



JET PROCESS

FOR PET FOOD

**ULTRA-EFFICIENT
NEW MANUFACTURING
TECHNOLOGY
FOR WET PET FOOD**

*WITH IN-LINE
CONTINUOUS
STERILIZATION
SYSTEM*

WWW.DCNORRISNA.COM



**Most Innovative
Processing Solution**

WINNER

INTRODUCING THE



JET PROCESS SYSTEM



DC NORRIS
NORTH AMERICA

DC Norris' Jet Process System produces ambient stable pet food without batch processing, traditional pressure vessels or retorts.

The Jet Process System is a revolutionary new solution for industrial wet pet food processing. Jet Process can cook, entrain (mix and hydrate hydrocolloids) and sterilize all-in-one complete system. The unique in-line continuous sterilization system reduces the number of processing vessels used, saving time and energy, while improving product quality and profitability.

WHY USE JET PROCESS?

Traditional wet pet food processing uses multiple jacketed or pressure vessels, emulsifiers, heat exchangers and/or retorts to achieve high temperature sterilization. This requires a large manufacturing footprint, regular maintenance, substantial energy resources, and annual pressure testing.

Jet Process eliminates multiple processing stages, minimizing square footage required and reducing energy use during production.

It also eliminates the dangers of a caustic clean-up process for burn on contamination.

The system can produce 26,400 pounds per hour and is operated by a single person, dramatically reducing labor costs.

CLIENT TESTIMONIAL:

"Seeing a product heated and mixed from 113°F to 298.4°F in less than 6 feet was very impressive, especially with no moving parts and using very little energy. The final footprint of the system was tiny in comparison to the traditional way of processing."



- PETER BIRCH
HEAD OF OPERATIONS,
PETS CHOICE

WHAT IS JET PROCESS?

Jet Process is a complete system incorporating the latest ground-breaking technologies from DC Norris. These new innovations are saving pet food manufacturers energy and reducing costs by minimizing the overall processing times in each step of the process.



SAMPLE WET PET FOOD PRODUCTION PROCESS USING **JET PROCESS**

JET PROCESS CAN BE ADAPTED TO MEET INDIVIDUAL REQUIREMENTS

1 JET ENTRAINMENT - POWDERS, GUMS, GELS, VITAMINS & HYDROCOLLOIDS

High speed system for entraining powders such as gums, gels, vitamins and hydrocolloids. Jet Entrain automatically transfers the hydrated gums and powders to an unjacketed processing vessel where key wet pet food ingredients such as meat, vegetables, water and rice are then added.

Jet Entrainment is able to entrain heat, mix and hydrate 1,323lbs /600kgs of powder to their required temperature in under 5 minutes.

2 JET COOK™ - IN TANK HEATING & HIGH SHEAR MIXING

DC Norris' patented Jet Cook in-tank units can be used to heat and emulsify the wet pet food up to 206°F. High shear mixing heads can be used to create the final texture before the product is automatically diverted via Jet In-line units if sterilization is required, or alternatively to a filler.

3 JET STERILIZE - IN-LINE HIGH TEMPERATURE STERILIZATION IN A SINGLE PASS

The pet food is then heated with the In-line Jet Units from 120°F to 302°F in a single pass in less than 6.5' with zero burn-on or fouling. As product goes through the units, the process flow undergoes a double phase change and a very rapid transition of pressure and velocity. The in-line units create 7 trillion droplets of water per second giving almost 100% heat transfer to the product, as well as intense, controlled mixing. Any powders, fats or liquids contained in the flow become thoroughly and safely homogenized without detrimental effect on particulate integrity, along with even heat distribution from steam condensation, giving a 99.8% usage of the steam energy. The product then passes through a series of holding tubes to hold the product at temperature for the required period of time.

4 JET COOL - EFFICIENT RECOVERY & RECYCLING OF COOLED MAINS WATER

The cooling process is completed using the same line as the Jet Sterilize and holding tubes, bringing the pet food back down to 158°F in a single pass before diverting to the filler or holding vessels. The product is cooled using mains water which can be recovered as high as 158°F for use at the start of the process for Jet Entrainment. This efficient recovery technique, unique to the Jet Process System, saves pet food manufacturers in energy and water usages.



JET PROCESS SYSTEM

OUR HIGH-SPEED, ALL-IN-ONE WET PET FOOD MANUFACTURING SOLUTION

DC Norris' Jet Process System is ideal for manufacturing wet pet food. The Jet Process System allows pet food manufacturers to realize time, manufacturing footprint and energy savings while producing high quality wet pet food products.

CAPACITY RANGE:
From 50 gallons

ORDER NOW:
(231) 935-1519
MAIL@DCNORRISNA.COM

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

DC Norris leads the global food production industry. So too, do our teams. Our commitment 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.

DC Norris North America

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