



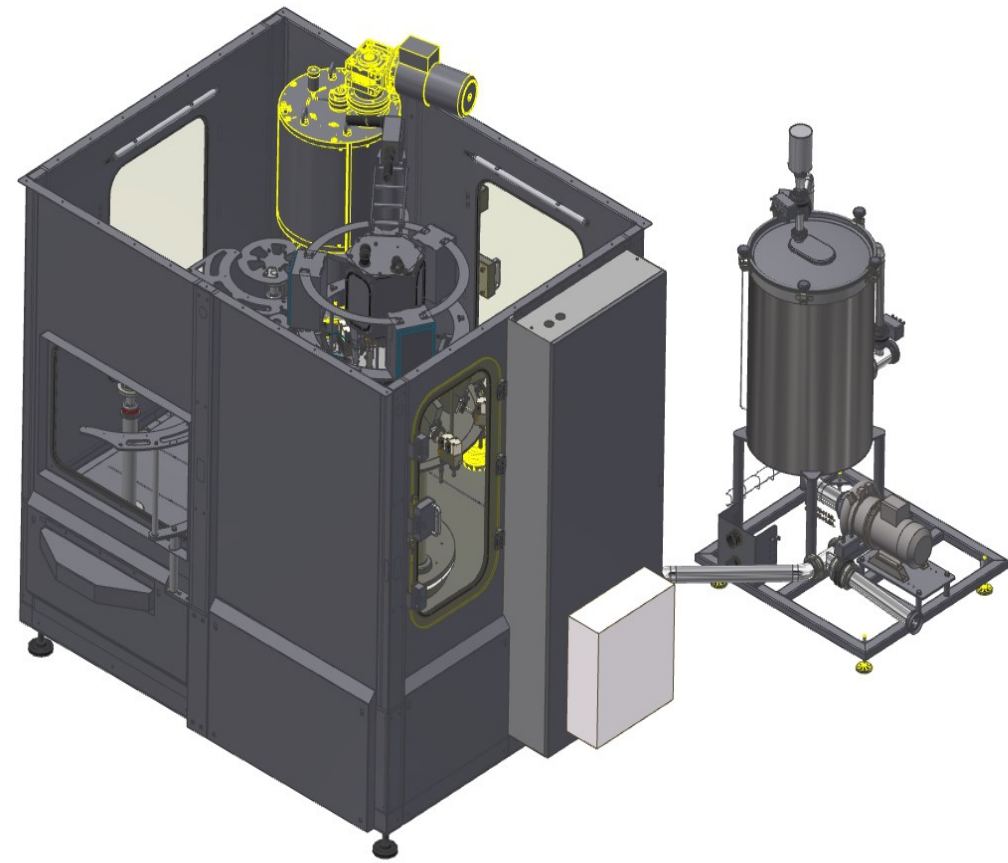
HEVD

**Hyperclean Electronic Volumetric
filling System for Detergents**

HEVD - NOT ONLY BEVERAGE

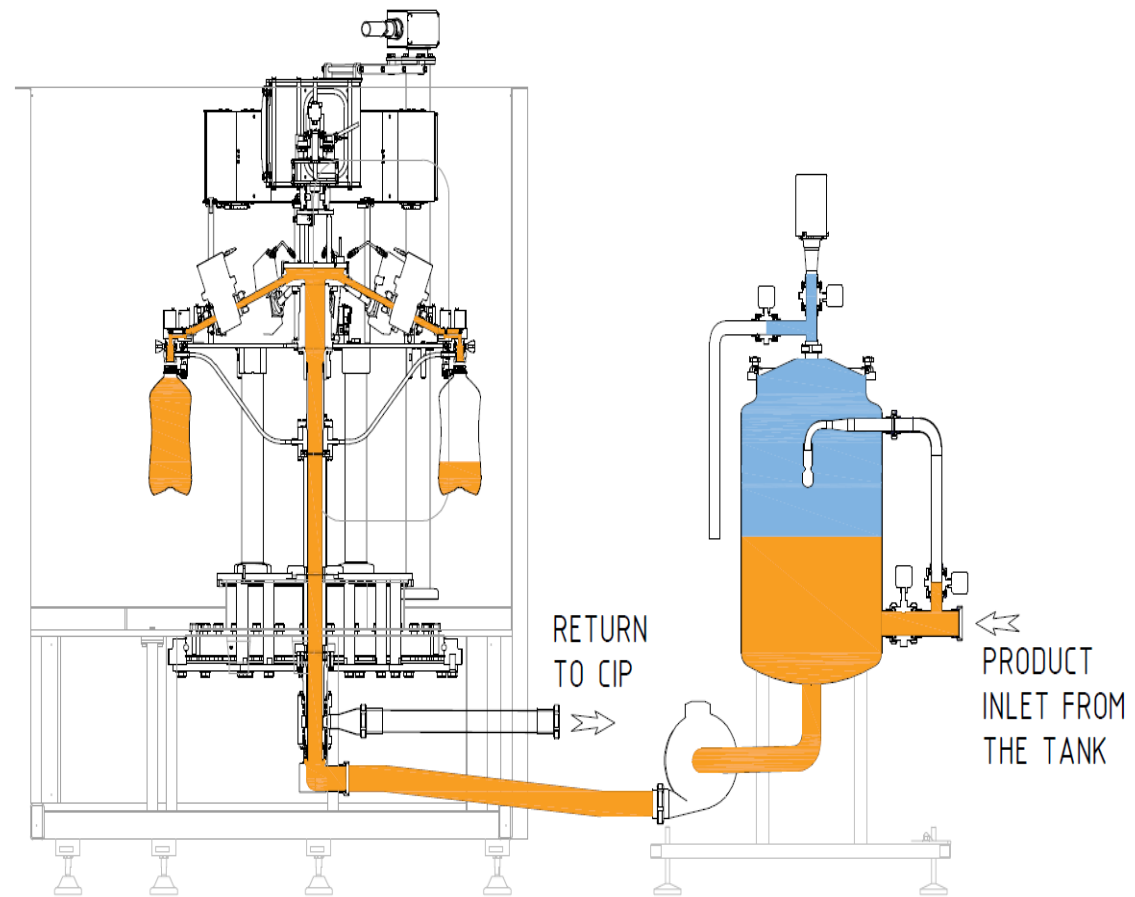
The thirty-year experience of Enoberg in the construction of filling machines bring us in a new sector where our machines can be used. Detergent market is one of the fields where Enoberg fillers can find the perfect placing thanks to the new HEVD machine series

