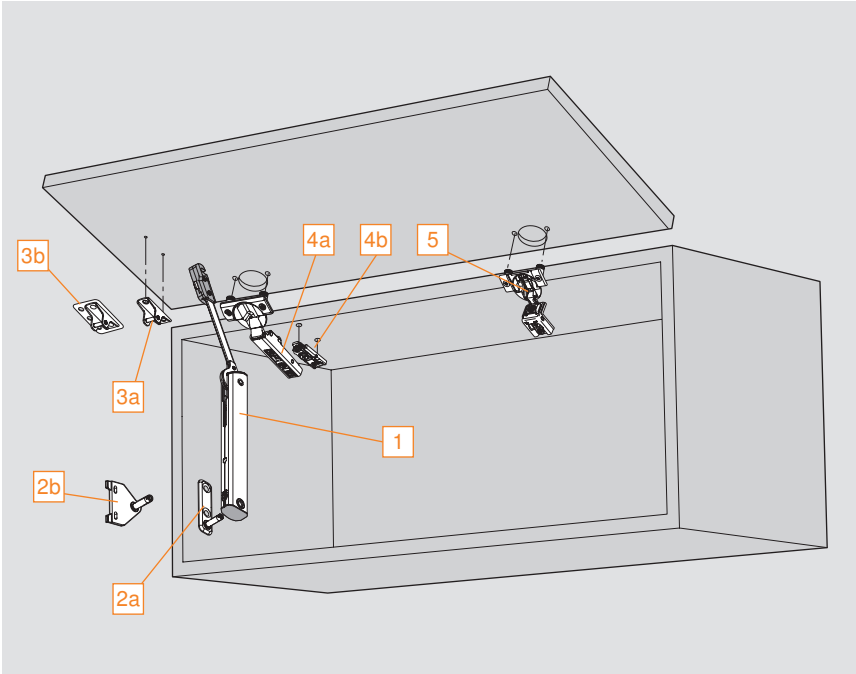


# AVENTOS HK-XS



## Ordering information for face frame and panel



- Well suited for small wall cabinets
- Cabinet height from **238** (9-3/8") to **610** (24")
- Interior depth minimum **127** (5")
- Closes silently and effortlessly with CLIP top BLUMOTION or COMPACT BLUMOTION hinges
- Simple, virtually tool-free assembly and easy adjustment
- Symmetrical lift mechanism – can be used on one or both sides
- Designed for use with BLUMOTION hinges

### Step 1 – Determine the power factor for the application



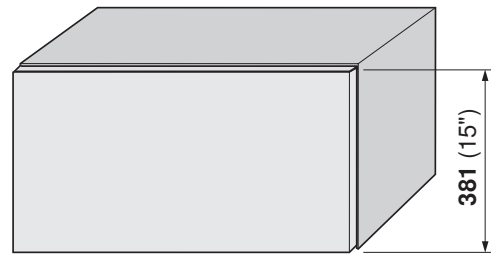
**Power factor = cabinet height (inch) x door weight including double handle weight (lb)**

#### 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.

#### Example:

Cabinet height: 15 inches (within possible range)  
 Door weight including twice the handle weight: **9 lb 14 oz** (14 oz = **.9 lb** see chart below)  
 Total weight converted to decimal is **9.9 lb**  
 Power factor = cabinet height multiplied by door weight including twice the handle weight  
 Power factor = 15 x **9.9**  
 Power factor = 148.5  
 A power factor of 148.5 requires lift mechanism 20K1501




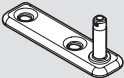
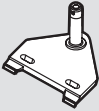

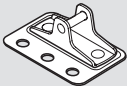
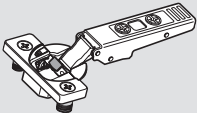

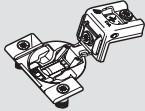
door weight + twice handle weight = 9 lb 14 oz

**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				
	<p><b>NOTE:</b> Two lift mechanisms are required for cabinet widths greater than <b>610</b> (24")</p> <p>Opening angle is 105° with CLIP top BLUMOTION, 100° with COMPACT BLUMOTION hinges</p>	<b>Power factor range (1 lift)</b>	<b>Power factor range (2 lifts)</b>	
		17 – 60	34 – 120	Part no.
		61 – 112	121 – 224	<b>20K1101</b>
		113 – 156	225 – 312	<b>20K1301</b>
			<b>20K1501</b>	
Cabinet mounting plate				
	<p><b>Panel</b></p>	Screws	Part no.	
		EXPANDO	<b>20K5101</b>	
			<b>20K51E1</b>	
	<p><b>Face frame</b></p>	Screws	Part no.	
			<b>20K5501</b>	
Door mounting plate				
	Screws	Part no.	<b>20K4101</b>	
	<p><b>NOTE:</b> For use with large overlay five-piece doors</p>	Screws	Part no.	
			<b>20K4501</b>	
Hinge recommendations				
	<p><b>CLIP top BLUMOTION 110°</b></p>		Part no.	
	Press-in		<b>71B3580</b>	
	<p><b>Hinge mounting plate</b></p>		Part no.	
	Screws		<b>175H3100</b>	
		<p><b>COMPACT BLUMOTION 39C</b></p>		Part no.
32 (1-1/4") Overlay, Press-in			<b>39C358B.20</b>	
<p><b>COMPACT BLUMOTION 38N</b></p>		Part no.		
13 (1/2") Overlay, Press-in			<b>38N358B.08</b>	

