

## WS 98 Wall-Mount Sampler



### Extraordinary Flexibility in a Compact Unit

The WS 98 is a compact sampler for indoor applications that do not require cooling.

It features the same range of functions as larger, stationary samplers.

### ADVANTAGES AT A GLANCE

- Typical WaterSam® quality and performance in a compact package
- Housing made of high-value 316Ti stainless steel as standard; well suited for use in demanding environments
- Compatible with all WaterSam sampling systems; even as a double sampler for sampling from two different points
- Suitable for refitting existing samplers (including those from other manufacturers); optionally with connections for cooling, etc.
- Can be combined with a commercially available refrigerator for low-cost cooling of composite samples
- Optional XY Distributor in a support frame for discrete sample distribution to a variety of bottle combinations
- Optional rinsing of complete sampling line with clean water

# TECHNICAL DATA

## GENERAL

	Wall-mount sampler for indoor applications
Norms	CE
Dimensions	H x W x D: 340 x 472 x 190 mm
Weight	Approx. 12 kg, depending on equipment
Power Requirements	230 V AC (optional: 110 V AC); 50 Hz (optional: 60 Hz); Main fuse 4/10 A
Output	Approx. 60 VA

## SAMPLING

Sampling System	Standard: VAC vacuum pump system for sampling under pressure-free conditions  Alternative systems: <u>For sampling under pressure-free conditions:</u> VAR-B, VAR-E, VAR-C, peristaltic pump <u>For sampling under pressurized conditions:</u> FMWW, PRF, VAC with isolation valve, INLINEevent, WS INLINEcut®, VacuPress  <b>Note:</b> WS 98 is available with 2 sampling systems
Sampling Modes	All sampling systems from WaterSam can take time-, volume- and event-proportional samples  For flow-proportional sampling, the following systems are suitable: VAR-B, VAR-E, VAR-C, peristaltic pump
Sample Volumes	15-350 ml (optional: up to 1000 ml) multiple-shot metering possible
Metering Glass	DURAN 50 borosilicate glass; dishwasher-safe, resistant to acid, alkali, temperature fluctuations
Pump	230 V AC; -0.8 to 1.0 bar; 14l/min free flow; VM 0.5 m/s to 6 m; max. lift height 8 m (optional: high-performance pump; VacuPress for lift heights up to 30 m or more)
Intake Hose	12 mm ID PVC (optional: 16 mm ID)
Wetted Parts	Borosilicate glass, PE, PVC, stainless steel 304/316Ti, silicone (optional: alternative materials as required)

## HOUSING

Housing Material	Stainless steel 316Ti Optional: ■ Powder coating (RAL colors) ■ Plastic (UV resistant)
Environmental	Construction facilitates easy material separation for proper recycling/disposal

## DISTRIBUTOR (optional)

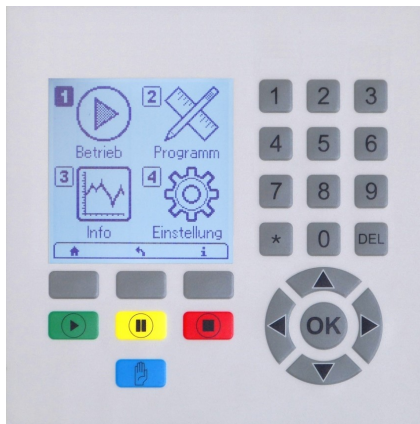
Distributor	XY Distributor: two-axis coordinate system for direct depositing of discrete samples with no cross-contamination
Bottle Synchronization	Automatic
Sample Bottles / Sets	See „Bottle Combinations“



WS 98 with two FMWW sampling systems

# CONTROLLER

## MS3 Controller



With the MS3 controller, WaterSam has set new standards. In addition to comprehensive communications possibilities, the MS3 sets itself apart with its through its user-friendly layout and easy operation.

## ADVANTAGES AT A GLANCE

### Easy Operation

The large backlit graphic display permits a clear and simple view of menus. The 24 keys make menu navigation very straightforward and easy. In addition to the numerical and navigation keys, there are direct function keys to start, pause and stop selected programs, as well as take a grab sample. This means controller operation remains dependable regardless of precipitation or extreme temperatures; even when using gloves.

### Versatile Parameter Settings

All programs can be configured according to the user's needs. Programs can be run simultaneously or in a specific order. If the application demands special considerations, a wide range of system and program parameters can be adjusted without hassle. In order to protect the sampler against unauthorized access, a special code can be set by the operator to limit access to several different menu levels. The levels of protection permit varying degrees of access to specific sampler functions and settings.

### Comprehensive Communication

The numerous ports on the controller allow simple communication with the sampler. With a Modbus protocol, the sampler can be integrated into an on-site control system

The USB port can be used to retrieve saved data as well as load software updates. The available webserver allows access to sampler functions and information.

The controller has 4 GB for storage space, which can be expanded to 32 GB.

In addition to 4 separate analog inputs and an analog output, the MS3 controller features 16 digital inputs and 16 digital outputs as standard equipment.

### Sensor Connection

Intelligent sensors can be connected directly to the MS3, and monitored data can then be stored. This completely eliminates the need for an expensive transmitter.

### Energy Efficient

The technologically advanced MS3 has especially low power consumption.

Additionally, portable samplers feature an intelligent sleep mode to further increase efficiency and thereby extend battery life.

The sleep mode is activated not only before and after a sampling campaign, but also in between individual samplings.



