



Solutions for All Applications

AVENTOS





There are many good reasons why AVENTOS lift systems are an excellent choice for wall cabinets.

Since the cabinet doors open upwards, AVENTOS provides an excellent view into the cabinet interior enabling comfortable and ergonomic access to storage items.

The AVENTOS program opens up a whole new world of design possibilities for kitchen and office spaces. Even the widest and heaviest doors can be accommodated. Wide base cabinet designs can now be mirrored in the wall cabinets above to create a more uniform look.

Online Resource for Planning

Easy Planning

Blum offers many online tools to help you with your kitchen planning and ordering. Online Product Configurator (OPC) offers a parts list and planning information based on your specifications. Once complete, your results can then be exported to a shareable document.

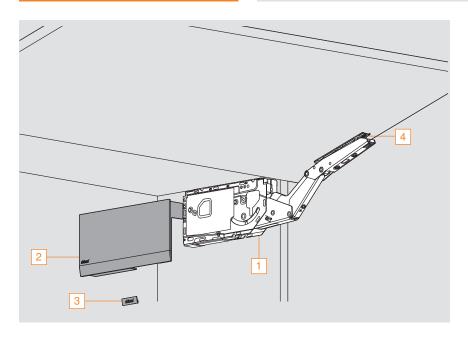
OPC is easily accessible on our website at blum.com/configurator



AVENTOS

<u>ablum</u>

AVENTOS HK top Ordering Information for Frameless and Face Frame



- Self-positioning mechanism with locating template eliminates complicated installation
- Integrated opening angle adjustment between 75° and 107°
- Cabinet height from 250 (10") to 610 (24")
- Cabinet width range 381 (15") to 1828 (72")
- Interior cabinet depth minimum of 187 (7-3/8")
- Optional: TIP-ON for AVENTOS
- If using a third lift mechanism for wider applications (power factor increases by up to 50%), we recommend a trial application.

NOTE: For wide cabinets, we recommend an additional lift mechanism be attached to the center panel to prevent the middle of the front from sagging when open.



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

- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet



Step 1 – Determine the Power Factor for the Application



Power factor = cabinet height (inch) x door 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.

Power factor = cabinet height multiplied by door weight*

Example:

Cabinet height: 20" (within possible range)

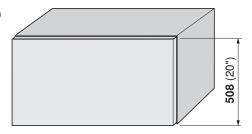
Door weight including twice the handle weight = 13 lb 14 oz (14 oz = .9 lb see chart below)

Power factor = 20 x 13.9 Power factor = 278

A power factor of 278 requires lift mechanism 22K2700

*Including twice the handle weight

NOTE: AVENTOS planning tools available at blum.com/planning



Door weight + twice handle weight = 13 lb 14 oz

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

AVENTOS HK top Ordering Information

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Step 2 - Select the Required Components

Lift mechanism sets Set includes: NOTE: Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms. 1 Lift mechanism (qty 2) $#7 \times 35 (1-3/8")$ wood screw (qty 8) Power factor range Opening angle Part no. 36 - 139107° 22K2500 80 - 240107° 22K2700 150 - 450 107° 270 - 781107° 22K2900



Wood or wide aluminum door hardware set					
	Set includes:				
	4 Arm assembly mounting				
	plate (qty 2)				
			Part no.		
		Wood or wide aluminum hardware set	20\$4200		
		Installation screw for wood doors	606N or 606P		
		Installation screw for wide aluminum doors	7072A		

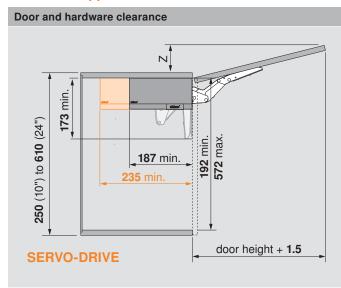
Mounting plate with bracket set			
	Set includes: Mounting plate with bracket (qty 2)	For use with large overlay five-piece doors	
			Part no.
		Mounting plate with bracket set	20S4F01

Face frame mounting bracket set			
	Set includes: Right and left brackets M4 X 30 lift mounting screws	NOTE: See page 18 for more information	
			Part no.
		HK top frame mounting bracket set	22K6001

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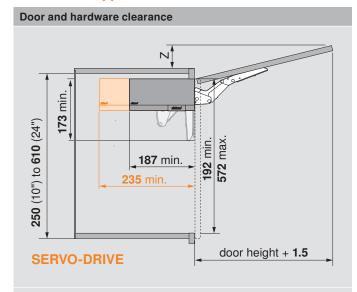
AVENTOS HK top Planning Specifications for Frameless and Face Frame

Frameless Application

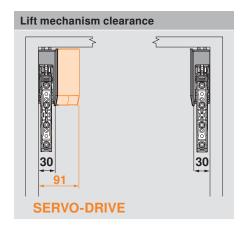


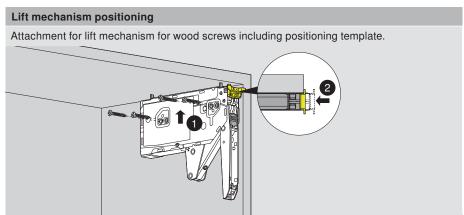
NOTE: Z = door height x 0.29 + door thickness minus top panel thickness

Face Frame Application

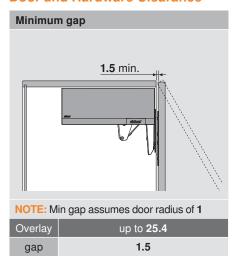


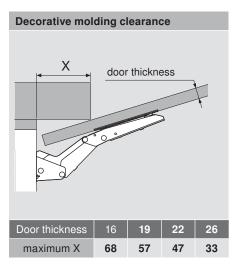
NOTE: $Z = \text{door height } \times 0.29 + \text{door thickness minus}$ top frame width