**NOTE:** For other hinges and mounting plate options please refer to the Concealed hinges brochure



Planning specifications for face frame and panel

Cabinet and door mounting plate locations for face frame applications

**Lift mechanism**

\*Location when using COMPACT 39/38C  
 \*\*Location when using COMPACT 38N

**NOTE:** When using CLIP top BLUMOTION hinges in a face frame application, you will need to use the calculation below:

**Y = 137 + D + K**

**Door mounting plate**

\*Location when using COMPACT hinges

When using large overlay mounting plate (20K4501) hole location is offset by 19 mm (15.5 + OL - 19)

**NOTE:** When using CLIP top BLUMOTION hinges in a face frame application, you will need to use the calculation below:

**126 + D + K + OL**

Attach using #6 x 5/8" (606N/P) wood screw

**Space requirements**

\*Minimum top reveal based on hinge used. Please see minimum reveal specs in Concealed hinges brochure

Z = (Door height minus A) x 0.3

Door thickness (mm)	16	19	22	24
A (mm)	45	34	23	15

Cabinet and door mounting plate locations for panel applications

**Lift mechanism**

**Y = 137 + D + K**

**Door mounting plate**

Attach using #6 x 5/8" (606N/P) wood screw

Z = (Door height minus A) x 0.3				
Door thickness (mm)	16	19	22	24
A (mm)	45	34	23	15

**Cornice and crown molding clearance**

Door thickness (mm)	16	19	22	24
X (mm)	45	34	23	15

Opening angle =  
 105° CLIP top BLUMOTION  
 100° COMPACT BLUMOTION

**Abbreviations**

D	=	Mounting plate height
K	=	Hinge arm crank
OL	=	Overlay

**K = Hinge arm crank**

Straight arm crank	=	0 mm
Half cranked arm	=	9.5 mm
Full cranked arm	=	18 mm

**NOTE:** Designed to be used in a lift up application only



## Face frame applications

**CLIP top BLUMOTION 110°**

\*All 35 mm and 8 mm holes must be a minimum of 13 mm deep

H	Overlay					P	S
0	14	15	16	17	18	12	21.5
3	11	12	13	14	15	15	24.5
4.5	9.5	10.5	11.5	12.5	13.5	16.5	26
6	8	9	10	11	12	18	27.5
	3	4	5	6	7	fixed distance = 11	
	B = boring distance						

**COMPACT BLUMOTION 39C**

gap 5 (3/16") factory setting, adjusts +2 (3/32") -1 (1/32")

Overlay
32 (1-1/4")
3 (1/8")
B = boring distance

**COMPACT BLUMOTION 38N**

gap 5 (3/16") factory setting, adjusts +2 (3/32") -1 (1/32")

Overlay
13 (1/2")
3 (1/8")
B = boring distance

## Panel applications

**CLIP top BLUMOTION 110°**

\*All 35 mm and 8 mm holes must be a minimum of 13 mm deep

H	Overlay					P	S
0	14	15	16	17	18	12	21.5
3	11	12	13	14	15	15	24.5
6	8	9	10	11	12	18	27.5
9	5	6	7	8	9	21	30.5
	3	4	5	6	7	fixed distance = 11	
	B = boring distance						

**NOTE:** Use 3 hinges at cabinet width 914 (36") and/or power factor 156 and 4 hinges at cabinet width 1219 (48") and/or power factor 234

**Abbreviations**

H	=	Plate height
P	=	Door protrusion
S	=	Side arm protrusion
W	=	Side panel width
T	=	Door thickness

## CLIP top BLUMOTION 110°

Minimum reveal table						
3	0.5	1.0	1.8	2.7	4.3	
4	0.5	1.0	1.7	2.5	3.8	
5	0.5	0.9	1.7	2.4	3.4	
6	0.5	0.9	1.6	2.3	3.2	
7	0.5	0.9	1.6	2.2	3.0	
B = boring distance	16	19	22	24	26	
	T = door thickness					

For thickness greater than 26 trial app. recommended

## COMPACT BLUMOTION 39C

Minimum reveal table	
3 (1/8")	5.5 (7/32")
	19 (3/4")
B = boring distance	T = door thickness

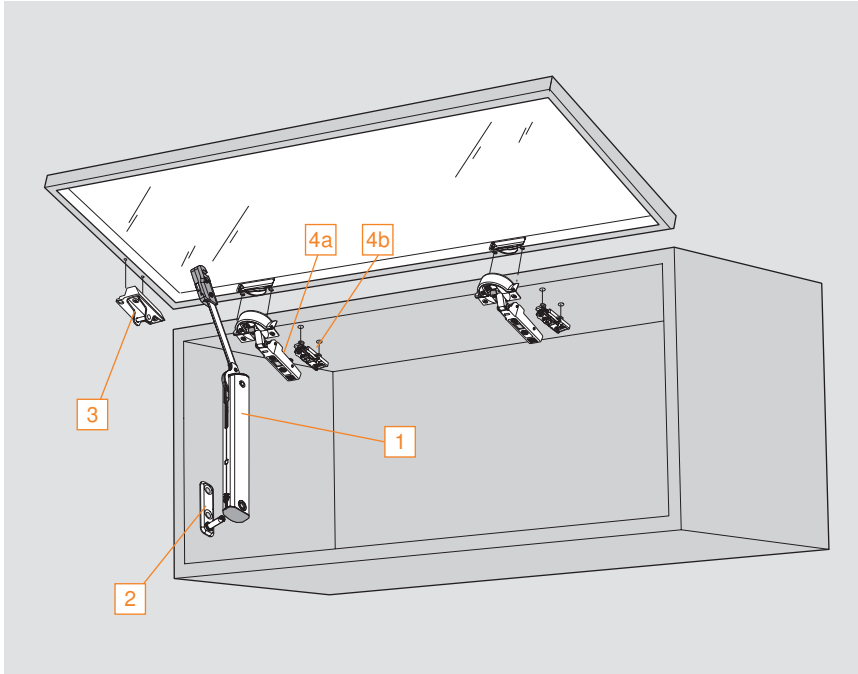
## COMPACT BLUMOTION 38N

Minimum reveal table	
3 (1/8")	7 (9/32")
	19 (3/4")
B = boring distance	T = door thickness

