



AVENTOS HK

Stay lift system

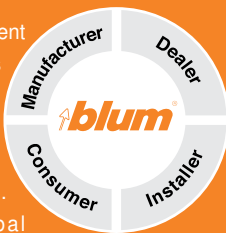


Blum, Inc. is a leading manufacturer of functional hardware for the kitchen cabinet and commercial casegoods industries specializing in concealed hinges, drawer runner systems and lift systems. Virtually all of the hardware needed to assemble and make cabinets functional are available within the wide range of quality Blum products.

Blum's manufacturing and distribution facility in Stanley, North Carolina supplies the North American markets through a network of more than 150 dependable distributors. Wholly owned by the Blum family, the company was formed in 1952 by Julius Blum and is headquartered in Hoechst, Austria.

Global customer benefits

Product development at Blum considers all of the various customers who will come in contact with our products.



With this "Global Customer Benefits" philosophy we strive to create advantages for all users from the manufacturer to the end consumer.



Blum, Inc. is ISO 9001 certified which means that you are assured of consistent quality in every Blum product. What's more they exceed the requirements of ANSI-BHMA standards for cycle life, static load and self-closing performance. Contact your local Blum representative for more details.

Table of contents

	Page
Overview	2 - 4
Features	5 - 6
Using this catalog	7
Wood or wide frame aluminum door - face frame application	9 - 10
Wood or wide frame aluminum door - panel application	11 - 12
Narrow frame aluminum door application	13 - 14
Accessories and assembly aids	15
Other AVENTOS lift systems	16
Assembly	17 - 18
Removal	19



Opening action – easier than everything that has come before

AVENTOS HK is a lift system that provides a comfort of motion that is sure to impress. AVENTOS HK doors open effortlessly, and thanks to BLUMOTION, come to a gentle halt. Its elegant

yet simple design makes it easy to integrate the lift hardware into the cabinet and the high-quality cover caps for AVENTOS HK give the cabinet interior a modern look.



Silent and effortless closing – integrated BLUMOTION



Regardless of how heavy the door or whether it's closed with force, it will close silently and effortlessly every time.

BLUMOTION on AVENTOS HK provides:

- ▶ Doors swing downward ...
- ▶ ... are brought to a gentle halt and ...
- ▶ ... close silently and effortlessly.

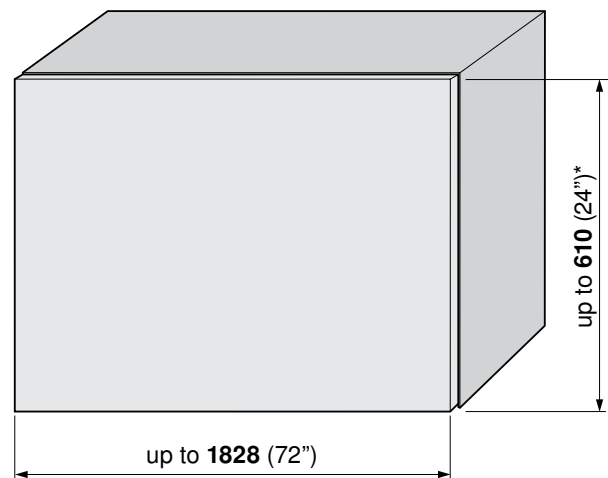
Overview



Few parts – many applications

Although the program only consists of a few parts, AVENTOS HK covers all common door widths and heights. The small product line simplifies planning, ordering, and inventory.

* For ergonomic reasons, we recommend a maximum cabinet height of **610 (24")**. Taller cabinets can be used but a suitable power factor would be required.



Fast assembly and removal

AVENTOS HK is equipped with proven CLIP technology. This enables the doors to be installed in a matter of seconds.

In this way, the cabinet can be quickly, easily and (last but not least) securely attached to the wall for the final assembly. Assembly into the cabinet takes just a few steps.

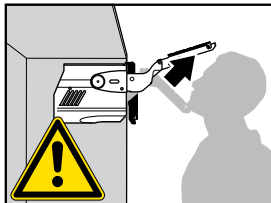


Lift mechanism: The symmetrical design enables it to be used on both the left and the right.

Attachment of symmetrical mounting plate to the door.

The attachment to the door uses CLIP technology.

WARNING



Lever arm can spring up and cause injury without door attached

- Do not push lever arm down
- Remove mechanism before installing or removing cabinet
- For questions call 1-800-430-6788 or go to www.blum.com

Fast and precise adjustment

The AVENTOS HK door can be adjusted in three dimensions. The result is that a perfect alignment can be achieved on site. The tension adjustment feature is used to fine tune the opening and closing power. Adjustment is easy and enables the power to match the size and weight of the door.



Exact door adjustment using the 3-dimensional adjustment feature.

Variable adjustment on the power setting means that the strength of the mechanism can be matched to each door.



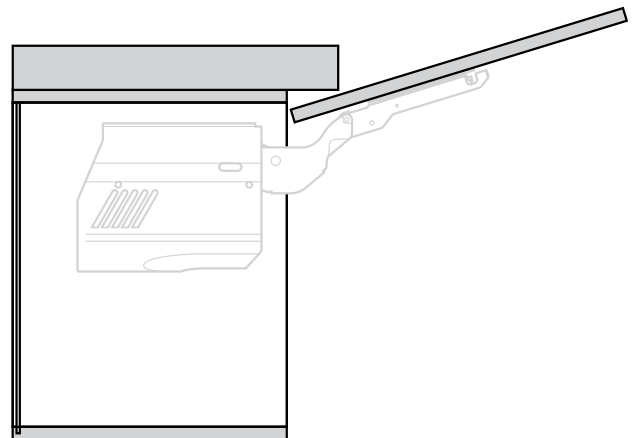
Design options

AVENTOS HK offers numerous design options including wooden doors and aluminum frame doors.



Decorative molding clearance

When developing the AVENTOS HK, we also took into account cabinets with decorative mouldings. The design options are limitless.



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 choosing 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.

$$\text{Power factor (PF)} = \text{cabinet height [inch]} \times \text{door weight* [lb]} \\ \text{(including twice the handle weight)}$$

* 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**

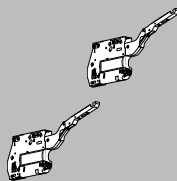
Power factor (PF) = **574**

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

Hardware set	Part no.
	20S4200.K1

Narrow aluminum door application

Hardware set	Part no.
	20S4200AK1

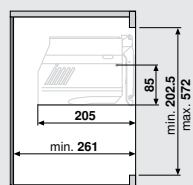


Step 5: Determine mounting location for lift mechanism

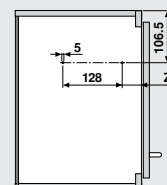
Use the diagram for the appropriate application to determine the lift mechanism locating hole positions and pre-bore them in the cabinet sides.

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

Step 5: Space requirement

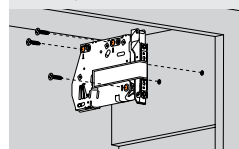


Locating pin positions



Overlay	up to 28	32	35
Z	37	35	33

Mounting hole locations



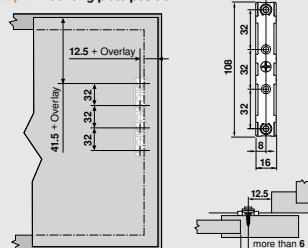
The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

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.

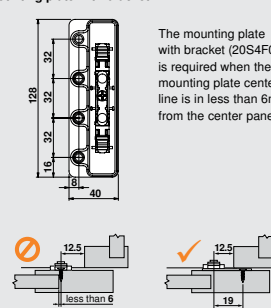
Step 6: Mounting plate position



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.

