



PROCESS MAP FOR

1 Pre-filtered Water

Water for boiler feed, cleaning, and general use comes from municipal or well sources, which may contain contaminants that shorten the life and dependability of plant systems. Coarse filtration purifies incoming water and extends the life of systems by removing corrosive dirt, rust, and scale. In accordance with the FDA Pasteurized Milk Ordinance and 3-A guidelines, use a PF-EG housing with a PP-N or P-SWM element for pre-filtration.

2 Pre-filtration for Reverse Osmosis

Water from a Reverse Osmosis (RO) system can also be used as a system ingredient. By removing larger containments that cause the system to wear out faster, pre-filtered water to the RO system improves the system's longevity and efficiency. The RO system will last longer and perform better if the incoming water is pre-filtered through a PF-EG housing with PP100 1 micron elements.

3 Steam Pre-filter

Steam's heat energy causes system components like carbon steel pipes, sealing elastomers, and mechanical components like pressure reducing valves to degrade more quickly. As an entrainment separator and pre-filter, use a P-EG housing and P-SWM 25 micron element, which meets FDA Milk Ordinance and 3-A requirements for steam pre-filtration.

4 Culinary Steam Filter

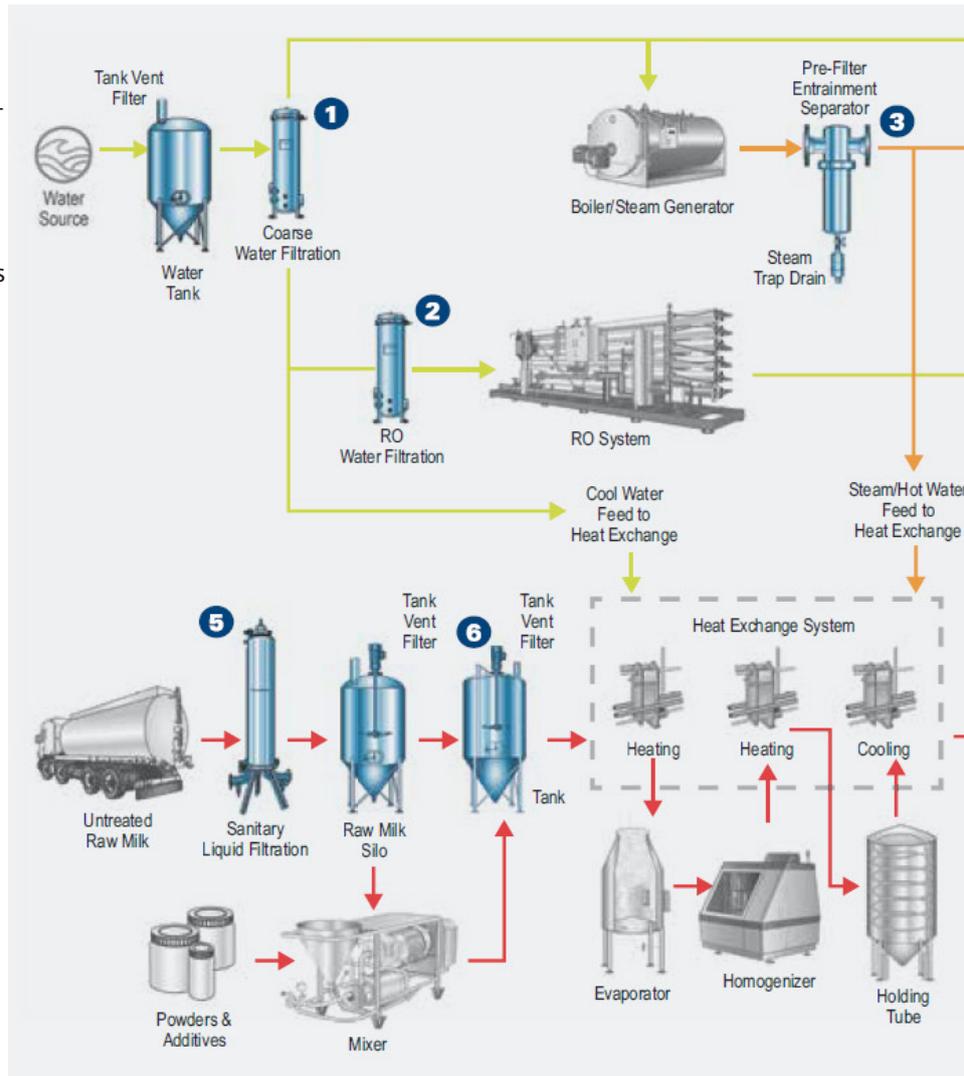
For steam-based cleaning processes, contamination from boilers can be particularly problematic. Even minute amounts of contamination can clog wands and spray balls, rendering Clean-In-Place (CIP) and Sterilization-In-Place (SIP) systems ineffective. To make 3-A culinary grade steam, combine a P-EG housing with a P-GS 5 micron element. To evacuate condensate, install stainless drains on all steam filter housings.

