

Laboratory & Field Instruments: Sigma Samplers

See Inside!.

- **Build your own, customized sampler system.**
See page 112.
- **SD900 Controller.**
An easy-to-use, reliable, low-maintenance sampling solution.
See page 113.
- **Product bundles for Portable, Refrigerated, and All Weather Refrigerated bases.**
See pages 115-117.
- **For superior solids handling, check out the “Dipper.”**
See page 121.
- **Protect your equipment from the elements with Weatherguard Enclosures.**
See page 122.



Be Right™

Automatic Samplers

Samplers

Reliable results begin with sampling!



Automatic samplers offer...

- Convenience
- Consistency
- Repeatability

...for more representative samples than manual sampling!

Primary applications for samplers are:

- Monitoring Influent and Effluent waters (Wastewater Treatment Facilities and/or Industrial Dischargers)
- Compliance monitoring (Private Testing Labs, State Enforcement Agencies)
- Environmental/Stormwater run-off monitoring

Hach offers a full line of equipment to meet your automatic sampling needs:

- **SD900 Controller**
Easy set-up and reduced maintenance
- **900Max Controller**
Advanced measurement capabilities
- **Portable Bases**
Compact and standard sizes
- **Indoor Refrigerated Bases**
Vinyl and stainless steel finishes
- **All Weather Refrigerated Base**
Maximum protection from the elements
- **Dipper**
2" inlet accommodates large particulates
- **Accessories**
From bottles to solar panels, and everything in between

Select from our most popular sampling kits or customize your own.

Hach Sampler Rental Programs

Hach offers select samplers for long- or short-term rentals. Call 800-227-4224 for details on Hach's rental offerings, as well as our Rent-to-Own program!



Choosing the Sampler for You

Select base options from portable compact, portable standard, indoor refrigerated (with vinyl or stainless steel cabinet) or all-weather refrigerated, as well as single or multi-bottle sets.



Samplers

	PORTABLE				REFRIGERATED			ALL-WEATHER	
	SD900 Compact	SD900 Std	900MAX Compact	900MAX Std	SD900	900MAX	Dipper	SD900	900MAX
APPLICATIONS									
Waste Water Treatment Plants	■	■	■	■	■	■	■	■	■
Drinking Water					■	■		■	■
Industrial Water	■	■	■	■	■	■		■	■
Environmental	■	■	■	■					
Collection Systems	■	■	■	■	■	■	■	■	■
Food and Beverage	■	■	■	■	■	■		■	■
Pulp and Paper	■	■	■	■	■	■	■	■	■
FEATURES									
SDI-12 functionality (Compatible with Hydrolab sondes)	■	■			■			■	
Automatic Sampling	■	■	■	■	■	■	■	■	■
Portable	■	■	■	■					
Stationary Site					■	■	■	■	■
AC Power	■	■	■	■	■	■	■	■	■
Battery Power	■	■	■	■					
All Weather								■	■
Remote Pump			■	■		■			■
Solenoid Valve Control for Pressurized Pipe Sampling			■	■		■			■
Interchangeable Composite and Discrete Sampling	■	■	■	■	■	■		■	■
Pump Tubing Life > 20,000 Cycles	■	■			■			■	
Integral Flow Monitoring			■	■		■			■
pH/Temp ORP	■*	■*	■	■	■*	■		■*	■
DO/Conductivity	■*	■*	■	■	■*	■		■*	■
Rain Gauge			■	■		■			■
4-20 mA Outputs			■	■		■			■
4-20 mA Inputs	■**	■**	■	■	■**	■	■**	■**	■
Alarm Relays			■	■		■			■
Flow Proportional Sampling Input	■	■	■	■	■	■		■	■
Analog Inputs			■	■		■		■	■
Modem (USA, Canada)			■	■		■		■	■
Solar Power System (Option)	■	■	■	■					

*When using SDI-12 and Data Sonde. **For flow pacing only.

Build Your Own Sampler Set-up

Customization Options for Portable Base



1. CONTROLLER

SD900

- ☐ 8925SD SD900 controller, center, lid
- ☐ 8975 compact base
- ☐ 8976 standard base

900Max

- ☐ 8930 900Max controller, center, lid
- ☐ 8975 compact base
- ☐ 8976 standard base

2. POWER

SD900

- ☐ 8754400 Battery
- ☐ 8753500US Battery Charger 115v US plug
- ☐ 8754500US Power Supply 100-120v, 3 pin connection
- ☐ 8757400 A/C Power Back up, 16" cable, 3 pin connection
- ☐ 5698200 A/C Power Back up, 28" cable, 3 pin connection

900Max

- ☐ 1414 Battery (Gel Electrolyte, 12 Vdc, 6 amp hour) Use charger 913US
- ☐ 913US Battery Charger 90-250 Vac, US plug
- ☐ 4455100 Power Supply 100-120v, 2 pin connection
- ☐ 3670 A/C Power Back Up 2 pin connection

3. BOTTLE KITS

Include container, retainer, full bottle shut off and/or distributor arm.

Compact Base

- ☐ PC010025 (1) 10 L (2.5 gal) glass bottle
- ☐ PC010030 (1) 10 L (2.5 gal) poly bottle
- ☐ PC240575 (24) 575 mL poly bottles

Standard Base

- ☐ PS010025 (1) 10 L (2.5 gal) glass bottle
- ☐ PS010030 (1) 10 L (2.5 gal) poly bottle
- ☐ PS010040 (1) 15 L (4.0 gal) poly bottle
- ☐ PS240350 (24) 350 mL glass bottles
- ☐ PS241000 (24) 1 L poly bottles

4. TUBING

- ☐ 921 Tubing, Teflon Lined PE, 10 ft. 3/8 in.*
- ☐ 922 Tubing, Teflon Lined PE, 25 ft. 3/8 in.*
- ☐ 925 Tubing, Teflon Lined PE, 100 ft. 3/8 in.*
**Requires teflon connection kit, Prod. No. 2186*
- ☐ 920 Tubing, Vinyl, 25 ft. intake 3/8 in.
- ☐ 923 Tubing, Vinyl, 100 ft. intake 3/8 in.
- ☐ 924 Tubing, Vinyl, 500 ft. intake 3/8 in.

