



INSPIRE - 100

An Emergency Ventilator

TekMedika Pvt. Ltd.

INSPIRE-100 is a patent-pending ventilator design tailored for adult patients, providing comprehensive ventilatory support from initiation to weaning.

It features a user-friendly Human-Machine Interface with a clear front panel and advanced remote monitoring capabilities accessible via laptops, desktops, tablets, or mobile devices.

This device is particularly suited for facilities without access to compressed gas or oxygen pipelines and is built to withstand challenging environmental conditions.

INSPIRE-100 supports four commonly used ventilation modes: CMV, ACV, SIMV, and PSV. It offers a full range of breath parameters across all modes, ensuring complete assistance for patient-initiated breathing.

- ✓ Unmatched Affordability
- ✓ Unmatched Remote Monitoring via WiFi
- ✓ Unmatched Ease-of-use
- ✓ Works without Piped Compressed Air or Oxygen
- ✓ Field Upgradeable
- ✓ Complete Set of mainstream Parameters

Technical Specs

Mode	Description
CMV	Continuous Mandatory
ACV	Synchronized Assist Control
SIMV	Synchronized Intermittent Mandatory
PSV	Pressure Supported (BiPAP equivalent)

Volume Control Parameter	Range
Tidal Volume (ml)	200 - 600
Respiration Rate (bpm)	10 - 30
I:E Ratio	1:1 - 1:3
PEEP (cmH2O)	4 - 15
FiO2 (System Managed)	External

Pressure Support Parameter	Range
Support Pressure (cmH2O)	5 - 35
Flow Trigger Termination (%)	10 - 60
Time Trigger Termination (secs)	1.0 - 3.0

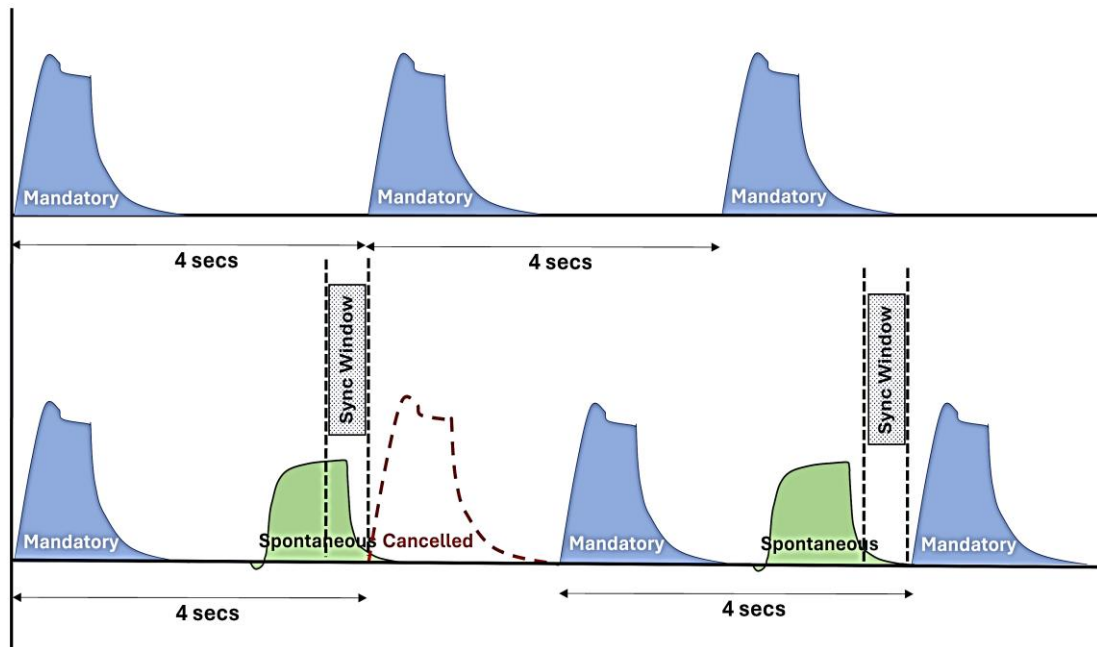
Full Set of ALARMS	
Max Pressure	Pressure Leak
Pressure Loss	Airway Blockage
Cough / Hiccups	System Temperature
Inconsistent Parameters	Extreme Parameters
Replace BVM	BVM Size
and many more ...	