Part no. 20S4200
Mounting plate

Mounting plate with bracket



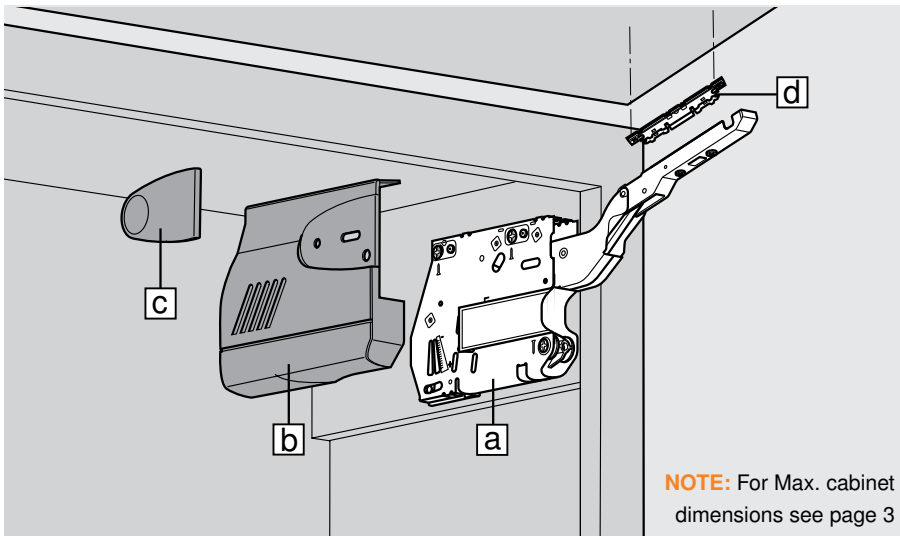
The mounting plate with bracket (20S4F01) is required when the mounting plate center line is in less than 6mm from the center panel.

Part no. 20S4F01
Mounting plate with bracket

Step 7: Begin assembly

Now move to the Assembly instructions on page 17.

Wood or wide aluminum door for face frame applications



Determine required parts

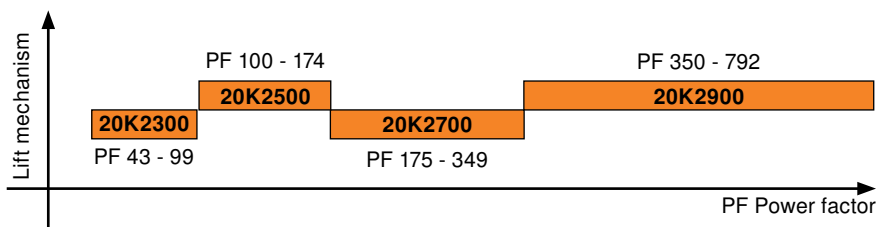
To determine the required lift mechanism set for any application, calculate the power factor based on weight of the door (including double the handle weight) and cabinet height. See formula below

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

Using this catalog
Installation & removal

page 7
pages 17 - 20

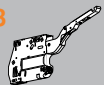
**Power factor (PF) = cabinet height in inches x door weight in pounds
(including twice the handle weight)**



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:

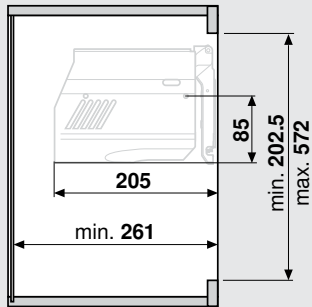
- d** 2 x 20S4200 Wood/wide aluminum mounting plate
- d** 2 x 20S4F01 Wood/wide aluminum mounting plate with bracket
- 22 x 606P Wood door screws for 20S4200*
- 18 x 7072A Aluminum door screws for mounting plates*
- POZI #2x2 driver bit for adjusting tension

* only 8 screws required

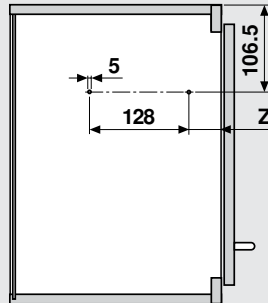
Part no.
Hardware set **20S4200.K1**

Installation

Step 5: Space requirement

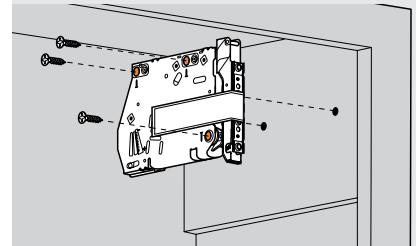


Locating pin positions



Overlay	up to 28	32	35
Z	37	35	33

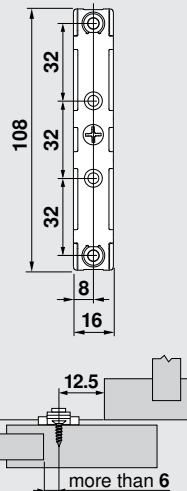
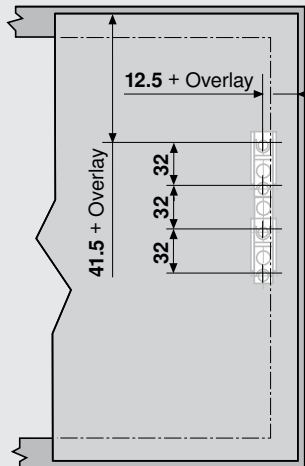
Mounting hole locations



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.

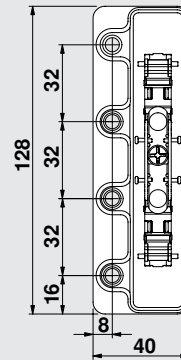
Step 6: Mounting plate position



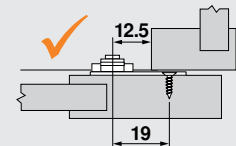
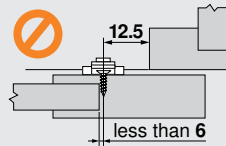
Use the standard mounting plate (20S4200) for solid doors or on five panel doors when the mounting plate center line is in more than 6mm from the center panel.

Mounting plate **Part no. 20S4200**

Mounting plate with bracket

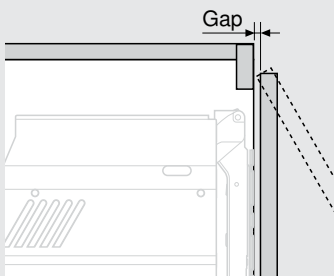


The mounting plate with bracket (20S4F01) is required when the mounting plate center line is in less than 6mm from the center panel.



Mounting plate with bracket **Part no. 20S4F01**

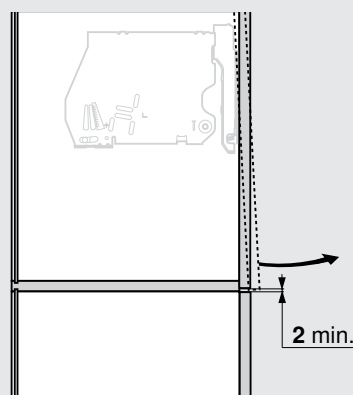
Minimum gap



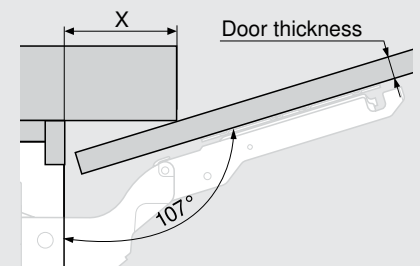
NOTE: For doors with a radius of 1 mm.

