

# MANUAL

Document Version 1.0/January 2018



# SLIMdrive-660s



### **Manual SLIMdrive-660s**

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The German language version is the original

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# 1 INTRODUCTION

The product documentation consists of this manual and a data sheet.

This document is intended to enable the assembly personnel to work safely with the SLIMdrive-660s. The assembly personnel must therefore always have the complete documentation available. The document must be complete and in a perfectly legible condition. Follow the instructions in this document to avoid hazards and to prevent damage to the SLIMdrive-660s.

The information in this document has been compiled with great care. We strive to ensure the accuracy and completeness of the content by revising it and updating it regularly, however, no guarantee can be given for its accuracy and completeness.

## 1.1 COPYRIGHT

© January 2018 by LOGICDATA Electronic und Software Entwicklungs GmbH

All rights reserved. All information in this documentation is protected by copyright. No part of this documentation may be copied or reproduced without the written permission of LOGICDATA. LOGICDATA reserves the right to change specifications and other information in this documentation without prior notice.

## 1.2 ROYALTY-FREE USE OF IMAGES AND TEXT

After purchase and full payment of the product, the running texts and graphics in Chapter 2 "Safety of this documentation" may be used free of charge by the customer for a period of 10 years from delivery for the preparation of the end-user documentation for the height-adjustable table in which the SLIMdrive-660s was installed. This license does not include logos, design and page layout elements of LOGICDATA. The customer may make any necessary changes to the texts and graphics in order to adapt them to the purpose of end customer documentation. The texts and graphics may not be changed or sold as they are, and may not be published or sublicensed digitally. Also, a transfer of this license to third parties without permission from LOGICDATA is excluded. Full ownership and copyright to the text and graphics remains with LOGICDATA. Texts and graphics are offered in their current state without warranty or promise of any kind.

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## 1.3 TRADEMARKS

Documentation may include, but is not limited to, the representation of registered trademarks of goods or services, as well as information about copyright or other proprietary expertise of LOGICDATA or third parties. In all cases, all rights remain exclusively with the respective copyright holder.

LOGICDATA® is a registered trademarks of the LOGICDATA Electronic und Software GmbH in the USA, the European Union and other countries.



## 1.4 SYMBOLS AND SIGNAL WORDS USED

<b>DANGER</b>	<b>Imminent threat to the lives of persons</b> A safety notice with the signal word DANGER indicates imminent danger to the life and health of persons!
<b>WARNING</b>	<b>Risk of personal injury (serious injuries) and possibly additional material damage</b> A safety note with the signal word WARNING indicates a dangerous situation which may affect the health of persons!
<b>CAUTION</b>	<b>Danger of material damage and possible additional low risk of injury</b> A safety notice with the signal word CAUTION indicates a possibly dangerous situation, which can lead to material damage!
<b>NOTICE</b>	This symbol with the label Note, indicates supporting information for installation, operation, or service and repair.
	Damage due to electrostatic discharge (ESD)
	Device of protection class III



## 2 SAFETY

### 2.1 GENERAL SAFETY REGULATIONS AND OBLIGATIONS

In general, the following safety regulations and obligations apply when handling the product:

- The SLIMdrive-660s may only be operated in a clean and perfect condition.
- Do not remove, change, bridge or bypass any protection, safety or monitoring equipment.
- Do not convert or modify the SLIMdrive-660s without written approval from LOGICDATA.
- In the event of malfunction or damage, the SLIMdrive-660s must be replaced immediately.
- Repairs are prohibited.
- Hardware replacement is only allowed in a de-energized state.
- Only qualified persons are allowed to work on the SLIMdrive-660s.
- For the operation of the system, the national worker protection conditions and the national safety and accident prevention regulations apply.



### 2.2 RESIDUAL RISKS

Even with maximum care in the design and construction of the component and taking into account all safety-relevant facts, there are still residual risks that can exist and these have been evaluated by means of a risk assessment.

#### **DANGER**

##### **Danger to life due to electrical hazard**

In order to avoid an electrical hazard, please note the following points when handling the SLIMdrive-660s:

- Never open the SLIMdrive-660s linear actuator.
- The SLIMdrive-660s may only be operated with LOGICDATA control units.
- Operate the SLIMdrive-660s with undamaged cable only.
- A damaged cable must be replaced by the manufacturer or the complete SLIMdrive-660s must be replaced.
- During assembly and disassembly, the SLIMdrive-660s must be disconnected from the control unit.
- Do not immerse the cable in liquids and keep it away from heated surfaces.
- The SLIMdrive-660s may only be cleaned with a dry or slightly damp cloth.