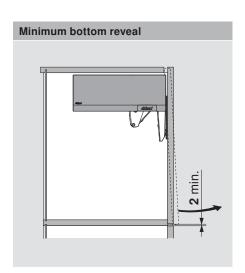




Door and Hardware Clearance







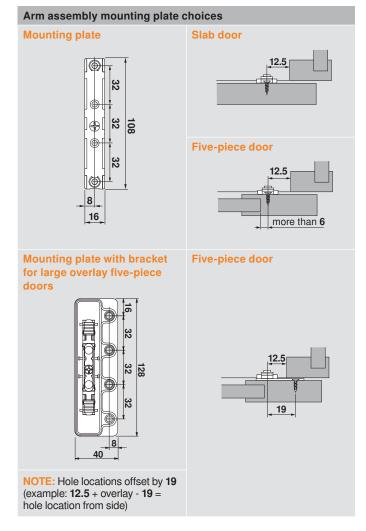
AVENTOS HK top Planning Specifications

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Arm assembly mounting plate location Frameless and face frame applications **12.5** + overlay 62 + overlay 32

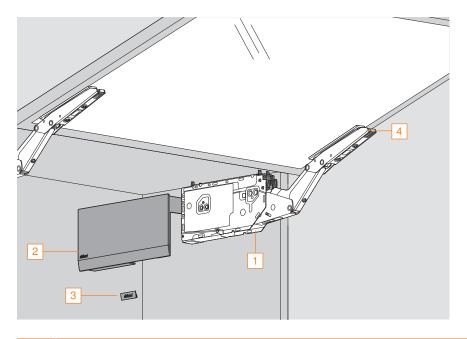
NOTE: Attach mounting plate with four 606N or 606P wood screw for wood doors or 7072A for wide aluminum doors



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AVENTOS HK top Planning Specifications for Narrow Aluminum



- Self-positioning mechanism with locating template eliminates complicated installation
- Integrated opening angle adjustment between 75° and 107°
- Cabinet height from 250 (10") to 610 (24")
- Cabinet width range 381 (15") to 1828 (72")
- Interior cabinet depth minimum of 187 (7-3/8")
- Optional: TIP-ON for AVENTOS
- If using a third lift mechanism for wider applications (power factor increases by up to 50%), we recommend a trial application.

NOTE: For wide cabinets, we recommend an additional lift mechanism be attached to the center panel to prevent the middle of the front from sagging when open.



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

- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet



Step 1 – Determine the Power Factor for the Application



Power factor = cabinet height (inch) x door 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.

Power factor = cabinet height multiplied by door weight*

Example:

Cabinet height: 20" (within possible range)

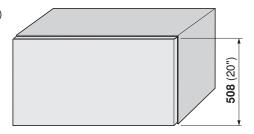
Door weight including twice the handle weight = 13 lb 14 oz (14 oz = .9 lb see chart below)

Power factor = 20×13.9 Power factor = 278

A power factor of 278 requires lift mechanism 22K2700

*Including twice the handle weight

NOTE: AVENTOS planning tools available at blum.com/planning



Door weight + twice handle weight = 13 lb 14 oz

	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

AVENTOS HK top Ordering Information

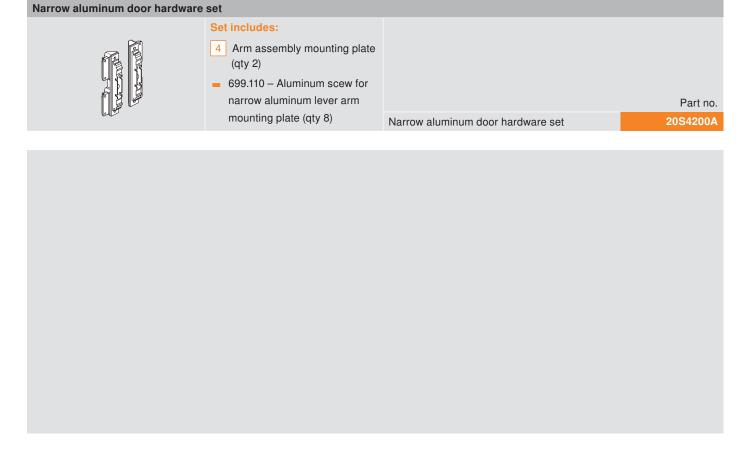
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Step 2 - Select the Required Components

Lift mechanism sets Set includes: NOTE: Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms. 1 Lift mechanism (qty 2) $#7 \times 35 (1-3/8")$ wood screw (qty 8) Power factor range Opening angle Part no. 36 - 139107° 107° 22K2500 80 - 24022K2700 150 - 450107° 270 - 781107° 22K2900

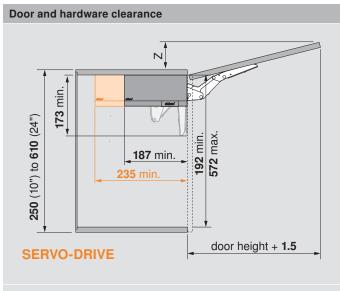




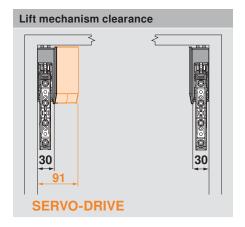
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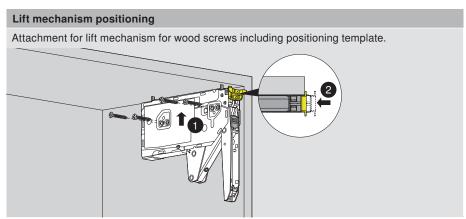
AVENTOS HK top Planning Specifications for Narrow Aluminum

Door and Hardware Clearance and Positioning

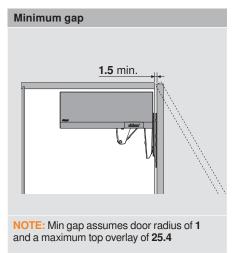


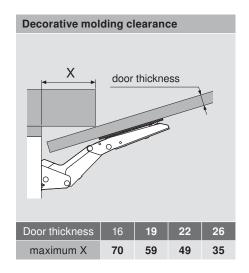
NOTE: Z = door height x 0.29 + door thickness minus top panel thickness

