How to Install a Blum AVENTOS HK-XS Lift With Hinges

Doors, Drawers & Fronts. US catalog, in inches and millimeters. Updated November 2026.

The AVENTOS HK-XS is Blum's small lift for a lift-up door that hangs on hinges: the hinges carry the door and the lift mechanism, which clips onto plates in the cabinet and on the door, balances it. This guide shows how to pick the mechanism by power factor, the parts to order by Blum part number, the plate positions and the steps in order, for cabinets from 238 mm (about 9-3/8 in) to 610 mm (about 24 in) high.

AVENTOS HK-XS at a glance

Cabinet Height	From 238 mm (about 9-3/8 in) to 610 mm (about 24 in) outside height, up to 1828 mm (about 71-15/16 in) outside width
Inside Size	Inside height at least 200 mm (about 7-7/8 in), and inside depth at least 125 mm (about 4-15/16 in)
Sizing	Power factor = cabinet height (in) x door weight including double handle weight (lb)
Mechanisms	One mechanism per part number, and Blum prints that the power factor doubles with two mechanisms
Hinges	3 hinges from a cabinet width of 900 mm (about 35-13/32 in) and/or a power factor of 158, and 4 hinges from 1200 mm (about 47-7/32 in) and/or 238
Options	TIP-ON fits the HK-XS, with free swing hinges

From Blum AVENTOS catalog p.9, 57, 53, 54.

Who this guide is for

A homeowner or small workshop hanging a lift-up door on hinges in a wall cabinet from 238 mm (about 9-3/8 in) to 610 mm (about 24 in) high, frameless or face frame. Blum designs the HK-XS for a lift-up application only.

What you need

Order the mechanism by power factor, a cabinet plate and a door plate for your cabinet and door, and hinges with their plates.

Blum Part Number	What It Is	How Many	Your Choice
20K1101, 20K1301, 20K1501	AVENTOS HK-XS lift mechanism, one each, chosen by power factor	1 per mechanism; see the maker's instructions for the number of mechanisms	
20K5101	Cabinet mounting plate, screw-on, frameless	1 per mechanism	
20K51E1	Cabinet mounting plate, EXPANDO	in place of 20K5101	
20K5501	Cabinet mounting plate for a face frame cabinet	in place of 20K5101	
20K4101	Door mounting plate, screw-on	1 per mechanism	

20K41E1	Door mounting plate, EXPANDO	in place of 20K4101	
20K4101A	Door mounting plate for narrow aluminum frames	in place of 20K4101	
20K4501	Door mounting plate for large overlay five-piece doors	in place of 20K4101	
71B3590	CLIP top BLUMOTION 110 degree hinge, INSERTA	see the maker's instructions	
71B3550	CLIP top BLUMOTION 110 degree hinge, screw-on	in place of 71B3590	
71B950A	CLIP top hinge for narrow aluminum frames	in place of 71B3590	
31C358B.20	COMPACT CLIP hinge for a 32 mm (about 1-1/4 in) overlay	in place of 71B3590	
30C258B.08	COMPACT CLIP hinge for a 13 mm (about 1/2 in) overlay	in place of 71B3590	
175H3100	Hinge mounting plate, screw-on	1 per hinge	
177H3100E	Hinge mounting plate, EXPANDO	in place of 175H3100	
177H3100	Hinge mounting plate, knock-in	in place of 175H3100	

From Blum AVENTOS catalog p.53, 54. Finishes and colors are your choice; the table names them as Blum prints them.

These hinge mounting plates are the door-side plates. A face frame hinge plate for the HK-XS: see the maker's instructions. With TIP-ON the hinges change to free swing hinges: see the TIP-ON guide.

Jigs and tools that make it easier

The HK-XS hangs on hinges, so it has the most jigs of the six lifts: one set for the lift plates and one for the hinges. Blum makes each by part number.

Blum Part Number	Jig or Tool	What It Does Here
65.1051.02	Universal individual template, with the 5 mm (about 3/16 in) drill bit DB-5mm	Marks and guides the cabinet plate holes.
ZML.0040.02	Universal drilling template	Marks and drills the door plate positions.
M31.1000	ECODRILL	A hand-held drilling pattern for the hinges.
65.7500.03	QUICKFIX (brochure name: drilling template for hinge systems)	Transfers hinge and plate positions between the door and the cabinet.
65.059A	INSERTA boring template	Bores the INSERTA hinge fixing holes.
ZME.0710	Knock-in tool	Presses knock-in hinges and plates into place.

