



Blentech corporation

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BLENTech PRODUCT LINE

Blentech is a manufacturer of high quality food processing equipment. Our machines are built to order. This allows our engineers to custom design each unit to our customer's application. We creatively blend function, durability and safety into the design of each of our machines. The following description outlines just some of the equipment we manufacture for the food, meat, poultry and cheese industries.

PRODUCT LINE

COOKING	BLENDING	MASSAGING & MARINATING	PRODUCT TRANSFER	SPECIAL APPLICATIONS
VersaTherm Dual Shaft Horizontal Blending Cooker	Batch Blenders Dual and Single Shaft	CO₂ & N₂ Vacuum Massagers	Conveyors Screw, Belt, Mesh	CheezTherm Processed Cheese Cooker
Blentherm Single Shaft Horizontal Blending Cooker	Continuous Blenders Dual and Single Shaft	CO₂ Vacuum Paddle Blenders	Tilt Dumpers	FreezCoat Freeze Coating Tumbler
ContinuBlend Continuous Blending Cooker	Mixing Tumblers	RotaMassager Glycol Chilled Paddle Marinator	High Lift Dumpers	HydraTherm Continuous Full- Absorption Rice Cooker
ContinuTherm Continuous Thermal Screw Cooker			Agitated Surge Vessels	FusionCooker Continuous Direct Steam Injection Cooker
SteamTherm Batch Rice Cooker			Pump Feeders	
VersaWok Mechanical Wok Stir Fryer				

VersaTherm Blending Cooker

The Blentech *VersaTherm* is a unique horizontal blending cooker that we believe will replace the scraped surface kettle for most thick-viscous product applications. The *VersaTherm* has a keyhole-shaped wraparound steam jacket that provides from 23% up to 65% more jacket area per product volume than kettles and up to 34% more jacket area than standard jacketed horizontal blenders. Its double shaft ribbon agitators make it a very efficient blender. These two innovations, combined with the PATENTED reversible scrapers, which continuously scrape the heat exchange surfaces, allow the *VersaTherm* to cook viscous products more evenly at rates up to 50% faster than conventional batch cookers. The Vacuum Cooling/Cooking Package adds a capability not readily available with kettles. Other methods of cooling include CO₂ chilling and jacket cooling with glycol or chilled water. Enhancing these features is an optional multiple recipes PLC control package that makes the *VersaTherm* the ultimate machine for blending and cooking thick viscous products.

BlenTherm Blending Cooker

The *BlenTherm* blending cooker is designed to process thick slurries as well as thinner products with heavy particulates in suspension where the elaborate features and capabilities of the *VersaTherm* would not be fully utilized. This machine has a single horizontal agitator with a dual ribbon-paddle design. It is mounted with our proprietary scrapers that continuously sweep the heat exchange surface to maximize conductive heat transfer as with the *VersaTherm*. This design provides excellent vertical circulation while being very gentle on fragile particulates. The *BlenTherm* also has a keyhole-shaped wraparound steam jacket for improved heat-up times on par with the *VersaTherm* over kettles and standard jacketed horizontal blenders. The *BlenTherm* is an ideal solution for processors seeking to significantly reduce cook times and eliminate or reduce particulate degradation that occurs when using double agitated hemispherical kettles. The *BlenTherm* can be ordered with many of the same options that are available on the *VersaTherm*.

VersaWok "Mechanical Wok"

The *VersaWok* is a single agitator cooker specifically designed to replicate the high temperature, stir-fry cooking technique familiar to Asian cuisines that has traditionally been limited to production on gas-fired woks in 5 to 30-lb batches. With the *VersaWok*, one operator can stir-fry up to 600 lbs of product from loading to discharge in less than 8 minutes. The 600°F temperatures obtained on gas-fired woks are achieved by circulating heated thermal oil through a specially designed serpentine flow jacket on the *VersaWok*. The *VersaWok* can also be used to sauté or braise a wide variety of products such as vegetables, beef, pork, etc.

ContinuBlend

The *ContinuBlend* Cooker is a continuous version of the very successful *VersaTherm* Blending Cooker. This cooker benefits from the superior blending technology found in the *VersaTherm* to continuously mix and cook the product while it is conveyed from inlet to outlet. The *ContinuBlend* is a practical alternative to scraped surface heat exchangers, with their high maintenance costs and product degradation issues. It can continuously blend and cook the most difficult, viscous products yet its agitation is gentle enough to retain particulate identity. A PLC recipe control system manages the entire blending/cooking process to give the operator the utmost in flexibility. We can also provide gravimetric and volumetric metered feeding systems and other ancillary equipment for complete, turn-key continuous cooking lines

Vacuum Tumble-Mixer

Blentech *Vacuum Tumble-Mixers* have a well-earned reputation in the meat and poultry industries for their workmanship and reliability. The PATENTED "Wave-Vane" tumble system utilizes a unique, hybrid vane design that overcomes the disadvantages of other commercial tumblers in use today. It incorporates the superior massaging action of the parallel vane design with the effective end-to-end mixing and rapid discharge advantages of the spiral vane design, both in the same tumbler.

The “Wave-Vane” system is so effective that, with a few modifications, the Blentech *Vacuum Tumble-Mixer* can be used for CO₂ or liquid nitrogen chilling for forming. Whole muscle pieces are kept intact resulting in whole chicken pieces making up the majority of the formed shapes. These formed shapes have a bite more like whole filets. A second door with integral CO₂ snowhorn is installed on the tumbler for CO₂ chilling applications. As the snow is injected, the “Wave-Vane” system evenly folds the snow into the product matrix, mixing it thoroughly end-to-end, inside the tumbler. In as little as 8 to 10 minutes, 3,500 lbs of whole muscle chicken or meat can be chilled down to forming temperatures with no encapsulated CO₂ to pop during frying. For processors opting for liquid nitrogen chilling, the cryogen is applied via a probe that passes through a unique hollow drive shaft.

