



BPAP 25A Training

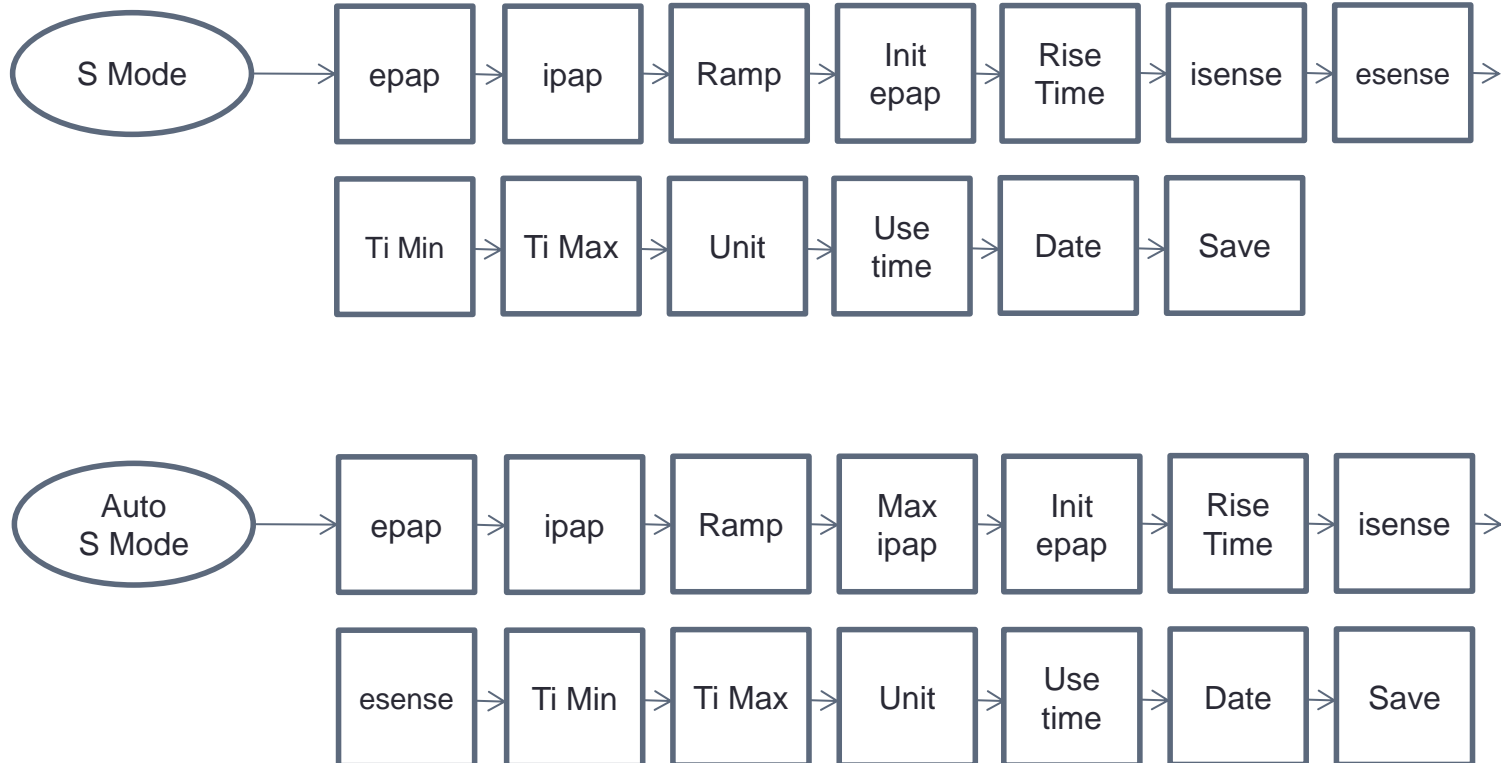
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Clinical Education
Manager

Clinician Menu

To access Clinician Menu press and hold the **On/Off Button** and **Ramp Button** and at the same time connect the power cord into the AC inlet on the back of the RESmart. Release the buttons once the Clinician Menu appears on display screen as below.

