

# User Manual

## Equipment Trolleys

- **Eco Equipment Trolley** #15-1740
- **Premium Equipment Trolley** #15-1741



This is a class I medical device within the meaning of the European Medical Device Regulation (MDR) 2017/745, Appendix VIII.

The manufacturer declares that this product complies with the fundamental requirements pursuant to MDR 2017/745, Appendix IX, as documented by the CE mark.

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We work constantly to further develop our products. Please understand that we must reserve the right to make changes to the delivery package in terms of form, equipment and technology at any time.

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## 1. IMPORTANT INFORMATION

This instruction guide applies to the equipment carts 15-1740 (Equipment trolley with twin swivel casters, 5 shelves and drawer) and 15-1741 (Premium Equipment trolley with twin swivel casters, 5 shelves and drawer).

All products from Ackermann Instrumente GmbH are manufactured for a long and trouble-free service life.

Development, construction, sales and production are certified at Ackermann Instrumente GmbH according to DIN EN ISO 13485.

This is a basis for:

- highest quality and a long service life
- easy, safe and ergonomic operation
- functional design
- optimisation for the planned usage

The products comply with the requirements of the European Medical Device Regulation (MDR) and bear the CE mark.

- Carefully read these instructions for usage from the beginning in order to become familiar with the functions step-by-step.
- Please be sure to address all questions or concerns to the manufacturer.
- The mobile equipment carts are only intended for the use as described.
- These instructions are to be kept for the service life of the product

### 1.1. CORRECT USAGE

The functions of the mobile equipment carts of Ackermann Instrumente GmbH are:

- mounting medical and IEC-tested devices according to the permitted load information in compliance with the requirements of IEC 60601-1 in the currently valid edition.
- Connection and distribution of mains voltage from the local electricity outlet as well as from data lines.
- Consolidation of original Ackermann Instrumente GmbH components and accessories.

Using the mobile equipment carrier, the medical equipment can be transported inside the building or arbitrarily positioned in the area before and after the application. Therefore, a flexible, economical efficiency of all equipment is possible. In addition, it is easier to clean the floor area.

### 1.2. GENERAL EXPLANATION OF THE SYMBOLS



"ON" (voltage) - lights up green



"OFF" (voltage)



"ON" lights up green/"OFF" (pressure actuated)



Equipotential bonding:

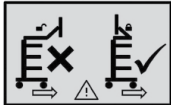
Identifies equipotential bonding terminals on the housing of the isolating transformer; equipotential bonding ensures that resistance between all conductive materials is sufficiently low.



Connection to protective conductor:  
Connects conductors, equipment units, conducting parts, main earth terminals and earth



Conductive castors:  
Conductive castors are indicated by a flash or a yellow point



Move only with arm folded up



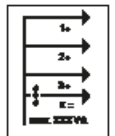
Use the handle to push



Follow the instruction manual



Alternating current



Total output:  
Total power that can be supplied by the individual plug in locations must not exceed the total power.



Total load rating (basic frame):  
max. total load rating (= total of all load ratings of mounted system components)  
Please refer to the label for appropriate load.



Load rating (system components):  
Please refer to the label for appropriate load.



Humidity limit



General warning sign:  
This symbol is used at the socket strips. The overall rating given on the name plate must not be exceeded.

## EQUIPMENT TROLLEY



Only suitable for the interior



Distributed by



Adjustment of the clamping force (tilt and swivel unit)



Set load:

Describes the load range and also the direction of rotation for setting them.



Risk of tilting:

It is imperative to observe the sequence of loading and unloading mobile equipment carts.

Heavy object:

Any lifting of the mobile racks must be done by two people in order to avoid injury.



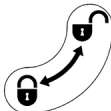
Brake:

Information about positioning of the support arm in the event of device acceptance and indicates the direction for release and blocking the locking function.



Operating position:

This symbol describes the permitted operating positions (right/left) and indicates a prevailing danger of tilting when changing over.



Locking function:

This describes the closing / opening direction for components.



Do not push:

It is forbidden to push the equipment cart above the handle because of a risk of tipping over.

## 1.3. SAFETY INSTRUCTIONS

### General:

- Only those mobile equipment carts may be operated whose main voltage equipment has been tested and approved by appropriate, qualified personnel!

- Ensure the isolating transformer is only connected to a power supply with a functioning protective earth connection that complies with the provisions of the IEC 60364-7-710 2012-10 "Electrical installations in buildings, part 7-710: Requirements for special installations or locations – Medical locations". If in doubt, contact a specialist in the electrical trade or an authorised employee of the hospital's engineering team.
- Personnel (hospital and service personnel) working directly or indirectly with a mobile equipment carrier must be instructed!
- Setting adjustments may only be carried out by qualified personnel.
- Repairs may only be carried out by Ackermann Instrumente GmbH.

