



# WCS - WATER CONTROL SYSTEMS®



Battery Powered Remote Monitoring  
for Drinking Water and Wastewater Systems



# REMOTE MONITORING - REQUIREMENTS

- Requirements are increasing continuously
- Security of supply
- Efficiency
- Information about condition of components
  - Pump motors
  - Filter systems
  - Emergency power generators
  - Alarm system

# WCS – TYPICAL MEASUREMENTS IN SUPPLY PLANTS

- Pipeline network or network pump
- Flow
- Pressure
- Level
- Temperature
- Redox
- Conductivity
- pH value
- Level measurement
- Dry run protection
- Running time
- Fault



## Well house:

- Flood protection
- Antifreeze
- Door alarm
- Heating control
- Mains voltage
- UV system monitoring



# WCS – TYPICAL MEASUREMENTS IN LOW- AND HIGH-LEVEL TANK AREA

- Flow
- Level
- Temperature
- pH value
- Redox
- Conductivity
- Turbidity
- Alarm signal
- Status signal





# WCS - APPLICATIONS

- WCS – Water Control Systems® is used to capture dynamic readings and static state queries, as well as to issue control commands.
- The system is used in many areas, such as:
  - Water supply systems
  - Sewage systems
  - Wastewater treatment plants
  - District heating plants
  - Environmental industry

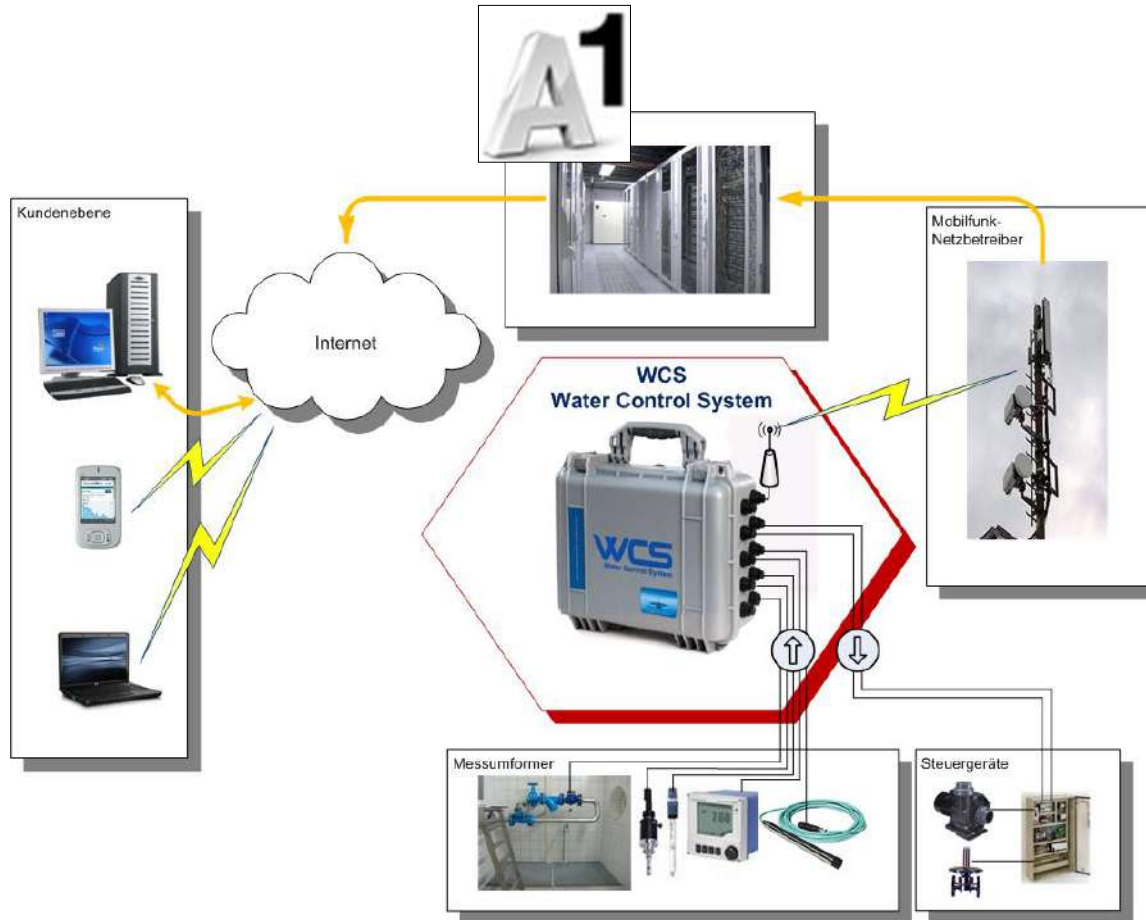
# COMPACT AND VERSATILE MONITORING SYSTEM

