



## 26.10.20 Editors - Properties Editor - Particle Properties Tab - Force Field Settings panel

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## Force Field Settings panel

The Force Field Settings panel allows you to make each individual act as a force field, allowing them to affect other dynamic systems, or even, each other.

### Self Effect

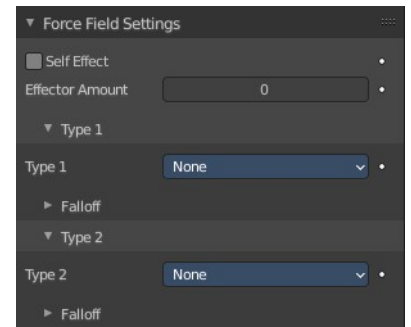
Causes the particle force fields to have an effect on other particles within the same system.

### Effector Amount

Set how many of the particles act as force fields. 0 means all of them are effectors.

### Type 1 and Type 2 Sub panels

You can give particle systems up to two force fields. By default they do not have any force field enabled. Choose an effector type from the selector to enable them.



### Type 1 / 2

#### **Force**

Radial field towards the center of an object.

#### **Strength**

The strength of the force.

#### **Flow**

Convert effector force into air force velocity.

#### **Affect**

##### **Location**

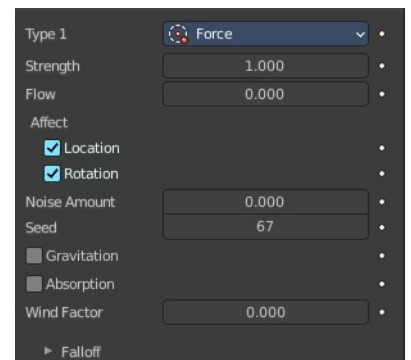
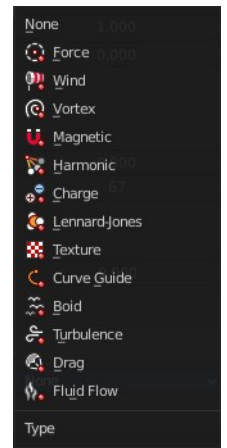
Affect the location of the particles.

##### **Rotation**

Affect the rotation of the particles.

##### **Noise Amount**

Amount of noise for the force effect.



## Seed

The random seed for the noise amount.

## Gravitation

Multiply force by 1 divided through the distance in square.

## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## Wind

Constant force along the Z axis.

### Strength

The strength of the force.

### Flow

Convert effector force into air force velocity.

### Affect

#### Location

Affect the location of the particles.

#### Rotation

Affect the rotation of the particles.

### Noise Amount

Amount of noise for the force effect.

## Seed

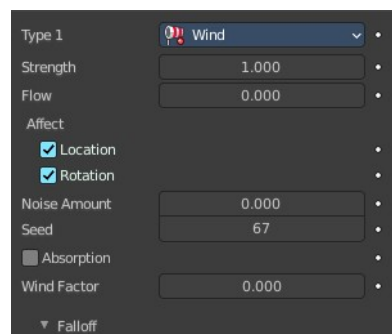
The random seed for the noise amount.

## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.



## ***Vortex***

Spiraling force that twists the force object's local Z axis.

### **Strength**

The strength of the force.

### **Flow**

Convert effector force into air force velocity.

### **Affect**

#### ***Location***

Affect the location of the particles.

#### ***Rotation***

Affect the rotation of the particles.

### **Noise Amount**

Amount of noise for the force effect.

### **Seed**

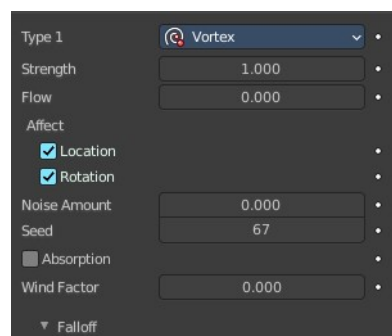
The random seed for the noise amount.

### **Absorption**

Force gets absorbed by collision objects.

### **Wind Factor**

How much the force is reduced when acting parallel to a surface. Like a cloth.



## ***Magnetic***

Force field depends of the speed of the particles.

### **Strength**

The strength of the force.

### **Flow**

Convert effector force into air force velocity.

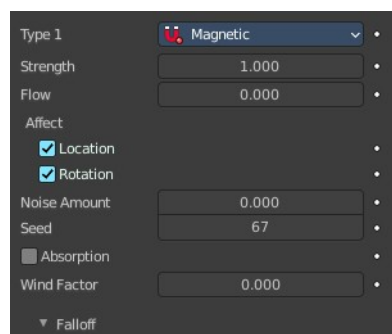
### **Affect**

#### ***Location***

Affect the location of the particles.