#### Safe working with the equipment cart:

- The device is only disconnected from the mains supply when the power plug is removed from the socket.

#### Operation:

- With every change of location it must be ensured that no one is injured or objects damaged!

#### Connections:

- In the USA and Canada, use a hospital-grade connection cable when connecting isolating transformers in the 115 V mode and in Japan use the optional Japanese connection cable.
- When connecting to the multiple-socket strip, secure the plug using an optional available plug pull-out lock.
- Only devices that fulfil the requirements of IEC 60601-1 or are IEC-tested may be connected to the sockets/connecting lines.
- Additional medical equipment with connecting bolts for equipotential bonding are to be connected with the green-yellow cable to the optional equipotential bonding connecting bolts!



Caution: The overall rating given on the nameplate must not be exceeded. Please observe that no further multiple sockets must be connected to an existing multiple socket.

#### Load capacity:

- The total weight of the equipment and the accessories on the mobile equipment carrier may not exceed the permitted payload weight (see load capacity sticker on the base frame).
- The surface load imprinted on the system components may not be exceeded!
- The load shown on the fittings (e.g. infusion stand, jointed arms) may not be exceeded!



Caution: Please note that, in accordance with the standard, the overall dimensions of the equipment cart, including all devices and systems, must be specified on a label that is attached to the equipment cart. We would be pleased to provide you with any support in creating this label.

#### Infection protection:

- Hygiene regulations are to be observed when cleaning!
- Give only cleaned and disinfected equipment and fittings to a service technician for maintenance and repair work!

#### Environmental protection:

- Dispose of all cleaning and disinfection agent residue in a manner not harmful to the environment!

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## 2. ASSEMBLY

### 2.1. COMPLETENESS

Begin by unpacking the equipment cart and use the enclosed delivery note to check that all parts ordered are included.

### 2.2. LOADING

Place the equipment cart on a level, horizontal surface. Place the appliances in the cart taking into consideration the loading sequences. Loading and assembly may only be effected if the cart is separated from current. We recommend the optional accessory (e. g. tension belt) to be applied for the safety of each appliance. The maximum loading is specified in section 10. If the tilt stability is not adequate, the cart must be clearly labelled in conformity with the 5° labelling specification.

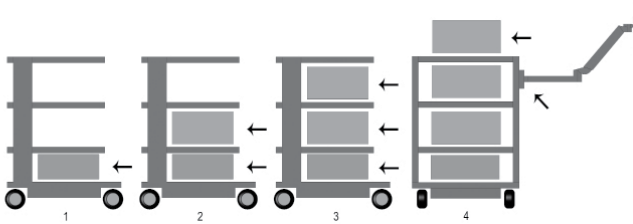


### 2.3. LOADING SEQUENCE

Take the appropriate measures to ensure that all equipment is stored securely on the equipment cart to avoid any items moving, tipping, falling, or being otherwise displaced (also whilst the cart is moving). We would advise that any heavy items are secured on the equipment cart by two people. You should take into account the fact that the centre of gravity changes with the loading.

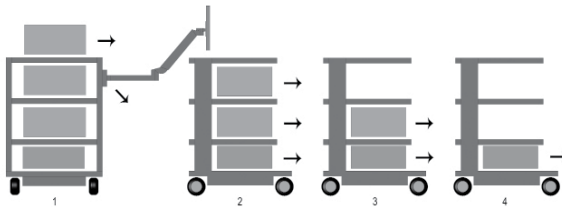
The cart should be loaded in the following sequence:

- shelves and drawers from the bottom to top
- support arm system should be burdened last



The cart should be unloaded in the following sequence:

- support arm system should be relieved first
- shelves and drawers should be unloaded from top to bottom



For transportation please refer to section 4 of this manual.

### 2.4. RISK OF MECHANICAL INSTABILITY

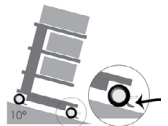
The overall system must be in accordance with IEC 60601-1.

### 2.5. CASTORS

The equipment cart includes twin castors and brakes.

Before using the equipment cart, please ensure that the brakes are working. When parking the cart or stopping during transport, all roller brakes on the equipment cart must be pressed (roller locking device). Accordingly, all roller brakes must be released before moving and transport.