- Data logger with up to 8 measurements inputs  
3x analogue (4-20mA), 1x RS232 and 4x digital
- Connection of customary sensors
- Independent of external energy supply up to 5 years  
(battery- or battery/mains operation)
- No data cable → data transfer via GSM/GPRS
- Alarm function (email and/or SMS)
- Guaranteed data availability
- New: Real-time mode (e.g. for water loss analysis)





# WCS – FUNCTIONAL SCHEME



# WCS – DATA HOSTING

Hosting by A1 (TELEKOM AUSTRIA)  
highest level of security guaranteed for

- Data transfer
- Archiving
- Availability
- Access protection







# WCS – CONTROL CENTRE I

- Access protection by password secured login

**WCS-Webinterface**  
Control Center /

**WCS**

Einloggen

## Einloggen

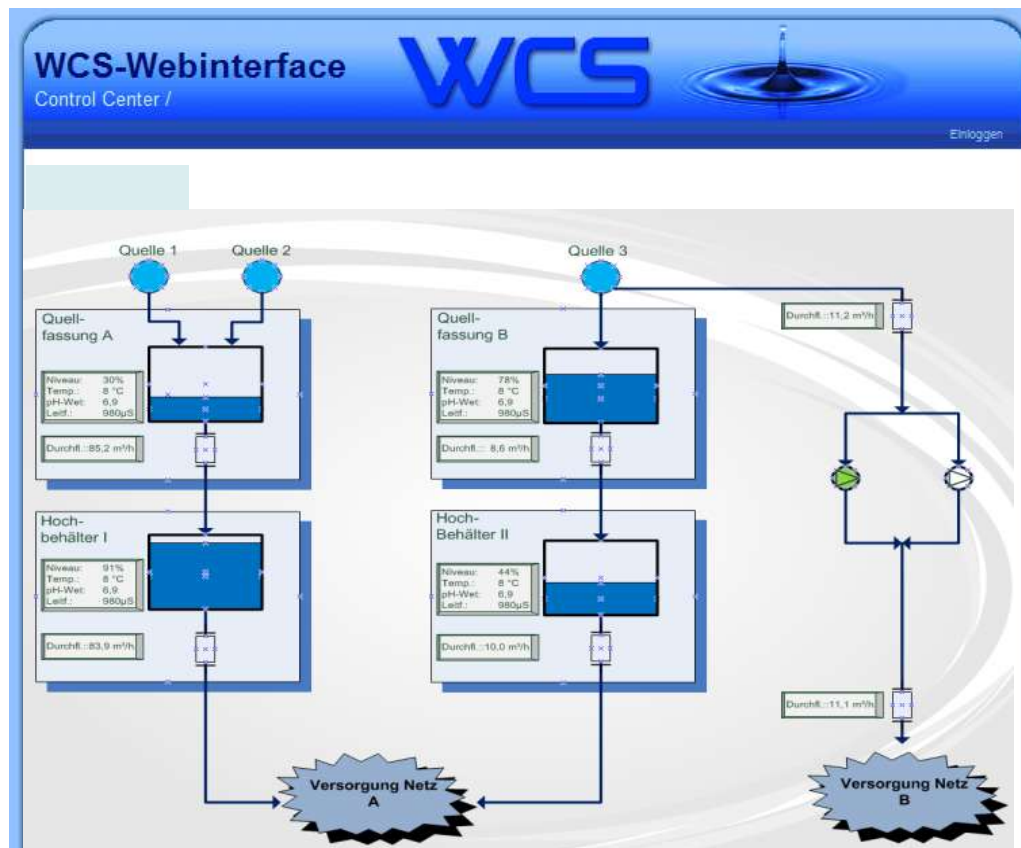
Name:

Passwort:



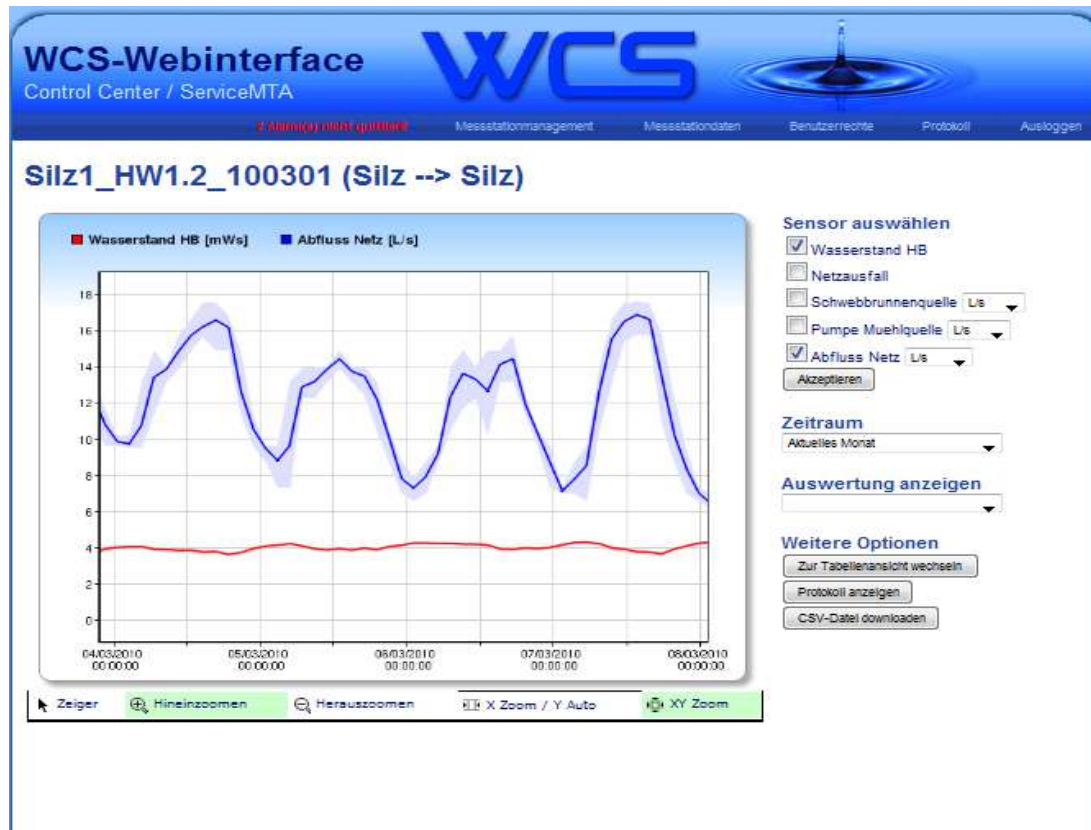
# WCS - CONTROL CENTRE II

- Graphic visualisation of a plant scheme (optional)



