

HIGH LIGHT

GRUNWALD[®]
Dosing · Filling · Packing



GRUNWALD's customer magazine · special edition



UF-WHITE CHEESE cup filling line





UF WHITE CHEESE Filling, Coagulation and Closing Line

... makes your vision a reality

The GRUNWALD-UF WHITE CHEESE cup filling line is designed for various kinds of cast cheeses such as

- FETA type
- Domiaty
- Queso Fresco
- all types which are based on UF concentrate.

Description of the plant:
The plant is build-up in three blocks:

1) Filling section

In the filling section the plastic cups are placed in the cup magazines and by cup destacking dispensed onto the filling conveyor, which will transport the cups stepwise under

- cup sterilisation UV(C)
- spraying station for anti-stick
- filling station
- spraying station for anti-foam and
- onto the pushover station at the inlet to the coagulation conveyor.

2) Coagulation section

As soon as 16 filled cups have been accumulated on the chain and peg drive of the filling machine, they are discharged on the coagulation conveyor.

In the coagulation section the filled cups will be transported gently from one end of the tunnel to the other for a period of 20 - 25 minutes (depending on type of cheese to be produced). A slowly moving transport conveyor is used to guarantee the coagulation of the products in the cups. The temperature of the tunnel will be continuously monitored.

At the end of the coagulation conveyor the cups will be pulled out row by row to the transfer

conveyor leading to the inlet of the GRUNWALD-HITTPAC AKH-019SE closing machine or alternatively back to the filling section for filling second layer.

2) Multi-step filling

When filling volumes above 500 ml the cups are filled in more than one step.

The filling operation takes place as follows.

- After filling one part of the total volume, the partly filled cups are discharged to the coagulation tunnel. From the coagulation conveyor the cups are discharged to the return conveyor of the filling machine. Then the cups are indexed on the chain and peg drive of the filling station and are filled with another amount of the final volume.
- Step 1 is repeated as often as necessary to reach the final volume.

When the cups are filled with the total amount at the end of the coagulation conveyor the still open cups will be automatically discharged onto the infeed conveyor of the fully automatic packing machine GRUNWALD-HITTPAC AKH-019SE.

Photos on this page:

Photo top left shows the filling section with UV sterilisation of cups, anti-stick spraying filling nozzle and anti-foam spraying.

Photo below shows the buffer tank for the UF retentate, rennet mixing/buffering tank as well as the two mixing/buffering tanks for anti-foam/anti-stick.



3) Closing machine

The still open cups with the now coagulated cheese will be automatically transported to the following stations:

- **infeed station**
In the infeed station the cups are discharged to an indexing tappet and are placed in the rotary table
- **Cheese cutting station**
The cheese will be divided into 4 or 6 blocks by a vertical moving cutting knife
- **Parchment paper station**
where a pre-cut parchment paper lid is placed on top of the coagulated cheese
- **Dry salting unit**
dosing an adjustable quantity of fine salt on the parchment paper
- **Seal lid dispenser**
placing a UV sterilised pre-cut seal lid exactly on the cup and point welding it in order to keep it in position during the move to the heat sealing station
- **Heat sealing station**
for complete sealing of the lid-material.
- Space for **Date coder** on the foil lid
- **Cover lid dispenser** (optional) for applying a snap-on lid on top of the plastic-foil lid
- **Cup lift and discharge conveyor** of the closed cups

Photos on this page:

Photo top left shows the dry-salting unit inclusive the buffer tank.

Photo below shows the cheese cutting section, for dividing the cheese into 4 or 6 blocks.

GRUNWALD offers various options for the UF-WHITE CHEESE cup filling line:

- Cup Buffer magazine
- GDL mixing tank prior to buffer tank
- Extended line for higher capacity
- Extended coagulation tunnel for up to 30 min. holding time
- 2 or 3 layered filling
- Cheese cutting
- Gas flushing to reduce residual oxygen
- Foil from reel sealing/cutting

Capacity / speed:
1.000 - 4.800 cups/hour
depending on volume, product consistency, product characteristics, remaining headspace in the cup and packing material.

If you are interested in this UF-WHITE CHEESE cup filling line and in receiving further information or if you are looking for a solution for your filling application please contact us.

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OUR PROGRAMME

**You have the product.
We have the technology.**

In order to meet our customers' requirements with their different products, flexible machinery is needed.

Rotary-type machines

- ROTARY
- HITTPAC

Inline machines

- FOODLINER
- FOODLINER UC (ultra clean)
- FLEXLINER
- FLEXLINER UC (ultra clean)

Bucket machines

- FLEXLINER XL
- HITTPAC XL
- ROTARY XL

Dosing machines

- SERVODOS
- FLEXODOS
- MEGADOS
- SEMIDOS



ROTARY



HITTPAC



FOODLINER



FOODLINER UC



FLEXLINER



FLEXLINER XL



HITTPAC XL



SERVODOS



MEGADOS



SEMIDOS

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