Auto-TRAK
Algorithm
Unlike manually controlled systems, Auto-Trak Sensitivity does the work for you
**Inspiratory trigger and expiratory cycle**

**Shape signal**
Delayed waveform crossing patient flow in case of flow direction changes

- Inspiratory effort: patient flow naturally increases
- Expiratory effort: patient flow naturally decreases

**Inspiratory trigger**

**6ml volume**
Detects an accumulated 6ml volume above baseline

**Expiratory cycle**

**Spontaneous expiratory threshold**
Electronic signals rise in proportion of tidal volume

**Flow reversal**
Allows detection of excessive mouth leaks

→ Flow naturally rises when the patient opens his mouth: flow delivered increases to compensate for mouth leak and to maintain IPAP

**Safety feature**
Maximum inspiratory time of 3 seconds
**Unique feature** designed to **automatically adjust triggering** and **cycling thresholds** whatever the leaks and changes in patient status

**Characteristics**
1. Automatic inspiratory trigger and expiratory cycle
2. Advanced leak estimation and compensation
3. Patient tidal volume estimation (Vte)

**Advantages**
1. **Easy ventilation** → No need for trigger adjustments even in presence of high leaks or patient status changes
2. **Efficient ventilation**: Leaks are all compensated
3. **Safe ventilation**: Monitoring of patient Vte (estimation)

**Leak estimation and compensation**

- **Vti > Vte** means leak has increased → Base line needs to be increased
- **Vti < Vte** means leak has decreased → Base line needs to be decreased
- **Vti = Vte** means leak estimation is correct → Base line is correct: patient Vte estimation is (Vte + Vti)/2

Leaks are estimated on a breath-by-breath basis.