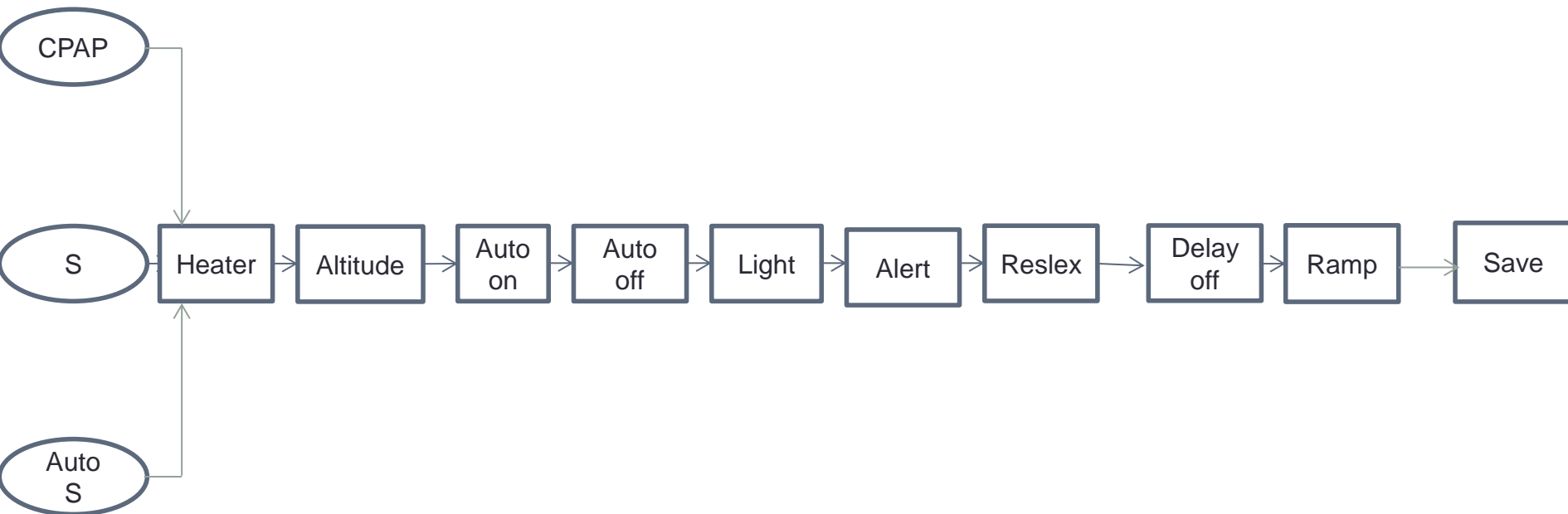


Clinician Menu



Patient Menu

Top access Patient Menu press and hold the **Ramp Button** for approximately 3 seconds while the machine is in standby mode. Release once you see “Heater” in the display.



Ramp

Ramp:

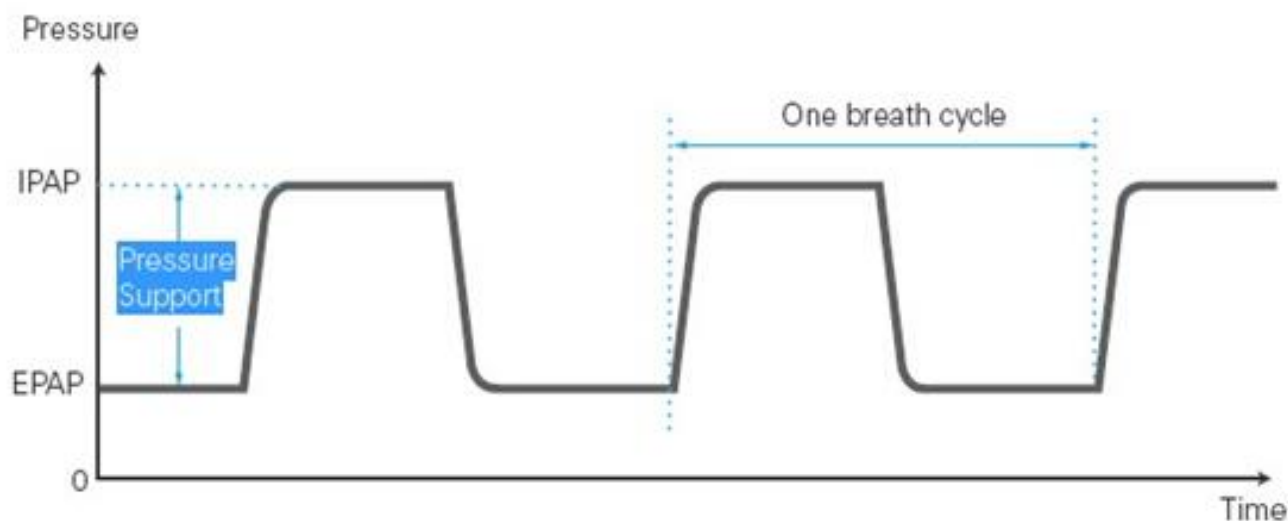
This setting will gradually increase the output pressure and rise to the prescription EPAP pressure over the set time to assist the patient in falling asleep. Setting Range is 0-60 minutes in increments of 5 minutes. Default is 0 minutes. The device will reduce the outlet pressure and starts the countdown every time the ramp button is depressed during therapy.