The castor must be tested every 12 months for safety as well as the crackproof, firm hub of the castor attachment pin. If these should be lost, please contact your supplier immediately.



### 2.6. LOAD CAPACITY

You must not exceed the load capacity of the equipment cart. Please note the maximum load capacity of the equipment cart (see point 10).



## 2.7. ASSEMBLY / HANDLING

### 2.7.1 Shelves

Shelves can be removed or installed in another position. Loosen the screws, re-position the shelf and then screw the shelf tightly in position again. Check the safety-earth resistance.

### 2.7.2 Drawers

The drawers can be lifted out in the extended position. A label strip can be affixed to the front trim. Insert drawer during transport.

### 2.7.3 The isolating transformer

Follow the instruction manual for the isolating transformer. The isolating transformer is mounted in a housing under the base of the basic frame. This is assembled at the factory. The isolating transformer can be delivered separately, too.

## 2.8. ADDITIONAL MOUNTING OF SYSTEM COMPONENTS

Retrospective installation of Ackermann Instrumente system components must only be carried out by specialists in accordance with the specifications of the installation instructions supplied. The modified overall system must be rechecked in accordance with the IEC 60601-1.

## 3. ELECTRICAL SAFETY

### 3.1. POSITIONING OF THE ELECTRICAL EQUIPMENT

Please note that electrical devices on the equipment cart should not be wet. Under no condition should you position the products, which may lead to loss of their fluidness, over the electrical equipment or extension lead in which fluidity may be permeate.



### 3.2. POWER COLUMN SUPPORT COLUMN

Plug socket strips or the cabling system can be found in the left or right power column on the cart.

Power columns are located on the left and right behind the vertical extrusion and permit optimum accommodation of the power equipment cables available. Under no circumstances should you drill any holes into power columns, support columns or media columns, as these may contain live power cables.



### 3.3. GASES

Electrical equipment should not be operated in the vicinity of gases, e.g. flammable gas used in anaesthesia or similar gases. The user is responsible for maintaining this requirement and for compliance with IEC 60601-1-2 standard.

### 3.4. EQUIPOTENTIAL BONDING (POAG)

Potential equalisation is needed for equipment carts with an isolating transformer. For this purpose, begin by connecting the POAG cable to the base frame of the equipment cart and then to the POAG plug in the room. Next, connect the POAG supply cables to the POAG pins of the multiple sockets and the appliance.



### 3.5. ISOLATING TRANSFORMER – LEAKAGE CURRENT

The purpose of the equipment cart is to provide a practical mobile workstation for electromedical equipment. Total earth leakage currents must not exceed a maximum value of 0.5 mA so that the entire medical electrical system can be compliant with IEC 60601-1. If the sum of the ground leakage currents would exceed the tolerance range, the system must be supplied through a safety transformer.

If there is no isolating transformer, the multiple socket/auxiliary socket system on the equipment cart must not be used for connecting equipment, which does not correspond to leakage current requirements in accordance with IEC 60601-1.

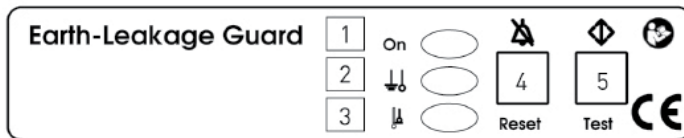
If an isolating transformer is mounted, the total power uptake of all the connected units must remain within the rated value for the isolating transformer.

### 3.6. EARTH-LEAKAGE-GUARD (ELG)

The following descriptions are only applicable for the carrier systems in which the item "isolating transformer with insulating monitor" is installed.

#### 3.6.1 Control panel of the earth-leakage-guard (ELG)

For equipment with an integrated installation monitoring unit, the analysis electronics are integrated in the transformer housing, the operating and display panel is in one of the shelf floors. Both components are connected to each other by means of an interface cable located in the vertical profile.



Control panel of the earth-leakage-guard (optional):

- 1 Power on control (green)
- 2 Signals exceeding dielectric resistance (yellow)
- 3 Signals exceeding temperature (yellow)
- 4 Reset-button for fault release
- 5 Test-button starting self-test function manually

#### 3.6.2 Application requirements

The earth-leakage-guard monitors the dielectric resistance for equipment (where safety isolation is necessary) which are connected to the isolation transformers. Simultaneously, the temperature of the transformer is evaluated by a built-in thermal switch which responds when triggered. The evaluation procedure is processor controlled.