# AVENTOS HK-XS



## Ordering information for narrow aluminum



- Well suited for small wall cabinets
- Cabinet height from **238** (9-3/8") to **610** (24")
- Interior depth minimum **127** (5")
- Closes silently and effortlessly with CLIP top BLUMOTION
- Simple, virtually tool-free assembly and easy adjustment
- Symmetrical lift mechanism – can be used on one or both sides
- Designed for use with BLUMOTION hinges

### Step 1 – Determine the power factor for the application



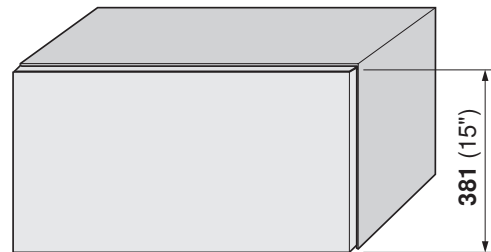
**Power factor = cabinet height (inch) x door weight including double handle weight (lb)**

#### 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.

#### Example:

Cabinet height: 15 inches (within possible range)  
 Door weight including twice the handle weight: **9 lb 14 oz** (14 oz = **.9 lb** see chart below)  
 Total weight converted to decimal is **9.9 lb**  
 Power factor = cabinet height multiplied by door weight including twice the handle weight  
 Power factor = 15 x **9.9**  
 Power factor = 148.5  
 A power factor of 148.5 requires lift mechanism 20K1501



door weight + twice handle weight = 9 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

1

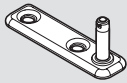


**NOTE:** Two lift mechanisms are required for cabinet widths greater than **610** (24")  
Opening angle is 95° with CLIP top BLUMOTION

Power factor range (1 lift)	Power factor range (2 lifts)	Part no.
17 – 60	34 – 120	20K1101
61 – 112	121 – 224	20K1301
113 – 156	225 – 312	20K1501

Cabinet mounting plate

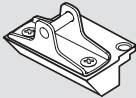
2



	Part no.
Screws	20K5101
EXPANDO	20K51E1

Door mounting plate

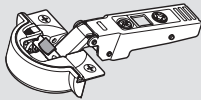
3



	Part no.
Screws	20K4101A

Hinge recommendations

4a



CLIP top BLUMOTION 95°	Part no.
Press-in	71B950A

4b

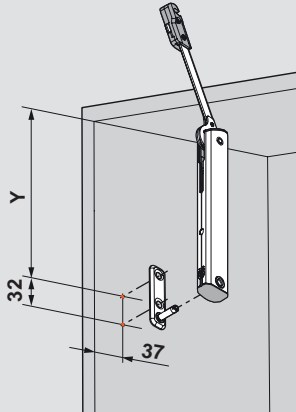


Hinge mounting plate	Part no.
Screws	175H3100

**NOTE:** For other hinges and mounting plate options please refer to the Concealed hinges brochure

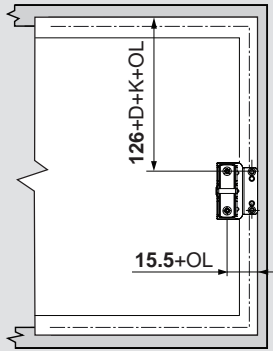
Cabinet and door mounting plate locations for panel applications

Lift mechanism



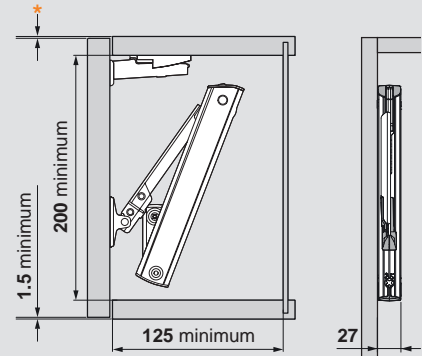
$Y = 137 + D + K$

Door mounting plate



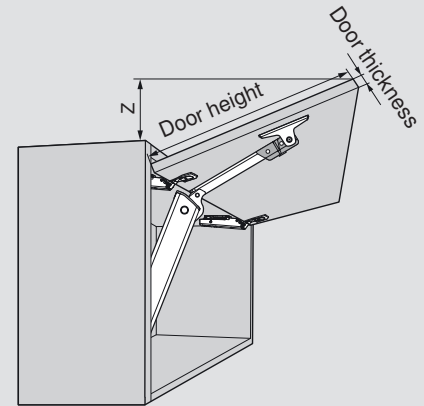
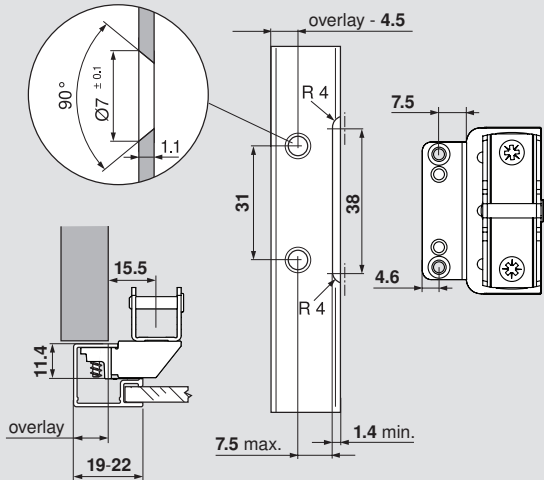
Attach using #6 x 11 mm (699.110) aluminum screw

