

## FAST WAX MELTING FOR CANDLE MAKING

*Increase production through faster wax melting and temperature maintenance*

### Application

Wax is substance that can be melted in 55-gallon (200-208 liter) drums. Wax caps must be removed from beehive frames to allow honey to be spun during harvesting. These can be melted in drums to increase the production yield from each frame. The wax must be filtered out and may be used for other products. An example of this would be the manufacturing of candles using beeswax.

Paraffin candles are made from petroleum-based wax that has a melting temperature of 99°F (37°C). Beeswax is a cleaner burning wax that has a higher melting temperature than paraffin, ranging from 144°F to 147°F (62°C to 64°C).

To melt more efficiently, the wax is mixed 50-50 with oil having a lower melting point for better flame stability. Since the oils have a lower melting point, they can be heated in a drum and used to assist in the melting of the beeswax. Once melted, the oil and wax are mixed for the final product. The wax can be dispensed into jars, molds or blocks for future use. The wax must be efficiently and accurately melted to avoid damaging or destroying the final product.

### Solution

BriskHeat's DHI Immersion Drum heater is the ideal solution for heating beeswax. The heater is directly immersed within the drum which allows the heat to immediately be transferred to the product rather than having it absorbed by the container. The heating element inserts into the bung hole on a standard 55-gallon (200-208 liter) drum lid, then threaded into place for quick installation. The DHI delivers 1,000 watts for maximum heat, has a built-in digital controller that can be set up to 167°F (71°C), and a 10 ft (3 m) long cord with standard 3-prong plug for simple plug-and-play operation. It is safe for use on poly or metal drums. The superalloy incoloy 840 heater will not corrode and contaminate the product, is grounded, and includes a 180°F (82°C) high-limit alarm for safety and peace of mind.

For even better thermal performance, the DHI drum immersion heater can be paired with either a FGDHW Wet-Area or the FGDH Standard Full-Coverage Drum Heater. These add more heating power and insulation to the system. As an alternative, performance tests show that the combination of the DHI immersion heater and FGDHIW insulator heats faster than a standard full-coverage 55-gallon drum heater.

**Product Tip:** For dispensing the wax into molds or smaller containers, the heater can be positioned close to the pouring spout to prevent clogs. Remove power when the liquid level covers less than 12 in (305 mm) of the heater.

### Additional Uses

BriskHeat offers a full line of drum heaters and insulators that can be used in most environments for other types of wax melting, freeze protection, viscosity control, and process heat.



#### Industries

Agriculture/Ranching/ Farming	Food & Beverage Processing
Consumer/Residential	Manufacturing

#### Types of Users

Plant Managers	Beekeepers
Production Engineers	Home Hobbyists
Small Business Owners	