#### 3.6.3 Application requirements

Turn the main power switch of the isolating transformer to "ON". Within 5 s the self-test of the ELG is automatically activated. After the self-test of the ELG is concluded, the green LED (Power on control) glows permanently. During operation this test is repeated (automatically) in a time cycle of 8 hours. This self-test may also be activated manually through the test-button.

The control procedure for the manual self-test is as follows:

- An insulation error is simulated, the yellow LED (signals exceeding dielectric resistance) glows, a warn signal (2.4 kHz) is activated. Both signals stop after approx. 5 s.
- Following this, a temperature error is simulated. The yellow LED (signals exceeding temperature) glows, a warn signal (2.4 kHz pulse tone) is activated. Both signals stop after approx. 5 s.

An error situation is recognized as follows:

- In case of an insulation error, the yellow LED (signals exceeding dielectric resistance) glows permanently, the warn signal with 2.4 kHz is activated permanently. The warn signal can be deactivated through the reset-button for fault release. The LED glows until the error is eliminated.
- If the earth-leakage-guard is turned "OFF" in the meantime and the error is not eliminated, when turning the ELG back "ON" the above described procedure begins anew.

With the occurrence of an isolation error the acoustic and optical alarm stays activated (even if the isolation error is corrected on its own) until deactivated through the fault release:

First activation of the fault release: acoustic alarm is deactivated

Second activation of the fault release: optical alarm is deactivated

- In case of a temperature error, the yellow LED (signals exceeding temperature) glows permanently and the warn signal with 2.4 kHz is activated intermittent. The warn signal can be deactivated through the reset-button for fault release. The LED glows until the error is eliminated. If the earth-leakage-guard is turned "OFF" in the meantime and the error is not eliminated, when turning the earth-leakage guard back ON the above described procedure begins anew.
- Should an insulation error and a temperature error occur simultaneously, the dielectric resistance fault has priority (acoustic).

#### Self test for the Earth-Leakage Guard

In addition to the manual self-test, during operation the earth-leakage-guard repeats the self-test in a time cycle of 8 hours and each time the unit is turned "ON".

From outside, you will not notice the self-test, the time period for this process is approx. 5 seconds. In case of fault, the green LED (power on control) blinks in a frequency of 0.5 Hz and with the same frequency an acoustic alarm is activated. The fault signal can not be deactivated through the reset-button.

### **3.6.4 Trouble shooting**

Do not attempt to repair on your own. Warranty will be invalid if unauthorized repair has been carried out. Due to safety reasons repair and maintenance may only be done by the manufacturer.

#### Please note:

For further technical data and information, please refer to the separate and comprehensive instructions for use, enclosed with the product, isolating transformer and insulating monitor.

## **3.7. CABLE CONNECTION**

Anyone operating the equipment cart or integral isolating transformers must ensure that there is only a detachable connection with the tool for the cable connection between the multi-socket outlets on the cart and the equipment. Our line of accessories includes a selection of covers for multiple power outlet strips.

## **3.8. COMBINATION OF EQUIPMENT**

The following should be observed for combination of equipment on the cart system:

- Auxiliary equipment connected to analogue and digital interfaces of the equipment must be certified in compliance with the relevant EN specifications (e. g. IEC 60950 for data-processing equipment and IEC 60601-1 for medical electrical equipment).
- Furthermore, all configurations must comply with the valid version of the standard IEC 60601-1. Anyone connecting additional equipment to the signal input or signal output is a system configurer and is therefore responsible for ensuring compliance with the valid version of the standard IEC 60601-1.

If you have any questions, you should contact your local dealer or technical services.

#### Please note:

Make sure that this is also the case for adaptation of equipment in the power supply circuit (e. g. multiple socket strip).

## **3.9. EMC**

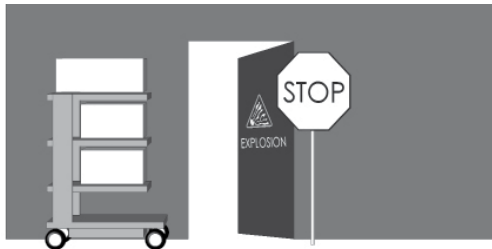
Electromagnetic compatibility of the medical electrical equipment positioned on the cart has to be checked. If you use a different equipment combination, you should check electromagnetic compatibility between individual items of equipment before using in a medical setting.



Trolleys used within the nuclear spin environment must be tested by the customer for suitability for use due to the ferromagnetic materials they contain. Ackermann Instrumente GmbH excludes any liability in this respect.



Using the carrier system with an isolating transformer within an environment subject to explosive hazard is not permissible.



