

# Sentry Automatic Samplers

Industrial | Food Grade | Hygienic | 3-A Standard



Food & Beverage | Chemical & Petrochemical | Oil & Gas | Cement | Mining | Pharmaceutical





Gas



Liquid & Slurry



Solid & Powder



Steam & Water

# Industrial

Sentry® ISOLOK® samplers isolate the operator from the process at all times, while the sample in the container is locked out from external influences.



## ISOLOK API-CA Sampler or ISOLOK API-CE Sampler

- Suited for sampling a variety of hydrocarbon liquids, especially crude oil, condensate, and mixtures of oil and water; ideal for energized mixing and blending applications
- 1 cc per sample; up to 20 samples per minute
- Pneumatically or electrically actuated cell sampler
- ATEX rated and complies with API 8.2, ISO 3171 and ASTM D 4177 standards

## ISOLOK API-PA Sampler or ISOLOK API-PE Sampler

- Suited for sampling a variety of hydrocarbon liquids, especially crude oil, condensate, and mixtures of oil and water; ideal for installing where product is well mixed
- 1 cc per sample; up to 20 samples per minute
- Pneumatically or electrically actuated probe sampler
- Probe lengths accommodate 4 to 52-inch diameter pipes
- ATEX rated and complies with API 8.2, ISO 3171 and ASTM D 4177 standards



## ISOLOK SAB Sampler

- Provides representative samples of liquids and slurries such as waste acid, resin bead slurry, bauxite mud and raw municipal sludge
- Fixed volume of 10 cc or 25 cc per sample cycle
- Line pressures from vacuum to 300 psig (21 barg) in most applications
- ATEX-compliant models available



## ISOLOK SAG Sampler

- Provides large quantity samples of liquids and slurries such as radioactive waste, waste acid, resin bead slurry, bauxite mud and raw municipal sludge
- Fixed volume of 50 cc, 120 cc or 200 cc per sample cycle
- Line pressures from vacuum to 300 psig (21 barg) in most applications
- ATEX-compliant models available



## ISOLOK SAL-DBB Sampler

- Samples liquids and slurries in harsh operating conditions, such as oil sand mining
- Fixed volume of 8, 10, or 25 cc per sample cycle
- Process line pressures from 300 psig (21 barg) to 500 psig (34.4 barg)
- Double block and bleed sampling valve allows the sampler to be fully isolated from the process prior to removal
- Canadian Registration Numbers (CRN)



## ISOLOK SAL-Q Sampler

- Liquid and slurry sampler suitable for oil sands and other mining application
- Fixed volume of 10 cc or 25 cc per sample cycle
- Process line pressures from 300 psig (20.7 barg) to 400 psig (27.5 barg)
- Delta knife gate valve allows sampler removal while process line remains pressurized
- Canadian Registration Numbers (CRN)

# Samplers



## Sentry D2 Sampler

- Strip sampler captures free-flowing or non free-flowing materials such as pellets, powders, flakes and granules from gravity chutes and hoppers
- A motor-driven auger draws the product to the discharge point
- Low height requirements
- CE and ATEX compliant models available



## Sentry DS-3 Sampler

- Automates sampling of materials such as grains from conveyors
- Up to 262 cc of sample per cut can be collected per cycle
- Flexible mounting location; can be mounted anywhere along the belt
- Adjustable arm to suit belt speeds up to 900 fpm
- NEMA 4 enclosure for sampler controller for dust and weather protection



## Sentry GA Sampler

- Cross-cut sampler captures dry free-flowing materials such as grain, granules, powders, flakes or pellets in vertical or inclined chutes
- Pneumatic, electric or hydraulic actuation available
- USDA, Canadian, FGIS and NOPA approved design
- CE and ATEX compliant models available



## Sentry MG Sampler

- Strip sampler captures dry free-flowing materials such as pellets, powders, flakes and granules in gravity chutes and hoppers
- Sample tube is easily removed for cleaning and inspection
- Available with pneumatic or electric actuation
- CE and ATEX compliant models available



## Sentry R Sampler

- Samples free flowing materials such as granules, powders, flakes or pellets from positive or negative pressure systems
- Sample volume is determined by flow rate; maximum volume per stroke is 24 cc
- An auger conveys the sample to the discharge point
- CE and ATEX compliant models available



## Sentry RB Sampler

- Strip sampler captures dry free-flowing and non free-flowing materials such as granules, powders, flakes or pellets from gravity chutes and hoppers
- An auger conveys the sample material to the discharge point
- CE and ATEX compliant models available



## Point Samplers

- Take a sample at one point in the product flow stream
- Often used when material is homogenous.



## Strip Samplers

- Take a sample from a narrow portion the product flow stream
- Used in situations where product segregation exists



## Cross Cut Samplers

- Take a cross-section of the entire product stream
- Provides the most representative sample, but requires a lot of headroom



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# Food Grade Samplers



## ISOLOK SAA Sampler

- For liquids and slurries
- Fixed volume of 3 cc or 8 cc
- Process pressures from vacuum to 200 psig (14 barg)
- ATEX-compliant models available



## ISOLOK SAE Sampler

- For pellets, powders, flakes, granules or friable materials
- Fixed volume of 90 cc or 100 cc
- Particle sizes up to 0.75 inch (19 mm)
- ATEX-compliant models available



## ISOLOK SAH Sampler

- For flowable free-falling materials
- Fixed volume of 40 cc or 50 cc
- Particle sizes up to 0.62 in (16 mm)
- ATEX-compliant models available



## ISOLOK SAK Sampler

- For flowable powders, flakes or granules, such as salt, cement, fertilizer and food products
- Fixed volume of 16 cc or 18 cc
- Particle sizes up to 0.34 in (9 mm)
- ATEX-compliant models available



## ISOLOK SAL-B Sampler

- Samples slurries with particles up to 0.375 in (10 mm)
- Fixed volume of 8 cc or 25 cc
- Process pressures from vacuum to 300 psig (21 barg)
- ISOVALVE® technology allows sampler removal with line in service
- ATEX-compliant models available



## Sentry A Sampler

- For dry free-flowing materials such as granules, powders, flakes and pellets from screw or drag conveyors
- Particle sizes up to 0.25 in (6 mm)
- Pneumatic or electric actuation
- CE and ATEX compliant models available



## Sentry PR Sampler

- For free-flowing materials such as granules, powders, flakes or pellets from pneumatic systems
- Sample volume up to 205 cc
- Particle sizes up to 0.25 in (6 mm)
- CE and ATEX compliant models available



## Sentry RPG Sampler

- For dry free-flowing materials such as granules, powders, flakes or pellets from gravity chutes and hoppers
- Fixed volume of 25 cc for a 4-inch stroke; larger volumes available
- CE and ATEX compliant models available



## Sentry RX Sampler

- Strip sampler for dry free-flowing materials such as granules, powders, flakes, pellets, grain or seed from pneumatic systems, gravity chutes and hoppers
- Particle sizes up to 0.25 in (6 mm)
- CE and ATEX compliant models available



## Sentry SA Sampler

- Cross-cut sampler captures dry free-flowing materials such as grain, granules, powders, flakes or pellets
- Pneumatic or electric actuation
- USDA, Canadian, FGIS and NOPA approved design
- CE and ATEX compliant models available

# Hygienic Samplers



## ISOLOK MSD Sampler

- For high-viscosity products such as toothpaste, peanut butter, tomato paste, juice concentrates, or rocket propellant; contracting annulus ejects sample into container
- Up to 14 cc sample volume per cycle
- Process line pressures from 30 psig (2 barg) to 200 psig (14 barg)
- Food-grade elastomers for all process contact seals



## ISOLOK MSE Sampler

- For high-viscosity products such as toothpaste, peanut butter, tomato paste, juice concentrates, or rocket propellant; contracting annulus ejects sample into container
- Up to 10 cc sample volume per cycle
- Process line pressures from atmospheric to 150 psig (10 barg)
- Food-grade elastomers for all process contact seals



## Sentry HPR Sampler

- Hygienic sampling of free-flowing materials such as granules, powders, flakes or pellets from pneumatic convey lines
- Particle sizes up to 0.25 in (6 mm)
- CE and ATEX compliant models available
- Seal certifications: FDA & EC 1935/2004



## Sentry HRX Sampler

- Hygienic strip sampler for dry free-flowing materials such as granules, powders, flakes, pellets, grain or seed from pneumatic convey lines, gravity chutes and hoppers
- Particle sizes up to 0.25 in (6 mm)
- CE and ATEX compliant models available
- Seal certifications: FDA & EC 1935/2004

All food and beverages undergo some form of processing, and those processes need to follow good manufacturing practices (GMP), as well as local, national and international food safety regulations. A food safety sampling and analysis program provides controlled, real-time data and is aligned with regulatory requirements. Such as, the hazard analysis and risk-based preventive control (HARPC) provisions under the U.S. FDA Food Safety Modernization Act (FSMA).



• **Food grade** samplers include 316 stainless steel contact surfaces and FDA compliant seals.

• **Hygienic** samplers closely follow the strict standards of various certifying agencies and technical reports, including PMMI's One Voice for Hygienic Equipment Design. These automatic samplers meet or exceed minimum food protection and sanitation criteria for materials, design, fabrication and construction. All product contact surfaces dismantle for easy cleaning and inspection without tools.

• Samplers that meet **3-A Standards** for sanitary design are marked with a 3-A Symbol and have passed third-party verification inspection. The USDA, FDA and state regulatory authorities accept the 3-A standard.





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# 3-A Standard



## ISOLOK M4KSA Sampler

- Designed to sample sanitary products such as Grade A or industrial grade raw or processed milk, whey, and other food or pharmaceutical products
- Fixed volume of 3 cc per sample cycle
- FDA approved materials; conforms to 3-A Sanitary Standards (TPV)
- ATEX-compliant models available



## ISOLOK MSA Sampler

- Designed for sampling sanitary products such as Grade A or industrial grade raw or processed milk
- Fixed volume of 0.5 cc per sample cycle
- Can be used in a process line, on the wall of a vessel or reactor, or on road tankers transporting liquid milk
- FDA approved materials; conforms to 3-A Sanitary Standards (TPV)
- ATEX-compliant models available



## ISOLOK MSC Sampler

- Samples medium-viscosity liquids or slurries up to 1,000 cP such as cream or single-strength orange juice
- Fixed sample volume of 14 cc per cycle
- FDA approved materials; conforms to 3-A Sanitary Standards (TPV)
- ATEX-compliant models available



## Sentry B1 Sampler

- Non-free flowing and free flowing materials, including sanitary products, from gravity chutes and hoppers
- Powders, flakes, granules, powdered milk and pharmaceutical products
- Model conformant to 3-A Sanitary Standards available
- CE and ATEX compliant models available



## Sentry IsoPure Sampler

- Automatic or manual sampling of liquids from closed systems such as vessels and pipelines
- Compact design provides a permanent valve integration into aseptic and hygienic production lines
- Clean-in-place (CIP) or sterilize-in-place (SIP)
- Conforms to 3-A Sanitary Standards (TPV)

# Controllers & Accessories



## **Sentry SBC Automatic Sampler Controller**

- Dedicated logic control system capable of controlling any automatic sampler in the Sentry product line
- Operator-friendly user interface features both local and remote operating modes
- Customize operation to your process using standard features such as batch sampling, flow proportional sampling, flow counter based sampling, and control of the Sentry Indexing Cabinet (IC)
- Supports ModBus, CAN, and other protocols
- Custom programming available



## **Sentry COS Controller**

- Dedicated logic control and alarm system designed to integrate with any Sentry ISOLOK API cell or probe sampler
- Capacitive touch user interface
- Remote operation via ModBus TCP/IP
- CE and ATEX approvals available