#### ***Rotation***

Affect the rotation of the particles.



## Noise Amount

Amount of noise for the force effect.

## Seed

The random seed for the noise amount.

## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## Harmonic

The source of this force field is the zero point of a harmonic oscillator.

### Strength

The strength of the force.

### Damping

Damping of the harmonic force.

### Rest Length

The rest length of the harmonic force.

### Affect

#### Location

Affect the location of the particles.

#### Rotation

Affect the rotation of the particles.

### Noise Amount

Amount of noise for the force effect.

### Seed

The random seed for the noise amount.

### Multiple Springs

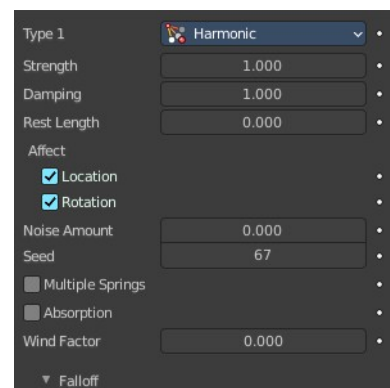
Every point is effected by multiple springs.

### Absorption

Force gets absorbed by collision objects.

### Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.



## **Charge**

Special force field based on the charge of particles. Charge force fields just affects other charge force fields.

## **Strength**

The strength of the force.

## **Flow**

Convert effector force into air force velocity.

## **Affect**

### **Location**

Affect the location of the particles.

### **Rotation**

Affect the rotation of the particles.

## **Noise Amount**

Amount of noise for the force effect.

## **Seed**

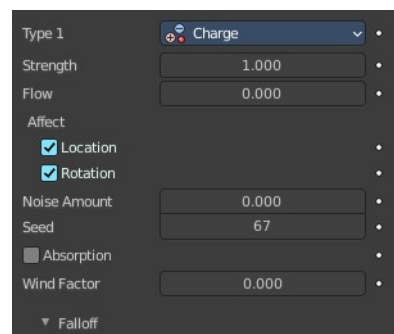
The random seed for the noise amount.

## **Absorption**

Force gets absorbed by collision objects.

## **Wind Factor**

How much the force is reduced when acting parallel to a surface. Like a cloth.



## **Lenard Jones**

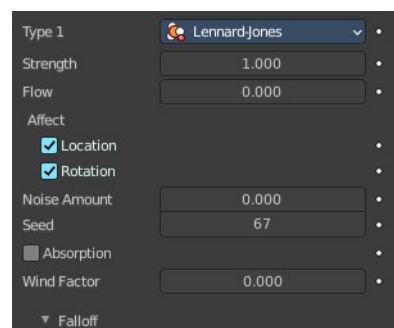
Force field based on the lennard jones potential. The Lennard-Jones potential describes the interactions of two neutral particles using a relatively simple mathematical model.

## **Strength**

The strength of the force.

## **Flow**

Convert effector force into air force velocity.





## **Affect**

### ***Location***

Affect the location of the particles.

### ***Rotation***

Affect the rotation of the particles.

### **Noise Amount**

Amount of noise for the force effect.

### **Seed**

The random seed for the noise amount.

### **Absorption**

Force gets absorbed by collision objects.

### **Wind Factor**

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## ***Texture***

Force field based on a texture. There is no way to add a texture here though.

### **Strength**

The strength of the force.

### **Flow**

Convert effector force into air force velocity.

## **Affect**

### ***Location***

Affect the location of the particles.

### ***Rotation***

Affect the rotation of the particles.

### **Noise Amount**

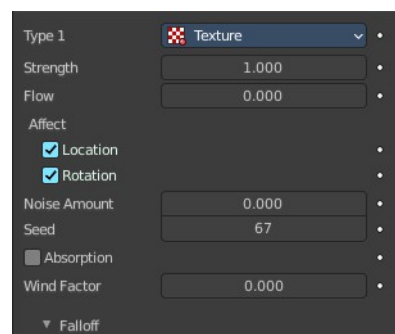
Amount of noise for the force effect.

### **Seed**

The random seed for the noise amount.

### **Absorption**

Force gets absorbed by collision objects.



## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## Curve Guide

Creates a force along a curve object. There is no way to add a curve here though.

## Strength

The strength of the force.

## Flow

Convert effector force into air force velocity.

## Affect

### Location

Affect the location of the particles.

### Rotation

Affect the rotation of the particles.

## Noise Amount

Amount of noise for the force effect.

## Seed

The random seed for the noise amount.

