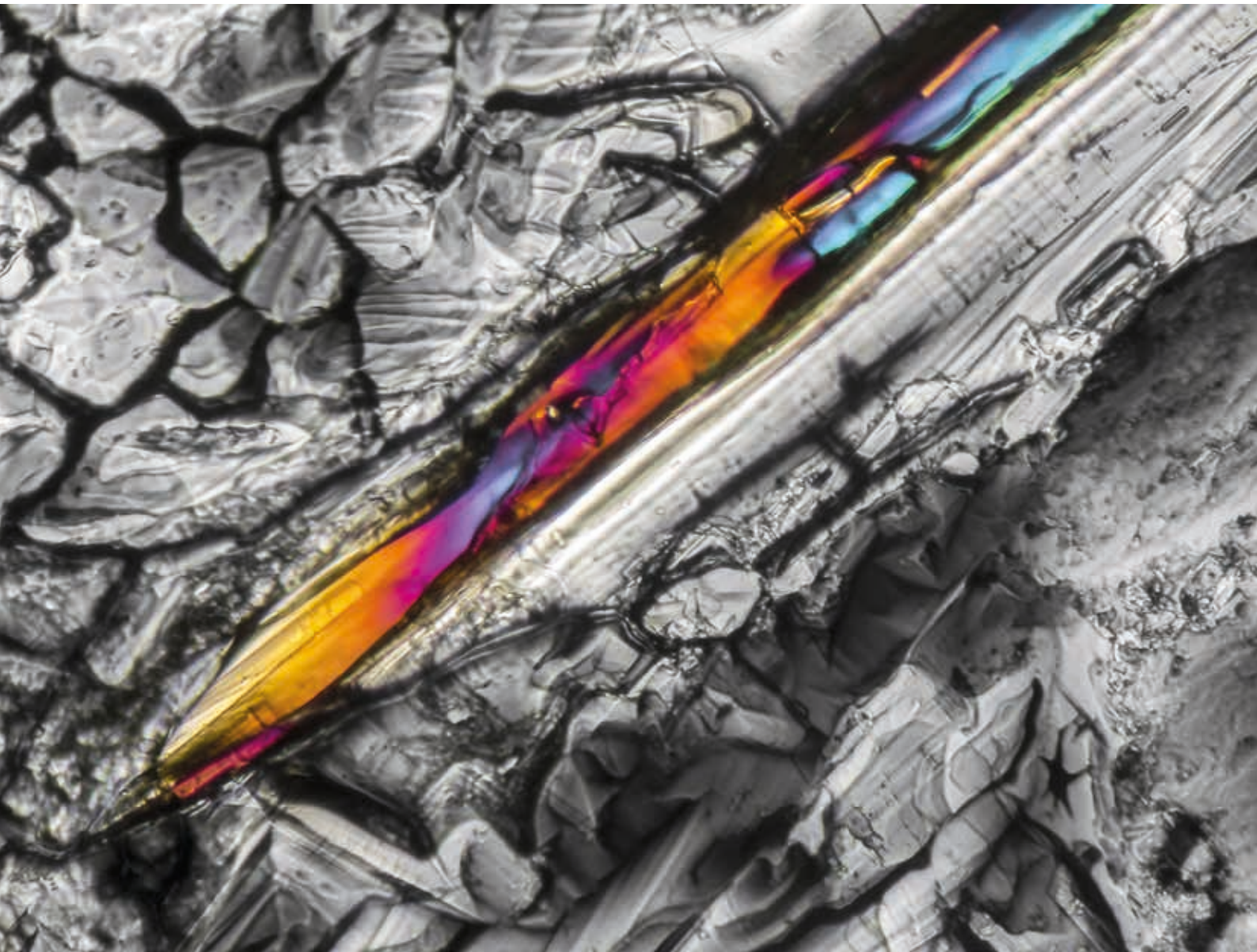




SIEBTECHNIK TEMA



Ammonium Sulfate

The basics of Ammonium Sulfate

Ammonium Sulfate is an **inorganic salt** with a number of commercial uses. The most common uses are as soil fertilizer, food additives & in the treatment of drinking water.



