# Using this catalog

## Step 1: Determine your application

Go to the page for your application: face frame page 9, panel page 11, or narrow frame aluminum door page 13.

## Step 2: Calculate the power factor

Determining the Power factor (PF) is important for chosing the lift mechanism that works best with your cabinet and doors. It is calculated by multiplying the cabinet height in inches by the exact door weight (including twice the weight of the handle) in pounds.

**Power factor (PF) = cabinet height [inch] x door weight* [lb] (including 2 x the handle weight)**

* For calculations, use the conversion chart below to determine door weight in decimal form.

**Example:**

Cabinet height: **24 inches**

Door weight (including 2 x handle): **23 lb 14 oz** (14 oz = .9 lb).

Weight converted to decimal is **23.9 lb**

Power factor (PF) = **24 x 23.9**

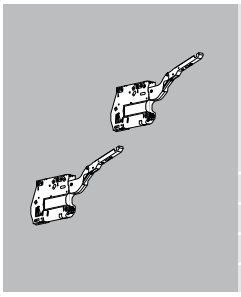
Power factor (PF) = **574**

**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 3: Select proper lift mechanism set based on power factor

Use the calculated Power factor (PF) to select the proper lift mechanism.



| Power factor (PF) | Opening angle | Part No. |
|---|---|---|
| **43 - 99** | 107˚ | **20K2300.NA** |
| **100 - 174** | 107˚ | **20K2500.NA** |
| **175 - 349** | 107˚ | **20K2700.NA** |
| **350 - 792** | 100˚ | **20K2900.NA** |

## Step 4: Select the proper hardware set

Select the proper hardware set based on the intended application.

**Wood/wide aluminum door application**

| | Part no. |
|---|---|
| Hardware set | **20K4200.A1** |

**Narrow aluminum door application**

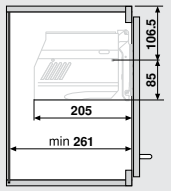
| | Part no. |
|---|---|
| Hardware set | **20K4200AA1** |

## Step 5: Determine mounting location for lift mechanism

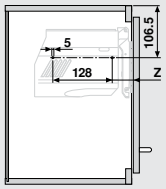
Use the diagram for the appropriate application to determine the lift mechanism locating hole positions and pre-bore them in the cabinet sides.

For face frame applications, cabinet sides must be blocked out.

**Step 5: Minimum space requirement**

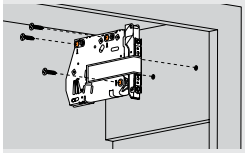



**Locating pin positions**




| Overlay | up to 28 | 32 | 35 |
|---|---|---|---|
| Z | 37 | 35 | 33 |

**Mounting hole locations**



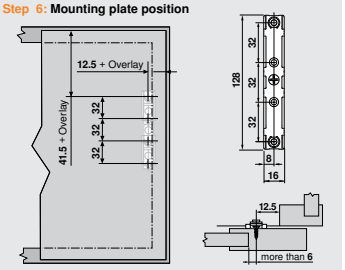
The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

NOTE: Face frame cabinets must be blocked out flush with the frame on the sides to mount the AVENTOS HK lift mechanisms.

## Step 6: Determine mounting location for the mounting plates

Use the diagram for the appropriate application to determine mounting plate positions and mount them on the doors.

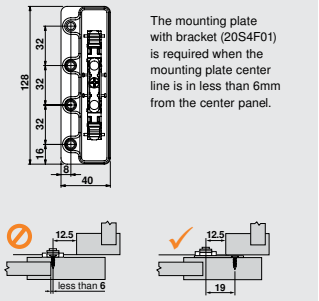
**Step 6: Mounting plate position**




Use the standard mounting plate (20S4200) for solid doors or on five panel doors when the mounting plate center line is in more than 6mm from the center panel.

Mounting plate — Part no. 20S4200

**Mounting plate with bracket**



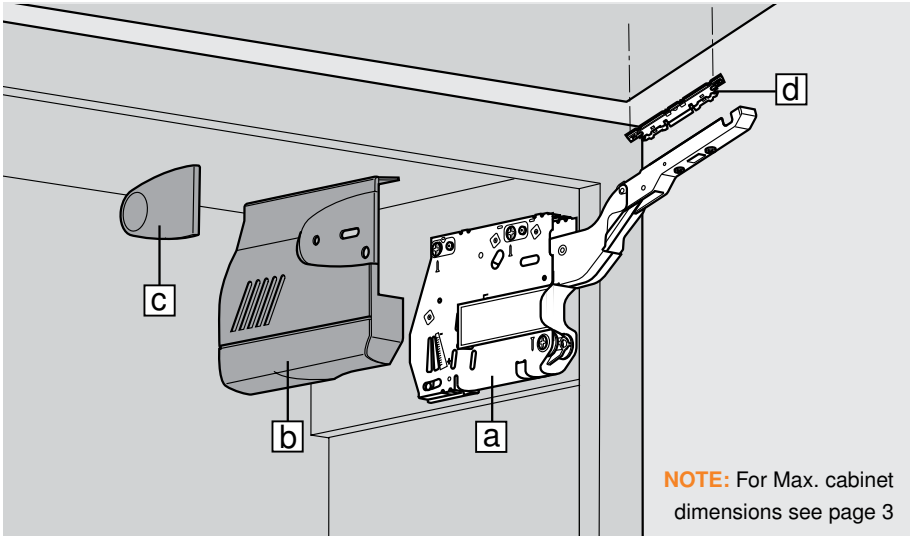

The mounting plate with bracket (20S4F01) is required when the mounting plate center line is in less than 6mm from the center panel.

