

 Made in Poland. Established 1990.

MSX water and wastewater sampling and monitoring station

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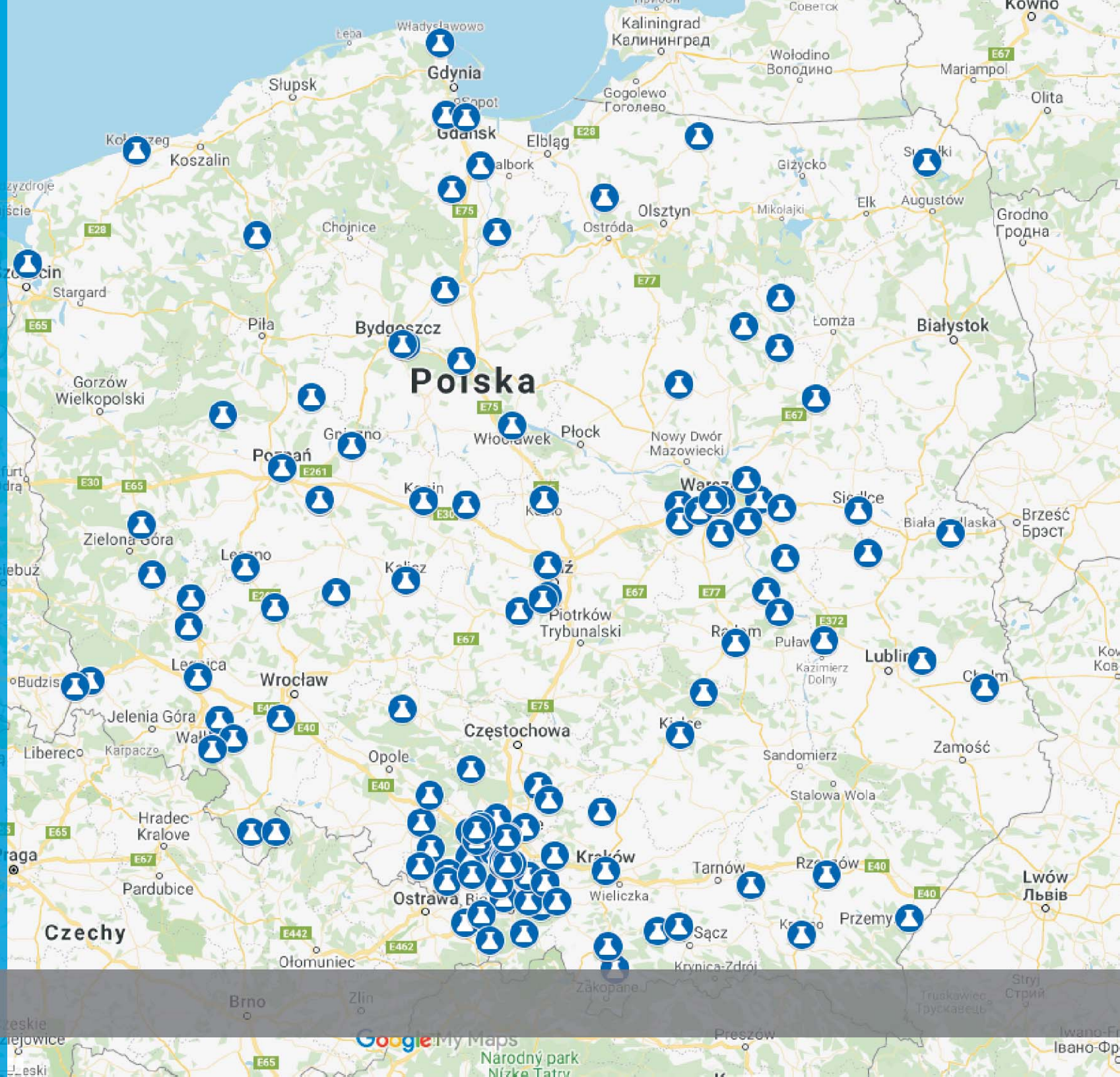