HEVD: Hyperclean Electronic Volumetric filling systems for Detergents.



HEVD - HOW DOES IT WORKS?

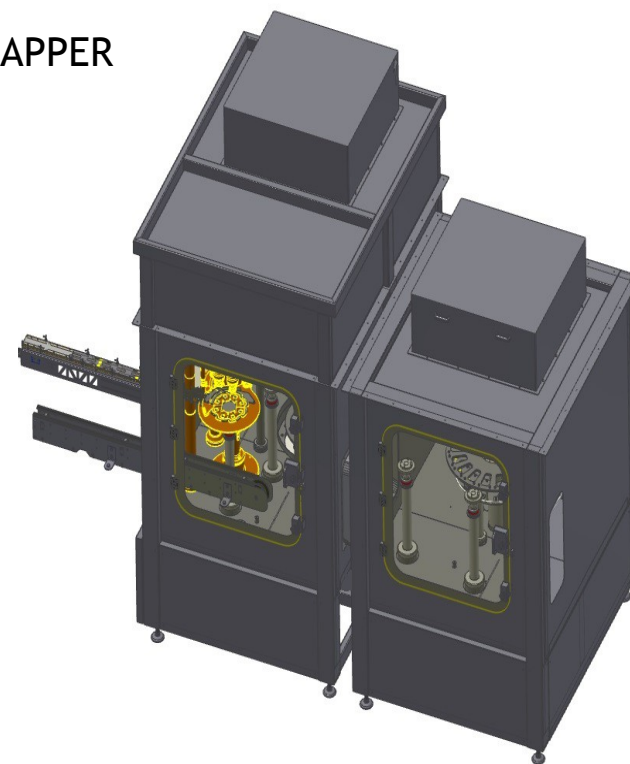
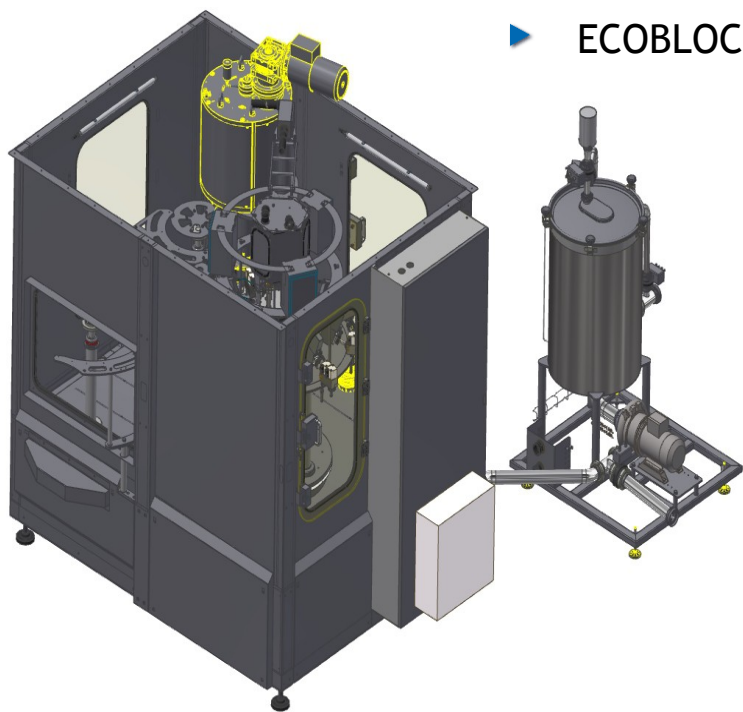
The electronic volumetric filling system is based on the use of a flow meter for each filling valve. The flow meter detects the product flow that is entered in each bottle; when the correct volume is reached, the flow meter controls the closing of the filling valve.



