

JEWELRY INDUCTION CASTING AND MELTING EQUIPMENT

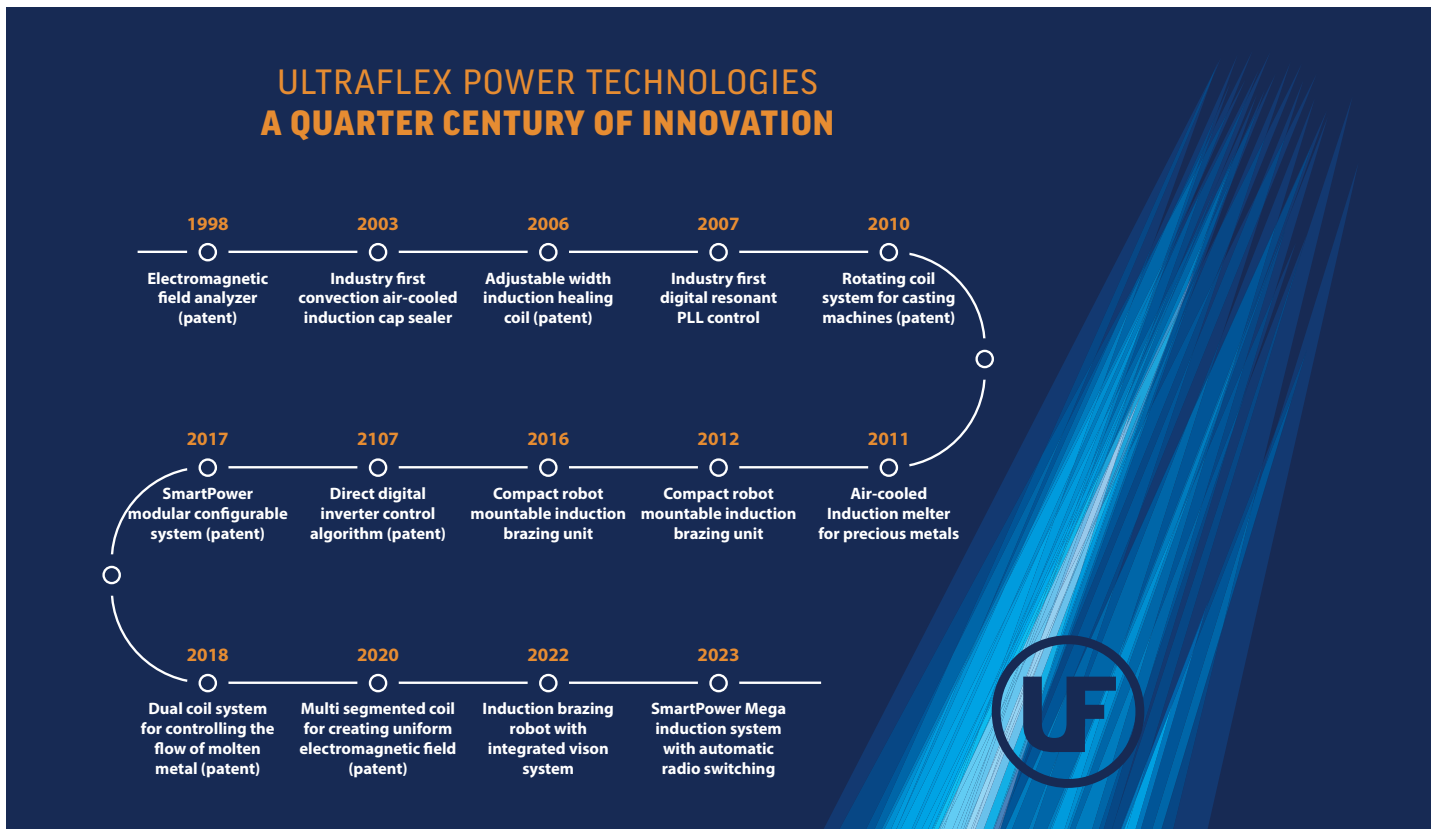


UF UltraFlex
25 YEARS OF INNOVATION



ULTRAFLEX POWER TECHNOLOGIES: REDEFINING JEWELRY CRAFTSMANSHIP

At UltraFlex Power Technologies™ we recognize that the essence of exceptional jewelry is rooted in meticulous precision and the transformative art of creation. Our state-of-the-art melting and casting machines are designed to bring your creative visions to life, offering unmatched precision, efficiency, and reliability.





THE ULTRAFLEX POWER TECHNOLOGIES ADVANTAGE

Founded and headquartered in New York, **UltraFlex Power Technologies™** has provided industrial induction heating equipment and customer-focused solutions worldwide for over 25 years. **UltraFlex** is a global provider with manufacturing facilities in the USA (New York and California), Europe (Bulgaria) and sales and support centers in India, and South America, with additional support from our global distributors and partners.

ABOUT OUR SYSTEMS

UltraFlex offers the most innovative, digitally controlled induction technology in the industry. Our patented SmartPower™ modular systems feature the widest load matching capabilities in the market. This unique technology significantly reduces production downtime and allows more power to be added to the existing system when required. Our equipment incorporates many advanced diagnostic features and modular design advantages which optimize serviceability and maintainability. Our systems can be easily integrated into a manual assembly process or in a fully automated production line. Our engineers can help you develop custom induction heating equipment, OEM modules, or complete turnkey systems.

CERTIFICATIONS

Our equipment is supported by a global network of ISO 9001 certified factories, sales and support offices, and application labs. Our equipment is CE marked and meets the current WEEE, RoHS, and Reach directives. Additional certifications, such as UL and CSA, are available upon request.



CENTRIFUGAL CASTING MACHINES

Induction casting machines tailored for both jewelry and dental applications, compatible with a wide range of alloys, including both precious and non-precious metals. These machines offer rapid, versatile induction melting and ensure precise, dependable casting with centrifugal injection. Their casting method simplifies spruing and achieves exceptionally dense alloy formations.



