

A large industrial induction melting furnace is shown in operation. The furnace is a large, dark, cylindrical vessel with a wide opening at the top. Inside, a bright, glowing yellow-orange molten metal is being heated. A thick stream of molten metal is being poured from the furnace into a large, dark, rectangular container below. The background is dark, and the overall scene is illuminated by the intense heat of the molten metal.

**INDUCTION  
MELTING & HEATING  
EQUIPMENT**

**Since 1979**

## POWER CUBE MELTING FURNACE



This induction melting furnace can melt 100lb./45kg to 1985lb./900kg of steel and 175lb./80kg to 2865lb./1300kg of brass. It has an extremely durable and high-quality construction with a cast and fired refractory top and bottom blocks. The induction coil is constructed from high-conductivity, heavy wall copper tubing. Power cables can be brought out by either side for better mobility. The floor mounted box furnace is installed onto stanchions.

## COMPACT POWER MELTING FURNACE

Up to 50-60 lb./110-132kg (Steel) Capacity.

Ideal for all small melting applications such as steel non-ferrous, and precious metals using ceramic, clay graphite or silicon carbide crucibles.

This induction melting furnace can be constructed for one-man or two-man pouring action. For one-man pouring, the compact box furnace is mounted onto a steel frame and is tilted by attaching a handheld tilt bar.

The frame can also be fitted with a hydraulic cylinder and a pneumatic air-over-oil assist for easier for easier tilting and more control. For two-man pouring, the compact box furnace rests on a sturdy table and is equipped with shank handles for pouring into stationaty molds.



## LIFT & SWING MELTING FURNACES

### SMALL

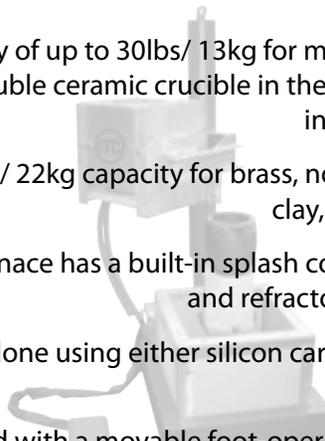
Capacity of up to 30lbs/ 13kg for melting steel, using a double ceramic crucible in the crucible, ideal for investment casting.

A 50lbs/ 22kg capacity for brass, non-ferrous metals, clay, graphite melting.

The furnace has a built-in splash containment shield and refractory lined spill pan.

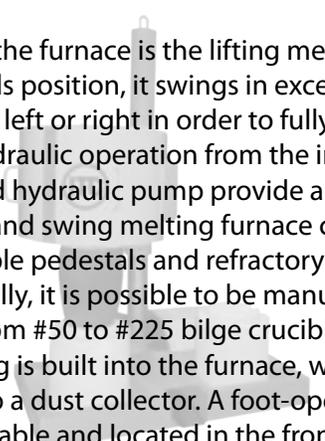
It can be done using either silicon carbide or machined graphite crucible.

Equipped with a movable foot-operated control valve and allows to be easily moved when not in use.



### LARGE

The key element of the furnace is the lifting mechanism. When in the upwards position, it swings in excess of 90 degrees to the left or right in order to fully access the crucible. The hydraulic operation from the integral or external mounted hydraulic pump provide a smooth lift. The lift and swing melting furnace comes supplied with crucible pedestals and refractory lined spill pans. Additionally, it is possible to be manufactured to accommodate from #50 to #225 bilge crucibles. A fume collector ring is built into the furnace, which can be connected to a dust collector. A foot-operated control valve is available and located in the front center of the furnace.



### EZ LIFT

This lift induction melting furnace has a capacity of up to 30 lbs/ 13kg for steel melting, using double ceramic crucible in crucible ideal for investment casting. As well as a capacity of up to 50 lbs/ 22kg for brass with single clay graphite crucible. Either machined graphite or silicon carbide crucibles can be used for non-ferrous applications. The rugged design is counter-weighted for easy up & down operations, for which no air or hydraulics are required. The furnace has a cast refractory spill containment table, as well as a built in crucible pedestal block. Additionally a replaceable refractory crucible pedestal is included and a custom coil can be designed to match the power supply. The furnace can stand freely and can be easy moved out when not in use.