HEVD - AVAILABLE CONFIGURATIONS

The machine is available in the following versions:

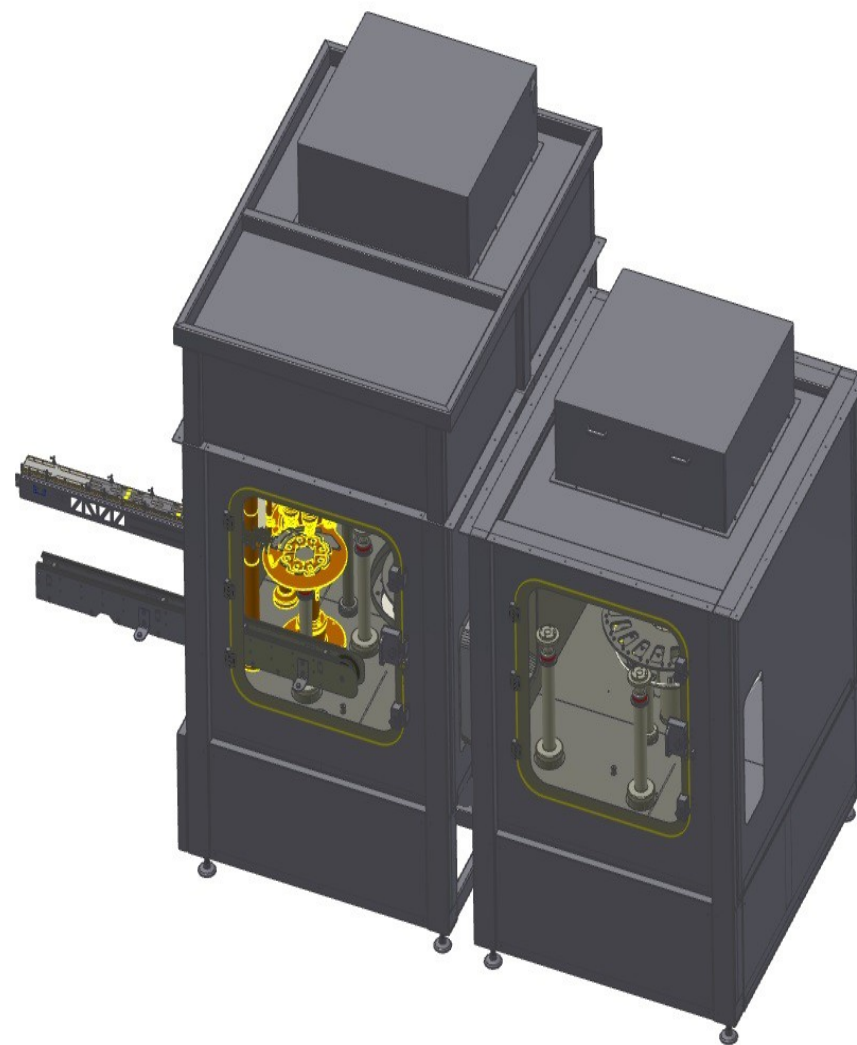
- ▶ FILLER - CAPPER;
- ▶ RINSER - FILLER - CAPPER
- ▶ ECOBLOC®: BLOWMOULDER - FILLER - CAPPER



HEVD - MACHINE DIMENSIONS

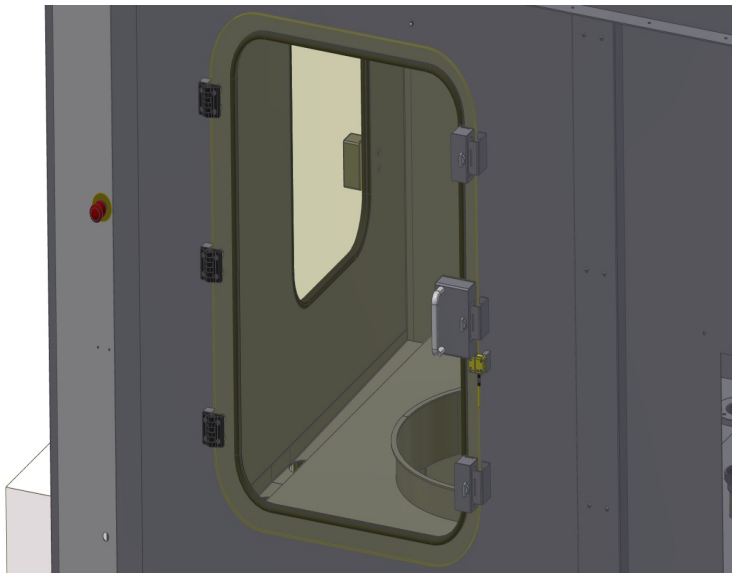
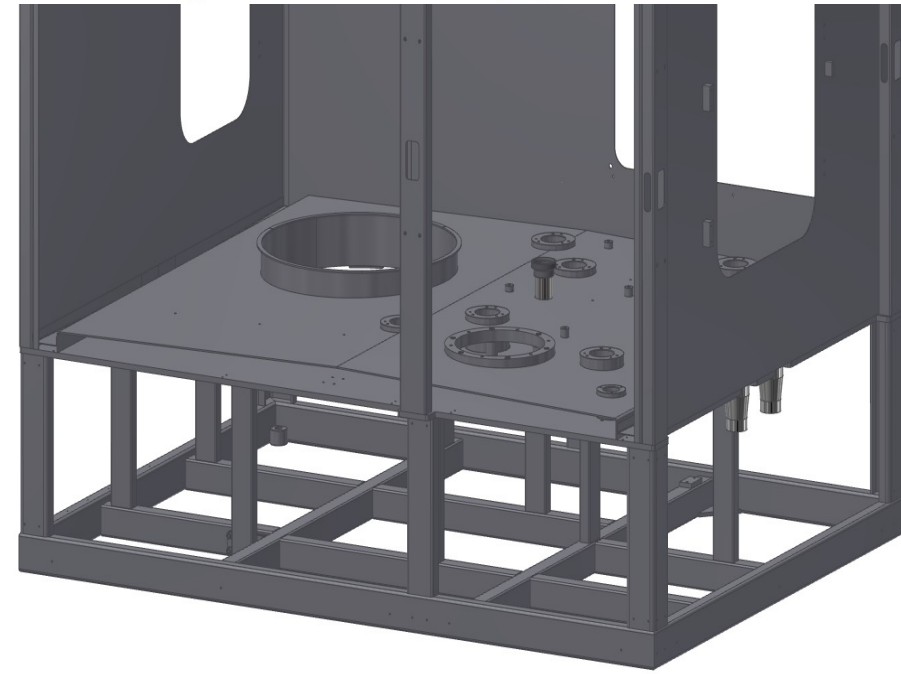
The frame of the new HEVD is realized with reduced dimensions. Advantages of the solution:

- space saving for machine positioning in the plant;
- possibility of transporting the machine inside 40 'high cube container (available for most models).



HEVD - THE FRAME

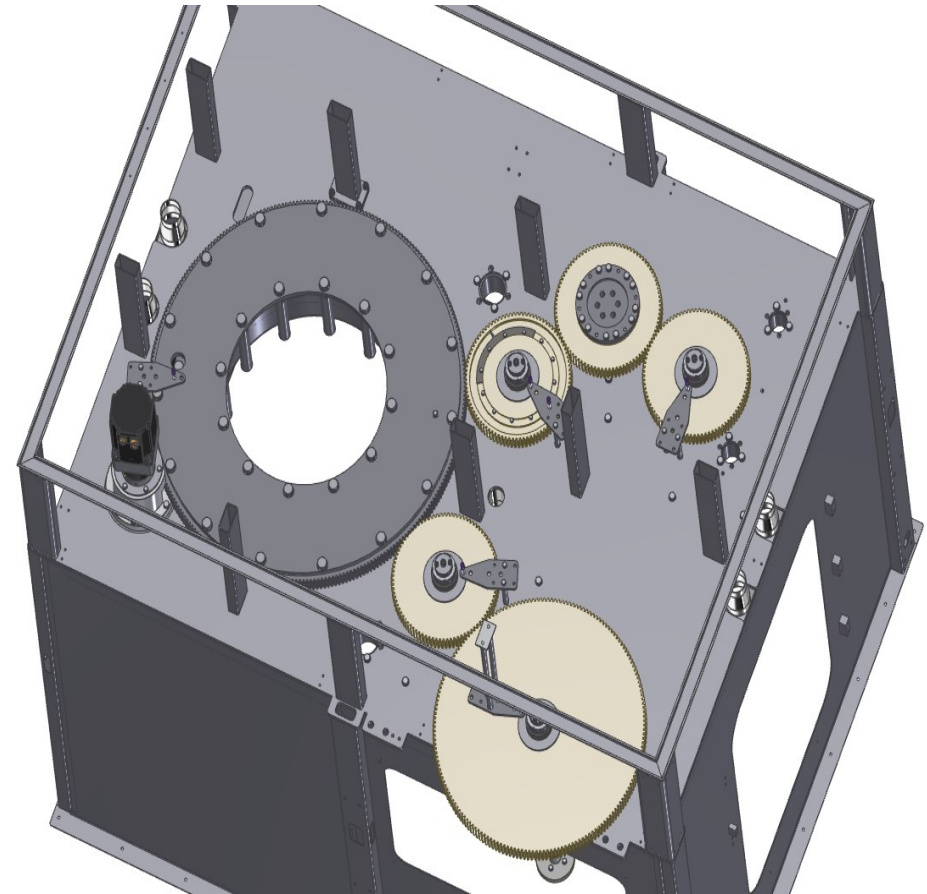
- frame made of AISI 304 stainless steel;
- fully welded frame which gives the entire machine a solid and resistant structure;
- the filling chamber is completely isolated from the transmissions, which therefore do not come into contact with any type of liquid;
- tempered glass protections and sealing gasket hermetically seal the filling environment from the external environment.



