the final discharge process, according the operator discharge of experience, turn on the none - Equal Energy condition discharge process, it suitable for use the small current discharge process (The current under 10A). If operator turns on the none - Equal Energy condition discharge process on the rough process, that the electrode wear and tear will be higher more then the Equal Energy condition discharge process

F. Parameter Description

ON (ON.T) : Spark Pulse on time. Unit: (uS) 。

OFF Time (OFF.T) : Spark Interval Time. Unnit: (uS) 。

HV (H_V) : Spark trigger Current. Unit: (A) 。LV (

L_V) : Spark current. Unit: (A) 。

(WORK) : Work Time. Unit: (SEC) 。

(P.P.) : Jump Height for flushing. Unit: ㎜。

SPEED : Feed rate for P.P or Orbit movement.

GAP : Reference Voltage for servo spark gap voltage. Unit: (Volt) 。

POLAR : Electrode polarity.

HV2 (HV2) : 2nd step HV of spark.

OFF Time2 (ARC.T) : Raising OFF Time while arcing. Unnit: (uS) 。

* There is a Servo sensitivity adjustment knob can control the servo reaction. Turn clockwise for more sensitivity and counter-clockwise for low sensitivity. The result effects the working efficiency and can be read from the meter on the controller panel.

Parameter Character :

(1) ON Time : Larger ON Time: higher working speed, less electrode wear and rough finish.
Less ON Time: lower working speed, more electrode wear and finer finish.

(2) OFF Time : Larger OFF Time: lower working speed, less electrode wear.

Small OFF Time: higher working speed, more electrode wear and easy to cause arcing. (normal setting: between 23~30)

(3) HV : HV is used for large mold, deep depth discharge, difficult flushing and hard material. With HV, can increase the efficiency but also increased the electrode wear. (Normally no use)

(4) LV：Normally used as spark current. Work with ON Time. (1：15~20).

Example：LV: 3A，ON: 40~60

(5) Working Time：The spark time while electrode touch workpiece. Unit: 0.1 sec. Working time can be adjusted base on the stability of current working status. Large working Time：Fast working speed, easy to cause arcing and more electrode wear. Short working Time：Low working speed, not easy to cause arcing and less electrode wear. Find the suitable working time for ultimate working efficiency.

(6) P.P：Unit: ㎜. There are 1~38 steps。The jump height is base on the working depth. More P.P value for higher jump height. Less P.P value for lower Jump Height.

(7) Speed：Z axis travel speed while sparking. Speed setting is base on size of working area. Large Area: Z axis travel speed Slower Speed（40~80）。

Small Area：Z axis travel speed Faster Speed（100~200）it could be upper the discharge efficiency.

(8) GAP：Distance between electrode and workpiece.。Rough Setting:（70~90），Fine Finish Setting: Base on the working status（100V~150V）。

Large Gap：Slow Speed, not easy to cause arcing.

Small Gap：Faster Speed, easy to case arcing.

(9) HV2：Used for fine or micro finish. 1：ON、0：OFF；Purpose: increase spark voltage while ARCing.

(10) OFF Time2：While ARCing, system will extend the OFF Time to OFF Time2 in order to remove arc status.（OFF Time2：OFF Time1=1:2）

6 Manual Mode

In this chapter we would like to introduce the operation and functions in Manual mode. This mode provides all setup process such as Alignment, Find Position and working coordinate setup.

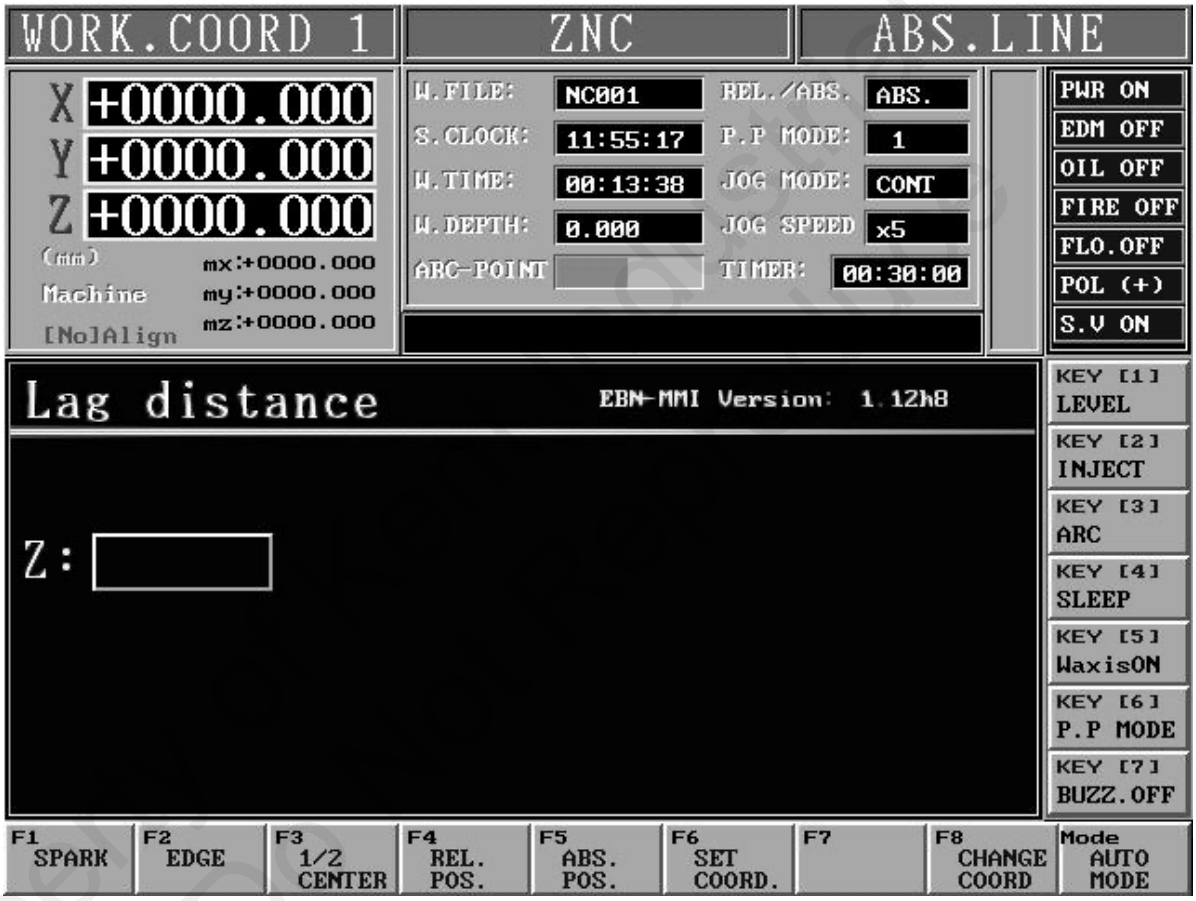
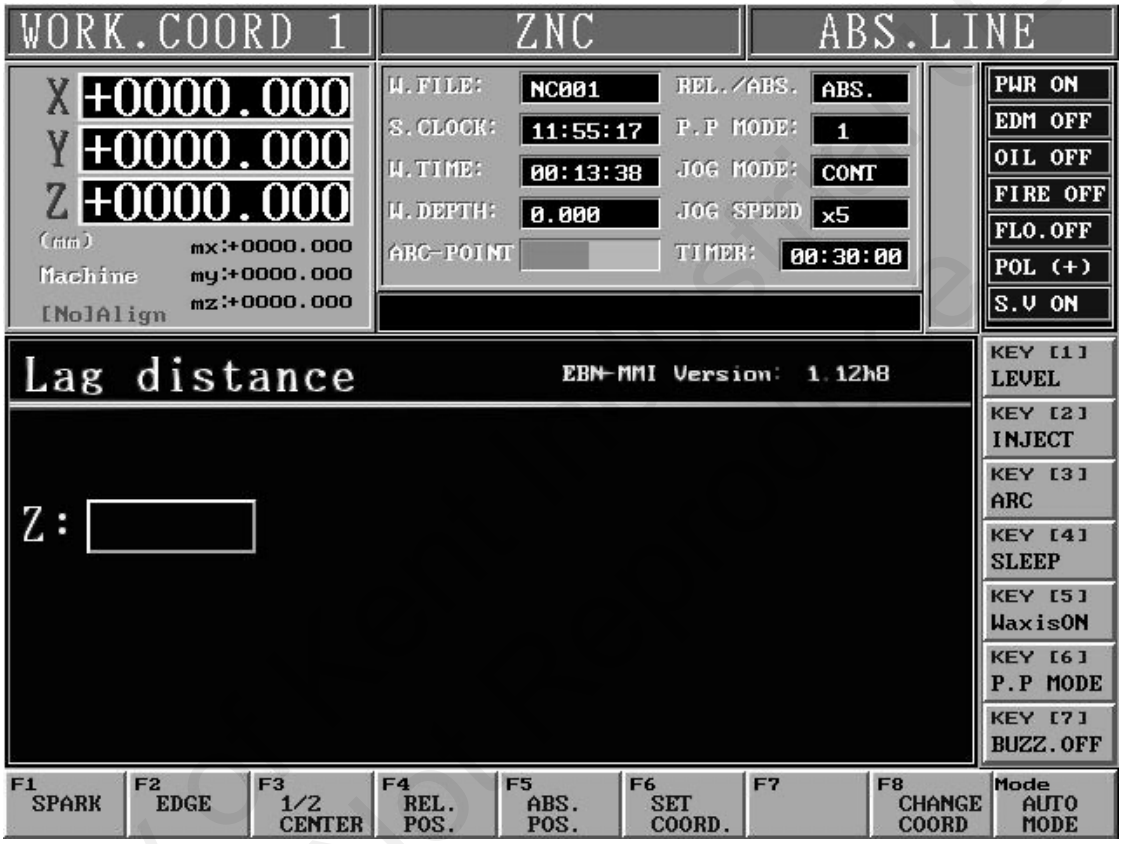


Fig. 6.1 Manual Mode Screen

A. SPARK FUNCTION

Function explain : offer the operator find the reference position on the work piece.

Function select: in the manual mode, press【F1】 key SPARK, that into the SPARK function.



6.2 SPARK function screen

Procedure:

1. When press the【F1】SPARK , The system will turn High voltage on and system will according the sparking parameter 200th line to touch the work piece. The operator can adjust the VR on the control panel to control the Z axis action speed. Consider the safety, we suggest setting the VR value position under 1/3when the electrode will closed the work piece.
2. When press the【F1】SPARK again or press 【ESC】 that the SPARK function will stop.

B. Edge

Description : Find the reference point of workpiece.

Function key : Press【F2】Edge under manual mode and enter EDGE function.

Fig. 6.3 EDGE Screen

Procedure:

(1) Press【↑】or【↓】key and select 「Z + 」or「Z - 」。

(2) Press【F1】Start and Z axis can find edge on positive or negative direction.

(3) Press【F2】HOLD to stop Find Edge temperately . Press【F2】 to continue.

(4) Press【F3】RESET to stop find edge.

C. 1/2Center

Description : Find the center poing

Function Key : Press【F3】1/2 Center under manual mode and enter ½ Center screen.

