

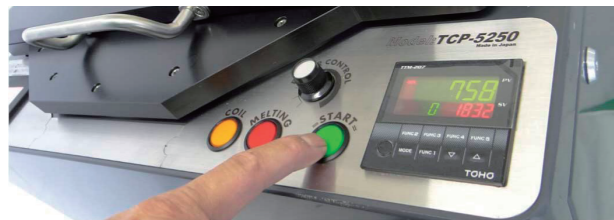
Vacuum Centrifugal Casting Machine TCP-5251 Specifications

Power	AC200V(190 ~ 220V) 3ph 50/60Hz 6.5kVA
Size	700(W) × 700(D) × 930(H)mm including all parts
Weight	230kg
For use with	Pt
Oscillator	4kw 40kHz ~ 50kHz
Range of thermometry	750°C ~ 2000°C
Thermometry	Radiation thermometer
Temperature control	PID
Max volume	Pt : 200g
Mold sizes	Selectable at time of purchase : Φ 60.3mm × 90(H) Φ 76.3mm × 90(H)
Other	Compressed air 5kg (Constant) Cooling water (2.0L / min) Vacuum pump (300L / min)

※ Design and specifications are subject to change without notice.

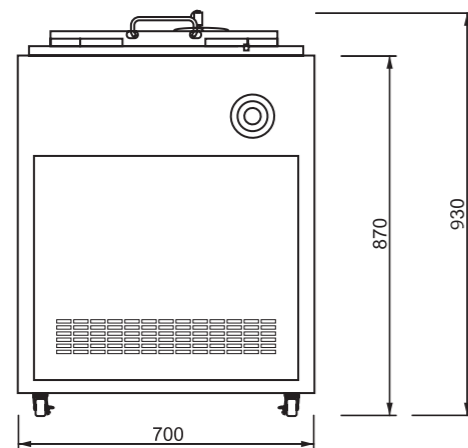
Easy to use

The TCP-5251 can easily be operated by its touch-panel control. Previously done settings can easily be recalled, and settings of other parameters can also be done. Error message functions are also available.

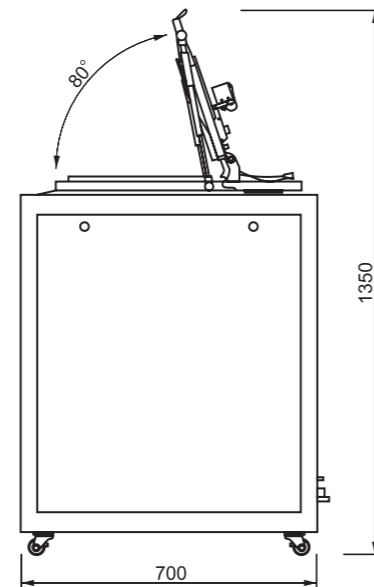


Compact, yet highly capable

By maintaining a simple internal structure, a highly compact design has been achieved. The Snap swing-arm contribute to its compact size and also beautiful casting result.



((mm))



 **TANABE**
Unrivaled Accuracy

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Please feel free to contact us with any questions or concerns. We are also able to provide demonstrations of our products.

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Vacuum Centrifugal Casting Machine

Compact, Powerful, and Accurate

真空遠心鑄造機
TCP-5251



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Rotation control

For centrifugal casting, the most important things are rotation control and the timing for pouring the alloy into the mold. With our 40 years' experience in developing centrifugal casting machines, we have found the ideal rotation speed and duration. With digital control, you can select programs for consistent casting conditions to create stable casting results.

