

# INDUCTION FURNACE

(medium frequency)

MHFIFF-series

## Introduction:

MHFIFF series of high/medium frequency induction furnace machine are available in more than 100 different modes in various frequency ranges from 400Hz to 15,000Hz. Virtually offering all melting solutions related to ferrous and non-ferrous metal. These find wide applications in automobile, medical, forging, continuous casting, aerospace, and many research & development applications.

## Operating Principle:

Any metal part gets heat up because of eddy current induction in it when it is placed under the influence of high frequency alternating magnetic field. As this heat induced is local and is induced in short time, accordingly metal is heated up to very high temperature. Empirically this eddy heat induced is given as under...

$$P=K.F^{1.4}B^2.W \quad \text{where } F= \text{frequency, } B= \text{magnetic field } W= \text{weight}$$

400 to 50,000 Hz----- I.G.B.T. FULL BRIDGE INVERSION  
50,000 to 440,000 Hz---- VACCUM VALVE OSCILLATOR



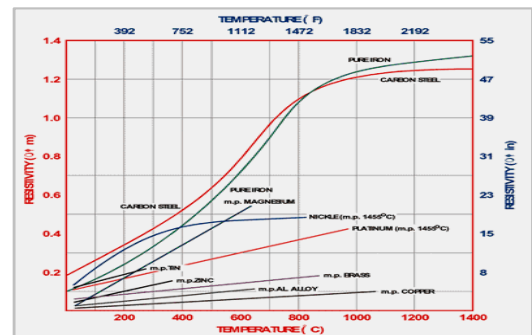
## INDUCTION FURNACE CONTROLLER SPECIFICATION:

Operating voltage 220 volts/50 Hz, 1/3 phase  
Excitation frequency 5-400 kHz  
Power range 1.0 to 20.0 kilo.watts  
Oscillation topology: I.G.B.T/ MOSFET/VALVE.  
Temperature (max) 1600 °C  
Material compatibility ferrus/non-ferrus  
Display 3½-digit red glow LED/LCD display for Temperature, voltage, current and power  
Frequency.

Power control: S.C.R. based cascade control  
Control against temperature/time set point.  
Protection: one Coil short circuit 2. Overload

## Model:

MHFIFF-00120	MHFIFF-00220	MHFIFF-00320
MHFIFF-00420	MHFIFF-00520	MHFIFF-01020
MHFIFF-02520	MHFIFF-05010	MHFIFF-10003
MHFIFF-20001	MHFIFF-50001	MHFIFF-10001



Frequency vs Temperature curve

Note: First four numeral after product code MHFIFF indicate kilowatt and last numeral indicate kilo hz.



MHFIFF-10005



MHFIFF-20001



MHFIFF-50001

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