For CPAP Mode, this setting is the ramp time from Init P to Treat P.

For S and Auto S mode, this setting is the ramp time from Init EPAP to prescription EPAP. The differential pressure of IPAP and EPAP is based on the IPAP and EPAP settings.

Pressure Support

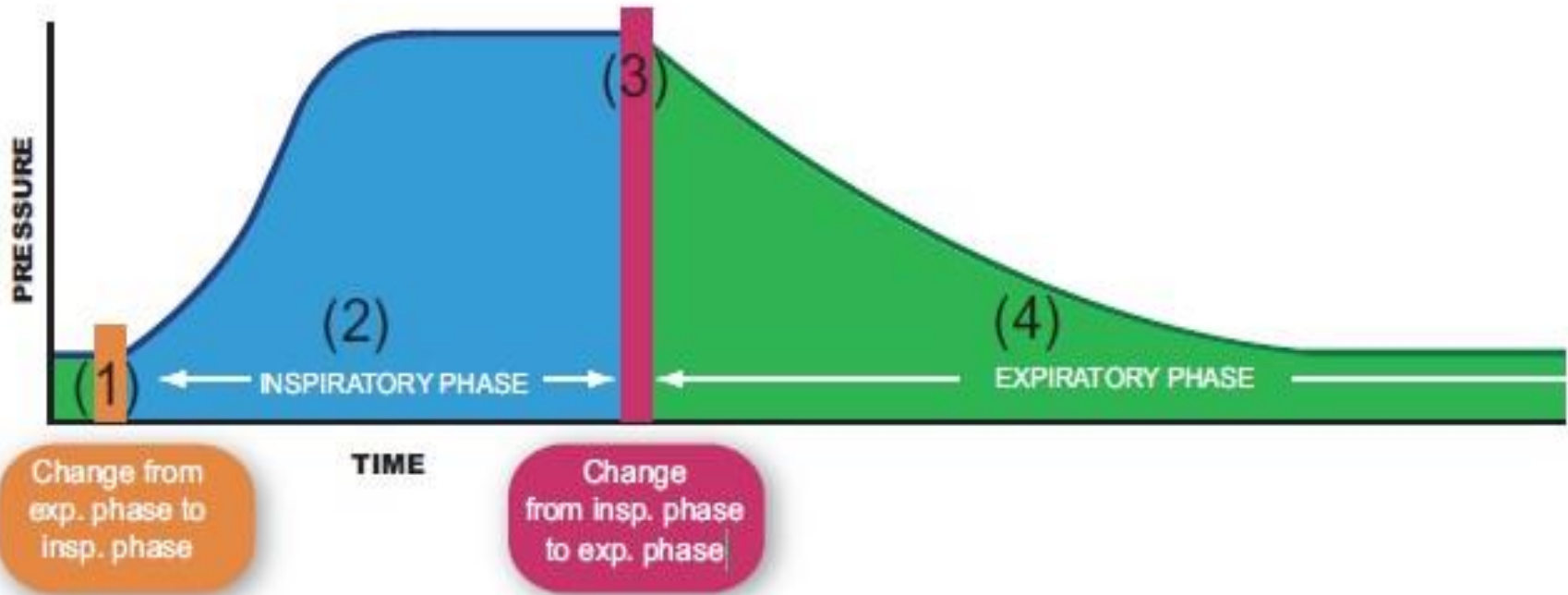
The difference between the IPAP and EPAP pressure creates the pressure support. Pressure support, also referred to as delta P, is the difference between IPAP and EPAP. The image below shows pressure support in BPAP therapy:



Pressure support is set to achieve an appropriate **tidal volume** (the amount of air breathed in and out by the patient in a single breath). The greater the **PS**, the greater the **tidal volume** for the patient. Patient with progressive diseases sometimes require changes in their pressure support to ensure adequate **tidal volume**.

