Blum SERVO-DRIVE User Guide.



Introduction

Overview

- The 'Blum SERVO-DRIVE Package' from Solid Setup Plus adds the Blum SERVO-DRIVE parts to Cabinet Vision.
- It provides drilling for the brackets in the cabinet parts for CNC output.
- It also adds 3d graphics for the profiles and brackets etc.
- The transformers and cables etc can be added via attribute as a separate parts and materials for reporting purposes.
- All material descriptions contain the Blum order number after the # symbol.
- It is designed to be used with a Blum Antaro drawer system and works with our BLMATRO package, however this is not a requirement for this package to work.

Included in This Package

Materials: Name	Description
"Servo Bracket Tier 1"	Servo Bracket 1 Tier #Z10D7101
"Servo Bracket Tier 2"	Servo Bracket 2 Tier #Z10D7201
"Servo Bracket TopBot"	Servo Bracket Top/Bot #Z10D01E0
"Servo Bracket Upper"	Servo Bracket Upper #Z10D6252
"Servo Bumper 5mm"	Servo Distance Bumper Dia 5mm #993.0530
"Servo Bumper 8mm"	Servo Distance Bumper Dia 8mm #993.0830.01
"Servo Cable and Plug"	Servo Flex Cable and Plug #Z10M200(U)
"Servo Cable Distrib"	Servo Cable Distribution 8meters + protector #Z10K800AE
"Servo Cable Holder"	Servo Cable Holder #Z10K0009
"Servo Connect Node"	Servo Connecting Node + Protector #Z10V100E
"Servo Drive Unit"	Servo Drive Unit #Z10A3000.01
"Servo Profile 1170"	Servo Profile Alu #Z10T1170A
"Servo Profile 650"	Servo Profile Alu #Z10T650AA
"Servo Profile 700"	Servo Profile Alu #Z10T700AA
"Servo Profile 710"	Servo Profile Alu #Z10T710AA
"Servo Profile 750"	Servo Profile Alu #Z10T750AA

- "Servo Profile 800" Servo Profile Alu #Z10T800AA
- "Servo Synch Cable 0080" Servo Synch Cable 80mm #Z10K008S
- "Servo Synch Cable 0500" Servo Synch Cable 500mm #Z10K050S
- "Servo Synch Cable 1200" Servo Synch Cable 1200mm #Z10K120S
- "Servo Synch Cable 1600" Servo Synch Cable 1600mm #Z10K160S
- "Servo Transformer" Servo Transformer #Z10NE020(G)
- "Servo Trigger Guide" Servo Trigger Guide #Z10A3H00
- "Servo Tx Base Fix" Servo Transformer Base Fix #Z10NG000
- "Servo Tx Panel Fix" Servo Transformer Panel Fix #Z10NG120
- For the Cable and Transformer materials, change the bracketed letter in the material description to the correct letter for your country. (Refer to Blums documentation for this)

User Created Standards

The Following UCS's are provided:

- { DRAWS } -- Blum Servo Drive Adds Servo Drive profiles and brackets etc.
- { DRAWS } -- Blum Servo Bumpers Adds Servo Bumpers to the drawer fronts

Library

- CVS Blum.cvc Cabinet Vision Catalog of Blum Library parts

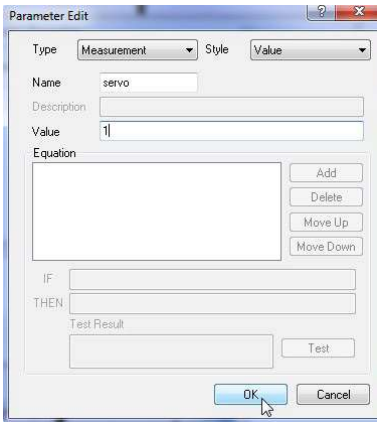
Servo Drive Usage

Activating the Cabinet.

