



STATIONARY PERISTALTIC SAMPLER · REFRIGERATED

Model YB Stationary Peristaltic Samplers

Accurate samples matter when the data has to hold up — for permit compliance, plant records, or an audit. Model YB samplers pair active ultrasonic fluid sensing with sampling software built for accuracy and repeatability, whether you're pulling discrete grabs or full composite sets from your source.

Built for NPDES compliance, industrial pretreatment, combined sewer overflow, storm water, and everyday process control.

**AMBIENT RANGE****32–110°F*****TUBING LIFE****1.5M Rev.****TRANSPORT VELOCITY****4.4 ft/sec****BOTTLE CONFIG****Single/Multi****SAMPLE ACCURACY****±0.5% / 5 mL**

* Extends to -40°F with the optional heated fiberglass enclosure (NEMA 3R rated).



Reliable Peristaltic Pump

Field-proven 3/8-in (9.53 mm) ID pump built to meet EPA intake-velocity criteria and hold up to sustained field use. Corrosion-resistant thermoplastic housing keeps rollers and tubing visible and inspectable without ever pulling the pump apart. High transport velocity — well over the 2 ft/sec EPA minimum — ensures representative samples, and consistent, accurate delivery holds up even as head height changes. Tubing is rated for 1,500,000 revolutions (24,000,000 pump counts) of typical life, cutting down on maintenance intervals, downtime, and cost.



Versatile Controller

Microprocessor-based controller ships in a NEMA 4X/6-rated enclosure, built for the conditions samplers actually work in. Data logging, operating-status review, and multiple flow and time modes come standard. A step-by-step menu, dedicated keypad, and large backlit LCD keep programming fast — even for a technician working by headlamp — without digging through nested menus to find a setting.



5.5 cu. ft. Refrigerator

The refrigerator is a separate assembly from the controller — if it's ever the failure point, you're replacing a refrigerator, not the whole sampler. Available in Digital and Non-Digital control versions for protected, indoor, or sheltered installations, it holds samples at the EPA-recommended 0–4°C across a 32–110°F (0–43.3°C) ambient range. Housed in the optional heated fiberglass enclosure (NEMA 3R rated), that range extends down to -40°F (-40°C) for outdoor or unprotected sites.



Single or Multiple Bottle Sampling

Bottle configurations cover single-bottle composite to 24-bottle discrete sampling. Multi-bottle operation requires the multi-bottle controller, specified at the time of order — a multi-bottle unit can run single-bottle, but a single-bottle unit can't be converted the other way in the field. Multi-bottle-to-single-bottle conversion requires no special tools.



Manning YB Refrigerated Sampler — Specifications

Size (H × W × D)	Controller w/pump: 10.75 × 7.00 × 9.75 in (273 × 178 × 248 mm) Refrigerator (5.5 cu. ft.): 23.63 × 33.5 × 23.5 in (600 × 851 × 597 mm) Optional Fiberglass Enclosure (NEMA 3R rated): 73i H 73.5 × W 32.2 × D 29.9 in (1867 × 818 × 760 mm) / 53i H 55 × W 29 × D 28.88 in (1397 × 737 × 733 mm)
Weight (dry)	YB Sampler: 10 lbs (4.54 kg). Refrigerator (5.5 cu. ft.): 100 lbs (45 kg). Multi-bottle suspension plate + 24 empty 1000-ml bottles: 15.5 lbs (7.03 kg). Single bottles vary with size/material. Weights exclude packaging or pallets.
Environmental Protection (sampler)	NEMA 4X/NEMA 6 structural resin housing around electromechanical components.
Refrigeration	Maintains samples at 0–4°C (32–39°F) . Epoxy coated copper lines.
Temperature Limits	32–110°F (0–43.3°C) ; with optional fiberglass enclosure, heater & fan (NEMA 3R): -40–110°F (-40–43.3°C) .
Sample Pump	High-speed 3/8-in (9.53 mm) peristaltic 12 VDC pump, impact- and corrosion-resistant body, dual-roller mechanism.
Pump Safety	Clear pump cover removal stops powered rotation of pump.
Pump Tubing / Life	Silicone tubing, 1,500,000 revolutions (24,000,000 pump counts) typical life; varies with setup.
Maximum Lift	28 ft (8.5 m) *Over 20 ft
Transport Velocity	4.396 ft/sec @ 5 ft of lift (1.34 m/sec @ 1.5 m) , exceeding the EPA-recommended minimum of 2 ft/sec (0.61 m/sec) and well within the EPA's 2–10 ft/sec (0.61–3.05 m/sec) recommended range.
Sample Volume	Programmed directly in 1-mL increments.
Repeatability	±0.5% of set volume or 5 mL , whichever is greater (typical).
Fluid Sensor	Non-contacting active ultrasonic.
Controller	Microprocessor controlled; internal battery (5-year typical); hermetically sealed 24-key keypad, 2-line × 20-character backlit display; Clock accurate to 1 min/month.
Power	Controller: 110 VAC (60 Hz) or 220 VAC (50 Hz) . Refrigerator: 110 VAC (60 Hz) only. Battery backup available (controller).
Alarm Contacts	Three SPST, 5 A 110/220 VAC (optional).
I/O	Contact closure; optional pulse (5-15VDC), 4–20 mA, serial out (RS-232).

