

A simple start to smarter control.

FlexView FMA90 enhances your sensors and brings every insight into clear view.

FlexView FMA90 and level sensors

Added values

Benefits at a glance

Compatible level sensors

Industry focus

Product overview

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At a glance: Control unit and level sensors

FlexView FMA90 is a versatile control unit that complements radar, ultrasonic and hydrostatic level sensors. While the sensors ensure reliable measurements, FlexView FMA90 adds value by simplifying commissioning, monitoring and control. With FlexView FMA90, you gain a reliable way to bring your level sensors into operation quickly as well as full transparency of your measurement points.

The combination is ideal for the water and wastewater as well as the mining, minerals and metals industries, enabling a simple start to smarter control.



Added values

FlexView FMA90 and the compatible level sensors provide outstanding simplicity, high flexibility and full compliance.

- Simplicity
- Flexibility
- Compliance



Easy to use

Efficient installation,
intuitive control.

Minimize complexity throughout
your measurement activities, from
installation to operation, thanks to
seamless connectivity and intuitive
setups.

Simplicity

Flexibility

Compliance



Reduced installation effort ∨



Fast commissioning ∨



Easy operation ∨

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Reduced installation effort ∨

Application-specific accessories and easy replacement of existing devices ensure easy integration in your control system via HART® and Modbus TCP. FlexView FMA90 powers connected sensors through an integrated, intrinsically safe power supply, eliminating the need for additional protective measures such as barriers.



Fast commissioning ∨



Easy operation ∨

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Reduced installation effort ∨



Fast commissioning ∨

Micropilot FMR20B, Micropilot FMR30B and Waterpilot FMX21 are automatically detected and configured via HART®. Step-by-step guided setup sequences for various applications ensure fast and easy commissioning. This allows you to quickly commission your measurement point.



Easy operation ∨

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Reduced installation effort ∨



Fast commissioning ∨



Easy operation ∨

Access the visualization of measurement
results remotely from your control cabinet
via Wi-Fi using a mobile device or desktop
computer. On site, the color touch display
of FlexView FMA90 ensures intuitive
operation, even when you are wearing
gloves.

Flexible to deploy

Versatile solution,
highly adaptable.

Optimize your performance on a
wide range of applications with a
streamlined measurement setup
with flexible sensor integration.

- Simplicity
- Flexibility
- Compliance



Multiple housing variants ▾



Flexible sensor connectivity ▾



Enhanced control ▾

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Multiple housing variants ▾

Choose from three different housing variants to suit your environment: Field housing for outdoor installation and DIN rail or panel housing for control cabinet installation. For use in hazardous areas, FlexView FMA90 is also available with an aluminum enclosure.



Flexible sensor connectivity ▾



Enhanced control ▾

Flexible to deploy

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Multiple housing variants ▾



Flexible sensor connectivity ▾

The control unit processes information from radar, ultrasonic and hydrostatic level sensors via 4–20 mA or HART® interface. It supports level measurement as well as open-channel flow measurement making it adaptable to a wide range of applications.



Enhanced control ▾

Flexible to deploy

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Multiple housing variants ▾



Flexible sensor connectivity ▾



Enhanced control ▾

Connect up to two level sensors
simultaneously – only one device is
needed to monitor two measurement
points in two different applications.
The unit is also equipped with eight
digital switching outputs for pump
control, rake control and flow pulse.

Secure to operate

Reliable protection, fully compliant.

Increase your data integrity and cybersecurity by meeting industry requirements, while optimizing your documentation to master audits successfully.

- Simplicity
- Flexibility
- Compliance



Proven cybersecurity ∨



Industry-compliant design ∨



Local and legal compliance ∨

Secure to operate

Reliable protection, fully compliant.

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- Flexibility
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Proven cybersecurity ∨

FlexView FMA90 complies with the Endress+Hauser product security framework ProtectBlue and supports secure operation in your process.