5. STRAINERS

- ☐ 926 Strainer, Teflon/Stainless Steel
- ☐ 4652 Strainer, High Velocity/ Shallow Depth
- ☐ 2071 Strainer, .406 in. Dia., 316 SS
- ☐ 2070 Strainer, 1 in. Dia., 316 SS
- ☐ 903 Strainer, Teflon/Stainless Steel, 11 in.

Customization Options for Indoor Refrigerated Base (115 Vac)



1. CONTROLLER & CABINET

SD900

- ☐ 8927SD SD900 controller, vinyl base, 115 Vac
- ☐ 98927SD SD900 controller, stainless steel base, 115 Vac

900Max

- ☐ 8933 900Max controller, vinyl base, 115 Vac
- ☐ 98933 900Max controller, stainless steel base, 115 Vac

2. AC POWER BACKUP

SD900

- ☐ 8757400 A/C Power Back up, 16" cable, 3 pin connection (Factory-installed option.)

900Max

- ☐ 8988 A/C Power Back up, 2 pin connection (Factory-installed option.)

3. BOTTLE KITS

Include container, retainer, full bottle shut off and/or distributor arm.

- ☐ RF010025 Kit, 10 L (2.5 gal), Glass
- ☐ RF010030 Kit, 10 L (2.5 gal), Poly
- ☐ RF010060 Kit, 21 L (5.5 gal), Poly
- ☐ RF040030 Kit, 4 Bottle, 10 L (2.5 gal), Poly
- ☐ RF240350 Kit, 24 Bottle 350 mL, Glass
- ☐ RF241000 Kit, 24 Bottle 1 L, Poly

4. TUBING

- ☐ 921 Tubing, Teflon Lined PE, 10 ft. 3/8 in.*
- ☐ 922 Tubing, Teflon Lined PE, 25 ft. 3/8 in.*
- ☐ 925 Tubing, Teflon Lined PE, 100 ft. 3/8 in.*
**Requires teflon connection kit, Prod. No. 2186*
- ☐ 920 Tubing, Vinyl, 25 ft. intake 3/8 in.
- ☐ 923 Tubing, Vinyl, 100 ft. intake 3/8 in.
- ☐ 924 Tubing, Vinyl, 500 ft. intake 3/8 in.

5. STRAINERS

- ☐ 926 Strainer, Teflon/Stainless Steel
- ☐ 4652 Strainer, High Velocity/ Shallow Depth
- ☐ 2071 Strainer, .406 in. Dia., 316 SS
- ☐ 2070 Strainer, 1 in. Dia., 316 SS
- ☐ 903 Strainer, Teflon/Stainless Steel, 11 in.

Customization Options for All-Weather Refrigerated Base (115 Vac)



1. CONTROLLER & CABINET

SD900

- ☐ 3540SDR SD900 controller, 115 Vac
- ☐ 3540SDRH SD900 controller, 115 Vac with controller compartment heater (Factory-installed option.)

900Max

- ☐ 3543R 900Max controller, 115 Vac
- ☐ 3543RH 900Max controller, 115 Vac, with controller compartment heater (Factory-installed option.)

2. AC POWER BACKUP

SD900 / 900MAX

- ☐ 5698200 A/C Power Back up, 28" cable, 3 pin connection

3. BOTTLE KITS

Include container, retainer, full bottle shut off and/or distributor arm.

- ☐ AW010060 Kit, 21 L (5.5 gal), Poly
- ☐ AW040030 Kit, 4 Bottle, 10 L (2.5 gal), Poly
- ☐ AW240350 Kit, 24 Bottle, 350 mL, Glass
- ☐ AW241000 Kit, 24 Bottle, 1 L, Poly

4. TUBING

- ☐ 921 Tubing, Teflon Lined PE, 10 ft. 3/8 in.*
- ☐ 922 Tubing, Teflon Lined PE, 25 ft. 3/8 in.*
- ☐ 925 Tubing, Teflon Lined PE, 100 ft. 3/8 in.*
**Requires teflon connection kit, Prod. No. 2186*
- ☐ 920 Tubing, Vinyl, 25 ft. intake 3/8 in.
- ☐ 923 Tubing, Vinyl, 100 ft. intake 3/8 in.
- ☐ 924 Tubing, Vinyl, 500 ft. intake 3/8 in.

5. STRAINERS

- ☐ 926 Strainer, Teflon/Stainless Steel
- ☐ 4652 Strainer, High Velocity/ Shallow Depth
- ☐ 2071 Strainer, .406 in. Dia., 316 SS
- ☐ 2070 Strainer, 1 in. Dia., 316 SS
- ☐ 903 Strainer, Teflon/Stainless Steel, 11 in.

**Controller + Base + Power
+ Bottle Kit + Tubing + Strainer
+ Accessories**

Your sampling solution for ease of use, reliability, and low maintenance costs.

- Obtain and preserve a repeatable sample volume at a timed interval or after a predetermined volume of flow
- Available in portable, refrigerated or all-weather refrigerated configurations to meet your sampling needs
- Large universal icon keys make set up simple, reducing program errors
- Improved pump means fewer clogs and exceptional performance, even at heights up to 25 feet
- Spring loaded rollers reduce wear and tear on the pump and tubing
- Easy access to dessicant from the side of the controller —no need to remove sampler from base
- 20x longer pump tubing life than other samplers means less down time and lower maintenance costs
- NEW SDI-12 functionality allows for communication with sondes (order Prod. No. 87390SD)



Data management at your fingertips.

Use Hach's NEW SampleView™ software to view and download sample history to a computer, save templates, upgrade firmware in the field, and download event logs. Reduce time required for manual recordkeeping.