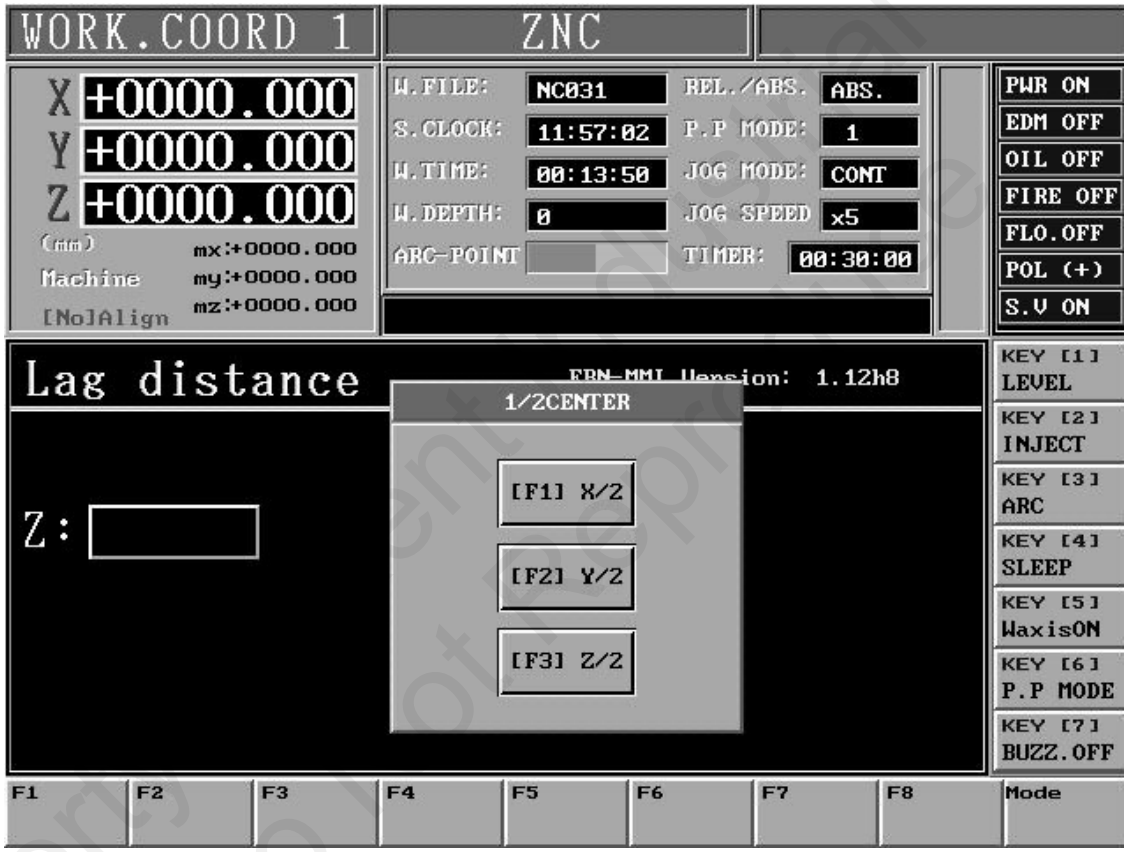


Fig. 6.4 1/2Center Function Screen

Procedure :

(1) Press【F1】X/2 and the current X value will be divided by 2.

(2) Press【F2】Y/2 and the current Y value will be divided by 2.

(3) Press【F3】Z/2 and the current Z value will be divided by 2.

D. Relative Positioning

Description : Move the Z axis to the position base on Relative Coordinate.

Function Key : Press【F4】REL.POS and enter Relative position Function.

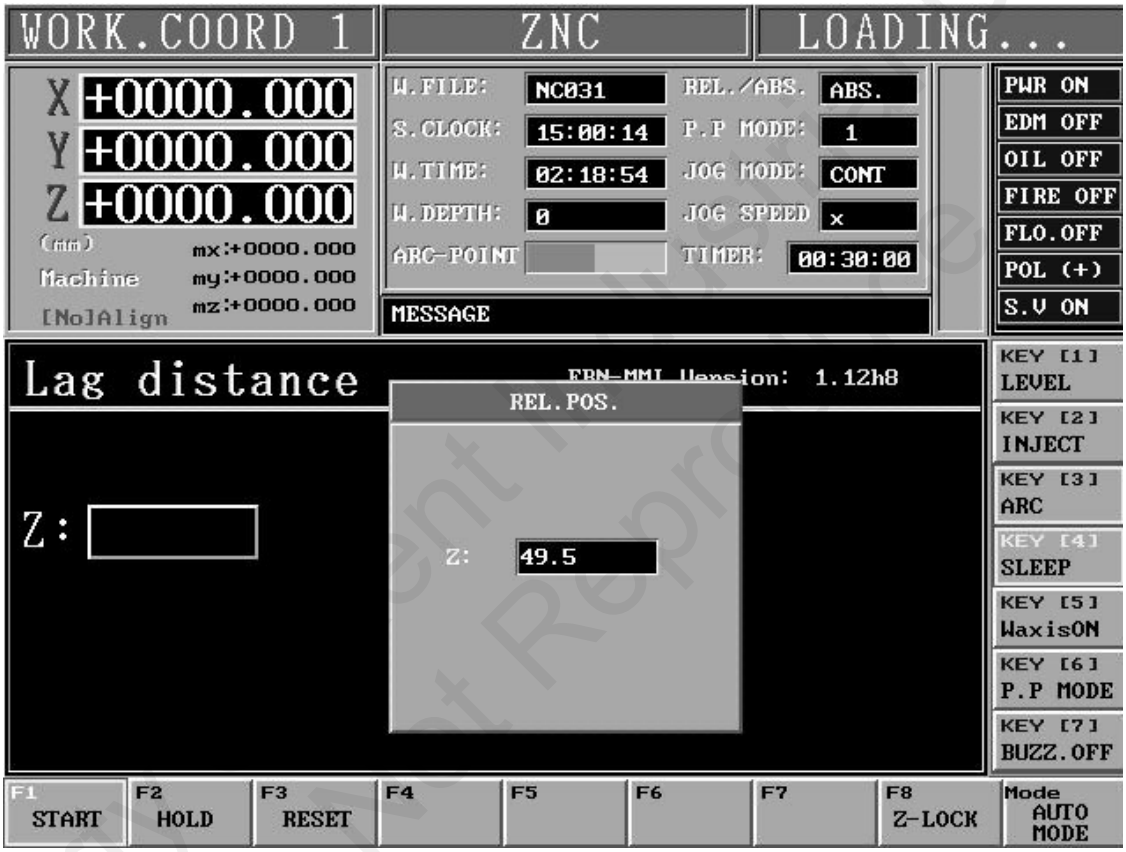


Fig. 6.5 Relative Position Screen

Procedure :

(1) Press【0】~【9】Number key and setup the current Z axis value related to current coordinate.

(2) Press【F1】Start and Z axis start to move to the position related to the current coordinate.

(3) Press【F2】Pause and stop movement temperately. Press【F2】again and continue movement.

(4) Press【F3】Reset and stop movement.

※Example : Current Z axis position is 20.0. If the relative position is 45.9 , Z axis will move

to Z 65.9 position.

E. ABS Positioning

Description : Move the Z axis to the position base on ABS Coordinate.

Function Key : Press【F5】ABS. POS under Manual mode and enter ABS Position function.

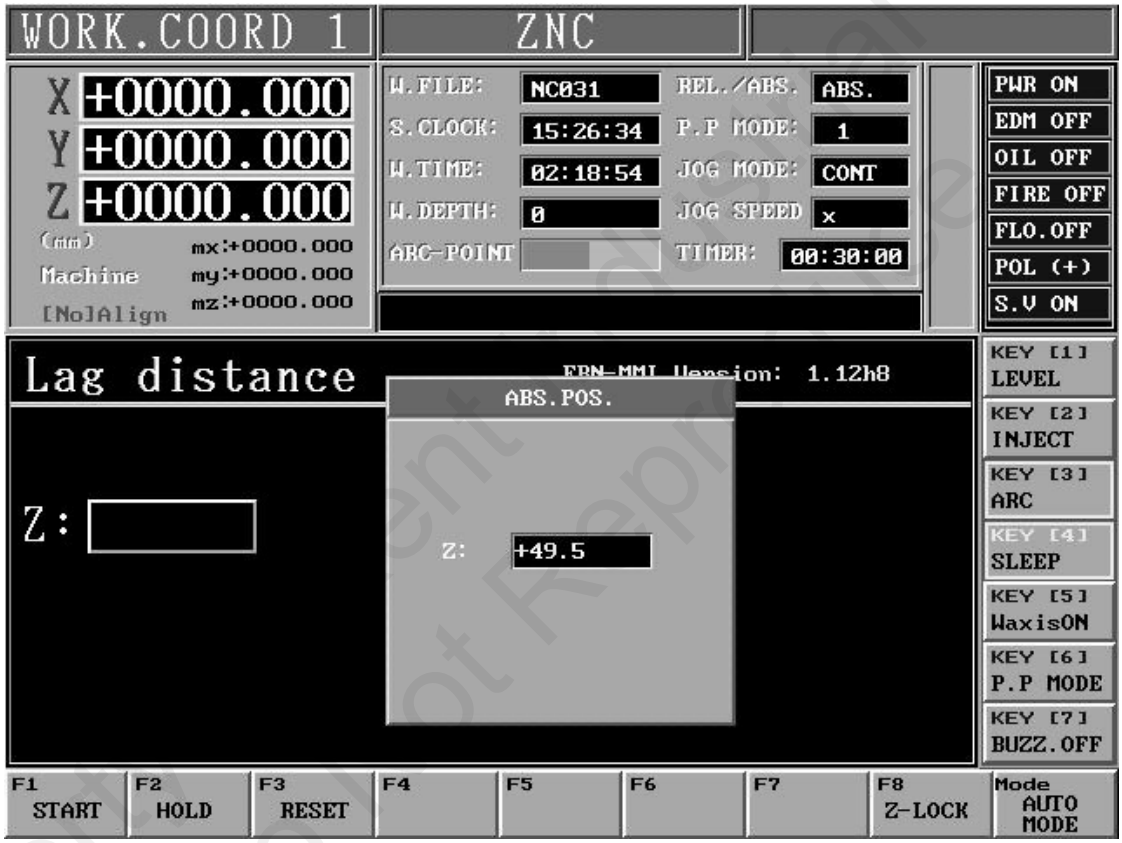


Fig. 6.6 ABS Positioning Screen

Procedure :

(1) Press【0】~【9】Number key and setup current Z axis position according to ABS Coordinate.

(2) Press【F1】Start and Z axis will move to the position.

(3) Press【F2】Pause and stop movement temperately. Press【F2】again and continue movement.

(4) Press【F3】Reset and stop movement.

※Example : Current Z axis position :20.0. If ABS Position is 45.9 , Z axis will move to Z

45.9 position.

F. Coordinate Setup

Description : Current X, Y and Z axes value setup.

Function Key : Press【F6】 SET COORD under Manual mode.

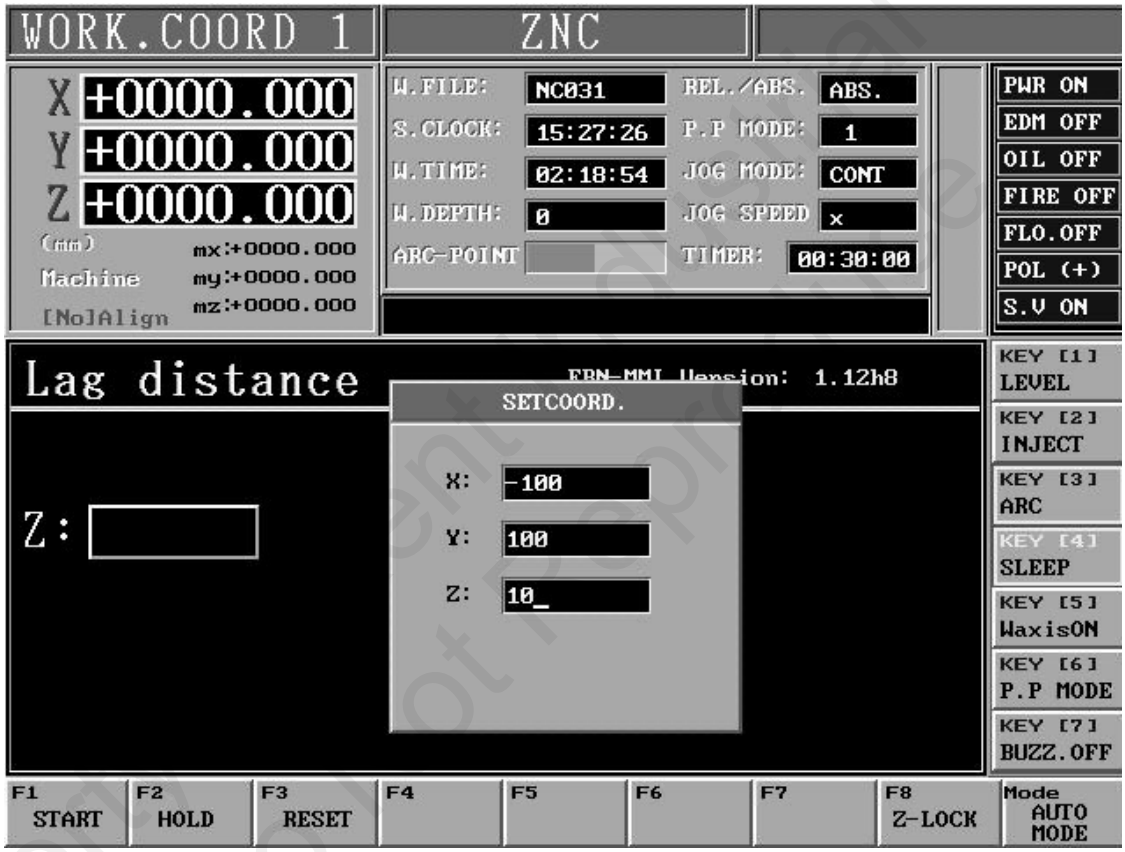


Fig. 6.7 Coordinate Setup Screen

Procedure :

(1) Press【0】~【9】to setup X、Y、Z value

(2) Press【Enter】to accept.