Overlay	up to 28	32	35
Gap	1.5	4	5

Minimum bottom reveal

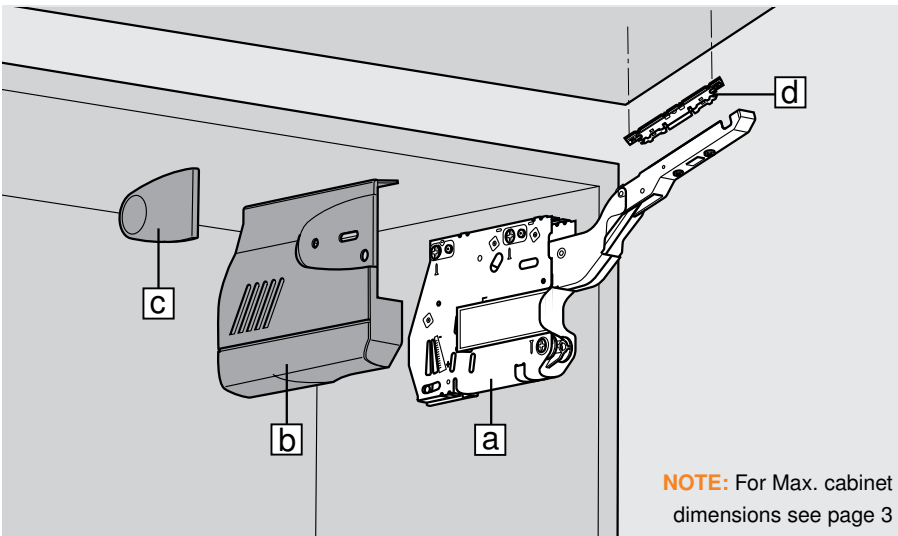


Decorative molding clearance



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

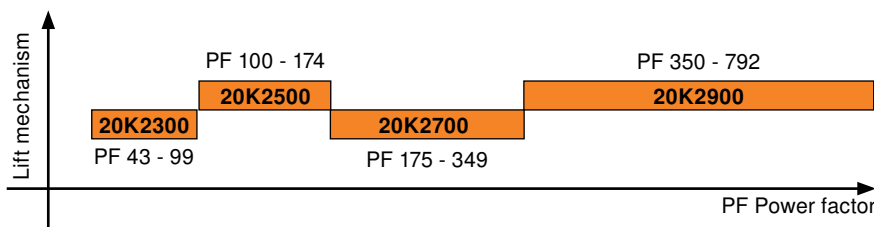
Determine required parts

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

Using this catalog
Installation & removal

page 7
pages 17 - 20

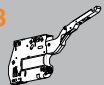
**Power factor (PF) = cabinet height in inches x door weight in pounds
(including twice the handle weight)**



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:

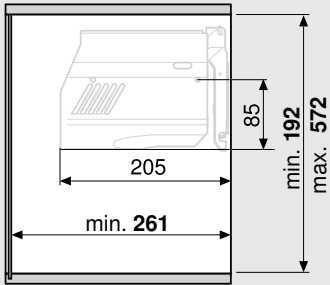
- d** 2 x 20S4200 Wood/wide aluminum mounting plate
- d** 2 x 20S4F01 Wood/wide aluminum mounting plate with bracket
- 22 x 606P Wood door screws for 20S4200*
- 18 x 7072A Aluminum door screws for mounting plates*
- POZI #2x2 driver bit for adjusting tension

* only 8 screws required

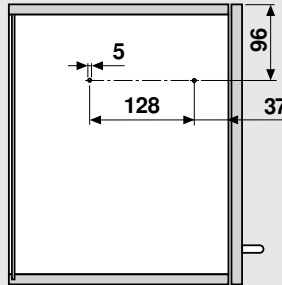
Part no.
Hardware set **20S4200.K1**

Installation

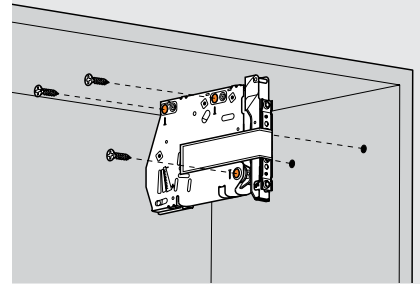
Step 5: Space requirement



Locating pin positions

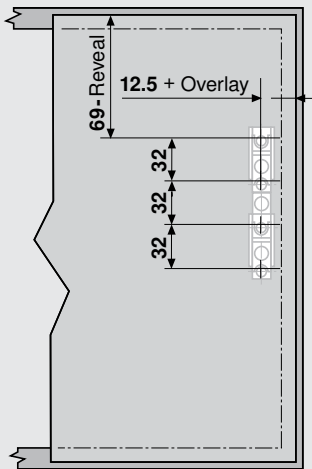


Mounting hole locations

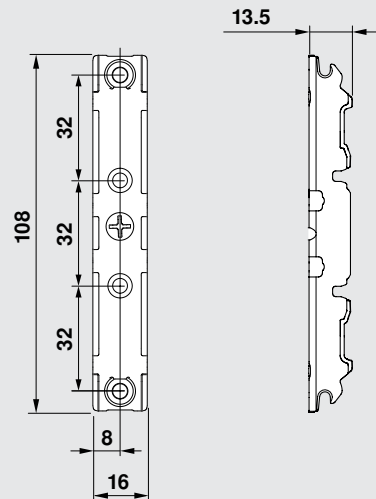


The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

Step 6: Mounting plate position

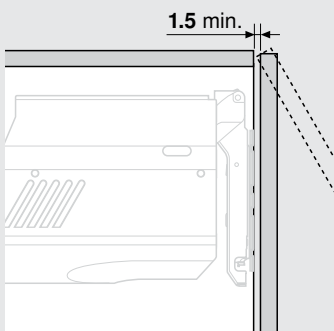


Mounting plate



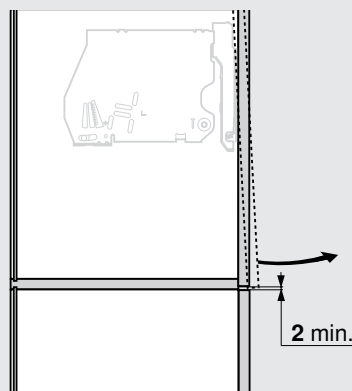
Part no.
Mounting plate **20S4200**

Minimum gap

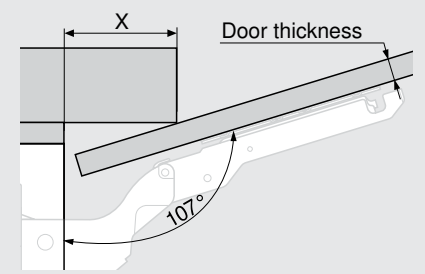


NOTE: For doors with a radius of 1 mm.

