

Every question deserves an answer.  
Every project deserves BMA.

Products and solutions for the sugar industry.









# BMA – Passion for Progress

For machinery, individual process steps or entire factories – whenever it comes to the industrial-scale production and refining of sugar, crystalline fructose and dextrose, BMA is your contact.

Whether you require assistance with plant design, traditional mechanical engineering, process automation or post-installation service – with BMA, your project is in safe hands right from the start.

For us, Passion for Progress is more than just a slogan. With our technical innovations, we have been setting industry standards for over 160 years. And we are truly passionate about developing progressive solutions for our customers around the globe.

BMA means engineering made in Germany. Every BMA site makes its own contribution, yet each site is different. Our subsidiaries in the United States, China, Tunisia,

Russia and Brazil, our business activities in more than 80 countries, and employees from over 25 different nations are all clear evidence of the international focus of our everyday work.

Both our batch and continuous centrifugals are BMA flagship products that are well known around the globe for their outstanding quality. But BMA offers far more than superior machinery and equipment.

Together with you, we can 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.



# The industry's most comprehensive product portfolio.



BMA develops, manufactures and installs all machinery and equipment for the core processes in sugar production: from extraction and evaporation to crystallisation and drying – you will find exactly what you need for each process step in our range of products.

## **Innovations for the sugar and sweeteners industry**

We have, in fact, often helped to advance the state of technology in the industry. Our extraction towers and the continuous crystallisation process are just two examples of innovations that BMA has brought to market. But to us, superior quality is more than simply collecting certificates: an extremely long product life and value retention of many years speak for themselves.

And yet, wear and tear cannot be prevented altogether, of course. Which is why BMA Assistance will provide you with original BMA parts and first-class service, whenever you need them. Thanks to our high manufacturing standards, your equipment will continue to function perfectly even when the original parts are replaced, so production can run at a consistently high level.

## **Plants and automation from a single supplier**

Even the best machinery and plants cannot be exploited to their full potential without perfectly tuned control systems and process automation. This is where BMA Automation steps in, with its blend of engineering know-how that is unique in the industry. Our experts develop automation solutions tailored to the requirements of the

sugar and sweeteners industry. How you benefit: your process steps and the finely tuned measuring and control system come from a single supplier. This ensures all components of your plant will work together smoothly right from the start.

# From the first consultation to the finishing touches: our services can take many different forms.



## **In-depth consulting: we can find a solution, whatever the challenge**

Every project, however small it may be, starts with a full consultation. Because at the outset, there will not always be a clearly outlined task, but simply a challenge that needs to be addressed. This is where you can benefit from our full range of experience and expertise.

You may need a new process step, or an upgrade of your plant's current automation system, to ensure you can continue to meet new challenges in the best possible and

most efficient manner. You might want us to get an entire new factory up and running, or supply only the key components.

And even if it is only a single machine you need – let us discuss your precise requirements and the best way of meeting them. Only when you are happy with the solution, will we consider our job well done.



### **Holistic plant design: in engineering, nobody can hold a candle to us**

Every plant is unique. The location, raw material properties, production targets, energy consumption – countless aspects must be taken into account and every detail calculated before the first machine can be built. We offer comprehensive engineering services for new plants, plant extensions and rehabilitation. Our services range from basic studies to detailed process engineering. Low-energy concepts for parts of a plant, or for entire sugar refineries and beet or cane sugar factories are our speciality. Key factors include the location of your plant and any particular local features. Wherever in the world you may be, our

engineering services are available to you. They comprise process and mechanical engineering, process automation, and local specialist knowledge gained in decades of successful international plant design.

You may also be interested to know that we always prepare supplier-neutral balances and plans. Leaving you free to choose an equipment supplier yourself, based on your specific requirements.

### Our engineering services at a glance:


CONCEPT STUDY	BASIC ENGINEERING	DETAILED ENGINEERING
As part of a concept study, we will prepare mass and heat balances, and visualise the process in a block diagram or simple process flow chart. With an additional economic feasibility analysis, we will develop an overall concept that takes into account all key factors of the plant.	Here, we go one step further. In addition to the services of the concept study, we will prepare equipment lists and specifications, a list of control circuits for the measuring and control systems, and a rough layout plan for key equipment. We will also provide you with the documentation you need to implement construction of the plant.	Here, we fine-tune our basic engineering work to the smallest detail. We will provide you with load plans for steel structures and concrete foundations, detailed layout plans, piping engineering, and much more. We will also handle the project management for your plant.