**Implementation
map of
sampling
units
PP 2002+
and monitoring
stations
MSX.**

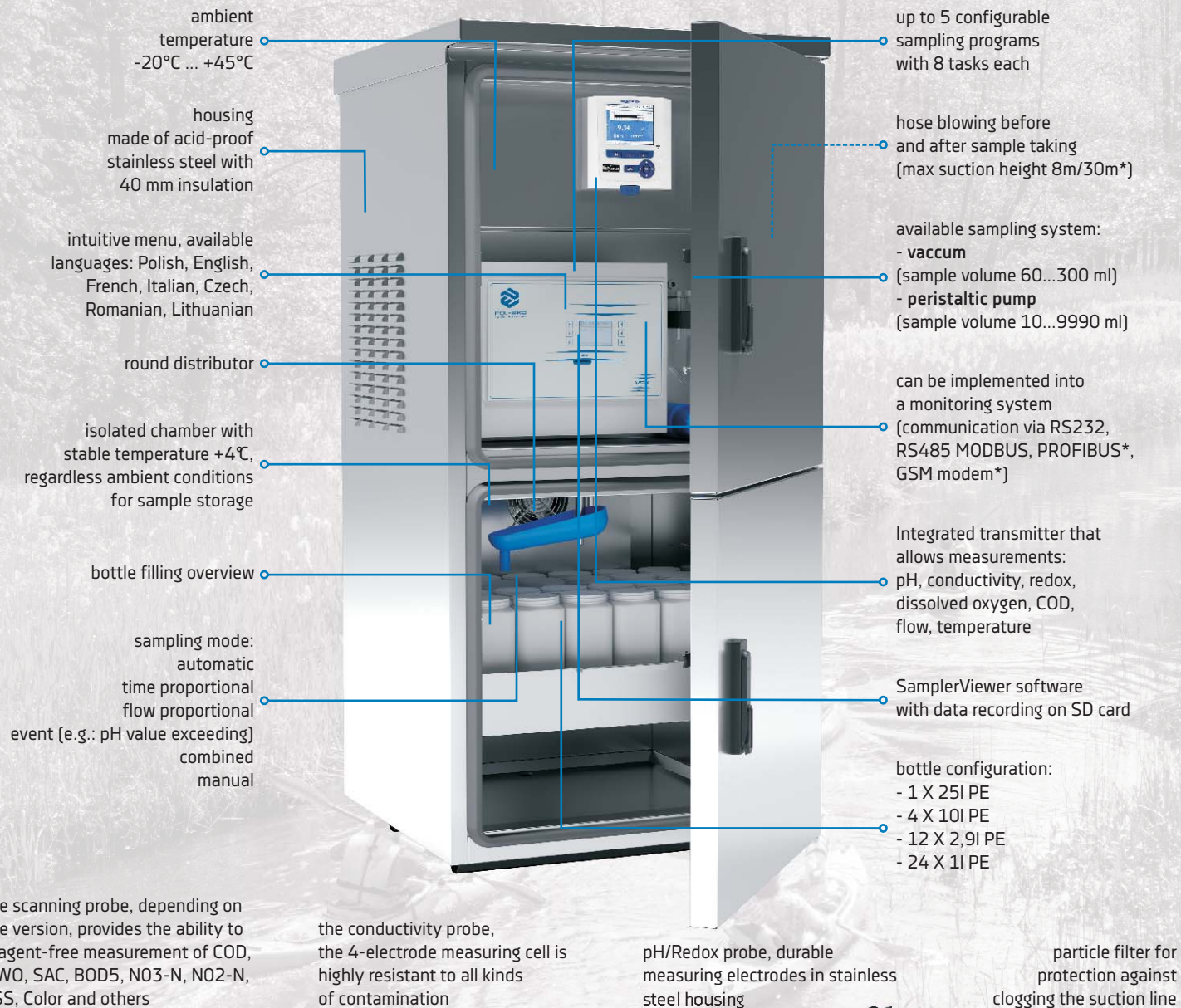


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Construction of MSX station



Representative sample taking according to PN-ISO 5667 directive.

