



Tetra Pak® Aseptic Tank VC

Aseptic, vertical storage tank for viscous food products



Highlights

- Aseptic buffering for gentle and safe buffer of viscous products under aseptic conditions.
- Minimises pressure drop to filling machine.
- Balancing supply and demand between the process and the filling machine.
- Validated design developed by experience ensures a safe function and a high availability for production.
- Guaranteed performance

Application

Intermediate storage of aseptically processed high- and low- acid viscous food products.

Working principle

Tetra Pak® Aseptic Tank VC is sterilised by steam at a minimum temperature of 125°C for 30 minutes. It is then cooled by water circulating through the cooling jacket. During cooling, sterile air is fed into the tank to prevent vacuum formation.

During production, sterile air fills the tanks space above the product level. The pressure is automatically controlled to maintain the feed pressure required by the filling machine in operation. A valve cluster module with control panel directs product flow, sterile air, cleaning liquids and steam. During production, a steam barrier (110°C) is applied to prevent reinfection.

The tank can be cleaned in place (CIP) by either a CIP unit or a central CIP system.

Since tank operation includes high-temperature sterilisation followed by cooling, the tank is designed to be completely implosion proof as standard. The tank is manufactured according to the European Pressure Equipment Directive (PED), but can be manufactured to comply with other codes on request.

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One of the three stainless steel legs is equipped with a load cell for level indication. The reading is shown on the operator's panel. Tank operation is fully automated and production interlocks are included for safety reasons. The operator only has to initiate the process steps; tank sterilisation, production and CIP. The tank is operated from its own PLC which is placed in the control panel.

Basic Module

Vertical tank with cooling jacket, conical bottom and safety rail.

Manhole and manhole cover with CIP nozzle. Inner shell is made of AISI 316. Three legs with adjustable ball feet. Load cell in one of the legs.

Valve cluster module with frame-mounted pre-assembled valves, sterile air filters, safety device and air pressure equipment for emptying the tank, end valve cluster and control panel.

Process control with Siemens S7 and Human Machine Interface (HMI) graphical touch screen (TPOP).

Connections for product, cooling water, air and CIP

Capacity

Four tank volumes are available:

- 3 500, 7 000, 12 000 and 20 000 litres

Dimensions and capacities

Volume	A Diameter, max, mm	B Height, max, mm
3 500 litres	1 700	4 170
7 000 litres	2 140	5 090
12 000 litres	2 600	5 560
20 000 litres	3 060	6 160

Materials

- Inner container made of AISi 316
- Max working pressure 600 kPa (6,0 bar)

Optional equipment

- Steam reducing valve set mounted on separate frame to reduce steam pressure to 2,7 and 1,0 bar.
- Inlet from two or more UHT modules
- Non-standard automation system
- Intermediate steam barrier to allow independent operation of UHT module, Tetra Pak® Aseptic Tank and filling line. Enables possibility of full CIP of units independently while others still are in production (smooth products).
- Air compressor with air cooler and air tank
- Several filling line flexibility with automatic control. Both hardware and software for control is included.
- Pall sterile air filters
- Air Cooler for control panel
- Non standard layout



Measurements in mm