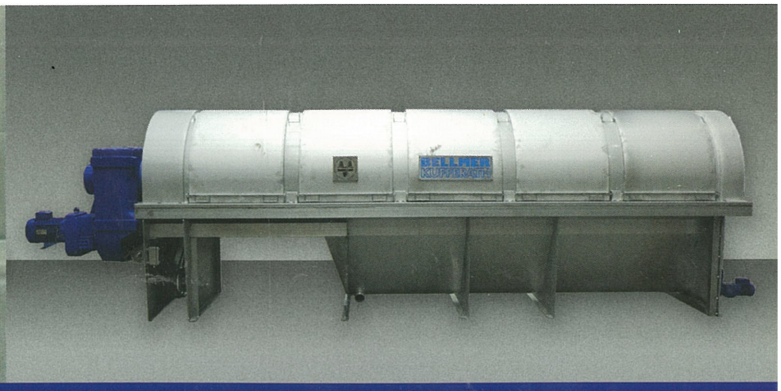
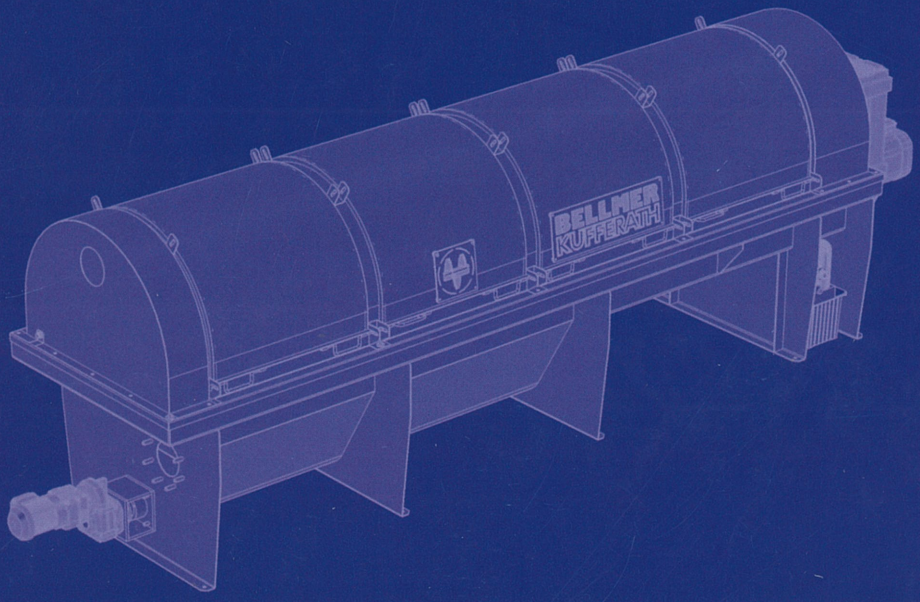
BELLMER KUFFERATH Machinery