Industry-compliant design ∨



Local and legal compliance ∨

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Proven cybersecurity ∨



Industry-compliant design ∨

Designed to meet industry safety requirements, the control unit and sensors are developed in accordance with industry standards, such as international Gas-Ex and Dust-Ex approvals.



Local and legal compliance ∨

Secure to operate

Reliable protection, fully compliant.

Increase your data integrity and cybersecurity by meeting industry requirements, while optimizing your documentation to master audits successfully.

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Proven cybersecurity ∨



Industry-compliant design ∨



Local and legal compliance ∨

Integrated flow totalizers help record output volumes, providing a reliable basis for your facility's billing, legal reporting and process analysis. Data logging allows you to manage and visualize stored data for detailed analyses of specific time periods.

Benefits at a glance

FlexView FMA90 is a smart control unit to connect your level sensors. It gives you a simple start to smarter control by combining easy operation, clear insights and industry-compliant design.

High cybersecurity in line with IEC 62443 and Endress+Hauser ProtectBlue product security framework

Remote access and parameterization at hard-to-reach measurement points via Wi-Fi and an integrated web server

Flexible use with up to two level sensors across multiple measurement technologies and seamless system integration via HART or Modbus TCP

Intuitive operation thanks to the 3.5" color touch display operable with gloves

Fast commissioning with automatic sensor detection and configuration via HART and guided setup sequences



Compatible level sensors

FlexView FMA90 offers flexible compatibility with a wide range of Endress+Hauser or universal 4-20 mA or HART level sensors simplifying the control and visualization of reliable measurement results. Discover which sensors you can connect:

FlexView FMA90

Smart control unit for simple commissioning, clear visualization and reliable control of measurement points.



Micropilot FMR10B

80 GHz radar sensor for continuous non-contact level measurement in basic applications.



Micropilot FMR20B

80 GHz radar sensor with HART® communication for reliable level measurement and parameterization in various applications.



Micropilot FMR30B

80 GHz radar sensor with color touch display for on-site access, extended diagnostics and full transparency.



Waterpilot FMX11

Compact **hydrostatic level probe** for basic freshwater applications.



Waterpilot FMX21

Robust, **hydrostatic level probe** with an optionally integrated temperature sensor for freshwater, wastewater and saltwater applications, featuring HART® communication.



Industry focus

FlexView FMA90 is the perfect fit for use in the water and wastewater industry, as well as the mining, minerals and metals industry. Designed for a wide range of applications, the control unit can operate two individual applications in parallel covering different measurement principles, providing maximum flexibility.