PRESSURE CASTING MACHINES

Induction pressure casting machines utilize induction heating to melt and mix metals efficiently. These high-volume, versatile pressure over vacuum systems are suitable for jewelry manufacturers with demanding requirements. High casting pressure ensures excellent results and perfect filling of the finest details.



STATIC MELTERS

Induction melting machines are designed for all metal types and alloys, both precious and non-precious. Available in diverse models to meet specific customer requirements, they comply with CE safety standards and incorporate essential safety features for secure operation.



TILTING MELTERS

Large-capacity induction tilting furnaces, available in both manual and automatic tilt models, are ideal for melting substantial metal quantities. Perfect for refining and melting operations, these furnaces offer versatility and efficiency in handling large-scale melting tasks.

SUPERCAST, EASYCAST*, CS DIGITAL*

AIR PURGING FOR OPTIMAL CASTING ENVIRONMENT

1 2

To ensure an environment for flawless casting, both the melting and casting chambers undergo a thorough air purging process. This involves deep vacuuming followed by argon refilling, repeated multiple times to eliminate all oxygen. The final step involves backfilling the chambers with argon, setting the stage for efficient melting and casting.

* The EasyCast and CS Digital series use a drop down coil system, not a rotating coil as shown on the diagram.

MELTING: PRECISION-DRIVEN PROCESS

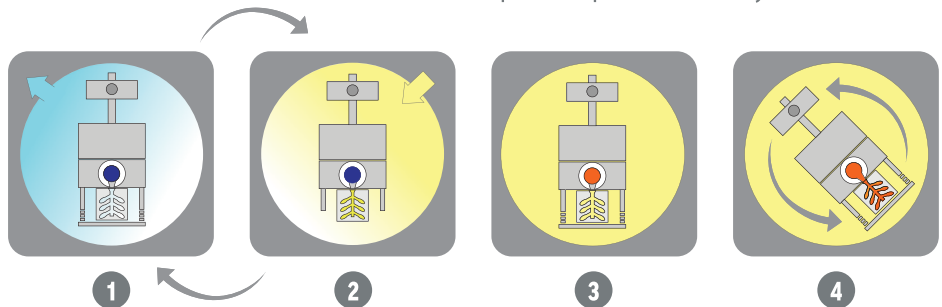
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Upon argon backfill, heating commences. An optical sensor, paired with a built-in temperature controller, monitors and maintains the alloy at the ideal temperature. A viewfinder allows for enhanced process oversight, ensuring every melt meets our exacting standards.

INJECTION AND COMPRESSION

4

As the alloy reaches the optimal casting temperature, our advanced injection and compression cycle begins, adhering to a precise spin profile. This critical stage ensures the right centrifugal force and duration are applied for impeccable casting. Our patented technology maintains uninterrupted heating to prevent premature alloy solidification.



PRESSCAST

MATERIAL LOADING: PREPARATION FOR PERFECTION

1

Before beginning the process, ingots or scrap are carefully loaded, paving the way for a seamless casting experience.

AIR PURGING FOR OPTIMAL CASTING ENVIRONMENT

2 3

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MELTING: PRECISION-DRIVEN PROCESS

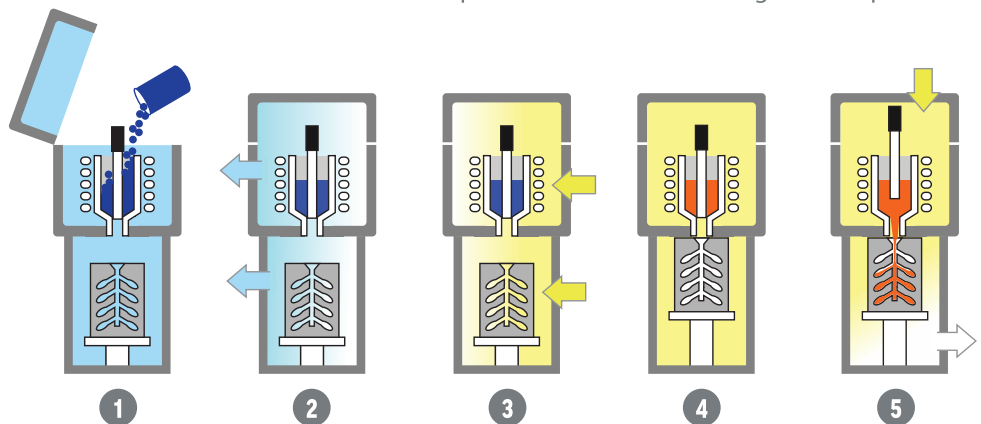
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Upon argon backfill, heating commences. An optical sensor, paired with a built-in temperature controller, monitors and maintains the alloy at the ideal temperature. A viewfinder allows for enhanced process oversight, ensuring every melt meets our exacting standards.

PRESSURE AND VACUUM INTEGRATION FOR FLAWLESS CASTING

5

During the injection and compression phase, the plunger is raised to apply the correct pressure and vacuum, optimizing the casting process. Pressure is applied to the melting chamber, while the vacuum is drawn from the casting chamber, mitigating miscasting, and significantly reducing shrinkage porosity. For optimal results, a precise vacuum/pressure profile is maintained throughout the phase.