Mounting plate with bracket — Part no. 20S4F01

## Step 7: Begin assembly

Now move to the Assembly instructions on page 17.

# Wood or wide aluminum door for face frame applications




**NOTE:** For Max. cabinet dimensions see page 3

## Determine required parts

To determine the required lift mechanism set for any application, calculate the power factor based on weight of the door (including double the handle weight) and cabinet height. See formula below

**NOTE:** Face frame cabinets must be blocked out flush with the frame on the sides to mount the AVENTOS HK lift mechanisms.

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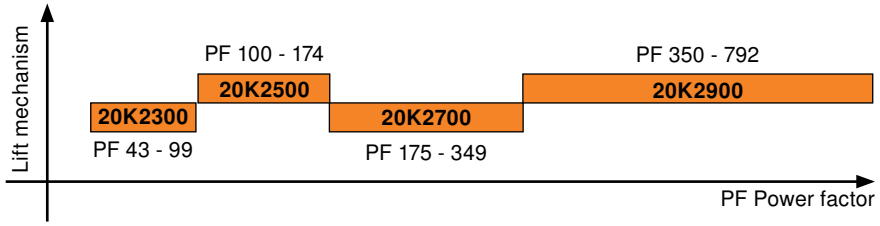
**Power factor (PF) = cabinet height in inches x door weight in pounds (including double the handle weight)**




A trial application is recommended when you are in a borderline area of the individual lift mechanism.

## Required parts

### Step 3 — a thru c Lift mechanism set

Set includes:

- a 2 x Lift mechanisms
- b 2 x Cover plates (right and left)
- c 2 x Cover caps
- 10 x #7x35mm (1-3/8") wood screws*

*** only 6 screws required**

| Power factor (PF) | Opening angle | Part No. |
|---|---|---|
| **43 - 99** | 107° | **20K2300.NA** |
| **100 - 174** | 107° | **20K2500.NA** |
| **175 - 349** | 107° | **20K2700.NA** |
| **350 - 792** | 100° | **20K2900.NA** |

### Step 4: Wood/wide aluminum door hardware set

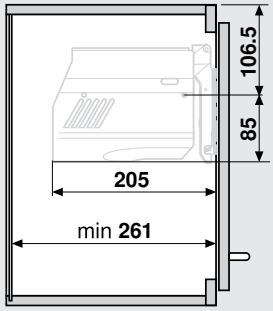
Set includes:

- d 2 x 20S4200 Wood/wide aluminum mounting plate
- d 2 x 20S4F01 Wood/wide aluminum mounting plate with bracket
- 22 x 606P Wood door screws for 20S4200*
- 18 x 699.110 Aluminum door screws for mounting plates*
- POZI #2x2 driver bit for adjusting tension

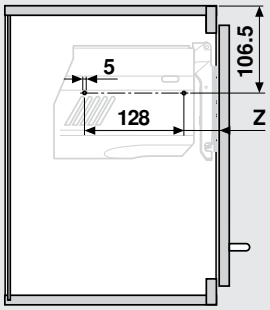
*** only 8 screws required**

| | Part no. |
|---|---|
| Hardware set | **20K4200.A1** |

## Step 5: Minimum space requirement

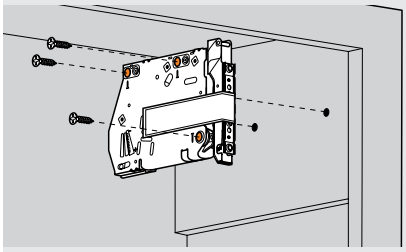



## Locating pin positions




| Overlay | up to 28 | 32 | 35 |
|---|---|---|---|
| Z | 37 | 35 | 33 |

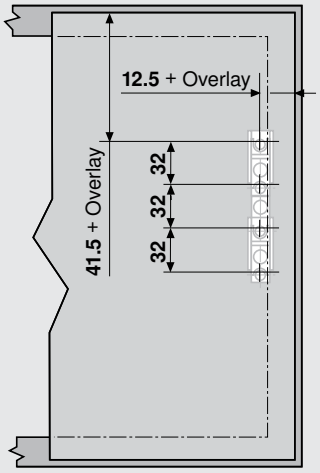
## Mounting hole locations

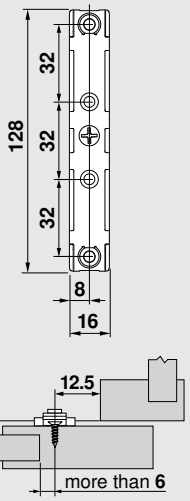


The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

NOTE: Face frame cabinets must be blocked out flush with the frame on the sides to mount the AVENTOS HK lift mechanisms.