-Stage A: From start to basin

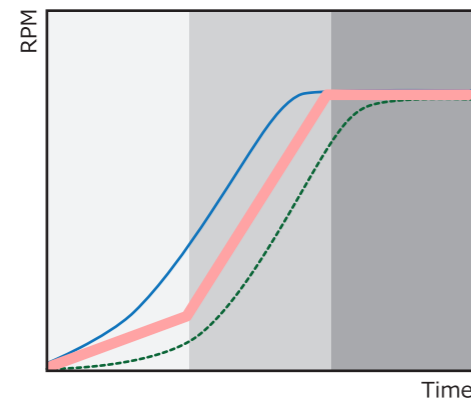
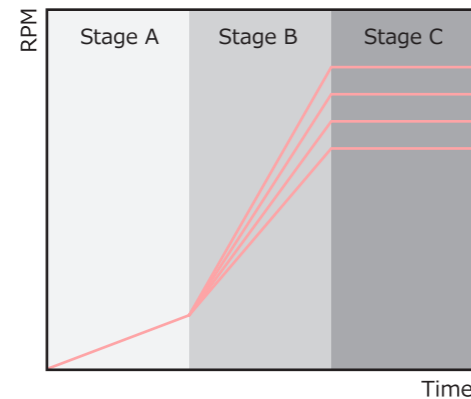
The initial rotation speed is programmed to avoid the alloy splashing and for all the alloy to enter the basin. This also helps to avoid any gas entering the mold, which causes pinholes.

-Stages B and C: From basin to mold

Depending on the type, amount, and weight of the alloy, and on the design, the rotation speed needs to be different. After the initial stage, you can set the speed and time of the rotation to achieve the highest level of product quality.

-Stable rotation control

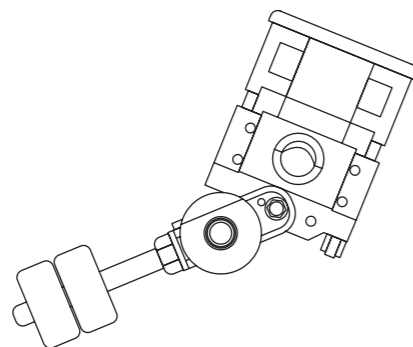
In the past, when doing casting with varied amounts of alloys, it was common to end up getting inferior results because of the difference caused to the rotation speed. However, the TCP-5251 maintains accurate rotation speed and duration regardless of the weight.



— TCP-5251 with any amount of alloy
 — Other machines with 50g alloy
 - - - Other machines with 100g alloy

Snap Swing-arm

The TCP-5251 uses the Tanabe Kenden exclusive Snap Swing-arm. Having this allows for a more compact centrifuge machine, without losing any efficiency when compared to larger machines. This enables all of the alloy to enter the mold without any spilling or waste.