Water & Wastewater

Mining, Minerals & Metals

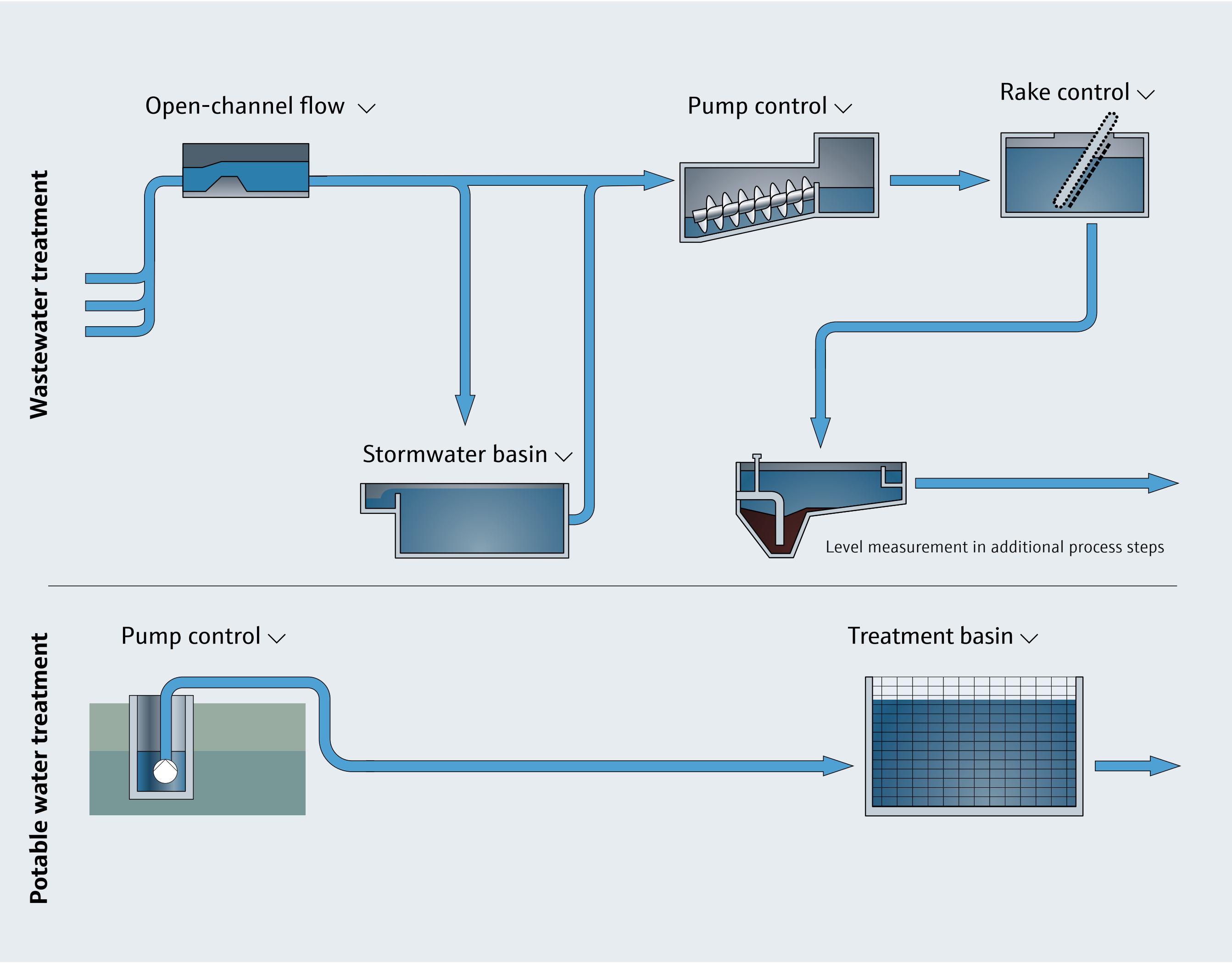


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Hover over each application to discover more details.

- Water & Wastewater
- Mining, Minerals & Metals



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Water & Wastewater

Mining, Minerals & Metals

Open-channel flow

Stormwater basin

Pump control

Rake control

Treatment basin

Your challenges

- Changing weather conditions
- Foam formation

Our solution

FlexView FMA90 and Micropilot FMR20B provide reliable performance independent of environmental influences such as sun, wind, fog or rain. Supported by optional flood and weather protection, the 80 GHz radar technology of Micropilot FMR20B ensures stable measurements even under demanding conditions with foam formation. Thanks to the integrated flow totalizers FlexView FMA90 easily records output volumes. This data serves as a basis for billing or reporting procedures. With the help of implemented linearization tables, nonlinear sensor signals are converted into linear output values.



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Mining, Minerals & Metals

Open-channel flow

Stormwater basin

Pump control

Rake control

Treatment basin

Your challenges

- Difficult installation conditions
- Conformity to legal requirements

Our solution

Legal requirements state that untreated discharged wastewater quantities must be measured and documented. FlexView FMA90 and Micropilot FMR20B provide the requested measurement data. Wi-Fi connectivity enables remote access via mobile devices or desktop computers for measurement points which are difficult to access. Thanks to its highly focused 80 GHz radar signal, Micropilot FMR20B ensures reliable level measurement even in the presence of condensate, as the signal is largely unaffected by moisture.



