

EXICOM

Bühler Control  
Systems.  
**User-friendly  
solutions for  
maximum  
efficiency.**



**Every business and every product is different. We make sure you benefit from an automation solution that is perfectly tailored to your needs.**

### Benefits of Bühler Control Systems

- Intuitive design for maximum productivity
- Ideal product and machine handling for optimal profitability
- Auxiliary features for higher process reliability
- Elaborate data management for quality assurance
- Remote access for easy process monitoring

# Bühler Control Systems.

## Flexible solutions – tailored to your needs.

You must be able to rely on your processes. They need to run smoothly and handle countless demands, such as for maximum product safety, efficient energy use or easy operation. As a solution provider with decades of experience in automation, Bühler sets industry standards and delivers the highest possible quality.



### COMFORT

#### Convenient solution with manual operation.

The machine is controlled entirely by pushbuttons whereby signal lamps and displays indicate the machine status. Depending on the process, the rotor speed can be selected.



### PREMIUM PLUS

#### Enhanced solution with extendable functionalities.

The Premium Plus control offers advanced features and can integrate the control of tanks, peripherals and pre-grinding machines.



### WINCOS®

#### Comprehensive plant control system for fully automated processes.

With WinCos®, we offer a plant control system that fulfills every demand – module by module, characterized by great flexibility and individual support.

# Premium Plus solution.

## Excellent process control.

### Job wizard

The Job wizard interface displays a progress bar with three steps: Step 1 (active), Step 2, and Terminate. Below the progress bar, there are input fields for 'Job number' and 'Batch size' (set to 0 kg). A 'Start Job' button is prominently displayed, along with a 'Process values' button. A 'Cancel' button is at the bottom left, and a 'Next' button is at the bottom right. The interface also shows the loaded recipe 'Black-367K' and a note: '\*Next\* to select recipe.'

### Integrated machine visualization with menu options

This interface provides a comprehensive overview of machine status. At the top, it shows the date '01/03/2017 0' and the current job 'Job: Test-2' and recipe 'Recipe: Black-367K'. A central panel displays key performance indicators (KPIs) in a list format: 'tel 0:06 h:m', 'tre 0:08 h:m', 'Es 21 kWh/t', 'P 13.2 kW', 'vR 11.0 m/s', and 'To 49.2 °C'. To the right, a schematic diagram of the machine is shown with various components highlighted in green. A menu icon (three horizontal lines) is located on the left side of the top panel.

### Main menu

The main menu is a grid of nine icons representing different system functions: Overview, Recipes, Machine Settings, Process Values, Curves, Jobs, System Settings, Cockpit, Maintenance, and User Management. The interface also shows the current job status 'Job: Test-01' and 'Job stopped' at the top.

### Recipe menu (example)

The recipe menu displays a list of recipes with columns for recipe name and timestamp. The list includes: Black-367, Black-367K, Blue-302, Blue-367, Blue-386, Gr-384, Gr-386, Kreis, Kreis-2, Red-100, Red-105, Red-108, Spuelen, Yel-105, and Yel-156. At the bottom, there are buttons for 'Delete', 'Statistic', and 'Load'. A '+ New Recipe' button is also present.

### Maintenance menu (example)

The maintenance menu offers several options for system management: Alarm history, Operation hours Energy, I/O status, Alarm ranking, Maintenance intervals, System message history, and Maintenance protocol. Each option is represented by an icon and a text label.

**Control and status bar**

4:12:25 PM Automatic Admin 9

1 New Job

4

5

6

7

pi 0.65 bar

mi 2400 kg/h

ni 60 %

**Process values (actual/target)**

BOHLER 02/03/2017 12:45:32 PM Automatic User2

Process Values 1/2 Black-367K

Rotor		Pump		General	
vR	10.0 / 10.0 m/s	ni	15 / 15 %	OpM	Circle
nR	544 / 544 1/min	pi	0.2 bar	Tmax	60.0 °C
P	12.0 kW	m'i	600 kg/h	Es	25 / 8 kWh/t
To	55.0 / 46.7 °C				
I	20.0 A				

**Short-term trends**

BOHLER 18.01.2017 13:02:14 Automatic User2

Curve	Unit	Value	Date/Time
nR	d	0.000000	18.01.2017 12:53:53:846
ni	g	2.000000	18.01.2017 12:53:53:846

**Walk by screen**

BOHLER MyMill 18.01.2017 13:02:43 Automatic User2

tre (h:min)	ni (%)	vR (m/s)
1:22	62	11.0
pi (bar)	P (kW)	To (°C)
1.8	10.2	56.4

**Cockpit**

BOHLER 18.01.2017 13:25:55 Automatic Admin 9

Job	Test-07	Es [kWh/t]	vR [m/s]
Recipe	Black-367K	21	10,5
Status	Running		
Started	02/03/2017 02:56:54 PM	P [kW]	To [°C]
Run time [min]	0.1	9,8	54,4
Down time [min]	0.0		

# Smooth operation with maximum benefits. **Taking efficiency to the next level.**



## **Intuitive design for maximum productivity**

The intuitive design and user guidance simplify the correct operation of the machine. The control is easy to use which makes extensive trainings unnecessary. Additionally, a walk by screen with color coding shows warnings and standstills at a glance even from a distance.