### 3.10. EXCLUDED FROM THE FINAL ELECTRICAL INSPECTION OF SYSTEM COMPONENTS AND ACCESSORIES

Ackermann Instrumente GmbH exclude the following system components and accessories from the final electrical inspection:

- Multiple socket strips without additional protective conductors that are not wired in the mounting
- ME cables and appliance cables included
- POAG plates and cables included
- Non-electrified equipment carts and support systems
- Height adjustments and attachment parts to height adjustments
- Handles, mouse pads, drawers, drawer bodies and attachments (bottle mounting brackets, baskets, camera mounting brackets, infusion tripods, ...)
- Isolation transformers, which are not mounted but instead leave the Ackermann Instrumente as a single part.
- **Keyboard extensions and extendable shelves**
- Computer mounts at the top and bottom
- Conductive castors
- Support arms installed and monitor mounting brackets
- Secondary power circuit with insulation monitors are only excluded from the dielectric strength inspection!

### 3.11. MINIMUM SAFETY

Ackermann Instrumente GmbH is not aware of any item of equipment or accessory that reduces the minimum safety of the system. Only equipment not presenting a hazard may be used. If necessary, this should be clarified by means of a risk analysis (ISO 14971).

## 4. TRANSPORTATION

### 4.1. SAFE TRANSPORTATION ON CASTORS

Please ensure that before the mobile use of the equipment cart:

- All equipment / products in transit are secured against detachment.
- All swivel arms must be swivelled in and secured.
- The feeder from the local outlet must be disconnected.
- The brakes of the castors are released.

When moving the equipment cart over a threshold, the maximum speed must be 0.8 m/h +/- 0.1 m/h. The velocity is significantly reduced when knocked down by bedplates, cables as well as hoses. It is safer to deliver by driving on ramps having a max. gradient of 10° so that the equipment cart can be brought to a standstill at any time.

Although all precautionary measures have been observed to guarantee maximum stability for this product, it is important to pay attention to unevenness in floors, lift door frames, cables, etc. in order to prevent accidents.

Fundamentally, the requirements of the IEC 60601-1 apply.

### 4.2. SAFE TRANSPORTATION BY CARRYING

Handles are not provided for lifting the mobile equipment carts, but exclusively have a function for pushing. Lifting and carrying the mobile device carrier must only be carried out by two persons using the extensions of the base.

Fundamentally, the requirements of the IEC 60601-1 apply.

## 5. MECHANICAL AND ELECTRICAL HEIGHT ADJUSTEMENT

Specific safety regulations must be observed for the „mechanical height adjustment“ using the „gas pressure“, as well as for the electro-mechanical height adjustment using „Linear drive“, in accordance with IEC 60601-1 „Mechanical Risk in Conjunction with Moving Parts“.

Hereby:

- Take into consideration and adhere to the permitted distance between moving parts, in accordance with IEC 60601-1 in Table 20 (ISO 13857:2008).
- Products with height adjustment are manufactured and supplied ex works conforming to the standard, under consideration of the permitted safety distances. Due to the equipping of or replacement with ME devices and / or component, these distances change. This can result in a mechanical risk. The respective person who configures the system is responsible for adhering to the minimum distances required.
- The overall weight of the devices and accessories installed must not exceed the specified maximum overall payload of the height adjustment. Overloading results in damage to the height adjustment and loss of the warranty.
- Stored energy is released with the mechanical height adjustment using gas pressure. Thereby, for unloaded systems sudden, unbraked activation of the height adjustment can result in injuries and damage.
  - o In order to prevent injuries and damage, before installation and removal of the devices, place the height adjustment at the uppermost position („energy-free“).
  - o The height adjustable supporting arm system „15-1741-200“ must also be fixed and secured at the uppermost position („energy-free“) with the aid of the clamping lever (refer to the separate user instructions for the „15-1741-200“, as well as the risk notes on the supporting arm system).
- Unintended activation of the electro-mechanical height adjustment using the manual button can also result in injuries and damage.
  - o In order to prevent injuries and damage, before installation and removal of the devices, disconnect the height adjustment from the power supply.
  - o Servicing and maintenance tasks in the „interior area“ of the height adjustment, i.e. in the covered area within the supporting column not accessible from outside, must only be carried out by specialists.



- o **Caution:** If operating the height adjustment using a remote control, make sure that no persons are in the hazard area.

