

# AS950 PORTABLE SAMPLER

## Applications

- Wastewater
- Collection systems
- Industrial pretreatment
- Environmental monitoring
- Stormwater



## Sampling has never been this easy.

HACH LANGE's AS950 sampler controller makes programming, data transfer and operation more intuitive and error-free.

### Easiest and most intuitive operation

The large full colour display and intuitive programming give you access to all your programmable criteria on a single screen - eliminating scrolling through menus and supporting error-free operation.

### Most convenient data transfer and programming available

The AS950 is the only sampler that utilises a USB drive to upload and download data and copy programs from one sampler to another.

### Confidence in your sampling process

The program status screen instantly communicates alarms, missed samples and program progress for quick and easy troubleshooting.

### Field convertible for compact or discrete sampling

Weighing only 12.7 kg, the AS950 portable sampler is designed for accuracy and convenience. Quickly switch between composite and discrete sampling in the field. Configurable for single or multiple bottle applications, it is specifically designed for use in 18-inch manholes.

### Easy maintenance at low cost

Spring-mounted rollers provide long tubing life keeping maintenance costs low. The desiccant and pump tubing can easily be accessed; the replacement is possible without any tools. The rugged see-through pump cover is made for a quick visual inspection.

## Technical Data\*

### AS950 Portable Sampler

<b>Housing material</b>	Impact resistant ABS plastic, 3-section construction Double-walled base with 2.54 cm insulation, direct ice contact with bottles (Sampler)
<b>Temperature</b>	Operating: 0 - 49 °C Storage: -40 - 60 °C
<b>Power requirements (Voltage)</b>	None
<b>Dimensions (W x H x D)</b>	Standard Base: 50.5 cm x 69.4 cm Compact Base: 44.1 cm x 61 cm Composite Base: 50.28 cm x 79.75 cm
<b>Weight</b>	Standard: 15 kg with (24) 1 L Polyethylene bottles; 14.8 kg with 10 L Polyethylene bottle Compact Base: 12.2 kg with (24) 575 mL Polyethylene bottles; 12.9 kg with 10 L Polyethylene bottle Composite Base: 15 kg with (1) 21 L Polyethylene bottle
<b>AS950 Controller</b>	
<b>Housing material</b>	PC/ABS blend, NEMA 4X, 6, IP68, corrosion and ice resistant (Controller)
<b>Display</b>	1/4 VGA, Colour; self-prompting/ menu-driven program
<b>User interface</b>	Membrane switch keypad with 2 multiple function soft keys
<b>Languages user interface</b>	English, French, Spanish, Italian, German, Portuguese, Chinese
<b>Lock function</b>	Access code protection prevents tampering
<b>Memory</b>	Sample history: 4000 records; Data log: 325,000 records; Event log: 2000 records
<b>Communication capabilities</b>	USB and optional RS485 (MODBUS)
<b>Inputs</b>	One 0/4-20 mA input for flow pacing
<b>Certifications</b>	CE, UL

### Sample container

<b>STANDARD BASE CAPACITY:</b>
(24) 1 L Polyethylene or 350 mL Glass bottles
(8) 2.3 L Polyethylene or 1.9 L Glass bottles
(4) 3.8 L Polyethylene or 3.8 L Glass bottles
(2) 3.8 L Polyethylene or 3.8 L Glass bottles
(1) 21 L Polyethylene composite bottle or
(1) 15 L Polyethylene composite bottle or
(1) 20 L Polyethylene composite bottle or
(1) 10 L Polyethylene or 10 L Glass composite bottle
<b>COMPACT BASE CAPACITY:</b>
(24) 575 mL Polyethylene bottles
(8) 950 mL Glass bottles
(1) 10 L Polyethylene or 10 L Glass bottle
<b>COMPOSITE BASE CAPACITY:</b>
(1) 21 L Polyethylene bottle
<b>ICE CAPACITY:</b>
Compact Base: 3.9 kg with (24) 575 mL PE bottles
Standard Base: 14.5 kg with (24) 350 mL Glass bottles

\*Subject to change without notice.

