

# Tetra Pak® Mixer RJCI 4X

All the ingredients for success in batch mixing for soft drinks



## APPLICATION

Tetra Pak® Mixer RJCI 4X is designed to feed and dissolve powdered and liquid ingredients typically up to 200 cP batch viscosity. It provides a batch volume of 3,000 litres or, as an option, 2,000 litres. Tetra Pak Mixer RJCI 4X allows the transfer of the final batch into a downstream line using its recirculation pump.

## WORKING PRINCIPLE

Tetra Pak Mixer RJCI 4X consists of a dissolving tank and integral centrifugal pump to convey the batch product. A patented injector system enables the module to aspirate powder or concentrates via a feeding hopper. The ingredient mixture finally gets transferred back to the mixing tank where it is agitated hydraulically by a radial jet mixer which provides homogenous mixing and enables flexible batch volumes. Tetra Pak Mixer RJCI 4X is equipped with a mains water and CIP inlet and a process outlet connection for batch discharge.

## HIGHLIGHTS

- No more ingredient losses
- No need for high shear mixing
- Ingredient loop extension (ILE) for greater dosing flexibility
- Lumps should not be a problem
- High hygienic standards

## NO MORE INGREDIENT LOSSES

Tetra Pak Mixer RJCI 4X can be equipped with an optional dust Extraction and Recovery System called ERS which eliminates ingredient dust losses. ERS is fully integrated into the CIP cycles and requires no maintenance or replacement of filters.

## NO NEED FOR HIGH SHEAR MIXING

A specially designed Auto Mixing Device (AMD) allows powders that are difficult to dissolve like CMC or pectin to be fed into the mixer at concentrations of up to 1% at 20°C without lumps remaining. In these cases, the AMD option is all you need to handle gums and stabilizers without the need for an energy-intensive high shear pump.

## INGREDIENT LOOP EXTENSION (ILE) FOR GREATER DOSING FLEXIBILITY

As an option, you can add the Ingredient Loop Extension (ILE) to Tetra Pak Mixer RJCI 4X. This option offers the opportunity to loop other feeding points into the hydraulic conveying line, so ingredients can be fed in from several different points in the surrounding area. This is achieved by adding multiple injectors to the recirculation loop providing flexibility in layout and enabling hazardous environments to be contained in dedicated areas.

## LUMPS SHOULD NOT BE A PROBLEM

To ensure water-soluble powder lumps get dissolved efficiently without blocking the feeding inlet, Tetra Pak Mixer RJCI 4X features a large dumping funnel which can be flooded by liquid and is fully integrated into the cleaning system. The immediate contact of the lumps with liquid makes them fall apart and allows the lumps to dissolve before they create blockages. There is no need to use lump-breaking systems which consume energy and require additional maintenance.

## HIGH HYGIENIC STANDARDS

To facilitate today's demands of multiple SKU and ingredient handling, all ingredient introduction equipment used for powders and liquids is cleaned to ensure flexibility and to ensure hygienic conditions. Even the dust extraction system, the tank ventilation and the water spray lance for washing are fully integrated into the cleaning system to maintain the high hygienic standards required in the food industry.

## MAIN COMPONENTS

- Dissolving tank 3,000 litres or, as an option, 2,000 litres.
- Recirculation pump
- Set of butterfly valves
- Operating table containing a feeding hopper (130 litres in volume)
- Horizontal injector
- Radial jet mixing nozzle (RJM)
- A water spray lance to recover residues on the feeding hopper surface. Comes complete with a cleaning holster.
- Piping including hygienic fittings made to DIN11853 standard

## KEY OPTIONAL FUNCTIONS

- **Large liquid lance.** A suction lance with an outer diameter of 48.3 mm for aspirating of higher viscous concentrates up to 10,000 cP
- **Small liquid lance.** A suction lance with an outer diameter of 29 mm for aspirating bulk ingredients and low viscous liquids up to 200 cP.
- **ERS** is a dust extraction system where the dust that is normally released into the air is recovered.
- **Auto Mixing Device (AMD)** for dissolving hardly soluble powders (stabilizers, gums etc.) max. 1% at 20°C.
- **Ingredient Loop Extension (ILE)** provides a second or several injection points into the recirculation loop where Big Bags or additional hoppers can be connected.

## CONTROL PANEL

Tetra Pak Mixer RJCI 4X is controlled by Tetra Pak® PlantMaster. The control system is fitted into a cabinet located on the machine framework. An optional touch-screen allows the operator to always keep full control of the recipe and have easy interaction with the mixer controls.

## MATERIALS

- Stainless steel surfaces in contact with products are AISI 316L, surface roughness: Ra 1.6 µm
- Framework structures: AISI 304L
- All surfaces in contact with products are compliant with food regulations
- Gaskets: EPDM (Viton on request)

## TECHNICAL DATA

Batch volume*	3000 litres
<i>*Optional</i>	2000 litres
Max. batch viscosity	200 cP
Max. rate of feeding intake for water soluble and trickling powders	90 kg/min
Feeding hopper volume	130 litres

## CONSUMPTION DATA

<b>Compressed air</b>	
Air pressure	6 bars
<b>Electricity</b>	
Panel	400 V 50 Hz (Other on request)
Recirculation pump	22 kW
Extraction and Recovery System*	3 kW
<i>*Optional</i>	