INDUCTION CASTING AND MELTING MACHINES

CASTING MACHINES



● g	page 6 EASYCAST SERIES		page 7-8 SUPERCAS T SERIES		page 9 CS DIGITAL			page 10 PRESSCAST	
	EC11	EC12	SCLJ4	SCPJ5-T	CS1-T	CS2-T	CS3-T	PC 3	PC 5
	GOLD*	150		170	170	290	650	1300	3000
PLATINUM	150		200	200	350	750	1000		
SILVER	90		90	90	150	350	700	1600	2700
BRASS	80		70	70	150	300	600	1200	2000
ST. STEEL	55		100	100	170	260	320		
COPPER	80		75	75	130	300	500	1400	2300
TITANIUM				80					
PALLADIUM	100		100	100	170	390	780	1800	3000

MELTING FURNACES



● kg	page 11 EASYMELT SERIES / AIR-1G					page 13 ULTRAMELT 4/5			page 14 ULTRAMELT 12/16				page 15 ULTRAMELT TLT		page 16 ULTRAMELT TF	
	1G	2G	1P	2P	AIR-1G	4G	5G	5P	12G	12U	16G	16U	3P	5P	TF 20	TF 40
GOLD*	1	2			1	4	5		10	6	15	10	4	6	20	40
PLATINUM			0.25	0.5				0.6		3	2	5	2	3		
SILVER	0.55	1.1			0.55	2.2	2.75		5.5	2.75	8.25	5.5	2.2	2.75	14	22
BRASS	0.45	0.9			0.45	1.8	2.2		4.5	2.2	6.75	4.5	1.8	2.2	11	18
ST. STEEL			0.085	0.17				1		2	1	5		2		
COPPER	0.45	0.9			0.45	1.8	2.2		4.5	2.2	6.75	4.5	1.8	2.2	11	18
PALLADIUM	0.5	1			0.5	2	2.5		5	2.5	7.5	5	2	2.5	12	20
ALUMINIUM	0.14	0.28			0.14	0.56	0.7		1.4	0.7	2.1	1.4	0.56	0.7	4	6

○ na

* For 24k gold; For 22k multiply by 0.913; For 18k multiply by 0.776; For 14k multiply by 0.581.

COMPACT, EFFICIENT, AND VERSATILE CENTRIFUGAL CASTING



The Ideal Choice for Small-scale Jewelry Excellence

EasyCast J is a compact centrifugal casting system, designed specifically for small jewelry manufacturers and boutique shops. It can cast all types of metals and alloys, both precious and non-precious.

State-of-the-Art Technology for Superior Performance

Its state-of-the-art induction heating generator employs the latest technology for rapid melting, enhancing productivity and efficiency.

Oxidation-Free Casting

Casting in a vacuum and inert gas atmosphere with EasyCast J ensures complete protection from oxidation, guaranteeing the integrity of every piece. Integrated infrared temperature control ensures consistent casting quality and repeatability.

User-Friendly and Low-Maintenance

The machine's reliable modular system is straightforward to maintain and service, making it a practical choice for any jewelry business.

FEATURES

- Built-in vacuum pump and inert gas (argon or nitrogen) circuit (EC-12 model).
- Integrated Infrared pyrometer with precise temperature control.
- Modern digital controls featuring self-diagnostic capabilities.
- Customizable parameters: power level, rotation speed, acceleration, and melting temperature.
- Internal water cooling system with pressure and water temperature control.
- Optional Heat Exchanger can provide additional cooling for the machine when operating continuously in a hot environment.

SPECIFICATIONS

	EC-11	EC-12
Power (max)	3.0 kW	3.0 kW
AC Line, (50/60Hz), 1 Phase	230 V ±10%	230 V ±10%
Melting Temperature (max)	2000 °C	2000 °C
Crucible Capacity	150g Pt (30g min)	150g Pt (30gr min)
	150g Au, 80g Ag	150g Au, 80g Ag
Crucible Volume	Graphite insert 10 cm ³	Graphite insert 10 cm ³
	Ceramic 30 cm ³	Ceramic 30 cm ³
Flask Size (max), DxH	80 mm x 75 mm	80 mm x 75 mm
IR Temperature reader/regulator	n/a	included
Water Cooling System	included	included
Vacuum Pump	n/a	included
Weight	100 kg (220.5 Lb)	110 kg (242.5 Lb)
Dimensions, LxWxH	53 cm x 65.7 cm x 105 cm (20.9" x 25.9" x 41.3")	53 cm x 65.7 cm x 105 cm (20.9" x 25.9" x 41.3")

THE PINNACLE OF UNIVERSAL CASTING TECHNOLOGY



Revolutionizing Casting with Patented Rotating Coil System (RCS)
SuperCast J is the market’s most advanced universal casting machine, featuring the Rotating Coil System (RCS). It continuously melts the metal during spinning and injecting, maintaining the metal’s viscosity and preventing premature solidification.

Exceptional Quality and Repeatability for All Metals
 The fully automatic operation, casts all types of precious and non-precious metals and alloys with quality and repeatability. The powerful motor delivers high acceleration and speed, resulting in very low porosity and dense metal compaction.

Efficient Melting and Mixing with Advanced Induction Heating
SuperCast J ensures rapid and efficient melting and mixing of metals in various forms, from grains and ingots to scrap and even powder.

Intuitive and Informative Touch Control Panel
 The modern LCD Touch control panel on **SuperCast J** has easy-to-use interface, providing intuitive visual feedback.

FEATURES

- Fully automatic (one-button) or manual casting cycle.
- Built-in vacuum pump and inert gas (argon or nitrogen) circuit.
- Continuous coil rotation with arm and flask for consistent heating and injection.
- Accurate temperature reader with advanced temperature controller and metal emissivity regulation.
- Optional Heat Exchanger can provide additional cooling for the machine when operating continuously in a hot environment.
- Advanced, highly efficient induction heating technology.
- Modern 5" full color LCD touch control panel (J5-T model).
- Multiple user programs with a range of pre-programmed settings (J5-T model).
- Special programs for titanium casting (J5-T models).
- Easy installation, with simple and safe operation.

