

Product Sheet

Moba Coenraadts Tray Washer



Overview on the CTW 3250 and CTW 6500

Introduction

The Moba-Coenraads tray washer is suitable to denest, wash, stack and dry plastic egg trays, as currently in use in the egg grading and processing market.

The tray washer is available in 2 different configurations: 6500 and 3250 trays per hour. Further on, there are various options available.

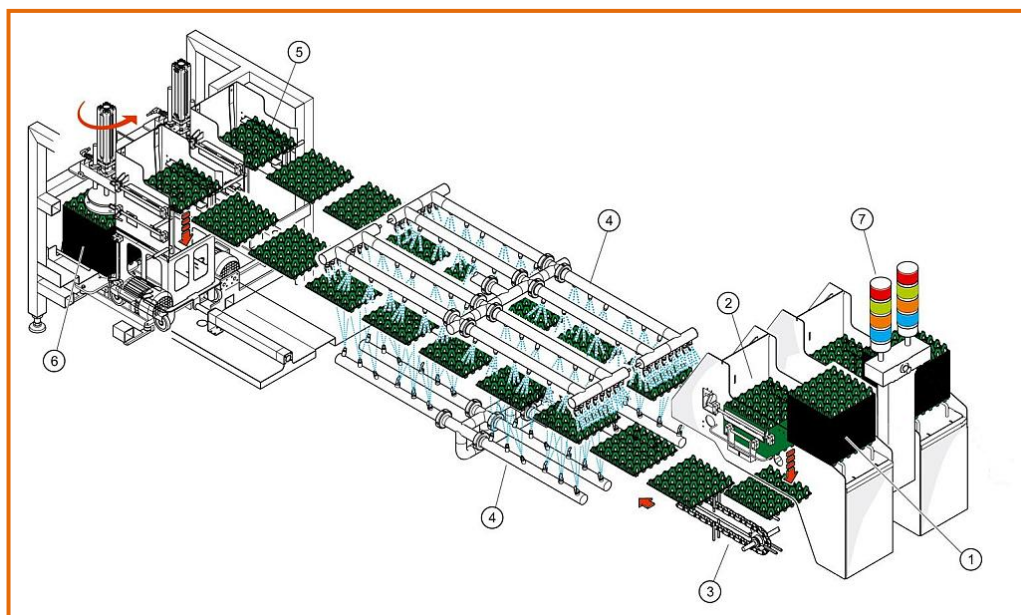
Egg trays can become quite dirty in the cycle of egg production. Particularly in case liquid egg has had the chance to dry, stacked trays can be glued together quite firmly. Automatic processing of such trays is not easy, but nevertheless very essential in the tray washing process. Therefore the Moba-Coenraads tray washer is equipped with a rugged and versatile tray denesting system that is also very capable of processing dirty and sticky trays efficiently. Good washing performance starts with a great denesting function!

Standard features of the Moba Coenraads tray washer are:

- Independent process lines, with dedicated centrifuges; compared to a separate centrifuge, drying time is doubled.
- Rugged spraying system with stainless steel nozzles that are carefully positioned to thoroughly clean all parts of the tray.
- Smart filtration system with extended screen surface, matched with the nozzle diameter, to prevent clogging.
- Compact machine with all required functions. The 'wet footprint' for tray washing is kept to an absolute minimum.
- Designed to even achieve a good washing result with cold water, keeping overall energy consumption limited.
- Cleaning in place.

Functioning of the tray washer

A stack of dirty trays is placed into the denester (1). After the trays are unstacked (2),



they are placed on a transport chain (3). This chain leads every individual tray through an array of various types of powerful stainless steel spray nozzles (4). These nozzles are arranged in a way that every part of the tray can be cleaned thoroughly. Right after the cleaning procedure, as an option, trays can be rinsed and disinfected. Next step is to restack trays in a pre-set quantity. The tray stacking system (5) can independently per channel be set to stack 40, 45 or 50 trays high. A completed stack is automatically fed into the integrated centrifuge (6). In a spinning cycle of approximately 30 seconds, stacks are dried. The dry stacks are ejected onto a stack transport conveyor, feeding the clean stacks back to an ergonomic height towards the infeed side of the tray washer. Status lights (7) per channel are situated at the infeed side of the washer.