NOTE: To use this package the cabinet **must** be a **straight** – **unshaped** cabinet, **wider** than **275mm**, and have an **unfinished** back. Also the unfinished back **must** have its finished side facing **in**, and be **vertically grained** in your construction method!

To turn on the Servo Drive system, add the 'servo = 1' parameter to the cabinet as follows:

- At the room level, right click on the cabinet and select "Properties"
- Click on the "Parameters" Tab.



- Press the "Add" button.
- For the name type "servo"
- For the Value type "1"
- Press OK
- The Cabinet is now active for servo drive.

Initial Conditions

Once the cabinet is active the following will occur:

- A vertical aluminium servo profile with brackets, will be added to the back of the cabinet.(Servo A)
- If there are drawers, a drive unit for each drawer will be added.
- Blum distance bumpers are added to the drawer fronts.
- If the cabinet has a solid top, a route will appear in it to allow access for fitting the servo drive.(Base and Vanities only)
- Attributes will be added to the following parts:
    - Unfinished back (The main servo drive attributes)
    - Drawer box and Rollout backs (To mount a bracket + drive unit behind the drawer on a cross rail or to add a second drive unit or delete the drive units)
    - Drawer fronts (To control the Blum distance bumpers)
    - Cabinet top (To control the access cutout)
    - Cabinet bottom (To add base mounted transformer or cabling etc to reports)

Unfinished Back Attributes:

The following attributes are added to the cabinet unfinished back:

- **Servo On?** **Turns the servo drives On or Off for the whole cabinet.**
- **Servo Depth** **Sets the drawer(s) depth for servo A and B profiles.**
- **Servo Steel Backs?** **Moves servo parts forward 17mm for steel backed drawers.**

- **Servo A On?** **Turns servo profile A + brackets and drive units On or Off:-**
    - **Servo A Length** Sets the length of the Servo A profile plus brackets
    - **Servo A Y Bot** Sets the Y position of the Servo A bottom bracket

- **Servo B On?** **Turns servo profile B + brackets and drive units On or Off:-**
    - **Servo B Length** Sets the length of the Servo B profile plus brackets
    - **Servo B Y Bot** Sets the Y position of the Servo B bottom bracket

- **Servo Tier 1 On?** **Turns a Tier 1 bracket + Drive unit at the base of the back On or Off.**
- **Servo Tier 2 On?** **Turns a Tier 2 bracket + 2 Drive units at the base of the back On or Off.**
- **Servo Tier Depth** **Allows the drawer depth for the Tier bracket to be set independently.**

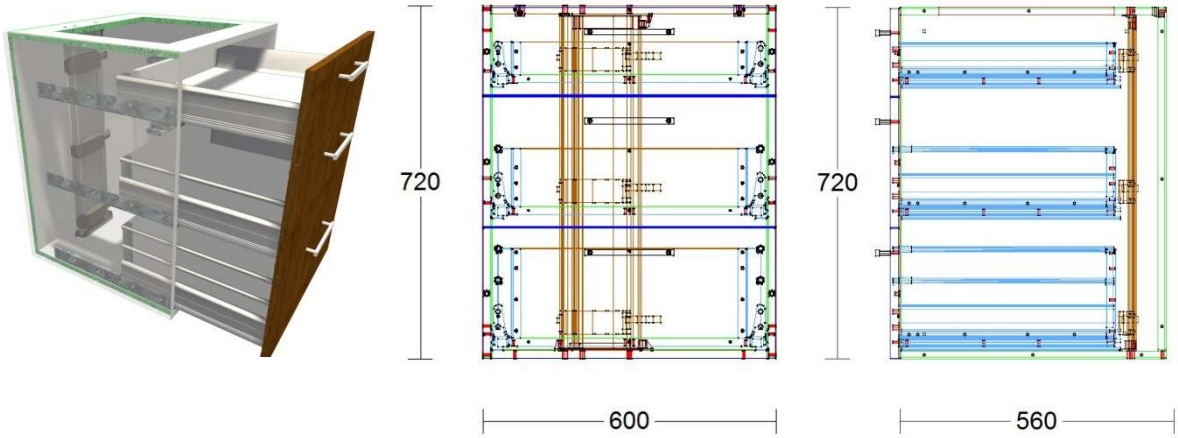
- **Servo Tx Panel Fix?** **Adds a Transformer and back panel fixing bracket in centre of back:-**
    - **Servo Tx Panel XPos** Sets the X position of the back panel fixing bracket
    - **Servo Tx Panel YPos** Sets the Y position of the back panel bracket

