Made in Poland. Established 1990.

Waste Water Receipt Stations FEKO+

POL-EKO
Perfect Environment

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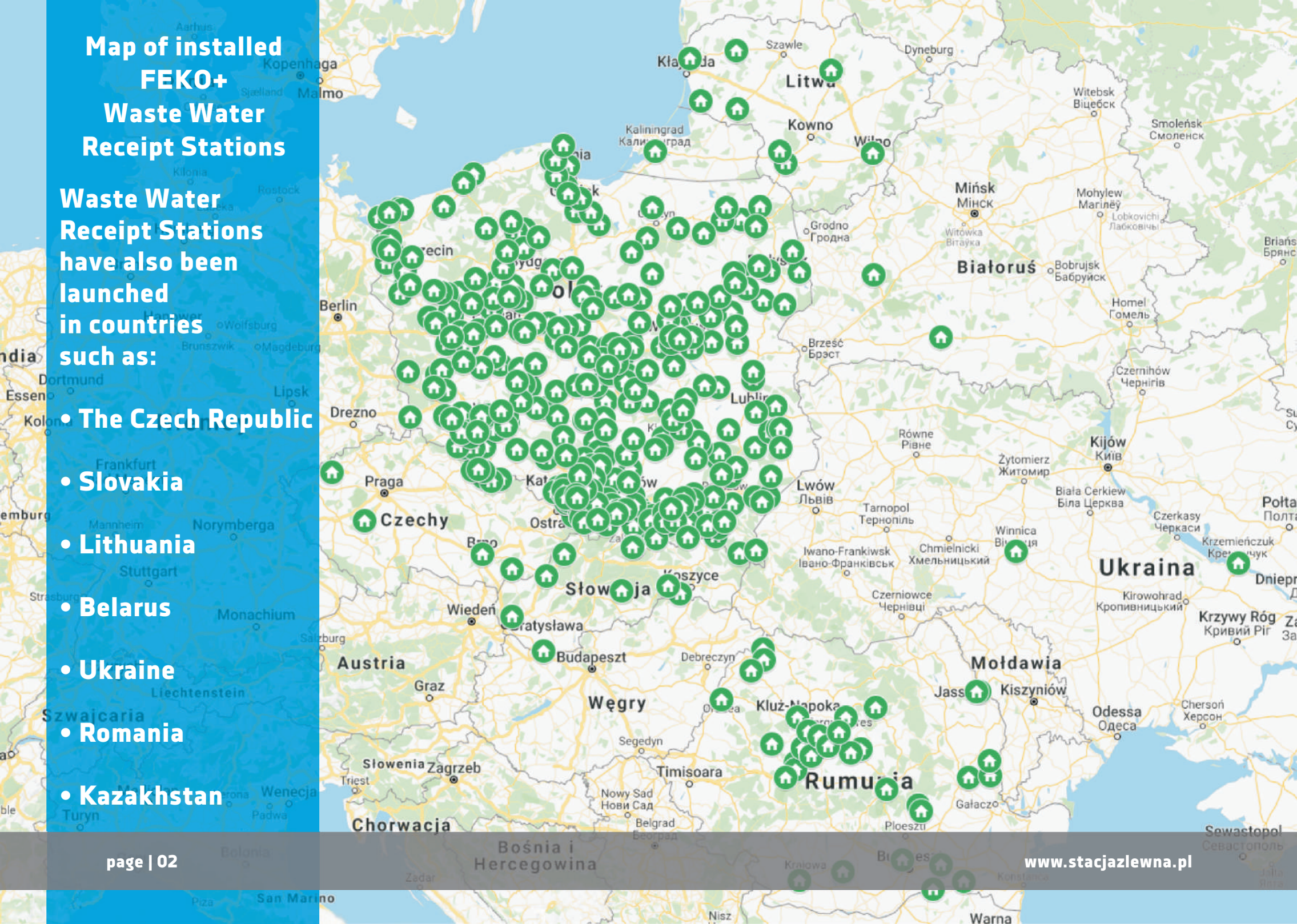
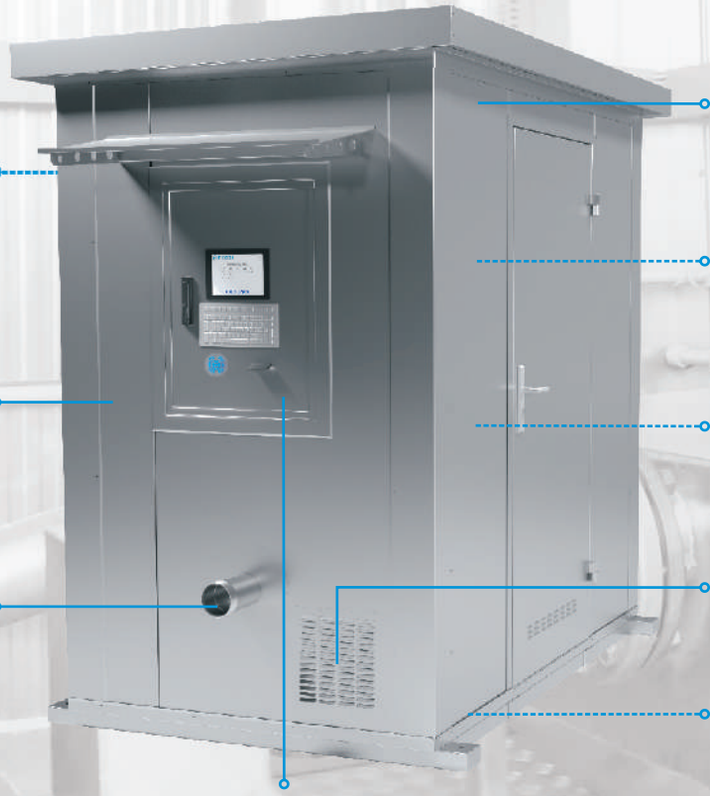
Map of installed FEKO+ Waste Water Receipt Stations

