

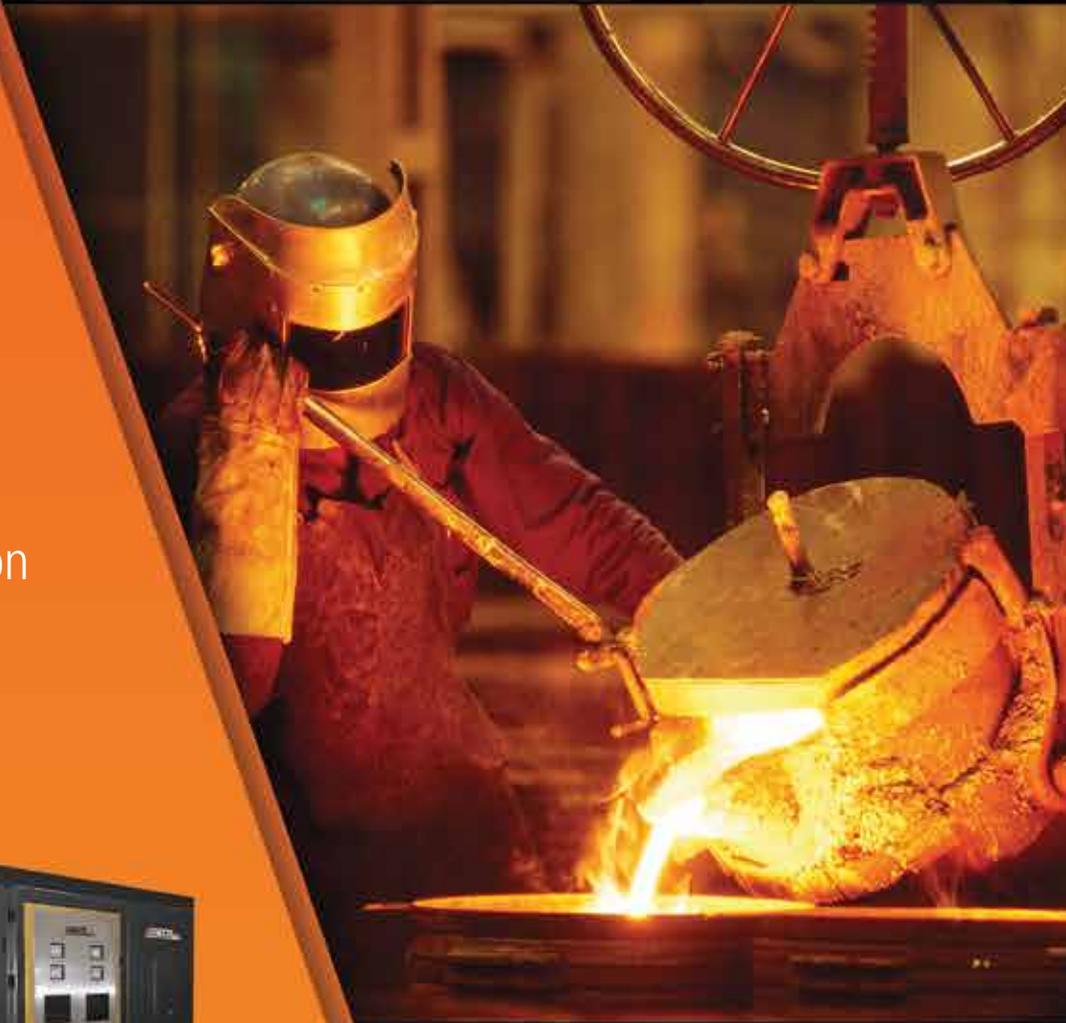
Proudly Canadian
Design & Manufacturer
Induction Furnaces



Amelt Corporation

Foundry Industries Equipment & Furnaces

Canadian Designer and
Manufacture of Induction
Melting
Holding & Heating
Furnaces

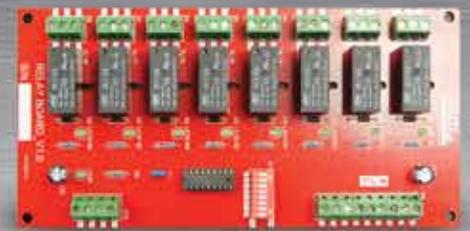


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Toronto, Ontario, Canada
M2M4K2



