

# INSTRUCTION FOR USE AND MAINTENANCE

LIFTING  
TABLES



# **Instructions for use and maintenance**

**In compliance with European Directives**

**CE**

The manufacturer assumes no responsibility for any modifications or technical changes in content or data contained in this user guide. This user guide applies to all equipment supplied by Gastro Production Ltd.

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# 1. Introduction

## 1.1 Orientation in the user guide

- This user guide has been designed so that the users can easily and quickly find the information necessary to manage the operation and maintenance of cooling equipment.
- The users should read the entire user guide with utmost attention and make sure they have perfectly understood all information contained in it.
- The user guide also serves for subsequent reference when needed. For this reason this user guide must be always available to the person operating the equipment.
- Searching this user guide is facilitated by the general table of contents, which allows immediately finding a specific location, and also by table of contents at the head of each section.
- In addition, next to some paragraphs, there are signs inserted to emphasize the importance of the information contained in those paragraphs, **which should be read with special attention.**

## 1.2 Explanation of symbols used in the user guide



**Warning - Danger of electrical injury** - refers to parts, where there is a danger of electrical injury. Read especially carefully.



**Warning - Rotating parts** - refers to parts, where there is a danger from rotating parts.



**Warning – Risk of injury** - refers to parts, where there is a risk of injury while touching the equipment in operation. Read especially carefully.



**Warning - Important** - refers to parts, where danger might occur, or to parts otherwise important. Read especially carefully.



**Do not wash with pressurized water** – it is forbidden to wash a part so indicated with pressurized water for risk of damaging the equipment.



**Forbidden handling procedures** – refers to parts, where there is a risk of damaging the equipment by handling it in a forbidden way.

## **2. Common Provisions**

### **2.1 Transport and Unpacking**

#### **2.1.1 Transport**

The client is obliged to check for the completeness and integrity of the packaging in which the equipment is transported, and seek compensation for potential damages caused during transport from the carrier in question. The equipment should be, if possible, transported onto the location designated for its operation in its original packaging.

#### **2.1.2 Unpacking**

After transporting the equipment on the location designated for its operation, remove all packaging.



Next remove all protective wrappings from outside and inside of the equipment. The consumer is obliged to dispose of all packaging in accordance with regulations valid in their respective countries!

### **2.2 Testing, Warranty Conditions**

#### **2.2.1 Testing**

All equipment is factory tested in accordance with applicable laws, technical standards and government regulations. For all equipment, a test report documenting the tests performed is drawn up and kept at the factory. The equipment is sent to the customer completely ready for use. An exception is equipment placed in a more complex dispensing lines and assembled on-site.

## 2.2.2 Warranty



Thank you for using our products. Our company will adhere to the relevant provisions of our "Terms and Conditions" and provide you with appropriate services upon submission of the invoice. **We offer a 12-month warranty from the date of purchase (invoice issue date).**

**During the warranty period, our company is responsible for free replacement parts and related services if there is a device malfunction or quality issue during proper operation.**



**The free services do not cover the following damages:**

- Failure to provide an invoice or alteration of invoice details.
- Damage caused during transportation (it is necessary to inspect the condition of the goods upon receipt from the carrier), installation, or improper connection and handling.
- Damage to components caused by failure to provide power and voltage according to the specifications in the technical data.
- Damage caused by disassembly of the products, modification, or alteration of mechanical and electrical structures without permission.
- Damage caused by improper operation, cleaning, or maintenance.
- Non-human-caused damages such as damage caused by abnormal voltage, fire, building collapse, lightning, floods, and other natural disasters, as well as damage caused by rats and other pests.
- Failure to follow the operating instructions during use.
- Wearable and consumable parts.





**If the following conditions are not met, the complaint will not be considered:**

**How to proceed with a complaint for the fastest resolution:**

- **Product identification** – by submitting the order, invoice, or inspection label.
- **Description of the defect** – describe as thoroughly as possible why the product is being claimed.
- **Attach photos or video** (used to assess the claim resolution and possibly propose repairs and ensure spare parts needed for the repair).
- **Customer's request** for claim resolution – repair (service) / return, etc.

