

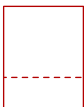
box transformation in pdf-trans.tex



before

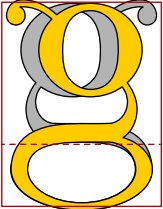


after



bounding box

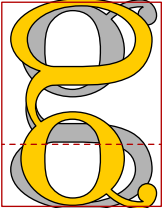
Yoga

A diagram illustrating the TeX command `\boxflipx`. It shows the word "Yoga" in a serif font. The letter "g" is highlighted with a red rectangular box. Inside this box, a yellow "g" is shown, which is a horizontal reflection of the original "g". The original "g" is shown in a lighter, semi-transparent grey, and the reflected "g" is shown in yellow. The box is labeled with `\boxflipx` at the top and `<box>` at the bottom, indicating the command and the box being flipped.

`\boxflipx <box>`

`\boxflipx`

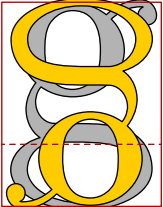
Yoga



`\boxflipy <box>`

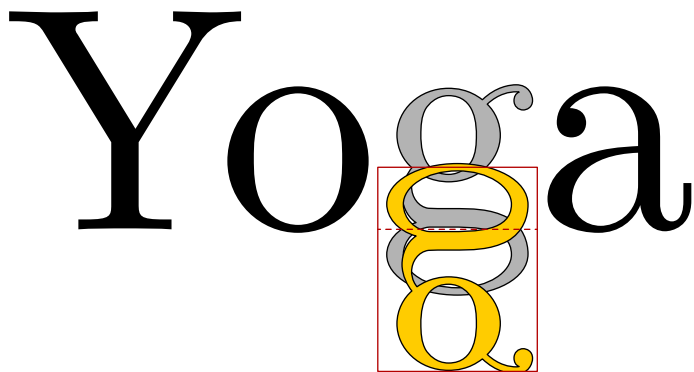
`\boxflipy`

Yoga

A decorative, calligraphic letter 'g' is positioned between the 'o' and 'a' in the word 'Yoga'. The 'g' is rendered with thick, flowing yellow and grey strokes, giving it a hand-drawn, artistic appearance. It is enclosed within a thin red rectangular border, which also contains a horizontal dashed red line across its middle.

`\boxflipxy` <box>

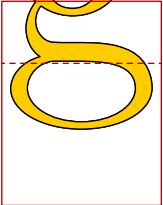
`\boxflipxy`



`\boxflipbase <box>`

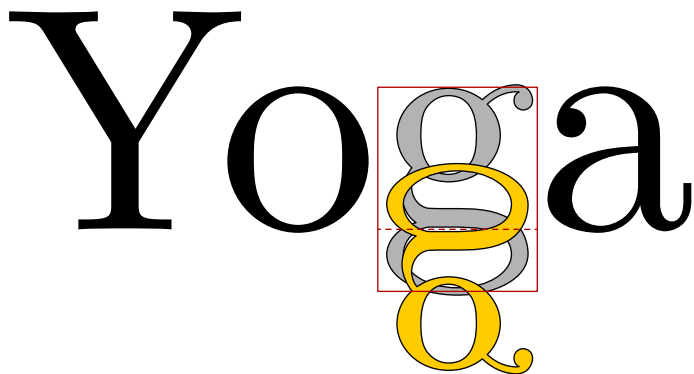
`\boxflipbase`

Yoga

A diagram illustrating the TeX command \bboxtrans. It shows the word "Yoga" in a black serif font. The letter 'g' is highlighted in yellow. A red rectangular box is drawn around the lower portion of the 'g', specifically the part that descends below the baseline. A horizontal dashed red line indicates the baseline. The box is positioned such that it encloses the part of the 'g' that would be flipped if the \bboxtrans command were used.

