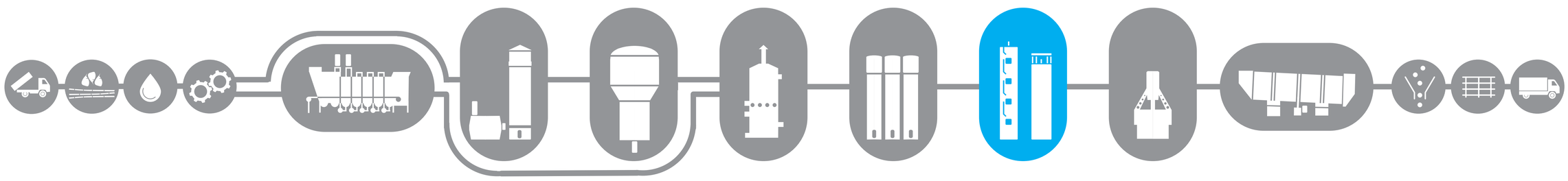
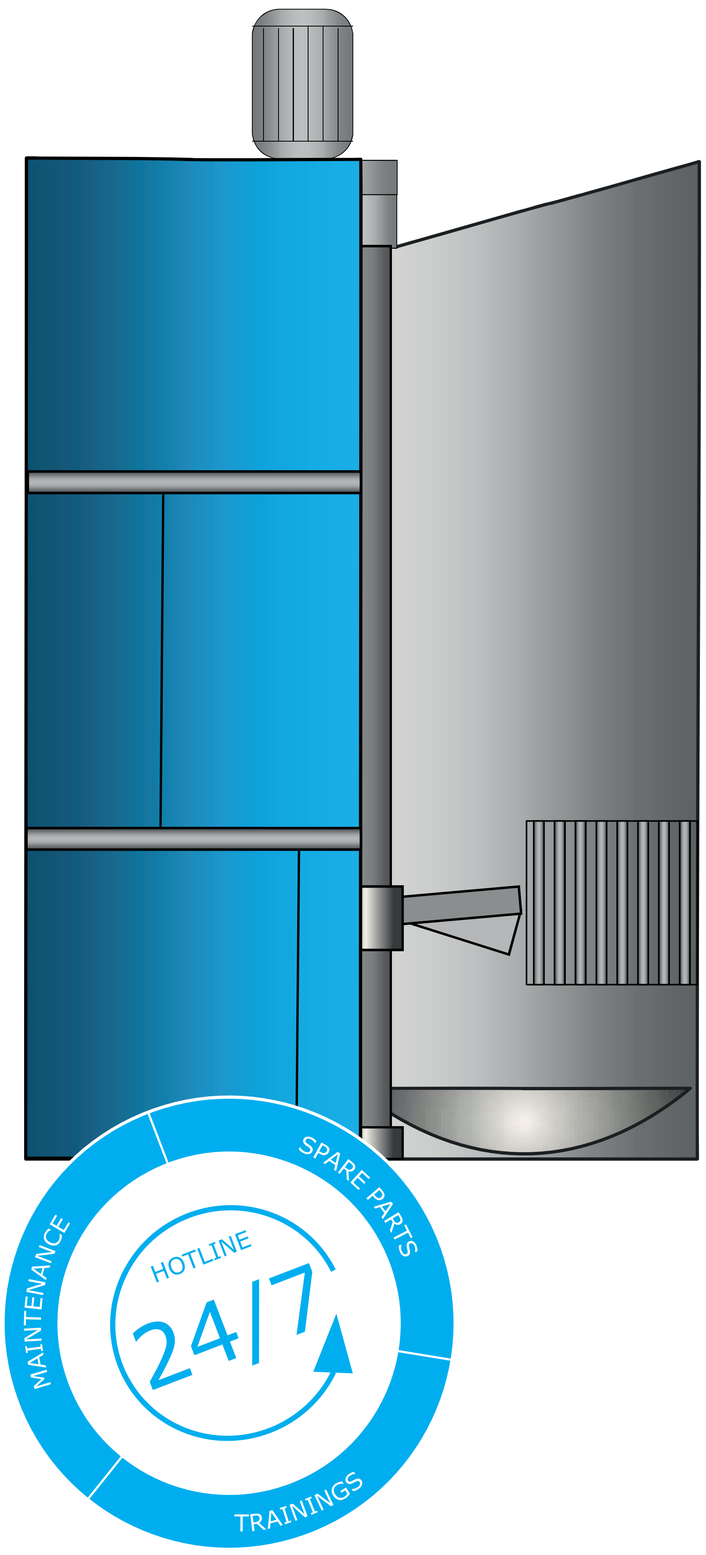
Area of application

BMA

Batch pan (DVK)



Intake > storage > cleaning > crushing/slicing | Cane diffusion | Beet extraction | Pulp dewatering | Juice purification | Evaporation | Crystalli-sation | Centrifu-gation | Sugar drying/cooling | Packaging > storage > transportation



Principle of operation

Crystallisation is a key element of the sugar process; it is crucial for crystal quality and sugar output. Organising several crystallisation steps in the best possible way ensures the quality of the final product and the maximum output from the overall process.

In a DVK batch pan, the first step is to reduce the feed solution to the desired supersaturation level with the continued evaporation of water. By “seeding” the solution with slurry or seed massecuite, the crystals then grow in the supersaturated mother liquor. As water evaporates and more feed solution is added, the crystal content and volume steadily increase up to the maximum capacity of the batch pan. Crystallisation continues until the maximum crystal content is reached.

Full automation of the process ensures reproducibility of all sections and in all batches. In process monitoring, the DynFAS MW sensor from BMA is used to measure the solids content. The process can run almost independently and process disruptions are handled automatically. Several machines in a cluster can be coordinated, thus helping to make process flows more even.

Benefits

Massecuite circulation
The agitator and cone bottom help optimise massecuite circulation and mixing.

Starting volume
A filling volume of 30 % is sufficient to start the process.

Batch time/heating steam pressure
Shorter boiling times thanks to high heating surface-to-volume ratio; no adding of water required.

Crystal quality
Even in large-volume batch pans, crystal size distributions with a small spread can be obtained.

1.0-1.2 bar* STEAM PRESSURE REQUIRED FOR OPERATION.

* abs

Technical data

Heating surface [m²]	193 to 636
Diameter [mm]	3,200 to 5,600
Capacity [m³]	25.6 to 82.7

Reference extract

Customer	Year	Country	Massecuite [t]
SUJ	2016	Indonesia	75
Etihad	2014	Iraq	124 (max)
MSM	2013	Malaysia	75
Sugar Australia	2011	Australia	61
Tambov	2009	Russia	106

More information

https://www.bma-worldwide.com/crystallisation/vertical-vacuum-pan-vkt.html

Sales sales@bma-de.com
Automation sales@bma-automation.com
After sales after-sales@bma-de.com

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