

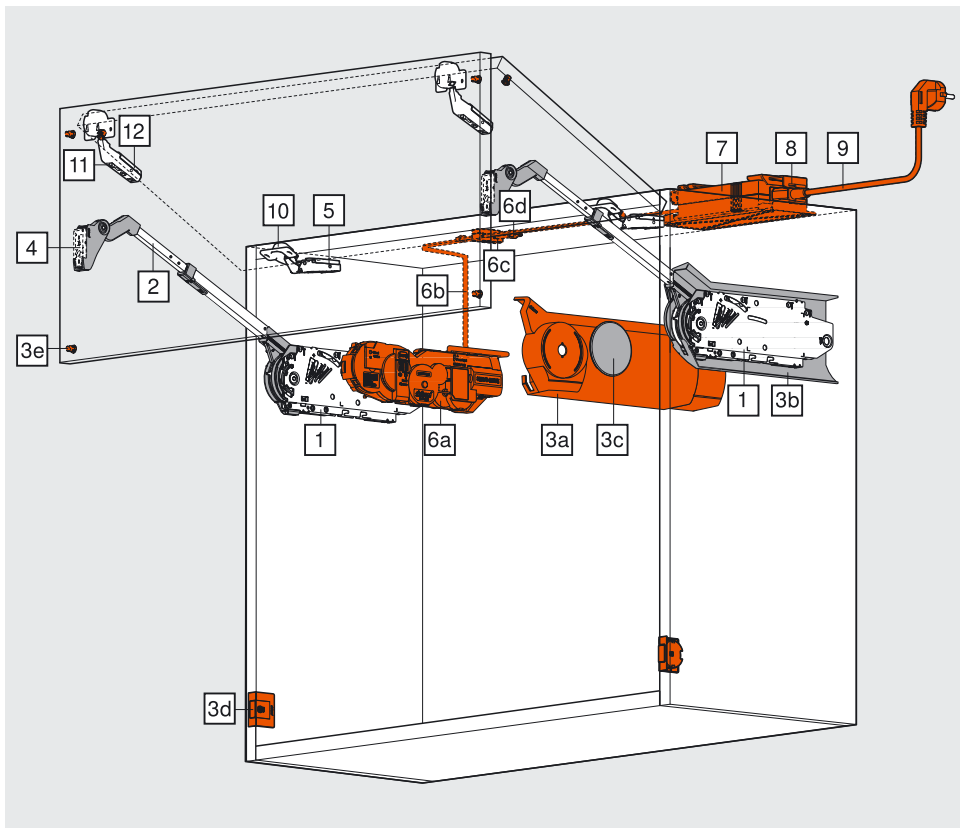


SERVO-DRIVE for AVENTOS HF

Technical data sheet

SERVO-DRIVE for AVENTOS HF

Ordering information **Wooden fronts and wide alu frames**
symmetrical / asymmetrical



3 types of lift mechanisms are enough to cover a wide range of applications.

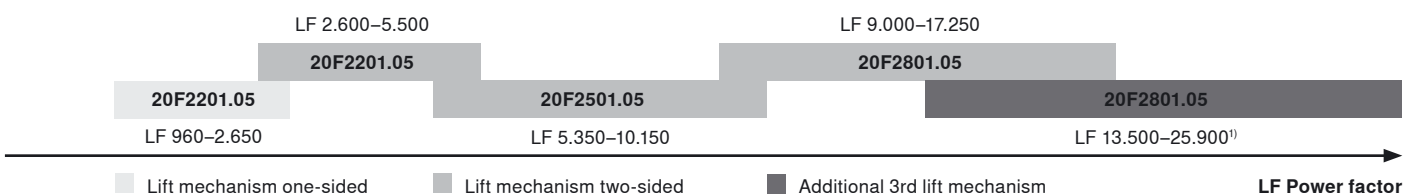
Using the power factor, you can calculate the required lift mechanisms. The power factor required depends on the weight of the lower and upper front and the cabinet height.

The power factor and the door weight can be increased by 50% when a third lift mechanism is used.

The larger front must be at the top for asymmetrical fronts.

■ Standard
 ■ SERVO-DRIVE

i	This is how it's done!	Symmetrical fronts: $\text{Power factor} = \text{cabinet height (KH) [mm]} \times \text{door weight}$
		Asymmetrical fronts: $\text{Theoretical cabinet height (TKH)} = \text{upper front height (FHo)} \times 2 \text{ (including gaps)}$



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

¹⁾ We recommend two synchronised drive units for a power factor > 17,250.

1	Symmetrical lift mechanism	
	Power factor LF	
	2.600-5.500	20F2201.05
	5.350-10.150	20F2501.05
	9.000-17.250	20F2801.05

2	Telescopic arm symmetrical		
	Nickel plated steel		
	Cabinet height ²⁾ 480-570 mm		
		l + r	20F3201
	Cabinet height ²⁾ 560-710 mm		
		l + r	20F3501
	Cabinet height ²⁾ 700-900 mm		
		l + r	20F3801
	Cabinet height ²⁾ 760-1,040 mm		
		l + r	20F3901


²⁾ "Theoretical cabinet height" for asymmetrical fronts

SERVO-DRIVE for AVENTOS HF

Ordering information Wooden fronts and wide alu frames symmetrical / asymmetrical




3a	SERVO-DRIVE cover cap large left		
	Nylon light grey / silk white		
		Left	21F8001

3b	Cover plate right		
	Nylon light grey / silk white		
		Right	20F8001


3c	Cover cap round		
	Nylon deep grey		
	Plain	2 x	20F9001
	Printed with the BLUM Logo	2 x	20F9001.BL
	can be printed with customer logo - minimums from 1,000 pcs		

