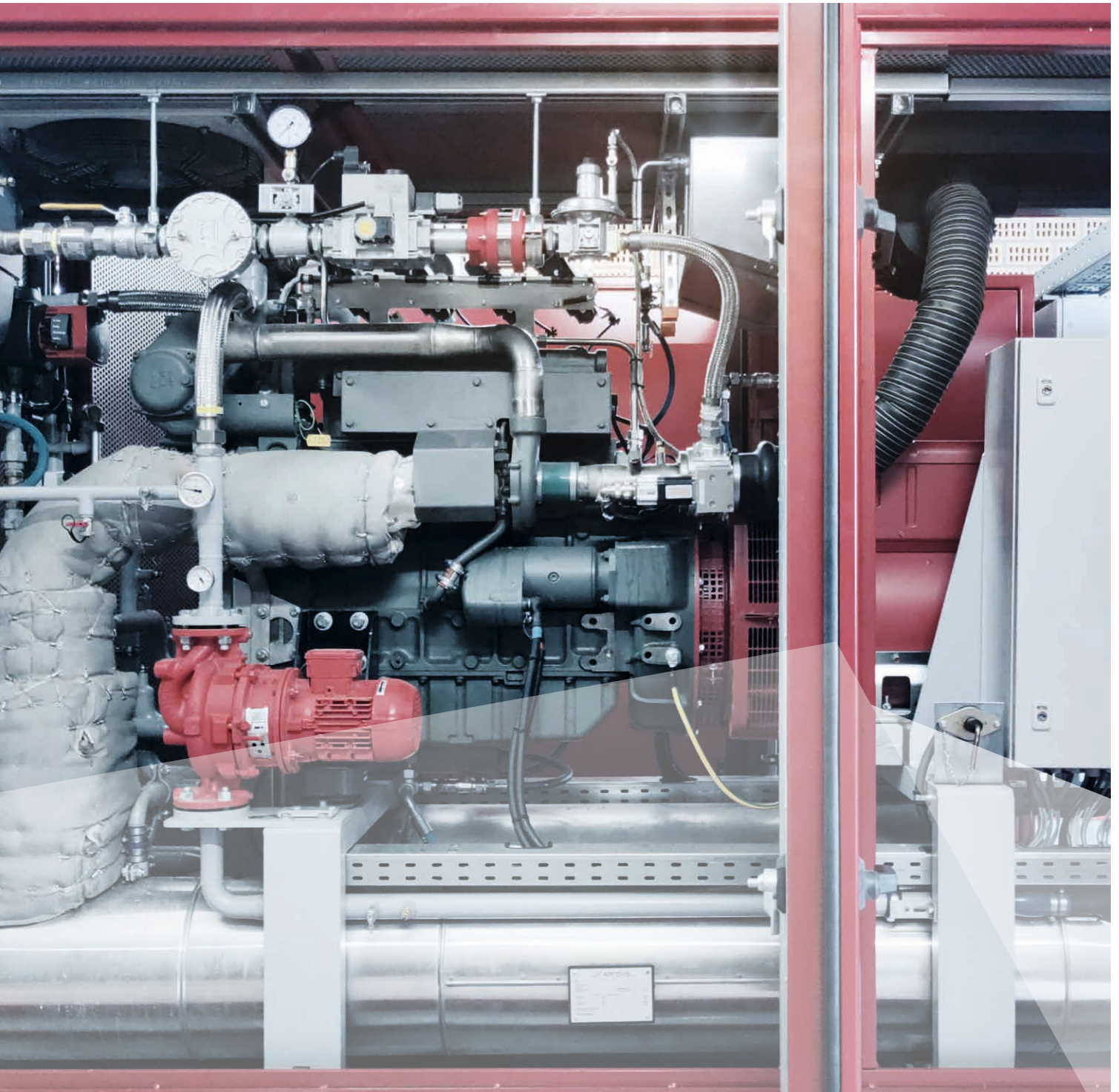


FULL THROTTLE!



CHP Template

FULL THROTTLE!

BK³ Energieanlagen GmbH, based in Berlin (Germany), has been building combined heat and power plants for almost twenty years. Updates to grid connection guidelines for low and medium voltage required plant recertification.

For BK³, this was an opportunity to integrate a new controller system – the Bachmann M200 Series. The migration was completed extremely quickly thanks to the Bachmann CHP template.

BK³ Energieanlagen GmbH builds combined heat and power plants that produce between 50 and 500 kW of energy, with a focus on converting sewage gas into electricity. The revised German power generator connection regulations, VDE-AR-N 4105:2018 low-voltage and VDE-AR-N 4110 medium-voltage, require new dynamic and static grid support functions, making it necessary to recertify plants. This was a time-consuming process, with high associated costs, which BK³ tackled together with enertec Kraftwerke GmbH. The company from Mühlhausen in Thuringia also builds CHP units – primarily for converting biogas into electricity.

