

# Dependable drying

Illustrations: Pink



Vacuum processes are normally used to dry products containing solvents or water-based moisture. However, as not all products are suitable for drying in a vacuum, a new forced-air dryer with a very high solvent recovery rate has been developed for use at atmospheric pressure.

Vacuum is normally used to dry products that contain solvents, but not all products can withstand this process. To address this problem, drying specialists at Pink in Wertheim/Germany have designed a forced-air drier that can be used for external recovery of solvents. In contrast to other designs, external recovery allows you to condense, collect and dispose of solvents even if they are potentially explosive. The drying process normally takes place as follows. A loading cart, which contains the product trays, is used to load the product chamber in the drier. A separate support cart can be used to avoid contamination when the loading cart is being moved to the drier. After loading, the internal chamber is purged with inert gas until the explosive concentration

falls below the ignition point. The ventilators and heating are then turned on, and the drying process starts. The gas atmosphere that now contains solvents can be fed to the external condenser in partial flow mode. The condensed vapor is collected in an exhaust device and moved to a secure container.

## No emissions escape into the environment

Because the system uses a closed cycle, the remaining partial flow is returned to

the system. The big advantage of this recovery method is that no hazardous substances are released into the environment.

Another advantage of external recovery compared to internal recovery is that the drying temperature in the forced-air oven is not affected by the condensation process. This has a significant effect on uniform drying of a complete batch.

### For further information:

[www.pharma-tec.com](http://www.pharma-tec.com)

- Visit this website for detailed online information about drying processes

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This new product is the latest addition to the range of drying and vacuum products offered by experts in Wertheim. In addition to forced-air driers operating at atmospheric pressure, the company has supplied drying cabinets for vacuum drying for many years. In vacuum drying, total pressure in the drying cabinet is lowered, so that water or solvents are transformed from the liquid to the vapor state at low temperatures.

A controlled regulation of pressure and introduction of heat can be used to optimize the drying process. A vacuum drier is basically made up of three units: a drying cabinet and an associated heating system, a vacuum pump unit designed for the specific drying process and an appropriate controller.

Cabinets supplied by Pink are used worldwide in process engineering applications and in the food sector. The company has made a name for itself in the area of conformance to GMP requirements. All drying cabinets, regardless of whether they operate with vacuum, forced air or a combination of the two, are suitable for use in the chemical and pharmaceutical industries.

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