HEVD - MOTION TRANSMISSION

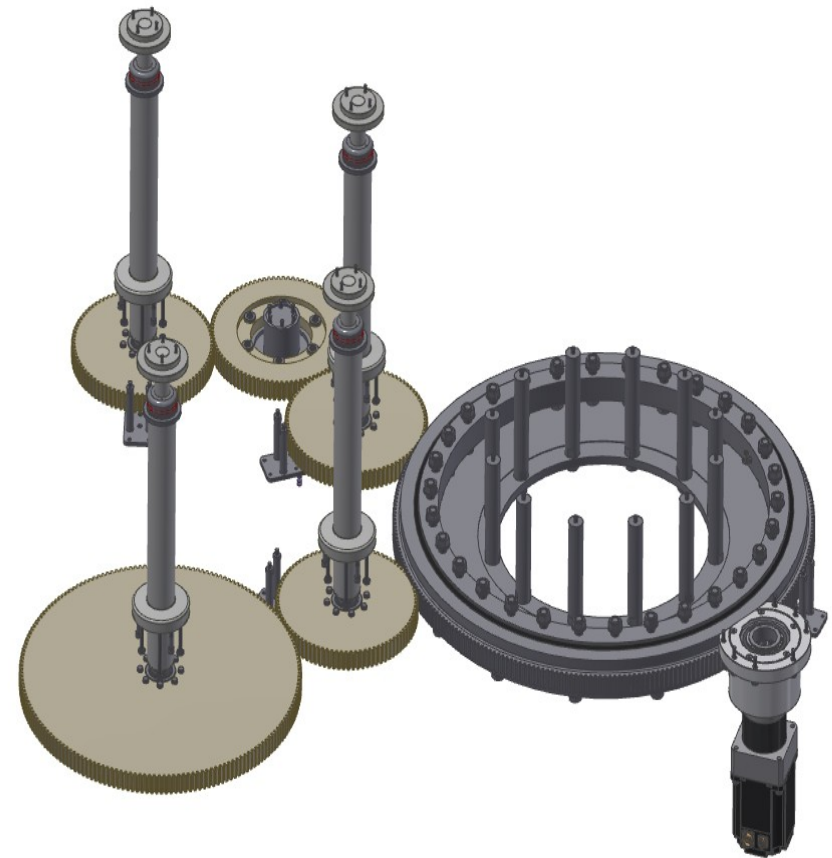
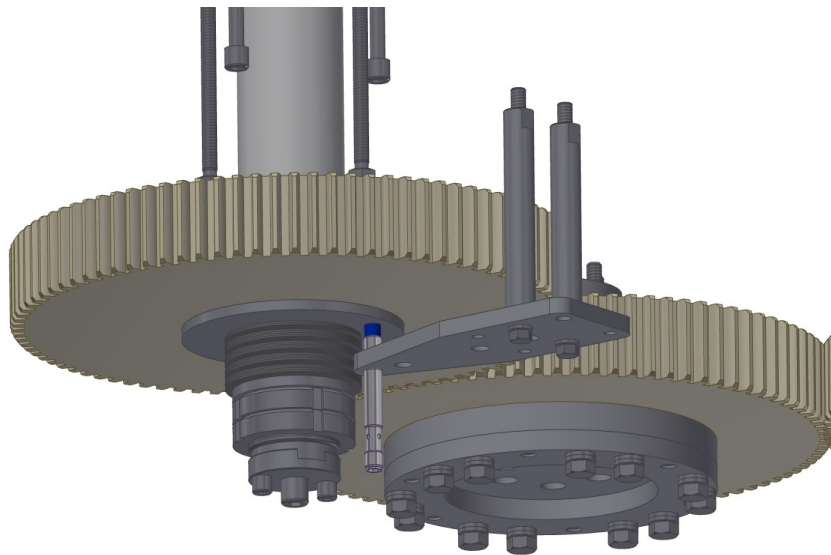
The movement of the carousels of the machine is obtained with robust gears positioned in the base of the machine. A gear placed in the base of the machine corresponds to each star-wheel placed in the filling environment. The gears are moved by a single brushless motor managed by the machine program.

The filling carousel is moved thanks to a toothed fifth wheel having the same primitive diameter as the filling carousel.



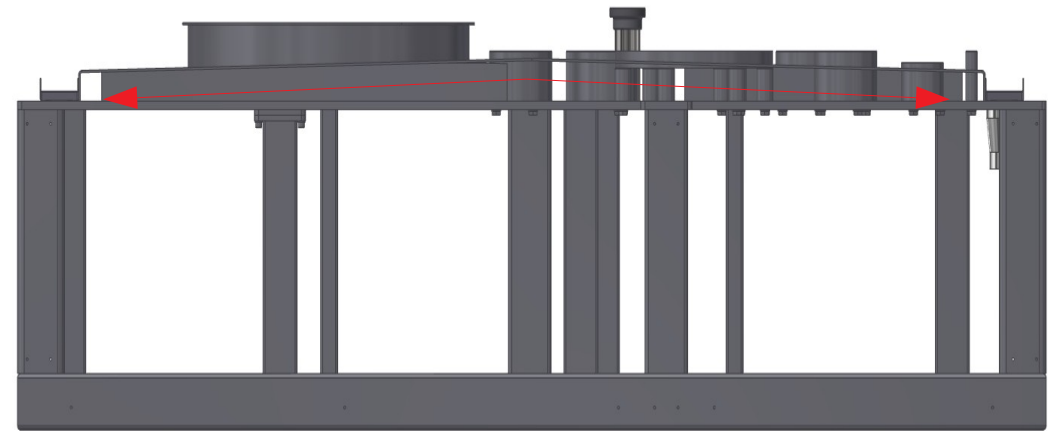
HEVD - MOTION TRANSMISSION

- the synchronism between all the star-wheels is guaranteed by the toothed wheels having the same diameter as the corresponding handling carousel in the working environment;
- each transmission shaft is equipped with a mechanical emergency clutch.



