



**AVENTOS HK top**  
Lift Systems Reimagined

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## Reimagined for Easy Installation

An eye for detail and another on the big picture – that's what's needed to develop a lift system that is not only compact in design but also impresses with easy installation. That is what makes AVENTOS HK top the perfect solution for cabinetry where every detail counts.

 **blum**

A photograph of a modern kitchen cabinet. The upper part of the cabinet has a black, glossy AVENTOS HK top. Below it, there are glassware shelves. The lower part of the cabinet is made of light-colored wood. The background is a textured grey wall.

## Contents

### AVENTOS HK top

- 5** Solutions for All Applications
- 6** Specifications for Frameless & Face Frame
- 10** Specifications for Narrow Aluminum
- 14** Ordering Information for TIP-ON
- 16** Assembly
- 17** Adjustments
- 18** Face Frame Mounting Brackets
- 19** Assembly Aids
- 20** SERVO-DRIVE for HK top
- 36** Part Number Index







**There are many good reasons why AVENTOS lift systems are an excellent choice for wall cabinets.**

Since the cabinet doors open upwards, AVENTOS provides an excellent view into the cabinet interior enabling comfortable and ergonomic access to storage items.

The AVENTOS program opens up a whole new world of design possibilities for kitchen and office spaces. Even the widest and heaviest doors can be accommodated. Wide base cabinet designs can now be mirrored in the wall cabinets above to create a more uniform look.



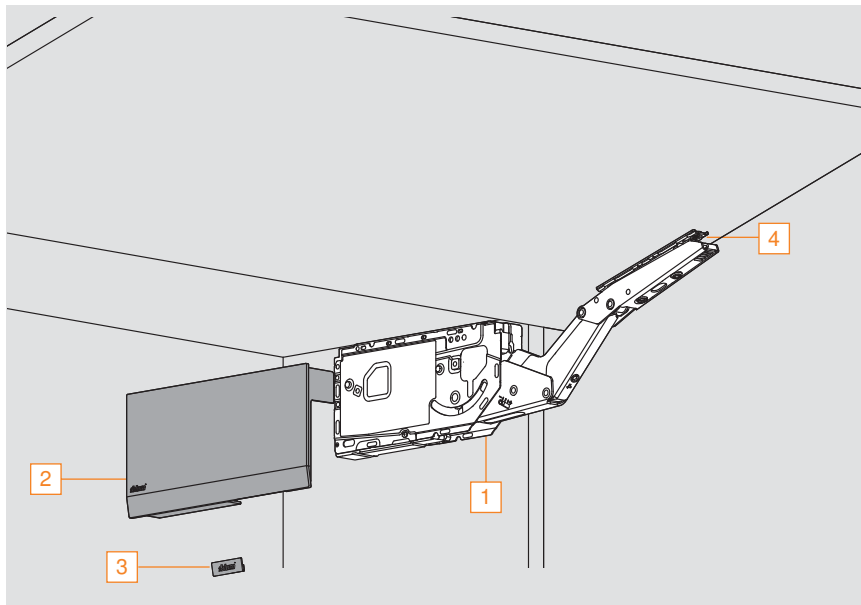
**Online Resource for Planning**

**Easy Planning**

Blum offers many online tools to help you with your kitchen planning and ordering. Online Product Configurator (OPC) offers a parts list and planning information based on your specifications. Once complete, your results can then be exported to a shareable document.

OPC is easily accessible on our website at [blum.com/configurator](https://blum.com/configurator)





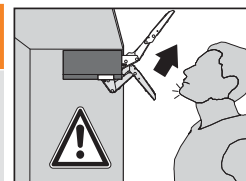
- Self-positioning mechanism with locating template eliminates complicated installation
- Integrated opening angle adjustment between 75° and 107°
- Cabinet height from **250** (10") to **610** (24")
- Cabinet width range **381** (15") to **1828** (72")
- Interior cabinet depth minimum of **187** (7-3/8")
- Optional: TIP-ON for AVENTOS
- If using a third lift mechanism for wider applications (power factor increases by up to 50%), we recommend a trial application.

**NOTE:** For wide cabinets, we recommend an additional lift mechanism be attached to the center panel to prevent the middle of the front from sagging when open.



**Warning: Risk of injury by spring-loaded lever arm!**

- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet



### Step 1 – Determine the Power Factor for the Application



Power factor = cabinet height (inch) x door weight\* (lb)

#### Determine power factor

To select the correct lift mechanism for a given application, the power factor must first be calculated by using the formula below. Use the table at the bottom of the page to convert ounces into decimal form for easy calculation.

Power factor = cabinet height multiplied by door weight\*

#### Example:

Cabinet height: 20" (within possible range)

Door weight including twice the handle weight = 13 lb 14 oz (14 oz = .9 lb see chart below)

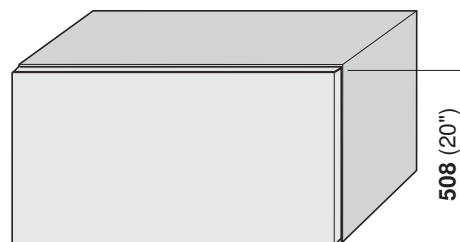
Power factor = 20 x 13.9

Power factor = 278

A power factor of 278 requires lift mechanism 22K2700

\*Including twice the handle weight

**NOTE:** AVENTOS planning tools available at [blum.com/planning](http://blum.com/planning)



Door weight + twice handle weight = **13 lb 14 oz**

Weight conversion chart

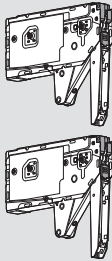
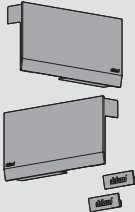

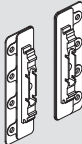
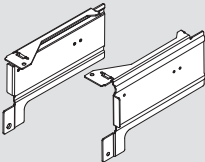
| oz | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| lb | .1 | .1 | .2 | .3 | .3 | .4 | .4 | .5 | .6 | .6 | .7 | .8 | .8 | .9 | .9 |

## AVENTOS HK top Ordering Information

AVENTOS

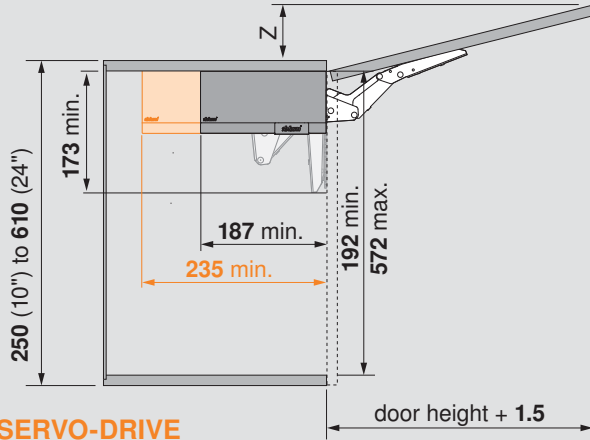


### Step 2 – Select the Required Components

| Lift mechanism sets   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|---|---|---|--------------------|---------------|----------|----------|------|---------|----------|------|---------|-----------|------|---------|-----------|------|---------|
|    | <b>Set includes:</b><br><div><div>1</div> Lift mechanism (qty 2)<br/><div><div></div> #7 x 35 (1-3/8") wood screw (qty 8)</div></div> | <b>NOTE:</b> Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms.<br><table><tr><th>Power factor range</th><th>Opening angle</th><th>Part no.</th></tr><tr><td>36 – 139</td><td>107°</td><td>22K2300</td></tr><tr><td>80 – 240</td><td>107°</td><td>22K2500</td></tr><tr><td>150 – 450</td><td>107°</td><td>22K2700</td></tr><tr><td>270 – 781</td><td>107°</td><td>22K2900</td></tr></table> | Power factor range | Opening angle | Part no. | 36 – 139 | 107° | 22K2300 | 80 – 240 | 107° | 22K2500 | 150 – 450 | 107° | 22K2700 | 270 – 781 | 107° | 22K2900 |
|   | Power factor range  | Opening angle   | Part no.           |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | 36 – 139  | 107°  | 22K2300            |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | 80 – 240  | 107°  | 22K2500            |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | 150 – 450   | 107°  | 22K2700            |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
| 270 – 781   | 107°  | 22K2900   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
| Cover set   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | <b>Set includes:</b><br><div><div>2</div> Right and left cover plate<br/><div><div>3</div> Non-handed cover cap (qty 2)</div></div>   | <b>NOTE:</b> Light Gray, Dark Gray and Silk White options available<br><div><div></div> Light Gray (HGIG)<br/><div><div></div> Dark Gray (TGIG)<br/><div><div></div> Silk White (SWIG)</div></div></div>  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   | Part no.  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | Cover set   | 22K8000.NA  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
| Wood or wide aluminum door hardware set   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|  | <b>Set includes:</b><br><div><div>4</div> Arm assembly mounting plate (qty 2)</div>   | Part no.  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | Wood or wide aluminum hardware set  | 20S4200   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | Installation screw for wood doors   | 606N or 606P  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | Installation screw for wide aluminum doors  | 7072A   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
| Mounting plate with bracket set   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|  | <b>Set includes:</b><br><div><div></div> Mounting plate with bracket (qty 2)</div>  | For use with large overlay five-piece doors   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   | Part no.  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | Mounting plate with bracket set   | 20S4F01   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
| Face frame mounting bracket set   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|  | <b>Set includes:</b><br><div><div></div> Right and left brackets<br/><div><div></div> M4 X 30 lift mounting screws</div></div>        | <b>NOTE:</b> See page 18 for more information   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   | Part no.  |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   | HK top frame mounting bracket set   | 22K6001   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |
|   |   |   |                    |               |          |          |      |         |          |      |         |           |      |         |           |      |         |

### Frameless Application

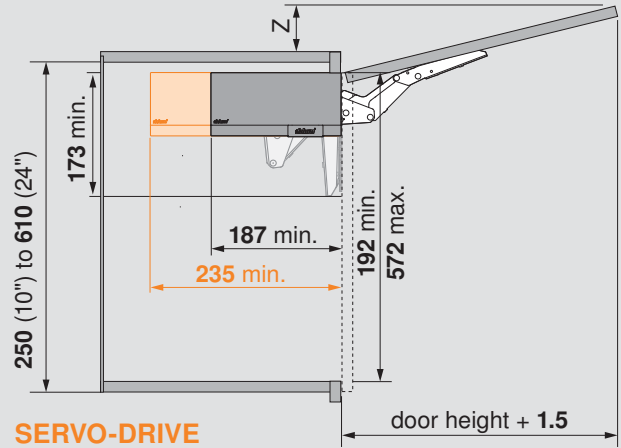
#### Door and hardware clearance



**NOTE:**  $Z = \text{door height} \times 0.29 + \text{door thickness} \text{ minus top panel thickness}$

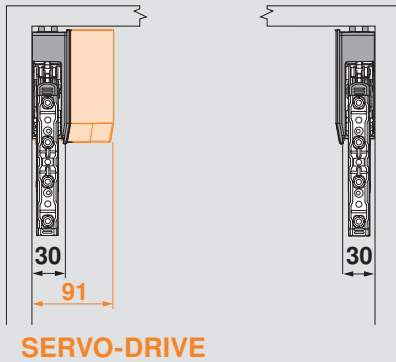
### Face Frame Application

#### Door and hardware clearance



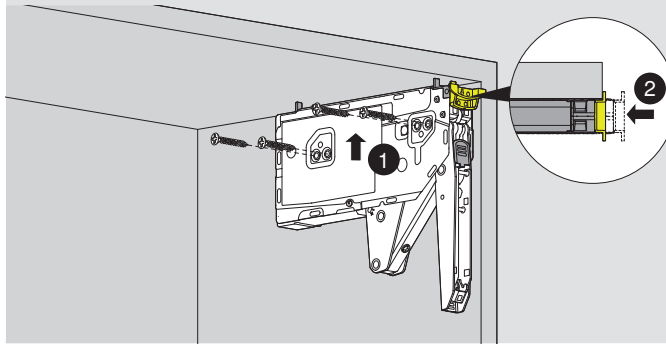
**NOTE:**  $Z = \text{door height} \times 0.29 + \text{door thickness} \text{ minus top frame width}$

#### Lift mechanism clearance



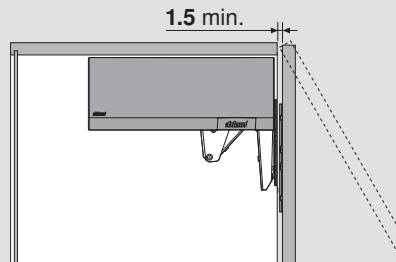
#### Lift mechanism positioning

Attachment for lift mechanism for wood screws including positioning template.