Note: A minimum PS of 4 cm H₂O is recommended

Breathing Phases



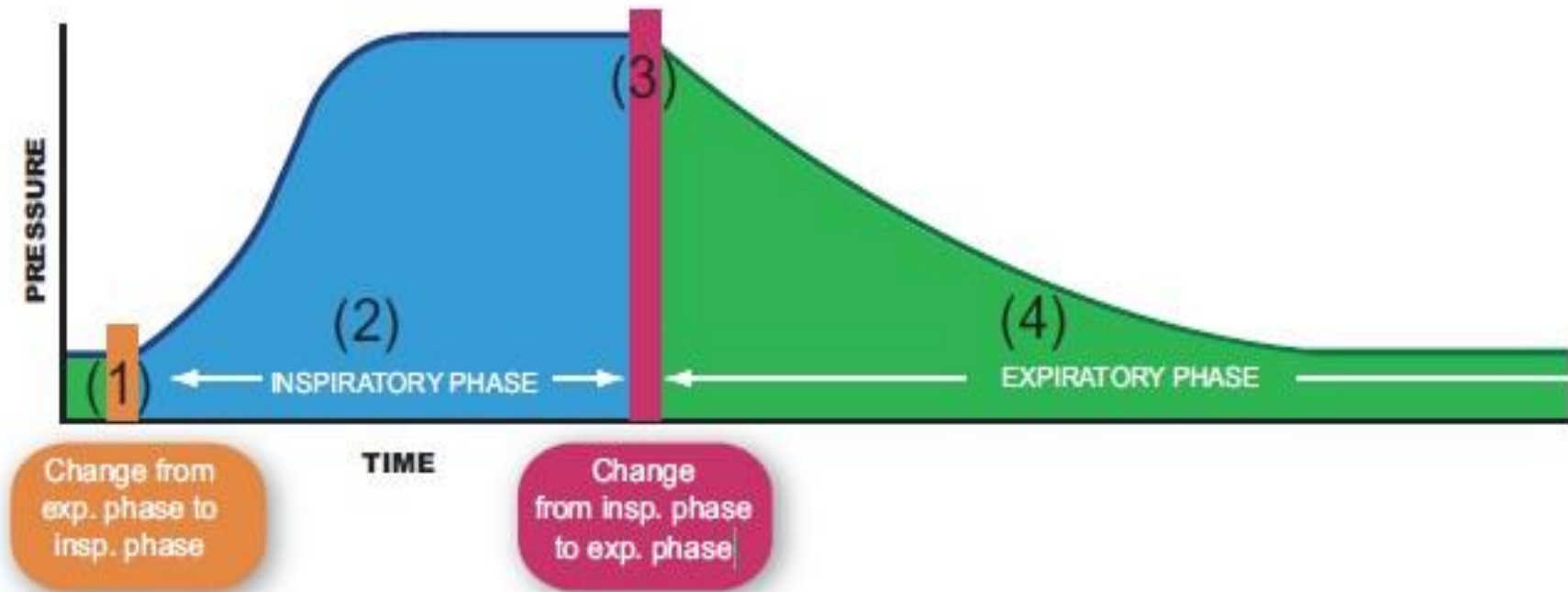
Phase	Description
1	Transition from expiration pressure to inspiration
2	Inspiratory phase
3	Transition from inspiration pressure to expiration
4	Expiratory phase

Breathing Phases

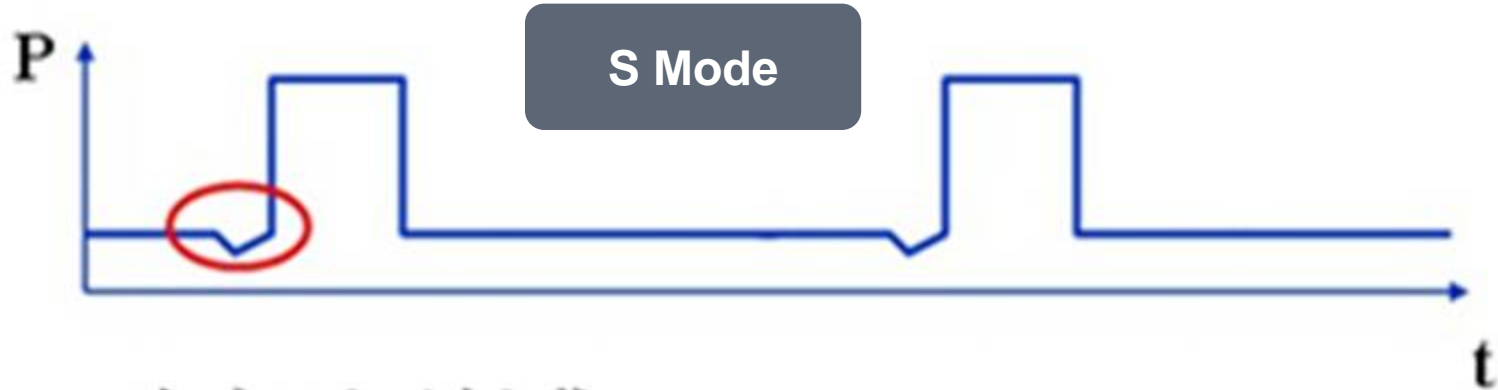
A breath can be broken into four distinct phases. It is important to understand these so that you are able to set up the BPAP device to assure patient-device synchrony.

