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Constraint(bpy_struct)

base class — `bpy_struct`

subclasses — `ActionConstraint`, `ArmatureConstraint`, `CameraSolverConstraint`, `ChildOfConstraint`, `ClampToConstraint`, `CopyLocationConstraint`, `CopyRotationConstraint`, `CopyScaleConstraint`, `CopyTransformsConstraint`, `DampedTrackConstraint`, `FloorConstraint`, `FollowPathConstraint`, `FollowTrackConstraint`, `KinematicConstraint`, `LimitDistanceConstraint`, `LimitLocationConstraint`, `LimitRotationConstraint`, `LimitScaleConstraint`, `LockedTrackConstraint`, `MaintainVolumeConstraint`, `ObjectSolverConstraint`, `PivotConstraint`, `PythonConstraint`, `ShrinkwrapConstraint`, `SplineIKConstraint`, `StretchToConstraint`, `TrackToConstraint`, `TransformCacheConstraint`, `TransformConstraint`

class `bpy.types.Constraint(bpy_struct)`

Constraint modifying the transformation of objects and bones

active

Constraint is the one being edited

TYPE:

boolean, default False

enabled

Use the results of this constraint

TYPE:

boolean, default False

error_location

Amount of residual error in Blender space unit for constraints that work on position

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0, (readonly)

error_rotation

Amount of residual error in radians for constraints that work on orientation

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0, (readonly)

influence

Amount of influence constraint will have on the final solution

TYPE:

float in $[0, 1]$, default 0.0

is_override_data

In a local override object, whether this constraint comes from the linked reference object, or is local to the override

TYPE:

boolean, default False, (readonly)

is_valid

Constraint has valid settings and can be evaluated

TYPE:

boolean, default False, (readonly)

boolean, default False, (readonly)

mute

Enable/Disable Constraint

TYPE:

boolean, default False

name

Constraint name

TYPE:

string, default "", (never None)

owner_space

Space that owner is evaluated in

- **WORLD** World Space – The constraint is applied relative to the world coordinate system.
- **CUSTOM** Custom Space – The constraint is applied in local space of a custom object/bone/vertex group.
- **POSE** Pose Space – The constraint is applied in Pose Space, the object transformation is ignored.
- **LOCAL_WITH_PARENT** Local With Parent – The constraint is applied relative to the rest pose local coordinate system of the bone, thus including the parent-induced transformation.
- **LOCAL** Local Space – The constraint is applied relative to the local coordinate system of the object.

TYPE:

enum in ['WORLD', 'CUSTOM', 'POSE', 'LOCAL_WITH_PARENT', 'LOCAL'], default 'WORLD'

show_expanded

Constraint's panel is expanded in UI

TYPE:

boolean, default False

space_object

Object for Custom Space

TYPE:

Object

space_subtarget

Armature bone, mesh or lattice vertex group, ...

TYPE:

string, default "", (never None)

target_space

Space that target is evaluated in

- **WORLD** World Space – The transformation of the target is evaluated relative to the world coordinate system.
- **CUSTOM** Custom Space – The transformation of the target is evaluated relative to a custom object/bone/vertex group.
- **POSE** Pose Space – The transformation of the target is only evaluated in the Pose Space, the target armature object transformation is ignored.
- **LOCAL_WITH_PARENT** Local With Parent – The transformation of the target bone is evaluated relative to its rest pose local coordinate system, thus including the parent-induced transformation.
- **LOCAL** Local Space – The transformation of the target is evaluated relative to its local coordinate system.
- **LOCAL_OWNER_ORIENT** Local Space (Owner Orientation) – The transformation of the target bone is evaluated relative to its local coordinate system, followed by a correction for the difference in target and owner rest pose orientations. When applied as local transform:

the owner produces the same global motion as the target if the parents are still in rest pose..

TYPE:

enum in ['WORLD', 'CUSTOM', 'POSE', 'LOCAL_WITH_PARENT', 'LOCAL', 'LOCAL_OWNER_ORIENT'], default 'WORLD'

type

TYPE:

enum in [Constraint Type Items](#), default 'CAMERA_SOLVER', (readonly)

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

[type](#)

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- | | |
|--|---|
| • bpy_struct.as_pointer | • bpy_struct.items |
| • bpy_struct.driver_add | • bpy_struct.keyframe_delete |
| • bpy_struct.driver_remove | • bpy_struct.keyframe_insert |
| • bpy_struct.get | • bpy_struct.keys |
| • bpy_struct.id_properties_clear | • bpy_struct.path_from_id |
| • bpy_struct.id_properties_ensure | • bpy_struct.path_resolve |
| • bpy_struct.id_properties_ui | • bpy_struct.pop |
| • bpy_struct.is_property_hidden | • bpy_struct.property_overridable_library_set |
| • bpy_struct.is_property_overridable_library | • bpy_struct.property_unset |
| • bpy_struct.is_property_readonly | • bpy_struct.type_recast |
| • bpy_struct.is_property_set | • bpy_struct.values |

References

- | | |
|--|--|
| • Object.constraints | • PoseBone.constraints |
| • ObjectConstraints.active | • PoseBoneConstraints.active |

- [ObjectConstraints.active](#)
- [ObjectConstraints.copy](#)
- [ObjectConstraints.copy](#)
- [ObjectConstraints.new](#)
- [ObjectConstraints.remove](#)
- [Panel.custom_data](#)
- [PoseBoneConstraints.active](#)
- [PoseBoneConstraints.copy](#)
- [PoseBoneConstraints.copy](#)
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