## TABLETOP MELTING FURNACES

### EASYMELT

EasyMelt compact desktop unit, perfect for quick induction melting of small batches.

Fast induction melting is achieved using efficient circuits with low energy consumption.



### COMPACT TILTING STATION

The UltraMelt TLT-2 is a tilting station built to melt up to 4.4 lb. (2 kg) of platinum.

It works best with 12 kW-16 kW power supplies.

The crucible size is 2.7 inch. x 5.5 inch. (71 mm x 142 mm)



## MELTING FURNACE PLATFORM SYSTEM



The melting furnace system is complete with power supply, hydraulically tilted furnace, removable steps and gates that open on either side of the platform for easy loading of pallets containing raw materials. This system can be easily designed to accommodate additional furnaces for alternate operation.



## LIFT & SWING FURNACE

This complete melting system is equipped with a Large Lift & Swing Furnace, an energy efficient power supply (100-300kW) and a crucible lifting basket. The furnace has a smooth lifting mechanism and a 90 degree swing which provides for complete crucible access. It comes supplied with crucible pedestals and refractory lined spill pans. Additionally, it is possible to be manufactured to accommodate from #50 to #225 bilge crucibles. A fume collector ring is built into the furnace, which can be connected to a dust collector. A foot-operated control valve is available and located in the front center of the furnace.



# COMPLETE MELTING SYSTEMS



## POWER CUBE FURNACE

SmartPower™ and the Power Cube Melting Furnace form a powerful and extremely flexible modular system which can have up to 4 furnaces connected (with configurable 40 kW to 400 kW power output). It is energy-efficient and saves space.



## NOSE-TILT FURNACE



Equipped with one-man Nose Tilting furnaces, with a pneumatic assist for easy pouring, and a SmartPower™ system which allows the simultaneous melting of different metals. All while achieving zero down-time operation and reducing maintenance costs by utilizing the benefits of SmartPower™.

## SMARTPOWER™ MEGA SYSTEM

Ultraflex **SmartPower™ MEGA** System is a breakthrough innovation in induction heating technology, featuring the **Direct Digital Step™** control algorithm and a unique configurable modular approach.

Configurable and field upgradeable power supplies with output power from 64kW to 512kW, 3kHz to 25kHz range.

The latest SiC transistor technology and proprietary digital control algorithms ensure optimal performance and maximum efficiency in a wide frequency range. Ultra-flexible, wide range of load impedance matching by utilizing multiple transformer ratios and configurable capacitor banks.

Configurable to work with single or multiple, independently controlled RF outputs from one cabinet.

Durable and reliable design with built-in tuning, safety, and diagnostics features.