- **Servo Upper On?** **Adds an Upper fixing bracket under the cabinet top, or top rail.**
- **Servo Upper Depth** **Allows the drawer depth for the Upper bracket to be set independently.**

Servo A

Servo A turns on as soon as you activate the cabinet. You should either have a solid top or a back top rail for the top bracket to mount on to. Turn off Servo A with the **Servo A On?** Attribute if it is not required.

- The **servo depth** attribute will be calculated based on the internal depth of the cabinet if there are no drawers in the cabinet. For a 560 deep cabinet with a 16mm back and no back scribe this will be 500mm. If there are drawers in the cabinet the **servo depth** attribute will match the depth of drawer 1.
- **NOTE**: *This does not mean the servo drive will fit though, because while there may be room for a 500 deep drawer, if the cabinet has a back scribe, the servo drive may not fit, so always check there is room and adjust the drawer depths and the **servo depth** attribute to suit.*
- **NOTE:** *If you are using rollouts with the servo drive profile, and the rollouts are set back, you will need to add the setback amount to the **Servo Depth** value.*



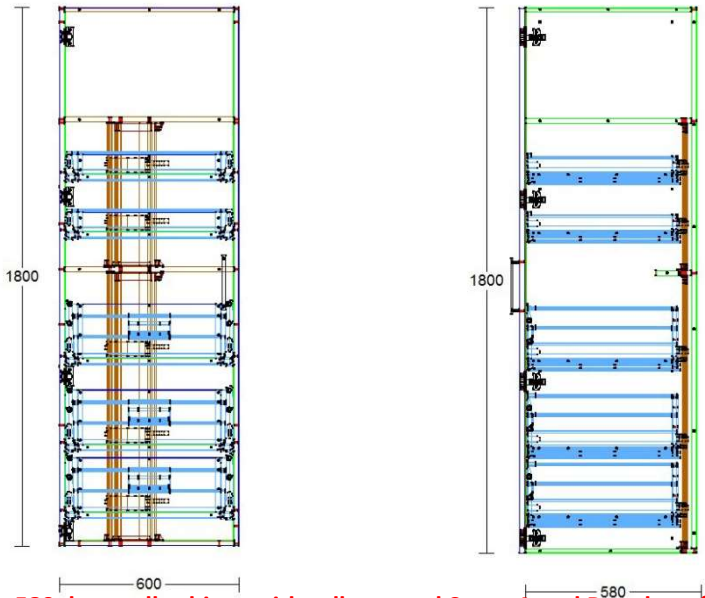
This diagram shows a 560 deep cabinet with a 16mm back scribe which only leaves enough space for 450 deep drawers with a servo profile.

- **"Servo A Y Bot"** controls the distance from the cabinet base up to the bottom bracket (default is zero)
- **"Servo A Length"** controls the length of the profile plus brackets (default is internal cabinet height up to a maximum of 1180mm)
- The longest profile available is 1170mm so the longest Servo A can be, including the top and bottom bracket, is 1180mm
- The material for the profile on your reports, will be rounded up to the lengths available to be cut down from (650,700,710,750,800 or 1170)
- If the internal height of the cabinet is over 1180mm you will need to switch on Servo B.
- The X position of the profile is automatic based on the cabinet width.
- The top/bottom bracket will be drilled for 3 10mm holes as per Blum specifications.
- A drive unit will be added for each drawer or rollout in the cabinet.

