
Presentation Purpose

- The purpose of this presentation is to provide the operator with an understanding of the process used to pack kettle pump casings. Information contained within has been derived from the FDA Food Code and Serv-Safe® providing a science based reference pertaining to the prevention of food borne illness.
- M&Q Packaging Corporation recommends that a certified food technician be consulted on technical issues and that a documented HACCP procedure be created for the operators packing cook chill kettle pump casings.

What is Cook Chill?



- Preparing food in bulk quantities and maintaining freshness in refrigerated storage.
- Storage temperature is between 28°F - 32°F (-2°C - 0°C).
- Food packaged in properly chilled casings will have a shelf life up to 28 days.

Advantages of Cook Chill

- Food on demand vs. cook and serve
- Preserve nutrient integrity and flavor
- Consistent taste and quality
- Reduce operating costs by 35% or more

Menu Items for Cook Chill

Kettle Pump Casings

•Soups



•Sauces



•Chili



•Mashed Potatoes



Step One: Food Preparation

- Viscous or semi viscous menu items (i.e. soups, sauces, chili, etc.) cooked to or past a pasteurization temperature of 165°F (74°C)
- At this point, bacteria is eliminated in the food.
- It is recommended that food be cooked to at least 180°F (82°C) allowing an additional buffer during filling and clipping of the casings.



Step Two: Packaging

- Recommended casing sizes include:
 - 10" x 16" Casings (½ gallon)
 - 10" x 20" Casings (1 gallon)
 - 10" x 24" Casings (1.5 gallon)
 - 10" x 30" Casings (2.0 gallon)
 - 12" x 30" Casing (3 gallon handle bag)
- Packing in excess of 3 gallons will slow cooling time and may compromise the desired shelf life.
- Remove food from direct heat while packing casings. Product remains pasteurized until reaching 165°F (74°C).

Manual Cook Chill



- A Ring Stand holds the casing open during filling.
- A calibrated pitcher or vessel portions the desired amount of food into each casing.
- Prior to clipping, *evacuate as much air as possible from the casing then clip near the top of the open end.*

Manual Cook Chill

Continued

- When food temperature reaches the pasteurization point (165°F/74°C) any air remaining inside the casing is also pasteurized.
- Allow at least 4” between the top of the fill line and where the casing is clipped.
- **Note:** Casing should not be packed firmly like a cookie-dough package. Food should move freely inside the casing to accelerate the cooling process.



Validate Casing Fill Level



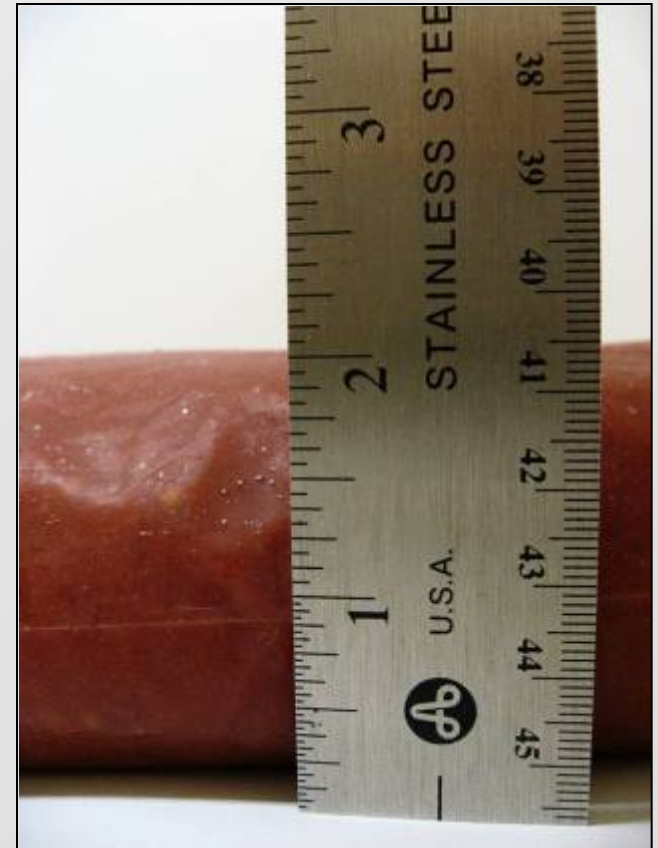
- There are two (2) methods by which the Casing Fill Level may be validated. Casing Fill Level is critical to proper cooling.
- **Method 1: Saddle Validation**
Place the filled casing over extended fingers. Casing should be evenly distributed like a “saddle-bag”.
- Fingers are partially visible through the center of the casing. If fingers are not visible, the casing has been overfilled and will not cool properly.

Validate Casing Fill Level

Continued

- **Method 2: Table Test**

Place the casing flat on a table and measure the height from the table surface to the top of the casing. Height should measure no more than 2" - 2.5". If the measurement exceeds 2.5" the casing is overfilled and will not cool properly.



Checking Casing Temperature



The filled casing cannot be punctured to obtain a true internal temperature. Two options have been developed to validate the internal temperature. Both options require the development of a HACCP protocol for calculating internal temperature of the specific food products being packed.

Option 1: Shake the casing vigorously to ensure a consistent internal temperature. Fold one side over the other and gently press the stem of a Bimetallic Stemmed Thermometer between the two folds to obtain a reading. Consult the HACCP protocol for the correlating targeted temperature.

