Blum AVENTOS HF top User Guide.



Introduction

Overview

- The 'Blum AVENTOS HF TOP Package' from Solid Setup Plus adds the Blum AVENTOS HF top door lift system to Cabinet Vision and optional SERVO-DRIVE.
- It provides drilling for the Cabinet and Door parts, for CNC output.
- *(You can change the drilling diameters and depths to the tools you want to use.)*
- It also adds 3d graphics for the mechanisms and brackets utilizing material models.
- The mechanisms and brackets etc are added as a separate parts and materials for reporting purposes.
- All material descriptions contain the Blum order number after the # symbol.
- UCS calculates weight of Door by using the density of board and handle weight.
- User can adjust density, handle weight or Total weight using attributes.
- UCS uses total weight to determine a 'POWER FACTOR' which is displayed as an attribute and can be changed.
- The POWER FACTOR determines which Mechanism to use and how many arms are required, automatically.
- If one arm or three arms are required, user can swap the odd arm left to right with an attribute.
- If three or four arms are required, the centre arm(s) will link to a partition if there is one present.

Included in This Package

User Created Standards

The Following UCS is provided

- { DOOR } -- Blum AVENTOS HF top Attributes -Adds Blum AVENTOS HF top Attributes to DOR
- { DOOR } -- Blum AVENTOS HF top -Adds Blum AVENTOS HF top to DOR_OPEN

Miscellaneous Materials:

Name	Description
Aventos HF top Mech Pre Mounted	Aventos HF Mech Model Pre Mounted
Aventos HF top Mech Screwon	Aventos HF Mech Model Screwon
Aventos HF top Mech Set 2500	Aventos HF Mech Screwon #22F2500
Aventos HF top Mech Set 2800	Aventos HF Mech Screwon #22F2800
Aventos HF top Mech Set 2510	Aventos HF Mech Pre Mounted #22F2510
Aventos HF top Mech Set 2810	Aventos HF Mech Pre Mounted #22F2810
Aventos HF top Arm 3200	Aventos HF top Arm 3200 Model
Aventos HF top Arm 3500	Aventos HF top Arm 3500 Model
Aventos HF top Arm 3900	Aventos HF top Arm 3900 Model
Aventos HF top Arm Set 3200	Aventos HF top Arm 3200 Set #22F3200
Aventos HF top Arm Set 3500	Aventos HF top Arm 3500 Set #22F3500
Aventos HF top Arm Set 3900	Aventos HF top Arm 3900 Set #22F3900
Aventos HF top Arm Ext 3200	Aventos HF top Arm Ext 3200 Model
Aventos HF top Arm Ext 3500	Aventos HF top Arm Ext 3500 Model
Aventos HF top Arm Ext 3900	Aventos HF top Arm Ext 3900 Model
Aventos HF.HS.HL top Cover Dk Grey	Aventos HF.HS.HL top Cover Model Dk Grey
Aventos HF.HS.HL top Cover Lt Grey	Aventos HF.HS.HL top Cover Model Lt Grey
Aventos HF.HS.HL top Cover S White	Aventos HF.HS.HL top Cover Model S White
Aventos HF.HS.HL top Cover Servo Dk Grey	Aventos HF.HS.HL top Cover SERVO Model Dk Grey
Aventos HF.HS.HL top Cover Servo Lt Grey	Aventos HF.HS.HL top Cover SERVO Model Lt Grey
Aventos HF.HS.HL top Cover Servo S White	Aventos HF.HS.HL top Cover SERVO Model S White
Aventos HF.HS.HL top Cover Set Dk Grey	Aventos HF.HS.HL top Cover Set #22.8000.TGR
Aventos HF.HS.HL top Cover Set Lt Grey	Aventos HF.HS.HL top Cover Set #22.8000.HGR
Aventos HF.HS.HL top Cover Set S White	Aventos HF.HS.HL top Cover Set #22.8000.SW
Aventos HF.HS.HL top Cover Set Servo Dk Grey	Aventos HF.HS.HL top Cover Set SERVO #23.8000.TGR
Aventos HF.HS.HL top Cover Set Servo Lt Grey	Aventos HF.HS.HL top Cover Set SERVO #23.8000.HGR
Aventos HF.HS.HL top Cover Set Servo S White	Aventos HF.HS.HL top Cover Set SERVO #23.8000.SW
Aventos Servo Bumper Dk Grey	Aventos Servo Bumper Dk Grey
Aventos Servo Bumper Lt Grey	Aventos Servo Bumper Lt Grey
Aventos Servo Bumper S.White	Aventos Servo Bumper Silk White
Aventos Servo Drive Set 23.A000	Aventos Servo Drive Set #23.A000
Aventos Servo Drive Switch Dk Grey	Aventos Servo Drive Switch.TGR
Aventos Servo Drive Switch Lt Grey	Aventos Servo Drive Switch.HGR
Aventos Servo Drive Switch S.White	Aventos Servo Drive Switch.SW