The MSX automatic water and wastewater sampling and monitoring station is integrated with measuring device which can measure parameters such as pH level, electrical conductivity, dissolved oxygen, redox potential, COD (Chemical Oxygen Demand), and temperature. The MSX station also enables remote monitoring of physicochemical parameters of water and wastewater in real-time, from any web browser.



Monitoring station MSX

The MSX monitoring and sampling station is integrated with DIQ series transmitters for continuous monitoring of parameters such as pH, redox potential, electrical conductivity, dissolved oxygen, temperature, COD, OWO, SAC, BZ5T, NO3-N, NO2-N, TSS, Color and others.

The device can also be equipped with a GSM telemetry modem, allowing the user to have remote control and real-time visualization of parameters through a web browser. Access to parameter monitoring is possible via a computer or smartphone. There is also the option to receive notifications via SMS and email regarding exceeded permissible wastewater parameters and alarms.

This option also allows for monitoring the bottle filling status. By combining the sampling device with measuring instruments, full control over physicochemical parameters is possible. In the event of any parameter exceedances being detected, a sample is taken, which can undergo detailed chemical analysis.

Applications:

- ▶ Monitoring of wastewater treatment processes
- ▶ Control of wastewater treatment effectiveness
- ▶ Wastewater network monitoring
- ▶ Monitoring and control of water intake and water supply installations
- ▶ Monitoring and control of surface water (rivers, lakes)

Stacja MSX

Parameter	Type	MSX
Sampling system		peristaltic pump / vacuum system
Sample storing		stable temperature +4°C regardless of ambient conditions
Menu language		EN, FR, PL, CZ, RO, LT, IT
Medium		liquids of conductivity min 20 µS/cm and max temp. 60°C
Hose blowing		before and after sample taking
Sampling mode		automatic time proportional, flow proportional, event or manual
Sampling height [m]		max 8
Sample volume [ml]		regulated 60...300 or 10...9990
Hose length [m]		8 standard
Hose diameter [mm]		12/13
Distributor		round
Number of bottles x capacity [l]		24 x 1
Overall dims [mm]	Width	630
	Height	1325
	Depth	660
Weight [kg]		100
Housing		acid-proof stainless steel with 40 mm insulation
Ambient temperature [°C]		-20...+45
Nominal power [W]		550
Controller		microprocessor, graphic display with contrast control, bottle filling overview
Programming		5 programs, 8 tasks each
Data logging		SD card + Sampler Viewer software
Input signals		8 analogue, 4 binary
Output signals		4 binary
Communication		RS 232 or RS 485
Operating conditions		indoor or outdoor installation
Voltage		230 V 50 Hz
Warranty		24 months
Manufacturer		POL-EKO



MSX water and wastewater sampling and monitoring station

- equipped with a vacuum-pressure pump or peristaltic pump

Additional options:

- online monitoring software
- external flowmeter connection
- connection of measurement transmitters (pH, conductivity, redox, dissolved oxygen, COD, etc.)

WTW Measurements



DIQ 282/284 transmitters

All parameters visible on the screen pH, COD, conductivity, suspended solids and more, up to 20 parameters available simultaneously. Intuitive software and large graphical display provide a complete view of the measurement system.

WTW measurement probes

- electrochemical
- optical

Measuring transmitters 282 (2-channel) and 284 (4-channel)	
Parameters	pH/ORP, O ₂ , conductivity, turbidity, sludge density, NH ₄ ⁺ , NO ₂ ⁻ , NO ₃ ⁻ , NO _x , PO ₄ , COD, BOD, O ₂ , DOC, SAC, UVT, sludge level
Interfaces	USB data logger (standard); as an option: PROFIBUS (RS 485) or MOOBUS (RS 485) or Ethernet/IP, MOOBUS TCP, PRO FIN ET (RJ45) or RJ45 for remote connections
Total length of wiring	250m

pH/Redox probe: Sensolyt

pH /ORP mixer with integrated preamplifier.

