

## Removing polypropylene dust, oil, and dirt from plastic tool models

### General Description

All cleaning involves one or more processes: direct mechanical energy such as scrubbing or spraying, use of chemicals, heating, and time. Ultrasonic energy, a form of mechanical energy, generates controlled, high-magnitude pressure fluctuations in liquids that produce a consistent, high level of cleanliness in a short amount of time. Ultrasonic cleaning also is able to penetrate minute crevices that conventional methods cannot.

### How to Clean Plastic Tool Models

- Fill the tank with the proper chemistry and turn on the heat.
- Ensure that the tool model to be cleaned doesn't trap any air. If all surfaces are not wetted with liquid, the ultrasonic energy won't be fully effective.
- Activate the ultrasonic energy by turning the system on.
- When the cycle ends, remove the cleaned tool model and ensure that it is completely drained and free of all soils.
- Thoroughly rinse the part with clean water, again wetting all surfaces.
- Dry the tool model by evaporation, air-drying, or forced hot air.



### Equipment Recommendation

An appropriately sized Bransonic® Model MH is a highly effective unit for cleaning plastic tool models. It features our rugged industrial-style 40 kHz transducer and is simple to operate:

- Fill the bath with a solution of 10% Branson Industrial Strength (IS) solution.
- Turn on the heater and set the ultrasonic cycle time.
- The unit's sweep frequency ultrasonics eliminates any dead zones, ensuring complete, consistent precision cleaning every time.

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## Recommended Plastics Tool Model Cleaning Process

The chart below indicates recommendations for precision cleaning plastic tool models using the Branson Model MH ultrasonic cleaning unit.

Process Stage	Chemical	Ultrasonic Frequency (kHz)	Handling	Temp. (°F)	Dwell Time (minutes)
<b>WASH</b>	10% Branson IS	40	basket	140	5
<b>RINSE</b>	clean tap water	N/A	basket	warm	N/A
<b>DRY</b>	forced hot air	N/A	basket	ambient	until dry

It is vital that tool models be clean of polypropylene dust and oil prior to moving to the next step in the modeling process. Through the use of the Model MH you are assured of the same level of cleanliness every time, using a preset configuration set by the engineer. The process requires only that the operator place the tool model in the proper

fixture in the bath and start the automatic program. At the end of the cycle, rinse the Branson Industrial Strength (IS) solution from the tool model with clean water. Dry using forced hot air. There's no need for brushing or manual washing with the Branson MH ultrasonic cleaner.

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