

Kelvion Switch Condenser

THINK BIG



DESIGN & FUNCTION

Since the invention of the Switch Condenser in 1954, Kelvion has delivered more than 1,500 units globally for PA processes. The design philosophy behind our Switch Condensers is the optimal use of the entire surface for collecting PA, to ensure economical loading times. For that reason, we have introduced three sections of fin tube systems with different designs and functions.

The main task of the high density section is collecting PA in a very compact form. Next, there is a high yield section, which also collects PA and cools gas. Finally, the high efficiency section has a special filter function for PA needles. This guarantees the very high efficiency rate of Kelvion switch condensers.

Our engineering excellence has convinced our customers worldwide, who have confirmed our technological advantages in their processes and daily operation. As a result, Kelvion is the undisputed world market leader in desublimator technology.

ADVANTAGES

- ▶ HIGHEST EFFICIENCY/MINIMUM PA LOSS
- ▶ LOW WEIGHT
- ▶ LOW OPERATING COST
- ▶ LOW ENERGY CONSUMPTION
- ▶ HIGH RELIABILITY
- ▶ MINIMIZED RISK OF FATIGUE FAILURES
- ▶ LONG LIFETIME
- ▶ MAINTENANCE FRIENDLY

GOOD TO KNOW

Desublimators are not "regular" heat exchangers.

The purpose of desublimators is material separation through phase change.

Desublimation is a thermodynamic material separating process

Desublimation can be an attractive alternative to adsorption, absorption or cyclon separation methods.

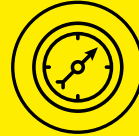
SWITCH CONDENSER APPLICATIONS



Product separation in chemical & pharmaceutical processes



Environmental protection



Protection of vacuum systems



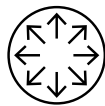
Recovery of valuable (raw) materials

DESIGN DATA



GAS FLOW

▶ **MAX. 40,000 NM³/H**



CAPACITY

▶ **MAX. 10,000 KG PA/CYCLE**



O-XYLENE LOADING

▶ **100 G/NM³ AIR & HIGHER**

EFFICIENCY OF...

... **POWER PLANTS**



40 - 45 %

... **HEAT EXCHANGERS**



approx. 80 %

... **FILTERS / DEMISTERS**



approx. 98 %

... **SWITCH CONDENSERS**



min. 99.5 %

EXAMPLES OF SUBSTANCES SUITABLE FOR DESUBLIMATION

- ▶ Aminophenol
- ▶ Amylphenol
- ▶ Chloro aniline
- ▶ Glycolide
- ▶ Iodine
- ▶ Naphthalene
- ▶ Naphtol
- ▶ Oligomers
- ▶ Polymers
- ▶ Phthalic Anhydride
- ▶ Poly lactide
- ▶ TDA (diamino toluene)
- ▶ Water
- ▶ Others on request

INTERNATIONAL CERTIFICATION

- ▶ TÜV NORD
- ▶ TÜV Rhineland
- ▶ TÜV Austria
- ▶ Det Norske Veritas
- ▶ Class NK
- ▶ Lloyd's Register of Shipping
- ▶ Bureau Veritas
- ▶ American Bureau of Shipping
- ▶ Germanischer Lloyd
- ▶ Urząd Dozoru Technicznego
- ▶ Inspection and Quarantine of the PRCh
- ▶ Gost – RT
- ▶ U-Stamp acc. ASME Code