### Door and Hardware Clearance

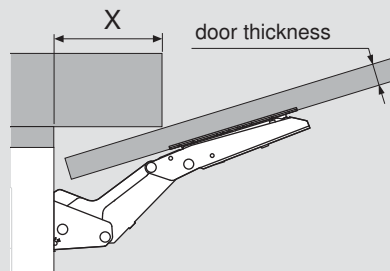
#### Minimum gap



**NOTE:** Min gap assumes door radius of 1

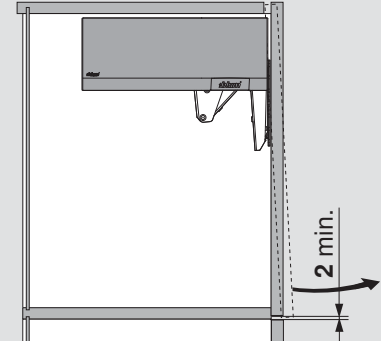
|         |            |
|---------|------------|
| Overlay | up to 25.4 |
| gap     | 1.5        |

#### Decorative molding clearance



|                |    |    |    |    |
|----------------|----|----|----|----|
| Door thickness | 16 | 19 | 22 | 26 |
| maximum X      | 68 | 57 | 47 | 33 |

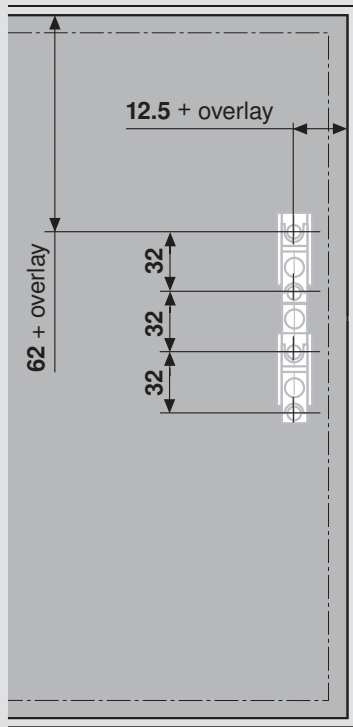
#### Minimum bottom reveal





## Arm assembly mounting plate location

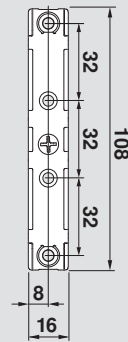
### Frameless and face frame applications



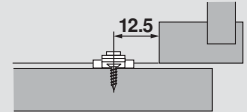
**NOTE:** Attach mounting plate with four 606N or 606P wood screw for wood doors or 7072A for wide aluminum doors

## Arm assembly mounting plate choices

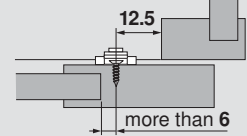
### Mounting plate



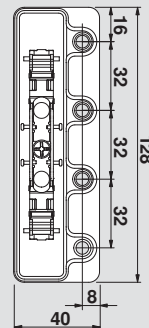
### Slab door



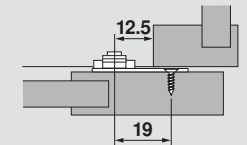
### Five-piece door



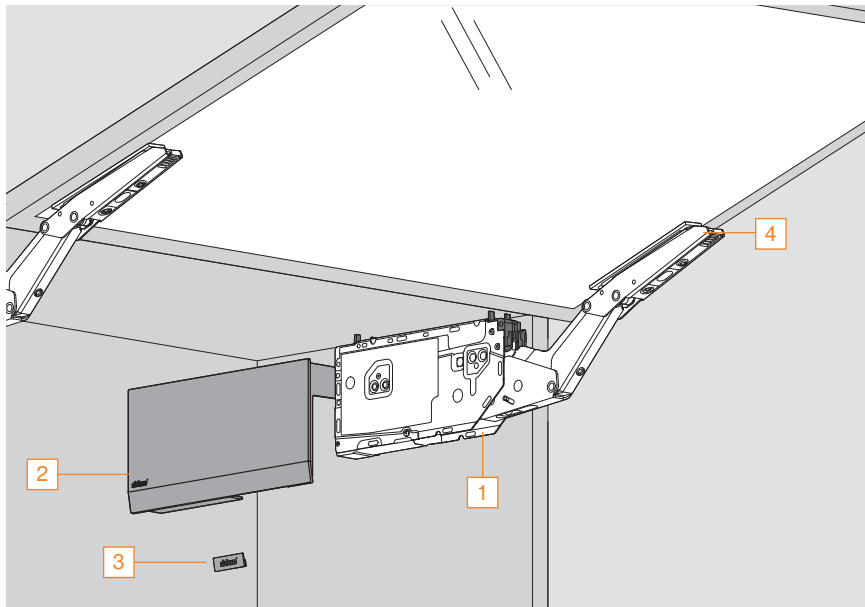
### Mounting plate with bracket for large overlay five-piece doors



### Five-piece door



**NOTE:** Hole locations offset by 19 (example: 12.5 + overlay - 19 = hole location from side)



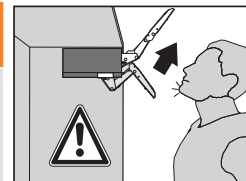
- Self-positioning mechanism with locating template eliminates complicated installation
- Integrated opening angle adjustment between 75° and 107°
- Cabinet height from **250** (10") to **610** (24")
- Cabinet width range **381** (15") to **1828** (72")
- Interior cabinet depth minimum of **187** (7-3/8")
- Optional: TIP-ON for AVENTOS
- If using a third lift mechanism for wider applications (power factor increases by up to 50%), we recommend a trial application.

**NOTE:** For wide cabinets, we recommend an additional lift mechanism be attached to the center panel to prevent the middle of the front from sagging when open.



**Warning: Risk of injury by spring-loaded lever arm!**

- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet



### Step 1 – Determine the Power Factor for the Application



Power factor = cabinet height (inch) x door weight\* (lb)

#### Determine power factor

To select the correct lift mechanism for a given application, the power factor must first be calculated by using the formula below. Use the table at the bottom of the page to convert ounces into decimal form for easy calculation.

Power factor = cabinet height multiplied by door weight\*

#### Example:

Cabinet height: 20" (within possible range)

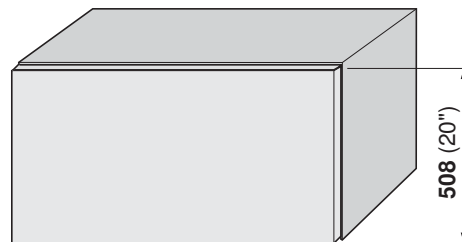
Door weight including twice the handle weight = 13 lb 14 oz (14 oz = .9 lb see chart below)

Power factor = 20 x 13.9

Power factor = 278

A power factor of 278 requires lift mechanism 22K2700

\*Including twice the handle weight



Door weight + twice handle weight = **13 lb 14 oz**

**NOTE:** AVENTOS planning tools available at [blum.com/planning](http://blum.com/planning)

Weight conversion chart

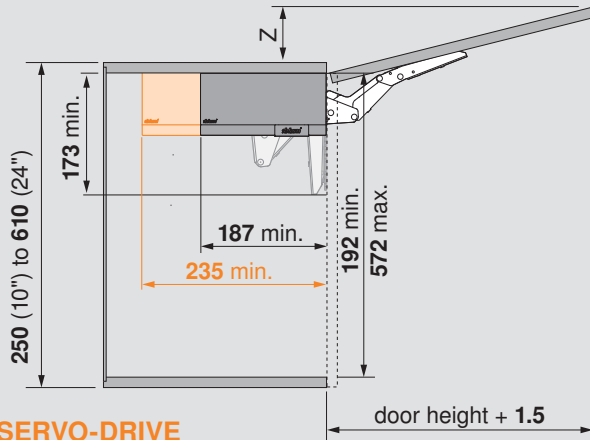
| oz | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| lb | .1 | .1 | .2 | .3 | .3 | .4 | .4 | .5 | .6 | .6 | .7 | .8 | .8 | .9 | .9 |

## Step 2 – Select the Required Components

| Lift mechanism sets               |   |   |
|-----------------------------------|---|---|
|                                   | <b>Set includes:</b><br><b>1</b> Lift mechanism (qty 2)<br>#7 x 35 (1-3/8") wood screw (qty 8)  | <b>NOTE:</b> Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms.         |
|                                   | <b>Power factor range</b>   | <b>Opening angle</b>  |
|                                   | 36 – 139  | 107°  |
|                                   | 80 – 240  | 107°  |
|                                   | 150 – 450   | 107°  |
|                                   | 270 – 781   | 107°  |
|                                   |   | Part no.  |
|                                   |   | <b>22K2300</b>  |
|                                   |   | <b>22K2500</b>  |
|                                   |   | <b>22K2700</b>  |
|                                   |   | <b>22K2900</b>  |
| Cover set                         |   |   |
|                                   | <b>Set includes:</b><br><b>2</b> Right and left cover plate<br><b>3</b> Non-handed cover cap (qty 2)  | <b>NOTE:</b> Light Gray, Dark Gray and Silk White options available<br>Light Gray (HGIG)<br>Dark Gray (TGIG)<br>Silk White (SWIG) |
|                                   |   | Part no.  |
|                                   | Cover set   | <b>22K8000.NA</b>   |
| Narrow aluminum door hardware set |   |   |
|                                   | <b>Set includes:</b><br><b>4</b> Arm assembly mounting plate (qty 2)<br>699.110 – Aluminum scREW for narrow aluminum lever arm mounting plate (qty 8) | Part no.  |
|                                   | Narrow aluminum door hardware set   | <b>20S4200A</b>   |

### Door and Hardware Clearance and Positioning

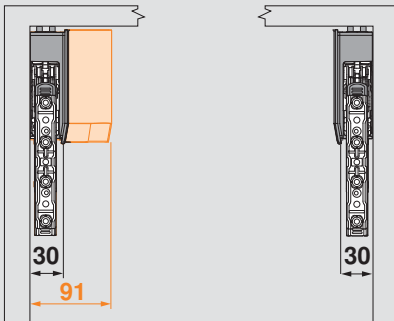
#### Door and hardware clearance



**SERVO-DRIVE**

**NOTE:**  $Z = \text{door height} \times 0.29 + \text{door thickness} - \text{top panel thickness}$

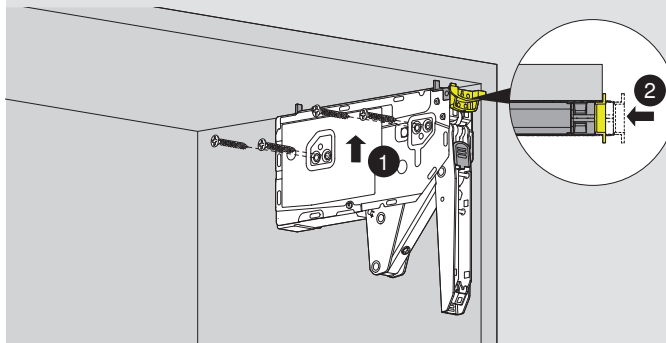
#### Lift mechanism clearance



**SERVO-DRIVE**

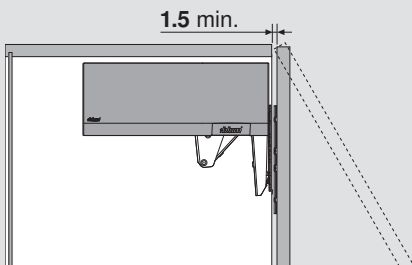
#### Lift mechanism positioning

Attachment for lift mechanism for wood screws including positioning template.