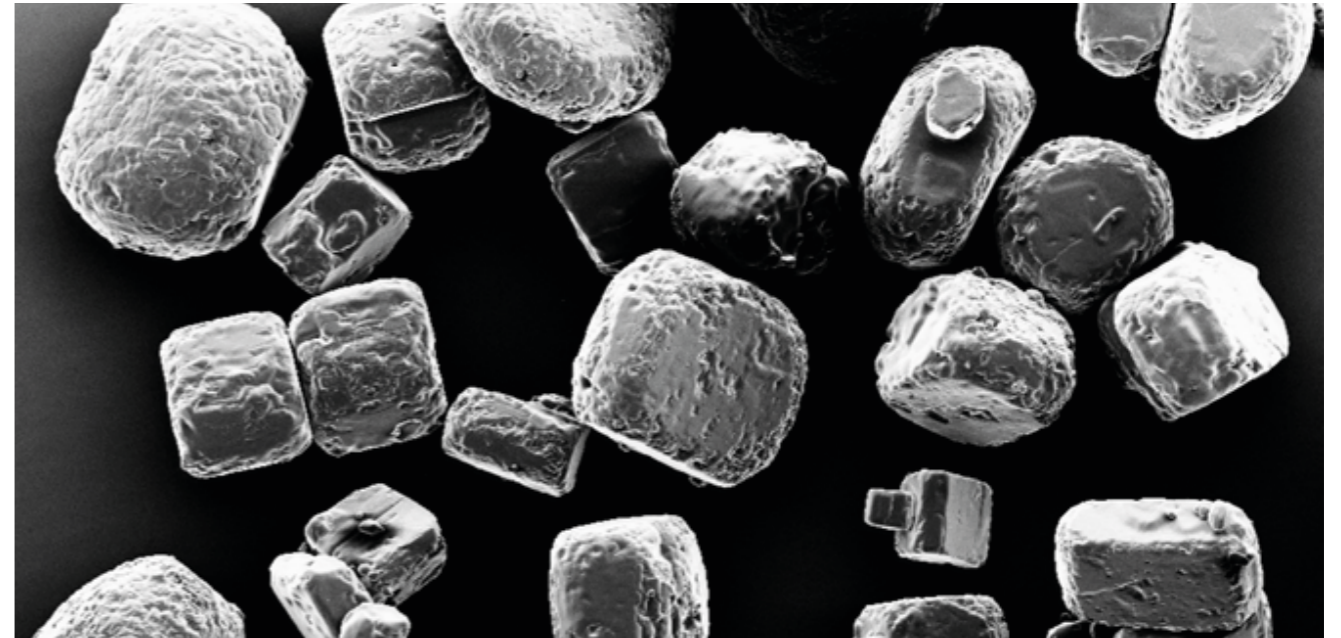
Fertilizer - The primary use of ammonium sulfate is as a fertilizer for alkaline soils. In the soil the ammonium ion is released and forms a small amount of acid, lowering the pH balance of the soil, while contributing essential nitrogen for plant growth.



Food Additives | Acid Regulator (E517) - As a food additive, ammonium sulfate is considered generally recognized as safe (GRAS) by the U.S. Food and Drug Administration, and in the European Union it is designated by the E number E517. It is used as an acidity regulator in flours and breads.