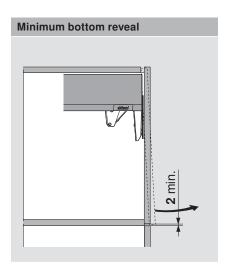




Door and Hardware Clearance



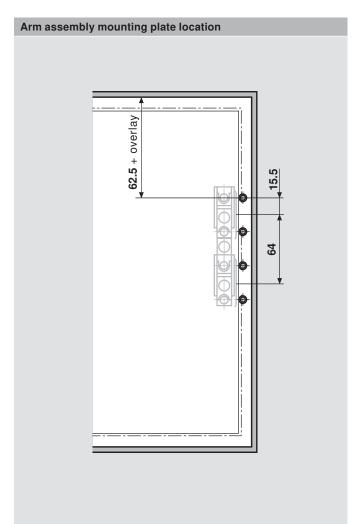


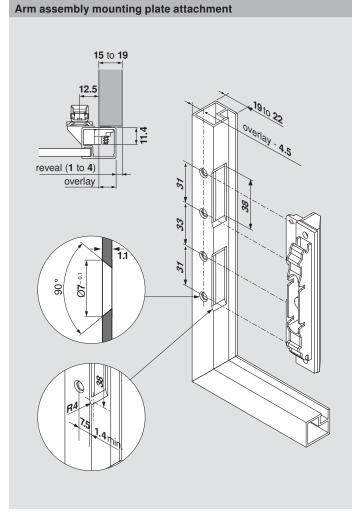


AVENTOS HK top Planning Specifications

AVENTOS





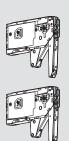


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AVENTOS HK top Ordering Information for TIP-ON

Lift mechanism sets



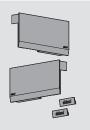
Set includes:

- Lift mechanism (qty 2)
- #7 x 35 mm (1-3/8") wood screw (qty 8)

NOTE: Symmetrical with wood screws including positioning template. Max front weight 39 lb for two lift mechanisms.

Power factor	Opening angle	Part no.
36 – 139	107°	22K2300T
80 - 240	107°	22K2500T
150 – 450	100°	22K2700T
270 - 781	100°	22K2900T

Cover set



Set includes:

- Right and left cover plate
- Non-handed cover cap (qty 2)

NOTE: Light Gray, Dark Gray and Silk White options available.

Light Gray (HGIG)

Dark Gray (TGIG)

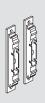
Silk White (SWIG)

Narrow aluminum door hardware set

Part no.

Cover set 22K8000.NA

Wood or wide aluminum door hardware set



Set includes:

 Arm assembly mounting plate (qty 2)

Part no.

Wood or wide aluminum hardware set

20\$4200

Installation screw for wood doors

606N or 606P

Installation screw for wide aluminum doors

7072A

NOTE: Refer to pages 8-9 for installation specifications

Narrow aluminum door hardware set



Set includes:

- Arm assembly mounting plate (qty 2)
- 669.110 aluminum screw for narrow aluminum lever arm mounting plate (qty 8)

Part no.

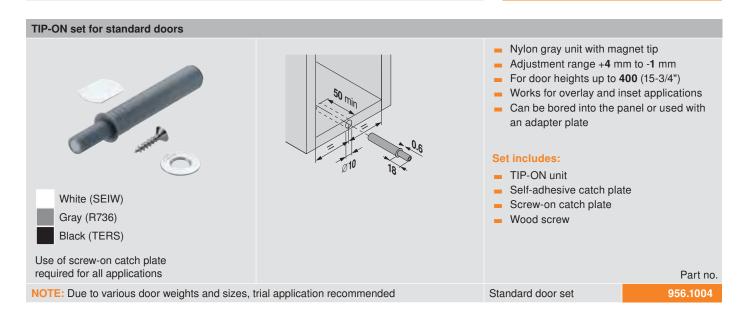
20S4200A

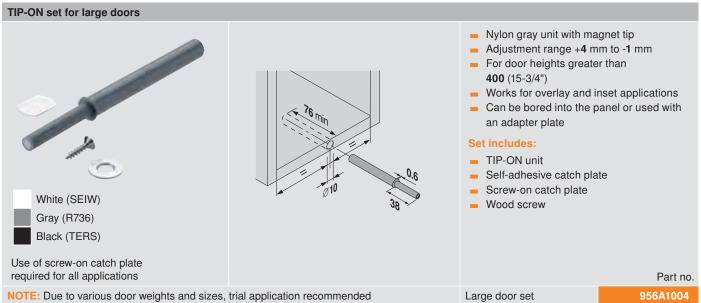
NOTE: Refer to pages 12-13 for installation specifications

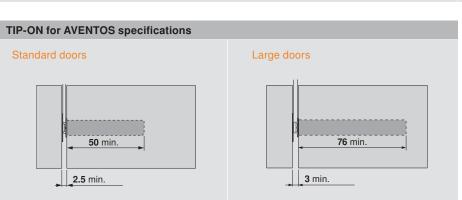
AVENTOS HK top Ordering Information for TIP-ON

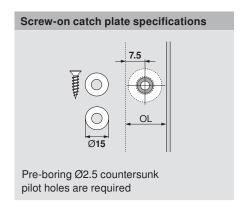
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For TIP-ON adapter plate mounting please refer to the Concealed hinges brochure.

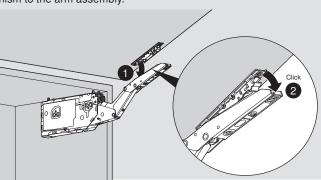
AVENTOS HK top Assembly



Remove positioning template Press up on arm release slide then slowly raise the arm to the upright position. 1 Push the positioning template down to remove.

Attaching AVENTOS HK top doors

Attach the door using the CLIP mechanism to the arm assembly.

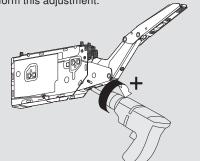


Adjust the lift mechanism

Use a T20 TORX screwdriver or screw gun and a T20 TORX bit to adjust the lift mechanism to the desired tension (door weight balanced). Cover cap does not need to be removed to perform this adjustment.