3d	SERVO-DRIVE switch		
	light grey / silk white		
		2 x	21P5020

3e	Blum distance bumper		
	RAL 7037 dust grey		
	Ø 5 mm	6x	993.0530
	Ø 8 mm	6x	993.0830.01





4	Mounting plate for telescopic arm		
	All horizontal mounting plates with 0 mm distance		
	Recommendation		
	Screws ³⁾	Spacing 0 mm	175H5400
	Knock-in	Spacing 0 mm	177H5100
	EXPANDO	Spacing 0 mm	177H5400E

5	Mounting plate for CLIP top 120° hinge		
	Standard mounting plates, spacing depends on the top gap		
	Screws ³⁾	Spacing 0 mm	175H5400
	Knock-in	Spacing 0 mm	177H5100
	EXPANDO	Spacing 0 mm	177H5400E


6a	SERVO-DRIVE drive unit		
	RAL 7037 dust grey		
			21FA001


6b, 6c, 6d, 7, 9, 8	Distribution cable, connecting node, cable end protector, Blum transformer, flex and transformer unit housing		
		See page	15


³⁾Use chipboard screws (609.1x00) for wooden fronts.
Use self tapping screws (608.085) for wide alu frames.

10	CLIP top 120° hinge		
		Screws ³⁾ Unsprung	70T5550.TL
		Knock-in Unsprung	70T5580.TL
		EXPANDO Unsprung	70T558E.TL
		INSERTA Unsprung	70T5590BTL

11	CLIP top centre hinge		
		Screws ³⁾ unsprung	78Z5500T
		Knock-in Unsprung	78Z5530T
		EXPANDO unsprung	78Z553ET

12	Mounting plate for CLIP top centre hinge		
	Standard mounting plates with 0 mm distance		
	Screws ³⁾	Spacing 0 mm	175H5400
	Knock-in	Spacing 0 mm	177H5100
	EXPANDO	Spacing 0 mm	177H5400E
Only use a cruciform mounting plate for wide alu frames under a 55 mm frame width			

	Opening angle stop		
	Nylon, dark grey		
	104°		20F7051
	83°		20F7011

	Bit PZ cross slot		
	Size 2, length 39 mm		BIT-PZ KS2

SERVO-DRIVE for AVENTOS HF

Ordering information **Wooden fronts and wide alu frames**
symmetrical / asymmetrical



Instruction leaflet and installation instructions

Including documentation for the Machine Directive

MA-400	German	MA-021/01DE
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MA-400	Spanish	MA-021/01ES
MA-400	Bulgarian	MA-021/01BG*
MA-400	Chinese	MA-021/01ZH*
MA-400	Danish	MA-021/01DA*
MA-400	Estonian	MA-021/01ET*
MA-400	Finnish	MA-021/01FI*
MA-400	Greek	MA-021/01EL*
MA-400	Japanese	MA-021/01JA*
MA-400	Croatian	MA-021/01HR*
MA-400	Latvian	MA-021/01LV*
MA-400	Lithuanian	MA-021/01LT*
MA-400	Dutch	MA-021/01NL*
MA-400	Norwegian	MA-021/01NO*
MA-400	Polish	MA-021/01PL*
MA-400	Portuguese	MA-021/01PT*
MA-400	Romanian	MA-021/01RO*
MA-400	Russian	MA-021/01RU*
MA-400	Swedish	MA-021/01SV*
MA-400	Serbian	MA-021/01SR*
MA-400	Slovakian	MA-021/01SK*
MA-400	Slovenian	MA-021/01SL*
MA-400	Czech	MA-021/01CS*
MA-400	Turkish	MA-021/01TR*
MA-400	Hungarian	MA-021/01HU*

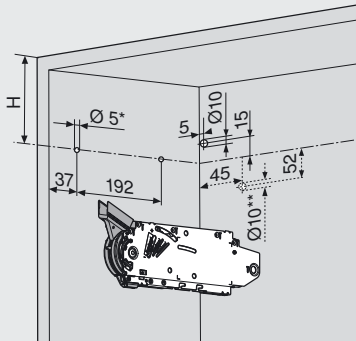
* Available starting 01/2010

SERVO-DRIVE for AVENTOS HF

Planning Symmetrical wooden fronts and wide alu frames



Drilling for mechanism and cable¹⁾



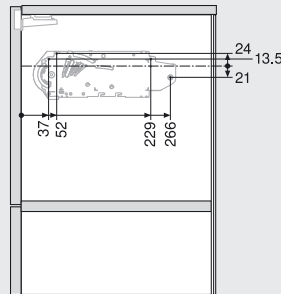
* Drilling depth 5 mm

** Alternative drilling

Cabinet height KH	H
480–549 mm	KH x 0.3 - 28 mm
550–1.040 mm	KH x 0.3 - 57 mm

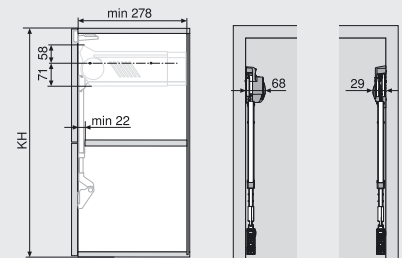
¹⁾ Only on the left side

Fixing positions for lift mechanism



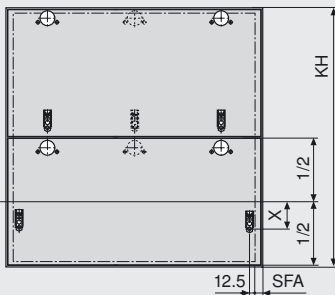
4 x chipboard screws, Ø 4 x 35 mm

Space requirement



KH Cabinet height

Front assembly

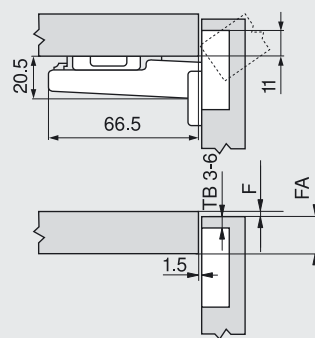


SFA Side front overlay

3 hinges starting at cabinet width 1,200 mm and/or 12 kg front weight
4 hinges starting at cabinet width 1800 mm and/or 20 kg door weight