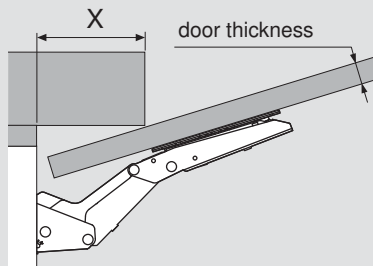
### Door and Hardware Clearance

#### Minimum gap



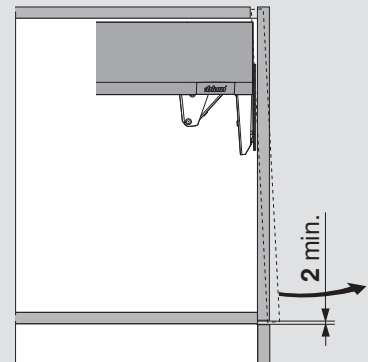
**NOTE:** Min gap assumes door radius of 1 and a maximum top overlay of 25.4

#### Decorative molding clearance



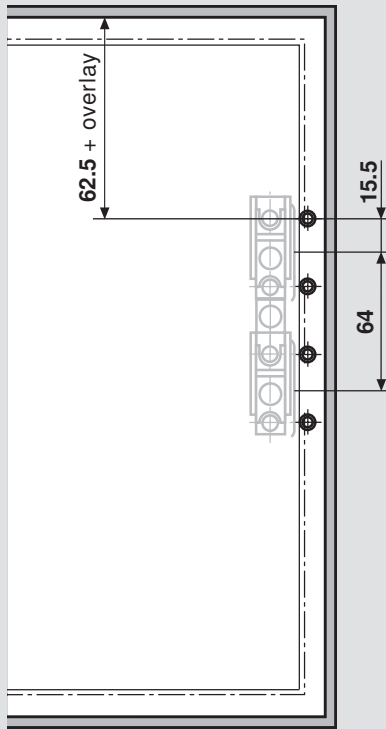
| Door thickness | 16 | 19 | 22 | 26 |
|----------------|----|----|----|----|
| maximum X      | 70 | 59 | 49 | 35 |

#### Minimum bottom reveal

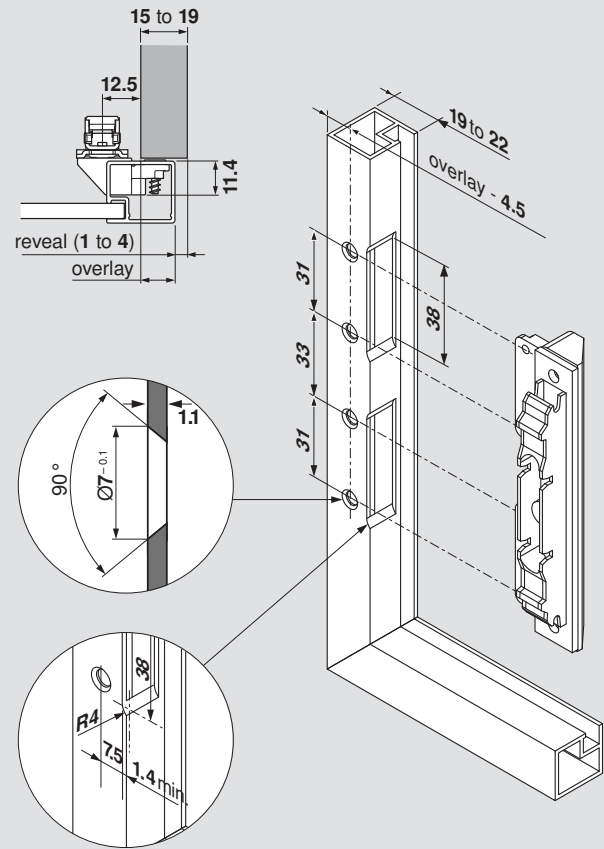




## Arm assembly mounting plate location

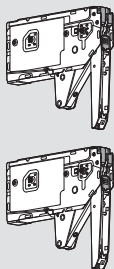


## Arm assembly mounting plate attachment



Follow the assembly instructions on page 16

### Lift mechanism sets



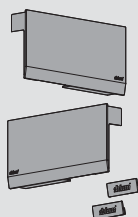
#### Set includes:

- Lift mechanism (qty 2)
- #7 x 35 mm (1-3/8") wood screw (qty 8)

**NOTE:** Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms.

| Power factor | Opening angle | Part no. |
|--------------|---------------|----------|
| 36 – 139     | 107°          | 22K2300T |
| 80 – 240     | 107°          | 22K2500T |
| 150 – 450    | 100°          | 22K2700T |
| 270 – 781    | 100°          | 22K2900T |

### Cover set



#### Set includes:

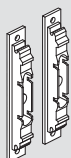
- Right and left cover plate
- Non-handed cover cap (qty 2)

**NOTE:** Light Gray, Dark Gray and Silk White options available.

|  |                   |
|--|-------------------|
|  | Light Gray (HGIG) |
|  | Dark Gray (TGIG)  |
|  | Silk White (SWIG) |

|           | Part no.   |
|-----------|------------|
| Cover set | 22K8000.NA |

### Wood or wide aluminum door hardware set



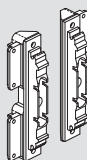
#### Set includes:

- Arm assembly mounting plate (qty 2)

|  | Part no.     |
|--|--------------|
| Wood or wide aluminum hardware set         | 20S4200      |
| Installation screw for wood doors          | 606N or 606P |
| Installation screw for wide aluminum doors | 7072A        |

**NOTE:** Refer to pages 8-9 for installation specifications

### Narrow aluminum door hardware set



#### Set includes:

- Arm assembly mounting plate (qty 2)
- 669.110 aluminum screw for narrow aluminum lever arm mounting plate (qty 8)

|                                   | Part no. |
|-----------------------------------|----------|
| Narrow aluminum door hardware set | 20S4200A |

**NOTE:** Refer to pages 12-13 for installation specifications

## AVENTOS HK top Ordering Information for TIP-ON

AVENTOS

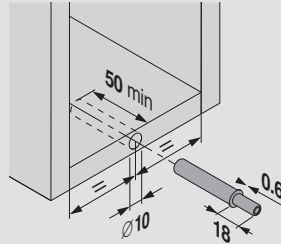


### TIP-ON set for standard doors



- White (SEIW)
- Gray (R736)
- Black (TERS)

Use of screw-on catch plate  
required for all applications



- Nylon gray unit with magnet tip
- Adjustment range +4 mm to -1 mm
- For door heights up to **400** (15-3/4")
- Works for overlay and inset applications
- Can be bored into the panel or used with an adapter plate

#### Set includes:

- TIP-ON unit
- Self-adhesive catch plate
- Screw-on catch plate
- Wood screw

Part no.

**NOTE:** Due to various door weights and sizes, trial application recommended

Standard door set

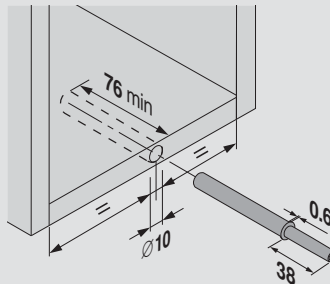
**956.1004**

### TIP-ON set for large doors



- White (SEIW)
- Gray (R736)
- Black (TERS)

Use of screw-on catch plate  
required for all applications



- Nylon gray unit with magnet tip
- Adjustment range +4 mm to -1 mm
- For door heights greater than **400** (15-3/4")
- Works for overlay and inset applications
- Can be bored into the panel or used with an adapter plate

#### Set includes:

- TIP-ON unit
- Self-adhesive catch plate
- Screw-on catch plate
- Wood screw

Part no.

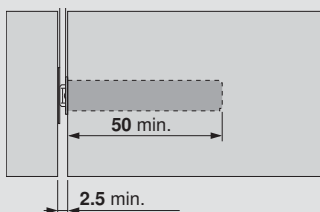
**NOTE:** Due to various door weights and sizes, trial application recommended

Large door set

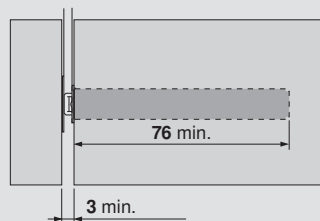
**956A1004**

### TIP-ON for AVENTOS specifications

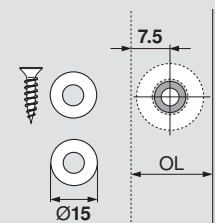
#### Standard doors



#### Large doors



### Screw-on catch plate specifications

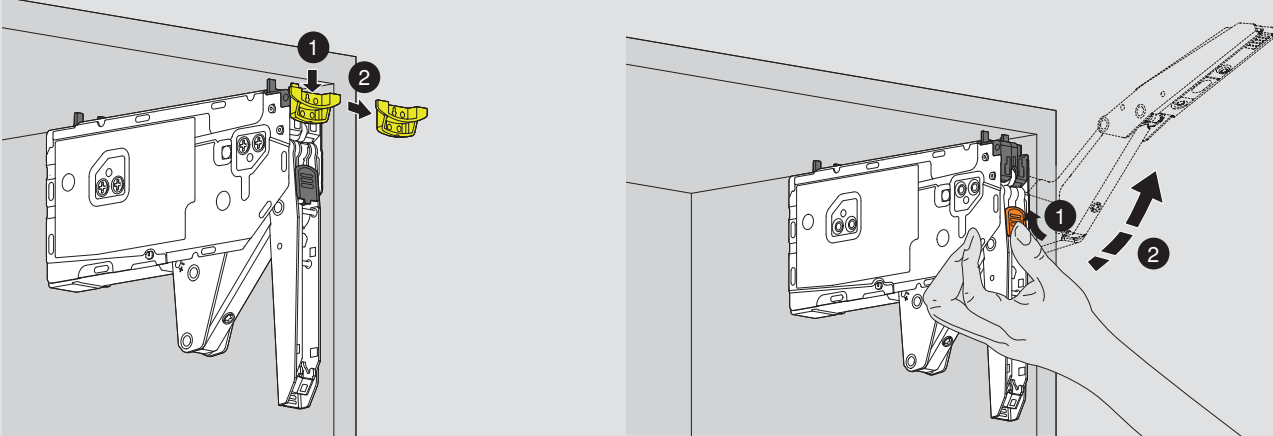


Pre-boring Ø2.5 countersunk  
pilot holes are required

For TIP-ON adapter plate mounting please refer to the Concealed hinges brochure.

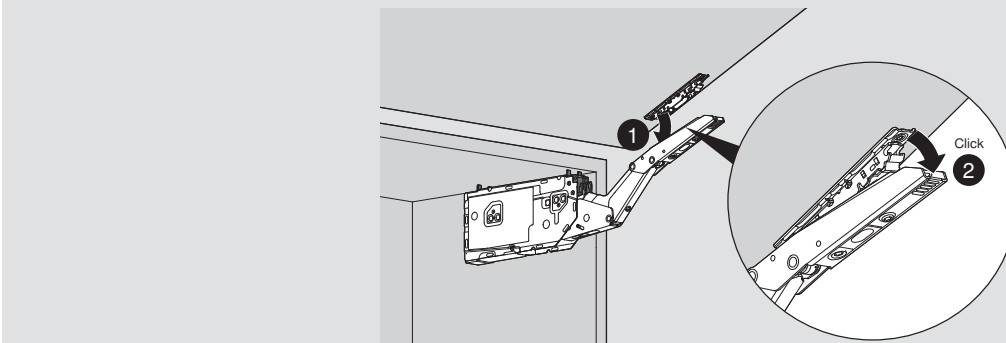
### Remove positioning template

- 1 Push the positioning template down to remove.
- 2 Press up on arm release slide then slowly raise the arm to the upright position.



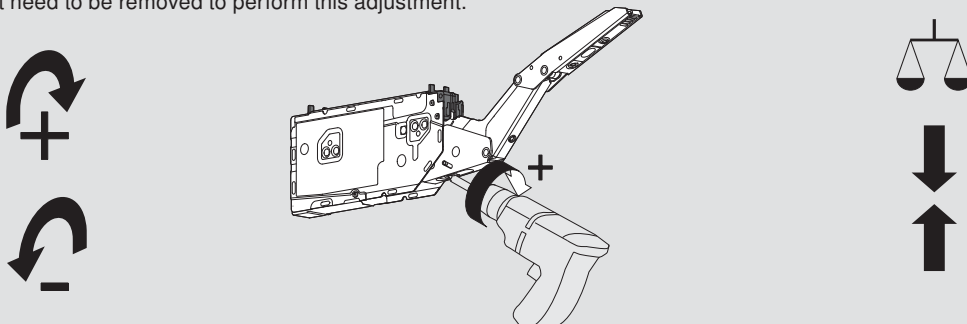
### Attaching AVENTOS HK top doors

Attach the door using the CLIP mechanism to the arm assembly.



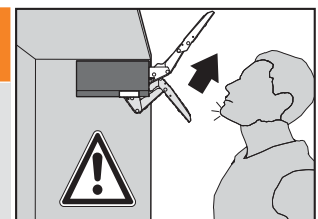
### Adjust the lift mechanism

Use a T20 TORX screwdriver or screw gun and a T20 TORX bit to adjust the lift mechanism to the desired tension (door weight balanced). Cover cap does not need to be removed to perform this adjustment.



