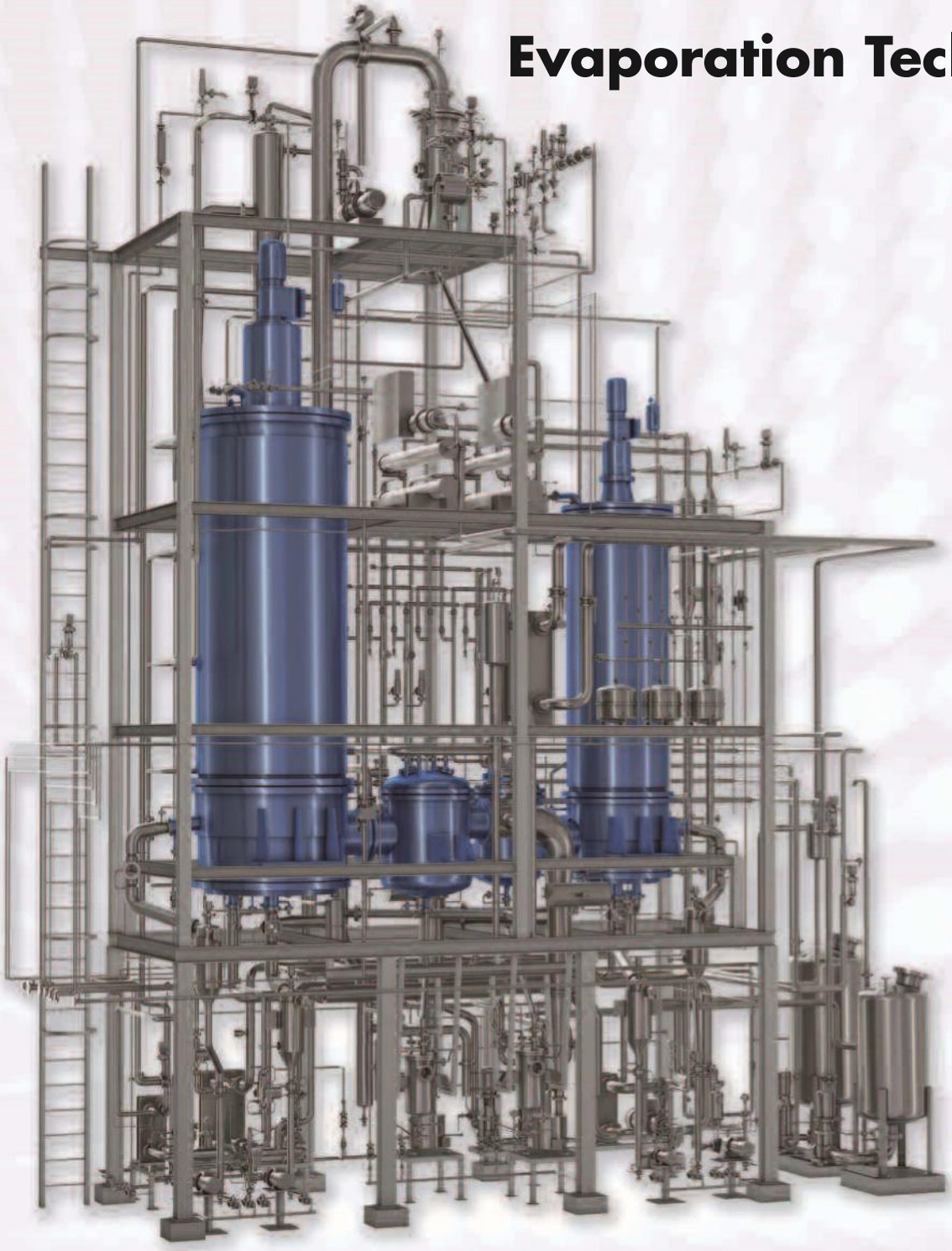
Buss-SMS-Canzler

Evaporation Technology



SMS

We live process engineering
and special manufacturing

Buss-SMS-Canzler

Buss-SMS-Canzler
Core Competence Evaporation

Buss-SMS-Canzler is a leading international supplier of thermal separation solutions for difficult products and mixtures. We are the world's leading supplier of thin film evaporation technology. We develop and manufacture machines and plants for drying, evaporation, processing of highly viscous materials and membrane filtration. Our experience and our test centre in Pratteln with its 20 pilot plants allow us to develop customer specific process solutions by applying tailor-made equipment and complete systems. We work worldwide for renowned companies in industries such as plastics, fibres, polymers, specialty chemicals, agrochemicals, oleo- and petrochemicals, fine and basic chemicals, biochemicals, food and pharmaceuticals as well as environmental and energy solutions.

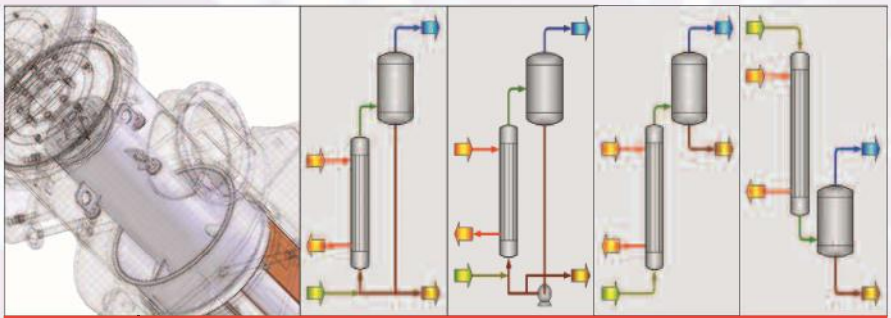
Buss-SMS-Canzler partners you as consultant, designer and manufacturer through all project stages: from process layout, engineering, mechanical design, manufacturing and documentation to installation, start-up and after sales service.

For future product changes or changing process requirements we assist you with our expertise and innovation, always keeping the costs in sight.

Over 8.000 references in more than 50 countries

For more than five decades we have consistently expanded our leadership in the area of evaporation technology. Samesreuther & Co. GmbH, founded in 1919, began specializing in thermal separation technology in the 1950s and then merged with Müller-Schuss GmbH in 1964 to form the company SMS. In 1972, SMS was acquired by Luwa AG, Zurich, changing the name to Luwa-SMS GmbH. In 1983, Buss AG took over the thermal separation technology of Luwa AG. In 2003, Buss-SMS took over the process technology of Canzler GmbH, thus combining step-by-step complementary strengths with the target to remain a knowledgeable and reliable partner for your future process challenges.

Thin film evaporator in our test facility



		Natural Circulation Evaporator	Forced Circulation Evaporator	Rising Film Evaporator	Falling Film Evaporator
Typical evaporator and process properties	Residence time	long	long	medium	short
	Process pressure drop	medium	medium	medium	low
	Hydraulic head	high	high	medium	none
	Liquid hold-up, process	high	high	medium	low
	Product recirculation	by density difference	by pump	none	by pump (none)
	Liquid or film velocity	low/medium	high	low / medium	medium
	Product film	filled tubes, 2-phases	filled tubes	filled tubes, 2-phases	thin, by gravity
	Heating Temp. difference	medium	small	medium / large	small
Product properties	Viscous	low	low / medium	medium	medium
	Heat sensitive	fairly suited	fairly suited	fairly suited	suited
	Fouling	vulnerable	little	little /medium	vulnerable
	Solids in product	suited	well suited	fairly suited	fairly suited
	Foaming	fairly suited	fairly suited	suited	suited

Static evaporation equipment

Evaporation Technology

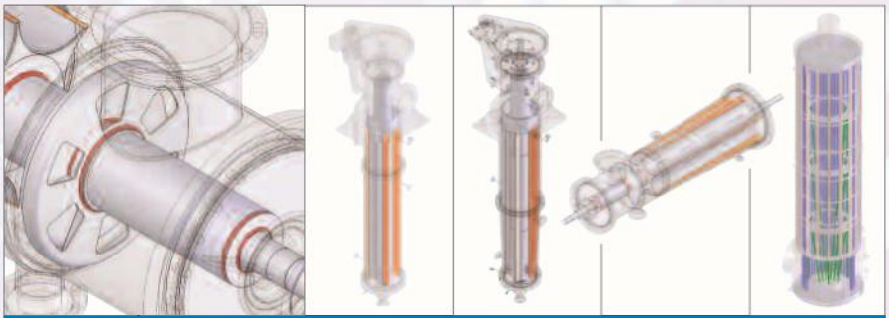
Higher efficiency with optimised process stages

Optimising processes and costs of your production plant means perfect tuning of all components. According to your specific requirements, we design and build complete single or multi-stage plants in various kinds of configurations, including thin film evaporators, short path evaporators and complete distillation column systems.

Depending on the requirements, static evaporators may be used in upstream stages of thin film and short path evaporation systems. Falling film evaporators, forced circulation evaporators, natural circulation evaporators or rising film evaporators can significantly improve the efficiency of your complete system.

If necessary, the vapour stream generated from the thin film evaporation stage can be separated in distillation columns.

Multi-stage falling film evaporation plant for miscella distillation



		Thin Film Evaporator (TFE)	TFE KV conical, vertical	TFE KH conical, horizontal	Short Path Evaporator (SPE)
Typical evaporator and process properties	Residence time	short	short	short / medium	short
	Process pressure drop	low	low	low	very low
	Hydraulic head	none	none	none	none
	Liquid hold-up, process	low	low	low	low
	Product recirculation	none	none	none	none
	Liquid or film velocity	medium	medium	medium	medium
	Product film	thin, wiped	thin, wiped	thin, wiped	thin, wiped
	Heating Temp. difference	large	large	large	large
Product properties	Viscous	medium / high	medium / high	medium / high	medium / high
	Heat sensitive	well suited	well suited	well suited	best suited
	Fouling	suited	suited	suited	suited
	Solids in product	well suited	well suited	well suited	suited
	Foaming	suited	suited	suited	poorly suited

Thin film and short path evaporators

Pilot plant for methyl ester evaporation