Reliable measurement values due to integrated temperature sensor

Measurement pH / Redox : Sensolyt® 700 IQ (SW)	
Measurement method	Electrochemical
Measurement range	SEA 2 ... 12 pH
	SEA-HP 4 ... 12 pH
	DWA 0 ... 14 pH
	ECA 2 ... 12 pH
	PtA ± 2000 mV
Operating temperature	0 ... 60°C
Temperature measurement	Integrated NTC, -5 ... +60°C

Conductivity probe: TetraCon

Proven measurement technology guarantees operation without any interference.

The 4-electrode measuring cell is highly resistant to all kinds of contamination.

Measurement of conductivity and salinity: TetraCon® 700 IQ (SW)	
Measurement method	Elektrochemical
Measurement range	Conductivity 10 µS/cm ... 500 mS/cm
	Salinity 0 ... 70
Response time	in 25°C t ₉₀ : 180 s
Operating temperature	0 ... 60°C
Temperature measurement	Integrated NTC, -5 ... +60°C

WTW optical probes

	Spectral measurement in the UV-VIS range (200 - 720 nm) /in the UV range (200 - 390 nm)						
	CarboVis 701 IQ	CarboVis 705 IQ	NitraVis 701 IQ NI	NitraVis 705 IQ NI	NiCaVis 705 IQ	NiCaVis 701 IQ NI	NiCaVis 705 IQ NI
Measurement range	ChZT [mg/l]: 0 ... 20 000 OWO [mg/l]: 0 ... 20 000 SAK [m-1]: 0 ... 5 000 DOC [mg/l]: 0 ... 12 500 BZT [mg/l]: 0 ... 8 000 UVT [%]: 0,0 ... 100,0	ChZT [mg/l]: 0,0 ... 800,0 OWO [mg/l]: 0,0 ... 500,0 SAK [m-1]: 0,0 ... 600,0 DOC [mg/l]: 0,0 ... 500,0 BZT [mg/l]: 0,0 ... 500,0 UVT [%]: 0,0 ... 100,0	NO₃-N [mg/l]: 0,0 ... 150,0 NO₂-N [mg/l]: 0,00 ... 75,00	NO₃-N [mg/l]: 0,00 ... 50,00 NO₂-N [mg/l]: 0,00 ... 25,00	NO₃-N [mg/l]: 0,00 ... 50,00 ChZT [mg/l]: 0,0 ... 800,0 OWO [mg/l]: 0,0 ... 500,0 SAK [m-1]: 0,0 ... 600,0 DOC [mg/l]: 0,0 ... 500,0 BZT [mg/l]: 0,0 ... 500,0 UVT [%]: 0,0 ... 100,0	NO₃-N [mg/l]: 0,0 ... 150,0 NO₂-N [mg/l]: 0,00 ... 75,00 ChZT [mg/l]: 0 ... 20 000 OWO [mg/l]: 0 ... 20 000 SAK [m-1]: 0 ... 600,0 DOC [mg/l]: 0 ... 12 500 BZT [mg/l]: 0 ... 8 000 UVT [%]: 0,0 ... 100,0	NO₃-N [mg/l]: 0,0 ... 150,0 NO₂-N [mg/l]: 0,00 ... 75,00 ChZT [mg/l]: 0 ... 20 000 OWO [mg/l]: 0 ... 20 000 SAK [m-1]: 0 ... 5 000 DOC [mg/l]: 0 ... 12 500 BZT [mg/l]: 0 ... 8 000 UVT [%]: 0,0 ... 100,0
Measuring range of suspended substances [optional]]	intake: TSS [g/l] 0,00 ... 15,00 outflow: TSS [mg/l] 0 ... 4 500	TSS [mg/l] 0,0 ... 900,0	-	-	-	-	-
Materials	Case: Titanium 3. 7035, PEEK Measuring windows: Sapphire glass						
Conditions	Sample temperature: 0 ... +45 °C						
Flow speed	• 3 m/s						
The pH range	4 ... 12 pH						
Dimensions/Weight	802 x 59.9 mm length x diameter / 7,8 kg						