## Step 6: Mounting plate position



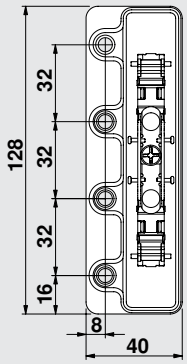




Use the standard mounting plate (20S4200) for solid doors or on five panel doors when the mounting plate center line is in more than 6mm from the center panel.

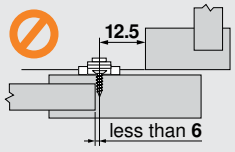
Part no.

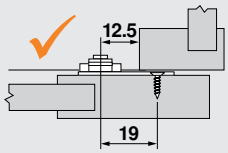
Mounting plate **20S4200**

## Mounting plate with bracket




The mounting plate with bracket (20S4F01) is required when the mounting plate center line is in less than 6mm from the center panel.

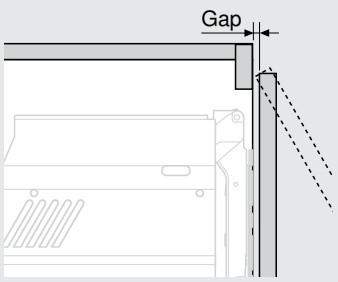



Part no.

Mounting plate with bracket **20S4F01**

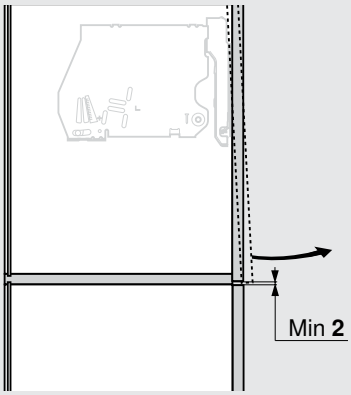
## Minimum gap



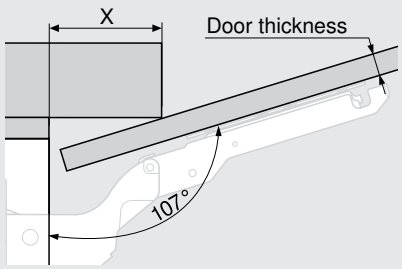

**NOTE:** For doors with a radius of 1 mm.

| Overlay | up to 28 | 32 | 35 |
|---|---|---|---|
| Gap | 1.5 | 4 | 5 |

## Minimum bottom reveal

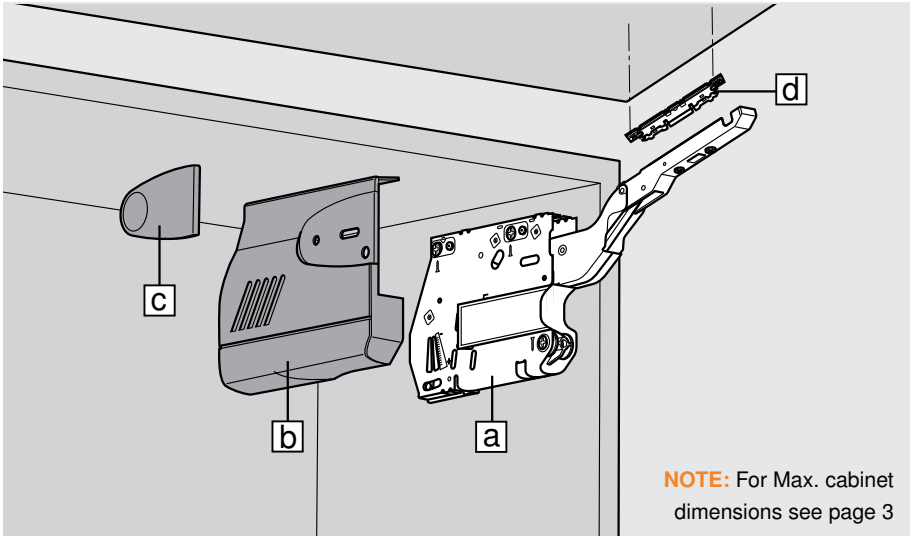



## Decorative molding clearance




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

# Wood or wide aluminum door for panel applications




NOTE: For Max. cabinet dimensions see page 3

## Determine required parts

To determine the required lift mechanism set for any application, calculate the power factor based on weight of the door (including double the handle weight) and cabinet height. See formula below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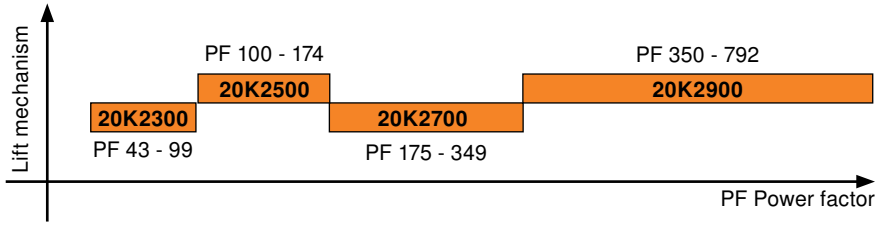
**Power factor (PF) = cabinet height in inches x door weight in pounds (including double the handle weight)**




A trial application is recommended when you are in a borderline area of the individual lift mechanism.