Space requirements



\*Minimum top reveal based on hinge used. Please see minimum reveal specs in Concealed hinges brochure

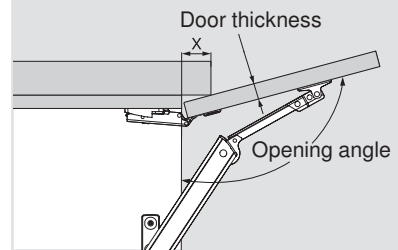
Arm assembly mounting plate



$Z = (\text{Door height minus } A) \times 0.3$

Door thickness (mm)	16	19	22	24
A (mm)	45	34	23	15

Cornice and crown molding clearance



Door thickness (mm)	16	19	22	24
X (mm)	45	34	23	15

Opening angle =  
95° CLIP top BLUMOTION

Abbreviations

D	=	Mounting plate height
K	=	Hinge arm crank
OL	=	Overlay

K = Hinge arm crank

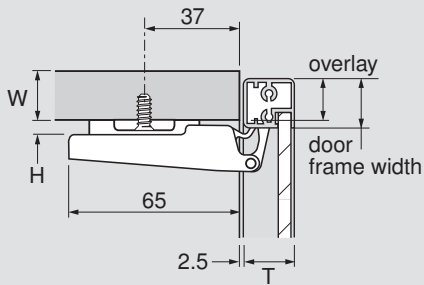
Straight arm crank	=	0 mm
Half cranked arm	=	9.5 mm
Full cranked arm	=	18 mm

**NOTE:** Designed to be used in a lift up application only



## Panel applications

### CLIP top BLUMOTION 95°



H	Overlay	P	S
0	16	13.5	22
3	13	16.5	25
6	10	19.5	28
9	7	22.5	31
	B = fixed		

**NOTE:** Use 3 hinges at cabinet width 914 (36") and/or power factor 156 and 4 hinges at cabinet width 1219 (48") and/or power factor 234

### Abbreviations

H	=	Plate height
P	=	Door protrusion
S	=	Side arm protrusion
W	=	Side panel width
T	=	Door thickness

### CLIP top BLUMOTION 95°

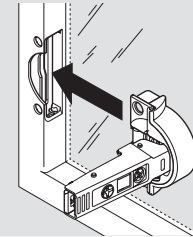
#### Minimum reveal table

18	0.2	0.3	0.4	0.6	0.7
19	0.2	0.3	0.4	0.6	0.7
20	0.2	0.3	0.4	0.5	0.7
21	0.2	0.3	0.4	0.5	0.7
22	0.2	0.3	0.4	0.5	0.7
door frame width	18	19	20	21	22
	T = door thickness				

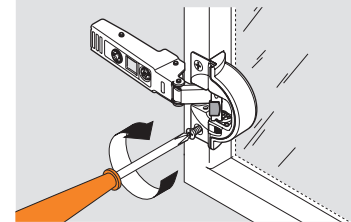
Thickness greater than 22 trial recommended

### Installation

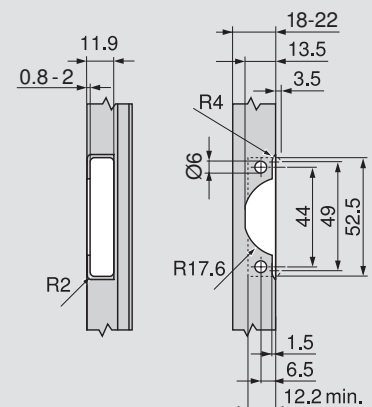
Attach cup adapter to the hinge and insert into machined openings



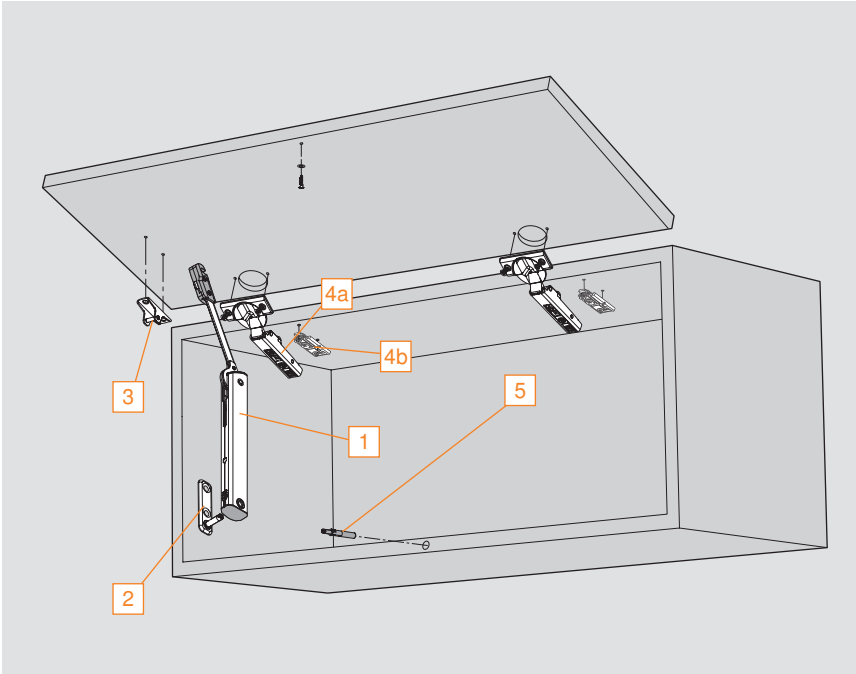
Attach using aluminum screws provided with hinges (699.110)



