Wiegers Process Innovations

Custom engineered solutions

Wiegers Process Innovations (WPI) is based in the Netherlands and provides custom engineered solutions for the Baking, Confectionary and Dairy industry.
Our equipment is used world wide in a wide range of applications, by large multinationals but also by small specialist companies.

WPI is specialized in:

- *Crème processing equipment for fillings in sandwiched biscuits, wafers, and cakes*
- *Jam, Jelly, and Caramel preparation systems*
- *Continuous Aeration equipment*
- *Scraped Surface Heat Exchangers*
- *Color and Flavor dosing systems*
- *Water tempering systems*
- *Premixers*
- *Dry ingredient mixers*

WPI Crème preparation system

Description

This system is used to prepare a wide variety of crème fillings for i.e. sandwiched biscuits, wafers or cakes.

System parts

- *Jacketed scraped surface holding tank with slow rotating stirrer*
- *Positive displacement pump*
- *TempAerator, Scraped Surface Heat Exchanger and Aeration unit*
- *Water tempering system*
- *CIP cleaning pump*
- *PLC control with touch screen HMI*
- *Skid mounted*

Applications

- Crèmes
- Chocolate crèmes
- Compounds
- Jellies and jams
- Marshmallows
- Cake batters
- Margarines

Models

Model Range	Model	Heat transfer area
TempAerator	600	0.6 m^2
TempAerator	900	0.9 m^2
TempAerator	1600	1.6 m^2
TempAerator	2500	2.5 m^2
TempAerator	4500	4.5 m^2

Color and Flavor injection system

Description

Continuous and inline dosing of color and flavor additives, or other liquid ingredients.

System benefits

- *precise dosing and homogeneously mixing small volumes of high concentrated ingredients into a flow of base product*
- *quick change over between different colors or flavors without production down time, and product waste due to otherwise necessary cleaning*
- *can run multiple colors and flavors at the same time, coming from only one base product*
- *makes the premixing process simple and reliable, eliminating the time consuming pre-weighing of small additives*
- *The WPI system is built modular, and can therefore be easily extended with more dosing circuits to meet production demands.*

Applications

- Colored and flavored icings
- Extruded marshmallow
- Jellies
- Creams
- Candy
- Mixing
- Dosing

Sugar Coating System

Description

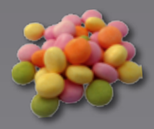
Installation on Lab scale which is used for sugar coating, or spray coating of confectionary products.
The machine is suitable for coating small batches of products, or for small capacity continuous production.

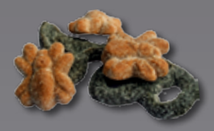
System parts

- *Starch removal system*
- *Steam heating belt, with high speed product removal system*
- *Coating drum*
- *Control cabinet*

Applications

- Candy
- Marshmallow
- Chewing gum
- Sprinkles





Water tempering system

Description

Temperature control is essential to guarantee a good production process. WPI designs and builds temperature control systems suitable to control each part of a process.The Water Tempering systems have an integrated water chiller, and water heating system. Multiple circuits can be installed to control each step in your production process independently with an accuracy of 0.1°C Our Water Tempering Systems are executed with a heat recovery system in the chiller, saving energy on heating.

System benefits

- *Integrated chiller using Environmental friendly refrigerants*
- *Heat recovery system*
- *Isolated water tanks, no condensation or heat loss*
- *Independent tempering circuits which can heat or cool*
- *Grundfos industrial circulation pumps*

Applications

- Bakery
- Dairy
- Confectionary
- Chemical
- Pharmaceutical

Continuous Aerating Systems

Description

The WPI continuous aerators are designed to handle a wide range of products. Product density and texture are adjustable and easy to control.

Mixing heads

- *Mixing head constructed of a solid piece of stainless steel Aisi 316*
- *Mechanical shaft seal*
- *Jacketed mixing head stators*
- *Rotor cooling (optional)*
- *Pneumatic operated backpressure regulator valve*
- *Automatic density control*
- *Easy CIP, and simple to maintain*

Models

Model Range	Model
CM	180
CM	180 Hybrid
CM	350
CM	350 Hybrid
CM	450
CM	450 Hybrid

Applications

- Sponge cake
- Merengue
- Chocolate mousse
- Fish and meat mousse
- Yoghurt / quark mousse
- Chiffon cake
- Marshmallow
- Water based fat cream
- Dairy cream

CIP system

Description

Cleaning In Place system for automatic cleaning and sanitizing production lines.
The system is executed with 3 tanks, pre-rinse, detergent, and final rinse. The final rinse water is after cleaning stored in the pre-rinse tank, to reduce water usage and waste water costs.
The system is fully automatic, and has a data logging system which stores data regarding the cleaning process for quality control and certification purposes.