## Required parts

Step 3  **a thru c Lift mechanism set**

Set includes:

- a 2 x Lift mechanisms
- b 2 x Cover plates (right and left)
- c 2 x Cover caps
- 10 x #7x35mm (1-3/8") wood screws*

*** only 6 screws required**

| Power factor (PF) | Opening angle | Part No. |
|---|---|---|
| **43 - 99** | 107° | **20K2300.NA** |
| **100 - 174** | 107° | **20K2500.NA** |
| **175 - 349** | 107° | **20K2700.NA** |
| **350 - 792** | 100° | **20K2900.NA** |

Step 4: **Wood/wide aluminum door hardware set**

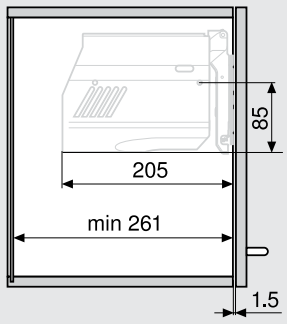
Set includes:

- d 2 x 20S4200 Wood/wide aluminum mounting plate
- d 2 x 20S4F01 Wood/wide aluminum mounting plate with bracket
- 22 x 606P Wood door screws for 20S4200*
- 18 x 699.110 Aluminum door screws for mounting plates*
- POZI #2x2 driver bit for adjusting tension

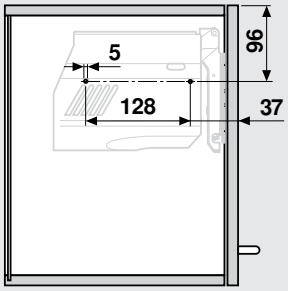
*** only 8 screws required**

| | Part no. |
|---|---|
| Hardware set | **20K4200.A1** |

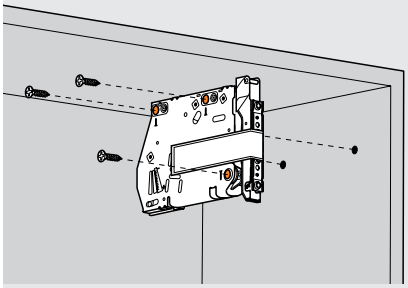
## Step 5: Minimum space requirement




## Locating pin positions

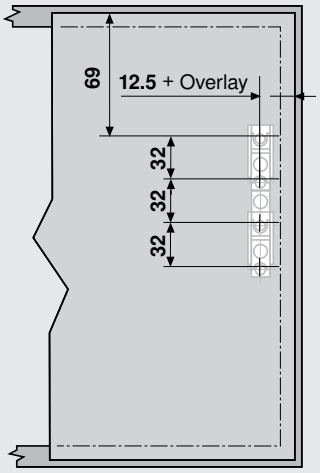



## Mounting hole locations

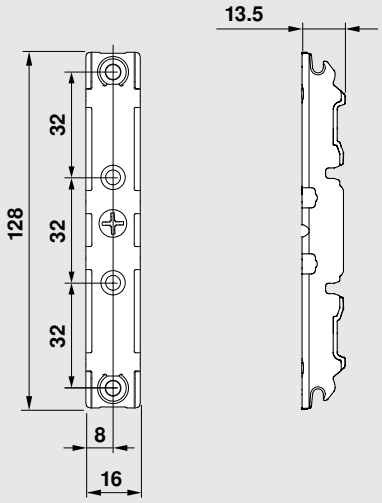


The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

## Step 6: Mounting plate position

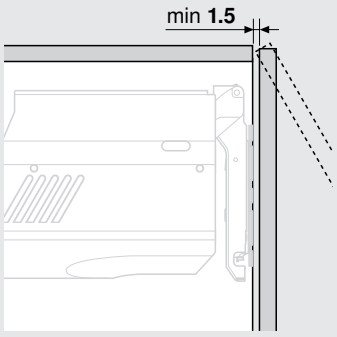



## Mounting plate



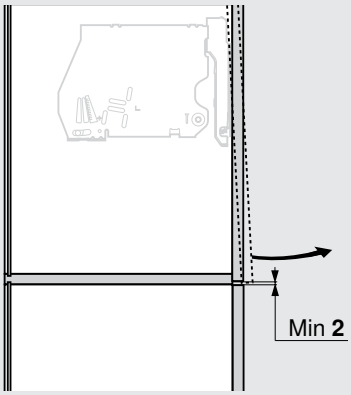

| | Part no. |
|---|---|
| Mounting plate | 20S4200 |

## Minimum gap

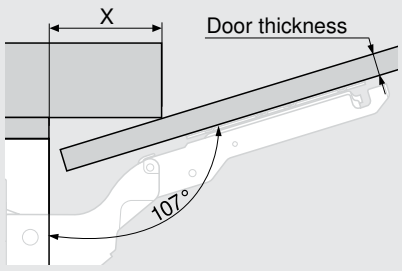



NOTE: For doors with a radius of 1 mm.

