



IntelliTrig - Adapting to airway leaks

Increase ventilator efficiency and patient comfort

Airway leakages during noninvasive ventilation reduce synchronization of patient demand and ventilator support. This often leads to a significant reduction in efficiency of noninvasive ventilation during both inspiration and expiration. As the patient's efforts may fluctuate depending on variations in mask leakage and the patient's alertness, it is important for the ventilator to adapt on a breath-by-breath basis to these fluctuations.

Our ventilators provide leakage compensation, IntelliTrig, during the full breath cycle to increase patient-ventilator synchrony and reduce the risk of autotriggering. Using IntelliTrig, the ventilator identifies the leak by measuring the flow at the airway opening, and uses this data to automatically adjust the gas delivery while remaining responsive to the set inspiratory and expiratory trigger sensitivity. The process is illustrated on page 2.

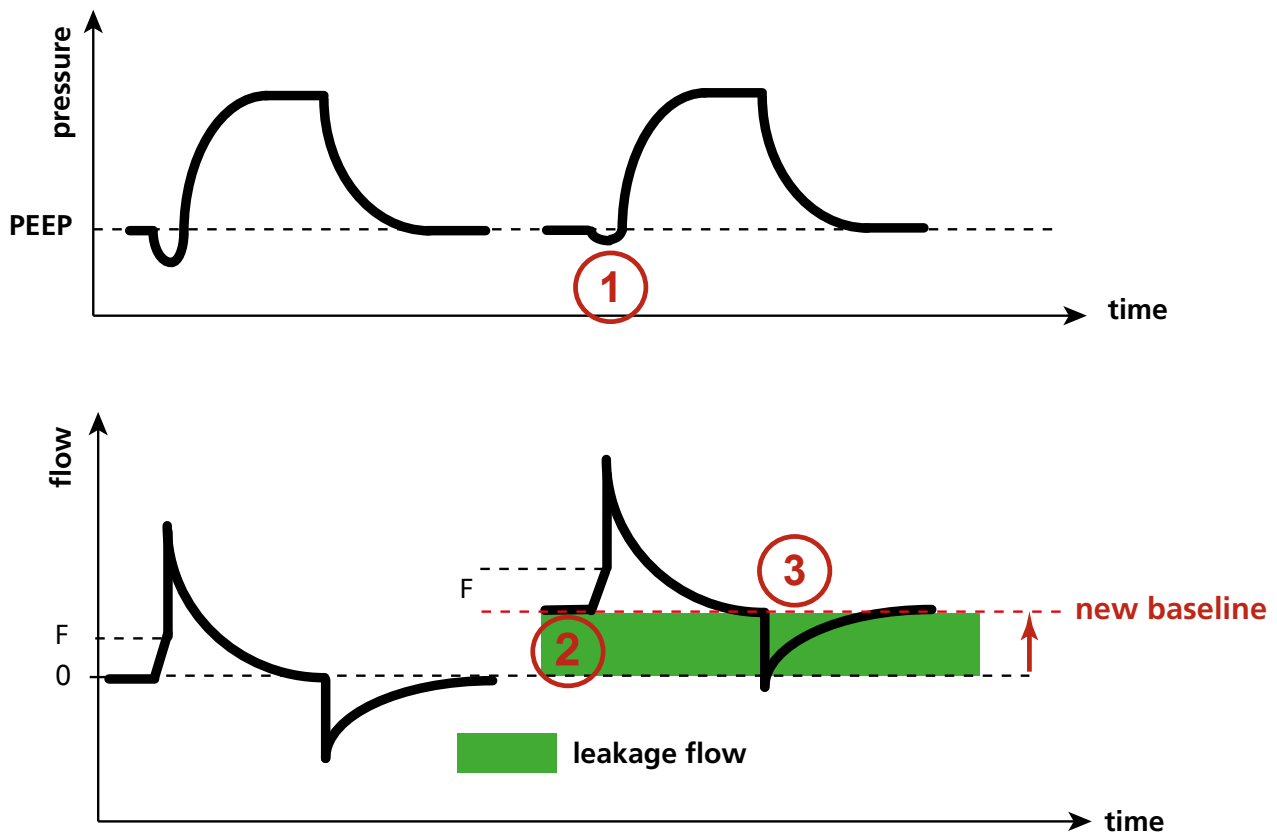
Increase efficiency and patient safety

- No need for trigger adjustments, even in the presence of high leakage or patient status change
- Compensation for all airway leaks
- Monitoring of patient's tidal volume

Ventilation using IntelliTrig

Working principles

The device measures the leakage flow by comparing inspiratory and expiratory volumes, and adds this flow to the flow trigger setting F (item ②). As a result, the shape of the flow pattern is the same, with or without leakage. The patient can trigger a breath regardless of the amount of leakage. As the leakage is measured, the patient's expiratory trigger can be accurately detected by a proximal flow measurement (item ③). In addition, the effort required to trigger a breath (work of breathing) decreases as a result of the increased availability of gas (item ①).



Pressure- and flow-time curve with IntelliTrig