

# RESPIRATORY EQUIPMENT: ANSWERING THE CALL FOR CRITICAL HEALTHCARE DEVICES

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THE NEED FOR RESPIRATORY EQUIPMENT IS REACHING  
NEW HEIGHTS IN DEMAND, PORTABILITY AND MOBILITY

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## Respiratory Equipment: Answering the Call for Critical Healthcare Devices

The COVID-19 pandemic has put significant stresses on the global healthcare infrastructure, raising awareness on the need for adequate respiratory care equipment and placing significant demand on the supply of ventilators. This crisis has shed a light on health system vulnerabilities, potentially making the stockpiling of respiratory equipment a new reality among both providers and governments alike and forcing respiratory equipment manufacturers to ramp up production activities..

But as device makers know, this is only one part of the story. Respiratory equipment is also needed for a wide range of lung-related diseases — from common illnesses to more life-threatening conditions. As health systems manage the pandemic, they must take into account the daunting needs of an aging population. This reflects the more than 620 million people around the world now over the age of 65<sup>1</sup> who may need to be cared for in hospitals, patient homes and in their local communities and who may require, at some point, a respiratory device.



### **In this unprecedented time of need and increased demand, TE is here to support respiratory equipment makers with applications we can develop for a wide range of devices.**

TE supports our customers in developing an array of respiratory equipment — from tried and true devices used in hospitals and treatment centers to personal healthcare innovations that rely on mobile technologies to support telemedicine. This includes a focus on ventilators that range from the most commonly used equipment in emergency medicine and long-term critical care to Continuous Positive Airway Pressure (CPAP) machines that are frequently prescribed to treat sleep apnea at home.

For respiratory diseases, our solutions support the development of stationary devices such as chest percussion equipment that helps to relieve significant mucus buildup and sophisticated oxygen concentrators that deliver pulmonary medications into the lungs. Conversely, we also support the development of portable devices including nebulizers and inhalers. Last, we are committed to helping develop new wearable devices that use innovative technologies to non-invasively monitor diseases and their progression.

### **A Customer Focused Approach Built on Partnership**

Regardless of the type of device to be built, TE can help respiratory equipment makers, in a spirit of partnership, address a host of unique design requirements. Our capabilities include answering the global demand for connectors, relays, sensors and tubing solutions required for ventilator equipment and portable healthcare devices, as well as providing quick-turn solutions for urgent requests of our products. We are equally focused

on delivering an excellent customer experience — a priority as fundamental to our approach as airflow through a respiratory device.

Our expert engineers innovate reliable connectivity products that can be offered as drop-in solutions across a number of designs for respiratory equipment. Our extensive portfolio is based on our understanding of market trends and their impact on manufacturing. For example, as respiratory equipment makers develop smaller and more portable equipment for both healthcare settings and home usage, our focus is on miniaturizing component parts without compromising performance or reliability. This allows these solutions to be incorporated into mobile technologies that healthcare providers can use at the patient point-of-care, or for remote monitoring purposes.

In addition, TE engineers are empowered to develop products right the first time. By building durable products, efficiency is respiratory devices operate accurately and reliably for the ultimate benefit of the patient.



<sup>1</sup> U.N. Population statistics, 2019.

## Respiratory Equipment: Answering the Call for Critical Healthcare Devices

As a global leader in connectivity solutions, we enable the development of respiratory equipment in three differentiating ways:

- Our vast portfolio of products reflects more than 70 years of creating innovative, highly reliable connectivity solutions

- We provide access to a global network of our product and technology experts for support

- We operate in a spirit of partnership defined by hands-on support and connectivity expertise from product creation to market launch.

### Our Products and Capabilities Enable Manufacturers to Design a Broad Range of Respiratory Equipment

Our approach can be an important part of helping manufacturers to select the right type of solution for their equipment. We categorize our products into the following categories: motors; power systems; user interface and control displays; and sensification.

### Applications

- Ventilator/Respirator
- Patient Monitoring System
- Oxygen Concentrator
- Pressure Sensor
- CPAP/BiPAP
- Battery Suction devices



**Motors:** Our broad portfolio of high-quality connectors, relays, tubing and sensors can reliably help to ensure that motors in respiratory devices are manufactured efficiently and will run smoothly.

CT Connectors  
Economy Power II Connectors  
Economy Power 2.5 Connectors  
GRACE INERTIA 2.5 Connectors  
Mini CT Connectors  
Ultra-Fast Terminals  
RZ Power PCB Relay  
NTC Thermistors  
RTD Temperature Sensors



**Power Systems:** Our products enable smarter, more connected and sophisticated devices, allowing for innovative designs to be built for the long run. Since our products are also reliable, they help to simplify the design process and bring respiratory devices to market more quickly.

Power Double Lock (PDL) Connectors  
Potentiometers  
POWER TRIPLE LOCK Connectors  
Chassis Mount Resistors  
Tactile Switches  
AMPLIVAR Terminals  
Snap Action Switches  
FASTON Terminals  
Single Wall Heat Shrinkable Tubing



**User Interface Control and Display:** Our broad portfolio of connectors, sensors, relays, and tubing can help optimize user interface systems. This includes high quality, reliable and 5G ready solutions for use in ventilators, sleep apnea devices or other applications, to help meet design requirements and simplify the manufacturing process.

Through-Hole Resistors  
MTA Connectors  
Chassis Mount Resistors  
Antennas  
Tactile Switches  
FASTON Terminals  
Snap Action Switches  
Single Wall Health Shrinkable Tubing  
Ultra-Fast Terminals



**Sensification:** Our portfolio of products, including connectors, sensors, and 5G-ready solutions, can be essential to enabling sensification in personal healthcare devices. Our products can be equally critical to enabling the collection of localized data in better serving the personal healthcare space.

Surface Mount Resistors  
MAG-MATE Terminals  
Potentiometers  
DIP & SIP Switches  
AMPLIVAR Terminals  
Snap Action Switches  
Humidity Temperature Sensors

### Conclusions

As the need for respiratory devices continues to grow, respiratory equipment manufacturers are answering the call for a range of equipment to meet market demands, urgent care needs and an aging population. This includes the development of everything from highly sophisticated equipment in healthcare settings to new personal healthcare innovations that rely on mobile technologies.

TE Connectivity's broad array of connectivity solutions are designed to help manufacturers of respiratory equipment address a wide range of health concerns, challenges and opportunities brought on by ever-changing market needs and evolving product trends. Through deep engineering capabilities and a commitment to testing, specific design requirements are achieved with reliability and dependability. And with manufacturing locations around the world, we are positioned to offer products and support globally, backed with strong partnership from our distribution partners.

### TE Connectivity

TE Connectivity is a global technology leader offering complete product portfolios across a wide-range of industry applications. TE remains committed to meeting the needs of our customers, delivering quality products and identifying opportunities for more efficiencies, cost-savings and innovations in design. Finding ways to help solve customer problems and increase the reliability and performance of their products and new designs are just some of the ways TE lives up to its purpose of creating a safer, sustainable, productive and connected future.

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