### Aluminum door preparation







- Well suited for small wall cabinets
- Cabinet height from **238 (9-3/8")** to **610 (24")**
- Interior depth minimum **127 (5")**
- Opens with a light touch to the front
- Simple, virtually tool-free assembly and easy adjustment
- Symmetrical lift mechanism – can be used on one or both sides
- Designed for use with free swing hinges

**Step 1 – Determine the power factor for the application**

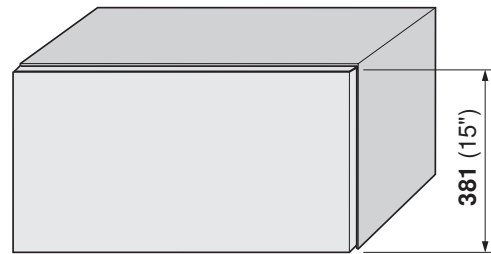
**i** Power factor = cabinet height (inch) x door weight including double handle weight (lb)

**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.

**Example:**

Cabinet height: 15 inches (within possible range)  
 Door weight including twice the handle weight: **9 lb 14 oz** (14 oz = **.9 lb** see chart below)  
 Total weight converted to decimal is **9.9 lb**  
 Power factor = cabinet height multiplied by door weight including twice the handle weight  
 Power factor = 15 x **9.9**  
 Power factor = 148.5  
 A power factor of 148.5 requires lift mechanism 20K1501



door weight + twice handle weight = 9 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			
	<b>NOTE:</b> Two lift mechanisms are required for cabinet widths greater than <b>610</b> (24") Opening angle is 105° with CLIP top		
	<b>Power factor range (1 lift)</b>	<b>Power factor range (2 lifts)</b>	Part no.
	17 – 60	34 – 120	20K1101T
	61 – 112	121 – 224	20K1301T
	113 – 156	225 – 312	20K1501T
Cabinet mounting plate			
	Part no.		
	Screws	20K5101	
	EXPANDO	20K51E1	
Door mounting plate			
	Part no.		
	Screws	20K4101	
Hinge recommendations			
	<b>CLIP top 110°, free swing</b> Part no.		
	Press-in	70T3580.TL	
	<b>Hinge mounting plate</b> Part no.		
	Screws	175H3100	
TIP-ON mechanism set			
	<b>Set includes:</b> <ul style="list-style-type: none"> <li>TIP-ON mechanism</li> <li>Self-adhesive, screw-on catch plate and screw</li> </ul>		
	<ul style="list-style-type: none"> <li>Works for both overlay and inset applications</li> <li>Nylon gray</li> <li>For door heights greater than <b>400</b> mm use 956A1004</li> </ul>		
	Part no.		
<b>NOTE:</b> Use of screw-on catch plate is required for all applications		Standard doors	956.1004
		Large doors	956A1004

**NOTE:** For other hinges and mounting plate options please refer to the Concealed hinges brochure

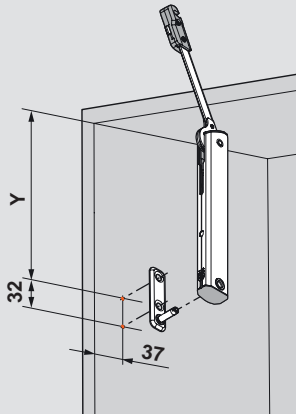
# AVENTOS HK-XS



## Planning specifications for TIP-ON

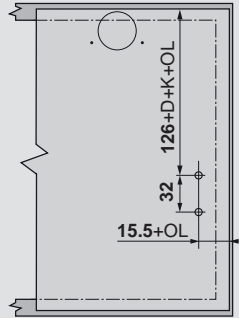
### Cabinet and door mounting plate locations for panel applications

#### Lift mechanism



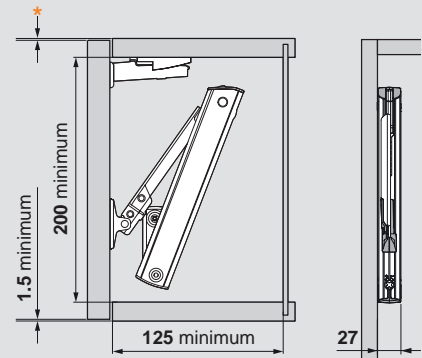
$$Y = 137 + D + K$$

#### Door mounting plate



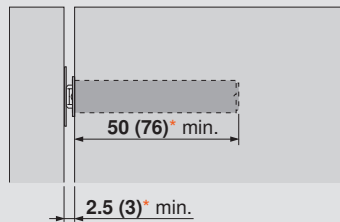
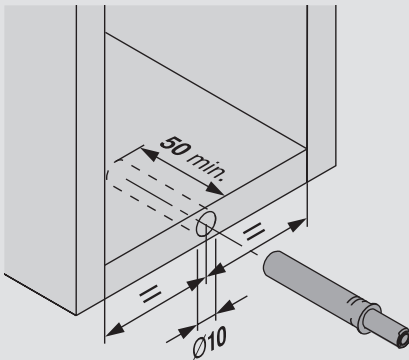
Attach using #6 x 5/8" (606N/P) wood screw

#### Space requirements



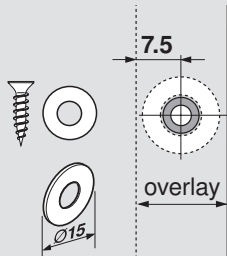
\*Minimum top reveal based on hinge used. Please see minimum reveal specs in Concealed hinges brochure