## LOW FREQUENCY POWER SUPPLIES

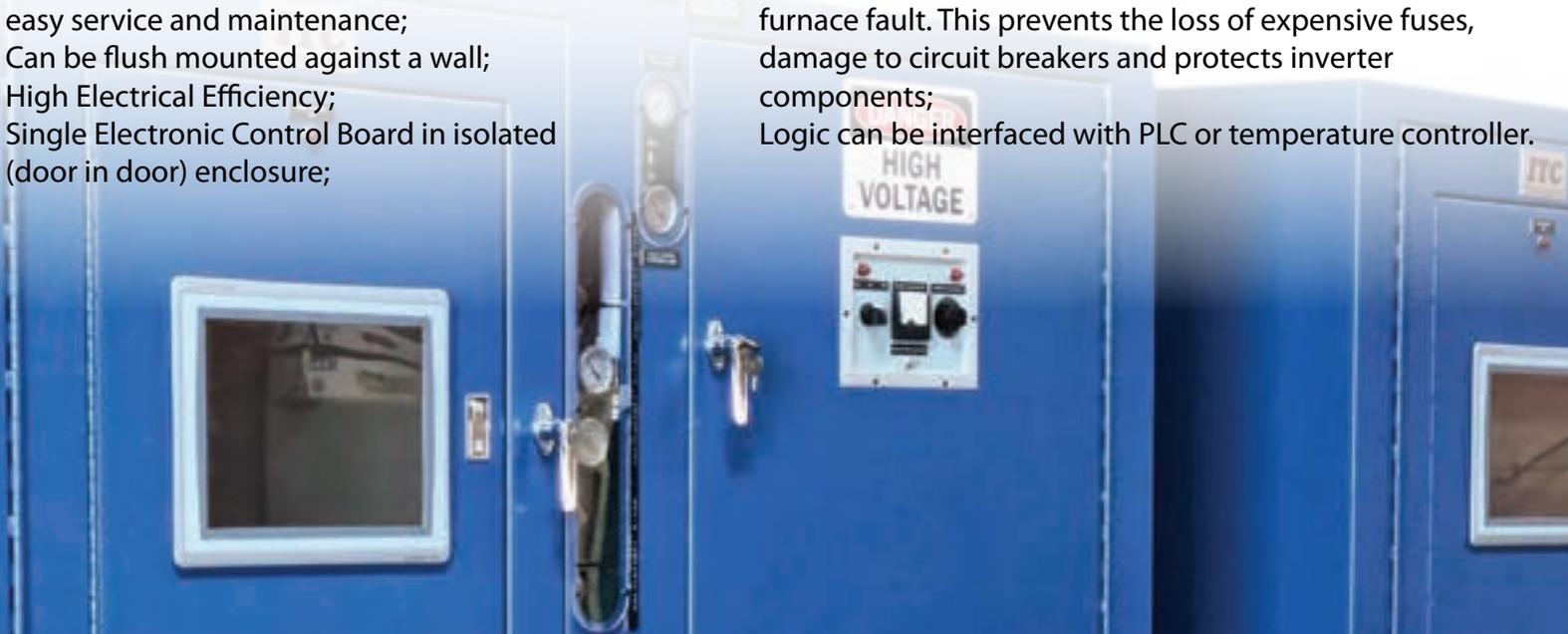
Solid-State Power Supplies

For Induction Heating and Melting

100 kW to 300 kW | 1000 Hz to 3000 Hz  
300 kW to 1000 kW | 100 Hz to 3000 Hz

High quality design is user and maintenance friendly;  
Cabinet is rugged 10 gauge steel construction;  
All components are readily accessible through large front doors and end door (near furnace switches) for easy service and maintenance;  
Can be flush mounted against a wall;  
High Electrical Efficiency;  
Single Electronic Control Board in isolated (door in door) enclosure;

Diagnostic Circuit Monitor shows where to locate faults and indicates electronic limits;  
Three Phase SCR controlled Electronic Circuit Interrupter shuts off power to inverter in the event of an inverter or furnace fault. This prevents the loss of expensive fuses, damage to circuit breakers and protects inverter components;  
Logic can be interfaced with PLC or temperature controller.



## HIGH FREQUENCY POWER SUPPLIES

UltraFlex Power Technologies offers a wide range of induction heating power supplies depending on your business needs from 1kW to 400kW in output power and frequency ranges from 6kHz to 1.2MHz. The induction heaters are provided with standard or custom induction heating coils, increasing their capabilities for use in various applications: annealing, bonding, brazing, carbide tipping, casting, melting, soldering, and many others.

### UltraHeat S series

2 kW to 5 kW  
30 kHz to 400 kHz



### SOLO Induction Heating Systems

12 kW to 32 kW  
3 kHz to 400 kHz



### UltraHeat SB series

3 kW  
700 kHz to 1200 kHz



### SMART POWER

UltraFlex SmartPower™ Compac System are a breakthrough innovation in the induction heating technology, featuring the Direct Digital Step™ control algorithm and a unique configurable modular approach.

Configurable and field upgradable power supplies with output power from 50kW to 400kW.

Wide output frequency range - two ranges available from 6kHz to 60kHz and from 40kHz to 200kHz.