## **Ideal handling of product/machine for optimal profitability**

With Bühler control systems the machine can be used to its full extent. An intelligent cockpit shows current process parameters including the optimum range of operation, which allows immediate adjustment. Further features, such as a job wizard, support the correct and fast start-up of the machine.



## **Auxiliary features for higher process reliability**

Integrated recipe assistants allow a production process with up to five steps enabling an ongoing adjustment of process parameters to the changing product characteristics. Additionally, various start ramps ensure a fast production start tailored to the product. The result is higher process reliability in less time.



## **Elaborated data management for quality assurance**

The control system uses intelligent data management for quality assurance and optimization. The user is able to access the past 200 jobs allowing replication and traceability of the production. Further optional measuring systems show improvement potential and enable inline quality control. Additionally, in order to preventively maintain the machine, the occurring errors are tracked and ranked. This allows an easy monitoring and scheduling of maintenance.



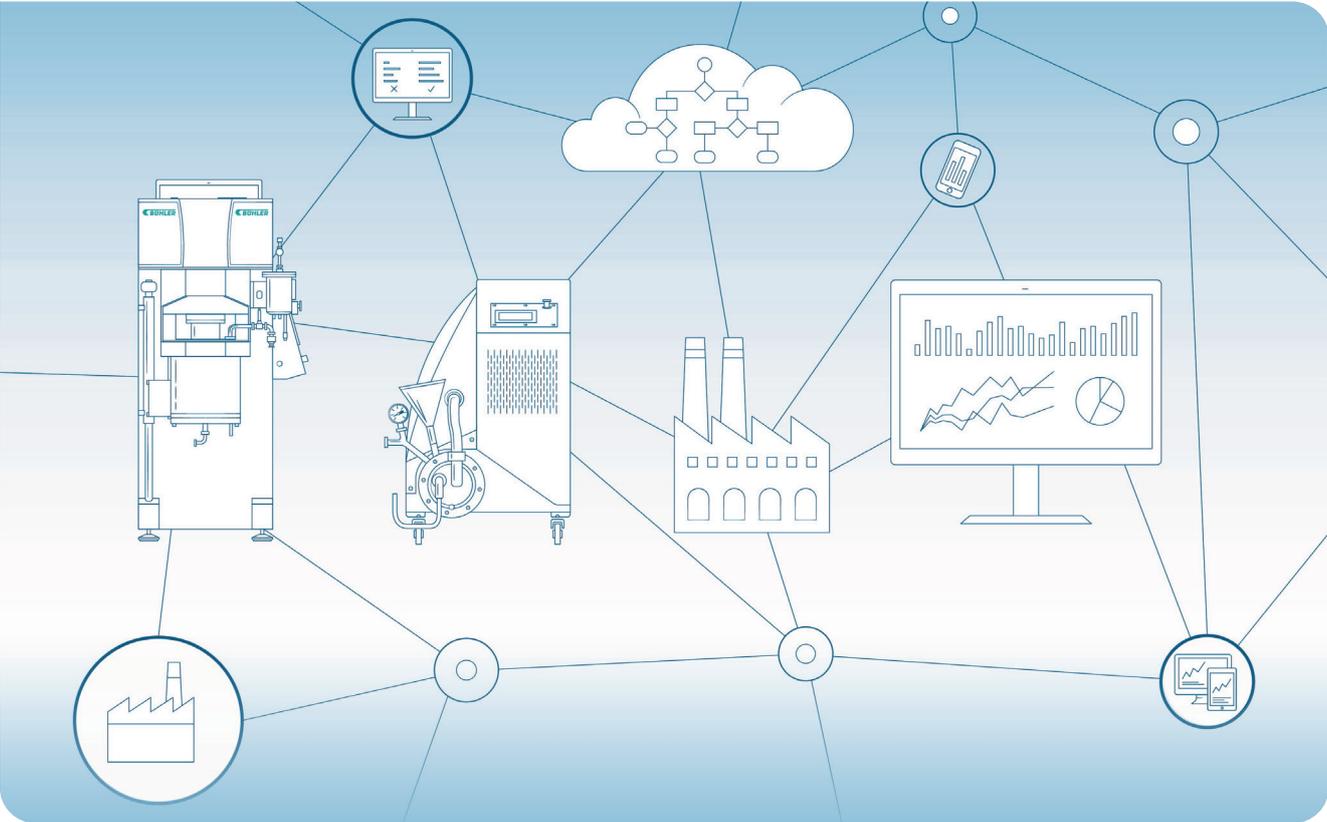
## **Remote access for easy process monitoring**

The Premium Plus solution gives remote access to the control system, which greatly improves process monitoring. Standstills are detected more quickly and can potentially be resolved without being on site. This saves costs and increases productivity. When required, Bühler Customer Service representatives can remotely access the system ensuring quick and inexpensive servicing.

# Digital Services.

## **We are your trusted partner in digitalization.**

Our vision is to enable fully connected plants that improve themselves autonomously by continuously exchanging information between machines. Your plant is fully connected and improves itself autonomously by exchanging information from machine to machine.



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