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Open-channel flow

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Pump control

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Treatment basin

Your challenges

- Narrow installation conditions and deep installation depths
- Condensate formation

Our solution

FlexView FMA90 enables reliable pump control combined with Micropilot FMR20B or Waterpilot FMX21. Micropilot FMR20B provides non-contact level measurement in narrow installations and reliably handles condensate, sludge and build-up. For deep wells, Waterpilot FMX21 ensures stable hydrostatic level and temperature measurement because it is unaffected by beam angle limitations or signal loss caused by narrow boreholes, even at depths of up to 200 m water column. FlexView FMA90 continuously visualizes the pump status and records operating hours, helping to optimize maintenance planning.



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Mining, Minerals & Metals

Open-channel flow

Stormwater basin

Pump control

Rake control

Treatment basin

Your challenges

- Suspended solids or sediments
- Foam formation

Our solution

FlexView FMA90 and Micropilot FMR20B help to optimize your process and control the rake. Thanks to measurement before and after the rake, Micropilot FMR20B reliably detects clogging. Depending on the degree of contamination, FlexView FMA90 can automatically initiate and control the rake cleaning process. Due to 80 GHz radar sensor Micropilot FMR20B, reliable measurement is assured even in the presence of foam.



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Water & Wastewater

Mining, Minerals & Metals

Open-channel flow

Stormwater basin

Pump control

Rake control

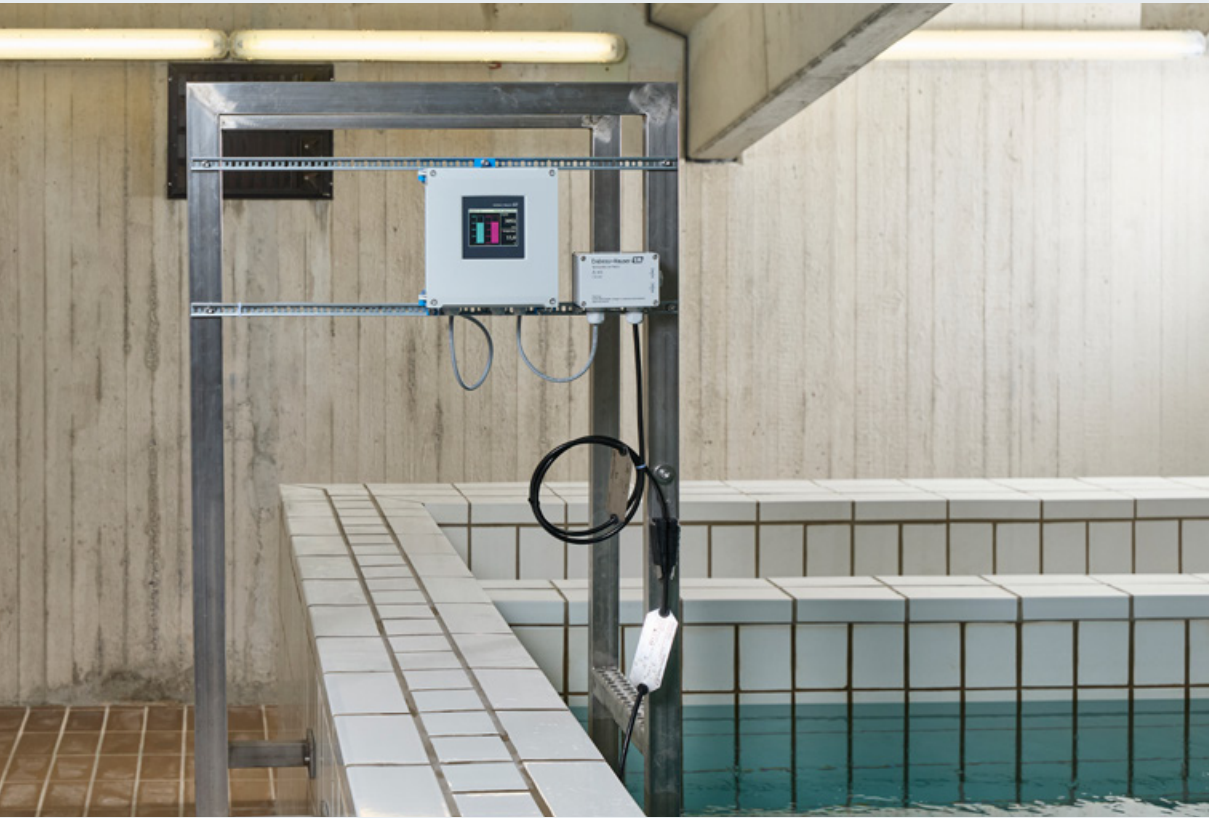
Treatment basin

Your challenges

- Risk of overflow and dry running
- Stable operation of downstream treatment processes

Our solution

FlexView FMA90, combined with Waterpilot FMX21, provides reliable level and temperature monitoring in water storage and treatment applications. Temperature-compensated density correction of Waterpilot FMX21 ensures high measurement accuracy even under changing process conditions. All measurement values are clearly visualized on the control unit's display, while switching outputs enable direct pump control.



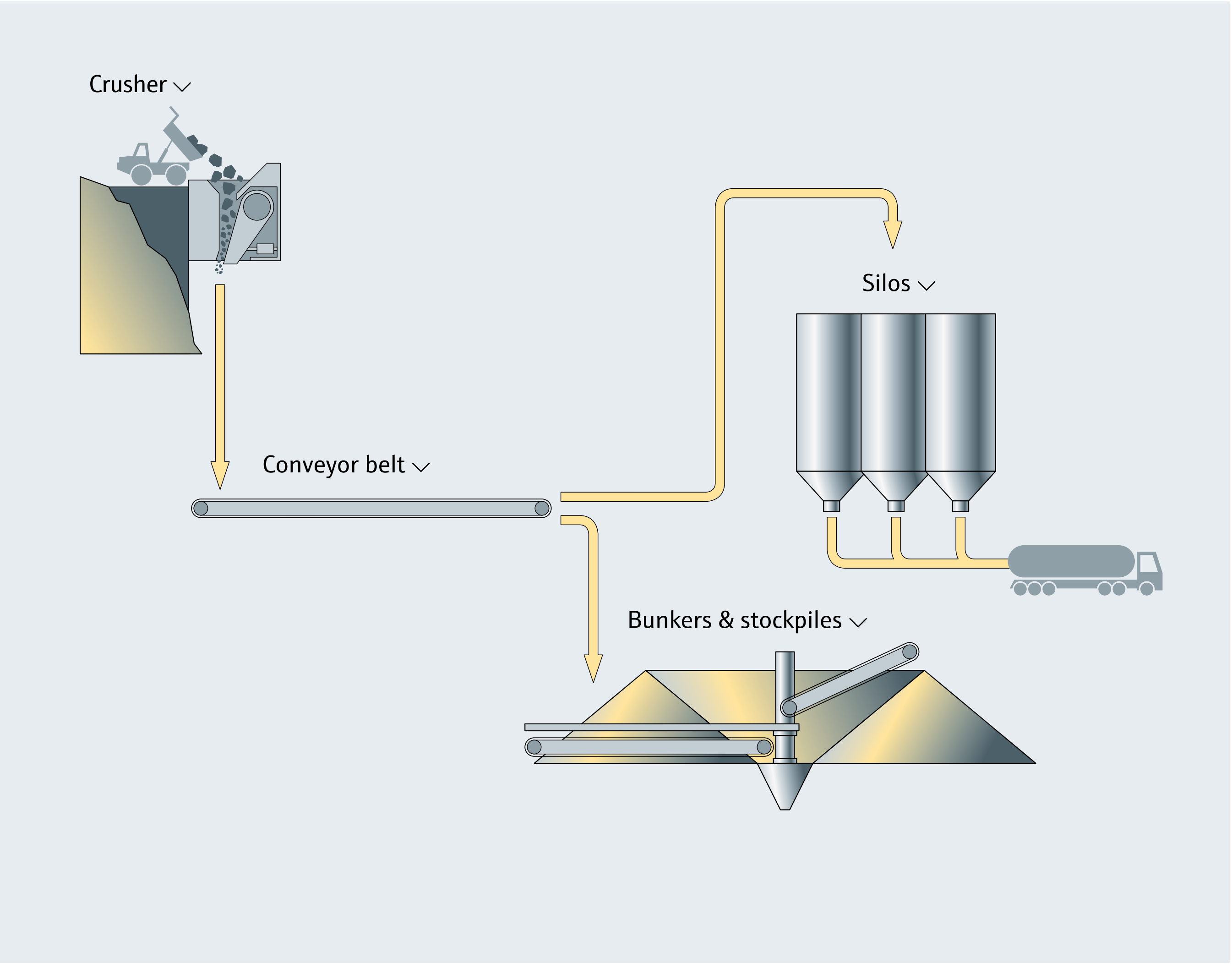
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Water & Wastewater