A BPAP device set up optimally should mimic the patient's own breathing pattern.

Trigger is the point at which the device changes from the expiratory pressure and increases to the inspiratory pressure.



Mode

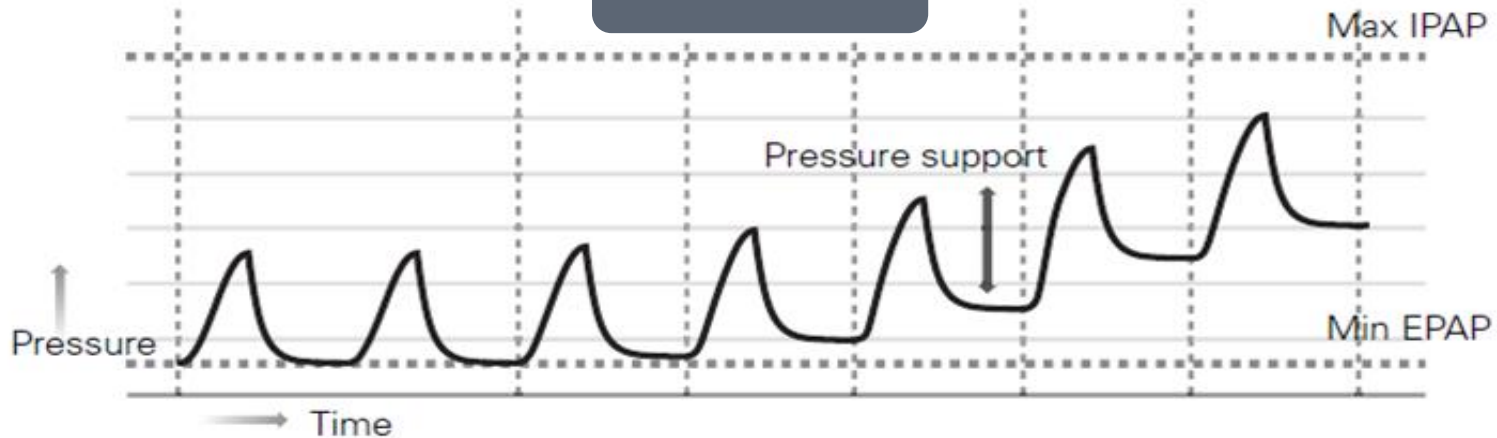


- Flow triggered
- Inspiratory and expiratory time depend on the patient
- Minute Ventilation is patient dependent

The main parameters that can be set under S mode	
IPAP	EPAP
I sense	E sense
Rise Time	
Ti Max	Ti Min

Mode

Auto S



Under this mode, RESmart provides two different pressures: IPAP and EPAP, when there are no respiratory events (Apnea or Hypopnea). If there is any events, the IPAP and EPAP will increase and decrease between the range of EPAP and Max IPAP, keeping the **PS(IPAP-EPAP)** unchanged.

The main parameters that can be set under Auto S mode	
IPAP	EPAP
I sense	E sense
	Max IPAP
Rise Time	
Ti Max	Ti Min

Parameters

Clinician Menu

Treat P (*CPAP Mode only*): Indicates CPAP Treatment Pressure. Pressure Range from 4 to 20 cm H₂O in 0.5 cm H₂O increment.

Init P (*CPAP Mode only*): The starting pressure if a Ramp time is set. Setting range is 4 cm H₂O to Treatment Pressure (Prescription Pressure). Adjustment step is 0.5 cm H₂O. Default setting is 4 cm H₂O.

EPAP (*S and Auto S Mode*): Expiratory Positive Airway Pressure. This pressure is set as the prescription expiratory pressure. Setting range is 4-25 cm H₂O. Cannot go above IPAP Pressure. Adjustment step is 0.5 cm H₂O. Default setting is 6 cm H₂O.

IPAP (*S and Auto S Mode*): Inspiratory Positive Airway Pressure. This pressure is set as the prescription inspiratory pressure. Setting range is 4-25 cm H₂O. Adjustment step is 0.5 cm H₂O. Default setting is 8 cm H₂O.

Parameters

Clinician Menu

Init EPAP (*S and Auto S Mode*): When a Ramp time is set, this will be the initial pressure to begin ramp pressure rise.

Max IPAP (*Auto S Mode only*): This setting is the maximum IPAP Pressure. Default setting is 25 cm H₂O.

