

# mindray

## Mindray Ultrasound Solutions Against COVID-19



2020-2

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# Mindray in Action

The newly-emerged epidemic pneumonia caused by a new type of coronavirus (COVID-19) has become the biggest concern in China and the very focus of public attention around the world. As a company with the mission to “advance medical technologies to make healthcare more accessible”, Mindray has immediately responded with multiple actions.

## Frontline: Quick Response in the Shortest Possible Time

Mindray has donated a total amount of about **1.57** million USD's worth of medical devices to Wuhan Huoshenshan Hospital and Leishenshan Hospital, two make-shift hospitals for the treatment of novel coronavirus patients. From Jan 25 to Feb 6, Mindray completed the installation of over **3,000** units of devices against time as Huoshenshan and Leishenshan completed the construction on Feb 2 and Feb 6 respectively.



The demand for quality medical devices also staggeringly soared across the whole nation. As the leading provider of medical devices and solutions in China, Mindray has allocated resources efficiently and spared no efforts to ensure the timely supply of devices urgently needed. Till Mar 1, Mindray has delivered over **50,000** units of medical devices to help nationwide hospitals and caregivers to combat the novel coronavirus.



# Mindray in Action

## Coordinated Efforts Ensure Timely Supply and Delivery

The fight against the coronavirus on the frontline needs the strong support from the back end. Mindray has carried out efficient coordination across supply chains, manufacturing, logistics, delivery, installation and trainings to ensure a seamless workflow.



On the third day of Chinese Spring Festival holiday, Mindray Guangming Manufacturing Center already resumed work to ensure the timely supply of Mindray products.

Not only in Wuhan, in order to fully cooperate with the control and prevention of COVID-19 across other regions, all Mindray subsidiaries in China immediately established emergency teams, involving production, customer service, technical support, and clinical training. All people are standing by 24/7 in case of any urgent request for our service and ensure that all devices in use are functioning properly.



Mindray is ready to make extra donations and will always be committed to offering high-quality products to all regions. We firmly believe this epidemic will be brought under control. With joint efforts, we can win the battle against this common enemy to all humankind.

# Application

Point of care ultrasound (POCUS) has seen an increase in use over the past several decades, especially in intensive care units (ICUs) and emergency departments. Use of the modality at the bedside to examine the heart, lungs, obtain vascular access, and perform small drainage procedures has allowed for cost effective management. Currently used most prevalently in the ICUs and emergency departments to rapidly recognize and diagnose patients before initiating treatment plans. In addition to the diagnostic capabilities the use of US to help reduce complications and costs associated with guided procedures has increased and become standard of care over the past decades\*.



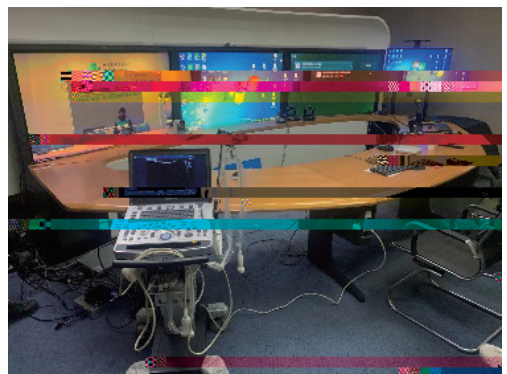
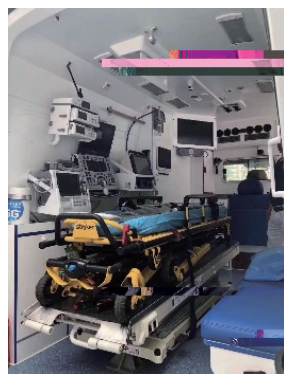
## 1. Ultrasound can improve the rate of successful rescues significantly

For novel coronavirus pneumonia (NCP) patients, bedside ultrasound can be used in the evaluation of pulmonary exudation, pleural effusion, pneumothorax, as well as the airway management and acute respiratory distress syndrome (ARDS). The focused echocardiography can quickly provide information about cardiac structure, function and hemodynamics. It can accurately guide clinical treatment, such as ventilator and ECMO weaning, quickly assess the effect and prognosis of disease. For patients, these indicate an increase of accuracy and more rapid diagnosis and treatment.



