



## 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-150 is OFRU's most popular vacuum distillation unit out of the professional ASC-Series. It includes a modern integrated steam heating system.

A particular 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 attained 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 solvent evaporated is gradually and automatically replaced. This automatic process can be adjusted with 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: 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 a set time has passed the plant switches off and is ready for manual or fully automatic emptying.

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

The emptying of the high-viscosity residue is done via natural gravity over a drainage valve at the bottom of the round conical vessel.

The plant can be refilled again automatically with dirty solvent after e.g. a one, two or three-shift operation. A new continuous recycling process then begins.

**Typical area of application:** 66-211 gal / shift

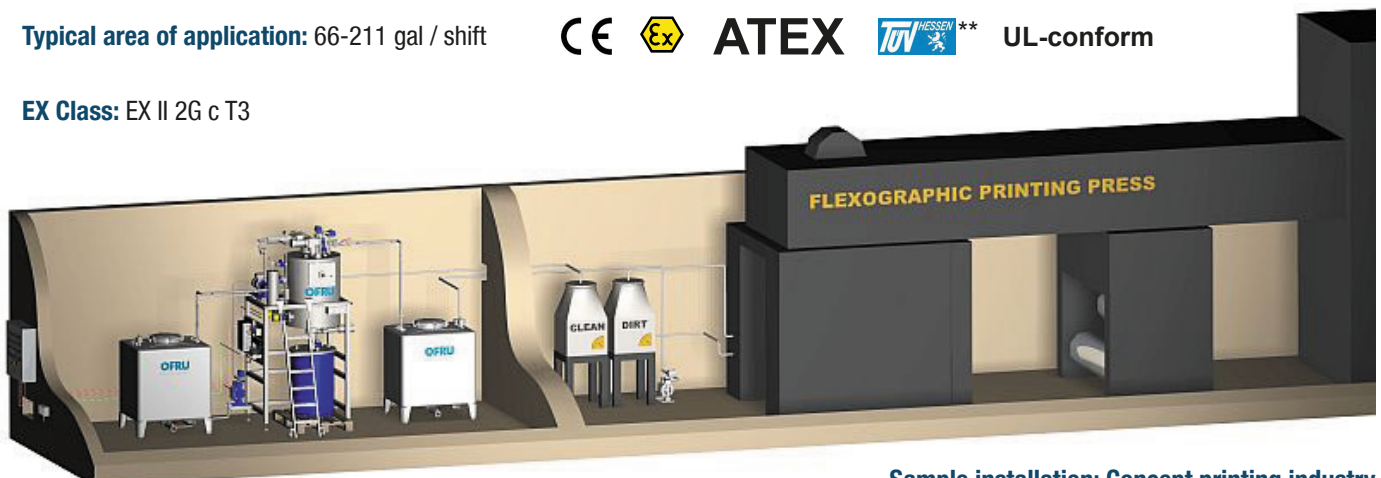


**ATEX**



**UL-conform**

**EX Class:** EX II 2G c T3



**Sample installation: Concept printing industry**



## Technical data

Technical data	ASC-150 24 kW (US-Version)
Total vessel volume	42 gal
Filling volume constantly, level controlled	~26 gal
Distillation rate approx.	10-24 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	24 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.	20 kW
Consumption cooling water (8-12° C / 46-53 °F) approx.	1,5 m³/hr / 396 gal/hr
Width x Depth x Height approx.	1,50 x 1,05 x 2,65 [m] /
Weight approx.	~950 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

- Parts contacting the solvent are made of 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 a smooth and plane inner surface: Easy and complete drainage of vessel content by means of natural gravity and scraper operation
- Perfect scraper system: Blades keep the evaporator walls free from residues, no re-adjustment necessary, guaranteeing an optimum and very effective cleaning
- Water cooling: Optimum 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 entering 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
- Conform to ASME codes and standards

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