**Contact person and address where the product is located.**

### **3. Maintenance of stainless steel**

To ensure a beautiful and long-lasting stainless steel table top, it is very important that the user cleans the steel table correctly. Proper cleaning can avoid corrosion (rust) problems and also ensure that protection against corrosion is maintained.

- Any spills should be dried as soon as possible to avoid stains.
- A gentle detergent for daily cleaning, sulfonated water and a soft cloth is recommended. Always rinse with clean water afterwards. The steel tabletop is rubbed dry with a cloth, this prevents lime stains on the steel from dried water.
- A suitable steel cleaner is recommended for thorough cleaning. Lime scale can be removed using a cream cleaning powder and a soft cloth. Be careful when scrubbing in the direction of sanding the steel. Make sure the detergent DOES NOT contain chlorides, ammonia, etc.
- Use a nylon sponge to remove scratches in the table top. Remember to scrub in the direction of sanding.
- Can be treated with a treatment spray that provides a protective film.
- When you put hot things on the table top, a stain may form.

- **Never use on a stainless steel surface:**
- **Scouring sponges/scrubbing powder – leave scratches.**
- **Chlorine-containing cleaning product for a longer period of time – can make the steel surface matt.**
- **Scouring sponges in steel wool - steel wool can be deposited in the steel and rust stains can appear.**
- **Table salt – must be rinsed away. This can lead to rust stains on the steel.**
- **Iron-containing objects that are placed in/on the kitchen sink "overnight" can lead to rust stains on the steel.**

## 4. Control box LINAK CO71

The LINAK control box offers a consolidated range of unprecedented features – all utilising standardised technology, interfaces and compatibility. It is equipped with a green LED for indication of mains power connected. When the CO71 is connected to mains, the LED is green. Connected only to battery, the LED is off.

### Power supply

<b>350W power output</b>
<b>100-240 VAC, 50/60Hz</b>
<b>-15% / +10%</b>
<b>Universal, SMPS (Switch Mode Power supply)</b>
<b>Duty cycle – 10% -2/18 min. On/off continuous use</b> <b>Max. Power is 350W for 80 sec. And 175W for 40 sec. at 25°C</b>

### Usage

<b>Operation temperature</b>	+5 °C to +40 °C
<b>Storage temperature</b>	-10 °C to +50 °C
<b>Relative humidity</b>	20% - 80% - non-condensing
<b>Atmospheric pressure</b>	700 to 1060 hPa
<b>Meters above sea level</b>	Max 3000 meters
<b>Duty cycle</b>	10% - 2/18 min on/off continuous use Maximum power is 350 W for 80 seconds and 175 W for 40 seconds at 25 °C
<b>Approvals</b>	- IEC60601-1 edition 3.1 - ANSI/AAMI ES60601-1:2005/(R) 2012 - CSA CAN/CSA-C22.2 NO. 60601-1:14 - PSE Japan

### Connected to MAINS

<b>LED colour</b>	<b>Indication of operation</b>
<b>Green</b>	On mains, not activated by hand or foot control. The system is working ok and is ready for normal operation
<b>Yellow</b>	On mains, not activated by hand or foot control. The system is defective and should not be operated
<b>Yellow</b>	On mains, activated by hand or foot control. The system is working

### Not connected to mains but with BATTERY back-up

<b>LED colour</b>	<b>Indication of operation</b>
<b>Green</b>	On battery, activated by hand or foot control. The system is working
<b>Yellow</b>	On battery, not activated by hand or foot control. or CO71 not connected to mains

## **Acoustic signal functionality**

The buzzer will make a warning, when a button on the hand control is pressed, and the battery state of charge is low. The buzzer can also be activated by the control box to signal other conditions. This must be specified in the control box software.

