

# INSPIRE - 100

An Emergency Ventilator TekMedika Pvt. Ltd.

INSPIRE-100 is a patent-pending design that provides ventilator support for adult patients. It offers a complete range of ventilation modes and parameters to support patient needs from initiation to weaning.

INSPIRE-100 offers a straightforward and uncomplicated Human-Machine Interface. The easy-to-read front panel is supplemented by sophisticated remote monitoring features accessible via laptops, desktops, tablets or mobile phones.

INSPIRE-100 is ideal for facilities that may lack infrastructure such as compressed gas and oxygen pipelines. Further, the design is rugged and robust enough to enable use in harsh environmental conditions.

- Unmatched Affordability
- Unmatched Remote Monitoring
- 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

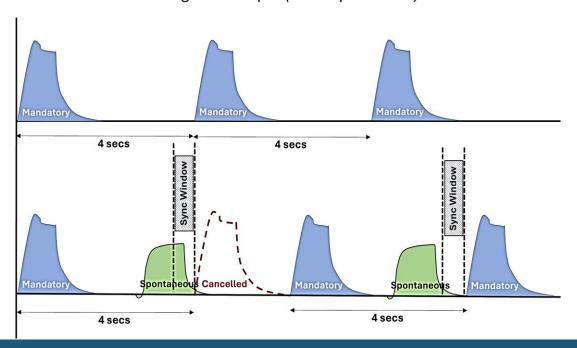
Full Set of ALARMS						
Max Pressure	Pressure Leak					
Pressure Loss	Airway Blockage					
Cough / Hiccups	System Temperature					
Inconsistent Parameters	Extreme Parameters					
Replace BVM BVM Size						
and many more						

## Power Consumption 120W

# Breath Synchronization for Patient Comfort

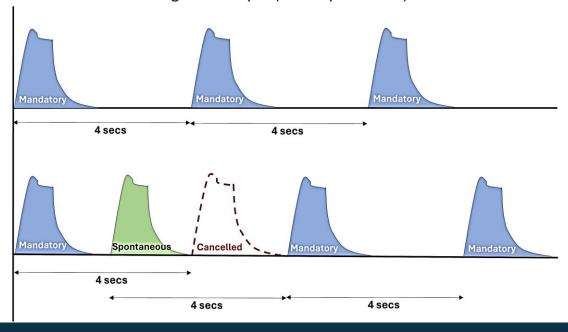
#### **Breath Synchronization in SIMV Mode**

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



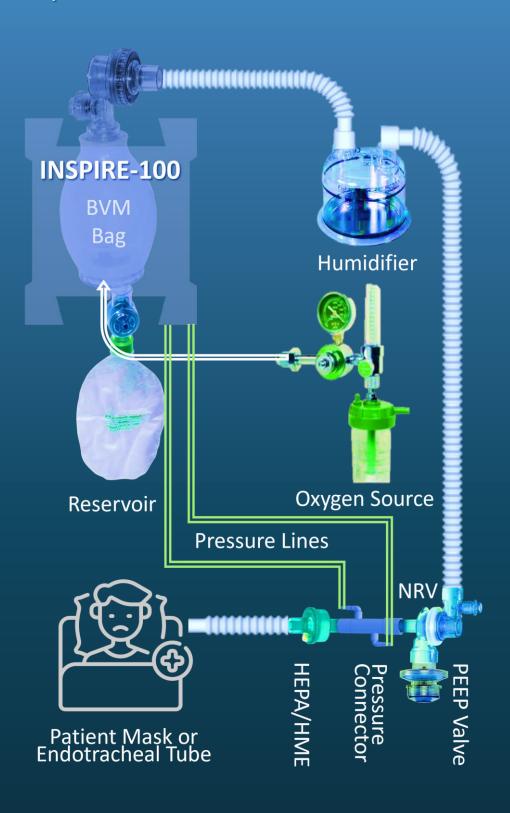
#### **Breath Synchronization in ACV Mode**

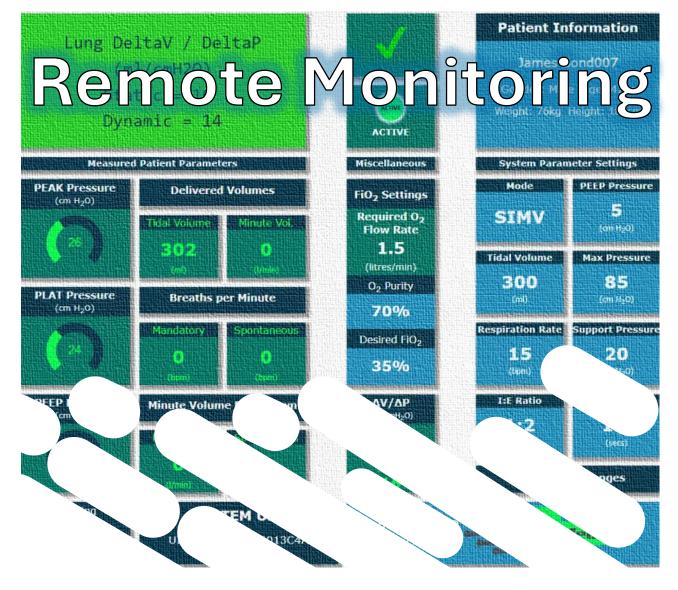
e.g. RR=15 bpm (4 secs per breath)



