

# INDUCTION HEATERS

MHFI-series

**Introduction:**

**MHFI series** of high/medium frequency induction heating machine are available in more than 100 different modes in various frequency ranges from 400Hz to 440,000Hz. Virtually offering all heating /melting solutions related to annealing, surface hardening, quenching and metal forming. These find wide applications in automobile, medical, forging, aerospace, and many research & development applications.

**Operating Principle:**

Any metal part gets heat up on account of eddy current induction in it when it is placed under the influence of high frequency alternating magnetic field. As this heat induced is quite 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 200,000 Hz----- MOSFET /IGBT/FULL BRIDGE INVERSION



MHFI-0420



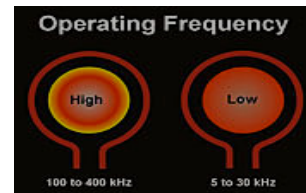
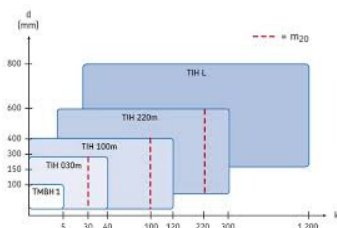
MHFI-0520



Model	Watts	Volts/ph	frequency k.hz	cooling	Model	Watts	Volts/p h	frequency k.hz	Cooling
MHFID-1015	03000	220/1	05-150	water	MHFID-07515	75000	220/3	05-150	water
MHFID-1015	10000	220/1	05-150	water	MHFID-20015	200000	220/3	05-150	water
MHFID-2015	20000	220/1	05-150	water	MHFID-30015	300000	220/3	05-150	water
MHFID-3015	30000	220/1	05-150	water	MHFID-40015	450000	220/3	05-150	water
MHFID-5015	50000	220/3	05-150	water	MHFID-60015	75000	220/3	05-150	water
MHFID -10015	75000	220/3	05-150	water	MHFID -80015	200000	220/3	05-150	water

**General specification of high frequency Induction heater:**

- Operating voltage 220 volt/single and three phase
- Output frequency : 1/3 phase, 5-200 KZ
- Output POWER: 5-800 K.W.
- Switching frequency 5.0-200 K.Hz
- POWER/FREQUENCY Control accuracy 99.9% of set point
- Resolution 0.1 volts/amps D.C.
- Power Ripple 10.0 volts/amps to 100 micro volts/amps
- Response time 0.5 –1.1 mill-seconds
- Power control range 0.0-400 volts
- Power factor/harmonics 0.95(lagging)/ less than 3% of principal harmonics
- Control 1.cascade feedback control with soft start
- Display Voltage/current/kilowatt /frequency in 3½ red glow LED display
- Protection over voltage/short ckt & inline surge protection.
- Pulse mode battery on line U.P.S.s are also available.



**DIEMENSION OF INDUCTION HEATER (INCHES)**

Model	size	Model	size	Model	size	Model	size
MHFID-1015	12x81x18	MHFID-07515	18x24x24	MHFID-10008	12x81x18	MHFID-07505	18x24x24
MHFID-1015	14x20x20	MHFID-20015	20x24x24	MHFID-10108	14x20x20	MHFID-20005	20x24x24
MHFID-2015	16x22x22	MHFID-30015	24x28x28	MHFID-20108	16x22x22	MHFID-30003	24x28x28
MHFID-3015	16x22x22	MHFID-40015	24x24x30	MHFID-30108	16x22x22	MHFID-40003	24x24x30
MHFID-5015	16x22x22	MHFID-60015	24x24x36	MHFID-50108	16x22x22	MHFID-60003	24x24x36

Three numerals x 100 after MHFIH indicates voltage of battery HEATER and last three-digit Indicates current. All dimensions are in inches.

**MOTORON SEMICONDUCTORS CORPORATION**

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