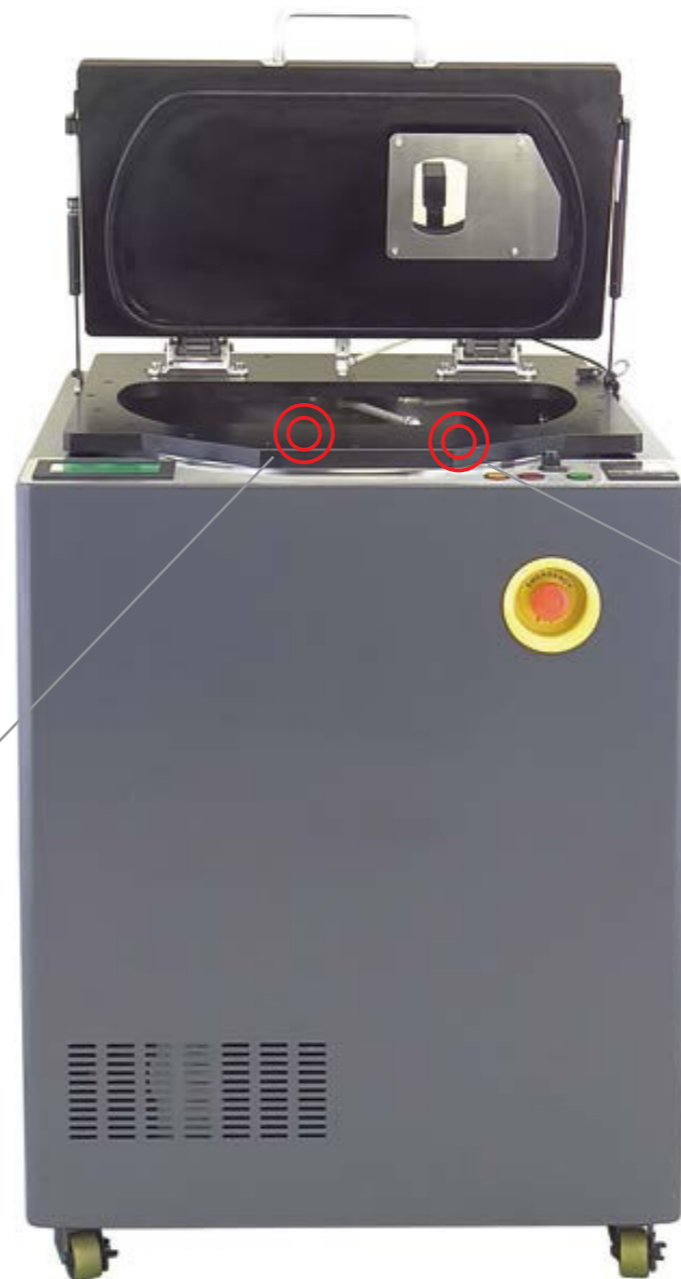


Compact, Powerful, and Accurate

TCP-5251

Vacuum Centrifugal Casting Machine

Effective rotation programming
 Efficient alloy pouring with Snap Swing-arm
 Prevention of pinholes by inert gas replacement control
 Accurate temperature control through smoke removal function

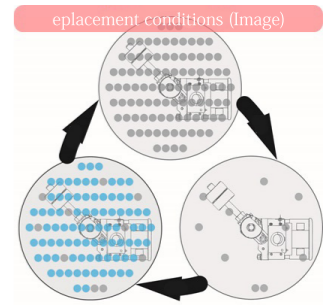


Inert gas replacement function

During the casting process, oxidization of the alloy can cause pinholes and discoloring, resulting in a lower quality product. The TCP-5251 has an inert gas replacement function to prevent this.

-Replacement can be repeated as many times as needed

Some alloys are more likely to oxidize, and thus for these alloys, repeating the inert gas replacement will lower the amount of oxygen in the chamber, resulting in a better product. By doing this once, 90% replacement can be achieved, but by doing it twice, 99% is achieved, and the more it is done, the closer to 100% you can get.



-Efficiently fills the smallest, detailed parts of the mold and avoids shrinkage

After the rotation begins, inert gas is inserted to regular atmosphere pressure so that the alloy enters every part of the mold. The pressure of the inert gas makes the solidification of the alloy faster, preventing shrinkage and pinholes.

-Decompression level can also be set

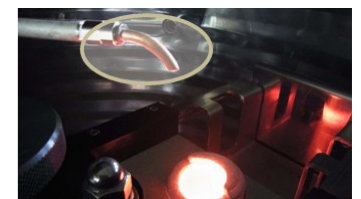
Depending on the characteristics of the alloy and the design of the pieces, you can program the decompression level to your needs for higher quality casting results.

Accurate temperature control

Even when the quality of the radial thermometer is very high, it can yield inaccurate results when there is smoke coming from the melted alloy. By removing the smoke, the accuracy of the measurement is restored, allowing you to know the best timing for the casting.

-Smoke removal function

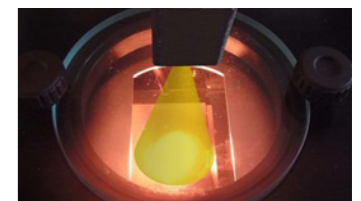
By removing the smoke coming from the alloy, the temperature measurements become more accurate.



-Radial thermometer

Range of measure: 750°C ~ 2000°C

Depending on the alloys, the thermal emissivity will vary. This is specially set for platinum.



Melting atmosphere, Manual mode

When the alloy is melted, not only the temperature but also the atmosphere around the alloy is an important factor. The melting button can be pressed at any time deemed fit by the user, such as right after reaching the target temperature or during the decompression. Automated and manual modes are both available for creating high quality pieces.