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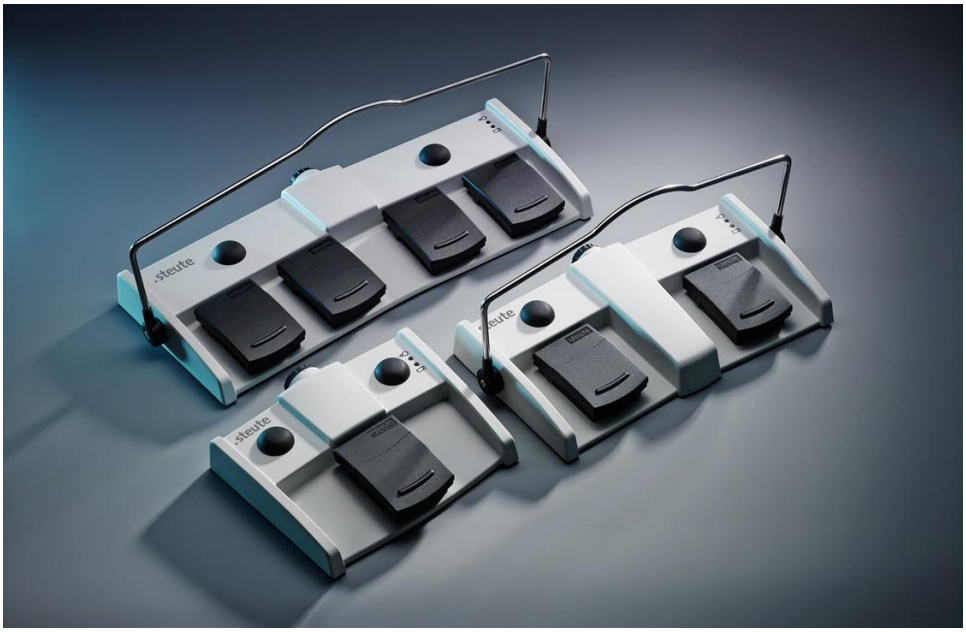
New low-energy wireless technology

Wireless foot controls

A new series of battery-driven foot controls uses the latest generation of a wireless technology developed especially for medical equipment. Its power consumption is low, meaning that conventional and not rechargeable batteries can be used.



The pedals in the new foot control series are very flat. A collapsible handle makes it easy to move the control, also by foot

Which power source makes more sense for medical foot controls: commerically available alkaline batteries or rechargeable batteries? For steute Meditec the answer is clearly conventional batteries, and a corresponding new series of user interfaces will be presented at the Medica. The arguments in favour of conventional over rechargeable batteries are:

- regular charging of li-ion rechargeable batteries is no longer required,
- both the charging device and the costs of charging management can be eliminated, and
- conventional batteries are available without transport restrictions all over the world, reducing costs for both device manufacturers and users.

This changeover to conventional battery power has been made possible by the latest version of the SW2.4LE-MED wireless technology, developed by steute Meditec especially for the medical field. Power

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consumption during active operation is just 11 mA.

Low power consumption does not mean weaker transmission, however: in fact, compared to its predecessor, this generation of the steute wireless technology actually performs better. It is now variable, with the advantage, amongst other things, that the user interface can transmit signals to the corresponding device, for example an X-ray machine, from a neighbouring control room. A clear assignation of foot control to receiver using the "pairing" procedure prevents any incorrect operation. This is a prerequisite if several wireless user interfaces are to be operated without mutual interference in the same OR.

After a period of time which is configurable by the user, the wireless foot control falls into a sleep mode if not actuated. The power consumption is reduced to next to nothing. The change back from this low-energy resting phase to the active mode is so short that it is not even noticeable. Tests in the laboratory with tens of thousands of operating cycles have shown that the average wake-up time is just 60 ms.

CATCHWORDS TO REMEMBER:

- Medical products with conventional, not rechargeable batteries
- New family of wireless foot controls
- Low-energy wireless technology
- Battery change through users or as part of an annual service

Batteries can be changed as part of regular servicing

Using three C batteries with a capacity of 8000 mAh in conjunction with a typical user profile for medical applications, a lifetime of over one and a half years can be achieved. This means that device manufacturers can usually change the batteries as part of their annual service. If an interface is in constant use, users can also change the batteries themselves. An indicator displays the battery status at all times. The wireless system meets the standards of SIL 3 (Safety Integrity Level to IEC 61508).

The new wireless foot controls are produced with one to four pedals. The user interfaces in series GP x11 come with a battery compartment for three AA or C batteries. With this new foot control series, steute Meditec is expanding its range of "Classic" wireless foot controls. In the future, the wireless system in these controls will also be used in steute Meditec "Custom" user interfaces.

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