

## 7.1.38 Editors - 3D Viewport - Header - Hair Curve - Edit mode - Curves menu

### Table of content

Detailed table of content.....	1
Edit mode - Curves menu.....	3
Transform Submenu.....	3
Warp.....	6
Radius.....	6
Mirror submenu.....	7
Interactive Mirror.....	7
X Global, Y Global etc.....	7
Snap submenu.....	8
Snap.....	8
Set Attribute.....	9
Delete.....	9
Operators.....	9
Duplicate.....	9
Set Spline Type.....	10
Set Attribute.....	10
Toggle Cyclic.....	10
Separate.....	11
Delete.....	11

### Detailed table of content

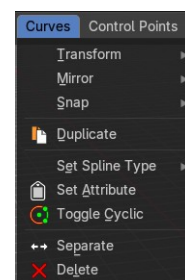
### Detailed table of content

Detailed table of content.....	1
Edit mode - Curves menu.....	3
Transform Submenu.....	3
To Sphere.....	3
Usage.....	3
Last Operator To Sphere.....	4
Factor.....	4
Proportional editing.....	4
Proportional Falloff.....	4
Proportional Size.....	4
Connected.....	4
Projected(2D).....	4
Shear.....	4
Last Operator Shear.....	4
Offset.....	4
Axis.....	4
Axis Ortho.....	4
Orientation.....	4
Proportional editing.....	4
Proportional Falloff.....	5
Proportional Size.....	5

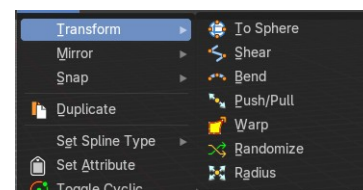
Connected.....	5
Projected(2D).....	5
Bend.....	5
Push/Pull.....	5
Last Operator Push/Pull.....	5
Distance.....	5
Mirror Editing.....	5
Proportional editing.....	5
Proportional Falloff.....	5
Proportional Size.....	5
Connected.....	6
Projected(2D).....	6
Warp.....	6
Last operator Warp.....	6
Warp Angle.....	6
Offset Angle.....	6
Min.....	6
Max.....	6
Radius.....	6
Last Operator Transform.....	6
Values.....	6
Axis.....	7
Orientation.....	7
Mirror Editing.....	7
Proportional editing.....	7
Proportional Falloff.....	7
Proportional Size.....	7
Connected.....	7
Projected(2D).....	7
Mirror submenu.....	7
Interactive Mirror.....	7
X Global, Y Global etc.....	7
Last Operator Mirror.....	8
Orientation.....	8
Constraint Axis.....	8
Snap submenu.....	8
Snap.....	8
Last operator Snap Selection to Cursor.....	8
Offset.....	8
Rotation.....	8
Set Attribute.....	9
Delete.....	9
Operators.....	9
Duplicate.....	9
Last Operator Duplicate.....	9
Move X , Y , Z.....	9
Orientation.....	9
Mirror Editing.....	9
Proportional editing.....	9
Proportional Falloff.....	9
Proportional Size.....	9

Connected.....	9
Projected(2D).....	10
Set Spline Type.....	10
Last Operator Set Spline Type.....	10
Type.....	10
Handles.....	10
Set Attribute.....	10
Last Operator Set Attribute.....	10
Position.....	10
Toggle Cyclic.....	10
Last Operator Toggle Cyclic.....	11
Direction.....	11
Separate.....	11
Delete.....	11

## Edit mode - Curves menu



## Transform Submenu



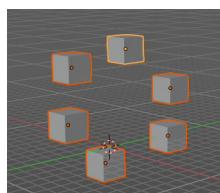
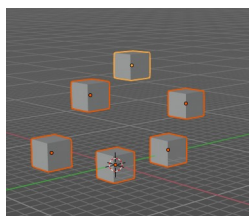
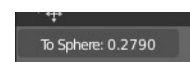
### To Sphere

Shapes a selection of objects into the shape of a sphere. The calculation happens with the object origins.