Servo B

Servo B will be placed above servo A with a default gap of 16mm to allow for a rail to be inserted between the brackets. The rail needs to be added **manually**. If the gap required is not 16mm adjust the **Servo B Y Bot** attribute to suit.

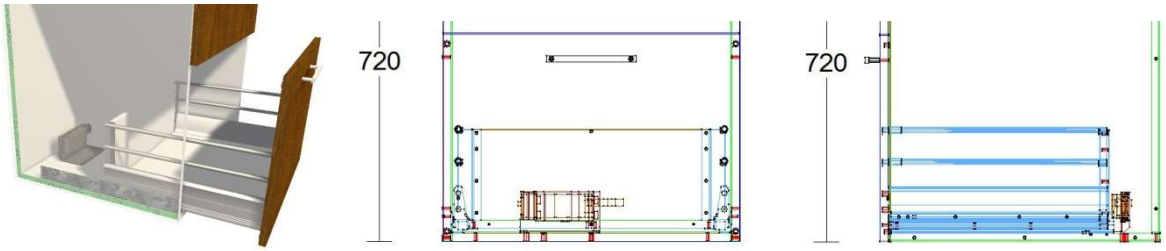
- **"Servo B Y Bot"** controls the distance from the cabinet base up to the bottom bracket (default is 16mm above servo A)
- **"Servo B Length"** controls the length of the profile plus brackets (default is remaining internal cabinet height above Servo A up to a maximum of 1180mm)



This diagram shows a 580 deep tall cabinet with rollouts and Servo A and B under a fixed shelf, split by a shallow shelf or rail.

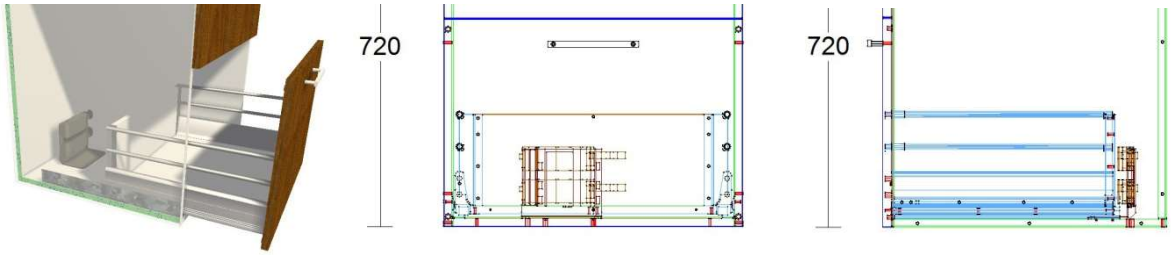
Servo Tier 1

Use the Tier 1 bracket and drive unit on a bottom draw or bin drawer when a full profile is not required. (turn off servo A and B)
Ensure the **Servo Tier Depth** attribute matches the drawer nominal depth. The Cabinet base will be drilled for the bracket.



Servo Tier 2

Use the Tier 2 bracket and 2 drive units for a heavier drawer when required.



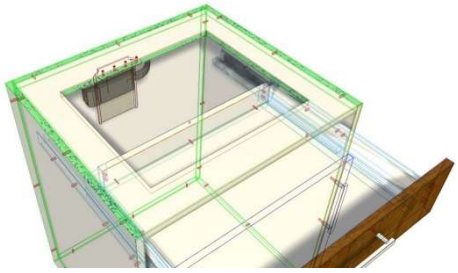
Servo Transformer Back Panel Fix

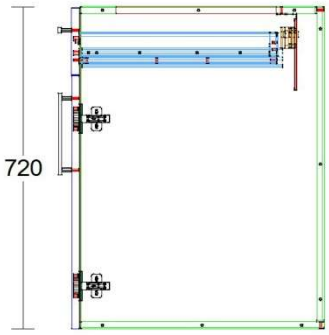
The Transformer back panel fixing bracket will be added to the center of the cabinets back and pilot holes drilled.
Use the **Servo Tx Panel XPos** and the **Servo Tx Panel YPos** attributes to move it if required. A transformer will also be added to your reports. (Shown here in a cabinet which also has a Tier 2 base mounted bracket)



Servo Upper Bracket

Use the Upper bracket and drive unit on a top draw or bin drawer when a full profile is not required. (turn off servo A and B)
Ensure the **Servo Upper Depth** attribute matches the drawer nominal depth. The Cabinet top or top rail will be drilled for the bracket.





