

For many of us, February brings wind-chills that make a relatively balmy 35° F feel like 20 below. The cold air blows away the insulating layer of air around us and draws away our body heat more quickly. That's exactly how a blast chiller works. When foods are placed in a blast chiller, the moving air draws heat out of the food so quickly that the temperature falls through the danger zone (140° F–40° F) fast enough to minimize the chances of bacterial growth. That means less of a chance of foodborne illness, and foods can be held longer without spoiling.

THE CONCEPT. Most chillers are capable of lowering the temperature of foods removed from the stove or oven at 165° F to roughly 40° F, in less than two hours. This means that those foods spend minimal time in the temperature danger zone where harmful bacteria could multiply. The concept of cooking, chilling, then reheating (rethermalizing) at a later time is not new. It was first conceived in the late 1960s when it was called “ready foods,” and the concept still holds true today.

The advantage to what we now call cook-chill is that cooked foods—and the labor required to cook them—are “packaged” together into a pull-from-the-refrigerator container that can be rethermalized and served in less time and with less effort than if you were to make it from scratch close to the time of service. The concept helps you spread your labor over more hours, thus elim-

inating the “crunch” that is common in so many foodservice locations when service periods begin.

Cook-chill programs also offer important economies of scale because your staff can make chicken in red wine or pans of lasagna for several meal periods at one time. So, instead of hand slicing onions for 20 servings, your staff can use a food processor to cut onions for 80 servings. That can decrease your labor cost per portion made. And, because you have back-up pans of lasagna, you won't have to take it off your menu because of unexpectedly high demands during a given meal period. That decreases stress on your staff and improves customer satisfaction.

Blast chillers should also be used to chill foods that will later be served cold. For example, the cooked chicken breasts that you will dice and use in your Mediterranean Chicken Salad are chilled quickly enough to minimize the potential for foodborne illness. And you can cook and chill several days' worth of chicken at one time.

CHOOSE YOUR FEATURES. Your choice of blast chillers should closely match the needs of your operation. Blast chillers are sized for the smallest of operations, where safely chilling 35 lb. of food per batch may only be necessary a few days a week. On the other hand, you may need a unit that can chill 500+ lb. of product per batch in a commissary operation that supports multiple outlets.



Traulsen's SmartChill microprocessor control system provides critical temperature monitoring, and is NAFEM Data Control compliant

Among other features, consider the following when comparing different models:

◆ **Pounds Per Cycle**—Match this number to your production needs. If you need a blast chiller that offers a quick way to chill a single grilled chicken breast that will go on a chicken Caesar, you need a model with minimal output. You also have to consider if you plan to make several batches of a given item throughout the day, or make just one large batch. You gain the most economies by making larger batches. So you need to match the production batch size with the capacity of the blast chiller you choose.

While pounds per cycle is a common way to compare models, it's important to consider the thickness of the foods that you will chill. For example, a blast chiller rated at 150 lb. per cycle will require more time to chill 150 lb. of roasted rib-eye to a core temperature below 40° F than if you were to chill 150 lb. of two-inch-thick lasagna.

◆ **Cycle Time**—Some models are listed with cycle times of 90 minutes while others require 120 minutes per cycle. While the longer cycle time is short enough to ensure the safe chilling of foods, it limits the number of batches that can be chilled per shift. That impacts the total vol-

ume of product that you'll be able to process per chiller per shift. Cycle times will also be affected by the temperature of the air in your blast chiller. Some models offer adjustable temperatures. For example, you can purchase a chiller that operates at 28° F when chilling delicate foods like crab-stuffed sole fillets. For thick cuts of meat or deep pans of stew, the chiller can be operated at -4° F.

◆ **Start & End Temperatures**—While most models calculate cycle times in terms of 140° F to 40° F, some use a higher starting temperature. The cycle times on some models are based on a starting temperature of 194° F and an ending temperature of 37° F. When you choose a model you need to consider the starting temperature of the foods that you

plan to place in your blast chiller. Most manufacturers have cycle times based on foods at different starting temperatures, so contact them directly before making your final purchase decision.

◆ **Blast Chill/Blast Freeze Capabilities**—If you never plan to freeze the foods that you've prepared, you won't need a model with blast freezing capabilities. On the other hand, if you do choose a dual functionality model you could prepare some items in batches that would last you several weeks in the freezer without product deterioration and other items for use within a week that are held at refrigerated temperatures.

◆ **HAACP Documentation**—At a minimum, you need a read-out so that you can note and

record the internal temperature of foods as they cool in your blast chiller. Many models can be equipped with a printer that prints internal temperature readings over time from each probe. If you intend to use your blast chiller for large batches, ship foods to remote locations, or prepare foods that might be integrated in home meal replacement (HMR) options, blast chillers equipped with PC-compatible readouts that allow you to download the temperature profile of foods as they chill are a must.

◆ **Remote Compressor**—Generally, small-capacity blast chillers have built-in compressors. But blast chillers put out a lot of heat—heat that can make a kitchen uncomfortable in the summer. If you need a high-

capacity chiller, look at those that can be piped to a remote compressor so that all of the waste heat ends up outdoors.

◆ **Roll-In / Roll-Through**—Roll-in capabilities mean you can load and unload your chiller quickly. That increases the amount of food that can be chilled per shift. The loaded cart can be quickly rolled to a walk-in for long-term storage with little labor input, thus minimizing labor costs.

Most manufacturers offer a variety of models from which to choose.

Match the needs of your operation to each model, and check the warranty and the power requirements before making your final purchase decision.



This Alto-Sham blast chiller features convenient roll-in capabilities

BLAST CHILLER COMPARISONS

Brand / Model	Capacity Pounds Per Batch	HP Rating	Remote compressor option available	Roll-in feature	HAACP Interface / Print-Out	Temperature Probe(s)	Automatic or Manual Mode
Victory VCB-35	35	3/4	No	No	No	Yes	Both
Cres Cor CCBC-12-UA-100	100	2.5	No	No	Yes	Yes	Both
Henny Penny BCC-140	140	2	Yes	Yes	Yes	Yes	Both
Traulsen RBC200	200	4 plus 3/4	Yes	Yes	Yes	Yes	Both
Alto-Sham QC-100	240	3.5	Yes	Yes	Option	Yes	Both
Electrolux Air-O-System 101	400	2.5	No	Yes	Yes	Option	Both
Master-Bilt MCR-400	500	6	Yes	Yes	Yes	Yes	Auto
Randell BC-10	100	1.5	No	No	Yes	Yes	Both