## Minimum Reveal

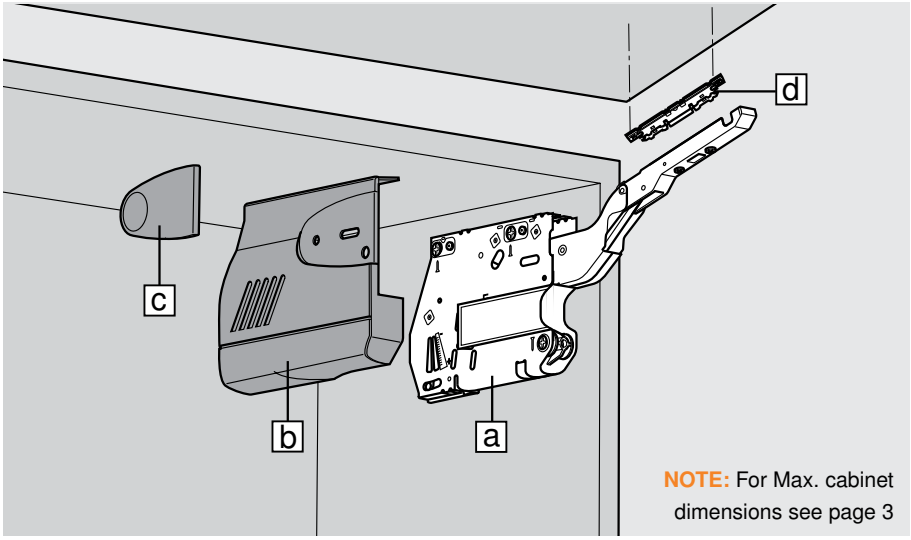



## Decorative molding clearance




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

# Narrow aluminum door for panel applications




**NOTE:** For Max. cabinet dimensions see page 3

## Determine required parts

To determine the required lift mechanism set for any application, calculate the power factor based on weight of the door (including double the handle weight) and cabinet height. See formula below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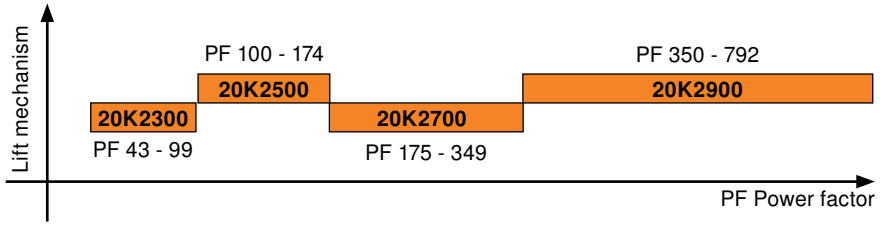
**Power factor (PF) = cabinet height in inches x door weight in pounds (including double the handle weight)**




A trial application is recommended when you are in a borderline area of the individual lift mechanism.

## Required parts

### Step 3 — a thru c Lift mechanism set

Set includes:

- a 2 x Lift mechanisms
- b 2 x Cover plates (right and left)
- c 2 x Cover caps
  10 x #7x35mm (1-3/8") wood screws*

*** only 6 screws required**

| Power factor (PF) | Opening angle | Part No. |
|---|---|---|
| **43 - 99** | 107° | **20K2300.NA** |
| **100 - 174** | 107° | **20K2500.NA** |
| **175 - 349** | 107° | **20K2700.NA** |
| **350 - 792** | 100° | **20K2900.NA** |

### Step 4: Narrow aluminum door hardware set

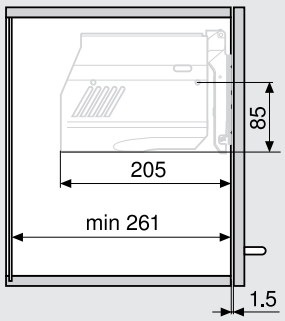
Set includes:

- d 2 x 20S4200A Narrow aluminum mounting plate
  18 x 699.110 Aluminum door screws for narrow frame aluminum doors*
  POZI #2x2 driver bit for adjusting tension