Parameters

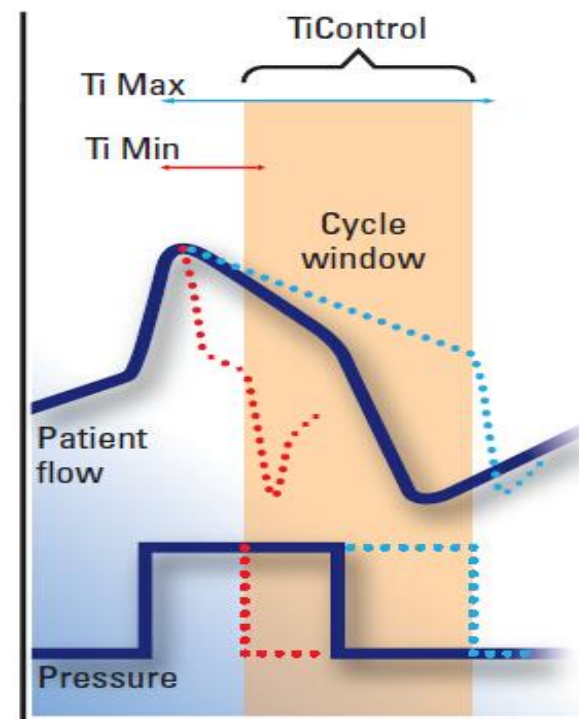
Clinician Menu

Ti Max(S and Auto S Mode): Maximum Inspiration Time. It refers to the maximum duration of IPAP in each respiratory cycle. Setting range is 0.3-3.0 Seconds. Adjustment step is 0.1 S. Default setting is 2.0 S.

Ti Min(S and Auto S Mode): Minimum Inspiration Time. It refers to the minimum duration of IPAP in each respiratory cycle. Setting range is 0.1-Ti Max. Adjustment step is 0.1 S. Default setting is 0.5 S.

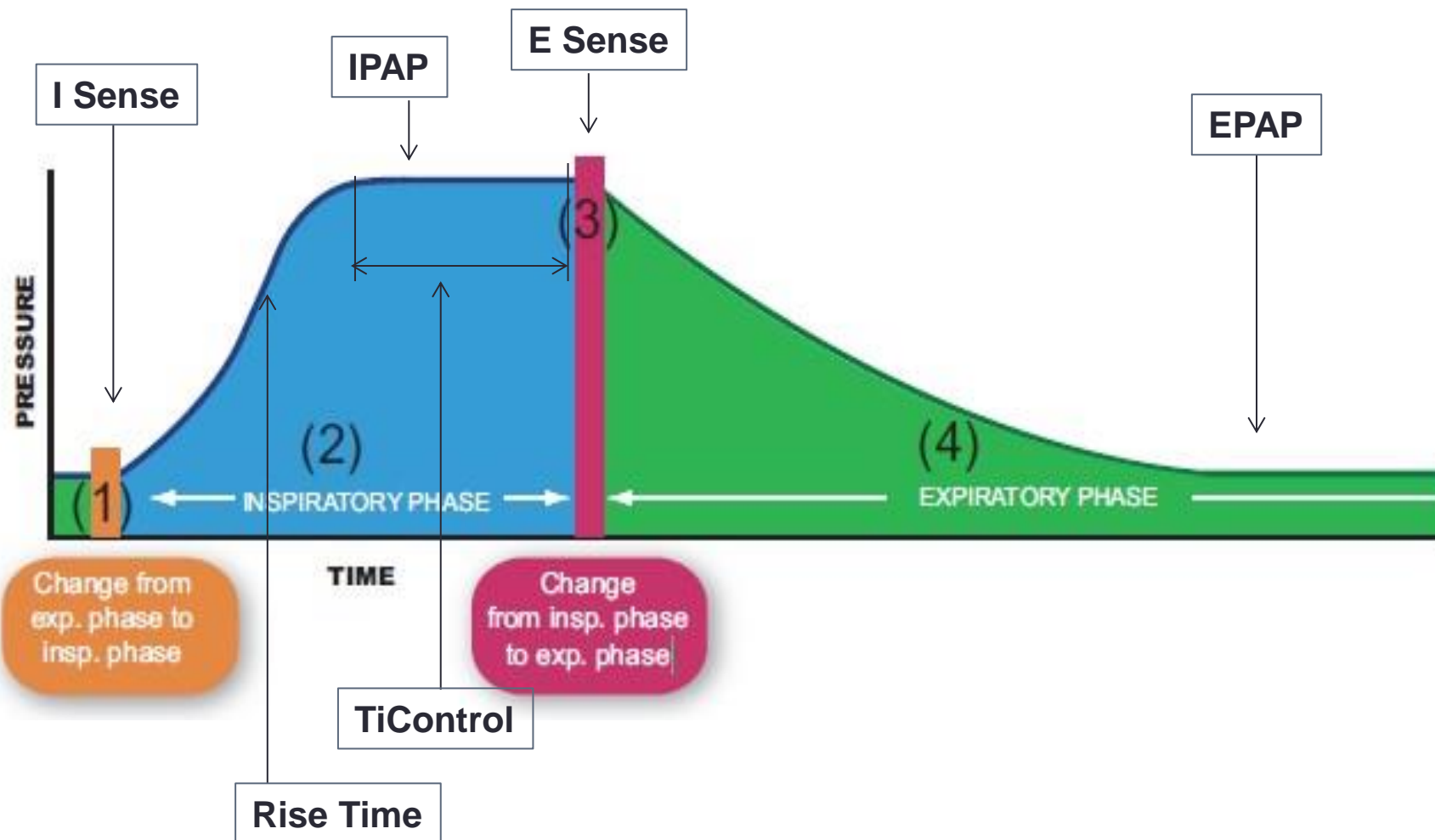
Ti Max limits the inspiration time for patients who require a longer expiration time.