## 2. Ultrasound can reduce the opportunity of cross-infection effectively

For novel coronavirus pneumonia (NCP) patients, ultrasound can be used in the quarantine unit or ICU to reduce the X-ray/CT exposure. With the complete disinfection solution, it can effectively reduce the potential cross-infection rate of patient-to-patient or patient-to-medical staff.



\* Balmert N, Espinosa J, Arafah MO, Costello J, Markle S. Integration of bedside ultrasound into the ICU—a review of indications, techniques and interventions. J Emerg Crit Care Med 2018;2:17.

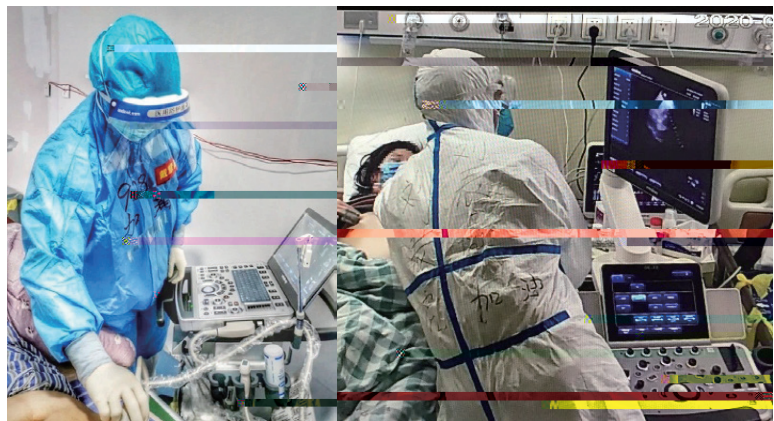
### 3. Ultrasound can effectively reduce the working intensity of physician

For novel coronavirus pneumonia (NCP) patients, ultrasound can partly replace X-ray/CT or other invasive procedures, reducing the working intensity of medical staff, especially when the stethoscope cannot be used on some NCP patients, ultrasound serves as a "visual stethoscope" for doctors.



### 4. Ultrasound can improve the diagnosis and treatment level of critical care in departments / hospitals directly

It is a consensus globally that ultrasound equipment should be one of the necessary devices in ICU, indicating that critical ultrasound plays an important role in critical care. It can help physicians on the differential diagnosis of respiratory failure, airway/circulation management, vascular access, evaluation of ARDS, guiding the diagnosis and treatment of cardiac arrest, even guiding to find the cause fever. Except for those benefits, ultrasound can also reduce the radiation and medical costs of the patient and government.



### 5. Ultrasound can provide social benefits for patients and reputation for hospitals

"Better healthcare for all", since the outbreak of COVID-19, Mindray has been proactively supported solutions to healthcare facilities against the disease.

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# TE7 ACE — Dedicated POC Ultrasound Solution



Scan the QR code  
to learn more about TE7 ACE

**Recommendation for:** ICU / Emergency / Quality Assurance / Quality Assurance / Research / Field Use

## Product Highlight:

- **Smart Quality Assurance:** Cutting-edge technology for rapid and accurate diagnosis and ultrasound procedural guidance.
- **Chemical Resistant Seamless Screen:** Dedicated seamless and non-porous screen design provides high chemical resistance and wide range of disinfectants compatibility.
- **Intelligent Fluid Management:** Smart Fluid Management and series of smart features, along with Shock / BLUE protocols workflow, empower efficient assessment with confidence.
- **Safe:** Chip-embedded transducers provides patient tracking solution. iVocal voice operation for touch-less procedure, avoid cross contamination.
- **Rapid Charge Ability:** 3 seconds rapid boot up, 22 hours standby with 2+ hours battery for crucial requests.
- **Intelligent Versatile Transducers:** eSpacial Navi, iNeedle and button transducers support safety needling procedure and ECMO, CRRT preparation.



