GUARANTEED VOLUME
THE KEY TO IMPROVED VENTILATION

AVAPS™ AVERAGE VOLUME ASSURED PRESSURE SUPPORT
A REVOLUTIONARY WAY TO ENSURE TARGETED TIDAL VOLUME

Patients deserve efficient and comfortable noninvasive ventilation. That's why there's Average Volume Assured Pressure Support (AVAPS™)—a unique feature that automatically adjusts pressure support to meet changing patient needs while maintaining an average tidal volume.

Coupled with Digital Auto-Trak,™ AVAPS estimates the patient’s tidal volume over several breaths and compares it to the desired targeted tidal volume. AVAPS recognizes if the patient is not achieving the targeted volume and gradually changes the inspiratory pressure (.5–1 cm H2O per minute) to achieve breath comfort and synchrony. Since the pressure increases smoothly, it will never compromise patient comfort—or safety.

WHY AVAPS™?

- Adapts automatically to changing patient needs
- Improves ventilation efficacy and patient comfort
- Increases safety by guaranteeing a minimum ventilation
- Simplifies the titration process

WHO POTENTIALLY BENEFITS FROM AVAPS™?

- Neuromuscular and COPD patients with respiratory insufficiency—AVAPS combines the comfort and leak compensation of a pressure mode with the safety of a guaranteed volume.
- Obesity hypoventilation patients—ventilation depends on body position. But thanks to AVAPS, a target tidal volume can be established and maintained.

To improve comfort while guaranteeing the safety of ventilation, AVAPS is available in the BiPAP® AVAPS in S, S/T, PC and T modes.
AVAPS™ SUGGESTED SETTINGS*

1. Set the target tidal volume, either to 110% of the displayed patient tidal volume when ventilated on S/T mode or to 8 ml/kg of ideal weight. Adjust depending on patient tolerance and clinical outcomes. Target Vte may be set from 200 ml to 1500 ml.

<table>
<thead>
<tr>
<th>HEIGHT</th>
<th>59”</th>
<th>61”</th>
<th>63”</th>
<th>65”</th>
<th>67”</th>
<th>69”</th>
<th>71”</th>
<th>73”</th>
<th>75”</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEAL WEIGHT</td>
<td>52.0 Kg</td>
<td>55.5 Kg</td>
<td>59.0 Kg</td>
<td>62.5 Kg</td>
<td>66.5 Kg</td>
<td>70.5 Kg</td>
<td>74.5 Kg</td>
<td>78.5 Kg</td>
<td>83.0 Kg</td>
</tr>
<tr>
<td>VTE IF 8 ML/KG</td>
<td>420 ml</td>
<td>440 ml</td>
<td>470 ml</td>
<td>500 ml</td>
<td>530 ml</td>
<td>560 ml</td>
<td>600 ml</td>
<td>630 ml</td>
<td>660 ml</td>
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</tbody>
</table>

2. Set IPAP limit.
   - IPAP max = 25 to 30 cm H2O depending on patient pathology
   - IPAP min = EPAP + 4 cm H2O

3. Set respiratory rate 2-3 BPM below resting respiratory rate.

4. Set inspiratory time for the controlled breaths.
   - Set Ti between 25% and 33% for obstructive patients.
   - Set Ti between 33% and 50% for restrictive patients.

5. Adjust rise time to the patient’s comfort.
   - Obstructive patients prefer short rise times from 1 to 4 (100 ms to 400 ms).
   - Restrictive patients prefer long rise times from 3 to 6 (300 ms to 600 ms).

*Nothing in these suggested settings is intended to supercede established medical protocols.
CLINICAL REFERENCES

AVAPS SUPPORT FUNCTION

Average Volume Assured Pressure Support in Obesity Hypoventilation: A Randomized Crossover Trial.

Preferred Tidal Volume Setting For Non-Invasive Ventilation Is Different For Sleep And Wakefulness.
Thematic Poster Session.

Average Volume Assured Pressure Support (AVAPS) For Pressure-Controlled Ventilation (BiPAP® Therapy).

Short-Term Efficacy Of Spontaneous AVAPS (Average Volume Assured Pressure Support) Mask Ventilation In Patients With Hypercapnic COPD. Poster Session.
Tramacere A, Romagnoli M, Bellantone T, Lubello R, Lugli D, Trianni L, E. Clini