

Solvent Recovery Plant **US-Version**

The ASC-Series, one of the most modern distillation plants worldwide, is constructed with a compact design, is powerful and very easy to use.



The ASC-500 is a most comfortable vacuum distillation unit out of the professional series ASC. It includes a modern integrated steam heating system.

A characteristic is the conical distillation vessel made of stainless steel, where the lateral surface is heated with steam. The steam in the double jacket transfers the energy extremely fast into the

solvent. At the same time a high distillation rate is reached with a small vessel volume. Only an electrical connection is necessary for the integrated steam heating system.

A high-speed vacuum pump transfers the dirty solvent to the evaporator and guarantees a continuous 24 hour operation. During automatic distillation the quantity of solvents which is evaporated is automatically refilled by small portions again. This automatic process is adjusted by the timer. **Timer 1 "Continuous Distillation"**: If the set time has passed or the tank of dirty solvent is empty, the plant switches automatically to Timer 2. **Timer 2: Final distillation mode "Sump Distillation"**. The continuous filling is stopped and the remaining solvent mixture in the vessel is evaporated to a thick concentrate. After the time has passed the plant switches off and is ready for the manual or fully automatic emptying.

The distilled and cleaned solvent flows continuously from the distilling plant into a build-lateral tank. A further characteristic of the ASC evaporators is a slow-running agitator with automatic self adjusting scraper blades made out of PTFE. These blades optimally clean the conical evaporator vessel and need no re-adjustment. The total distillation process is controlled by a SIEMENS microprocessor.

The emptying of the high-viscosity residue is done by natural gravity over a drainage valve at the bottom of the conical round vessel. The plant can be re-filled again automatically with dirty solvent. A new continuous recycling process begins.

Typical area of application: 211-476 gal / shift

EX Class: EX II 2G c T3

CE **Ex** **ATEX** **TUV** **WESSEN** ******

UL-conform

Sample Installation:

■ ASC-500 50 kW with Ex-Zone housing



Technical data

Technical data	ASC-500 50 kW (US-Version)
Total vessel volume	132 gal
Filling volume constantly, level controlled	~66 gal
Distillation rate approx.	26-58 gal/hr *
Heating-up time approx.	0,5 hr *
Heating temperature	Max. 180 °C / 356 °F
Vacuum abs.	Max. 50 mbar
Electrical connection	480Y / 277V, 60Hz, grounded wye
Power consumption steam heating generator	50 kW
Power consumption vacuum unit	1,1 kW
Consumption air pressure approx.	6 bar max., 50 l/min, 13 gal/min
Eff. cooling capacity necc. approx.	40 kW
Consumption cooling water (8-12° C / 46-53 °F) approx.	4 m³/hr / 1.060 gal/hr
Width x Depth x Height approx.	2,20 x 1,10 x 3,20 [m]
Weight approx.	~1.500 kg

* Dependent on kind and composition of the solvent, kind of contamination and its share, heating temperature, vacuum pressure, coolant temperature and pressure, boiling characteristics.

**Depository, notified body acc. RL 2014/34/EU

Product benefits

- Almost all product-contacting parts in stainless steel
- Automatic and continuous filling with dirty solvents
- Filling level is constantly controlled = Mostly constant output
- Excellent conical distillation vessel in stainless steel AISI 304 with lathed and plain surface: Easy and complete drainage of vessel content by natural gravity and scraper support
- Perfect scraper system: Blades keep the evaporator walls free from depositions, no re-adjustment necessary, guaranteeing an optimal and real cleaning effect.
- Water cooling: Optimal condensation of solvent vapours even at high ambient temperature
- Integrated modern steam heating system: Solvent is heated up faster than with conventional thermal oil heating systems, no oil change necessary = saves money and maintenance, no incrustation of heating elements any more, always constant heating power, no oil sludge in the machine, closed system: No corrosion of vessel due to humidity or salty air going daily into a thermal oil heating jacket
- Electric control board with SIEMENS S7 1200 digital control inside
- Control cabinet (Non-Ex) with SIEMENS HMI Color TFT-Comfort Panel with touch operation and process monitoring
- Automatic operation
- Auto-stop: When dirty solvent drum or external dirty solvent tank is empty, when the temperature is too high, when too little thermal oil remains, or when there is too little cooling water flow
- Constructed according to latest EU directives: A high level of operational safety is standard

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