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Inverse Kinematics Constraint

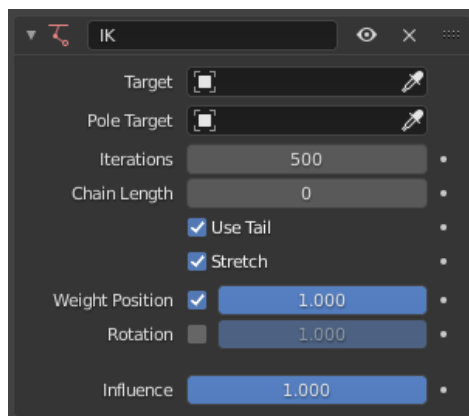
The *Inverse Kinematics* constraint implements the *inverse kinematics* armature posing technique. Hence, it is only available for bones. To quickly create an IK constraint with a target, select a bone in Pose Mode, and press `Shift - I`.

This constraint is fully documented in the [Inverse Kinematics](#) page, part of the rigging chapter.

Note

The IK constraints are special in that they modify multiple bones. For this reason, they ignore their position in the stack and always run after all other constraints on the affected bones. To apply constraints after IK, it is necessary to first copy the final transformation to a new bone chain, e.g. using [Copy Transforms](#).

Options



Inverse Kinematics panel.

Target

[Data ID](#) used to select the an armature. See [common constraint properties](#) for more information.

Pole Target

Object for pole rotation.

Iterations

Maximum number of solving iterations.

Chain Length

How many bones are included in the IK effect. Set to 0 to include all bones.

Use Tail

Include bone's tail as last element in chain.

Stretch

Enable IK stretching.

Weight Position

For Tree-IK: Weight of position control for this target.

Rotation

Chain follows rotation of target.

Target

Disable for targetless IK.

Influence

Controls the percentage of affect the constraint has on the object. See [common constraint properties](#) for more information.

iTaSC Solver

If the [iTaSC IK Solver](#) is used, the IK Solver Constraint changes to add these additional parameters.

IK Type

Copy Pose

Equivalent to the traditional end effector position and orientation constraint: the end effector is constrained to take the position, and optional the orientation, of a given target, which is set in the target field.

Position/Rotation Locking

Allows to obtain various effect by not constraining the coordinates along certain axis.

Axis Reference

Specifies how to compute the axis coordinates.

Bone

The coordinates are the position and orientation of the target relative to the bone.

Target

The opposite of *Bone*, the coordinates are the position and orientation of the tip of the bone relative to the target.

Distance

Specify that the end effector will stay inside, at, or outside a sphere centered on the target object.

Limit Mode

Inside

The end effector will stay inside of the distance from the target object.

Outside

The end effector will stay outside of the distance from the target object.

On Surface

The end effector will stay exactly at the distance from the target object.

Distance

The radius from the target object.

Note

The *Influence* parameter is not implemented if *Pole Target* is used.

Example