Cabinet height KH	X	X
	Screw-on/ EXPANDO	Knock-in
480–549 mm	68 mm	70 mm
550–1.040 mm	45 mm	47 mm

CLIP top 120° hinge unsprung



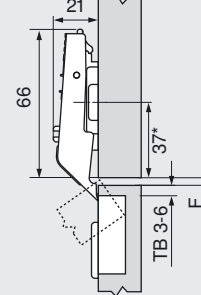
F Gap

Drilling distance TB

	Front overlay FA																
	5	6	7	8	9	10	11	12	13	14	15	16	17				
0											3	4	5	6			
3								3	4	5	6						
6				3	4	5	6										
9	3	4	5	6													

▲ Mounting plate

CLIP top centre hinge



* Depends on mounting plate (e.g. 37 mm for cruciform mounting plate)

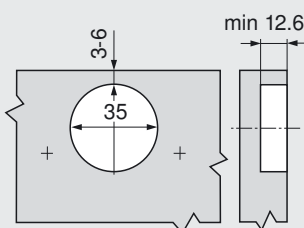
Min. gap F = 1.5 mm

Drilling distance TB

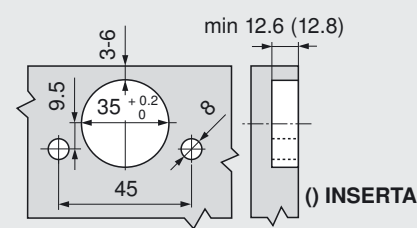
	Centre gap F											
	3	4	5	6	3	4	5	6				
0					6	5	4	3				
3												
6												
9												

▲ Mounting plate

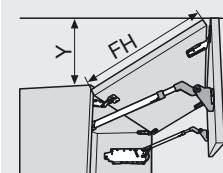
Screw-on



INSERTA/knock-in/EXPANDO assembly



Space requirement



OEB = Opening angle stop

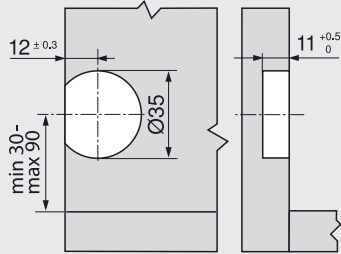
Without OEB	$Y = FH \times 0.44 + 38$
OEB 104°	$Y = FH \times 0.24 + 34$
OEB 83°	$Y = 0$

SERVO-DRIVE for AVENTOS HF

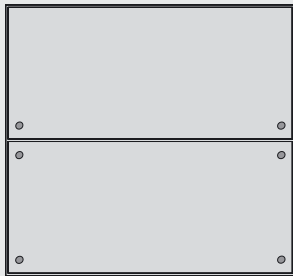
Planning Symmetrical wooden fronts and wide alu frames



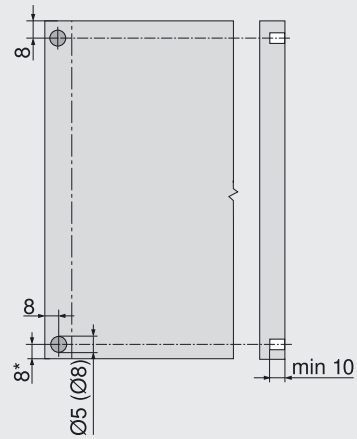
SERVO-DRIVE switch



Blum distance bumper



Blum distance bumper drilling position



* From cabinet front edge for fronts that protrude below

Recommendation for aluminium frames: Consider drilling for the Blum distance bumper in the cabinet side. A trial application must be carried out when fixing the Blum distance bumper to the front.

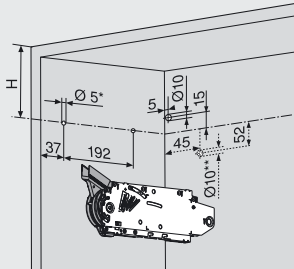
i Do not glue Blum distance bumper.