**Warning: Risk of injury by spring-loaded lever arm!**

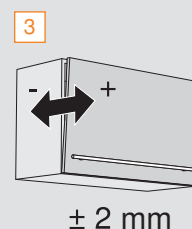
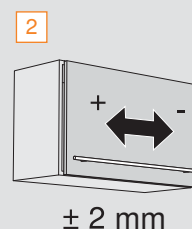
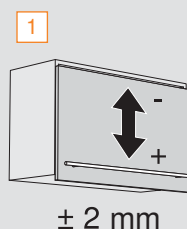
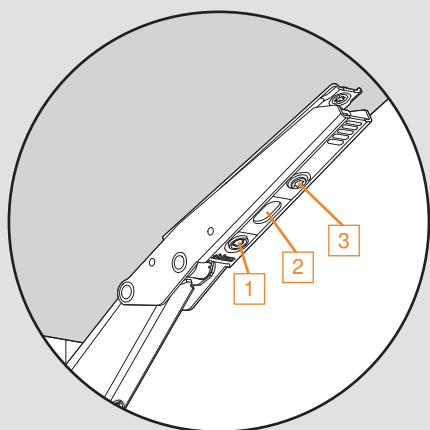
- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet





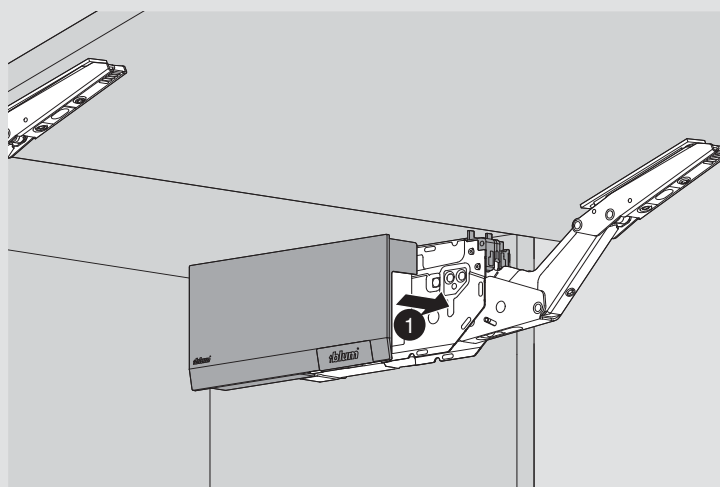
## AVENTOS HK top door adjustment

Use a T20 TORX screwdriver to perform cam adjustments for each of the three-dimensional door adjustments.



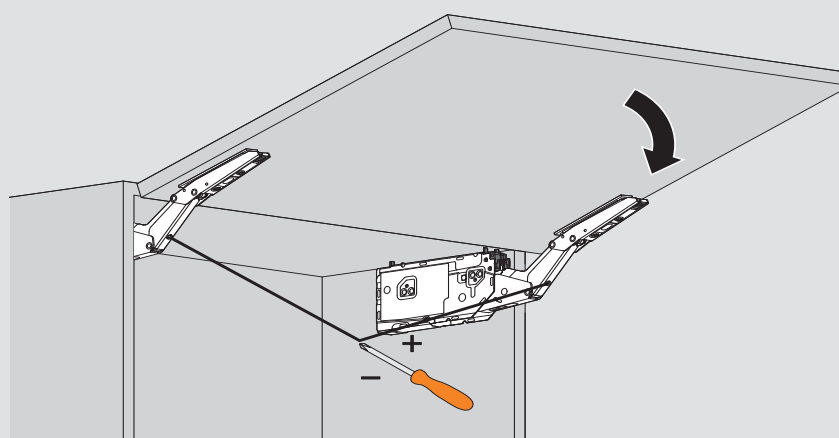
## Attaching cover caps

Place the left and right cover plates over the appropriate lift mechanisms, and snap them in place.



## Adjust opening angle

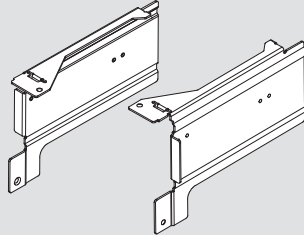
Turn adjustment screw, with a T20 TORX screwdriver, until tight on both sides and desired angle is reached.



**NOTE:** Adjustments can be made with the cap on

### AVENTOS HK top face frame mounting bracket set

- Brackets for mounting AVENTOS HK top in face frame cabinet
- Minimum recess of **12.5** (1/2")
- Provides accurate mounting position for lift mechanism



#### Set includes:

- Right and left brackets
- M4 x 30** lift mounting screws (qty 12)

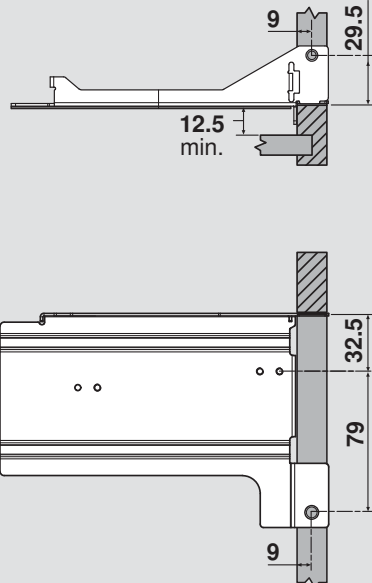
Part no.

HK top frame mounting bracket set

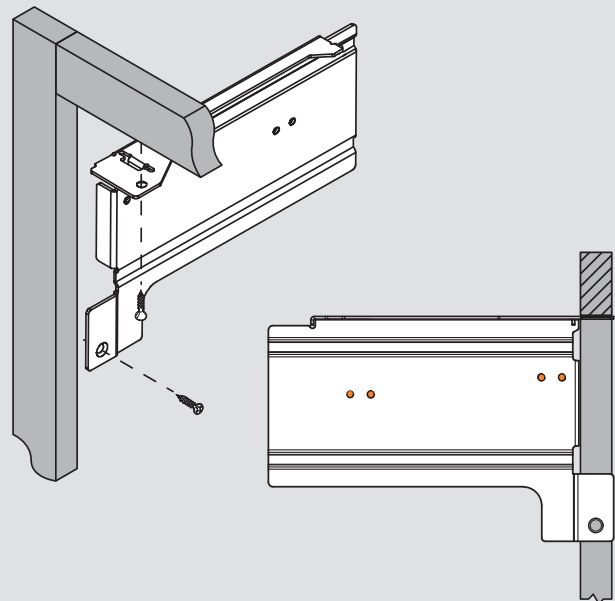
**22K6001**

### AVENTOS HK top face frame bracket mounting locations

Fixed setback allowing for up to **25.4** top overlay.



Attach bracket to face frame with two #7 x 3/4" (7074N) wood screws. Attach lift mechanism to bracket with four **M4 x 30** machine screws (included).



**NOTE:** Machine screw mounting locations marked in orange

## Assembly Aids

## AVENTOS



### TORX DRIVER

- For AVENTOS HK top and LEGRABOX adjustments
- TORX size 20 (T20)
- Blade length **100**
- Total length **210**



Part no.

T20 TORX DRIVER

**TORX DRIVER**

### Short TORX DRIVER

- For AVENTOS HK top and LEGRABOX adjustments
- TORX size 20 (T20)
- Blade length **35**



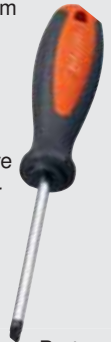
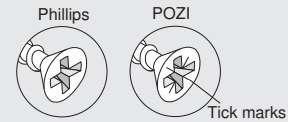
Part no.

T20 TORX DRIVER

**SHORT TORX DRIVER**

### POZI DRIVER

A POZI screwdriver (different from Phillips) is the most crucial tool you can use to assure that full torque is applied to all Blum mounting screws. POZI screws can be identified by the distinctive "tick" marks located in the center of the screwhead recess.



Part no.

#2 POZI DRIVER

**POZI DRIVER**

1/4" Magnetic bit holder

**BIT HOLDER**

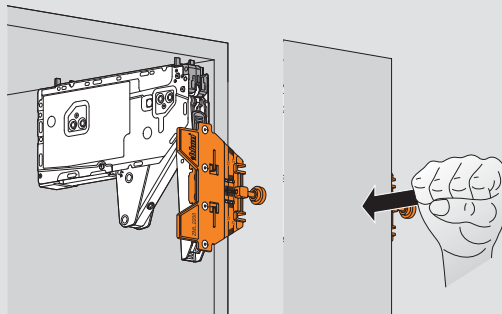
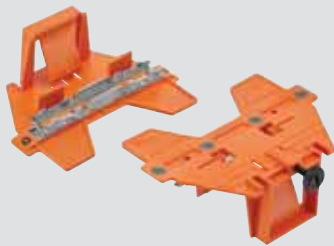
#2 x 1" POZI bit insert

**POZI BIT #2X1**

#2 x 2" POZI bit insert

**POZI BIT #2X2**

### Front marking template for HK top



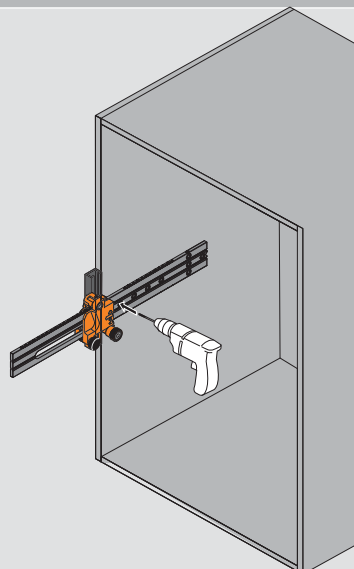
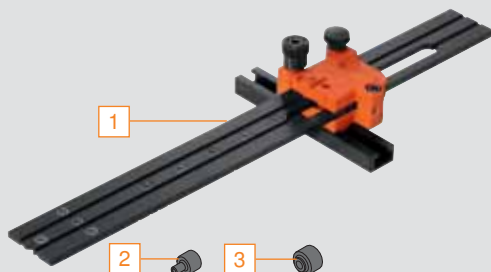
- Used to determine the location for the arm assembly mounting plate
- Side overlay adjustable from **12** to **21** mm
- Calibrated scale for accurate setting
- Only intended for frameless cabinets
- Instructions included with template

Part no.

Template

**ZML.2200**

### Universal individual template



- Used to pre-bore for AVENTOS lift mechanism locating pins
- Also used for pre-boring for cabinet profiles and BLUMOTION for doors and TIP-ON for doors adapter plates
- Calibrated scale for accurate setting

#### Set includes:

- Universal individual template
- Ø2.5 stop collar
- Ø5 stop collar

Part no.

Template

**65.1051.02**

Ø2.5 drill bit

**DB-2.5mm R**

Ø5 drill bit

**DB-5mm R**

# SERVO-DRIVE for AVENTOS HK top

AVENTOS HK top is also compatible with other Blum motion technologies that help create an awe-inspiring space, like SERVO-DRIVE, our electrical motion support system. With one-touch opening and closing, SERVO-DRIVE increases the functionality of the cabinet, and even with the added electrical drive unit, the mechanism remains impressively compact.







## Contents

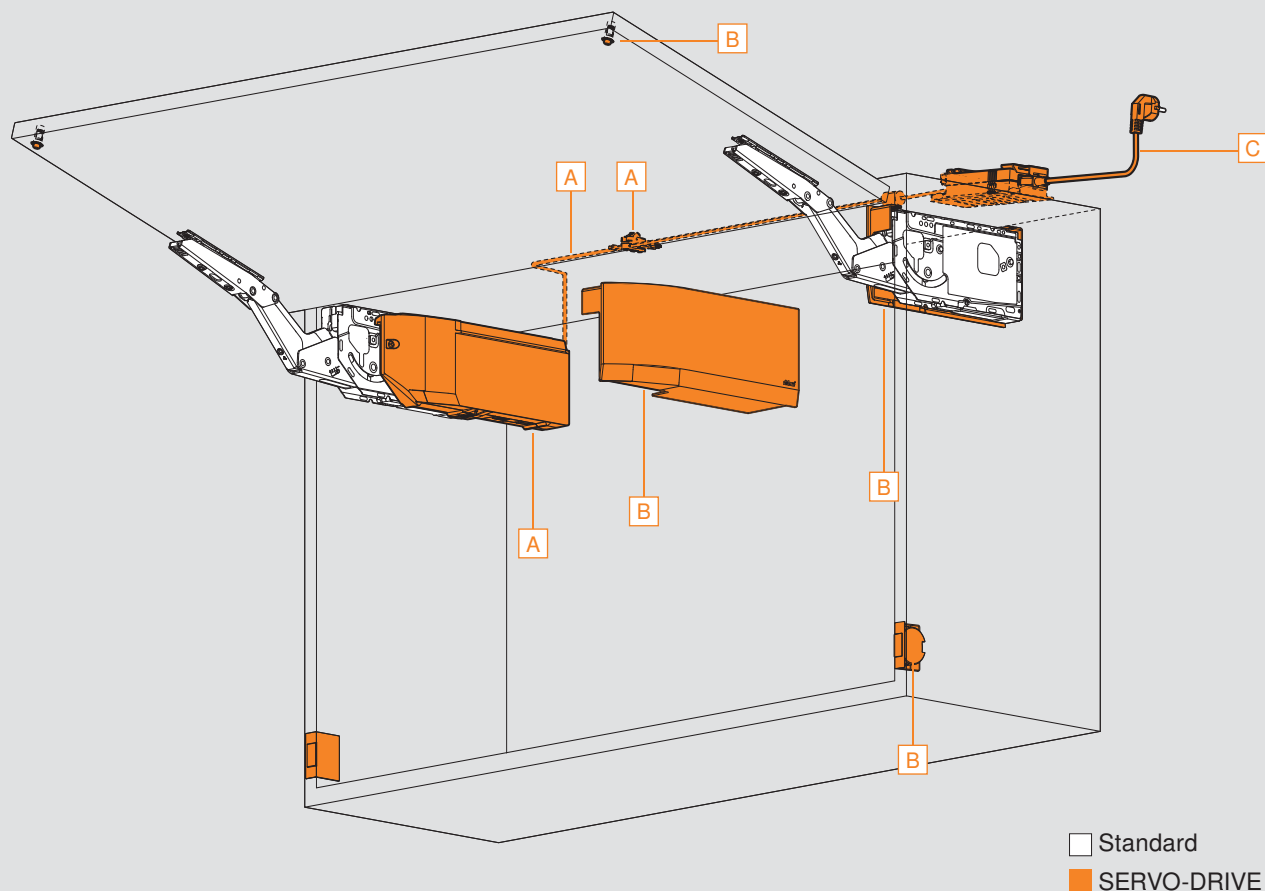
### SERVO-DRIVE for AVENTOS HK top

- 22** SERVO-DRIVE Ordering Information
- 23** Electrical Components
- 25** Assembly for HK top SERVO-DRIVE
- 27** Activating SERVO-DRIVE
- 30** Additional Features
- 33** Deactivating SERVO-DRIVE

# SERVO-DRIVE for AVENTOS HK top



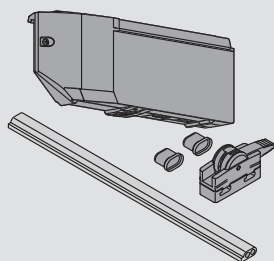
## AVENTOS HK top SERVO-DRIVE Ordering Information



### SERVO-DRIVE set

#### A Set includes:

- Drive unit
- 60" universal cable
- Cable connector
- Cable end protector (qty 2)



Part no.