AVENTOS HF top Usage

Door Requirements.

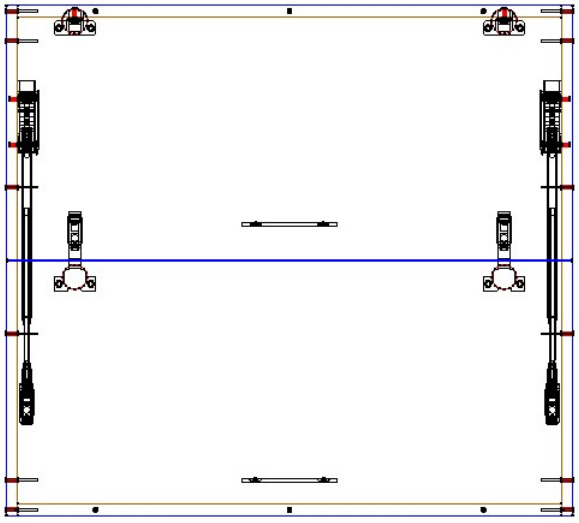
For the AVENTOS HF top to appear on a door the following conditions must be met

- Cabinet **must** have 2 doors hinged at top one above the other
- 2 times the top door height **must** be in size range **480-1200 High** and doors must be **260-1800 Wide**
- Lower Door **must** be **smaller** or **equal** to the top door in height
- The **"Aventos HF top?"** Attribute will then appear on the Top Door to switch on Aventos HF top.
- (You must be in the orthographic or "Smiley" views to click on the door and see the attributes)

Attributes

- If the **"Aventos HF top?"** attribute is changed to "**Pre-Mounted**" or "**Screwon**" the following attributes will appear on the Top Door, along with the Aventos mechanisms and arms.
- **NOTE**: - If the Door is not within the above size ranges, or is too heavy for any Mechanism the AVENTOS HF top parts will **not** be added to the Door. (The power factor **must** be between **1350** and **38600**)

Attributes	
Aventos HF TOP ?	Pre-Mounted
Aventos HF TOP Colour	Light Grey
Aventos HF TOP Dor Kg/m3	800
Aventos HF TOP Dor Pull gm	200
Aventos HF TOP Dors Kg	7.3
Aventos HF TOP Dors Total Kg	7.5
Aventos HF TOP Knockin?	EXPANDO
Aventos HF TOP Pos Cen L	0
Aventos HF TOP Pos Cen R	0
Aventos HF TOP Pos Lh	16.5
Aventos HF TOP Pos Rh	16.5
Aventos HF TOP Pos Top	16.5
Aventos HF TOP Power Factor	5424.4
Aventos HF TOP Servo	False
Aventos HF TOP Swap Sides?	False



- **AVENTOS HF top ?** Activates Aventos HF top – Pre-mounted or Screwon
- **AVENTOS HF top Dor Kg/m3** This value is the density of the door measured in kilograms per cubic meter and is used to calculate the weight of the door – ***change this to the density of the board you are using if known (If you are using MDF its density varies between 680 and 830 Kg/m3)***
- **AVENTOS HF top Dor Pull gm** -This value is the weight of the handle in grams and is used to calculate the total weight of the door plus handle – ***(change this to the total weight of the handle(s) you are using.)***
- **AVENTOS HF top Dors Kg** -This is the weight of the door as calculated by the **density** value **you** entered multiplied by the door size and thickness. – ***(If you already know the door weight you can change this value rather than using the density calculated weight.)***
- **AVENTOS HF top Dors Total Kg** -This is the total weight of the door and handle added together and is used to calculate the "Power Factor" ***(If you already know the total door weight plus handle you can change this value rather than using the density calculated weight.)***
- **AVENTOS HF top Power Factor** -This is the value used to select the correct lift mechanism and how many to use based on the **AVENTOS HF top Dors Total Kg** value. – ***(If you have already calculated the power factor yourself you can change this to your value instead)***

