

# ALEX INDUCTION FURNACE USER GUIDE



# **CONTENTS OF MACHINE**

## **1—COMPACT CONSTRUCTION**

## **2--INTERNAL COLLING SYSTEM**

F-series Machine have internal cooling system  
no need external part.

## **3--MICROPROCESSOR CONTROL**

Microprocessor is useful for high power jeneratore.  
Because before set point to calculate power of genertor.  
And if need can be power off to generator  
For a productive melting melting point

## **4--HIGH PRODUCTIVE IGBT GENERATOR**

IGBT is last technology can be use up to 40 khz.  
1200v. 150A.continuous to work  
But for melting system is used 10...13khz  
18A. And 530 v.  
More productive then SCR

## **5--OLD CURCIBLE SENSITIVE SYSTEM**

F-series machine can be sense less load if crucible is old  
And genertor go up high power is automatic will be stop

## **6--DIGITAL TEMPATURE DISIPLAY**

F-series have 4 digit temperature disiplay for set melting point  
And during melting can see temperature inside of curcible

## **7--K TYPE TERMOCOUPLE**

K-type termocouple is high liner measuring temperature

## BEFORE START TO WORK

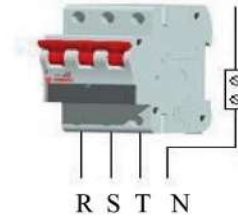
1- Use 32A. Fuse between electricity to the cable of machine.

R S T not need to be lined ( you can use RST or STR or any one )

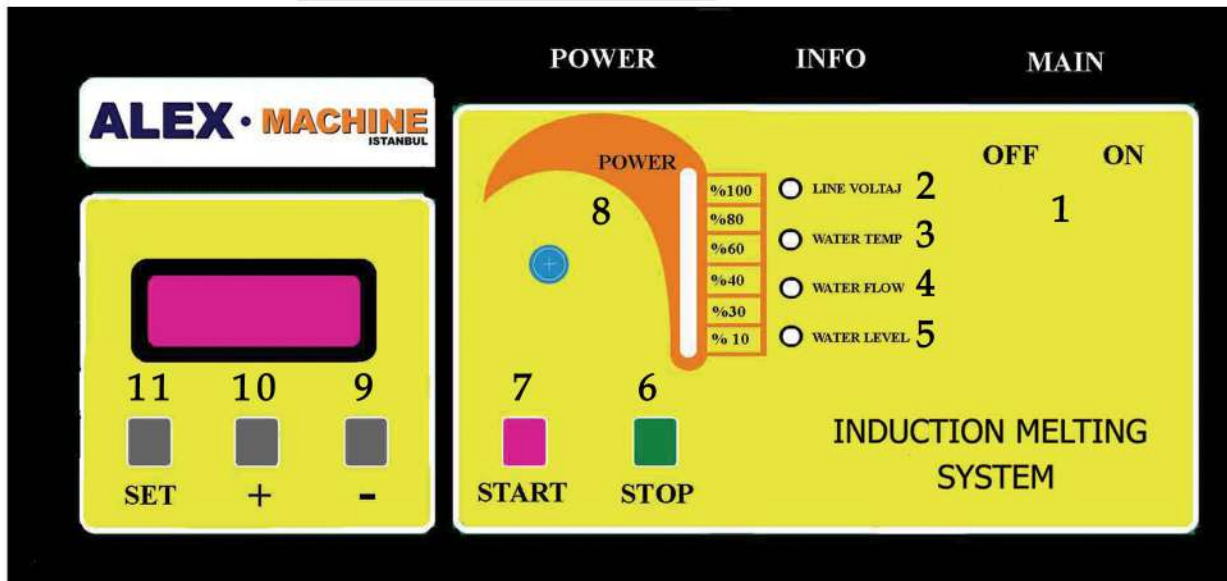
the important to the green/ yellow cable connect to the neutral ( not ground )

BROWN = FAZ R  
BLACK = FAZ S  
BLUE = FAZ T  
GREEN/yelow = NEUTRAL

the collar just for sample



## FRONT PANEL



- 1 - Main on // off switch (main fuse)
- 2 - Line control led
- 3 - Water over temperature led
- 4 - Water Flow density
- 5 - Water system control led
- 6 - Generator start button
- 7- Generator stop button
- 8 - Generator power volume
- 9 - Increase to melting point
- 10-decrease to melting point
- 11-Set button for melting point

We would recommend to changing the closed-circuit water every six months.

**For this process ...**

Open the left cover of machine and take out the pipe from water return point. Then turn on the main switch, in several minutes water begins to flow this point. wait until end of flow of water, turn off the main switch.