# WCS - CONTROL CENTRE III

- Visualisation of measured values as hydrographs





# WCS - CONTROL CENTRE IV

- Visualisation of measured values in tabular form

**WCS-Webinterface** **WCS** Control Center / ServiceMTA

3 Anlagen nicht geblenkt | Messstationmanagement | Messstationdaten | Benutzerrechte | Protokoll | Ausloggen

### Silz1\_HW1.2\_100301 (Silz --> Silz)

Messzeitpunkt	Wasserstand HB [m/Ws]	Schwebbrunnenquelle [m <sup>3</sup> /h]	Pumpe Muehiquelle [m <sup>3</sup> /h]	Abfluss Netz [m <sup>3</sup> /h]
16.02.2010 00:00:00	2.038	18.3858	7.308	31.9525
17.02.2010 00:00:00	4.032	20.3371	7.0589	41.5923
18.02.2010 00:00:00	3.5547	20.3085	13.2561	47.084
19.02.2010 00:00:00	3.9705	20.2857	8.0958	44.0545
20.02.2010 00:00:00	3.9821	20.2439	9.2075	45.2903
21.02.2010 00:00:00	4.0079	20.1848	8.143	39.9480
22.02.2010 00:00:00	4.0108	20.1813	7.9419	43.4239
23.02.2010 00:00:00	3.9797	20.1978	8.4721	44.1038
24.02.2010 00:00:00	3.9138	20.1179	9.3777	48.2137
25.02.2010 00:00:00	3.905	20.1033	11.7283	49.8337
26.02.2010 00:00:00	3.7235	20.0919	13.4011	50.8963
27.02.2010 00:00:00	3.9483	20.024	13.3292	49.3797
28.02.2010 00:00:00	3.754	19.9568	10.0854	49.7583
01.03.2010 00:00:00	3.9585	19.934	11.7093	48.5221
02.03.2010 00:00:00	3.7937	19.8032	8.2788	45.0588
03.03.2010 00:00:00	3.9485	19.8511	13.821	49.0403
04.03.2010 00:00:00	3.8834	19.8158	11.0125	47.9485

**Sensor auswählen**

- Wasserstand HB
- Netzausfall
- Schwebbrunnenquelle m<sup>3</sup>/h
- Pumpe Muehiquelle m<sup>3</sup>/h
- Abfluss Netz m<sup>3</sup>/h

Akzeptieren

**Zeitraum**

Aktuellen Tag

**Auswertung anzeigen**

**Weitere Optionen**

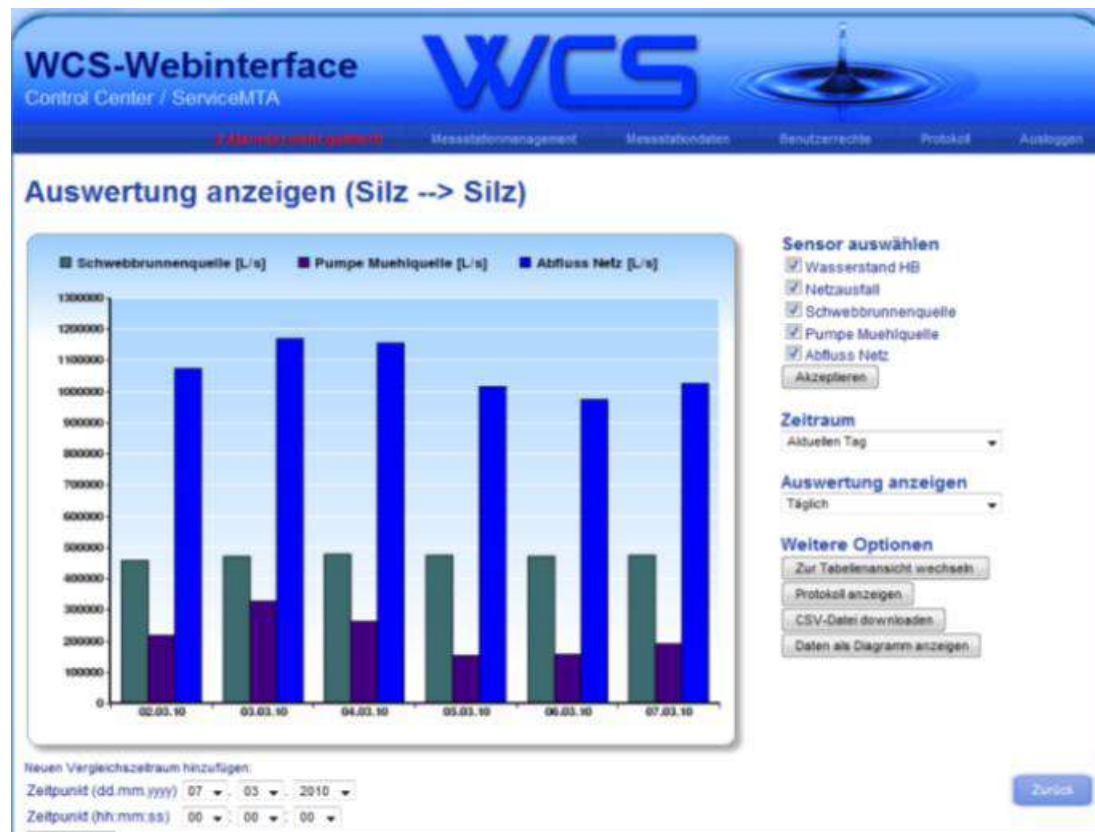
- Zur Diagrammansicht wechseln
- Protokoll anzeigen
- CSV-Datei downloaden
- Tageweise anzeigen