#### **CAUTION**

##### **Danger due to exceeding the duty cycle**

The SLIMdrive-660s linear actuator is not designed for continuous operation. A change in the table top position without interruption may not exceed the duty cycle stated on the type plate!

**NOTICE**

Connecting self-made products to SLIMdrive-660s is prohibited. Only controls and accessories that have been approved by LOGICDATA may be used in combination with the SLIMdrive-660s.

**⚠ CAUTION**

**Various dangers due to premature commissioning**  
Do not operate the SLIMdrive-660s before mounting.

**⚠ WARNING**

**Risk of pinching when changing the table top height**  
Make sure that there are no persons or objects (e.g. wall projection) in the danger zone.

**⚠ WARNING**

**Dangers due to improper conversion or modification**  
The SLIMdrive-660s may not be converted or modified.

**⚠ DANGER**

**Risk of explosion**  
The SLIMdrive-660s may not be operated in an explosive atmosphere.

**⚠ WARNING**

**Risk of pinching during start-up of the drive**  
During start-up of the drive, the collision protection (ISP) is not active for 1-2 seconds. The drive moves a bit before it shuts off automatically. Make sure that no persons are in the danger zone.

**⚠ WARNING**

**Risk of pinching during reset operations and at the limit position area**  
The collision protection (ISP) is not active during limit position calibration. Observe that there is a risk of pinching and make sure that no person or objects are in the danger zone.

**⚠ WARNING**

**Various dangers if the lifting capacity is exceeded**  
Do not exceed the static and dynamic load limits of the SLIMdrive-660s (see data sheet).





## **DANGER**

### **Various dangers on the spindle system**

During installation, the SLIMdrive-660s must be clad in such a way that no contact with the spindle system is possible during operation.

## **NOTICE**

The cladding of the SLIMdrive-660s should be constructed in such a way that there is no risk of pinching in the area of the cladding.

## **NOTICE**

When assembling the final product (for example, a table), make sure that the motor cable is routed properly and that there is no risk of tripping or stumbling.

## **DANGER**



### **Danger to life due to electrical hazard**

The SLIMdrive-660s is a Protection Class III device and may therefore only be supplied with safety extra-low voltage (SELV) according to the marking on the type plate.



## 2.3 IMPORTANT NOTES FOR RESELLERS

We deem resellers to be companies that purchase SLIMdrive-660s linear actuators from LOGICDATA and install them in their own products (such as height-adjustable workstations).

## **NOTICE**

For reasons of EU conformity and product safety, we recommend providing users of your products with an operating manual in the respective EU official language.

## **NOTICE**

Be sure to provide your end product with an operating manual that includes all the safety instructions that end users require in order to handle your product safely.

**NOTICE**

The operating manual for your end product must contain the following information:  
Be sure to read the operating instructions before operating the product (height-adjustable workstation). Inform your end users that the operating instructions must always be kept in the immediate vicinity of the product (height-adjustable workstation).

**⚠ DANGER****Various dangers**

Be sure to perform a risk assessment on your product (height-adjustable workstation) so that you can respond to potential residual hazards (for example, by constructive measures or by references in the operating instructions and/or safety instructions on your product).

**NOTICE**

Make sure that no unauthorized persons (such as young children, persons under the influence of medications, etc.) are allowed to handle your product.

## 2.4 QUALIFIED PERSONS

The SLIMdrive-660s may only be installed and commissioned by qualified persons who are authorized for installation planning, installation, commissioning or maintenance/servicing and who have read and understood the SLIMdrive-660s documentation. Qualified persons have the necessary expertise to test, assess and manage electrical and mechatronic products and systems in accordance with the generally accepted standards and guidelines of electrical engineering and furniture manufacturing through their education, work experience and recent professional activity. They know and adhere to the basic regulations on occupational safety and accident prevention and the basic norms and specialist standards applicable to the specific application.

## 2.5 LIABILITY

The products comply with the applicable state of the art health and safety regulations. Nevertheless, dangers can result from incorrect operation or misuse.