Build your own SD900 sampling system using these bases:

Prod. No. Description

PORTABLES

8925SD	Sigma SD900 Controller with Center Section and Cover (Select either a compact or standard insulated base)
8975	Portable Compact Insulated Base
8976	Portable Standard Insulated Base

INDOOR REFRIGERATED

8927SD	Sigma SD900 Controller with Refrigerated (Vinyl) Base Cabinet, 115v
98927SD	Sigma SD900 Controller with Refrigerated (Stainless Steel) Base Cabinet, 115v

ALL WEATHER REFRIGERATED

3540SDR	Sigma SD900 Controller with All Weather Refrigerated Base Cabinet, 115v
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For a complete sampler set up, you will need to select a controller and base, bottle option, intake tubing, strainer, and power supply. See pages 112 for product numbers and pricing.

Specifications*

Controller Housing

High impact injection-molded, ABS/PC plastic
Submersible, watertight, dust-tight, corrosion- and ice-resistant
NEMA 4X, 6, IP67

Certification

Controller: CE, RoHS

Graphics Display

128 x 64 dot matrix backlit LCD, visible in direct sunlight

User Interface

Self prompting/menu driven program
13-key embossed keypad including power key, 4 function keys, 8 navigation keys, and LED indication

Data Logging

Store up to 510 entries in Sample History log including sample time stamp, bottle number, and status of sample (success, bottle full, rinse error, user abort, distributor error, pump fault, purge fail, sample timeout, power fail and low main battery)

Event Log

Includes 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, pump tube change required

Sampling Pacing Modes

Composite and discrete, multiple bottle time, multiple bottle flow, single bottle time, single bottle flow, flow with time over ride, variable interval, user start/stop, and stormwater, timed bottle sets and set point sampling on a combination of external trigger and/or up to four SDI-12 parameters.

Overload Protection

Internal software-protected
7 amp fuse

Diagnostics

Tests pump, distributor, keypad, LCD, and liquid detect calibration

Program Language

English, Spanish, French, Italian, German, Portuguese, Czech, Turkish, Chinese, Polish, and Hungarian

Program Lock

Access code protection prevents tampering of program and system settings

Program Delay

Programmable sampler start time/date or programmable number of counts to expire before program can start

**Subject to change without notice.*

For more information, call to request Literature #2569, #2590, #2591, or visit www.hach.com

900MAX Controller

Samplers



Manages and monitors level, flow, velocity, rainfall, pH or ORP, dissolved oxygen and conductivity.

- *Patented* Constant Time/Variable Volume feature varies sample size in proportion to flow rate, capturing flow-weighted samples on the first try*
- *The sample volume increases and decreases with the flow, ensuring that proportional samples are taken at even intervals throughout the sampling period*
- *Large 8 line x 40 character screen, combined with 12 data-logging channels maximizes your flexibility for advanced sampling*

*Patent No. 5587926

Specifications*

Controller Housing

High-Impact, injection-molded ABS; submersible, watertight, dust-tight, corrosion, and ice resistant; NEMA 4X, 6

Certification

CE

Graphics Display

8 line x 40 character alphanumeric, back-lit liquid-crystal graphics display.

Self prompting/menu driven program.

User Interface

21 key membrane switch keypad with 4 multiple function soft keys

Data Logging

Records program start time and date, sample volume collected, sample volume remaining, stores up to 400 sample collection times/dates, all program entries, operational status including number of minutes or pulses to next sample, bottle number, number of samplers collected, number remaining, sample volume collected, volume remaining, sample identification, and all logged data. Up to 200 events logged, including alarm conditions, program run/stop events, etc.

Set Point Sample Trigger

When equipped with integral flow meter, pH/temperature/ORP meter, conductivity, and/or DO monitoring options, sampling can be triggered upon an upset condition when field selectable limits are exceeded

Sampling Modes

Multiple bottle time, multiple bottle flow, composite time, composite flow, composite multiple bottle time, composite multiple bottle flow, flow with time override, variable interval, start/stop, and level actuation

Overload Protection

5 amp dc line fuse for pump; 5 amp dc line fuse for ac power converter

Diagnostics

Tests keypad, RAM, ROM, pump, distributor, liquid sensor, and velocity signal

Program Languages

Czech, Danish, English, French, German, Swedish

Program Lock

Access code protection prevents tampering

*Subject to change without notice.

Note: Constant Time/Variable Volume option requires purchase of factory installed integral flow meter option. See pages 473-494 for Flow Products.

Build your own 900MAX sampling system using these bases:

Prod. No. Description

PORTABLES

8930	Sigma 900MAX Controller with Center Section and Cover (Select either a compact or standard insulated base)
8975	Portable Compact Insulated Base
8976	Portable Standard Insulated Base

INDOOR REFRIGERATED

8933	Sigma 900MAX Controller with Refrigerated (Vinyl) Base Cabinet, 115v
98933	Sigma 900MAX Controller with Refrigerated (Stainless Steel) Base Cabinet, 115v

ALL WEATHER REFRIGERATED

3543R	Sigma 900MAX Controller with All Weather Refrigerated Base Cabinet, 115v
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For a complete sampler set up, you will need to select a controller and base, bottle option, intake tubing, strainer, and power supply. See page 112 for product numbers and pricing. Contact Hach Company for Factory installed options and pricing for 900MAX Advanced Sampling parameters such as level, flow, velocity, rainfall, pH or ORP, dissolved oxygen and conductivity.

For more information, call to request Literature #2565, #2567, #2571, or visit www.hach.com



Perfectly suited for remote locations and confined spaces.

Durable, Heavy-duty Construction

- Molded ABS exterior withstands harsh environments
- Double-walled insulated base keeps samples cool
- Select from either standard sized or compact sized base
- Either can be quickly converted between composite and discrete sampling right in the field
- Compact base model is specifically designed for use in 18 in. manholes
- Efficient design and flip-up handles make carrying easy



*Photo above shows SD900 controller option.
Use Portable Bases with either SD900 or 900MAX controllers.*

Bundled systems below include controller, base, 6 amp-hour 12 Vdc battery, 115 Vac power converter, battery charger, sample bottle(s), bottle retainer, 25' of vinyl intake tubing, and Teflon®/Stainless Steel strainer.