(3) Press【F1】START to confirm X, Y and Z axes value.

(4) Press【F2】PAUSE and stop coordinate value setup temperately. Press【F2】to continue.

(5) Press【3】Reset to stop coordinate value setup.

G. Coordinate Selection

Description : Selection of Working Coordinate 1 or Working Coordinate 2.

1 or 2.

Switch to Coorkinate 2

Function Key : Press【F8】Coordinate Selection under manual mode for selection Coordinate

Fig. 6.8 Coordinate selection Screen.

Procedure : Press【F8】Coordinate Selection between Coordinate 1 and 2.

7 System Mode

In this chapter, we would like to introduce the operation and functions in System Mode.

System Mode provides user setup custom of operation and Time setup. Also provides the troubleshooting information for engineer.

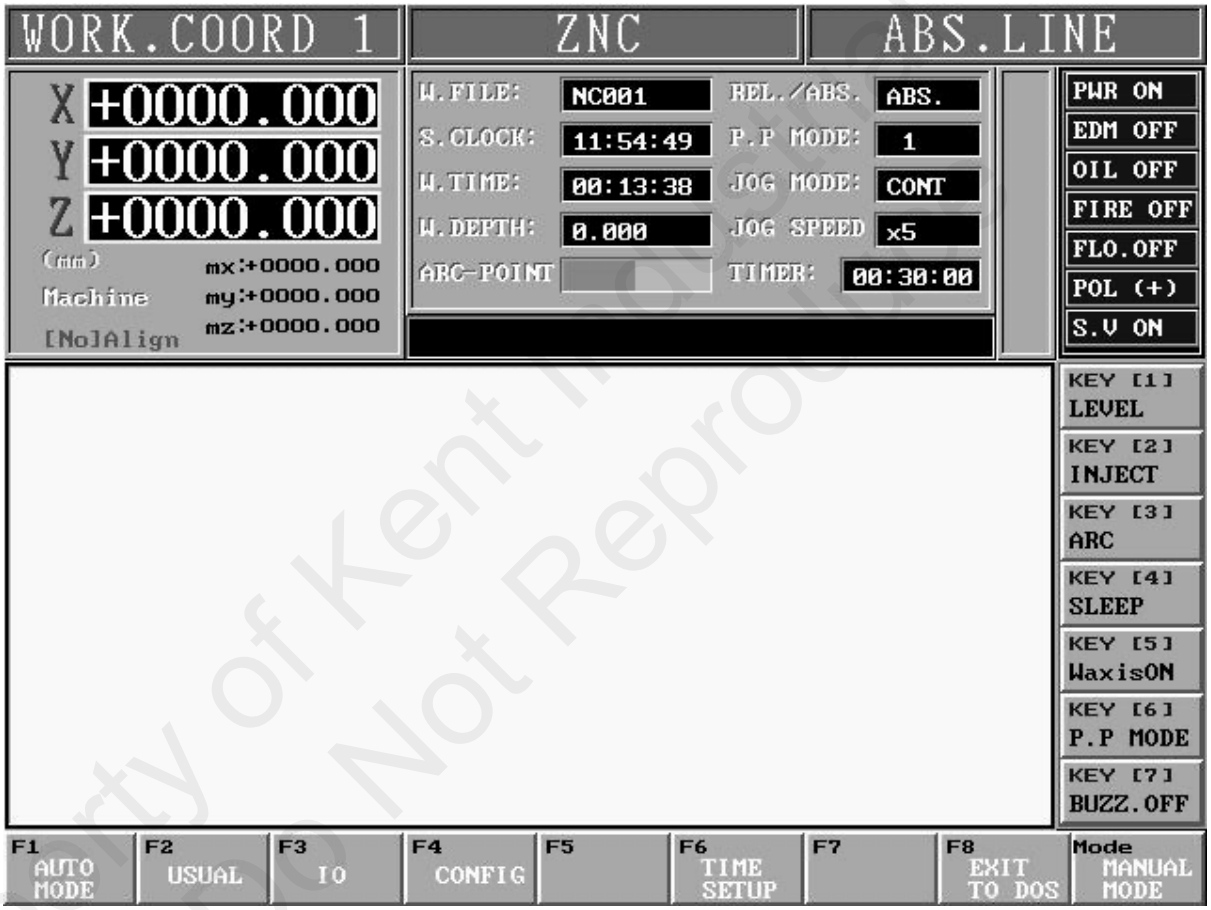


Fig. 7.1 System Mode Screen

Description :

(1) Custom : User can setup operation custom of his own.

(2) IO : IO status for technician debug purpose.

(3) Parameter : Machine parameter for technician troubleshooting.

(4) Time setup : System time Setup

! Note

※Important! Don't modify system parameters, otherwise will cause machine mal-function.

A. USUAL

Description : Customize User's System Operation

Procedure : Press【F2】USUAL and enter sub-function.

Shown as follow :

Fig. 7.2 USUAL screen

User can modify the system screen base on his own operation custom.

Edit Procedure as follow :

【+】、【-】: Increase/ Decrease parameter value.

【↑】、【↓】: Press this key to select item.

【ENTER】: Press this key to accept.

【0】~【9】: Press number key to input parameter.

【ESC】: Press this key to save and leave parameter setup.

Parameters Description :

① WORK_FILE : Default file as machine boot up.

② DIS_OFF_TIME : Setup working Dis-OFF-Timer.

③ LANGUAGE : Language selection: Chinese/ English

④ UNIT : Coordinate Unit System: ㎜/ inch

⑤ COORDINATES : Default Coordinate selection.

Work1→1st Working coordinate , Work2→2nd Working coordinate.

⑥ REL/ABS.LINE : Default Z axis REL/ ABS movement.

REL.LINE→ Working coordinate ; ABS.LINE→ Reference coordinate.

⑦ RESERVED : Reserve. N/A.

⑧ PRESET_TIME : Preset Time setup on Pulse Board.

⑨ ARC_DISTANCE : Jump Height setup while arcing.

⑩ COOR.RESERVED : Coordinate Value Reserve while machine shut down.

Enable/ Disable

⑪ DIS_OFF_TIMER : DIS_OFF_Timer activated.

Enable/ Disable

⑫ TIMER_ON_STATE : Timer ON setup.

a : Global→Timer for all steps. 補: (從第一行程式至最後一行加工所需的時間) 。

b : Last→Timer for last step only.

B. IO

Description : Showing system I/O status for troubleshooting.Procedure

: Press【F3】IO and enter sub-function.

Shown as follow :

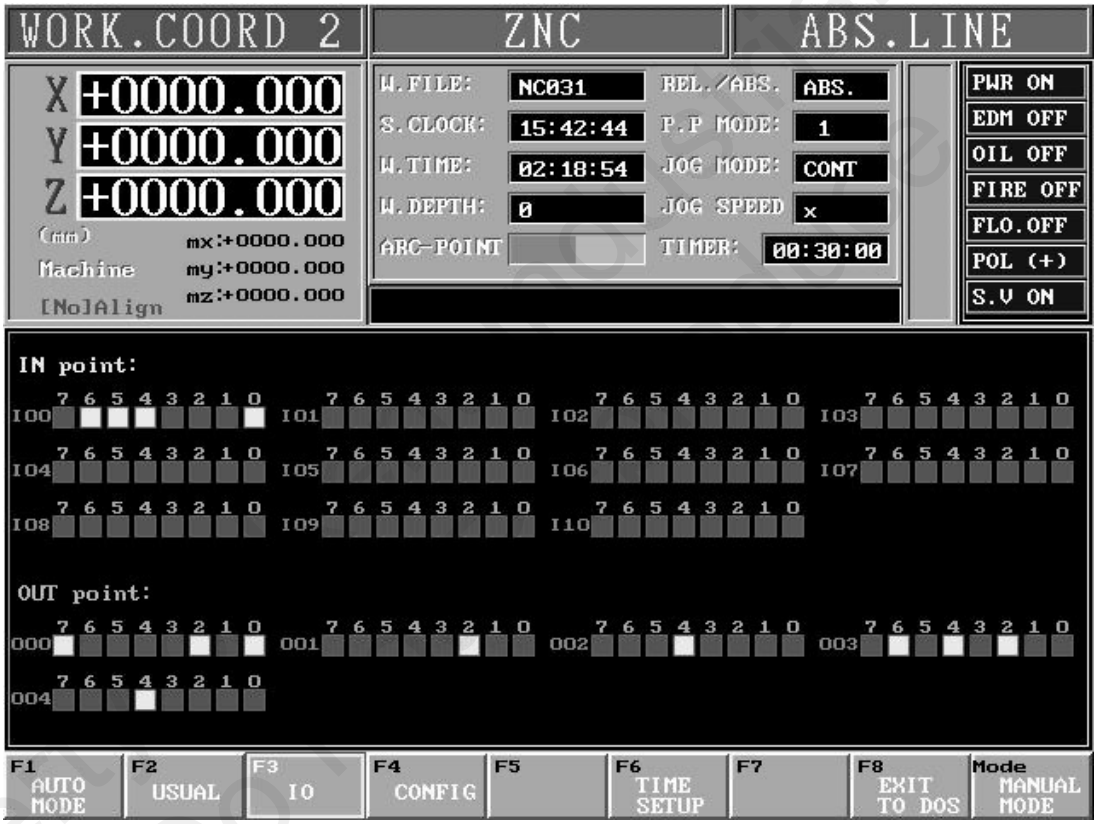


Fig. 7.3 I/O screen

□ : OFF ■ : ON。

This is the information for technical troubleshooting.

C. CONFIG

Description : This function provides the Machine Parameter and Servo Parameter setup. Only the technician can edit the parameters.

Procedure : Press【F4】CONFIG and enter sub-function.

Shown as follow :

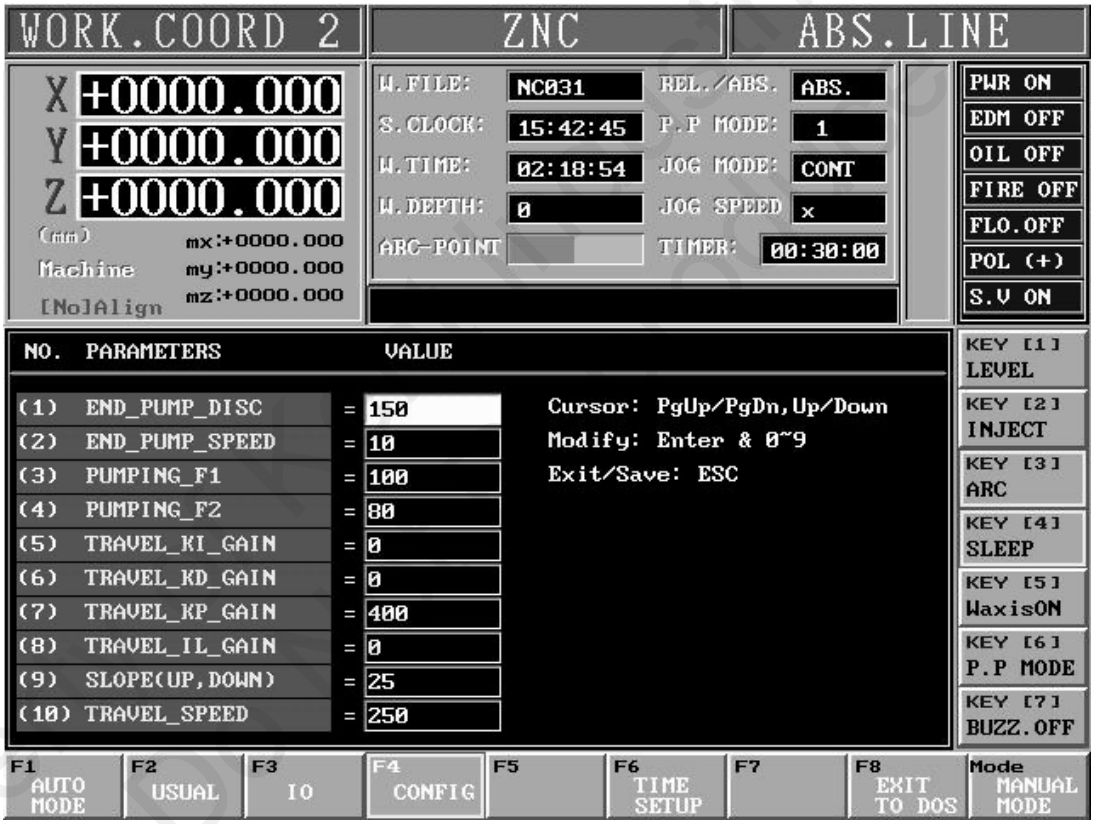


Fig. 7.4 CONFIG screen

【PgUp】、【PgDn】 : Press this key for page up or page down.