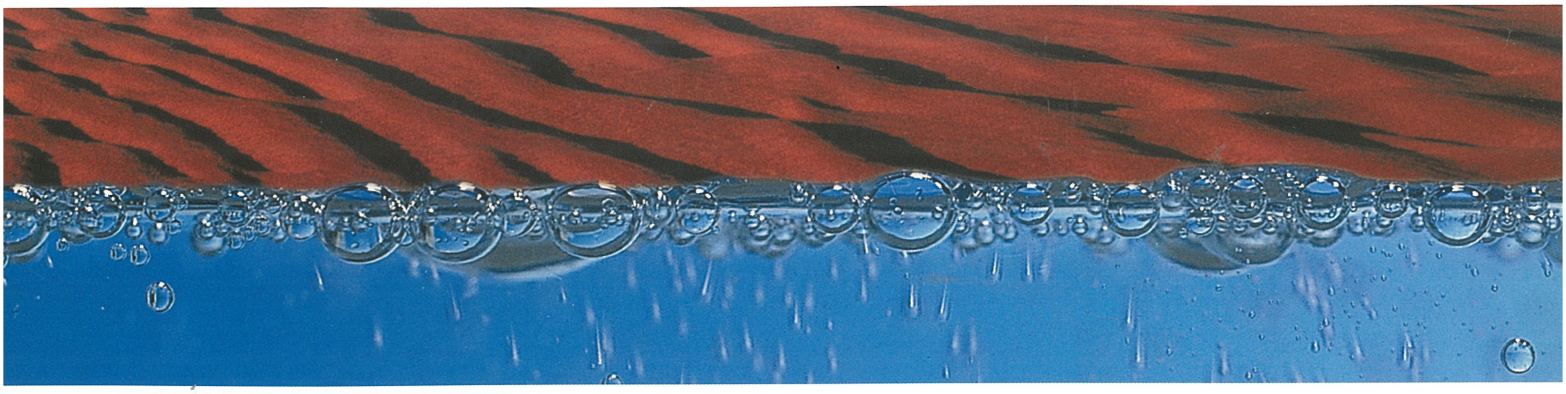




SYSTEMS FOR THICKENING AND DEWATERING DIFFICULT AND FINE STRUCTURED MATERIALS



BELLMER KUFFERATH Machinery

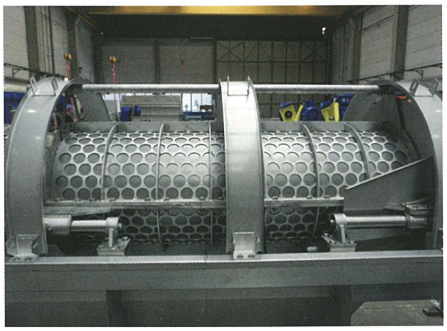


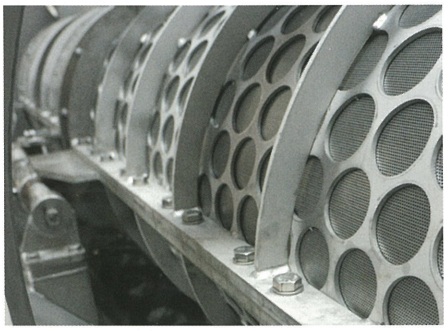
BELLMER KUFFERATH develops and sells plant and equipment for the dewatering, thickening and sorting of solids. The different AKUPRESS® product lines, part of which are patented, have made BELLMER KUFFERATH a leading manufacturer of screw presses suitable for dewatering coarse matters, fibrous materials and sludges.

With the AKUPRESS® BX-Ls and Ms models, BELLMER KUFFERATH expands its supply program with regard to the dewatering of difficult and fine structured materials.

DEWATERING OF DIFFICULT AND FINE STRUCTURED MATERIALS

Building on the well-proven principle of the AKUPRESS® BX screw press with more than 100 units sold and delivered, the AKUPRESS® BX-Ls and -Ms press type has specifically been designed for dewatering finely structured materials that are difficult to dewater.
The 's' stands for the new pioneering technology of an integrated sedimentation stage for the press water.





AKUPRESS® BX
FIELDS OF APPLICATION

Dewatering of e.g.:

- Digester output from wet digestion
- Digester from dry digestion after separation of coarse matters

- Sludges from the pulp and paper industry with a high percentage of biological sludge and sludge from precipitation

- Algae
- Slurry from starch production and ethanol production
- Residues from soy processing
- Wine and fruit pomace
- Various industrial sludges

AKUPRESS® BX
CHARACTERISTICS

- Based upon the patented and well-tried concept of the AKUPRESS® –X screw press line using the interchangeable screen basket system: hence allowing for a sensitive adjustment of the dewatering pressure.
- The screw press can completely be emptied before downtime periods.
- During the integrated sedimentation phase the press water runs through an additional cleaning stage.

> High adjustable dry contents
> Low content of filterable substances in the press water

AKUPRESS® BX
ADVANTAGES

Advantages in comparison to other technologies:

- Low energy consumption
- No spray water required during the process, hence no increase of the filtrate quantity