<u>Prod. No.</u>	<u>Description</u>
WITH SD900 CONTROLLER	
900SDPC1	Compact Portable Sampler w/ SD900 controller & 10 L (2.5 gal.) bottle
900SDPC24	Compact Portable Sampler w/ SD900 controller & 24 575 mL bottles
900SDPS1	Standard Portable Sampler w/ SD900 controller & 10 L (2.5 gal.) bottle
900SDPS24	Standard Portable Sampler w/ SD900 controller & 24 1 L bottles
WITH 900MAX CONTROLLER	
900MAXPC1	Compact Portable Sampler w/ 900MAX controller & 10 L (2.5 gal.) bottle
900MAXPC24	Compact Portable Sampler w/ 900MAX controller & 24 575 mL bottles
900MAXPS1	Standard Portable Sampler w/ 900MAX controller & 10 L (2.5 gal.) bottle
900MAXPS24	Standard Portable Sampler w/ 900MAX controller & 24 1 L bottles

To customize your sampling set up see accessories on pages 118-120.

**For more information, call to request
Literature #2565, #2591, or visit www.hach.com**

Specifications*

Dimensions

With Compact Base and 10 L (2.5 gal.) poly. container:
Diameter 44.1 cm (17-3/8"), Height 61 cm (24"),
Weight 12.9 kg (28.3 lbs.).

With Standard Base and 10 L (2.5 gal.) poly. container:
Diameter 50.5 cm (19-7/8"), Height 69.4 cm (27-3/16"),
Weight (14.8 kg (32.6 lbs.))

Power Requirements

12 Vdc (supplied by 12 Vdc battery or AC adapter)

Sample Cooling

Icing Capacity

Compact Base: 3.9 kg (8-1/2 lbs.) with (24) 575 mL bottles

Standard Base: 14.5 kg (32 lbs.) with (24) 350 mL glass bottles

Temperature Range

Storage: -30 to 60°C (-22 to 140°F)

Operating: 0 to 50°C (32 to 122°F)

**Subject to change without notice.*

Indoor Refrigerated Bases

Ideal for monitoring influent and effluent waters.



Photo above shows SD900 Controller option.
Use Refrigerated Bases with either SD900 or 900MAX controllers.

The Corrosion Seal of Approval

- Endures humid and corrosive environments
- Available in either vinyl or stainless steel finishes
- Custom-designed airsensing thermostat controls refrigeration temperature
- A high efficiency compressor/condenser assembly, wraparound evaporator, and rigid foam insulation ensure optimum 39°F (4°C) sample temperature
- Forced air blower and front ventilation provide the flexibility to position the sampler either against a wall or inside a sampler enclosure



Specifications*

Power Requirements

115 Vac, 60 Hz (230 Vac optional)
Compressor Current: 1.5-2.0 A. running. Locked rotor current 12 Amps
Overload Protection: 5 amp DC line fuse for Pump, 1 amp DC line fuse (AC power converter)
Compressor: Thermal overload relay opens at 110°C (230°F)

Optional 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 at full charge (factory installed option).

Sample Cooling

Refrigeration: 1/10 HP, 75 Watt, 400 BTU/hr. compressor, 120 CFM condenser fan; 3 sided wraparound plate type evaporator; rigid foam insulation; air sensing thermostat capable of maintaining sample liquid at 4°C (39°F) in ambient temperatures up to 49°C (120°F); accurate to ±0.8°C (1.5°F); magnetic door seal; refrigerator body is 22 gauge steel with vinyl laminate overcoating; refrigeration components and copper plumbing are corrosion protected with conformal coating.

Temperature Range

Storage: -30 to 60°C (-22 to 140°F)
Operating: 0 to 50°C (32 to 122°F)

*Subject to change without notice.

Bundled systems below include controller, vinyl refrigerator, sample bottle(s), bottle retainer, 25' of vinyl intake tubing, and Teflon®/Stainless Steel strainer.

Prod. No. Description

WITH SD900 CONTROLLER

- 900SDR1 Refrigerated Sampler** w/ SD900 controller
115 Vac w/ 21 L (5.5 gal.) bottle
- 900SDR13 Refrigerated Sampler** w/ SD900 controller
115 Vac w/ 10 L (2.5 gal.) bottle
- 900SDR24 Refrigerated Sampler** w/ SD900 controller
115 Vac w/ 24 L bottles

WITH 900MAX CONTROLLER

- 900MAXR1 Refrigerated Sampler** w/ 900MAX controller
115 Vac w/ 21 L (5.5 gal.) bottle
- 900MAXR13 Refrigerated Sampler** w/ 900MAX controller
115 Vac w/ 10 L (2.5 gal.) bottle
- 900MAXR24 Refrigerated Sampler** w/ 900MAX controller
115 Vac w/ 24 L bottles

To customize your sampling set up see accessories on pages 118-120.

For more information, call to request
Literature #2567, #2590, or visit www.hach.com

All-Weather Refrigerated Bases

Stands up to environmental extremes.

Built Better from the Top Down!

- Durable construction provides superior corrosion and UV resistance
- Top mounted compressor is away from standing water, rodents and heavy corrosive gases found at floor level; heat from the compressor is dissipated in to the air, not in to the sample compartment
- Accurate temperatures are assured with microprocessor thermal control system, not simply a “warmer” “colder” dial
- Lockable controller compartment prevents program tampering
- Mechanical door latch with compressible gasket ensures positive seal, even with wide temperature fluctuations
- Lip overhangs door seal, preventing precipitation from entering sample containers

The Name “All Weather” is No Exaggeration

- Designed to operate anywhere—indoors or out—without a secondary enclosure
- Leveling feet accommodate uneven surfaces
- Factory installed controller compartment heater option for operation in temperatures from -40 to 120°F
- Lockable lid protects pump tubing
- Sidewall ventilation system allows positioning against a wall

Take a video tour of this sampler at:
www.hach.com/videos

Bundled systems below include controller, All-Weather Refrigerated cabinet, sample bottle(s), bottle retainer, 25' of vinyl intake tubing, and Teflon®/Stainless Steel strainer.

