NDT NORDIC DAIRY TECHNOLOGY

COTTAGE CHEESE · PANEER · HALLOUMI · FRESH CHEESE

Hygienic. Automated. Trusted.



Nordic dairy engineering for efficient cheese production.

NDT delivers hygienic, automated process lines for cottage cheese, paneer, halloumi and fresh cheese – trusted by dairies across Europe and North America. Closed from milk to cheese grains, run on recipe, and built for more cheese from every litre.

WHO WE ARE

Nordic engineering, built in Denmark – with one speciality for more than 20 years

OUR STORY

It started with a better way to make cottage cheese

Jon Fosse, a cheese process technologist with dairy in his blood, set out to solve the problems of the open cottage cheese vat: hard manual work, variable quality and a product exposed to the room. His answer was a closed, automatic vat with gentle cutting and gentle handling of the cheese grains – the cheese grains should be handled gently, in a closed vessel, with as little as possible left in the whey.

That idea became NDT. Since then we have carried it into halloumi and grill cheese, into a new paneer line, into the Multi-Cheese Vat, and across the Atlantic to the first closed-vat cottage cheese plant in the United States.

NDT is based in Denmark, a dairy country with exacting hygiene standards. Our lines are engineered in our own design office and built with Danish and Northern European suppliers, for Nordic dairies and for the North American market. Our process engineers have made cheese themselves – which is why our proposals start with your product, not with our catalogue.



WHAT DRIVES US

Innovation

New technology is only worth it when it changes what the dairy gets: yield, hygiene, hours. That is the test we apply to everything we build.

Flexibility

Capacities from 6,000 to 30,000 litres, modular systems, one vat for many products – for the specialty cheesemaker and the industrial plant.

Sustainability

Less energy, less water, less waste, less food thrown away. A closed line with a higher yield is the most sustainable line there is.

Automation

Process knowledge and automation competence in one house, so the line runs on recipe and tells you before something goes wrong.

Longevity

The best materials, components and craftsmanship – and upgrades designed to extend the life of what you already own.

MEASURED, NOT PROMISED

20+
years of closed cheese lines

16→8h
vat cycle time at a cooperative dairy in the USA, 2025

+10-15%
more cottage cheese from the same milk at the same dairy

WHAT NDT LINES DELIVER

Six things a closed NDT line does better than an open vat

01

YIELD

More cheese grains per litre

A clean cut and gentle handling of the cheese grains keep the casein in the cheese instead of in the whey. Horizontal and vertical cutting tools, a low filling height and whey drawn off during agitation – measured on your milk in commissioning.

02

QUALITY

The same cheese grains, batch after batch

Recipe control sets temperature, cutting and stirring the same way every time. Uniform cheese grains and a product your customers recognise, every day of the year.

03

AUTOMATION

The line runs on recipe

From milk in to cheese grains out, the line follows the recipe. Operators supervise the process from the panel instead of stirring and shovelling it.

04

HYGIENE

Food safety by design

Hygienic stainless steel, sterile air, cleaning-in-place without disassembly – and no open surfaces where contamination starts.

05

CLOSED SYSTEMS

The product never meets the room

In an NDT line the product is enclosed from vat to filler, under filtered air. No open vats, no manual tools in the product.

06

RELIABLE OPERATION

Built for 24/7

Proven components, one planned service stop per year on the Multi-Cheese Vat, and process engineers in Denmark who know your line.



WHAT CLOSED MEANS

Closed means the product never meets the room

The milk enters a closed vat and leaves it as cheese grains through closed pipes and enclosed conveyors. There is no open manway during production, no hand tools in the product and no exposure to the air of the room. Vats and conveyors breathe through sterile air units, and the whole line is cleaned in place without disassembly.

- No open vats, no open transfer – enclosed from coagulation to the filler
- Sterile air inside the equipment, cleaner than the room around it
- Hygienic stainless steel design: no dead legs, no crevices, drainable surfaces

THE COTTAGE CHEESE LINE

From skim milk to packed cottage cheese, step by step

An NDT cottage cheese line integrates the full processing chain in one closed system: the vat, the Draining Washer Cooler, the Drum Drainer and the Creamer Blender – every component designed for gentle handling of the cheese grains before the final blend with dressing. Every step can be delivered on its own as an upgrade to an existing line.

01

Milk in

Standardised, pasteurised skim milk enters the closed vat. From here on the product is enclosed.

02

Curd making · MCV

Acidification, coagulation, cutting, agitation and heating in the Multi-Cheese Vat, on recipe – one vat for any type of cheese curd processing. Horizontal and vertical cutting tools; whey pre-drawn through the strainer during agitation; delta-T controlled heating.

03

Draining, washing, cooling · DWC

The Draining Washer Cooler removes the whey and washes and cools the cheese grains – gentle handling that improves yield and quality at high capacity.

04

Drum drainer · DD

The Drum Drainer separates the cheese grains from the liquid before it is dosed into the mixing tanks.