SPECIFICATIONS

	Supercast Lite J4	Supercast J5-T
Power (max)	4.0 kW	5.0 kW
AC Line (50/60Hz), 1 Phase	230 V ±10%	230 V ±10%
Melting Temperature (max)	2000 °C	2000 °C
Crucible Capacity	200g Pt (50g Pt min), 170g Au, 80g Ag	200g Pt (50g Pt min), 170g Au, 80g Ti (10g Ti – ingot), 80g Ag
Crucible Volume	Graphite insert 10 cm ³ Ceramic 30 cm ³	Graphite insert 10 cm ³ Ceramic 30 cm ³
Flask Size (max), DxH	80 mm x 75 mm	90 mm x 90 mm
Water Cooling System	included	included
Vacuum Pump	included	included
Auto-Cast Programs	No	included
Titanium casting program	No	Yes
LCD touch control panel	No	Yes
Weight	155 kg (342 Lb)	175 kg (385.8 Lb)
Dimensions, LxWxH	64 cm x 67 cm x 105 cm (25.2" x 26.4" x 41.3")	64 cm x 67 cm x 105 cm (25.2" x 26.4" x 41.3")

PRECISION CASTING FOR RESEARCH AND QUALITY CONTROL



FEATURES

- Fully automatic (one-button) or manual casting cycle.
- Built-in vacuum pump and inert gas (argon or nitrogen) circuit.
- Continuous coil rotation with arm and flask for consistent heating and injection.
- Accurate temperature reader with an advanced temperature controller and metal emissivity regulation.
- Capable of melting all metals and alloys (precious and non-precious) in ingot or powder form (AP-T).
- Advanced, highly efficient induction heating technology.
- Modern 5" full color LCD touch control panel.
- Multiple user programs with a variety of pre-programmed settings.
- Special programs designed for titanium casting.
- Designed for easy installation and simple, safe operation.

Tailored for Specialized Applications

The **SuperCast Pro** systems is designed for sample preparation and quality control testing in research, recycling, foundry, and metallurgical facilities.

Cutting-Edge Induction Heating Technology

SuperCast Pro can melt all types of metals and alloys, precious and non-precious, in ingot or powder form, ensuring versatility across a wide range of applications.

Patented RCS for Consistent Quality

The patented RCS (Rotating Coil System) guarantees the production of samples with exceptional repeatability and quality, setting a new standard in precision casting.

Efficiency at Its Best

Boasting high melting efficiency and speed, **SuperCast Pro** is capable of producing up to 12 casting samples per hour, making it ideal for 24-hour operations.

Compact and Reliable Design

SuperCast Pro systems are compact and reliable, featuring an integrated vacuum pump and water cooling.

Safety and Compliance

Each **SuperCast Pro** system is CE certified, ensuring adherence to the highest safety and protection standards.

SPECIFICATIONS

	SuperCast AP5-T	SuperCast A5-T
Power (max)	4.4 kW	5.4 kW
Frequency kHz	350 – 400	85 – 105
AC Line (50/60Hz), 1 Phase	230 V ±10%	230 V ±10%
Line Phases	1	1
Crucible Capacity	10-30 ccm	10-30 ccm
Type of material	Powder	Small pieces
Melting Temperature (max)	2000 °C	2000 °C
Water Cooling System	included	included
Weight	200 kg (440.9 Lb)	200 kg (440.9 Lb)
Dimensions, LxWxH	67 cm x 56 cm x 105 cm (26.4" x 22" x 41.3")	67 cm x 56 cm x 105 cm (26.4" x 22" x 41.3")

THE ULTIMATE SOLUTION FOR HIGH-VOLUME JEWELRY MANUFACTURING



Designed for Large-scale Production

CS **Digital** is tailored for high-volume jewelry manufacturers.

Versatile Casting Capabilities

The CS **Digital** can cast all metals and alloys commonly used in jewelry manufacturing.

High-Performance Centrifugal Casting

A heavy-duty provides high speed and acceleration for centrifugal casting.

Powerful Induction Heating

for Rapid Melting

CS **Digital** ensures fast and efficient melting and mixing of both precious and non-precious metals and alloy.

Advanced Temperature Control

for Consistent Results

Integrated Infrared temperature control, coupled with an optional advanced Dual-wave IR pyrometer.

FEATURES

- Centrifugal injection with pneumatic movement for rapid coil descent.
- Accurate temperature controller up to 2000°C.
- Centrifugal arm balancing with adjustable counterweights.
- Advanced 5" full-color LCD touch panel with remote diagnostic capabilities.
- Melting power regulation from 10% to 100%.
- Powerful DC motor with reduction gear and adjustable acceleration.
- Integrated powerful vacuum pump.
- Maximum rotating speed of 500 rpm. Rotation timeout preset at 40 sec.
- Auto-locking chamber lid during the centrifugal phase for enhanced safety.
- Inert (Argon or Nitrogen) gas circuit included.

SPECIFICATIONS

	CS1-J	CS2-J	CS3-J
Power (max)	7.5 kW	7.5 kW	10.0 kW
AC Line, (50/60Hz), 3 Phase	400 V ±10% 230 V ±10% (optional)	400 V ±10% 230 V ±10% (optional)	400 V ±10% 230 V ±10% (optional)
Melting Temperature (max)	2000 °C	2000 °C	2000 °C
Crucible Capacity	350g Pt (90g Pt min) 290g Au	750g Pt (190g Pt min) 650g Au	1 kg Pt (250g Pt min) 1.3 kg Au
Crucible Volume	Graphite insert 20 cm ³ Ceramic 25 cm ³	Graphite insert 40 cm ³ Ceramic 60 cm ³	Graphite insert 85 cm ³ Ceramic 170 cm ³
Flask Size (max), DxH	100 mm x 120 mm	120 mm x 160 mm	150 mm x 180 mm
Vacuum Pump	included	included	included
Cooling Requirements water system quoted upon request	Water (external)	Water (external)	Water (external)
Cooling Water (min)	2 LpM (0.53 GpM)	2 LpM (0.53 GpM)	2 LpM (0.53 GpM)
Inlet Water Temperature (max)	35 °C	35 °C	35 °C
Weight	250 kg (551.1 Lb)	310 kg (683.4 Lb)	330 kg (727.5 Lb)
Dimensions, LxWxH	70 cm x 76 cm x 110.5 cm (27.6" x 30" x 43.5")	91 cm x 103 cm x 110.5 cm (35.8" x 40.6" x 43.5")	100 cm x 110 cm x 110.5 cm (39.4" x 43.3" x 43.5")

HIGH-VOLUME, VERSATILE PRESSURE CASTING SYSTEMS



Engineered for Demanding High-Volume Production

PressCast 3 and 5 are our flagship pressure-over-vacuum casting systems, designed specifically for high-volume jewelry manufacturers with stringent requirements.