Prod. No.	Description
WITH SD900 CONTROLLER	
900SDRAWRS1	All-Weather Sampler w/ SD900 controller 115 Vac w/ 21 L (5.5 gal.) bottle
900SDRAWRS13	All-Weather Sampler w/ SD900 controller, 115 Vac w/ 10 L (2.5 gal.) bottle
900SDRAWRS24	All-Weather Sampler w/ SD900 controller, 115 Vac w/ 24 1 L bottles
WITH 900MAX CONTROLLER	
900MAXAWRS1	All-Weather Sampler w/ 900MAX controller 115 Vac w/ 21 L (5.5 gal.) bottle
900MAXAWRS13	All-Weather Sampler w/ 900MAX controller, 115 Vac w/ 10 L (2.5 gal.) bottle
900MAXAWRS24	All-Weather Sampler w/ 900MAX controller, 115 Vac w/ 24 1 L bottles

To customize your sampling set up see accessories on pages 118-120.

For more information, call to request
Literature #2571, #2569, or visit www.hach.com



Complete
Sampler Kits
include
everything you
need to start
sampling!

Photo above shows SD900 controller option.
Use All Weather Bases with either SD900 or 900MAX controllers.

Specifications*

Environmentally Safe Refrigerant

The All Weather Refrigerated Sampler is provided with environmentally safe non-CFC refrigerant.

Dimensions (H x D x W)

142 x 81 x 76 cm (56 x 32 x 30 in.)

Weight

118 kg (260 lbs)

Power Requirements

115 Vac, 60 Hz (230 Vac optional). Compressor Running Amperage 1.5-2.0 A. Locked rotor current 12 Amps. Overload Protection: 5 amp DC line fuse for Pump, 1 amp DC line fuse (AC power converter); Compressor: Thermal overload relay opens at 110°C (230°F).

Optional 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 at full charge (factory installed option).

Sample Cooling

Refrigeration: Top mounted compressor and fan-forced air cooled condenser; 3-sided wrap-around evaporator plate; 2" rigid foam insulation; microprocessor controlled thermostat maintains sample liquid at 4°C (±1°C); frost free; non-CFC R134A refrigerant; compression gasket door seal; refrigeration components and plumbing are corrosion protected with conformal coating.

Recovery Time with door open: 1 min. in 24°C (75°F) ambient and 4°C sample temperature, 5 minutes.

Pull Down Time: From 24°C (75°F) to 4°C (39°F), 15 minutes.

Temperature Range

Operating Temperature: 0 to 50°C (32 to 122°F)

Storage: -30 to 60°C (-22 to 140°F)

With optional controller compartment heater: -40 to 50°C (-40 to 122°F)

*Subject to change without notice.

Samplers

Find it here... Buy it today on www.hach.com
U.S. customers only.



Sampling Accessories

Samplers

Prod. No. Description

ALL-WEATHER REFRIGERATED SAMPLERS

6613100 All Weather Sampler Cabinet Anchor Mounting Kit

REFRIGERATED SAMPLERS

2143S Lockable hasp for Refrigerated cabinet
8963 Cover for Refrigerated cabinet with 900Max
6692000 Cover for Refrigerated cabinet with SD900

PORTABLE SAMPLERS

1355 Portable Sampler Suspension Harness
9542 Manhole Spanner bar, 18-28", for Portable Sampler
9557 Manhole Spanner bar, 28-48", for Portable Sampler
5713000 Manhole Support Bracket, 18-27", for Portable Sampler

BOTTLE KITS

AW010060 All Weather Sampler Bottle Kit, with (1) 5.5 gal poly bottle with cap, full bottle shut off and tube support
AW040030 All Weather Sampler Bottle Kit, with (4) 2.5 gal poly bottles with caps, and distributor arm
AW240350 All Weather Sampler Bottle Kit, with (24) 350mL glass bottles with caps, retainer, tray and distributor arm
AW241000 All Weather Sampler Bottle Kit, with (24) 1 L poly bottles with caps, retainer, tray and distributor arm
PC010025 Compact Portable Bottle Kit, with (1) 2.5 gal glass bottle with cap and full bottle shut off
PC010030 Compact Portable Bottle Kit, with (1) 2.5 gal poly bottle with cap and full bottle shut off
PC240575 Compact Portable Bottle Kit, with (24) 575 mL poly bottles with caps and full bottle shut off
PS010025 Standard Portable Bottle Kit, with (1) 2.5 gal glass bottle with cap, and full bottle shut off
PS010030 Standard Portable Bottle Kit, with (1) 2.5 gal poly bottle with cap, and full bottle shut off
PS010040 Standard Portable Bottle Kit, with (1) 4 gal poly bottle with cap and full bottle shut off
PS240350 Standard Portable Bottle Kit, with (24) 350 mL glass bottles with caps, retainer and full bottle shut off
PS241000 Standard Portable Bottle Kit, with (24) 1 L poly bottles with caps, retainer and full bottle shut off
RF010025 Refrigerated Bottle Kit, with (1) 2.5 gal glass bottle with cap, and full bottle shut off

Prod. No. Description

RF010030 Refrigerated Bottle Kit, with (1) 2.5 gal poly bottle with cap, and full bottle shut off
RF010060 Refrigerated Bottle Kit, with (1) 5.5 gal poly bottle with cap, full bottle shut off and tube support
RF040030 Refrigerated Bottle Kit, with (4) 2.5 gal poly bottles with caps, and distributor arm
RF240350 Refrigerated Bottle Kit, with (24) 350 mL glass bottles with caps, retainer and full bottle shut off
RF241000 Refrigerated Bottle Kit, with (24) 1 L poly bottles with caps, retainer and full bottle shut off