MAIN LOGIC CONTROL BOARD FOR MELTING FURNACES WITH POWER UP TO 1000KW AND FREQUENCY RANGE UP TO 10,000 HERTZ



**50,75,100,150,200,250,300 KW
1000-3000HZ MELTING FURNACES**

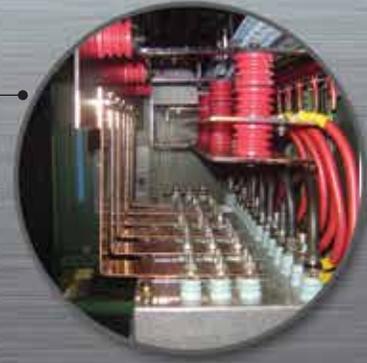
STANDARD FEATURES:

- COMPACT & LIGHT WEIGHT
- ELECTRICAL CONVERSION EFFICIENCY UP TO 97%
- NO ELECTRICAL STARTING SURGE OR INRUSH
- SINGLE ELECTRONIC LOGIC BOARDS
- STEEL CABINET WITH WELDED BEAMS
- COMPONENTS ACCESSIBLE THROUGH ALL DOORS FOR EASY MAINTENANCE
- CIRCUIT BREAKER THAT TRIPS IN THE EVENT OF AN INVERTER SHORT CIRCUIT
- NO EXPENSIVE FUSES
- VERSATILE & USER FRIENDLY FOR TROUBLE-FREE OPERATION & LOW MAINTENANCE
- DIAGNOSTIC CIRCUIT MONITOR BOARD IDENTIFIES FAULTS & ELECTRONIC LIMITS
- LOGIC CAN BE INTERFACED WITH PLC'S, TEMPERATURE CONTROLS & MOLTEN HEEL WEIGHTING SYSTEM (OPTIONAL)
- DIRECT WATER COOLED IGBT / SCR POWER DEVICE
- LOAD FROM POWER LINE WITH INSULATION TRANSFORMER FOR MELTING APPLICATION OR LOW VOLTAGE WORK HEAD TRANSFORMER FOR HEATING APPLICATIONS (IN SERIES CIRCUIT)
- VARIOUS LOADS & COILS CAN BE USED WITHOUT HAVING TO CHANGE CAPACITORS & TRANSFORMER TAPS



Tiltable melting body with capacity from 50 Kg. Up to 4000 Kg.

PICTURE SHOWS WATER COOLED CAPACITOR
CIRCUIT ARRANGEMENT FOR MELTING,
FORGING AND HEATING FURNACES



TILTABLE MELTING BODY WITH
CAPACITY FROM 50 KG. UP TO 4000 KG.

400,500,600,800 , 1000 KW 500-1000HZ MELTING FURNACES

STANDARD FEATURES:

- COMPACT & LIGHT WEIGHT
- ELECTRICAL CONVERSION EFFICIENCY UP TO 97%
- NO ELECTRICAL STARTING SURGE OR INRUSH
- SINGLE ELECTRONIC LOGIC BOARD
- STEEL CABINET WITH WELDED BEAMS
- COMPONENTS ACCESSIBLE THROUGH ALL DOORS FOR EASY MAINTENANCE
- AC INTERRUPTER LOGIC BOARD IN SHORT CIRCUIT FAULTS
- NO EXPENSIVE FUSES
- VERSATILE & USER FRIENDLY FOR TROUBLE-FREE OPERATION & LOW MAINTENANCE
- DIAGNOSTIC CIRCUIT MONITORS TO LOCATE FAULT & ELECTRONIC LIMITS
- LOGIC CAN BE INTERFACED WITH PLC'S & TEMPERATURE CONTROLLERS & MOLTEN HEEL WEIGHTING SYSTEM (OPTIONAL)
- DIRECT WATER COOLED IGBT / SCR POWER DEVICE
- LOAD ISOLATED FROM POWER LINE WITH ISOLATION TRANSFORMER FOR MELTING APPLICATION OR LOW VOLTAGE WORK HEAD TRANSFORMER FOR HEATING APPLICATIONS (IN SERIES CIRCUIT)
- VARIOUS LOADS & COILS CAN BE USED WITHOUT HAVING TO CHANGE CAPACITORS & TRANSFORMER TAPS

OPTIONS :

- THREE PHASE SCR CONTROLLED ELECTRONIC CIRCUIT INTERRUPTER SHUTS OFF POWER TO INVERTER IN THE EVENT OF AN INVERTER OR FURNACE FAULT. THIS PREVENTS DAMAGE TO CIRCUIT BREAKER & THE LOSS OF EXPENSIVE COMPONENTS & FUSES.
- CABINET IS SET UP FOR THE ADDITION OF UP TO THREE FURNACES SWITCHES ALTERNATE OPERATION OF MULTIPLE FURNACES.
- INTERNAL CLOSED WATER SYSTEM PROTECTS ALL POWER SUPPLY COMPONENTS FROM DIRT & ELECTROLYSIS. THE SYSTEM BUILT INTO THE POWER SUPPLY COOLS ALL INTERNAL COMPONENTS WITH LOW CONDUCTIVITY DISTILLED WATER. THE EXTERNAL WATER SOURCE COOLS THE INTERNAL SYSTEM PLATE TYPE EXCHANGER & FURNACES.
- CABINET CAN BE MANUFACTURED "RIGHT HAND" OR "LEFT HAND" (MIRROR IMAGE)
- PROGRAMMABLE LOGIC CONTROL BOARD & CONTROLLABLE VIA INTERNET FOR FAULT FINDING.