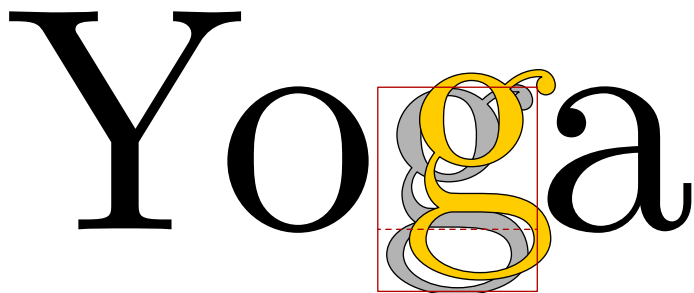
```
\bboxtrans {<trans>} <box>
```

```
\bboxtrans \boxflipbase
```



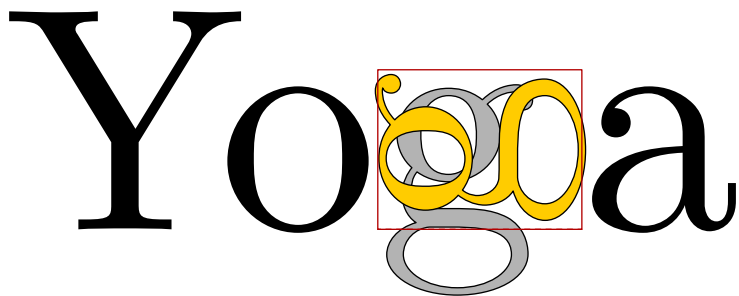
```
\cboxtrans {<trans>} <box>
```

```
\cboxtrans \boxflipbase
```



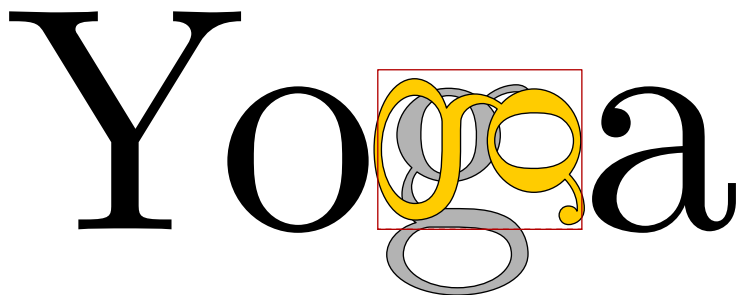
```
\boxtranslate {<dimexpr>}{<dimexpr>} <box>
```

```
\boxtranslate {3mm}{2mm}
```