# **Breathing Circuit**

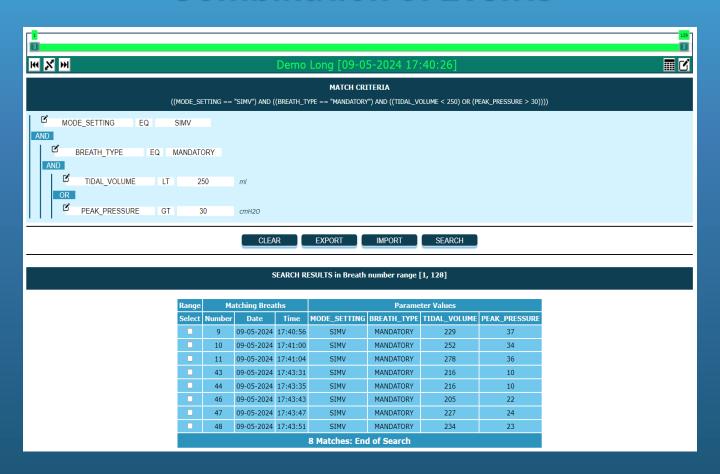
Simple, Off-the shelf, Single-limbed and compatible with Standard Accessories



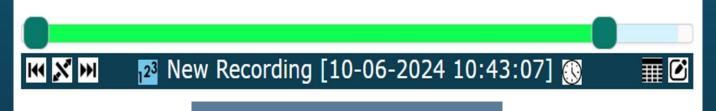


- Accessible on Laptops & Mobile devices
- Search & Range Selection
- Snapshots View
- Waveforms View
- Charts View
- Statistics View
- Recording and Playback
- Multi-system Display

# Powerful Search for Combination of Events



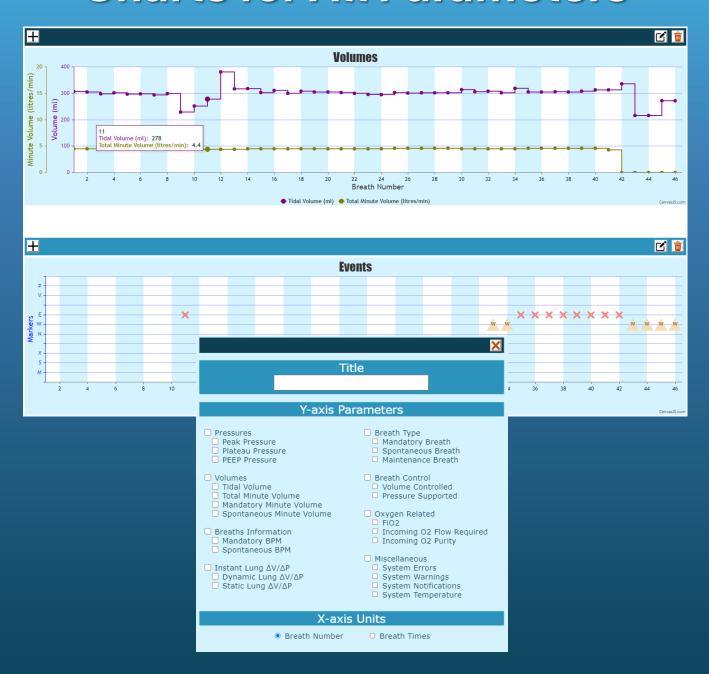
# Range Selector to Navigate Any View Back and Forth in Time



