AS950 PORTABLE SAMPLERS

Sampling has never been this easy.

The AS950 Portable Sampler makes programming, data transfer and operation more intuitive and virtually error-free.

Easiest and Most Intuitive Operation

The large full color 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 utilizes 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 28 pounds (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.

HACH®

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Specifications*

Sampling Features

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 Modes
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

Run Modes
Continuous or non-continuous

Status Screen
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

Alarms
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 Sample
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 (0.34 oz) increments from 10 to 10,000 mL (3.38 oz to 2.6 gal)

Interval Between Samples
Selectable in single increments from 1 to 9,999 flow pulses (momentary contact closure 25 ms or 5 to 12 Vdc pulse; 4-20 mA interface optional), or 1 to 9,999 minutes in one minute increments

Set Point 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

Datalogging
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

EVENT LOG
Stores up to 2000 entries. 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

Subject to change without notice.

Specifications*

AS950 Portable Sampler

Sampler Housing	Impact resistant ABS plastic, 3-section construction Double-walled base with 1 in. (2.54 cm) insulation, direct ice contact with bottles
Temperature	Operating: 0 to 49 °C (32 to 120°F)
	Liquid Crystal Display (LCD): -10 to 70°C (-14 to 158°F)
	Storage: -40 to 60°C (-40 to 140°F)
Power Requirements	12 Vdc supplied by optional a/c power converter or battery. Average current with pump running: 2.25 amps dc
AC Power Backup (Pump Controller Only)	Rechargeable 6 amp-hour gel lead acid battery takes over automatically with AC line power failure. Integral trickle charger maintains battery as full charge (factory installed option)
Solar Power Panel/Backup	12 Vdc regulated supply voltage, 5 watts minimum; optional 12 Vdc lead-acid or gel-electrolyte battery backup
Dimensions	Standard Base: 50.5 cm x 69.4 cm (19.9 x 27.3 in.)
	Compact Base: 44.1 x 61 cm (17.4 x 24 in.)
	Composite Base: 50.28 x 79.75 cm (19.8 x 31.4 in.)
Weight	Standard: 15 kg (35.6 lb.) with (24) 1-L polyethylene bottles; 14.8 kg (32.6 lb.) with 10 L (2.5gal) polyethylene bottle
	Compact Base: 12.2 kg (27 lb.) with (24) 575-mL polyethylene bottles; 12.9 kg (28.3 lb.) with 10 L (2.5-gal) polyethylene bottle
	Composite Base: 15 kg (36 lb.) with (1) 21 L (5.5 gal) polyethylene bottle

AS950 Controller

Housing	PC/ABS blend, NEMA 4X, 6, IP68, corrosion and ice resistant
Graphics Display	1/4 VGA, Color; self-prompting/menu-driven program
User Interface	Membrane switch keypad with 2 multiple function soft keys
Program Languages	Chinese, English, French, German, Italian, Spanish, Portuguese
Program Lock	Access code protection prevents tampering
Memory	Sample history: 4000 records; Data log: 325,000 records; Event log: 2000 records
Communications	USB and optional RS485 (Modbus)
AUX port inputs	One 0/4-20 mA input for flow pacing
Certifications	CE, UL

Sample Containers

Standard Base Capacity
(24) 1 L (0.26 gal) polyethylene or
(24) 350-mL (11.83 oz) glass bottles

(8) 2.3 L (0.6 gal) polyethylene or
(8) 1.9 L (0.5 gal) glass bottles

(4) 3.8 L (1 gal) polyethylene or
(4) 3.8 L (1 gal) glass bottles

(2) 3.8 L (1 gal) polyethylene or
(2) 3.8 L (1 gal) glass bottles

(1) 21 L (5.5 gal) polyethylene composite bottle or
(1) 15 L (4 gal) polyethylene composite bottle or
(1) 20 L (5.25 gal) polyethylene or
(1) 10 L (2.5 gal) polyethylene or
(1) 10 L (2.5 gal) glass

Compact Base Capacity
(24) 575 mL (19.44 oz) polyethylene bottles
(8) 950 mL (32.12 oz) glass bottles
(1) 10 L (2.5 gal) polyethylene bottle
(1) 10 L (2.5 gal) glass bottle

Composite Base
(1) 21 L (5.5 gal) polyethylene bottle

Ice Capacity
Compact Base: 3.9 kg (8.5 lb.) with (24) 575 mL PE bottles
Standard Base: 14.5 kg (32 lb.) with (24) 350 mL glass bottles

Subject to change without notice.

