

basic

Ex 1 mobile

Mobile sampler meeting professional
requirements for use in explosion-
hazardous surroundings

Bluetooth WDMi GSM/GPRS



Wasser-Analytik

Labortechnik

Probenahme

Ex-Komponenten





For nearly 60 years now, ORI are manufacturers of

sampling devices and laboratory apparatus.

During this time the devices have been

steadily enhanced and advanced through customer-orientation.

With ORI we go a long way to experience reasonable product compilation.

The name ORI answers quality in our products
and employees who identify with these products for many years
look for direct contact with the customer.

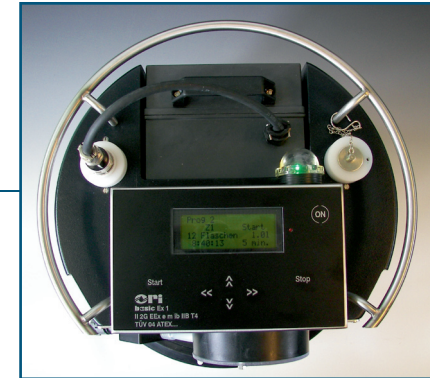
The benefits at a glance:

- light, compact device
- simple to operate
- complies with all sampling tasks reliably
- easily replaceable integrated accumulator
- WDMi - self-teaching water detection for automatic detection of suction height and highest metering accuracy
- low-maintenance hose pump technology complies with ISO 5667 and EN25667
- distributor with automatic position detection
- maintenance-free brushless pump and distributor motors
- idle mode switching for extremely long operating times (power consumption in idle mode 0.25 mA)
- wireless communication via Bluetooth interface e.g. using ORI Ex probe or Nivus PCM Pro Ex for event or flow-proportional sampling (even within explosion zone)
- large internal data memory of 2 MB for logging of sample data and further externally coupled measuring devices
- with RS 232 interface for connection with Ex GSM /GPRS Modem; enables operation, alarming, diagnosis/update functions from remote (also within explosion zone)
- future-safe Internet-capable with integrated web server
- TÜV certified safety for use in explosion-hazardous surroundings ATEX II 2G IIB T4 in Zones 1 and 2

Light and compact

The **basic** Ex 1 mobil
was logically designed as a light, compact device for mobile use
and fitting in manholes within explosion-hazardous surroundings.

„More than **20%** lighter than comparable devices“.



Ø = 420mm

H = 570mm

„More than **35%** more compact than comparable devices“.

Simple to operate

The **basic** Ex 1 mobile sampler is fitted with the same established simple menu navigation as the non-explosion versions.

4-key menu navigation with large-size LCD display makes operation almost child's play. One keystroke is enough to start the program.

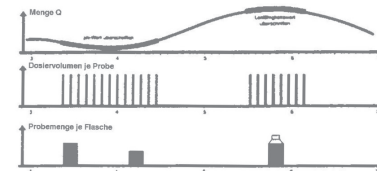
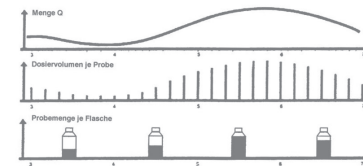
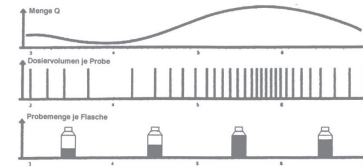
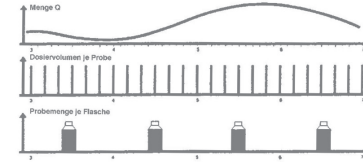
The most important information is then visible at a glance while the program is running:

- 1) Number of currently filled flask /
total number of programmed flasks
- 2) Number of individual samples already taken /
total number of programmed individual samples
- 3) Residual program runtime
- 4) Sample type
- 5) Error display
- 6) Time



