



# TOTAL SOLUTIONS

FOR THE EGG PROCESSING INDUSTRY

**Pelbo**<sup>®</sup>  
Egg Processing Equipment

**MOBA**



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# TOTAL SOLUTIONS FOR THE EGG PROCESSING INDUSTRY

The Moba Group is the world's leading manufacturer of egg grading, packing and processing equipment. Our head office is situated in Barneveld, the Netherlands. With development, manufacturing, sales and service in multiple locations, our aim is to offer global total solutions and remain close to our customers at the same time. We use an extensive network of agents to support our branch offices in maximise an effective dialogue with our customers. Our competence center for breaking and processing is based to Brugherio, Italy. There our famous breaking and processing machines are manufactured.



Pelbo's dedication to an egg industry goes back to the early 70s when first parallel

lines egg breaker / separator was designed, patented and launched in the market. Ever since Pelbo has focussed to provide innovative products and systems based on most advanced technologies to support egg industry's profitability and production efficiency. Pelbo products and systems portfolio includes complete range of egg breaking and liquid egg processing plants based on components and technologies developed and tested internally and supported by a team of highly skilled engineers. Worldwide presence with own staff, business partners and a wide spread Service Network guarantees

constant connection with customers and most significant players in the industry. Pelbo R&D develops innovative solutions turned into standalone products, fully integrated egg processing plants and customised solutions.

## Egg Loaders

Egg loading has always been the critical factor in egg breaking process. The industry uses several kind of trays, either new or re-used, made by carton or other different plastic shapes. Eggs are often more fragile when compared with egg grading, another delicate egg process, but with less constraints than in egg breaking. Our egg loaders are designed to guarantee maximum performance and continuous operations during process. Made with food tech grade stainless steel all Pelbo egg loaders are fully automatic to guarantee stable and gentle egg handling for maximum efficiency. Egg handling must be performed at constant speed, smoothly and gently, to guarantee constant egg supply to high capacity egg breaking & separating systems. The state-of-the-art Crono loaders family incorporates all Pelbo experience and the innovative Multilink® servo assisted auto adjusting technology guarantees maximum performance, minimum downtimes, and dramatically reduced egg loss. Pelbo egg loaders are fully compatible with egg breaking systems but can be also utilized to feed other machinery such as egg grading.



## EGG LOADERS



Model	Type		Capacity range	
	single tray	destacker	eggs / hour	cases / hour
Crono1	•		10.000 / 45.000	27 / 125
Crono2		•	72.000	200
Crono4		•	130.000	360
Dual Crono2		•	144.000	400
Crono6		•	180.000	500





### Egg Breakers / Separators

Pelbo egg breakers/separators provide large quantity of egg yolks with very high content of dry matter and even broken yolks are recovered allowing a superior performance. All our egg breakers separators are built to guarantee long-term trouble free operations, with easy maintenance and simple sanitation through integrated automatic CIP system.

The key component of an egg processing plant is the egg breaker, we produce a wide range of egg breaker separators with a capacity from 20,000 to 225,360 eggs/hour.

All Pelbo breakers separators are equipped with a unique and exclusive egg breaking system combining the highest proven yield in the industry with the cleanest product possible, an indispensable property to ensure long shelf life of finished products. High capacity egg breaking systems may be equipped with Pelbo top of the range egg white inspection system, which can guarantee the highest quality of egg white with fat content below 0.03%.



**Synchro626** > 225.360 eph / 626 cph



# SYNCHRO EGG BREAKERS & SEPARATORS



**Synchro150** > 54.000 eph / 150 cph



**Synchro200** > 72.000 eph / 200 cph



**Synchro400** > 144.000 eph / 400 cph



**Synchro500** > 180.000 eph / 500 cph

## SIMPLEX EGG BREAKERS & SEPARATORS



**Simplex3S75** > 2.000 ÷ 27.000 eph / 5 ÷ 75 cph



**Simplex5S125** > 18.000 ÷ 45.000 eph / 50 ÷ 125 cph

Model	Rows	Capacity range		Loading	Upgrade	Separation (cups)	Albuchecker® yolkscanner
		eggs / hour	cases hour				
Simplex3S75	3	2.000 / 27.000	5 / 75	manual	to 5S125	•	option
Simplex5S125	5	18.000 / 45.000	50 / 125	Crono1	-	•	option
Synchro150	6	54.000	150	Crono2	-	•	•
Synchro200	6	72.000	200	Crono2	-	•	•
Synchro400	12	130.000	360	Crono4	-	•	•
Synchro400	12	144.000	400	Dual Crono2	-	•	•
Synchro500	15	180.000	500	Crono6 Crono2 + Crono4	-	•	•
Synchro626	15	225.360	626	Crono6 + In Line	-	•	•



The key component of an egg processing plant is the egg breaker, Pelbo produces whole egg breakers from 900 to 144,000 eggs/hour. All Pelbo breakers are equipped with an exclusive egg breaking system that combines the highest proven yield in the industry with the cleanest product possible, an indispensable property for a long shelf life of finished products. All Pelbo egg breakers are built to guarantee long-term trouble free operation, with easy maintenance, furthermore many of our models are ready to be totally washed by a CIP system.