In Object mode this tool requires to have more than one object selected.

#### Usage

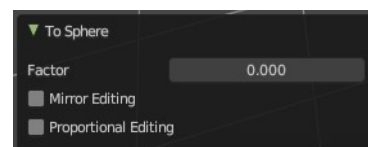
Select the objects, activate the tool, then drag the mouse in the 3D viewport. In the header you will read the current factor then. Which tells you how close you are towards the sphere shape.



## Last Operator To Sphere

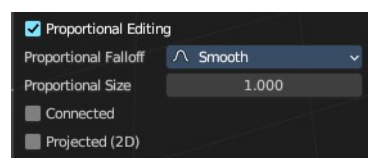
### Factor

The factor to transform the selection into a shape form.



### Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.



### Proportional Falloff

Adjust the falloff methods.

### Proportional Size

See and adjust the falloff radius.

### Connected

The proportional falloff gets calculated for connected parts only.

### Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

## Shear

Shear shears the selection.

In Object mode this tool requires to have more than one object selected.

### Last Operator Shear

#### Offset

Adjust an offset.

#### Axis

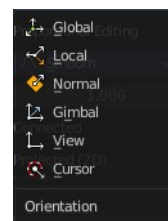
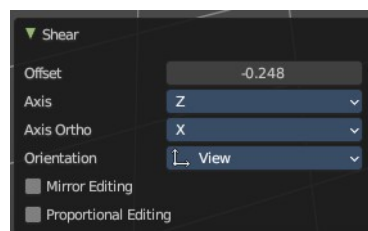
Defines one axis of the imaginary shear axis plane.

#### Axis Ortho

Defines the other axis of the imaginary shear axis plane.

#### Orientation

Choose the orientation for the shear action.



## Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.

### ***Proportional Falloff***

Adjust the falloff methods.

### ***Proportional Size***

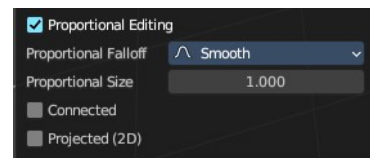
See and adjust the falloff radius.

### ***Connected***

The proportional falloff gets calculated for connected parts only.

### ***Projected(2D)***

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.



---

## Bend

Bends the selection.

In Object mode this tool requires to have more than one object selected.

---

## Push/Pull

It pushes or pulls the object positions relative to the center of the selection.

In Object mode this tool requires to have more than one object selected.

### ***Last Operator Push/Pull***

### **Distance**

Adjust the strength of influence of the tool.

### **Mirror Editing**

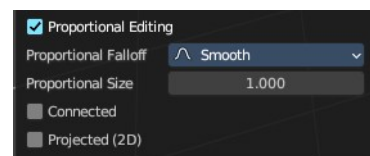
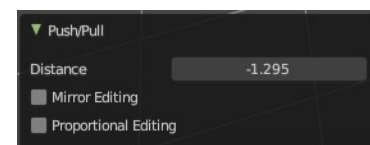
Enables mirror editing.

## Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.

### ***Proportional Falloff***

Adjust the falloff methods.



### ***Proportional Size***

See and adjust the falloff radius.

### ***Connected***

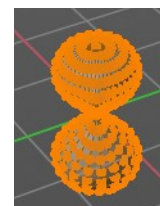
The proportional falloff gets calculated for connected parts only.

### ***Projected(2D)***

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

## **Warp**

Warp a mesh selection between two defined points. This also works with curves.



### **Last operator Warp**

#### ***Warp Angle***

The strength of the warp effect.

#### ***Offset Angle***

An offset angle to bend side wards.

#### ***Min***

The start point.

#### ***Max***

The end point.