LOGICDATA is not liable for damages caused by:

- Improper use of the products
- Disregard of the documentation
- Unauthorized changes to the products
- Improper work on and with the SLIMdrive-660s
- Operation of a product, although it is damaged
- Wear parts
- Improperly performed repairs
- Unauthorized, improper change of operating parameters
- Disasters, external influence and force majeure



Responsible for the LOGICDATA products in the specific application and compliance with the relevant directives, standards and laws is the manufacturer of the height-adjustable tables in which the LOGICDATA products are installed. LOGICDATA shall not be held liable for any damage that is directly or indirectly attributable to the delivery, performance or use of this document.

Each reseller must take into account the relevant safety standards and guidelines for his product in which the SLIMdrive-660s is installed.



## 3 PRODUCT

### 3.1 DESCRIPTION

The SLIMdrive-660s is a spindle drive for electrically height-adjustable tables. This is installed by the customer in a height-adjustable column for electrically height-adjustable tables. It is controlled by a control unit from LOGICDATA, to which various operating elements can be connected. In addition, several drives can be operated synchronously on one control unit.



**Fig. 1: SLIMdrive-660s setup**

1	Attachment point on motor end incl. fastening screws with rubber disks
2	Connection cable
3	Motor
4	Attachment point middle tube with installation variant – thick tube up
5	Attachment point middle tube with installation variant – thick tube down
6	Spindle end attachment point



## 3.2 INTENDED USE

The SLIMdrive-660s linear actuator may only be installed in telescopic tubes for electrically height-adjustable tables and used for this purpose exclusively. The intended use is adjusting the table height electrically. Only control units from LOGICDATA that are parameterized for the SLIMdrive-660s linear actuator may be used for this purpose.

The linear actuators must be assembled, commissioned and functionally checked by qualified personnel. Any other use that does not conform to the intended use will result in the loss of warranty and warranty claims.

The basic function is the upward and downward movement (of a table top). This function can be executed with all hand switches from LOGICDATA.

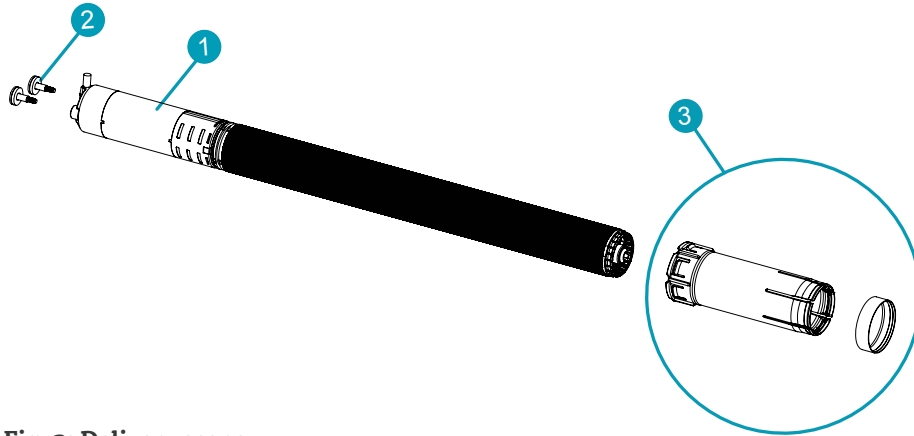


### NOTICE

Permissible drive loads and speeds always refer to the product SLIMdrive-660s and not to the additional load on the table system. The reseller must take additional loads such as e.g. friction forces, the deadweight of the table components and torque loads into consideration. The newly determined permissible load must be specified in the parent documentation of the final product.

## 4 DELIVERY SCOPE

The standard scope of delivery for the SLIMdrive-660s linear actuator consists of the following components:



**Fig. 2: Delivery scope**

### Standard delivery scope:

- |   |   |
|---|---|
| 1 | SLIMdrive-660s linear actuator                                    |
| 2 | Two mounting screws incl. rubber disks (LOG-PRT-SD-MOUNTINGSCREW) |

### Optional for installation variant "thick tube up":

- |   |                                |
|---|--------------------------------|
| 3 | Middle tube adapter and sleeve |
|---|--------------------------------|

## 5 UNPACKING

The SLIMdrive-660s linear actuator is packaged in a carton.



### NOTICE



Ensure proper ESD handling during unpacking. Errors that can be attributed to electrostatic discharge will void warranty claims.

To unpack, proceed as follows:

1. Remove the packaging material from the drive components.
2. Check the contents of the package for completeness and damage.
3. Provide the operating manual to the operating personnel.
4. Dispose of the packaging material.



### NOTICE

Dispose of the packaging material in an environmentally friendly manner (separate the plastic parts and the cardboard by type).