## 6. SUPPORT ARMS

### 6.1. WIRING

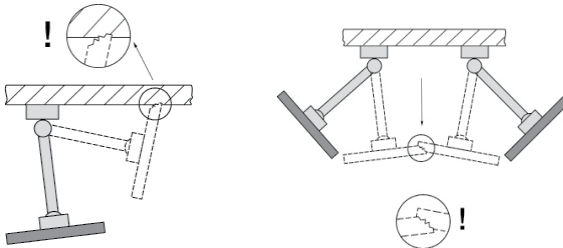
Please observe the following instructions:

- So that there is no damage to the cable or failure of the device when swivelling, the cable must be sufficiently dimensioned.
- Possible sagging cables must under no circumstances be used as a handle.
- Please make sure that the enclosed assembly material is correctly applied, in accordance with the assembly instructions.
- When swivelling the arms, pay attention to possible cable loops present.

### 6.2. HORIZONTAL SWIVEL

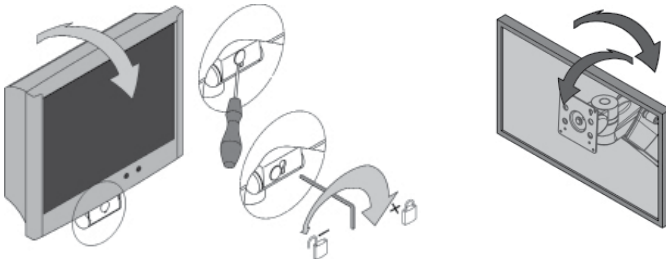
Make sure that the swivel range of the system components matches the dimensions of the equipment and the ambient conditions in the working environment.

When system components and attached equipment are swivelled horizontally, they must not collide with other equipment, with other system components or with the wall. Any collision may result in damage to equipment and injuries to persons.



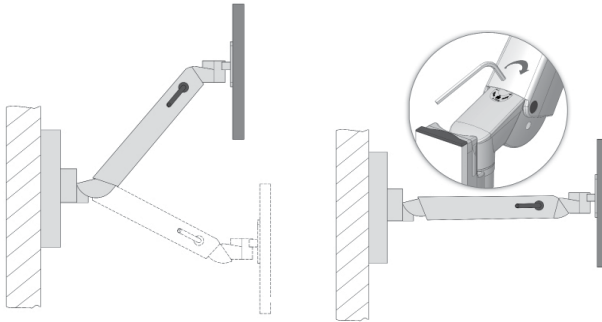
### 6.3. TILTING/ ROTATING EQUIPMENT

If system components are tiltable or rotatable, it is important to ascertain whether the clamping force is appropriate for the unit being fixed in place. If the force applied is incorrectly adjusted, the equipment is at risk of tilting over. Adjustment must therefore be carried out to ensure that the unit can be slightly tilted or rotated, while the unit remains stable in any desired position.



#### 6.4. VARIABLE HEIGHT SUPPORT ARM (15-1741-200)

When loading the system components that can be height adjusted, unconditionally observe the minimum and maximum permitted total weight. Also, due to safety reasons, please make sure that the space below the height-adjustable support arm remains clear. In order to be able to set the support arm to the load, it must be placed into the horizontal position.



#### 6.5. DISMANTLING AND REPOSITIONING SYSTEM COMPONENTS AND ACCESSORIES

When system components and accessories are dismantled or repositioned, it is important to remove any units mounted on these elements before any changes are made. If this concerns the disassembly / assembly of the height-adjustable support arms 15-1741-200, these must first be placed in the uppermost position and the clamping (brake) must be determined (refer to decal).

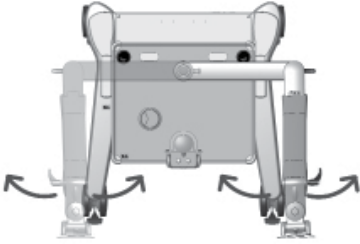
#### 6.6. INTENDED USE WHEN MANOEUVRING THE MOBILE EQUIPMENT CARTS

When manoeuvring the mobile equipment carts it is imperative to make sure that the support arms attached (swivelling, height adjustable) are placed into the respective park position and, as necessary, locked. Otherwise, the stability cannot be guaranteed (refer to Point 2.4).

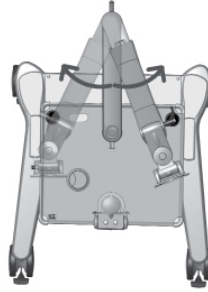
#### 6.7. OPERATING SUPPORT ARM SYSTEM (15-1741-200 WITH SWIVEL ARM) ON THE MONITOR BASE

When operating the height-adjustable support systems (15-1741-200 with swivel arm) on the monitor base, you must always ensure that the swivel arm responsible for moving from side to side is always parallel to the front of the cart (locked position). Thereby, please observe that only two operating positions of the support arm (right / left) are permitted (refer to „Operating position“ in Chapter „1.2 General symbol explanation“).