#### TIP-ON for AVENTOS specifications

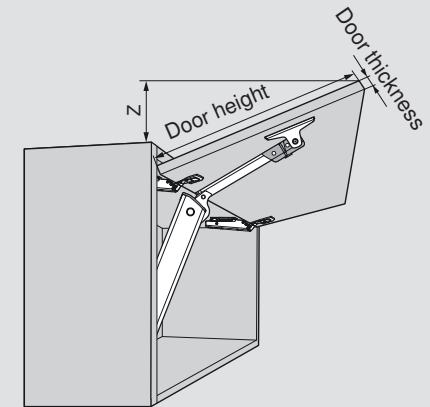


\*For door heights greater than 400 mm use 956A1004

#### Screw-on catch plate



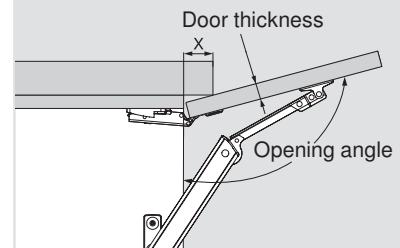
Pre-boring Ø2.5 mm countersunk pilot holes are required



$$Z = (\text{Door height minus } A) \times 0.3$$

Door thickness (mm)	16	19	22	24
A (mm)	45	34	23	15

#### Cornice and crown molding clearance



Door thickness (mm)	16	19	22	24
X (mm)	45	34	23	15

Opening angle =  
105° CLIP top free swing

#### Abbreviations

D	=	Mounting plate height
K	=	Hinge arm crank
OL	=	Overlay

#### K = Hinge arm crank

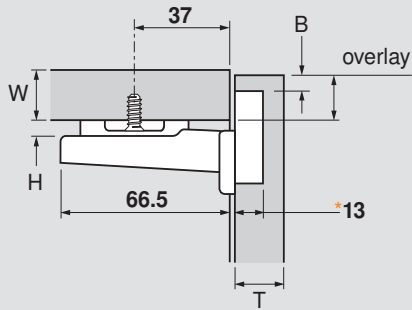
Straight arm crank	=	0 mm
Half cranked arm	=	9.5 mm
Full cranked arm	=	18 mm

**NOTE:** Designed to be used in a lift up application only



## Panel applications

### CLIP top 110°, free swing



\*All 35 mm and 8 mm holes must be a minimum of 13 mm deep

H	Overlay					P	S
0	14	15	16	17	18	12	21.5
3	11	12	13	14	15	15	24.5
6	8	9	10	11	12	18	27.5
9	5	6	7	8	9	21	30.5
	3	4	5	6	7	fixed distance = 11	
	B = boring distance						

**NOTE:** Use 3 hinges at cabinet width 914 (36") and/or power factor 156 and 4 hinges at cabinet width 1219 (48") and/or power factor 234

### CLIP top 110°, free swing

Minimum reveal table						
3	0.5	1.0	1.8	2.7	4.3	
4	0.5	1.0	1.7	2.5	3.8	
5	0.5	0.9	1.7	2.4	3.4	
6	0.5	0.9	1.6	2.3	3.2	
7	0.5	0.9	1.6	2.2	3.0	
B = boring distance	16	19	22	24	26	
	T = door thickness					

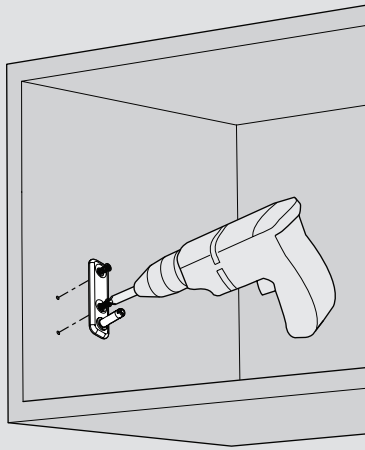
For thickness greater than 26 trial app. recommended

### Abbreviations

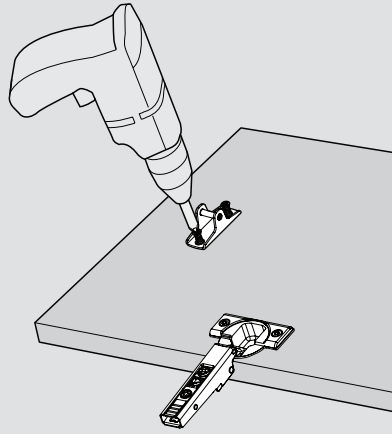
H	=	Plate height
P	=	Door protrusion
S	=	Side arm protrusion
W	=	Side panel width
T	=	Door thickness

Attaching AVENTOS HK-XS cabinet and door mounting plate

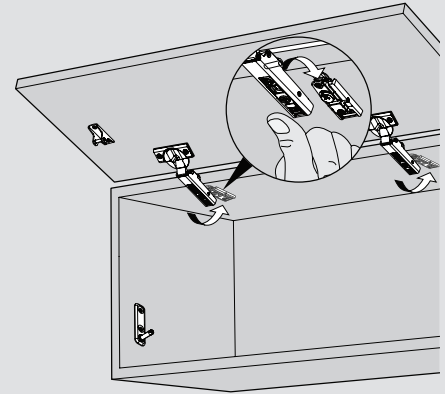
1 Attach cabinet mounting plate.