SERVO-DRIVE for AVENTOS HF

Planning Asymmetrical wooden fronts and wide alu frames



Drilling for mechanism and cable¹⁾



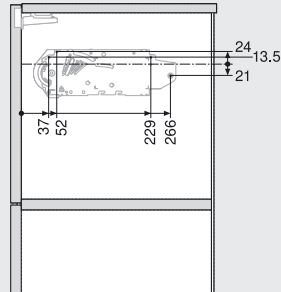
* Drilling depth 5 mm

** Alternative drilling

TKH	H
480–549 mm	TKH x 0.3 - 28 mm
550–1.040 mm	TKH x 0.3 - 57 mm

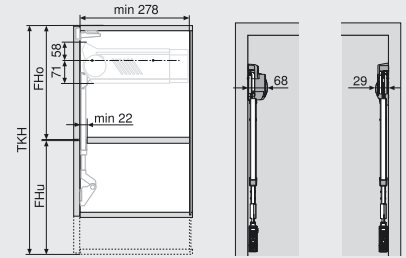
¹⁾ Only on the left side

Fixing positions for lift mechanism



4 x chipboard screws, Ø 4 x 35 mm

Space requirement



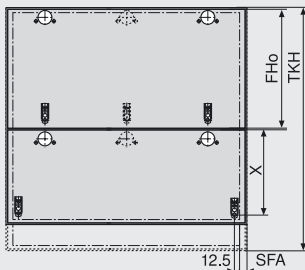
TKH Theoretical cabinet height

KH Cabinet height

FHo Upper front height

FHu Lower front height

Front assembly



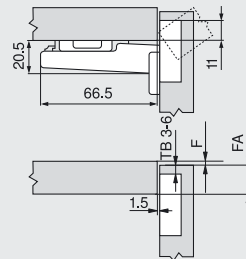
FHo Upper front height

TKH Theoretical cabinet height

SFA Side front overlay

TKH	X Screw-on/ EXPANDO	X Knock-in
480–549 mm	FHo/2 + 68 mm	FHo/2 + 70 mm
550–1.040 mm	FHo/2 + 45 mm	FHo/2 + 47 mm

CLIP top 120° hinge unsprung



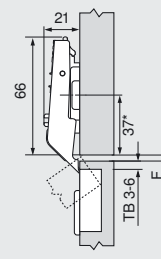
F Gap

Drilling distance TB

	Front overlay FA												
	5	6	7	8	9	10	11	12	13	14	15	16	17
0										3	4	5	6
3							3	4	5	6			
6				3	4	5	6						
9	3	4	5	6									

▲ Mounting plate

CLIP top centre hinge



* Depends on mounting plate (e.g. 37 mm for cruciform mounting plate)

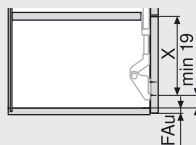
Min. gap F = 1.5 mm

Drilling distance TB

	Centre gap F			
	3	4	5	6
0				
3				
6				
9				

▲ Mounting plate

Min. lower front height



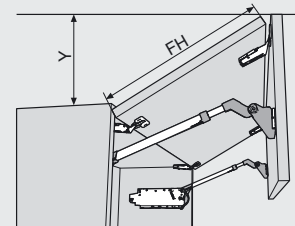
X + 19 + FAu

FAu Lower front overlay

Number of Hinges

3 hinges starting at cabinet width 1200 mm and/or 12 kg door weight
4 hinges starting at cabinet width 1800 mm and/or 20 kg door weight

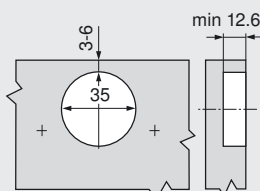
Space requirement



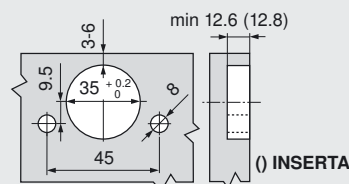
OEB = Opening angle stop

Without OEB	Y = FH x 0.44 + 38
OEB 104°	Y = FH x 0.24 + 34
OEB 83°	Y = 0

Screw-on



INSERTA/knock-in/EXPANDO assembly

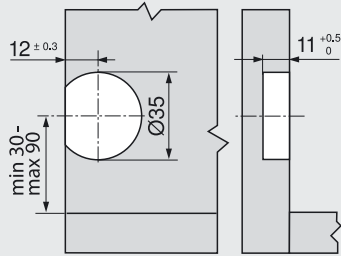


SERVO-DRIVE for AVENTOS HF

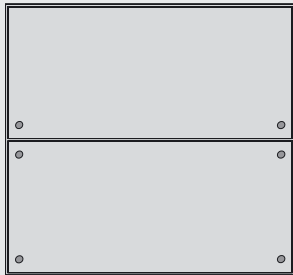
Planning Asymmetrical wooden fronts and wide alu frames