【↑】、【↓】 : Press this key to select the item.

【ENTER】 : Press this key to accep.

【0】~【9】 : Press number key to input parameter.

【ESC】 : Press this key to save and leave parameter setup.

D. Time setup

Description : System Time Setup

Procedure : Press【F6】Time Setup and enter sub-function.

Shown as bellow :

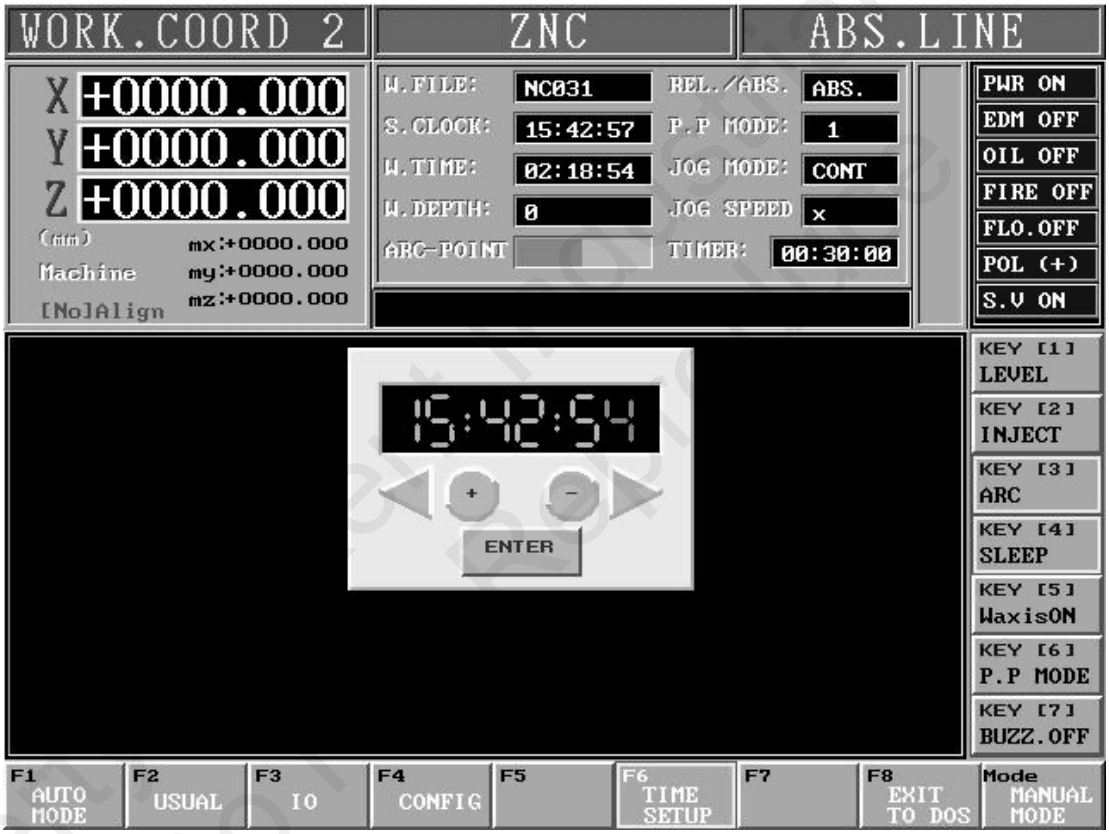


Fig. 7.5 Time Setup Screen

Setup procedure :

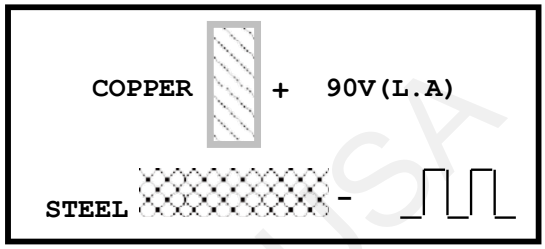
【←】、【→】 : Press this key to select hr, min and sec.

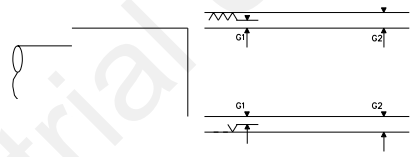
【+】、【-】 : Press this key to adjustment hr, min and sec.

【ENTER】 : Press this key to accept input.

【ESC】 : Press this key to leave Time setup.

KEB-Series Machine Data Sheet

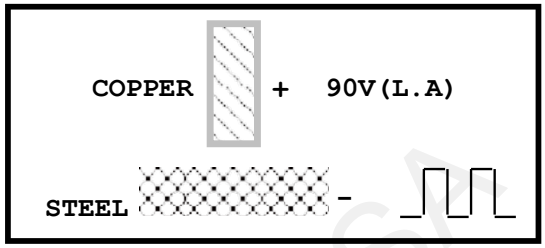


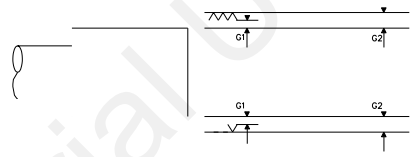
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	GAP (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
1	5	1	1	100	0.93	12	0.137	0.015	0.031
2	5	1	1	100	1.01	12	0.211	0.018	0.038
4	5	1	1	100	1.06	8	0.226	0.020	0.042
6	5	1	1	100	1.12	8	0.250	0.023	0.045
8	10	1	1	100	1.14	6	0.277	0.026	0.050
10	10	1	1	100	1.16	6	0.280	0.028	0.052
15	10	1	1	100	1.16	6	0.290	0.032	0.054
20	10	1	1	100	1.19	2	0.292	0.035	0.057
30	10	1	1	100	1.21	2	0.226	0.040	0.060
40	20	1	1	100	1.25	-	0.183	0.042	0.066

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。



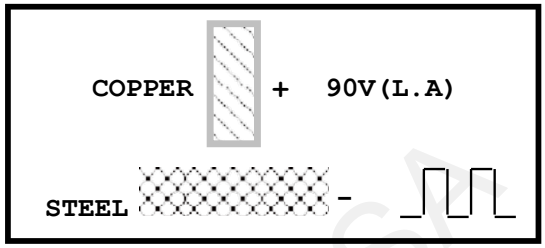
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (A)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
1	5	0	2	90	0.91	28	0.153	0.016	0.034
2	5	0	2	90	0.99	12	0.220	0.020	0.040
4	5	0	2	90	1.19	6	0.237	0.025	0.049
8	5	0	2	90	1.30	6	0.245	0.028	0.052
10	10	0	2	90	1.33	6	0.262	0.030	0.056
15	10	0	2	90	1.42	4	0.273	0.032	0.060
20	10	0	2	90	1.42	-	0.311	0.034	0.062
30	10	0	2	90	1.41	-	0.333	0.038	0.066
40	20	0	2	90	1.43	-	0.342	0.042	0.074
60	20	0	2	90	1.43	-	0.372	0.050	0.082

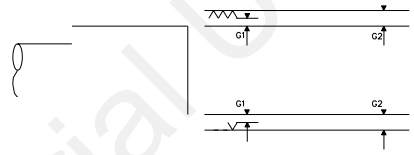
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

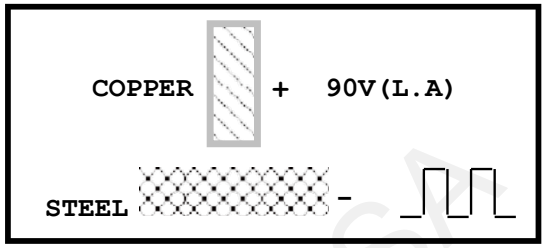
KEB-Series Machine Data Sheet

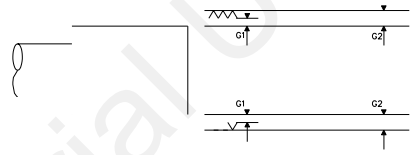


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (A)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
5	20	0	3	80	1.80	12	0.506	0.026	0.056
10	20	0	3	80	2.02	6	0.775	0.030	0.062
20	20	0	3	80	2.30	2	1.321	0.033	0.070
30	20	0	3	80	2.33	2	1.519	0.040	0.078
40	20	0	3	80	2.27	1	1.617	0.048	0.080
50	20	0	3	80	2.23	1	1.519	0.052	0.094
60	20	0	3	80	2.29	0.5	1.333	0.058	0.102
80	20	0	3	80	2.26	0.5	1.288	0.066	0.108
100	20	0	3	80	2.20	0.5	1.205	0.072	0.112
120	20	0	3	80	2.01	-	1.197	0.076	0.116

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

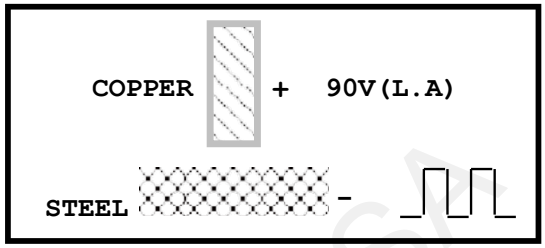
KEB-Series Machine Data Sheet

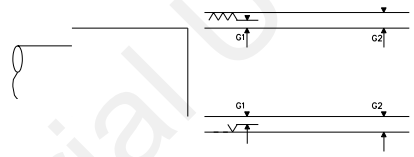


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
5	20	0	4	80	1.91	9	0.704	0.030	0.058
10	20	0	4	80	2.45	5	0.968	0.032	0.066
20	20	0	4	80	2.82	3	1.831	0.036	0.078
30	20	0	4	80	3.02	2	2.520	0.044	0.088
40	20	0	4	80	3.13	0.67	2.561	0.052	0.106
50	20	0	4	80	3.38	0.67	2.850	0.056	0.108
60	20	0	4	80	3.32	0.33	2.851	0.060	0.110
90	20	0	4	80	3.39	0.33	3.352	0.070	0.122
120	20	0	4	80	3.26	-	3.080	0.078	0.134
150	20	0	4	80	3.07	-	3.000	0.086	0.138

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



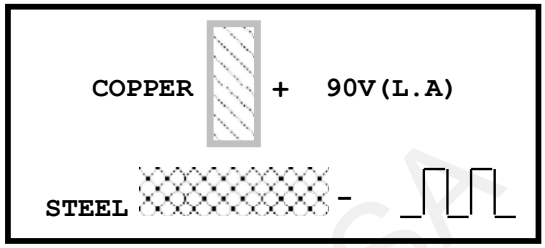
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (∇)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
10	20	0	5	70	2.65	5.3	2.054	0.035	0.075
20	20	0	5	70	2.98	2.7	3.081	0.040	0.090
30	20	0	5	70	3.13	2	3.737	0.050	0.100
40	20	0	5	70	3.52	1.3	4.559	0.055	0.105
50	20	0	5	70	3.95	0.8	5.670	0.055	0.110
60	20	0	5	70	4.01	0.8	6.229	0.060	0.120
90	20	0	5	70	4.16	0.6	6.441	0.070	0.130
120	20	0	5	70	4.33	0.4	5.428	0.080	0.135
150	20	0	5	70	3.88	-	5.366	0.090	0.150
200	20	0	5	70	3.42	-	4.656	0.105	0.160

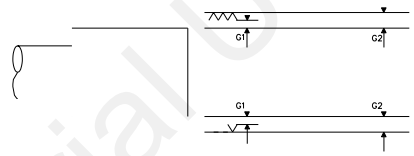
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



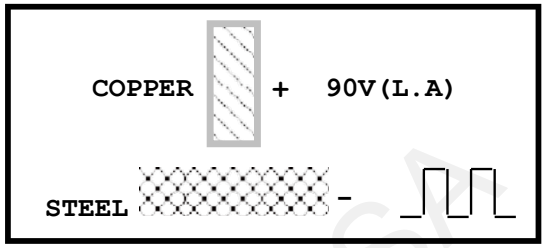
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
10	20	0	6	70	2.70	6	3.089	0.040	0.080
20	20	0	6	70	3.21	3.3	4.809	0.045	0.095
30	20	0	6	70	3.65	2	5.587	0.050	0.105
60	20	0	6	70	4.27	0.7	5.875	0.060	0.120
90	20	0	6	70	4.46	0.4	6.249	0.075	0.135
120	20	0	6	70	4.84	0.4	8.118	0.090	0.155
150	20	0	6	70	4.92	-	6.908	0.100	0.165
180	20	0	6	70	4.50	-	6.188	0.110	0.170
240	20	0	6	70	4.42	-	6.009	0.120	0.185
300	20	0	6	70	4.38	-	5.671	0.135	0.200

