#### DYNAMATIC TECHNOLOGIES LIMITED

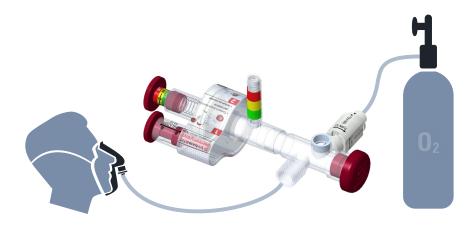


# PRANAYENT

### MECHANICAL RESUSCITATOR

(Medical Single Patient – Use, Disposable)

LIGHT WEIGHT



### **PRANAVENT™**

**PRANAVENT**™ is designed to provide ventilatory support to patients who have insufficient or reduced breathing. These Ventilators make use of compressed oxygen, and don't need any electricity to maintain a continuous and reliable air flow to patients.

Integrated with Peak Inspiratory Pressure & breathing rate adjustment dials, PRANAVENT™ provides pressure cycled, constant flow ventilation.

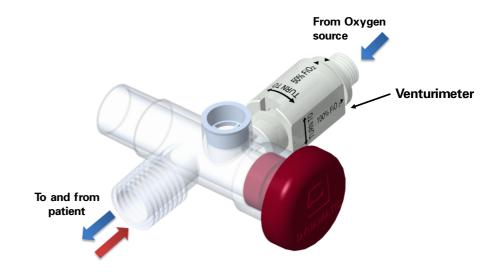
#### Features:

- Adjustable PIP PEEP Pressure
- Manometer Display
- Light Weight
- Fully Pneumatic
- No Electronics
- Emergency Whistle
- Emergency air intake valve



### **PRANAVENT™**

**PRANAVENT**<sup>TM</sup> function is to regulate  $FiO_2$  (mixing of Atmospheric Air and Oxygen), as per patient's need.

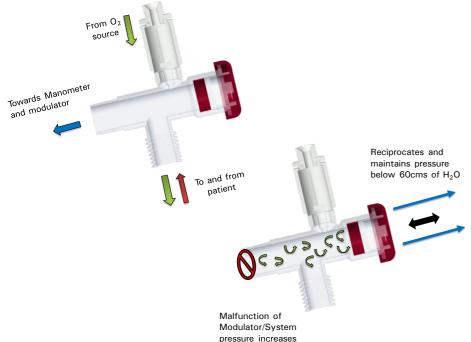


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### **CROSS SECTION OF POP-UP VALVE**

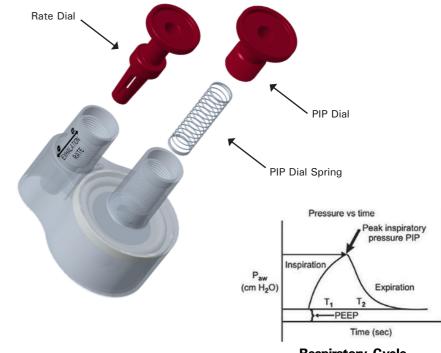
Pop-up Valve function is to limit the pressure of supplied Oxygen Air mixture within the set capacity for a given patient

### System pressure maintained within 50 cms of H<sub>2</sub>O



### **MODULATOR**

Adjustable Modulator controls the respiration (Inspiration & Expiration) cycle. This is the heart of the Ventilator, has controllable BPM & tidal volume features.



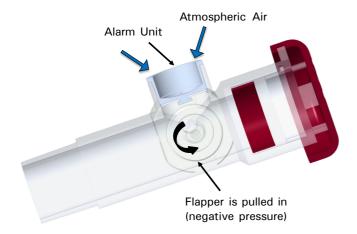
### CROSS SECTION OF ONE WAY AIR VALVE

#### Use Scenario of One Way Valve:

**Scenario-1:** Oxygen supplied is 25 lpm but patient needs/inhales 30 lpm. Excess 5 lpm is pulled from atmosphere through Air valve.

**Scenario-2:** Oxygen supply is cut-off, negative pressure is created in the chamber, air valve opens.

Under these two scenarios, based on the inflow of the atmospheric air into the **PRANAVENT**<sup>TM</sup> chamber, alarming whistle sound will be blown.