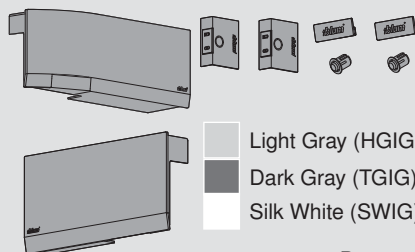
SERVO-DRIVE set

**23KA000**

### Cover set

#### B Set includes:

- SERVO-DRIVE cover plate (left)
- Cover plate (right)
- Non-handed cover cap (qty 2)
- SERVO-DRIVE switches (qty 2)
- Ø5 Blum distance bumper (qty 2)
- Color options: light gray, dark gray or silk white



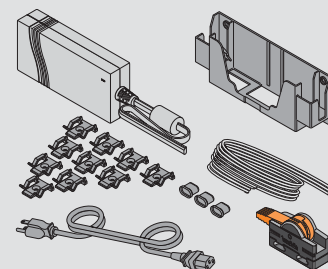
Part no.

Cover set

**23K8000.NA**

### Power Supply

#### C Power supply options - see page 23

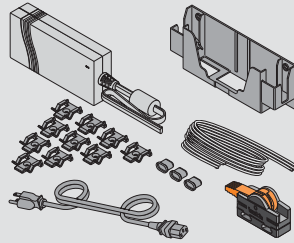


**NOTE:** For additional AVENTOS HK top components and installation instructions, see pages 7-9

## Option 1: Power supply set

### Set includes:

- Power supply
- Wall mount bracket
- Three-prong power cord
- Cable connector
- Cable end protector (qty 3)
- Cable clips (qty 10)
- 19 feet universal cable



Part no.

Power supply set

**Z10NE03UG10**

## Option 2: SERVO-DRIVE uno power supply

Supplies power to a single drive unit

- 44" power cord
- Extendable up to 6 feet using cable connectors (sold separately)



Part no.

Power supply set

**Z10NA30UGF**

## SERVO-DRIVE switch

For adding additional activation switches to a SERVO-DRIVE for AVENTOS application.

- Up to six switches can be added per drive unit
- Color options: light gray, dark gray or silk white



**NOTE:** A switch can only be synchronized to one drive unit

Part no.

SERVO-DRIVE switch (set of 2)

**23P5020**

## SERVO-DRIVE switch adapter

- Used for face frame and frameless applications
- Doesn't require boring into side of cabinet
- Color options: light gray, dark gray or silk white



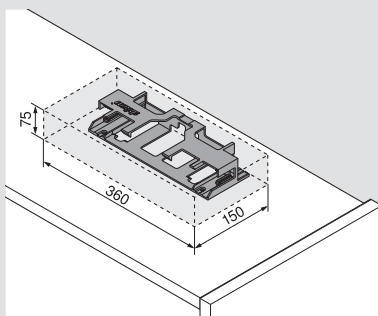
Part no.

SERVO-DRIVE switch adapter

**23P5216**

## Space requirements and safety distance for power supply

A safety distance of **30 mm** must be maintained for air circulation



## Output specifications

|                          |  |
|--------------------------|--|
| Output voltage           | 24 VDC   |
| Output power             | 24 W continuous / 12 W continuous*                     |
| Minimum load             | None   |
| Over voltage protection  | At 33 VDC  |
| Overload protection      | 10.5 A hiccup trip and restart mode with auto recovery |
| Short circuit protection | Continuous   |

\*12 W Output power applies to SERVO-DRIVE uno only

## Environmental information

|                       |                 |
|-----------------------|-----------------|
| Operating temperature | 32° F–104° F    |
| Storage temperature   | -4° F to 185° F |
| Protection            | IP40            |

## Input specifications

|                       |                          |
|-----------------------|--------------------------|
| Input voltage         | 100-240 VAC              |
| Input frequency       | 50-60 Hz                 |
| Input current         | 0.6 A                    |
| Inrush current        | 100 A maximum at 240 VAC |
| Protection class      | Class I                  |
| Earth leakage current | 3.5 mA maximum           |

## General specifications

|                        |                |
|------------------------|----------------|
| Efficiency             | ≥ 87%          |
| Switching frequency    | 65 kHz typical |
| No load loss (standby) | < 0.075 W      |
| Energy Star            | Level VI       |

## Safety / Approvals

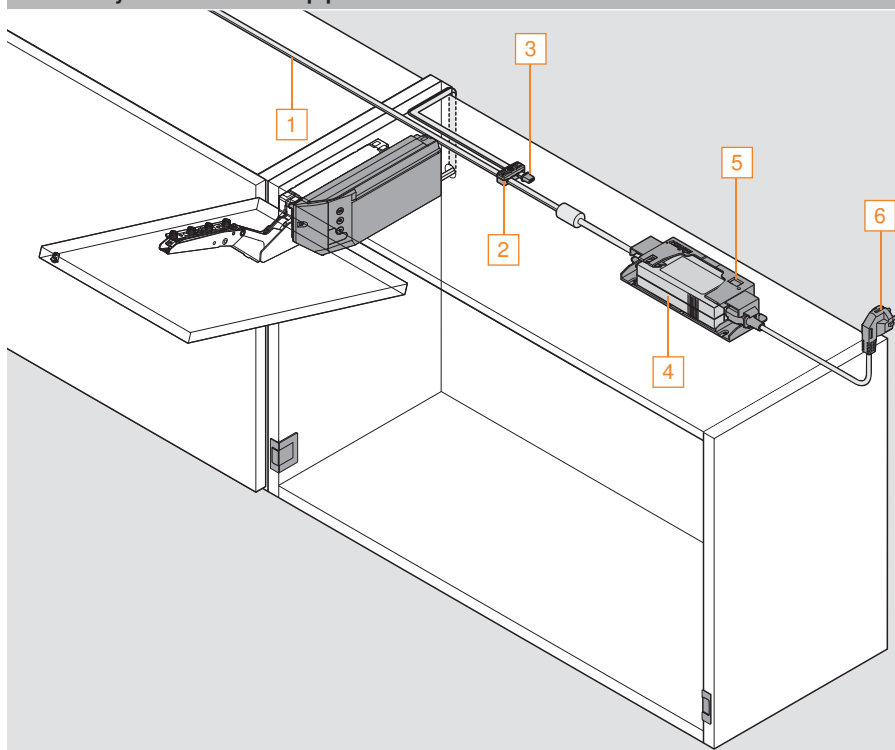
|          |                |
|----------|----------------|
| EN / IEC | 60950, 60335-1 |
| UL       | 60950-1        |

# SERVO-DRIVE for AVENTOS HK top



## Wiring Options

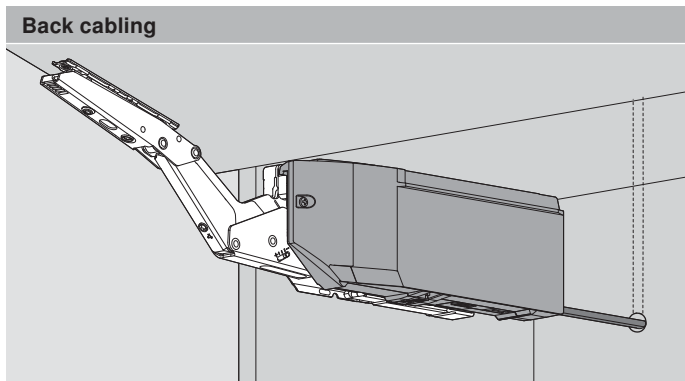
### Assembly on the cabinet top panel



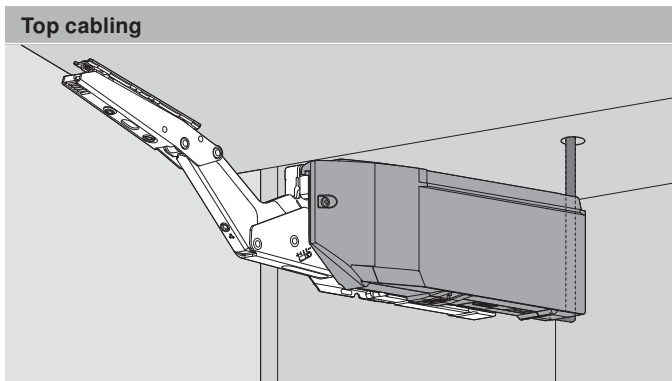
- 1 Distribution cable for cutting to size
- 2 Connecting node
- 3 Cable end protector
- 4 Blum transformer
- 5 Transformer unit housing
- 6 Plug

**i** Only one Blum transformer can be connected to each distribution cable.

### Back cabling

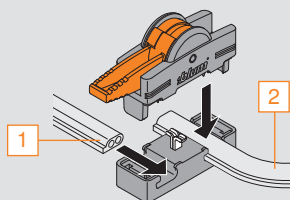


### Top cabling

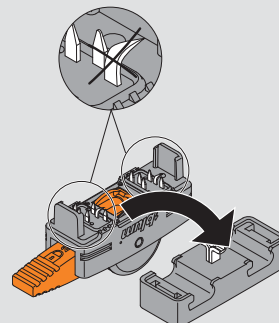
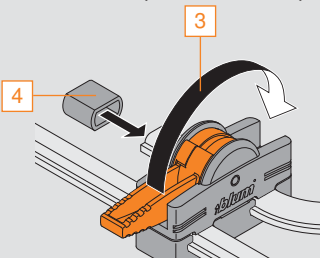


### Installing cable connector

- 1 Insert cable for distribution into open slot
- 2 Insert cable for power into open slot



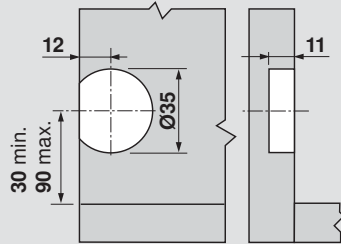
- 3 Rotate orange lever to lock into place
- 4 Slide cable end protector over exposed cable



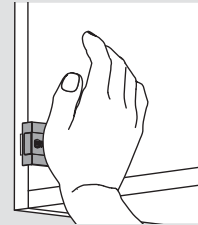
**NOTE:** Ensure piercing pins are not damaged



### Installation of SERVO-DRIVE activation switch

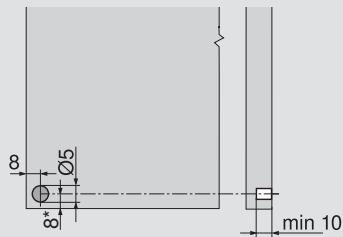


The activation switch should be installed by pressing into the cabinet side with your hand. Do not use hammer to install.



**NOTE:** Use of boring template (M31.2000) recommended, see page 35

### Installation of Blum distance bumpers



Install into door front.