Mining, Minerals & Metals

Crusher

Conveyor belt

Silos

Bunkers & stockpiles

Your challenges

- Dust formation and harsh operating conditions
- Limited installation space at crusher inlets
- Risk of crusher overload

Our solution

80 GHz radar sensor Micropilot FMR20B delivers fast and reliable radar-based level measurement in crusher applications, even under strong dust and vibration. The focused beam angle enables precise measurement directly into the crusher. FlexView FMA90 uses switching outputs to trigger alarms when critical limits are reached.



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Water & Wastewater

Mining, Minerals & Metals

Crusher

Conveyor belt

Silos

Bunkers & stockpiles

Your challenges

- Changing weather conditions
- Dynamic process with fluctuating belt load
- Risk of overload

Our solution

Micropilot FMR20B provides continuous, non-contact level measurement of bulk material on conveyor belts. 80 GHz radar technology ensures reliable level measurement even in dusty or fast-moving conditions. Combined with FlexView FMA90, switching outputs can trigger alarms or control actions to support timely feed-rate reduction or conveyor belt protection.



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Mining, Minerals & Metals

Crusher

Conveyor belt

Silos

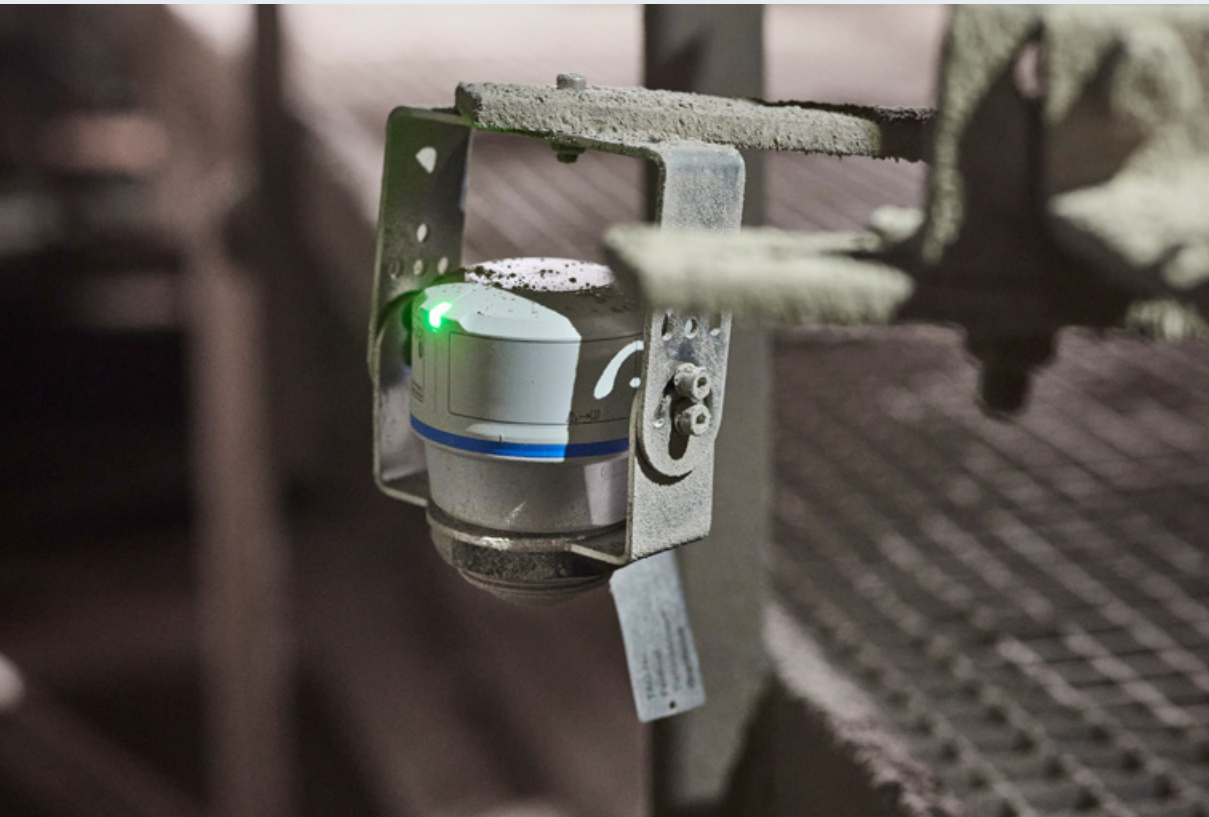
Bunkers & stockpiles

Your challenges

- Uneven surfaces and fluctuating fill levels
- Dust formation and long measuring distances
- Different bulk materials

Our solution

FlexView FMA90, combined with Micropilot FMR20B or Micropilot FMR30B, enables reliable level monitoring in silo applications. FlexView FMA90 can monitor and visualize levels of up to two silos simultaneously, including trend recording for inventory monitoring. The focused beam angle of the radar sensors ensures accurate measurement despite dust, uneven surfaces and long measuring distances of up to 30 m.



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Water & Wastewater

Mining, Minerals & Metals

Crusher

Conveyor belt

Silos

Bunkers & stockpiles

Your challenges

- Changing weather conditions
- Dust formation and long measuring distances