#### **SPECIFICATIONS**

1. For use on humans of body weight ≥10 Kg

2. Ventilatory frequency

3. Adjustable PIP pressures

4. Oxygen delivery, FiO<sub>2</sub>

5. Gas Inlet connector

6. Patient connector

7. PEEP pressure

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Auto adjusting to lung capacity

10 to 45 cm of H<sub>2</sub>O

50% to 100%

DISS Gas connection

Φ15 mm female, Φ22 mm male

1/5<sup>th</sup> of PIP pressure i.e 2 to 9 cm of H<sub>2</sub>O



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Dynamatic Technologies Limited designs and builds highly engineered products for Automotive, Aeronautic, Hydraulic and Security applications. With futuristic design, engineering and manufacturing facilities in Europe and India, the company is able to meet customers' exacting requirements on 6 continents.

Dynamatic Hydraulics<sup>®</sup>, a division of Dynamatic Technologies Lmited, is the world's largest manufacturer of hydraulic gear pumps with over 1.5 million pumps produced between its state-of-the-art facilities in India, UK and the USA.

Dynamatic has one of the most expansive range of pumps for the most rigorous hydraulic applications and designed bespoke for pressure, flow, efficiency, size, weight and noise requirements. Dynamatic Hydraulic® has 35% share of business globally on the Agricultural Tractors produced and has 75% share of business on the tractors produced in India.

## RESEARCH AND DEVELOPMENT

Dynamatic has state-of-the-art R&D capabilities in India and UK and houses very advanced labs for rapid proto-typing. The company also has very hi-tech metallurgy labs in Germany and India.

The R&D Center at Bangalore, has been certified by the Department of Scientific and Industrial Research (DSIR), Government of India, since 2001.

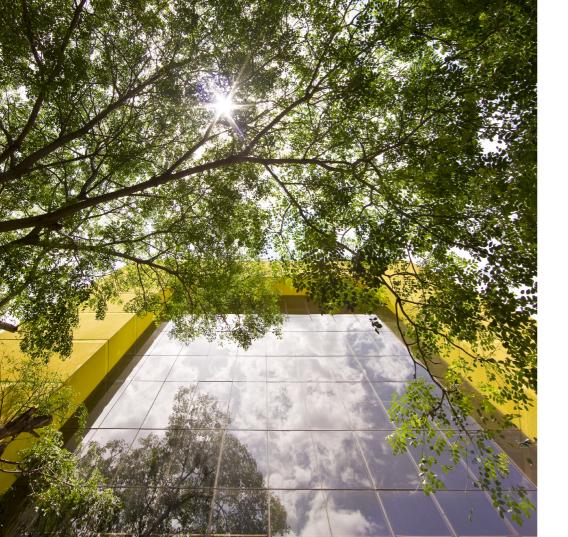
The Material Science Laboratory in Germany holds several patents on special metals and alloys with high thermal capabilities.

The Dynamatic Engineering, in Swindon, UK, specializes in designing product and solutions for the Mobile Hydraulics Sector and holds a number of patents to its credit. This facility houses comprehensive product testing and validation capabilities.





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### **TEAM**

### **Technology Management**

Dr. Udayant Malhoutra Arvind Mishra Ramesh P S Ravichander V Pramilla Malhoutra

#### **Medical Advisory**

Dr. Sonal Asthana Dr. V Arun

### **Design & Development**

Vivek Anand Sukumaran Chandrashekar S D Manu Prasad Sushanth Marathe Nishith Shetty Venugopal Borra

#### **Proto & Validation**

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Srinivasamurthy B
Jagadeesha H
Sankarsan Mohanty
Balakrishna
Shyam M R
Ashutosh Shankar Gupta

### **Legal & Regulatory**

Shivaram V Srinivas M K

### **Program Management**

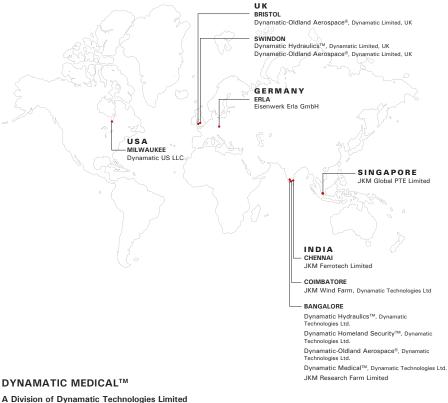
Basavaraj Patil

### **Visual Identity**

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#### **Business Development**

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