

NEUTEC USA®

## J-Z, J-ZP & J-ZP AUTOCAST INDUCTION, VACUUM CASTING MACHINES

From this world leader in casting technology we bring you a complete range of induction melting, vacuum casting systems built to out perform other machines that cost far more. While the J-Z is more sophisticated with more features than any of its competitors, it is engineered to be the easiest to operate and maintain of any machine in its class.

Features and Benefits of all J-Z machines –

- Space saving design – can be easily set up for bench- top use or mounted on either the optional stand or water cooler/stand combination. Both optional stands have adjustable feet to ensure the machine is level.

- Fast cycle times and simple operation - Dynamic Variable Compensation™ technology combined with an 18 turn induction coil automatically produces the fastest, most efficient melting program for any alloy and any size load - without the need for operator intervention. Casting cycle times average about four minutes, or 15 flasks per hour. The 18 turn induction coil is encased in a heat resistant, dielectric ceramic material. This keeps the user safe from electric shock and makes the coil extremely reliable. Check out the coils in other brands of casting machines. You'll see less than half the number of turns on their coil

- No over-carating - Pulsed Power Stirring™ technology ensures homogeneity. Alloys and metals are prevented from separating as Pulsed Power Stir operates right up to the pour time.

- Large flask capacity – all size perforated flasks can be used, even up to 127mm diameter X 229mm high (5" X 9") It is possible to cast small sculptures with this size if required

- Built in vacuum pump – a quality 15cfm, oil-sealed, direct drive pump is built into the machine to give durability and quiet, trouble free operation. Unlike some other machines the J-z requires no air compressor.

- Grain making tank – All machines in the J-Z range come with a grain making tank. It is well known that reusing your clean buttons, sprues and trees will give you significant savings in refining charges and reduce the cost of carrying large stocks of metal. Research shows that casting quality improves when only granules of an even shape and size is used. Your profits will increase when you alloy your own metal and reuse your clean metal. A special graining crucible is available for this.

- Built in computer – Neutec Advanced Dynamic Computer™ (ADC) technology produces the most efficient melt/cast cycle for any alloy and load size – without the need for operator intervention. The precise accuracy of ADC temperature control has proven successful for stone-in place casting with CZ's, diamonds, sapphires, rubies and many created stones, etc.



- Closed system – melting and casting is in a closed oxygen-free, nitrogen atmosphere to reduce porosity and rejects caused by oxidation. The crucible chamber and the flask chamber are separately controlled with each having its own gas flow meter. It is recommended that nitrogen gas is used, however, it is possible to use argon. Graphite crucible also removes any oxygen that may be present in the metal added.

- Large 184cc graphite crucible – you can alloy 2,700 grams of 18ct at one time and cast up to 1,600 grams at a time. Small casts are no problem, 100 grams will cast to the same high quality.

- Single phase electrical power- not all workshops have 3-phase power which is often a requirement with other casting machines. The J-z is designed to operate on single phase for this very reason.

- Water cooling – all induction machines require water cooling. With the J-Z you have two choices. You can connect directly to your water supply and waste drain, making sure the water supply is running while using the machine or you can purchase the closed cooling system that controls the water temperature and reuses water. This unit is also a stand that supports your machine at a convenient height.



## All J-Z Casting Machines Benefits –

- Built in computer - produces the most efficient melt/cast cycle for all alloys and load sizes and accurately controls temperatures for standard and specialty casts ie: stone in place casting
- Closed vacuum system – porosity and rejections reduced by casting in oxygen-free atmosphere
- Built in vacuum pump
- Large crucible capacity – 184cc capacity will cast from 100gm to 1,600 grams 18ct
- Large flask capacity when required – can use all perforated flask sizes up to 127mm diameter X 229mm high
- Fast cycle time – averages around 4 minutes or 15 flasks per hour
- No over carating – Pulsed Power Stirring ensures homogeneity on every alloy and cast batch
- Grain making tank included
- Exceptional reliability for long service life
- Qualified technical support and training available locally



## Additional Benefits Of J-Z P –

- Includes all features and benefits of J-Z plus
- Exclusive two stage Dynamic Pressure System™ (DPS). Over pressure system produces exceptional detail and casting quality.



**Grain Making Tank**  
included with all three J-Z models



## Additional Benefits Of J-ZP Autocast –

- Includes all features and benefits of J-Z and J-ZP plus
- Automatically initiates the pour when the metal reaches the set casting temperature
- Signals when the flask can be removed after pour is completed and metal has stabilized. This does not extend the cycle time.



## J-Z Specifications -

Dimensions : 89cmW X 56cmD X 97cmH  
 Weight : 132kg  
 Shipping Weight : 186kg  
 Power : 240volts single phase, 50/60Hz  
 Max. Temp : 1371 C  
 Normal Cycle Time : 4 minutes

## Optional Accessories -

### Cabinet Stand

The stable way to bring your J-Z up to a comfortable working level



### Water Cooler Stand

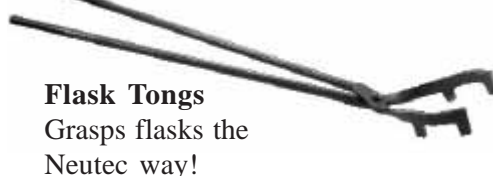
It's stable, it's the right height and cooling water is recycled in this stand not just flushed down the drain.



