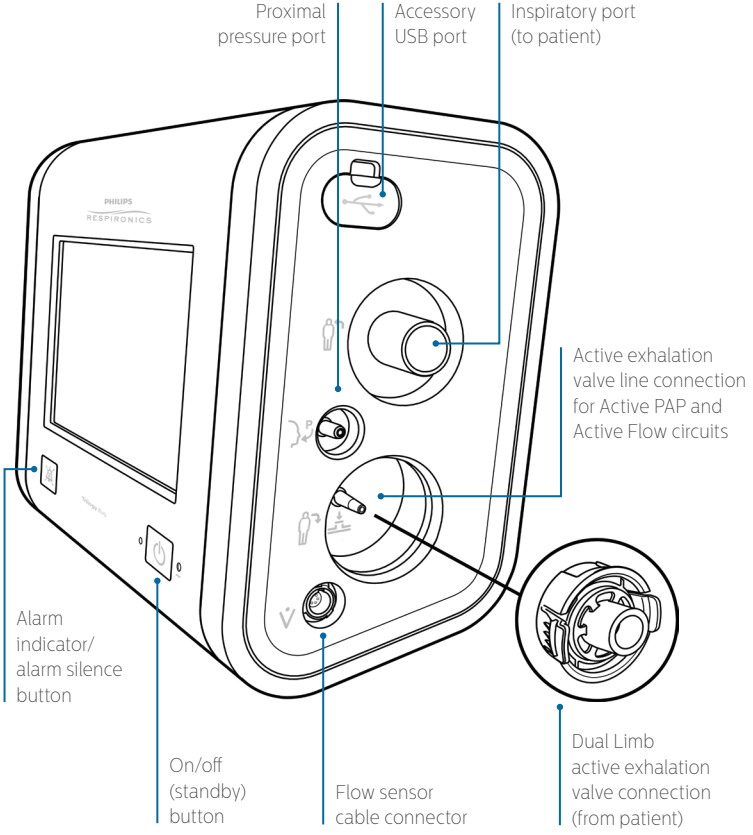
PHILIPS
RESPIRONICS

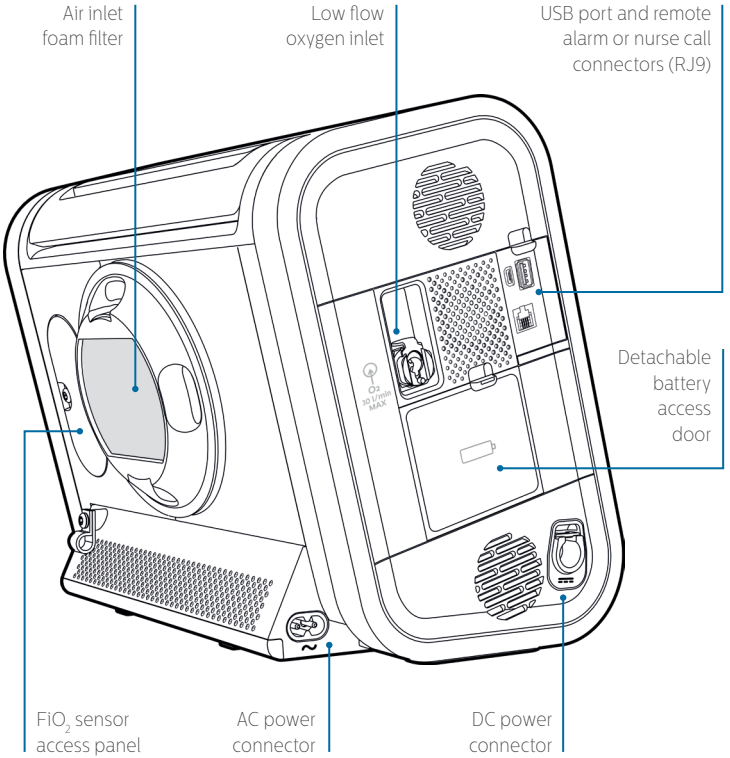
Trilogy Evo

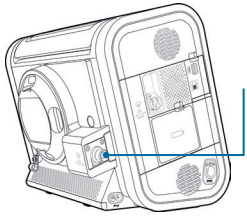
# Quick start guide
## *for clinicians*



# Overview


Proximal pressure port
Accessory USB port
Inspiratory port (to patient)
Active exhalation valve line connection for Active PAP and Active Flow circuits
Alarm indicator/ alarm silence button
On/off (standby) button
Flow sensor cable connector
Dual Limb active exhalation valve connection (from patient)