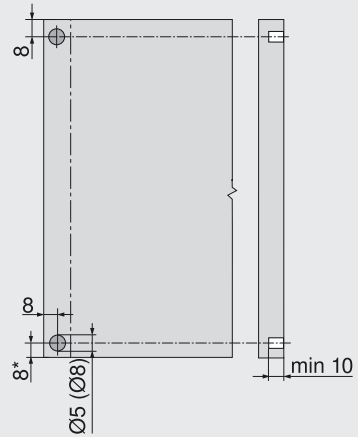
SERVO-DRIVE switch



Blum distance bumper



Blum distance bumper drilling position



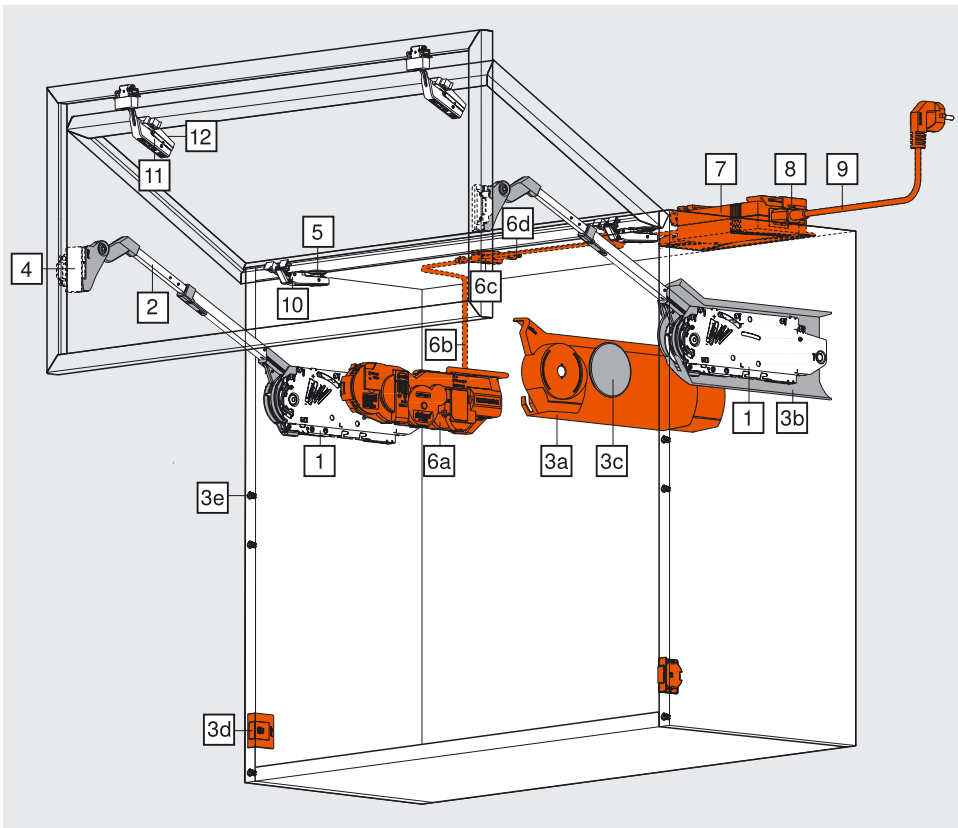
* From cabinet front edge for fronts that protrude below

Recommendation for aluminium frames: Consider drilling for the Blum distance bumper in the cabinet side. A trial application must be carried out when fixing the Blum distance bumper to the front.

i Do not glue Blum distance bumper.

SERVO-DRIVE for AVENTOS HF

Ordering information **Symmetrical / asymmetrical narrow alu frames**



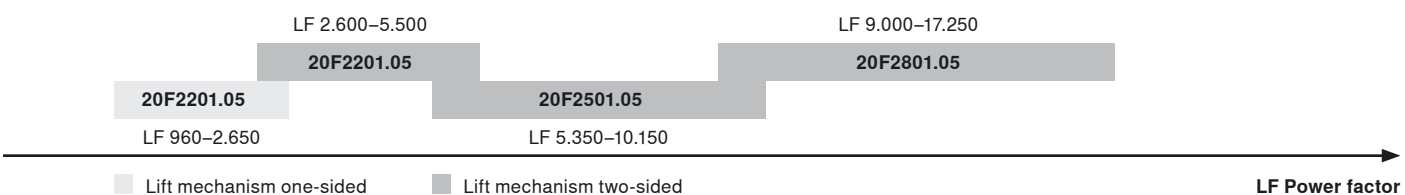
3 types of lift mechanisms are enough to cover a wide range of applications.

Using the power factor, you can calculate the required lift mechanisms. The power factor required depends on the weight of the lower and upper front and the cabinet height.

The larger front must be at the top for asymmetrical fronts.

■ Standard
■ SERVO-DRIVE

i	This is how it's done!	Symmetrical fronts: SFibPower factor = cabinet height (KH) [mm] x door weight
		Asymmetrical fronts: Theoretical cabinet height (TKH) = upper front height (FHo) x 2 (including gaps)



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

1	Symmetrical lift mechanism	
	Power factor LF	
	2.600-5.500	20F2201.05
	5.350-10.150	20F2501.05
	9.000-17.250	20F2801.05
3a	SERVO-DRIVE cover cap large left	
	Nylon light grey / silk white	
	Left	21F8001


2	Telescopic arm symmetrical		
	Nickel plated steel		
	Cabinet height ¹⁾ 480-570 mm		
		l + r	20F3201
	Cabinet height ¹⁾ 560-710 mm		
		l + r	20F3501
	Cabinet height ¹⁾ 700-900 mm		
	l + r	20F3801	
	Cabinet height ¹⁾ 760-1,040 mm		
	l + r	20F3901	

¹⁾ "Theoretical cabinet height" for asymmetrical fronts

SERVO-DRIVE for AVENTOS HF

Ordering information Symmetrical / asymmetrical narrow alu frames





3b	Cover plate right		
	Nylon light grey / silk white		
		Right	20F8001

3c	Cover cap round		
	Nylon deep grey		
	Plain	2 x	20F9001
	Printed with the BLUM Logo	2 x	20F9001.BL
	can be printed with customer logo -minimums from 1.000 pcs		

3d	SERVO-DRIVE switch		
	light grey / silk white		
		2 x	21P5020


3e	Blum distance bumper		
	RAL 7037 dust grey		
	Ø 5 mm	6x	993.0530
	Ø 8 mm	6x	993.0830.01


4	CLIP adapter plate for telescopic arms		
	Spacing 0 mm	left/right	175H5B00


5	Mounting plate for CLIP top 120° hinge		
	Standard mounting plates, spacing depends on the top gap		
	Screw-on	Spacing 0 mm	175H5400
	Knock-in	Spacing 0 mm	177H5100
	EXPANDO	Spacing 0 mm	177H5400E

6a	SERVO-DRIVE drive unit		
	RAL 7037 dust grey		
			21FA001

6b, 6c, 6d, 7, 9, 8	Distribution cable, connecting node, cable end protector, Blum transformer, flex and transformer unit housing		
		See page	15