Zum Anfang | Zurück | Zum Ende



# WCS - CONTROL CENTRE V

- Visualisation of measured values as a statistical evaluation



# WCS – INCIDENT MANAGEMENT

- 2-way-alert
  - 2 redundant alarm systems
  - Alarm systems independently
- SMS and/or email, directly to the control centre or on-call service

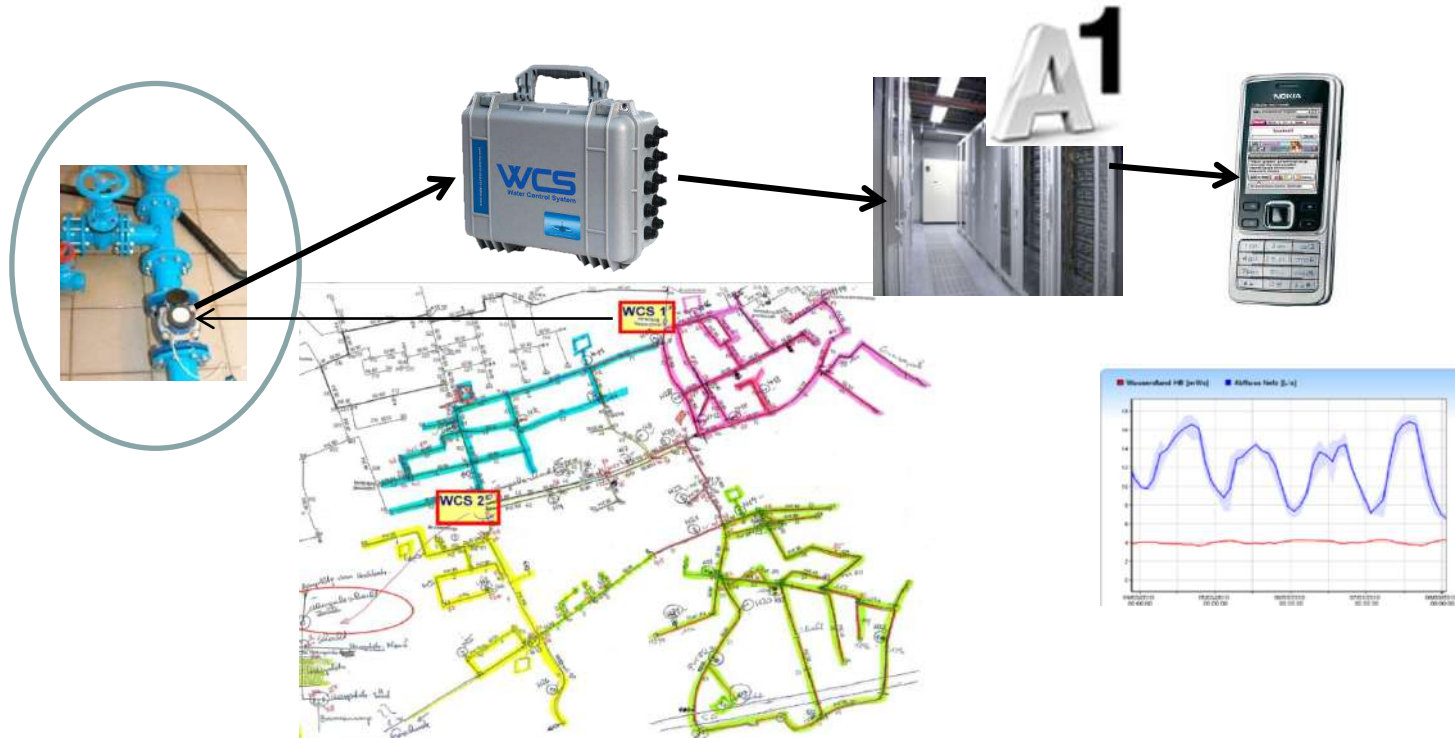


- Alarm signal via web interface



# WCS – REAL-TIME MODE

- WCS – Applications: Water supply
- Real-time mode -> Water loss analysis



# WCS – ULTRASONIC APPLICATION WATER LOSS ANALYSIS

- Mobile flow measurement