## 6 ASSEMBLY

### 6.1 GENERAL ASSEMBLY

#### NOTICE

Before assembly and operation, the SLIMdrive-660s must be acclimatised to the ambient conditions.

#### NOTICE



Ensure proper ESD handling throughout the installation. Errors that can be attributed to electrostatic discharge will void warranty claims.

#### 6.1.1 DRIVE DIMENSIONS

Figure 3 shows the dimensions of the SLIMdrive-660s linear actuator in the retracted and extended state.



**Fig. 3: Drive dimensions**



## 6.1.2 INSTALLATION OPTIONS

The SLIMdrive-660s is designed for synchronous movement of the middle tube.



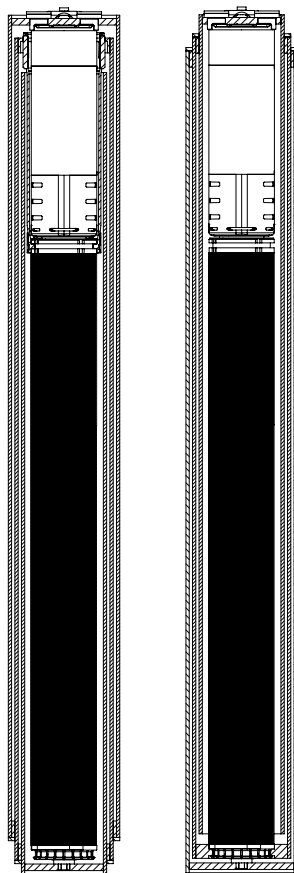
**Fig. 4: Synchronous movement of the middle tube results in the distances  $x$  being the same at all times independently from the current height.**

For this it is necessary to connect the drive with the middle tube of the height-adjustable column. Depending on the type of height-adjustable column design, different installation requirements must be taken into consideration. In this document, the installation variants are characterized as follows, depending on the types of height-adjustable columns:

- “Thick tube up”: In this variant, the tube with the largest diameter is at the top (table top).
- “Thick tube down”: In this variant, the tube with the largest diameter is at the bottom (floor).

The SLIMdrive-660s can be used for both variants. Prerequisite is the order of necessary optional components ([see 4 Delivery scope](#)) for the variant “Thick tube up”.





**Fig. 5: “Thick tube up” and “Thick tube down” in retracted position**

### NOTICE

Regardless of the installation variant, the inner diameter of the inner tube must be selected so that a surrounding air gap of 3 mm between the inner wall of the tube and the SLIMdrive-660s is guaranteed.

### NOTICE

As shown in Figure 5, height-adjustable columns must be designed so that the motor end of the SLIMdrive-660s is always up and the steel spindle the down.

## 6.1.3 INSTALLATION TOLERANCES

### NOTICE

In order to ensure proper functioning, height-adjustable columns must comply with the tolerances specified by LOGICDATA. Otherwise, the warranty claims are void. These tolerances are published by LOGICDATA on request.

## 6.1.4 DEFAULT SETTINGS

### NOTICE

Failure to follow the instructions below may result in damage!

### NOTICE

LOGICDATA recommends measuring the dimensions of the SLIMdrive-660s before assembly with a gauge or other suitable measuring equipment.

### NOTICE

In order to utilize the complete stroke of the drive, a corresponding design of the height-adjustable column is necessary. It is important that the drive reaches the final position before the tube.

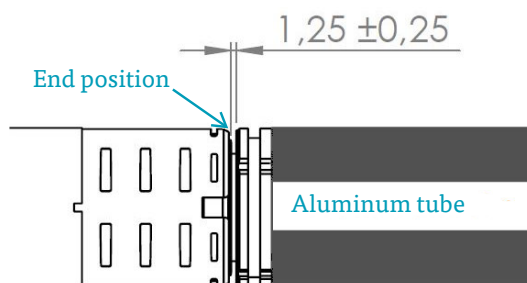
### NOTICE

Deviating spindle settings may only be implemented in consultation with LOGICDATA.

### Setting up the drive

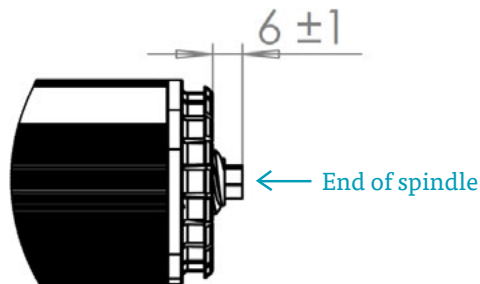
Before assembling the SLIMdrive-660s in a tube system, adjust the position of the spindles as described below.