Waste Water Receipt Stations have also been launched in countries such as:

- **The Czech Republic**
- **Slovakia**
- **Lithuania**
- **Belarus**
- **Ukraine**
- **Romania**
- **Kazakhstan**



Construction of FEKO+ Stations



Communication options:
- Ethernet
- WiFi
- GPRS
- USB

Stainless steel containers:
- 600 x 1800 mm – KS INOX/XS
- 1000 x 2000 mm – KS INOX/S
- 1400 x 2400 mm – KS INOX/M
- 2400 x 3600 mm – KS INOX/L
- 2400 x 4200 mm – KS INOX/XL
- custom - KNS

Stainless steel pipeline acid-resistant, according to DIN 1.4301 thickness 2 mm (length = 3m):
- DN 100
- DN 125

External walls of the "sandwich" type with 100 mm insulation made of acid-resistant stainless steel according to DIN 1.4301 (inside and outside)

Standard measurements with MemoSens technology:
- pH and temperature
- conductivity

Additional measurements:
- Density*
- COD*
- Redox*

Mechanical ventilation adapted to the size of the container and the incorporated additional elements.

Floor made of riffled aluminium sheet or stainless steel*

External control-identifying box (made of stainless steel):
- 10" color LCD screen with a touch panel
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- USB input for data transfer and manual station programming
- Carrier identification module - contactless cards
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)
- Visualization through Modbus RTU/TCP or PROFIBUS* interface

* additional option



Waste Water Receipt Stations FEKO+

Wastewater Receipt Stations FEKO+, are devices designed to identify wastewater providers, to measure the quantity of delivered wastewater, to assess its quality and control these parameters.

These stations also prevent the exceeding of established measurement values in accordance with accepted standards.

FEKO+ stations meet the requirements outlined in the Regulation of the Minister of Infrastructure dated August 4th, 2023 (Journal of Laws of 2023, item 1469).

FEKO+ /XS



FEKO+ /XS Waste Water Receipt Station

- Container with dimensions of 800 x 1800 mm and a height of 900 mm, top-opening

Additional Options (descriptions on page 12)

- Additional physicochemical measurements
- CCTV monitoring
- Stone catcher (external)
- Stationary sampler (external)
- Odor neutralization system
- Gate control

The FEKO+ /XS container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*

The external control-identifying box, made of stainless steel, is equipped with:
- 10'' color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)

Other equipment in the FEKO+ /XS station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose

Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Redox

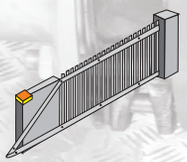
Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application











* additional option

FEKO+ /S

The FEKO+ /S container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*

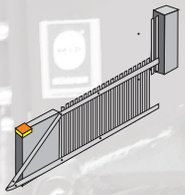
The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)