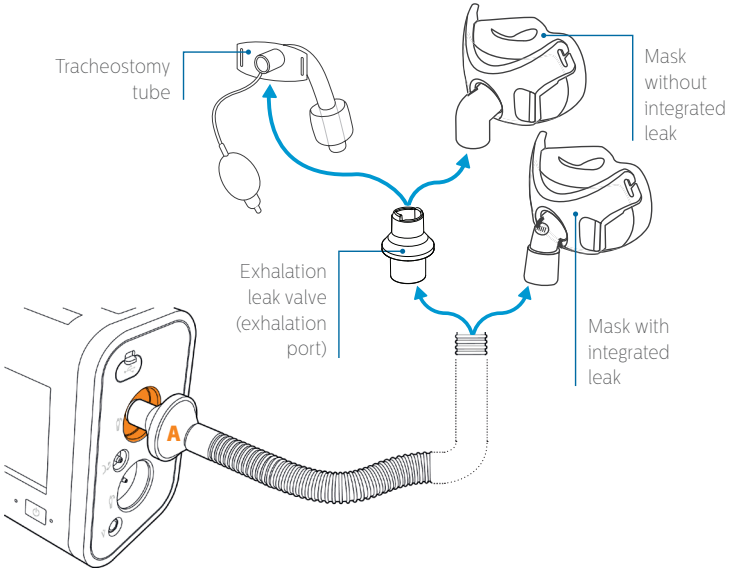


Oxygen blending module
may not be part of your
device model

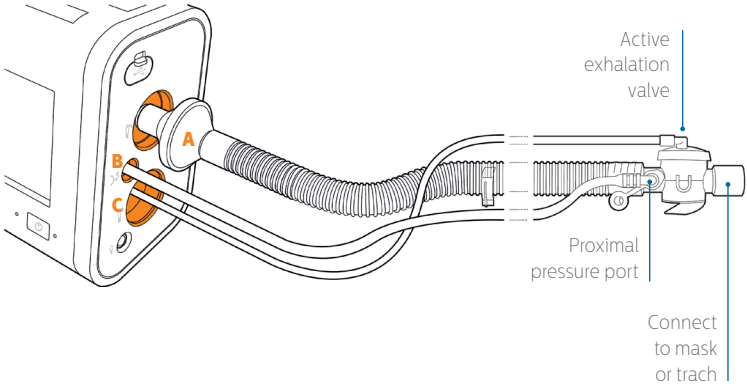
# Available circuit options

## Passive circuit




**A.** Connect the bacteria filter on the circuit to the inspiratory port.

# Active PAP circuit



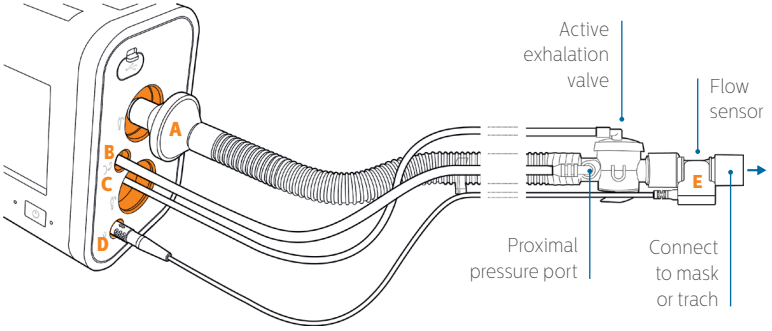

**A.** Connect the bacteria filter on the circuit to the inspiratory port.

**B.** Connect the proximal pressure line (wider diameter than active exhalation valve line) to the proximal pressure port.

**C.** Connect the active exhalation valve pressure line to the active exhalation valve line connection.

# Available circuit options *(continued)*

## Active Flow circuit




**A.** Connect the bacteria filter on the circuit to the inspiratory port.

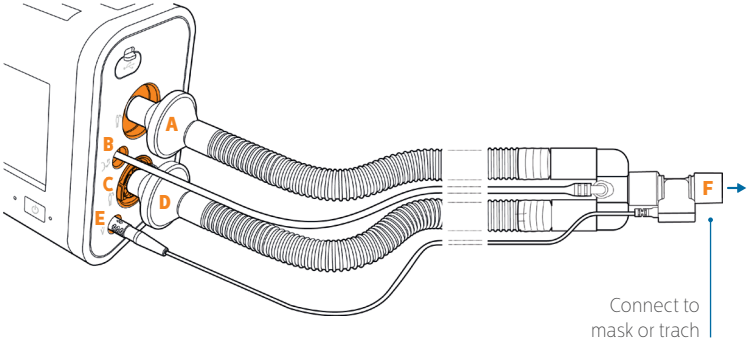
**B.** Connect the proximal pressure line (wider diameter than active exhalation valve line) to the proximal pressure port.