Servo Upper bracket used for a top drawer in a cabinet with 1 drawer above 1 door.

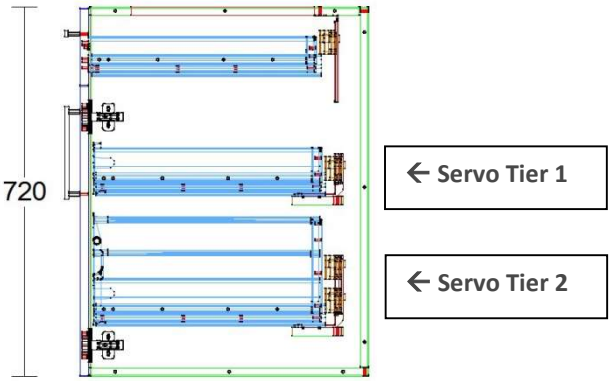
Drawer/Rollout Back Attributes:

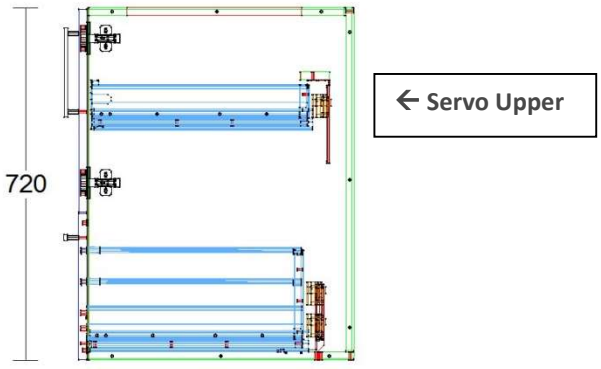
In situations where a back profile cannot be used, such as:

- when drawer depths differ or
- rollouts and drawers are in the same cabinet (rollout backs do not line up with drawer backs when a rollout setback is used)

It may be easier to mount the drive unit and bracket on a rail behind some drawers.
We have included the following three options for this situation:

- **Servo Drive On?** **Allows the Drive Unit to be removed if not required.**
- **Servo Drive x2?** **Adds a second Drive Unit if required.**
- **Servo Tier 1 On?** **Adds a Tier 1 bracket and drive unit to a rail behind and <u>below</u> the drawer.**
- **Servo Tier 2 On?** **Adds a Tier 2 bracket and drive units to a rail behind and <u>below</u> the drawer.**
- **Servo Upper On?** **Adds an Upper bracket and drive unit to a rail behind and <u>above</u> the drawer.**



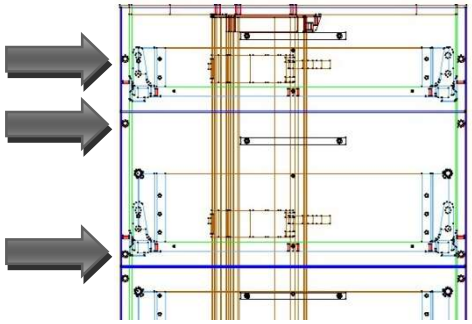


NOTE: *The Rails are 100mm wide for the Tier type brackets and 60mm for the Upper bracket and are edged in "interior banding" along the front edge. The rails are drilled for the brackets accordingly, and rebated into the cabinet ends for location. Refer to the "Drilling Setup" section to alter the rebate depth and drilling details.*

Drawer Front Attributes:

The following attributes are added to the drawer fronts:

- **Servo Bumper On?** **Turns the bumpers On or Off for selected drawer.**
- **Servo Bumper Edit?** **Shows the following attributes.**
- **Servo Bumper Edge Pos** **Sets distance from left/right edges of drawer front.**
- **Servo Bumper Qty** **Sets 1 or 2 rows (automatically puts 2 rows (4 bumpers) if over min height) Automatically puts 2 rows (4 bumpers) if using our BLMTBOX package and 65kg runners are selected)**
- **Servo Bumper 01 Pos** **Can move first row of bumpers up or down.**
- **Servo Bumper 02 Pos** **Can move 2nd row of bumpers up or down (only shown if Qty is 2)**

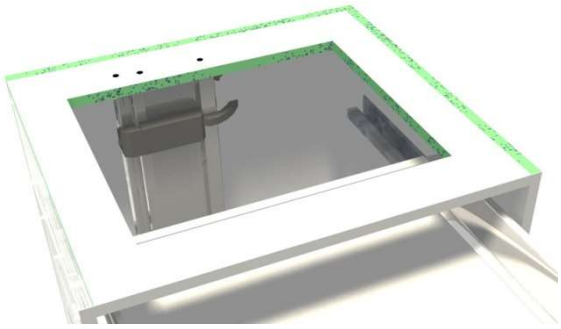


Front view of cabinet showing servo bumper locations

Top Attributes:

The cabinet top for a base or vanity will receive an access route as soon as the cabinet is activated for servo drive. The following attributes are added to the top to control the route.

- **Servo Route On?** **Turns the top access route On or Off.**
- **Servo Route Lip Fnt** **Distance to route from front of cabinet (default 80mm) .**
- **Servo Route Lip Lft** **Distance to route from left of cabinet (default 70mm) .**
- **Servo Route Lip Rgt** **Distance to route from right of cabinet (default 70mm) .**
- **Servo Route width** **Distance to back of route from cabinet face. (will automatically change to follow the drawer depth attribute unless edited).**

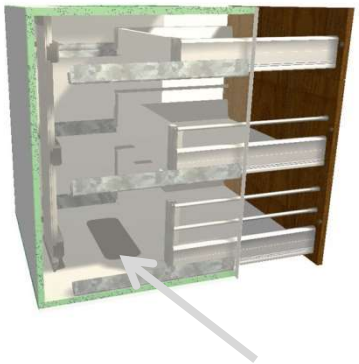


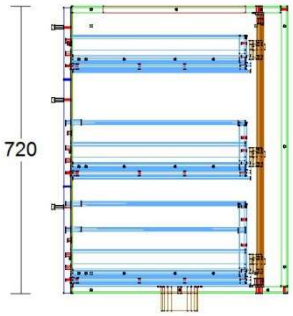
Top route access showing the servo aluminium profile and top bracket drilling.

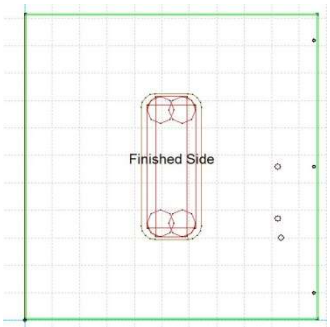
Cabinet Bottom Attributes:

Attributes on the deck allow for the addition of a base fixed transformer and bracket which is routed into the part, or the addition of cables and other items for ordering purposes (Value entered is quantity of item)

- **Servo Cable Distrib** — **Adds Cable Distribution 8meters + protector (non visual) to the reports for ordering**
- **Servo Cable Holder** — **Adds Cable Holders (non visual) to the reports for ordering**
- **Servo CableSynch 0080** — **Adds Synchronization cables 8cm (non visual) to the reports for ordering**
- **Servo CableSynch 0500** — **Adds Synchronization cables 50cm (non visual) to the reports for ordering**
- **Servo CableSynch 1200** — **Adds Synchronization cables 120cm (non visual) to the reports for ordering**
- **Servo CableSynch 1600** — **Adds Synchronization cables 160cm (non visual) to the reports for ordering**
- **Servo Connect Node** — **Adds Connecting Nodes + protector (non visual) to the reports for ordering**
- **Servo Trigger Guide** — **Adds Trigger Guides (non visual) to the reports for ordering**
- **Servo Tx Base Fix** — **Adds a transformer, base bracket, route, Cable and Plug (non visual)**
- **Servo Tx Base XPos** — **Moves the base bracket and route left to right (default is center of base)**
- **Servo Tx Base ZPos** — **Moves the base bracket and route in or out (default is center of base)**







