



The highest water bottling line in all of Greece

The summer of 2011 saw the production start-up at Greece's highest water bottling plant: [Eurowaterland](#). On its new Krones/Kosme line, the company is filling 0.5 and 1.5-litre PET bottles with still mineral water at a maximum speed of 12,000 bottles per hour. Where this line is particularly successful is the integrative combination of both Krones and Kosme machines.



Eurowaterland is located at an elevation of 3,560 feet in the immediate vicinity of the mountain village of Theodoriana in the north of Greece. The water comes from the surrounding nature reserve, extracted from a spring 5,780 feet up in the hills. According to analyses conducted by the Fresenius Institute, the water quality is excellent. Installation of the bottling line means that Apostolos Panagiotou, Eurowaterland's Managing Director, has made one of his deceased father's fondest wishes come true. "It all began 30 years ago. My mother is from Theodoriana. I myself was born in nearby Arta. But every summer, my brothers and I were here in the mountains. This region possesses one of the biggest water deposits in Greece. The country's longest river has its source here. We were making our plans for a bottling line while our father was still alive. Five years ago, my brother Photis and I started putting this all in place, bit by bit. I'm confident we're going to be successful!"

Eurowaterland has opted for a Krones wet end ...

Quite apart from its picturesque location, Eurowaterland is also special in that it features a successful combination of machines from both Krones and Kosme in its bottling line, which has been installed in a new building. The Krones wet end monobloc comprises an S 8 stretch blow-moulding machine with preform feed, and a filler. The blow-moulder's rated output is 12,000 bph, equivalent to 1,500 bottles per cavity. The filler chosen was a Volumetric VODM-PET, including

closure feed and capper. The Controll labeller and the Checkmat EM inspector were also supplied by Krones.

After blow-moulding has been completed, the bottles are conveyed in neck-handling mode to the water filler via a short transfer section featuring transfer starwheels. The filler is installed in an operator-accessible cleanroom enclosure featuring HEPA filters of Cleanroom Class 7. The machine possesses 32 filling valves, and fills still water in two bottle sizes, 0.5 and 1.5 litres, which are then injected with N₂ by means of a nitrogen dropper, so as to ensure improved stability for packing and palletising. After being filled, the bottles are fitted with 30-millimetre plastic screw-caps by a capper with eight closing elements integrated into the filler's discharge. A mobile foam cleaning station is provided for manual cleaning routines.

The bottles are transferred from the capper to the conveyor that leads to the labeller via a vertical transfer starwheel in order to compensate for different bottle heights, since the height of the conveyor itself remains the same. On the discharge conveyor, a Checkmat FG inspector is installed, to monitor the fill level for underfills using gamma-rays and the presence of a closure by means of optical sensors for one type of plastic closure. Bottles identified as defective are ejected into a collecting container using a Directpush rejection system at the bottle conveyor. The production bottles are then date-coded in the shoulder area using an ink-jet unit.

Before entering the labeller, they are put back into single file after the mass conveyors and fed into a Dryer 3000 drying tunnel, to remove any

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To quote Apostolos Panagiotou, Managing Director of Eurowaterland: "We're really happy that we've got Kronos on our side. We're confident that with this kit everything's going to be a huge success!"





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moisture before they are labelled. The modularised labeller is linked to the blow-moulder/filler monobloc by bottle conveyors. In the labeller, the bottles are dressed in a reel-fed polypropylene wrap-around label. On the discharge conveyor after the labeller is a Checkmat EM inspector, where sensor detection verifies the presence of a label.

Before entering the labeller, the bottles are fed into a drying tunnel, to remove any moisture before they are labelled.



... and a Kosme dry end

Downstream of the labeller is the interface between the Krones wet and the Kosme dry end – though it's not really an interface since the machines concerned have been matched to each other, and erection and commissioning were single-sourced. Kosme also supplied the CIP system. The bottles exiting from the labeller are passed by single and multi-lane Kosme bottle conveyors directly to the packaging zone featuring a Flypack 45 F packer, where the bottles can be assembled in different pack types and sizes: 0.5-litre non-returnable PET bottles in shrink-wrapped 6-packs with a handle or 24-bottle shrink-packs without a handle, or 1.5-litre non-returnable PET bottles in shrink-wrapped 6-packs with a handle. The machine can cope with both unprinted films and those with a cutting mark. Each package of bottles is wrapped in a shrink-film, and then passed through the downstream shrink-tunnel, where the pack acquires its final stability from the shrink-wrapping operation. Downstream of the shrink tunnel, the packs exit from the machine long-side-leading.



Palletising in the basement

The Palpack PD palletiser is located in the basement: the packs arriving from upstairs in single file through a spiral lowerator/turner are shortly before the infeed of the palletiser's grouping station divided into two lanes, and fed into the machine. In the pregrouping station, the packs are grouped in accordance with the specified layer pattern, and then transferred to the palletising unit, which pushes one layer at a time onto the waiting pallets. The machine handles half-pallets in pairs or Euro-Pool pallets. Each pallet is first given a cardboard layer pad for the bottom of the stack, and the individual layers on the pallets are then stabilised by more layer pads, finishing with a cardboard top pad on the pallet stack. After palletising, the finished pallets are wrapped in film, with the wrapper extending underneath them so as to achieve improved stability for the load and enhanced protection during transit. The half-pallets are individually wrapped on a Volpack 115 film strapping machine, placed on a Euro-Pool carrier pallet and

then wrapped once again on a Volpack 120 film strapping machine.

To quote Apostolos Panagiotou, Managing Director of Eurowaterland: "We have a great relationship with Krones, and we're really happy that we've got Krones on our side. We're confident that with this kit everything's going to be a huge success!"

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