

INDUSTRIAL
**COOLING
EQUIPMENT**



DC NORRIS
NORTH AMERICA

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INDUSTRIAL

COOKING EQUIPMENT

TUMBLE CHILLERS
GLYCOL JACKETED
STATIC DA COOLER
VACUUM COOLING



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TUMBLE CHILLERS

As part of the DC Norris cook chill system, after cooking filled casings are conveyed into a purpose built rotary tumble chiller which reduces the temperature of cooked food to below 39.2° F in under an hour (products with a thin viscosity) to 90 minutes (thick viscosity), with cooling times and temperatures fully logged. The bagged product is immersed in chilled water in the drum which rotates, gently tumbling the bags and massaging the product to ensure complete cooling.

Sizes Available

79, 132, 198 and 264 USG capacities

Approximate capacities:

- Model TC-30 – 79 USG of product
- Model TC-50 – 132 USG of product
- Model TC-75 – 198 USG of product
- Model TC-100 – 264 USG of product

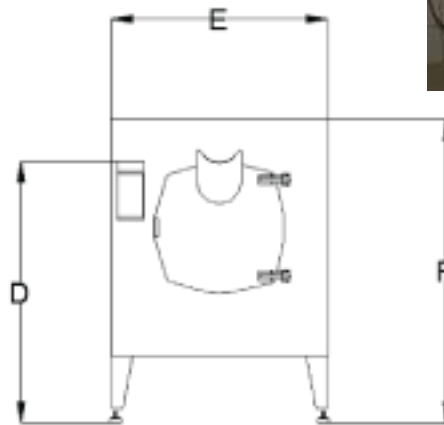
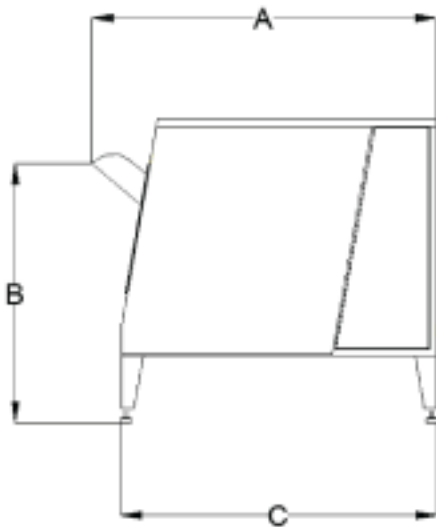


TUMBLE CHILLER FEATURES

- DC Norris cook chill process
- All stainless steel design
- Microprocessor control
- Large or small batch sizes
- Easy to use HMI
- Cleaning cycle
- Manufactured to UL and NSF standards

CUSTOM OPTIONS

- Chilled water recovery system
- Automatic back flush system for heat exchanger
- 'Super Dynamic' temperation loop
- V-Type twin belt skeleton conveyor
- Virtual chart recorder



MACHINE	DIM A	DIM B	DIM C	DIM D	DIM E	DIM F
TC-30	76.4	67.1"	67.9"	71.4"	55.3"	75.6"
TC-50	82.9"	68.4"	74.4"	70.5"	55.3"	80"
TC-75	85.6"	71"	77.2"	76.2"	61"	85.6"
TC-100	97.2"	73.1"	88.8"	73.7"	61"	85.6"

GLYCOL JACKETED & STATIC DA COOLER

Glycol-jacketed cooling vessel designed for the cooling of a wide range of food products including soups, stews, sauces and preserves. For processes that require large batch cooling in stand-alone vessels, DC Norris offers an extensive range of static DA coolers with unique scraped surface agitators.

The large surface area to product ratio allows rapid cooling times without damage to particulates or adverse effect on quality or taste. Product is gently transferred to the coolers using our vacuum transfer system and the cooling cycle is closely monitored to eliminate the risk of thermal shock or separation. Once cooled, product can be transferred into filler hoppers or into DC Norris transfer vessels by conventional pumps and pipework, or by using air 'over-pressure'.



Batch Sizes: 75 - 200 gallons (custom sizes made to order)
Interior: Standard internal sanitary finish.
Exterior: Semi-deluxe buff finish (or to customers specification)

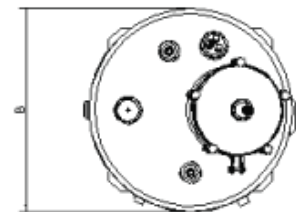
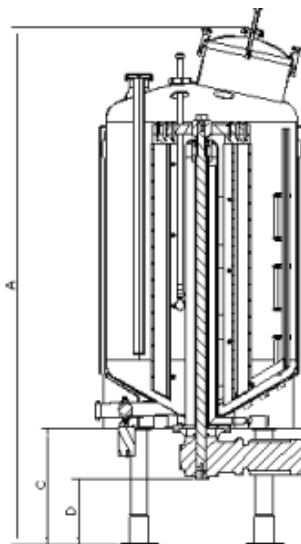
DA FEATURES