Controlled migration to the M200 Series

enertec has relied on Bachmann's controller system for its plants for

some time and has had a good experience. "The compact controller we were using up to now did not offer the necessary functional performance required by the revised regulations. That's why we decided to migrate our CHP controller to the M200 Series, not least on the recommendation of enertec," explains Michael Rauchfuß, commissioning engineer at BK³.

1:1 plus

The Bachmann automation system opened up completely new possibilities compared to the previous compact controller, but also required a change in approach to development at BK³: Where programmers previously had to restrict themselves to the parameterization of software unknown in the source code, the possibility of free programming had now become available. It was clear from the very beginning, however, that the individual functions



»The CHP template took most of the work for controller migration out of our hands.«

Michael Rauchfuß

Commissioning engineer
BK³ Energieanlagen GmbH

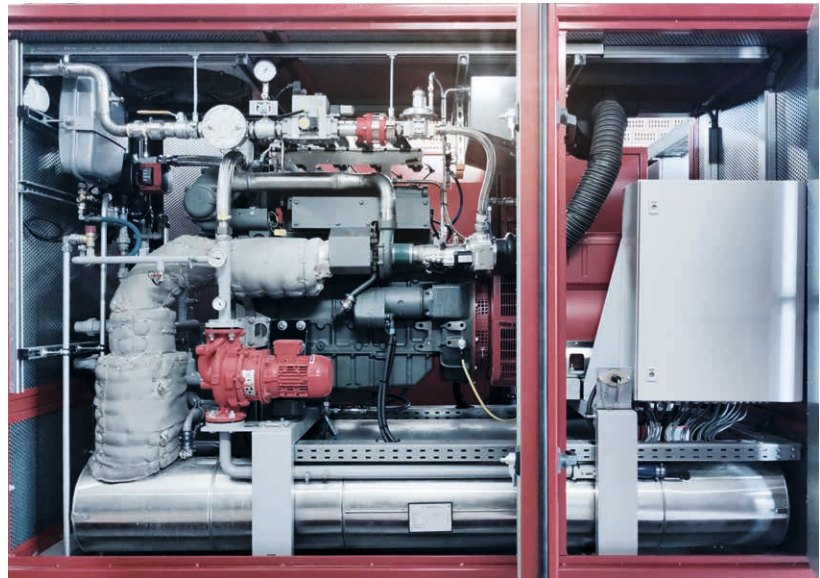
BK3 ENERGIE-ANLAGEN GMBH

- Headquarters in Berlin, Germany
- Manufacturing, installation and service of cogeneration units from 50 to 500 kW

www.bk3-energieanlagen.de



Clear and self-explanatory:
Operator guidance on the BK³ CHP unit new touchscreen panel.



BK³ builds CHP modules for the common fuels – sewage gas, natural gas, as well as biogas – and also offers solutions for special applications such as associated gas or landfill gas.

and familiar approach to operating the CHP had to be mapped as far as possible on the new controller system. "We did this primarily with service in mind. We wanted to retain as much as possible of what we were used to," says Michael Rauchfuß, describing what was probably his most important requirement for the replacement system. This also created space for completely new projects, for example in plant operation – which now features a touchscreen panel.

The basis: The CHP template

With the new controller system, BK³ wants to build a baseline for all future implementations: The development of a basic software. This software could then be transferred very easily to various plants, where it would already be executable for basic functions. "Up to now, this has been very annoying. The compact

controller's closed nature meant that we practically had to start from scratch again with each plant. Now we can copy and paste individual functions – and it works," Michael Rauchfuß is pleased to report. He also had this experience with the CHP template: "The functions provided for operation, starting, stopping and motor control are very sophisticated. Thanks to this, the first time we commissioned the CHP was very quick," confirms the commissioning engineer. For individual tree groups or special control characteristics, he adapted the template together with Bachmann application engineer Axel Wedderien: "Axel was always available and ready to listen to our concerns. We are very grateful for that."

Future-proof

For Rauchfuß, the whole project is a great leap forward: "Each system is

basically unique – rarely are two identical. It is therefore helpful to be able to use existing software to cover basic functions. In his mind's eye, he sees a future CHP unit that is completely freely configurable on the software side: During commissioning, software is loaded, and then functions and installed components are selected on the display. Following a restart the operator sees only exactly what is required.

The engineer is certain that the Bachmann controller offers him every opportunity to further develop the BK³ CHP units and to implement brand new possibilities for his customers. He has no shortage of ideas, when it comes to plant monitoring, for example: "Our aim is to save resources, time and costs, and thus to make a decisive contribution to the successful energy transition in line with our corporate philosophy."

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