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Using the installation instructions

Please read the installation instructions and safety information before SERVO-DRIVE installation.
We recommend that you use the orientation diagram for easier identification of the parts being described.
These installation instructions apply to the SERVO-DRIVE electrical motion support system for:
- the lift systems AVENTOS HF, AVENTOS HS, AVENTOS HL, AVENTOS HK and AVENTOS HK top
- the box systems LEGRABOX and TANDEMBOX as well as the runner systems MOVENTO and TANDEM
However, only AVENTOS HF is used as an example in the illustrations.
Please see the special AVENTOS installation instructions for the assembly steps for the mechanical AVENTOS HF, HS, HL, HK and HK top lift systems without SERVO-DRIVE.

Safety

SERVO-DRIVE complies with current safety standards.
Nevertheless, there are certain risk factors if these installation instructions are not followed. Please be aware that Julius Blum GmbH is not responsible for incidental or consequential damages that may arise due to non-compliance with these installation instructions.
• All national standards must be followed for SERVO-DRIVE assembly. This includes, in particular, those related to the mechanical safety of moving parts and electrical cabling.
• Only qualified technicians may install/replace Blum components, modify the position of the Blum transformer or modify any cabling.
• The device may only be connected to a power supply that corresponds to the type and frequency listed on the serial tag (see Blum
transformer).
• The outlet must be freely accessible.
• Only 1 Blum transformer can be connected to each distribution cable.
• Maintain safety distances to the Blum transformer listed in the installation instructions.
• Make sure that moisture cannot penetrate the Blum transformer and drive unit.
• Before starting repair or maintenance work, unplug the Blum transformer to disconnect the power.
• The drive unit, Blum transformer and SERVO-DRIVE switch should only be cleaned with a moist cloth because penetrating moisture and aggressive cleaning materials can damage the electronics.
• Do not touch the area around the lever during the opening and closing motion.
• No damaged parts should be used.
• Sharp edges may damage the cable.
• Neither the Blum transformer nor any cabling should come into contact with moving parts.
• Never take apart a drive unit or a SERVO-DRIVE switch.

Intended use

SERVO-DRIVE supports the opening and closing of lift systems and/or the opening of pull-out elements, and may only be used under the following conditions:
• In dry, enclosed rooms.
• In combination with AVENTOS lift systems and/or pull-out systems from Julius Blum GmbH within permitted technical specifications.
• In combination with a Blum transformer.
⚠️ WARNING

Danger of electric shock
- Never open a Blum transformer. There is a danger of electric shock.
- Before starting repair or maintenance work, unplug the Blum transformer to disconnect the power.

⚠️ WARNING

There is a danger of injury if the lever springs upward.

There is a danger of injury from the lever springing upwards when the front is removed.
- Do not push down on lever arm, instead, remove the arm if it is in the way (not possible on HK variant).
- Do not connect the transformer to the power supply while the fronts are unattached.

Blum transformer safety distance

NOTE

A safety distance of 30 mm must be maintained for air circulation; otherwise, there is a risk that the Blum transformer could overheat.
- The dimensions in the drawing take into account the safety distance.
**Troubleshooting**

For troubleshooting information, please go to: www.blum.com/sd/troubleshooting

**Info regarding the Machine Directive 2006/42/EC**

Furniture with SERVO-DRIVE for AVENTOS, as long as it is intended for domestic use, is not subject to the provisions of the Machine Directive 2006/42/EC. This is valid for items for office and professional use and for putting a machine on the market within the Economic Area (EEA + Switzerland + Turkey). The standards and/or guidelines of other countries are covered with our TÜV certification.

For detailed information regarding the Machine Directive, please go to: www.blum.com/sd/guideline

**Structural changes and spare parts**

Structural changes and replacement parts not approved by the manufacturer affect the safety and functionality of SERVO-DRIVE and are, therefore, not allowed.

- Only use original replacement parts from Julius Blum GmbH.
- Blum components are the only devices that should be connected to the Blum transformer.
Disposing of electrical and electronic appliances:
Electrical and electronic appliances must not be disposed of with household waste at the end of their service life. Ask your local authority for information on how to proceed. Blum electrical and electronic appliances meet the requirements of the WEEE Directive 2012/19/EU. Electrical and electronic appliances are collected separately, which enables old appliances to be reused or recycled, and their materials to be reused. This is intended to prevent any hazardous materials that may be contained in the appliances from damaging the environment and health during disposal. In most cases, the entire appliance does not need to be disposed of according to the WEEE guidelines, but only the part that is equipped with electrical components. Please refer to the disassembly instructions for information on this. There are free collection points for returning electrical and electronic appliances in your area. You will find further information on this under the following link: www.blum.com/recycling