1250-4000 KW 200-700HZ SINGLE MELTING & MULTI-MELT FURNACES

STANDARD FEATURES:

- COMPACT & LIGHT WEIGHT
- ELECTRICAL CONVERSION EFFICIENCY UP TO 97%
- NO ELECTRICAL STARTING SURGE OR INRUSH
- SINGLE ELECTRONIC LOGIC BOARD
- STEEL CABINET WITH WELDED BEAMS
- COMPONENTS ACCESSIBLE THROUGH ALL DOORS FOR EASY MAINTENANCE
- AC INTERRUPTER LOGIC BOARD IN SHORT CIRCUIT FAULTS
- NO EXPENSIVE FUSES
- VERSATILE & USER FRIENDLY FOR TROUBLE-FREE OPERATION & LOW MAINTENANCE
- DIAGNOSTIC CIRCUIT MONITORS TO LOCATE FAULT & ELECTRONIC LIMITS
- LOGIC CAN BE INTERFACED WITH PLC'S & TEMPERATURE CONTROLLERS & MOLTEN HEEL WEIGHTING SYSTEM (OPTIONAL)
- DIRECT WATER COOLED IGBT / SCR POWER DEVICE
- LOAD ISOLATED FROM POWER LINE WITH ISOLATION TRANSFORMER FOR MELTING APPLICATION OR LOW VOLTAGE WORK HEAD TRANSFORMER FOR HEATING APPLICATIONS (IN SERIES CIRCUIT)
- VARIOUS LOADS & COILS CAN BE USED WITHOUT HAVING TO CHANGE CAPACITORS & TRANSFORMER TAPS



Picture showing the Inverter & Capacitor arrangement of AMELT Induction Power Supply .

OPTIONS :

- THREE PHASE SCR CONTROLLED ELECTRONIC CIRCUIT INTERRUPTER SHUTS OFF POWER TO INVERTER IN THE EVENT OF AN INVERTER OR FURNACE FAULT. THIS PREVENTS DAMAGE TO CIRCUIT BREAKER & THE LOSS OF EXPENSIVE COMPONENTS & FUSES.
- CABINET IS SET UP FOR THE ADDITION OF UP TO THREE FURNACES SWITCHES ALTERNATE OPERATION OF MULTIPLE FURNACES.
- INTERNAL CLOSED WATER SYSTEM PROTECTS ALL POWER SUPPLY COMPONENTS FROM DIRT & ELECTROLYSIS. THE SYSTEM BUILT INTO THE POWER SUPPLY COOLS ALL INTERNAL COMPONENTS WITH LOW CONDUCTIVITY DISTILLED WATER. THE EXTERNAL WATER SOURCE COOLS THE INTERNAL SYSTEM PLATE TYPE EXCHANGER & FURNACES.
- CABINET CAN BE MANUFACTURED "RIGHT HAND" OR "LEFT HAND" (MIRROR IMAGE)
- PROGRAMMABLE LOGIC CONTROL BOARD & CONTROLLABLE VIA INTERNET FOR FAULT FINDING.



Manual and Motorized fast automatic main circuit breakers for melting, forging and heating furnaces



4000 -12,000 KW 100-500HZ SINGLE MELTING & MULTI-MELT FURNACES

STANDARD FEATURES:

- HIGH ELECTRICAL EFFICIENCY UP TO 97%
- SINGLE & DUAL ELECTRONIC
- CONTROL BOARD IN ISOLATED & SHIELDED AREA
- CABINET IS RUGGED 12 GAUGE STEEL CONSTRUCTION
- COMPONENTS EASILY ACCESSIBLE THROUGH ALL DOORS FOR EASY MAINTENANCE
- FAST ACTING MANUAL & MOTORIZED CIRCUIT BREAKER OR OPTIONAL ELECTRONIC CIRCUIT INTERRUPTER THAT SHUTS POWER OFF IN THE EVENT OF AN INVERTER FAULT. THIS PREVENTS DAMAGE TO THE CIRCUIT BREAKER, LOSS OF EXPENSIVE FUSES & PROTECTS INVERTER COMPONENTS.
- DIAGNOSTIC DIGITAL CIRCUIT MONITOR SHOWS WHERE TO LOCATE FAULTS & INDICATES ELECTRONIC LIMITS THAT MAKES IT MAINTENANCE FRIENDLY
- VARIOUS LOADS & COIL CAN BE USED WITHOUT HAVING TO CHANGE CAPACITORS & TRANSFORMERS TAPS.