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

- Arm has built in safety feature to prevent opening and closing
- Secure lever arm before installing cabinet



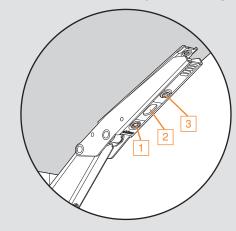
AVENTOS HK top Adjustments

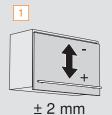
AVENTOS



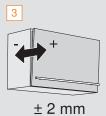
AVENTOS HK top door adjustment

Use a T20 TORX screwdriver to perform cam adjustments for each of the three-dimensional door adjustments.





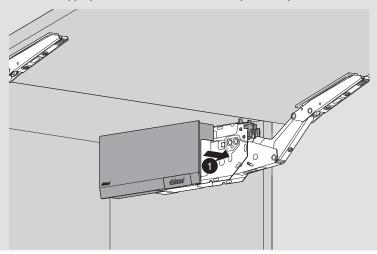




±2 mm

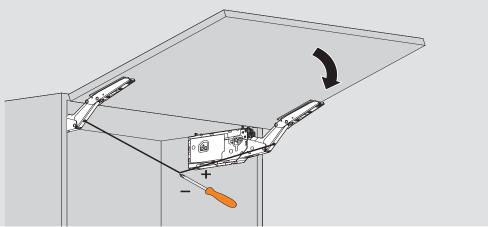
Attaching cover caps

Place the left and right cover plates over the appropriate lift mechanisms, and snap them in place.



Adjust opening angle

Turn adjustment screw, with a T20 TORX screwdriver, until tight on both sides and desired angle is reached.



NOTE: Adjustments can be made with the cap on

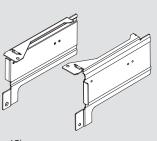
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Face Frame Mounting Brackets

AVENTOS HK top face frame mounting bracket set

- Brackets for mounting AVENTOS HK top in face frame cabinet
- Minimum recess of 12.5 (1/2")
- Provides accurate mounting position for lift mechanism



Set includes:

- Right and left brackets
- M4 x 30 lift moutning screws (qty 12)

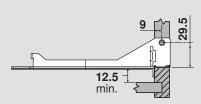
Part no.

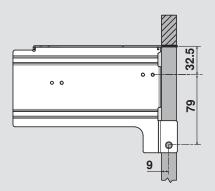
HK top frame mounting bracket set

22K6001

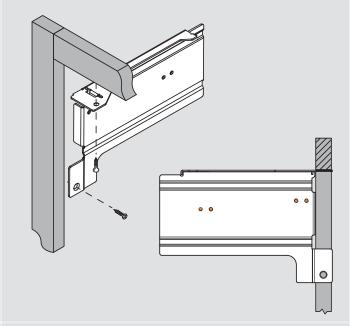
AVENTOS HK top face frame bracket mounting locations

Fixed setback allowing for up to 25.4 top overlay.





Attach bracket to face frame with two #7 x 3/4" (7074N) wood screws. Attach lift mechanism to bracket with four M4 x 30 machine screws (included).



NOTE: Machine screw mounting locations marked in orange

Assembly Aids

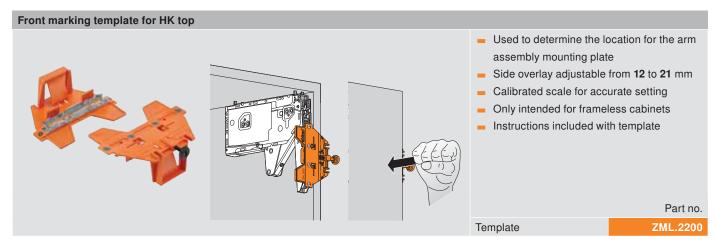
AVENTOS

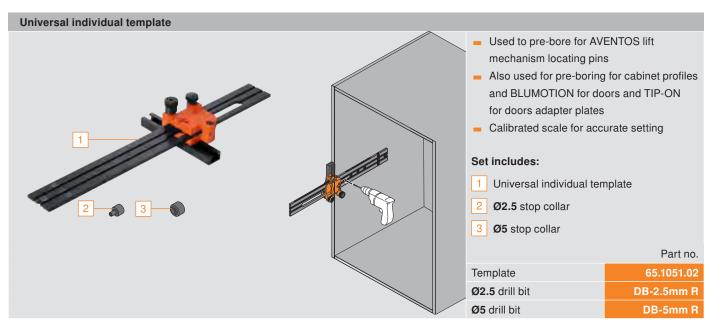










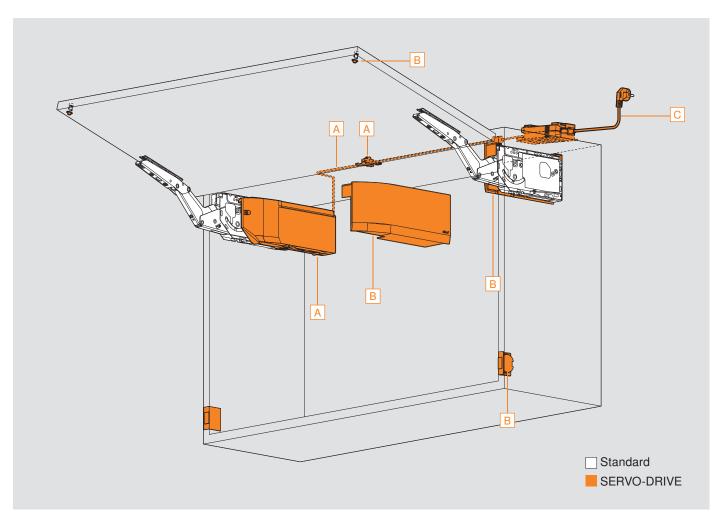


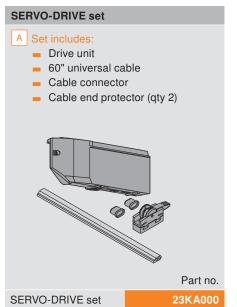


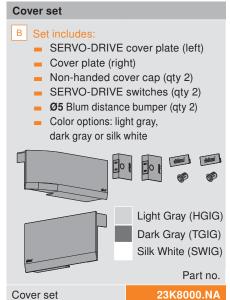


SERVO-DRIVE for AVENTOS HK top Ablum

AVENTOS HK top SERVO-DRIVE Ordering Information









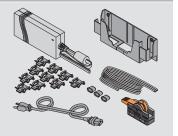
NOTE: For additional AVENTOS HK top components and installation instructions, see pages 7-9

