

# A DEDICATED NEONATAL & PAEDIATRIC VENTILATOR

Model: Shreeyash SW21



ISO 13485 certified  
CDSCO registered





## About Shreeyash:

Shreeyash Electro Medicals is in to manufacturing New Born life saving devices since last 30 years in Pune with an established sales & service network all across India.

The manufacturing activity is carried in 3 facilities in Pune in an ISO 13485 certified premises.

Shreeyash was the First company in India to manufacture:

- Bubble CPAP in 2003
- Neonatal Ventilator in 2004
- High Frequency Oscillatory Ventilator in 2006
- Conductive Patient Warming Blankets in 2013, and
- A fully Automatic Human Milk Pasteurizer in 2017.

## Awards | Achievements | Approvals



Critical care & Anesthesia department of KEM Hospital Pune, honored Dr. Sudhir Waghmare as "Honorary Student" of their department for his work in Ventilation



He is also honored by Camden University USA, by offering him Doctorate for his work in the field of Ventilation.



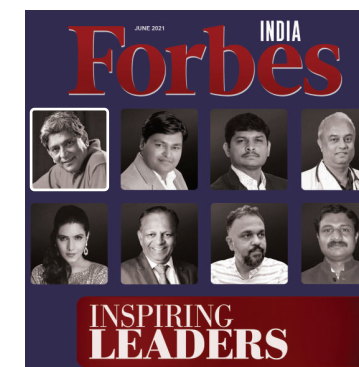
Best Ventilator Award by Marico Innovation Foundation with a monetary grant for ramping up the Production.



Best Small- Scale Industry Award from Govt. of Maharashtra.



Prestigious Parkhe Award from Chamber of commerce, Pune.



"Forbes" the world's famous magazine did a cover story on him for his dedicated work In medical equipment field.



Invited as A **TED** Talk Speaker.



CEO & Founder, Dr Sudhir interviewed on India's most Prestigious TV Cannel CNBC in July 2020



Success story of Shreeyash published on front page by the Corporate Citizen Magazine.



"Kimie" our Patented Human Milk Pasteurizer was Nominated for the Prestigious "Thomas Edison Award" in USA.



First Indian company to Publish Research Papers on Human Milk Pasteurizer in **India, Sri Lanka, USA & France**



## Introduction of Shreeyash SW2I Ventilator:

Shreeyash SW2I Ventilator is a Dedicated Neonatal & Paediatric Ventilator with different modes of Ventilation to assist the patient as per the need. Auto mode facility in ACMV & CPAP mode along with **Inbuilt High Frequency Flow Chopping mechanism (HFFC)** puts this device in the class of most updated Ventilators. "Shreeyash SW2I" is a Pressure & Volume controlled, Time cycled, Continuous Flow Respirator that is intended for Neonatal & Paediatric use.

## Special Functions:

- 15 inches large touch screen with Rotary knob for setting the parameters.
- SIMV plus Pressure support.
- Auto mode in ACMV mode.
- Auto Mode in CPAP + PS Mode.
- Inbuilt High Frequency Ventilation mode using flow chopping mechanism.
- Non-Invasive High Flow Nasal CPAP. (HFNC Mode)
- CPAP plus Pressure support. This specialty mode puts the ventilator in the category of the most updated ventilators & is a boon for patients with "FLAIL" Chest.
- On Line Inspiratory & Expiratory Hold.
- Provision to connect Nebulizer kit & ETCO2 sensor.
- Suction