OPTIONS :

- THREE PHASE SCR CONTROLLED ELECTRONIC CIRCUIT INTERRUPTER SHUTS OFF POWER TO INVERTER IN THE EVENT OF AN INVERTER OR FURNACE FAULT, THIS PREVENTS DAMAGE TO CIRCUIT BREAKER & THE LOSS OF EXPENSIVE COMPONENTS & FUSES.
- CABINET IS SET UP FOR THE ADDITION OF UP TO THREE FURNACES SWITCHES OPERATING AT ALTERNATE TIMES.
- INTERNAL CLOSED WATER SYSTEM PROTECTS ALL POWER SUPPLY COMPONENTS FROM DIRT & ELECTROLYSIS. THE SYSTEM BUILT INTO THE POWER SUPPLY COOLS ALL INTERNAL COMPONENTS WITH LOW CONDUCTIVITY DISTILLED WATER. THE EXTERNAL WATER SOURCE COOLS THE INTERNAL SYSTEM PLATE TYPE EXCHANGER & FURNACES.
- PROGRAMMABLE LOGIC CONTROL BOARD & CONTROLLABLE VIA INTERNET FOR FAULT FINDING.



Steel Shell Melting & Holding body with capacity from 5M Ton up to 20M Ton



Steel Shell Holding Furnace with capacity from 5000 Kg. Up to 40000 Kg.

**400,500,600,800 , 1000 KW
500-1000HZ HOLDING FURNACES**

STANDARD FEATURES:

- COMPACT & LIGHT WEIGHT
- ELECTRICAL CONVERSION EFFICIENCY UP TO 97%
- NO ELECTRICAL STARTING SURGE OR INRUSH
- SINGLE ELECTRONIC LOGIC BOARD
- STEEL CABINET WITH WELDED BEAMS
- COMPONENTS ACCESSIBLE THROUGH ALL DOORS FOR EASY MAINTENANCE
- AC INTERRUPTER LOGIC BOARD IN SHORT CIRCUIT FAULTS
- NO EXPENSIVE FUSES
- VERSATILE & USER FRIENDLY FOR TROUBLE-FREE OPERATION & LOW MAINTENANCE
- DIAGNOSTIC CIRCUIT MONITORS LOCATE FAULT & ELECTRONIC LIMITS
- LOGIC CAN BE INTERFACED WITH PLC'S & TEMPERATURE CONTROLLERS & MOLTEN HEEL WEIGHTING SYSTEM (OPTIONAL)
- DIRECT WATER COOLED SCR POWER DEVICE
- LOAD ISOLATED FROM POWER LINE WITH ISOLATION TRANSFORMER FOR MELTING APPLICATION OR LOW VOLTAGE WORK HEAD TRANSFORMER FOR HEATING APPLICATIONS (IN SERIES CIRCUIT)
- ABILITY TO UPGRADE THE POWER LOAD UP TO 35% OF TOTAL POWER RATE WITH MIN. COST WITHIN 48 hrs.

OPTIONS :

- THREE PHASE SCR CONTROLLED ELECTRONIC CIRCUIT INTERRUPTER SHUTS OFF POWER TO INVERTER IN THE EVENT OF AN INVERTER OR FURNACE FAULT, THIS PREVENTS DAMAGE TO CIRCUIT BREAKER & THE LOSS OF EXPENSIVE COMPONENTS & FUSES.
- INTERNAL CLOSED WATER SYSTEM PROTECTS ALL POWER SUPPLY COMPONENTS FROM DIRT & ELECTROLYSIS. THE SYSTEM BUILT INTO THE POWER SUPPLY COOLS ALL INTERNAL COMPONENTS WITH LOW CONDUCTIVITY DISTILLED WATER. THE EXTERNAL WATER SOURCE COOLS THE INTERNAL SYSTEM PLATE TYPE EXCHANGER & FURNACES.
- CABINET CAN BE MANUFACTURED "RIGHT HAND" OR "LEFT HAND" (MIRROR IMAGE)
- PROGRAMMABLE LOGIC CONTROL BOARD & CONTROLLABLE VIA INTERNET FOR FAULT FINDING.