BOTTLES

6498 5.5 gal poly container with cap
1367 4.0 gal poly container with cap
6559 2.5 gal glass container with cap
6494 5.5 gal poly container with cap
1918 2.5 gal poly container with cap
2318 Set of (2) 2.5 gal glass containers with caps
2215 Set of (2) 1 gal poly containers with caps
2316 Set of (2) 2.5 gal poly containers with caps
2317 Set of (4) 2.5 gal glass containers with caps
2315 Set of (4) 2.5 gal poly containers with caps
2217 Set of (4) 1 gal poly containers with caps
2216 Set of (4) 1 gal glass containers with caps
657 Set of (8) 2.3 L poly containers with caps
1118 Set of (8) 1.9 L glass containers with caps
1369 Set of (24) 575 mL poly containers with caps
732 Set of (24) 350 mL glass containers with caps
737 Set of (24) 1 L poly containers with caps

RETAINERS

1502 Container support for standard base with 2.5 gal glass or poly bottles for composite sampling
2190 Positioner and Retainer for (8) 950 mL bottle sampling, use with compact portable base
2038 Bottle positioner for 2 and 4 bottle sampling; use with refrigerated base
1322 Retainer for (24) 1 L and 8 bottle sampling, use with Refrigerated and All Weather Refrigerated Bases
1422 Retainer for (24) 1 L and 8 bottle sampling, use with standard portable base
2189 Retainer for (24) 350 mL bottles, use with standard portable base
1056 Retainer for (24) 350 mL glass bottles, use with Refrigerated and All Weather Refrigerated bases
1511 Bottle tray for 8 and 24 bottle sampling, use with Refrigerated and All Weather Refrigerated bases



Discrete Bottle Kit
Prod. No. AW040030



Composite Bottle Kit
Prod. No. PC010030



Discrete Bottle Kit
Prod. No. RF241000

Prod. No. Description

TUBE SUPPORT

- 8986** Composite sampling tube support with tube, use with Refrigerated base
- 8838** Composite sampling tube support with tube, use with All Weather Refrigerated base
- 3527** Extension tube for composite sampling, use with Refrigerated base

FULL BOTTLE SHUT OFF

- 8996** Full container shut off for portable bases
- 8847** Full container shut off for Refrigerated and All Weather Samplers

DISTRIBUTOR ARMS

- 8562** Distributor arm for 24 bottle sampling in Refrigerated base
- 8568** Distributor arm for 2 and 4 bottle sampling in Refrigerated base
- 8565** Distributor arm for 8 bottle sampling in Refrigerated base
- 8580** Distributor arm for 24 bottle sampling with compact portable base
- 8582** Distributor arm for 24 bottle sampling with standard portable base
- 8584** Distributor arm for 2, 4 or 8 bottle sampling with compact portable base
- 8841** Distributor arm for 24 bottle sampling with All Weather sampler
- 8842** Distributor arm for 8 bottle sampling with All Weather sampler
- 8843** Distributor arm for 2 or 4 bottle sampling with All Weather sampler

SD900 CABLES

- 2198** External battery cable, 10ft. For use with 12v deep cycle marine batter. 2 pin Power connector on one end and 2 alligator clips on the other. If connecting to SD900 controller, you will need the 2 to 3 pin power adaptor, Prod. No. 8739400.
- 8754500US** Power Supply for SD900, 3 pin connector, US plug
- 8753500US** Battery Charger for SD900 battery (Prod. No. 8754400), 3 pin connector, US plug
- 8758200** DB9 Cable for SD900, 7 pin, 10ft. Allows sampler to connect to computer.
- 8758100** Half cable for SD900, 7 pin, 10ft. 7 Pin connector one end, open leads on the other end. Connects SD900 to a Sigma 980 flow meter
- 8758000** 6 to 7 pin Auxiliary cable adaptor, allows use of 6 pin aux cable and 7 pin SD900 controller
- 8757500** DB9 Cable and SampleView software CD for SD900
- 8760600** 4-20mA interface. Converts analog signal from flow meter to pulses, (compatible with SD900 sampler)
- 8757400** AC power back up, 16" cable. For use with Refrigerated and Portable samplers, 3 pin
- 5698200** AC power back up, 28" cable. For use with All Weather and Portable samplers, 3 pin
- 8757300** Cascade sampling cable for SD900, 7 pin.



Standard Portable Bottle Kit
Prod. No. PS010025



3 Pin, Power Supply for SD900 sampler
Prod. No. 8754500



Battery, with 3 pin connector for SD900 sampler
Prod. No. 8754400

Prod. No. Description

- 8757200** Half cable for SD900, 25ft. 7 Pin connector one end, open leads on the other end. Connects SD900 to a Sigma 980 flow meter
- 8757100** Full cable for SD900, 10ft. 7 Pin connector one end, 6 pin connector on the other end. Connects SD900 to a Sigma 920/930/940/950 flow meter
- 8757000** Full cable for SD900, 25ft. 7 Pin connector one end, 6 pin connector on the other end. Connects SD900 to a Sigma 920/930/940/950 flow meter
- 8756900** Multi-purpose half cable, 10ft; 7 Pin Auxiliary connector on one end, open leads on the other end. Connects an SD900 sampler to a non-Sigma flow meter.
- 8756800** Multi-purpose half cable, 25ft; 7 Pin Auxiliary connector on one end, open leads on the other end. Connects an SD900 sampler to a non-Sigma flow meter.
- 8754400** 12 v lead acid battery with 3 pin connector for SD900. Use with charger Prod. No. 8753500.
- 8739400** 2 to 3 Pin Power adaptor, allows use of Prod. No. 1414 batteries with new 3 pin SD900 controller

SD900 DESSICANT

- 8755500** Desiccant (bulk) for SD900 Sampler, 1.5 lb
- 8755600** Desiccant assembly for SD900 Sampler, includes grease packet

SD900 PUMP TUBING

- 8753900** Pre-cut pump tubing for SD900 All Weather Sampler, 24.25"
- 8753800** Pre-cut pump tubing for SD900 Portable and Refrigerated Sampler, 23.25"

SDI-12 OPTIONS FOR SD900

- 87390SD** SDI-12 Factory installed option
- 8762400** Cable to connect sampler to Hydrolab sonde using SDI-12, 50 ft (15 m)
- 8762500** Cable to connect sampler to Hydrolab sonde using SDI-12, 100 ft (30 m)