2 Attach door mounting plate. Insert hinge.

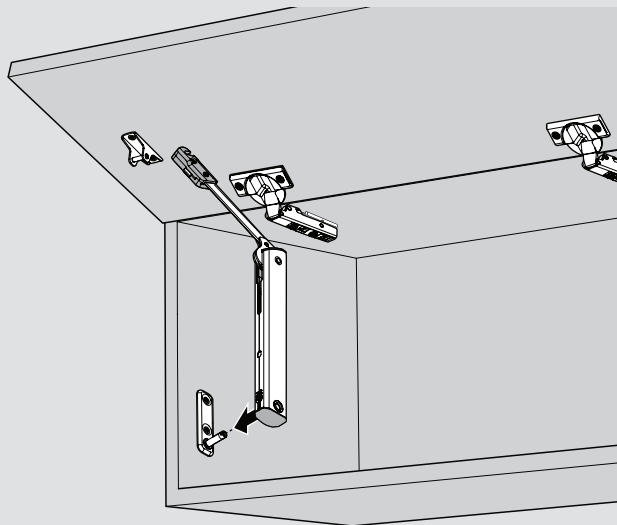


3 Attach door to the cabinet.

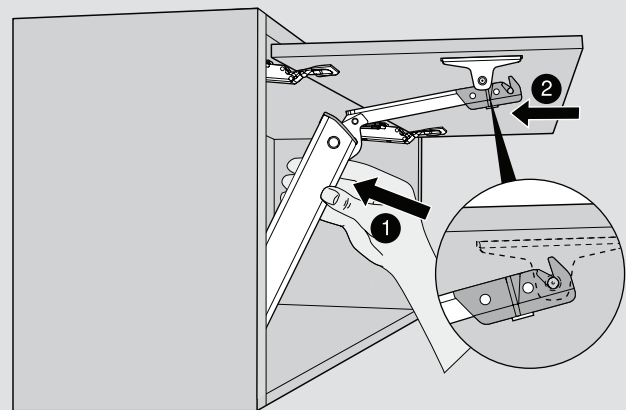


Attaching AVENTOS HK-XS lift mechanism to cabinet

4 Attach the lift mechanism to cabinet mounting plate.

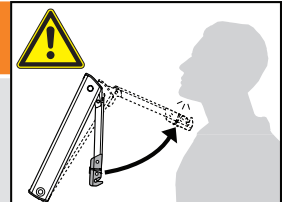


5 Attach lift mechanism to door.

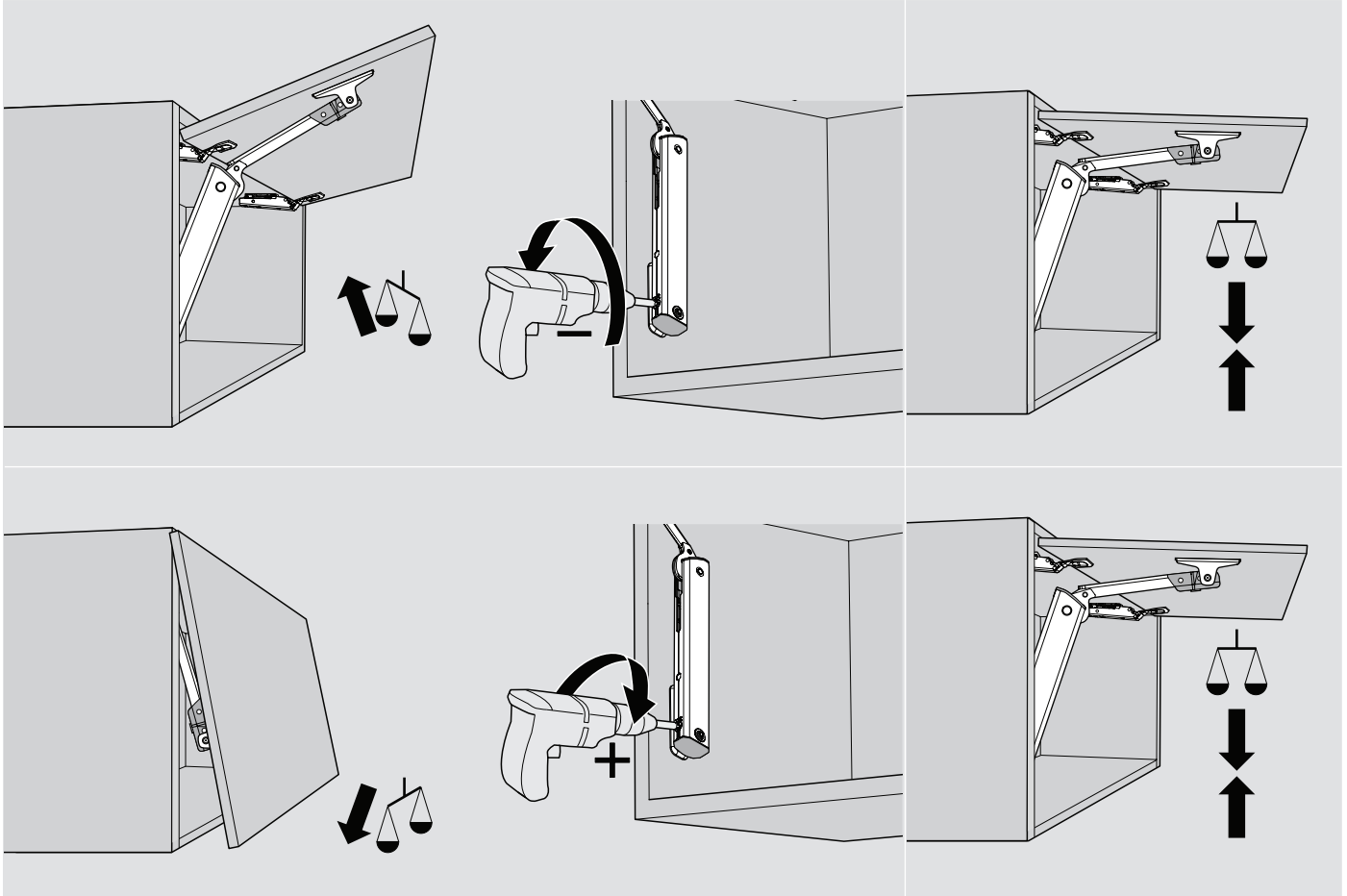


Warning: Risk of injury by spring-loaded lever arm!