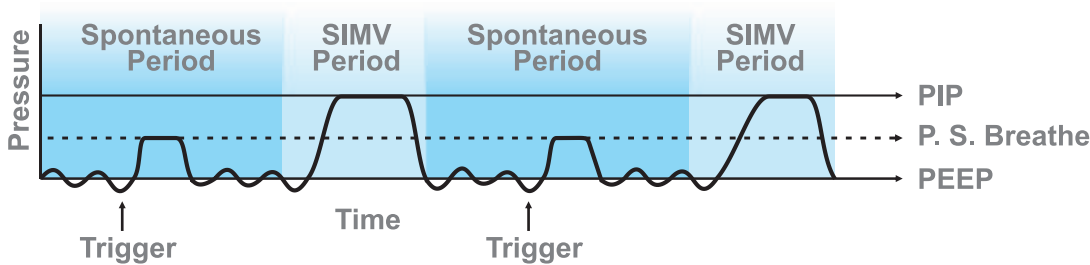




SIMV + Pressure Support

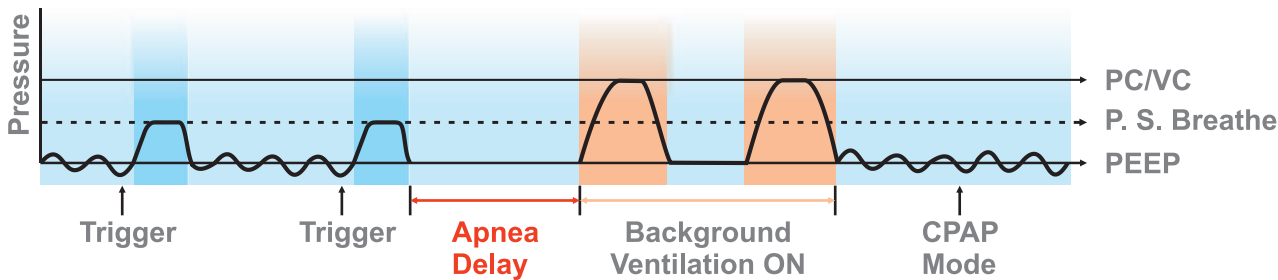
During the SIMV period, if the patient triggers the Shreeyash SW2 I, a synchronized breathe will be provided as per the set Peak Inspiratory Pressure & the Inspiration time. The patient is allowed to breathe spontaneously through the "BIAS FLOW" in spontaneous period. If during the spontaneous period, the patient Triggers the Shreeyash SW2 I, a "Pressure Support Breathe" is provided to the patient with a preset pressure above PEEP. This avoids unnecessary high Peak Airway Pressure, & also provides support to the patient's spontaneous breathe. The number of Pressure Support Breaths in the spontaneous period depends upon the patients breathing effort.

- SIMV Plus Pressure support.
- Help Line facility that guides the user regarding various settings in various diseases.



CPAP Plus Pressure Support, with AUTO MODE (Apnea Ventilation):

- Patient Breaths spontaneously through the Bias Flow and sets his own Rate and I:E. ratio.
- When the patient triggers the ventilator, a Pressure Support breathe is provided above PEEP as per the set pressure support values.
- Apnea alarm can be set from 1 to 60 seconds. If the patient does not breathe, the ventilator sounds an alarm & provide the patient with back ground ventilation as set by the clinician.
- The clinician needs to set the back ground ventilation Rate, Ti, PIP/Vt & ventilator mode (PC/VC) in CPAP with AUTO MODE.



Following Invasive & Non Invasive modes provided.

- ACMV Pressure
- ACMV Volume
- SIMV + PS in PC mode.
- SIMV + PS in VC mode
- PRVC
- BiPAP
- CPAP + PS
- APRV
- High Flow & HFFC (High Frequency Flow Chopping mechanism)

Shreeyash SW2I is provided with HFFC

(High Frequency Flow Chopping Mechanism) mode for treating LBW babies.

The clinician can set the Frequency from 5 to 15 Hertz, I:E ratio can be set from 1:1 & 1:2, the power (Amplitude) can be set from 0 to 100%, MAP can be set up to 30 CM H2O, Bias flow is servo controlled & display of delivered Tidal Volume & DCO2 helps the clinician to non invasively monitor the pulmonary mechanics.



Display:

A Fifteen inches Touch screen is provided that indicates, Flow v/s Time, Volume v/s Time & Pressure v/s Time graphs. It also indicates Pressure Volume, Flow Volume & Pressure Flow loops It also display's various parameters like set & delivered PIP, PEEP, Set & Delivered Tidal Volume, FIO2, ongoing mode of ventilation, I:E ratio, Inspiration time etc.

Ventilator is provided with a Battery Backup which can operate the ventilator for 4 Hours when the battery is in fully charged condition.



Provision for connecting ETCO2 sensor & Nebuliser. (Accessory provided at Extra cost)

Humidifier cost Extra at Actuals.

Specifications of Neonatal & Paediatric Ventilator

FiO2	21 to 100% Digitally Controlled & Displayed
Inspiratory Time	0.2 to 4 Seconds
Respiratory Rate	4 to 120 BPM
PEEP/CPAP	0 to 30 Cm H2O
Peak Inspiratory Pressure	0 to 45 Cm H2O
Tidal Volume	2 ml to 500 ml
Trigger Method Pressure & Flow	Flow ( 1 to 9 LPM ) Pressure (Minus 1 to 9 Cm H2O)
Flow	2 to 30 LPM





## Graphical representation provided for following:

- Volume vs Time
- Pressure vs Time
- Flow vs Time

Loops provided for Pressure Volume, Flow Volume & Pressure Flow.

**Inbuilt Electronic Air Oxygen Blender:**  
**Digital display provided for set & delivered FIO<sub>2</sub>.**

## Following display's are provided on the 15 inches screen:

Set Tidal Volume, Delivered Tidal Volume, Expired Tidal Volume, Minute Volume, Positive End Expiratory Pressure (PEEP), Set Inspiration Time, I:E Ratio, Set Trigger Level, Respiratory Rate, Peak Inspiratory Pressure, SIMV %, Patient Efforts. MAP, Dynamic Compliance, Static Compliance, RSB Index, Peak Flow etc.

## Alarms & Warnings

Oxygen & Air Supply Failure, High PIP, High PEEP, High Rate, Volume not Delivered, Patient in Apnea, Leakage in Patient circuit, Power Failure etc.

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An established dealer network all over India ensures prompt post sales service of the Ventilator whenever required.

### Your nearest contact: