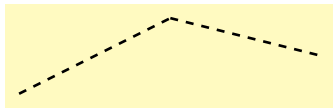


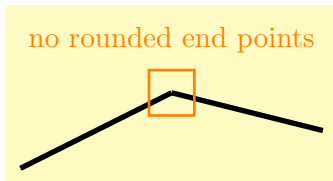
Here (type 3) is an invisible bar or beam. Since this is plotted as a dashed lines, there is no option to round the ends.



```
\begin{tikzpicture}
\point{a}{0}{0};
\point{b}{2}{1};
\point{c}{4}{.5};
\beam{3}{a}{b};
\beam{3}{b}{c};
\end{tikzpicture}
```

```
\beam{4}{initial point}{end point}[rounded initial point][rounded end point];
```

Type 4 has the same look and the same properties as type 1, but no characteristic fiber. This corresponds to a bending beam without characteristics fiber.



```
\begin{tikzpicture}
\point{a}{0}{0};
\point{b}{2}{1};
\point{c}{4}{.5};
\beam{4}{a}{b};
\beam{4}{b}{c};
\end{tikzpicture}
```

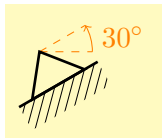
### 3.2.3 Supports and Bearings

```
\support{type}{insertion point}[rotation];
```

In the library the most common types of bearings and springs are available. Similar to all remaining elements the type can be changed by the type variable. Similarly, an insertion point is required to initialize a bearing or a spring. As an optional parameter the rotation is available. Here the angle is counted from the x-axis.

```
\support{1}{insertion point}[rotation];
```

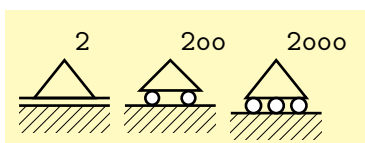
Type 1 is a fixed bearing, which can absorb both horizontal and vertical forces, but no moments.



```
\begin{tikzpicture}
\point{a}{0}{0};
\support{1}{a}[30];
\end{tikzpicture}
```

```
\support{2}{insertion point}[rotation];
\support{2oo}{insertion point}[rotation];
\support{2ooo}{insertion point}[rotation];
```

Type 2 is a floating bearing, which can absorb forces only in one direction and no moments. It has three alternative representations, (2) will use a slider, (2oo) two rollers and (2ooo) three rollers.



```
\begin{tikzpicture}
\point{a}{0}{0};
\draw (a) node[above right] {\texttt{2}};
\point{b}{1.4}{0};
\draw (b) node[above right] {\texttt{2oo}};
\point{c}{2.8}{0};
\draw (c) node[above right] {\texttt{2ooo}};
\support{2}{a};
\support{2oo}{b};
\support{7}{c};
\end{tikzpicture}
```