Exceptional Quality Casting for a Range of Metals

PressCast machines excel in producing high-quality castings, including “stone-in-place” casting, for all low melting point metals and alloys commonly used in jewelry manufacturing – gold, silver, brass, and more.

High-Pressure Casting for Impeccable Detailing

With a high casting pressure of up to 6 bar, **PressCast** systems ensure excellent casting results and flawless filling of intricate details. An integrated thermocouple probe and temperature controller guarantee consistent casting quality and repeatability.

Advanced Induction Heating for Efficient Melting

The advanced powerful induction heating technology in **PressCast** utilizes low frequency (6kHz) and electromagnetic pulsing, providing fast, efficient melting and superior mixing of the molten metal.

Intuitive LCD Touch Control Panel

The LCD Touch control panel offers a user-friendly interface with intuitive visual feedback. It efficiently manages process parameters, user input, settings adjustments, and stores multiple programs.

FEATURES

- Dual chamber injection casting system with pressure over vacuum.
- High-pressure casting (6 bar) with pneumatic flask lift.
- Graphite stopper rod centrally positioned in the crucible.
- Accurate temperature control with a thermocouple embedded in the sealing rod.
- Multiple programs: 10 programmable cycles with 10 parameters per cycle.
- Integrated vacuum pump: 100 mbar with 40m³/hr capacity.
- Argon required for casting: maximum 60 L at 2 bar pressure.
- Optional high-capacity granulation system.

SPECIFICATIONS

	PressCast - 3J	PressCast - 5J
Power (max)	11.0 kW	11.0 kW
Frequency	6 kHz	6 kHz
AC Line, (50/60Hz), 3 Phase	400 V ±10%	400 V ±10%
	230 V ±10% (optional)	230 V ±10% (optional)
Melting Temperature (max)	1300 °C	1300 °C
Crucible Capacity	3 kg Au	5 kg Au
Crucible Volume	208 cm ³	430 cm ³
Flask Size (max), DxH	120 mm x 300 mm	120 mm x 300 mm
Vacuum Pump	Included	Included
Cooling Requirements water system quoted upon request	Water (External)	Water (External)
Cooling Water (min)	5.8 LpM (1.53 GpM)	5.8 LpM (1.53 GpM)
Inlet Water Temperature (max)	35 °C	35 °C
Weight	290 kg (639.3 Lb)	425 kg (937 Lb)
Dimensions, LxWxH	70 cm x 101 cm x 135 cm (27.6" x 39.8" x 53.1")	70 cm x 101 cm x 135 cm (27.6" x 39.8" x 53.1")

COMPACT, EFFICIENT INDUCTION MELTING FOR SMALL BATCHES



Desktop Unit for Rapid Melting

EasyMelt is an ideal compact desktop unit, engineered for quick induction melting of small batches.

Efficient and Fast Induction Melting

Designed with efficient circuits that minimize energy consumption and provide fast melting.

Temperature Control

This system can be adapted to melt a variety of metals and alloys. Its temperature control prevents overheating and ensures the metal is melted without any risk of burning.

Durable and Reliable Design

Featuring a stainless steel front and a high-temperature resistant top cover, **EasyMelt** is built for heavy-duty use.

User-Friendly and Low-Maintenance

Installation, maintenance, and servicing are straightforward with **EasyMelt**, making it a hassle-free addition to any workspace.

FEATURES

- Adjustable Timer (1 – 30min) with an audible alert.
- Power regulation ranging from 10 – 100%.
- Built-in temperature reader.
- Temperature probe available for models up to 1300 °C
- LED panel displaying Power, Time, and Temperature.
- Optional water cooling system available upon request.

SPECIFICATIONS

	EM – 1G	EM – 1P	EM – 2G	EM – 2P
Power (max)	2.80 kW	2.80 kW	2.80 kW	2.80 kW
AC Line, (50/60Hz), 1 Phase	230 V ±10%	230 V ±10%	230 V ±10%	230 V ±10%
Melting Temperature (max)	1300 °C	2000 °C	1300 °C	2000 °C
Crucible Capacity	1 kg Gold	50-250g Pt	2 kg Gold	200-500g Pt
Crucible Volume	67 cm ³	21 cm ³	124 cm ³	80 cm ³
Weight	14 kg (30.9 Lb)	14 kg (30.9 Lb)	14 kg (30.9 Lb)	14 kg (30.9 Lb)
Dimensions, LxWxH	40 cm x 45 cm x 18 cm (15.7" x 17.7" x 7.1")	40 cm x 45 cm x 18 cm (15.7" x 17.7" x 7.1")	40 cm x 45 cm x 18 cm (15.7" x 17.7" x 7.1")	40 cm x 45 cm x 18 cm (15.7" x 17.7" x 7.1")
Cooling Requirements water system quoted upon request	Water (external)	Water (external)	Water (external)	Water (external)
Cooling Water (min)	0.8 LpM (0.21 GpM)	0.8 LpM (0.21 GpM)	0.8 LpM (0.21 GpM)	0.8 LpM (0.21 GpM)
Inlet Water Temperature (max)	35 °C	35 °C	35 °C	35 °C

COMPACT AIR-COOLED INDUCTION MELTING SYSTEM



Ideal for Small Batches of Gold and Silver

The **EasyMelt Air-1G** is a compact, air-cooled desktop induction melting system, specifically designed for melting small batches of gold and silver. Its size and functionality make it a perfect fit for small workshops and labs.

