

Simplicity wins.

Diffusers from BMA – superior performance, high availability and low maintenance.



Calm is strength. Diffusers for sugar cane and bagasse.



Diffusers from BMA are known around the globe for their outstanding performance and extremely low operating and maintenance costs. With capacities of up to 24,000/33,200 TCD (sugar cane/bagasse), they are extremely flexible and can be tailored to your requirements.

Diffusers are used for the continuous extraction of sugar from sugar cane or bagasse. Sugar cane is crushed and the sugar is then washed out in a cross-countercurrent process using water. The aim is to obtain low-temperature, high-purity raw juice with a high dry substance content. The diffuser from BMA achieves this with the formation of a layer of crushed sugar cane or bagasse from the first mill on a chain conveyor.

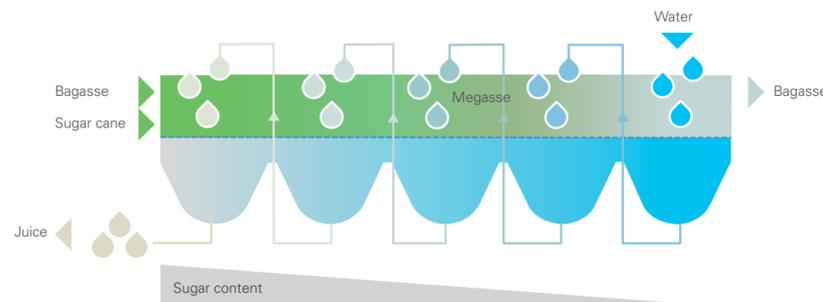
juice reaches its maximum sugar content at the diffuser inlet.

Design features of BMA diffusers

- Patented water application system
- Efficient high-power drive with frequency converter for variable speeds
- Patented cane feed system
- Bagasse dewatering system incl. pre-dewatering drum
- Self-cleaning fixed bottom screens
- Low-maintenance and highly reliable megasse transportation
- Distribution chute for optimum bagasse distribution
- Ultrasound-based measurement of layer thickness

At the conveyor outlet, water is added and percolated through the megasse bed and the screen bottom of the diffuser. The water dissolves the sugar in the megasse and this juice is collected in a trough. A pump transports it to the next step, where the process is repeated until the

Diffusion process



Bringing out the best. Benefits at a glance.

Diffusers from BMA have a winning combination of features, and not just compared to other diffusers. Even in a contest with cane mills, they win every time.

Efficiency and flexibility

- Outstandingly high extraction rates of up to 98.5 %
- Sugar losses are reduced by up to 25 % compared to cane mills
- Higher-quality thin juice with fewer solids and less cloudiness because of the filtration effect in the megasse bed
- Highly flexible capacity and throughput time thanks to adjustable bed height and chain speed

Simple and economical operation

- Reduced pesticide use thanks to controlled temperature of >75 °C inside the diffuser
- Fully automated with an electrical locking system for smooth operation
- Considerably lower operating and maintenance costs than a mill tandem
- Improved work safety thanks to low maintenance requirement

High co-generation potential

- Low steam consumption as only low heating steam pressure is required
- Energy requirement of only 40 to 50 kWh/t_r, which is about 50 % less than for a mill tandem
- Low energy requirement thanks to central drive, small pumps and few movable parts
- Increased co-generation potential with recycling of carbonation sludge
- Low level of residual moisture thanks to preliminary dewatering

Low-cost installation

- Simple yet reliable functional and design concepts
- Small number of complex components permits local manufacture
- Suitable for indoor and outdoor installation

Plants and automation technology from a single supplier

Even the best plants can only be exploited to their full potential with perfectly tuned control systems and process automation technology. This is where BMA Automation steps in, with a combination of engineering know-how that is unique in the industry. How you benefit: your process steps and the finely tuned C & I system come from a single supplier.



BMA Service: from the first consultation to the finishing touches

Whether you require assistance with plant design, traditional mechanical engineering, automation technology or post-installation service – with BMA, your project is in safe hands right from the start. Together with you, we develop perfect solutions for your projects, assisting you from the first concept until the final bolt is in place and sugar production is running at full speed. Throughout the life cycle of your plant.

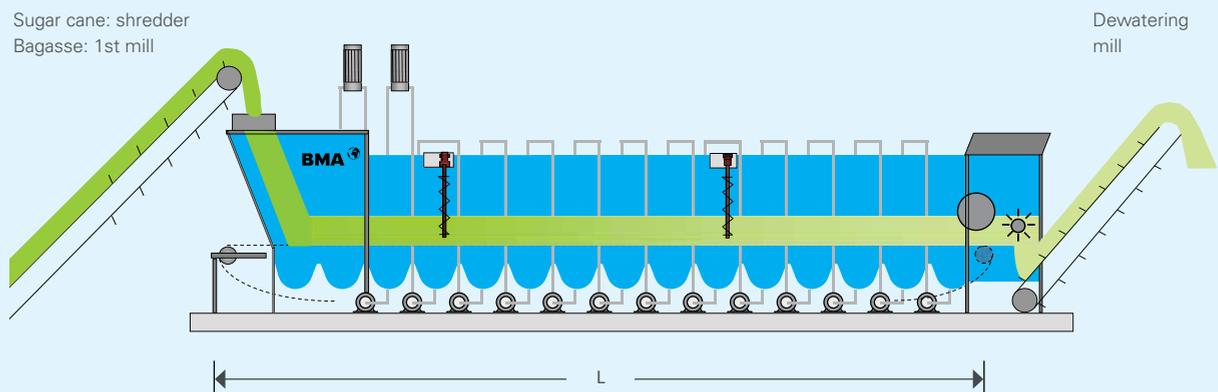


Performance in brief.

Facts and figures about diffusers from BMA.



The diffuser from BMA is a fully enclosed, stand-alone horizontal chain conveyor with a rectangular cross section. Its top cover is designed as a rounded steam dome; a special base facilitates the juice flow.



BMA diffuser series: nominal capacity* in TCD

Width in m	Sugar cane L = 59 m	Bagasse L = 52 m
4.8	4,100	5,800
6.4	5,500	7,700
8.0	6,900	9,600
9.6	8,300	11,500
11.2	9,700	13,500
13.5	11,700	16,220
15.1	13,000	18,000
16.7	14,500	20,000
18.3	15,800	22,000
19.9	17,200	24,000
21.5	18,600	26,000
23.1	20,000	27,800
26.1	22,600	31,300
27.7	24,000	33,200

*Fibre content: 15%

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BMA – Passion for Progress

For over 170 years, BMA has been developing and manufacturing machinery and equipment for the industrial-scale production of sugar. BMA system solutions for sugar factories and refineries are in demand wherever minimum energy consumption and consistently high product quality are top priorities. With a strong workforce around the globe and in-depth knowledge of process engineering, BMA's service profile is unique in the sugar industry.



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