#2 POZI DRIVER	#2 POZI driver, or POZI BIT #2X2 in a screw gun with a BIT HOLDER	Blum says a POZI screwdriver, which is different from a Phillips, is the most crucial tool to make sure full torque reaches the mounting screws. It sets the tension and the cams.

From Blum AVENTOS overview p.1; Blum AVENTOS catalog p.66, 67.

If you cut on a CNC router, you can drill these same positions from your own cut file, so the jigs here are for building by hand.

Sizing, plate positions and limits

The HK-XS is picked by power factor, from the cabinet height and the door weight. Blum counts the handle weight twice, and prints that the power factor doubles when two mechanisms are used.

Power factor

`Power factor = cabinet height (in) x door weight including double handle weight (lb)`
Cabinet height in inches. Door weight and handle weight in pounds. The handle weight is counted twice, as Blum prints.

From Blum AVENTOS catalog p.53.

Cabinet plate position Y, CLIP top hinge, frameless cabinet

`Y = 137 + D + K`
Y is the distance marked Y on Blum's page 57, to the upper of the two cabinet plate holes, measured from the underside of the top panel (the inside top corner). On a cabinet whose top panel sits between the sides, add the top panel's thickness to measure from the side's top edge. D is the mounting plate height and K the hinge arm crank, in millimeters: straight 0, half-cranked 9.5, full-cranked 18.

From Blum AVENTOS catalog p.57.

Cabinet plate position Y, CLIP top hinge, face frame cabinet

`Y = 169 + D + K`
With a COMPACT hinge on a face frame cabinet Blum prints 162 mm (about 6-3/8 in) for COMPACT 31C3 and 178 mm (about 7 in) for COMPACT 30C2.

From Blum AVENTOS catalog p.57.

Door plate position from the top edge of the door

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126 + D + K + OL
COMPACT face frame: 134
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OL is the door overlay. The holes are 15.5 + OL from the side edge of the door. For the large overlay plate 20K4501 the hole location is offset by 19, so it is 15.5 + OL - 19.

From Blum AVENTOS catalog p.57.

Power Factor Ranges

Part Number	Power Factor From	Power Factor to
20K1101	18	88
20K1301	44	132
20K1501	70	158

Blum prints no inclusive or exclusive word for the end of a range, so read each range as running from its first figure to its second, and do a trial application near either end. From Blum AVENTOS catalog p.53.

Hinge Count

Hinges	Cabinet Width From	And/or Power Factor From
3	900 mm (about 35-13/32 in)	158
4	1200 mm (about 47-7/32 in)	238

From Blum AVENTOS catalog p.54.

Cornice Clearance X by Door Thickness

Door Thickness	X
16 mm (about 5/8 in)	45 mm (about 1-25/32 in)
19 mm (about 3/4 in)	34 mm (about 1-11/32 in)
22 mm (about 7/8 in)	23 mm (about 29/32 in)
24 mm (about 15/16 in)	15 mm (about 19/32 in)

From Blum AVENTOS catalog p.57.

Blum recommends the more powerful lift mechanism for applications in overlapping ranges, and a trial application when you are in a borderline area of a mechanism's power factor range.

Blum prints: "Double power factor when using two lift mechanisms." For the cabinet width at which a second mechanism is needed, see the maker's instructions.

For the inside height, Blum prints a minimum of 216 mm (about 8-17/32 in) for a 110 degree hinge with face frame plate 20K5501, and 225 mm (about 8-7/8 in) for a COMPACT hinge with 20K5501. The top reveal depends on the hinge: see Blum's concealed hinge sheet.

Worked example. A cabinet 15 in high and 23 in wide

The door weighs 1.6 lb and the pull weighs 0.2 lb.

1. The pull counts twice: 2 x 0.2 = 0.4 lb
2. Door weight including double handle weight = 1.6 + 0.4 = 2.0 lb
3. Power factor = 15 x 2.0 = 30
4. 20K1101 runs from 18 to 88 and 20K1301 starts at 44, so only 20K1101 holds 30.

Order mechanism 20K1101, cabinet plate 20K5101, door plate 20K4101, and CLIP top hinges 71B3590 with plates 175H3100.