Disposing of batteries:
Batteries must not be disposed of with household waste at the end of their service life. Ask your local authority for information on how to proceed. Batteries used at Blum meet the requirements of the Battery Directive 2006/66/EC. Batteries are collected separately, which enables the batteries or their materials to be recycled. This is intended to prevent any hazardous materials that may be contained in the appliances from damaging the environment and health during disposal. Please refer to the disassembly instructions for information on removing batteries. There are free collection points for returning batteries in your area. Please avoid shorting the contact surfaces when disposing of batteries.
Simplified EU Declaration of Conformity
Hereby, Julius Blum GmbH declares that all electrical and electronic article types of Julius Blum GmbH are in compliance with Directive 2011/65/EU.
Hereby, Julius Blum GmbH declares that the radio equipment types 23.A00L83, 23KA001, 23KA000, 21FA001, 21FA000, 21LA001, 21LA000, 21SA001, 21SA000, 21KA001, 21KA000, 23P5020, 21P5020 and Z10C5007 are in compliance with Directive 2014/53/EU.
Hereby, Julius Blum GmbH declares that the electrical and electronic article types Z10A3000, Z10C5000, Z10ZE000 and Z10ZC000 are in compliance with Directive 2014/30/EU.
Hereby, Julius Blum GmbH declares that the power supply types Z10NA300 and Z10NE030 are in compliance with Directive 2014/35/EU and Directive 2014/30/EU.
The full text of the EU declaration of conformity is available at the following internet address: www.blum.com/compliance
SERVO-DRIVE overview drawing
A1  Blum transformer with LED display
A2  Transformer unit housing for base fixing
A4  Flex
A5  Distribution cable for cutting to size
A6  Connecting node
A7  Cable end protector
A8  Blum distance bumper

B1  Lift mechanism
B2  Telescopic arm or lever arm
B3  Drive unit with LED display
B4  Cover cap
B5  SERVO-DRIVE switch with battery display

C1  Bracket profile vertical
C2  Bracket profile cable (for power supply)
C3  Communication cable
C4  Upper/Back bracket profile attachment
C5  Lower bracket profile attachment
C6  Bracket profile cover cap
C7  Attachment bracket 1 tier
C8  Attachment bracket 2 tier
C9  Bracket profile horizontal
C10 Bracket profile attachment left/right
C11 Adapter for drive unit
C12 Upper attachment bracket with adapter for drive unit
C13 Drive unit
AVENTOS function

**Electrical motion support system**
The SERVO-DRIVE switch triggers the automatic opening and closing action of SERVO-DRIVE for AVENTOS.

- Press on the front
  - The lift system opens automatically
- Press on the SERVO-DRIVE switch
  - The lift system closes automatically

**Manual operation**
The lift system can be opened or closed manually without restrictions without damaging SERVO-DRIVE for AVENTOS.

- Manual opening of the lift system by moving it upwards
- Manual closing of the lift system by moving it downwards

**LEGRABOX/TANDEMBOX/MOVENTO/TANDEM function**

**Electrical motion support system**
When the front and/or handle of the drawer (A) is pulled or pressed, the eject lever of the drive unit (B) swivels forward and opens the pull-out element a short distance.
SERVO-DRIVE for AVENTOS

Distribution cable installation
HF / -HS / -HL / -HK

Drive unit adjustment
HF / -HS / -HL

Drive unit assembly

NOTE
➢ Before SERVO-DRIVE for AVENTOS assembly, the lift mechanisms must be set so that the front remains open in different positions.
➢ The telescopic arm and/or lever arm must be in the completely open position for drive unit installation.
➢ If required, attach the opening angle stop only after drive unit installation and before the reference run.
HF / -HS / -HL

NOTE

➢ The drive unit can be locked when the orange slide is no longer visible in the view window.

HK

NOTE

The drive unit can only be locked when the drive unit is inserted completely into the lift mechanism.

SERVO-DRIVE switch installation
SERVO-DRIVE for AVENTOS

Distribution cable installation
AVENTOS HK top

Drive unit assembly

NOTE

➢ Before SERVO-DRIVE for AVENTOS assembly, the lift mechanisms must be set so that the front remains open in different positions.
➢ The telescopic arm and/or lever arm must be in the completely open position for drive unit installation.
➢ If required, adjust the opening angle stop only after drive unit assembly and before the reference run.
SERVO-DRIVE switch installation
SERVO-DRIVE for LEGRABOX / TANDEMBOX / MOVENTO / TANDEM

Drive unit assembly

Horizontal cross member assembly

Vertical cross member assembly
Assembly of larder unit with horizontal and vertical cross members

Equip bracket profile with distribution cable.
Remove pre-mounted bracket profile cable from both bracket profiles and insert a new, long bracket profile cable in the upper bracket profile.