Fill new water from inlet of machine Fig 2 ( approximate 4.5 lt. pure Water, 0.5 lt. Antifreeze )

Turn on the main switch again , in several minutes water begins to flow this point. When water begins to flow, Then turn off the main switch, put the pipe to the store. And fix with pipe clip Now we are sure have not any problem on water flow. Close to cover of machine.



*Resim 1:FIG 3*

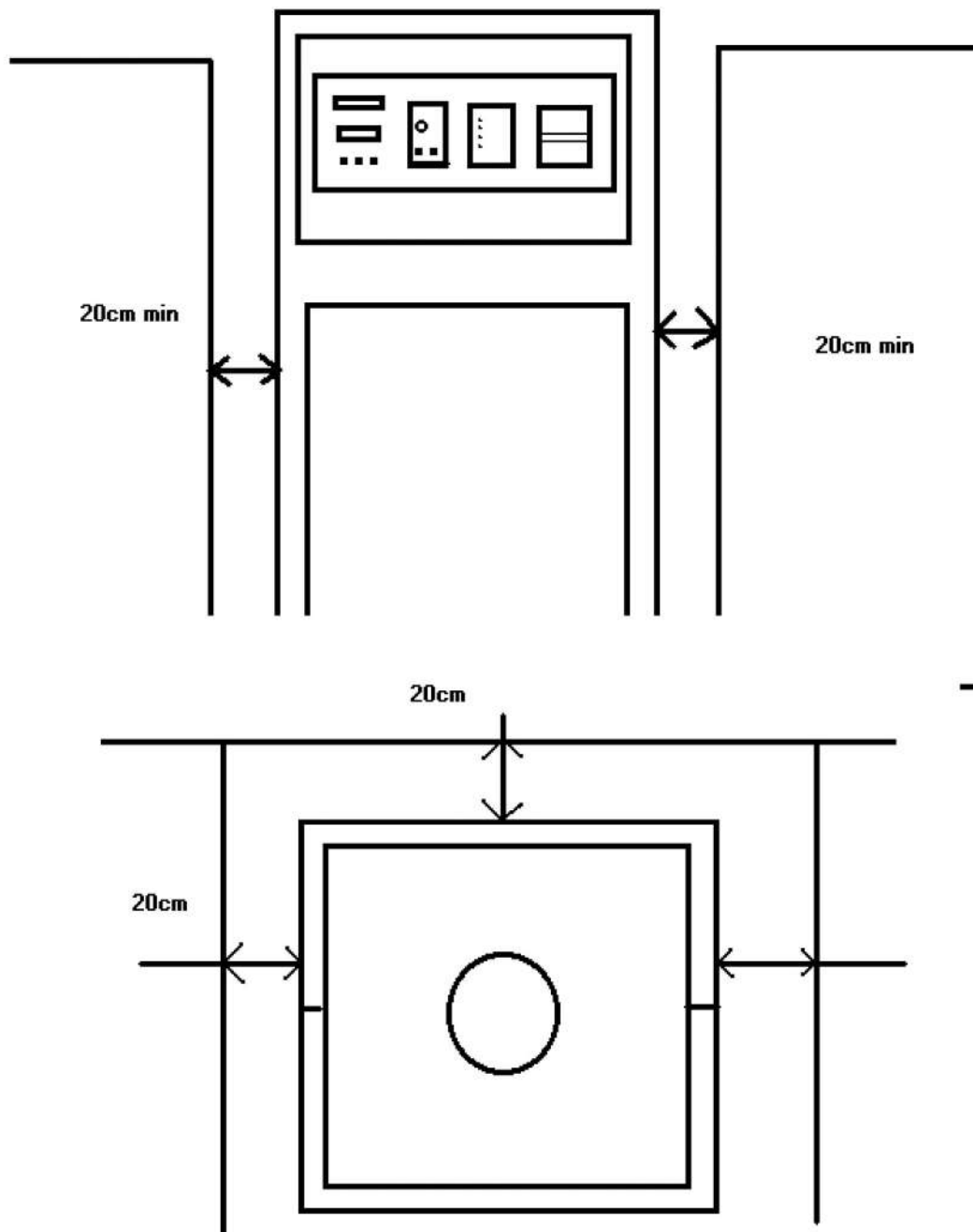


We would recommend to clean the radiator also every months.