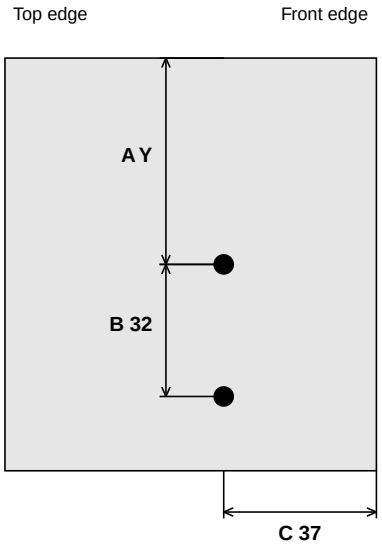
The cabinet is narrower than the width at which Blum prints three hinges.

From Blum AVENTOS catalog p.53.

Drawings and positions

Every drawing below is ours, drawn to scale from the figures Blum prints and named with its source page. The letter on a dimension line points to the table under the drawing.

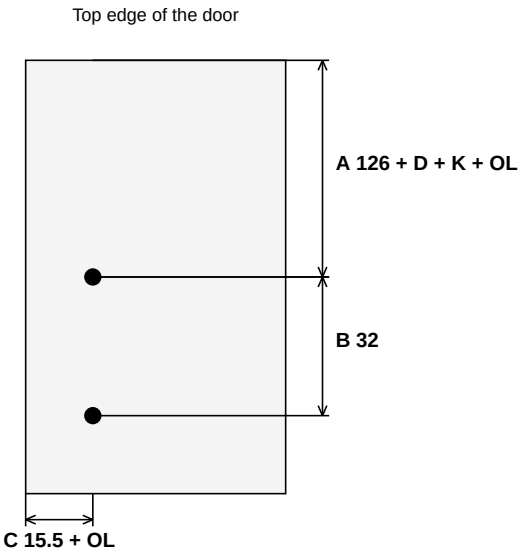
Cabinet plate holes in the cabinet side



Drawn by CabDesign after Blum AVENTOS catalog cme106254, p.57, for a CLIP top hinge in a frameless cabinet. The 32 and the 37 are to scale. Y is shown short: it is 137 + D + K, as the formula says.

Letter	Figure	In Inches	What It Measures
B	32 mm	about 1-1/4 in	Upper plate hole to the lower hole
C	37 mm	about 1-15/32 in	Front edge to the column of holes

Door plate holes



Drawn by CabDesign after Blum AVENTOS catalog cme106254, p.57, with the overlay OL drawn as zero. The 15.5 and the 32 are to scale. The distance from the top edge is 126 + D + K + OL, as the formula says, and is shown short.

Letter	Figure	In Inches	What It Measures

B	32 mm	about 1-1/4 in	Upper hole to the lower hole
C	15.5 mm + OL	about 5/8 in + OL	Side edge of the door to the holes, plus the overlay

Steps, in order

1. Pick the mechanism by power factor. Multiply the cabinet height in inches by the door weight in pounds, counting the handle weight twice, and choose the mechanism whose range holds the answer. Then choose the hinge count from the cabinet width and the power factor.

2. Check the space. The inside height is at least 200 mm (about 7-7/8 in), or more for a face frame plate, and the inside depth at least 125 mm (about 4-15/16 in). Check the cornice clearance X in the table above.

3. Bore the hinge cups. Bore the cups for the hinges as Blum's hinge sheet shows for the hinge you chose. ECODRILL M31.1000 and the INSERTA boring template 65.059A help.

4. Fit the cabinet plates. Fix each cabinet plate at the position Y of the formula for your hinge and cabinet, with its two holes 32 apart and 37 mm (about 1-15/32 in) from the front edge on a frameless cabinet.

5. Fit the door plate and hinges. Fix the door plate at the positions of the door formula with #6 x 5/8 in wood screws (606N or 606P), then insert the hinges.

6. Hang the door. Hang the door on its hinges on the cabinet.

7. Attach the lift mechanism. Attach the mechanism to the cabinet plate, then to the door plate.

8. Adjust. Adjust the lift mechanism, then adjust the door with a POZI driver on the side, depth and height cams, plus or minus 2 mm (about 3/32 in) each.

9. Remove the mechanism when you need to. Take the arm off the cabinet plate, then the lift mechanism off the door.

Check before you finish

- The cabinet plate sits at the position Y for your hinge, and the door plate at its formula position.
- The hinge count matches the width and the power factor.
- The door balances, and the lift mechanism holds it open.
- The open door clears a cornice or crown molding by the X in the table.
- The three door adjustments are within plus or minus 2 mm (about 3/32 in) each.

