

Amrita Hospitals, AMMACHI Labs design affordable kits for frontline health workers

01 June 2021 | News

The PAPR kits are superior to regular PPEs being low cost, low weight and having higher flow



Doctors at Amrita Hospitals in collaboration with AMMACHI Labs, the academic and research centre at Amrita Vishwa Vidyapeetham, have designed and developed affordable kits for frontline workers right from the scratch.

Amrita Hospitals and AMMACHI Labs launched Powered Air Purifying Respirator (PAPR) kits, the product jointly in January this year. Amrita Hospital's goal is to develop a low-cost solution that meets all the National Institute of Occupational Safety and Health (NIOSH) standards while making these widely available across India and the world at affordable prices.

Amrita PAPR for medical professionals uses an H14 grade HEPA filter with more than 99.995 per cent and not only weighs less at 1.4 kg, but the airflow is also more at > 10 CFM, it is less noisy as motor/blower operational noise - ? 68 dBA at ear and the battery pack lasts about 10-14 hours. In comparison 3M PAPR weighs 1.78 kg the airflow is slower at High Flow Nominal of 8 CFM, operating the motor is noisier at ? 75 dBA at ear and the battery lasts for less amount of time approximately 7-19 hours (TR-630 7-12.5 hours; TR632 10.5-19 hours). The lower noise of the battery makes communication easier.

Dr Bhavani Rao R, Director, AMMACHI Labs who is overseeing the entire project, said "Once all the feedback and design improvements have been incorporated, our PAPRs will be productised and marketed by Omnex Inc. Unlike commercial PAPRs costing anywhere between Rs 70,000 - Rs 1,50,000, our PAPR will cost less than Rs 30,000 per kit."

Commenting on the product roll-out strategies, Arun Kumar, Vice President, Omnex Global said, " Amrita Vishwa Vidyapeetham and Omnex will also be applying for certifications for the PAPR product. Currently, work is in progress for gathering data for pre-certification testing requirements for NIOSH approval for US markets. We are also exploring requirements for field testing in an accredited lab of NABL (National Accreditation Board for Testing and Calibration Laboratories)."