Dynafill
Filling and capping with one and the same unit
As fast as no other system

Time reduced by 50 percent, distance reduced and only one instead of two machines in use – these and many other advantages of the Dynafill are very convincing: Filling and capping is done in one sole functional unit – and that within less than five seconds. With good reason, one can claim that the concept of Dynafill revolutionises beer filling.

At a glance:
- Innovation for beer filling into glass bottles
- Combined filling and capping process on one single machine
- Novel filling process
Brownie points for speed and quality

The Dynafill combines filling and capping on one KRONES machine – and convinces with regard to process duration and product quality.

**Speed**
- A novel filling process fills the container within only 0.5 seconds.
- 66 combined filling and capping units process up to 36,000 0.5 litre glass containers per hour. A conventional filler requires 100 filling valves for this output.
- The machine can fill a maximum of 100,000 containers per hour.

**Quality**
- The new filling process enables a low total oxygen pick-up with low consumption of CO₂.
- The closed hygienic filling and capping area ensures optimum product purity: No return gas must be returned into the product bowl and high-pressure injection is no longer required.
- No product is lost during filling.
- The Weihenstephan Research Centre for Brewing and Food Quality and the Chair in Brewing and Beverage Technology at Munich Technical University confirm that all analytic and sensory quality parameters for beer are met.
1 Evacuation and filling

- The filling valve moves into the pressure chamber from the side and the glass bottle is pressed onto the filling valve.
- The container is flushed with CO₂.
- The filling process:
  - It lasts only about 0.5 seconds.
  - The evacuated bottle is filled without pressurisation.
  - The filling process is ended once the bowl pressure is reached in the bottle.
  - The head space is pressurised with CO₂.
That’s how filling and capping within one unit works

2 Capping

– During the flushing process, the cap is introduced and the chamber is sealed
  ▪ from the top by lowering the capper head.
  ▪ from the bottom by closing the neck-ring seal.
– Parallel to the filling process, the pressure chamber is evacuated and pressurised with CO₂.
– After the filling process, the filling valve retracts and the bottle is capped with a crown.

3 Snifting

– The pressure chamber is snifted and the seals are opened.
– The bottle is lowered and discharged from the filling and capping unit, afterwards the capper head is lifted.
Your benefits in figures

Thanks to the Dynafill,

− the time between filling and capping process is reduced by 50 percent* to approximately 5 seconds.

− the CO₂ consumption for flushing is reduced by 20 percent.*

− the floor space required for installation is reduced by 50 percent.*

− the number of filling valves is reduced from 100 to 66 with the same output of 36,000 containers per hour. Warm filling (up to 30 °C), also requires only 66 valves** instead of the previous 120 ones – which means the number is reduced by nearly the half.*

* Compared to conventional systems
** Output: 36,000 cph
Benefits to you

**Reduced space requirement**
Thanks to the 2-in-1 principle, the Dynafill requires substantially less space than comparable combined filler-capper units. As the filler is not to be emptied in the case of a malfunction in the filling line, the buffer section to the labeller can be reduced. The labeller can also be directly block-connected to the filler.

**Increased outputs**
In future, the Dynafill enables a higher output than conventional systems: More than 100,000 containers per hour can be processed.

**Increased filling quality**
The closed hygienic filling and capping area ensures optimum product purity, as return gas feed back into the product bowl is no longer required. High-pressure injection is no longer required and no product is lost during filling.

**Reduced CO₂ consumption**
The CO₂ consumption is 20 percent lower than that of conventional systems.

**Stable filling process**
The Dynafill enables not only cold but also warm filling of beverages (temperatures up to 30 °C) – the process duration will not exceed five seconds in both cases. The filling process remains always stable.

**Ideal cleaning conditions**
The Dynafill is a closed system. The filling valve and the capper unit are integrated in the CIP circuit.

**Easy accessibility**
The individual components, such as the filling valve, the media hoses and the capper drive can be individually dismantled.
Everything from a single source:

**KIC KRONES cleaning agents make your machine shine**
Only if the production environment is immaculate, can your product be brilliant. KIC KRONES provides you with the optimum cleaning agents and disinfectants for each individual production step.

**Lubricants from KIC KRONES for every productions step**
Whether for gears, chains or central lubrication systems – our greases and oils are veritable all-rounders. You can reach every lubrication point, protect your line and ensure gentle treatment for your product thanks to our food-grade products.

**EVOGUARD - excellent valve technology all along the line**
The valve series of EVOGUARD comprises a modular system with hygienic and aseptic components which contributes to an increased performance at every point of the production line and has the perfect solution for every process step.

**EVOGUARD – pumps for absolute process safety**
In addition to separation and shut-off, one thing is particularly important in a line - and that is the reliable conveyance of your product. This is why EVOGUARD also offers innovative centrifugal pumps in addition to high-quality valves.