## **General warnings**

**Failure to comply with these instructions may result in accidents involving serious personal injury:**

- The medical device manufacturer is responsible for the incorporation of a suitable safety arrangement, if the actuator or lifting column is used for pull in an application where personal injury can occur, which will prevent personal injury from occurring in case of actuator failure.
- Note that during construction of applications, in which the actuator is to be fitted, there must be no possibility of personal injury, for example the squeezing of fingers or arms.
- The plastic parts in the system cannot tolerate cutting oil.
- Assure free space for movement of the application in both directions to avoid a blockade.
- The application and actuators are only to be operated by instructed personnel.
- In applications with spline function, the blockage by an obstacle when the application is moving inwards, the removal of the obstacle will cause the load to drop until the spindle hits the nut.
- Do not turn the outer tube.
- Do not use chemicals.
- Inspect the actuator system regularly for damage and wear.
- Do not expose LINAK actuator system components to high intensity ultraviolet radiation disinfection lamps. This may damage the enclosure, supporting parts and cables.
- If faults are observed, the products must be replaced.

- LINAK actuators and electronics are not designed for use within the following fields: *In the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide. Planes and other aircrafts. Explosive environments. Nuclear power generation.*
- A LINAK control box, actuator and accessory component must, in the final application, be placed where it is not exposed to any impact. This is to prevent damage if a passer-by accidentally hits it with an object or when cleaning the floor with a broom or a mop. On a medical bed e.g. this might be underneath the mattress support platform. If necessary to mitigate this risk, additional protection might be required.
- To avoid unintended movement, prevent foreign objects or persons from unintentionally activating a footswitch or a hand control at any time, for instance during normal use or maintenance.
- If there is visible damage on the product it should not be installed.
- If the actuator system makes unusual noise or smells, switch off the mains voltage immediately and disconnect batteries, if applicable.
- The products must only be used in an environment that corresponds to their IP protection class.
- The cleaners and disinfectants must not be highly alkaline or acidic (pH value 6-8). See cleaning section.
- Irrespectively of the load, the duty cycle stated on the product label must NOT be exceeded.
- The control box must only be connected to the voltage stated on the label.
- Systems not specified for pull must only be used in push applications.
- Fastening screws and bolts must be tightened correctly.
- Specifications on the product label must under no circumstances be exceeded.
- NOT TO BE OPENED BY UNAUTHORISED PERSONS.

- Only use the actuator within specified working limits.
- Be aware that during the design of medical devices, the risk of personal injury (for instance squeezing of fingers or arms) must be minimised.
- If irregularities are observed, the actuator must be replaced.
- All cables must be mounted in such a way that they are not trapped or exposed to tension or sharp objects when the application is moved in different directions.

### **General recommendations**

#### **Failing to follow these instructions may result in actuator system damage:**

- The duty cycle printed on the actuator system label must always be respected. If exceeded, there is a risk that the actuator system is damaged. Unless otherwise specified on the label, the duty cycle is max. 10%, max. 2 min. in use followed by 18 min. not in use.
- All detachable connections between components must be locked by the cable locking mechanism - when applicable.
- It is recommended to have options like quick release, manual lowering or similar built into the system in case of power loss or system failure or if movement of the system is critical. After service it is recommended to test the system for correct functionality before it is put back into operation.
- Prior to assembly/disassembly, ensure that the following points are observed: The actuator system is not in operation. The mains current supply is switched off and the plug has been pulled out. Batteries - if applicable - may also power the system. Actuators are free from loads that could be released during this work.
- Prior to operating the actuator system, check the following: Actuator system components are correctly mounted as indicated in the product-specific user instructions. The equipment can be operated in its entire intended range of movement. Ensure that the load-supporting bolts can withstand the wear. Ensure that the load-supporting bolts are secured safely.
- During operation: Listen for unusual sounds and watch out for uneven movement. Stop the actuator system immediately if anything unusual is observed. Do not sideload the actuator. Do not step on or kick any LINAK component.

- When the equipment is not in use: Switch off the mains supply or pull out the plug in order to prevent unintentional operation.
- Cables and plugs: It is important to remove the transport plastic bag before using the cable. When changing the cables on a LINA<sup>K</sup>® actuator system, it is important that this is done carefully in order to protect the plugs and pins. Please ensure that the plug is in the right location and properly inserted before the cable lid is mounted.