10	CLIP top 120° alu frame hinge		
	Boss: Zinc boss	Screw-on unsprung	72T550A.TL

11	CLIP top alu frame centre hinge		
	Boss: Zinc boss	Screw-on unsprung	78Z550AT

12	CLIP adapter plate for centre hinges		
	Symmetrical		175H5A00


	Opening angle stop		
	Nylon, dark grey		
	104°		20F7051
	83°		20F7011

Instruction leaflet and installation instructions

Including documentation for the Machine Directive

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MA-400	Danish	MA-021/01DA*
MA-400	Estonian	MA-021/01ET*
MA-400	Finnish	MA-021/01FI*
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MA-400	Japanese	MA-021/01JA*
MA-400	Croatian	MA-021/01HR*
MA-400	Latvian	MA-021/01LV*
MA-400	Lithuanian	MA-021/01LT*
MA-400	Dutch	MA-021/01NL*
MA-400	Norwegian	MA-021/01NO*
MA-400	Polish	MA-021/01PL*
MA-400	Portuguese	MA-021/01PT*
MA-400	Romanian	MA-021/01RO*
MA-400	Russian	MA-021/01RU*
MA-400	Swedish	MA-021/01SV*
MA-400	Serbian	MA-021/01SR*
MA-400	Slovakian	MA-021/01SK*
MA-400	Slovenian	MA-021/01SL*
MA-400	Czech	MA-021/01CS*
MA-400	Turkish	MA-021/01TR*
MA-400	Hungarian	MA-021/01HU*

* Available starting 01/2010

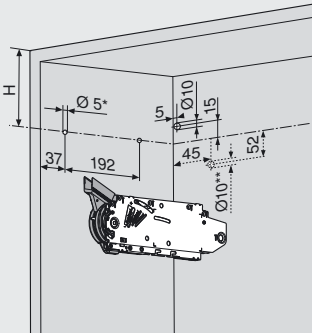
	Bit PZ cross slot	BIT-PZ KS2
	Size 2, length 39 mm	

SERVO-DRIVE for AVENTOS HF

Planning Symmetrical narrow alu frames



Drilling for mechanism and cable¹⁾



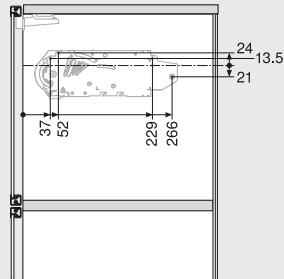
* Drilling depth 5 mm

** Alternative drilling

Cabinet height KH	H
480–549 mm	KH x 0.3 - 28 mm
550–1.040 mm	KH x 0.3 - 57 mm

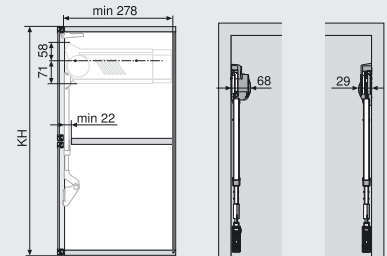
¹⁾ Only on the left side

Fixing positions for lift mechanism



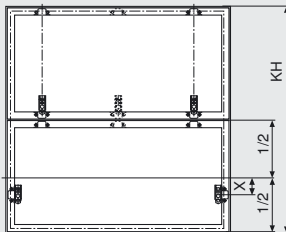
4 x chipboard screws, Ø 4 x 35 mm

Space requirement



KH Cabinet height

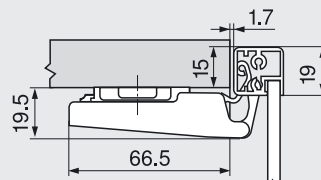
Front assembly



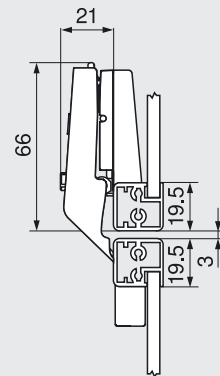
3 hinges starting at cabinet width 1,200 mm and/or 12 kg front weight cabinet width 1,800 mm and/or 20 kg front weight

Cabinet height KH	X
480–549 mm	54 mm
550–1.040 mm	31 mm

CLIP top 120° alu frame hinge unsprung



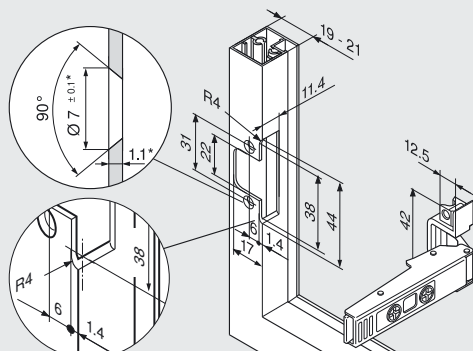
CLIP top alu frame centre hinge



Min. gap F = 1.5 mm

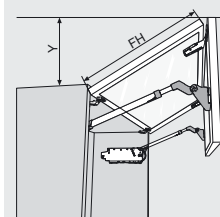
An adjustment has to be made for frame thicknesses over 20.5 mm

Front assembly



* When changing material thickness, adjust the assembly dimensions accordingly

Space requirement



OEB = Opening angle stop

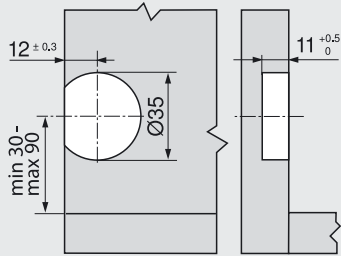
Without OEB	$Y = FH \times 0.44 + 38$
OEB 104°	$Y = FH \times 0.24 + 34$
OEB 83°	$Y = 0$