Power Consumption 120W

Breath Synchronization for Patient Comfort

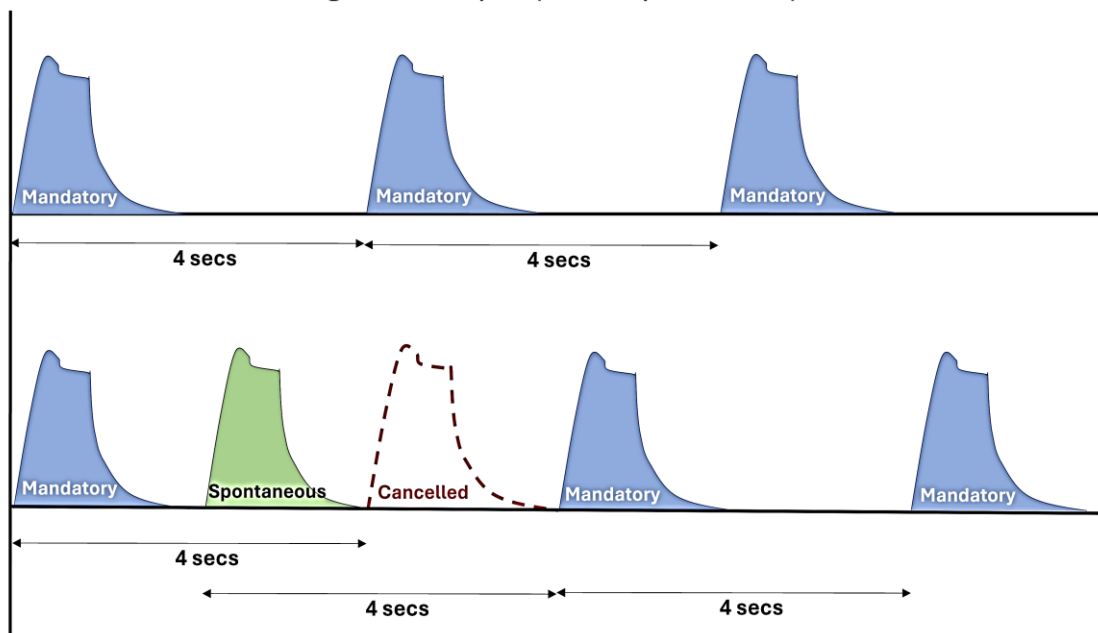
Breath Synchronization in SIMV Mode

e.g. RR=15 bpm (4 secs per breath)