Insert long bracket profile cable into the lower bracket profile. Attach lower bracket profile.
Attachment bracket 1 tier / 2 tier

Attachment bracket 1 tier

Attachment bracket 2 tier
A second drive unit can also be installed (optional).

Bracket profile horizontal
Equip drive unit adapter bracket profile cable

Attach drive unit to drive unit adapter

Install drive unit adapter to bracket profile horizontal

Install bracket profile horizontal in bracket profile attachment
Upper attachment bracket

The bracket plate must be connected to the cross bar to make it secure.

Insert bracket profile cable

Attaching drive unit to adapter
Blum distance bumper

NOTE

➢ Do not glue the Blum distance bumper

Installation in the front
Aluminium frame: Installation in the cabinet side

Cabling overview drawing

Wall cabinet

Wall cabinet/Base cabinet combination

Base cabinet

A1 Blum transformer with LED display
A2 Transformer unit housing for base fixing
A3 Transformer unit housing for panel fixing
A4 Flex
A5 Distribution cable for cutting to size
A6 Connecting node
A7 Cable end protector
Connecting node assembly

Transformer assembly
Transformer unit housing for base fixing

Transformer unit housing for panel fixing

Transformer unit housing – Assembly on the top panel

NOTE
➢ Do not damage piercing pins.
Cable diagram

NOTE

➢ Only 1 Blum transformer can be connected to each distribution cable.

SERVO-DRIVE for AVENTOS

Transformer unit housing for panel fixing

Transformer unit housing for base fixing

Back cabling

Upper cabling

SERVO-DRIVE for LEGRABOX/ TANDEMBOX/ MOVENTO/ TANDEM

Transformer unit housing for panel fixing

Transformer unit housing for base fixing

Sink cabinet

Transformer unit housing for base fixing

Transformer unit housing for panel fixing

Upper attachment bracket

Bracket profile horizontal
SERVO-DRIVE for AVENTOS

Activating the SERVO-DRIVE switch

Optional

Additional features

C Synchronisation activation

D Collision avoidance activation

Starting reference run

Deactivation

E Reset motion

F Reset wireless

Button layout

Drive unit
<Reset Motion> button
Motion LED
<SWITCH> button
<SYNC> button
<COLL> button
<Reset Wireless> button
Wireless LED
SERVO-DRIVE switch
Start-up

Activating the SERVO-DRIVE switch

Setting up the wireless connection between the SERVO-DRIVE switch and the drive unit
A switch can only be assigned to one drive unit.

1. Press the <SWITCH> button until the LED flashes green.

2. Press the SERVO-DRIVE switch until the LED lights up green continuously.

3. Repeat procedure A 1–2 for additional SERVO-DRIVE switches in the cabinet.
Starting reference run

The drive unit recognises the required parameters using the reference run.

1. Reference run is required: LED flashes

2. Close the front manually

3. Press on front: The reference run starts automatically

4. Front opens and closes 2x automatically: Under no circumstances should you try to manually interrupt or stop the process.

NOTE

If the reference run is interrupted, it should be reset → see Reset motion E 1. The reference run restarts.
Activating synchronisation

Up to three drive units can be synchronised allowing them to move simultaneously. This function is required for several cabinets with a uniform front.

1. Activating the SERVO-DRIVE switch → see A 1–3.

2. Press the <SYNC> button for the first drive unit

   until the LED flashes green.

3. Press the <SYNC> button for the second drive unit

   unit the LEDs of both synchronised drive units light up green.

4. Repeat procedure C 2–3 for all additional drive units.

5. Carry out reference run → see B 1–4.

---

**NOTE**

If there is an activation error, reset all drive units → see Reset wireless F 1.

Re-activate the SERVO-DRIVE switch, synchronisation and the reference run → see A 1–3, C 2–4 and B 1–4.
Activating collision avoidance

To avoid the collision of fronts, drive units (max. 6) can be linked so that only one front can be opened at a time. A front is prevented from opening as long as a linked front remains open.

1. Activating the SERVO-DRIVE switch → see A 1–3.

2. Press the <COLL> button for the first drive unit until the LED flashes green.

3. Close the front manually

4. Open the second front manually

5. Press the <COLL> button for the second drive unit unit the LED lights up Green (this will happen simultaneously on the unit behind the close door).

