



ACUSON Freestyle ultrasound system

Environmental Product Declaration

siemens-healthineers.com/ultrasound





Progress that is impressive

The ACUSON Freestyle ultrasound system sets the pace for modern healthcare. Its advanced technologies, including the industry's first cable-free ultrasound transducer, is designed to streamline operational and sterile field management. Value-based innovations for improving visualization and cable-free scanning are built to deliver new levels of ease and efficiency at your point of care. From anesthesiology to interventional radiology to musculoskeletal ultrasound, the ACUSON Freestyle system is engineered with the user in mind.

Ecological advantages of the ACUSON Freestyle ultrasound system

- Portable, light weight ultrasound system means a smaller environmental footprint
- Managed Node Package upgrade allows software updates to be delivered remotely, reducing customer service visit travel
- Automatic energy saving modes conserve electricity
- Rapid power-up and power-down time conserves energy
- All substances contained in the product and its packaging are documented
- Disassembly instructions for high-quality recycling are available

ACUSON Freestyle ultrasound system

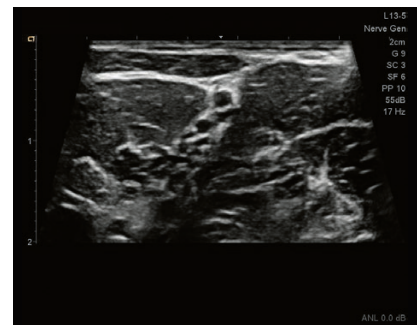
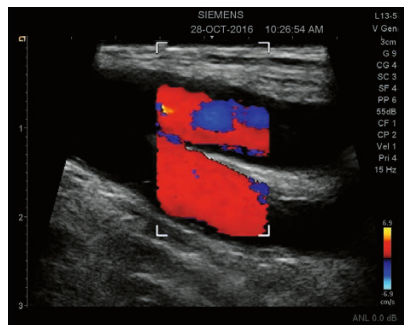
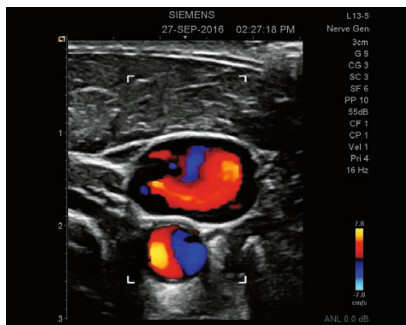
Light weight reduces environmental footprint

Low mass and reduced shipping weight means lower fossil fuel consumption and greenhouse gas emissions during shipping (for production and to customers) and less natural resources consumed in manufacturing. With this and the reduced need for service visit travel, the ACUSON Freestyle system proves it is possible to have powerful performance without a large environmental impact.

Two modes reduce energy consumption

The ACUSON Freestyle system is equipped with two modes that reduce energy consumption.

- “Auto-freeze” puts the system in freeze mode by halting parts of the imaging subsystem when no changes to the image are detected. This reduces power consumption by ~10% compared to live imaging for the system. It also saves battery life in the probe, which reduces the power consumed to recharge probe batteries.
- “Sleep” mode is similar to a screen saver. It dims the screen after a user-configurable time period after the system enters Auto-freeze. It further reduces power consumption by ~10% over Auto-freeze.



Environmental management system

Siemens Healthineers gives high priority to achieving excellence in Environmental Protection, Health Management and Safety (EHS).

Across the globe, Siemens Healthineers has implemented a consistent EHS management system. It lays the foundation for the continuous improvement of our performance in these areas, and regular auditing assures our conformance.

Healthineers is certified in accordance with ISO 14001 and OHSAS 18001.

Environmental product design



Material supply:

From natural resources to delivery of semi-finished products



Production/delivery:

From production of components to operation startup by the customer



Use/maintenance:

Includes daily use by our customers as well as maintenance



End of life:

From disassembly at the customer through material and energy recycling

Siemens Healthineers considers environmental aspects in all phases of the product life cycle, including material supply, production/delivery, use / maintenance and end of life.

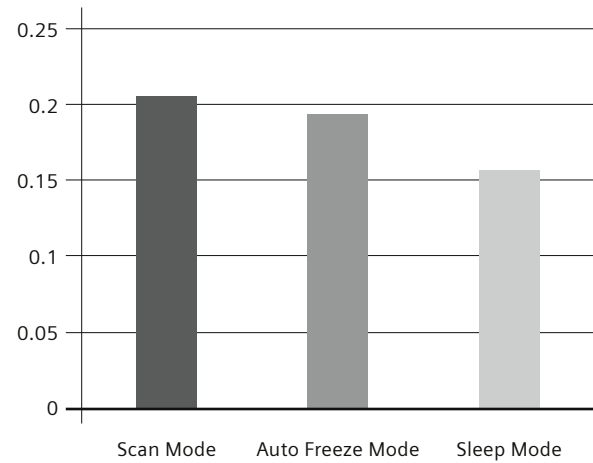
Our product design procedure fulfills the requirements of IEC60601-1-9:2007 "Environmental product design for medical electrical equipment".