- Varying bulk materials and surfaces

Our solution

Micropilot FMR20B and Micropilot FMR30B provide reliable, non-contact level measurement in bunkers and stockpiles. 80 GHz radar technology ensures stable measurement even in dusty environments, with uneven material surfaces, varying bulk materials and measuring distances of up to 30 m, independent of weather conditions. FlexView FMA90 clearly visualizes measured values and trends, supporting efficient bulk material handling.



Product overview

The combination of FlexView FMA90, Micropilot FMR20B and Waterpilot FMX21 gives you a simple and flexible way to measure level in liquids and solids, with automatic sensor detection and configuration via HART® for fast and easy integration.

	FlexView FMA90	Micropilot FMR20B	Waterpilot FMX21
			
Communication	Digital communication via HART®, Modbus TCP, Ethernet or Wi-Fi	Digital communication with HART® and long-distance Bluetooth connectivity	Digital communication with HART®
Identification	Automatic sensor detection via HART®	Automatic recognition via HART® when connected to FlexView FMA90 and highly visible LED to indicate operating status from a distance	Automatic recognition via HART® when connected to FlexView FMA90
Operational integrity	Guided commissioning ensures fast setup and reliable operation	Heartbeat Technology allows on-demand verification and diagnostics	Reliable long-term measurement with robust ceramic measuring cell
Measuring range		Up to 30 m (98 ft) non-contact radar level measurement	Up to 200 m (0–20 bar / 0–300 psi), depending on version



Visit the product website



Visit the product website



Visit the product website

How-to videos

How-to videos accessible via QR code on the device display simplify setups. The short videos guide you through how to configure for common applications, integrate to existing networks and even customise data visualisations.

 [Watch the How-to videos](#)

A separate QR code links directly to the product page of FlexView FMA90 with full access to the product documentation.

 [Visit the product website](#)



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