- **AVENTOS HF top Colour?** -Changes the Cover Colour **(Light Grey, Silk White, Dark Grey)**
- **AVENTOS HF top Knockin?** -Changes the Door inline plate type **(Knockin , EXPANDO, Screwon)**
- **AVENTOS HF top Pos Cen L** -Can be used to move the x position of the center left arm.
- **AVENTOS HF top Pos Cen R** -Can be used to move the x position of the center right arm.
- **AVENTOS HF top Pos Lh** -Can be used to move the x position of the left arm.
- **AVENTOS HF top Pos Rh** -Can be used to move the x position of the right arm.
- **AVENTOS HF top Pos Top** -Can be used to adjust the up/down position
- **AVENTOS HF top Swap Sides?** -You can swap the odd arm from left to right for when there is 1 or 3 arms

Servo Attributes

- **AVENTOS HF top Servo** -Turns on Servo Drive and following 4 attributes.
- **AVENTOS HF top Servo Bck Dia** -Changes Servo Back Hole diameter – set to 0 to delete hole.
- **AVENTOS HF top Bumpers** -Turns off bumpers if not required.
- **AVENTOS HF top Bump Bot** -Can be used to move the bottom 2 bumpers up if base is scribed up etc.
- **AVENTOS HF top Switch Pos** -Can be used to move the servo switches up or down.

Note: The correct arm length is calculated automatically based on the height of the doors.

- The correct vertical position of the mechanisms is calculated as per Blum specifications automatically

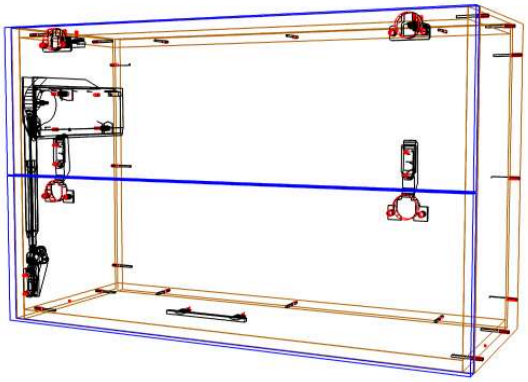
The following table shows which lift mechanism is used, and how many arms based on the Power Factor (Because Blum uses overlapping ranges , we have adjusted the ranges so that the stronger mechanism and arm quantity is chosen where the ranges overlap)

Blum Power Factor	Used Power Factor	Lift Mechanism	Arm Quantity
1350 - 3000	1350 - 2700	22F2500	(1 piece)
2700 - 13500	2700 - 10000	22F2500	(1 set)
10000 - 19300	10000 - 19300	22F2800	(1 set)
15000 - 28950	19300 - 28950	22F2800	(3 pieces)
20000 - 38600	28950 - 38600	22F2800	(4 pieces)

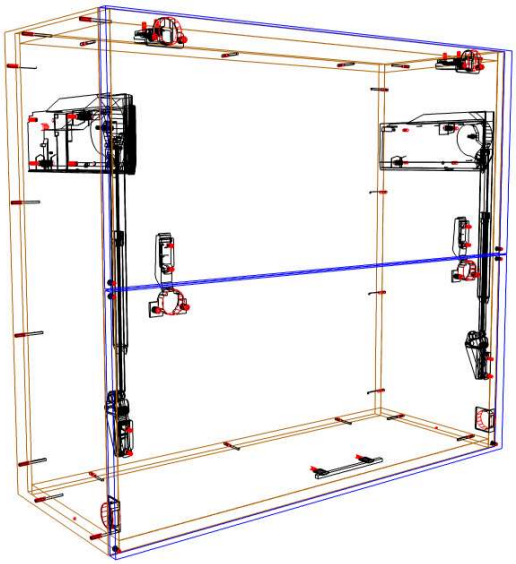
The following table shows which arm assembly is used for each cabinet height. (We actually base this on the total door height incase the cabinet has other openings not related to the Aventos)

Total Door Height	Arm Assembly
480 - 600	22F3200
600 - 840	22F3500
840 - 1200	22F3900