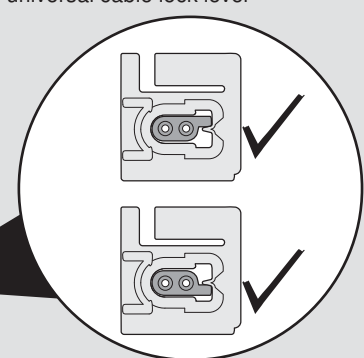
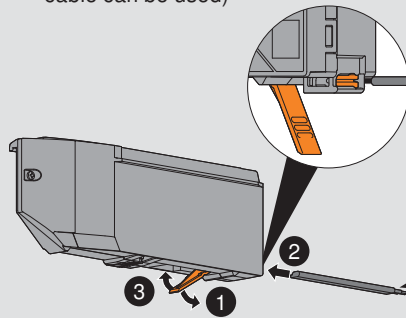
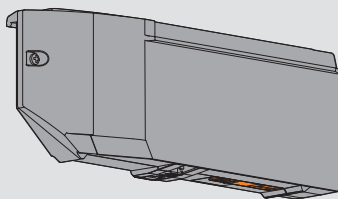
**NOTE:** The distance bumper should not touch the SERVO-DRIVE switch

### Installation of universal cable

**1** Pull down orange universal cable lock lever

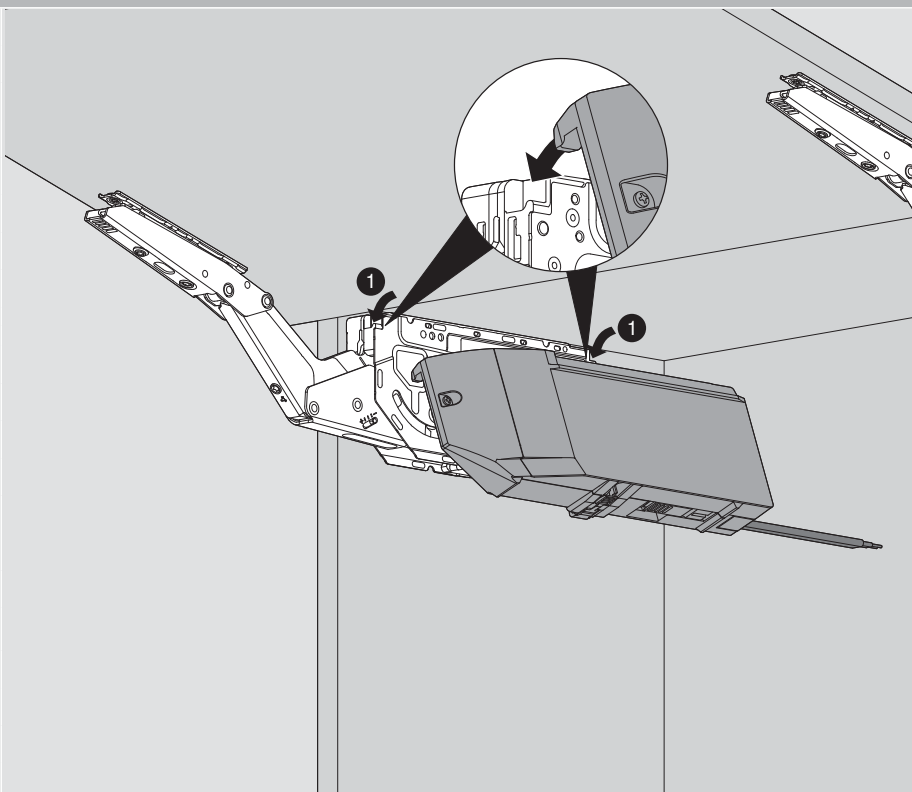
**2** Insert universal cable (either end of the cable can be used)

**3** Once cable is inserted, push up on universal cable lock lever

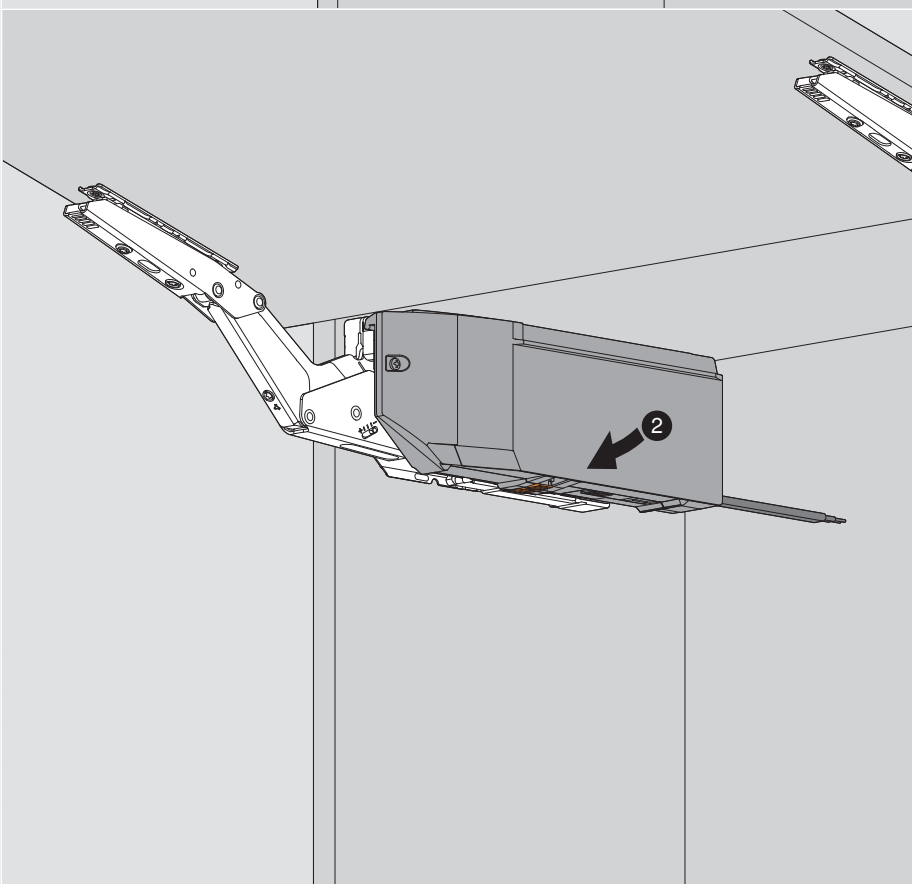


Drive unit installation

- 1 Position drive unit onto lift mechanism with locating tabs.



- 2 To lock drive unit to the lift mechanism, hold drive unit in place and press the bottom of the drive unit to click into place. Drive unit pin will self-locate during reference run.



## Overview of Functions

SERVO-DRIVE for  
AVENTOS HK top



### Start-Up

**A** Activating the SERVO-DRIVE switch

### Additional Features

Optional

**C** Activating synchronization

**B** Start reference run

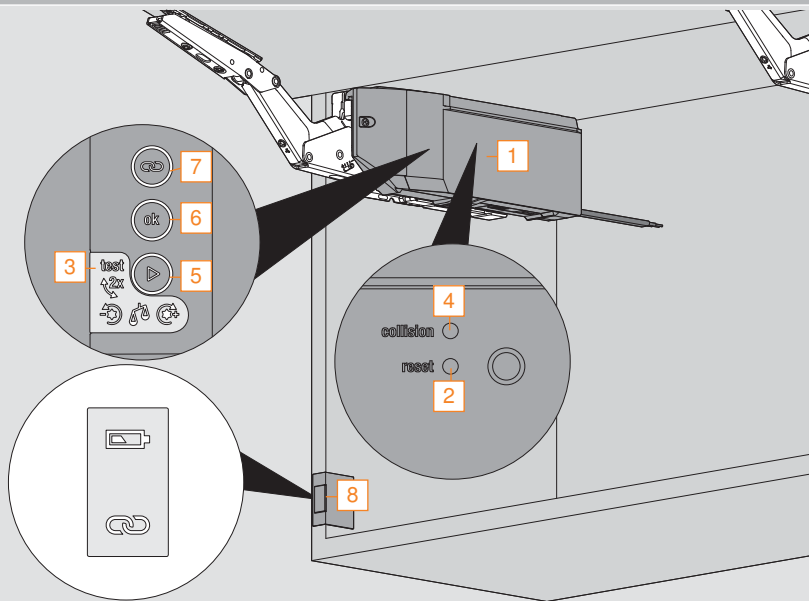
Optional

**D** Activating collision avoidance

### Deactivation

**E** Reset to Default

### Function buttons layout



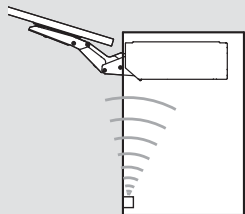
- 1 Drive unit
- 2 <Reset> button
- 3 LED
- 4 <Collision> button
- 5 <Play> button
- 6 <Ok> button
- 7 <Link> button
- 8 SERVO-DRIVE switch




# SERVO-DRIVE for AVENTOS HK top



## Start-Up

### A Linking the SERVO-DRIVE switch

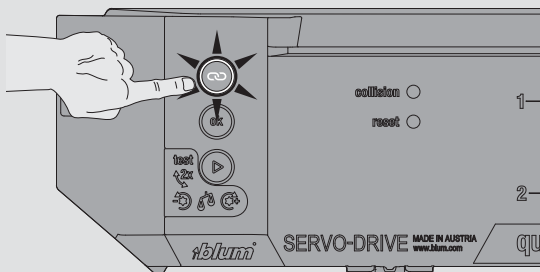


-  Operation
-  Lights up continuously
-  Flashes

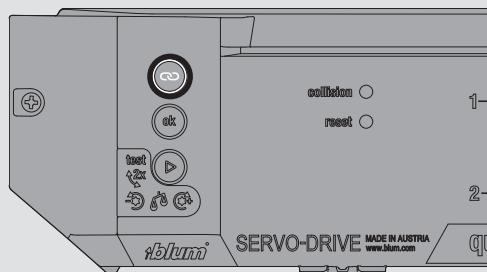
Set up the wireless connection between the SERVO-DRIVE switch and the drive unit. Each switch can only be assigned to one SERVO-DRIVE unit.

**NOTE:** Up to 6 switches can be programmed to a single drive unit

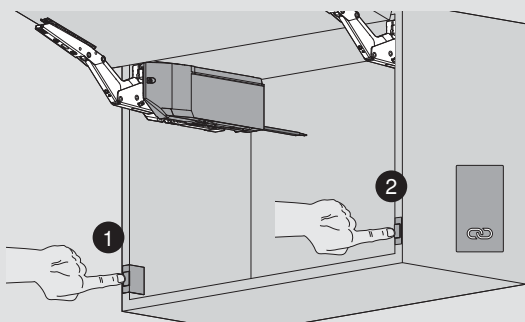
#### 1 Press flashing link button.



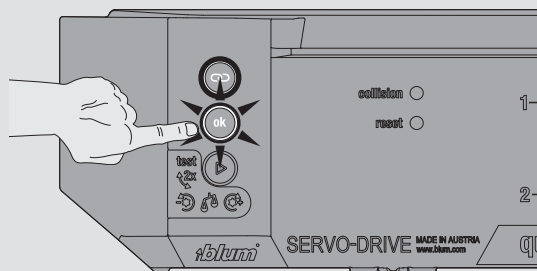
#### 2 Link button lights continuously.



#### 3 Press each switch to link.



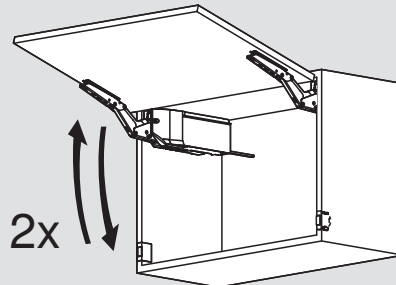
#### 4 Press flashing "ok" button to complete linking.



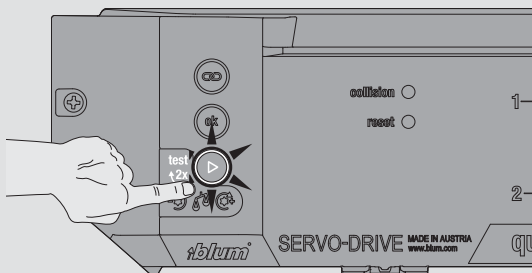
#### 5 Proceed to start reference run. Page 29

## B Start reference run

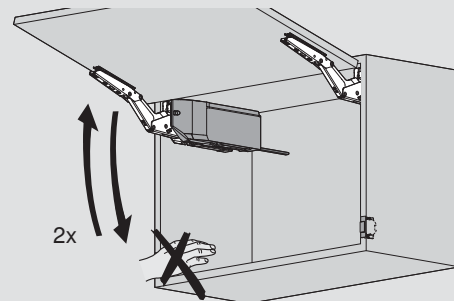
The drive unit recognizes the required parameters using the reference run.



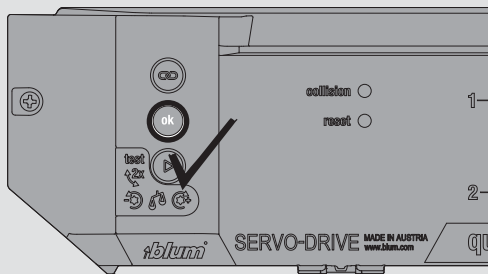
1 Press flashing play button.