Checking Casing Temperature

Continued



Option 2:

Shake the casing vigorously to ensure a consistent internal temperature. Using an Infrared (Laser) Thermometer, take a reading of the casing surface. Consult the HACCP protocol for the correlating targeted temperature.

Chilling and Cool Down Process



- Bacteria grows rapidly when food is in the “The Danger Zone” (135°F/ 57°C to 41°F/ 5°C).
- Chilling food through the “Danger Zone” is the most important aspect of the cook chill process.
- Do not prepare more food than can be packed before the temperature falls below 135°F (57°C). If temperature does fall below 135°F (57°C) food must be reheated to a minimum of 165°F (74°C) for 15 seconds before filling may resume.

FDA Food Code

Stage 1:

Cool food from 135 °F to 70 °F (57°C to 21°C) within two hours.

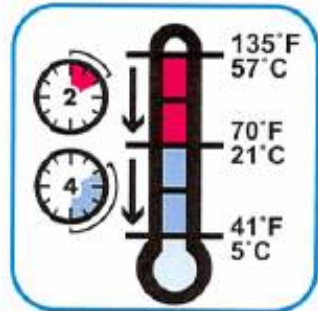
If food is not cooled to 70 °F (21°C) within two hours, it must be reheated to 165 °F (74°C) for 15 seconds before packing resumes.

Stage 2:

Continue cooling food from 70 °F to 41 °F (21°C to 5°C) or lower over the next four hours.

Check local requirements for reheating protocol.

Cooling Food



Food must be cooled from 135°F to 70°F (57°C to 21°C) within two hours and from 70°F to 41°F (21°C to 5°C) or lower in the next four hours.

Cooling Method: Blast Chiller



- A blast chiller employs forced air in a cabinet type freezer. Utilizing wheel-in carts, food in steam table pans or packed in casings are loaded onto the shelves of the cart. The cart is wheeled into the cabinet. Hot foods are then rapidly brought through the Danger Zone (from above 135°F / 57°C to below 41°F/ 5°C).

Cooling Method: Tumble Chiller



- Filled casings are loaded directly into the product chiller and gently tumble in circulating cold water. The tumbling action quickly removes heat from the food casings, dropping the product temperature from 180°F (82°C) to 41°F (5°C) in 60 minutes or less.

Cooling Method: Ice Water Bath

- **Most common method used with our Manual Cook Chill System.**
- A three-bay sink, braising pan, or large tub is filled with ice and water.
- Packed casings are placed into the ice-water bath and agitated occasionally adding ice to maintain temperature.



Storage - Shelf Life



- Cook chill is defined as the process of keeping chilled casings in refrigerated storage at temperatures ranging from 28°F to 32°F (-2°C - 0°C).
- Shelf life may be extended up to 28 days depending upon menu item and how quickly chilling occurs.

Pre-Clipped Nylon Casings

- Nylon allows easy opening of the casing
- Most durable casing available
- Temperature variance -40°F to 325°F (-40°C to 163°C)
- Reheat casing in boiling water or oven



Angle Seal Coex Casings



- Angle Seal relieves hydraulic pressure points during filling and handling
- Temperature variance 0°F to 212°F (-18°C to 100°C)
- Casings lay flat in smaller boxes saving shipping costs and storage space

PanSaver® 7 Day Bags



- Ideal for storing food products up to seven days
- Temperature variance 0°F to 210°F (-18°C to 99°C)
- Excellent for portion control and sanitary transport
- Lightweight 2.5 mil bags for produce items
- Heavyweight 3.25 mil bags for soups and sauces

The 7% Solution

At approximately \$1800.00 our PanSaver® Manual Cook Chill System offers small to medium sized foodservice operators the storage and transport benefits of cook chill food production for as little as 7% the cost of an automated system.

Start up cost based on the purchase of a clipper (\$850.00), 4 Post Filling Pedestal (\$500.00), clips (\$140.50), 2 cases of 10"x20" 3.0 mil Angle Seal casings (\$147 x 2), and Aluminum Funnel (\$30.00) plus shipping charges.

Food Quality Benefits



- Foods prepared using the cook chill method maintain the taste, texture, color, and aromas of freshly prepared menu items.
- Centralized purchasing and production allow better planning and ingredient preparation.
- Refrigerated –NOT FROZEN – food storage maintains cellular structure without compromising the texture and consistency.

Food Safety Benefits

- Cook chill casings are ideally suited to be part of a HACCP compliant food safety program.
- Products are packed at pasteurized temperatures (165°F) into clean casings.
- Cook chill casings are durable.
- Properly chilled casings allow a refrigerated shelf life of up to 28 days.



Cost Savings Benefits

- Reduction in the need for highly trained employees at peak operating times
- Overall decrease in food production hours
- Waste reduction
- Provides food on demand
- Allows portion control



Planning Benefits

- A cook chill food operation provides the benefits of scheduling regulation
- Better scheduling improves employee morale, employee retention and helps recruitment
- More efficient purchase of raw materials



Planning Benefits

Continued



- A refrigerated food bank provides emergency backup in case of natural disaster, such as snow storms and work stoppages.
- A cook chill operation allows operators to solicit outside food production contracts, expanding profit center capabilities.

Experience the benefits of our PanSaver[®] Cook Chill System Today!

- After discussing your needs with us, ask for a variety of sample casings free of charge to test in your kitchen

Contact Information

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