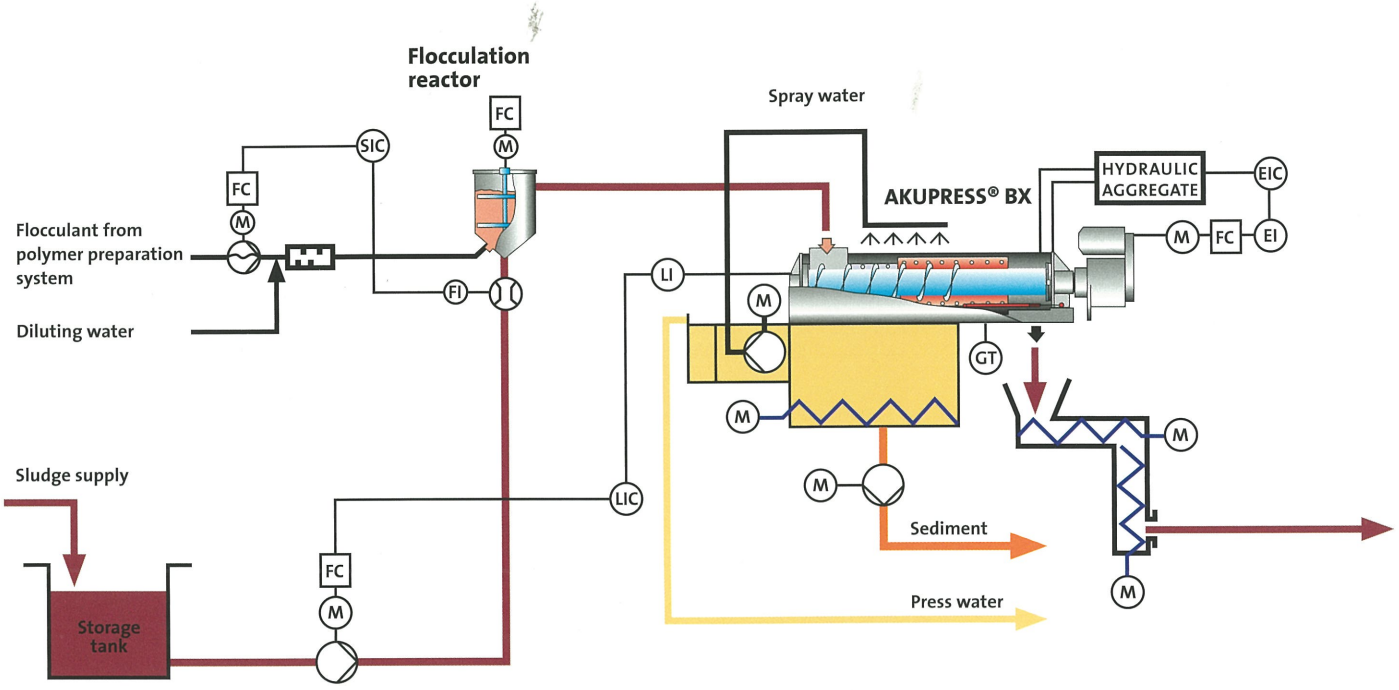
> Low operating cost

FLOCCULATION, FLOCCULATION REACTOR

Sludges and digester output are basically dewatered by adding flocculants.

Optimal mixing is ensured by using a flocculation reactor.



