## JET COOKTM HIGH SPEED COOKING & MIXING





### In 1996, DC Norris developed Jet Cook™, its patented high performance steam system.

#### **PATENTED DESIGN**

Jet Cook™ offers significantly reduced processing times and dramatically cuts clean-in-place requirements, without compromising on quality or flavor. It is a revolutionary fluid processing solution that can homogenise, emulsify, entrain, pump and heat with impressive, rapid performance.

DC Norris's cutting-edge technology also provides the potential for reductions in ingredient quantities such as starch, gums, dairy and spices. It can also eliminate the need to pre-slurry active powders such as salt, starch and gums by utilizing a unique powder entrainment facility combining multi-stage processes into one system.

With a small footprint and minimal cleaning requirements, Jet Cook™ is a compact, fast and cost effective solution to food production. DC Norris has conducted over 3,600 trials with Jet Cook™ covering ready meals, soups, sauces, beverages, desserts and pie fillings (savory and fruit). This has resulted in hundreds of Jet Cook™ systems being installed in countries around the globe including Australia, Dubai, the United States, Japan, Mexico, Azerbaijan, throughout Europe, and Africa.

"Production times are much quicker, while giving excellent finished product quality with no burn-on contamination."





## JET COOK™ BENEFITS

**IMPROVED PRODUCT QUALITY:** The Jet Cook™ infuser has no moving parts and is extremely quick and efficient at heating and mixing product. Because of this, the thermal impact on particulates is dramatically reduced, resulting in a first-class finished product and particulate integrity.

**REDUCED PROCESSING STAGES:** The mixing, heating, pumping and homogenizing of ingredients can be completed simultaneously in one simple stage reducing waste and energy usage.

**PARTICULATE INTEGRITY:** With no moving parts and a reduced thermal impact, the integrity of particulates (meat, vegetables, fruits) is superior to traditional production methods

**REDUCED BATCH CONTAMINATION:** Energy reduction of between 35% - 40% compared to traditional cooking methods. 99.5% of the steam is utilized and then collapsed into the product making Jet Cook™ extremely efficient.

**REDUCED COOKING/PROCESSING TIMES:** Production times for sauces, dairy products, soups and ready meals are typically reduced by 50% or more.

**REDUCED CLEANING & CHEMICALS:** No moving parts or burn-on contamination, so cleaning times and the chemicals required are dramatically reduced.

**FLEXIBILITY:** a) Can be combined into a purpose built system or retro-fitted to an existing system. b) Flexibility to turn around small and large batches of both smooth and particulate sauce very quickly.

## HOW DOES JET COOK™ WORK?

#### THE COANDĂ PRINCIPLE

Steam is accelerated and atomised at high pressure directly into the product through DCN's patented steam conditioning chamber and annular nozzle arrangement. As the steam collapses it creates a partial vacuum and pulls the product through the system back into the vessel, while simultaneously heating, mixing and pumping. 99.5% of energy is collapsed directly into the productensuring huge energy savings.

## JET COOK™ TESTIMONIALS

"We purchased our first Jet Cook™ system for the production of meat and particulate sauces for ready meals, and then ordered another two systems within 6 months." - GREENCORE

"Bechamel Sauce cooked in less than 20 minutes without any burn-on in the vessel or in the finished product." - BAKKAVOR

"The cooking time was incredibly quick and the quality of the pieces of fruit was excellent. The flexibility of the product range we can now produce is remarkable." - AZERSUN





















WHITE SAUCES







### JET COOK™ SUITS MANY FOODS

#### JET COOK™ COOKING DATA

PRODUCT	BATCH SIZE (GALLONS)	KETTLE COOKING TIME (MINS)	JET COOK™ COOKING TIME (MINS)	JET COOK™ YIELD (%)
Béchamel	250	60	20	100
Lasagne Ragu	400	100	50	105
Tomato Ketchup	125	30	10	100
BBQ Sauce	125	30	10	100
Sweet Chili Sauce	250	45	20	105
Tomato & Basil Soup	250	45	25	105
Dairy Custard	175	60	18	108
Sweet & Sour Sauce	250	60	20	105
Tikka Massala	250	100	35	100
Steak & Ale Pie Filling	250	120	65	100
Porridge	125	60	18	105

## JET COOK™ CASE STUDIES

#### **BÉCHAMEL SAUCE**

GOAL: Improve the emulsification of the sauce and reduce the noise of the customers current system.

**METHOD:** All ingredients added to the main vessel and heated, mixed and homogenized using the patented Jet Cook $^{\text{TM}}$  steam infusion nozzle.

**RESULT:** 132.1usg of sauce reached 203°F in 8 minutes greatly reducing production times. The customer is achieving a far better emulsion and therefore improved taste and texture. Vibration and noise was reduced dramatically and the customer replaced his existing equipment with a Jet Cook™ system.

#### **CHEESE SAUCE**

**GOAL:** To reduce overall cooking batch time, minimize the level of burn-on and maximise product consistency without compromising the quality of flavor.

**METHOD:** Using the DC Norris Cook Chill method, the cheese sauce was cooked in a kettle fitted with an in-tank steam infusion unit. Once the ingredients were added to the kettle the in-tank unit heated and homogenised the product to a temperature of 194°F. The sauce was then transferred into Cook Chill bags using the pump fill station and then cooled in a DC Norris tumble chiller.

**RESULT:** The sauce was cooked in a third of the normal time with improved gloss and flavor. Once emptied, the kettle revealed absolutely no burn-on.

# WE'RE HERE TO HELP YOU LEAD THE EVOLVING NORTH AMERICAN FOOD MARKET

The processing equipment manufactured by DC Norris leads the global food production industry. So too, do our teams. Our committment to partnership with our clients is what truly drives global food cultures forward. Together, we innovate to feed the world the best foods possible and to make continual strides in convenience and accessibility by improving efficiency, lowering cost, and minimizing environmental impact.

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