Specifications*

Sample Pump and Strainer

Sample Pump
High-speed peristaltic, dual roller, with 0.95 ID x 0.16 OD cm (3/8 ID x 5/8 in. OD) pump tube

Pump Body
IP37, polycarbonate cover

Vertical Lift
8.5 m (28 ft) using 8.8 m (29 ft) maximum of 3/8-in vinyl intake tube at sea level at 20 to 25 °C (68 to 77 °F)

Tubing
Pump tubing:
9.5 mm ID x 15.9 OD mm (3/8-in ID x 5/8-in. OD) silicone

Intake tubing: 1.0 to 4.75 m (3.0 to 15.5 ft) minimum length, ¼-in. or 3/8-in. ID vinyl or 3/8-in. 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 (15 ft) vertical lift, 4.9 m (16 ft) of 3/8- in vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m (5000 ft) elevation

Sample Volume Accuracy (typical)
±5% of 200 mL sample volume with: 4.6 m (15 ft) vertical lift, 4.9 m (16 ft) of 3/8- in. vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m (5000 ft) elevation

Transfer Velocity (typical)
0.9 m/s (2.9 ft/s) with: 4.6 m (15 ft) vertical lift, 4.9 m (16 ft) of 3/8-in. vinyl intake tubing, 21 °C (70 °F) and 1524 m (5000 ft) elevation

Pump Flow Rate
4.8 L/min (1.25 gpm) at 1 m (3 ft) vertical lift with 3/8-in intake tube typical

Internal Clock
±1 second per day at 25 °C (77 °F)

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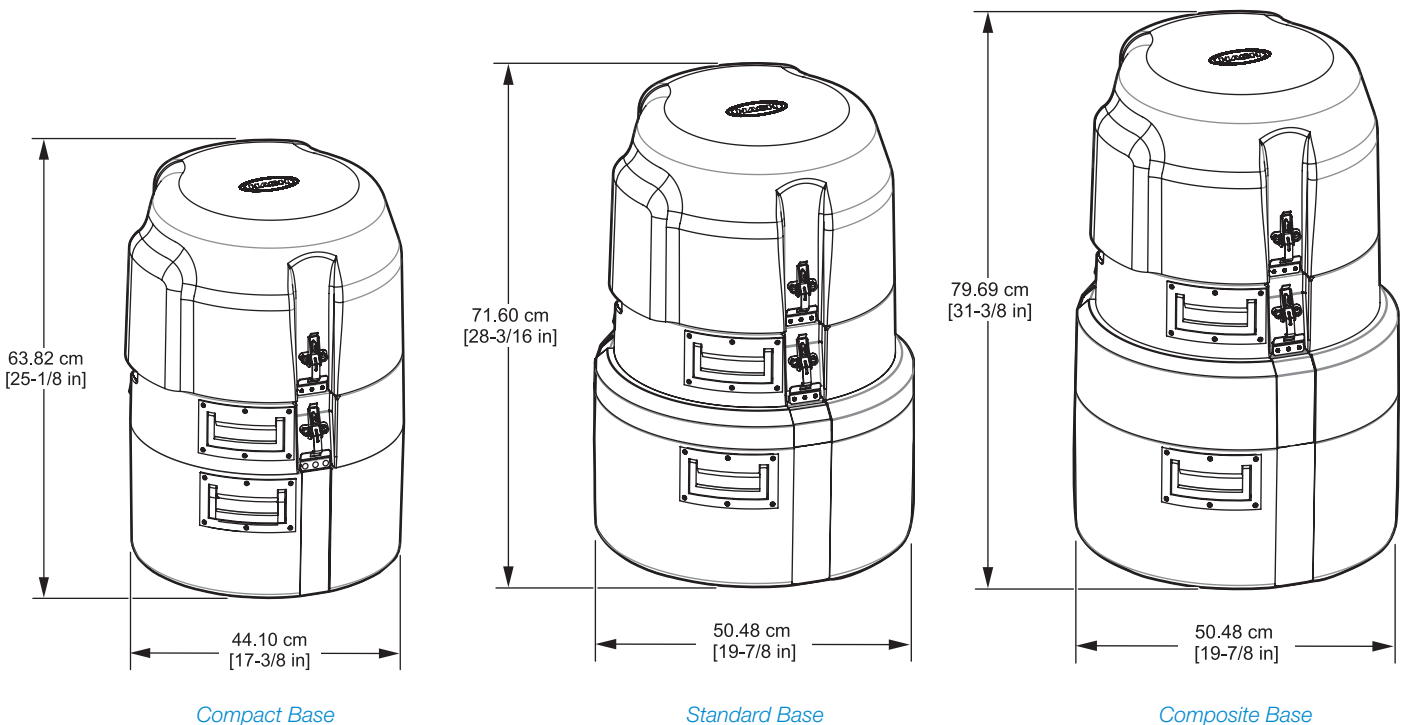
Rinse: Intake line automatically rinsed with source liquid prior to each sample, from 1 to 3 rinses

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

Subject to change without notice.