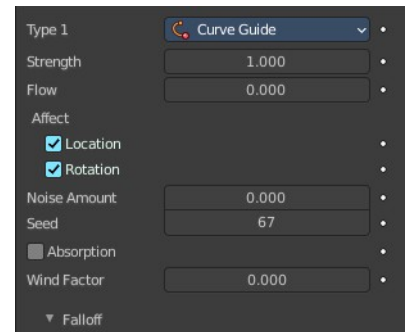
## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## Boid

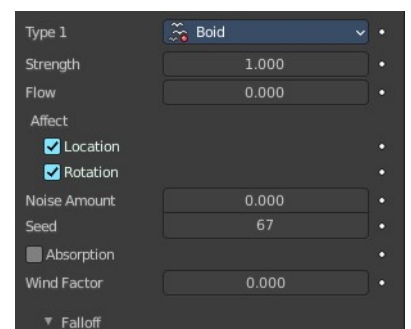
Creates a force that acts as a boid's predator or target.

## Strength

The strength of the force.

## Flow

Convert effector force into air force velocity.



## **Affect**

### ***Location***

Affect the location of the particles.

### ***Rotation***

Affect the rotation of the particles.

## **Noise Amount**

Amount of noise for the force effect.

## **Seed**

The random seed for the noise amount.

## **Absorption**

Force gets absorbed by collision objects.

## **Wind Factor**

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## ***Turbulence***

Create turbulence with a noise field.

## **Strength**

The strength of the force.

## **Size**

The size of the turbulence.

## **Flow**

Convert effector force into air force velocity.

## **Affect**

### ***Location***

Affect the location of the particles.

### ***Rotation***

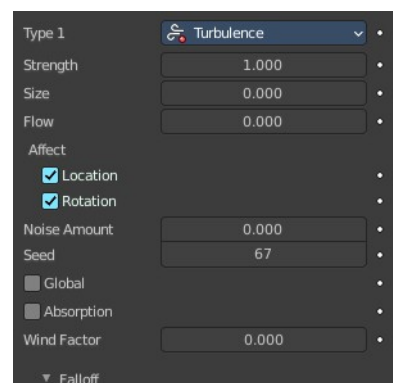
Affect the rotation of the particles.

## **Noise Amount**

Amount of noise for the force effect.

## **Seed**

The random seed for the noise amount.



## Global

Use global coordinates for the turbulence.

## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## Drag

Create a force that dampens motion.

## Linear

Drag component proportional to velocity.

## Quadratic

Drag component proportional to square velocity.

## Affect

### Location

Affect the location of the particles.

### Rotation

Affect the rotation of the particles.

## Noise Amount

Amount of noise for the force effect.

## Seed

The random seed for the noise amount.

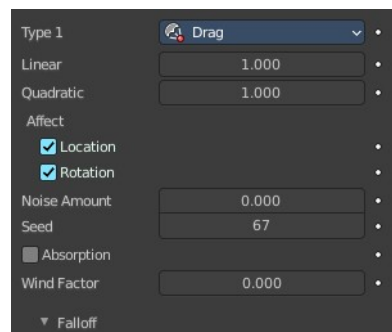
## Absorption

Force gets absorbed by collision objects.

## Wind Factor

How much the force is reduced when acting parallel to a surface. Like a cloth.

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## **Fluid Flow**

Create a force field based on fluid simulation velocities.

### **Strength**

The strength of the force.

### **Flow**

Convert effector force into air force velocity.

### **Affect**

#### **Location**

Affect the location of the particles.

#### **Rotation**

Affect the rotation of the particles.

### **Noise Amount**

Amount of noise for the force effect.

### **Seed**

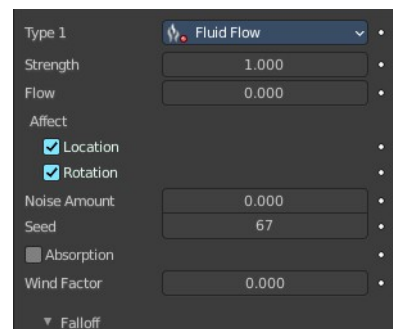
The random seed for the noise amount.

### **Absorption**

Force gets absorbed by collision objects.

### **Wind Factor**

How much the force is reduced when acting parallel to a surface. Like a cloth.



## **Falloff subpanel**

### **Z Direction**

Apply the effect in both directions along Z axis, or just one direction.

### **Power**

How quickly the strength falls off with increasing distance from the force field.

### **Min Distance**

Minimum distance for the fields falloff.

### **Max Distance**

Maximum distance for the fields falloff.