**C.** Connect the active exhalation valve pressure line to the active exhalation valve line connection.

**D.** Attach the flow sensor cable to the flow sensor cable connector.

**E.** Attach the flow sensor to the active exhalation valve on the circuit.

# Dual Limb circuit




**A.** Connect the bacteria filter end of the colored inspiration tube to the inspiratory port.

**B.** Connect the proximal pressure line to the proximal pressure port.

**C.** Install the active exhalation valve into the recessed AEV port. Press until both sides click into place.

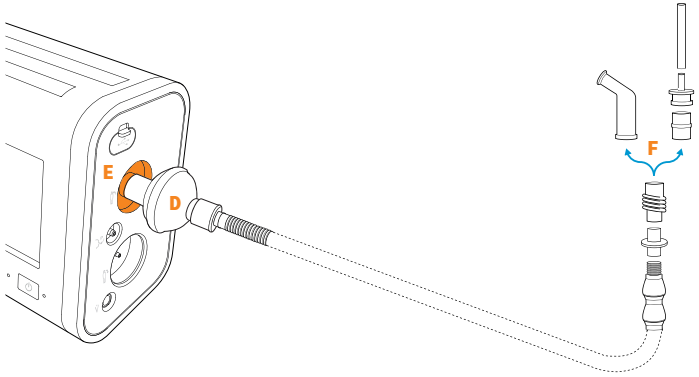
**D.** Attach the bacteria filter end of the clear expiration tube to the AEV.

**E.** Attach the flow sensor cable to the flow sensor cable connector.

**F.** Attach the flow sensor to the Y-shaped connector on the circuit.

# Available circuit options *(continued)*

## MPV circuit




**A.** Fully extend and straighten the circuit support arm. See the diagram below.

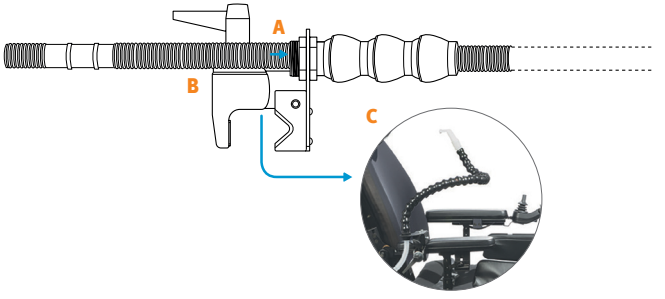
**B.** Feed the circuit tube (15mm) through the center of the circuit support arm until it exits the other end.

**C.** Attach the clamp to a wheelchair if required.

**D.** Attach the reducer cuff and then the bacteria filter onto the device-end of the circuit tube.

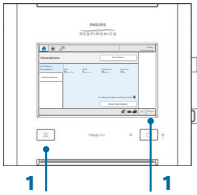
**E.** Connect the bacteria filter on the circuit to the inspiratory port on the Trilogy Evo.

**F.** Attach the coupler and miniature flextube (optional) onto the circuit support arm before connecting your chosen patient interface.



# Key menu windows

## Gaining full access



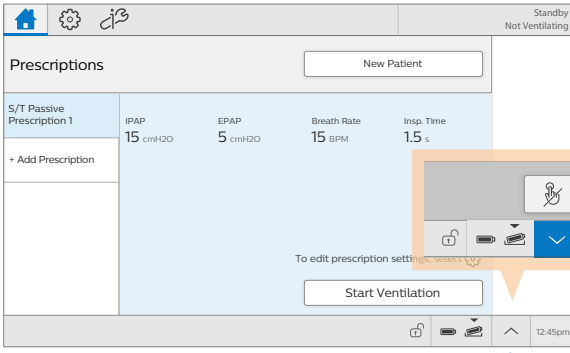

*There are full and limited access levels. On a new device, full access is the default setting. If the device is in limited access, gain temporary full access with these steps:*

1. Press and hold the digital clock in the status bar (bottom right of the touch screen) and then the alarm silence button (front panel) and keep holding both together for 5 seconds.
2. A confirmation pop-up will appear. Release the button and clock, and make a selection in the pop-up to enter full access mode. The Full Access icon will appear in the status bar.