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

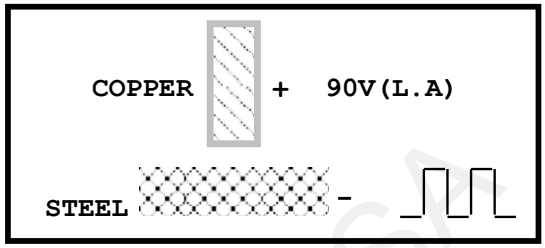
KEB-Series Machine Data Sheet

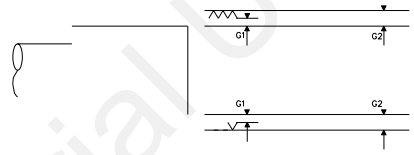


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
20	20	0	7	70	3.47	2.4	6.440	0.050	0.100
40	20	0	7	70	4.26	1.6	8.635	0.060	0.115
60	20	0	7	70	5.02	0.6	11.175	0.070	0.140
80	20	0	7	70	5.40	0.6	11.341	0.080	0.150
100	20	0	7	70	5.48	0.6	11.554	0.090	0.160
120	20	0	7	70	5.53	0.4	11.000	0.100	0.170
150	20	0	7	70	5.86	-	10.554	0.115	0.185
180	20	0	7	70	5.45	-	10.131	0.130	0.200
240	20	0	7	70	5.28	-	9.358	0.140	0.210
300	20	0	7	70	5.07	-	6.725	0.155	0.225

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



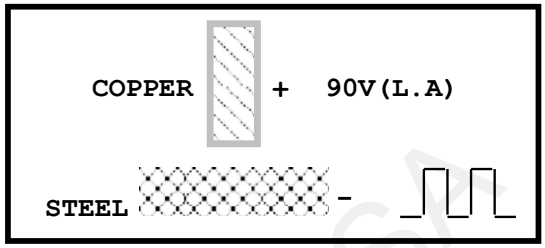
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
30	20	0	8	70	4.16	2	10.554	0.065	0.120
50	20	0	8	70	5.17	1.2	12.457	0.080	0.130
70	20	0	8	70	5.48	0.6	13.569	0.090	0.150
90	20	0	8	70	5.73	0.4	13.766	0.095	0.160
120	20	0	8	70	6.16	0.4	13.473	0.100	0.175
150	20	0	8	70	6.66	-	12.457	0.115	0.180
180	20	0	8	70	6.24	-	12.256	0.130	0.195
210	20	0	8	70	6.01	-	12.139	0.140	0.205
240	20	0	8	70	5.70	-	12.062	0.150	0.215
300	20	0	8	70	5.55	-	11.799	0.160	0.230

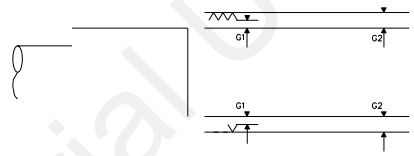
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



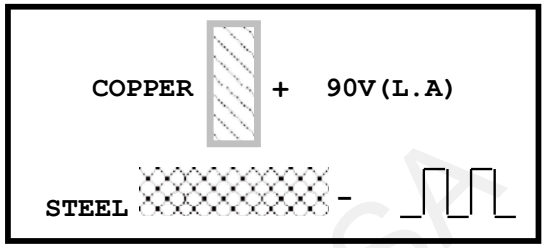
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
30	20	0	9	70	4.71	2	13.101	0.075	0.135
60	20	0	9	70	6.17	1	16.377	0.080	0.160
90	20	0	9	70	6.22	0.4	19.189	0.090	0.170
120	20	0	9	70	6.55	0.4	19.999	0.100	0.185
150	20	0	9	70	7.03	-	18.537	0.120	0.190
180	20	0	9	70	6.73	-	18.444	0.130	0.195
200	20	0	9	70	6.45	-	17.428	0.140	0.200
240	20	0	9	70	6.32	-	15.177	0.155	0.215
300	20	0	9	70	6.02	-	14.613	0.170	0.220
400	20	0	9	70	6.73	-	12.336	0.180	0.240
				A					

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



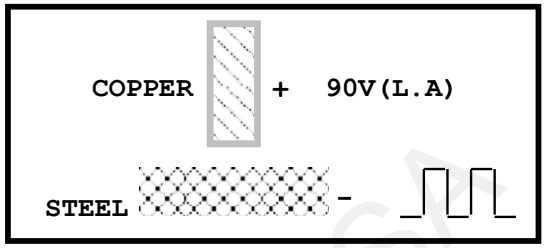
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
40	20	0	10	70	5.27	1.2	15.320	0.080	0.145
60	20	0	10	70	6.25	0.8	16.519	0.090	0.165
90	20	0	10	70	6.68	0.4	21.345	0.100	0.180
120	20	0	10	70	6.89	0.4	24.047	0.110	0.195
150	20	0	10	70	7.28	-	19.189	0.125	0.205
200	20	0	10	70	7.54	-	18.997	0.145	0.220
240	20	0	10	70	7.49	-	18.007	0.160	0.235
300	20	0	10	70	6.70	-	16.377	0.170	0.240
400	20	0	10	70	7.26	-	14.841	0.180	0.245
500	20	0	10	70	5.42	-	13.473	0.190	0.260

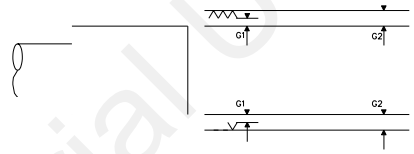
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



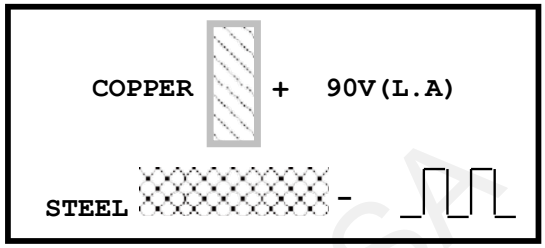
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (A)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	12	70	6.75	1.1	28.144	0.105	0.170
90	20	0	12	70	7.58	0.4	32.434	0.120	0.180
120	20	0	12	70	8.04	0.1	34.994	0.130	0.200
150	20	0	12	70	8.38	0.1	37.994	0.140	0.220
180	20	0	12	70	8.75	-	34.237	0.150	0.230
200	20	0	12	70	9.09	-	33.666	0.160	0.240
240	20	0	12	70	8.80	-	29.883	0.170	0.255
300	20	0	12	70	8.74	-	29.226	0.180	0.270
400	20	0	12	70	8.76	-	26.280	0.195	0.285
500	20	0	12	70	8.58	-	26.463	0.210	0.305

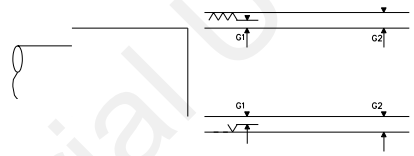
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2

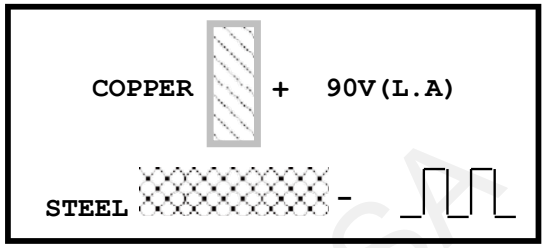
KEB-Series Machine Data Sheet

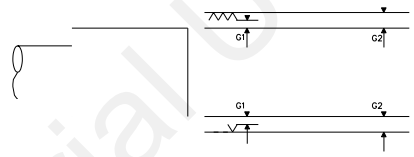


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	14	70	6.90	1.1	35.226	0.115	0.180
90	20	0	14	70	7.71	0.7	44.326	0.130	0.190
120	20	0	14	70	8.28	0.1	46.254	0.140	0.205
150	20	0	14	70	8.71	0.1	44.326	0.150	0.220
180	20	0	14	70	9.26	-	39.401	0.160	0.240
200	20	0	14	70	9.57	-	41.556	0.170	0.250
240	20	0	14	70	9.82	-	38.545	0.175	0.265
300	20	0	14	70	9.24	-	35.699	0.185	0.280
400	20	0	14	70	9.36	-	34.994	0.200	0.300
500	20	0	14	70	9.40	-	30.430	0.220	0.320

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

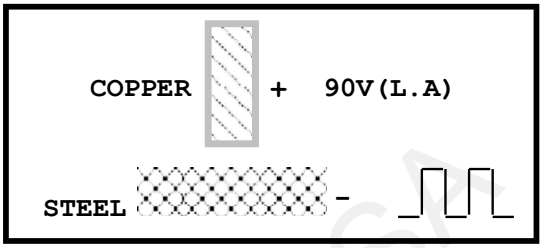
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (A)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	16	70	7.29	1.7	36.939	0.130	0.185
90	20	0	16	70	8.53	0.9	47.920	0.140	0.200
120	20	0	16	70	9.12	0.1	53.191	0.150	0.215
150	20	0	16	70	9.53	0.1	53.191	0.165	0.235
180	20	0	16	70	9.95	-	49.855	0.180	0.250
200	20	0	16	70	10.43	-	48.356	0.188	0.265
240	20	0	16	70	10.14	-	45.078	0.195	0.280
300	20	0	16	70	10.09	-	41.556	0.205	0.295
400	20	0	16	70	10.11	-	39.111	0.215	0.315
500	20	0	16	70	10.03	-	39.111	0.230	0.340

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

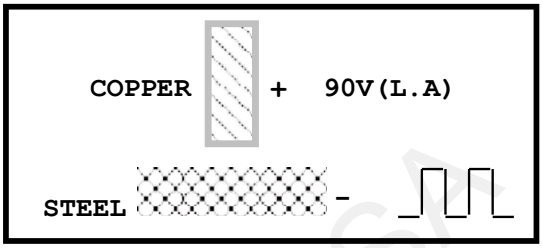
KEB-Series Machine Data Sheet

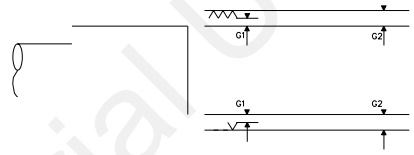


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	18	70	7.46	2.5	61.281	0.135	0.195
90	20	0	18	70	8.69	1	69.395	0.150	0.210
150	20	0	18	70	9.68	0.2	80.838	0.180	0.240
200	20	0	18	70	10.85	0.2	95.884	0.190	0.260
240	20	0	18	70	11.09	0.1	91.003	0.208	0.280
300	20	0	18	70	11.68	-	90.868	0.220	0.300
400	20	0	18	70	11.22	-	89.397	0.235	0.320
500	20	0	18	70	11.16	-	74.589	0.250	0.350
600	20	0	18	70	11.18	-	63.456	0.265	0.370
700	20	0	18	70	10.97	-	50.658	0.285	0.390

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



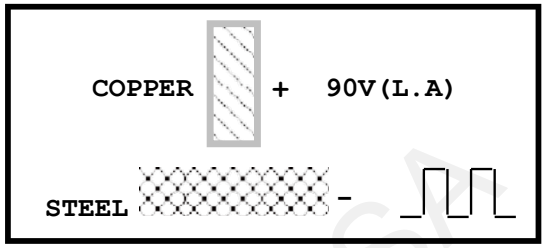
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (A)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	20	70	7.74	3.5	67.545	0.140	0.205
90	20	0	20	70	8.81	1.2	82.149	0.150	0.230
150	20	0	20	70	10.09	0.2	101.317	0.180	0.260
200	20	0	20	70	11.57	0.1	112.159	0.200	0.290
240	20	0	20	70	11.89	-	116.931	0.210	0.305
300	20	0	20	70	12.55	-	114.699	0.220	0.320
400	20	0	20	70	12.85	-	113.905	0.240	0.340
500	20	0	20	70	12.58	-	107.130	0.250	0.360
600	20	0	20	70	12.52	-	94.395	0.270	0.390
700	20	0	20	70	12.46	-	81.928	0.290	0.410