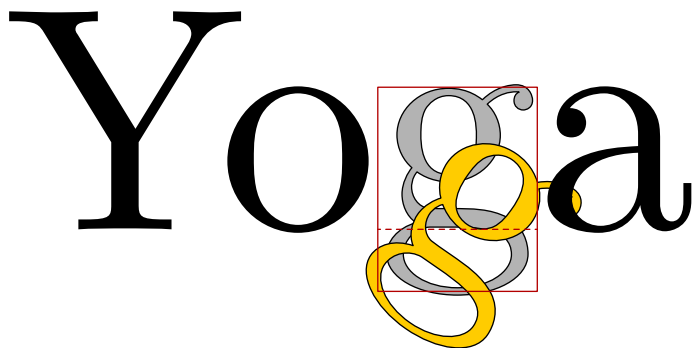
`\boxrevolveleft <box>`

`\boxrevolveleft`



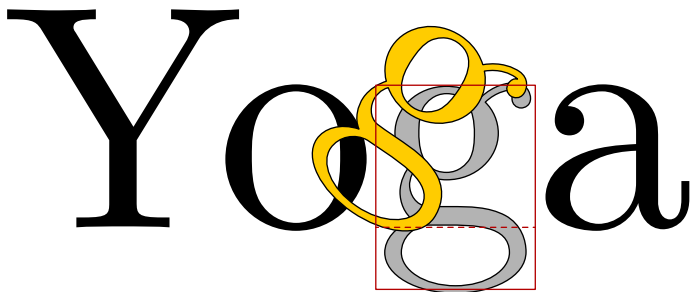
`\boxrevolveright <box>`

`\boxrevolveright`



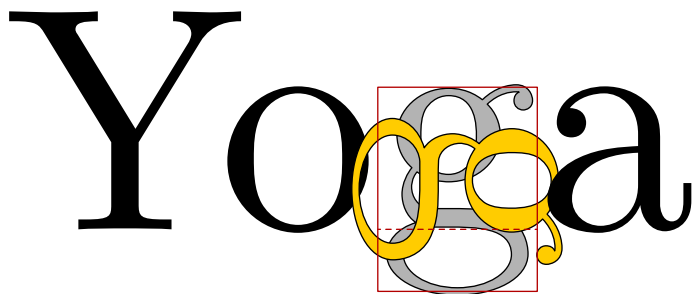
```
\boxrotate {<angle>} <box>
```

```
\boxrotate {394.7}
```



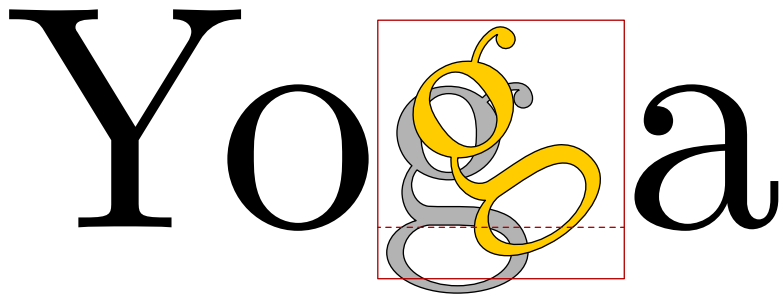
```
\boxrotatexy {<angle>}{<dimexpr>}{<dimexpr>} <box>
```

```
\boxrotatexy {34.2}{\wd \transbox }{\ht \transbox }
```



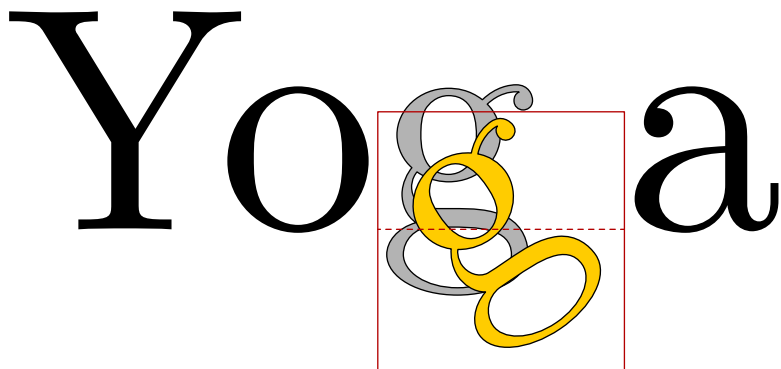
`\boxrotatec {<angle>} <box>`

`\boxrotatec {90}`



```
\boxrotatebb1 {<angle>} <box>
```

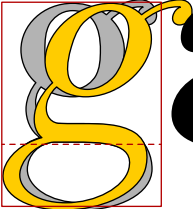
```
\boxrotatebb1 {-34.1}
```



`\boxrotatebbr {<angle>} <box>`

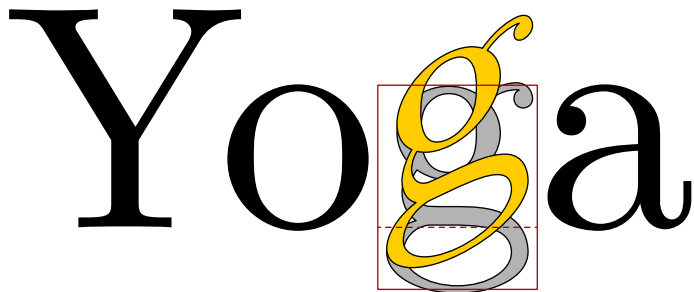
`\boxrotatebbr {-34.2}`

Yoga

A decorative 'g' with a yellow and grey 3D effect, enclosed in a red bounding box. The 'g' is stylized with a thick yellow outline and a grey shadow, giving it a three-dimensional appearance. It is positioned between the 'o' and 'a' in the word 'Yoga'. A red rectangular box is drawn around the 'g', and a dashed red line is visible at the bottom of the box.