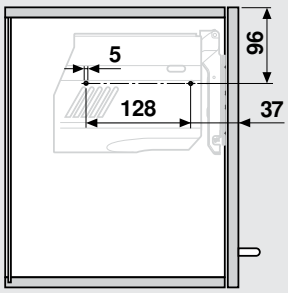
*** only 8 screws required**

| | Part no. |
|---|---|
| Hardware set | **20K4200AA1** |

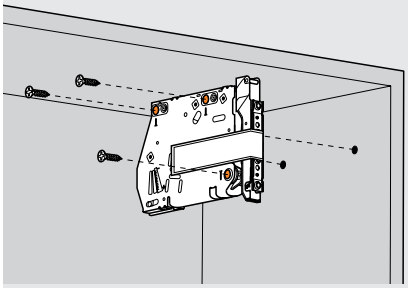
## Step 5: Minimum space requirement




## Locating pin positions

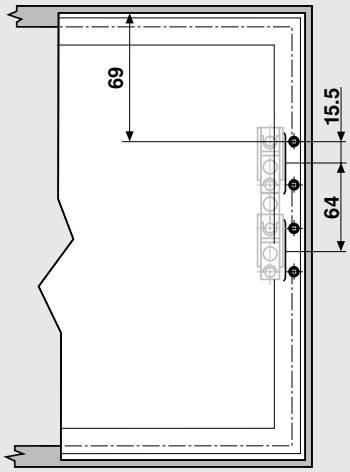



## Mounting hole locations

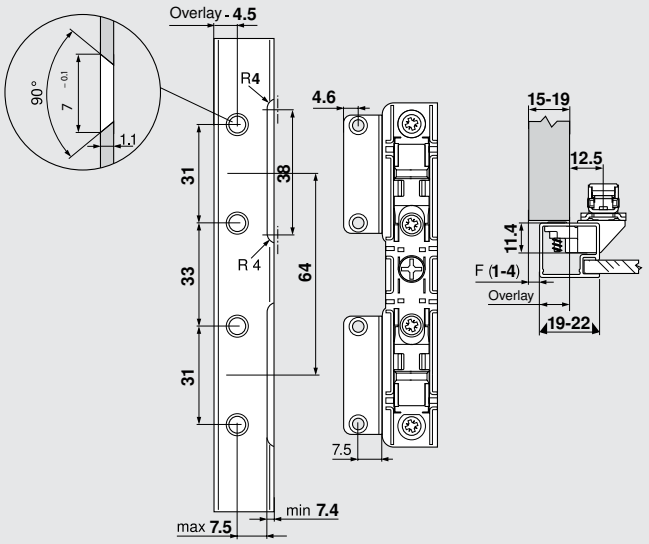


The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

## Step 6: Mounting plate position

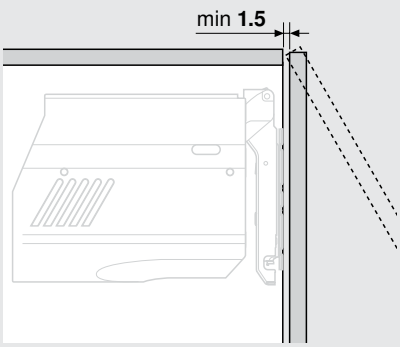



## Mounting plate for narrow frame aluminum doors



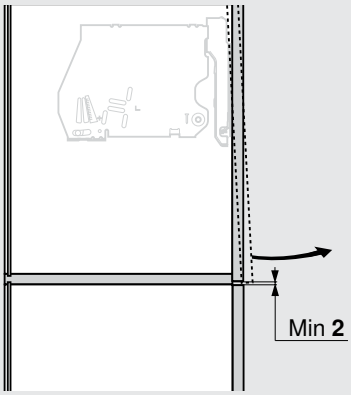

When changing material thickness, adjust the assembly dimensions accordingly.

## Minimum gap

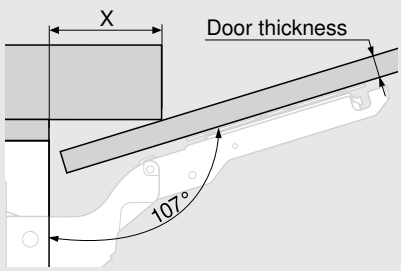



**NOTE:** For doors with a radius of 1 mm.

## Minimum Reveal

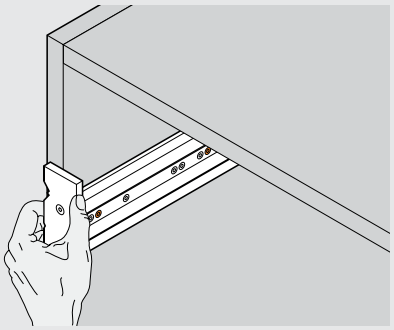



## Decorative molding clearance




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

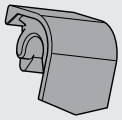
## AVENTOS template

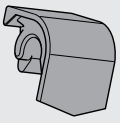


- Use to pre-bore for AVENTOS locating pins

| | Part no. |
|---|---|
| AVENTOS template | 65.5020 |
| Ø5mm drill bit | DB-5mm |

## Restriction clip



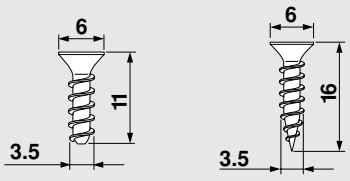


- Restricts the openning angle of the door
- Prevents the door from hitting an object above or to keep the handle within reach on very high cabinets

| | Part no. |
|---|---|
| 100 degree | 20K7041 |
| 75 degree | 20K7011 |

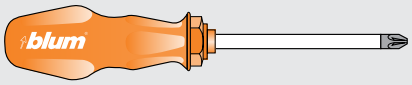
## Screws

Use to attach mounting plates to doors




| For aluminum door mounting plates | Part no. 699.110 |
|---|---|
| For wood door mounting plates | 606P |