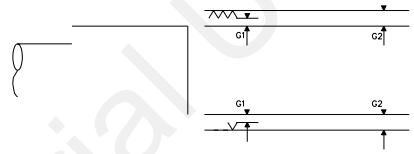
※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

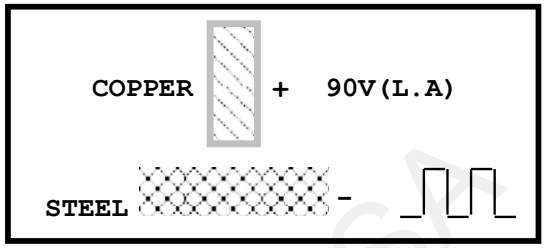
KEB-Series Machine Data Sheet

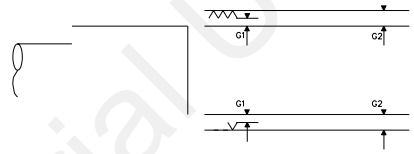


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	22	70	7.80	4.5	70.359	0.150	0.215
90	20	0	22	70	9.14	1.8	88.358	0.160	0.240
150	20	0	22	70	10.44	0.4	108.554	0.185	0.265
200	20	0	22	70	12.19	0.2	118.731	0.205	0.295
240	20	0	22	70	12.52	0.1	122.561	0.215	0.310
300	20	0	22	70	13.21	-	126.121	0.225	0.335
400	20	0	22	70	14.01	-	136.915	0.245	0.360
500	20	0	22	70	13.79	-	133.036	0.260	0.380
600	20	0	22	70	13.73	-	105.907	0.280	0.405
800	20	0	22	70	13.57	-	95.283	0.295	0.425

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

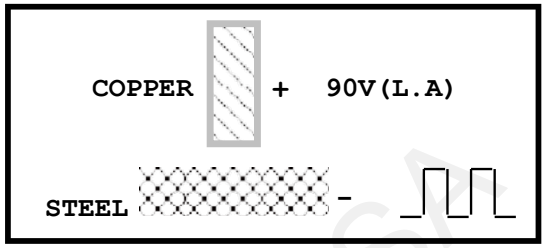
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
60	20	0	24	70	8.22	7.5	71.017	0.160	0.225
90	20	0	24	70	9.53	2.6	90.462	0.170	0.250
150	20	0	24	70	11.21	0.6	115.133	0.190	0.275
200	20	0	24	70	12.61	0.6	133.900	0.210	0.300
240	20	0	24	70	13.12	0.3	135.693	0.220	0.320
300	20	0	24	70	14.23	0.1	138.160	0.235	0.340
400	20	0	24	70	14.74	-	153.511	0.250	0.370
500	20	0	24	70	15.07	-	155.873	0.270	0.405
600	20	0	24	70	15.32	-	126.647	0.290	0.430
800	20	0	24	70	14.91	-	116.234	0.305	0.460

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

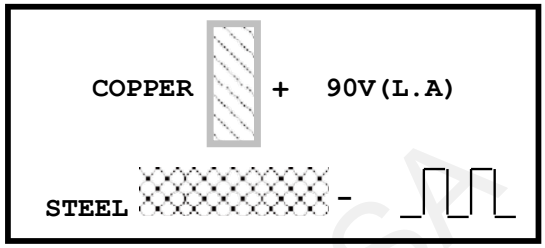
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
120	20	0	30	70	10.97	1.8	142.018	0.190	0.285
150	20	0	30	70	11.89	1.1	163.754	0.205	0.300
200	20	0	30	70	13.19	0.6	179.535	0.215	0.320
240	20	0	30	70	14.20	0.4	197.076	0.235	0.340
300	20	0	30	70	15.85	0.1	203.535	0.245	0.355
400	20	0	30	70	17.13	-	204.984	0.260	0.390
500	20	0	30	70	18.04	-	209.675	0.280	0.425
600	20	0	30	70	18.71	-	219.181	0.290	0.450
700	20	0	30	70	18.40	-	211.981	0.300	0.480
800	20	0	30	70	18.14	-	210.993	0.315	0.490

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



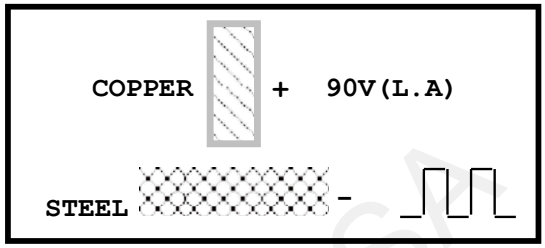
SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
150	20	0	40	70	12.69	2.1	203.797	0.225	0.310
200	20	0	40	70	14.20	1.3	249.174	0.240	0.335
240	20	0	40	70	15.95	0.9	257.271	0.250	0.350
300	20	0	40	70	17.44	0.4	278.540	0.260	0.380
400	20	0	40	70	19.06	-	287.126	0.275	0.420
500	20	0	40	70	21.66	-	292.699	0.295	0.450
600	20	0	40	70	21.95	-	297.931	0.310	0.500
700	20	0	40	70	22.15	-	289.488	0.325	0.530
800	20	0	40	70	21.89	-	284.547	0.340	0.550
900	20	0	40	70	22.04	-	285.059	0.355	0.570

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。

2. Setting P.P. = 1。

3. Turn Servo sensitivity adjust knob about to 1/2。

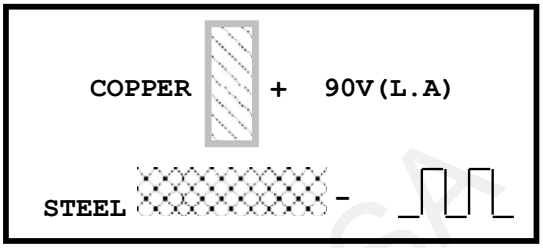
KEB-Series Machine Data Sheet

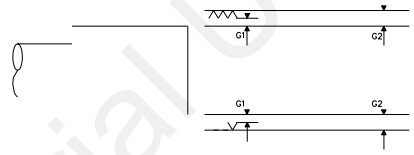


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
180	20	0	50	70	15.12	3.3	249.764	0.250	0.340
240	20	0	50	70	17.49	2.1	287.387	0.270	0.375
300	20	0	50	70	18.80	1.2	293.513	0.280	0.410
400	20	0	50	70	20.93	0.2	308.374	0.295	0.450
500	20	0	50	70	24.14	-	331.971	0.320	0.490
600	20	0	50	70	25.88	-	377.473	0.340	0.530
700	20	0	50	70	25.90	-	357.450	0.355	0.565
800	20	0	50	70	25.52	-	349.559	0.370	0.590
900	20	0	50	70	25.50	-	345.743	0.385	0.605
1000	20	0	50	70	25.43	-	344.240	0.400	0.630

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

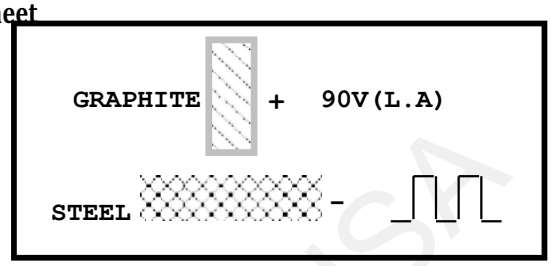
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	G P (V)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
200	20	0	60	70	16.92	2.8	311.713	0.260	0.380
300	20	0	60	70	19.13	2	410.766	0.285	0.435
400	20	0	60	70	21.52	1.3	429.133	0.300	0.460
500	20	0	60	70	24.84	0.2	463.012	0.325	0.500
600	20	0	60	70	26.49	-	502.700	0.340	0.545
700	20	0	60	70	27.94	-	515.798	0.360	0.585
800	20	0	60	70	27.22	-	485.737	0.380	0.610
900	20	0	60	70	26.67	-	484.251	0.395	0.645
1000	20	0	60	70	25.94	-	458.986	0.415	0.670
1200	20	0	60	70	26.02	-	455.029	0.440	0.710

※ P.S : 1. TEST AREA = Φ20 ㎜ * 1/2。
2. Setting P.P. = 1。
3. Turn Servo sensitivity adjust knob about to 1/2。

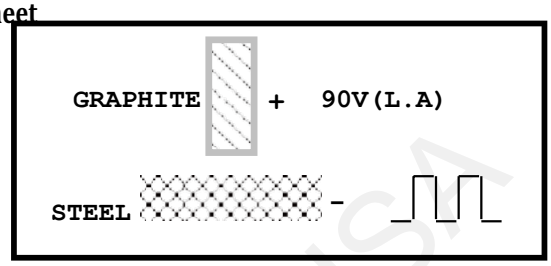
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
6	20	0	5	90	2.40	27.2	1.815	0.035	0.073
10	20	0	5	90	2.59	20.8	2.110	0.040	0.080
20	20	0	5	90	3.06	15.2	3.175	0.045	0.095
30	20	0	5	90	3.21	11.6	3.390	0.050	0.100
40	20	0	5	90	3.32	7.8	3.597	0.055	0.107
50	20	0	5	90	3.72	4.6	3.003	0.060	0.114
60	20	0	5	90	3.97	2.4	2.801	0.062	0.122
90	20	0	5	90	3.88	-	2.786	0.070	0.130
120	20	0	5	90	3.38	-	2.770	0.080	0.136
150	20	0	5	90	3.29	-	2.688	0.090	0.154

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

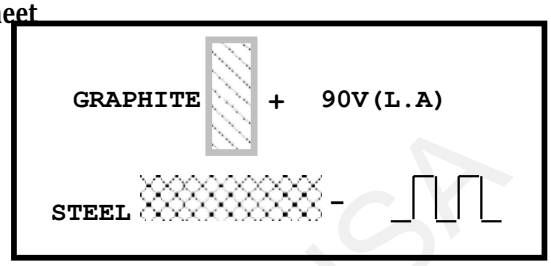
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
6	20	0	6	90	2.74	22.4	2.545	0.040	0.082
10	20	0	6	90	2.82	17.6	3.115	0.045	0.089
20	20	0	6	90	3.18	12.0	3.521	0.050	0.102
30	20	0	6	90	3.37	7.2	3.817	0.054	0.106
40	20	0	6	90	3.73	6.8	4.762	0.062	0.118
50	20	0	6	90	4.20	4.0	4.739	0.070	0.132
60	20	0	6	90	4.29	0.8	4.237	0.075	0.130
90	20	0	6	90	3.87	-	3.731	0.085	0.144
120	20	0	6	90	3.78	-	3.534	0.100	0.160
150	20	0	6	90	3.26	-	3.185	0.110	0.172

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

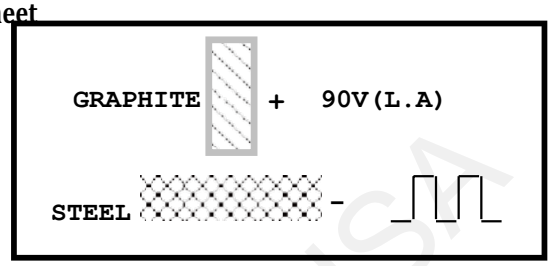
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
10	20	0	7	80	2.98	18.6	3.724	0.050	0.094
20	20	0	7	80	3.35	10.8	4.415	0.060	0.106
30	20	0	7	80	4.08	6.0	5.089	0.065	0.119
40	20	0	7	80	4.17	3.6	5.540	0.072	0.128
50	20	0	7	80	4.33	3.2	6.042	0.079	0.141
60	20	0	7	80	5.18	3.2	7.576	0.085	0.153
90	20	0	7	80	5.42	3.0	7.299	0.100	0.170
120	20	0	7	80	5.06	-	6.689	0.110	0.176
150	20	0	7	80	4.66	-	5.900	0.125	0.191
200	20	0	7	80	4.37	-	5.510	0.135	0.207

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

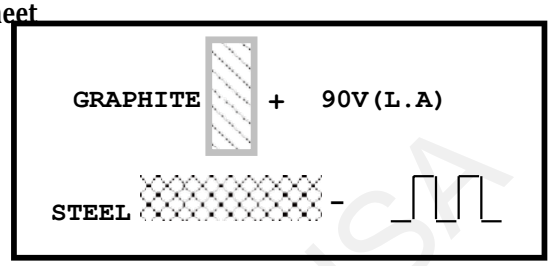
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH (μM)	ELECTRODEWEARRATE (%)	PROCESSING SPEED (mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	(A) P					
10	20	0	8	80	3.03	20.2	3.929	0.055	0.105
20	20	0	8	80	3.62	11.4	4.515	0.060	0.114
30	20	0	8	80	4.16	6.2	5.236	0.070	0.130
40	20	0	8	80	4.50	4.0	5.970	0.078	0.138
50	20	0	8	80	5.18	3.8	6.557	0.088	0.154
60	20	0	8	80	5.40	2.8	8.000	0.095	0.161
90	20	0	8	80	5.56	1.6	7.843	0.105	0.173
120	20	0	8	80	5.25	-	7.380	0.115	0.189
150	20	0	8	80	5.03	-	6.826	0.130	0.192
200	20	0	8	80	4.88	-	6.211	0.140	0.210