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IGBTs TECHNOLOGY MELTING FURNACES 100 -1,000 KW / 500-3000HZ

IGBTs INDUCTION MELTING FURNACES

IGBTs are mainly used in power electronics applications, such as inverters, converters and power supplies, where the demands of the solid state switching device are not fully met by power bipolars and power MOSFETs. High-current and high-voltage bipolars are available, but their switching speeds are slow, while power MOSFETs may have higher switching speeds, but high-voltage and high-current devices are expensive and hard to achieve.

The advantage gained by the insulated gate bipolar transistor device over a Thyristor (SCR) is that it offers greater power gain than the standard bipolar type transistor combined with the higher voltage operation and lower input losses of the MOSFET.

PERFORMANCE AND FEATURES:

- Zero-voltage scanning soft start, or option to stop at any time under any state without impact on power supply
- Speedy melting, low production cost; adheres to environmental protection regulations limits pollution
- Melting directly from low temperature, available for full emptying of solution, easy change of category of melting material
- Flexibly adjustable power, easy & continuous smooth adjustment, easily controlled temperature, low oxidization loss, uniform metal content
- Complete set equipment can realize full automatic remote control, also including PLC programmable controller & HMI (Human Machine Interface) or industrial control computer system & industrial control configuration software & all kinds of sensors, etc.
- The rectifier using full-wave rectifier, LC filter using capacitors & inductors way that the power factor of over 0.97, without harmonic interference. Inverter part adopts series inverter working mode. Work load in the case of high-voltage small current, copper loss small & greatly improving the efficiency per ton of molten iron power consumption is about 519 KWH/T



PUSH-OUT, LIFT SWING & DROP COILED FURNECE TYPE

There are four types ideal for small capacity :

- Amelt's Lift & Swing
- Amelt's Pushout Box
- Amelt's Drop Coil
- Amelt's Aluminum Body type with hydraulic tilting mechanism

Pushout, lift swing & drop coil furnaces are ideal for small capacity melting non-ferrous using graphite crucibles.

The installation of pushout & drop coil requires foundation performances below ground level. Though lift swing is ideal for places when performing concrete or steel frame foundation, it is often not an option for customers. These furnaces range from 10 kg (20 lbs) capacity up to 300kg (660 lbs) .

As mentioned before, in pushout, lift swing & drop coil type of induction melting furnaces the use of graphite crucibles will eliminate the refractory lining usage and enable easier operations. In our pushout induction furnaces, the pneumatic operation with air cushion cylinders will make the operation smooth and spell-free while eliminating mechanical shocks.

Customers can choose between hydraulic or pneumatic operation in pushout & drop coil induction melting furnaces.

Amelt power supplies for drop coil and lift swings is produced with a range of 30KW – 300KW.



REBUILT , REFURBISHING & UPGRADING YOUR CURRENT INDUCTION MELTING FURNACES

Amelt Induction Canada is a leader in furnace inverter technology with an in-depth understanding of foundry and metallurgical applications. We apply that knowledge in rebuilding second-hand induction furnaces of the highest quality, thoroughly testing it to ensure maximum durability.

With one of the largest stocks of melting furnaces in the business, our used, refurbished and rebuilt furnaces come in many varieties in order to match individual need. We often have 60 machines in stock at a time!

All our furnaces are tested for their inverter function prior to dispatch. Still, we offer an additional six-month warranty, optional start up, customer support and commissioning by Amelt's Engineers.

Please contact us for more information and pricing.

Our systems come from suppliers such as:

- AMELT Induction
- Inductotherm
- Pillar
- ABP
- Ajax Tocco
- I.H.S



Before

After



Before

After



PUMP MODULE UNIT ALONG WITH MAKE UP TANK



CLOSED CIRCUIT COOLING TOWER WITH USING CONDENSER COIL AND SHOWER TYPE MODEL

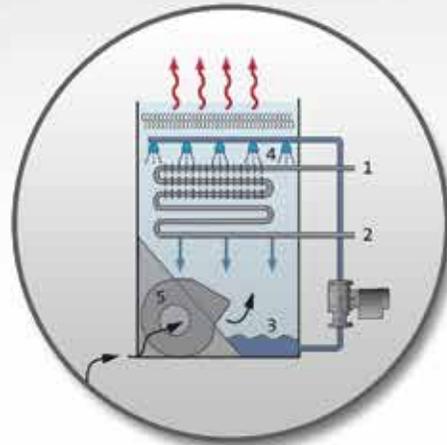
AIR BLAST (DRY TYPE) CLOSED CIRCUIT COOLING SYSTEM