Carries out all sampling tasks reliably

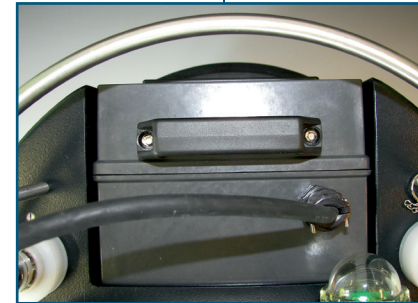
- time-proportional
- flow-proportional (with switchover and switch-off value) linked via Bluetooth interface or (0)4-20mA input with external flowmeter
- quantity-proportional linked via Bluetooth interface or impulse import with external flow measurement device
- event-proportional linked via Bluetooth interface or impulse import with external measurement device
- parallel sampling of individual and collective samples
- linking and concatenation facilities for various predefined programs



with easily replaceable integrated accumulator

— The **basic** mobile Ex 1 housing contains an integrated compartment for the external accumulator. If the plug connection is released and the safety pin is raised, it can easily be removed and replaced. It is not necessary to open any further covers. The sampler can also be permanently supplied by an outside power supply. The accumulator is not required in this case.

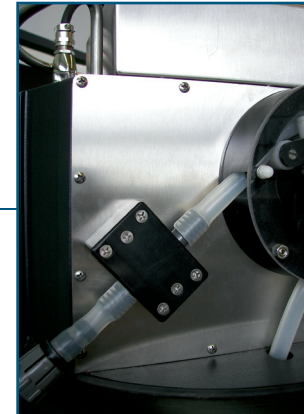
- maintenance-free (no water refilling)
over the entire usability duration
- nominal capacity 10 Ah / 12V lead gel
- very low self-discharge rate, and therefore long-term storable
- no memory effect
- short recharging times
- reverse charging-safe to DIN 43 539 T5
- completely recyclable
- own impact-proof housing to DIN EN 60079-0
with handle and locking pin
- can quickly be connected to the CONex plug-in system
developed by ORI



WDMi

- intelligent water detection for automatic detection of suction height and highest metering accuracy

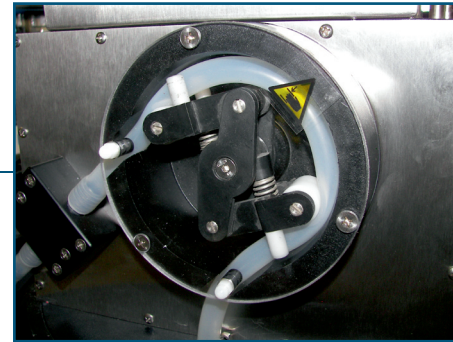
A water detection sensor upstream of the pump unit is vital to ensure metering accuracy is kept to if the suction heights vary. Difficulties are often caused here by strongly varying conductivity values, heavily contaminated waste water and changing surrounding conditions. The intelligent water detection system recognises these fluctuations and automatically adjusts itself accordingly. Even accumulations and soiling can be detected by the system and compensated for to a large extent. The WDMi measurement principle is based on a contactless capacitive sensor.



Low-maintenance hose pump technology

complies with ISO 5667 and EN25667 standards

The basic Ex 1 mobile sampler carries out sampling with the tried-and-tested dual-roller hose pump. This meets all requirements because it is spring-loaded and mounted on ball bearings.

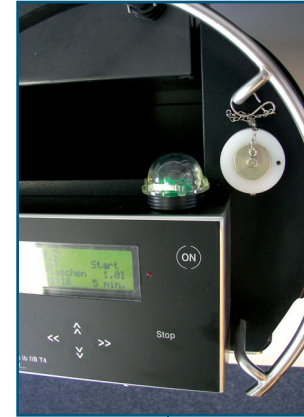


Communicative without cables

Mobile samplers are often used in situations where plug systems become soiled and can quickly become damaged over time. In addition to this, every cable connection makes installation in tight spaces such as wastewater manholes more difficult. Up to now, local operation or inspection of the device was not possible without opening the manhole cover .