Minimum Reveal

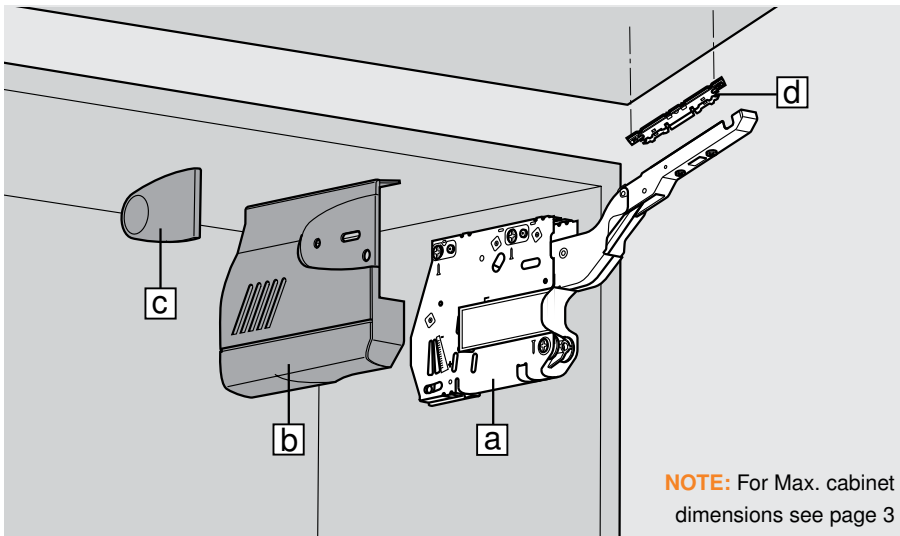


Decorative molding clearance



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

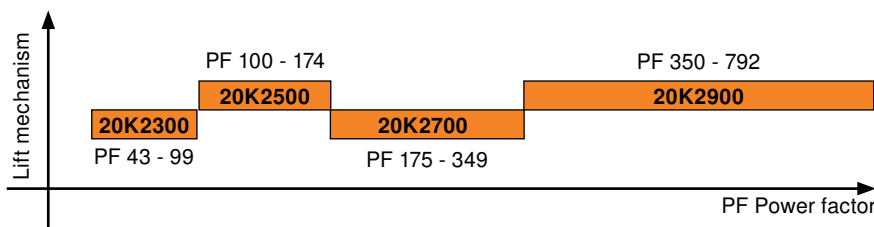
Determine required parts

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

Using this catalog
Installation & removal

page 7
pages 17 - 20

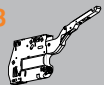
**Power factor (PF) = cabinet height in inches x door weight in pounds
(including twice the handle weight)**



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:

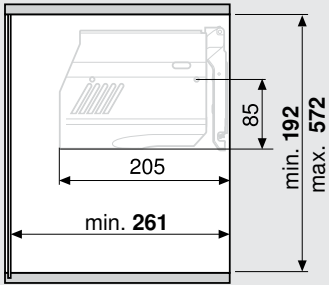
- d** 2 x 20S4200A Narrow aluminum mounting plate
- 18 x 699.110 Aluminum door screws for narrow frame aluminum doors*
- POZI #2x2 driver bit for adjusting tension

* only 8 screws required

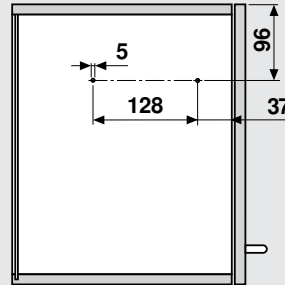
Part no.
Hardware set **20S4200AK1**

Installation

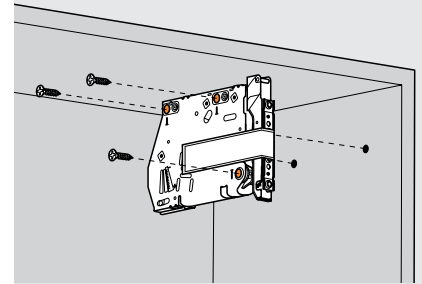
Step 5: Space requirement



Locating pin positions

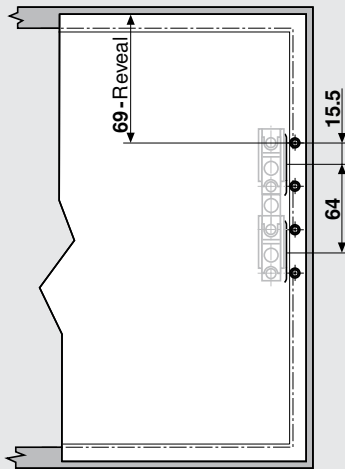


Mounting hole locations

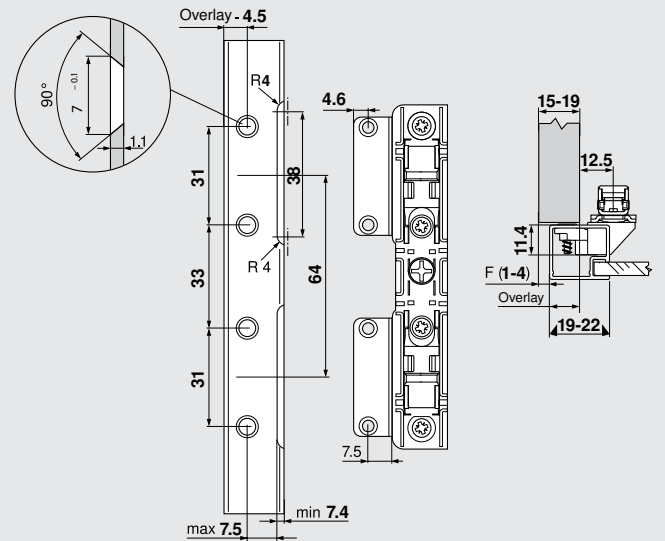


The included #7 x 35 mm (1-3/8") wood screws are required in the three holes marked in orange.

Step 6: Mounting plate position



Mounting plate for narrow frame aluminum doors

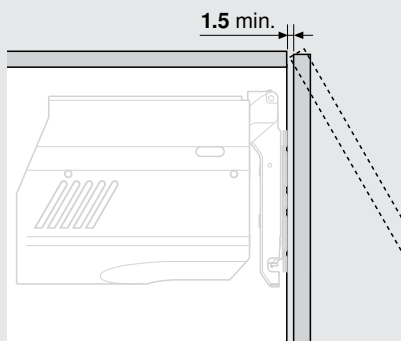


Narrow aluminum mounting plate

Part no.

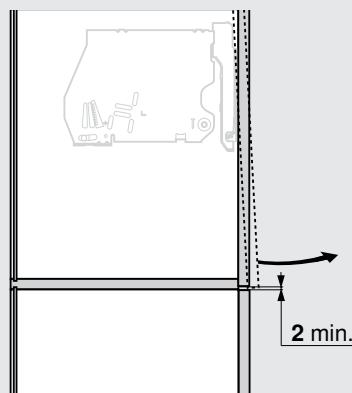
20S4200A

Minimum gap

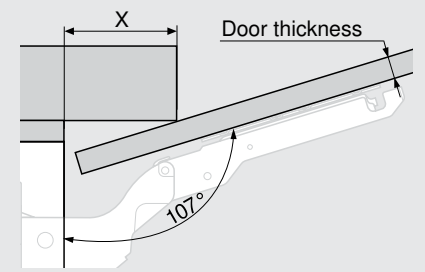


NOTE: For doors with a radius of 1 mm.