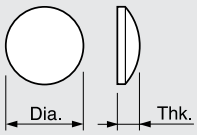
## POZI DRIVER and bits




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 screw head recess.

| | Part no. |
|---|---|
| #2 POZI DRIVER | POZI DRIVER |
| #2x1" POZI bit insert | POZI BIT #2x1 |
| #2x2" POZI bit insert | POZI BIT #2x2 |
| 1/4" bit holder | BIT HOLDER |

## Bumpers




Cushions door closing
Self-adhesive back; clear

| | Part no. |
|---|---|
| **6**(1/4") dia. x **1.5**(1/16") | FX4041 |
| **10**(3/8") dia. x **3**(1/8") | SJ5312 |

## Step 1: Complete an AVENTOS planning worksheet

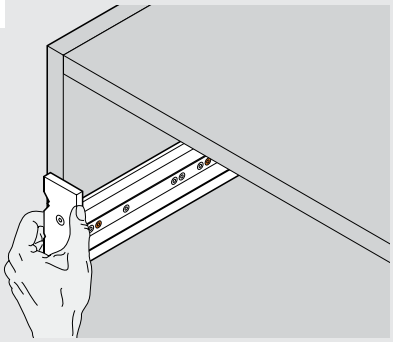
Go through the "Using this catalog" steps on pages 7 - 8 or complete an AVENTOS planning worksheet (available on www.blum.com). This will help you determine required hardware and neccessary cabinet preparation.

## Step 2: Install the lift mechanism

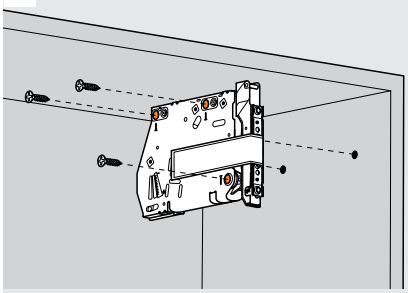
a. Use the AVENTOS template to prebore the locating pin holes for the AVENTOS HK lift mechanism.

b. After aligning the lift mechanism with the cabinet using the locator pins, attach the mechanism with the three mounting screws provided.

a



b



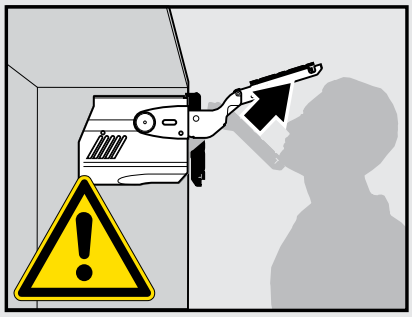
3 x wood screws #7 x 35 mm

## Step 3: Remove warning label from lift mechanism and raise arms

**WARNING**

Risk of injury: spring-loaded lever arm

- Do not push lever arm down or leave in the down position
- Remove mechanism before installing or removing cabinet

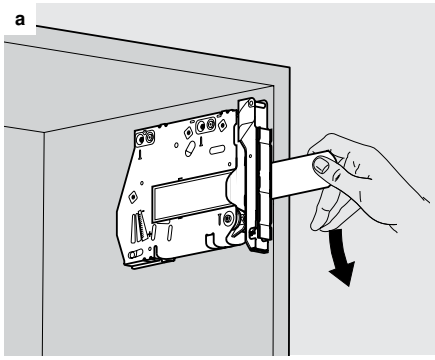


a. Standing at arm's length, carefully remove the label holding the arm in place.

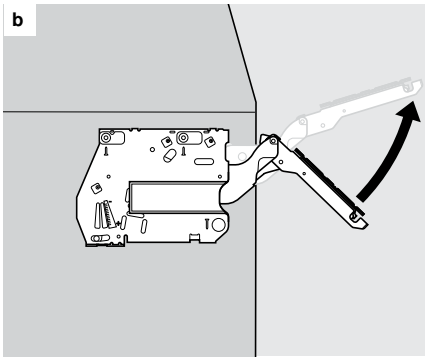
b. Raise the arm to the upright position.