*After these steps, the device will revert to limited access after 30 seconds of inactivity. To stay in full access, go to options, device options and set menu access level default to "Full".*

## Home standby window

The Home standby window loads after the device is turned on



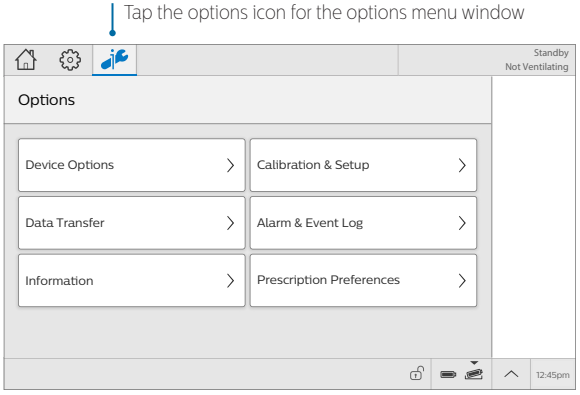

**Prescriptions**
Therapy prescriptions are listed here, for selection. One default prescription is present for a new patient

**Touchscreen lock**
To prevent accidental therapy changes, use touchscreen lock. Lock the screen anytime with the status bar shortcut shown here.
In the device options screen, you can activate automatic touchscreen lock, which will engage after 30 seconds of inactivity

# Key menu windows *(continued)*

## Prescription settings window

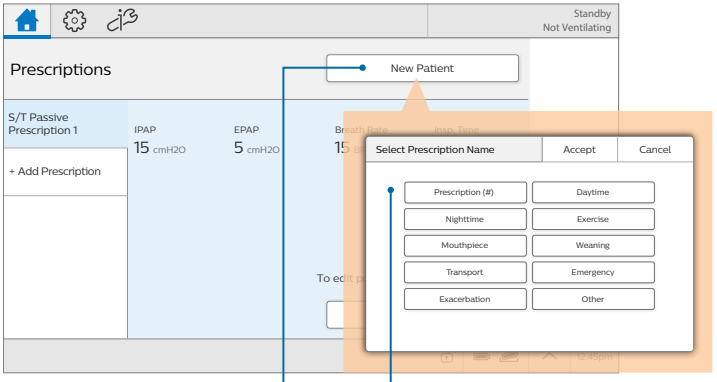
## Options window




Within this window, change device options, run calibrations and tests, and view and work with data.

# Set up & deliver therapy

## Configure for a new patient

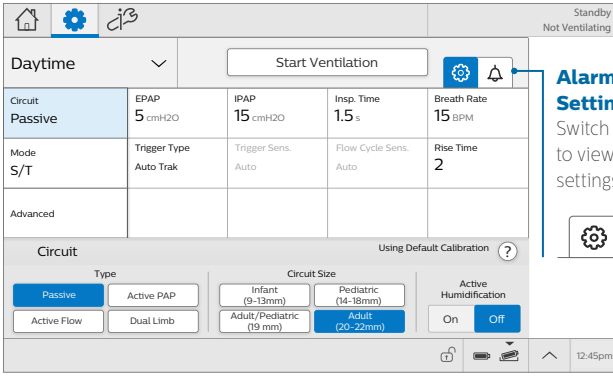



**1. New patient**
Tap **New Patient** to clear logged patient data and prescriptions, preparing the device for a new patient's use

**2. Select new prescription**
Select a name for the initial, default prescription for the new patient

**3. Confirm filter**
Acknowledge use of a bacterial filter with the circuit

## Prescription settings: circuit

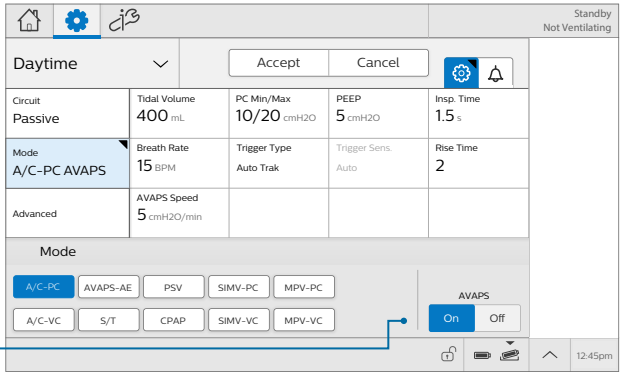



**Alarm Settings**
Switch tabs to view alarm settings

**Settings selection grid**
Tap any setting in the selection grid to bring up that setting's user control in the space below the grid. The **Circuit** setting is selected and displayed by default