1. Screw the aluminum tube counterclockwise until it reaches the end position.
2. Then loosen the aluminum tube to reach the target position (distance 1.25 mm to end position, see [Figure 6 below: Adjusting the plastic spindle](#)).



**Fig. 6: Adjusting the plastic spindle**

3. Turn the steel spindle until the target position is reached (distance 6mm to end of spindle, see [figure 7 below: Adjusting the steel spindle](#)).
4. Make sure that the steel spindle does not change this position during assembly.

**Fig. 7: Adjusting the steel spindle**

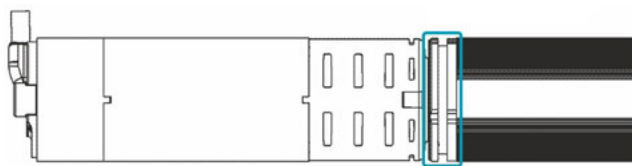
## 6.2 ASSEMBLY “THICK TUBE UP” VARIANT (OPTIONAL)

This chapter explains the installation with installation option “thick tube up” in more detail. If you are using the installation of the “thick tube down” column, skip this chapter and continue with [6.3](#).

### 6.2.1 SETTING UP THE TUBE ADAPTER

With the installation option “thick tube up”, the assembly of the tube adapter is necessary (except with units already preassembled by LOGICDATA). The drive can also optionally be used with a separately supplied tube adapter and sleeve. To install the tube adapter, follow these steps:

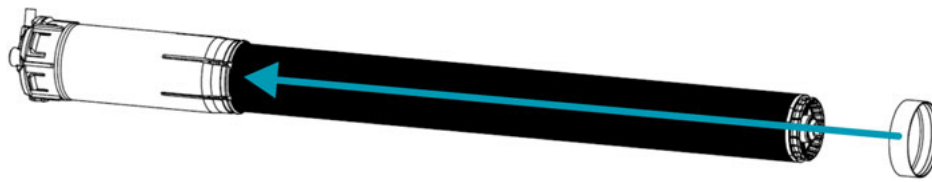
1. Apply grease generously all around the spindle nut of the drive in order to maintain good gliding properties between the tube adapter and the drive. Use the recommended lubricants from the design specifications, which you can obtain from LOGICDATA.

**Fig. 8: Spindle nut**

2. Attach the tube adapter to the nut of the hollow spindle. Ensure that all flaps of the tube adapter on the drive nut are properly snapped into place.

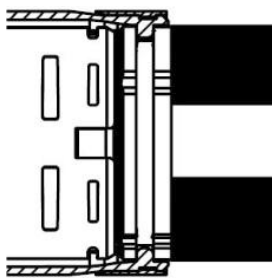
**Fig. 9: Attaching the tube adapter**

3. Fix the tube adapter in place with the help of the sleeve



**Fig. 10: Attaching the sleeve**

4. Check whether the inner ring of the sleeve is properly snapped into place on the nut of the tube adapter. Subsequently test the rotation characteristics of the tube adapter (smooth and quiet).
5. Be mindful of the direction during assembly. The sleeve must snap into place positively (no projection).



**Fig. 11: Sleeve cross-section**

## 6.2.2 ATTACHING THE MIDDLE TUBE

With the installation version “thick tube up”, the assembly of the tube adapter is necessary (see chapter 6.2.1) (except with units already preassembled by LOGICDATA). This tube adapter is intended to connect the drive with the middle tube of the height-adjustable column via a special counterpiece (see Figure 12: Symbolic image of the counterpiece for the tube adapter).



### NOTICE

The design specifications for the customer-provided counterpiece are available from LOGICDATA only on request. These includes dimensions and tolerances as well as notes on material selection and assembly.

### ⚠ CAUTION

#### **Danger due to insecure connection**

To ensure a secure connection, the counterpiece must be designed exactly to the specifications of LOGICDATA. Otherwise, the warranty claims are void.



**Fig. 12: Symbolic image of the counterpiece for the tube adapter**

**Recommended assembly procedure:**

**NOTICE**

The assembly procedure shown is based on a height-adjustable column design in which the top plate can be removed (i.e., it is not permanently connected to the thick tube). For instructions on mounting with other height-adjustable column constructions, please contact LOGICDATA.

**NOTICE**

We recommend measuring the friction of the tube pairs before installing the drive! The combination of control unit and drive is not a suitable means for measuring the friction!