Ti Min prevents premature cycling to EPAP for those patients whose inspiratory efforts are extremely weak.



Parameters

Clinician Menu



Parameters

Clinician Menu

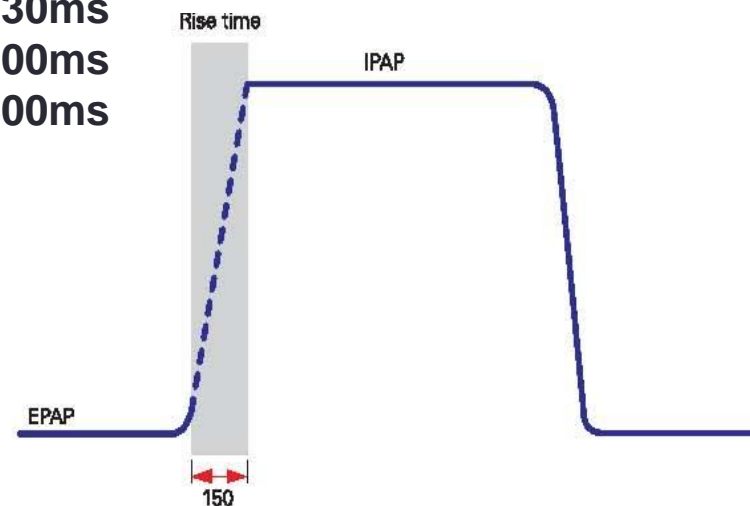
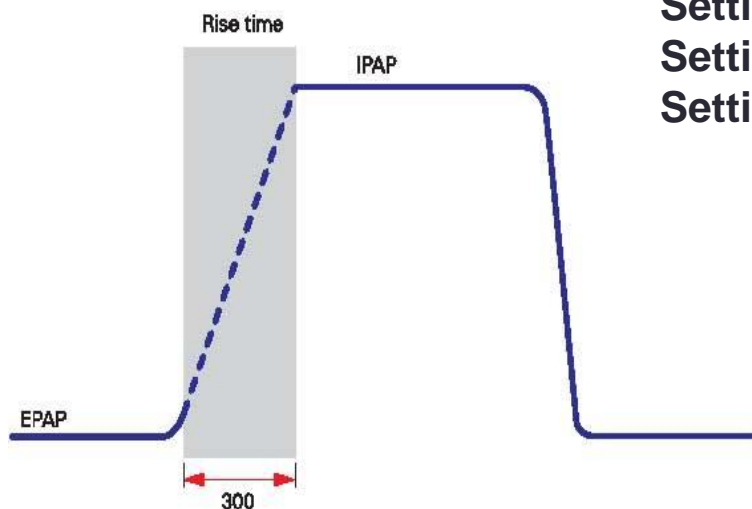
Rise Time(S and Auto S mode) is the time it takes for the device to transition from EPAP to IPAP once inspiration has triggered. The greater the **Rise Time** is, the longer it takes for pressure to increase from **EPAP** to **IPAP**. It is adjustable by the patient and the provider from 0 to 3, default setting is 2.

Setting 0: 150ms

Setting 1: 230ms

Setting 2: 300ms

Setting 3: 400ms



Patients with an obstructive lung disease often require a shorter rise time
Patients with a restrictive lung disease may prefer a longer rise time.