*Suction Height/Driving Pressure: 0 ft/14.73 psi, 10 ft/9.3 psi, 20 ft/4.4 psi, 25 ft/1.9 psi. Recommended to 20 ft. Ask about booster pump setups.

Sampler Programming

- Data logging (512-event capacity)
- Flow proportional pacing
- Flow pacing with time override
- Flow pacing with delay sampling
- Flow pacing, maintained event sampling
- Totalized flow pacing (analog input)
- Uniform / non-uniform time intervals
- Pump tubing life warning indicator
- Program delay (time or flow)
- Sampling from external device input
- Hydrologic level event mode
- Real-time clock (time and date)
- Password protection
- Manual test cycle feature
- Activity review log (current & past)
- Intake fault alert
- Multiple bottles / samples per bottle
- Multiple bottle compositing
- Settable sample volume
- Intake line purge and rinse
- Automatic shut-off
- Power fail / auto restart

Warranty

One year warranty.



Model Number Configuration

YB8 — 3/8-in (9.53 mm) ID peristaltic pump stationary sampler system. Select one option from each category to build a complete configuration number.

YB8

--	--	--	--	--	--	--	--	--	--

Select one option from each category below, left to right (Power Requirement → Alarms), to complete the configuration number.

Power Requirement	A 110 VAC — C Battery backup (sampler only, not refrigerator)
Refrigerator	1 None — 7 5.5 cu.ft., White, 110 VAC, Non-Digital — 9 5.5 cu.ft., White, 110 VAC, Digital
Input/Output Option	A Contact Closure Input — B Contact Closure Input + 4–20 mA Analog Input — C Contact Closure Input + RS-232 Serial Output — D Contact Closure Input + 4–20 mA Analog Input + RS-232 Serial Output — E 12 VDC Pulsed Input — F 12 VDC Pulsed Input + 4–20 mA Analog Input — G 12 VDC Pulsed Input + RS-232 Serial Output — H 12 VDC Pulsed Input + 4–20 mA Analog Input + RS-232 Serial Output
Liquid Sensor	2 Active Ultrasonic Sensor
Bottle Configuration	A Single Bottle (composite sampling) — C Multi-Bottle (discrete sampling) — E Multi-Bottle, controller only
Bottle Type	1 None — 2 2.5-gal (10 L) polyethylene — 3 5-gal (20 L) polyethylene — 4 4-gal (15 L) polyethylene — 5 2.5-gal (10 L) glass w/PTFE cap — 6 24× 1000-mL polyethylene (multi) — 7 24× 500-mL polyethylene (multi) — 8 2.5-gal (10 L) glass w/foam-lined cap — 9 5-gal (20 L) polyethylene w/splashguard & transport lid
Sampling Hose Type	All hose 3/8-in (9.53 mm) ID. A None — connector only. PVC: B 10 ft, C 25 ft, D 50 ft, E 100 ft. Solid PTFE (or equal): K 10 ft, L 25 ft, M 50 ft, N 100 ft.
Sampling Strainer Type	1 None — 2 PVC strainer, 3/8 in — 3 Stainless steel strainer, 3/8 in — 4 Standard Flex Strainer, 3/8 in — 5 Heavy Flex Strainer, 3/8 in
Environmental Protection	A None — K 73i Fiberglass Enclosure w/Fan — L 73i Fiberglass Enclosure w/Heater, Light & Fan — N 73i Fiberglass Enclosure w/Heater & Fan — P 73i Fiberglass Enclosure w/Light & Fan — U 53i Fiberglass Enclosure w/Fan & Heater — V 53i Fiberglass Enclosure w/Fan
Alarms	1 None — 2 Three alarm contacts (sample in progress, missed sample, bottle-full / end-of-sample)

Manual included with all samplers.



Engineering Specification

Written for direct use in submittals. Plain numbered list, no design elements — copy and paste as needed.