## Technical Data\*

### Sampling Features

#### Programs

Dual Programs: Up to 2 sample programs can be run sequentially, in parallel, or according to day of week scheduling; enabling a single sampler to function like multiple samplers

#### Sampling mode

Pacing: Time weighted, Flow weighted, Time table, Flow table, Event

Distribution: Single bottle composite, multi-bottle composite, multi-bottle discrete, bottles per sample, samples per bottle or a combination of bottles per sample and samples per bottle

#### Operating mode

Continuous or non-continuous

#### Status messages

Communicates what program is running, if there are any missed samples, when the next sample will be taken, how many samples remain, number of logged channels, time of last measurement, memory available, number of active channels, if alarms were triggered, when alarms were triggered, active sensors and cabinet temperature

#### Alarm

Configurable alarms that show on status screen and are recorded in diagnostics alarm logs. Alarms can be set for system diagnostics and logging such as program end, sample complete, missed samples and full bottle. Channel alarms are setpoint alarms for the recorded measurements (channels), such as pH, level and power supply voltage.

#### Manual sampling

Initiates a sample collection independent of program in progress

#### Automatic shutdown

Multiple Bottle Mode: After complete revolution of distributor arm (unless Continuous Mode is selected)

Composite Mode: After preset number of samples have been delivered to composite container, from 1 to 999 samples, or upon full container.

#### Sample volume

Programmable in 10 mL increments from 10 to 10,000 mL

#### Sample interval

Selectable in single increments from 1 to 9999 flow pulses or 1 to 9999 minutes in one minute increments

#### Sample trigger

When equipped with flow sensor or pH/temperature sensor or peripheral monitoring options, sampling can be triggered upon an upset condition when field selectable limits are exceeded

#### Data logging

SAMPLE HISTORY - Stores up to 4000 entries for sample time stamp, bottle number and sample status (success, bottle full, rinse error, user abort, distributor error, pump fault, purge fail, sample timeout, power fail and low main battery).

MEASUREMENTS - Stores up to 325,000 entries for selected measurement channels in accordance with the selected logging interval.

EVENTS - Ability to store up to 2000 entries in Sample History logging. Records Power On, Power Fail, Firmware Updated, Pump Fault, Distributor Arm Error, Low Memory Battery, Low Main Battery, User On, User Off, Program Started, Program Resumed, Program Halted, Program Completed, Grab Sample, Tube Change Required, Sensor Communication Errors, Cooling Failed, Heating Failed, Thermal Error Corrected.

#### Diagnostics

View event and alarm logs as well as maintenance diagnostics

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## Technical Data\*

### Sample Pump and Strainer

#### Sample pump

High-speed peristaltic, dual roller, with 0.95 ID x 1.6 OD cm (3/8" ID x 5/8" OD) pump tube;

Pump body IP37, Polycarbonate cover

#### Vertical lift

8.5 m using 8.8 m maximum of 3/8" Vinyl intake tube at sea level at 20 to 25 °C

#### Tubing

Pump tubing: 9.5 mm ID x 15.9 mm OD Silicone

Intake tubing: 1.0 - 4.75 m minimum length, 1/4" or 3/8" ID Vinyl or 3/8" ID Teflon-lined Polyethylene with protective outer cover (black or clear)

#### Sample volume repeatability

Typical: ±5% of 200 mL sample volume with: 4.6 m vertical lift, 4.9 m of 3/8" Vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m elevation

#### Sample volume accuracy

Typical: ±5% of 200 mL sample volume with: 4.6 m vertical lift, 4.9 m of 3/8" Vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m elevation

#### Sample transport velocity

0.9 m/s with 4.6 m vertical lift, 4.9 m of 3/8" Vinyl intake tubing, 21 °C and 1524 m elevation

