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# Preci Roto

# Benefits:

- Versatile system for accurate and simple spruing, investing, and casting with plastic or metal rings
- Produces consistent, accurate, and predictable castings
- Facilitates controlled thermal expansion
- Eliminates suck-back and contraction tearing
- Produces very dense and homogeneous precision fit castings

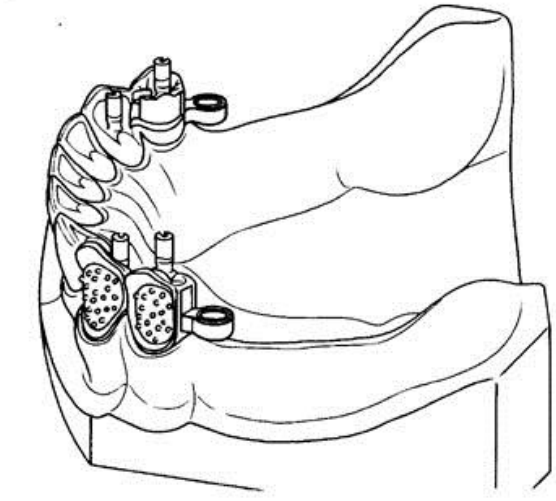
*Large Wax*

### Roto Casting Wheels

Wax casting wheels (with release canal) may be easily placed onto the crucible former. Observe a safe distance between the casting units and the ring former wall. Never place the objects in the thermal center of the ring former.

50 wax pieces (29mm Ø), Large

# Roto Instructions



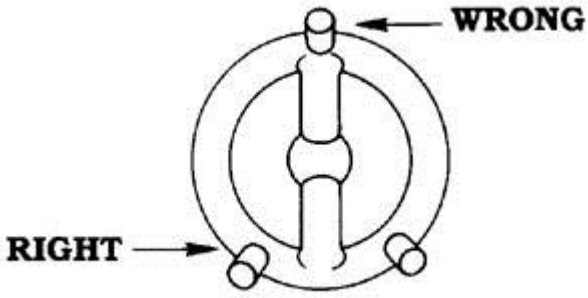
**1**

**2**

Wax up the crowns/bridges. Lute the end of the green sprue (with the nib) to the wax pattern at its thickest point (**FIG 1**). Make sure that the molten metal will not strike an opposing sharp edge. Fill the open slot with wax

(this will lute the interior of the sprue to the pattern). The end of the sprue that is attached to the wax pattern should be waxed out to form a gentle taper (**FIG 2**).

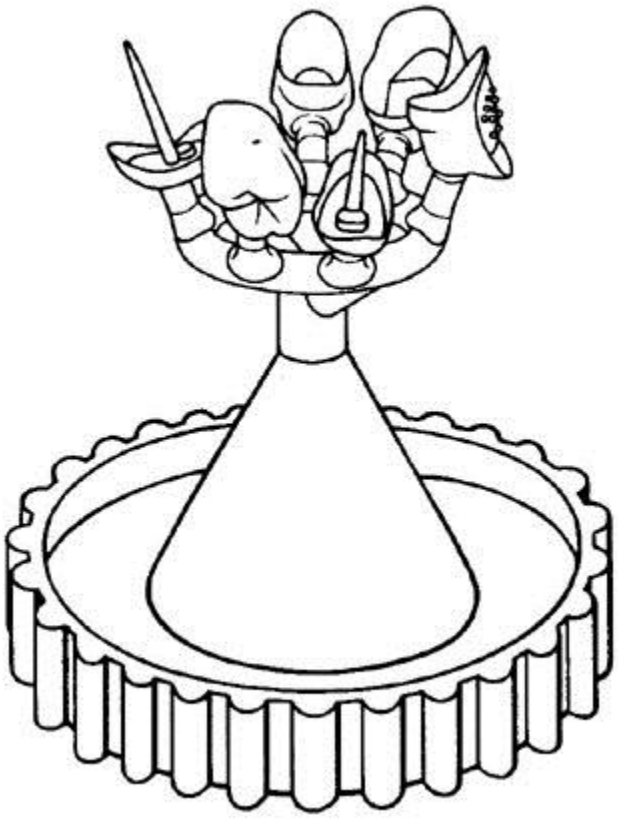
**3**




**4**

Wax the patterns (6-10 pieces) and sprues onto the wax ring. **Please note: if the plastic casting rings are used, they must be dipped in dipping wax prior to using**. The patterns should be angled slightly outward and must never lean towards the inside (**FIG 3**). The sprues must never be aligned with the main sprue of the wax ring (position 3-5mm to either side) (**FIG 4**).

