

KDL 5 AS LABORATORY PLANT

UIC laboratory plants are preferably used in research and development laboratories where they are applied in a wide range of distillation tasks. They are of a modular structure and enable flexible adjustment to a variety of tasks. Our smallest lab plants, with flows of only approx. 100 grams per hour, are especially suitable for research in which only small volumes of a mixture are available. In contrast, our larger lab plants can also be used for a small scale production of up to 10 kilograms per hour.

The core components of all our lab plants are made of borosilicate glass. This is chemically inert and also resistant to corrosive media. An important benefit of a glass system is that it enables direct observation of the distillation process. Our lab plants are heated by thermal oil. Maximum evaporation temperatures achievable are between 250°C and 350°C, depending on the respective model involved. Minimum pressures of 0.001 mbar can be achieved depending on the product to be distilled and the vacuum system selected.

STANDARD GLASS EVAPORATORS

Description	KDL1	KDL5	DSL5	KDL10	KDL30
Feed g/h	100-400	200-2,000	200-2,000	1.000-4,000	2,500-10,000
Design*	SPD	SPD	RF	SPD	SPD
Max. evaporator temperature °C	250	350	250	250	250

* SPD = Short Path Distillator, RF = Thin Film Evaporator

KD6 AS PILOT PLANT

Process development/optimization, sample production, and product development are the areas of application for the UIC pilot plants. Since the plants are made of stainless steel, they are extremely well suited for scale-up to industrial plants in all sizes.

Our plants can also be used for optimizing production plants. This way critical operating parameters can be identified and optimized. Due to this increasing efficiency parallel to the production process is easily feasible. The combination possibilities of the Short Path Distillation and Thin Film Evaporation with various additional options such as rectification, degassing, flash evaporation and washing condenser is more extensive than with laboratory plants.

The pilot plant series by UIC includes both mini plants with approx. 3-6 kg/h throughput up to small production plants with 30 kg/h.

A maximum evaporator temperature of up to 350 °C and a fine vacuum of down to 0.001 mbar allows a wide range of applications. There are specially developed solutions for high viscous or crystallizing products. The pilot plants are designed for easy commissioning with just a few simple steps. A further feature is that our plants are easy to clean and disassemble. If required the plants can be designed according to ATEX and GMP guidelines. With PLC control system and process visualization UIC plants can be used as multi-purpose systems.

INDIVIDUAL OR MODULAR SYSTEM?

Depending on the requirements, the pilot plants and also the laboratory units can be modularly put together. Shortest delivery times and flexible adjustments thanks to module expansion are the main advantages of this modular system. Of course, we also deliver tailor-made pilot plants on request – to optimally reflect your requirements. Materials used: stainless steel (1.4571, 1.4404, 1.4439, 1.4462), Hastelloy, Tantalum – further materials on request

Description	KD6	KD10	KD30	RF6	RF10	RF30
Feed (kg/h)	3 - 9	5 - 20	15 - 60	3 - 9	5 - 20	15 - 60
Design*	SPD	SPD	SPD	RF	RF	RF
Typical space requirement (m)	2.0 x 0.8 x 2.3	2.5 x 1.0 x 2.5	3.0 x 1.0 x 3.0	2.5 x 0.8 x 2.3	3.0 x 1.0 x 2.5	3.5 x 1.0 x 3.0
Heating temperature (°C)	350	350	350	250	250	250
Min. pressure (mbar)	0.001	0.001	0.001	1,0	1,0	1,0

* SPD = Short Path Distillator, RF = Thin Film Evaporator