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.

63.82 cm [25-1/8 in]   44.10 cm [17-3/8 in]   *Compact Base*

71.60 cm [28-3/16 in]   50.48 cm [19-7/8 in]   *Standard Base*

79.69 cm [31-3/8 in]   50.48 cm [19-7/8 in]   *Composite Base*

Ordering Information

AS950 Portable Sampler Bundles

Includes portable base,12V battery, sample bottle(s), vinyl intake tubing (25 ft.), and Teflon/stainless steel strainer. To order different combinations, please contact Hach Company.

ASP.CXXXC121XX
Portable Compact Sampler with AS950 controller,
(1) 2.5 gal polyethylene bottle
ASP.CXXXC161XX
Portable Compact Sampler with AS950 controller,
(24) 575 mL polyethylene bottles and distributor arm
ASP.CXXXS121XX
Portable Standard Sampler with AS950 controller,
(1) 2.5 gal polyethylene bottle
ASP.CXXXS141XX
Portable Standard Sampler with AS950 controller,
(24) 1 L polyethylene bottles and distributor arm

Controller and Base Options

8975	Compact Insulated Base
8976	Standard Insulated Base
8561	Composite Insulated Base

Bottle Options

6559	2.5 Gallon Glass, with Teflon-lined cap
1918	2.5 Gallon Polyethylene, with cap
6494	5.5 Gallon Polyethylene, with cap
2214	Set of (2) 1 Gallon Glass, with Teflon lined caps
2215	Set of (2) 1 Gallon Polyethylene, with caps
2216	Set of (4) 1 Gallon Glass, with Teflon lined caps
2217	Set of (4) 1 Gallon Polyethylene, with caps
2348	Set of (8) 950 mL Glass, with Teflon lined caps
1369	Set of (24) 575 mL Polyethylene, with caps
737	Set of (24) 1 Liter Polyethylene, with caps

Bottle Accessories

2620	Retainer for (12) 950 mL Glass Bottles
2189	Retainer for (24) 350 mL Glass Bottles
1422	Retainer for (8) Glass, (8) Poly, (24) 575 mL Poly, and (24) 1 Liter Poly Bottles
2347	Retainer for (8) 950 mL Glass Bottles
2190	Retainer for 1 Gallon Glass and 1 Gallon Polyethylene 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

Intake Tubing and Strainers

920	25 ft. Vinyl Intake Tubing, 3/8-in ID
922	25 ft. Teflon Lined Polyethylene Tubing, 3/8-in. ID (requires Prod. No. 2186 Connection Kit)
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

Pump Tubing

4600-15	Pump Tubing, 15 ft.
4600-50	Pump Tubing, 50 ft.
8964	Pump Tube Insert
9501400	Pump tube insert, non-contact liquid detect

Factory Installed Options (contact sales representative)

Two Sensor Ports
Accepts Hach digital Differential pH, Hach digital AV9000 analyzer with submerged area velocity flow and/or Hach digital US9000 ultrasonic level sensors
Rain/RS485 Port
Accepts Hach 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

Inputs/Outputs

9494500 IO9001 Module (connects through auxiliary port) single relay (high voltage)
9494600 IO9004 Module (connects through auxiliary port) includes multiple 0/4–20 mA outputs and inputs for recorded measurements and to receive measurements from external instruments, four low voltage, contact closure, and four relays controlled by alarm events

Accessories

1355	Suspension Harness (suspends the sampler)
9542	Manhole Support Bracket/Spanner, 18 to 28 in.
9557	Manhole Support Bracket/Spanner, 28 to 48 in.
5713000	Manhole Support Bracket, 18 to 27 in.
6987	Weatherguard Fiberglass Enclosure, 89 x 89 x 86 cm (35 x 35 x 34 in.)
6992	Weatherguard Fiberglass Enclosure, 91 x 66 x 135 cm (36 x 26 x 53 in.)
8713200	Solar Module, with 10 W panel and 12 Vdc regulator
8713300	Solar Module, with 20 W panel and 12 Vdc regulator
8713400	Solar Module, with 30 W panel and 12 Vdc regulator
8713500	Solar Module, with 40 W panel and 12 Vdc regulator
8713600	Solar Module, with 50 W panel and 12 Vdc regulator
8754400	Battery, 12 volt, Lead Acid
8753500	US Charger, 115V, Lead Acid
8754500	US Power Supply, 100-120V, US plug
9504700	USB Cable, A to A

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