# Set up & deliver therapy *(continued)*

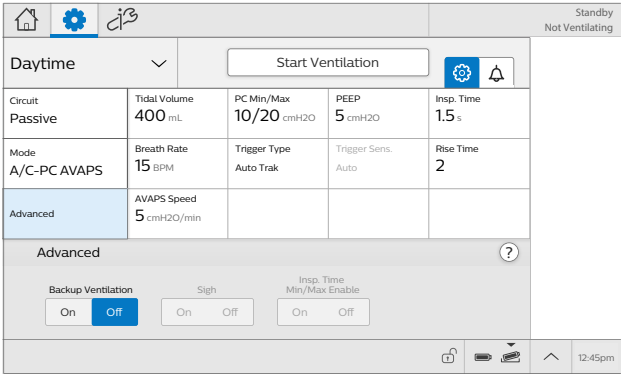
## Prescription settings: mode




**Mode settings**

Tap **Mode** to choose a therapy mode or to add **AVAPS**. An unsaved change indicator (◥) is visible until you tap **Accept** to save new values

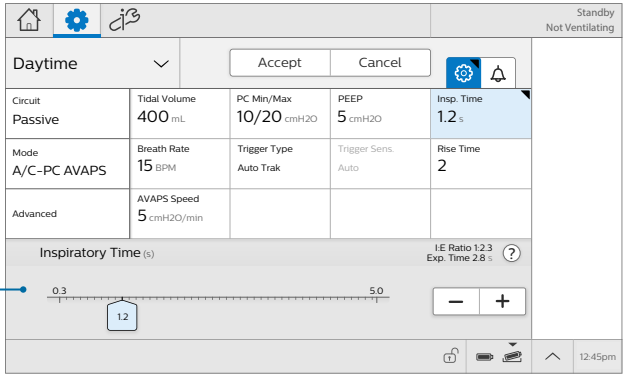
## Prescription settings: advanced




**Advanced settings**

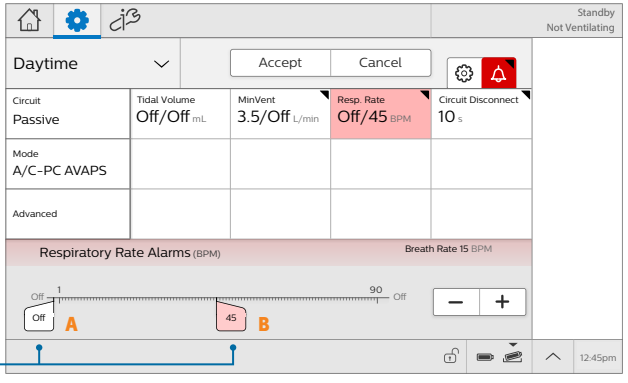
Tap **Advanced** to access specialized features, which vary by mode and circuit

## Therapy settings




Adjust prescription parameters, then tap **Accept** to save values

## Alarm settings



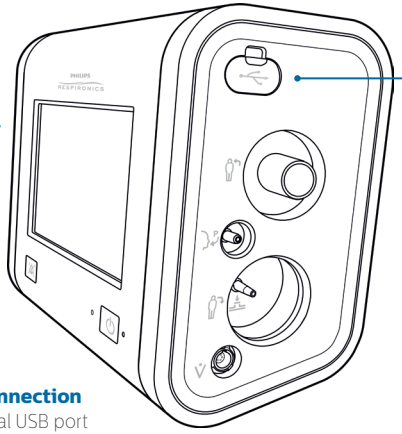

Configure all user-settable alarms (**A.** Low threshold, **B.** High threshold)

Once all settings are configured, tap **Accept** to save the new values.
Then tap **"Start Ventilation"** to begin therapy

**Appendix A**

# Additional features

## USB connections

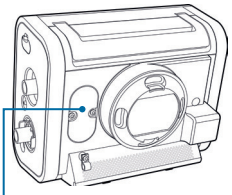


**USB connection**
USB port for accessories:

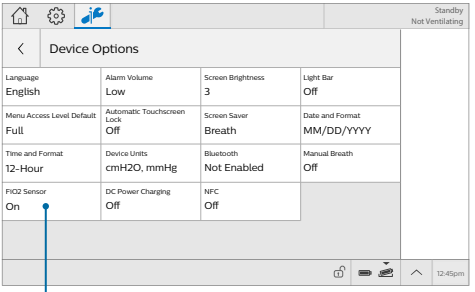
- Pulse oximetry ($SpO_2$) / Pulse rate (PR)
- Capnography ($EtCO_2$)
- Data management