Minimum Reveal



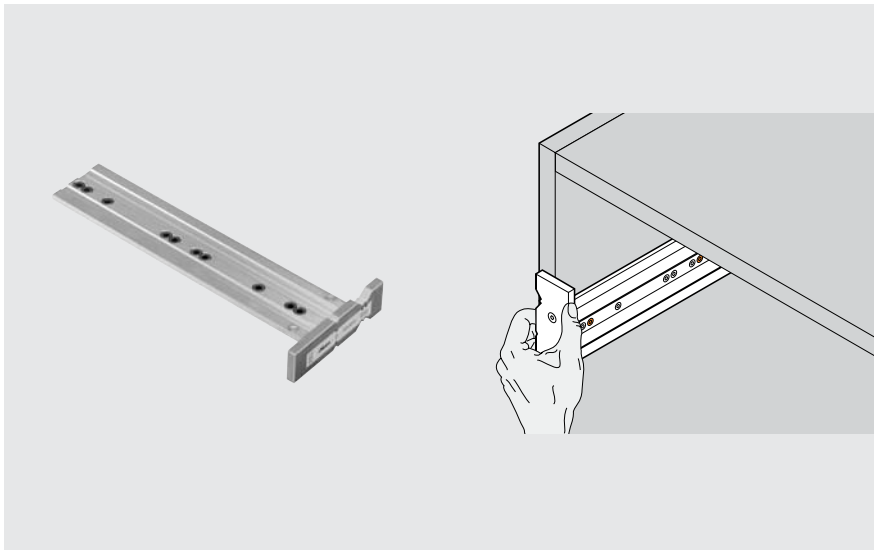
Decorative molding clearance



Door thickness	16	19	22	26
X	70	59	49	35



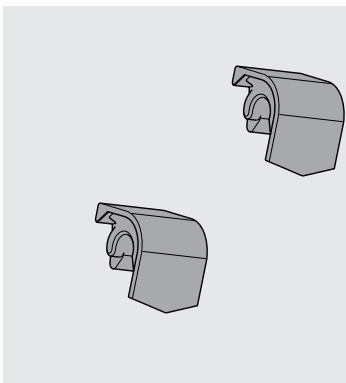
AVENTOS template



- Use to pre-bore for AVENTOS locating pins

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

Restriction clip



- Restricts the opening angle of the door
- Prevents the door from hitting an object above or to keep the handle within reach on very high cabinets
- One required per lift mechanism

Part no.	
100 degree	20K7041
75 degree	20K7011

Screws

Use to attach mounting plates to doors

Part no.	
For aluminum door mounting plates	7072A
	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

The AVENTOS line



AVENTOS HF bi-fold lift system

The doors fold in the middle when opening. This ensures easy access to the pull in any position for high wall cabinets.



AVENTOS HS up and over lift system

The door swings gently over the cabinet and makes storage space easily accessible. The space requirement over the cabinet is also kept to a minimum.



AVENTOS HK stay lift door system

The door swings straight up. Applications include above refrigerator, accent cabinets or wall cabinets.



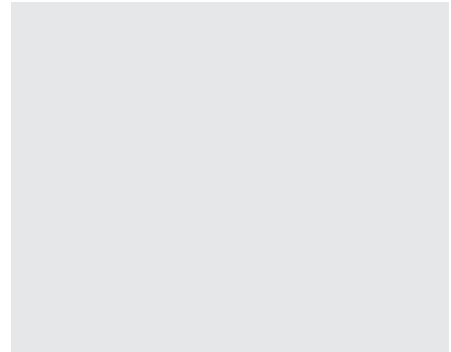
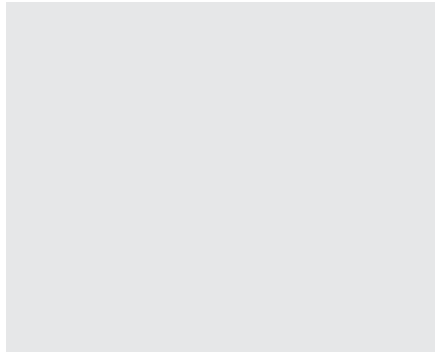
AVENTOS HL lift up system

Available Spring 2008

The door opens vertically. This is ideal for an appliance garage or wall cabinets.

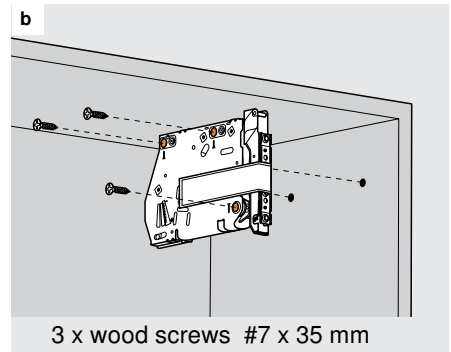
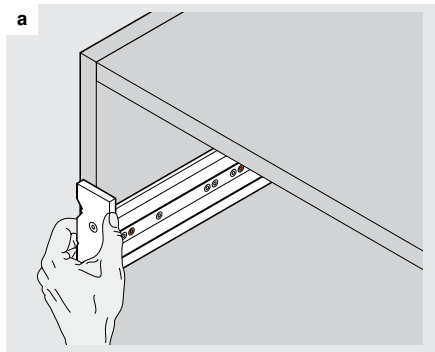
Step 1: Complete an AVENTOS planning worksheet

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 necessary cabinet preparation.



Step 2: Install the lift mechanism

- Use the AVENTOS template to prebore the locating pin holes for the AVENTOS HK lift mechanism.
- After aligning the lift mechanism with the cabinet using the locator pins, attach the mechanism with the three mounting screws provided.

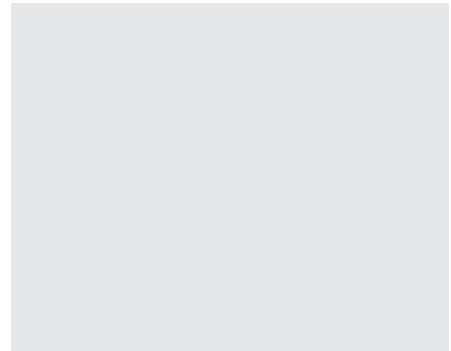
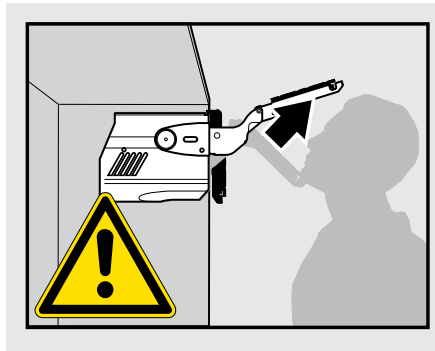


Step 3: Remove warning label from lift mechanism and raise arms

WARNING

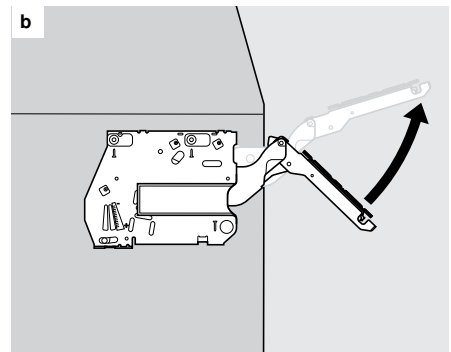
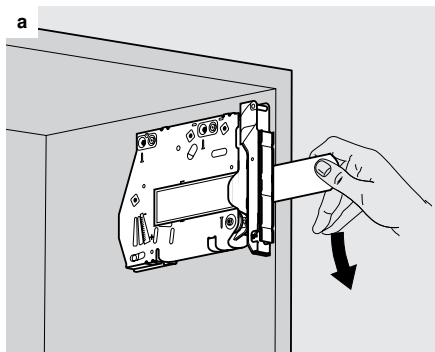
Risk of injury: spring-loaded lever arm