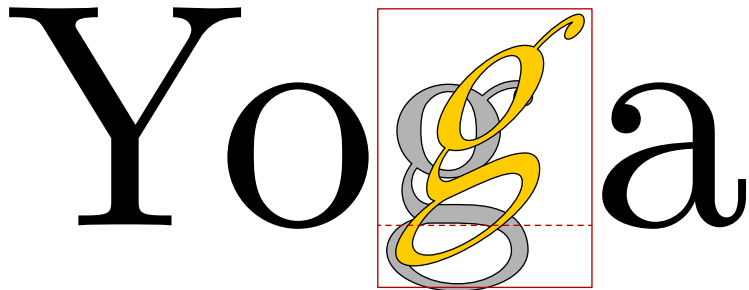
```
\boxslantx {<angle>} <box>
```

```
\boxslantx {15.2}
```

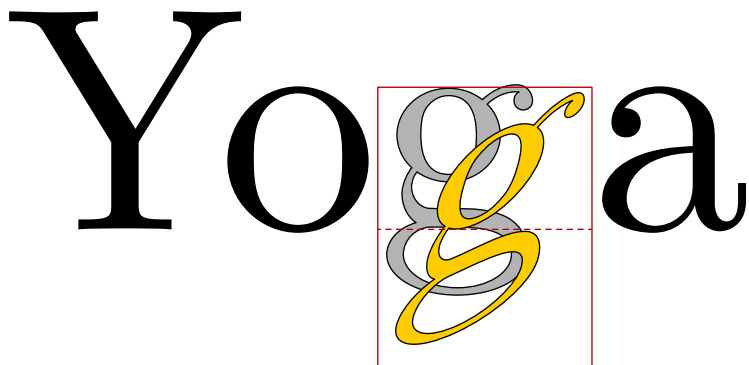
```
\boxslanty {<angle>} <box>
```

```
\boxslanty {25.3}
```



```
\boxslantbb1 {<angle>}{<angle>} <box>
```

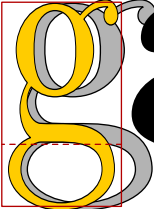
```
\boxslantbb1 {15}{25}
```



`\boxslantbbr {<angle>}{<angle>} <box>`

`\boxslantbbr {15}{25}`

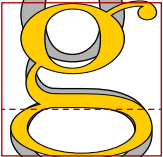
Yoga

The image shows the word "Yoga" in a black serif font. The letter 'g' is stylized with a yellow fill and a grey shadow, giving it a 3D appearance. A red rectangular box is drawn around the 'g', indicating its bounding box for scaling purposes.

```
\boxscalex {<numexpr>} <box>
```

```
\boxscalex {75}
```

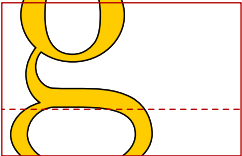
Yoga

The image shows the word "Yoga" in a black serif font. The letter 'g' is replaced by a stylized, 3D-rendered yellow snake with a grey underbelly. The snake is coiled into the shape of the letter 'g', with its head forming the top loop and its tail curving around the bottom. A red rectangular bounding box is drawn around the 'g', with dashed lines indicating its extent. The snake's body is yellow with a grey underbelly, and it has a small yellow tongue sticking out.

```
\boxscaley {<numexpr>} <box>
```

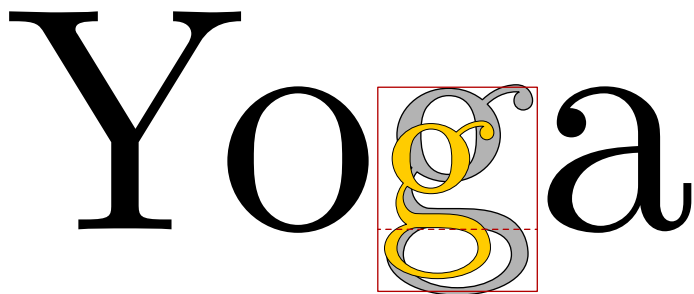
```
\boxscaley {75}
```

Yoga a

A diagram illustrating the bounding box for the 'g' character in the word 'Yoga'. The 'g' is highlighted in yellow. A red rectangle is drawn around the 'g', with a dashed red line indicating the height of the character. The 'g' is positioned between the 'o' and 'a' in the word 'Yoga'.