#### Pump flow rate

4.8 L/min at 1 m vertical lift with 3/8" intake tube typical

#### Internal clock

±1 second per day at 25 °C

#### Intake

Strainers: Choice of Teflon and 316 Stainless Steel construction, or all 316 Stainless Steel in standard size, high velocity, and low profile for shallow depth applications

Purge: Air purged automatically before and after each sample; duration automatically compensates for varying intake line lengths

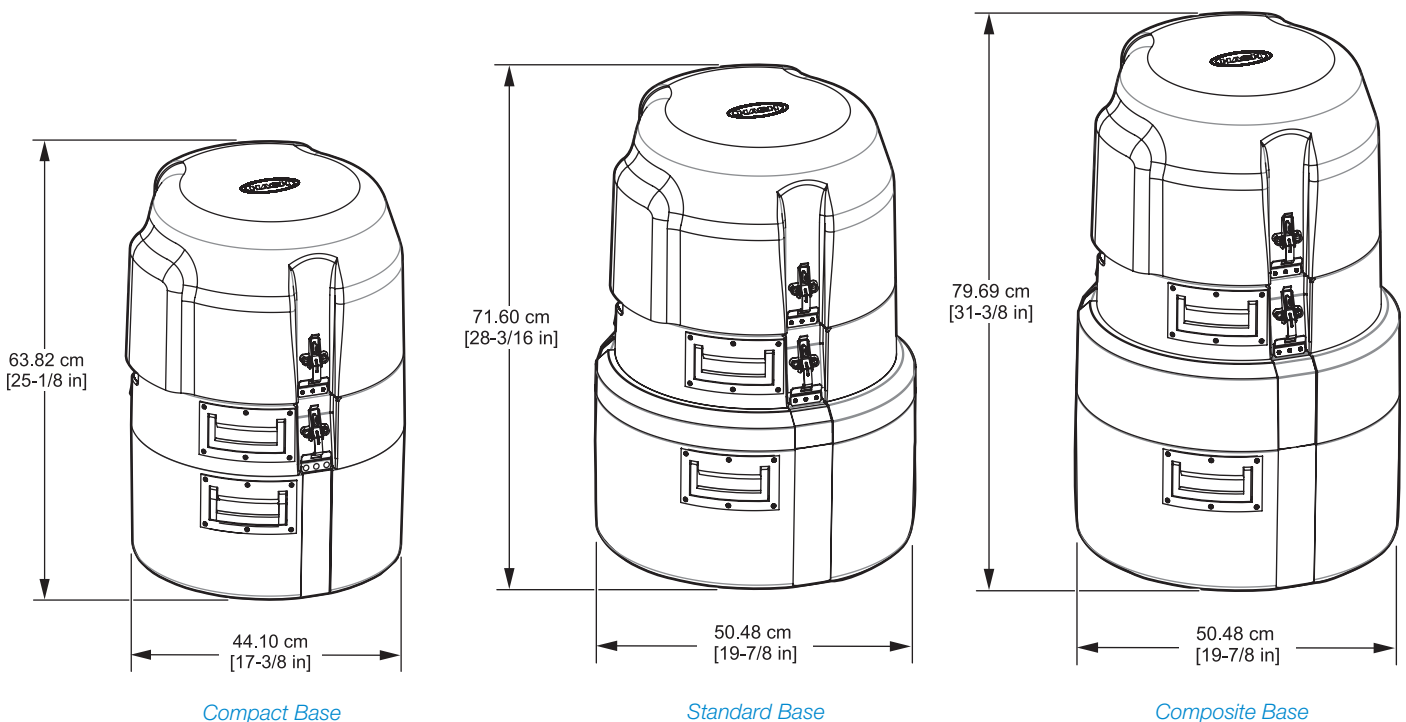
Rinse: Intake line automatically rinsed with source liquid prior to each sample, from 1 to 3 rinses

Retries or Fault: Sample collection cycle automatically repeated from 1 to 3 times if sample not obtained on initial attempt

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## Dimensions

The AS950 Portable Sampler is designed for indoor or outdoor use. No secondary enclosure is required when operated within the specified temperature range. The sampler consists of three main sections - the top cover, the center control system, and the bottle/base section held together by Stainless Steel latches which serve as the connection point for the optional suspension harness. The lockable top cover protects the controller from extreme weather and unauthorized use.