# M9 — Best of Performance and Portability for ICU



**Recommendation for:** ICU / Emergency / Quality Assurance / Field Use

## Product Highlight:

- **Performance Accuracy:** mQuadro platform with Single Crystal transducers for precise diagnosis.
- **Smart Diagnostics:** Intelligent measurements with automatic optimization provides efficient assessment with confidence.
- **Rapid Access:** Rapid boot up.
- **Lightweight:** 30 minutes charging, 4 hours battery operation.
- **Safe:** Magnesium-alloy main unit and SSD hard drive for reliability.
- **Intelligent Versatile Transducers:** Exceptional imaging quality and iNeedle guide interventional procedure and ECMO, CRRT preparation.



# M8 — Accessible to Premium Capability for ICU



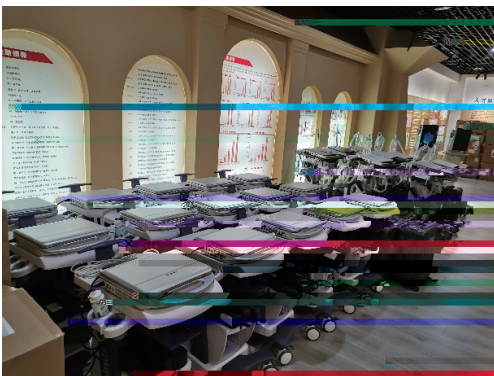
**Recommendation for:** ICU  
 /E e e c /Q. a a . . e a d  
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## Product Highlight:

- E c e e c e l a . . . P e . . . a c e: mQuadro platform and 3T transducers for precise diagnosis.
- S a . a d S . . . . : Intelligent measurements with automatic optimization provides efficient assessment with confidence.
- R e a d . . . A c . . . : Rapid boot up.
- L . . . d . a . . . : 30 minutes charging, 4 hours battery operation.
- S a e : Magnesium-alloy main unit and SSD hard drive for reliability.
- I a . . V . a a . . T . . . : Exceptional imaging quality and iNeedle guide interventional procedure and ECMO, CRRT preparation.

# M Series — Affordable and Fast



**Recommendation for:** Fe. e c . c /  
 E e e c /Q. a a . . e a d /ICU

## Product Highlight:

- S a b . . : Over 10,000 installation worldwide proven its stability.
- A . . d a b e: High performance with budget friendly configuration.
- V e a . . : All features available for various clinical application.
- I a . . V . a a . . T . . . : iNeedle guide interventional procedure.



# Resona Series

——New Waves in Premium Diagnostic Ultrasound

**Recommendation for:** ICU / Q. a a . . e U. a . . d  
R. . . / Q. a a . . e Rad. . . De a. e .

## Product Highlight:

- **I . e . e ce:** Revolutionary Channel data based ZST+ Platform provide industry-leading comprehensive intelligent ultrasound diagnosis.
- **C a . . :** Single crystal transducer with Dynamic Pixel Focusing & Sound Speed Compensation define a new standard of image performance
- **M. . -F. . c . . a :** Professional tools provide new capabilities in clinical research and diagnosis: V-Flow, RIMT, and Sound Touch Elastography, etc.
- **E ce c :** Powerful gesture-based operation, one-button automatic calculation leads to efficient user experience, reduce contact time for operator safety and patient satisfaction
- **Sa e :** Disinfection compatible solution available for in-hospital use



# DC Series

——Precision imaging for all diagnosis demands

**Recommendation for:** ICU / Q. a a . . e  
U. a . . d R. . . / Q. a a . . e Rad. . . De a. e .

## Product Highlight:

- **E ce . . a a . . :** X-insight solution offers comprehensive and dedicated ultrasound experience with efficiency.
- **S. e b a . . e . . a ce:** Single Crystal Transducers and ComboWave transducers enable clarity imaging.
- **Ea e . . e a . . :** iTouch, Smart Track, Smart Calc toolkits save physician precious time.
- **Sa e :** Disinfection compatible solution available for in-hospital use.