Electrical Components

SERVO-DRIVE for **AVENTOS HK top** Ablum

Option 1: Power supply set

- Power supply
- Wall mount bracket
- Three-prong power cord
- Cable connector
- Cable end protector (qty 3)
- Cable clips (qty 10)
- 19 feet universal cable



Part no.

Power supply set

Z10NE03UG10

Option 2: SERVO-DRIVE uno power supply

Supplies power to a single drive unit

44" power cord

Extendable up to 6 feet using cable connectors (sold seperately)



Part no.

Power supply set

Z10NA30UGF

SERVO-DRIVE switch

For adding additional activation switches to a SERVO-DRIVE for AVENTOS application.

- Up to six switches can be added per drive unit
- Color options: light gray, dark gray or silk white



NOTE: A switch can only be synchronized to one drive unit

Part no.

SERVO-DRIVE switch (set of 2)

23P5020

SERVO-DRIVE switch adapter

- Used for face frame and frameless applications
- Doesnt require boring into side of cabinet
- Color options: light gray, dark gray or silk white



Part no.

SERVO-DRIVE switch adapter

23P5216

Output specifications				
Output voltage	24 VDC			
Output power	24 W continuous / 12 W continuous*			
Minimum load	None			
Over voltage protection	At 33 VDC			
Overload protection	10.5 A hiccup trip and restart mode with auto recovery			
Short circuit protection	Continuous			

*12 W Output power applies to SERVO-DRIVE uno only

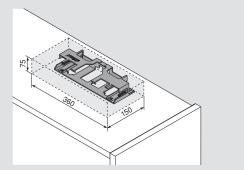
Environmental information

Operating temperature	32° F–104° F			
Storage temperature	-4° F to 185° F			
Protection	IP40			

Input specifications				
Input voltage	100-240 VAC			
Input frequency	50-60 Hz			
Input current	0.6 A			
Inrush current	100 A maximum at 240 VAC			
Protection class	Class I			
Earth leakage current	3.5 mA maximum			

Space requirements and safety distance for power supply

A safety distance of 30 mm must be maintained for air circulation

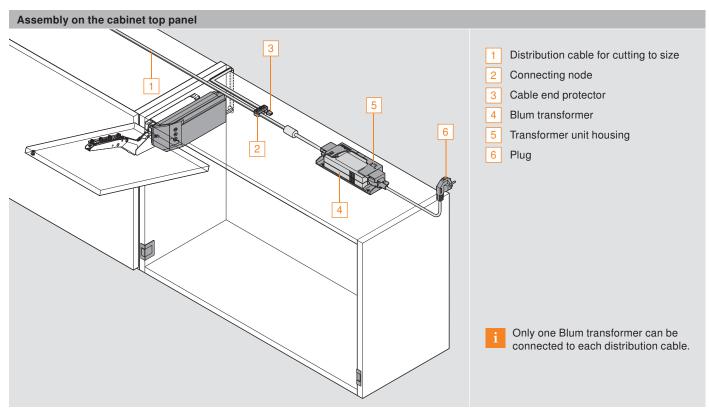


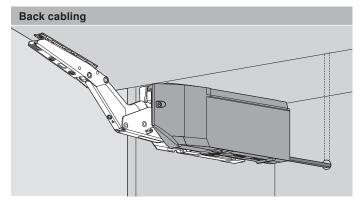
General specifications			
Efficiency	≥ 87%		
Switching frequency	65 kHz typical		
No load loss (standby)	< 0.075 W		
Energy Star	Level VI		

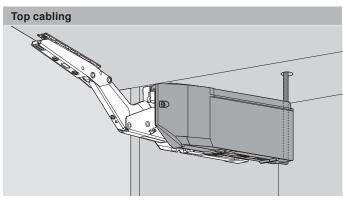
Safety / Approvals				
EN / IEC	60950, 60335-1			
UL	60950-1			

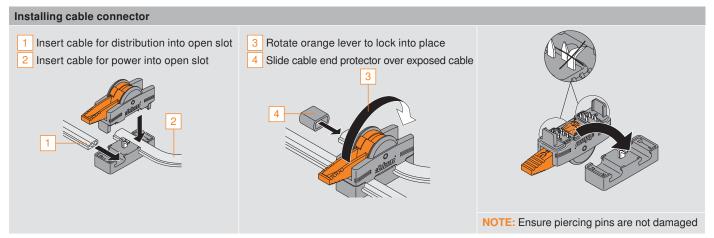
SERVO-DRIVE for **AVENTOS HK top Ablum**

Wiring Options



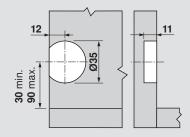






Assembly

Installation of SERVO-DRIVE activation switch



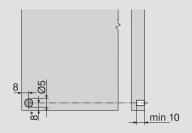
NOTE: Use of boring template (M31.2000) recommended, see page 35

The activation switch should be installed by pressing into the cabinet side with your hand. Do not use hammer to install.