MAX CABLES

- 2198** External battery cable, 10ft. For use with 12v deep cycle marine batter. 2 in Power connector on one end and 2 alligator clips on the other. If connecting to SD900 controller, you will need the 2 to 3 pin power adaptor, Prod. No. 8739400.
- 540** Full cable for 900Max, 25ft. 6 pin connectors on both ends. Connects 900Max to a Sigma 920/930/940/950 flow meter
- 541** Multi-purpose half cable, 25ft; 6 Pin Auxiliary connector on one end, open leads on the other end. Connects a 900Max sampler to a non-Sigma flow meter.
- 940** Full cable for 900Max, 10ft. 6 Pin connector on both ends. Connects 900Max to a Sigma 920/930/940/950 flow meter
- 941** Multi-purpose half cable, 10ft; 6 Pin Auxiliary connector on one end, open leads on the other end. Connects a 900Max sampler to a non-Sigma flow meter.

Sampling Accessories

Samplers

Prod. No. Description

MAX CABLES (continued)

- 1727** DB9 Cable for 900Max, 6 pin, 10ft.
Allows sampler to connect to computer.
- 2021** 4-20mA interface. Converts analog signal from flow meter to pulses, compatible with 900Max sampler.

MAX DESICCANT

- 3624** Desiccant (bulk) for 900Max Sampler, 1.5 lb
- 8849** Desiccant bag for 900Max controller

MAX OPTIONS

- 8800** Rain Gauge Receptacle.
(Requires Prod. No. 2149 Rain Gauge.)
This is a factory installed option.
- 2149** Rain Gauge with 25 ft. Cable and Mounting Base Plate. (For use with Rain Gauge Prod. No. 8800).
- 8793** Integral pH-Temperature/ORP Receptacle
Includes pre-amp interface. Requires pH-Temperature probe or ORP probe. pH and ORP cannot be used simultaneously. Standard cable length cannot exceed 50 ft. This is a factory installed option.
- 3328** pH-Temperature Probe (grounded), with 25 ft. Cable (for use with 8793 receptacle)
- 5172** pH-Temperature Probe (grounded), with 50 ft. cable (for use with 8793 receptacle)
- 2080** ORP Probe, with 25 ft. Cable (for use with 8793 receptacle)
- 5174** ORP Probe, with 50 ft. Cable (for use with 8793 receptacle)
- 5177** Three-way solenoid valve option (valve must be purchased separately)
- 5176** Two-way/Three-way solenoid valve option (valve must be purchased separately)
- 3516** DTU II, 115 Vac
- 2471** Flow Through module with flanged ends
- 2246** Remote pump. Recommended for vertical lift distances between 23-35 ft. Includes 35 ft. 12v cable and 35ft. suspension cable. Requires connection kit 2248 or 3152.
- 2248** Connection Kit for remote pump with 3/8" ID vinyl tubing
- 3152** Connection Kit for remote pump with 3/8" ID teflon lined polyethylene tubing

MAX BATTERIES

- 1416** 12v 4 amp hour NiCd battery for 900Max controller, 2 pin
- 1414** 12v 6 amp hour gel electrolyte battery for 900Max controller, 2 pin
- 914US** Battery charger for NiCd battery, 2 pin, 115v, US plug
- 913US** Universal battery charger for gel electrolyte battery, 2 pin, 90-250v, US plug



Desiccant assembly for SD900 Sampler
Prod. No. 8755600



Teflon/Stainless Steel Strainer
Prod. No. 926

Prod. No. Description

900MAX AC POWER

- 3670** AC power battery back up for 900Max Portable Samplers
- 8988** AC power battery back up for 900Max Refrigerated Sampler
- 4455100** AC power supply 100-120v for 900Max Portable Sampler, 2 pin, US plug

MAX PUMP TUBING

- 8964** Pre-cut pump tubing for 900Max Portable Sampler
- 8957** Pre-cut pump tubing for 900Max Refrigerated Sampler
- 8888** Pre-cut pump tubing for 900Max All Weather Sampler
- 6607400** Pre-cut pump tubing for 900Max All Weather Sampler (Available June 1, 2008)

RAIN GAUGE/LOGGER

- 2459** Rain Gauge with tipping bucket, bubble level, level adjust and base mounting plate
- 2390** Rain Logger with 9v battery

SOLAR MODULES

- 8713600** Solar Module with 50 W panel with 15 ft. cable, mounting bracket and regulator
- 8713400** Solar Module with 30 W panel with 15 ft. cable, mounting bracket and regulator
- 8713300** Solar Module with 20 W panel with 15 ft. cable, mounting bracket and regulator
- 8713200** Solar Module with 10 W panel with 15 ft. cable, mounting bracket and regulator.

STRAINERS

- 926** Teflon/stainless steel strainer, 5.5" long x .875" OD
- 4652** Strainer for high velocity and shallow depths, 3.9" long x .406" OD
- 2071** Stainless steel strainer for shallow depths, 6" long x .406" OD
- 2070** Stainless steel strainer, 8" long x 1.0" OD
- 903** Teflon/stainless steel strainer, 11" long .875" OD

TUBING

- 4600-15** Silicone pump tubing for 900 Series Samplers, 15 ft.
- 4600-50** Silicone pump tubing for 900 Series Samplers, 50 ft.
- 2186** Connection kit for teflon-lined polyethylene intake tubing
- 921** 3/8" diameter Teflon-lined polyethylene intake tubing, 10 ft.
- 922** 3/8" diameter Teflon-lined polyethylene intake tubing, 25 ft.
- 925** 3/8" diameter Teflon-lined polyethylene intake tubing, 100 ft.
- 920** 3/8" diameter Vinyl intake tubing, 25 ft.
- 923** 3/8" diameter Vinyl intake tubing, 100 ft.
- 924** 3/8" diameter Vinyl intake tubing, 500 ft.