No Water Cooling Required

This system does not require water cooling, simplifying its use and installation, especially in settings where water cooling isn't available.

Bringing Melting Capabilities to Smaller Spaces

EasyMelt Air-1G extends melting capabilities to smaller workspaces and laboratories where larger induction furnaces may not be practical.

Efficient and Fast Induction Melting

Utilizing an efficient circuit, this system achieves fast induction melting with low energy consumption, making it both effective and economical.

Reliable and Easy-to-Use

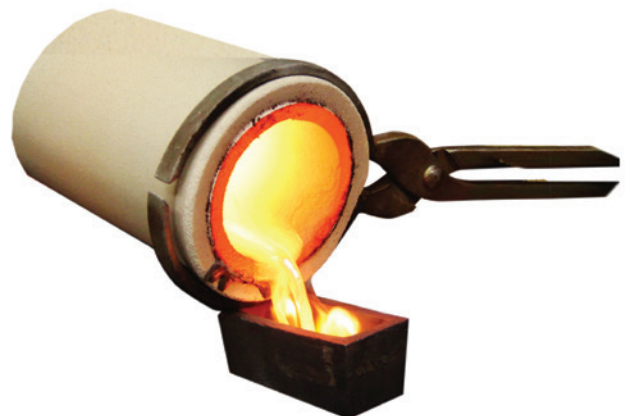
EasyMelt Air-1G is not only reliable but also easy to install, maintain, and service, ensuring a hassle-free experience for its users.

FEATURES

- Adjustable Timer (1 – 30 minutes) with an audible alert.
- Power regulation ranging from 10 – 100%.
- Built-in temperature reader, with an optional thermocouple probe.
- LED panel displaying Power, Time, and Temperature.
- Effective coil overheating protection system.

SPECIFICATIONS

	EM – 1G
Power (max)	2.8 kW
AC Line, (50/60Hz), 1 Phase	230 V ±10%
Melting Temperature (max)	1300 °C
Crucible Capacity	1 kg Gold
Crucible Volume	95 cm ³
Weight	14 kg (30.9 Lb)
Dimensions, LxWxH	40 cm x 45 cm x 18 cm (15.7" x 17.7" x 7.1")
Cooling Requirements water system quoted upon request	Forced Air



5 KW ADVANCED INDUCTION MELTING FURNACE



Efficient Melting Solution

The UltraMelt 4/5 is a highly reliable and durable induction melting furnace, designed to efficiently melt any precious and non-precious metals and alloys.

Fast Induction Melting

This furnace boasts fast induction melting capabilities, utilizing an advanced circuit with low energy consumption.

Configurable Systems for Diverse Melting Requirements

UltraMelt 4/5's flexible systems can be tailored to melt different metals and alloys, offering versatility to meet specific melting demands.

Precise Temperature Control

Equipped with temperature control features, including a thermocouple probe or an optional IR pyrometer, UltraMelt 4/5 prevents overheating and ensures the metal is melted safely and effectively.

Robust and Heavy-Duty Design

A stainless steel front and high-temperature top cover enable prolonged heavy-duty use, reinforcing the furnace's durability and longevity.

FEATURES

- Power regulation from 10 – 100%, with a power bar-graph indicator.
- Advanced digital controls, complete with service and diagnostic features.
- Temperature controller compatible with a thermocouple probe or an optional IR pyrometer.
- Optional transformer available for 3-phase/230V AC line requirements.
- Water cooling system available upon request.

SPECIFICATIONS

	UM – 4G	UM – 5G	UM – 5P
Absorbed Power (max)	5.0 kW	5.0 kW	5.0 kW
AC Line, (50/60Hz), 1 Phase	230 V ±10%	230 V ±10%	230 V ±10%
Crucible Capacity	4 kg Gold	5 kg Gold	150 - 600 g Pt
Crucible Volume	280 cm ³	562 cm ³	291 cm ³
Melting Temperature (max)	1300 °C	1300 °C	2000 °C
Weight	56 kg (123 Lb)	56 kg (123 Lb)	56 kg (123 Lb)
Dimensions, LxWxH	46 cm x 40 cm x 95 cm (18.1" x 15.7" x 37.4")	46 cm x 40 cm x 95 cm (18.1" x 15.7" x 37.4")	46 cm x 40 cm x 95 cm (18.1" x 15.7" x 37.4")
Cooling Requirements water system quoted upon request	Water (external)	Water (external)	Water (external)
Cooling Water (min)	2.0 LpM (0.5 GpM)	2.0 LpM (0.5 GpM)	2.0 LpM (0.5 GpM)
Inlet Water Temperature (max)	35 °C	35 °C	35 °C

16KW INDUCTION MELTING FURNACE



Efficient Melting for All Metal Types

UltraMelt 12/16 is a robust induction melting furnace, expertly designed for melting both precious and non-precious metals and alloys.

Advanced Circuit for Fast, Energy-Efficient Melting

This furnace features fast induction melting capabilities, thanks to an advanced RF circuit that optimizes energy consumption.

Configurable for Various Melting Needs

The flexible systems of **UltraMelt 12/16** can be tailored to specific requirements, allowing for the melting of different metals and alloys to suit diverse needs.

Precise Temperature Control

Equipped with a temperature control mechanism, including a thermocouple probe or an optional IR pyrometer, **UltraMelt 12/16** ensures safe and effective melting without the risk of overheating or metal burning.

FEATURES

- Power regulation from 10 – 100%, with a power bar-graph indicator.
- Advanced digital controls, featuring service and diagnostic capabilities.
- Temperature controller, compatible with a thermocouple probe or an optional IR pyrometer.
- Optional transformer available for 3-phase/230V AC line requirements.