Other equipment in the FEKO+ /S station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose

Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox

Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



FEKO+ /S Waste Water Receipt Station

- Container with dimensions of 1000 x 2000 mm and a height of 2300 mm

Additional Options (descriptions on page 12)

- Additional physicochemical measurements
- CCTV monitoring
- Stone catcher (external)
- Stationary sampler (external)
- Odor neutralization system
- Gate control

* additional option

FEKO+ /M



FEKO+ /M Waste Water Receipt Station

- Container with dimensions of 1400 x 2400 mm and a height of 2300 mm

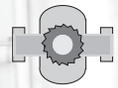
Additional Options (descriptions on page 12)

- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Stone catcher (external)
- Stationary sampler (internal/external)
- Odor neutralization system
- Gate control

The FEKO+ /M container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*

The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)







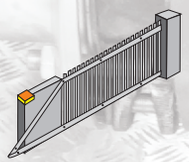
Other equipment in the FEKO+ /M station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose





Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



* additional option

FEKO+ /ML

two-stand waste water receipt station

The FEKO+ /ML container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*

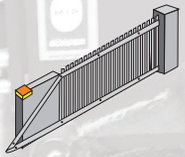












The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)

Other equipment in the FEKO+ /ML station includes:
- Two stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose

Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



FEKO+ /ML Waste Water Receipt Station
- **Container with dimensions of 2400 x 2400 mm and a height of 2600 mm**

Additional Options (descriptions on page 12)
- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Stone catcher
- Stationary sampler
- Odor neutralization system
- Gate control

* additional option

FEKO+ /L



FEKO+ /L Waste Water Receipt Station

- **Container with dimensions of 2400 x 3600 mm and a height of 2600 mm**

Additional Options (descriptions on page 12)

- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Rotary pump
- Stone catcher
- Sieve with screenings press
- Stationary sampler
- Odor neutralization system
- Gate control

The FEKO+ /L container features:

- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*



The external control-identifying box, made of stainless steel, is equipped with:

- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)





Other equipment in the FEKO+ /L station includes:

- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose



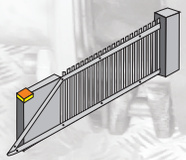


Available physicochemical measurements*:

- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

Software:

- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



* additional option

FEKO+ /XL



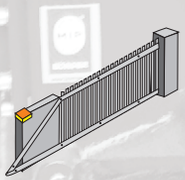












The FEKO+ /XL container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*

The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)

Other equipment in the FEKO+ /XL station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose

Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



FEKO+ /XL Waste Water Receipt Station
- **Container with dimensions of 4200 x 2400 mm and a height of 2600 mm**

Additional Options (descriptions on page 12)
- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Rotary pump
- Stone catcher
- Sieve with screenings press
- Stationary sampler
- Odor neutralization system
- Gate control

* additional option

FEKO+ /XXL



FEKO+ /XXL Waste Water Receipt Station

- Container with dimensions of 3400 x 6400 mm and a height of 2600 mm

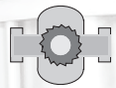
Additional Options (descriptions on page 12)

- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Rotary pump
- Stone catcher
- Sieve with screenings press / sand separator with sieve
- Stationary sampler
- Odor neutralization system
- Gate control

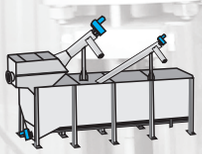
The FEKO+ /XXL container features:
- Electric heating system with a radiator
- Mechanical ventilation
- "Sandwich" type walls, both sides covered with acid-resistant stainless steel sheet according to DIN 1.4301
- Floor made of riffled aluminum sheet or stainless steel*



The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)







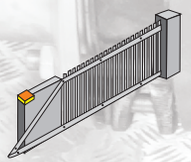
Other equipment in the FEKO+ /XXL station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose





Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

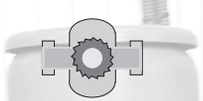
Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



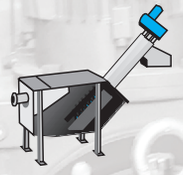
* additional option

FEKO+ inside a building



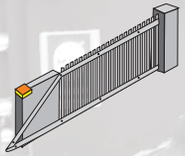










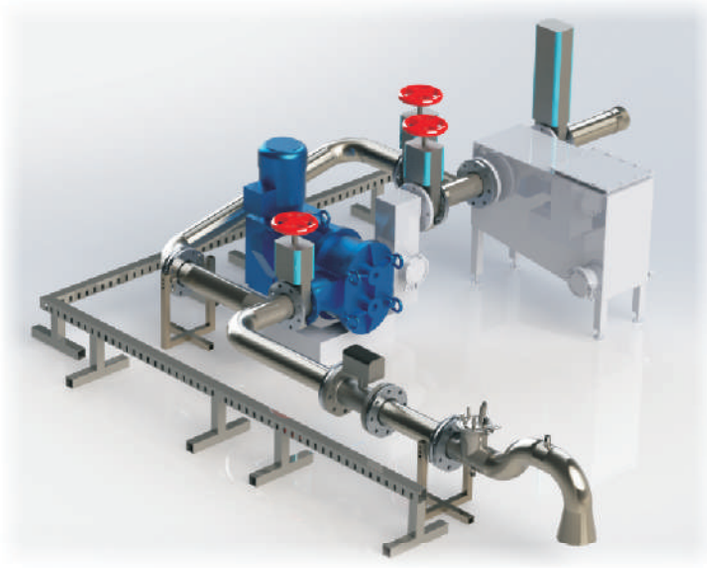


The external control-identifying box, made of stainless steel, is equipped with:
- 10" color touchscreen LCD
- Control system with data archiving and database creation capability
- Software based on Windows Embedded
- Internal memory (location, property address)
- Ethernet or Wi-Fi* communication module
- USB input for data transfer and manual station programming
- MODBUS RTU/TCP or Profibus* communication protocol
- Carrier identification module - RFiD key fobs
- Wastewater type identification module
- Modular printer with paper cutter
- Industrial keyboard (made of stainless steel)

Other equipment in the FEKO+ station includes:
- Stainless steel acid-resistant pipeline according to DIN 1.4301, with a thickness of 2 or 3 mm and a diameter of DN100 or DN125
- Oil compressor
- Automatic flushing system
- Electromagnetic flow meter with empty pipe detection
- Measuring vessel with protective strainer
- Pneumatic knife gate valve
- 3.5 m long drain hose
- Stainless steel hanger for the drain hose

Available physicochemical measurements*:
- pH and temperature
- Conductivity
- Sludge concentration
- Redox
- COD

Software:
- FEKO+ application
- FEKO+ SERVER application
- FEKO+ VIEWER* application



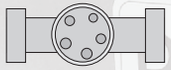
FEKO+ /BUD Waste Water Receipt Station

The pipeline of the waste water receipt station, along with metering, and additional options, can be installed inside a building adapted for this purpose.

Additional Options (descriptions on page 12)
- Additional physicochemical measurements
- CCTV monitoring
- Macerator milling cutter
- Rotary pump
- Stone catcher
- Sieve with screenings press / sand separator with sieve
- Stationary sampler
- Odor neutralization system
- Gate control

* additional option

additional options for FEKO+ stations



Physicochemical measurements

The most commonly used physicochemical measurements are pH (acidity), temperature, and conductivity, which are fundamental parameters indicating the quality of the received wastewater. Additionally, proposed measurements in waste water receipt stations include redox potential, sludge concentration, and online COD measurement. Due to the need for special measuring vessels, not all station models can measure these values.



Macerator - milling cutter

Macerator - milling shredder is recommended for installation in waste water receipt stations mounted on sewage networks and on facilities where delivered sewage will be pumped for further treatment process. The shredder protects the drain line and pumps from damage caused by solids and fibrous substances. The device is equipped with a reverse function, and a sedimentation tank is mounted at the inlet, in which hard solids (stones, screws) accumulate. It is possible to connect with the rotary pump.



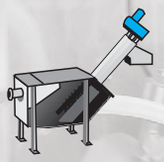
Stone catcher

The stone catcher is designed to capture large and small impurities flowing into the waste water receipt station. The catcher is installed at the inlet of the station's drain line as an external module (additionally protected against freezing). The stone catcher protects the line against clogging caused by solids. The unit stops stones, concrete debris, metal elements, bottles, cans, etc.