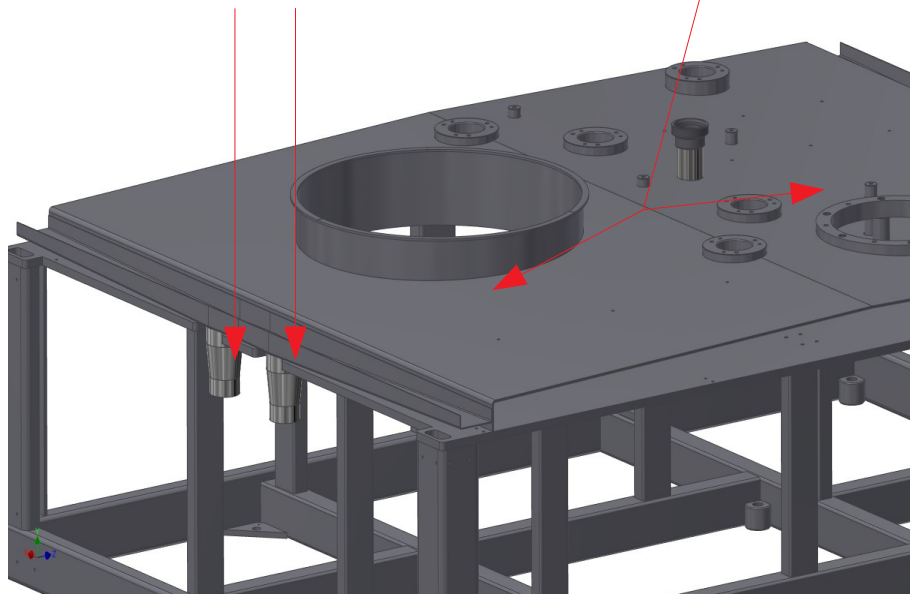
HEVD - FILLING ENVIRONMENT: INCLINED BASE PLATE

The basement of the machine is inclined towards the drainage points of the machine.



INCLINED BASEMENT

DRAINAGE



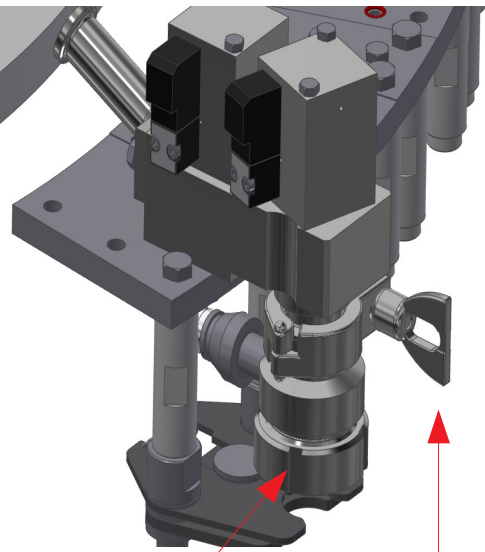
Advantages of the solution:

- drainage of liquids present on the machine basement;
- higher level of hygiene.

HEVD - FILLING VALVE

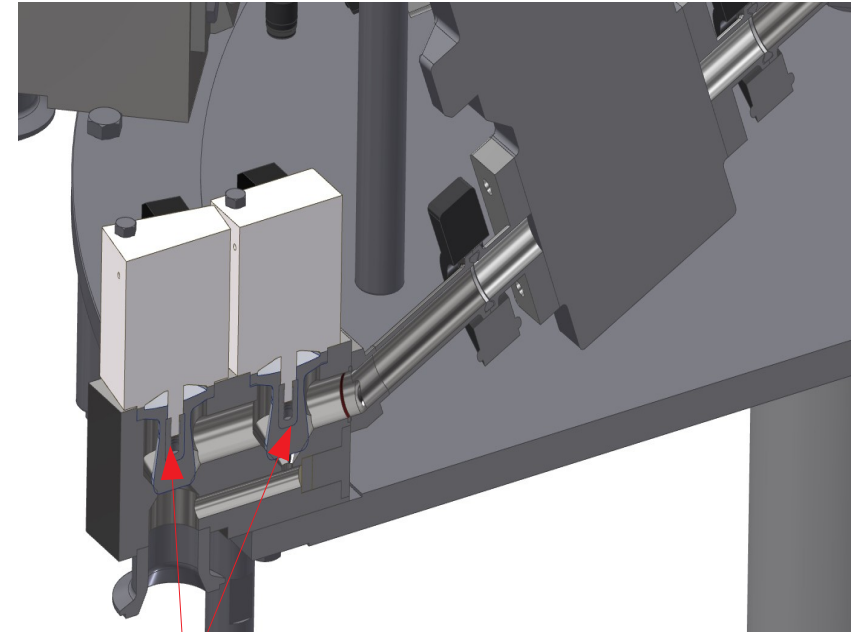
- filling valve with reduced number of gaskets: two aseptic membranes regulate the flow of the filling product;

- the terminal valve of the filling valve is dedicated to detergent products, is connected with the filling valve thanks to a pharmaceutical clamp.