## Order Information

**ASP.XXXXXXXXXX** AS950 Portable Sampler  
Portable Sampler with AS950 Controller, available in various configurations and with several factory installed options. Please contact HACH LANGE for more information.

### Controller and Base Options

**8975** Compact insulated base for AS950 Portable Sampler  
**8976** Standard insulated base for AS950 Portable Sampler  
**8561** Composite insulated base for AS950 Portable Sampler

### Bottle Options and Accessories

**1918** 10 L Polyethylene bottle, with cap  
**6494** 20 L Polyethylene bottle, with cap  
**737** Set of (24) 1 L Polyethylene bottles, with caps  
**1369** Set of (24) 575 mL Polyethylene bottles, with caps  
**2348** Set of (8) 950 mL Glass bottles, with Teflon-lined caps  
**2189** Retainer for (24) 350 mL Glass bottles  
**1422** Retainer for (8) 1.9 L Glass / (8) 2.3 Polyethylene bottles or (24) 350 mL Glass / (24) 575 mL Polyethylene bottles  
**2347** Retainer for (8) 950 mL Glass bottles  
**1502** Container support  
**8996** Retainer/full container shut-off

### Distributors

**8582** Distributor with arm for 24 bottle standard base and 12 bottle compact base  
**8580** Distributor with arm for 24 bottle compact base  
**8584** Distributor with arm for 2, 4 and 8 bottle standard base and 8 bottle compact base

### Tubing and Strainers

**920** 7 m Vinyl intake tubing, 3/8" ID  
**922** 7 m Teflon-lined Polyethylene tubing, 3/8" ID (requires Connection Kit 2186)  
**926** Strainer, Teflon/Stainless Steel  
**2070** Strainer, 316 Stainless Steel  
**2071** Strainer, for shallow depth applications, 316 Stainless Steel

**2186** Connector Kit, for Teflon-lined Polyethylene tubing  
**4652** Strainer, high velocity and shallow depth  
**4600-15** Pump tubing, 4.5 m  
**4600-50** Pump tubing, 15 m  
**8964** Pump tube insert  
**9501400** Pump tube insert, non-contact liquid detect

### Factory Installed Options

**TWO SENSOR PORTS**  
Accepts HACH LANGE digital Differential pH, HACH LANGE digital AV9000 analyser with submerged area velocity flow and/or HACH LANGE digital US9000 ultrasonic level sensors

**RAIN/RS485 PORT**  
Accepts HACH LANGE Rain Gauge (not included) or can be used as RS485 communications

**NON-CONTACT LIQUID DETECT**  
Sample volume accuracy for applications that require complete tubing replacement

Please contact your local HACH LANGE representative for details.

### Inputs/Outputs

**9494500** IO9001 Module (connects through auxiliary port), includes 1 relay (high voltage)  
**9494600** IO9004 Module (connects through auxiliary port), includes multiple 0/4-20 mA outputs and inputs

### Accessories

**1355** Suspension harness (suspends the sampler)  
**9542** Manhole support bracket/spanner, 18 to 28 inches  
**9557** Manhole support bracket/spanner, 28 to 48 inches  
**5713000** Manhole support bracket, 18 to 27 inches  
**6987** Weatherguard fiberglass enclosure, 89 cm x 89 cm x 86 cm  
**6992** Weatherguard fiberglass enclosure, 91 cm x 66 cm x 135 cm  
**8713200** Solar Module, with 10 W panel and 12 VDC regulator  
**8754400** 12 V Lead Acid battery with 3 pin connector  
**8753500EU** EU Charger, Lead Acid, 3 pin, 230 V  
**8754500EU** Power supply, 3 pin connector, 230 V, EU plug  
**9504700EU** USB cable, A to A (EU)