This standard supports the effort to improve the environmental performance of our products.

Energy Analysis

Energy consumption is an important environmental aspect of medical devices. The intelligent ACUSON Freestyle system automatically detects when the system is no longer scanning and automatically switches the system from Scan to Auto-freeze mode, reducing electricity consumption approximately 2% from 0.230 kW to 0.225 kW. The system can be put into Sleep mode to reduce electricity consumption to approximately 0.207 kW, almost another 8% less.

Electricity Consumption per day (kWh)

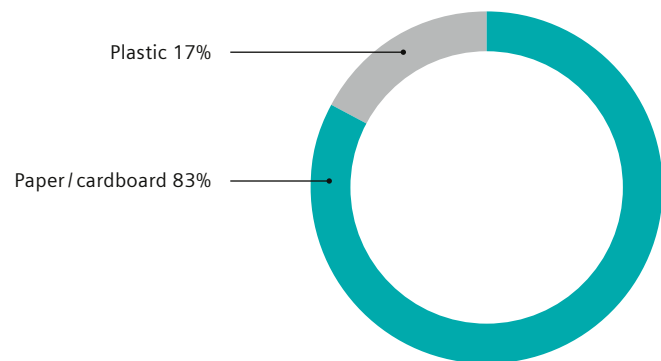


Packaging

The ACUSON Freestyle system packing materials consist entirely of paper, cardboard and plastic, nearly all of which can be recycled.

The total weight of the packaging below is for a standard ACUSON Freestyle system with two probes and four batteries.

Total weight:
closed packaging approx. 5.20 kg





Operating data

Heat emissions of the device:

• Sleep mode ¹	0.060 kW
• Auto-freeze mode ²	0.065 kW
• Scan mode ³	0.065 kW

Allowed room temperature ⁴	10°C–40°C
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Allowed relative humidity ⁴	40–60%
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Energy consumption:

• During ramp up ⁵	0.093 kW
• Sleep mode ¹	0.060 kW
• Auto-freeze mode ²	0.065 kW
• Scan mode ³	0.065 kW

Power-on time ⁵	40 sec
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Power-off time ⁶	47 sec
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Technical specifications

Interface for heat recovery	No
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Possible type of cooling	Air-cooling
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Complete switch-off is possible	Yes
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Device is adjustable for the user in terms of height	Yes
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Uniform operating symbols for device families	No
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Radiation

Not applicable

Replacement parts and consumables

System battery	300 charge cycles ⁷
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Probe batteries	500 charge cycles ⁷
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¹ Approximate value for energy consumption in mode; when device has been inactive for a pre-selected amount of time the system automatically puts the system to sleep to conserve energy.

² Approximate value for energy consumption in auto-freeze mode; when imaging has been inactive for 3 minutes the system automatically freezes the image to conserve energy.

³ Average value for energy consumption at examination of patients

⁴ Within examination room

⁵ From off-mode to operating state

⁶ From operating state to off-mode

⁷ Number of charge cycles before charge capacity reduced to < 70% of original capacity

Disposal/substance information

End-of-life concept	Yes
Recycling information	Yes
List of hazardous substances	Yes

Cleaning

Compatible cleaning processes:

• Total device	No
• Restrictions for particular device components	No

List of incompatible substance classes:

• Total device	alcoholic/etheric disinfections sprays organic solvents scouring solvents products containing phenolacylamine / lye
• Restrictions for particular device components	No

Suitability of device for sterile areas ¹	Probes and batteries
Size of the surface to be cleaned ²	Approx. 1 m ²

Further ecologically relevant information

Elements of instructions are:

• Recommendations for saving energy	Yes
• Recommendations for efficient cleaning	Yes
• Recommendations for appropriate use of consumables	No



¹ System console cannot be sterilized, however, since it is wireless, it can be used while kept outside the sterile environment.

² Console, probe, keyboard

This declaration is for information purposes only, it is not part of the specification and does not represent any warranty or guarantee.

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At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare.

An estimated 5 million patients globally everyday benefit from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services

We are a leading medical technology company with over 170 years of experience and 18,000 patents globally. With more than 48,000 dedicated colleagues in 75 countries, we will continue to innovate and shape the future of healthcare.

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