## SIMPLEX WHOLE EGG BREAKERS



**Micro25** > 9.000 eph / 25 cph



**Nano3M75** > 5.000 / 27.000 eph



**Nano5M125** > 18.000 / 45.000 eph



**Simplex6M200** > 72.000 eph / 200 cph



**Simplex12M400** > 144.000 eph / 400 cph

Model	Rows	Capacity range		Loading	Upgrade	Separation(chutes)
		eggs / hour	cases hour			
Micro25	2	900 / 9.000	3 / 25	manual		supplied
Nano3M75	3	5.000 / 27.000	27 / 125	manual	to 5M125	option
Nano5M125	5	18.000 / 45.000	125	Crono1	-	option
Simplex6M200	6	72.000	200	Crono2	-	option
Simplex12M400	12	130.000	360	Crono4	-	-
	12	144.000	400	Dual Crono2	-	-

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# EGG PRODUCTS PROCESSING

We don't only offer breaking, inspection and separation systems, but also state of the art solutions for pumping, filtration, cooling, storage, blending, stabilization, pasteurization, packaging and drying of egg products as well as automatic cleaning systems. Our systems are designed to be integrated with your current egg processing plant for process improvement or as complete turn-key solutions tailored to your specific needs.

Filtration systems are designed to remove organic parts such as chalazae and membranes, as well as egg shell particles from liquid egg. Line filters are suitable for different capacities and can operate manually or automatically.



*Automatic triple filter*





### Ovolution Modular Integrated Pasteurizing Systems

Ovolution is a completely integrated egg processing system where all steps of liquid egg processing are incorporated including:

- Egg breaking
- Blending
- Pasteurizing
- Packaging
- CIP cleaning

In fact, it is a complete “plug-and-play” pre-assembled egg processing factory. The system is available in capacities from 300 to 3,000 liters per hour. The units are pre-assembled in a module and are extensively tested before shipment to ensure a quick and easy installation.

Ovolution processing systems use a proven technology that assure the achievement of:

- Optimal functional product performance combined with the highest possible bacterial reduction (long shelf life)
- High-energy efficiency therefore very low operational cost.

Ovolution can be configured to order, with a choice of:

- Whole egg or separating configuration
- Size and number of tanks
- Filtration system, manual or automatic for labour saving
- Product homogenisation, by high pressure homogeniser or cavitation homogenizer for extended run time. In the Ovolution series the valves and the controls are automatic, the functions are shown in a colour display to help the operator during production and cleaning.

Automatic controls allow remote support and troubleshooting from a Pelbo/Moba helpdesk if support is needed. The Ovolution system can be supplied with an automatic packaging system for a wide range of

sizes and packaging types, from 1 kg to 1000 kg. The Ovolution system is the reliable best value option for an easy and quick start in the liquid egg products industry.