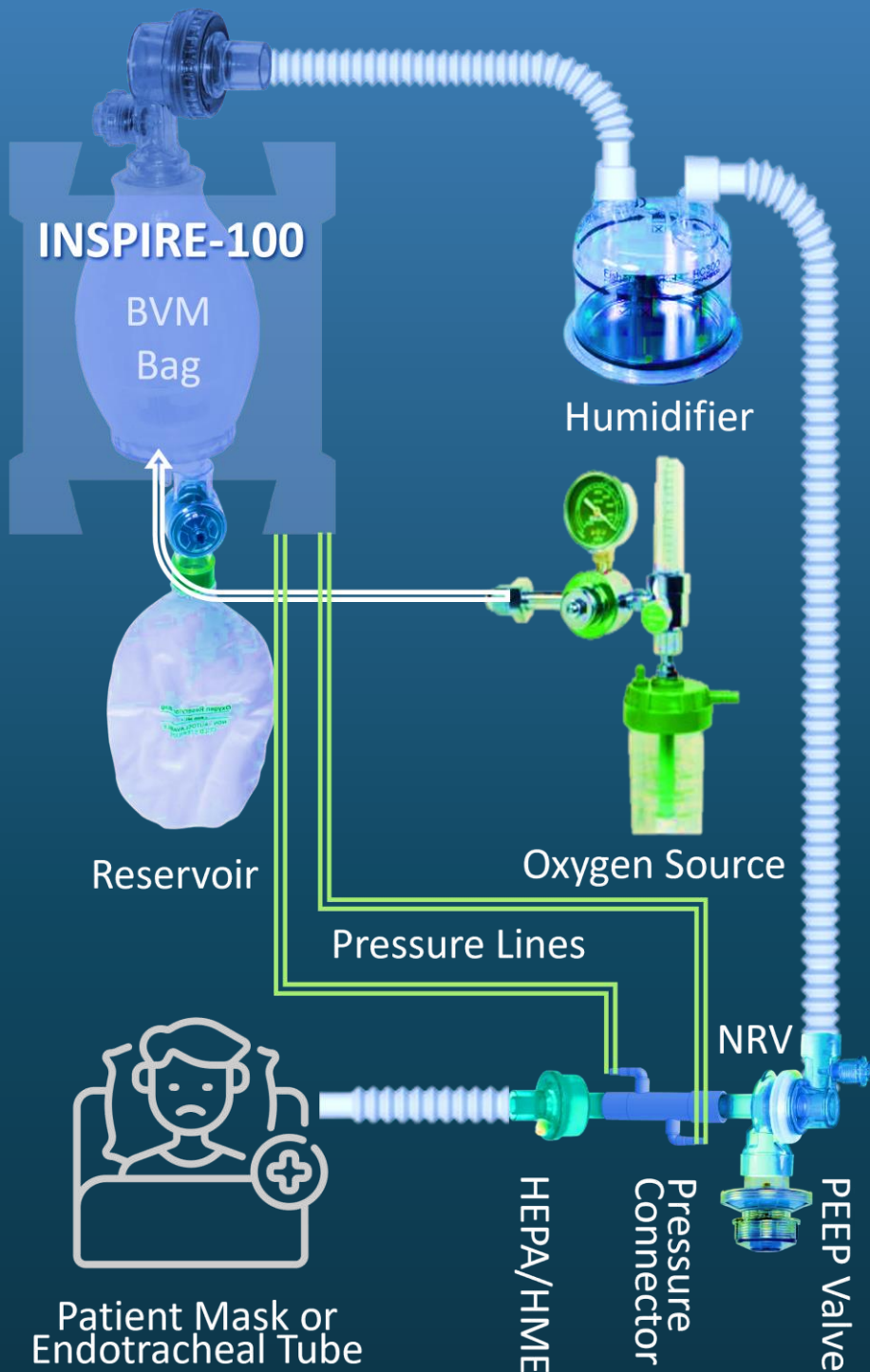
Breath Synchronization in ACV Mode

e.g. RR=15 bpm (4 secs per breath)