Ref: 41-292-001

### Crucible Cooling Jar

Prolong the life of your graphite crucibles by stabilising the cool down rate while keeping air away until the crucible is cool.



**Flask Tongs**  
Grasps flasks the Neutech way!



**Crucible Tongs**  
Ref: 41-292-002

NEUTEC/USA®

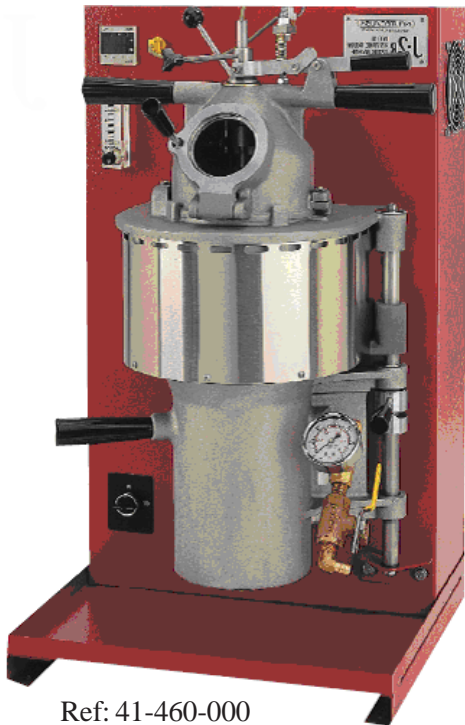
## J-2R Series IV

### RESISTANCE MELTING VACUUM CASTING MACHINE

The perfect choice for the small to medium size workshop when increased production with improved quality at an affordable price is important. This current model is the fourth generation resistance melting vacuum casting machine from this internationally renowned, innovative company. The J-2R is proven to be reliable, easy to set up and use and will produce quality castings quickly and consistently. There simply is no other machine on the market with these features and quality at such an affordable price.

#### Features and Benefits Include –

- Easy installation and simple operation – taking up less than 1 square metre of bench space, the J-2R is simple to set up and operate. All that is required to cast is to set the required cast temperature on the temperature controller, add the metal to be melted, insert the flask and as the set temperature is reached just stir the molten metal using the stirring lever then push the casting lever to release the metal into the flask
- Fast cycle times – after initial warm up the cycle time is 6 to 8 minutes, depending on amount to be cast.
- Large crucible capacity (154cc – working capacity is 60% of liquid capacity ie: 722gm sterling silver) this machine can cast to flasks ranging from 2/12" (63.5mm) to 4" (101.6mm) in diameter up to 9" (228mm) high
- Closed system – melting and casting is in a closed oxygen-free, nitrogen atmosphere to help reduce porosity and rejects caused by oxidation. Graphite crucible also removes any oxygen present in the metal added.
- Accurate temperature control – melt/cast temperature is reached quickly and is held with more stability. As the metal temperature is measured accurately at the center of the metal pool the likelihood of temperature overshoot and over-heating the metal is reduced. The bottom-pour crucible with short pouring distance allows little drop in metal temperature from crucible to flask and any contaminants stay in the button.
- Service and support – Constructed with heavy duty, quality components incorporating advanced technology. As authorized Australian agents for Neutec, AJS is committed to providing qualified technical support and supply of parts and consumables anywhere in our region.



Ref: 41-460-000

#### Specifications

Dimensions : 77 H X 46 W X 46cmD  
 Weight : 54kg  
 Shipping : 65kg  
 Power : 240 volts AC single phase,  
 1.5kw (15amp breaker required)  
 Max. Temp : 1204 C  
 Inert Gas : 5 litres/minute @ 0.7bar (10psi)  
 technical grade nitrogen or argon  
 Warranty : 12 months Manufacturers warranty



#### Graphite Flask Gaskets (packs of 6 only)

Ref: 41-290-003	suit 3" Flasks	
Ref: 41-290-035	suit 3½" Flasks	Gaskets for other sizes by special order
Ref: 41-290-004	suit 4" Flasks	
Ref: 41-290-045	suit 4½" Flasks	

## Neutec Perforated Flasks

For NeuSprues and sprue bases see Carving Waxes page 22



#### Stock Sizes

Reference	Size mm	Reference	Size mm	Reference	Size mm
41-285-003	76 x 102	41-285-006	102 x 152	41-285-008	102 x 203
41-285-010	102 x 254	41-285-025	62 x 102	41-285-035	89 x 152
41-285-100	89 x 254				

Other sizes available by special order

76 x 203	76 x 229	89 x 127	89 x 203	89 x 229	102 x 102
102 x 229	127 x 178	127 x 203	127 x 229	127 x 254	152 x 203
152 x 229	152 x 254				