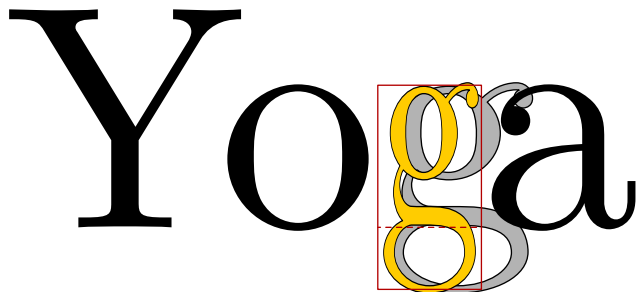
```
\boxscalexy {<numexpr>}{<numexpr>} <box>
```

```
\cboxtransoff \boxscalexy {150}{75}
```



```
\boxscale {<numexpr>} <box>
```

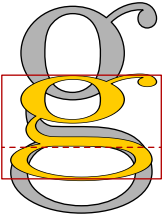
```
\bboxtransoff \boxscale {75}
```



```
\boxscaleto {<dimexpr>} <box>
```

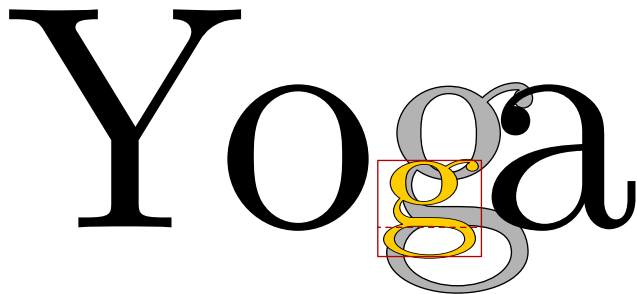
```
\boxscaleto {.5in+.1cm}
```


Yoga

The image shows the word "Yoga" in a black serif font. The letter 'g' is stylized with a grey outline and a yellow spiral filling its lower loop. A red rectangular box is drawn around the middle of the 'g', highlighting a specific portion of the spiral.

```
\boxscaleyto {<dimexpr>} <box>
```

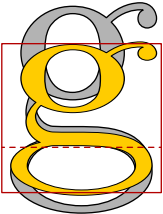
```
\boxscaleyto {.5in+.1cm}
```



```
\boxscalexyto {<dimxpr>}{<dimexpr>} <box>
```

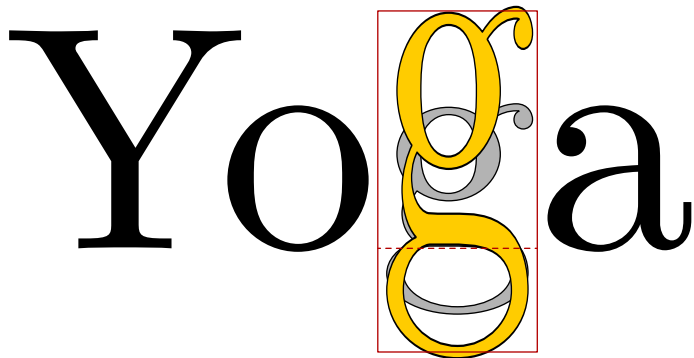
```
\boxscalexyto {.5in+.1cm}{1in/2}
```

Yoga

The image shows the word "Yoga" in a black serif font. The letter 'g' is stylized with a yellow fill and a grey outline, featuring a decorative swirl. A red rectangular box is drawn around the 'g', with dashed horizontal lines indicating its vertical extent.