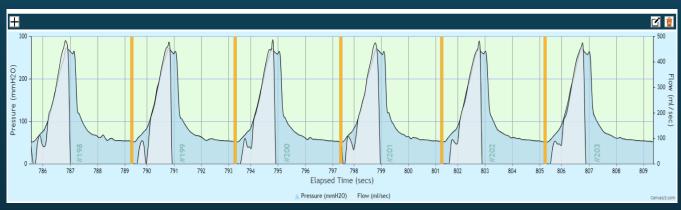
#### Selected Breath Range

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

### **Charts for All Parameters**

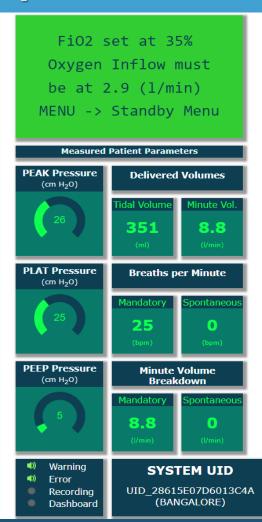


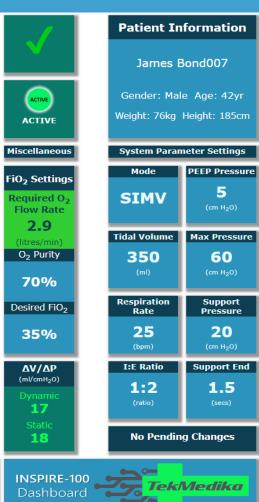
## **Pressure & Flow Waveforms**



### **Snapshots for each Breath**







#### **Detailed Statistics**

Parameters Measured							
Parameter	Units	Min	Max	Avg			
Peak Pressure	cmH20	21	26	25.7			
Plateau Pressure	cmH20	19	24	23.7			
PEEP Pressure	cmH20	3	6	5.0			
Tidal Volume Delivered	ml	284	966	311.9			
Total Minute Volume	litres/min	0	5.8	4.3			
Mandatory Minute Volume	litres/min	0	4.6	4.1			
Spontaneous Minute Volume	litres/min	0	1.9	0.2			
Mandatory BPM	bpm	0	15	13.8			
Spontaneous BPM	bpm	0	2	0.2			
FIO2	%	35	35	35.0			
Static ΔV/ΔP	ml/cmH20	0	18	15.9			
Dynamic ΔV/ΔP	ml/cmH20	0	16	14.4			
System Temperature	degC	35	35	35.0			

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Information	Value
Number of Breaths	120
Number of Mandatory Breaths	118
Number of Spontaneous Breaths	2
Number of Maintenance Breaths	0
Number of CMV Spontaneous Breaths	0
Number of Missing Intervals (Packet loss)	0
Number of WiFi Disconnects	0
Number of Notifications	0
Number of Warnings	0
Number of Errors	0

Miscellaneous Information

#### Static Information

Patient Name: James Bond007 Gender: Male Age: 42yr Weight: 76kg Height: 185cm

System Location: Bengaluru Location Altitude: 3000 ft

Location Atmospheric Pressure: 930 cmH2O

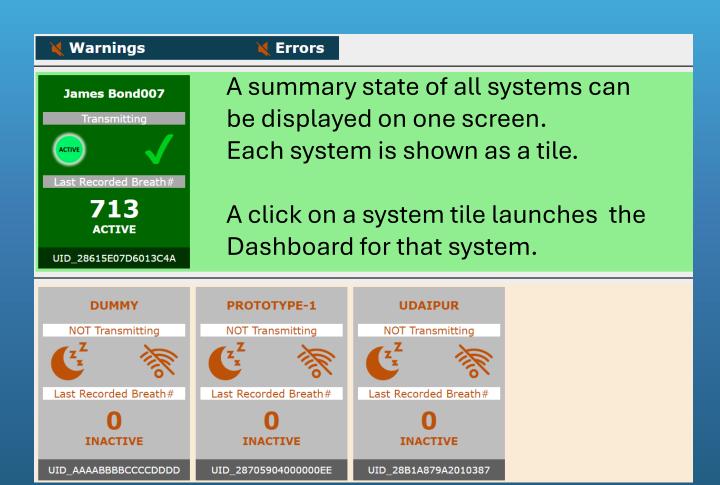
Location Atmospheric Oxygen: 19%

#### Parameter Settings Used

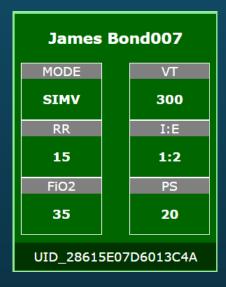
Parameter	Units	Values
Ventilation Mode	mode	SIMV
Tidal Volume	ml	300
Minute Volume	l/min	2
Respiration Rate	bpm	15
I:E Ratio	ratio	1:2
PEEP Pressure	cmH20	5
Maximum Pressure	cmH20	85
Support Pressure	cmH20	20
Support Pressure Termination	%flow,secs	1.5
FIO2	%	35

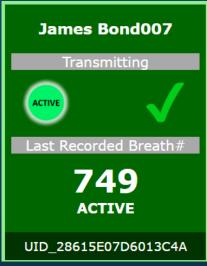
#### **Sequence of Parameter Combinations**

MODE	VT/MV	RR	I:E	PEEP	<b>PMAX</b>	PS	TPS	FIO2	#BREATHS	Before#
SIMV	300	15	1:2	5	85	20	1.5	35	119	2



# Multi-system Monitoring For Nurses Station







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