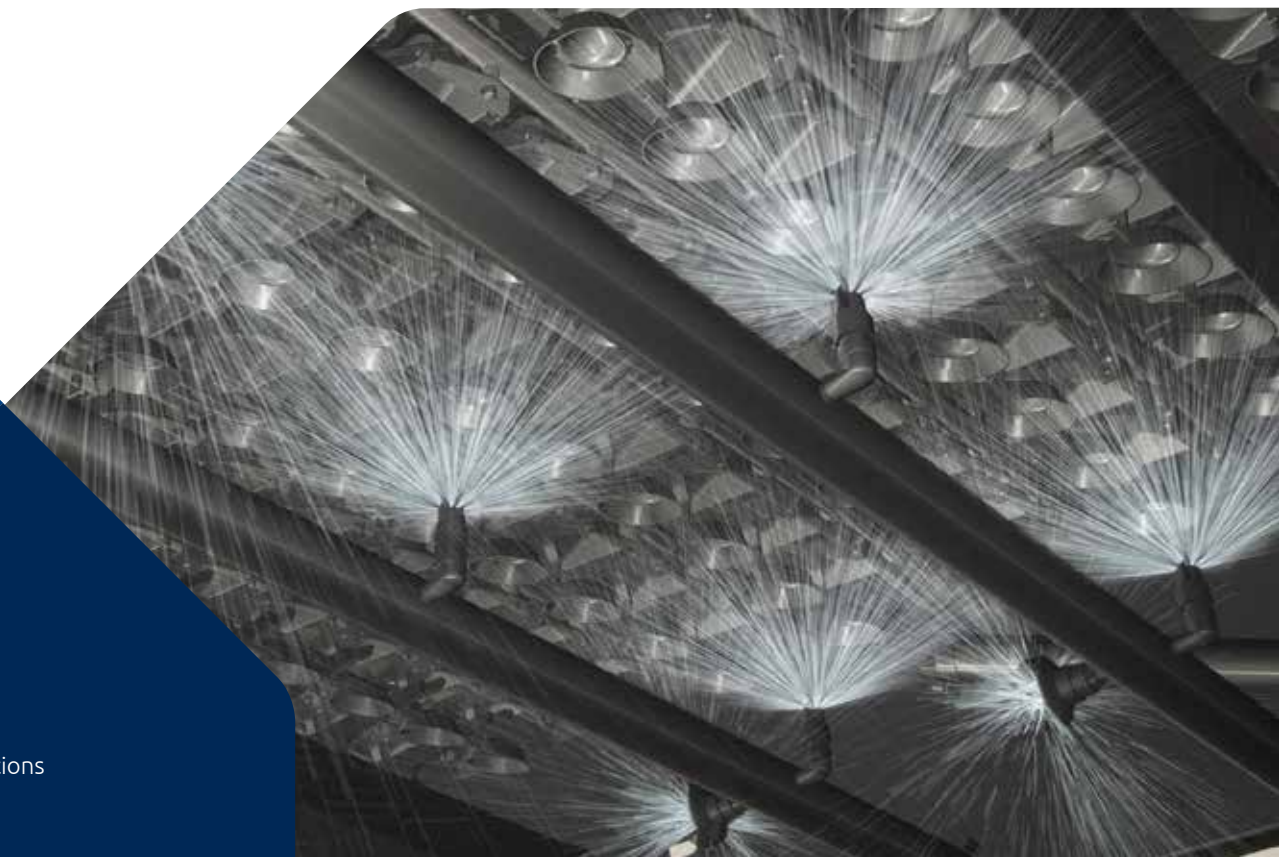
Ovolution300



Ovolution470



Ovolution1300

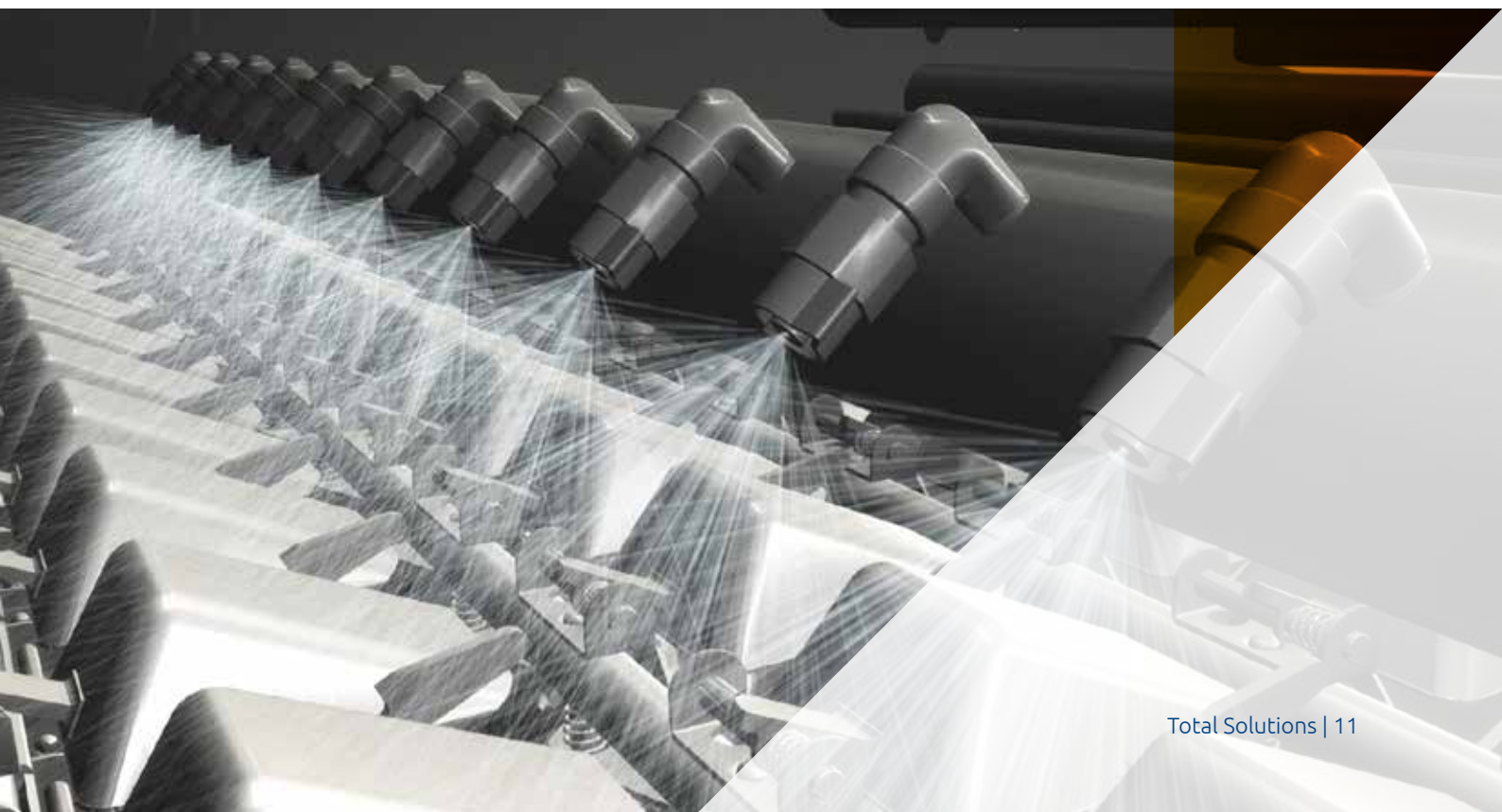


## CIP Systems - System components & accessories

The final quality of the liquid end product depends on effective cleaning. After every processing cycle all major systems including, piping, pumps, heat exchangers, need to be carefully cleaned and sanitised. Cleaning in place (CIP) is the method of cleaning egg processing facilities without needing to dismantle the production equipment. We offer fully integrated CIP systems designed to provide the proper cleaning and sanitation of the equipment with a minimum environmental load and energy consumption.



Model	Application	Features
1-Tank	breakers, fillers	fully automated, single use caustic and acid
2-Tank	small breaking plants	fully automated, caustic recovery, single use acid
3-Tank	medium and large breaking plants	fully automated, caustic recovery and option for acid or rinse recovery
4-Tank	medium and large breaking plants	fully automated, caustic, acid and rinse recovery



## Egg washers

Egg washing equipment is designed to be integrated with breaking equipment and washes eggs with a maximum of 225,360 eggs/hour (626 cph). The egg washer modules are equipped with a combination of spray nozzles and brushes. High capacity pumps are used for recirculating the washing water, which passes through a two layer filter plus an inline filter. Heating the washing water can be done either by direct steam injection or by means of

a heat exchanger. Final rinse is combined with a dosing pump to add a disinfectant solution prior to the optional final drying phase. Powerful dryers can be added to the washer to remove residual water before breaking. The egg washers are constructed entirely out of stainless steel. They can be manufactured in different layouts, to meet your specific needs.



PW Series washers



PWJ Series washers

Model	Rows	Capacity range
		<b>eggs / hour</b>
PW 1500B	5-6-12	9.000 - 144.000
PW 3000B	5-6-12	9.000 - 144.000
PWJ 5/6	5-6	up to 72.000
PWJ 12	12	up to 144.000



## Egg shell treatment

After breaking and processing it is essential to manage remaining egg shells. Egg shells are then transported by augers and belts to a dedicated area where egg shell centrifuge guarantees high grade of liquid/solid separation.



SC280 Egg shell centrifuge



Transportation belts/augers



Pneumatic shell transport



Egg shell drying plant

## Other equipment

Pelbo produces other standard and customized system components based on Customer's plant layout and local sanitary requirements.