## **Sentry SAL-DBB Sampler Controller**

## **Sentry SAL-Q & SAL-B Park Sampler Controller**

- Designed for use with the Sentry SAL-DBB Sampler or the Sentry ISOLOK SAL-Q and Sentry ISOLOK SAL-B Park samplers
- Batch and flow proportional sampling options
- Features both local and remote operating modes
- General purpose and hazardous area models available



## **Sentry CPC Constant Pressure Cylinder**

- For the receipt, storage, and transportation of liquid or gas hydrocarbon samples
- Maintains sample at process pressure conditions (up to 3600 psig / 248 barg)
- Suitable for hazardous and non-hazardous liquids and gases (Groups 1 and 2)
- All units PED compliant
- Compliance with NACE MR 0175 (optional certificate)



## **Sentry IC Indexing Cabinet**

- Multiple position indexing cabinet designed for collecting either individual or composite samples of dry bulk solids materials
- Electrically-driven carousel features 8, 16, or 24 collection positions
- Controlled by a PLC; interfaces with the sampler controller
- Offered with TEFC or explosion-proof motor
- CE and ATEX compliant models available



## **Sentry SC Sample Cutter**

- Reduces the size of a bulk solids sample when the primary sampler provides excess volume; excess material is returned to the main process flow
- Designed to eliminate degradation of sample material
- Customized to meet various application needs
- Explosion proof (XP) motor available
- CE and ATEX compliant models available

# The Sentry Advantage

**Running an efficient operation** requires careful analysis of controlled, real-time data achieved through reliable, accurate and repeatable process monitoring and measuring. By effectively conditioning, sampling and measuring gas, liquid, slurry, powder, solids, steam, or water within their production environments, our customers obtain the critical insights they need to control and optimize processes.

Driving operational efficiency by obtaining and analyzing critical data is at the heart of what we have been doing since 1924. Our proven representative sampling techniques matched with comprehensive analytical systems take the guesswork out of interpreting results, delivering the intelligence needed to make strategic operational decisions with confidence.

## INDUSTRY-LEADING EXPERIENCE

Our experts are well-respected throughout our industries for their technical competencies and unparalleled engineering capabilities, which allow us to consistently offer the reliable technical solutions and support our customers demand.

## WORLD-CLASS SAMPLING APPLICATION EXPERTISE

Our advanced technical knowledge and experience is employed not only to simply meet standards, but in many cases, sets the industry standards by which all others operate.

ISO 9001:2008 | 3-A | ASME | ATEX | CE | CRN | CSA | DOT | EPRI | NACE | NDE | PED | TPED

## EMPLOYEE-OWNED

As an employee-owned company, our team fully appreciates the value of every customer and the importance of every relationship. With a vested interest, we take pride in everything we do, deliver on our promises and stand behind our commitments.

## COMMITTED TO LONG-TERM PARTNERSHIPS

We continually invest in finding more and better ways to serve our customers. Over the years, we have expanded our Sentry brand by introducing new products, new services and acquiring companies with strong reputations, expertise, technologies or reach, and successfully uniting each company's competencies with our own. With sampling remaining at our core, we will continue to extend our breadth of expertise to deliver more value throughout the process value chain.



## Any Application. Anywhere.

Serving customers  
in over 50 countries across  
six continents worldwide.



Sample. Monitor. Measure.  
**SENTRY**  
Any Application. Anywhere.

[sentry-equip.com](http://sentry-equip.com)

966 Blue Ribbon Circle North, Oconomowoc, WI 53066 U.S.A. | +1-262-567-7256 | [sales@sentry-equip.com](mailto:sales@sentry-equip.com)



**RATE TECHNOLOGY SYSTEMS**  
3859 O'Neil Gate, Mississauga, ON L5L 5X6  
905-607-3240 | [sales@ratetechnology.com](mailto:sales@ratetechnology.com)  
[www.ratetechnologysystems.com](http://www.ratetechnologysystems.com)

Your authorized Sentry representative:

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