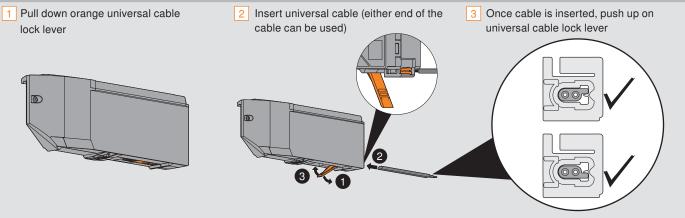
Installation of Blum distance bumpers





NOTE: The distance bumper should not touch the SERVO-DRIVE switch

Installation of universal cable

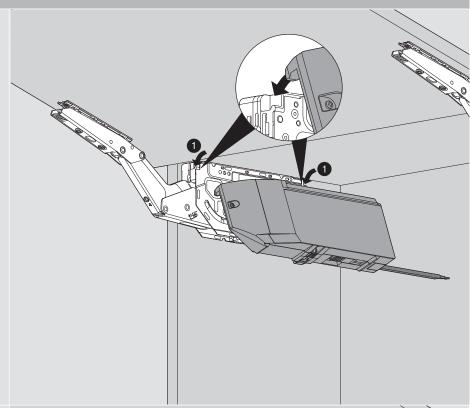


SERVO-DRIVE for **AVENTOS HK top** *ablum*

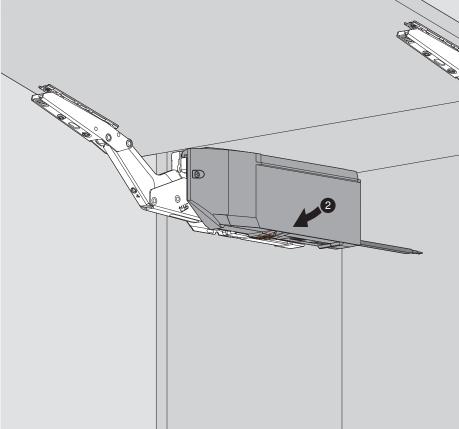
Assembly

Drive unit installation

1 Position drive unit onto lift mechanism with locating tabs.



2 To lock drive unit to the lift mechanism, hold drive unit in place and press the bottom of the drive unit to click into place. Drive unit pin will self-locate during reference run.

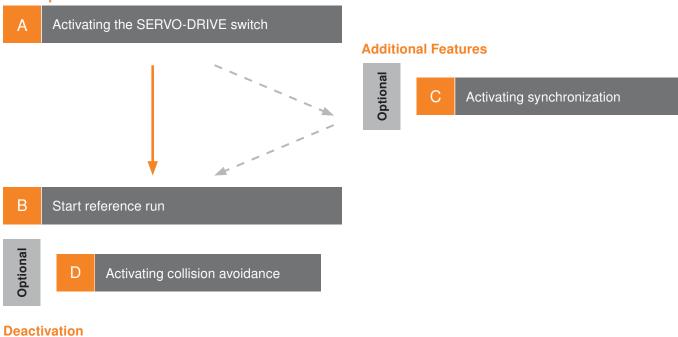


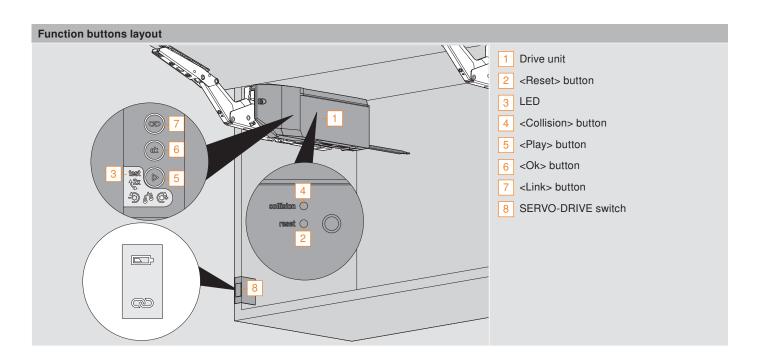
Overview of Functions

SERVO-DRIVE for **AVENTOS HK top Ablum**



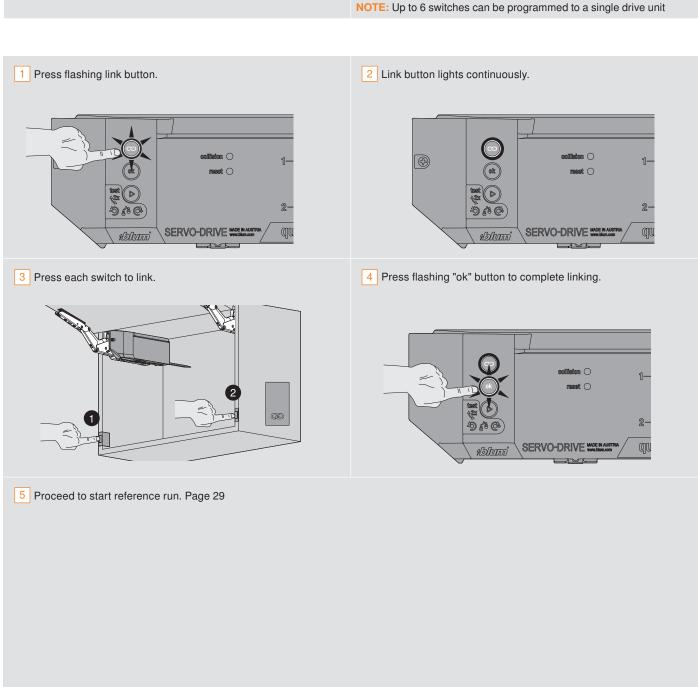
Reset to Default





Start-Up

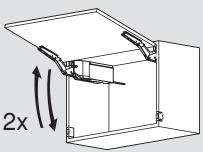
Linking the SERVO-DRIVE switch Set up the wireless connection between the SERVO-DRIVE switch and the drive unit. Each switch can only be assigned to one SERVO-DRIVE unit. Operation Lights up continuously Flashes



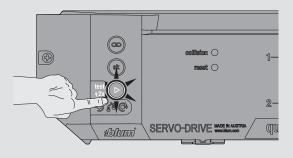
Reference Run

Start reference run

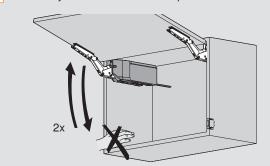
The drive unit recognizes the required parameters using the reference run.



Press flashing play button.