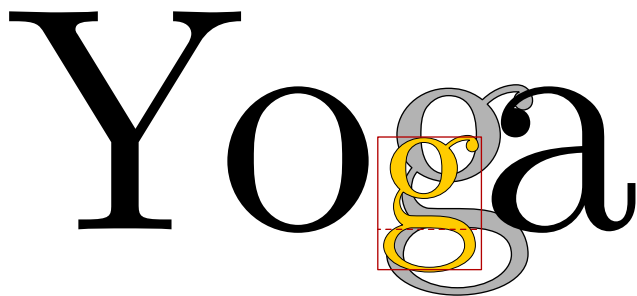
```
\boxscalehtto {<dimexpr>} <box>
```

```
\boxscalehtto {.5in+.1cm}
```



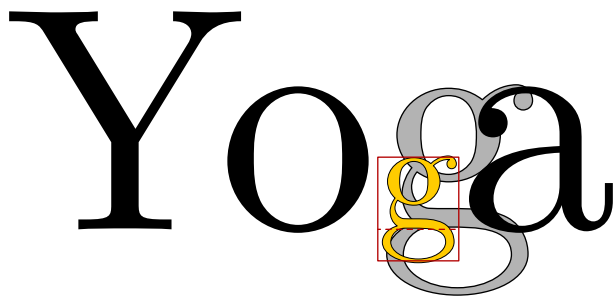
```
\boxscaledpto {<dimexpr>} <box>
```

```
\boxscaledpto {.5in+.1cm}
```



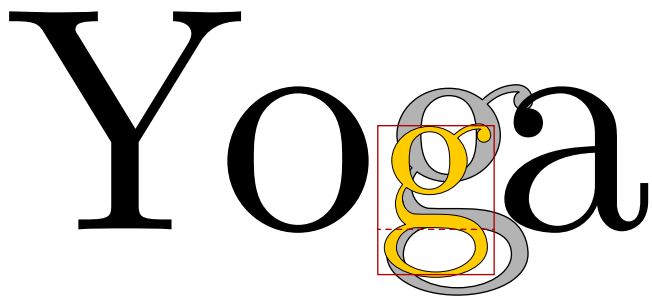
```
\boxuniscalexto {<dimexpr>} <box>
```

```
\boxuniscalexto {.5in+.1cm}
```



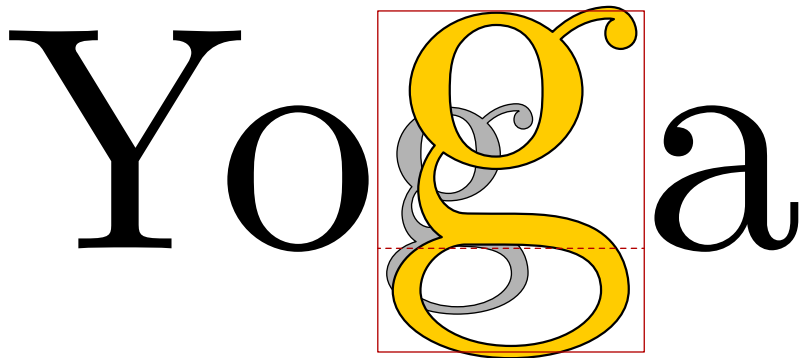
```
\boxuniscaleyto {<dimexpr>} <box>
```

```
\boxuniscaleyto {.5in+.1cm}
```



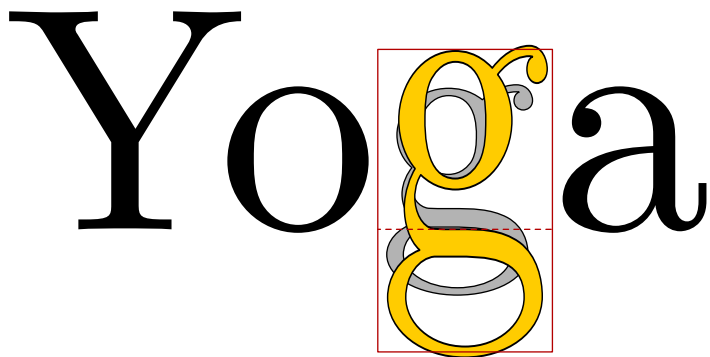
```
\boxunyscalehtto {<dimexpr>} <box>
```

```
\boxunyscalehtto {.5in+.1cm}
```