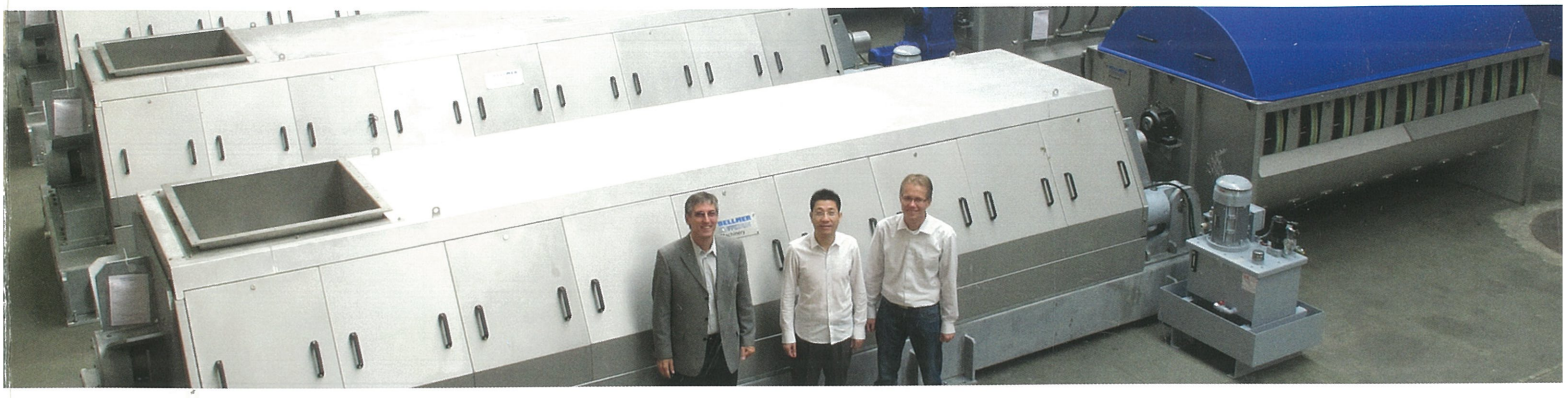


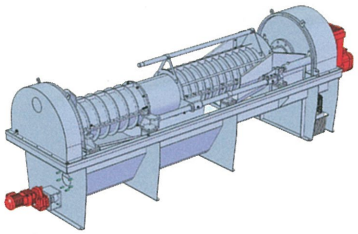


SCOPE OF DELIVERY

In addition to the optimised individual components we are able to supply a comprehensive range of machinery and equipment that includes complete turn-key systems together with all relevant process control technology, conveying systems and catwalks.

The process control technology can either be supplied with an own visualisation and operation surface (WinCC) or rather be linked with central process control systems via bus lines.





AKUPRESS® BX-Ls AND -Ms

AKUPRESS® BX-Ls and -Ms are screw presses designed to dewater difficult and fine structured materials. Both function and design are based upon the patented and well-tried concept of the AKUPRESS® –X. The essential characteristics comprise:

TORQUE CONTROL

The torque of the press is controlled and adapted by changing the pressing zone length during operation. The pressing zone is at the outlet of the press, between the spiral-free area and the screen basket. This conceptual design allows to sensitively adapt the throttling effect of the pressing zone to the characteristics of the material to be dewatered. In addition, the torque can be controlled, with the dry content being set in a narrow defined range.

INTEGRATED SEDIMENTATION

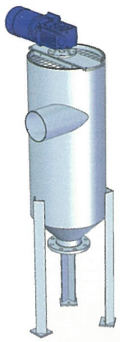
Difficult low-shear materials often lead to a high contamination of the press water with solid matters. The integrated sedimentation separates the press water into an overflow free of solids and a sediment that can either be disposed off separately or fed back to the material flow.

AKUPRESS® BX for dewatering materials difficult to dewater – available with two different torque levels

- AKUPRESS® BX-Ls – low torque for extremely difficult and low-shear materials
- AKUPRESS® BX-Ms – medium torque for low-shear materials with a minimum structure

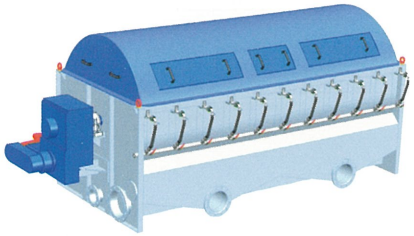
AKUPRESS® BX-Ls and -Ms can be supplied in different sizes with screw diameters ranging from 400 to 1000 mm.

AKUPRESS® BX stand out due to their simple maintenance requirements, e.g. thanks to their interchangeable screen basket system and the flange journals the screw shaft can be changed without opening the bearings.



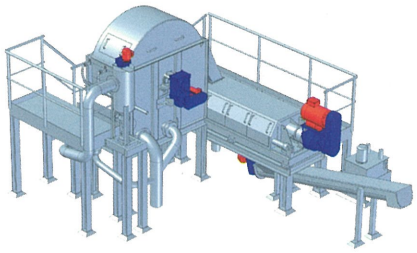
FR HC FLOCCULATION REACTOR

Under the designation FR HC, Bellmer Kufferath added a flocculation reactor to its product range that allows to ideally mix the flocculant into the material to be dewatered and make a visual check of the flock formation at the same time. Both the AKUPRESS® BX and the FR HC flocculation reactor are interlinked without intermediate buffer and shearing.



AKSE® S PRE-THICKENER

To secure the operation and the efficiency of the AKUPRESS® BX screw press at low inlet consistencies, the use of a pre-thickener may be beneficial and necessary. For this purpose, BELLMER KUFFERATH offers the AKSE® S disc thickener.