Proceed with the following steps for the assembly with the installation variant “thick tube up”:

1. Assemble the counterpiece for the tube adapter (see Figure 12: Symbolic image of the counterpiece for the tube adapter) in the middle tube.
2. Insert the three tubes into each other.

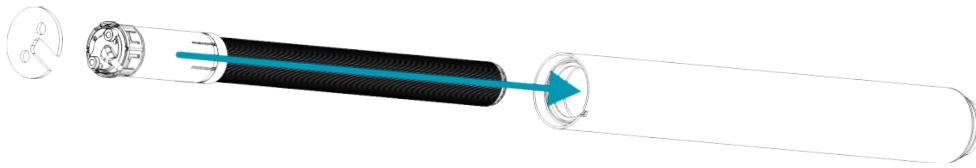
**NOTICE**

LOGICDATA recommends measuring the gliding properties of the height-adjustable column without the installed drive after this step.

**NOTICE**

The maximum force on the tube adapter counterpart must not exceed 150N! This results partly by the difference of the frictional forces between the tube pairs.

3. Mount the drive in the preassembled height-adjustable column (see Figure 13: Example of actuator installation in a round height-adjustable column).
4. Then make the attachment on the motor end and spindle end according to Chapter 6.4 and Chapter 6.5.



**Fig. 13: Example of actuator installation in a round height-adjustable column**

## 6.3 ASSEMBLY “THICK TUBE DOWN” VARIANT

The middle tube adapter is produced by the customer and is fixed in the middle tube. It is connected to the drive in the installation variant “thick tube down”.

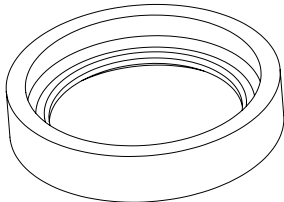
### NOTICE

The design specifications for the middle tube adapter are available from LOGICDATA only on request. These includes dimensions and tolerances as well as notes on material selection and assembly.

### ⚠ CAUTION

#### **Danger due to insecure connection**

To ensure a secure connection, the middle tube adapter must be designed exactly to the specifications of LOGICDATA. Otherwise, the warranty claims are void.



**Fig. 14: Symbolic image of the middle tube adapter**

#### **Recommended assembly procedure:**

### NOTICE

The assembly procedure shown is based on a height-adjustable column design in which the top plate can be removed (i.e., it is not permanently connected to the inner tube). For instructions on mounting with other height-adjustable column constructions, please contact LOGICDATA.

## NOTICE

We recommend measuring the friction of the tube pairs before installing the drive! The combination of control unit and drive is not a suitable means for measuring the friction!

Proceed with the following steps for the assembly with the installation variant "thick tube down":

1. Assemble the middle tube adapter (see Figure 15: Symbolic image of the middle tube adapter) in the middle tube.
2. Insert the three tubes into each other.

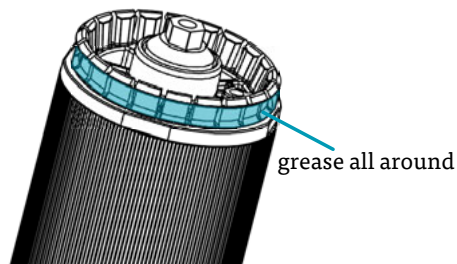
## NOTICE

LOGICDATA recommends measuring the gliding properties of the height-adjustable column without the installed drive after this step.

## NOTICE

The maximum force on the middle tube adapter must not exceed 150N! This results by the difference of the frictional forces between the tube pairs.

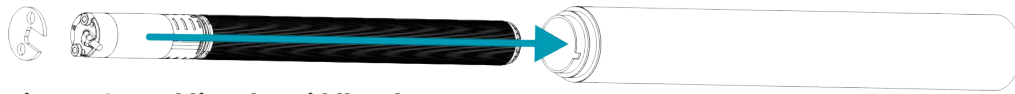
3. Apply grease generously all around the nut insert in order to obtain good gliding characteristics (see Figure 15: Nut insert). Use the recommended lubricants from the design specifications, which you can obtain from LOGICDATA.
4. Use a suitable production tool (e.g. hydraulic press) to insert the drive into the preassembled height-adjustable column (see Figure 16: Assembling the middle tube).