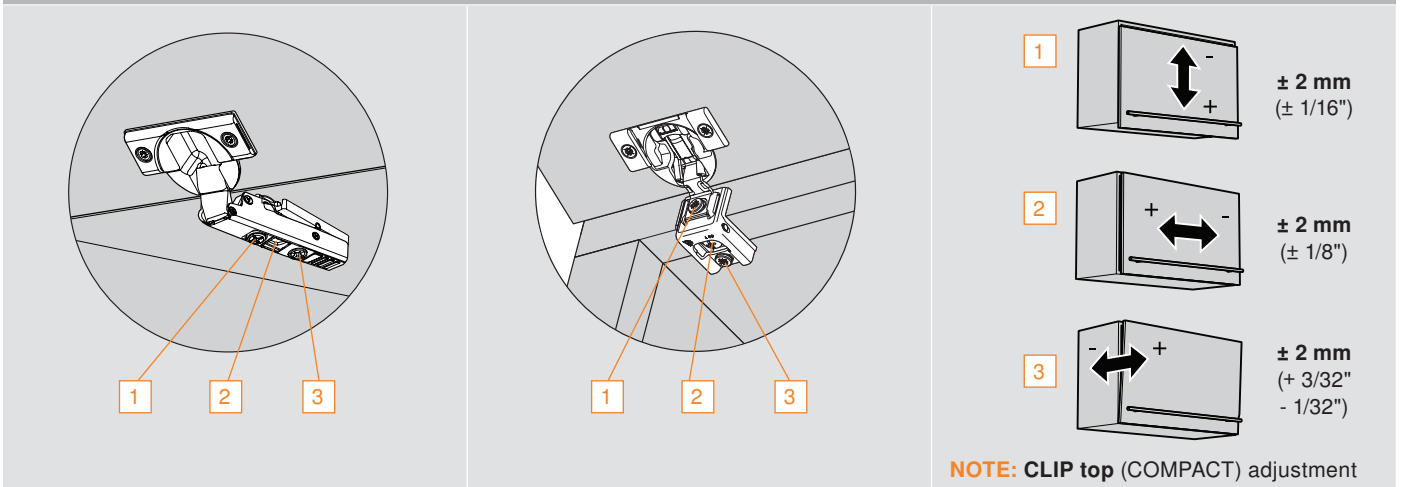
- Do not push lever arm down
- Secure lever arm before installing cabinet



Adjusting the lift mechanism



AVENTOS HK-XS door adjustment

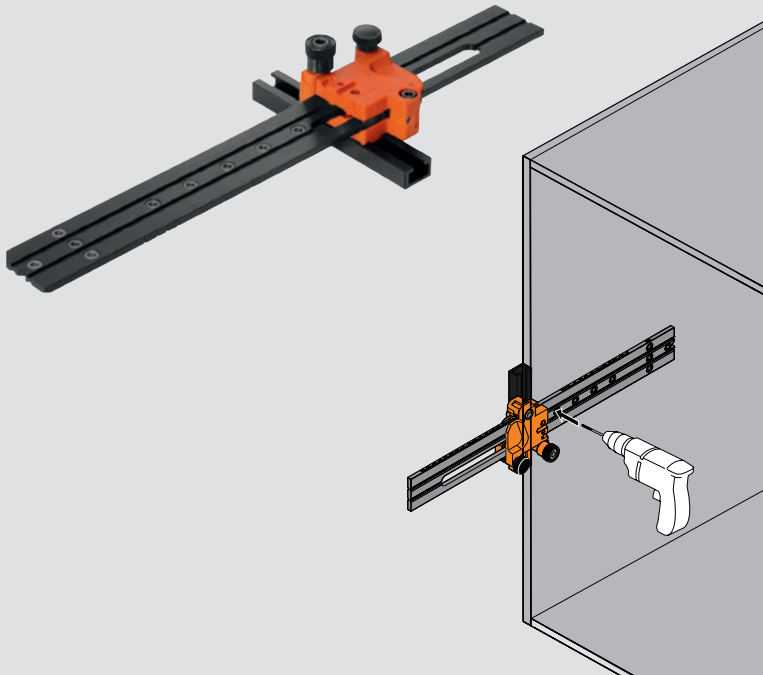


# AVENTOS HK-XS



## Assembly aids

### Universal individual template



- Used for AVENTOS locating pins and pre-boring for hinge mounting plates
- Can also be used for pre-boring holes for LEGRABOX, TANDEMBOX, and TANDEM drawer runners
- Calibrated scale for accurate setting

#### Set includes:

- Universal individual template
- Ø2.5 mm and Ø5 mm stop collars

Part no.

Universal individual template	65.1051.02
Ø2.5 mm drill bit	DB-2.5mm

### 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
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

### Vix piloting bit

For use in handheld drills

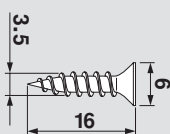


Part no.

Ø2.8 mm piloting bit	VPB-5
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### Deep thread wood screw

Use to attach mounting plates to doors

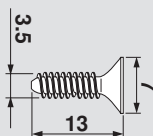


Part no.

#6 x 16 mm, Phillips	606N
#6 x 16 mm, Pozi	606P

### Fine thread aluminum screw

Use to attach mounting plates to wide frame aluminum doors

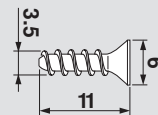


Part no.

#7 x13 mm fine thread	7072A
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### Deep thread aluminum screw

Use to attach mounting plates to narrow frame aluminum doors



Part no.

#6x11 mm deep thread	699.110
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