2 Door will cycle twice. Do not interrupt.



3 Ok button lights continuously. Setup complete.

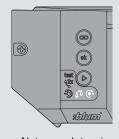




Unbalanced door error detection after reference run.

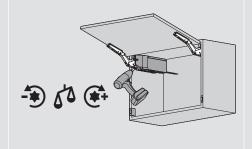


Too much tension.



Not enough tension.





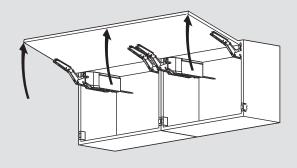
3 Press play button to perform reference run again.



SERVO-DRIVE for **AVENTOS HK top** Ablum

Drive Unit Synchronization

Activating synchronization



Up to three drive units can be synchronized allowing them to move simultaneously. This function is required for several cabinets with a single front.

NOTE: Up to 6 switches can be programmed to a single drive unit

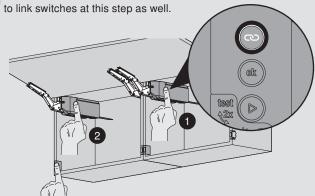
Press link button on first drive unit.



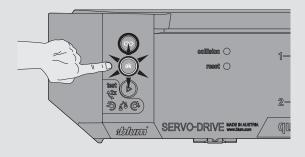
Link button lights continuously.



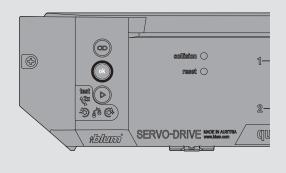
Press link button on second drive unit. Recommended



4 Confirm link by pressing flashing ok button.



5 Ok button lights continuously.



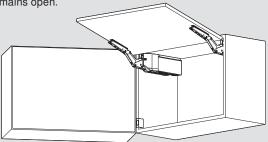
Press flashing play button to start reference run and complete synchronization.



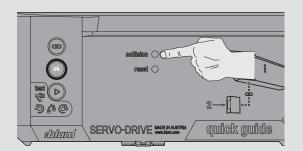
Collision Avoidance

Activating collision avoidance

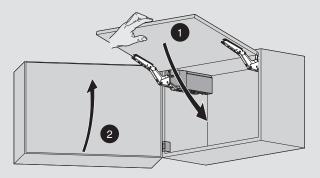
To avoid the collision of fronts, drive units (max. 6) can be linked so that only one front can be opened at a time. A front is prevented from opening as long as a linked front remains open.



1 Press collision button on first drive unit.



3 Close door one and open door two.



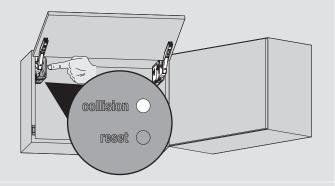
5 Press flashing ok button to complete link.



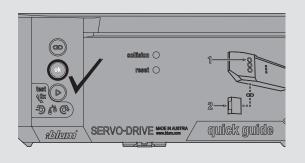
Collision button will light blue continuously.



4 Press collision button on second drive unit.



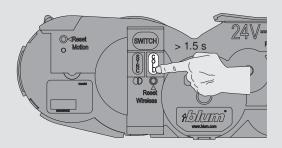
6 Link complete when ok button lights continuously.



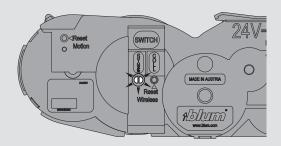
SERVO-DRIVE for **AVENTOS HK top** Ablum

Collision Avoidance with Other Drive Units

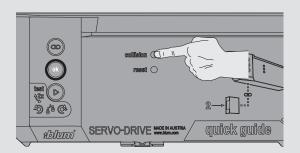
1 Press and hold COLL button on drive unit until...



Flashing green light appears. Close door.



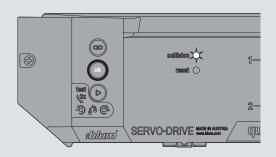
Open HK top door and press collision button on HK top drive unit.



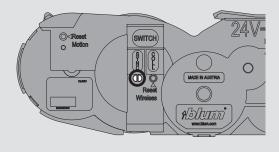
4 Press flashing ok button.



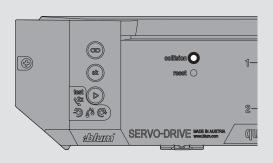
5 Collision button on HK top drive unit will begin to flash.



6 LED lights continuously on other unit.



7 Collision button lights continuously.

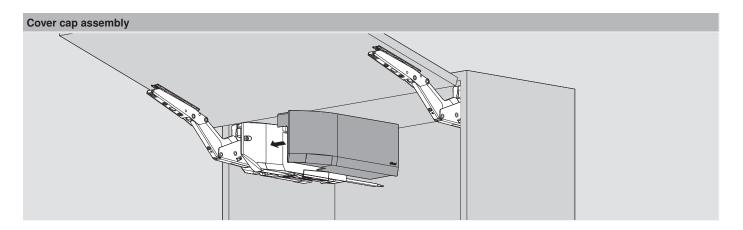


8 Link complete when ok button lights continuously.



Cover Cap Assembly, Switch Battery Replacement, and Drive Unit Reset

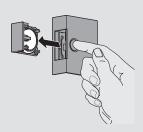
SERVO-DRIVE for **AVENTOS HK top Ablum**



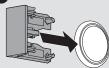
Replacing the SERVO-DRIVE switch battery

When the battery power begins to weaken, the battery display (LED) begins to flash red. If the battery is inserted incorrectly, the SERVO-DRIVE switch battery display will flash red.

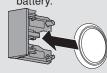
Press release button on switch and remove battery tray.

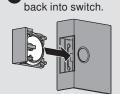


Remove old battery.



3 Replace with new battery.





Insert battery tray

remove the battery Insert the new battery (type CR2032)

Open the SERVO-DRIVE switch and

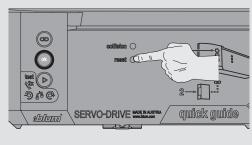
and close the SERVO-DRIVE switch - note correct polarity +/-

Note: The SERVO-DRIVE switch battery must not be recharged or discarded into fire.