COOLING TOWER & WATER CIRCULATION SYSTEM

- AMELT Cooling Tower has a cabinet with a condenser coil using 1-3 air fans depending on the capacity.
- Closed circuit cooling towers keep it contaminant free.
- This creates two separate fluid circuits: (1) an external circuit, in which spray water circulates over the coil and mixes with the outside air to increase the efficiency of the cooling and (2) an internal circuit, in which the process fluid to be cooled circulates inside the coil.
- During operation, heat is transferred from the warm fluid in the coil to the spray water, and then to the atmosphere as a portion of the water evaporates.
- In the Air Blast Type (Dry Type) Cooling Tower the technique is the same but with just one circulating closed water system, which is recommended for very cold environments to protect from freezing in the winter season. Dry Type is cost effective and requires less maintenance.

PUMP MODULE

- Our Cooling System also comes with a Make up Tank as well as a Double Circulating Pump with a Control Panel which reduces the downtime in maintenance.





POWER FURNACE TRANSFORMERS

An induction furnace transformer is used to supply power to an induction furnace, which reduces high voltage to levels required for induction furnace applications. Our Amelt transformers could be designed from 50Kva to 12,000Kva. Also, AMELT offers a diverse line of furnace transformers designed for different applications .

Types of Induction Furnace Transformers:

- Oil Filled Transformers
- Dry Type Transformers

The furnace transformers from Amelt will meet and exceed all quality standards for electrical distribution. High-grade materials and superior engineering are key elements to the furnace transformer manufacturing business and we recognize that. Go with us and we will deliver years of reliable service. Our transformers can be manufactured according to need with different windings & Vector Group for different ambient temperatures around the world.

Standard Features Include:

- Surge Arrester for Primary
- Versatile design with respect to customer requirements and space availability
- Design to all types of environments
- Design to all types of input (50Hz & 60Hz)
- On Load Tap (optional)
- High efficiency units with low operating temperatures
- Single & multi-pulse circuit configurations
- Superior short circuit withstand
- Pressure Relief Device
- Pressure Vacuum Gauge
- Oil Thermometer
- Drain Valve
- Upper Fill Valve
- Lifting Lugs



AMELT HEATING FURNACES MODEL & POWER RATE

MODEL	AHTF-25	AHTF-50	AHTF-100	AHTF-200	AHTF-400	AHTF-600	AHTF-800	AHTF-1000
POWER (KW)	25	50	100	200	400	600	800	1000

AMELT FORGING FURNACES MODEL & POWER RATE

MODEL	AFF-25	AFF-50	AFF-100	AFF-200	AFF-400	AFF-600	AFF-800	AFF-1000
POWER (KW)	25	50	100	200	400	600	800	1000

AMELT HARDENING FURNACES MODEL & POWER RATE

MODEL	AHF-25	AHF-50	AHF-100	AHF-200	AHF-400	AHF-600	AHF-800	AHF-1000
POWER (KW)	25	50	100	200	400	600	800	1000



HIGH FREQUENCY INDUCTION HEATING FORGING AND HARDENING FURNACES

- IGBT Technology & Control
- Easy Operation
- High Efficiency
- Self diagnostics with Fault LEDs & Alarm Indicator
- Temperature Controlled with Optical Sensor
- Silent Operation
- PLC Interlocking (Optional)
- Different Voltage Line Designs





MODEL	AM-30	AM-60	AM-80	AM-120	AM-160
Rated Power Output (KW)	30	60	80	120	160
Frequency Rang (Khz)	10-30	10-30	10-25	10-25	8-15
Input Power (V / Hz)	380V/50 Hz 3 Phase 460V/60 Hz 3 Phase				
Current Input (A)	48	97	135	195	240
Power Source Required (KVA)	38	75	100	150	200
Voltage Range (V)	342~430	342~430	342~430	342~430	342~430
Cooling water flow (L/ min.) 0.1 Mpa	27	40	33	56	56
Power Unit Dimension (mm)	365x500x790	400x540x970	750x500x1040	550x600x1380	550x600x1380
Output Transformer Dimension (mm)	320x320x310	410x470x385	410x470x385	405x555x380	810x410x440

MEDIUM FREQUENCY INDUCTION MELTING FURNACE

- IGBT Technology & Control
- Easy Operation
- Highly Efficient
- Self Diagnostics with Fault LED's & Alarm Indicator
- Temperature Controlled with Thermocouple or Optical Sensor (Optional)
- Extremely Silent Operation
- Electrical (Motorized) Tilting System
- Gas Blow Pipe section to Prevent Oxidization
- PLC & HMI with Data Collection for Temperature Control & Weighting System (Optional)
- Suitable for Different Voltage Usage





INDUCTION FURNACE PARTS

AMELT offers a full stock of OEM and aftermarket services and spare parts, along with industry-proven components for your induction furnace system. Our services and parts accommodate machines with an up to 12,000KW power rating. Other manufacturing brands include Inductotherm, Pillar, ABPTaylor, Induction Heating Systems (IHS), Ajax Tocco and Amelt's Induction melting systems.