## COMPACT MOTOR CONTROL CENTER

Controls all auxilliary motors required on an induction melting or heating system for operation of water pumps, cooling tower fans and hydraulic pumps. Manufactured with up to 6 Motor Starters plus a solid state adjustable timer for shut-off of water pump after system cool-down. Contains an 115 Volt Control Transformer. Equipped with Motor Starters that have magnetic and adjustable thermal overload protection. Motor Control Center will operate up to 15 HP motors. Enclosure is a durable NEMA-12, heavy gauge steel.



## WATER COOLING TOWERS, CHILLERS & TANKS

ITC offers a variety of water cooling towers, chillers & tanks. We can help you decide which one will best suit your manufacturing requirements. Since high amounts of electricity can generate a tremendous amount of heat, an entire induction system need to be water-cooled. We offer a variety of watercooling towers, fluid coolers and chillers ideal for cooling the water as it recirculates through your induction heating system. We will provide you with the best water cooling solution to ensure that the power supplies, coils and furnaces in your induction system are being properly water cooled so that your induction equipment remains at safe temperatures during operation.

## SINGLE & DUAL WATER PUMP MODULE

Both types are designed for closed-loop type water cooling and recirculating systems. The Single Pumping Module includes 1 water pump. The Dual Pumping Module includes 1 main water pump and 1 stand-by water pump. These water pumping modules are designed for maintaining proper water flow as the water is recirculated throughout your induction system.

Rugged heavy duty tubular steel frame  
Can be used with either Dry or Evaporative Type Closed Circuit Cooler  
Completely pre-piped and tested for easy installation  
Close coupled, all bronze or stainless steel pump.  
All copper piping  
230/460 Volt, 3 Phase, 60 Hz, TEFC Motor  
Pre-wired Manual Motor Starter with OL's  
Isolation ball valves with unions or flange connectors for easy pump replacement without draining system





## WATER-COOLED FLEX LEADS

Water cooling is one of the most important factors in the life of your induction melting equipment. To ensure efficient cooling process there needs to be a proper water flow to and from the induction coil. We manufacture all varieties of high-current water cooling cables using all top quality materials with a fast turnaround time. Sizes range from #12 up to #32 (SAE 37°) and rated for up to 8000 A. In addition to that, we also offer an optional fire retardant sleeve that protects your cables against damage from heated material.

Water cooling cables are recommended for air vacuum applications.

## INDUCTION COILS

ITC manufactures a wide range of coils for induction melting and heating applications. All of our coils are engineered and designed for the customer's specific production needs to maximize the efficiency of the melting or heating process. High conductivity copper tubing with proper wall thickness is selected to maximize electrical efficiency.

Our induction melting coils have the mechanical strength to withstand the severe conditions of a foundry environment. High dielectrical and high-temperature insulating materials are used for all coils. Special attention is given to the operating environment such as vacuum or air melting applications.



