

COLDSAN™ Brine

How to secure first class cheese brine

Since dumping of cheese brine is very costly and often prohibited due to the high salt content of the brine, it is preferable to recover and reuse the brine.

Cheese brine contains large amounts of undesired microorganisms, such as gas-producing lactobacilli, pigment-producing micrococcus, pathogenic bacteria, yeast and mould.

Microfiltration is cutting-edge technology for sanitation and purification of cheese brine since it physically removes the undesired microorganisms, dead cells and physical contaminants from the brine without causing any significant change to the chemical composition of the brine.

GEA Filtration Brine Sanitation Unit – COLDSAN™ - is simple to operate and easy to install in connection with existing brine systems.

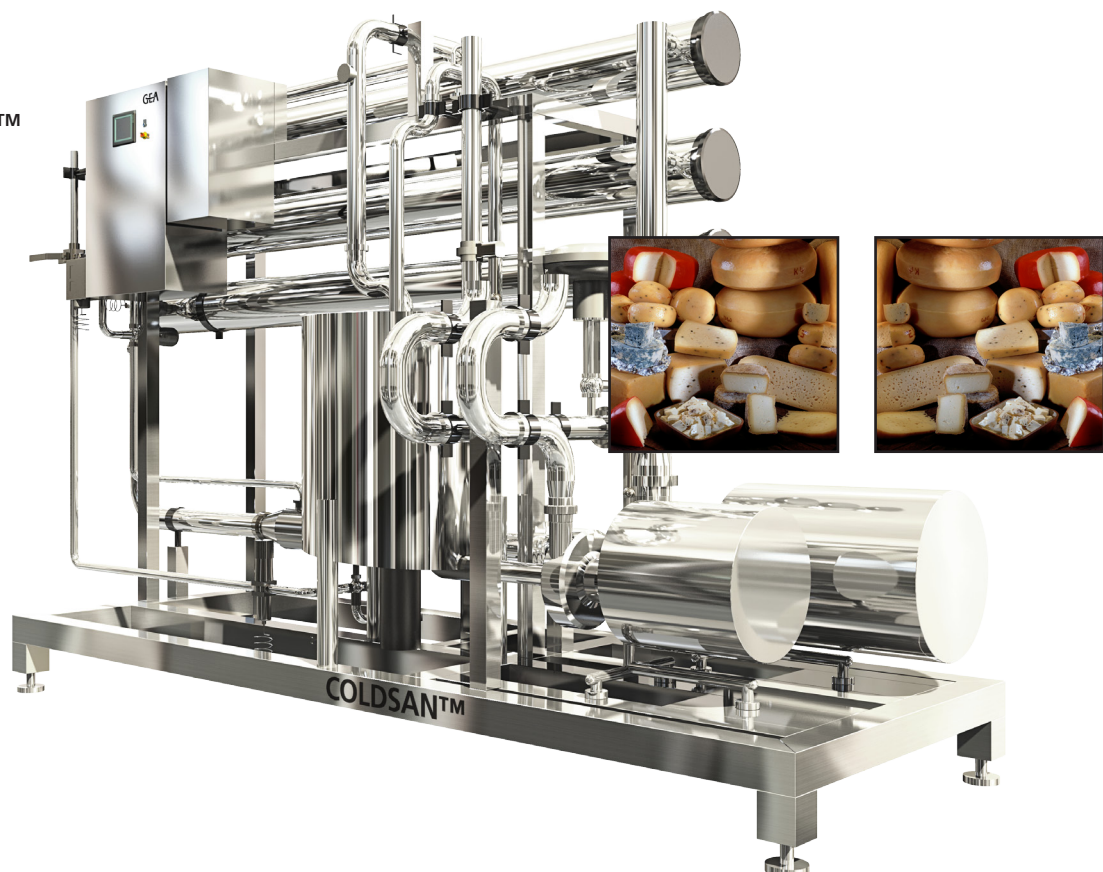
COLDSAN™ Brine fitted with polymeric MF membrane elements is widely recognized as the most effective method for cheese brine clarification.

Compared to other methods COLDSAN™ Brine ensures the best bacteriological quality and at the same time it causes practically no chemical changes to the brine.

Cold sanitation by use of COLDSAN™ Brine results in high cheese quality. It prevents problems in terms of bad rind, taste and appearance – and it reduces losses due to low quality cheese.

Reduction of bacteria exceeds 99%, while removal of yeast and mould is above 99.5%.

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Coldsan™ can be delivered in 6 sizes, to easily fit different brine pool sizes.

	Brine15	Brine30	Brine45	Brine60	Brine75	Brine90
Number of modules	1	2	3	4	5	6
Module size	6"	6"	6"	6"	6"	6"
Area [m ²]	28	56	84	112	140	168
Flow [l/day]	15,000	30,000	45,000	60,000	75,000	90,000
Flow [l/h]	750	1,500	2,200	3,000	3,800	4,500
Retentate [l/h]	4-7	7-15	11-22	15-30	19-38	22-45
Permeate [l/h]	743-746	1,485-1,493	2,178-2,189	2,970-2,985	3,762-3,781	4,455-4,478
CIP flow [l/h]	8,400	16,800	25,200	33,600	42,000	50,400
Installed power [kW]	3.7	5.2	8.5	10.5	15	16.5
Brine pool [m ³]	< 90	< 180	< 264	< 360	< 456	< 540

Advantages to the customers

GEA Filtration Brine Sanitation Unit - COLDSAN™ features the following advantages:

- Minimum loss of water and salt
- Clean and clear brine
- Total removal of physical impurities
- More than 99% reduction in total bacteria count
- More than 99.5% reduction of yeast and mould
- No undesired enzymatic activity
- Low retention of Ca and N
- No protein denaturation
- No precipitation of calcium phosphate

Other benefits

- No additives
- No changes in pH
- Simple and flexible process and easy operation
- CIPable unit
- Reduced corrosion in plant
- Standardized "plug & play" unit
- Low investment cost