

Global race to make ventilators

Inventors, academics, carmakers and aerospace firms are rushing to build hundreds of thousands of ventilators to help save the lives of people with Coronavirus-related breathing difficulties

MECHANICAL VENTILATOR

Ventilator unit: Pushes air into lungs, replicating normal breathing when disease causes lungs to fail. Patient must be heavily sedated

Humidifier
Matches air to body temperature and adds moisture

Oxygen flow to patient

Carbon dioxide flow from patient

Tube inserted into windpipe

Medication relaxes respiratory muscles so breathing can be fully regulated by machine

NON-INVASIVE VENTILATOR

Face mask covers nose and mouth

Continuous Positive Airway Pressure (CPAP)

device delivers oxygen to lungs without need for ventilator

Mercedes F1 is offering engineering expertise to University College London to build up to 1,000 CPAP machines per day