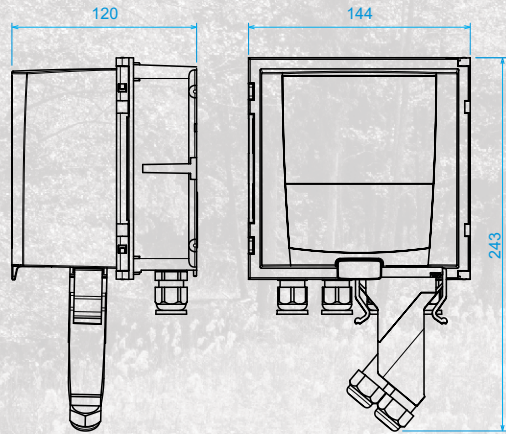
Optical probes

WTW optical probes enable continuous measurement of parameters related to organic carbon and nitrogen directly in the test medium.

To ensure simultaneous measurement (multi-parameter), the probe analyzes the entire spectral spectrum of the sample.

WTW Measurements

MSX Station



transmitter DIQ 282/284



ChZT CarboVis® 700 probe



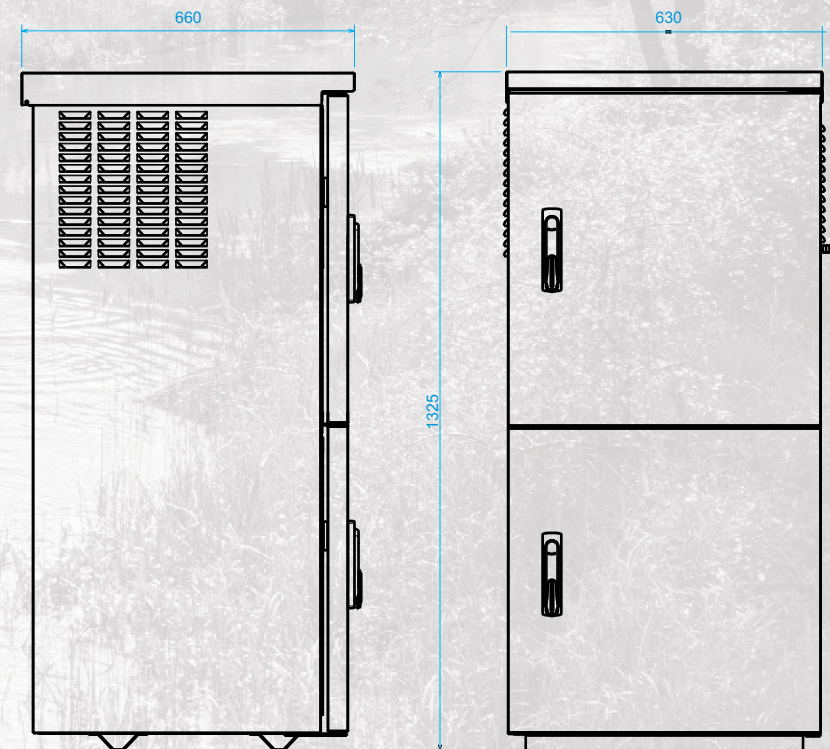
pH/Redox SensoLyt® 700 probe



TetraCon® 700 conductivity probe

Applications:

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- ▶ Monitoring and control of surface water (rivers, lakes)



On-line monitoring

It is also possible to receive notifications via SMS and email regarding exceeded permissible wastewater parameters and alarms. This option also allows for monitoring the bottle filling status. By combining the sampling device with measuring instruments, full control over physicochemical parameters is possible. In the event of any parameter exceedances being detected, a sample is taken, which can undergo detailed chemical analysis.

Stan	Paczka	Powierzchnie	Powierzchnię	Informacja o zdarzeniu
Alarm	2023-03-11 06:11:05			Sample - Mielna pom. K25. Niesie pH (5.99 < 7.00 (próg alarmowy)
Alarm	2023-03-23 19:55:42			Sample - Mielna pom. K25. Wysokie pH (8.00 > 8.10 (próg alarmowy)



By using the chart zooming option, we obtain tools for a more detailed analysis of physicochemical parameters.

