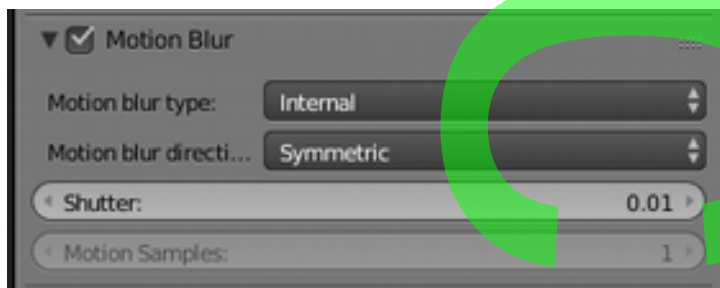


# Motion Blur

Blurring is a phenomenon common in photography especially when capturing fast-moving objects, it may result either when the camera has moved thereby the focal point when the camera shutter opened is no longer the same by the time the shutter is closed (camera blur) or when the object is moving too fast that the camera's shutter speed is not fast enough to capture a sharp image of it (object motion blur).

In CG where objects are simply modeled and rendered, the images may be all sharp since the computer is actually able to generate all frames. Blurring effects are generally simulated through a variety of settings during the rendering.

In OctaneRender for Blender, blur effects are applied through the Motion Blur rollout and there needs to be animated geometry that is either a Movable or a Reshapable Object Mesh Type.



Octane supports two type of motion blurring effects:

- Internal / Object Motion Blur
- SubFrame Motion Blur

Switch to either of the types through the drop down menu under the Motion Blur Type parameter and then adjust the Shutter parameter accordingly.

The Shutter is the shutter speed of the camera, this parameter determines the duration of the shutter or the period of exposure and it is specified as a fraction of the frame.

When transitioning a scene from the Plugin to the either Standalone Edition or ORC, the Shutter parameter value is converted to a percentage of time relative to the duration of a single frame. This equation holds true where the source of the scene is a plugin edition.

Motion Blur Shutter parameter from plugin editions to ORC:

$(\text{plugin's shutter value}) * (\text{fps}) * (100) = \text{SE and/or ORC Shutter Percent value}$

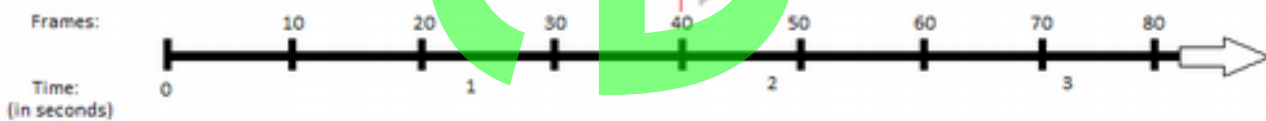
## Internal / Object Motion Blur

With the Internal Motion Blur type, the blurring is calculated based on the **Motion Blur Direction** parameter.

Motion Blur Direction

This specifies how the shutter interval is aligned to the current time. The alignment of the blur can therefore be `before`, `symmetrical` or `after` the shutter was triggered and this is applicable to each frame thereafter relative to the given frame rate.

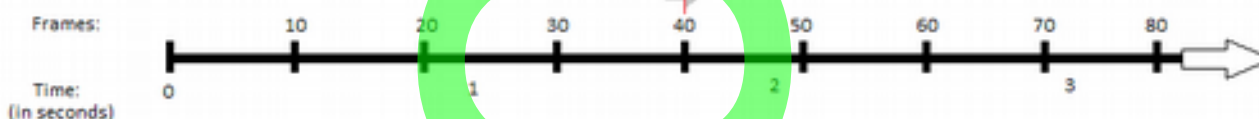
## After



## Before



## Symmetrical



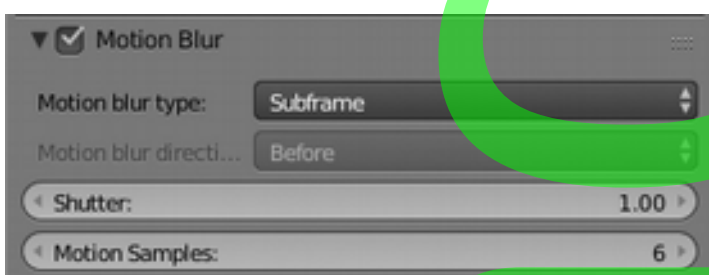
## SubFrame Motion Blur

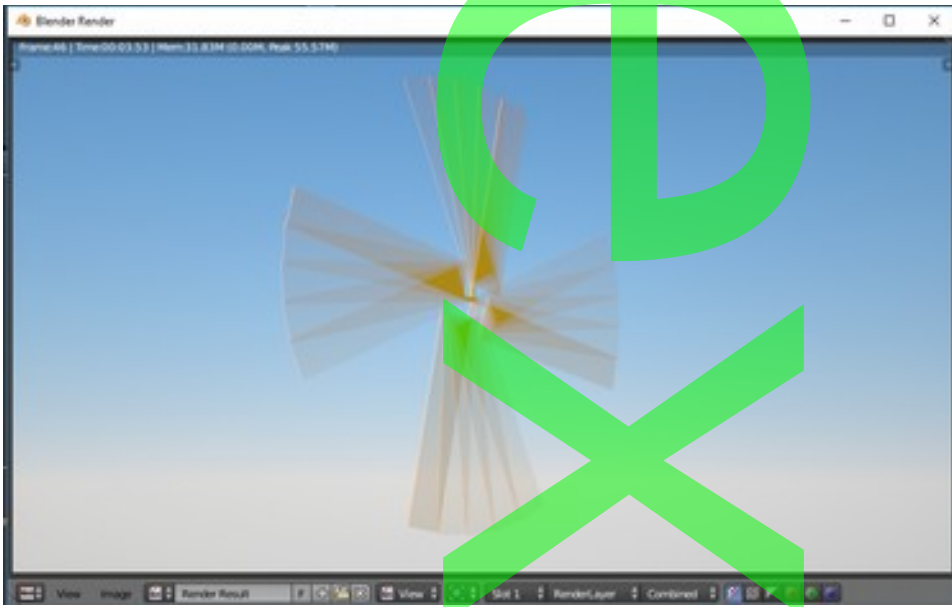
This is an option to generate motion blurred images and works only for the final render (F12). Blur effects using this method will not be visible in the 3D View window in rendered view mode.

With the Subframe Motion Blur type, the blurring is calculated based on the **Motion Samples** parameter.

Motion Samples affects the amount of images that are rendered relative to the amount of time that the shutter is open. The rendered images are then blended together producing the blurred effect. So depending on how fast the animated object is moving, a slow moving object will require more frames for the motion to be visible. Fewer images mean quicker render times.

The shutter speed affects the duration of frames while the count of passes affects the output quality. For lower render times, ensure that animated objects are set as movable geometry type.





A longer shutter speed will expose more of the blended images. Shutter speeds above 1 creates a stutter effect.