### Implementation: the German art of engineering – down to the smallest bolt

With more than 400 successfully completed factories and hundreds of thousands of individual items of equipment delivered, we can safely say that we have a knack for plant construction. BMA builds factories in highly industrialised urban areas in Asia, in remote agricultural regions in Africa, on the North German Plain, and on the Australian coast. And in all these places, our factories are known for their outstanding quality and efficiency.

Although we will generally deliver our products around the globe, their dimensions can in many cases present a logistical challenge. This is why we often have minor components manufactured near the destination. That can be either at one of our own sites, or, under close supervision, by local manufacturers. We also offer complete assembly supervision on site.



The core components of our product portfolio are manufactured exclusively by BMA.





### **Commissioning: ensuring perfect human-machine interaction**

Even after the construction of a plant is finished, we consider our work far from complete. Successful commissioning is essential for a smooth start-up and efficient factory operation.

New factories are also frequently staffed by a team who are unfamiliar with the work. And even experienced specialists may not be used to new process technology. Our experts will check that all equipment is perfectly adjusted, while also training your operators, to ensure a quick start or changeover.

This is not limited to the simple operation of individual equipment items and the running of the plant. We will, in addition, provide your staff with theoretical background knowledge – even across language barriers. Such additional knowledge is essential, particularly in view of the increasing importance of control and automation systems. Understanding a process means greater safety in everyday actions and better responses whenever anything is not going to plan.



Our product portfolio covers all core processes of sugar production and refining.



## Our product portfolio:

<p><b>EXTRACTION</b></p> <p>Countercurrent cossette mixers Extraction towers Cossette pumps Diffusers</p>	<p><b>EVAPORATION</b></p> <p>Falling-film evaporators Plate falling-film evaporators Condensate tanks</p>	<p><b>CENTRIFUGATION</b></p> <p>Batch centrifugals Continuous centrifugals Distribution mixers</p>
<p><b>PULP DEWATERING</b></p> <p>Pulp presses Fluidised-bed steam driers Rotary air locks</p>	<p><b>CRYSTALLISATION</b></p> <p>Batch pans Vertical continuous pans VKT Cascaded batch pans Cooling crystallisers OVC Molasses magma minglers Seed magma cooling crystallisers Magma pumps Receivers, mixers Slurry mills</p>	<p><b>SUGAR DRYING</b></p> <p>Drum driers-coolers Horizontal fluidised-bed coolers Vertical fluidised-bed coolers</p>
<p><b>JUICE PURIFICATION</b></p>	<p><b>AUTOMATION TECHNOLOGY</b></p>	
<p>Machine control systems, production line automation, process control systems, control cabinets</p>		



## A reliable partner throughout the life cycle of your plant.

### **The quality of our service is most evident when everything is running**

When you invest in new production machinery, you want to be sure that everything runs smoothly. The BMA Assistance team makes sure it does. As part of their service work, they will check wear parts and the proper functioning of your equipment. If necessary, they will adjust the settings. A tailor-made service agreement defines the individual services you wish us to perform after commissioning. For you, that means: the right

service at the right time, a clear cost overview – and thus greater security.

But faults may occur even in plants that are regularly serviced. In the event of unplanned downtimes, what you want is quick help. Whether it is spare parts you need or a service technician – you can rely on our global service network, 24 hours a day, 365 days a year.



### **Prepared for the future with upgrades**

As part of our services, we will also modify existing machinery and apparatus from BMA or other manufacturers. A new plant may not be necessary where a modification is legally required, or if you wish to increase output. Instead, you could rely on one of our retrofit kits or a bespoke optimisation solution.

### **Valuable knowledge for new and experienced colleagues**

While members of your workforce will come and go, your plant will stay with you for decades. BMA Academy can help you maintain a consistently high level of expertise among both new and experienced colleagues. With their tailor-made training programmes, our team provide theoretical background knowledge in units with a hands-on focus, geared to the individual participants' level of knowledge. So you can be sure your machinery and equipment continue to be used efficiently.



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