**NOTE:** Do not remove warning label until just before attaching the door.

a

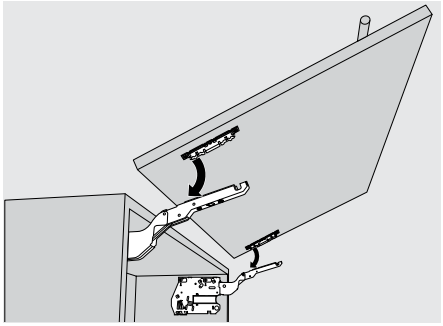


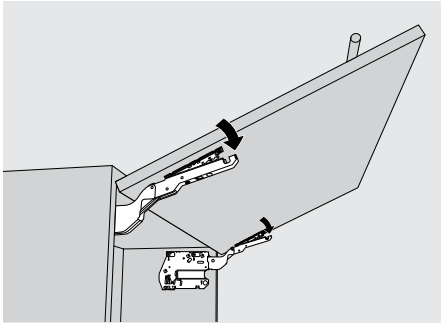
b



## Step 4: Attach the door

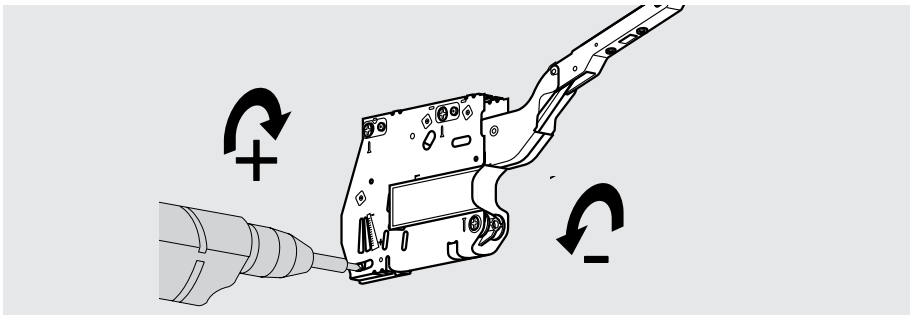
Attach the door using the CLIP mechanism in the mounting plate.





## Step 5: Adjust the door tension

Use a screw gun and the supplied #2x2 POZI driver bit to adjust the lift mechanism to the desired tension.

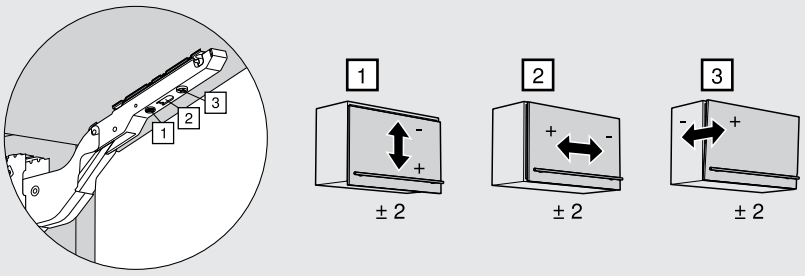


## Step 6: Finalize the door adjustments and attach cover caps

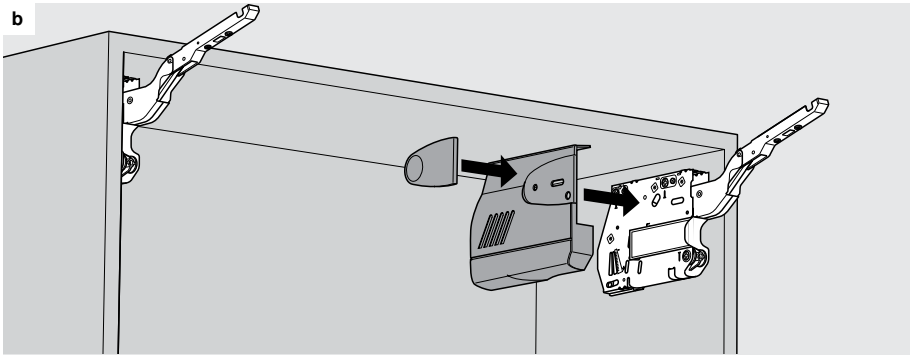
a. Use a POZI screwdriver to adjust cam adjustments for each of the 3-dimensional adjustments.

b. Snap the symmetrical cover caps on each cover plate. Place the left and right cover plates over the appropriate lift mechanisms and snap them in place.

a




b



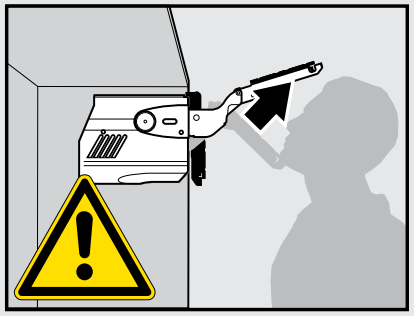
# Removal

## Step 1: Be aware

**WARNING**

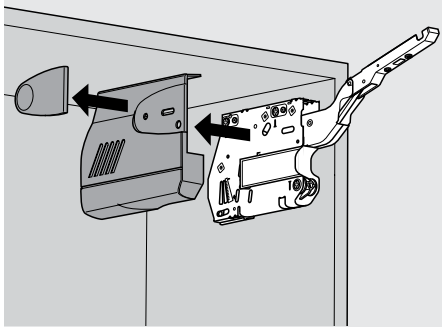
Risk of injury: spring-loaded lever arm

- Do not push lever arm down or leave in the down position
- Remove mechanism before installing or removing cabinet



## Step 2: Remove the cover plates

Remove the cover caps and cover plate.



## Step 3: Remove the door

a. Open the door. Use a screwdriver to disengage the CLIP mechanism of the lever arm from the mounting plate.

b. Support the door with one hand and repeat on the other side.