The application allows for the creation of **daily and monthly reports.**

Stacja poboru próbek - atenuacja pomiarowa K25
Raport dla okresu za okres: 2023-03-01

Data	pH			Przewodność			Temperatura wody		
	min	max	śred	min	max	śred	min	max	śred
2023-03-01	7.50	8.50	8.00	1500	2500	2000	15.00	18.00	16.50
2023-03-02	7.60	8.60	8.10	1600	2600	2100	16.00	19.00	17.50
2023-03-03	7.70	8.70	8.20	1700	2700	2200	17.00	20.00	18.50
2023-03-04	7.80	8.80	8.30	1800	2800	2300	18.00	21.00	19.50
2023-03-05	7.90	8.90	8.40	1900	2900	2400	19.00	22.00	20.50
2023-03-06	8.00	9.00	8.50	2000	3000	2500	20.00	23.00	21.50
2023-03-07	8.10	9.10	8.60	2100	3100	2600	21.00	24.00	22.50
2023-03-08	8.20	9.20	8.70	2200	3200	2700	22.00	25.00	23.50
2023-03-09	8.30	9.30	8.80	2300	3300	2800	23.00	26.00	24.50
2023-03-10	8.40	9.40	8.90	2400	3400	2900	24.00	27.00	25.50
2023-03-11	8.50	9.50	9.00	2500	3500	3000	25.00	28.00	26.50
2023-03-12	8.60	9.60	9.10	2600	3600	3100	26.00	29.00	27.50
2023-03-13	8.70	9.70	9.20	2700	3700	3200	27.00	30.00	28.50
2023-03-14	8.80	9.80	9.30	2800	3800	3300	28.00	31.00	29.50
2023-03-15	8.90	9.90	9.40	2900	3900	3400	29.00	32.00	30.50
2023-03-16	9.00	10.00	9.50	3000	4000	3500	30.00	33.00	31.50
2023-03-17	9.10	10.10	9.60	3100	4100	3600	31.00	34.00	32.50
2023-03-18	9.20	10.20	9.70	3200	4200	3700	32.00	35.00	33.50
2023-03-19	9.30	10.30	9.80	3300	4300	3800	33.00	36.00	34.50
2023-03-20	9.40	10.40	9.90	3400	4400	3900	34.00	37.00	35.50
2023-03-21	9.50	10.50	10.00	3500	4500	4000	35.00	38.00	36.50
2023-03-22	9.60	10.60	10.10	3600	4600	4100	36.00	39.00	37.50
2023-03-23	9.70	10.70	10.20	3700	4700	4200	37.00	40.00	38.50
2023-03-24	9.80	10.80	10.30	3800	4800	4300	38.00	41.00	39.50
2023-03-25	9.90	10.90	10.40	3900	4900	4400	39.00	42.00	40.50
2023-03-26	10.00	11.00	10.50	4000	5000	4500	40.00	43.00	41.50
2023-03-27	10.10	11.10	10.60	4100	5100	4600	41.00	44.00	42.50
2023-03-28	10.20	11.20	10.70	4200	5200	4700	42.00	45.00	43.50
2023-03-29	10.30	11.30	10.80	4300	5300	4800	43.00	46.00	44.50
2023-03-30	10.40	11.40	10.90	4400	5400	4900	44.00	47.00	45.50
2023-03-31	10.50	11.50	11.00	4500	5500	5000	45.00	48.00	46.50



On-line platform

The MSX water and wastewater sampling and monitoring station MSX manufactured by our company can be integrated with transmitters for continuous measurement of pH, conductivity, dissolved oxygen, redox potential, COD, and temperature. The device can be equipped with a GPRS modem, enabling remote control and real-time visualization of parameters through a web browser.

Access to view the parameters is possible via a computer or smartphone. With a generated login and password, the user gains access to a private account on the platform.

GRAND PRIX WOD-KAN 2023 Fairs

Monitoring Station MSX POL-EKO and Xylem





 Made in Poland. Established 1990.

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Let's Solve Water



POL-EKO
Perfect Environment

POL-EKO sp.k.

Manufacturer of laboratory equipment,
fume hoods and on-line instruments.

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Xylem Water Solutions Polska

Xylem is a leading water technology
company committed to the 'water solution'
by creating innovative and intelligent technologies
to meet the world's water, wastewater, and energy demands.

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