WEATHERGUARDS

- 6994** All Weather Sampler Outdoor Enclosure
- 6992** All Weather Sampler Outdoor Enclosure
- 6989** All Weather Sampler Outdoor Enclosure

SPLITTER

- 939** 3-way Splitter



Teflon-lined polyethylene intake tubing
Prod. No. 921



Dipper Refrigerated Sampler

“Dipper” Automatic Liquid Sampler provides superior solids handling.

- Dipping action of the Sigma 1600 simulates grab sample collection
- Once the liquid in the flow-through chamber is well mixed and turbulent, the dipper arm passes through the full cross section of the flow
- Good mixing prevents solids from settling and assures representative and repeatable samples
- 2-inch sample inlet can accommodate larger particulates without plugging



The 1600 can be conveniently located where pumps or gravity can deliver a wastewater stream from each stage of the treatment process.

Prod. No.	Description
INSTRUMENT	
16001	Dipper Refrigerated Sampler, 115v
COMPOSITE BOTTLE SAMPLING	
1918	Container, 2.5 Gallon Polyethylene with Cap, no adapter required
6559	Container, 2.5 Gallon Glass with Teflon lined cap (Requires adapter)
1999	Adapter (For glass container)
MULTIPLE BOTTLE SAMPLING	
16003	24 Bottle Kit. Includes 1958 Distributor arm assembly, 6105 475 mL Polyethylene Bottles with Caps, 1956 Bottle Tray
FACTORY INSTALLED OPTIONS	
1662	Pump Control Timer. Sampler controls pump or solenoid valve on force main so the sampler only has flow during sampling events
1980	Refrigerated compartment thermometer
2642	Control panel cover
1982	Dipper 1600 Inlet/Outlet Flange
1981	4-20mA interface. Allows flow proportional sampling from an external flowmeter with 4-20 mA output. User supplies cable that hard-wires to a sampler. Note: This option will disable the sampler's ability to operate w/contact closure flow proportional sampling (standard)

For more information, call to request Literature #3402, or visit www.hach.com

Specifications*

Sampler/Refrigerator Cabinet

Fiberglass reinforced plastic

24-Bottle/Composite Modes

Sampler may operate as composite or 24-bottle unit when equipped with the 24-bottle discrete kit (Prod. No. 16003).

Chassis Solid State

All circuit boards and components are treated with 3 mil thickness polyurethane coating.

Timer/Controller

Quartz crystal time base clock; adjustable from 1-60 sample cycles per hour. Instrument panel removable; all electrical components plug-in type.

Interval Between Samples

Time Mode: sample interval adjustable from 1-9999 minutes; interval set on four-digit thumbwheel switch; adjustable from 1-60 samples per hour.

Flow Proportional Mode: external mode for flow proportional sample initiate from flow-meter; 1-9999 contact closures (5 Vdc, 10 mA) or optional 4-20 mA; interval set on four-digit thumbwheel switch.

Sample Program Delay

1-9999 minutes when sampling in the time mode.

LED Display

Indicates minutes remaining to next sample.

Dipper

PVC construction, 25 mL per dip cycle, motor drive, cam operated.

Manual Test Pushbutton

Initiates sample cycle without interrupting preset program

Sample Volume

Number of 25 mL dip cycles (1 to 99) adjustable using two-digit thumbwheel switch; sample liquid delivered to container through sealed transfer tube.

Automatic Shut-off (multiplex)

Sampler operation terminated after preset number of samples (24 to 288) have been delivered to the composite container or with 24 advances of distributor tube.

Sample Containers

- Composite 10L (2.5 gal) polyethylene container with lid.
- Composite 10L (2.5 gal) glass container with lid.
- Discrete 24 475-mL polyethylene containers with lids.

Sample Chamber

5 to 30 gpm capacity with adjustable and removable weir, clear lift-off cover retains fumes and provides viewing of flow through chamber.

Pipe Connections

Inlet: 2-inch sch-80 PVC, socket coupling
Outlet: 3-inch sch-80 PVC, socket coupling

Refrigerator

- 1/6-hp compressor with fan cooled epoxy coated condenser and silver brazed tubing
- Refrigerator insulation 1-inch thick rigid polyurethane foam.
- Thermostatically controlled
- Range 34 to 42°F (1 to 6°C).
- Compressor assembly is field replaceable
- Refrigerator door equipped with key lock

Power

120 Vac, 60 Hz, 4.8 Amps.

Dimensions

132.7 x 48.3 x 52.1 cm
(52.25 x 19 x 20.5 in.)

Weight

52.2 kg (115 lbs.)

**Subject to change without notice.*

Weatherguard™ Enclosures

Samplers

Optimize your equipment's life by protecting it from the elements.



Model 6993 shown. Call for available options such as floor, heater, window, light, and fan.

- Tough, locking Weatherguard Enclosures are ideal for housing samplers, pumps, switch gear, and transformers
- One-piece molded, fiberglass-reinforced plastic
- Insulated and gasketed
- Designed to withstand winds of 130 mph

Prod. No.	Description
6992	This enclosure is suitable for one portable sampler and one portable flow meter. Outside Dimensions: 36"W x 26"D x 54"H
6994	This enclosure is suitable for one refrigerated sampler. Outside Dimensions: 43.75"W x 43.75"D x 50"H
6989	This full size, walk-in enclosure is suitable for one refrigerated sampler and wall-mounted instruments. Rear access door (#6865) optional Outside Dimensions: 51"W x 51"D x 74"H
6993	This full size, walk-in enclosure is suitable for two refrigerated samplers and wall-mounted instruments. Rear access door (#6865) optional Outside Dimensions: 68"W x 68"D x 84"H



Ask about Hach's Service Partnership Programs, which offer you:

- Optimal Performance
- Maximum Uptime
- Quality Data

Consult our service selection guide on page 17 to choose the program best for you, or call 800-227-4224, ext. 6178 for a quote.

Have a short term sampling need? Ask about Hach's rental program.

Hach offers select samplers for long- or short-term rentals. Call 800-227-4224 for details on Hach's rental offerings, as well as our Rent-to-Own program!

