



MK - 003 Rev 01

## **LUMENA**

*The world's first aerosol - safe ventilation mask*

# The Problem we are solving

**Healthcare workers and Caregivers are at an increased risk due to transmission of infections.**

A recognized key to transmission of droplet infections, including COVID-19, is the dispersion of bioaerosols from the patient.

Droplets generated by infected patients when they cough, sneeze, talk, sing, or breathe range from 0.1 to >100  $\mu\text{m}$  in diameter.

They can land in the mouth, nose, or eyes of those in proximity, and they have the potential to be inhaled into the lungs.

However, larger droplets settle on surfaces around the infected subject, where they could be infectious by contact for several days.

**The World Health Organization (WHO) lists non-invasive ventilation as a high-risk aerosol-generating procedure.**

During NIV, studies demonstrated that the dispersion had been grossly variable depending upon multiple factors like the interface used, pressure level, and the device used.

NIV accounts for high-dose viral transmission risk to family and healthcare givers during the treatment of chronic respiratory diseases, especially obstructive sleep apnea.

***Inspir Labs' solution*** is based on the creation of a negative pressure gradient layer ensuring that no aerosol contamination is introduced into the immediate surroundings, thereby allowing the safe use of NIV in any necessary environment.







# Our Technology

Combining state-of-the-art engineering and customer driven R&D, our products are the first and only respiratory products aimed to ensure not only patient safety, but also the safety of the healthcare professionals caring for the patient.

Creating a whole new category of healthcare professional safety awareness and responsibility.

The **LUMENA** addresses the unmet need of capturing aerosolized particles and suctioning them before they can disperse and spread infection.

**This is the first step towards making sure our greatest asset - healthcare workers - are safe**

# Introducing the LUMENA

The first ever aerosol-minimizing ventilation mask.

**A dual functioning ventilation and suction Oro-nasal mask.**

Our revolutionary mask is made up of **two different layers** which operate separately and independently within one mask:

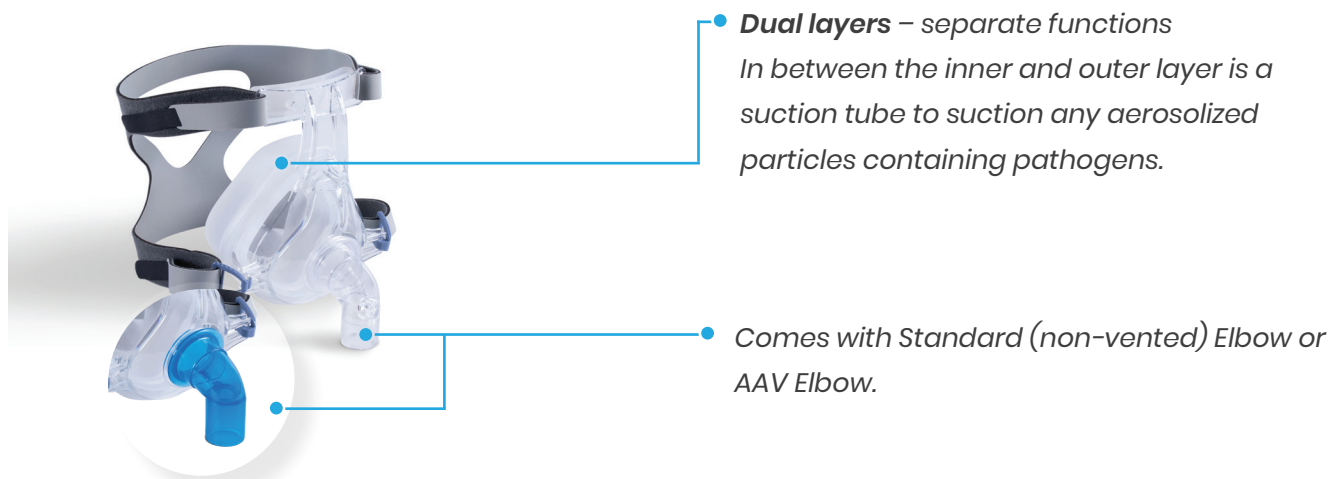
## ***Ventilation Chamber***

Provides ventilation according to the patient's need.

