



# Tetra Pak® High Shear Mixer for cold emulsions

Batch processing unit with double-shaft agitator



## Application

The new range of Tetra Pak® High Shear Mixers for cold emulsions is a game-changer for mixing products in this category.

The heating/cooling options in combination with the Dynamic HS mixing head and double-shaft agitator makes it possible to produce an almost limitless variety of different cold emulsion products – such as full or low fat mayonnaise, dressings, béarnaise sauce, hollandaise sauce, aioli and cheese emulsion.

It allows you to produce a homogenous mix of even highly viscous products, and to blend in particles such as herbs, fish, meat or vegetable pieces.

## Highlights

- Double-shaft agitator combined with Dynamic HS mixing head (patent pending)
- Patented Dynamic HS mixing head – enables 2-step emulsification process (high, medium, low and even no-shear possible in the same unit)
- Modular system can be configured for batch and continuous processing
- Unique prediction tool enables easy process scale-up and precise replication of product quality
- High level of flexibility to produce the widest range of products
- Fast ingredient intake, based on vacuum, for both oil and powders
- Rapid mixing, high capacity, and optimal use of ingredients lead to the lowest production costs in the industry

## Working principle

The Tetra Pak® High Shear Mixer for cold emulsions is designed for either a batch or a continuous production set-up. Our patented Dynamic HS mixing head enables a two-step emulsification process – leading to an unprecedented level of control over quality parameters such as droplet size, product texture, appearance, taste and mouthfeel. A shorter mixing time. Intake of both liquid and powder ingredients into the mixing vessel (not directly into the HS mixing head) creates a coarse emulsion and eliminates the need for a pre-mixing process. An automatic top opening lid and a bin-lift dumping system allows you to blend in particles, and the double-shaft agitator secures product flows correctly around the tank, regardless of viscosity. A cooling/heating jacket enable you to warm up or cool down your product.

For high-speed production, you can combine the emulsification process and emptying step by adding (as an option) a twin screw pump to control the higher flow out of the mixing vessel and a Multi-stage HS mixing head to create a fine emulsion. A fully automatic CIP system ensures fast and low-cost cleaning via strategically placed sprayballs. For continuous production, all ingredient intake lines can be equipped with flowmeters and control valves, allowing you to produce continuously.

## Basic unit

- Dynamic HS mixing head with CIP cleaning behind primary seals
- Double shaft-agitator
- Vacuum system for ingredient introduction

- Heating and cooling jacket
- Direct steam injection
- Direct powder inlet
- Direct liquid inlet
- CIP cleaning system
- Control system with Allen Bradley PLC and HMI

## Options

- Batch plus system (high-speed batch production)
- Multi-stage HS mixing head
- Twin screw pump
- Bin-lift system
- Vibrating powder hopper
- Starch inlet
- I200I mixer head (for continuous starch in-blending)

## Embedded automation based on Tetra Pak® Plantmaster Technology

Our new automation option gives you seamless, robust embedded automation based on Tetra Pak® PlantMaster technology in the mixer of your choice whether in a line or as a stand-alone solution. The automation is standardized and proven for all combinations of mixers and options to guarantee smooth operation of all functionalities. It makes recipe handling and recipe adjustments fast and easy, with recipe changes completed in minutes whether you have 10 or 100 recipes. You also get a complete system with basic navigation including step sequence information, alarm history and events, data logging for CIP and production history, communication signals for maintenance and support and much, much more. Select this option to make the most of you mixer, get more smart functions and effortless integration, optimize your mixing and enable full traceability with uncompromising food safety.

## Materials

- All components that come into contact with the food product are made from stainless steel AISI 316L
- Other parts are made from AISI 304.
- All elastomers are FDA approved, and EPDM and VITON compliant



## Technical data

Consumption data	B200-500VAA		B300-1500VAA		B400-2500VAA		C300-1500VAA
Production setup	Batch	Batch plus	Batch	Batch plus	Batch	Batch plus	Continuous
Voltage, V (Hz)	380-480 (50/60)	380-480 (50/60)	380-480 (50/60)	380-480 (50/60)	380-480 (50/60)	380-480 (50/60)	380-480 (50/60)
Power, kW	52	52	80	80	120	120	80
Service water, l/h	100	125	200	225	250	275	225
Compressed air, NI/h	100	100	150	150	200	200	150
Cooling water, l/h	5 000	5 000	10 000	10 000	15 000	15 000	10 000
Steam, kg/h	500	500	750	750	1 000	1 000	750
<b>Processing parameters*</b>							
Capacity, kg/h	3 000	4 200	6 400	9 000	10 000	13 500	3 000
Capacity, no of batches /h	6	8,6	4,3	6	3,8	5,5	

\* Based on 80% mayonnaise. Capacity of continuous and continuous plus setups above 8 000 kg/h.