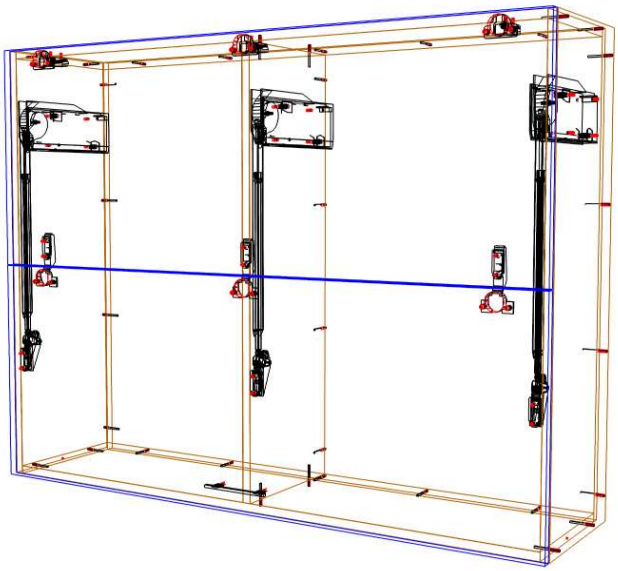
Some AVENTOS HF top Examples:



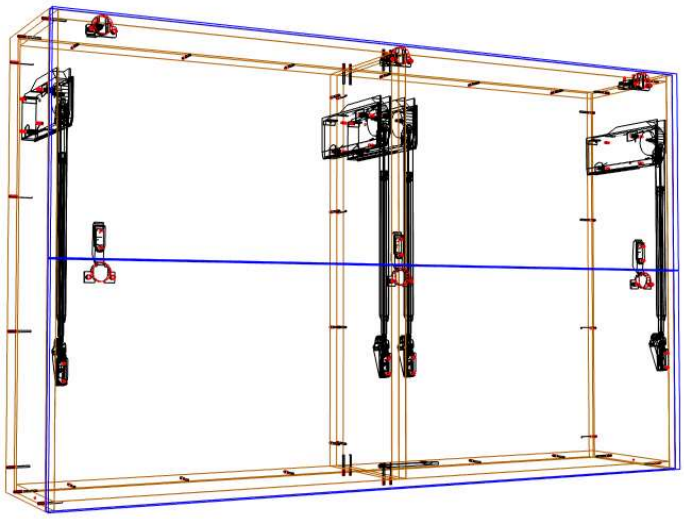
A 500mm high cabinet with a Power Factor of 2300 requiring one arm.



A 700mm high cabinet with SERVO-DRIVE and a Power Factor of 5400 requiring a pair of arms



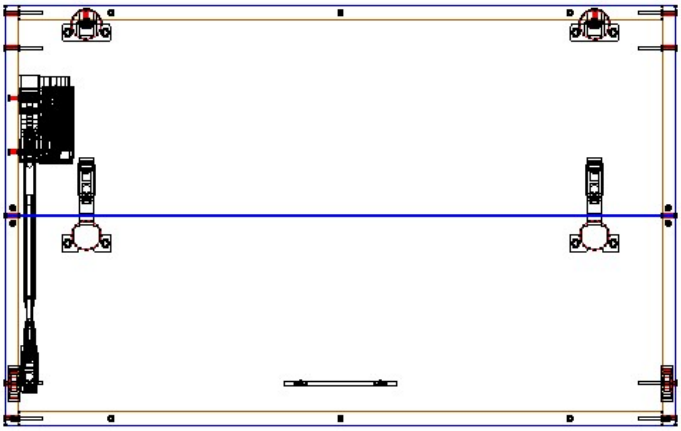
An 900mm high cabinet with a Power Factor of 19500 requiring three arms.