The **basic** Ex 1 mobile is completely different. The integrated Bluetooth interface allows coupling with up to 7 further Bluetooth subscribers. This can be, for example a PC, the ORI Ex probe or a flow quantity meter.

The devices are connected with each other without cables to allow data exchange. Integration within a PC network is also feasible.



With RS 232 interface for connection with the Ex GSM /GPRS Modem

The **basic** Ex 1 sampler can be connected to the Ex GSM/GPRS module to enable remote controlability, even inside explosion-hazardous surroundings.

This combination enables:

- automatic data transmission of collected values by e-mail or FTP
- alarm function by SMS if limit values are exceeded or in case of failure
- remote access to program parameters ...

In addition the RS 232 allows secure connections for software updates, maintenance and diagnosis functions.



TÜV-tested security for use in explosion-hazardous surroundings

For 20 years our company is a leading manufacturer of explosion-proof samplers that are appropriate for the assembly in explosive areas as well as for the sampling of explosive fluids. Due to the fact that you rarely can say beforehand which composition you expect from the sewages we offer our customers a high degree of affordable security.



Specifications

mobile, portable sampler for intermittent and continuous taking of waste water samples in explosion zones (Zone 1) using built-in hose pump

- **Sampling:**

- time, quantity, flow, event or revolution-controlled
- metering volumes from 10 ml, freely adjustable
- suction height max. 7 m
- hose length max. 30 m
- adjustable blow-off and suction time
- rinse function for suction hose can be set for every sample
- intelligent water detection with self-teaching medium detection for automatic detection of suction height
- suction speed min. 0.5 m/s (in acc. w. ISO 5667 EN25667)

- **Sample distribution:**

- filling can be made into 6 l or 26 l container
- distribution into 12 flasks each with 1 l PE or 0.5l glass flasks
- with automatic zero point search

- **Housing:**

- made of heavy duty PUR plastic with excellent insulation properties
- with all-round rubber impact protection
- stable carrying and hanging straps
- no protruding housing components
- manipulation protection using code lock
- with splashproof cover
- sample cooling can be carried out using external cooling system

- **Protection class:**

- control system IP 67
- accumulator IP 23

Specifications

- **Control system:**

- CPU 8 bit
- 5 freely programmable programs
- 1 freely programmable program for concatenation and linking
- event start facility at limit value overrun or underrun, separate flasks selectable for event.
- concatenation facility of programs as consequence or loop
- idle power saving mode - automatic deactivation of electronic components not required Reactivation by internal timer, keyboard action, Bluetooth signal or external start impulse
- EEPROM 2MB data memory for sample log and external data signals
- menu-guided simple programming
- real-time clock with memory condenser

- **Digital display:**

- LCD display 20x4

- **Keyboard:**

- contactless capacitive keyboard

- **Input/outputs:**

- 2x analog 0/4...20 mA in acc. w. DIN EN 60079-7
- 1x impulse input in acc. w. DIN EN 60079-7
- 1x impulse output in acc. w. DIN EN 60079-7
- Bluetooth interface class 2 (also usable inside explosion-hazardous surroundings) in acc. w. DIN EN 60079-18
- RS 232 interface (also usable inside explosion-hazardous surroundings) in acc. w. DIN EN 60079-7
- 1x Namur output in acc. w. DIN EN 60079-11
- Connection for power supply in acc. w. DIN EN 60079-7

Specifications

- **Surrounding temperature :**
 - -20°C...+40°C
- **Auxiliary energy:**
 - 12 VDC accumulator, 10 Ah integrated in housing
 - permanent supply via suitable power unit
- **Certification:**
 - ATEX II 2G EEx em ib IIB T4
- **Weight:**
 - 19.5 kg (incl. accumulator and 12 flasks)
- **Dimensions:**
 - Ø = 420mm
 - H = 570mm

For nearly 60 years we have been developing and producing analysis methods and devices for sludge-, ground water-, process water- and wastewater analysis. On the basis of our long experience we are your competent contact in the range of sampling, measurement and laboratory equipment.

www.origmbh.de



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