05

Creaming · CBV and DT

The Creamer Blender Vertical blends dressing and cheese grains before packaging – controlled and uniform through the whole packaging cycle. Dressing tanks hold any type of dressing.

06

To the filler

The finished cottage cheese goes to the filling machine in a closed system. No hands, no open transfer.

Around the line: sterile air and steaming for vats, conveyors and cabinets; one control system runs the recipes and keeps the batch records; CIP covers the complete line without disassembly.

CAPACITY

Start with one vat. Grow without replacing it.

Lines are modular and built from the same machines, so capacity grows by adding units – not by replacing them – and the layout is adapted to the building you already have. Capacities are typical at two batches per vat per day and 50–100 % of vat volume; the exact figure depends on your recipe and running hours.

ENTRY

One vat, one line

One MCV of 10,000 L, run at 5,000–10,000 L per batch, with a Draining Washer Cooler, a Drum Drainer and a Creamer Blender. For a dairy adding cottage cheese to an existing fresh-dairy plant.

approx. 10,000–20,000 L milk per day

STANDARD

Two vats, full closed line

Two vats of 14,000–18,000 L, run at 50–100 %, DWC, DD and CBV with dressing tanks, sterile air and CIP of the complete line.

approx. 30,000–70,000 L milk per day

ADVANCED

Multi-vat plant

Three or more vats of 22,000–30,000 L, parallel draining, washing and cooling, CCM cutter for ready-to-eat formats, integration with plant control.

more than 70,000 L milk per day

LINES – BY WHAT YOU MAKE

Three lines, one closed system

A line is what a dairy buys: the vat or the flocculator tanks, the draining, washing and cooling, the blending or the mould filling, pressing and cooking, the air and the cleaning – engineered, delivered, commissioned and guaranteed as one system. All three are built from NDT's own standard machines.



LINE 01 · COTTAGE CHEESE

More cheese from the same milk – in a closed line

The full processing chain in one closed system: Multi-Cheese Vats up to 30,000 litres, Draining Washer Coolers, Drum Drainers and Creamer Blender Vertical systems with dressing tanks – every component designed for gentle handling of the cheese grains before the final blend with dressing. Designed from the end product backwards, for the lowest consumption of skim milk per kg cheese grains and a shelf life of 40–50 days.

- Multi-Purpose Cheese Vat (MCV) – one solution for any type of cheese curd processing
- Draining Washer Cooler (DWC) – whey removal, washing and cooling at high capacity
- Drum Drainer (DD) – separating cheese grains from liquid before the mixing tanks
- Creamer Blender Vertical (CBV) and dressing tanks (DT) – uniform blending through the whole packaging cycle

AUSTRIA 2024 · UK 2025 · USA 2025 · GERMANY 2026 · CANADA 2026



LINE 02 · PANEER · NEW DESIGN IMPLEMENTED IN CANADA

Paneer at industrial scale – without hands

Paneer is made by flocculating hot milk with acid, not by renneting in a vat. The line does it in flocculator tanks, drains the cheese grains in a compact high-capacity drum drainer and fills and pre-presses the moulds automatically, with uniform weight control.

- Flocculator tanks – efficient flocculation by heat and acid, higher yield, uniform quality
- Drum Drainer Small High-Capacity (DDS-HC) – compact, gentle, high capacity
- Mould Pre Press Filling Machine (PPMFM) – mould filling and pre-pressing with weight control
- Mould conveyors, stacking and de-stacking, pressing station, cooling tunnel, mould turner, discharge station; CCM cutter

CANADA 2023 · CANADA 2024



LINE 03 · HALLOUMI AND GRILL CHEESE

Closed, continuous, fully automated

Coagulation in the Multi-Cheese Vat with multiple cultures, draining on the draining conveyor, mould filling and pre-pressing, then cooking, cooling and salting in the heating section – which also washes the moulds. Mould by mould, without hands.

- Multi-Cheese Vat (MCV) – efficient coagulation, uniform quality from batch to batch
- Draining conveyor (DC) – separating cheese grains from whey, compact design
- Pre Press and Mould Filling Machine (PPMFM) – uniform mould filling and weight control
- Heating section – cooking, cooling and salting; washing of moulds; mould handling; CCM cutter

SWEDEN 2020 · CANADA 2022 – UPGRADE

MACHINES – WHAT THE LINES ARE BUILT OF

The vat, the cutter – and the machines of the lines

Every line is assembled from NDT's own standard machines, so a line can grow, be upgraded or be rebuilt for another product without starting over. The Multi-Cheese Vat and the CCM cutter are also delivered on their own – as a capacity step, as a replacement for an open vat, or into a line from another supplier.



MACHINE 01 · MULTI-CHEESE VAT (MCV)

One closed vat for any type of cheese curd

Cottage cheese, halloumi and grill cheese, fresh cheese: the Multi-Cheese Vat is one solution for any type of cheese curd processing, with high yield and capacity. Run it at 50 % or 100 % of its volume, clean it in place, service it once a year.

