

WS 316

Stationary Water Sampler



Impressive Versatility and Huge Capacity

The WS 316 is the comprehensive all-weather stationary water sampler from WaterSam, offering the largest sample storage capacity and the widest array of options and equipment for specialized applications.

- Housing made entirely of high-grade stainless steel, incl. roof
- Vacuum/pressure system for precise sample volumes
- No recalibration necessary after cleaning
- Metering vessel protected in climate-controlled sample chamber
- 8 other sampling systems available, even as double systems
- Program linking and parallel operation as standard software
- Simple upgrade to monitoring station
- Intake hose inlet on the left and right side, optionally through the floor or rear wall
- XY Distributor for direct sample distribution; no cross-contamination and no distributor plate to clean
- Numerous sample bottle sets; up to 49 x 1-litre bottles
- Filling of different bottles and containers in one set for both composite and backup samples
- Customer-specific bottles can easily be used.
- Park position permits the use of large containers without retrofitting.



WaterSam WS 316 - Technical Specifications

General

Applications	Stationary indoor/outdoor water sampling
Norms	CE, ISO 5667-compliant
Dimensions	H x W x D: 1290 x 655 x 770 mm Width including base rails: 720 mm
Weight	ca. 90-125 kg, depending on equipment
Power Requirements	230 V AC (optional: 110 V AC) 50 Hz (optional: 60 Hz) Main fuse: 16 A
Output	ca. 750 VA max. including high-performance refrigeration and heating units
Ambient Temp.	-25°C to +42°C (optional: up to +55°C, others by request)

Sampling System

Standard	VAC vacuum-pressure sampling system for time-, volume-, event-proportional sampling
Flow-Proportional (Optional)	- VAR-B: contactless; variable volume - VAR-E: variable volume - Peristaltic pump: variable volume
Other (Optional)	- second sampling system - VAC with safety valve for pressurized lines - Water switches: FMWW, PRF - WS INLINEcut - WS INLINEevent
Sample Volume	15-350 ml (optional: up to 2000 ml)
Metering Vessel	DURAN 50 borosilicate glass; dishwasher-safe, resistant to acid, alkaline, and temperature changes
Pump Performance	230 V AC; -0.8 to 1.8 bar; brushless; 8 m max. lift height, 14.5 l/min free flow; V_m 0.5 m/s for lift heights up to 6 m (optional: high-performance Pumps and/or WS VacuPress for lifts heights up to 30 m or more)
Intake Hose	12 mm ID PVC (optional: other diameters)
Wetted Parts	Borosilicate glass, PE, PVC, silicone, stainless steel 304/316Ti (optional: alternative materials as required)

Sample Bottles / Distribution

Composite Container (without distributor)	15.4 / 20 / 26 / 60 l PE
Distributor (optional)	XY Distributor, direct sample depositing with two-axis positioning system
Bottle Synchronization	Automatic
Bottle Sets (with distributor)	<i>Discrete samples:</i> 4 x 10.4 / 15.4 / 20 / 25 l PE 5 x 12 l PE 16 x 2.9 l PE / 4 l PE / 2 l glass 24 x 2 l PE 36 x 1 l PE / 0.9 l glass 49 x 1 l PE / 0.9 l glass <i>Discrete + composite samples:</i> 12 x 2.9 l + 1 x 12 l PE 24 x 1 l + 1 x 12 l PE
Additional Bottle Set Possibilities	Use of customer-specific bottles without additional parts; via software setting change

Housing and Thermal Control

Housing Material	Double-walled stainless steel 304 Optional: - Stainless steel 316Ti - Powder-coating (RAL colours) - Plastic (UV resistant)
Insulation	40 mm; cold bridge free; not foamed
Environmental Consideration	Construction facilitates easy separation of materials for proper recycling and disposal
Partitioning	Three separate technical compartments in top dry section for electrical/electronics, refrigeration unit and other components
Placement of Sampling System	Metering vessel in thermal-controlled sample chamber; protected from heat and frost
Installation	Easy floor mounting and firm footing with sturdy base rails
Thermostat	PT 100 3-point thermostat
Refrigeration	Compressor refrigeration unit, 230 V, 160 W; R134a refrigerant (CFC-free); with freely adjustable automatic defrosting (interval, time, duration, max. temperature). Optional for corrosive environment, e.g. H2S: evaporator plate separate from sample storage chamber, clean external air drawn to cabinet via ventilation flange
Heating	Electric heating unit in stainless steel sleeve; 230 V, 350 W (optional: 24 V version)
Sample Chamber	Temperature preset to 3°C (adjustable)

Controller

General	Microprocessor controller with 4-button operation, backlit 4 x 20 character display, real-time clock, battery backed-up RAM memory (5 years), overload-protected outputs, 4 completely separated analog inputs (differential input)
Software	Menu-based operating system Up to 9 user-defined sampling programs; any/all programs can be run simultaneously or linked. Memory for fault, event, and operational conditions, preset operating programs, always switchable. Preset and user-defined distributor settings
Inputs (standard)	4 x analog 0/4-20mA 10 x digital (flow, event, multiple programmable inputs)
Outputs (standard)	16 x digital (program active message, fault message, other programmable messages)
Interface	RS 232, optional RS 485
Modem (optional)	Remote operation / fault message via SMS / Remote start via mobile phone
Advanced controller (optional)	See Advanced Controller datasheet

Additional options and accessories as well as custom equipment available by request.

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