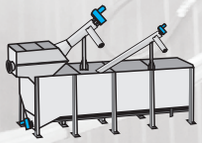
Stationary sampler

The stationary samper PP2002+ enables automatic sampling directly during the discharge of sewage. The operator of the waste water receipt station via the FEKO+ software defines the conditions when the sample is to be taken, e.g. after exceeding the measurement values, for defined clients and/or contractors, as well as randomly or manually (on-line).



Sieve with screenings press

The sieve with the screenings press ensures initial mechanical pre-treatment of the incoming sewage, retains solids (screenings) larger than 2 mm. Screenings are pre-rinsed and pressed, and then transported outside to containers or bags (e.g. Longopac system bagging machine - allows to reduce odors emanating from screenings).



Sand separator with sieve

Sand separator with is a block unit for mechanical wastewater treatment, which allows the retention of solid particles larger than 2 mm, which guarantees trouble-free operation of further technological elements of the treatment plant and catches mineral impurities such as sand or fine gravel in the sand trap through the sedimentation process. The unit is hermetic.



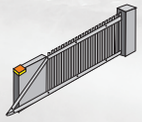
Odor neutralization system

The odor neutralization system is recommended especially when the wastewater receipt station is installed on the sewage system. The system consists of a tank for the preparation for neutralizing odors, fittings and a dosing pump integrated with the control system of the FEKO+ waste water receipt station.



Monitoring

Monitoring of the waste water receipt station using industrial cameras and data transmission via Ethernet or WiFi.



Gate control

The gate opening can be controlled remotely (in conjunction with monitoring) or through a panel with a FEKO+ transponder key reader.

POL-EKO
Perfect Environment

comparison of FEKO+ stations



OPTION / MODEL	FEKO+ /XS	FEKO+ /S	FEKO+ /M	FEKO+ /ML	FEKO+ /L	FEKO+ /XL	FEKO+ /XXL	FEKO+ in a building
pH and temperature measurement	✓	✓	✓	✓	✓	✓	✓	✓
Redox and temperature measurement	✓	✓	✓	✓	✓	✓	✓	✓
Conductivity measurement	✓	✓	✓	✓	✓	✓	✓	✓
Sludge concentration measurement	✗	✓	✓	✓	✓	✓	✓	✓
COD on-line measurement	✗	✗	✓	✓	✓	✓	✓	✓
External stone catcher	✓	✓	✓	✓	✓	✓	✓	✓
Internal stone catcher	✗	✗	✓	✓	✓	✓	✓	✓
Stationary sampler outdoor	✓	✓	✓	✓	✓	✓	✓	✓
Stationary sampler mounted inside	✗	✗	✓	✓	✓	✓	✓	✓
Macerator milling cutter	✗	✗	✓	✓	✓	✓	✓	✓
Rotary pump	✗	✗	✓	✓	✓	✓	✓	✓
Macerator in a set with a rotary pump	✗	✗	✗	✗	✓	✓	✓	✓
Sieve with screenings press	✗	✗	✗	✗	✓	✓	✓	✓
Sand separator with sieve	✗	✗	✗	✗	✗	✗	✓	✓
Odor neutralization system	✓	✓	✓	✓	✓	✓	✓	✓
CCTV monitoring	✓	✓	✓	✓	✓	✓	✓	✓
Gate control	✓	✓	✓	✓	✓	✓	✓	✓
DN 125 pipeline	✓	✓	✓	✓	✓	✓	✓	✓
FEKO Viewer application	✓	✓	✓	✓	✓	✓	✓	✓
Wi-Fi communication module	✓	✓	✓	✓	✓	✓	✓	✓
INOX container	✓	✓	✓	✓	✓	✓	✓	✗
Multi station construction	✗	✗	✗	✓	✓	✓	✓	✓



The operating principle of the FEKO+ /TO station

FEKO+ /TO is a version of the station designed to collect domestic and industrial wastewater, **sludge from domestic wastewater treatment plants** and grease from septic tank vehicles. The unit identifies carriers, wastewater suppliers, and also measures and controls the parameters (pH, temperature, conductivity, density) and quantity of the delivered wastewater. It is possible to block the admission of wastewater in which the measuring transducers have detected exceedances (e.g. pH or conductivity) assumed in the FEKO+ programe dedicated to the septic tank station. The station is a fully automated facility, requiring no permanent maintenance by the Operator; it is operated by software for data reading, programming and archiving, based on the Windows Embedded operating system. Only periodic maintenance is required.