- Cooling jacket with 45 psi operating pressure and special dimpled pattern
- Vessel can take a vacuum to allow filling of product without transfer pumps
- Product can be discharged under pressure negating the need for expensive pumps and additional cleaning
- Insulated with a conical bottom and stainless steel cladding
- Vertical product zone with scraping surface type, variable speed agitator fitted with replaceable food approved plastic blades
- Fixed lid design with manway for incorporating into CIP cleaning systems
- Can be integrated with DC Norris kettles, bratt pans and vacuum trolleys
- Manufactured to USDA, FDA, ASME, UL and NSF standards

CUSTOM OPTIONS

- Vacuum transfer system
- Sterile air kit
- Spray heads
- Cooler control system
- Full diameter, counter balanced, domed top lid for complete access to product zone

COOLER SIZE (GAL)	DIM A	DIM B	DIM C	DIM D
75	83.75"	41.75"	23.75"	13.5"
100	88.5"	41.75"	23.75"	13.5"
130	93"	41.75"	23.75"	13.5"
200	105.75"	41.75"	23.75"	13.5"



VACUUM COOLING

Vacuum cooling is the fastest and most effective means of heat removal from a batch process. Vacuum or "evaporative" cooling is achieved through the evaporation of part of a products moisture under vacuum conditions. By the utilization of vacuum, we are able to reduce the boiling point of a product - driving off the latent heat by boiling off vapor; which in turn causes the product to fall in temperature. By continually reducing the pressure we can continue to reduce the temperature of the product. This is achieved rapidly and therefore very fast cooling rates can be assured - typically from 200F - 39F within 45 minutes irrespective of the batch size. Although cooling rates can vary between differing product types, we can still offer a high level of consistency, quality, and repeatability.

Capacity Range: 80, 125, 250, 400, 500 Gallon
Water Recovery Options: Cooling tower, Abidiabatic Coolers, Chilled Water



VACUUM COOLING FEATURES

- An agitated vacuum rated vessel, designed for operating at full vacuum 30" Hg. The vessel is fitted with a slow speed agitator, a 6" diameter bottom outlet, and large diameter manway for access. Hygienic design, and all constructed from stainless steel.
- A vacuum cooling system comprising of: a stainless steel vacuum duct connecting the cooling vessel to the stainless steel steam venturi, shell and tube heat exchanger and liquid ring vacuum pump.
- An automated control system to provide effective control of the vacuum within the cooling vessel to maximize cooling efficiency and yields. Includes full data capture with downloadable historical trends and reports. Includes control of the plant utilities.

CUSTOM OPTIONS

- Tilting vessel, to allow for the controlled discharge of difficult to pour recipes, such as full absorption rice dishes.
- Combination cook / cool vessel. Designed for pressure cooking (15psi) with reduced cook times of up to 70%, then rapidly chilling to below 40F within 45 minutes, all in one vessel.
- CIP. All options are suitable for clean in place with rotary spray-balls and easy clean, crevice free construction.

CORE APPLICATIONS

- Soups / Sauces / Slurries / Stews
- Pie fillings
- Rice
- Jams / Jellies / Preserves
- Ground / Diced / Pulled / Shredded Meat
- Ready Meals
- Reductions
- Pet Foods





RESPOKE EQUIPMENT

Cooking
Sous Vid
Braising



THE DEVELOPMENT KITCHEN

TESTING AND PRODUCT DEVELOPMENT IS CRUCIAL TO THE SUCCESS OF YOUR BUSINESS.

To demonstrate our commitment to you, DC Norris has invested heavily in an on-site development kitchen facility.

Fully equipped with a range of DC Norris equipment for cook chill and Jet Cook™ trials along with a kitchen/leisure area that can be used for tasting, training and discussion. Here we can rigorously test equipment and cook and cool customer products in a food factory environment.

SERVICES AVAILABLE INCLUDE:

- steam
- chilled water
- air
- refrigeration
- electrical power.

Our experienced team are always on hand to assist in recipe development and to give customers the opportunity to fully assess equipment before they decide to order. Once an order has been placed and completed, we can also use the test kitchen to conduct full pre-delivery trials to ensure the equipment is running to its full potential. Customers can also use this as a great opportunity to be fully trained on their equipment in advance of delivery and installation.

WE'RE HERE TO DELIVER WORLD-CLASS FOOD PROCESSING SOLUTIONS & EQUIPMENT

OUR GOAL IS YOURS: TO SAFELY AND EFFICIENTLY GROW YOUR PRODUCTION CAPACITY WHILE IMPROVING THE QUALITY OF YOUR PRODUCTS AND THE OVERALL HEALTH AND SUSTAINABILITY OF YOUR BUSINESS.

Feeding the globe is never boring. DC Norris and its leaders have been helping clients from Dubai to Denver for more than 45 years.

WE CAN'T WAIT TO HELP YOU.



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 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

WWW.DCNORRISNA.COM

231.935.1519
mail@dcnorrisna.com



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