We provide the following items:

- Control boards
- Heat sinks
- SCR's
- Thyristors
- Diodes
- SCR clamps
- Firing modules
- Firing cards
- ACI modules
- Earth leak monitors
- Snubber capacitors
- rubber resistors
- Power transformers 3 phase both Delta & Star Vector Group
- Tank capacitors
- Filter capacitors
- Transformers
- CLR (reactors)
- CT'S current transformers
- Selector switches manual & automatic
- Flow switches
- Pressure sensors
- Temperature sensors
- Fuses
- Circuit breakers
- High frequency transformer (HF Transformer)
- DC chokes
- Monitoring board
- Relay boards
- Water cooled power cables
- Induction coils
- Digital & analog meters
- Three-phase KW meter & energy meters



EQUIPMENT ,PARTS & COMPONENTS

FLEXIBLE WATER COOLED CABLES

AMELT has a complete line of Water Cooled Power products, most notably Water Cooled Cables, for every high current application. Our line of Water Cooled Cables range from a standard resistance Induction heating to the most advanced high frequency coaxial design on the market. Although we have standard products available, most cables are custom designed and sized to meet customer requirements.

TANK & FILTER CAPACITORS

At AMELT Induction we design and manufacture capacitors for Inductive Heating, Melting, Forging & other applications at frequencies between 50 and 10,000 Hz. Manufactured by request, these capacitors are custom designed to meet technical requirements. This allows for the tuning of the circuit for changing inductive loads.

HYDRAULIC UNIT

We design and manufacture Hydraulic POWERPACKS with different capacities and pressures for various applications. In the foundry industry we manufacture from 2 litre /min. and 400 P.S.I to 45 litre /min. and 4000 P.S.I equipped with its own control panel.

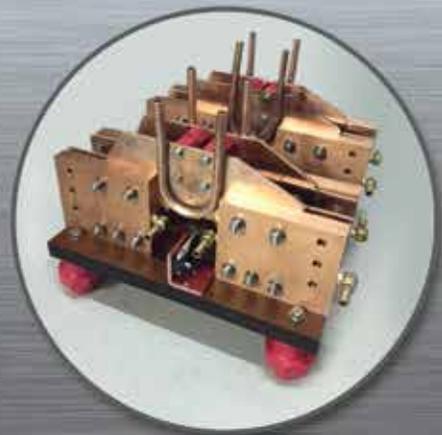
INDUCTION MELTING & HOLDING COILS

We manufacture Custom Induction Coils from a 10 kg – 25 Metric ton capacity tested in 4,000V, with different cross sections such as Profile, Pipe, D shape and a variety of wall thickness which includes a 12-month warranty for all our induction coils.

TEMPERATURE MEASUREMENT & MONITORING SYSTEM

This system is designed for monitoring molten heel temperature measurement on line and continues with large seven segment digital monitoring through the Infrared pyrometer installed near the melting body's furnaces with the accuracy of ± 3 degree C and integrated with computer and or PLC as an OPTION.





EQUIPMENT, PARTS & COMPONENTS

DIODES & THYRISTOR (SCR)

High quality, heavy-duty diodes and SCRs will avoid any technical difficulties, lost time and expenses for the end user. We consider 60% of capability of SCR power rating for longer life expectancy.

CIRCUIT BREAKER

Soft connecting and disconnecting motorized high-speed circuit breakers will maximize uptime and minimize costly maintenance.

FUSES

Even though we use an intelligent logic control board and a fast acting motorized circuit breaker, for final back up we rely on high-speed fast fuses and auxiliary function. We also supply 125A -1,600A Fast Power Fuses.

INVERTER & RECTIFIER PANEL

We manufacture our own custom-designed Inverter and Rectifier Panels according to KW rating and melting alloys in Half and Full Bridge types up to 12,000 KW.

We also provide solutions for customers with existing equipment to increase their power rating and efficiency.

CHANGE OVER SWITCHES

We provide the best quality change over switches for foundry needs including 100KW to 12,000 KW Power Supplies for both manual and automatic switching.

CONTROL VOLTAGE TRANSFORMER

Industrial control transformers (also known as machine tool transformers) fill the size range from 25VA to 7,500VA and up to 600 volts. We can supply step-up or step-down transformers to supply voltage for the control power supply.