5 Raw Milk Filter

Due to supplier handling and transportation, raw milk has varying levels of contamination. Contamination can include dirt, rust and grime from shipping containers, as well as organic and inorganic particulates of various sizes. Contaminants can degrade milk quality and contaminate the manufacturing process if left unchecked. To remove particulates and ensure a cleaner process and product, use a sanitary PF-EG housing and 10 micron PP N elements.

6 Tank Filter

Vent filters are required in enclosed tanks for raw milk, processed milk, and starter bacteria in inoculant tanks to prevent airborne contaminants from entering the tank. To prevent harmful bacteria from contaminating critical ingredients stored in enclosed tanks, use a P-BE and 0.2 micron P-SRF V sterile air element.



THE CHEESE INDUSTRY

7 Curd Production

The curd must be heated to control its size and acidity during the cheesemaking process. Hot water and/or culinary steam can be directly injected to provide heat in many cases. To meet 3-A sanitary liquid and culinary steam requirements, use Ultrafilter steam elements and 3-A certified housings.

8 Brining and Rinse

In the brine solution and after the excess whey has been removed from the cheese, sanitary water is used. During this process,

sanitary water is used. During this process, steam can also be used to help maintain a consistent temperature. To meet 3-A sanitary liquid and culinary steam requirements and reduce the risk of contamination, use Ultrafilter certified 3-A housings.

9 Molding and Pressing

To maintain a precise temperature without overcooking the cheese, low-pressure steam is used to heat the molding and pressing equipment. To meet 3-A sanitary guidelines and culinary steam requirements, use ultrafilter steam elements with 3-A certified housings.