2 Door will cycle twice. Do not interrupt.

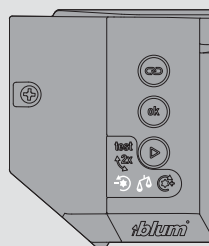


3 Ok button lights continuously. Setup complete.

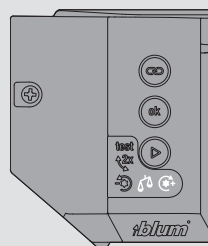


## Reference run with error detection.

1 Unbalanced door error detection after reference run.

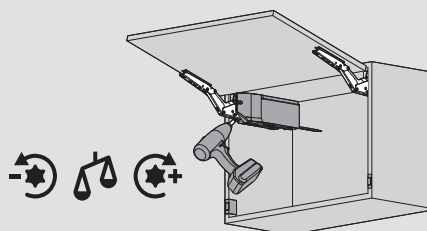


Too much tension.

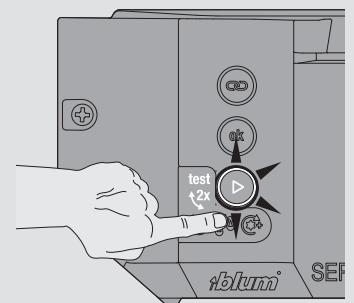


Not enough tension.

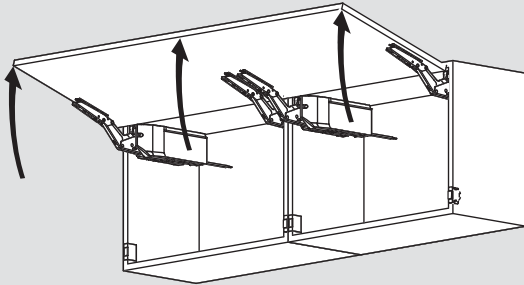
2 Adjust tension accordingly to balance door.



3 Press play button to perform reference run again.



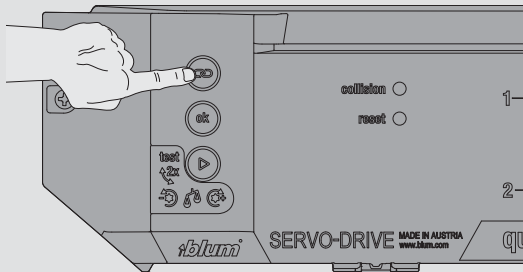
**C** Activating synchronization



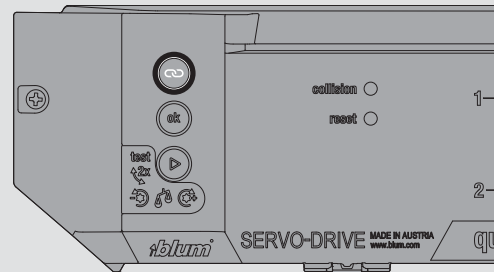
Up to three drive units can be synchronized allowing them to move simultaneously. This function is required for several cabinets with a single front.

**NOTE:** Up to 6 switches can be programmed to a single drive unit

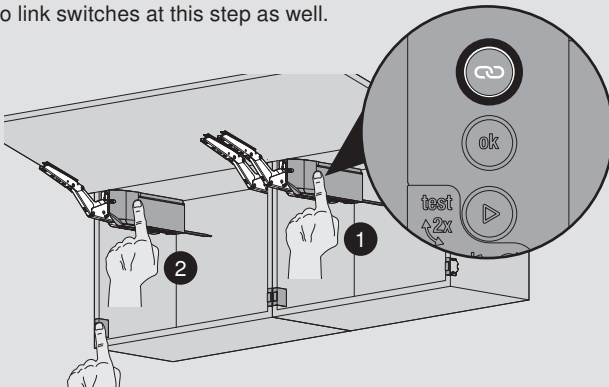
**1** Press link button on first drive unit.



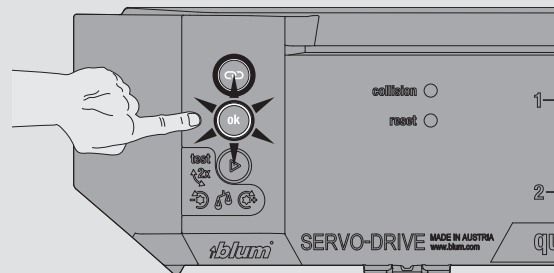
**2** Link button lights continuously.



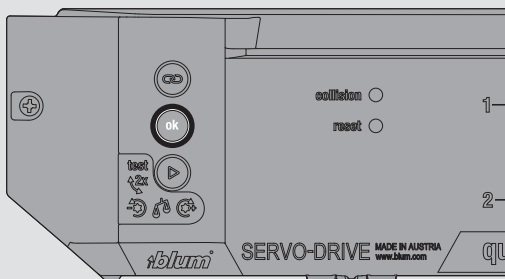
**3** Press link button on second drive unit. Recommended to link switches at this step as well.



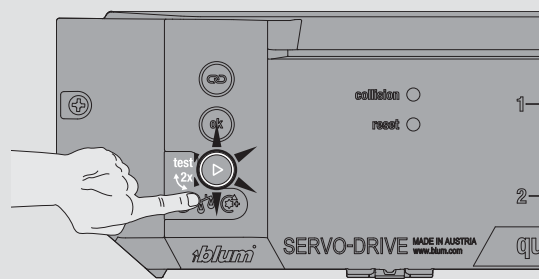
**4** Confirm link by pressing flashing ok button.



**5** Ok button lights continuously.



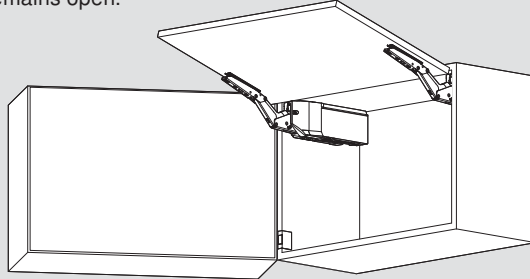
**6** Press flashing play button to start reference run and complete synchronization.



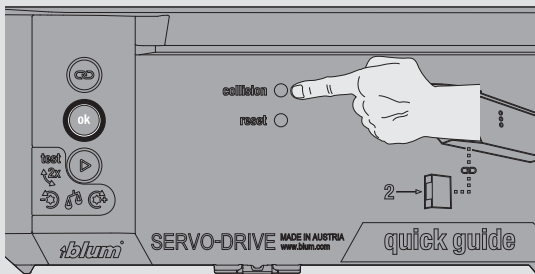


**D Activating collision avoidance**

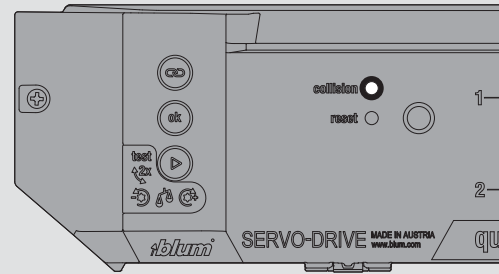
To avoid the collision of fronts, drive units (max. 6) can be linked so that only one front can be opened at a time. A front is prevented from opening as long as a linked front remains open.



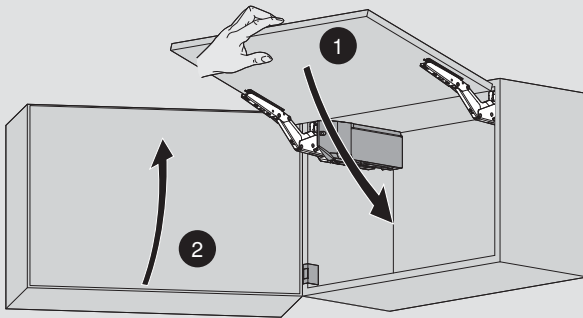
**1** Press collision button on first drive unit.



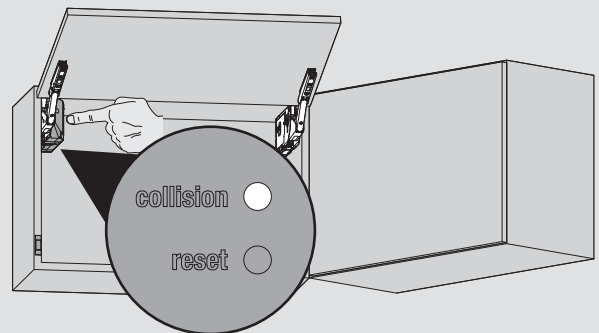
**2** Collision button will light blue continuously.



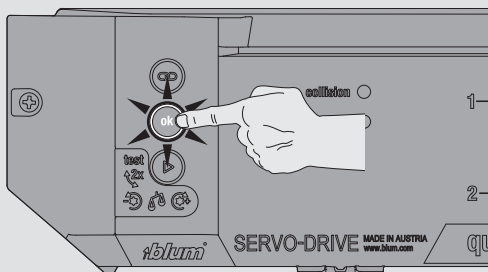
**3** Close door one and open door two.



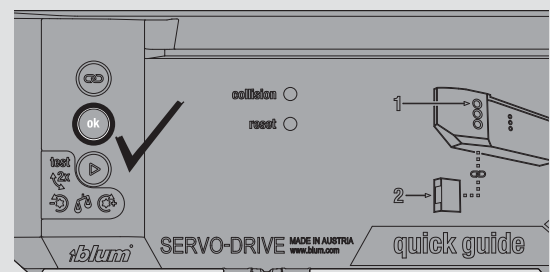
**4** Press collision button on second drive unit.



**5** Press flashing ok button to complete link.



**6** Link complete when ok button lights continuously.

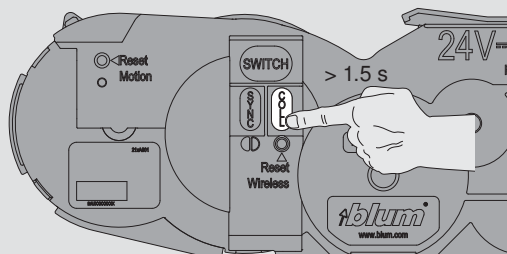


## SERVO-DRIVE for AVENTOS HK top

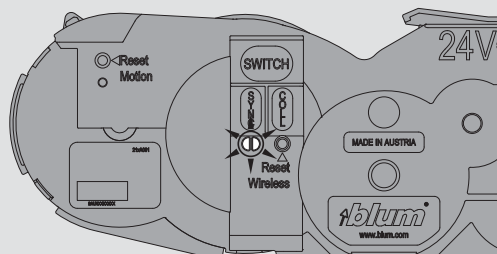


## Collision Avoidance with Other Drive Units

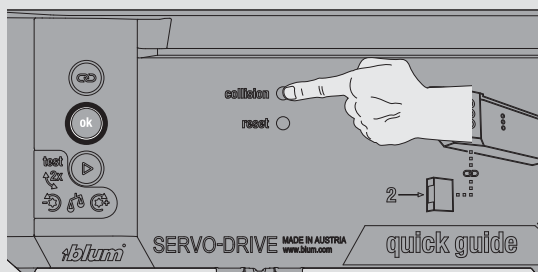
- 1 Press and hold COLL button on drive unit until...



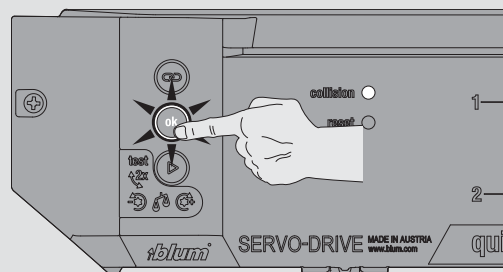
- 2 Flashing green light appears. Close door.



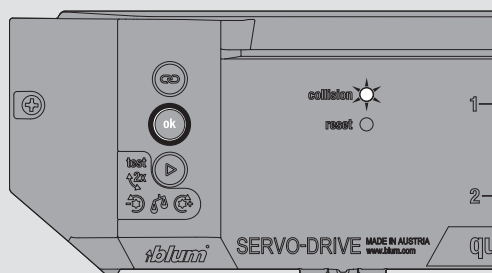
- 3 Open HK top door and press collision button on HK top drive unit.



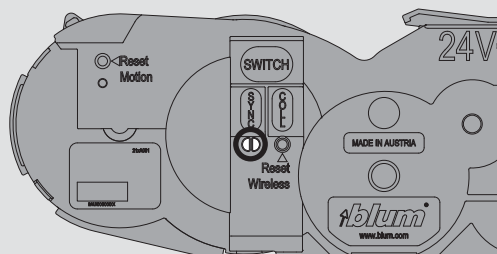
- 4 Press flashing ok button.