SERVO-DRIVE for AVENTOS HF

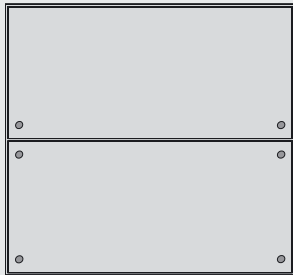
Planning Symmetrical narrow alu frames



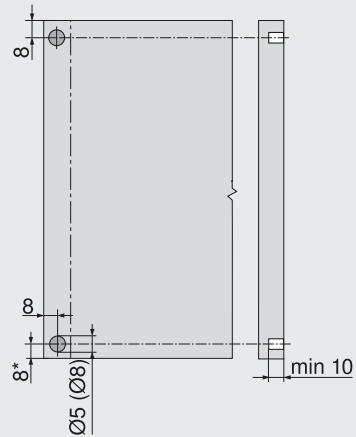
SERVO-DRIVE switch



Blum distance bumper



Blum distance bumper drilling position



* From cabinet front edge for fronts that protrude below

Recommendation for aluminium frames: Consider drilling for the Blum distance bumper in the cabinet side. A trial application must be carried out when fixing the Blum distance bumper to the front.

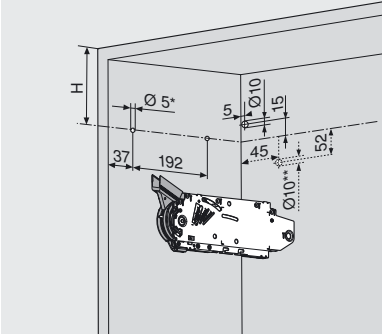
i Do not glue Blum distance bumper.

SERVO-DRIVE for AVENTOS HF

Planning Asymmetrical narrow alu frames



Drilling for mechanism and cable¹⁾

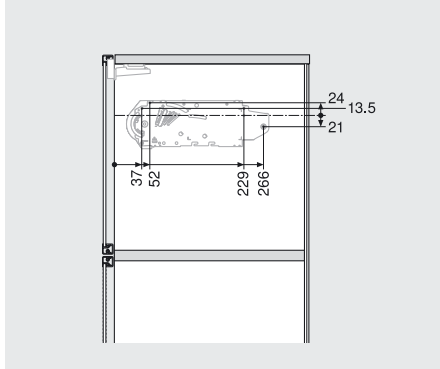


* Drilling depth 5 mm **Alternative drilling

TKH	H
480–549 mm	TKH x 0.3 - 28 mm
550–1.040 mm	TKH x 0.3 - 57 mm

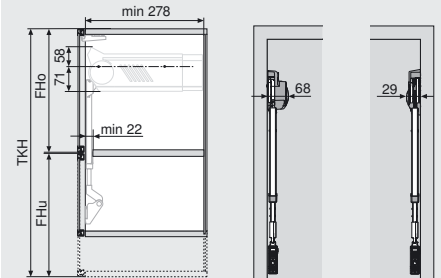
¹⁾Only on the left side

Fixing positions for lift mechanism



4 x chipboard screws, Ø 4 x 35 mm

Space requirement



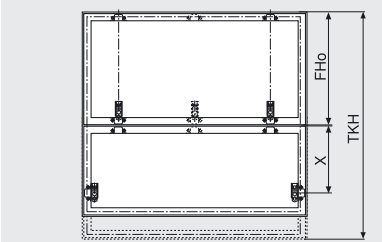
TKH Theoretical cabinet height

KH Cabinet height

FHo Upper front height

FHu Lower front height

Front assembly

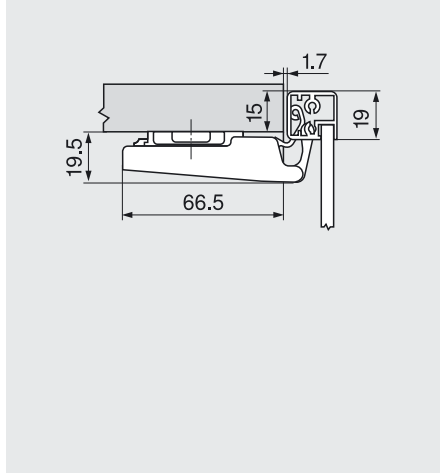


FHo Upper front height

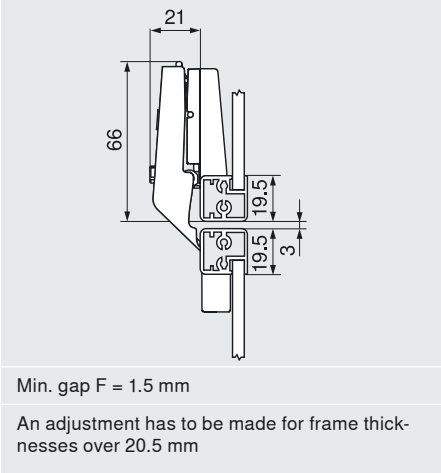
TKH Theoretical cabinet height

TKH	X
480–549 mm	FHo/2 + 54 mm
550–1.040 mm	FHo/2 + 31 mm

CLIP top 120° alu frame hinge unsprung



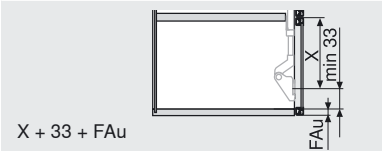
CLIP top alu frame centre hinge



Min. gap F = 1.5 mm

An adjustment has to be made for frame thicknesses over 20.5 mm

Min. lower front height



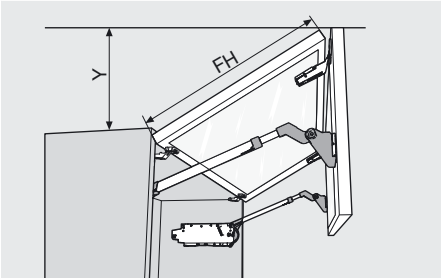
X + 33 + FAu

FAu Lower front overlay

Number of Hinges

3 hinges starting at cabinet width 1200 mm and/or 12 kg door weight
4 hinges starting at cabinet width 1800 mm and/or 20 kg door weight