## ***Suction Chamber***

Collects the infected / unwanted aerosolized emissions and drugs disposes of them through the suction port.

**There is no connection between the ventilation and suction chambers, therefore there is no risk of cross-contamination.**

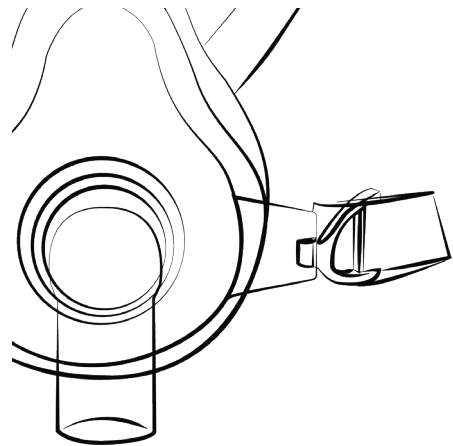
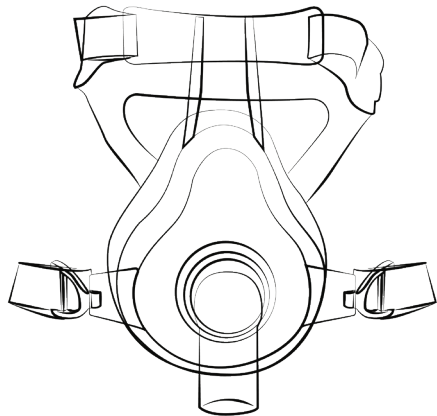




Manufactured with the patient in mind Sizes to fit individual patients needs:

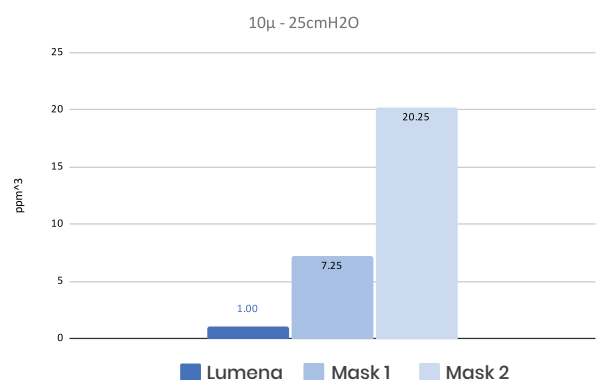
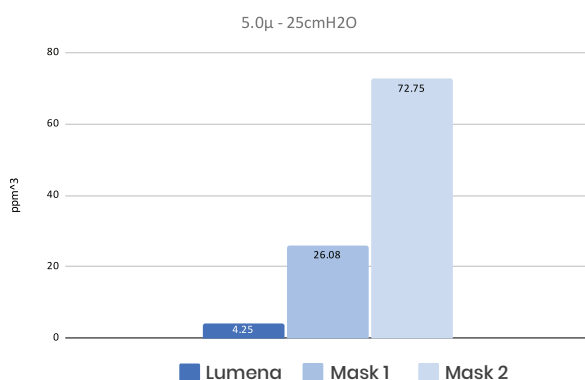
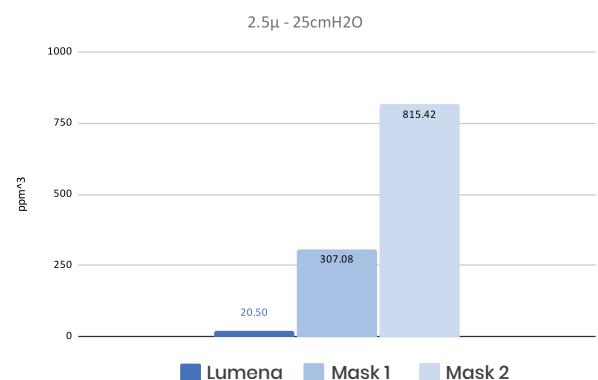
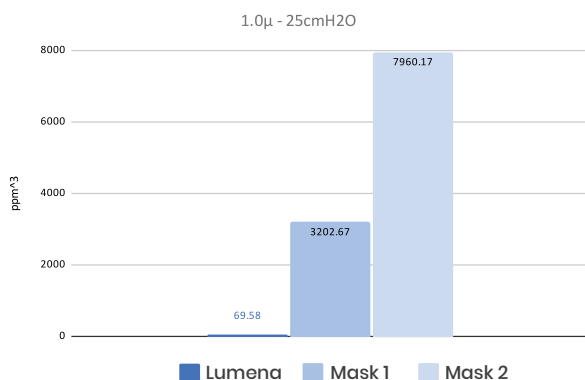
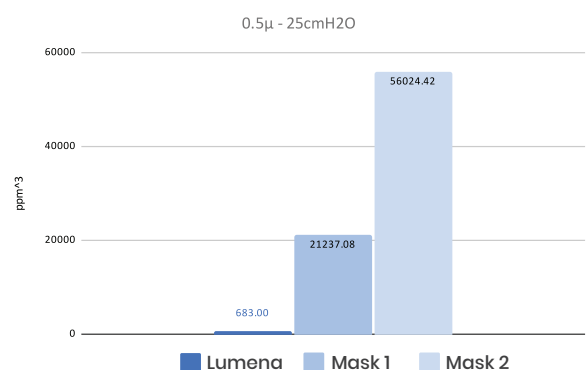
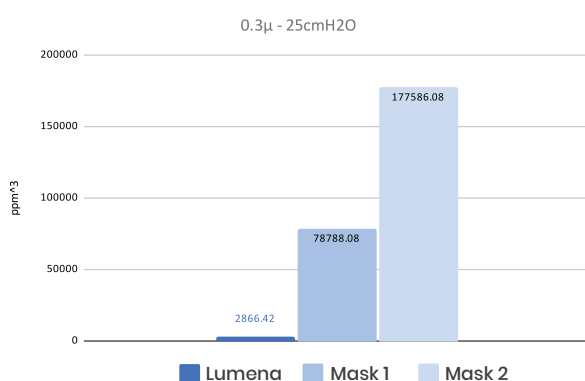
Size	Height (mm)	Length (mm)	Width (mm)
Small	157	138	108
Medium	175	145	124
Large	182	143	122

*\* We intend to release a LUMENA-T by the end of 2022*



# Unprecedented protection

Minimal to no aerosol leakage at low, medium or high particle concentrations vs standard masks.







## **Quality manufacturing matched to standards of excellence**

Inspir Labs as a company holds an ISO 13485 certificate, and our turnkey manufacturer holds the same certificate.

**We employ effort and resources to ensure these high quality manufacturing standards are maintained.**

All manufacturing processes are closely monitored to make sure the patient gets the best and safest product possible.

From the very beginning of choosing the materials, through injection molding, assembly, and packaging, Inspir Labs picks its partners carefully, to ensure customer satisfaction and safety.

# About Inspir Labs

## Dual impact innovation.

### *Reimagining respiratory care*

InspirLabs is pioneering in innovation and impact in the field of respiratory care by creating safer environments for patients and the medical staff that care for them.

Development of LUMENA, the world's first aerosol-minimizing ventilation mask, underpins the innovative and impact mindset of the company. We go beyond ensuring optimal ventilation to the overall respiratory environment protection.

## Dual Centric-Care

### *Caring for healthcare professionals*

Inspir Labs' technologies protect Hospitals' and Clinics' most strategic asset - the medical staff through the development of innovative solutions for the respiratory care environment.

We care about our healthcare professionals' protection against aerosolized pathogens and infection in their day-to-day activities, so they can focus on treating patients and saving lives.

### *Caring for patients*

Inspir Labs ensures optimal ventilation and comfort for the patient, while ensuring peace of mind that they are protecting those around them.



# Contact Us

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