1. The sampler is suitable for automatic collection and preservation of composite or discrete liquid samples.
2. The controller enclosure is made of structural resin with NEMA 4X/NEMA 6 ratings.
3. All wetted parts have a minimum internal diameter of 3/8 inch (9.53 mm). Strainer: PVC or 316 stainless steel. Intake Hose: PVC or PTFE. Pump Tubing: silicone.
4. The sampler incorporates a high-speed 3/8-in (9.53 mm) ID peristaltic pump with two rollers of at least 0.7-in (17.78 mm) diameter to increase tubing life. Pumps using smaller rollers are unacceptable. The roller mechanism uses a bearing to increase pump life. The pump body is constructed of corrosion-resistant, high-impact Acrylonitrile Butadiene Styrene (ABS). The pump mechanism has a clear cover plate which enables visual inspection of rollers, pump spindle, and tubing. Samplers requiring removal of part or all of the pump housing for visual inspection is unacceptable.
5. The sample liquid must be under forced flow at all times and shall not pass through a metering chamber, distribution plate, or valves. The sampler is equipped with a liquid sensing system that calculates the flow rate of the liquid in the intake line each collection cycle.
6. Using the optional kit, multi-bottle unit is convertible in the field to single bottle without using special tools.
7. The sampler collects composite and/or discrete samples. For composite sampling, an overflow protection mechanism shall automatically terminate any further sampling (see #8). Discrete sampling can be multiple bottles of the same sample or multiple samples in multiple bottles.
8. Bottle full condition is detected by using a stainless steel sensor located in the bottleneck. It is easily removable for cleaning or replacement without using special tools.
9. Systems relying upon sensing bottle weight to determine sample volume shall be unacceptable due to the variance in sample densities, and the need to calibrate the weight sensing mechanism.
10. The sampler is capable of transport velocity of 4.396 ft/sec through 3/8-in (9.53 mm) ID tubing at a draw height of 5 ft (1.5 m) using the 3/8-in (9.53 mm) ID pump, which is well in excess of the EPA-recommended minimum of 2 ft/sec (0.61 m/sec).
11. A hermetically sealed 24-button keypad and a 2-line by 20-character alphanumeric backlit LCD is linked to a programmable CPU.
12. The Refrigerator is a 5.5 cu. ft. (156 L) unit for protected-from-the-elements, indoor, or sheltered applications only, available in Digital and Non-Digital control versions. It maintains the EPA-recommended temperature of 32–39°F (0–4°C) within an ambient operating range of 32–110°F (0–43.3°C).
13. The Refrigerator has a foam-insulated cabinet with a white-finished steel exterior, and a standard condenser and evaporator arrangement with automatic defrost. Refrigerant: R600a. Compressor: 461-BTU, approximately 0.8 A draw.
14. The software is menu driven, prompting input of requested information using the keypad. The display indicates each programming step. After entering data, the system automatically advances to the next programming step.
15. A password feature restricts access to authorized persons only.
16. A sampling program can be delayed by entering the number of hours and minutes for the sampler to count down, or the number of contact closures to occur. The delay is independent of the sampling interval.
17. The sampler purges the sample hose immediately prior to and following each sample. Purge duration is selectable.
18. The sampler has the capability to rinse the sample hose with source liquid prior to each sample selected by user.
19. The sampler has an optional weighted strainer of PVC or stainless steel.
20. If a sample is not obtained on the first attempt, the sampler immediately retries to collect the sample. If a sample still cannot be collected, the sampler will omit that sample and continue the sampling sequence.
21. When initiated by a keystroke, the sampler is capable of manual sampling independent of a programmed sequence. The sampler logs manual collections, and is selectable to allow taking test samples: a) only when the sampler is not running a program, b) during a program but the test samples are not counted as a sample, or c) during a program and the test samples count as a sample.
22. In the Time Mode, the interval between samples is adjustable (1–5999 min. in 1-minute increments). In the Flow Mode, it accepts and totalizes contact closures (1–9999). A 12 VDC pulsed input or a 4–20-mA DC analog signal input for sampling at a user set point are also available.
23. A hydrologic event algorithm is used to enable sample programming for hydrologic events based on a combination of parameters including water level, differential (rising and falling) water levels, and time defaults following guidelines established by the U.S. Geological Survey.
24. Operating status is reviewed with minimal effort, and includes: program status, current time, time and date program started, active bottle number, active group period, number of samples collected, volume collected, number of contact closures, number of line blockages, minutes or flow signals remaining to the next sample, number of samples remaining, volume remaining, and time to override. All program settings are reviewed in addition to seeing the review of the completed program.
25. The entire refrigerated sampler may be housed in an optional weather-resistant fiberglass enclosure (NEMA 3R rated), available in two sizes — 73i and 53i — both made of fiberglass-reinforced polyester and insulated with 0.75 in (19.05 mm) polyurethane, and offering equivalent weather protection. Each is equipped with a full-size gasketed door with lockable latch, duplex outlet, air vents, and access holes for the sampling hose. It shall also include any or all of these (all optional): a heater with thermostat suitable for operation to -40°F (-40°C) outside temperature, a light, and/or fan. The fan is recommended for all applications.
26. This sampler is a Manning Model YB series.

In the interest of improving and updating its equipment, Manning reserves the right to alter specifications for equipment at any time.