Controls



Accessibility and user friendliness are key words in the design of the Moba Coenraads tray washer. Touch screen panel and straight-forward indication lamps are placed on the infeed side, to enable a clear view as well as ease of access. The 2 channels of the tray washer are controlled individually. If 1 line has stopped working, the other channel will continue to run, meaning that production will be maintained.

If a broken or badly bent tray has stopped a channel, the denester is lifted up automatically, enabling the operator to easy cure the problem and resume full production quickly.

All the necessary electrical components are 100% waterproof or well protected against wet conditions, to ensure a trouble free operation of the equipment.

Washing process

Before washing can start, the water tanks need to be filled up. Standard, the washing cycle is carried out with cold water. The dirty trays are cleaned by pumping up to 70m³ (2,5 bar) of water per hour through an array of stainless steel power nozzles. Different types of nozzles and a carefully chosen pattern ensure that all dirt is removed. If the trays are



so dirty that they need an

even more thorough cleaning action, the washing water can be heated to maximally 40°C by an optional warm water heat exchanger. This kind of heat exchangers can be fitted to a common central heating system, which is ideal if warm water is not widely available. Also, this rather gentle heating system does not easily coagulate the in the



washing water dissolved egg. This means longer production runs.

For extreme cases a rotating cleaning brush can be added in front of the nozzles.

Before the washing water returns to the collection tank, it is filtered through a unique filtering system. The overall screen surface is very large and enables very long washing cycles. Since the filtration system is matched to the nozzle size, the risk of clogging is reduced to an absolute minimum. The screens can be taken out easily for a quick and efficient cleaning, since they are fitted into a drawer system.



Drying of the trays



After washing (and sanitizing), the trays are stacked and inserted automatically into the integrated high-speed centrifuges. Capacity, runtime and speed are engineered to match the capacity of the washing and stacking procedure. In this way, drying time can be exactly synchronized to the specific moment the next formed stack is ready for drying.

Trays are spun for approx 30 seconds at a speed of 700 rpm removing remaining water from the stacks. The result is a dry stack of well washed, clean trays.

After being centrifuged, the stacks are placed on a transport conveyor that brings them to an ergonomic height towards the washer's infeed section. In case the transport conveyor is full, the tray washer automatically stops.

The Moba Coenraadts tray washer is engineered to occupy minimal footprint against maximum capacity. The Integrated centrifuges keep the 'wet footprint' to an absolute minimum. Keeping the concept of 2 separate lines beyond the centrifuges ensures an enlarged drying time of the washed trays. This results in an end product that is immediately ready to use.

Stack transport conveyor

After the stacks have been centrifuged, they are ejected onto a transversal transport conveyor. The stacks are transported around the tray washer, back to the infeed area. The manual pick-up position for the stacks is constructed at an ergonomical height. Further on, the pick-up position has standard a 'belt full detection' that automatically stops the system.



The entire stack transport conveyor has an open construction and is high pressure cleanable.

Options

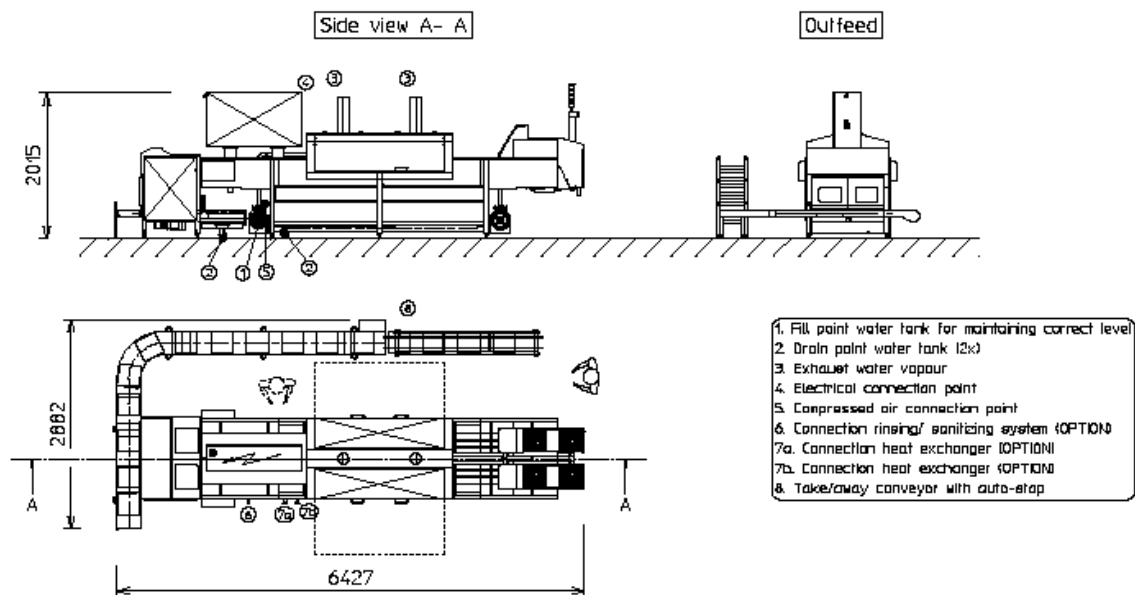
Following options are available for the Moba Coenraadts tray washer systems:

- Infeed extensions with auto-feed for 5 additional stacks per channel. (compressed air is required)
- Warm water heat exchanger to heat the washing water to maximally 40°C (warm water supply not included).
- Rotating brushes to enhance cleaning capabilities.
- Rinsing unit, right after the washing area.
- Sanitizing unit with dosing pump.

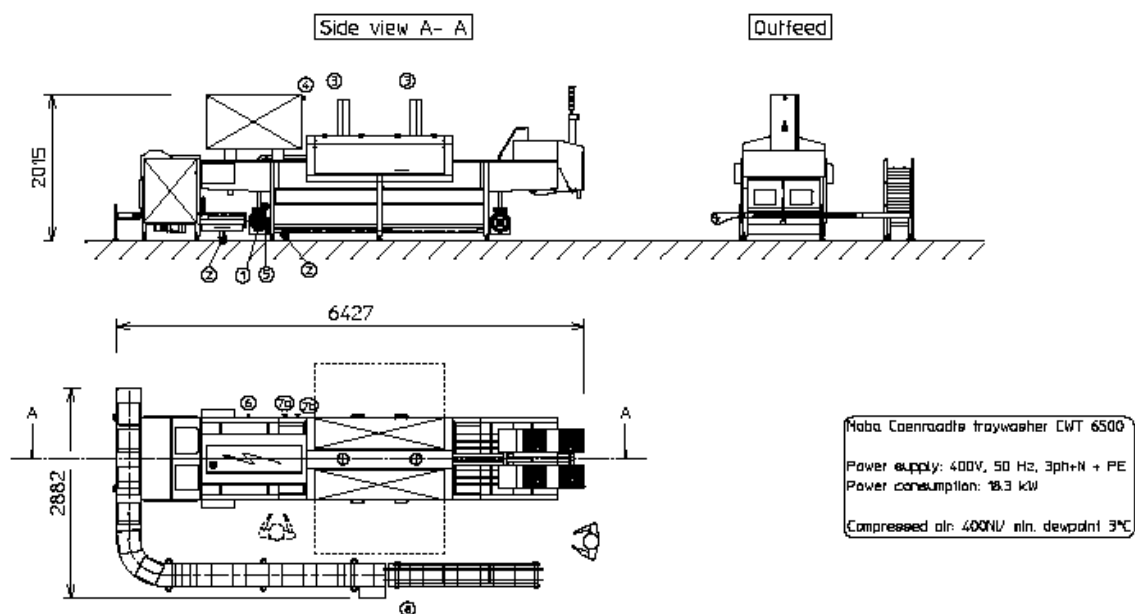


Specifications

	CTW 3250	CTW 6500
Capacity	3-3250 trays per hour	6-6500 trays per hour
Weight	Approx 1700 kg	Approx 1800 kg
Number of channels	1	2
Noise level	Max 84 db(A) at the washing section.	
Tank volume	1000 l	1000 l
Pump capacity	70 m ³ / hour @ 2.5 bar	2x 70 m ³ / hour @ 2.5 bar
Water consumption during operation	50-75 l/hr	100-150 l/hr
Air pressure	5-6 bar; dewpoint 3°C (an air dryer is recommended)	
Air consumption	15 m ³ / hour	24 m ³ / hour
	Defined as free air with a pressure of 1 bar.	
Voltage	400V, 3ph, +N	
Frequency	50Hz	
Power consumption (without heating)	9.1 kW	18.3 kW
Fuse	25A	40A



CTW6500R



CTW6500L