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

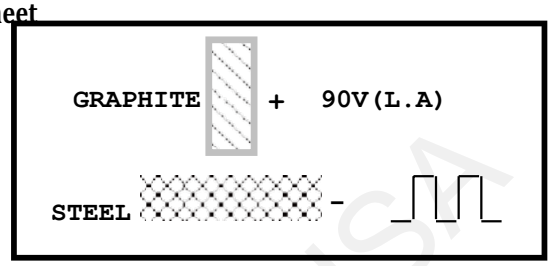
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
10	20	0	9	70	4.55	21.0	3.960	0.060	0.108
20	20	0	9	70	5.57	12.6	6.390	0.070	0.124
30	20	0	9	70	5.92	9.0	8.734	0.085	0.145
60	20	0	9	70	6.30	2.4	9.901	0.100	0.170
90	20	0	9	70	6.06	0.4	9.804	0.110	0.184
120	20	0	9	70	5.84	-	9.709	0.120	0.199
150	20	0	9	70	4.79	-	9.050	0.135	0.195
200	20	0	9	70	4.32	-	8.097	0.150	0.207
240	20	0	9	70	3.18	-	7.463	0.155	0.211
300	20	0	9	70	3.74	-	6.993	0.160	0.230

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

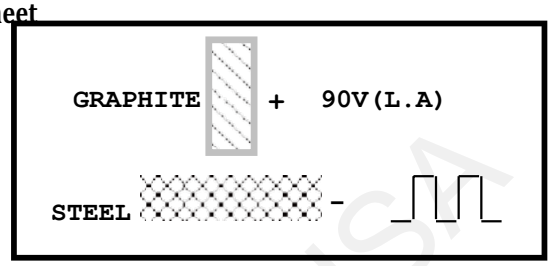
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
10	20	0	10	70	5.38	22.5	6.042	0.070	0.116
20	20	0	10	70	6.42	14.5	9.479	0.080	0.128
40	20	0	10	70	6.89	8.0	10.695	0.090	0.162
60	20	0	10	70	6.72	4.2	13.699	0.100	0.176
90	20	0	10	70	6.66	1.2	12.422	0.110	0.192
120	20	0	10	70	6.45	0.2	12.048	0.120	0.202
150	20	0	10	70	5.48	-	11.111	0.135	0.214
200	20	0	10	70	5.42	-	10.152	0.150	0.226
240	20	0	10	70	3.34	-	9.217	0.160	0.235
300	20	0	10	70	3.89	-	8.696	0.170	0.250

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

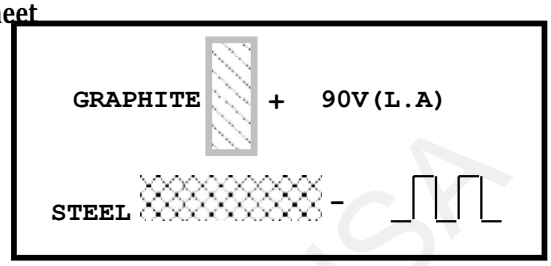
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
40	20	0	12	70	5.69	7.0	17.094	0.100	0.168
60	20	0	12	70	6.96	4.1	20.202	0.110	0.178
90	20	0	12	70	7.48	0.9	19.139	0.124	0.202
120	20	0	12	70	7.66	-	18.957	0.138	0.210
150	20	0	12	70	8.17	-	18.519	0.150	0.232
180	20	0	12	70	8.27	-	18.182	0.160	0.250
240	20	0	12	70	8.36	-	17.621	0.174	0.276
300	20	0	12	70	8.12	-	15.038	0.188	0.288
400	20	0	12	70	7.50	-	11.594	0.206	0.304
500	20	0	12	70	7.22	-	9.346	0.214	0.320

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

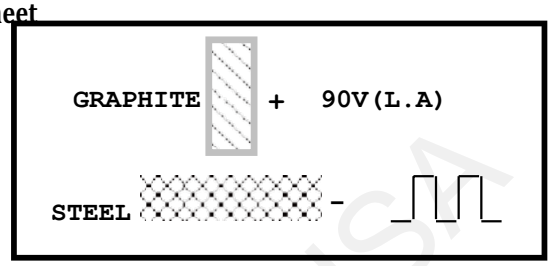
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
40	20	0	14	70	5.84	5.9	24.390	0.110	0.172
60	20	0	14	70	6.82	3.2	28.369	0.120	0.184
90	20	0	14	70	7.56	0.7	23.669	0.132	0.196
120	20	0	14	70	7.95	-	23.392	0.144	0.214
150	20	0	14	70	8.47	-	22.857	0.156	0.236
200	20	0	14	70	8.83	-	22.346	0.168	0.258
240	20	0	14	70	8.51	-	22.099	0.180	0.280
300	20	0	14	70	7.96	-	16.949	0.192	0.294
400	20	0	14	70	7.66	-	13.115	0.208	0.310
500	20	0	14	70	7.43	-	12.012	0.220	0.332

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

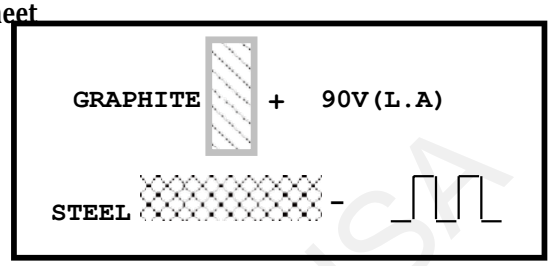
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
40	20	0	16	70	6.22	5.6	28.777	0.124	0.180
60	20	0	16	70	7.08	2.9	31.746	0.136	0.192
90	20	0	16	70	8.40	0.5	29.197	0.150	0.208
120	20	0	16	70	8.86	-	27.027	0.162	0.224
150	20	0	16	70	9.13	-	27.027	0.170	0.240
180	20	0	16	70	9.49	-	27.397	0.184	0.260
240	20	0	16	70	9.28	-	26.846	0.198	0.280
300	20	0	16	70	8.76	-	25.806	0.210	0.302
400	20	0	16	70	8.27	-	22.346	0.230	0.320
500	20	0	16	70	7.90	-	20.202	0.246	0.340

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

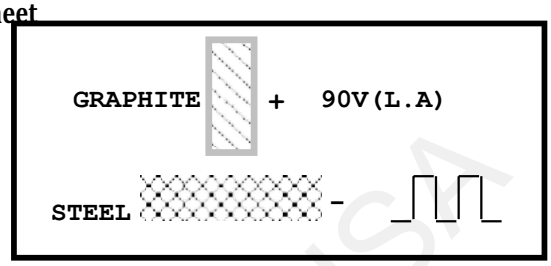
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
40	20	0	18	70	6.56	4.9	36.036	0.130	0.194
60	20	0	18	70	7.30	2.1	37.736	0.140	0.206
90	20	0	18	70	8.68	0.2	34.483	0.155	0.220
120	20	0	18	70	9.22	-	35.088	0.170	0.238
150	20	0	18	70	9.60	-	35.088	0.190	0.250
180	20	0	18	70	9.93	-	34.783	0.205	0.270
240	20	0	18	70	10.05	-	34.188	0.220	0.290
300	20	0	18	70	9.88	-	33.058	0.230	0.316
400	20	0	18	70	9.41	-	28.369	0.245	0.336
500	20	0	18	70	8.95	-	26.144	0.260	0.358

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet

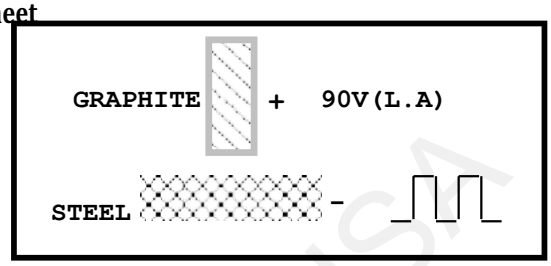


SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
40	20	0	20	80	6.67	2.3	36.810	0.132	0.200
60	20	0	20	80	7.42	1.1	41.958	0.140	0.210
90	20	0	20	80	8.72	0.2	43.478	0.154	0.240
120	20	0	20	80	9.33	-	40.268	0.180	0.255
150	20	0	20	80	9.88	-	40.268	0.195	0.270
180	20	0	20	80	10.14	-	39.216	0.210	0.285
240	20	0	20	80	10.43	-	37.500	0.225	0.310
300	20	0	20	80	10.01	-	36.585	0.235	0.330
400	20	0	20	80	9.67	-	32.787	0.250	0.360
500	20	0	20	80	9.42	-	31.250	0.270	0.390

※ P.S：1. TEST AREA = 10 ㎜×20 ㎜。

2. Setting P.P. = 1，WORK=3。

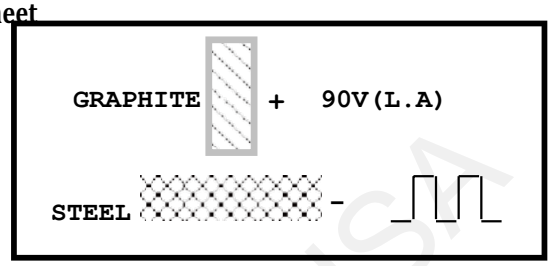
KEB-Series Machine Data Sheet



SET CONDITION									
ON.T	OFF.T	H.V	L.V	P (%)	SURFACE FINISH (μM)	ELECTRODEWEARRATE (%)	PROCESSING SPEED (mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
40	20	0	22	80	6.96	2.2	40.816	0.138	0.210
60	20	0	22	80	7.62	0.8	53.097	0.150	0.225
90	20	0	22	80	8.97	0.1	58.252	0.160	0.250
120	20	0	22	80	9.44	-	55.046	0.185	0.270
150	20	0	22	80	10.13	-	54.054	0.195	0.285
180	20	0	22	80	10.60	-	48.000	0.210	0.305
240	20	0	22	80	10.68	-	43.796	0.230	0.320
300	20	0	22	80	11.11	-	41.958	0.245	0.345
400	20	0	22	80	10.86	-	37.500	0.265	0.365
500	20	0	22	80	10.52	-	34.884	0.285	0.395

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

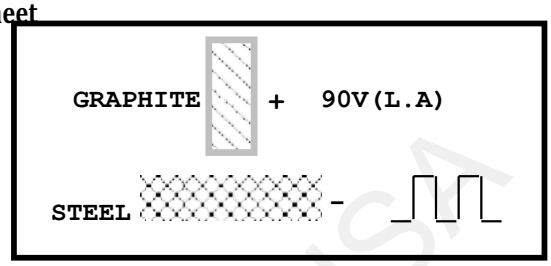
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
40	20	0	24	80	7.20	2.0	44.776	0.145	0.220
60	20	0	24	80	8.38	0.7	58.824	0.155	0.230
90	20	0	24	80	9.32	0.1	61.224	0.170	0.260
120	20	0	24	80	9.74	-	59.406	0.185	0.280
150	20	0	24	80	10.47	-	57.143	0.205	0.295
180	20	0	24	80	11.08	-	55.556	0.215	0.310
240	20	0	24	80	11.20	-	53.571	0.235	0.330
300	20	0	24	80	11.42	-	50.847	0.250	0.350
400	20	0	24	80	11.40	-	46.154	0.270	0.380
500	20	0	24	80	10.13	-	44.776	0.300	0.410

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

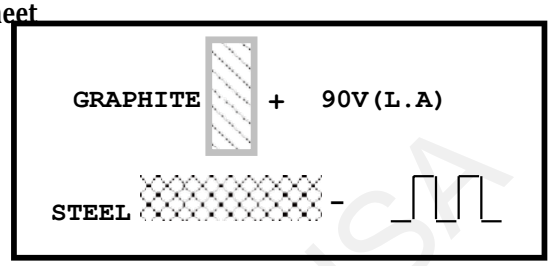
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
40	20	0	26	80	7.63	1.6	57.143	0.150	0.225
60	20	0	26	80	8.51	0.5	56.604	0.160	0.240
90	20	0	26	80	9.54	0.1	62.500	0.175	0.265
120	20	0	26	80	9.95	-	59.406	0.190	0.290
150	20	0	26	80	10.89	-	58.824	0.210	0.305
180	20	0	26	80	11.44	-	55.556	0.225	0.315
240	20	0	26	80	11.75	-	54.545	0.245	0.340
300	20	0	26	80	12.15	-	51.282	0.260	0.360
400	20	0	26	80	11.53	-	48.397	0.285	0.400
500	20	0	26	80	11.07	-	46.875	0.310	0.430