Car Bottom Gas Heating Furnace

Car Bottom Gas Heating Furnaces are used for heat treatment of ready-made products in forging and pressing shops, as well as for the heat treatment of castings and weldments. Bulky parts are annealed while resting on supports mounted on the furnace car, with smaller ones are stored in baskets or grates. These furnaces are used for various types of heat treatment – normalization, process annealing, hardening or austenization, further for tempering or annealing to release internal stresses after molding or welding. Commensurate with the above is the range of operating temperatures, from 250 °C to 1,150 °C and up to 1,250 °C in the event of special materials. Where required, furnaces are fitted with a cooling system that will make it possible to carry out the entire heat process with controlled cooling zones and intense final cooling of the charge in the closed furnace without the need to open the door or to move the car out of the furnace.

Car bottom furnaces are available in all sizes. The largest furnace we have ever made had a working space sized 900(W)×1,200(L)×500(H) cm and can accommodate a charge of 180 tones. A universal car hearth furnace with a clear length of 2,200 cm has been supplied for the processing of long rotors and shafts,

PLC Control will allow the heating for forging to go up to 1,250°C.

Properly selecting the types and locations of burners along with optimum control of the heating system, sufficient sealing and pressure stabilization of the furnace will ensure a highly homogeneous temperature field in the working space.

With respect to waste heat utilization, an optimal arrangement of the system is selected, depending on the prevailing temperatures of the treatment process, furnace capacity, expected plant factor and other operating conditions. Burners with cold combustion air inflow, air preheated in a central recuperator or recuperative burners – which provide utmost utilization of the heat from outgoing fumes for furnaces of this type – can be used.

Where justified, car bottom annealing furnaces are equipped with electrical-resistant heaters instead of gas-fired systems. Where necessary, forced air circulation is used to ensure homogeneous distribution of temperatures throughout the field and intensified convective heat transfer across the charge contents.





TECHNICAL SUPPORT & SERVICES

At AMELT we care about our customer's profit, process security and operational downtime. Your productivity is our first priority. Our team can assess and determine faults quickly and efficiently. We hope you will work with us as your service provider and benefit from our many years of experience.

Our maintenance programs can offer weekly, monthly or quarterly visits, depending on the complexity of the equipment design and any issues that may arise.

We offer a comprehensive assessment and cost-effective recommendations for refurbishing overhauling and rebuilding all types of power supplies such as Melting, Holding, Heating and Forging systems. All upgrades are completed with the most recent technology and components available, with innovations incorporated regularly.

If you have any question about our products or services or if you would like to contact us for a quote please use following contact information at any time and take advantage of our exceptional 24/7 technical support free of charge:

 (+1) 416.449.7990

 info@amelt.com

 www.amelt.com



PRODUCTION LIST

Production List & Melting Rate (lbs / hr.) 100-3000 Hertz Unit
Manufactured By AMELT INDUCTION

POWER (KW)	FREQUENCY (HZ)	STEEL @1650C	IRON @1480C	COPPER @1100C	BRONZE @1175C	ALUMINUM @700C	SILVER @960C
50	3000	135	185	105	320	135	60
100	3000	350	385	220	675	350	125
150	1000-3000	500	550	315	950	500	180
200	1000-3000	700	770	440	1350	700	250
250	1000-3000	950	1050	600	1800	950	340
300	1000	1175	1300	740	2200	1175	420
350	1000	1375	1500	860	26500	1375	500
400	1000	1600	1800	1000	3050	1600	575
500	100-1000	2000	2200	1250	3800	2000	720
600	100-1000	2400	2650	1500	4550	2400	860
800	100-1000	2800	3080	1760	5400	2800	1000
1000	100-1000	4200	4620	2630	7980	4200	1500
1500	100-700	6300	6930	3940	11970	6300	2250
2000	100-700	8400	9240	5250	15960	8400	3000
2500	100-500	10500	11550	6570	19950	10500	5840
3000	100-500	12600	13860	7880	21500	12600	4500
4000	100-500	16800	18480	10500	31920	16800	6000
5000	100-500	21000	23100	13125	39900	21000	7500
6000	100-500	25200	27720	15780	47880	25200	9000
7000	100-500	29400	32340	18410	55860	29400	10500
8000	100-500	33600	36960	21040	63840	33600	12000
10000	100-300	42000	46200	26250	79800	42000	15000
12000	100-200	50400	54440	31660	95760	50400	18000

This Melting Rate is based on a Nominal furnace size for Second Heat when lining is Hot,
Charge is Dense and bus runs proper. No Molten Heel Required.



Amelt Corporation



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