Parameters

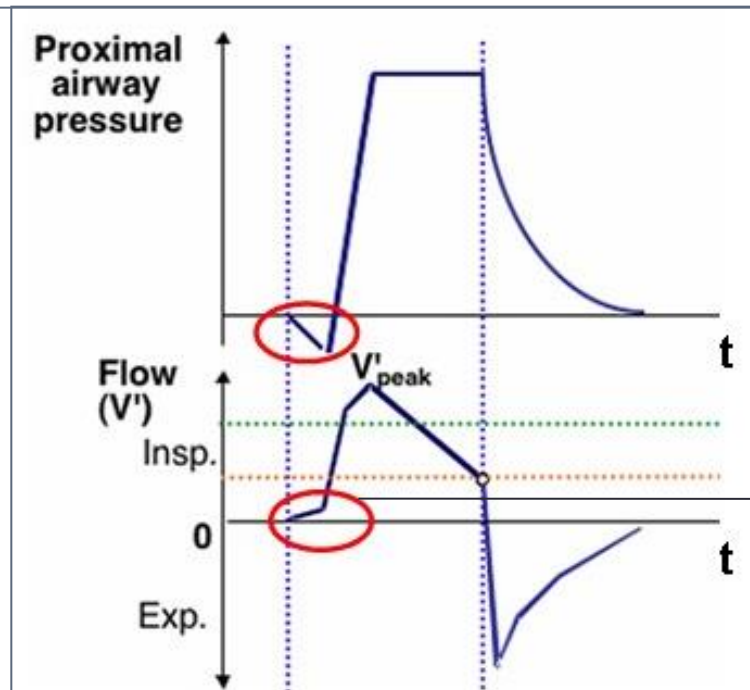
Clinician Menu

I Sense(S and Auto S mode): This Setting can adjust the trigger sensitivity when patient's breath switch into inspiratory phase. It can be adjusted from 1 (less sensitive) to 8 (most sensitive) in the **Clinician Menu**. Default setting is 6

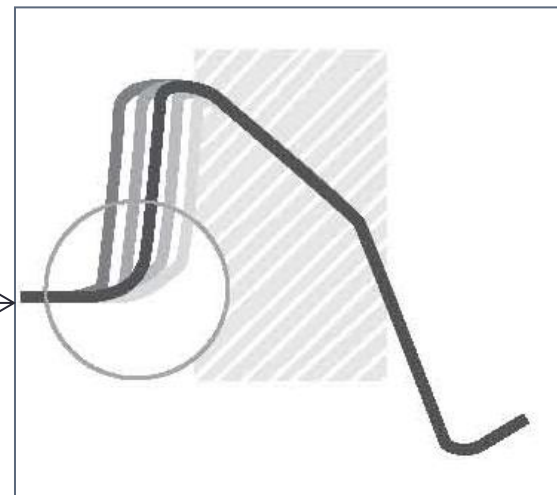
Inspiration Flow : 2/ 2.8/ 3.8/ 5/ 6.5/ 8/ 10/ 12 L/min, 8 sets Inspiration Trigger

Setting:8

Setting:1



Dynamic Inspiration Trigger (EPAP to IPAP)



Parameters

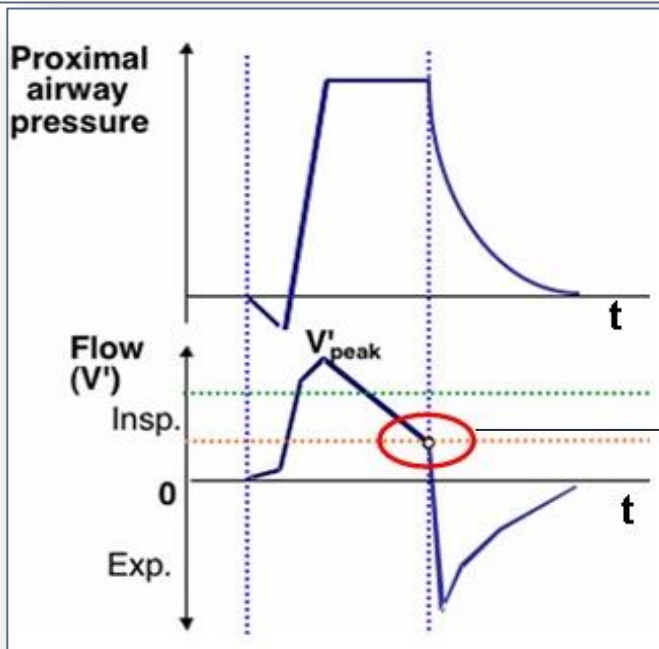
Clinician Menu

E Sense (S and Auto S mode): This Setting adjusts the trigger sensitivity when a patient's breath switches into expiration phase. It can be adjusted from 1 (less sensitive) to 8 (most sensitive) in the **Clinician Menu**. Default setting is 7.

ETS: 25% 28% 31% 34% 37% 40% 45% 50%, 8 sets Expiration Trigger

Setting:8

Setting:1



IPAP to EPAP