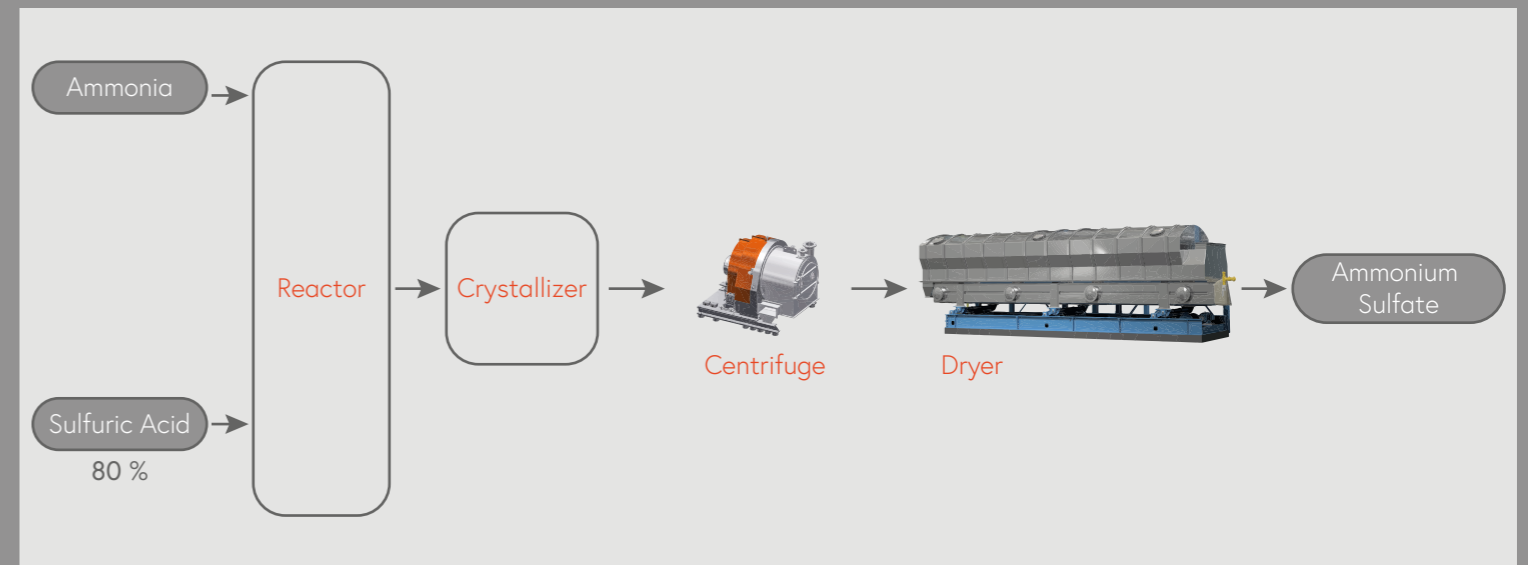
Treatment of drinking water - In the treatment of drinking water, ammonium sulfate is used in combination with chlorine to generate monochloramine for disinfection.