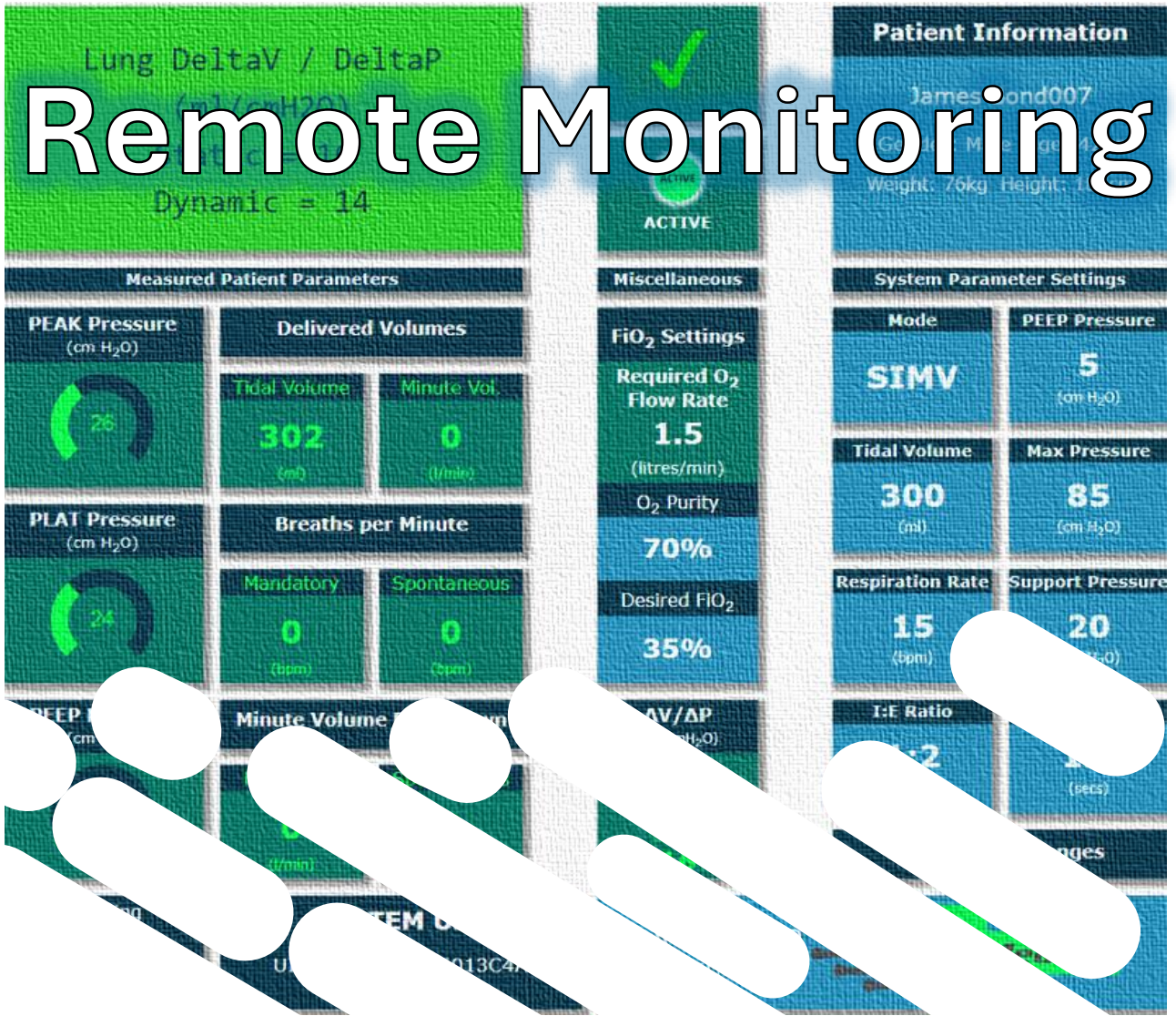


Breathing Circuit

Simple, Off-the shelf, Single-limbed and compatible with Standard Accessories



Remote Monitoring



- ✓ Accessible on Laptops & Mobile devices
- ✓ Search & Range Selection
- ✓ Snapshots View
- ✓ Waveforms View
- ✓ Charts View
- ✓ Statistics View
- ✓ Recording and Playback
- ✓ Multi-system Display

Powerful Search for Combination of Events

Demo Long [09-05-2024 17:40:26]

MATCH CRITERIA

((MODE_SETTING == "SIMV") AND ((BREATH_TYPE == "MANDATORY") AND ((TIDAL_VOLUME < 250) OR (PEAK_PRESSURE > 30))))

