WS 312

Please Note: The following text describes standard equipment, with optional alternative equipment and common accessories listed in parentheses (). The engineer may select the equipment desired for the application, and delete the specifications that are not required. If desired equipment is not listed in this text, please contact WaterSam regarding other option and special custom equipment.

Compact stationary water sampler with all-weather design and thermostatic control, vacuum pump sampling system for automatic time-, volume- and event-proportional sampling under pressure-free conditions.

Housing
Weather-proof housing made of stainless steel 304 (316Ti) inside and outside, including roof.
Sample chamber with 40 mm insulation.
(Lockable) Door for sample chamber and separate upper door with window in front of controller
Sandwich construction allows for easy separation of housing materials for recycling and disposal.

Top of cabinet as dry portion with three separate compartments:

1. Electronics compartment including control board and electrical components; IP65 protection.
2. Technical compartment for pump and valves; IP65 protection.
3. Refrigeration unit compartment with air vents on both sides for efficient cross-ventilation

Bottom of cabinet interior chamber as wet portion and thermostatically-controlled sample storage compartment

Thermostatic Control
Sample compartment with adjustable thermostatic control for sample storage at +4 °C ±1 °C in ambient temperatures from -25 °C to +42 °C.
Heater with overheating safeguard for switches off at 70 °C
Fully automatic defrost and outlet for condensation water

Controller
User interface with 128 x 128 pixel graphic display, 24 keys including navigation keys, numerical keys, color-coded keys for program start, pause, stop, and grab sample; IP65 protection.

Inputs

- 4 x analog inputs 0/4–20 mA
- 10 x digital inputs for e.g. flow, event, multiple programmable inputs

Outputs

- 1 x analog output 4–20 mA
- 16 x digital outputs for e.g. program active message, fault message, other programmable messages

Communication Ports

- Serial ports RS-232 and RS-485
- 10/100 Ethernet TCP/IP
- USB Host
- Mini-USB Port Slave

Sampling Programs
9 user-defined sampling programs can be stored
Multiple / all programs can operate simultaneously
Programs can be set to repeat automatically or be linked with another program
Battery backup of user programs after power loss – min. 5 years after delivery date

Data memory
Storage of 100 most recent datasets: sample in bottle X resp. sampling error, program start date and time, bottle change date and time, events date and time, voltage loss and voltage return date and time.

VAC Vacuum Sampling System
Vacuum sampling system for time-, volume- and event-proportional sampling under pressure-free conditions.
Metering vessel made of borosilicate glass DURAN 50; dishwasher-safe, resistant to acid, alkali and temperature fluctuations; located in thermostatically-controlled sample compartment for protection against frost, heat and sunlight to prevent sample falsification.
Sample volume adjustable: 12–200 ml (20–400 ml); multiple-shot samples possible.

(**VAR-C Vacuum Sampling System**
Variable-volume vacuum sampling system for time-, volume-, flow- and event-proportional sampling under pressure-free conditions.
Metering vessel made of borosilicate glass DURAN 50; dishwasher-safe, resistant to acid, alkali and temperature fluctuations; located in thermostatically-controlled sample compartment for protection against frost, heat and sunlight to prevent sample falsification.
Variable-volume samples: 20–150 ml.)

Vacuum Pump
Vacuum pump with 230 V AC motor; 14 l/min free flow, -0.8 to 1 bar, maximum lift height 8 m.

(High-performance pump with 19 l/min free flow, -0.85 to 7 bar pressure, limited to 3 bar; including pneumatically-operated pinch valve)

(Heavy-duty pump package including pivoted armature valves and pneumatically-operated pinch valve; for highly corrosive sample media and ambient air)

Suction Hose
PVC hose with reinforcement weaving; 12 mm inside diameter, 5 m length; including connector for metering vessel and stainless steel tip.

Sample Storage

Composite Sample Containers; without Distributor:

(10.4 l PE composite container with PE screw cap)
(15.4 l PE composite container with PE screw cap)
(20.0 l PE composite container with PE screw cap)
(26.4 l PE composite container with PE screw cap)

Distributor with Discrete Sample Bottle Sets:

(XY Distributor for direct sample depositing. Two-axis movement throughout entire sample compartment for precise coordinate positioning directly over sample bottles.
7 pre-set bottle layouts selectable in controller; 1 freely programmable bottle layout enables operator to set coordinates for non-standard bottles.
Automatic recouping of bottle changes after power loss.)

(2 x 10.4 l PE containers with lids)
(4 x 6.4 l PE containers with lids)
(4 x 12 l PE containers with lids)
(12 x 2.9 l PE bottles with lids)
(12 x 2 l borosilicate glass bottles, with PE lids)
(16 x 2 l PE bottles with lids)
(24 x 1 l PE bottles with lids)
(24 x 1 l borosilicate glass bottles, with PE lids)

(7 x 2 l PE bottles with lids and 12 x 1 l PE bottles with lids)
(12 x 1 l PE bottles with lids and a 10.4 l PE composite container with lid)
(12 x 2 l PE bottles with lids and a 6.4 l PE composite container with lid)

Technical data, dimensions and weight

Power requirements:	230 V AC (120 V AC), 50 Hz (60 Hz), 16 A; fused on site
Dimensions HxWxD:	1020 x 590 x 590 mm, 720 mm width with mounting rails
Weight:	approx. 75–80 kg, depending on equipment

Model: **WS 312**
Manufacturer: **WaterSam® GmbH & Co. KG, Germany**

Additional Options and Accessories:

(**Easy Handling Package**
Fully automatic program interruption if door is opened, e.g. when sample containers are exchanged or when sampler is cleaned. After door is closed, program continues on schedule and takes a sample if one has been missed. Alarm with adjustable time frame if door has been accidentally left open)

(**Interior light**
Light in sample compartment with door contact switch)

(**Base**
Stainless steel base with 300 mm height to elevate sampler for more comfortable operation)

(**Main switch**
Main switch as circuit isolator mounted in front panel of the sampler)

(**Mounting set**
Mounting set with rings, clips, plugs and screws)

(**Immersion jig**
Swivelling immersion jig made of PVC and stainless steel)

(**Relay**: General error alarm)
(**Relay**: Sampling error alarm)
(**Relay**: Bottle change notification)
(**Relay**: Program operating notification)
(**Relay**: End of program notification)