

WHY DRÄGER ORIGINAL SAMPLE LINES?

The sample line and the related gas analyzer are working in a team. **They have three goals:**

- 1
- 2
- 3

Indicating the correct concentrations of all gases, inspiratory and expiratory. These are:

- a. Oxygen
- b. Carbon dioxide
- c. Nitrous oxide
- d. Volatile anaesthetic agents

Showing correct real-time curves for all gas concentration.

Correctly detect and separate the breathing phases.

Within the sample line, neighbouring breathing phases are separated by a short boundary zone where both gases blend. To assure the best breathing phase detection and real time curve display it is essential to keep this

boundary zone as short as possible throughout the entire path through the sample line. This works best the more laminar (i.e. the less turbulent) the flow profile is. **See image 1.**



Image 1



Image 2



In case of a non-optimum flow profile within the sample line the real-time curve profile will be impaired. The "high" numerical values get false low, the "low" false high. **See image 2.**

The Dräger Original sample line assures a laminar flow profile and therefore a correct separation of neighbouring breathing phases.

This is done by the correct inner diameter and the special surface structure of the inner coating.

Volatile anaesthetic agents are commonly used during anaesthesia. They are potent solvents and tend to diffuse into most plastic materials.

If a sample line is made of normal plastic, the anaesthetic agent will diffuse into the wall material. It would act like a sponge, thus causing false values in the induction, steady state and recovery phase.

If an incorrect sample line is being used, the real-time curve of the anaesthetic agent concentration would be "rounded" (**See image 2**) and thus be incorrect.

The Dräger Original sample line has an inside coating of a material that does not allow adsorption of volatile anaesthetic agents.

Clinical routines can be rough. Sample lines can easily be clamped or kinked.

The Dräger Original sample line has an inside coating that hardens it and protects it from being kinked.

Summary: Using the Dräger Original ensures correct measurements and no alarms due to a blocked, kinked or leaking sample line.