Common mistakes

- Measuring the cabinet holes from the side's top edge. Blum measures the lift from the inside top of the cabinet, the underside of the top panel. On a cabinet whose top panel sits between the sides, the side's top edge is one top-panel thickness higher, so holes measured from that edge land one top-panel thickness too high and the arm misses the door plate.
- Mixing up D, K and OL. D is the mounting plate height, K the hinge arm crank and OL the overlay. Take the numbers for your own hinge and plate.
- Too few hinges. Blum prints three hinges from a cabinet width of 900 mm (about 35-13/32 in) and/or a power factor of 158, and four from 1200 mm (about 47-7/32 in) and/or 238.
- Forgetting that the power factor doubles with two mechanisms. Blum prints that the power factor is doubled when two lift mechanisms are used.
- A Phillips driver on the cams. Blum calls a POZI driver the most crucial tool to make sure full torque reaches the mounting screws.
- Using the HK-XS for anything but a lift-up door. Blum's note says it is designed to be used in a lift-up application only.

From Blum AVENTOS catalog p.62, 57, 54, 53, 67.

Check your numbers: Enter your cabinet and door in inches or millimeters, and the Blum AVENTOS Calculator gives the part, its power factor and every hole, each cabinet figure measured from Blum's own line and from the side's top edge. Open the Blum AVENTOS Calculator at cabdesign.app/modules/blum-aventos-calculator/blum-aventos-calculator.

What Blum's sheet decides

These details are not published in the Blum documents this guide is written from, so this guide leaves them out. Read them on Blum's own sheet for your part.

- The size of a pilot hole for the door screws: Blum prints only the screw part numbers.
- The cabinet width at which a second mechanism is needed.
- A face frame hinge plate for the HK-XS.

Frequently asked questions

How do I pick an AVENTOS HK-XS mechanism?

Multiply the cabinet height in inches by the door weight in pounds, counting the handle weight twice, and choose the mechanism whose power factor range holds the answer: 20K1101 from 18 to 88, 20K1301 from 44 to 132 or 20K1501 from 70 to 158.

How many hinges does an HK-XS door need?

Blum prints three hinges from a cabinet width of 900 mm (about 35-13/32 in) and/or a power factor of 158, and four hinges from 1200 mm (about 47-7/32 in) and/or a power factor of 238.

What is Y on the HK-XS cabinet plate?

Y is the distance to the upper of the two cabinet plate holes, marked Y on Blum's page 57. It is 137 + D + K for a CLIP top hinge in a frameless cabinet and 169 + D + K for a face frame cabinet, where D is the mounting plate height and K the hinge arm crank.

What depth does an AVENTOS HK-XS need?

An inside depth of at least 125 mm (about 4-15/16 in) and an inside height of at least 200 mm (about 7-7/8 in).

Does the HK-XS take TIP-ON?

Yes, with free swing hinges. See the TIP-ON guide.

How CabDesign picks and sizes this

CabDesign sizes a lift-up front on the AVENTOS HK-XS from the same printed Blum tables used in this guide. It reads the cabinet height, the door weight and the pull weight, counts the pull twice, picks the mechanism and puts its part numbers, with the plates and hinges, on the project's buy list.

Size it the same way in the Designer: pick a lift-up front, enter the door weight, and the Designer reads the same printed tables. Open the Designer at cabdesign.app.

Keep reading

- How to Install a Blum AVENTOS HK Top Stay Lift: cabdesign.app/guides/doors-drawers-fronts/install-blum-aventos-hk-top
- How to Install a Blum AVENTOS HK-S Stay Lift: cabdesign.app/guides/doors-drawers-fronts/install-blum-aventos-hk-s
- How to Fit Blum TIP-ON to an AVENTOS Stay Lift: cabdesign.app/guides/doors-drawers-fronts/install-blum-tip-on-aventos
- Cabinet Door Overlay and Reveals, Explained: cabdesign.app/guides/doors-drawers-fronts/door-overlay-and-reveals-explained

Sources and references

- Blum AVENTOS catalog cme106254, LIT.AVT1001.08.26, blum.com/file/cme106254_ep_dok_bus (ranges, part numbers and drawings)
- Blum AVENTOS program overview cme115842, blum.com/file/cme115842_td_dok_bus (templates for each lift)
- Blum AVENTOS HK-XS assembly instructions, blum.com/aventos-hkxs-assembly (the order of assembly)

AVENTOS, SERVO-DRIVE, TIP-ON and BLUMOTION are names of Blum. This guide is independent: it is written by CabDesign and Blum has not reviewed it.

Blum's own instructions win if they differ, and Blum may change its parts without notice.

A CabDesign guide. This guide on the web: cabdesign.app/guides/doors-drawers-fronts/install-blum-aventos-hk-xs