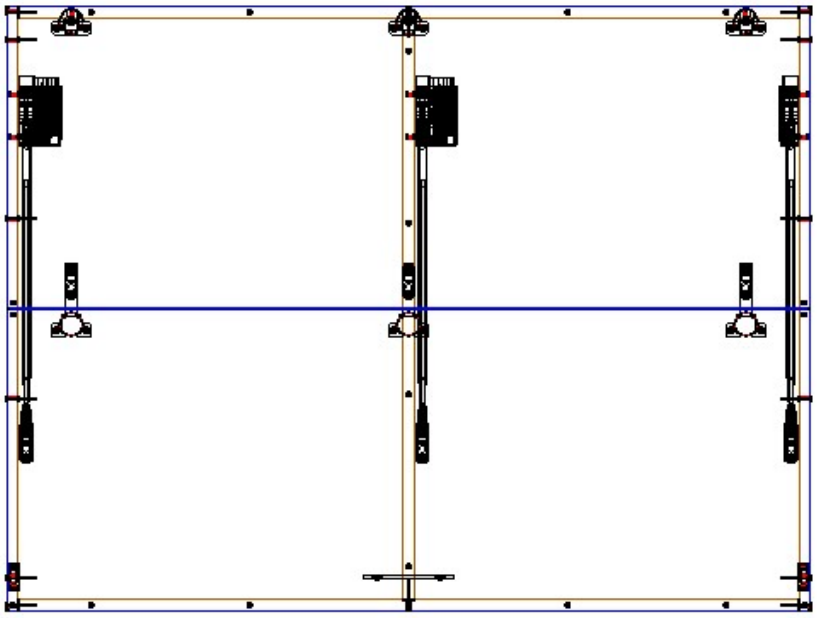


An 1000mm high, 1600mm wide cabinet with a Power Factor of 30000 requiring four arms.

Note: The handle on the top door can be removed in the section view by changing the Pull Quantity to zero.

SERVO-DRIVE Examples:





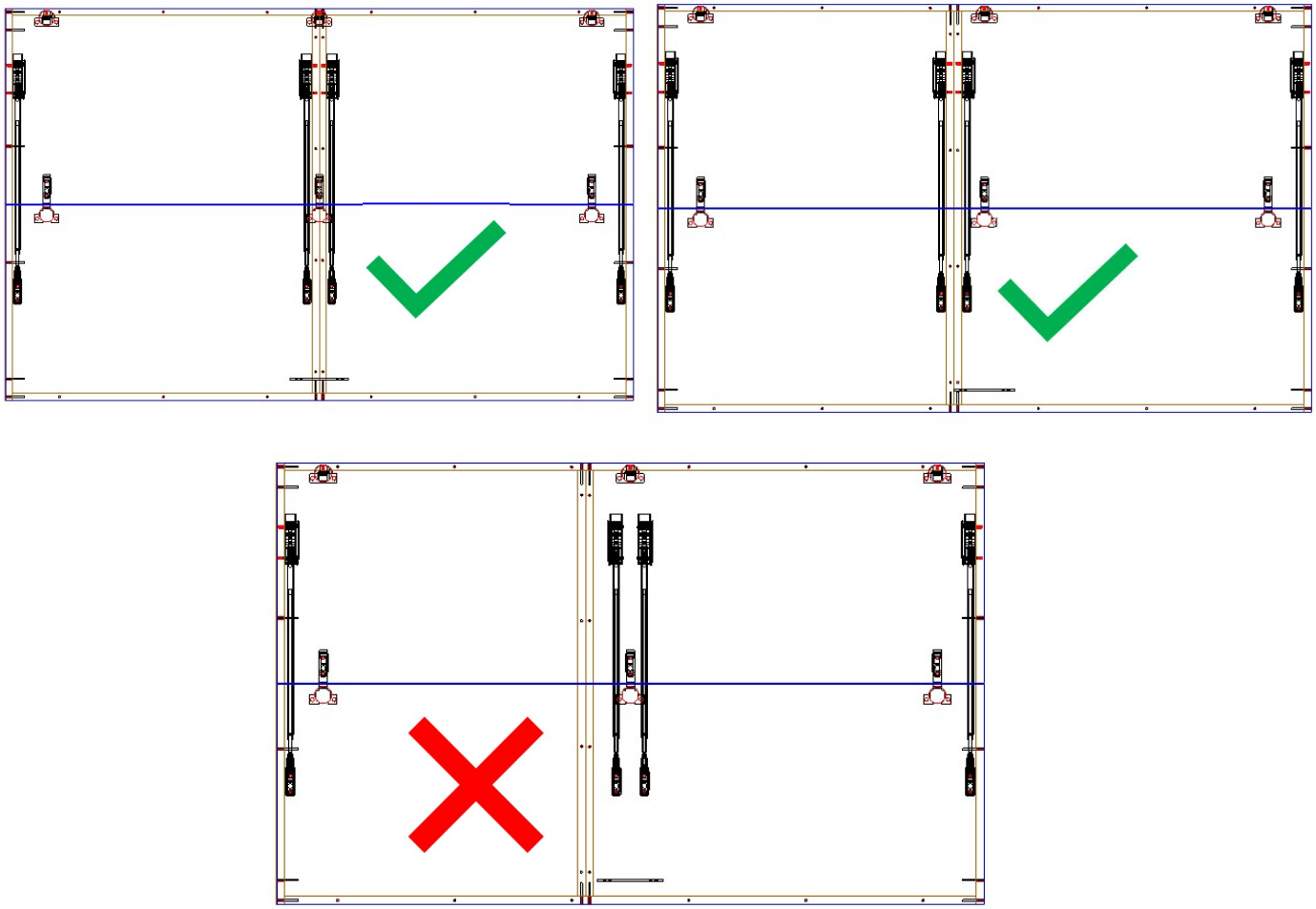
SERVO-DRIVE units are Left Hand only

- So if you are using 1 mech on the right and then activate SERVO-DRIVE, the mech with automatically switch to the left side of the cabinet.
- Also if you are using 3 mechs, and you have the center mech on the left side of the divider (Rh unit) and then activate SERVO-DRIVE, the mech with automatically switch to the right side of the divider or partion (Lh unit)

Center Arm Positions:

When there are 3 or 4 mechs, they will attempt to link to a partition or divider that is near the center of the door.
If the partition is too far from the center, the mechs will instead, stay in the center of the door and can be moved left or right with the **AVENTOS HF top Pos Cen L** and **AVENTOS HF top Pos Cen R** attributes.
This is to allow you to link them to another part you may have added manually.

Shown here are 4 mechs linked to a double partition:



Shown here are 4 mechs unlinked to a double partition because they are too far from center:

Hinge Selection.

We have provided a small selection of hinges and plates from our **BLMCTOP (Blum Cliptop Hinges Visual)** package, select the hinges from the following list:

TOP DOOR

Hinges:

Blum Cliptop Insrta 120 (preferred) or-
Blum Cliptop Screw 120
Or for larger front overlay:
Blum Cliptop Insrta 120 Special (preferred) or-
Blum Cliptop Screw 120 Special

Plates:

Blum Plate Inline 10dia Cam 0mm (preferred) or-
Blum Plate Inline 5dia Cam EXP 0mm
Blum Plate Inline 5dia Cam Scr 0mm

BOTTOM DOOR

Hinges:

Blum Cliptop Expndo Cen (preferred) or-
Blum Cliptop Screw Cen

Plates:

Blum Plate Inline 10dia Cam 0mm (preferred) or-
Blum Plate Inline 5dia Cam EXP 0mm
Blum Plate Inline 5dia Cam Scr 0mm

Drilling Setup

UCS Public Variables

- To change these variables go to the Utilities – Edit User Created Standards from the Room Plan or Elevation views



- Then click on the **"{ DOOR } -- Blum AVENTOS HF top Attributes "** UCS. The Public Variables are at the top of the screen.



- **Metric?** If you are using **imperial** units the variable must be set to **zero** but if you are using **metric** units it must be set to **1.**
- **Servo Switch Position** This sets the default servo switch position from the bottom of the door.

- Now click on the **"{ DOOR } -- Blum AVENTOS HF top"** UCS. Here we set the various drilling sizes.

Public Variables	
Mech Premount Holes Depth	12mm
Mech Premount Holes Diam	5mm
Mech Screw Holes Depth	12mm
Mech Screw Holes Diam	5mm

- Edit the values to the diameter and depths you require.
- Please note the servo buffers drill at 5mm diameter and 11mm deep.
- All other drilling sizes are able to be edited on the material models themselves.
- That includes the hinges, hinge plates, servo switches and buffers.

Tools Required

- In addition to the tool sizes you have chosen above, a **Ø10mm Vertical drill bit** is required for the Door Bracket front mounting holes for when the "**AVENTOS HF top Knockin**" attribute is set to "Knockin".
- The drill diameters you choose in the UCS User Definable Variables above and the 10mm tool are all required for this package to work. You must have these tool diameters in your tool catalog and in your machine.

Package Exclusions

Some of the items shown in various images contained in this document are not included in the Blum AVENTOS HF top Package, but come from other packages which are sold separately, as listed here:

Any other items shown in any images such as cabinet screw holes, etc are also part of our other packages which are sold separately.

See our website for more detailed information on these packages.