



Paradigm Shifting Surgical Mask Replacing Filtering With Air Flow Rerouting for Medical and Public Respiratory Protection

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Abstract

All current surgical masks designed for respiratory protection of both medical personal and public are built on the filtering mechanism. Filtering is fundamentally inconvenient: it prohibits free breath, creates moist area near face, and the filter performance deteriorates quickly. In the meantime, most medical applications, from surgery and GP to citizen protection in the areas of people concentration, do not require filtering. WHO claims that only direct aerosol breathing should be prevented to protect health in most cases?

Medical professionals report suffering discomfort and decreased alertness from the filtering masks. M.AERO LLC solves this acute pain by building the device that reroutes air flow through firm esthetically looking plastic mask. M.AERO masks equally serve as universal environmental and hygienic protection to both doctor and patient in the provision of medical care of any level of complexity, from lengthy surgical operations and infectious ward checkups to individual protection of the civilian population from airborne infection.

By changing the geometry of the canal and installing additional elements, M.AERO LLC can produce masks for various purposes, such as "Surgical", "Clinical" and "General Purpose", for mass use. We are developing a whole line of masks for various usage conditions, with a general functional purpose of protection against airborne infections.

The design of M.AERO masks is patented through PCT in the form of an impenetrable barrier and a hollow frame, which allows capture and venting of all exhaled air behind the user's back. Standard PCT Application includes the USA, Europe, Japan, China, and many other countries. M.AERO seeks strategic partnership in establishing pilot production and promotion.

Biography

Dr. Dmitry Kulish has completed his PhD at the Russian Academy of Sciences and postdoctoral studies from Harvard Medical School. He is the director of M.AERO, a company producing paradigm shifting respiratory protection masks. He has published more than 10 papers in reputed journals and has been serving as both industry consultant and university professor.