WHY USE DRÄGER ORIGINAL ACCESSORIES – VENTSTAR® OXYLOG®

Why is flow measurement important?

Flow Measurement is a common way to monitor breathing volume and flow of the patient.[1] The goal of monitoring the patient's breathing volume is that the **Tidal Volume** is accurately delivered by the Ventilator.

In this process it is essential to minimize ventilator induced injuries of the lung through an accurate monitoring of the flow rate and lung volume.[2]

How does flow measurement work?

The Dräger Differential Pressure Flow sensor (DFS) ensures technically proven **volume, flow and patient pressure airway** measurement accuracy. The DFS is specifically designed for the Dräger Oxylog device, within one component the Patient Flow and Volume can be measured.

Dräger Differential Pressure Flow Sensor:

The flow rate works as feedback to the Oxylog to adjust the desired amount of gas to be delivered.

Flap between the two housings, causing different pressure on each side.

The differential pressure over the flap correlates to the patients flow.

Pressure measuring ports in the housing are connected to a sensor inside the ventilator

Expiratory Valve & Check Valve

The **Expiratory Valve** controls the breathing phases: It closes the expiratory airway during inspiration and generates PEEP during expiration.

The **Check Valve** is open during inspiration and closes during expiration. It also ensures that the expiratory flow is directed to the expiration valve and the inspiratory flow is directed to the patient.

Why should I use original Oxylog accessories?

The Dräger DFS in combination with the other breathing circuit components meets the characteristic pressure-flow curve of all relevant Oxylog devices. The components are especially developed for the Oxylog device to guarantee an optimal performance:

Low inspiratory and expiratory resistance

Robust design adjusted to various operational conditions:

Measuring gas during Emergency- and Transport-Ventilation must be accomplished under various humidity-, and temperature-conditions. The DFS is tested under all these conditions.

High accuracy of flow-measurement for a reliable ventilator performance:

The Data from the flow sensor is used within the ventilator for monitoring the accurate delivered volume and flow. Own efforts of breathing are observed and the patient´s breathing pattern is analyzed.

! For all these reasons, Dräger recommends Dräger Original Accessories for Oxylog®.

References:

1. G. Wallon et. al.: Delivery of tidal volume from four anaesthesia ventilators during volume-controlled ventilation: a bench study. In: British Journal of Anaesthesia, 110
2. E. Schena, C. Massaroni, P. Saccomandi, S. Cecchini, Flow measurement in mechanical ventilation: A review, Medical Engineering & Physics, Volume 37, Issue 3 (2015)