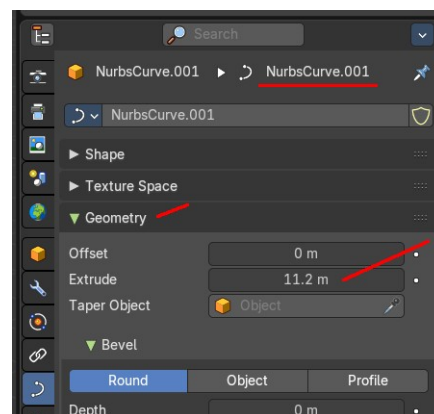


## **Radius**

Scales the selected geometry of a curve along its normals. Transform orientation and Pivot point gets ignored.

A positive value pushes the vertices outwards. A negative value pushes the vertices inwards.

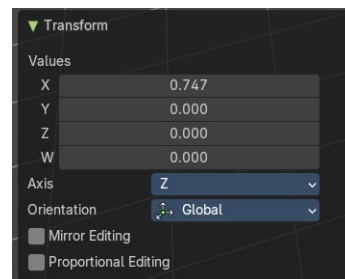
The curve needs to have geometry !



## Last Operator Transform

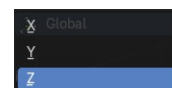
### Values

The transform values.



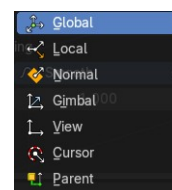
### Axis

The transform axis.



### Orientation

Choose the orientation.

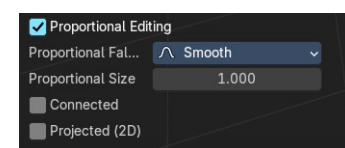


### Mirror Editing

Enable Mirror Editing.

### Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.



### Proportional Falloff

Adjust the falloff methods.

### Proportional Size

See and adjust the falloff radius.

### Connected

The proportional falloff gets calculated for connected parts only.

### Projected(2D)

*The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.*

## Mirror submenu

Mirror mirrors the selected geometry along the defined axis.



## Interactive Mirror

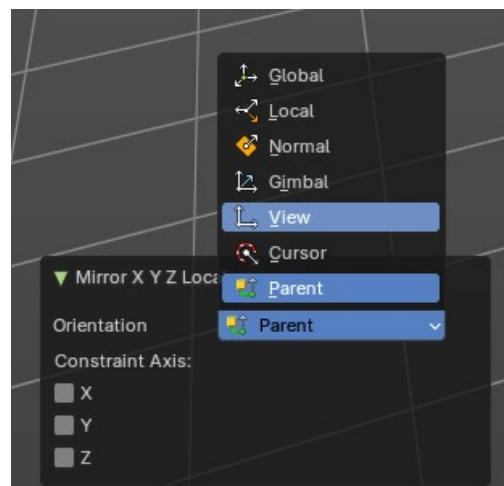
Mirror by hotkeys. You activate the tool, type in x for x global for example, or x x for x local. And the selection gets mirrored

## X Global, Y Global etc.

Mirrors the selection around the chosen axis.

## Last Operator Mirror

The Last Operator Mirror panel gives you tools to adjust the mirror action.

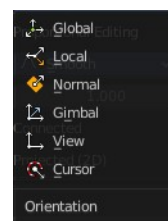


### Orientation

Orientation is a drop-down box . Choose the type of orientation for the mirroring action.

### Constraint Axis

Constraint Axis gives you again the possibility to define the mirror axis. You can choose more than one axis here.



## Snap submenu

### Snap

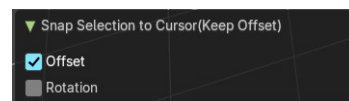
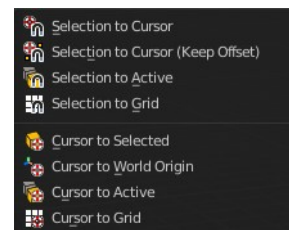
Choose several methods to snap one element to another. The menu items should be self explaining.

### Last operator Snap Selection to Cursor

Some snap operations shows a last operation panel, some not.

### Offset

If the selection should snap as a whole, or if each individual element of the selection should snap.

