



DC NORRIS
NORTH AMERICA



Jet Cook
steam infusion
system



www.dcnorrisna.com

Jet Cook

dramatically reduce production time & energy costs, whilst improving product quality

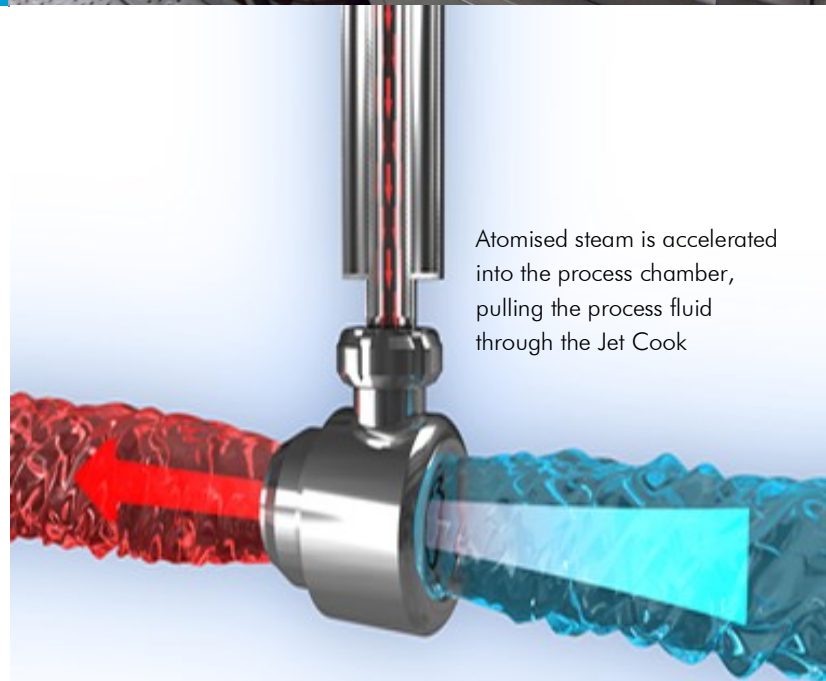


DCN have developed a new system incorporating all the best features of our world leading Steam Infusion cooking technology to cook products at incredible speeds.

The patented design offers the fastest and most efficient form of steam cooking available by utilising the Coandă principle most commonly used in the aerodynamic industry. Due to the curved shape of the Coandă Jet Cook Steam Infuser, the product is drawn through the Nozzle like a jet stream and is pumped, heated and mixed simultaneously. As the infuser has no moving parts the integrity of ingredients such as vegetables, meat and pulses are maintained and evenly cooked.

Another revolutionary feature of this system is its capability to entrain/induct powders directly into the liquid product stream. Powders such as starch, gums, SMP, flour and stocks are entrained without any agglomerations or fish eyes in the final product.

Food producers around the world use our ground-breaking technology to create meals of the highest quality, with a safe extended shelf life whilst also reducing processing costs.



Atomised steam is accelerated into the process chamber, pulling the process fluid through the Jet Cook

Benefits

Optimise Cooking Times

- * Production times are reduced by up to 90% (product dependent). Our systems are producing 264.2 (USG) of Béchamel sauce in 20 minutes.

Health Benefits

- * Customers have found they need to use less salt in their recipes than when using a standard method, due to our rapid heating and mixing. We have seen a reduction of milk and fats in our cream-based sauces due to our simultaneous high speed mixing and heating. This gives additional health benefits as well as a cost saving on ingredients.

Huge Energy Savings

- * Jet Cook Nozzle atomises steam into tiny particles due to its unique shape and then collapses the steam into the product without losing any of its energy.

Reduce Starch

- * Starch activation is dramatically improved during the phase change between liquid and vapour, resulting in a potential reduction of between 5-10%.

High Quality Taste & Flavour

- * Jet Cook delivers an enhanced flavour profile to products. Spices, flavourings and stocks are entrained, heated and mixed simultaneously leading to a reduction of between 5-10% of these expensive ingredients.

No Burn-on

- * As there is no direct surface heat contact with the product, burn-on contamination is removed and CIP time and caustic use is also dramatically reduced.

Quiet in Operation

- * Our automated adjustment feature means that the Jet Cook is the quietest form of steam infusion cooking on the market.

Jet Cook

case studies



“Production has welcomed Jet Cook. 132.1 usg of Béchamel Sauce is cooked to 203°F in 8 minutes.”

Laurette Brink, Technical Manager, Rhodes Food Group

“Production times using Jet Cook are much quicker, whilst giving excellent finished product quality with no burn-on contamination.”

Nigel McGinn, VP of Operations, Kettle Cuisine

“The flavour profile of cheese sauces has dramatically improved, the sauces have a much more intense cheesy flavour to them.”

Leading Manufacturer of Ready Meals

“The Jet Cook is really very good, it can take as little as 2 minutes to get 79.3 usg up to 176°F.”

Leading UK Manufacturer of Ready Meals



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 homogenised using the patented Jet Cook 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.

Chicken Korma

Goal: Improved taste and texture of Korma produced by a leading Indian Curry Manufacturer.

Method: The sauce was cooked using the patented Jet Cook System and then cooled to 39.2°F using our glycol jacketed vessel.

Result: Cooking and cooling times were exceptionally faster when compared with those recorded using standard equipment. Results collated from a taste test showed that the cooling process eliminated fat crystallisation in the korma resulting in enhanced taste and texture of the final product. The trial showed a massive energy saving compared with conventional cooking systems.

Cheese Sauce

Goal: To reduce overall cooking batch time, minimise the level of ‘burn-on’ and maximise product consistency without compromising the quality of flavour.

Method: Using the DCN 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 DCN Tumble Chiller.

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

Jet Cook

cooking data



Product (Sauce)	Pot Yield %	Jet Cook Yield %	Pot Cooking Time (mins)	Jet Cook Cooking Time (mins/secs)
Chicken & Broccoli	90	108.2	60-75	3.30
Frozen Chicken & Broccoli	83	103.6	60-75	4.30
Cheese-a-roni	85	109.66	60-75	4
Kids Chicken & Broccoli	85	110.9	60-75	3.20
Italian Cheese	80	104.4	60-75	4
Cheddar Melt	80	107.0	60-75	3
Béchamel	85	109.8	60-75	3
Creamed Spinach	80	109.7	90	15 minutes (including mixing spinach and reheat to 167°F)
Macaroni & Cheese	90	109.9	60-75	3.30



DC NORRIS
NORTH AMERICA

D C Norris North America LLC

2375 Traversefield Drive, Traverse City
MICHIGAN, 49686

t: (+1) 231. 935. 1519

e: mail@dcnorrisna.com

w: www.dcnorrisna.com