**USB connection**
Additional USB port available on opposite side

## $FiO_2$ sensor



**$FiO_2$ sensor compartment**
An $FiO_2$ sensor may be installed here. See manual for details



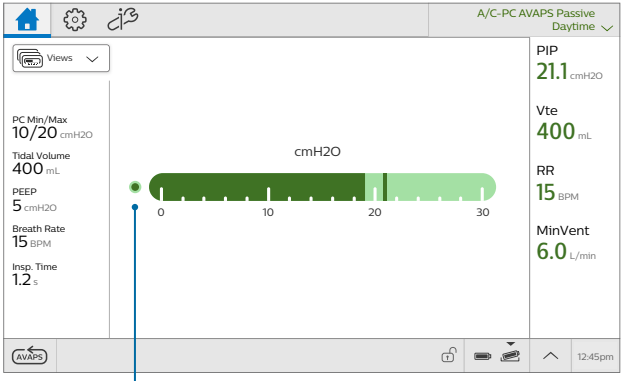

Under options, device options, tap the **$FiO_2$ Sensor** option and ensure the control is set to **"On"**

**Appendix B**

# Monitoring

## Home window during therapy

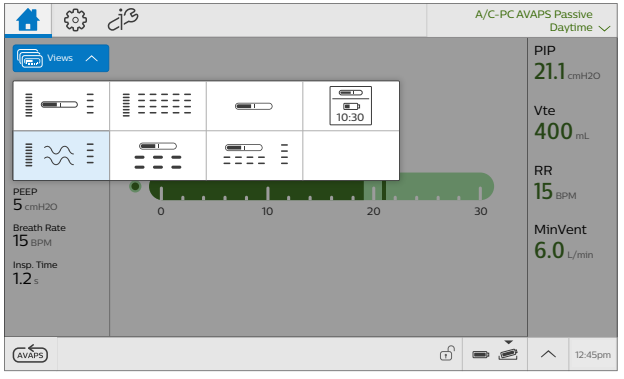
During ventilation, the monitoring view appears in the home window




**Spontaneous breath indicator**
When the current breath is triggered by the patient, this indicator appears filled (dark green)

## Change monitoring view

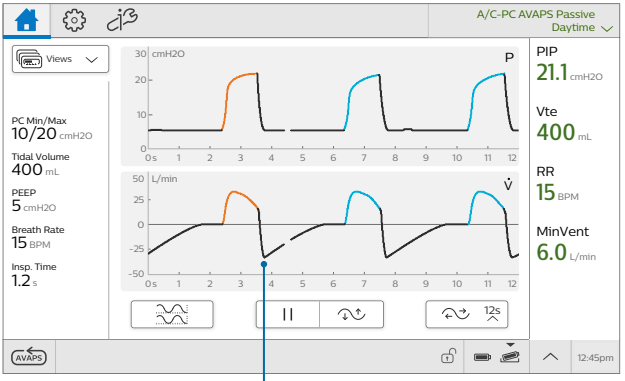
Tap **Views** to access multiple monitoring options



# Monitoring *(continued)*

## Monitoring views

Each monitoring view shows parameters, a pressure bar, combinations of these, or waveforms. The waveforms view is shown here.




**Inspiratory color-coding**

The inspiratory phase of the waveforms is color-coded. Orange indicates a ventilator-initiated breath, while blue indicates a patient-initiated breath

