

SENSOR Sampling CONCENTRIC Needle System

When samples are collected from a chemical or refining process, capturing the VENT and moving it away from personnel is one of the most important safety functions of the system. Many of these chemicals are hazardous to operations personnel, which makes grab sampling a potentially hazardous task. Standard bottle systems from SENSOR utilize a process needle for filling the bottle and a separate needle for venting it. The needles, in combination with a bottle, cap and membrane septum, provide for the “Closed-Loop” nature of the sample system.

The CONCENTRIC Needle design combines the function of the 2-needle system in one concentric combination of two different sized needles, one within the other. Process travels through the inner needle into the bottle and the displaced air and vapors are vented back through the annulus between the two needles and plumbed to a safe area. The process vent is available in three sizes: .065”/.109”, .083”/.148” and .109”/.203”.



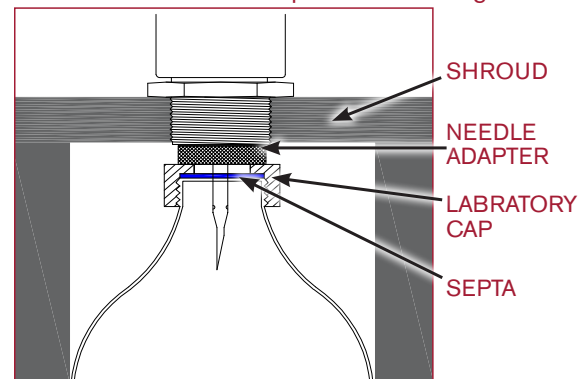
WHEN IS ONE NEEDLE BETTER THAN TWO?

- If the customer is using small bottles to collect samples, 4 oz or less
- If the cap supplier is not punching the holes large enough – could be buying from a lab supplier, instead of a grab sampling manufacturer
- If the customer has a reliability issue with vent needle breaking due to....
 - Operator attempting to thread or twist the bottle into the shroud
 - Operators removing shrouds, leading to improper alignment of bottle
 - Oversized shroud or the wrong size shroud for the sample bottle
- If the process stream has a viscosity similar to water
- If the process is relatively clean and free of solids
- If the process needle can be 0.109” or smaller – limitation on size due to damage to the septa
- If your customer has experience with sampling manufacturers which might include those whose designs require the sample bottle to be screwed or rotated into the sample station

CONCENTRIC NEEDLE FEATURES

- Aligns the process and venting functions with the center of the sample bottle
- Can be ordered as an OPTION without changing the Sample Station design
- Can be supplied in the same materials as the dual needle system
- Can improve reliability of the sample station in the field, if utilized for the right applications
- Can be used with vials with crimp-on caps
- Can be used for small sample bottles (less than 1 oz.)

SINGLE NEEDLE DESIGN: Eliminates damage to needle from the small cap hole or twisting the bottle



TWO NEEDLE DESIGN: Small cap hole or twisting causing vent needle to bend or break