☒ MODE_SETTING EQ SIMV

AND
☒ BREATH_TYPE EQ MANDATORY

AND
☒ TIDAL_VOLUME LT 250 ml

OR
☒ PEAK_PRESSURE GT 30 cmH2O

CLEAR

EXPORT

IMPORT


SEARCH

SEARCH RESULTS in Breath number range [1, 128]

Range				Parameter Values			
Select	Number	Date	Time	MODE_SETTING	BREATH_TYPE	TIDAL_VOLUME	PEAK_PRESSURE
<input type="checkbox"/>	9	09-05-2024	17:40:56	SIMV	MANDATORY	229	37
<input type="checkbox"/>	10	09-05-2024	17:41:00	SIMV	MANDATORY	252	34
<input type="checkbox"/>	11	09-05-2024	17:41:04	SIMV	MANDATORY	278	36
<input type="checkbox"/>	43	09-05-2024	17:43:31	SIMV	MANDATORY	216	10
<input type="checkbox"/>	44	09-05-2024	17:43:35	SIMV	MANDATORY	216	10
<input type="checkbox"/>	46	09-05-2024	17:43:43	SIMV	MANDATORY	205	22
<input type="checkbox"/>	47	09-05-2024	17:43:47	SIMV	MANDATORY	227	24
<input type="checkbox"/>	48	09-05-2024	17:43:51	SIMV	MANDATORY	234	23