10 Compressed Air Condensate

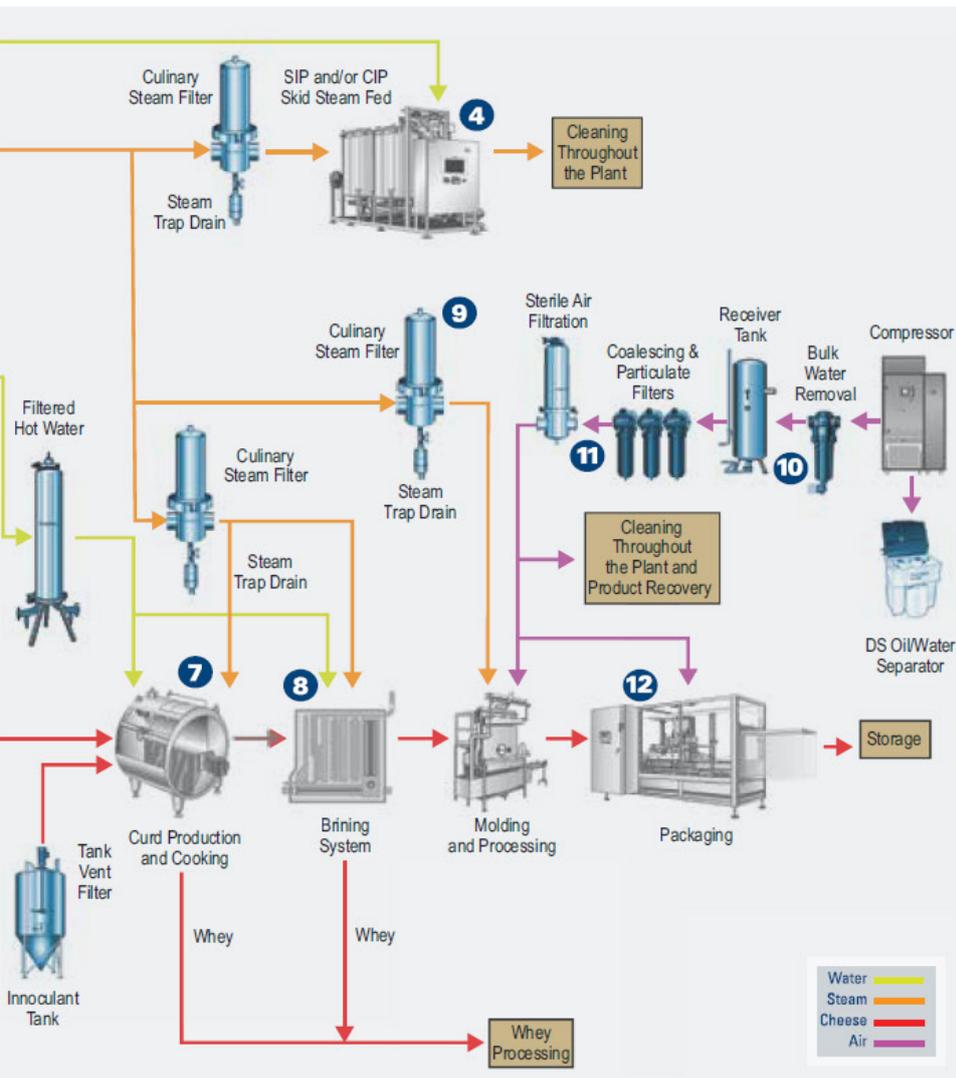
An aftercooler or refrigerated air dryer cools the hot air leaving the air compressor, causing water vapor to condense. To avoid rust formation and to comply with the FDA Pasteurized Milk Ordinance, use a Ultra-cyclone separator to remove this water and ensure that storage tanks remain relatively clean and dry. Connect all compressed air equipment's condensate drains to an oilwater separator, which will ensure that the wastewater discharge stream is clean and in compliance with environmental and safety regulations.

11 Plant Compressed Air

Airveyors, packagers, palletizers, and other pneumatic equipment should all be supplied with clean, dry compressed air to avoid malfunction. To protect equipment, the UltraPure filter housings and elements can remove dirt, oil, and water aerosols. To meet SQF compressed air regulations, connect three UltraPure housings in series with FF, MF, and SMF filter elements.

12 Sterile Air and Nitrogen Supply

Processing equipment and many of the pumps that move milk and whey through the plant use sterile air and nitrogen. During molding and packaging, sterile air and nitrogen are also used to provide positive pressure to keep airborne contaminants out. An Ultrafilter certified 3-A P-EG housing with 0.2 micron sterile air elements complies with 3-A sterile air and gas requirements and protects your process.



SUPERIOR FILTRATION MAXIMUM PROTECTION

Hygienic Design according to EHEDG



- *Stainless steel end caps*



- *Binder Free*



- *FDA Compliant*



Cost Saving Energy Efficiency



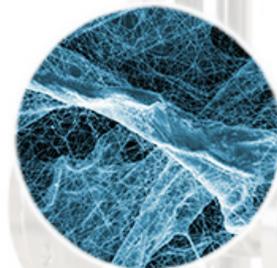
- *Nano Fiber filter medium*



- *70% more energy efficient*



- *Huge cost saving*



**NANO FIBER
FILTER MEDIUM**

QUALITY - RELIABILITY - EXPERIENCE

IMPORTANT NOTICE

Many factors beyond Ultrafilter's control can affect the use and performance of our products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



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