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



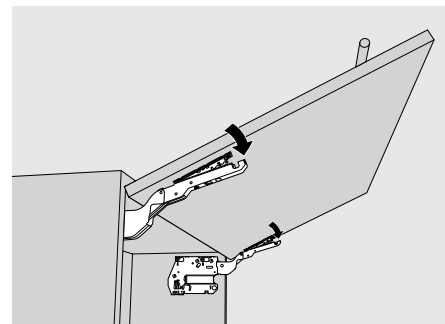
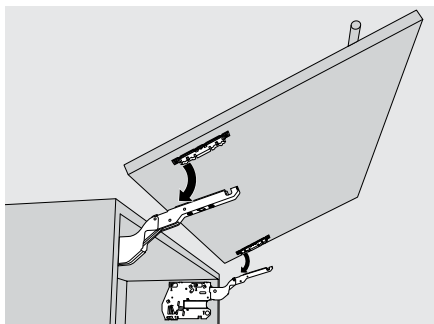
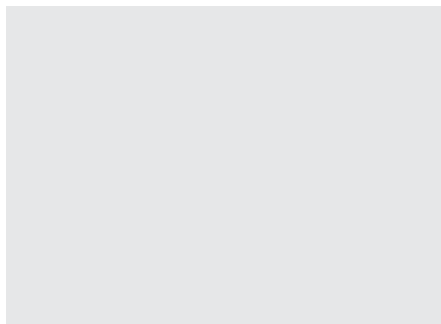
- Standing at arm's length, carefully remove the label holding the arm in place.
- Raise the arm to the upright position.

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





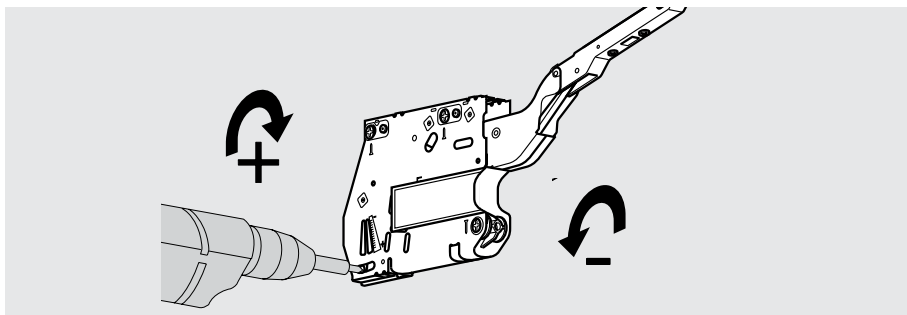
Step 4: Attach the door



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.

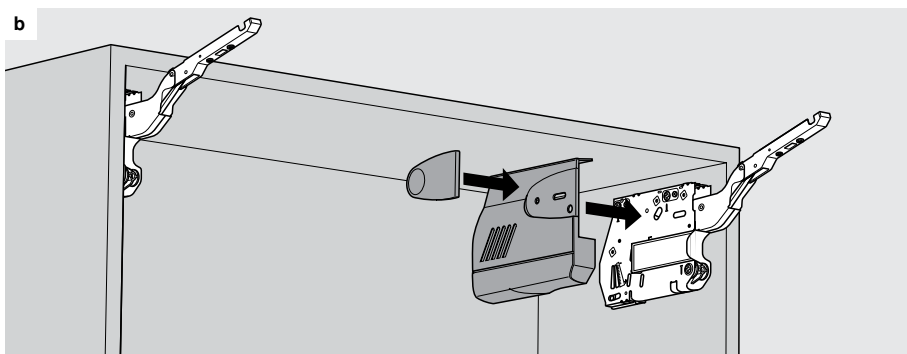
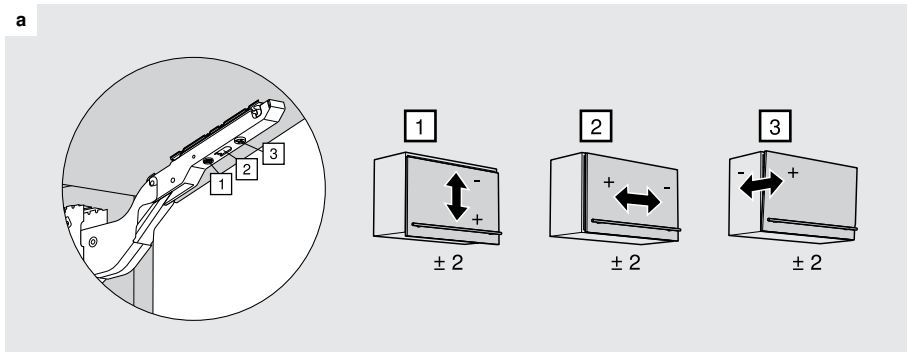
Tension should be the same on both lift mechanisms.



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.



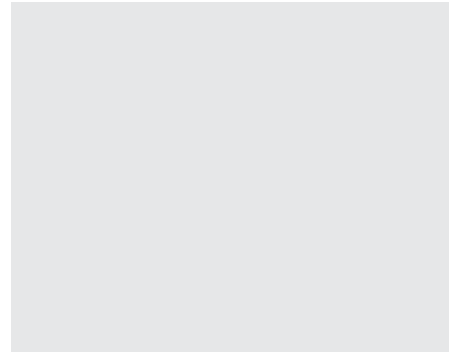
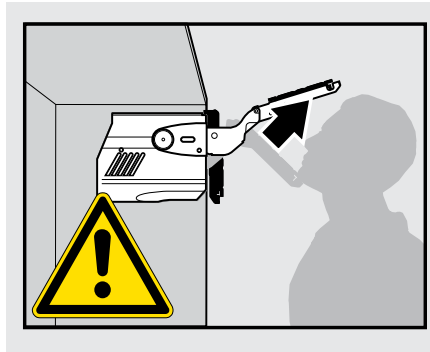


Step 1: Be aware

WARNING

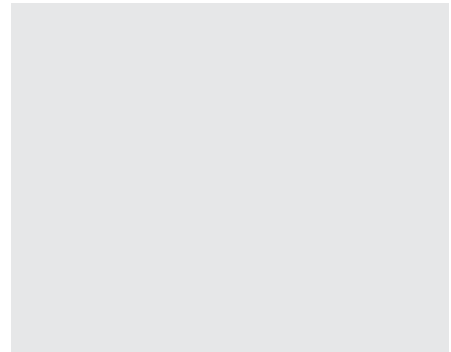
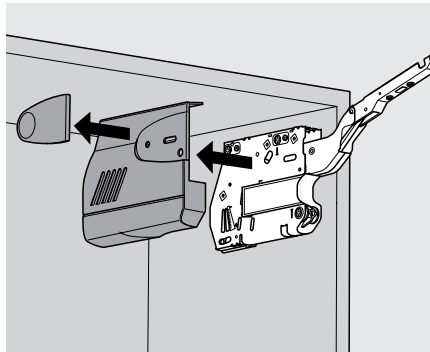
Risk of injury: spring-loaded lever arm