MS3 CONTROLLER TECHNICAL DATA

OPERATION

Waterproof keypad with 24 keys, incl. 4 color-coded direct function keys, navigation keys, numerical keypad, 3 flexible-function keys



SOFTWARE & PROGRAMS

Graphic menu; optional display of various selectable data

Up to 9 programs (number of programs adjustable), multiple / all programs can be run simultaneously

INTERFACE

RS-232, RS-485, TCP/IP, USB Host, USB Com Port Slave

SOFTWARE UPDATES

via USB flash drive

INPUTS

ANALOG

4 separate analog inputs  
0/4-20mA

DIGITAL

16 digital inputs  
e.g. for flow, events, external control, start, stop, distributor movement, etc.

OUTPUTS

ANALOG

1 analog inputs 4-20 mA

DIGITAL

16 digital outputs  
e.g. for messages, external control; expandable by request

DATA STORAGE

4 GB, optionally 32 GB or more;

usable for storing internal data (sampling data, quality parameter values, other sampling information) and data from external sources (pH, flow, conductivity sensors, etc.)

COMMUNICATION

Modbus via RS-485 or TCP/IP  
Webserver  
Optional:  
Profibus-DP, Modem

DATA RETRIEVAL

RS-232, RS-485, Modbus  
download via USB flash drive / TCP/IP  
Optional: via Webserver, Modem or Profibus-DP

# XY DISTRIBUTOR

For discrete bottle filling with numerous possibilities



Impresses with its unbeatable flexibility

For over 20 years, the WaterSam XY Distributor has been winning fans. As the standard discrete sample distribution system in our samplers, it has proven its reliability and long service life. Our customers value the wide range of possibilities available with the XY Distributor, and praise its low follow-up costs.

## Direct Sample Bottle Filling

The XY Distributor travels to each sample bottle to deposit samples directly. With this method, there is no need for a distributor plate, which can be time-consuming to clean. Cross-contamination is a thing of the past thanks to the XY Distributor.

## Exact Positioning

The XY Distributor positions itself precisely above each sample bottle based on pre-set or customer-defined coordinates.

## Maximum Storage Capacity

While a rotating distributor is limited by its diameter, the free mobility of the XY Distributor throughout the entire sample storage area allows it to fully utilize all available space.

This also ensures that sample bottles are easy to clean, since there is no need for wedge-shaped bottles.

## Numerous Bottle Combinations

The free movement of the distributor permits a variety of pre-set bottle combinations. Switching between different bottle sets is simple and can be done without additional parts. If the bottle combination is switched, only the distributor setting must be changed on the controller.

Even customer-specific bottles can easily be used without the need for additional accessories.

## Saving Time and Effort

Bottle combinations consisting of multiple bottles and an additional large container. This allows discrete samples and a composite sample to be taken at the same time.

Since there is no longer any need to homogenize the discrete samples into a composite sample, this type of combination serves to reduce the workload as well as eliminate filling mistakes. Abnormalities in discrete sample bottles can then be analyzed while a complete composite sample is still available.

## BOTTLE COMBINATIONS



### Discrete Samples

#### Possible Sets:

- 4 x 10.4 | PE
- 4 x 12.0 | PE
- 5 x 6.4 | PE
- 6 x 6.4 | PE
- 12 x 2.9 | PE
- 14 x 4.0 | PE
- 16 x 2.9 | PE
- 16 x 4.0 | PE
- 16 x 2.0 | glass
- 24 x 1.0 | PE
- 24 x 2.0 | PE
- 30 x 1.0 | glass
- 36 x 1.0 | PE / glass
- 49 x 1.0 | PE / glass
- 64 x 350 ml PE

### Composite Samples

#### Possible Sizes:

- 10.4 | PE
- 15.4 | PE
- 20.0 | PE
- 26.0 | PE

### Discrete + Composite Samples

#### Possible Sets:

- 12 x 2.9 | + 1 x 10.4 | PE
- 12 x 2.9 | + 1 x 12 | PE
- 24 x 1.0 | + 1 x 12 | PE

#### OUR TIP

Combining multiple bottles with an additional composite container is highly recommended.

The discrete sample bottles and composite sample container can then be filled with sample media at the same time by parallel programs.

## INFO BOX

**The use of custom bottle combinations and/or client-specific bottles is possible.**

**Haven't yet found the right bottle combination?**

Contact us! Other combinations as well as custom solutions are available upon request.

## OPTIONS

The equipment combination possibilities for the WS 98 are surprisingly varied. We will gladly create a quotation for a sampler especially designed for you and your requirements. You can profit from our years of experience and technical expertise. All desired options will be included when building your sampler to provide a complete package solution.

You'll be amazed at the possibilities.

### HOUSING EQUIPMENT

- Support frame with castors
- Drawer tray for sample containers
- Power socket

Other options  
available upon  
request

### TECHNICAL EQUIPMENT

- Main power switch
- Connection sockets
- Residual-current circuit breaker
- Various vacuum pumps
- Rotary distributor
- Data logger (for saving sampling data, monitoring data from internal measuring instruments and/or external on-line sensors)
- High-performance pump package with pneumatic pinch valve
- Heavy-duty pump and valve package for corrosive media / environment
- Inlet hose heating

### SAMPLING COMPONENTS

- Conforming of materials for the sampling line (intake hose, sampling system, distributor hose, sample bottles) e.g.: PTFE, PVDF, FPM.
- Metering vessels with alternative volumes (e.g. 200 / 350 / 500 / 750 / 1000 ml)
- Numerous sample containers with a variety of capacities and materials
- Drain position and rinsing with clean water
- Positioning armature for intake hose
- Filter basket

### COMMUNICATION

- GSM modem for remote operation, SMS and program start via mobile telephone, complete access to sampler software via PC / Laptop
- Signal relays (general error alarm, bottle changed, sample taken, program started, program stopped, return of power after power outage)

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QUESTIONS ?

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QUALITY MADE IN GERMANY

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