



- Plants for different campaign sizes
- Wide range of evaporation and distillation processes
- Permanent monitoring and documentation of distillation processes

CONTRACT MANUFACTURING

*WIPED FILM AND
SHORT PATH DISTILLATION*



Wiped film and short path distillation for purifying, devolatilization, concentration

VTA, located in Niederwinkling, Germany, is a company of the STREICHER Group, a group of companies with 4,000 employees. In addition to the design and manufacturing of components and turnkey plants for falling film, thin film and short path distillation, VTA operates laboratory and pilot plants in Niederwinkling as well as multi purpose toll distillation plants.

For completing our program we offer toll distillation services. Therefore, we have following plant sizes available:

- Small plants for campaign sizes up to 50 kg
- Medium plants for campaign sizes up to 25 t
- Industrial scale plants for campaign sizes up to 1,000 t

Thin film and short path distillation is used for purifying, devolatilization and concentration of heat sensitive, viscous or high boiling valuable products.

Industrial scale toll distillation plant

Many years of experience in designing thin film and short path distillation units made it possible to install an optimized multi purpose plant.

The individual stages and buffer tanks of the plant can be combined very flexibly. Altogether the following evaporation and distillation processes are available:

- Flash evaporation
- Thin film distillation
- Fractionation with a column with 10 theoretical trays (operated with the thin film evaporator as reboiler)
- Short path distillation

The wiper systems of thin film and short path evaporators will be selected according to the product characteristics.

The system is designed according to ATEX 94/9/EC and approved according to BImSchG.



Technical data of our plants

Throughput	from 0.1 kg/h up to 1,000 kg/h
Minimum achievable pressure in a thin film evaporator	< 1 mbar
Minimum achievable pressure in a short path evaporator	0.001 mbar
Max. heating temperature	350 °C
Max. product melting point	190 °C
Max. viscosity at operation temperature	100 Pa s
Material of fabrication	1.4404 / 1.4571



Analysis and quality assurance

In our analytical department, the quality demands of our customers are monitored with wet chemistry and instrumental analytical methods. All incoming and outgoing products are analyzed. Furthermore, all process relevant parameters are measured, recorded and stored on our DCS, in order to reproduce every distillation campaign.

The product quality is documented by certificates of analysis. Furthermore, product samples will be retained as reference samples.

Confidentiality

VTA and the companies of the STREICHER Group have no interest in production or marketing of chemical products. Information received from our customers is treated as strictly confidential. On request, cleaning or production information, which have been developed by VTA independently, may be handled confidentially.

Raw material delivery and filling/packing of the final product

Depending on the size of the campaign, the product properties and the capabilities of the customer, the raw material can be delivered in barrels, heated or unheated ISO tank containers or IBCs. According to customer requirements filling of the final product and the side fractions will be done in barrels, ISO tanks or IBCs. Higher melting products can be flaked or granulated directly after distillation by means of flaking roll or cooling belt.

Storage facilities

The spacious design of our container yard enables us to plan the raw material delivery and the final product delivery of larger campaigns in a very flexible way. Because of our storage opportunities, we can offer a tailored just-in-time delivery to our customers.





Examples of distilled products

With thin film distillation, a substantial decrease of boiling temperature is obtained by reducing the operating pressure. The thermal separation can be performed at very low residence times at boiling conditions.

This allows thermal separation of products that would be destroyed by conventional vacuum distillation (pot still or distillation column) because of the necessary high temperatures and long residence time.

- Concentration of pharmaceutical or chemical valuable materials
- Devolatilization of a variety of products (e.g. VOC removal)
- Color improvement of higher molecular compounds by distillation
- Separation of monomers or oligomers from polymers
- Distillation of prepolymers and oligomers
- Purification of additives
- Recovery of failed batches



Small distillation campaigns and pre-tests

Tests as well as production of smaller campaigns can be performed on our laboratory and pilot plants.

After examination of the results we can give guarantees on the product quality as well as on the yield of all further distillation campaigns.

