



# Tetra Pak® High Shear Mixer BPC I series

The mixing that makes the difference

## Highlights

- Hygienic design
- Self cooling system
- Shorten batch time and reduce energy consumption
- Saves time when dispersing tricky ingredients
- High shear rate for fine homogenous droplets (50,000/s)
- Able to manufacture product with viscosity up to 50,000 cps (e.g. skin care cream)
- Easy installation (plug and play)

## Application

This Tetra Pak® High Shear Mixer BPC I series is designed to produce a wide range of cosmetics products in :

### Hair care

color creams  
conditioners  
shampoos  
styling products

### Skin care

creams  
sunscreens  
lotions  
gels  
moisturizers

The mixer is fitted with high efficiency motor, enabling our customers to emulsify ingredients into fine homogenous droplets.

## Working principle

Tetra Pak® High Shear Mixer BPC I series is a high shear mixing unit with an external circulation line. The unit is equipped with patented **CODE<sup>®</sup>** that allows reductions in the process operating cost and time, thus improving production flexibility. Equipping the Tetra Pak® High Shear Mixer BPC I series with **CODE<sup>®</sup>** ensures maximum plant utilisation and improved production flexibility by allowing production scheduling to switch between Hot-Cold processing to conventional Hot-Hot processing.

During emulsification, stream from the main vessel will flow through the high shear mixer. Another stream from the wax melter will be dosed directly into the premix chamber, instantaneously forming droplets of oils, before mixed with the rest of the main phase. This dispersion is then re-circulated through an external line back into the main vessel for further homogenization, cooling, etc.

The high pumping capacity of the dispersion unit allows the resulting emulsions to be re-circulated back to the main vessel for further emulsification until stable fine droplets are achieved. This will give a homogeneous, highly stable and air-free end product. This process avoids many instability problems, namely sedimentation, creaming and phase separation during storage, and also shortens the process time considerably.



## Basic units

### Main Components

- InLine High shear mixer with dual series rotor stator
- Cartridge mechanical seal
- Triclamp connection, DIN 11852/ DIN 11850
- 1 main inlet, 1 secondary raw material inlet
- Operating panel for flexible speed setting
- Frame on trolley

## Technical sales and service

- **Global service agreement**  
Our Tetra Pak Technical Sales and Service units are well spread around the world to offer fast and reliable support.
- **Supply chain management worldwide**  
We design and implement a single process from supplier to end user, increasing availability and service level, reduce cost and optimise stock level.
- **Local presence of technician**  
We also offer local services to cater for customers worldwide.

## Technical data

<b>Flow rate (water)</b>	<b>m3/hr</b> gph	<b>15</b> 3,962	<b>50</b> 15,850	<b>80</b> 21,133
<b>Gap</b>	<b>mm</b> inch	<b>0.5</b> 0.019	<b>0.5</b> 0.019	<b>0.5</b> 0.019
<b>Max speed</b>	<b>rpm</b>	5,000	3,000	3,000
<b>Motor</b>	<b>kW</b> <b>hp</b>	<b>7.5</b> 10 380-400 V, 50 Hz	<b>30</b> 40 380-400 V, 50 Hz	<b>45</b> 60 380-400 V, 50 Hz
<b>Dimension</b>	<b>mm</b> inch			
	<b>A</b>	<b>1,200</b> 48	<b>1,530</b> 61	<b>1,530</b> 61
	<b>B</b>	<b>1,300</b> 52	<b>1,790</b> 71	<b>1,790</b> 71
	<b>C</b>	<b>680</b> 27	<b>680</b> 27	<b>680</b> 27
<b>Input</b>	<b>mm</b> inch	<b>76,1</b> 3	<b>101,6</b> 4	<b>125</b> 5
<b>Output</b>	<b>mm</b> inch	<b>38,1</b> 1,5	<b>63,5</b> 2,5	<b>76,1</b> 3

## Optional

- Feeding lobe pump: designed to handle a high viscosity product
- Wax pump and heat trace: for **CODE S** application
- Explosion proof rated motor and panel
- Back pressure valve for independent flow rate control

## Materials

Wetted parts are made from stainless steel AISI 316L, other parts are made from AISI 304. Partly ground and polished to 400 grains.