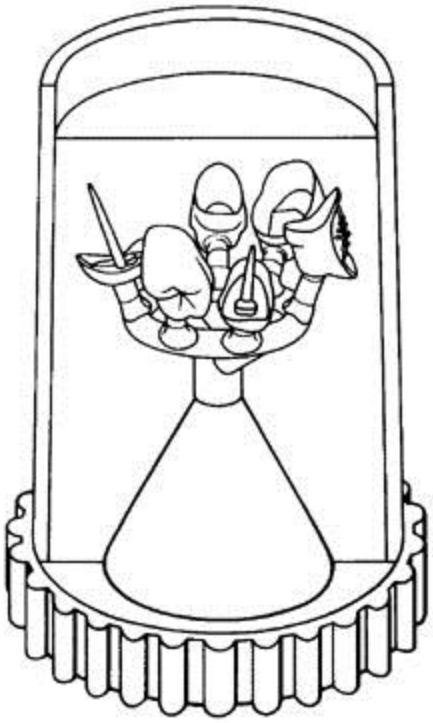
Attach long span components with contact sprues across from each other on the ring. Place the plastic investment ring over the wax patterns to make sure that there is 3-5mm of space between the plastic investment ring wall and the wax patterns.



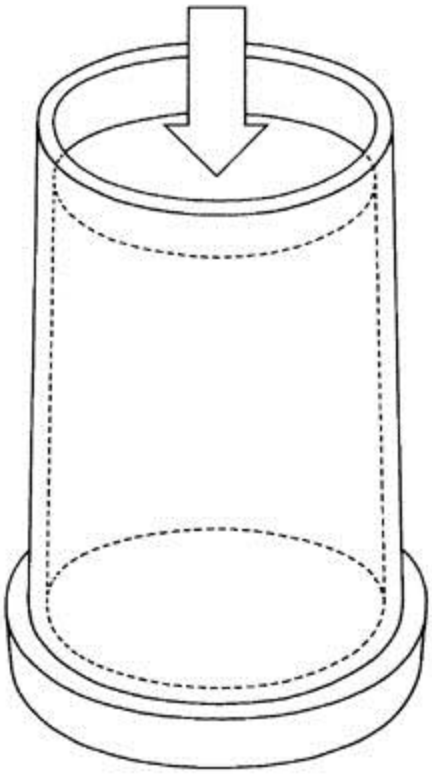
**5**

Position the wax ring on the plastic crucible former (it will fit perfectly) and lute it with wax to secure it (**FIG 5**). Ensure that all the wax joints are smooth. Spray the wax with a wetting agent.

Place the plastic investment ring over the wax patterns and snap it onto the plastic crucible former. Seal the joint with wax.



6



7

Use only high heat investment material according to the manufacturer's instructions and fill the plastic investment ring until the investment material covers the wax patterns with a minimum of 2mm and a maximum of 5mm of material (**FIG 6**).

After the investment has set but is still warm, carefully separate the crucible former from the plastic investment ring.

Place the large end of the plastic investment ring in the investment release ring (**FIG 7**) and tap lightly on the bench top. The invested cylinder can now be easily removed from the plastic investment ring.

If the investment material is cold, the plastic investment ring can be removed by placing a flat round disk on the top of the invested cylinder and pushing it out.

A two-stage burn-out is highly recommended. Place the investment mold into a cold furnace and go to 800F and hold for 30-40 minutes. Then proceed to normal burnout temperature and soak. This will prevent investment fracture.

Reserve 8 grams (0.3 oz.) of metal for the small cylinders and 12 grams (0.4 oz.) for the large ones.

**Note**: When using metal rings and liners, you should proceed according to the instructions provided by the investment manufacturer.