6. Repeat procedure D 2–5 for all additional cabinets.

7. Carry out reference run → see B 1–4.

NOTE

If there is an activation error, reset all drive units → see Reset wireless F 1.
Re-activate the SERVO-DRIVE switch, collision avoidance and the reference run → see A 1–3, D 2–6 and B 1–4.
Reset Motion

 Resets the reference run and enables a new reference run to be started.

 Press the <Reset Motion> button using a pen (at least 3 seconds) until the LED flashes quickly.

Reset Wireless

 Deactivates all functions: All active SERVO-DRIVE switches for the respective drive unit are deleted.

 Press the <Reset Wireless> button using a pen (at least 3 seconds) until the LED flashes quickly.

Cover cap assembly

Replacing the SERVO-DRIVE switch battery

When the battery power begins to weaken, the battery display (LED) begins to flash red

➢ Open the SERVO-DRIVE switch and remove the battery

➢ Insert the new battery (type CR2032) and close the SERVO-DRIVE switch – note correct polarity +/−

NOTE

➢ The SERVO-DRIVE switch battery must not be recharged or thrown into fire.
SERVO-DRIVE for AVENTOS HK top

A  Activating the SERVO-DRIVE switch

Optional

C  Synchronisation activation

D  Collision avoidance activation

B  Starting reference run

Deactivation

E  Reset

Button layout

1  Drive unit
2  <Reset> button
3  LED
4  <Collision> button
5  <Play> button
6  <Ok> button
7  <Connect> button
8  SERVO-DRIVE switch
Start-up

Operation

- Lights up continuously
- Flashes

A Activating the SERVO-DRIVE switch

Setting up the wireless connection between the SERVO-DRIVE switch and the drive unit.

A switch can only be assigned to one drive unit.
Starting reference run

The drive unit recognises the required parameters using the reference run.
Activating synchronisation

Up to three drive units can be synchronised allowing them to move simultaneously. This function is required for several cabinets with a uniform front.
Activating collision avoidance

To avoid the collision of fronts, drive units (max. 6) can be linked so that only one front can be opened at a time. A front is prevented from opening as long as a linked front remains open.
Operation

- Lights up continuously
- Flashes

1. > 1.5 s
2. 
3. 
4. 
5. 
6.
**Reset**

Resets the drive unit to the factory setting.

---

**Cover cap assembly**

---

**Replacing the SERVO-DRIVE switch battery**

When the battery power begins to weaken, the battery display (LED) begins to flash red

- Open the SERVO-DRIVE switch and remove the battery
- Insert the new battery (type CR2032) and close the SERVO-DRIVE switch – note correct polarity +/-

If the battery is inserted incorrectly, the SERVO-DRIVE switch battery display will flash red.

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**NOTE**

The SERVO-DRIVE switch battery must not be recharged or discarded into fire.
SERVO-DRIVE for LEGRABOX / TANDEMBOX / MOVENTO / TANDEM – General information

Drive unit selector switch

Selector switch Mode (1)
- Single: Only one drive unit moves (standard setting)
- Multiple: When set to "Multiple," drive units move simultaneously to any drive unit that is activated on same vertical bracket profile. This does not apply on horizontal bracket profile or any L brackets.

Selector switch Power (2)
- Full: Standard setting
- Half: For short nominal lengths (270–300 mm)

Operating mode display (LED) (3)

Lever extension

The lever extension must be removed for a cabinet width of 275-320 mm in combination with a steel back and for a cabinet width up to 300 mm in combination with a chipboard back.

Trigger guidance

The lever guide must be attached and secured with screws for cabinet widths 275-320 mm if being used with chipboard backs.

Synchronisation cable

Two drive units that are supposed to open simultaneously must be connected via the synchronisation cable.
Blum transformer removal

⚠️ WARNING

Danger of electric shock
➢ Never open a Blum transformer. There is a danger of electric shock.
➢ Before starting repair or maintenance work, unplug the Blum transformer to disconnect the power.

NOTE
➢ Do not damage piercing pins.
WARNING

Danger of electric shock
➢ Never open a Blum transformer. There is a danger of electric shock.
➢ Before starting repair or maintenance work, unplug the Blum transformer to disconnect the power.

Removal

AVENTOS HK top
Distribution cable

1. 
2. 
3. 

AVENTOS HK top

1. 
2. 
3. 

LEGRABOX / TANDEMBOX / MOVENTO / TANDEM

Drive unit removal

1. 
2. 
3. 
4.