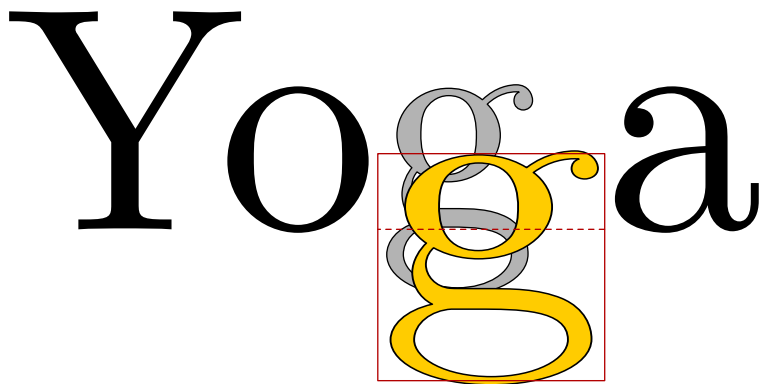
```
\boxuniscaledpto {<dimexpr>} <box>
```

```
\boxuniscaledpto {.5in+.1cm}
```

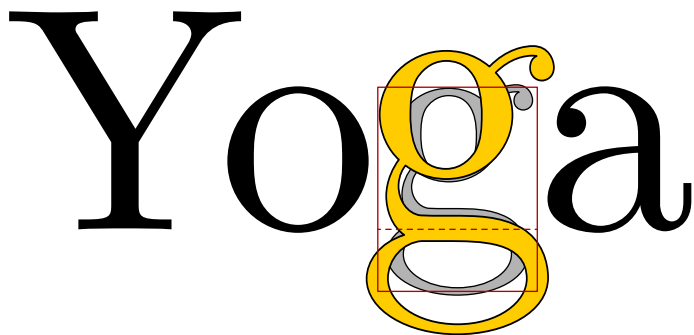
```
\boxextscale {<dimexpr>}{<dimexpr>}{<dimexpr>} <box>
```

```
\boxextscale {2mm}{5mm}{8mm}
```



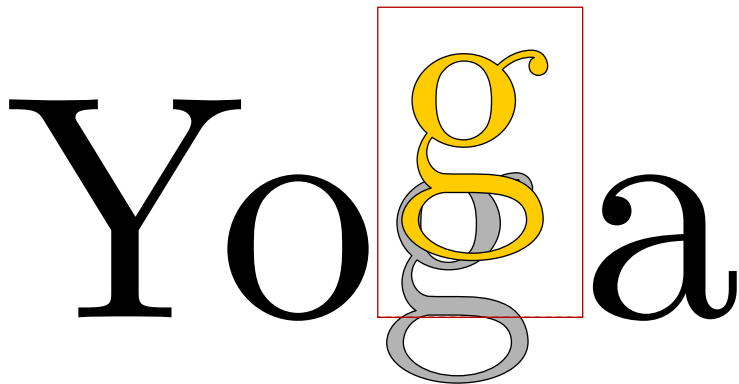
```
\boxextscaleto {<dimexpr>}{<dimexpr>}{<dimexpr>} <box>
```

```
\boxextscaleto {3cm}{1cm}{2cm}
```



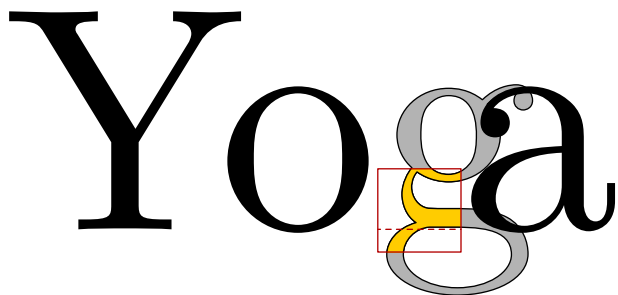
```
\boxexts {<dimexpr>}{<dimexpr>}{<dimexpr>}{<dimexpr>} <box>
```

```
\boxexts {3mm}{3mm}{5mm}{5mm}
```



```
\boxextents {<dimexpr>}{<dimexpr>}{<dimexpr>}{<dimexpr>} <box>
```