Transformer bracket is 60mm thick and hangs under base by 44mm in a 16mm base. Route is made up of 2 routes and 4 round holes to achieve radiused corners to match the bracket radiuses.

Drilling Setup

UCS Public Variables

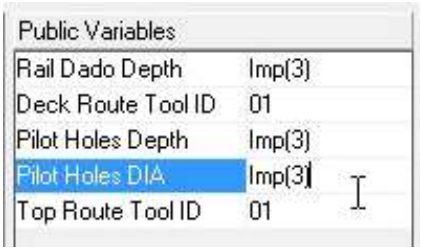
There are 5 Public Variables for the **"{ DRAWS } -- Blum Servo Drive "** UCS, and 7 Public Variables for the **"{ DRAWS } -- Blum Servo Bumpers".**

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



Then click on the **"{ DRAWS } -- Blum Servo Drive"** and **"{ DRAWS } -- Blum Servo Bumpers"** UCS's.

- On the top right hand side of the screen you will see the Public Variables list for each UCS.





"{ DRAWS } -- Blum Servo Drive" Public variables:

Rail Dado Depth = Depth of rebate in cabinet ends for rails added for the Tier or Upper brackets per drawer.
Deck Route Tool ID = Tool ID preferred for routing cabinet deck for transformer base fixing bracket.
Pilot Holes Depth = Depth of pilot holes for transformer or tier brackets.
Pilot Holes DIA = Diameter of pilot holes for transformer or tier type brackets.
Top Route Tool ID = Tool ID preferred for routing cabinet top for servo fitting access.

"{ DRAWS } -- Blum Servo Bumpers" Public variables:

Bumper Dwr Min 2nd = Minimum height of drawer to receive 2 rows of bumpers **(300mm recommended)**
Bumper Width = Diameter of visual bumper **(recommend 12mm for 8mm holes or 9mm for 5mm holes)**
Bumper Thickness = Thickness of visual bumper behind drawer front.
Bumper Hole Depth = Depth of hole in back of drawer front**. (8mm recommended)**
Bumper Hole Diameter = Diameter of hole in back of drawer front **(Only 8mm or 5mm are available but match the tool diameter in your machine. This value will determine which material is used for the bumpers for ordering)**
Bumper Pos Lft/Rgt = Distance to center of bumper from left / right of drawer front edges.
Bumper Pos Up/Down = Distance to center of bumper from Top / Bottom (only when 2 rows are active)

- If your system is set to mm, Edit the values in the **Imp()** brackets to the diameter and depths you require.
- If your system is set to inches, simply replace the whole **imp()** with the imperial measurement instead.
- Eg: **Imp(3)** might become **1/8**

Note: To turn off any of the holes if not required, set the depth to zero, or if bumper holes are not required turn off the bumper UCS.
For route tools to be auto selected set tool ID variable to zero.

Once you have changed these values to your requirements, you can close the UCS editor.

Tools Required

- The drill diameters you choose in the UCS User Definable Variables above are all required for this package to work. A 10mm tool is also required. You must have these tool diameters in your tool catalog and in your machine.

Package Exclusions

Some of the drawer drilling and other items shown in various images contained in this document are **not** included in the Blum Servo Drive Package, but come from other packages which are sold separately as listed here:

- **BLMTBOX** Blum Tandembox visual
- **BLMCTOP** Blum Cliptop Hinges Visual

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

See our website for more detailed information on these packages.