By a changeover of the operating position from left to right, or vice versa, the locking elements must be pushed downwards and the height adjustable support arm swivelled to the other side. Hereby, for 15-1741-200 with swivelling arm make sure that it is folded when changing over. Otherwise, the tilting stability cannot be guaranteed (refer to Point 2.4).



Working position right/left  
Swivel arm locked  
15-1741-200 can be moved freely



Switching sides  
Swivel arm can be moved freely  
15-1741-200 fixed

### 6.8. OPERATING SUPPORT ARM SYSTEM ON THE MEDIA COLUMN

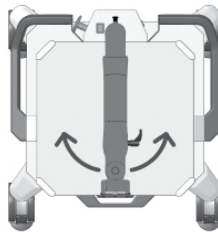
In their locked position, the height-adjustable support system (15-1741-200) is parallel to the front of the equipment cart. To move the 15-1741-200 when moving from side to side, you need to unbolt the locking bolts.

Whilst the height-adjustable support arm system is in use (15-1741-200 with swivel arm) on the media column, the swivel arm should preferably be in the locked position. When locked, the swivel arm is parallel to the front of the court. To move the swivel arm when moving from side to side, you need to unbolt the locking bolts. When doing this, you must ensure that the 15-1741-200 with swivel arm is collapsed and secured with the lever. Otherwise, the safety of the stand cannot be guaranteed (see point 2.4).

#### 15-1741-200 without swivel arm



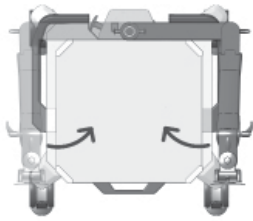
Transporting position  
15-1741-200 locked



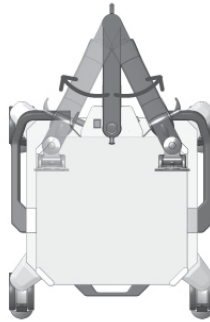
Working position  
15-1741-200 can be moved freely



## 15-1741-200 with swivel arm



Transporting position left/right  
Swivel arm fixed,  
15-1741-200 can be moved freely



Switching sides  
Swivel arm can be moved freely  
15-1741-200 fixed

## 7. MISCELLANEOUS

### 7.1. CLEANING AND DISINFECTION

**Caution:** Disconnect from power before cleaning and disinfection!

The equipment carts may be cleaned with standard all-purpose cleaners (neutral cleaners).

For disinfecting, commercial disinfectants approved for disinfecting surfaces or wipe disinfection can be used. The disinfection agents must be used solely as disinfection for wiping, in accordance with the manufacturer's specification.

For example, Ackermann Instrumente have carried out tests using the following disinfectants:

Product	Manufacturer
Bacillool plus	Bode
Cleanisept Wipes	Dr. Schumacher
Mikrobac Tissues	Bode
Mikrozid Sensitive Wipes	Schülke
Terralin Protect	Schülke
Incidin PLUS	Ecolab
Incidin Foam	Ecolab

If complete disinfection is required, assemblies can be disassembled by a specialist and wipe disinfected when disassembled.

### 7.2. SERVICE / REPAIR

The cart should be always be cleaned and disinfected with a suitable cleaning agent before any service operations are undertaken, and before the cart is returned for purposes of repair. Repairs to the cart should only be effected by professional personnel. We recommend consulting Ackermann Instrumente GmbH on all matters relating to service activities.



### 7.3. ENVIRONMENTAL CONDITIONS

The equipment carts are designed for normal use in hospital and general practice operations.

#### Operation:

Ambient temperature:	10° C to 40° C
Air humidity:	30 % to 75 %
Air pressure:	700 hPa to 1060 hPa
Protection class:	IP20

#### Transport/storage:

Ambient temperature:	-25°C to 70°C
Air humidity:	10% to 95%
Air pressure:	500 hPa to 1200 hPa

### 7.4. DISPOSAL

Separate Collection for Electrical and Electronic Equipment in compliance with Waste Electrical and Electronic Equipment Directive WEEE (registration number for Germany: DE35464575). All electrical and electronic equipment provided with systems released after 13 August 2005 is marked with a Separate Collection for Electrical and Electronic Equipment symbol, indicating that this equipment must undergo separate collection for disposal, in countries where EU directive 2002/96/EC is in effect.