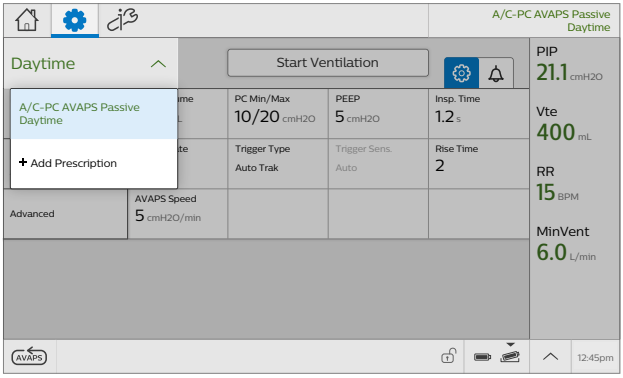
**Appendix C**

# Additional prescriptions

## Adding another prescription

### During therapy

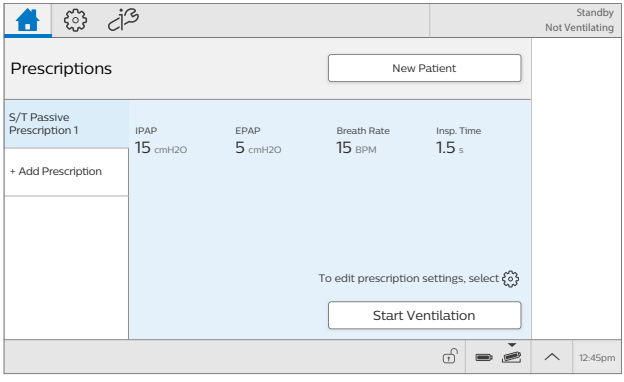
Tap the **prescription name** to open the prescriptions list.
Tap **Add Prescription** then select the name and edit as needed




### Or

### During standby

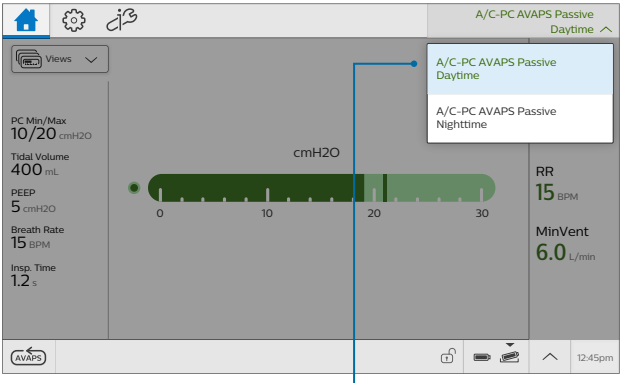
In the home window, tap **Add Prescription**
then select the name and edit as needed



# Additional prescriptions *(continued)*

## Changing therapy

**Prescription menu**
In the home window, tap the prescription in the menu bar to access the prescription menu




**Select prescription**
Select a prescription to switch therapy

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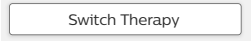
### Changing therapy in prescription settings

You can also change therapy in the prescription settings window. Select a prescription then tap **Switch Therapy**.




### Circuit note

The circuit settings must be the same as the current prescription. If the circuit settings differ, place the device into standby to change the physical circuit. Then, select the prescription from the home screen to start ventilation.

**Appendix D**

# Settable alarms

*The following alarms are available within each prescription, depending on the therapy mode.*

| User-settable alarm | Range of setting value |
|---|---|
| **Circuit Disconnect** | Off; 5 to 60 seconds |
| **Tidal Volume** | |
| Low | Off; 10 to 2000ml (or High alarm setting value -5) |
| High | Off; 10 (or Low alarm setting value +5) to 2000ml |
| **Minute Ventilation** | |
| Low | Off; 0.2 to 30l/min (or High alarm setting value -0.1) |
| High | Off; 0.2 (or Low alarm setting value +0.1) to 30l/min |
| **Respiratory Rate** | |
| Low | Off; 1 to 90bpm (or High alarm setting value -1) |
| High | Off; 1 (or Low alarm setting value +1) to 90bpm |
| **Inspiratory Pressure** | |
| Low | PEEP+1 to 90cm$H_2O$ (or High alarm setting value -1) |
| High | 10 (or Low alarm setting value +1) to 90cm$H_2O$ |
| **Apnea Interval** | 5 to 60 seconds |
| **No Trigger** | Off; 0.5 to 15.0 minutes |

**Appendix D**

# Settable alarms *(continued)*

*The following alarms are available only when associated accessories are connected.*

| User-settable alarm | Range of setting value |
|---|---|
| **$SpO_2$** | |
| Low | Off; 50 to 99% (or High alarm setting -1) |
| High | Off; 90 (or Low alarm setting +1) to 100% |
| **Pulse Rate** | |
| Low | Off; 18 to 300bpm (or High alarm setting value -1) |
| High | Off; 18 (or Low alarm setting value +1) to 300bpm |
| **$EtCO_2$** | |
| Low | Off; 1 to 100mmHg (or High alarm setting value -1) |
| High | Off; 1 (or Low alarm setting value +1) to 100mmHg |
| **$FiO_2$** | |
| Low | Off; 21 to 95% (or High alarm setting -1) |
| High | Off; 27 (or Low alarm setting +1) to 100% |