Mixer-Blenders

Blentech *Batch Mixers* and *Continuous Blenders* are available in single or twin agitator models. We assist the customer in the selection of a ribbon, paddle or other customized agitation design to optimize mixing for each specific application. Our mixers can be manufactured for special product requirements such as cooking while mixing using direct steam injection or indirect steam jackets. The products can be cooled while mixing using jacket cooling with glycol or chilled water, vacuum cooling, or cryogenically with CO₂ or liquid nitrogen. Available capacities range from laboratory blenders with batch sizes of 10-lbs to 150-lb to production units as large as 14,000-lbs per batch.

RotaMassager – Glycol Chilled Paddle Marinator

The *RotaMassager* is a very new concept in poultry, ham and seafood marinating. It implements the recently popularized “cold process” marinating of meat and poultry products at a temperature approaching the freezing point to stabilize the marinade in the product cell structure. The result is a product that will retain more marinade whether shipped fresh or cooked, translating into higher yields for the processor. The *RotaMassager* employs chilled glycol that is circulated through a serpentine flow jacket. Our keyhole-shaped trough design provides more heat exchange surface to volume than glycol-chilled tumblers. The optional glycol-chilled paddle agitator increases the heat exchange surface by 30%, further decreasing cycle times. Poultry products can be “cold process” marinated in as little as 20 minutes thereby retaining integrity of whole muscle pieces.

ContinuTherm Continuous Thermal Screw Cookers

ContinuTherm continuous thermal screw cookers are designed for cooking, blanching, and braising products using direct steam injection, water or oil immersion, steam jacket and/or hollow screw. Blentech tailors each thermal screw we manufacture to the specific requirements of the application and products to be processed. *ContinuTherm*s can be designed to continuously cook potatoes, rice, pasta, meatballs, vegetables, chili powder, fruit, pizza topping, bacon bits, etc., at production rates up to 10,000 lbs per hour.

CheezTherm Cheese Cookers

The Blentech *CheezTherm* Twin Shaft Cheese Cooker is the ultimate machine for the batch production of processed and analog cheeses. The counter-rotating twin screw design blends the cheese during cooking creating a "shearing action." This action creates a preferential cheese texture best described as "chicken breast" texture which will tear like chicken breast as opposed to processed cheeses made on other styles of cheese cookers which tend to come apart in chunks. The proprietary, flush-fitting steam valves inject steam directly into the product during cooking. These sanitary valves are easy to assemble and disassemble, thereby simplifying clean-up and sanitation. We can provide ancillary equipment for complete processed cheese systems including upstream pre-blender and downstream agitated surge vessel with pump.

HydraTherm – Continuous Full Absorption Rice Cooker

The *HydraTherm* is the first truly continuous, full absorption rice cooker for Asian ‘sticky’ rice and other specialty raw rice’s and rice blends where tight control and distribution of hydration moisture is critical to finished product quality. The *HydraTherm* is a unique, twin screw cooker with intermeshing agitators of a hybrid design. These custom agitators convey a bed of rice through the hydration/cooking zone where heat and moisture is applied by injecting culinary steam and mist spraying water. In this moisture-rich environment, the extremely gentle mixing action that results evenly exposes all rice kernels, allowing the rice to hydrate uniformly yet without excessive starch extraction. The heart of the *HydraTherm* system (process and machine patents pending) is a PLC control package which comprehensively manages every aspect of the process, including metered in feed of raw rice, culinary steam, cook water, and other liquid or particulate ingredient additions. The operator has complete control over cook time, agitation and moisture addition, with the flexibility to modify settings on-the-fly. The *HydraTherm* produces a consistently cooked, evenly hydrated rice while minimizing labor, floor space and water usage requirements.

FusionCooker – Continuous Direct Steam Injection Cooker

Our new *FusionCooker* is a continuous cooking system with a unique steam fusion heating process. Designed for any pumpable product, the *FusionCooker* takes advantage of a variable speed agitator rotating in its cooking column to create a plug flow so that directly injected culinary steam is quickly - and homogeneously - dispersed into the product. The steam energy is combined so effectively there is no overcooking of the product particles - or burn-on on the cooking column. The PLC control system accurately controls not only the *FusionCooker* cooking column to maintain constant temperature and pressure but can also manage upstream and downstream equipment in the processing line.

FreezCoat – Freeze Coating Tumbler

The *FreezCoat* cryogenic freeze coat tumbler system creates value-added frozen foods by individually coating IQF pasta, meat and/or vegetables pieces with multiple layers of your signature sauce. A proprietary metering technology controls dosing for efficient cryogen usage and optimal coating of the IQF core product. When reheated, the resulting meal becomes an appealing combination of core product and sauce in the proper proportions each and every time.

Pump Feeders

The Blentech *Pump Feeders* are designed to force-feed various types of viscous products into positive displacement pumps at rates up to 50,000 lbs/hr. Available with two intermeshing, counter-rotating screws of up to 12-inch diameter.

Screw and Belt Conveyors

Blentech manufactures *Screw Conveyors* with single and twin screws of up to 24-inch diameter and *Belt Conveyors* with rubber, plastic and wire mesh belts. All our conveying systems are custom designed to meet your specific product requirements.

Tilt Dumpers and Hi-Lift Dumpers

The Blentech simple and durable design allows for a wide range of container sizes with weight capacities up to 5,000 lbs. Custom designed dumpers can be designed to meet most loading requirements.

Other Products Produced By Blentech

- ♦ Surge Hoppers
- ♦ Agitating Surge Hoppers
- ♦ Operating Platforms
- ♦ Vacuum Cooling Systems