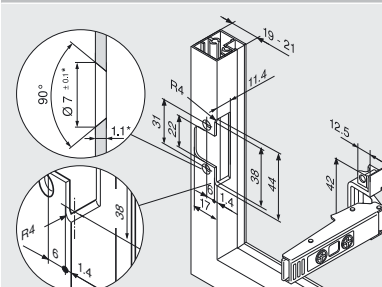
Space requirement



OEB = Opening angle stop

Without OEB	Y = FH x 0.44 + 38
OEB 104°	Y = FH x 0.24 + 34
OEB 83°	Y = 0

Screw-on



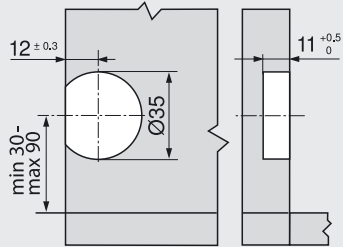
* When changing material thickness, adjust the assembly dimensions accordingly

SERVO-DRIVE for AVENTOS HF

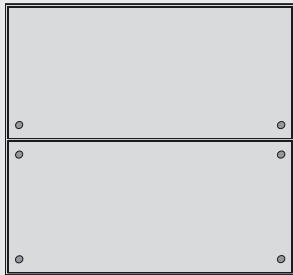
Planning Asymmetrical narrow alu frames



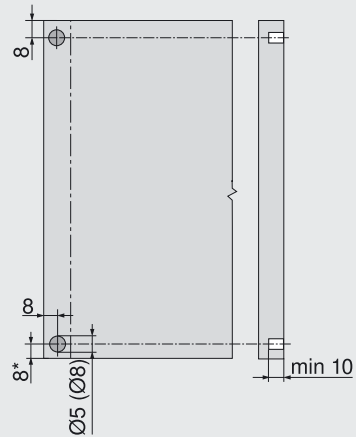
SERVO-DRIVE switch



Blum distance bumper



Blum distance bumper drilling position



* From cabinet front edge for fronts that protrude below

Recommendation for aluminium frames: Consider drilling for the Blum distance bumper in the cabinet side. A trial application must be carried out when fixing the Blum distance bumper to the front.

i Do not glue Blum distance bumper.

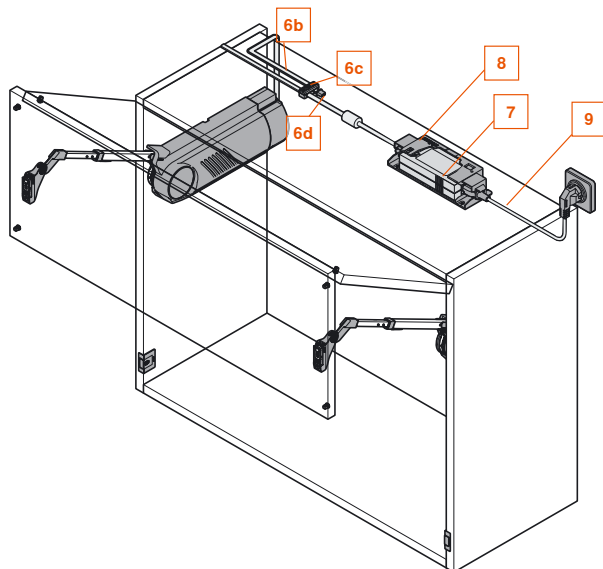
SERVO-DRIVE for AVENTOS HF

Order specifications



Blum transformer (100 Watt) and accessories

For all applications



6b	Distribution cable for cutting to size		
	1 x 100 m		Z10K1HMA
	1/10 x 6 m		Z10K600A
	1/10 x 8 m		Z10K800AE
Can be used as a distribution cable			

6c	Connecting node		
	Black		
		50 Stk.	Z10V1000

6d	Cable end protector		
	RAL 7037 dust grey		
		100 Stk.	Z10K0008

7	Blum transformer		
	100 W	10 Stk.	Z10NE050.01
	Only 1 Blum transformer permitted per distribution cable		

8	Transformer unit housing for panel fixing		
	RAL 7037 dust grey		
		10 pcs.	Z10NG100

9	Flex		
	Flex Europe	10 pcs.	Z10M200E
	Flex CH	10 pcs.	Z10M200C
	Flex US, CA	10 pcs.	Z10M200U
	Flex JP	10 pcs.	Z10M200J
	Flex BR	10 pcs.	Z10M200S
	Flex BR	10 pcs.	Z10M200S.01
	Flex UK	10 pcs.	Z10M200B
	Flex DK	10 pcs.	Z10M200D
	Flex IL	10 pcs.	Z10M200I
	Flex AU	10 pcs.	Z10M200K
	Flex CN	10 pcs.	Z10M200N
	Flex AR	10 pcs.	Z10M200A
	Flex IN	10 pcs.	Z10M200H
	Flex CL	10 pcs.	Z10M200L
	Flex TW	10 pcs.	Z10M200T
	Flex ZA	10 pcs.	Z10M200Z
Flex Europe without plug	10 pcs.	Z10M200E.OS	
Flex US, CA without plug	10 pcs.	Z10M200U.OS	

Cable holder			
	White		
		100 pcs.	Z10K0009