The CIP system comes skid mounted ready to connect to the process and ready for direct use.

System parts

- *Pre rinse tank*
- *Detergent tank*
- *Final rinse tank*
- *Heating system*
- *Automatic chemical dosing*
- *Control cabinet with touch panel HMI and data logger*

Applications

- Bakery
- Dairy
- Confectionary
- Pharmaceutical

Data logging

- Water temperature out
- Water temperature return
- Water flow
- Detergent concentration
- Pump pressure
- Cleaning cycle time

TempAerator design

Description

The TempAerator is a vertical scraped surface heat exchanger with two concentric heat exchange surfaces providing optimum heat transfer, combined with a continuous Aeration head.

The WPI TempAerator was granted with an Innovation award.

The scraped surfaces provide a continuous cooling / heating process with a gentle handling of the product.

System benefits

- *Large heat exchange surface area*
- *Small floor area required*
- *Vertical installation, self-draining, always good scraper contact to walls*
- *Simple inspection of the interior of the machine via the top lid, there is no need to dismantle seals or remove shafts*
- *All serviceable parts can be handled by one person*
- *One machine(!) instead of separate heat exchanger and aerator*

Applications

- Heating
- Cooling
- Crystallizing
- Tempering
- Aerating
- Pasteurizing

Models

Model Range	Model	Heat transfer area
TempAerator	600	0.6 m²
TempAerator	900	0.9 m²
TempAerator	1600	1.6 m²
TempAerator	2500	2.5 m²
TempAerator	4500	4.5 m²

Pre mixers

Description

To mix creams or batters from individual ingredients to a homogenous mass.

The pre mixer is executed with a double jacket, and a water tempering system, so it can be used on the right temperature according to the recipe and ingredients used.

The mixer is executed with scrapers on the tank wall, which will ensure an even temperature throughout the product in the mixer.

The manhole is at convenient height for easy manually loading.

A transfer pump is built underneath the mixer, to pump the product to the downstream process.

Applications

- Creams for sandwiched biscuits
- Creams for wafer
- Batters
- Icing
- Cheese cake

Mint oil dosing and mixing system

Description

This system is used for continuous processing of a tempered chocolate with mint oil. Other additives such colours and flavours are also possible to process with this system.

System parts

- *Chocolate Buffer tank*
- *Positive displacement pump for chocolate*
- *Mint oil buffer tank*
- *Positive displacement pump for mint oil*
- *Mass flow meter for mint oil*
- *Dynamic mixer*
- *Water Tempering Unit*

Applications

- Bakery
- Dairy
- Confectionary
- Pharmaceutical

Complete lines for production of cream for sandwiched biscuits

Description

The lines as shown on the picture are installed to feed cream to a Capper for the production of sandwiched biscuits with an aerated filling.

WPI executed this production lines with a specialized CIP system. The line can be effectively cleaned and dried in very short time.

System parts

- *Fat block melter*
- *Cream pre mixer*
- *Buffer tank with feeding pump*
- *TempAerator*
- *Water tempering system*
- *CIP cleaning and drying*

Cooking system

Description

Complete skid mounted cooking system for the production of Jam, Caramel, Mallow, Jelly, etc. The system is executed with a steam generator for the heat supply of the cooker.
The cooker is executed with a vacuum pump for either cooking at lower temperature, or cooling the batch after cooking.
CIP pumps are built on the skid for cleaning in place.

System parts

- *Steam generator*
- *Cooker*
- *Vacuum system*
- *Buffer tank*
- *Additives mixing tank*
- *Inline dynamic mixer*
- *Water tempering units for tank and pipe jackets*
- *Control cabinet*

Applications

- Pectin Jelly
- Jam
- Marshmallow
- Caramel
- Nougat

Pectine Jam preparation system

Description

This system is used for continuous processing of pectin jams or jellies. Jam is stored in the buffertank at high temperature from where it is pumped in a continuous way through the Dynamic Mixer to downstream depositing equipment. An injection pump meters acid into the Dynamic Mixer where it is homogeneously mixed into the hot Jam. In the Jacketed pipe work to the depositing equipment the acidified Jam is kept at high temperature. After the depositor when jam cools down it jellifies quickly.

System parts

- *Jam buffer tank*
- *Positive displacement pump for Jam*
- *Acid buffer tank*
- *Positive displacement pump for acid*
- *Dynamic mixer*
- *Water Tempering Unit*

Applications

- Jaffa cake
- Jam filled biscuits
- Centre in shell mallows
- Jam and cream sandwiched biscuits
- Tartlets

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