SPECIFICATIONS

	UM – 12G	UM – 12U	UM – 16G	UM – 16U
Power (max)	12 kW	12 kW	16 kW	16 kW
AC Line, (50/60Hz), 3 Phases	380 V/480 V ±10%	380 V/480 V ±10%	380 V/480 V ±10%	380 V/480 V ±10%
	Optional 230VAC	Optional 230VAC	Optional 230VAC	Optional 230VAC
Crucible Capacity	10 kg Au, 24kt	8 kg Au, 24kt *3 kg Pt *2 kg SS	15 kg Au, 24kt	10 kg Au, 24kt *5 kg Pt *5 kg SS
Melting Temperature (max)	1300 °C	2000 °C	1300 °C	2000 °C
Cooling Requirements water system quoted upon request	Water (External)	Water (External)	Water (External)	Water (External)
Weight	90 kg (198.4 lb)	90 kg (198.4 lb)	90 kg (198.4 lb)	90 kg (198.4 lb)
Dimensions, LxWxH	65 x 55 x 97 cm (25.6 x 21.7 x 38.2")	65 x 55 x 97 cm (25.6 x 21.7 x 38.2")	65 x 55 x 97 cm (25.6 x 21.7 x 38.2")	65 x 55 x 97 cm (25.6 x 21.7 x 38.2")

COMPACT TILTING STATION



Efficient Melting for All Metal Types

UltraMelt TLT is a robust induction melting furnace, expertly designed for melting both precious and non-precious metals and alloys.

Advanced Circuit for Fast, Energy-Efficient Melting

This furnace features fast induction melting capabilities, thanks to an advanced RF circuit that optimizes energy consumption.

Designed for Compatibility with Powerful Generators

This tilting station is engineered to be compatible with Solo 12 kW and 16 kW induction generators.

Note on Configuration

Please note that the induction heating power supply is not included with the **UltraMelt TLT** and must be ordered separately. Ensure to select the appropriate power supply to meet your melting needs.

FEATURES

- Manual tilting mechanism.
- Optional Infrared Temperature reader for accurate temperature monitoring.
- Optional argon gas dispenser.
- Compatible with power generators of 12 kW and 16 kW, allowing selection based on production rate needs.

SPECIFICATIONS

	UltraMelt TLT-3P	UltraMelt TLT-5P
AC Line , (50/60Hz), 3 Phases	380 V/480 V \pm 10%	380 V/480 V \pm 10%
Crucible Capacity	4kg Gold, 2kg Pt	6kg Gold, 3kg Pt
Melting Temperature (max)	2000 °C	2000 °C
Cooling Requirements water system quoted upon request	Water (External)	Water (External)
Temperature measurement	Infrared Pyrometer (optional)	Infrared Pyrometer (optional)
Weight	15 kg (33 lb)	15 kg (33 lb)
Dimensions , LxWxH	78 x 40 x 30 cm (30.7 x 15.7 x 11.8")	78 x 40 x 30 cm (30.7 x 15.7 x 11.8")
Compatible Power Supply	Solo 12, Solo 16	Solo 12, Solo 16



ROBUST TILTING INDUCTION MELTING FURNACE FOR LARGER VOLUMES



High-Capacity, Durable Melting Solution

UltraMelt TF stands as a long-lasting and durable tilting induction melting furnace, ideal for handling larger volumes of metals.

Versatile Melting Capacities

Efficiently melt up to 40kg of gold or 25kg of silver with **UltraMelt TF**.

Smooth and accurate Tilting Mechanism

The furnace tilting control ensures the safe and simple pouring of molten metal.

User-Friendly Digital Control Panel

Equipped with a digital control panel, **UltraMelt TF** displays status messages and diagnostics features, facilitating easy monitoring and control of the melting process.

Energy-Efficient Fast Induction Melting

This furnace boasts fast induction melting capabilities using an advanced circuit that optimizes energy consumption, making it both efficient and economical for large-scale operations.

Reliability and Ease of Maintenance

UltraMelt TF is easy to install, maintain, and service, ensuring a hassle-free experience for users.

FEATURES

- Power regulation from 10 – 100%, with a power bar-graph indicator.
- Advanced digital controls, complete with service and diagnostic features.
- Available models for steel melting.
- Temperature controller compatible with a thermocouple probe or an optional IR pyrometer.
- Custom models with different capacities can be manufactured.
- Automatic tilting control for ease of operation.

SPECIFICATIONS

	TF-20	TF-40
Power	20 kW / 25 kW	40 kW / 50 kW
AC Line, (50/60Hz), 3 Phases	380 V / 480 V ±10%	380 V / 480 V ±10%
Crucible Capacity	20 kg Gold	40 kg Gold
Crucible Volume	1615 cm ³	3278 cm ³
Cooling Requirements water system quoted upon request	Water (External)	Water (External)
Weight	350 kg (771 Lb)	370 kg (815 Lb)
Dimensions, LxWxH	73 cm x 99 cm x 136 cm (28.7" x 38.9" x 53.5")	73 cm x 99 cm x 136 cm (28.7" x 38.9" x 53.5")



EFFICIENT AND VERSATILE MELTING SOLUTION



Configurable Designs

The **CompactPower Cube** can be manufactured to accommodate different operational needs:

- One man tilt in a heavy-duty steel frame (pivot point near the center of the furnace).
- Air over oil tilt assist for effective nose pivot.
- Two man shank pour with a supportive table.

