



## CORROSION PRODUCTS SAMPLER MODEL CPS

### *Quantify and Identify Corrosion Products*

#### *Features*

- New electronic totalizer allows reset to zero
- Easy-to-use filter holder
- Measure effectiveness of chemical treatment
- Identify sludge traps where corrosion products accumulate
- Bypass capability allows isokinetic sample flow rates

#### *Background*

The control and prevention of corrosion are primary concerns of water chemists in the power plant. Left uncontrolled, corrosion can result in serious equipment failures. Of equal importance, deposition of corrosion products in the turbine or boiler can significantly reduce both capacity and efficiency of the plant.

Since corrosion is a dynamic process, it is difficult to get a representative sample by normal grab sample methods. An integrating sampler is required. This means using filters to collect a continuous sample over a period of time, and measuring the amount of corrosion products which are captured by the filters.

A particulate filter is used to collect undissolved matter, and dissolved species are often collected via special cation and anion filters.

#### *Description*

The Sentry Corrosion Products Sampler (CPS) is a discrete module which can be mounted in a central sample panel or as a stand-alone unit at the sample source.

Major components include:

1. An easy-to-use, high pressure filter holder capable of containing a particulate filter, plus a combination of cation and anion filters.
2. A digital totalizing meter which is designed for high accuracy at very low flow rates.
3. Unit can either run on AC power or remotely with an optional 3-month-capacity battery. When the unit is plugged into AC, the battery is charged.

The standard CPS is designed for portability so that it can be easily moved around the plant to conduct studies of corrosion product generation and transport within the system.

MODEL CPS SPECIFICATIONS

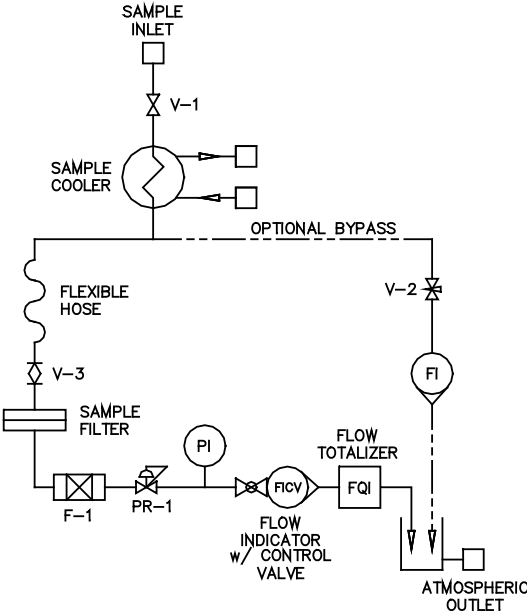
Maximum Inlet Pressure . . . . . 2850 psig (197 bar) standard (contact factory for higher pressure ratings)  
Maximum Sample Temperature (without sample cooler) . . . . . 131°F (55° C)  
Sample Flow Range. . . . . 2 to 330 cc/min  
Bypass Flow Range. . . . . 100 to 1300 cc/min  
Wetted Materials . . . . . 316 SS, PTFE, Viton®  
Maximum Back Pressure. . . . . Atmospheric  
Dimensions . . . . . 12" (30.5 cm) wide x 13" (33 cm) deep x 22" (55.9 cm) tall  
Electrical . . . . . .90 - 264 VAC, 47 - 63 Hz, 10 A max.  
Battery . . . . . Run-time approximately 3 months (battery life based on continuous usage with a new, fully charged battery)

Model #	Description	Power Source	Unit Weight
CPS-10A	Single stream with bypass; without sample cooler	A/C	51 lbs (23 kg)
CPS-10B	Single stream with bypass; without sample cooler	A/C and battery	85 lbs (39 kg)
CPS-11A	Single stream with bypass and sample cooler	A/C	63 lbs (28 kg)
CPS-11B	Single stream with bypass and sample cooler	A/C and battery	97 lbs (44 kg)
CPS-12A	Single stream; no bypass; without sample cooler	A/C	50 lbs (22 kg)
CPS-12B	Single stream; no bypass; without sample cooler	A/C and battery	84 lbs (38 kg)

Flow Diagram - Single Stream  
(drawing shown for reference only)

Available Options

- Panel mount or free-standing enclosure
- Sample cooling
- Speed loop (bypass circuit to maintain velocity through sample line)
- Multiple modules in one enclosure
- Pressure reduction before the sampler
- Lease or purchase
- Higher pressure rating



⚠WARNING

It is solely the responsibility of the end-user, through its own analysis and testing, to select products and materials suitable for their specific application requirements, ensure they are properly installed, safely applied, properly maintained, and limit their use to their intended purpose. Improper selection, installation, or use may result in personal injury or property damage.



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