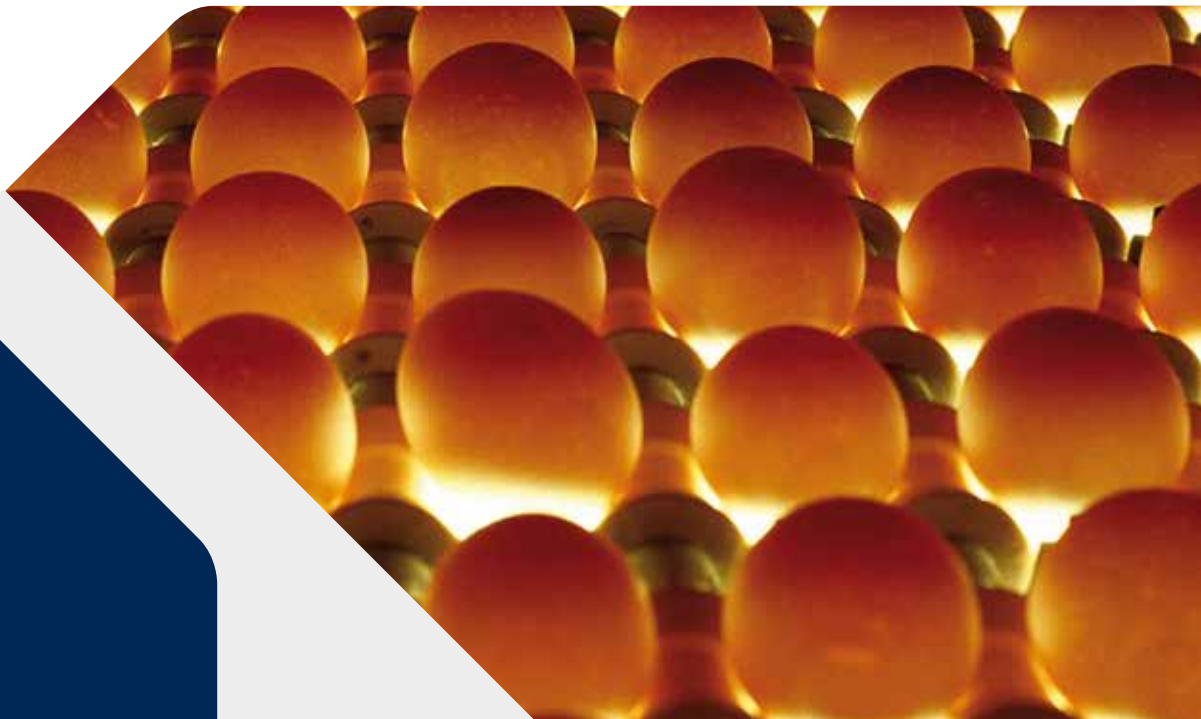
Egg accumulators



Egg inspection candler



Digital optical scanner & egg counter



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# THE COMPANY

Pelbo was founded in the 70's in Milan Italy by Giorgio Pellegrinelli. Very active in Pharmaceutical and food Industry, Pelbo introduced its innovative patent in 1982 and revolutionized the egg industry with the first egg breaking machine based on parallel lines and capacity of 54,000 eph. Today Pelbo produces Egg Breaking machines with capacity from 900 to 180.000 eggs per hour and also Egg Loaders, Centrifuges, Egg Washers and other key egg processing systems and components including Liquid Egg fully automated Pasteurizing plants. All Pelbo's machines are manufactured in compliance with the most severe and strict International sanitary standards for the egg processing industry. All Pelbo egg breaking machines and Liquid Egg Handling lines are USDA approved. Pelbo R&D is constantly involved in new development projects and studies with the commitment to provide egg processing industry always with new machinery and solutions to increase performances and productivity. In 2016 Pelbo became member of Moba Group.

## Service & Customer Support

Pelbo Service Network supports Customers around the World providing advise and solutions to optimize customer's machines and performances. Spare Parts warehouse is always ready to provide needed parts and services either based on planned maintenance or even satisfying last minute requirements with fast deliveries worldwide. "Total Customer Service" guaranteed by the Pelbo brand has always been one of the most important goals

of our company: complete service during all operating phases, from fabrication to installation, problem solving, spare parts availability and technical service. We have a team of experienced technicians to install and service our systems all over the world. A dedicated training section is delivered to our customers providing an easy overview of systems and operations. In addition we provide information sheets with recommendations for proper parts inventory and cost-effective alternatives of retrofit sets. A piece of equipment should operate at peak performance through its lifecycle and not only when the equipment is new. Through high quality spare parts, on-site training, online access to your system by our experts, and preventive maintenance programs, Pelbo can help you maintain equipment performance through its life and beyond. From a product pump or valve to a complete breaking and egg processing system, Pelbo is committed to your success. Contact us to learn more about the different ways Pelbo can make a difference.



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