## **4.1 Information on start-up, deinstallation and operation**

### **Before installation, deinstallation or troubleshooting**

- Stop the actuator/lifting column.
- Switch off the power supply or pull out the mains plug and pull out the plug to the actuator/lifting column.
- Relieve the actuator/lifting column of any loads, which may be released during the work.

### **Before start-up**

- Make sure that the system has been installed as instructed in the relevant product manual.
- The individual parts (actuator/lifting column/hand controls etc.) must be connected before the control box is connected to the mains.
- Make sure that the mains voltage to be connected to the product or the system is the one stated on the label.
- The equipment can be moved freely over the whole working area of the actuator/lifting column.
- Check correct function after mounting.
- The actuator/lifting column must not be loaded in excess of the values indicated in the specifications on the product label.
- The duty cycle noted on the product label must always be observed. Otherwise there is a risk of product
- damage. Exceeding the duty cycle will result in a dramatic reduction of the system lifetime.

- Unless specified otherwise on the product label, the duty cycle is max. 10%, max. 2 minutes in use followed by 18 minutes not in use.
- The actuator/lifting column system may only be used in an environment corresponding to the IP rating of the system. LINAK products are marked with the actual IP rating on the label.
- If any individual parts are suspected to be damaged, do not install the parts, but return them for inspection/service.

### **During operation**

- Check for unusual sounds and irregular movement. Stop the actuator/lifting column immediately if anything unusual is observed.
- If the control box makes unusual noises or smells, switch off the mains voltage immediately and the external battery, if any.
- Take care that the cables are not damaged.
- Unplug the mains cable on mobile equipment before it is moved.



## 4.2 Cleaning

The products can be cleaned as described in the following according to their IP protection stated on the product label.

The IP code specifies the protection degree provided by the enclosures. For most products, only the protection against ingress of water (second characteristic numeral) is specified, ingress of solid foreign objects or dust (first characteristic numeral) is not specified and therefore replaced by the letter X in the code. To avoid degreasing of the piston rod, the actuator should be retracted to minimum stroke and without load before washing.

<b><i>IP protection</i></b>	<b><i>Cleaning instructions</i></b>
<b>IPX0, IPX1, IPX2, IPX3, IPX4</b>	Clean with a damp cloth
<b>IPX5</b>	Wash with a brush and water, but not water under pressure
<b>IPX6</b>	Wash with a brush and water. The water can be under pressure, but the system must not be cleaned directly with a high pressure cleaner. Max. 20 oC
<b>IPX6 Washable according to IEC 60601-2-52</b>	Clean by the use of wash tunnels according to IEC 60601-2-52
<b>IPX6 Washable DURATM</b>	Clean by the use of wash tunnels according to IEC 60601-2-52, extended washing cycle test

### **Cleaning warnings**

- The systems must not be sprayed directly with a high pressure cleaner.
- Interconnecting cables must remain plugged in during cleaning to prevent water ingress.
- Cleaning with a steam cleaner is not permitted
- UV cleaning is not permitted.

## 4.3 General maintenance

### **If not otherwise stated in the specific product section.**

- LINAK products must be cleaned at regular intervals Frequent inspection for malfunction, mechanical damage, wear and cracks.Worn-out parts must be replaced
- Inspection/maintenance intervals are to be recommended by the medical device manufacturer
- LINAK products are closed units and require no internal maintenance
- LINAK products must be IPX6 Washable and IPX6 Washable DURA when cleaning in wash tunnels
- O-rings: When individual parts are replaced in a LINAK IPX6, IPX6 Washable or IPX6 Washable DURA system, the O-rings must be replaced at the same time on all parts.On all products where replaceable cables or fuses have been dismantled or replaced, the O-ring must be replaced, and the O-rings and the receptacle insert must be greased with an acid-free Vaseline.