VALVE TERMINAL

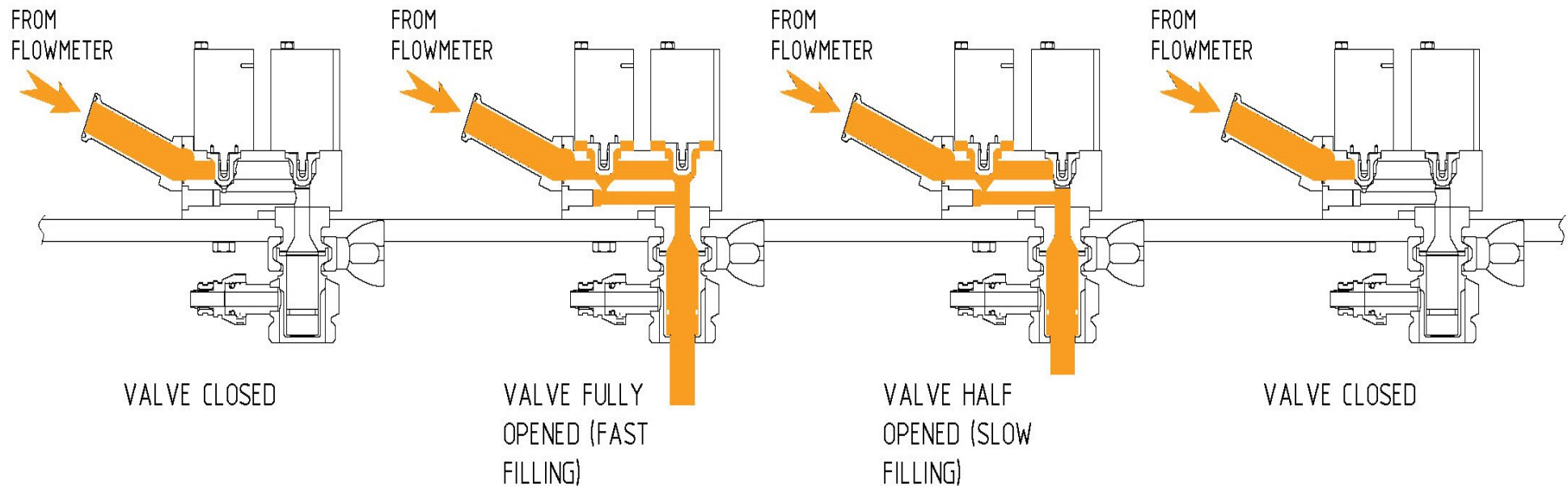
PHARMACEUTICAL CLAMP



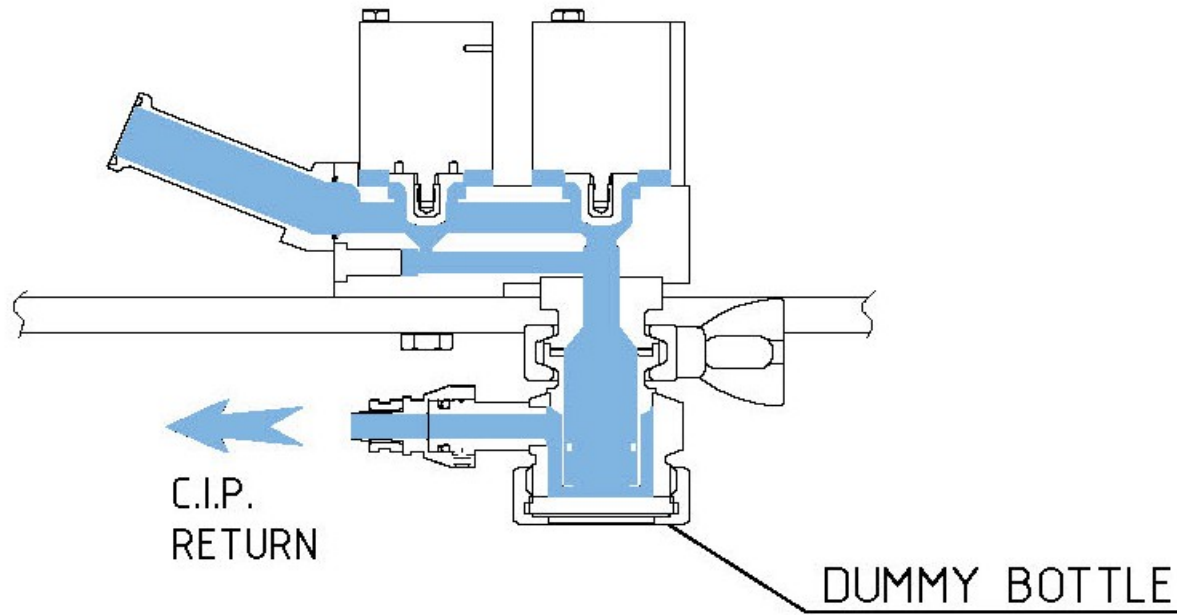
ASEPTIC FILLING MEMBRANES

HEVD - FILLING PHASES

- the valve allows to manage two filling speeds in order to fill in a homogeneous way, efficiently and without product leakage from the bottle;
- the duration of the filling cycles (slow or fast) can be easily and intuitively managed using the recipes present in the man-machine interface (Posyc HMI).