### 7.5. SPARE PARTS

Only spare parts authorized by Ackermann Instrumente may be used. A sticker with an order number is attached to the base of your cart. All order numbers and the associated spare parts are archived at Ackermann Instrumente GmbH. Spare parts may be obtained from Ackermann Instrumente GmbH.

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### 8. ACCESSORIES

A comprehensive range of accessories is provided in our catalogue or under [www.ackermannsurgical.com](http://www.ackermannsurgical.com).

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### 9. MAINTENANCE

The equipment carts have been developed and built for many years of trouble-free use. Check the functional capability of the following parts every 12 months in order to guarantee safety.

#### Monitor shelf:

- Swivels and tilts easily without too much play.

#### Shelves:

- Check whether the mounting screws have been tightened and whether the shelf is stable and flat.

#### Castors:

- Check that the castors run freely and the brakes operate correctly.
- Check that the 4 bolts holding the castors to the bottom side of the base and the castors themselves are seated firmly in their holders.
- The running surfaces of castors must be free from contamination, so that they can function correctly.

#### Socket strips:

- Check the main cable for damage and firm seating.

Auxiliary sockets:

- Check the cable for damage and firm seating.

Variable height support arm:

- The height adjustment functions freely, the raising force is adjusted to the weight of the device.

Support arm:

- Rotating and tilting functions smoothly, without excess play.

Isolating transformer:

- Safety-relevant checks of isolating transformers.

Serial number:

- Compare the serial number of the cart with the data of the equipment log book.

Fuses:

- Check whether the correct fuses have been installed.

If you encounter any problems during these checks you should contact your supplier immediately.

## 10. TECHNICAL DATA

### 10.1. LOAD CAPACITY 15-1740 (ECO TROLLEY)

Basic frame, total payload	150 kg / 330 lbs
Shelf	50 kg / 110 lbs
Drawer unit	3 kg / 6.6 lbs
Monitor shelf	max. 35 kg / 77 lbs (depends on model)
Mouse pad	3 kg / 6.6 lbs

### 10.2. LOAD CAPACITY 15-1741 (PREMIUM TROLLEY)

Basic frame, total payload	150 kg / 330 lbs
Shelf	50 kg / 110 lbs (pull-out: 20 kg / 44 lbs)
Drawer unit	3 kg / 6.6 lbs
Monitor shelf	max. 35 kg / 77 lbs (depends on model)
Mouse pad	3 kg / 6.6 lbs

### 10.3. LOAD CAPACITY 15-1741-200 (VARIABLE HEIGHT SUPPORT ARM)

15-1741-200	3-10 kg / 6.6-22 lbs
Tilt and swivel unit	up to 14 kg / 30.8 lbs
Post ("Down-Post")	10 kg / 22 lbs
Mouse pad	3 kg / 6.6 lbs

**11. APPENDIX**

These instructions for use are valid for the following products:

• **Eco Equipment Trolley #15-1740**

↳ Compatible Accessories for 15-1740:

- Holder for 3 L / 5 L / 10 L gas bottles (max. Ø 145 mm / 20 kg) #15-1741-100
- Adjustable monitor holding arm (VESA 75 / 100, max. 10 kg) #15-1741-200
- **8-plug socket strip with mount and power cord (5 m)** #15-1741-300
- Camera head holder, C-mount #15-1741-400
- Adjustable arm, tubing clamps (900 mm swing range, max. 1 kg) #15-1741-500
- Adjustable infusion stand (max. 4 x 2 kg, 870 mm) #15-1741-600
- Storage basket, (max. 3 kg, 305 x 205 x 150 mm) #15-1741-700
- **Isolating transformer (1000VA)** #15-1740-992

• **Premium Equipment Trolley #15-1741**

↳ Compatible Accessories for 15-1741:

- Holder for 3 L / 5 L / 10 L gas bottles (max. Ø 145 mm / 20 kg) #15-1741-100
- Adjustable monitor holding arm (VESA 75 / 100, max. 10 kg) #15-1741-200
- 8-plug socket strip with mount and power cord (5 m) #15-1741-300
- Camera head holder, C-mount #15-1741-400
- Adjustable arm, tubing clamps (900 mm swing range, max. 1 kg) #15-1741-500
- Adjustable infusion stand (max. 4 x 2 kg, 870 mm) #15-1741-600
- Storage basket, (max. 3 kg, 305 x 205 x 150 mm) #15-1741-700

**12. CONTACT DETAILS**

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**User\_Manual-15-1740\_15-1741-Revision\_06/22**

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