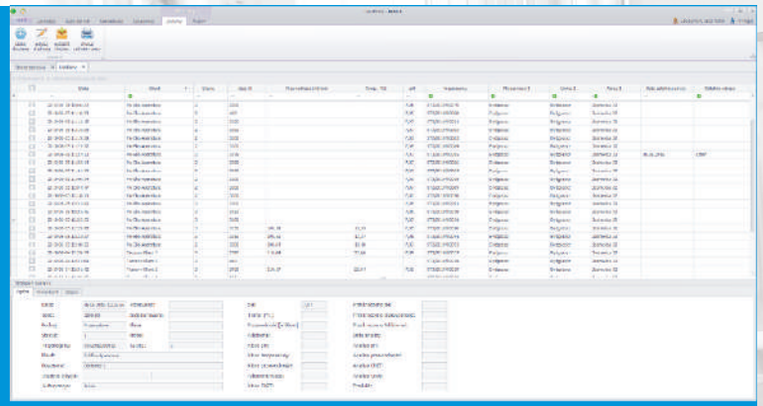
The following components may be included in the scope of supply of the station:

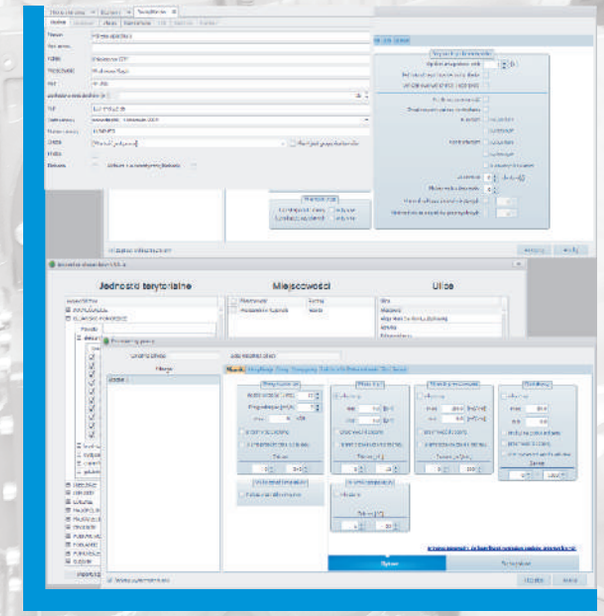
- waste water receipt station (control system with carrier identification module, flow meter, pipeline, measuring vessel, identifiers, pneumatic knife gate valve, compressor, flushing system with 60°C water, DN 125 manual valves, grit container, reinforced connecting hose 3m)
- pollution measurement kit based on the MemoSens system (pH, conductivity)
- sludge density measurement kit
- flow-through water heating unit for flushing (optional)
- stone catcher made of stainless steel integrated with a grinder
- two-shaft macerator (grinder)
- drum grate or drum sieve
- sampling device using a peristaltic pump method (stainless steel housing with data recording on an SD card)
- entire system is enclosed within a container or a purpose-built building.

FEKO+ application

FEKO+ office application

The FEKO+ program is an integral part of the FEKO+ station, enabling remote control of the FEKO+ station, report generation based on data transmitted from the FEKO+ station, station parameterization and many other functions essential for device management.





The application enables:

- Report generation
- Remote software updates
- Creation of a property database with septic tanks, including the ability to group them by neighborhoods or towns
- Carrier inspection schedule
- Statistical data analysis with automatic generation of discrepancy reports, e.g., properties from which a lesser/greater amount of wastewater/sludge was delivered than planned
- Station operating parameter adjustments
- Data export to file formats such as *.pdf, *.xls, *.doc, *.html.



FEKO+ Viewer application

FEKO+ Viewer application is additional software that allows real-time monitoring of the state of FEKO+ waste water receipt stations.

Users can view a list of stations, the current wastewater provider, data on the current discharge, including volume, valve, macerator status, and current measurement values (pH, temperature, conductivity), as well as station data (temperature, paper status in the printer, the number of available sample bottles, data from the previous delivery, station name, and a list of alarms).



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Catalogue "Waste Water Receipt Stations FEKO+" version 3.1/2025.

While we make every effort to provide accurate technical data, inconsistencies may occur.
We reserve the right to change technical specifications without notice.
All dimensions are given exact to ±5 %.

FEKO+/PL/09/2023