

Alfa Laval SCANDI BREW® Topplate assemblies

Tank top systems

Introduction

A top plate assembly is a machined solid-stainless-steel plate outfitted with all the necessary tank safety equipment for mounting on the top of a pressurized beer tank.

Application

For cylindro-conical tanks, the special compact design and central location of the tank top system provides an efficient and economic way of mounting anti vacuum and pressure relief safety valves, CIP supply with cleaning head, sight glass etc., in a single assembly.

Benefits

- Simple and safe operation
- All parts can be cleaned in place
- Centralized placing of tank equipment secures easy maintenance
- Better and lower tank insulation costs
- Flexible design
- Low installation costs

Design

The topplate assembly is designed and sized individually to suit the tank application, the process specification and special requirements. The design is based on tank size, maximum working pressure and cleaning procedure. The topplate assembly is mounted with a joint on to a counter flange directly welded into the top of the tank.

A typical topplate assembly will include a combination of the following components, PED approved on request:

Anti vacuum valve: The valve protects the tank from implosion during CIP or emptying. Sizing will depend on tank design data, cleaning procedure and process requirements.

Pressure relief valve: This valve protects the tank from overpressure and overfilling. Sizing of the valve will depend on tank design data and filling rates.

Pressure control: Regulation of the tank top pressure can be carried out in the traditional way by means of a bunging device connected to the CIP/gas pipe. Another possibility to be recommended is a remote controlled pressure exhaust (PE) valve.

CIP supply & cleaning head: The CIP pipe is mounted on the top flange by means of a union coupling or mounting



flange to enable easy demounting of sprayball or cleaning machine for inspection and maintenance.

Self-cleaning CO2 valve: A combined gas escape/supply valve is situated between the CIP pipe and the top plate. The valve is normally open for gas flow out of the tank during filling and fermentation, and open for gas inlet during pressurising or emptying. During CIP, the liquid will close the valve but a special drilling of the valve body ensures cleaning of its seat and the pipe connection because a small amount flows

through. The main CIP flow will run directly to the cleaning machine/sprayball.

High level probe: The probe will give a signal when the maximum filling height in tank is obtained and is a useful security against overfilling. The use of either sprayballs or rotating cleaning machines should be taken into account when selecting the type of probe.

Sight glass & light fitting: Ø78 or Ø120 mm combined units.

Pressure transmitter: To measure tank pressure.

Bursting disc, heating element, lifting lugs, sensors: Or other equipment as per customer requirements.

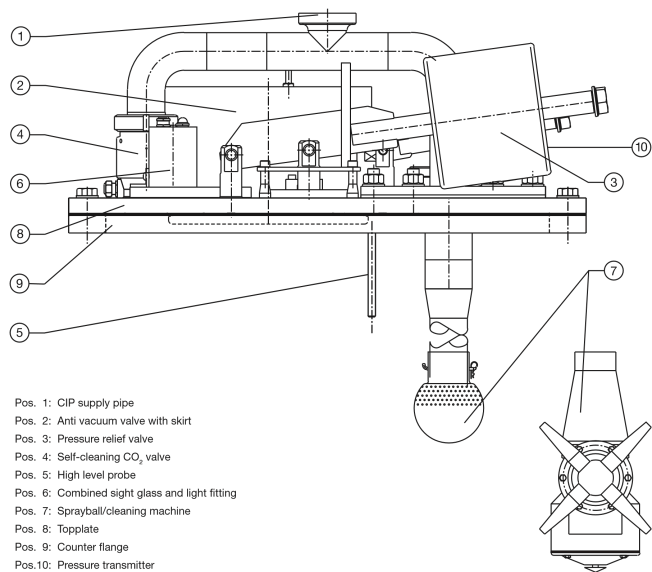
Option

- Weather cowl for protection of equipment.

Technical data

Topplate:	Stainless steel EN 1.4307 (AISI 304L) standard or EN 1.4404 (AISI 316L) on request
Components:	See separate product leaflets
Pressure control:	Max. working pressure at 50°C: 2.7 barg

Standard designs for fermenting vessels, storage vessels and bright beer tanks are supplied with an assessment for pressure equipment (PED).



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