**Fig. 15: Nut insert**

## NOTICE

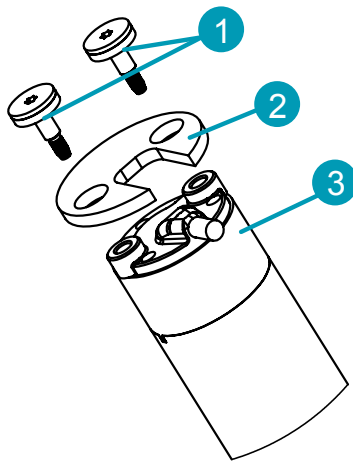
For suitable production aids, joining forces and joining speeds or detailed information on the assembly process, please contact LOGICDATA. Failure to perform the joining process properly may result in damage to the SLIMdrive-660s.

**Fig. 16: Assembling the middle tube**

5. Then make the attachment on the motor end and spindle end according to [Chapter 6.4](#) and [Chapter 6.5](#).

## 6.4 MOTOR SIDE INTERFACE

The figure below provides an overview of the components required to assemble the drive on the motor end.

**Fig. 17: Overview of the motor end**

1	Mounting screws including rubber disks
2	Top plate (developed by the customer, design specifications of LOGICDATA)
3	Drive



### NOTICE

The design specifications for the top plate are available from LOGICDATA only on request. These includes dimensions and tolerances as well as notes on material selection and assembly.

### NOTICE

Do not lift the SLIMdrive-660s by the cable and make sure that the cable is not damaged during assembly.

### NOTICE

The screws and rubber disks are supplied together with the drive. The mounting screws must be tightened to the recommended tightening torque of 2.5 - 3 Nm.



**NOTICE**

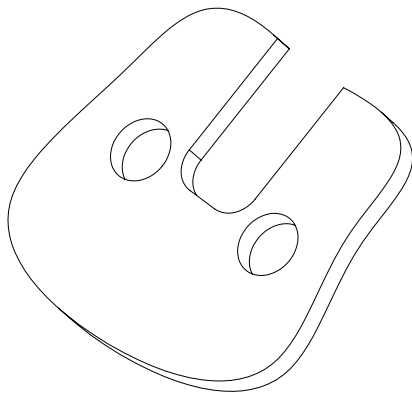
The SLIMdrive-660s can only be mounted once with the supplied screws, otherwise correct tightening of the mounting screws can not be guaranteed.

**NOTICE**

Mounting without rubber disks is not permitted.

**! CAUTION****Danger due to insecure connection**

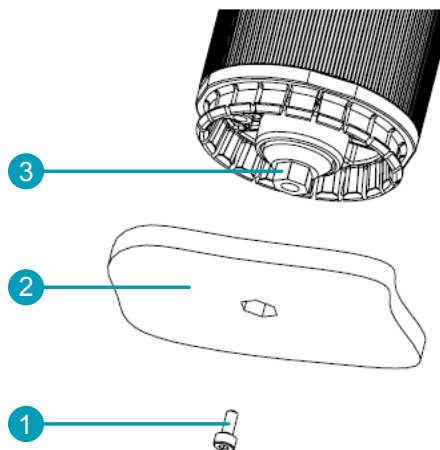
To ensure a secure connection, the top plate must be designed exactly to the specifications of LOGICDATA. Otherwise, the warranty claims are void.



**Fig. 18: Symbolic image of the top plate**

## 6.5 SPINDLE SIDE INTERFACE

The figure below provides an overview of the components required to assemble the drive on the spindle end.



**Fig. 19: Overview of the spindle end**

- |   |  |
|---|--|
| 1 | Mounting screw (adapted by the customer to bottom plate)                     |
| 2 | Bottom plate (developed by the customer, design specifications of LOGICDATA) |
| 3 | Spindle attachment point   |

## NOTICE

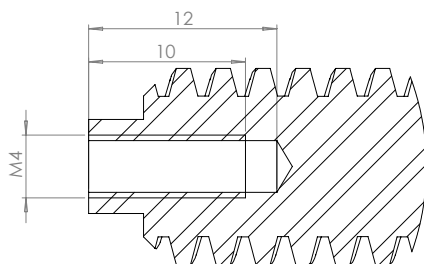
The design specifications for the bottom plate are available from LOGICDATA only on request. These includes dimensions and tolerances as well as notes on material selection and assembly.

## CAUTION

### Danger due to insecure connection

To ensure a secure connection, the bottom plate must be designed exactly to the specifications of LOGICDATA. Otherwise, the warranty claims are void.