- Without intervention in the pipeline







# WCS – APPLICATION WASTEWATER DISPOSAL

- Mobile flow measurement
- Observe measured values online



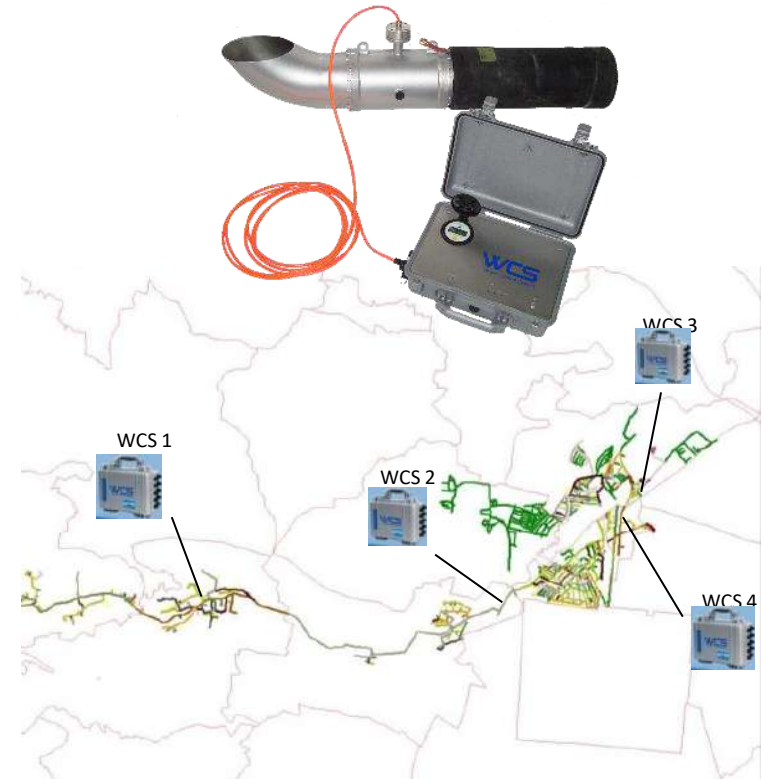
## MEASUREMENT METHOD

Magnetic-inductive flow measuring method, high measuring accuracy (0.25%). The proven measuring method brings the required reliability.

# WCS – APPLICATION WATER DISPOSAL

- Sewage systems / wastewater treatment plants / pumping stations
- Mobile wastewater measurement