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



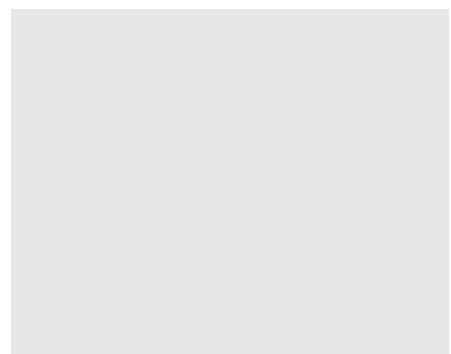
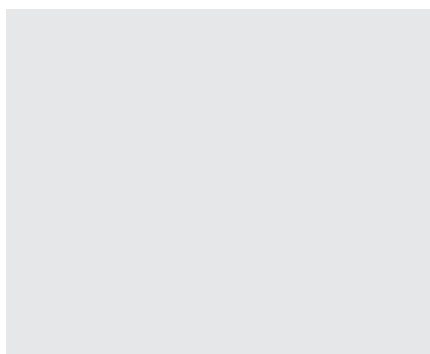
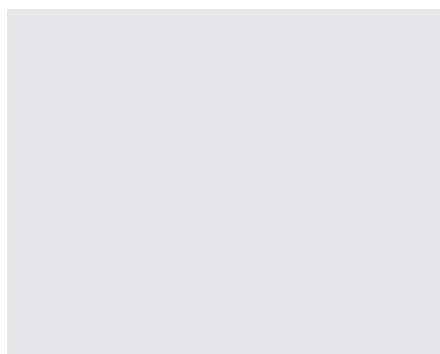
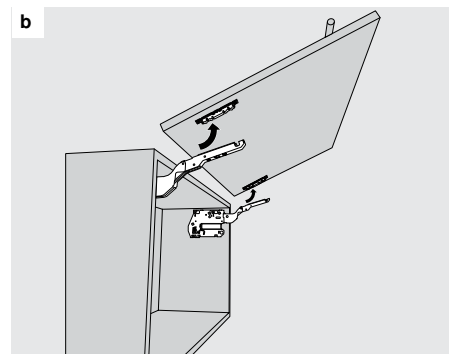
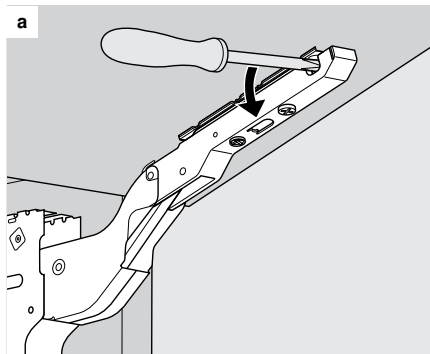
Step 2: Remove the cover plates

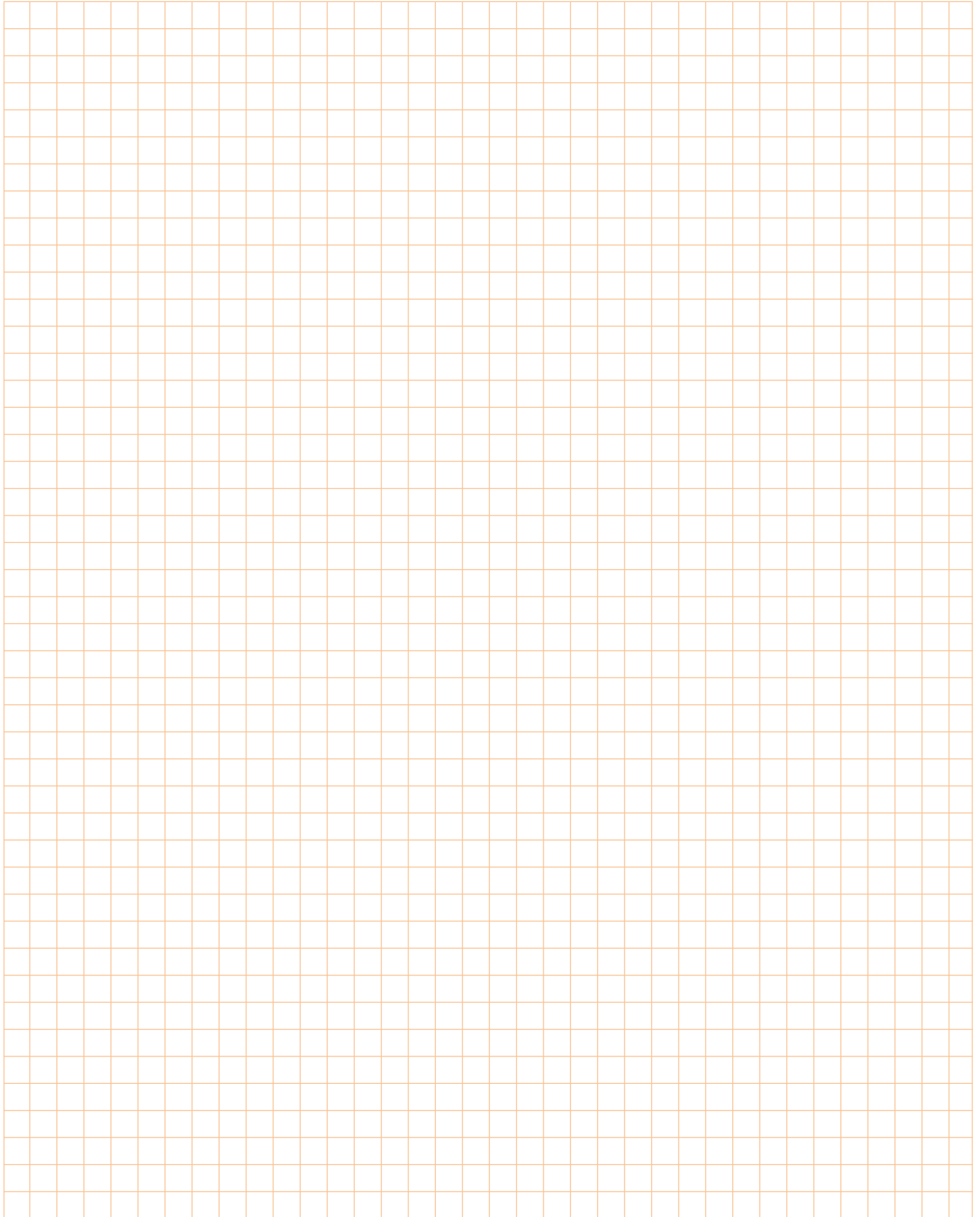
Remove the cover caps and cover plate.