FEATURES

Flexible system

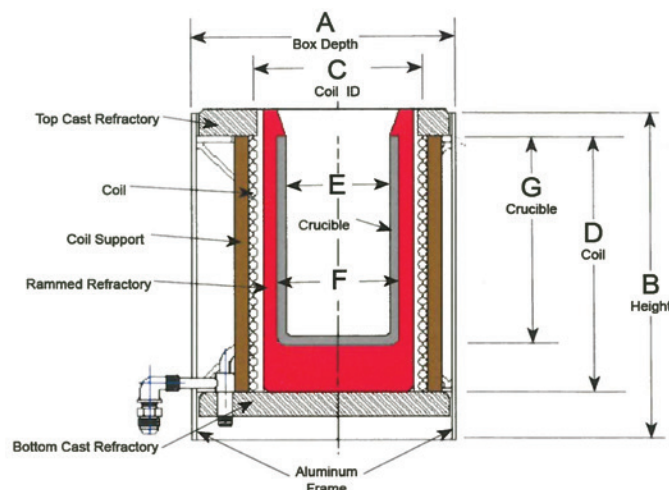
CompactPower Cube is compatible with UltraFlex Solo and SmartPower Series power supplies, ranging from 12 to 200kW, depending on the required melting capacity and production rates.

Direct Power Lead Connection

This feature eliminates common issues associated with thermal clamps, offering a more reliable and efficient power connection.

Ideal for Various Melting Applications

Perfect for any melting application, including steel, non-ferrous, and precious metals. It is compatible with ceramic, clay graphite, or silicon carbide crucibles.



SPECIFICATIONS

Furnance Capacity (Steel)	5 lbs. / 2 kg		12 lbs. / 8 kg		17 lbs. / 2 kg		30 lbs. / 14 kg		50 lbs. / 23 kg	
	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
A	12 1/4	31	12 1/4	31	12 1/4	31	12 1/4	31	13 1/4	34
B	14 1/2	37	14 1/2	37	14 1/2	37	14 1/2	37	17 1/4	44
C	4 1/2	11	5 1/2	14	5 3/4	14	7 1/8	18	8 1/2	22
D	10 3/4	27	10 3/4	27	10 3/4	27	10 3/4	27	13 1/2	34
E	2 3/4	7	3 1/2	9	3 3/4	10	5	13	5 1/2	14
F	3 3/8	9	4 1/4	11	4 1/2	11	5 3/4	15	6 1/2	17
G	6	15	7	18	8	20	9 1/2	24	11	28
Box Width	12 3/4	32	12 3/4	32	12 3/4	32	12 3/4	32	13 1/2	34
Approx. Weight of Furnance less Crucible Lining	75 lbs. / 34 kg		80 lbs. / 36 kg		80 lbs. / 36 kg		85 lbs. / 39 kg		102 lbs. / 46 kg	

VERSATILE AND POWERFUL INDUCTION FURNACE

FEATURES

■ **Flexible and Scalable System**

Capable of connecting 4 furnaces to a single power supply. Combined output power can reach up to 400 kW.

■ **Advanced Modular Design**

Configurable power output ranging from 40 kW to 400 kW, accommodating various melting requirements.

■ **High Capacity and Efficiency**

Melting capacity up to 2000kg steel/ brass, suitable for a variety of industrial applications. Energy-efficient design, ensuring reduced operational costs.

■ **Robust Construction for Durability**

Constructed with high-quality materials for longevity and reliability.

■ **Customizable Options**

- The furnace can be adapted for tilting using the customer’s overhead hoist.
- Optional hydraulic cylinders available, pre-piped with a control valve mounted on either side of the furnace for enhanced maneuverability.
- Fume collection ring, designed to enhance workplace safety by effectively managing and collecting fumes.



TILTING FURNACES SPECIFICATIONS

Model of Size	Capacity (kg/lbs)			Apx. Overall Furnace Dimensions (mm/in)			Coil ID (mm/in)	Apx. Working Lining Dimensions (mm/in)			
								Ram Lining		Crucible	
	Steel	Brass	Aluminum	Width	Length	Height		Depth	Avg. Dia.	Depth	Avg. Dia.
100	73/160	59/130	18/40	813/32	521/21	762/30	267/11	356/14	197/8	330/13	175/7
150	82/182	66/145	20/45	813/32	521/21	762/30	292/12	356/14	210/8	330/13	185/7
200	137/301	112/246	35/76	1067/42	660/26	940/37	330/13	445/18	241/10	415/16	215/8
300	175/385	157/347	49/107	1067/42	660/26	940/37	381/15	445/18	273/11	415/16	255/10
400	218/480	190/418	59/129	1067/42	660/26	940/37	419/17	445/18	305/12	415/16	280/11
500	354/781	310/684	96/212	1219/48	737/29	1054/42	451/18	572/23	343/14	520/20	320/13
650	409/901	351/773	108/239	1219/48	737/29	1054/42	495/20	572/23	368/15	520/20	340/13
850	467/1030	438/965	135/298	1219/48	737/29	1054/42	533/21	572/23	394/16	520/20	380/15
1000	821/1809	685/1511	212/467	1645/65	1067/42	1346/53	584/23	787/31	445/18	745/29	397/16
1500	917/2022	959/2114	297/654	1645/65	1067/42	1346/53	648/26	787/31	470/19	745/29	470/19
2000	1182/2605	1174/2588	363/800	1645/65	1067/42	1346/53	724/29	787/31	533/21	745/29	520/20
3000	1718/3788	1525/3361	472/1040	1981/78	1410/56	1511/60	787/31	914/36	597/24	865/34	550/22
4000	1945/4287	2033/4482	629/1386	1981/78	1410/56	1511/60	864/34	914/36	635/25	865/34	635/25

WHERE ARTISTRY MEETS INNOVATION IN JEWELRY MAKING

HEADQUARTERED IN NEW YORK, USA, ULTRAFLEX POWER SPECIALIZES IN THE DEVELOPMENT AND MANUFACTURING OF ADVANCED INDUCTION HEATING SYSTEMS. WE OFFER A DIVERSE ARRAY OF INDUCTION CASTING AND MELTING MACHINES COMPATIBLE WITH VARIOUS METALS AND ALLOYS.



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