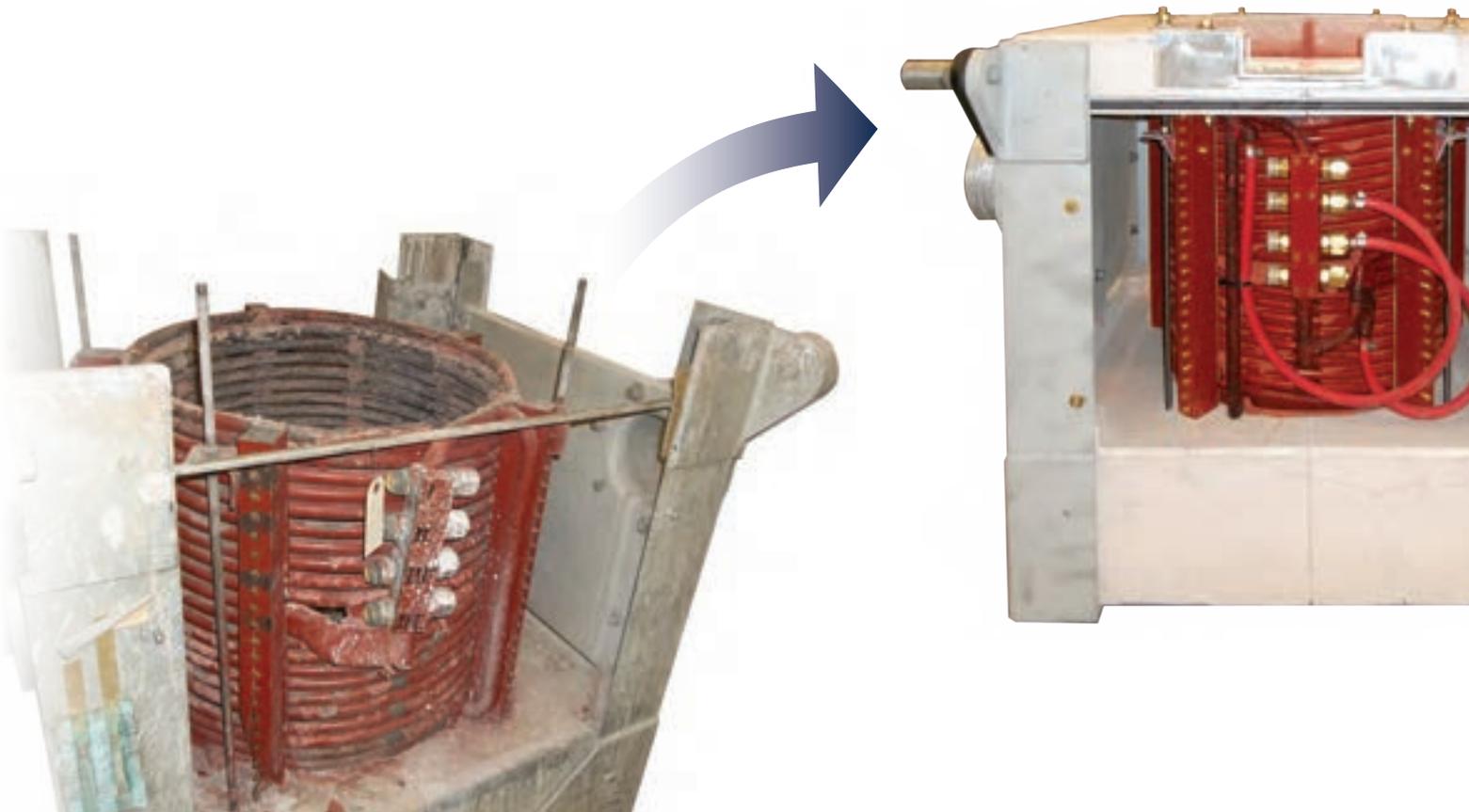
## CUSTOM ENGINEERING

- Full engineering design and support for new start-ups or for custom designed equipment built to suit unique applications
- Free full technical phone support from a highly trained service technician
- On-site initial start-up of newly installed equipment by a highly trained service technician
- On-site training on a wide variety of shop-related subjects, ranging from equipment operation and safety to maintenance and troubleshooting
- Superior aftermarket support services

## TECHNICAL SUPPORT & AFTERMARKET SERVICES

With over 40 years of experience in induction coil manufacturing, ITC has always supported customers with repair services for every inductor type and brand. We are equipped to quickly repair, recondition or rebuild heating or melting coils and furnaces. Our experienced team members deliver results that often exceed their original specifications.

- Coil repair, design and replacement
- Furnace repair or partial to complete rebuild
- Replacement parts for many OEMs
- Preventative Maintenance Service
- Water-cooled power cables, replacement or repair
- Used, Rebuilt or Reconditioned furnace systems and power supplies
- Water cooling and re-circulation systems
- On-site maintenance and repair





## ABOUT US

Induction Technology Corporation was founded in 1979. The company was started with the main objective of providing superior service and innovative products for the induction melting and heating industry. ITC originally operated out of the founder's garage in Huntington Beach, California. Throughout the years, ITC moved into bigger facilities as it grew, finally landing in Apple Valley, California. The facility occupies over 30,000 square feet and was built on 5 acres of industrial property. ITC's newest news is that as of June 2019, it has become a part of the UltraFlex Power Group. ITC has experienced steady growth during over 40 years of being in business.

The steady growth is attributed to its commitment to providing superior customer service and having the main objective of improving products and services continuously.

## CONTACT US

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