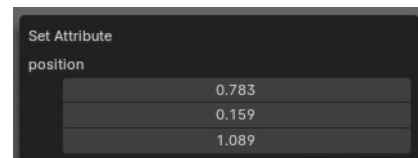


## Rotation

If the selection should be rotated to match the cursor.

## Set Attribute

Set the position attribute of the selected elements. The values can be adjusted in the popup.



## Delete

Deletes the selected hair curves.

# Operators

## Duplicate

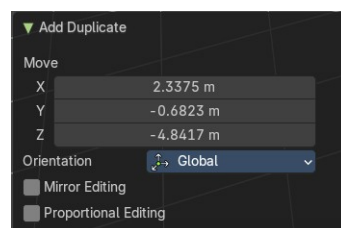
Duplicates the current selection. This can be a single control point or a whole curve.

The copy sticks to the mouse until you release it. A Right click while moving will reset the position of the duplicate. The duplicated part will be part of the same object.

When you drag the duplicate around you will see the position values in the header.

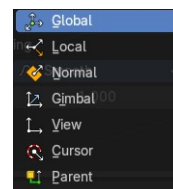
## Last Operator Duplicate

### Move X, Y, Z



### Orientation

Choose the orientation.

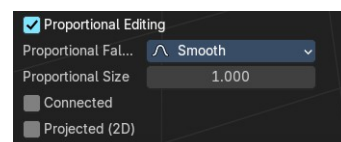


### Mirror Editing

Enable Mirror Editing.

### Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.



## Proportional Falloff

Adjust the falloff methods.

## Proportional Size

See and adjust the falloff radius.

## Connected

The proportional falloff gets calculated for connected parts only.

## Projected(2D)

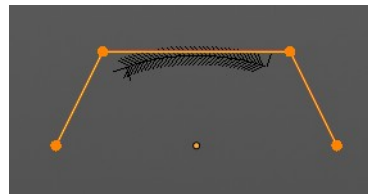
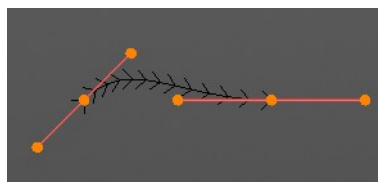
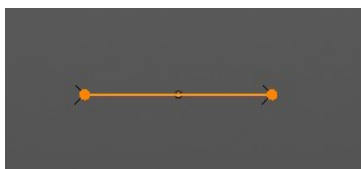
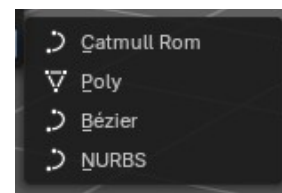
The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

---

## Set Spline Type

With set Spline Type, you can set the type of the curve.

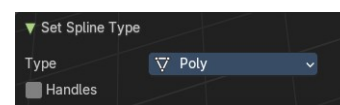
- **Catmul Rom** is an interpolated spline system for smooth curves.
- **Poly** is a straight line between the control points.
- **Bezier** has curve handlers.
- A **NURBS** curve has a control cage.



## Last Operator Set Spline Type

### Type

Type is a drop-down box . Choose the spline type



### Handles

Use Handles when converting Bezier curves into polygons.

---

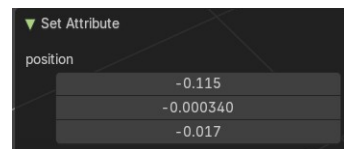
## Set Attribute

Set values of the attribute for selected elements. The selected geometry will be set to the chosen vector 3 value.

## Last Operator Set Attribute

### *Position*

The vector 3 values.



---

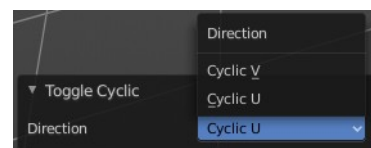
## Toggle Cyclic

Toggle Cyclic closes or opens the curve.

## Last Operator Toggle Cyclic

### *Direction*

Direction is a drop-down box . Choose the direction in which the curve gets closed.



---

## Separate

Separates the selection into a new object.

## Delete

Deletes the selected hair geometry.