8 Matches: End of Search

Range Selector to Navigate Any View Back and Forth in Time

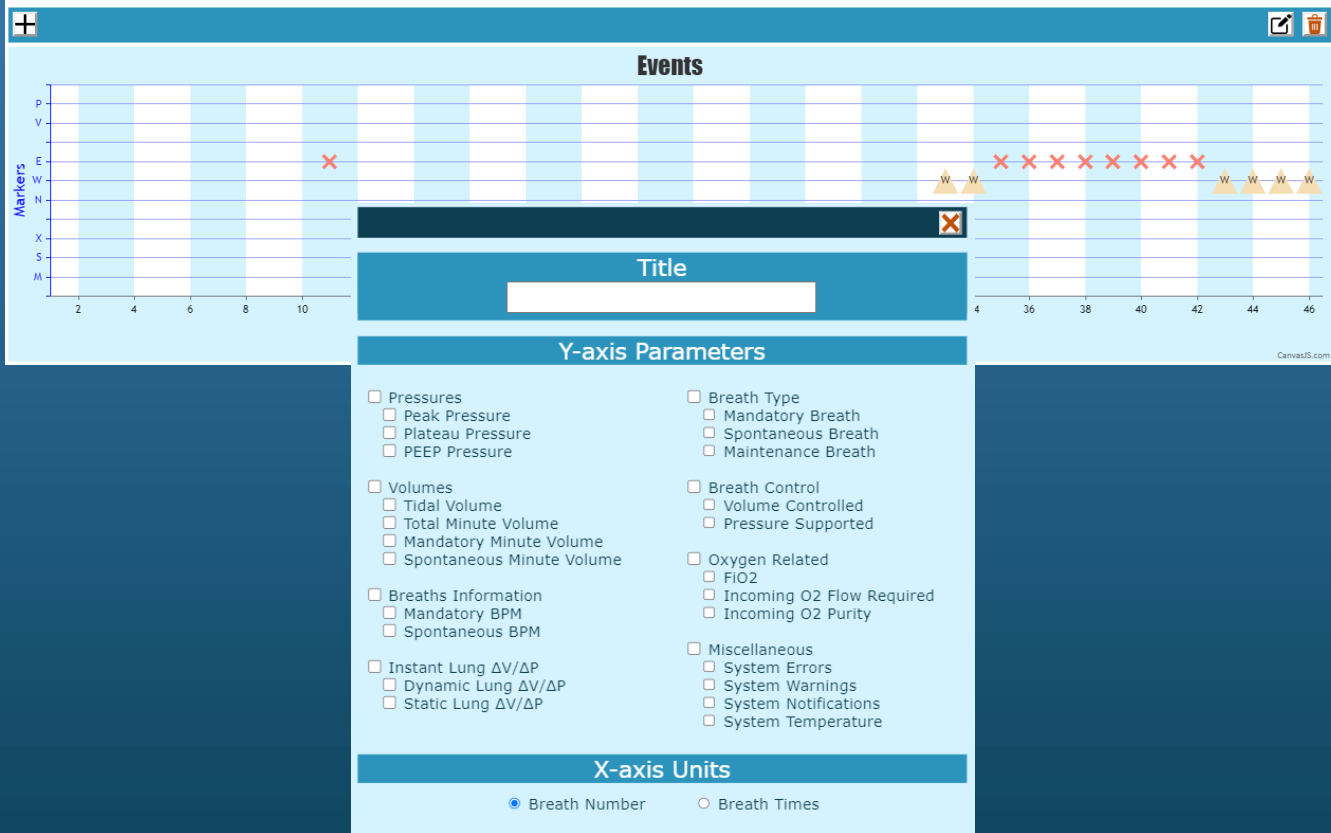
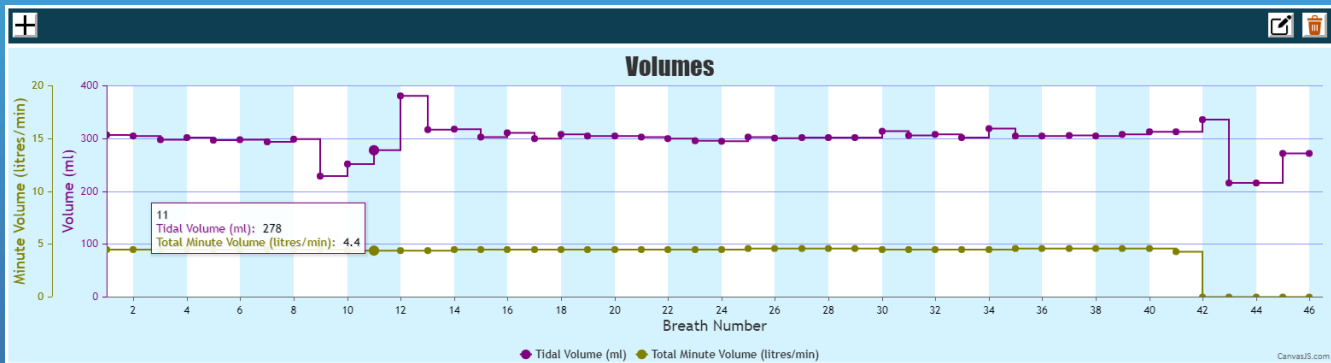