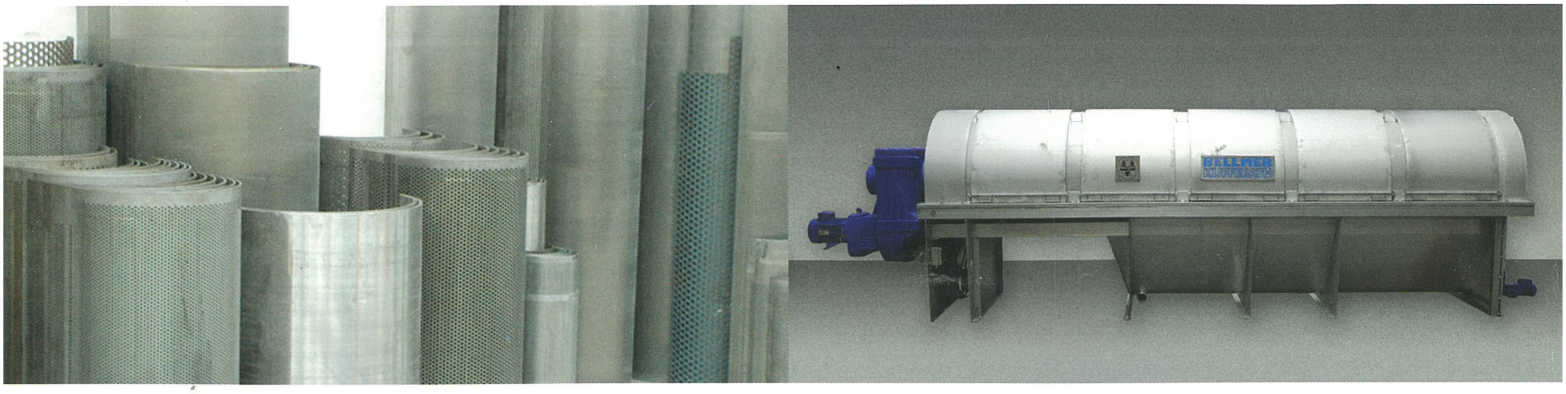


SLUDGE DEWATERING SYSTEMS

In addition to the optimised individual components we are able to supply a comprehensive range of machinery equipment that includes complete turnkey systems together with all relevant process control technology, conveying systems and catwalks. One important aspect is the integration of the flocculant treatment and dosing station.

Apart from the supply of these systems special engineering services, including sludge analyses, pilot plant trials, installations plans, flow and control charts and a complete technical documentation, are provided.

BELLMER KUFFERATH Machinery

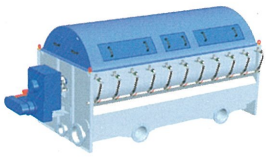


ABOUT BELLMER KUFFERATH Machinery

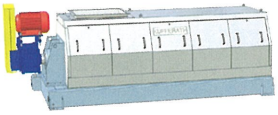
BELLMER KUFFERATH Machinery is a member of BELLMER Group and develops, produces and sells plant and equipment for dewatering, thickening and sorting solid matters. Always aiming at providing the best possible solution, the products made by BELLMER Separation Technology complement the Bellmer Kufferath product range most perfectly.

PRODUCTS

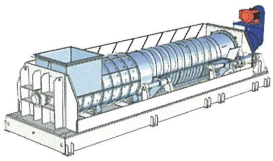
DEWATERING – FILTRATION



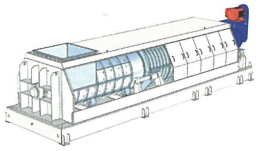
AKSE® F, S
Disc thickener



AKUPRESS® A, AS, AM, AX, AL
Screw presses for dewatering coarse matters



AKUPRESS® BX
Screw presses for dewatering sludges



AKUPRESS® CX
Screw presses for dewatering fibrous materials

SERVICES

PROJECT ENGINEERING

Our project engineering covers everything from flow and control charts, installation plans, feasibility studies to the integration of plants into the existing facilities and systems.

SCOPE OF SUPPLY

In addition to optimised individual components, e.g. for plant engineering, we are able to supply a comprehensive range of machinery and equipment including turnkey systems together with all relevant process control technology.

AFTER-SALES-SERVICE

- Machine/plant commissioning and staff training performed by our own experienced Application Engineers
- Complete on-site assembly and installation with own staff or on-site supervision of assembly and installation
- Maintenance, upkeep and repair works by our own team of highly qualified professionals
- Stockkeeping and fast delivery of important spare and wear parts

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