### **Maintenance of all LINAK control boxes**

- Electronics must be inspected at attachment points, wires, enclosure, and plugs
- Inspect the connections, cables, enclosure, and plugs, and check for correct functioning
- LINAK electronics are maintenance-free (however, this does not apply to lead acid batteries)

### **4.3.1 Repair and disposal**

Only an authorised LINAK service centre should repair the LINAK actuator systems. Systems to be repaired under warranty must be sent to an authorised LINAK service centre. In order to avoid the risk of malfunction, all actuator repairs must only be carried out by an authorised LINAK Service shop or repairers, as special tools and parts must be used. If a system is opened by unauthorised personnel there is a risk that it may malfunction at a later date. LINAK systems or components may be disposed of, possibly by dividing them into different waste groups for recycling or combustion. We recommend that our product is disassembled as much as possible at the disposal and that you try to recycle it. LINAK systems or components should be disposed of in accordance with the environmental regulations applicable in the respective country.

### **4.3.2 Batteries**

#### **General battery warnings**

- Handle batteries carefully. Do not short circuit the battery.
- Avoid continuous battery discharge when the medical device is not in use, as this may cause lead sulphate formation, which, if left in this state for too long, will irreversibly damage the battery.
- LINAK battery packs may emit flammable gases. Do not expose the battery packs to fire or equipment that emits sparks. Moreover, do not store the battery in a closed environment or incorporate it into a closed structure of an enclosure as this may cause an explosion, fire, equipment damage, or injury.
- Handle tools carefully and do not wear jewellery when handling batteries. A short-circuit of the battery terminals can cause burn injuries, damage or trigger explosions.
- Only connect LINAK batteries to compatible chargers.

- LINAK battery packs contain toxic substances. If the internal battery fluid leaks out and gets onto skin or clothing, make sure it is washed off with clean water. Moreover, if the fluid gets into the eyes, rinse them immediately with clean water and seek medical assistance.
- Do not use or store LINAK battery packs in places where the ambient temperature exceeds 50 °C, such as inside a hot automobile, in direct sunlight, or in front of a stove or a source of intense heat. Doing so can shorten the battery life, lower its performance level, cause the battery to leak fluid, explode, cause fire, or be damaged.

## 5. Actuator LA31

The LA31 is a compact, quiet and powerful actuator designed for a variety of applications in the MEDLINE & CARELINE segment, such as hospital beds, couches and nursing home beds. The standard LA31 actuator features known parts such as piston rod eye with slot, and comes in different variations with e.g. fast motor and hall positioning. The LA31 actuator has exchangeable cables and is ideal in combination with OpenBus control boxes. The Actuator has an ingress protection of IPX6 and is available in version with up to 6000N in push or 4000N in pull.

### Usage:

**Duty cycle:** Max 10% or 2 minutes continuous use followed by 18 minutes not in use

**Cycles:** The LA31 life cycle test has been performed with a stabilised power supply (10% duty cycle) on a 200 mm stroke actuator at max. load for 10,000 cycles (at ambient temperature)