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

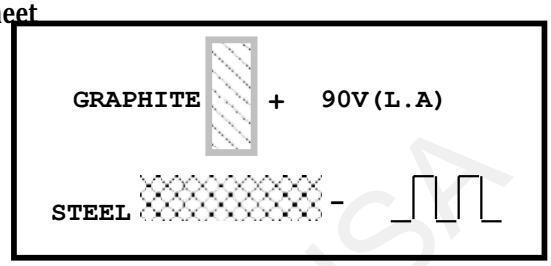
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
40	20	0	28	80	7.89	1.5	61.224	0.160	0.230
60	20	0	28	80	8.81	0.5	65.217	0.170	0.250
90	20	0	28	80	9.85	0.1	67.416	0.190	0.280
120	20	0	28	80	10.53	-	65.217	0.205	0.300
150	20	0	28	80	11.41	-	61.856	0.220	0.315
180	20	0	28	80	12.05	-	60.000	0.240	0.330
240	20	0	28	80	12.34	-	56.075	0.260	0.355
300	20	0	28	80	12.50	-	53.571	0.275	0.380
400	20	0	28	80	11.63	-	50.847	0.295	0.410
500	20	0	28	80	11.40	-	48.000	0.320	0.440

※ P.S : 1. TEST AREA = 10 ㎜×20 ㎜。
2. Setting P.P. = 1 , WORK=3。
3. Turn Servo sensitivity adjust knob about to 1/2。

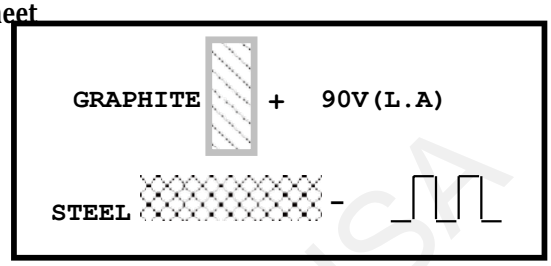
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
60	40	0	30	90	8.90	1.5	31.765	0.175	0.260
90	40	0	30	90	9.96	0.7	42.857	0.195	0.290
120	40	0	30	90	10.72	0.3	43.902	0.210	0.305
150	40	0	30	90	11.50	0.1	45.000	0.220	0.325
200	40	0	30	90	13.23	-	52.427	0.245	0.350
300	40	0	30	90	15.46	-	60.674	0.275	0.390
400	40	0	30	90	15.76	-	70.130	0.300	0.420
500	40	0	30	90	16.81	-	71.053	0.320	0.450
600	40	0	30	90	17.02	-	66.667	0.335	0.470
700	40	0	30	90	17.08	-	64.286	0.350	0.500

※ P.S : 1. TEST AREA = 40 ㎜×45 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

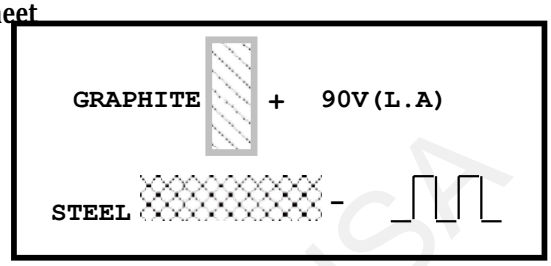
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
60	40	0	40	90	10.13	1.3	52.427	0.185	0.270
90	40	0	40	90	10.68	0.4	60.674	0.200	0.295
150	40	0	40	90	12.32	0.1	78.261	0.230	0.340
200	40	0	40	90	14.70	-	85.714	0.260	0.370
300	40	0	40	90	16.73	-	88.525	0.288	0.405
400	40	0	40	90	17.32	-	93.103	0.320	0.435
500	40	0	40	90	18.16	-	100.000	0.340	0.470
600	40	0	40	90	18.50	-	99.083	0.355	0.505
700	40	0	40	90	18.57	-	98.182	0.370	0.535
800	40	0	40	90	18.48	-	98.182	0.390	0.555

※ P.S : 1. TEST AREA = 40 ㎜×45 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

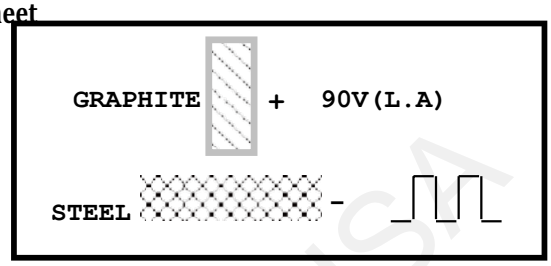
KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)		
90	40	0	50	90	11.52	0.3	84.375	0.215	0.310
150	40	0	50	90	13.51	0.1	94.737	0.240	0.380
200	40	0	50	90	15.17	-	108.000	0.275	0.400
300	40	0	50	90	17.57	-	117.391	0.310	0.450
400	40	0	50	90	18.42	-	138.462	0.340	0.480
500	40	0	50	90	20.86	-	142.105	0.365	0.510
600	40	0	50	90	21.72	-	150.000	0.390	0.535
700	40	0	50	90	22.80	-	145.946	0.420	0.570
800	40	0	50	90	22.93	-	135.000	0.440	0.590
1000	40	0	50	90	22.01	-	125.581	0.470	0.645

※ P.S : 1. TEST AREA = 40 ㎜×45 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

KEB-Series Machine Data Sheet



SET CONDITION					SURFACE FINISH	ELECTRODEWEARRATE	PROCESSING SPEED		
ON.T	OFF.T	H.V	L.V	P (%)	(μM)	(%)	(mm³/min)	FINE GAP mm 2 × G1	ROUGH GAP mm 2 × G2
90	40	0	60	90	11.93	0.3	114.894	0.225	0.330
150	40	0	60	90	14.32	0.1	128.571	0.265	0.415
200	40	0	60	90	15.46	-	135.000	0.300	0.450
300	40	0	60	90	18.25	-	145.946	0.340	0.480
400	40	0	60	90	19.36	-	163.636	0.360	0.535
500	40	0	60	90	22.33	-	168.750	0.380	0.570
600	40	0	60	90	24.65	-	168.750	0.400	0.610
800	40	0	60	90	25.50	-	166.154	0.430	0.645
1000	40	0	60	90	23.31	-	163.636	0.470	0.680
1200	40	0	60	90	24.90	-	154.286	0.500	0.720

※ P.S : 1. TEST AREA = 40 ㎜×45 ㎜。
2. Setting P.P. = 1 , WORK=2。
3. Turn Servo sensitivity adjust knob about to 1/2。

8 Graphite electrode machining process

As information offer the operator use electrode material is graphite machining, edit, access and running program.

The setting parameter position (HV2) as follow:

NO.	DEPTH	ON.T	OFF.T	HV	LV	WORK	P.P	SPD	GAP	POL	HV2	ARC.T
01	-10	120	20	2	16	30	1	180	70	+	0	40

In the second setting parameter that the select the higher voltage of the fine sparking, there are used 0、1、2、3 etc.. it had four step.

The operator press 【+】 or 【-】 key to setting as follow data. The Function as follow:

“0” : The second step for higher voltage of the fine sparking circuit ” closed ”

“1” : The second step for higher voltage of the fine sparking circuit” open ”

“2” : The second step for higher voltage of the fine sparking circuit ” closed ” and the Graphite sparking circuit” Open “

“3” : The second step for higher voltage of the fine sparking circuit ” closed ” and the Graphite sparking circuit” Close “

Example1 :

Used the Graphite electrode setting the HV2 = “ 2” that the controller will setting the sparking parameter by Graphite sparking circuit automatic, and sparking.

Example2:

Used the Graphite electrode setting the HV2 = “ 0” that the controller will setting the sparking parameter by standard sparking circuit automatic, and sparking.

! Note

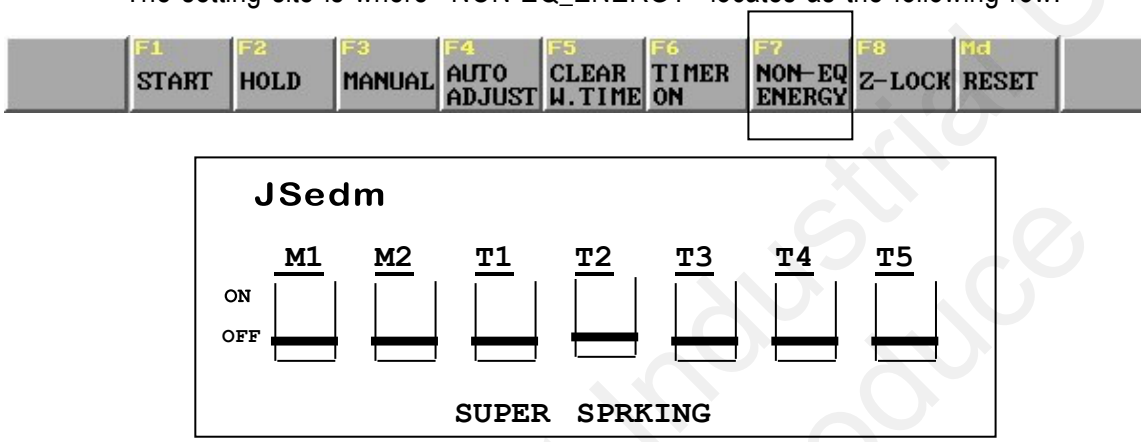
1. If used the graphite electrode for sparking that without setting the HV2 = “ 2” or “ 3” that will easy had the arc and carbon deposits situation on the work piece.
2. If used the cooper electrode for sparking that without setting the HV2 = “ 0” or “ 1” that

the sparking effectiveness will reduce and the electrode had situation easily.

8 Super Sparking

The introduction for user to process the program especially on work piece made of Tungsten Carbide or the other materials in the same hardness.

The setting site is where “NON-EQ_ENERGY” locates as the following row:



1. For discharging with “Super Sparking”, you must activate the “NON-EQ_ENERGY” function of the discharging screen; you can only discharge with “Super Sparking” when either of M1 and M2 is ON.

   To back to the normal discharging function, which you just need to call “NON-EQ ENERGY” off and set all the switches OFF.

2. Setting of M1 and M2:
   A. When M1 & M2 are both ON: Discharging Speed is fast, but consumption of Electrode is also huge.
   B. When M1 is OFF and M2 is ON: Discharging Speed is moderate, and consumption of Electrode is lighter.
   C. When M1 is ON and M2 is OFF: Discharging Speed is slow, and consumption of Electrode is littlest.

3. Setting of T1~T5: you only have to switch on T1when the hardness of material is tender, and

4. Setting of Discharging Condition: the collocation of Electric Current and Pulse Width would vary with different materials.

   For example of Tungsten Carbide (HRC60):

Best Setting: Electric Current *6~7= Pulse Width

Structure of Function keys

- (F1)AUTO MODE
  - (F1)FILE SELECT
  - (F2)START LINE
  - (F3)END LINE
  - (F4)AUTO INDEX
  - (F6)SET COORD
    - (F1)TYPE1
    - (F7)GE-NERATE
    - (Mode)NEXT
  - (F7)SAVE&PROCESS
    - (F1)START
    - (F4)SPARK(Z=0.0)
    - (F5)W.TIME CLEAR
    - (F6)TIME RESET
    - (F8)Z-LOCK
    - (Mode)RESET
  - (F8)Z-LOCK
  - (Mode)MANUAL MODE
- (F2)USUAL
- (F3)IO
- (F4)CONFIG
- (F6)TIME SETUP
- (F8)EXIT TO DOS

- (Mode)MANUAL MODE
  - (F1)SPARK
  - (F2)EDGE
  - (F3)1/2CENTER
    - (F1)START
    - (F2)HOLD
    - (F3)RESET
  - (F4)REL.POS.
    - (F1)START
    - (F2)HOLD
    - (F3)RESET
  - (F5)ABS.POS.
    - (F1)START
    - (F2)HOLD

8. Super Sparking

(F6)SET COORD.

(F7)CHANGE COORD.

(Mode)AUTO MODE

- (F1)START
- (F2)HOLD
- (F3)RESET