AMMONIUM SULFATE PROCESSES

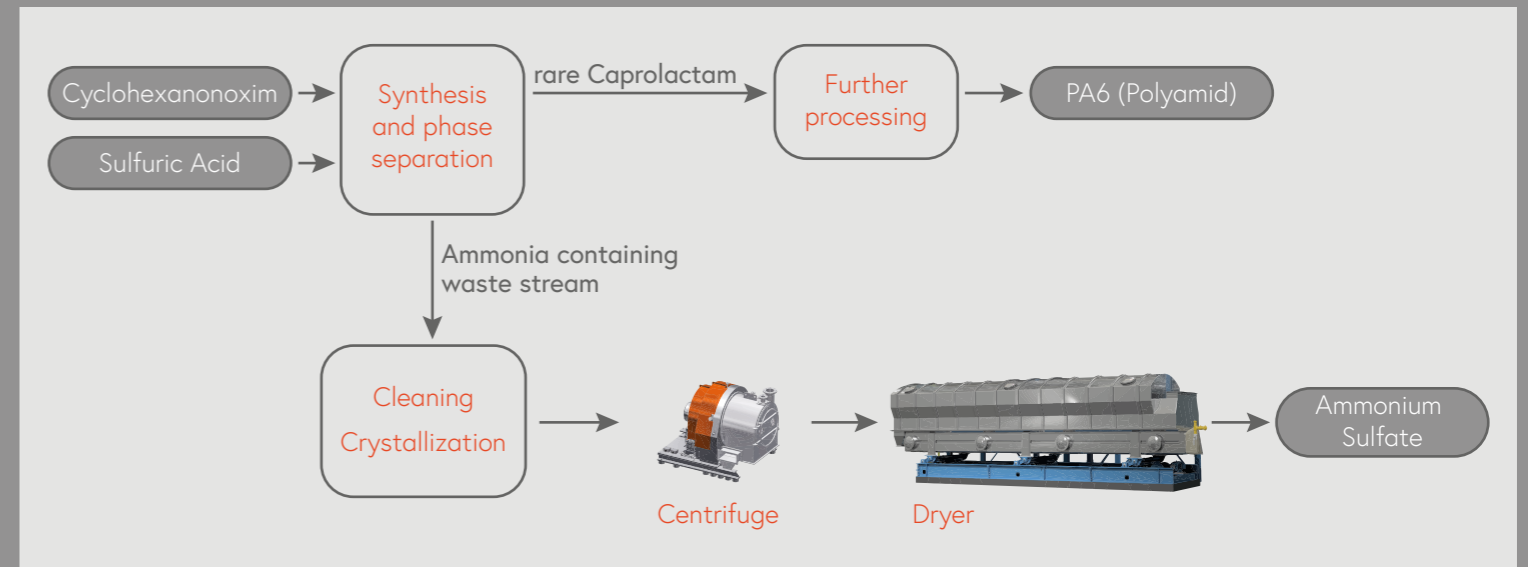


A) Synthetic production of Ammonium Sulfate out of ammonia gas and sulfuric acid.

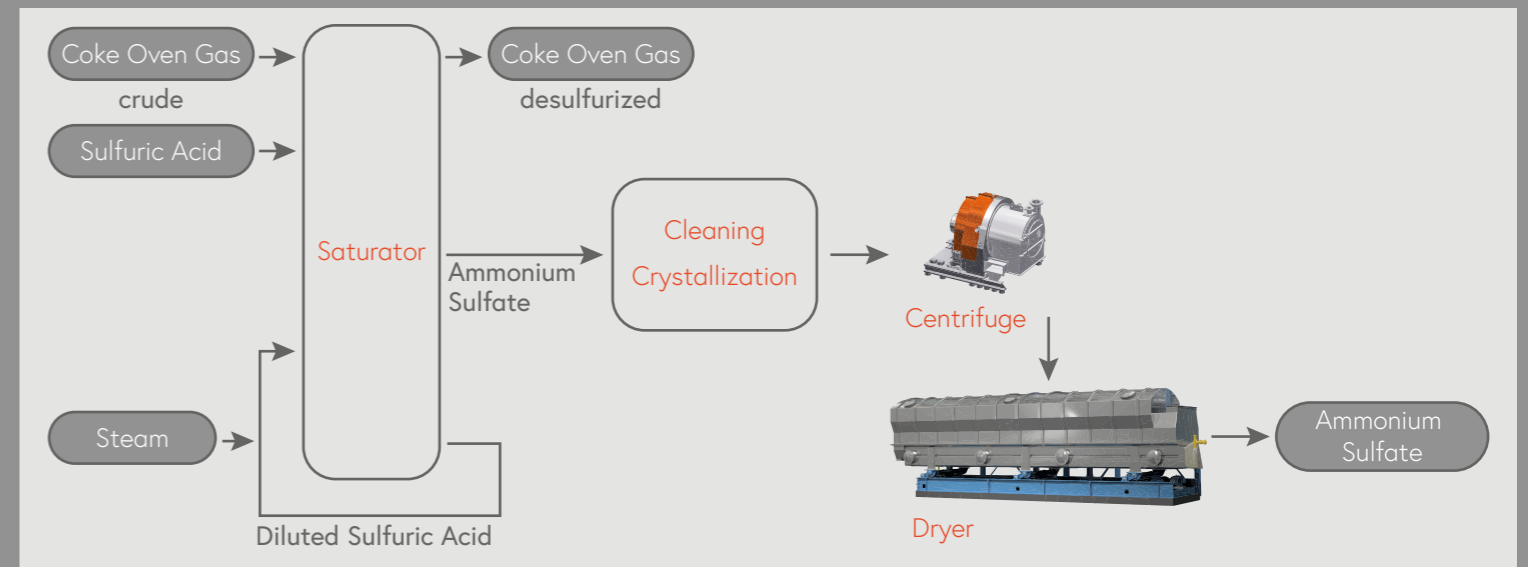


B) Recovering Ammonium Sulfate out of sulfuric- or ammonia containing wastewater from processes such as:

- ◆ Acrylnitrile (AN) → Acrylamide, glue, solvents
- ◆ Methylmethacrylate (MMA) → acrylic glass (plexiglass)
- ◆ Caprolactam (CPL) → Polyamide 6 (textile fiber, foil)



C) By-product of the desulfurization of coke oven gas or ammonia-containing wastewater.