The steel spindle has an M4 thread, which serves to fix the drive to the bottom plate of the height-adjustable column.



**Fig. 20: Spindle end attachment point**

## 7 SOFTWARE-DEPENDENT FUNCTIONS

## NOTICE

The description of the software-dependent functions, for example: manual reset, plug detection or auto detect number of drives can be found in the corresponding manual of the controlbox.

## 8 INTELLIGENT SYSTEM PROTECTION (ISP)

ISP is a collision protection system that LOGICDATA has developed according to the state of the art. This significantly reduces a possible risk of pinching. If there is an obstacle in the operating range of the table, and the obstacle and table collide, a load change affects the SLIMdrive-660s (or an optional sensor). The load change can be detected, all drives stop immediately and move back in the opposite direction for a few seconds.

There are two types of ISP:

### Software ISP

Software ISP uses known system variables that are measured or calculated by each controlbox. Additional sensors are not necessary, this function is available with all LOGICDATA controlboxes and all drives.

### Sensor ISP

Optionally, the drive can be equipped with sensor ISP, which increases the sensitivity of the collision detection.



### NOTICE

The description of the activation and deactivation of ISP sensors can be found in the corresponding manual of the controlbox.



### NOTICE

The ISP sensitivity and the ISP switch-off value depend on the complete system (mechanical and electronic components). To determine the ISP suitability of a height-adjustable table, please contact LOGICDATA!



### NOTICE

Within a system, drives can be used only unmixed, that is either with or without sensor ISP.

## 9 DISASSEMBLY

For disassembly, disconnect the SLIMdrive-660s from the power supply and proceed in reverse order to assembly.



## 10 MAINTENANCE

### **DANGER**

#### **Hazards from the use of incorrect accessory parts**

Only use original accessory parts! These may only be installed by expert service personnel! Otherwise your warranty claims will be void!

### **DANGER**

#### **Hazard from inappropriate repairs**

Contact your customer service immediately in the event of a malfunction! Only original spare parts are approved for the repair of the drives. These may only be replaced by expert service personnel! Otherwise your warranty claims will be void!

## 11 TROUBLESHOOTING

For technical problems, please contact our support at:

Tel.: +43 (0)3462 5198 0

Fax: +43 (0)3462 5198 1030

E-mail: [office.at@logicdata.net](mailto:office.at@logicdata.net)

Always provide the product name and the revision status according to the type plate with any support request. In case of a defect, replace the SLIMdrive-660s as a whole.

**Possible malfunctions and their remedy:**

Problem	Possible cause	Remedy
<b>SLIMdrive-660s does not function</b>	Mains cable of the controlbox not connected	Plug in the mains cable of controlbox
	SLIMdrive-660s linear actuator is not connected	Plug the motor cable into the controlbox
	Poor plug connection	Plug in the motor cable, mains cable, and hand switch properly
	Controlbox defective	Contact LOGICDATA
	Hand switch defective	Replace the hand switch
	SLIMdrive-660s linear actuator defective	Replace the SLIMdrive-660s linear actuator
	An error code appears on the display of the hand switch	Check the error code on the hand switch display or the click code of the controlbox, search the complete error code list in the operating instructions of the controlbox after the problem has been remedied
<b>SLIMdrive-660s only moves down (retracted position)</b>	Power failure while moving or power cable unplugged while moving	Manual reset *)
	Reset required	Perform a reset
	SLIMdrive-660s linear actuator defective	Replace the SLIMdrive-660s linear actuator

\*) If actuators only move down

**NOTICE**

A detailed description of the error codes on hand switches as well as click codes can be found in the corresponding manual of the controlbox.



## 12 ADDITIONAL INFORMATION

### 12.1 TECHNICAL SPECIFICATIONS

You can find the technical data of your drive in the corresponding data sheet.

### 12.2 OPTIONAL PRODUCTS



#### NOTICE

You can find information about available optional products in the current product catalog and at [www.logicdata.net](http://www.logicdata.net)

### 12.3 DISPOSAL



The SLIMdrive-660s is an electrical and electronic device that must be disposed of separately from household waste according to the WEEE Directive 2012/19/EU. The products are marked with the symbol shown on the left.

Before disposing of materials and components, check their recyclability. Recycle as many parts as possible.

Dispose of all materials and parts in accordance with your local guidelines and regulations. Ensure that the disposal is lastingly compatible for humans and nature.

# MOTION FOR YOUR LIFE

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**[www.logicdata.net](http://www.logicdata.net)**