**Ambient temperature** +5°C to +40°C

**Compatibility:** Compatible with LINAK control boxes. Please contact LINAK.

**Approvals:** IEC 60601-1, ANSI/AAMI ES60601-1 and CAN/CSA-22.2 No 60601-1

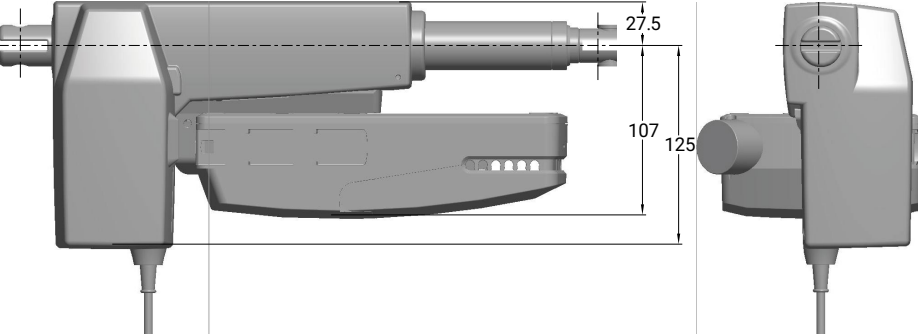
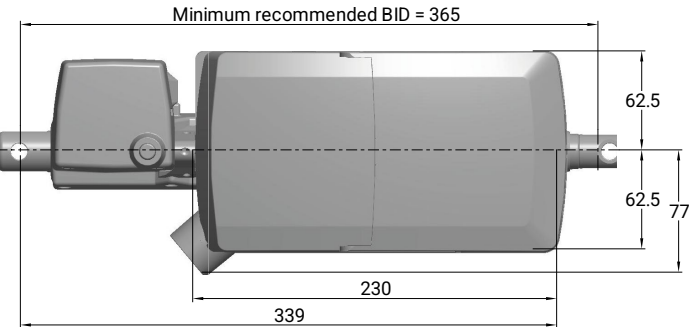
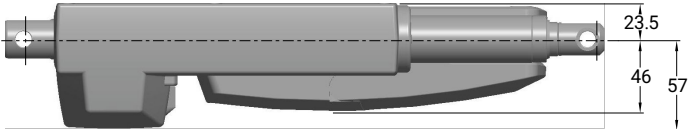
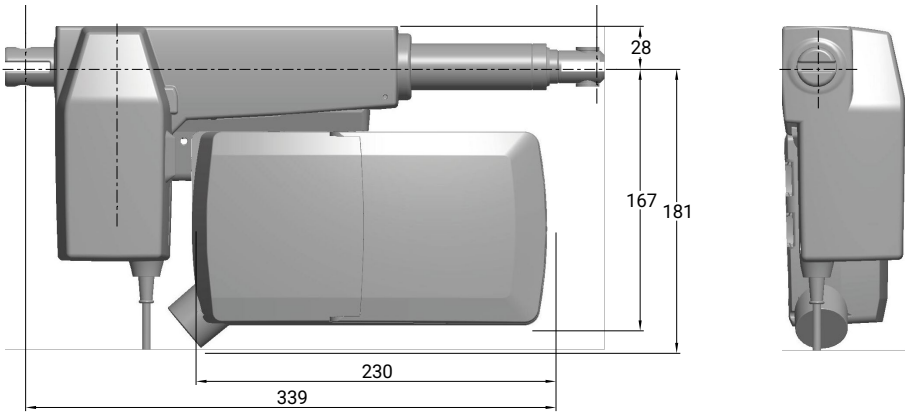
### LA31 Standard

	Stroke (mm)			
	Length ≤ 115	115 < Length ≤ 250	250 < Length ≤ 300	300 < Length ≤ 350
<b>Max. load =</b>	6000 N	6000 N	4000 N	4000 N
<b>Back fixture</b>	BID (minimum)	BID	BID	BID
	Piston rod eyes: 0, 1, 2 and 3			
<b>1/2 and 7/8</b>	288 mm	S + 173 mm	S + 192 mm	S + 212 mm
<b>5/6</b>	288 mm	S + 173 mm	S + 192 mm	S + 212 mm
<b>A/B</b>	291 mm	S + 176 mm	S + 195 mm	S + 215 mm

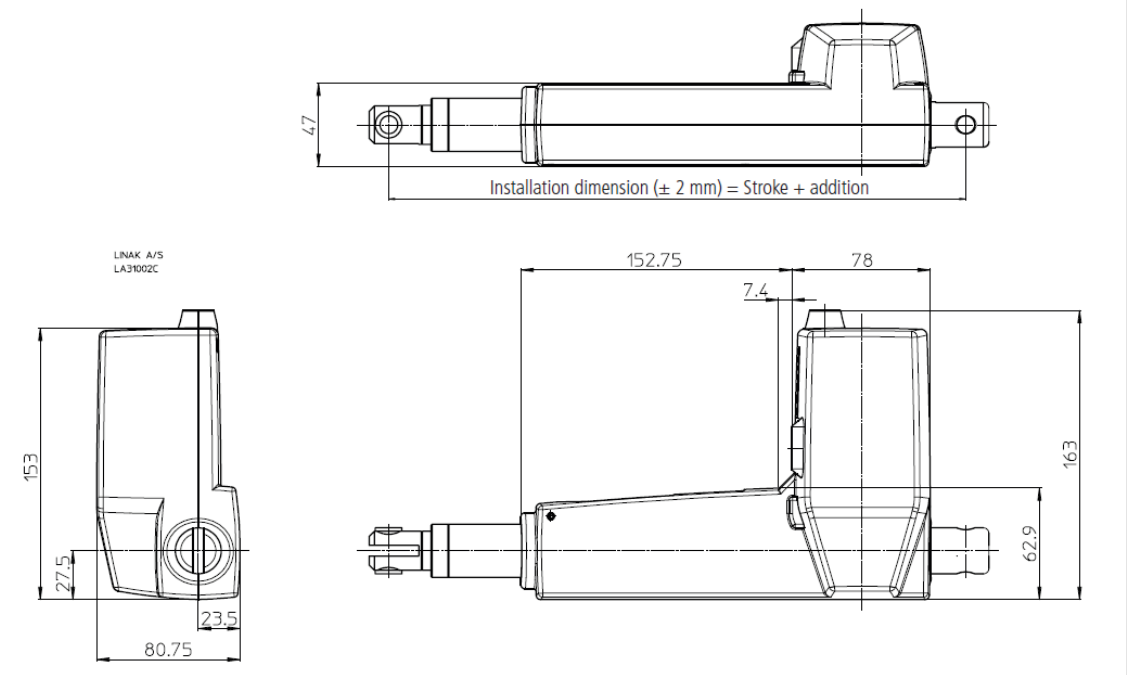
#### Explanation of table:

- Min. installation dimension = 288 mm when the stroke is ≤ 115 mm.
- Min. installation dimension is S + 173 when the stroke length is 115 < Length ≤ 250 and S + 176 with A/B type back fixture.
- Min. installation dimension is S + 192 when the stroke > 250 mm and S + 195 with A/B type back fixture.
- Min. installation dimension is S + 212 when the stroke > 300 mm and S + 215 with A/B type back fixture.
- BID = Built-in dimension

# 6. Dimensions – Control box mounted with Actuator



# 7. Dimensions – Actuator LA31



## **8. Transport, Unpacking and Guarantee conditions**

### **8.1 Transport**

The customer is obliged to inspect the completeness and integrity of the package in which the appliance is transported. Any damage during transport should be addressed with the respective carrier. After delivery, the appliance must be moved to the final place of installation in its original package, if possible.

### **8.2 Unpacking**

When the appliance is transported to the place of installation, remove all packages. Remove all protective films from the outside and inside of the appliance. The consumer is obliged to dispose of all packages in accordance with the applicable regulations in the country of installation!

### **8.3 Guarantee conditions**

**A guarantee is provided on the appliance if the appliance is used for its intended purpose and the operating instructions contained herein are strictly followed. Appliance operators are thoroughly and demonstrably trained and keep these Instructions for Use at hand. The Instructions for Use must be available to the operators at all times!**

### **8.4 Reasons for termination of guarantee**

- **In case of damage during transport, as the products are delivered from the factory and the buyer assumes the risks during transport, the seller is not responsible for missing or damaged parts. The buyer is therefore obliged to inspect and examine the goods upon receipt and to make claims for damages with the transport company.**
- **In case of defects caused by user negligence.**
- **In case of non-compliance with the instructions contained in this technical manual - incorrect operation, maintenance, and cleaning of the equipment.**



- In case of failure to provide the invoice or alteration of the invoice details.
- In case of damage caused by disassembly of the product, modification, or alteration of mechanical and electrical structures without permission.
- In case of damage not caused by humans, such as damage caused by abnormal voltage, fire, building collapse, lightning, floods, and other natural disasters, and damage caused by rats and other pests.

## 9. Correct use of the appliance



- The appliance is designed for normal use by an adult. It is not designed for rough handling and operation by children! Appliance operators must be thoroughly and demonstrably trained and keep these Instructions for Use at hand.
- The appliance must be operated in accordance with the Instructions for Use. The appliance may only be used for its intended purpose.
- Regularly check the appliance and perform maintenance work as per these Instructions for Use.

## 10. Work prohibited on the appliance



- It is prohibited to use the appliance for other than intended purposes!
- It is prohibited to interfere with the electrical connections of the appliance!
- It is prohibited to wash the appliance with pressure water!
- It is prohibited to treat the appliance roughly

# Annex 1 – Technical drawing of lifting table

