

Recommendation for the Cleaning and Disinfection of Armeo

1. General

The ArmeoPower, ManovoPower, ArmeoSpring, ArmeoSpring Pediatric, ManovoSpring and ArmeoBoom (hereinafter "Armeo") are noncritical items, described as follows: *"Noncritical items are those that come in contact with intact skin but not mucous membranes. Intact skin acts as an effective barrier to most microorganisms; therefore, the sterility of items coming in contact with intact skin is "not critical."*¹

The following processes are recommended, but should be adapted to comply with the local or national guidelines which may apply within the Healthcare Facility or the country of use:

- Pre-Cleaning / Cleaning (if necessary)
- Disinfection

There is no recommended interval for cleaning and disinfection. The Armeo should be routinely cleaned and disinfected between patients and at regular intervals while in use.

2. Pre-Cleaning / Cleaning

- Make sure the Armeo is turned off
- Visible dirt and particles should be wiped off the Armeo by using a wet cloth or a dry brush before starting the disinfection procedure

3. Disinfection

- The Armeo can generally be disinfected with the procedure of surface disinfection using wipes and / or sprays.
- The more delicate orthopedic parts, i.e., arm cuffs, consist of material which cannot be properly disinfected using surface disinfection. These parts need to be washed for proper disinfection (see following Recommended Disinfection Procedure (3.1)).
- Please make sure no disinfectant is getting to electronic interfaces, like the USB connector, or the main power socket.
- The use of disinfection showers is not permitted due to the electric connections and the unsealed moveable parts.
- Make sure surfaces to be disinfected are well covered with disinfectant.

¹ Rutala WA et al., 2008

3.1 Recommended Disinfection Procedures for Armeo Components

Components	Disinfection Procedure
After each patient	
Hand grip	Wipe ^a
At the end of each working day	
Remote control Telestop Keyboard Mouse Emergency button Grips for moving device (handles etc.)	Wipe ^a
Arm cuffs	Foam spray ^b
If needed, e.g. due to pollution with body fluids (e.g. sweat, urine)	
Metal components: - Frame - Exoskeleton	Wipe ^a
Orthopedic material: - Arm cuffs - ManovoSpring orthopedic material	Washing machine ^c

^a Includes mechanical cleaning.

^b Surface needs to be fully wet; dry before reuse.

^c Wash with 60°C; use laundry bag; delicate fabric cycle.

3.2 Recommended Disinfectants

When choosing disinfectants, health aspects of the staff / patients as well as material compatibility need to be in focus. Hocoma recommends to use disinfectants based on **quats (quarternary amonium cations)** as they provide the best material compatibility, are environmentally friendly and economical.

Please make sure to remove any soap residues before disinfection with quats.

Examples for recommended products are:

- Innocid RFD-i 44 RAPID FOAM (PRISMAN Pharma International AG)
- Descosept Special (Dr. Schumacher)
- Mikrozyd sensitive liquid (Schülke)
- Cleanisept (Dr. Schumacher)
- Mikrobac basic (Bode)

Examples for recommended products for US customers are:

- QUAT-STAT SC (Betco)
- First Defense™ 40-90 (Foster)
- IAQ 2500 (Fiberlock)

(These recommendations are not exhaustive as there may be local processes/substances that already comply with cleaning and disinfecting requirements)

- Please note that alcohol-based disinfectants can be used, but might lead to changes in material composition over medium to long-term application.
- In case of any uncertainties, please always consult an internal disinfectant expert.