**For this process ...**

Open the left cover of machine and clean the radiator with air gun. Look at Fig. 4 and fig. 5

## ASSEMBLING THE MACHINE



# **THE FIRST MELTING GUIDE**

1-To lift up the main switch (1)

3-Check volum at the minumum position.(8)

4-Push ON button for start generator(6")

5-Turn the volum increase to until yellow leds are shine(8)

6-When metal start to melt red led will start to shine (8)  
a litle decrease volum for metal do not burn

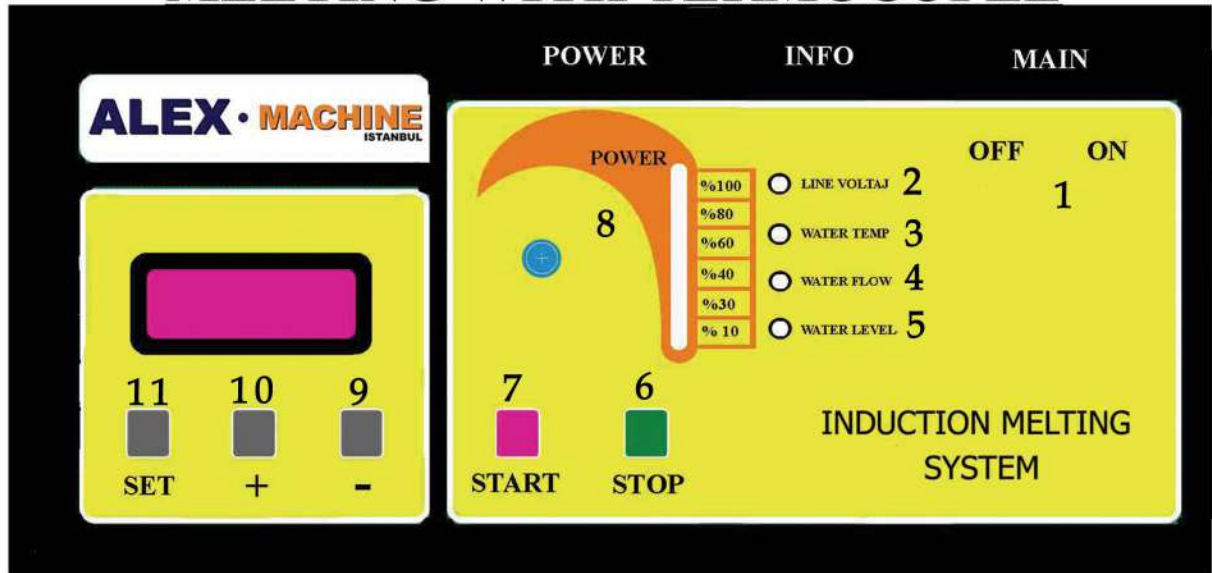
7-When melting operation to complete decrease volum at minimum position.(8)

8- Push OFF button for stop the generator.(7)

9-Take the curcible out the machine with tongs and lift up to the machine

10-Never to kep hot curicble inside the machine if not working,  
Never put on the machine liquid material  
Never to let something flow inside the machine  
Never put on the machine flame up material

# MELTING WITH TERMOCUPLE



1-To lift up the main switch (1)

2-Push set button to see set of melting degrees  
do not leave to set button and push” + “or “ – “ button  
for set to new melting point .

2-Put crucible into the machine and put the thermocouple into crucible

3-Check volume at the minimum position.(8)

4-Push ON button for start generator(6)

5-Turn the volume increase to until yellow LEDs are shine(8)

6-When temperature becomes near to melt point generator will be to pause  
a little time later will start this operation for metal do not burn

7-When melting operation to complete decrease volume at minimum  
position.(8) and take out the thermocouple

8- Push OFF button for stop the generator.(7)

9-For take the crucible out of the machine take the crucible with tongs and lift up to the machine

# FALUT LED INFORMATON

## LINE LED GREEN:

This led give information for electricity normal position this led must on if fine any problem of electricity is not shine and generator will not start one of phalse falut or very low volt

## WATER OVER TEMPERATURE RED LED :

This led give information for generator normal position this led must off if this led is shine generator will not stop, if have any air flow problem water temperature go to over set point led will turn on.

## WATER FLOW

This led give information for water flow.  
If this lamp is light you must add water.

## WATER LEVEL

This led give information for cooling system normal position this led must on

**1-GREEN** color is all normal machine can work



## **NOTE:**

Your machine has 1 year warranty.  
This warranty for general system and electronic device  
The electricity error and user mistake is out of warranty  
Termoculp and termoculp sheath is out of warranty  
Please do not use old, eroded and broken sheath  
In this condition the termoculp will be damaged.

## **TECHNICAL PROPERTY**

**POWER SUPPLY** : 380 X 3 TREE PHASE 50 / HZ  
: GND MUST BE CONNECTED  
**POWER SUPPLY** : F3 = 4.5KW F6 = 7.5 KW F9 = 10KW

## **INTERNAL COOLING SYSTEM**

**WATER CAPACITY** : 5 LT MIXTURE  
**WATER PUMP** : CP53 /220V..50HZ..104W..0.53A  
**RADIATOR** : 1 HP  
**WATER TYPE** : DISTILLED WATER  
**MIXTURE** : 4.5 / LT DISTILLED WATER  
AND 0.5 / LT ANTIFREEZE