The right pressure at the right time for more patient comfort and more efficient ventilation.

Auto-TRAK algorithm

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AVAPS, a unique clinically proven technology

- For patients with Obesity Hypoverilation Syndrome
  “The addition of AVAPS to BPV/S/T provides beneficial physiologic improvements, resulting in a more efficient decrease of PtcCO2 compared to BPV/S/T therapy alone.”
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What is AVAPS?

AVAPS is a support function that can be activated within our S, S/T, PC and T pressure modes. It automatically adapts pressure support to patient needs to guarantee an average tidal volume.

Based on the Auto-TRAK algorithm performance, the patient’s tidal volume is estimated at each breath and compared with the target tidal volume. Inspiratory pressure increases or decreases from breath to breath to ensure the preset tidal volume. Inspiratory pressure smoothly changes (<1cmH2O/min) so as not to affect patient comfort, and to prevent any potential patient-ventilator disynchronization.

In case the patient tidal volume is far from the set target, an accelerating factor will allow the inspiratory pressure to change faster by up to 3 cmH2O/min.

Check patient arterial blood gases (PaCO2 and PaO2) and oxygen saturation (SpO2)

* Conversion table to set the target tidal volume in relation to the ideal weight:

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AVAPS suggested settings

1. Set the Target Tidal Volume
   - To 8ml/kg of the ideal weight and adjust depending on patient pathology

2. Set IPAP Limits
   - IPAP max = 25 to 50 cmH2O depending on patient condition and maximum pressure available on the machine
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Which patients?

- **Obese hypoventilation patients:** To compensate for changes in body position, averaged tidal volume ensured
- **COPD patients:** To achieve a combination of ventilation comfort and efficiency with no compromise. Get both benefits by applying “the right pressure at the right time”
- **Restrictive patients:** To provide the comfort and leak compensation of a pressure mode, and the safety of a guaranteed volume

Which benefits?

- **Make titration process easier, no IPAP adjustment needed**
- **Follow disease progression as patient’s ventilatory needs change**
- **Improve patient’s ventilation efficacy and comfort**
- **Increase safety by guaranteeing an averaged tidal volume**

Estimation of the exhaled tidal volume (Vte)

Digital Auto-TRAK algorithm combined with the BPAP system is able to quickly identify the leak by comparing the original baseline flow to the new baseline flow. Differences are recognized as leaks, and adjusted for, quickly.

Auto-TRAK algorithm estimates patient flow to provide:

- **Automatic triggers:** sensitivity remains optimal even with a change in leaks and patient’s respiratory mechanics
- **An estimation of exhaled patient tidal volume (Vte)** for ventilation monitoring and for AVAPS. Based on Auto-TRAK advanced technology, AVAPS ensures a close monitoring of Vte and adjusts IPAP to maintain a true averaged patient tidal volume.

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