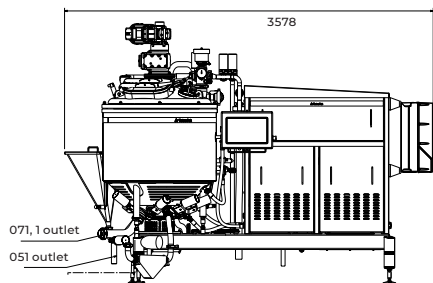
Tetra Pak® High Shear Mixer  
for cold emulsions, Batch



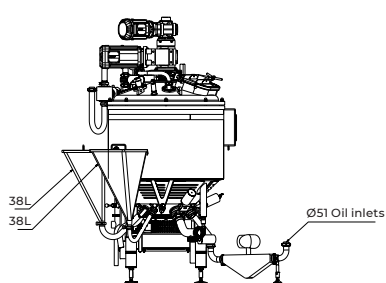
Tetra Pak® High Shear Mixer  
for cold emulsions, Batch plus

## Layout example

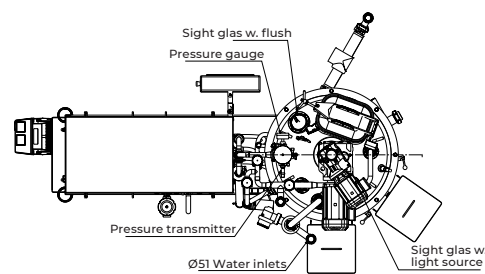
### B200-500VAA



Front view

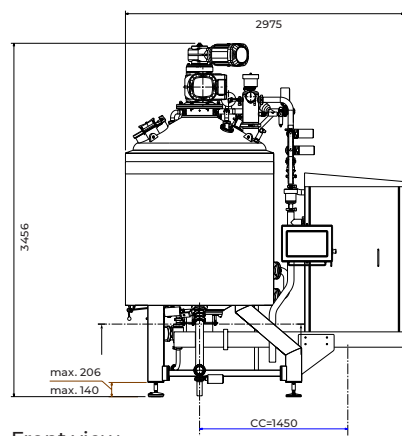


Left view

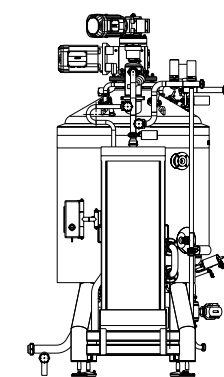


Top view

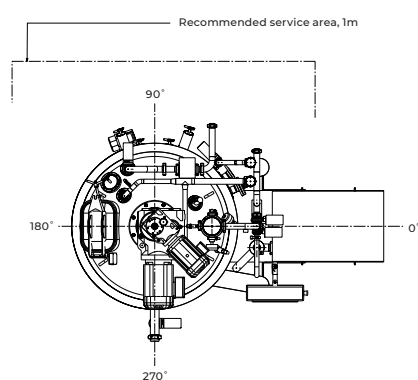
### B300-1500VAA / C300-1500VAA



Front view

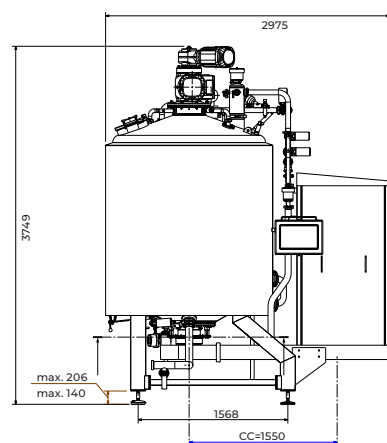


Left view

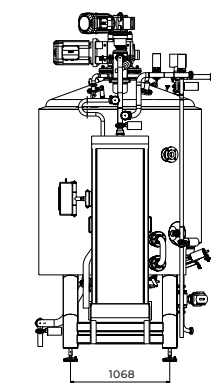


Top view

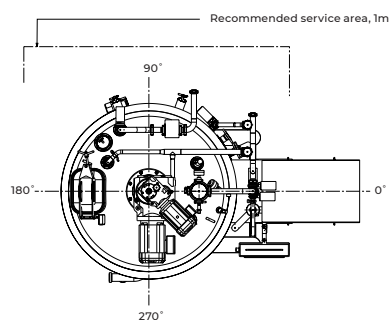
### B400-2500VAA



Front view



Left view



Top view