ContinuTherm: Continuous Cooker

The ***ContinuTherm*** thermal cooker is a flexible continuous thermal processing system configurable for a broad range of products; from meat, poultry and fish to fruits and vegetables to pasta, rice and other grains.

Continuous thermal screws are as simple to operate and maintain, as they are versatile. Processors benefit by switching from batch to continuous manufacturing where streamlined product handling reduces labor requirements and improves consistency of product quality.

Blentech specializes in turn-key ***ContinuTherm*** systems including raw material metering upstream and downstream separation, handling and cooling/chilling equipment. In addition to designing thermal screws for customary cooking modes such as direct steam and water or oil immersion, Blentech has developed several unique processing solutions by adapting our proprietary technologies to this "tried-and-true" continuous cooking method to produce high value-added food items such as sautéed onions, bacon bits and stir-fried rice.

The Continuous Cooking Workhorse

Cook, Blanch, Cool, Stir-Fry or Sauté

Range of Products & Applications:
The ContinuTherm is an extremely versatile machine that can be engineered to fit a whole host of continuous thermal processing applications. Each system is customized for the specific process and desired production rate. Blentech has designed units with capacities of 100-lb/hr (45-kg/hr) to 10,000 lb/hr (4,500-kg/hr) or more, depending on the application.

- ***Products Blanched or Cooked with Steam***
  Diced Potatoes, Carrots and other Fruits and Vegetables, Pulped Fruit and Vegetable Slurries, Scrambled Egg, Pet Foods

- ***Products Blanched or Cooked in Water***
  Rice, Pasta, Pizza Topping, Meatballs, Diced Meat or Poultry, Shrimp, Fruits and Vegetables, Pet Foods

- ***Products Cooked in Oil***
  Pizza Topping, Meatballs, Ground Beef Crumbles, Bacon Bits, Cubes or Strips of Meat, Poultry or Fish, Garlic, Onion, Peppers and other Vegetables

- ***Stir-Fried & Sautéed Products***
  Cubes or Strips of Meat, Poultry or Fish, Diced Mixed Vegetables, Egg-Fried Rice, Sautéed Onions and Garlic

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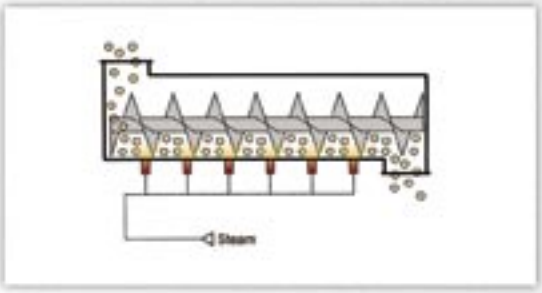
ContinuTherm's Proven Configurations

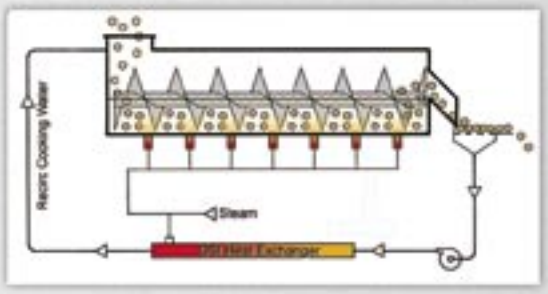


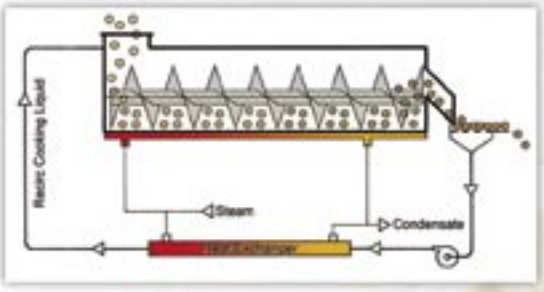
Direct Steam

Steam blanching or steam cooking in the ***ContinuTherm*** improves yields on potatoes and other products that tend to lose soluble solids when cooked in water. Conversely, pulped fruit or vegetables, for which moisture addition and particulate degradation are not an issue, can be rapidly heated with direct steam injection. Proprietary steam diffusers disperse steam evenly along the bottom of the vessel for uniform product heating.

Water Immersion

Water immersion cooking suits products such as pasta and rice that require added moisture to hydrate while cooking. Cooking diced meat or shrimp in water enhances heat conductivity and adds lubricity to keep individual pieces from cooking together. Heating is normally via direct steam injection, though indirect heating by steam jacket and/or external heat exchanger is possible if required by the application. Cooking water is captured at the outlet and re-circulated to use its residual heat potential while reducing effluent discharge.



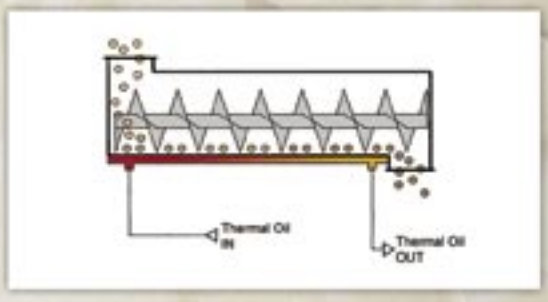


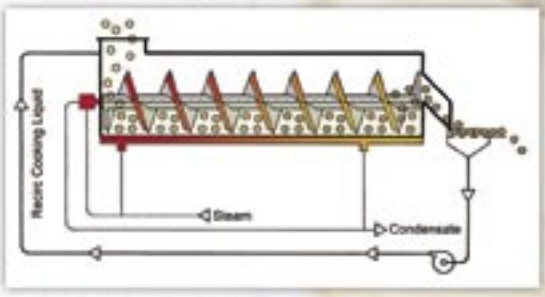
Hot Oil Immersion

Cooking in hot oil develops desirable browning color and flavor notes to products in a way that water immersion cannot duplicate. Oil is heated to 206°F (97°C) by a high pressure steam jacket and an external heat exchanger. This "low temperature" deep frying configuration is ideal for cooking pizza toppings, meatballs, chicken and beef cubes or fajita strips. Increasing the residence time or raising the cook oil temperature [up to 275°F (135°C)] produces a crispier texture and richer, brown finish. Results on pizza toppings indicate this process improves yields versus continuous ovens.

Sautéing and Stir-Frying

With features borrowed from our VersaWok batch stir-fry cooker, we have devised a ***ContinuTherm*** system capable of continuous sautéing or stir-frying of diced meat, poultry, onions, peppers and other vegetables as well as fried rice. High-pressure steam heats the jacket sufficiently for most sauté applications while thermal oil will generate temperatures approaching 590°F (310°C) for stir-frying. PLC controlled agitation action mimics the distinctive mixing and tossing action of wok cooking for authentic sautéed and stir-fried products. Blentech's patented scraper system inhibits burn-on allowing shift-long run times.





Jacket and Hollow Screw

The addition of a hollow screw dramatically expands the vessel's heat transfer capacity; making possible rapid heating of products where direct steam injection or water immersion are not practicable. This allows the ***ContinuTherm*** to satisfy the enormous heat load requirements needed to evaporate large volumes of moisture from products making, applications such as, the continuous frying of bacon bits a reality. High pressure steam, thermal oil – or chilled water or glycol coolant - can be circulated through the hollow screw and jacketed trough for maximum thermal processing flexibility.

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