**Appendix E**

# Trilogy to Trilogy Evo

| Trilogy setting | Trilogy Evo equivalent | Description |
|---|---|---|
| AC | A/C-VC | **Assist Control (Volume Control) mode** provides volume-controlled mandatory or assist-control breaths. The set inspiratory time applies to all breaths. |
| CV | | If you want to replicate CV mode where the ventilator triggers and cycles all breaths then set the trigger type to OFF. |
| PC | A/C-PC | **Assist Control (Pressure Control) mode** provides pressure-controlled mandatory or assist-control breaths. The set inspiratory time applies to all breaths. *Optional: AVAPS.* |
| T | | If you want to replicate T mode where the ventilator triggers and cycles all breaths then set the trigger type to OFF. |
| S | PSV | **Pressure Support Ventilation mode** is patient-triggered, pressure-limited, and flow-cycled. The patient determines the breath rate and timing so it is recommended to set back-up ventilation. *Optional: AVAPS and Inspiratory Time min/max.* |
| S/T | S/T | **Spontaneous/Timed** is a bi-level therapy mode where each breath is patient-triggered and patient-cycled, or ventilator-triggered and ventilator-cycled. |
| CPAP | CPAP | In **Continuous Positive Airway Pressure mode**, all breaths are spontaneous with the CPAP set pressure delivered in both inhalation and exhalation. |
| AC (MPV on) | MPV-VC | **Mouthpiece Ventilation (Volume Control)** provides on-demand volume-control ventilation using a Kiss trigger® that detects when the patient engages with the mouthpiece. No exhalation valve is required. |
| PC (MPV on) | MPV-PC | **Mouthpiece Ventilation (Pressure Control)** is similar to MPV-VC, but with pressure control. |
| PC-SIMV | SIMV-PC | **Synchronized Intermittent Mandatory Ventilation (Pressure Control) mode** is a pressure control mode that provides a mixture of mandatory, assist-control and spontaneous breaths with optional pressure support. It guarantees one mandatory breath in each cycle. The breath rate determines the length of the cycle. *Optional: Inspiratory Time min/max for the spontaneous breaths.* |
| SIMV | SIMV-VC | **Synchronized Intermittent Mandatory Ventilation (Volume Control) mode** is similar to SIMV-PC, but with volume control. |
| AVAPS-AE | AVAPS-AE | **AVAPS-Auto EPAP** mode automatically adjusts pressure support, to maintain the target tidal volume, and EPAP, to maintain a patent airway, within the set min/max ranges; and simplifies the set-up of the backup breath rate when set to auto. *Note: auto back-up rate maximum is 20bpm. Optional: Inspiratory Time min/max.* |

# Trilogy to Trilogy Evo *(continued)*

| Trilogy setting | Trilogy Evo equivalent | Description |
|---|---|---|
| | Inspiratory Time Min/ Max | Once enabled, this setting treats inspiration time as a variable value for patient-initiated, patient-cycled breaths. It is available in S/T, PSV, SIMV-PC, SIMV-VC, and AVAPS-AE modes, under Advanced in the Prescription Settings window. |
| AVAPS Rate | AVAPS Speed | This sets the maximum rate of change in pressure between the min and max values while AVAPS is seeking a volume target. |
| | PC Breath (AVAPS-AE) | Available in AVAPS-AE mode.<br>When PC Breath is on, the set inspiratory time applies to all breaths. |

*Available without a static maneuver for mandatory or assisted-breaths in A/C-PC, A/C-VC, SIMV-PC, or SIMV-VC modes with the passive, active flow, or dual limb circuits.*

| New lung mechanics in Trilogy Evo | Description |
|---|---|
| Dyn C | Lung compliance is the ratio of the tidal volume to the alveolar pressure at the end of inspiration. In Trilogy Evo, Dyn C is an estimate of the static compliance of the pulmonary system (lung and chest wall) measured dynamically (without an inspiratory hold) in ml/cm$H_2O$. |
| Dyn R | Airway resistance is the opposition to the motion of gas within the airways. In Trilogy Evo, this value is Dyn R (dynamic resistance) and is an estimate of the change in pressure divided by the air flow through the airways measured in cm$H_2O$/l/sec. |
| Dyn Pplat | Plateau pressure is the maximum pressure applied to small airways and alveoli during positive-pressure mechanical ventilation. In Trilogy Evo, this value is Dyn Pplat (dynamic plateau pressure) and is the estimate of the maximum alveolar pressure during inspiration (volume/Dyn C) measured in cm$H_2O$. |
| AutoPEEP | AutoPEEP is the estimate of the any pressure (above PEEP) that exists in the patient airway at the end of exhalation. In Trilogy Evo, this value is AutoPEEP and is measured in cm$H_2O$. |

# Notes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REF 1140825
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ZL 04/22/2019