# श्वसित+





SWASIT<sup>+</sup> is a high performance, versatile ventilator designed for critical care usage. SWASIT<sup>+</sup> operates on built-in turbine technology making it suitable for various invasive and non-invasive modalities of ventilation without the need for external



compressed air supply.







## **Key Specifications**

- Robust high flow turbine for external compressor free operation.
- High versatility and operates on various Invasive and Non-Invasive modalities.
- Deliverable tidal volume range of 02/50-2000/2500 ml (as per order).
- Designed for round the clock, continuous operations.
- Reliable FiO<sub>2</sub> delivery independent of demand parameters.

## **Key Features**

- Tidal Volume 02/50-2000/2500 ml (as per order) and PEEP 0-45 cmH<sub>2</sub>O.
- High-Luminance 10-inch LCD color display.
- Sturdy construction for rugged handling.
- Accurate Oxygen proportioning over the prescribed range using precision servo flow control valves.
- Bleed-less operation for efficient low loss oxygen handling.
- Failsafe design incorporating Pressure relief valve and safety valve to facilitate patient ventilation during fault conditions.
- In build sensor technology to avoid additional consumable external flow and pressure sensor.
- Active leak detection and compensation for continuous and accurate delivery.
- High flow Nasal Oxygen.

### Additional Accessories.

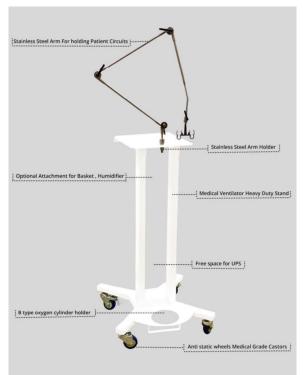
- Patient breathing circuit with test lung.
- Ventilator trolley with support arm.
- HME, Bacterial and viral filters.

### Approvals

- Approved by Government of India Empowerment Committee for COVID-19 ventilator with essential technical features.
- Performance and accuracy tested and validated by NABL accredited lab as per ISO 80601.
- Medical Electrical Equipment Type tested and validated by TUV Rhineland as per IEC 60601-1.
- Clinical Trial & Approvals by Government of India appointed Hospitals.











#### **TECHNICAL SPECIFICATIONS**

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Modes	PC-CMV, VC-CMV, PACV, VACV, PSIMV + PS, VSIMV + PS, PRVC, PSV with apnea backup, CPAP, BIPAP, APRV, HFNO.	Monitored parameters	PEEP, PIP, Vte, Vti, leak volume, FiO <sub>2</sub> , P Plateau, exhaled minute volume, spontaneous minute volume, spontaneous mandatory Vti,
	NIV and IV in all modes present.		spontaneous Vti, inspiratory peak
Display	10" High Illuminance LCD touch display.		flow, expiratory peak flow rate, dynamic compliance, Lung resistance, respiratory rate,
Delivered Tidal volume*	02/50-2000/2500 ml (as per order).		respiratory type and phase, I:E flow, RSBI, PTP, P0.1, tracheal pressure.
Pressure control Above PEEP*	0 to 90 cmH <sub>2</sub> O (PC + PEEP < 90 cmH <sub>2</sub> O).	Alarms	Peak pressure, exhaled tidal volume, PEEP, RR, Power disconnection, low battery, low $O_2$ supply, system failure, $O_2$ sensor error, patient disconnected, high leak.
Pressure support Above PEEP*	0 to 90 cmH <sub>2</sub> O (PS < PC; PS + PEEP < 90 cmH <sub>2</sub> O).		
PEEP*	0 to 45 cmH₂O.	Alarm indication	Visual and audible alarms in compliance with IEC 60601-1-8
Respiratory rate	2 to 100 bpm.		requirements.
FiO <sub>2</sub> range	21% to 100 %.	Electrical data	230 VAC, +/- 15%, 50 Hz, <2 A.
Apnea time (in PSV mode	10 to 45 seconds.	Battery backup	Upto 120 minutes when delivering above 90% $FiO_2^*$ .
Peak Flow rate	Upto 150 lpm.	Alarm history	Upto 250 alarms and graphical trends upto 125 hours.
Ventilation maneuvers	Inspiratory hold, Expiratory hold, Recruitment maneuver, Sigh maneuver, Suction maneuver, O <sub>2</sub> Boost.	Oxygen supply	2 bar to 6 bar.
Displayed scalars	Pressure – time; flow-time, volume-time graphs.	Storage temperature	5°C to 50 °C. 10 % to 95 % relative humidity (Non-condensing).
Displayed loops	Pressure Vs Flow, Pressure Vs Volume, Volume Vs Flow.	Operating temperature	0°C to 40°C.

\* Accuracy of delivered parameters are in compliance to ISO 80601-2-12. Accuracy of volume delivered is  $\pm$  [4.0 ml + (15% of actual volume)]. Accuracy of pressure is  $\pm$  [2.0 cmH<sub>2</sub>O + (4% of actual reading)]. Accuracy of FiO<sub>2</sub> are in the range of  $\pm$ 10% of Full Scale. Observation to be taken after setting time of up to 30 breaths or 3 minutes whichever is later or if parameter are found stable for any setting changes in range of  $\pm$  10% of Full Scale.

In view of continued product improvement, Zyna Medtech Private Limited reserves the right to make changes in the equipment which may affect the information contained in this leaflet without giving any prior notice.



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