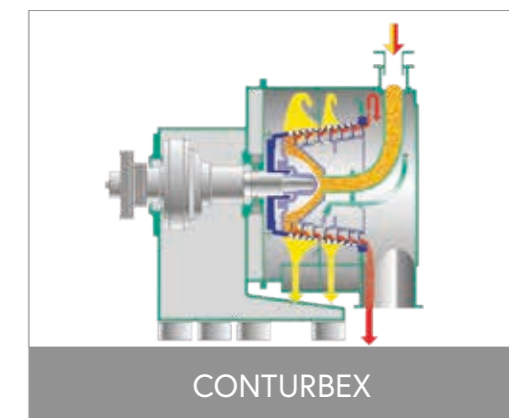
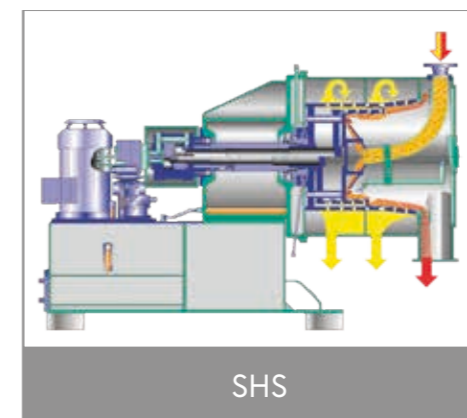
AMMONIUM SULFATE - CENTRIFUGES



	SHS pusher centrifuge	CONTUREBX screen scroll centrifuge
Typical machine sizes	302	250
	402	320
	502	400
	602	520
	702	700
	802	1000
	1002	1200



SELECTION CRITERIA FOR SHS & CONTUREBX



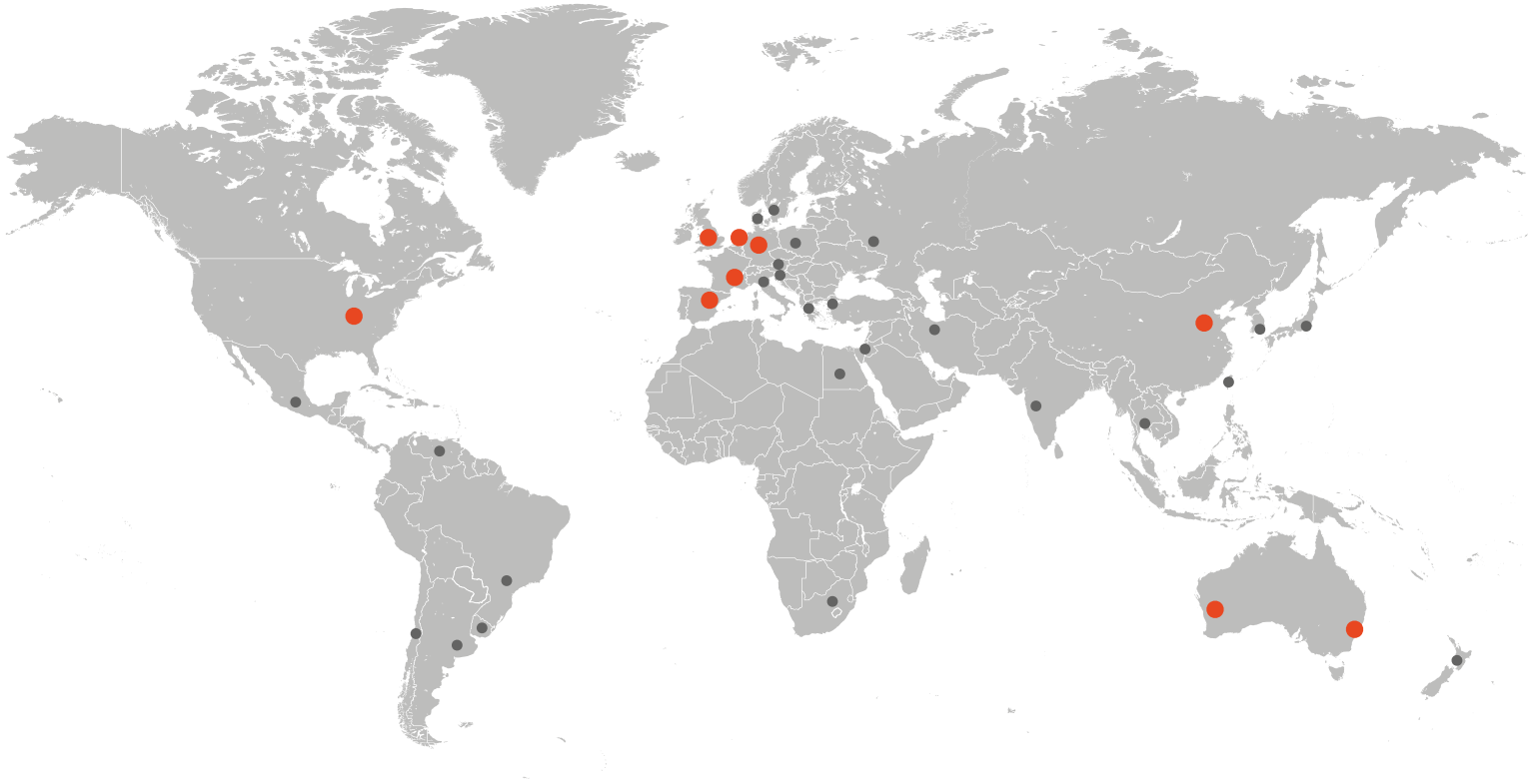
Minimum of the solid concentration in the feed

Average diameter d_{50}	%w/w	%w/w
< 0,5 mm	40	20
> 0,5 mm	35	20

Key Points

	SHS	CONTUREBX
Solid layer	+++ Smooth product transport, less particle breakage and less solid losses to filtrate due to high thickness of solid layer.	++ Thinner solid layer provides a quick dewatering, but may cause more particle breakage and higher losses of solids in the filtrate.
Solid concentration	+ High and stable solid concentration is requested.	+++ Low and varying solid concentration can be handled.
Product washing	+++ Very good washing efficiency due to long retention time of product on the screen.	++ Partly limited washing efficiency due to short retention time.
Product transport	+ No forced product transport, product remains in the drum after feeding stop. Cleaning is requested before restarting the machine to prevent high vibrations.	+++ Forced product transport by the scroll - "self-cleaning" - minimum remaining product after feeding stop.
g-force	+++ Smooth product transport and less particle breakage due to low g-force.	+ Higher g-force provides a quick dewatering, but more stressful product transport (scroll) may cause higher particle breakage and higher losses of solids in the filtrate.
Gas-tight execution	+++ Vapour- and gas tight execution available	+++ Vapour- and gas tight execution available

One Solution. Worldwide.



SIEBTECHNIK TEMA provides more than 50 local support offices worldwide as well as main sites located in:

Mülheim an der Ruhr, Germany | Rijswijk / The Hague, The Netherlands | Daventry, Great Britain
Mundolsheim, France | Madrid, Spain | Sydney & Perth, Australia | Cincinnati, USA | Tianjin, China

We are experts in the field of solid-liquid separation and the processing of bulk materials

Automation | Channel conveyors | Crushing & Milling Equipment | Control Screening Machines
Decanter | Dryers | Laboratory Equipment | Pneumatic Tube Systems | Preparation Systems
Process Equipment | Pulsator Jigs | Pusher Centrifuges | Sampling Systems | Screening
Machines | Screen Worm Centrifuges | Sliding Centrifuges | Vibrating Centrifuges