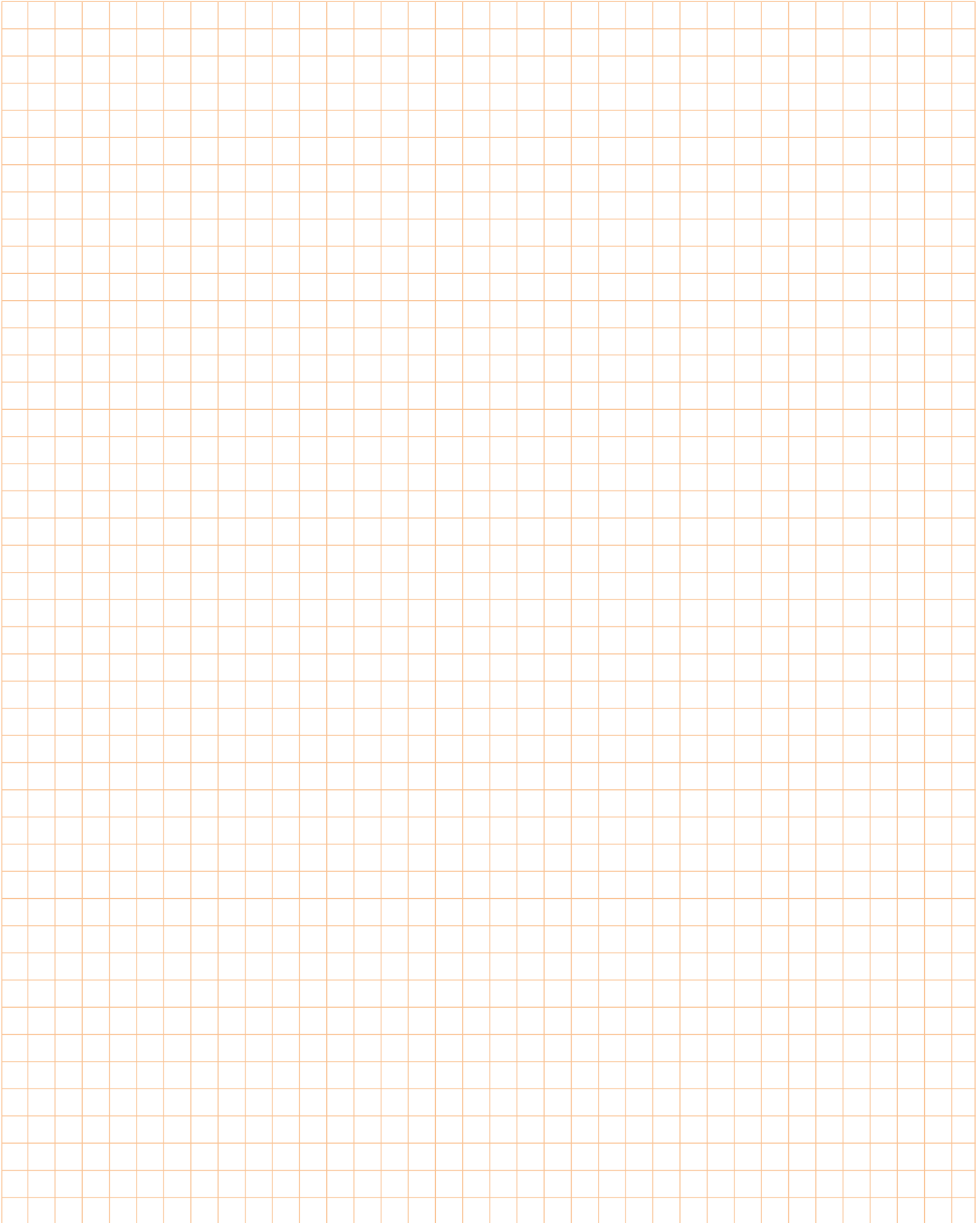


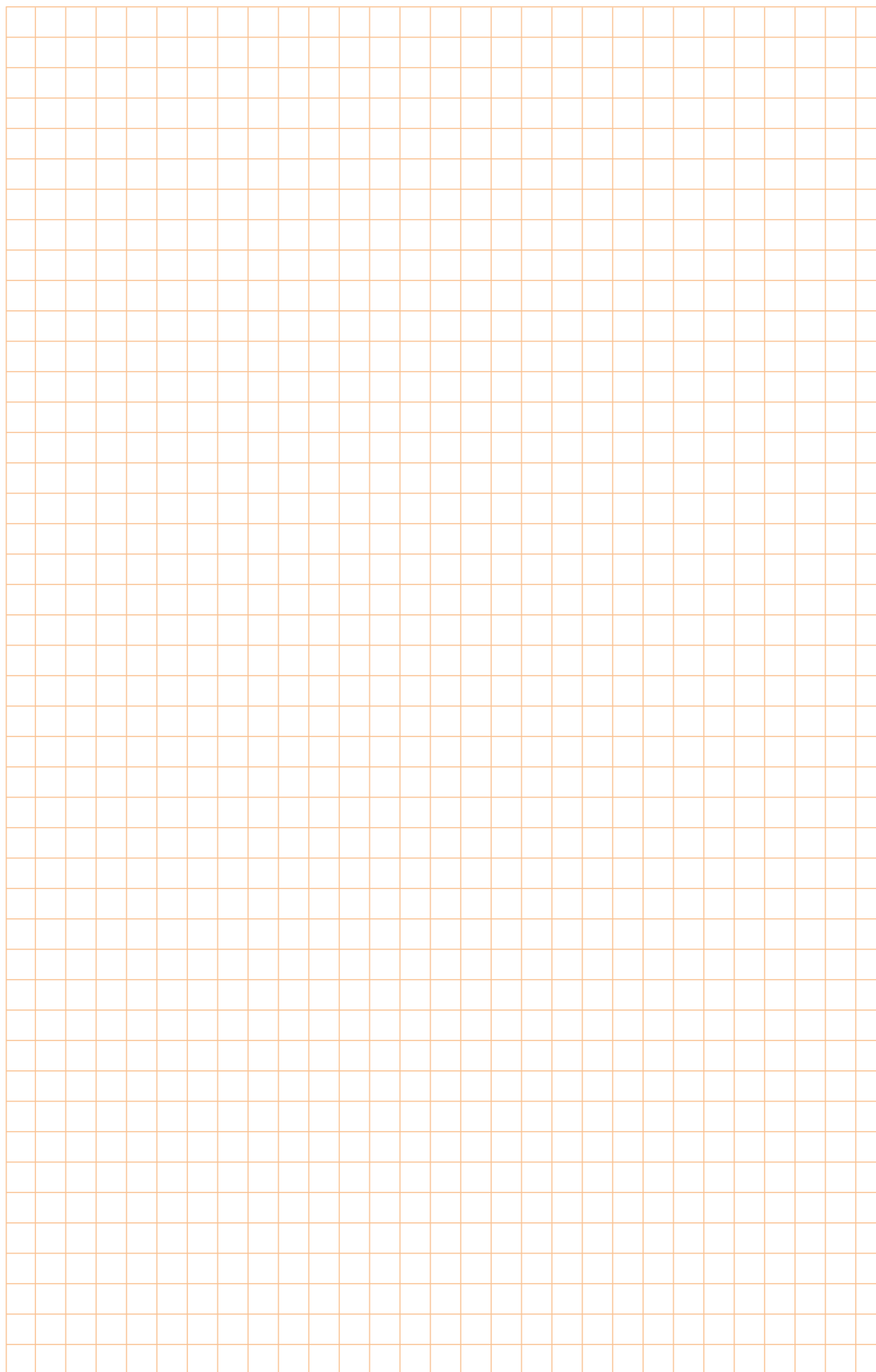
Step 3: Remove the door

- Open the door. Use a screwdriver to disengage the CLIP mechanism of the lever arm from the mounting plate.
- Support the door with one hand and repeat on the other side.









Conversion Chart

	Inch	mm
	1/32	.031 1
	1/16	.063 1.5
	3/32	.094 2
	1/8	.125 3
	5/32	.156 4
	3/16	.188 5
	7/32	.219 5.5
	1/4	.25 6
	9/32	.281 7
	5/16	.313 8
	11/32	.344 9
	3/8	.375 9.5
	13/32	.406 10
	7/16	.438 11
	15/32	.469 12
	1/2	.5 13
	17/32	.531 13.5
	9/16	.563 14
	19/32	.594 15
	5/8	.625 16
	21/32	.656 17
	11/16	.688 17.5
	23/32	.719 18
	3/4	.75 19
	25/32	.781 20
	13/16	.813 20.5
	27/32	.844 21
	7/8	.875 22
	29/32	.906 23
	15/16	.938 24
	31/32	.969 24.5
	1	1 25.4

Information is also available on these other Blum products:

- AVENTOS lift systems
- Concealed hinges: CLIP top, CLIP, MODUL, and COMPACT
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- ORGA-LINE organization system
- POCKET DOOR hardware
- STANDARD drawer runners
- SOLO concealed runners
- TANDEM concealed runners
- TANDEMBOX plus BLUMOTION drawer system

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