123 New Recording [10-06-2024 10:43:07]



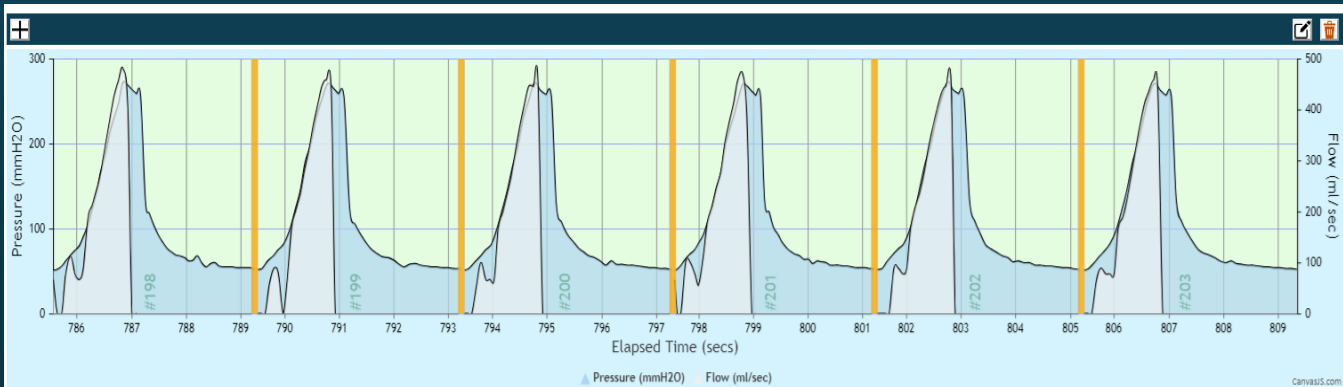

Selected Breath Range

	Breath Number	Breath Start Time		
		Day	Date	Time
From	520	Fri	26-Apr-2024	12:20:05
Upto	579	Fri	26-Apr-2024	12:22:58
SPAN	60	00:02:53		

Charts for All Parameters



Pressure & Flow Waveforms



Snapshots for each Breath

LOGGED BREATHS

3117

CURRENT SESSION

Start Date 05-06-2024
Start Time 12:36:58
Duration 08:47:21
Unlogged 15026

Temperature °C

34

Location

Bengaluru
3000ft (930cmH2O)
AtmOxygen 19%

SELECT VIEW

View Snapshots

View Charts

View Waveforms

View Statistics

View Alerts

View Search

View Recording

TURN ON/OFF

Audio Alarms

Start Recording

Pause Dashboard

FiO2 set at 35%

Oxygen Inflow must be at 2.9 (l/min)

MENU -> Standby Menu

Measured Patient Parameters

PEAK Pressure
(cm H₂O)

26

Delivered Volumes

Tidal Volume

351
(ml)

Minute Vol.

8.8
(l/min)

PLAT Pressure
(cm H₂O)

25

Breaths per Minute

Mandatory

25
(bpm)

Spontaneous

0
(bpm)

PEEP Pressure
(cm H₂O)

5

Minute Volume Breakdown

Mandatory

8.8
(l/min)

Spontaneous

0
(l/min)

ACTIVE

Miscellaneous

FiO₂ Settings

Required O₂ Flow Rate

2.9
(litres/min)

O₂ Purity

70%

Desired FiO₂

35%

ΔV/ΔP
(ml/cmH₂O)

Dynamic

17

Static

18

INSPIRE-100
Dashboard

Patient Information

James Bond007

Gender: Male Age: 42yr
Weight: 76kg Height: 185cm

System Parameter Settings

Mode

SIMV

PEEP Pressure

5
(cm H₂O)

Tidal Volume

350
(ml)

Max Pressure

60
(cm H₂O)

Respiration Rate

25
(bpm)

Support Pressure

20
(cm H₂O)

I:E Ratio

1:2
(ratio)

Support End

1.5
(secs)

No Pending Changes

SYSTEM UID

UID_28615E07D6013C4A
(BANGALORE)

INSPIRE-100
Dashboard

Detailed Statistics

</

Warnings

Errors

James Bond007

Transmitting

ACTIVE

✓

Last Recorded Breath#

713

ACTIVE

UID_28615E07D6013C4A

A summary state of all systems can be displayed on one screen.

Each system is shown as a tile.

A click on a system tile launches the Dashboard for that system.

DUMMY

NOT Transmitting

zz

📶

Last Recorded Breath#

0

INACTIVE

UID_AAAABBBBCCCCDDDD

PROTOTYPE-1

NOT Transmitting

zz

📶

Last Recorded Breath#

0

INACTIVE

UID_28705904000000EE

UDAIPUR

NOT Transmitting

zz

📶

Last Recorded Breath#

0

INACTIVE

UID_28B1A879A2010387

Multi-system Monitoring For Nurses Station

James Bond007

MODE

SIMV

RR

15

FIO2

35

VT

300

I:E

1:2

PS

20

UID_28615E07D6013C4A

James Bond007

Transmitting

ACTIVE

✓

Last Recorded Breath#

749

ACTIVE

UID_28615E07D6013C4A



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