WHY DRÄGER?
SAMPLE LINE

The sample line and the related gas analyzer work together to monitor **three important functions:**

1. Indicate the concentration of all gases, inspiratory and expiratory. These are:
   - a. Oxygen
   - b. Carbon dioxide
   - c. Nitrous oxide
   - d. Volatile anesthetic agents
2. Display accurate real-time curves for all gas concentrations.
3. Detect and segment the breathing phases.

Within the sample line, sequential 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 of the sample line. This works best when the flow profile is more laminar, less turbulent.
See diagram 1.

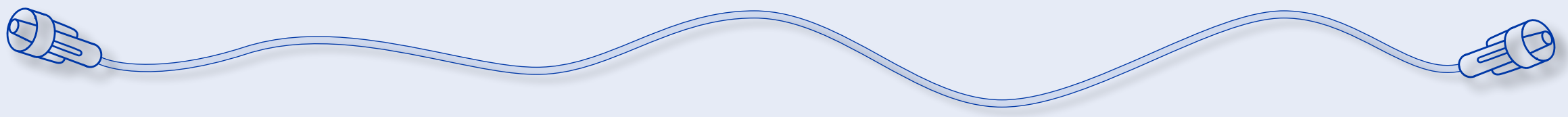

Diagram 1

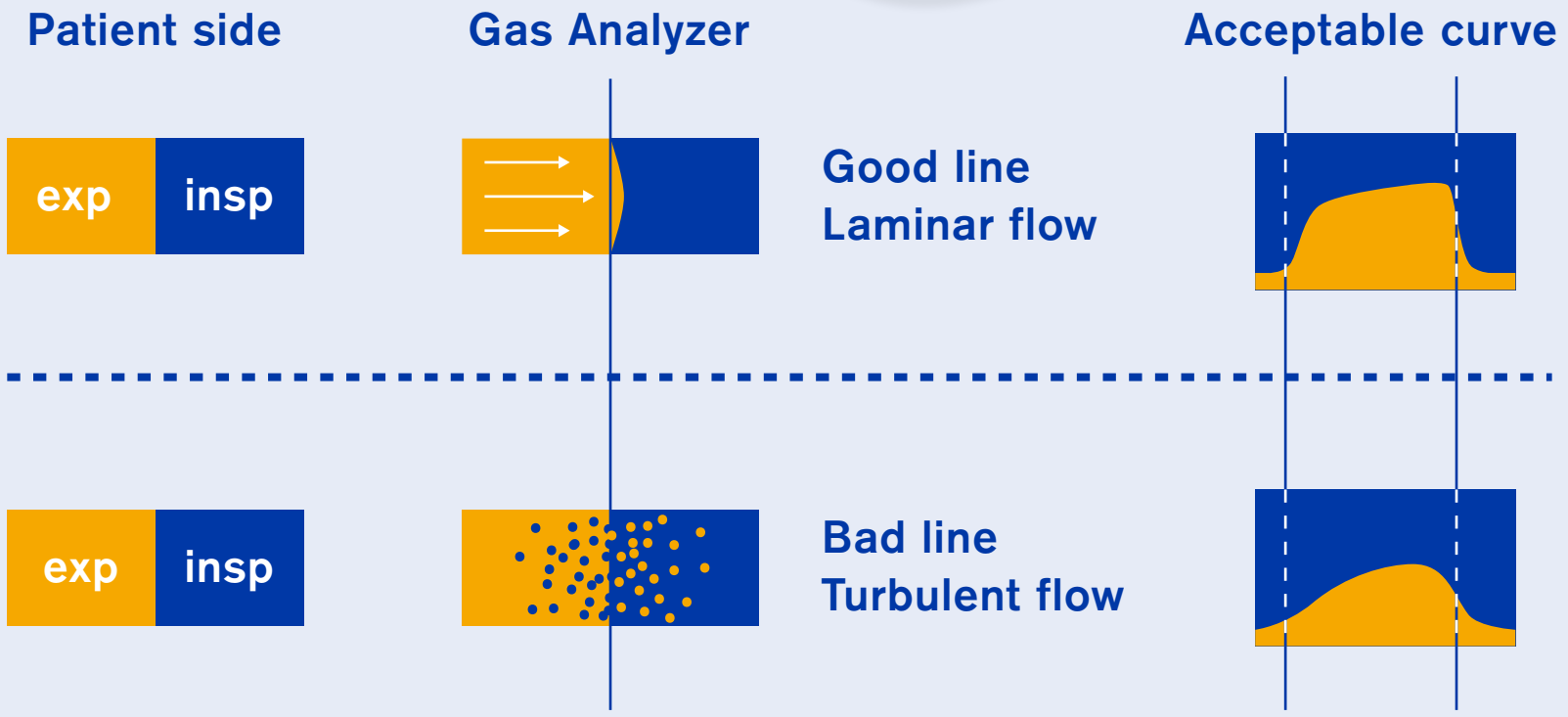

Diagram 2

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 diagram 2.***

Our sample line assures a laminar flow profile and therefore a correct separation of breathing phases.

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

Volatile anesthetic agents are commonly used during anesthesia. They are potent solvents and tend to diffuse into many plastic materials.

If a sample line is made of unproven polymers, the anesthetic agent can diffuse into the wall material. This absorption may cause false values in the induction, steady state and recovery phase.

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

Our sample line has an inside coating of a material that does not allow adsorption of volatile anesthetic agents.

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

Our sample line has an inside coating that hardens it and protects it from being kinked.

Summary: **Our sample line is tested and validated to ensure correct gas measurement, resulting in reduced complications as a result of blockage, kinks or leaking.**