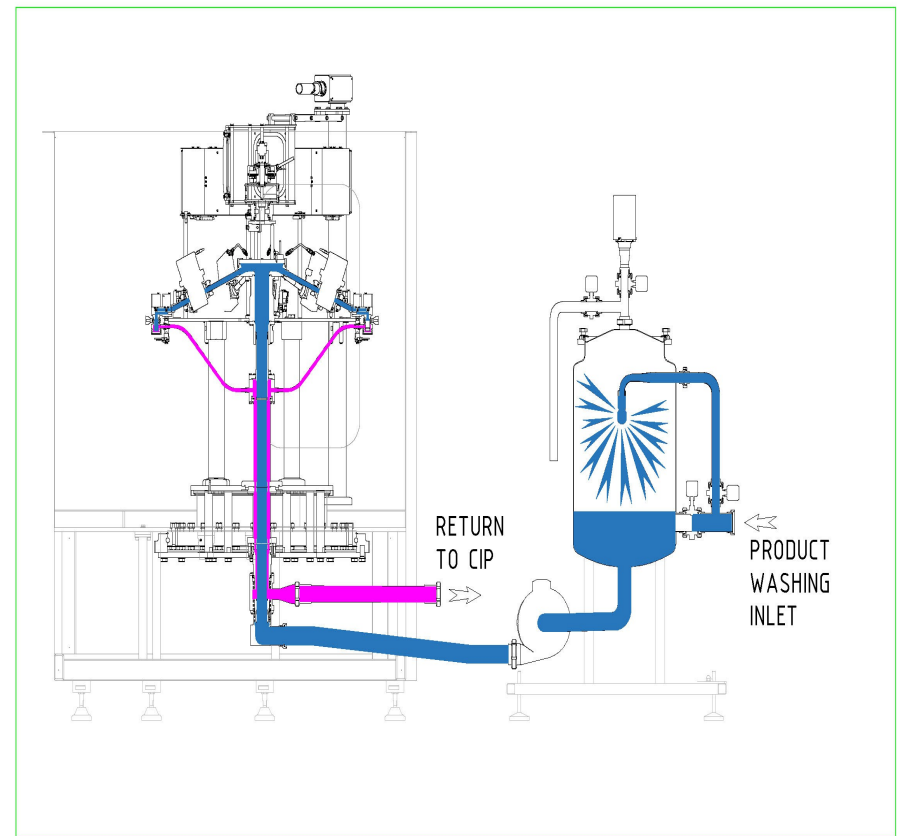
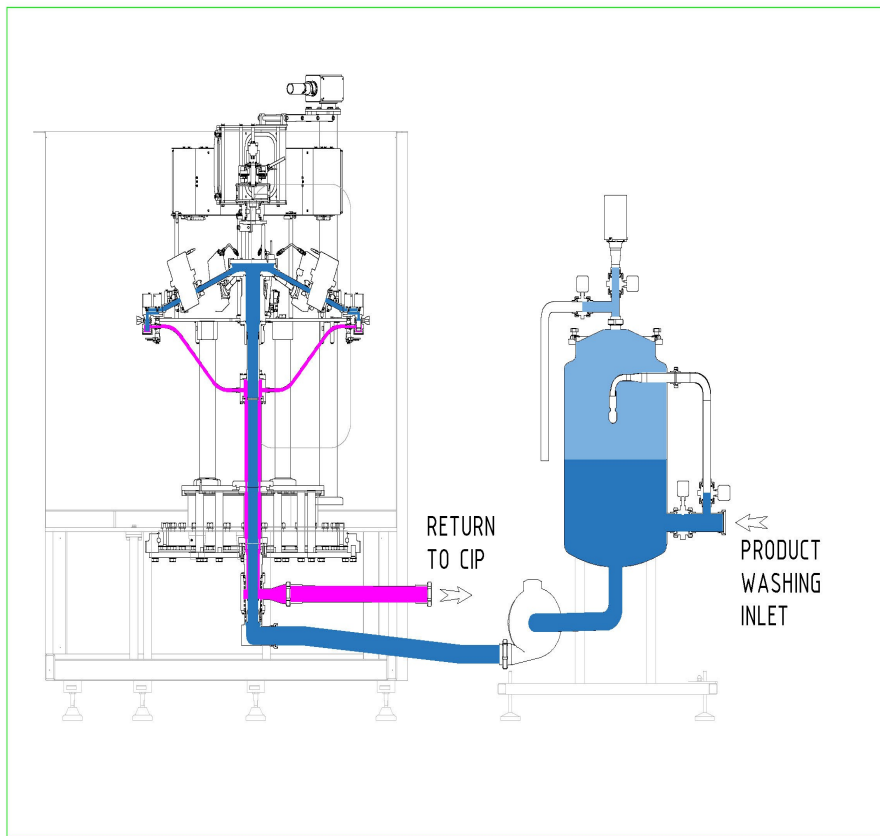


HEVD- CIP SANITATION



WASHING SYSTEM WITH
PRODUCT RECIRCULATION

HEVF: CIP SANITATION



HEVD - FILLABLE PRODUCT

The filling machine is designed to fill cleaning products, detergent and sanitizer like:

- foaming liquid detergent
- not foaming liquid detergent
- laundry detergent
- softener
- dishwasher detergent
- sanitizer
- hand sanitizer

The machine can fill product with a viscosity up to 350 cP at 20°C (filling temperature). For products with higher viscosity more specific test are necessary



HEVD - CONTAINERS

Thanks to the possible machine configuration and thanks to the high customization possibilities on the machine, we can handle different types of bottles formats (PET, HDPE, PP) and different types of caps format.

The solutions are studied for each specific customers application/request.



HEVD - FILLING PRODUCTION

**MAXIMAL SPEED REACHABLE (bph) on
the machine with 60 filling valves**

Foaming liquid detergent	24.000 (0,75 lt) - 8.500 (3 lt)
Softner	22.000 (0,75 lt) - 6.200 (3 lt)

ENOBERG
filling machines
since 1984



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