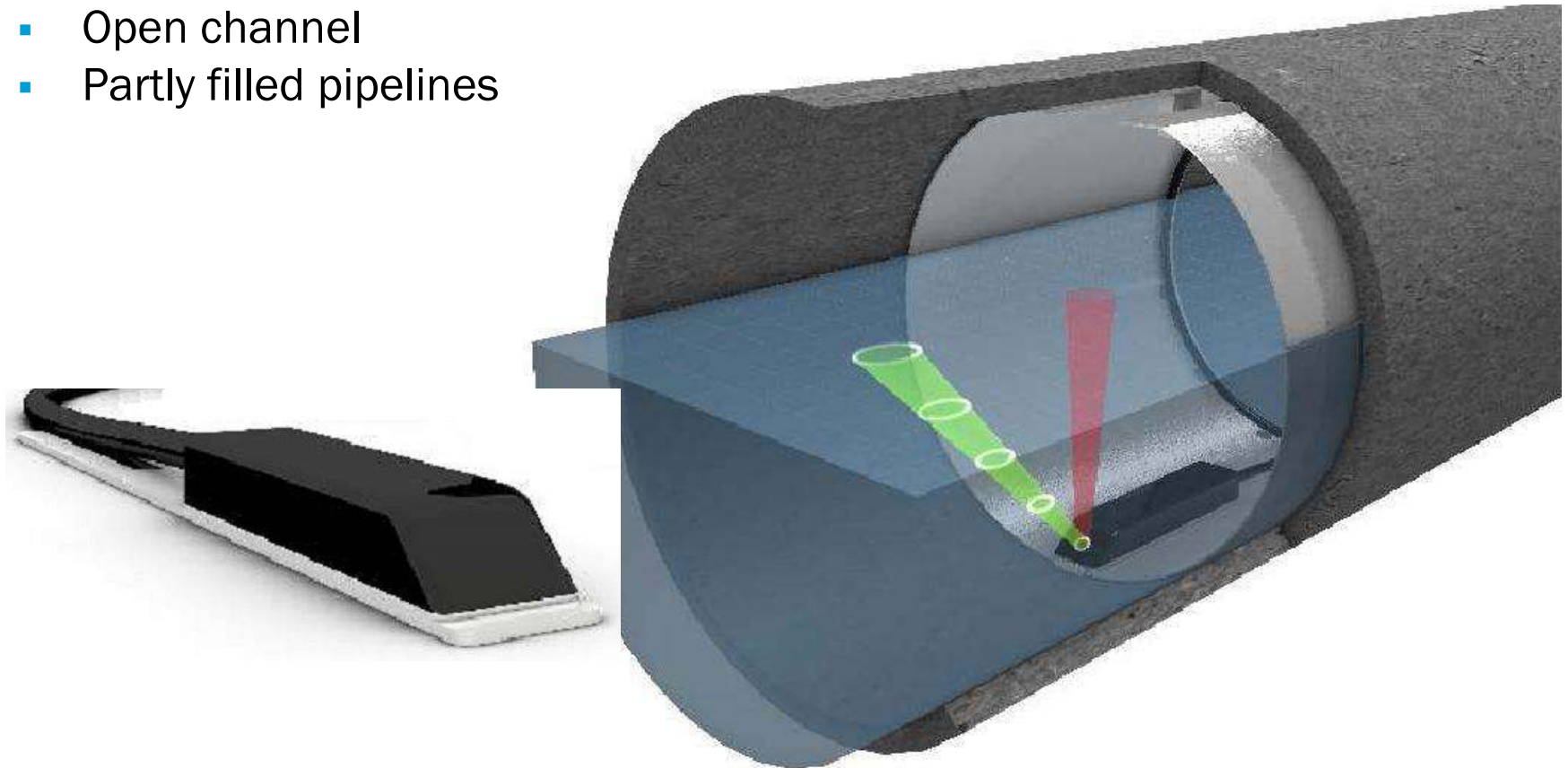
- Application range from DN 50 to DN 800
- Fast and easy installation
- Infiltration water determination
- Detection of foreign water
- Calibration of precipitation measurements and runoff models (sewage systems calculations)
- Monitoring of relief systems
- Process water measurements in mining and tunneling
- Wastewater discharge measurements for wastewater-producing industrial companies (temperature measurements)
- Quantity recording in wastewater service associations





# WCS – APPLICATION WASTEWATER DISPOSAL

- Sewage systems / pumping stations
- Mobile wastewater measurement
- Open channel
- Partly filled pipelines





WORLD WIDE WATER



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