CAPACITY	6,000–30,000 L in steps of 4,000 L · full process from 50 % to 100 % of vat volume
CUTTING	Servo-driven horizontal knife and vertical knives; grain size set by recipe; whey strainer with servo-controlled position
CONTROL	Multi-touch panel with 3D view, recipe and batch control, full documentation; Siemens, Rockwell or other platforms; intermediate and full CIP
SERVICE	One planned service stop per year at 24/7 production
REFERENCES	Denmark 2021 · Latvia 2025 · Denmark 2026



MACHINE 02 · CCM ULTRASONIC CHEESE CUTTER

Any cheese, cut to the gram

Cuts and slices blocks up to 150 × 150 × 500 mm into pieces from 100 g to 2,000 g – 60 pieces of 200 g a minute at ±0.5–1.0 % weight accuracy – with ultrasonic blades on servo drives. Any cheese from mozzarella to hard cheese.

PIECES	100 g to 2,000 g; slices from 1–2 mm; weight accuracy ±0.5–1.0 %
DESIGN	Hygienic stainless steel incl. gear motors and actuators; IP67/69; fully automatic
CONTROL	22-inch touch panel; ProfiNet; batch and piece registration; remote service with camera
FOOTPRINT	1.3 × 2.3 m · 3 × 380 V, 4.2 kW installed, approx. 2.5 kW in use
REFERENCES	Canada 2022 · Canada 2024

COTTAGE CHEESE

Draining Washer Cooler (DWC)

Removal of whey, washing and cooling of the cheese grains – gentle handling at high capacity.

COTTAGE CHEESE

Drum Drainer (DD)

Separates the cheese grains from the liquid before dosing into the mixing tanks.

COTTAGE CHEESE

Creamer Blender Vertical (CBV) · dressing tanks (DT)

Controlled, uniform blending of dressing and cheese grains before packaging – the same composition through the whole packaging cycle.

PANEER

Flocculator tanks

Efficient flocculation of hot milk by acid – higher yield, uniform quality from batch to batch.

PANEER

Drum Drainer Small High-Capacity (DDS-HC)

Separates cheese grains from whey; compact design to reduce space and load for installation.

PANEER · HALLOUMI

Pre Press and Mould Filling Machine (PPMFM)

Efficient mould filling and pre-pressing with uniform weight control.

HALLOUMI · GRILL CHEESE

Draining conveyor (DC)

Separates cheese grains from whey – gentle, compact, high capacity.

HALLOUMI · GRILL CHEESE

Heating section

Cooking, cooling and salting of the cheese; washing of moulds.

ALL LINES

Mould handling · sterile air

Mould conveyors, turner, stacking, pressing station, cooling tunnel, discharge; steaming and sterile air units; UVC treatment of brine.

REFERENCE · COTTAGE CHEESE · USA · 2025

Half the cycle time, twice the throughput

A farmer-owned cooperative dairy in Wisconsin, with close to 100 member farms, had made cottage cheese in open vats for decades: curd cut by hand, stirred, shovelled and drained manually. To stay in the market the cooperative needed more capacity, a more consistent product and lower labour per kilo.

In a new food-grade room the dairy installed two closed NDT multi-cheese vats, each taking up to 12,000 lb per run, with automated dosing, testing and cleaning-in-place inside a sealed, filtered environment – the first closed-vat cottage cheese plant in the United States.

WHAT CHANGED

16 → 8 h	vat cycle time
2×	throughput – the added capacity was sold within six months
+10–15 %	more cottage cheese from the same raw milk
Sealed	filtered process with CIP – a step change in microbiological safety

Figures from the project's public announcement, 2025–26. References are listed by country and year; we arrange reference calls and plant visits on request.

> **"That's very common in Europe. In the United States, this is the first."**
>
> Jon Fosse, founder of NDT, on closed-vat cottage cheese



GUARANTEES

What we put in the contract

A line proposal from NDT states what the line will deliver on your milk, your recipe and your running hours – and those figures go into the contract. They are confirmed in commissioning, batch by batch, before you take the line over.

- Yield – kilograms of cheese per 1,000 litres of milk, confirmed on your milk
- Cheese grains – uniform grain size according to the recipe, batch after batch
- Cycle time – hours per batch from filling to emptying
- Capacity – litres of milk per day for the agreed running hours
- Service – one planned stop per year at 24/7 production; full CIP of the complete line

SERVICE AND UPGRADES

Day-one performance, year after year

NDT commissions every line we deliver, trains your operators and keeps the critical wear parts for your line. A service agreement fixes one planned stop a year, remote support with an agreed response time, refresher training and an annual review of yield, cycle time and losses against the figures in your contract.

We also upgrade existing lines – ours and others' – with new cutting technology, Draining Washer Coolers and Drum Drainers, sterile air and steaming, UVC treatment of brine and modern recipe control: higher yield and better hygiene from the vats you already own.

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NEXT STEP

Talk to a process engineer

Tell us your reference product, how much you make or how much milk you have, the specification of your skim milk – and where you are. We answer with a line proposal and the numbers behind it – not a brochure.

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