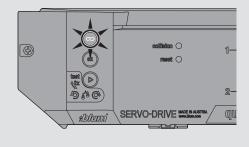
Reset

Reset the drive unit to the factory setting.

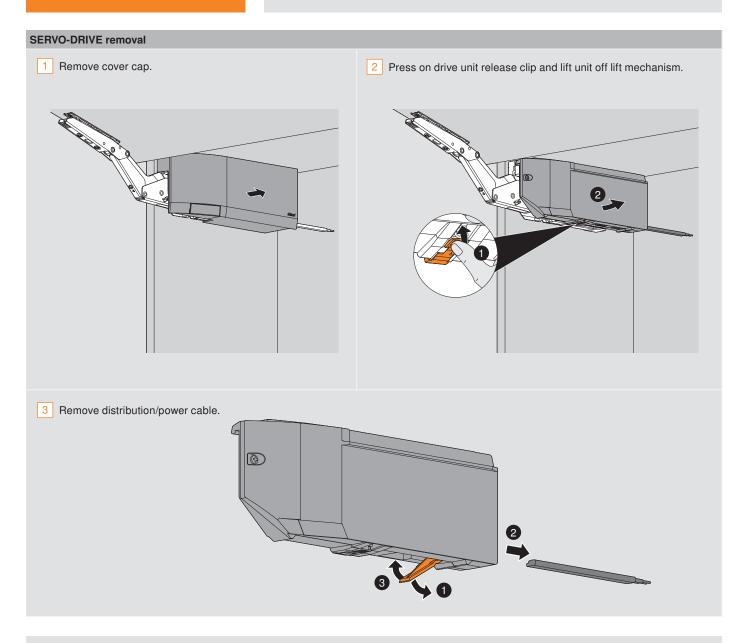
1 Press reset button.



2 Link button will flash continuously when reset complete.

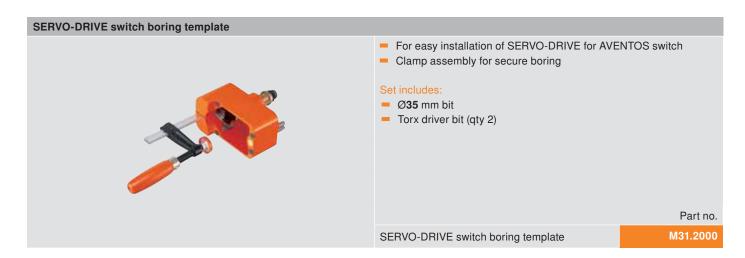


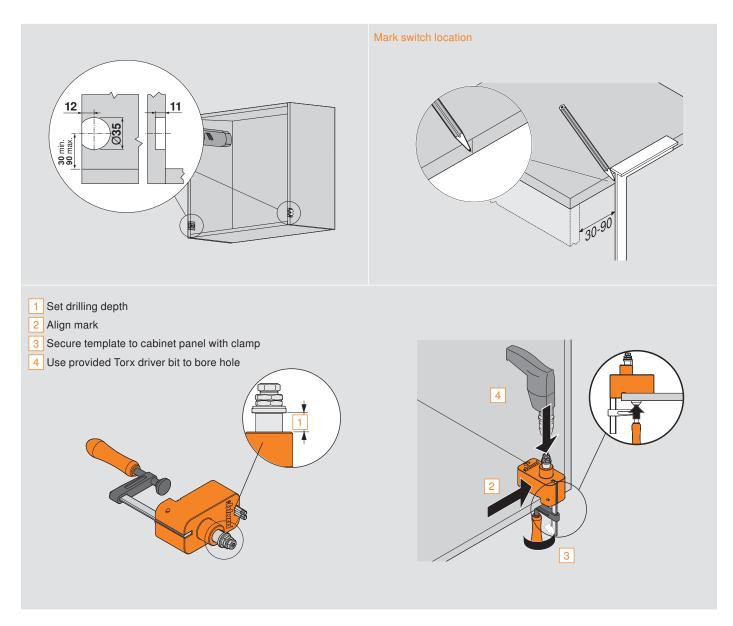
Removal



Assembly Aids

SERVO-DRIVE for **AVENTOS** *ablum*



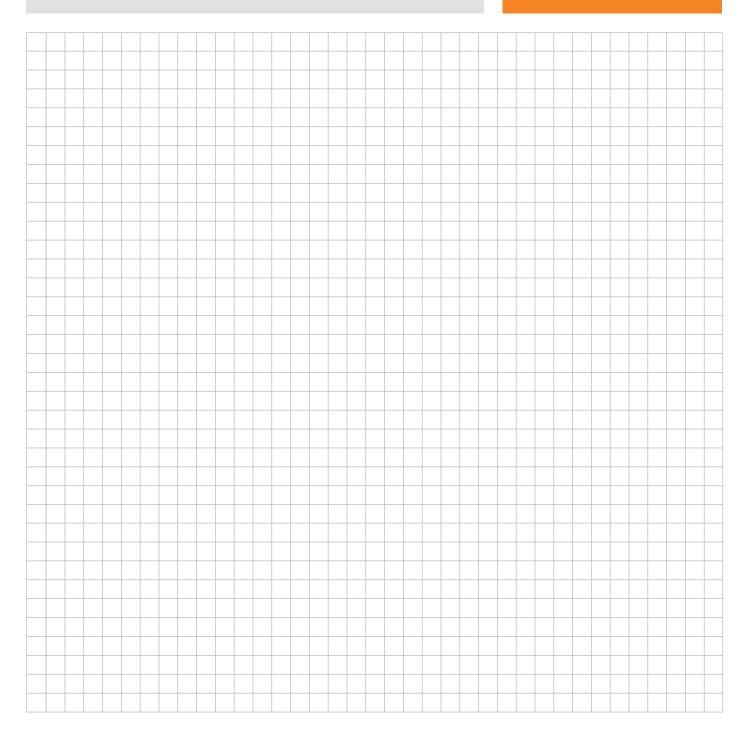


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