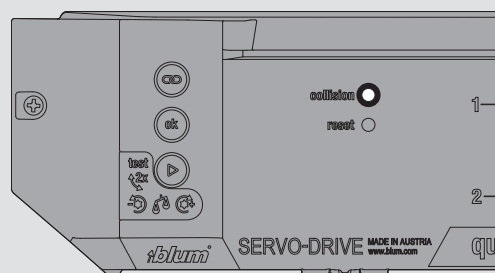
- 5 Collision button on HK top drive unit will begin to flash.



- 6 LED lights continuously on other unit.



- 7 Collision button lights continuously.



- 8 Link complete when ok button lights continuously.

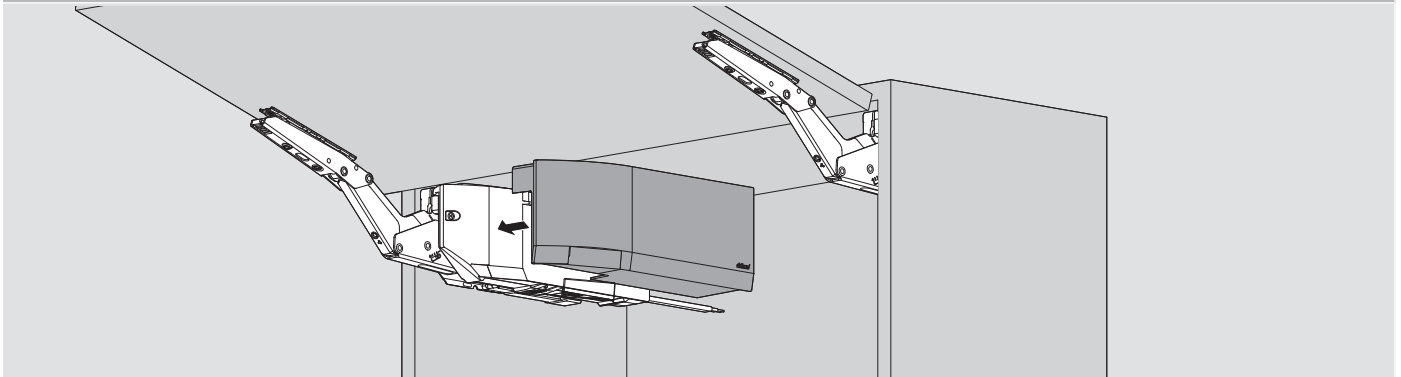


## Cover Cap Assembly, Switch Battery Replacement, and Drive Unit Reset

SERVO-DRIVE for  
AVENTOS HK top



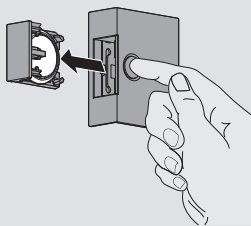
### Cover cap assembly



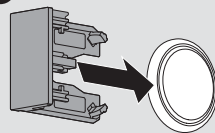
### Replacing the SERVO-DRIVE switch battery

When the battery power begins to weaken, the battery display (LED) begins to flash red. If the battery is inserted incorrectly, the SERVO-DRIVE switch battery display will flash red.

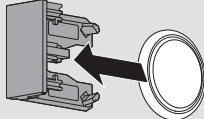
- 1 Press release button on switch and remove battery tray.



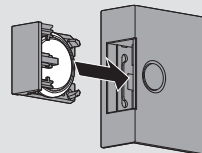
- 2 Remove old battery.



- 3 Replace with new battery.



- 4 Insert battery tray back into switch.



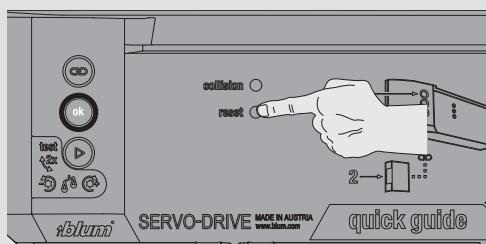
- Open the SERVO-DRIVE switch and remove the battery
- Insert the new battery (type CR2032) and close the SERVO-DRIVE switch - note correct polarity +/-

**Note:** The SERVO-DRIVE switch battery must not be recharged or discarded into fire.

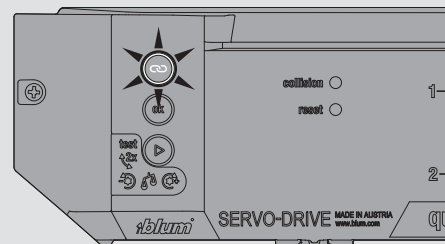
### E Reset

Reset the drive unit to the factory setting.

- 1 Press reset button.



- 2 Link button will flash continuously when reset complete.



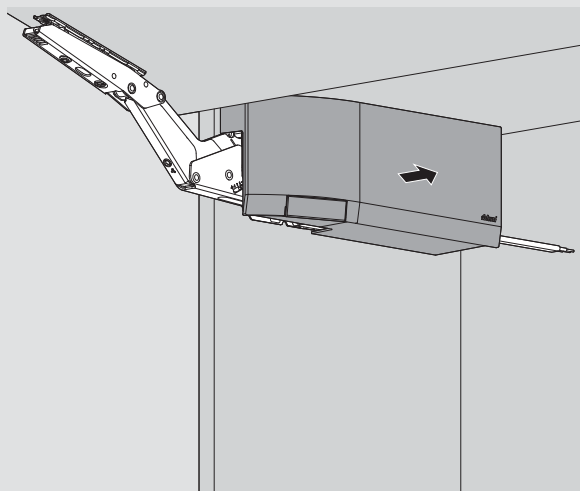
## SERVO-DRIVE for AVENTOS HK top



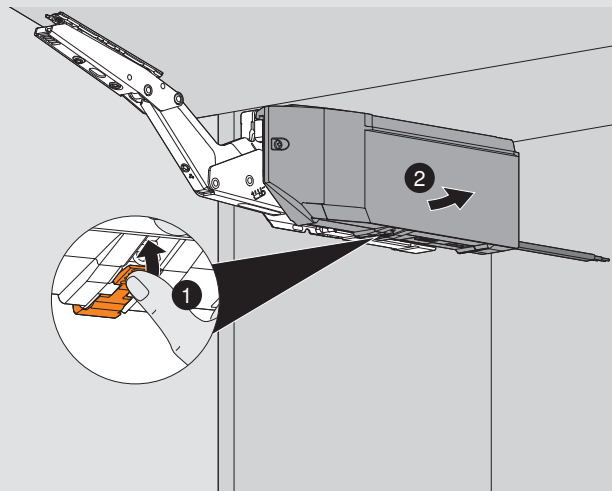
## Removal

### SERVO-DRIVE removal

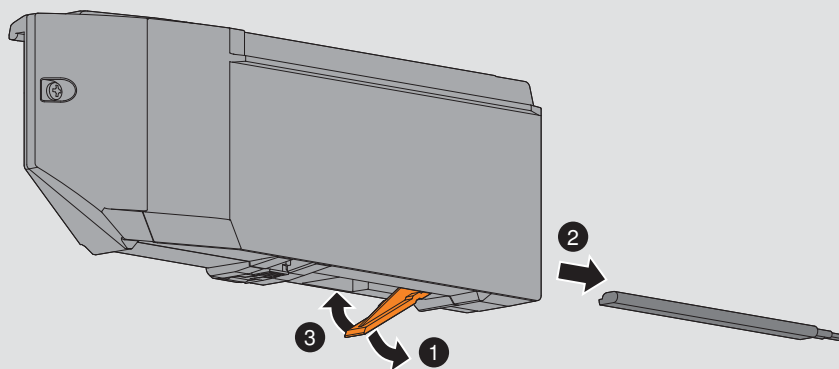
- 1 Remove cover cap.



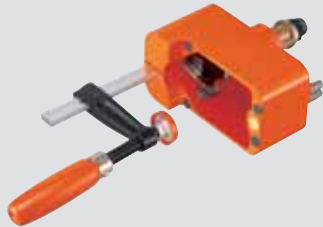
- 2 Press on drive unit release clip and lift unit off lift mechanism.



- 3 Remove distribution/power cable.



### SERVO-DRIVE switch boring template



- For easy installation of SERVO-DRIVE for AVENTOS switch
- Clamp assembly for secure boring

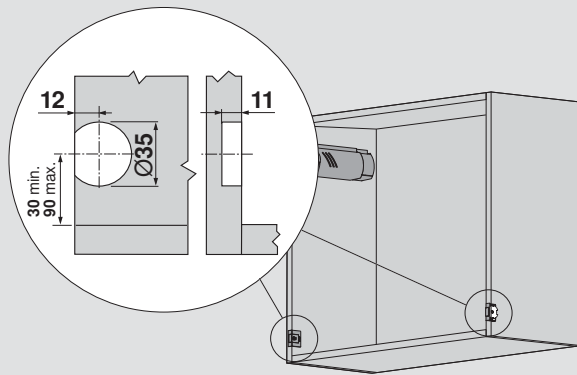
#### Set includes:

- Ø35 mm bit
- Torx driver bit (qty 2)

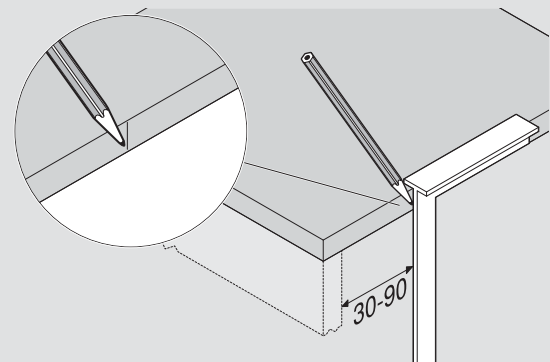
Part no.

SERVO-DRIVE switch boring template

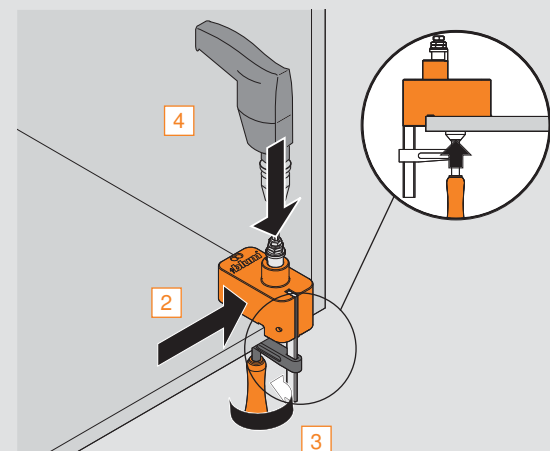
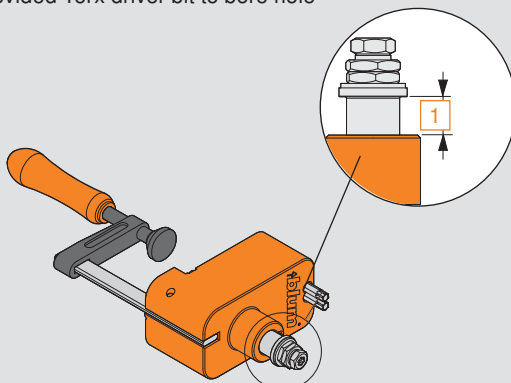
M31.2000



### Mark switch location



- Set drilling depth
- Align mark
- Secure template to cabinet panel with clamp
- Use provided Torx driver bit to bore hole



## SERVO-DRIVE for AVENTOS HK top



## AVENTOS HK top Part Number Index

| Part no.          | Page no.  |
|-------------------|-----------|
| 20S4200           | 7, 14     |
| 20S4200A          | 11, 14    |
| 20S4F01           | 7         |
| 22K2300           | 7, 11     |
| 22K2300T          | 14        |
| 22K2500           | 7, 11     |
| 22K2500T          | 14        |
| 22K2700           | 7, 11     |
| 22K2700T          | 14        |
| 22K2900           | 7, 11     |
| 22K2900T          | 14        |
| 22K6001           | 7, 18     |
| 23K8000           | 22        |
| 22K8000.NA        | 7, 11, 14 |
| 23KA000           | 22        |
| 23P5020           | 23        |
| 23P5216           | 23        |
| 606N              | 7, 14     |
| 606P              | 7, 14     |
| 65.1051.02        | 19        |
| 7072A             | 7, 14     |
| 956.1004          | 15        |
| 956A1004          | 15        |
| BIT HOLDER        | 19        |
| DB-2.5mm R        | 19        |
| DB-5mm R          | 19        |
| M31.2000          | 35        |
| POZI BIT #2x1     | 19        |
| POZI BIT #2X2     | 19        |
| POZI DRIVER       | 19        |
| SHORT TORX DRIVER | 19        |
| TORX DRIVER       | 19        |
| Z10NA30UGF        | 23        |
| Z10NE03UG10       | 23        |
| ZML.2200          | 19        |



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