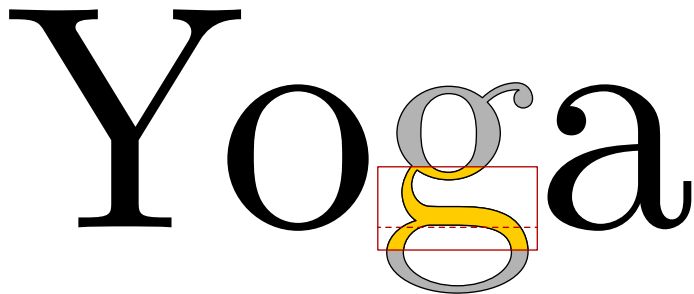
```
\boxextents {2mm}{4mm}{6mm}{8mm}
```



```
\boxxformspec resources{/Foo /Bar} \boxxform <box>
```

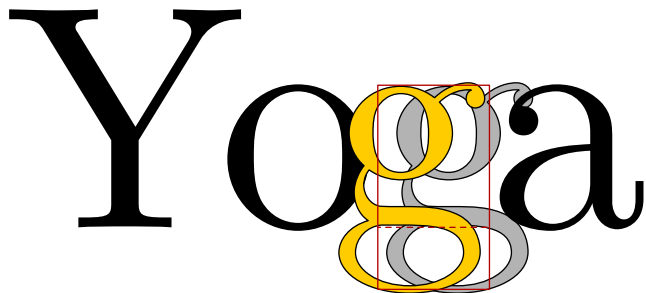
```
\boxxformspec resources{\the \pdfpageresources } \boxxform \boxresizeto {11mm}{8mm}{3mm}
```

Yoga



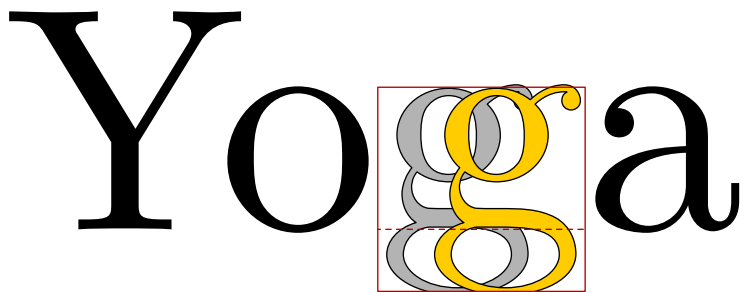
```
\boxclip <box>
```

```
\boxclip \boxresizeto {}{8mm}{3mm}
```



```
\boxmoveleft {<dimexpr>} <box>
```

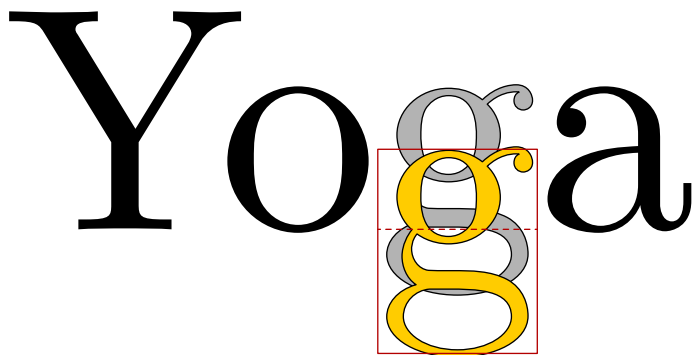
```
\boxmoveleft {.3\wd \transbox }
```



```
\boxmoveright {<dimexpr>} <box>
```

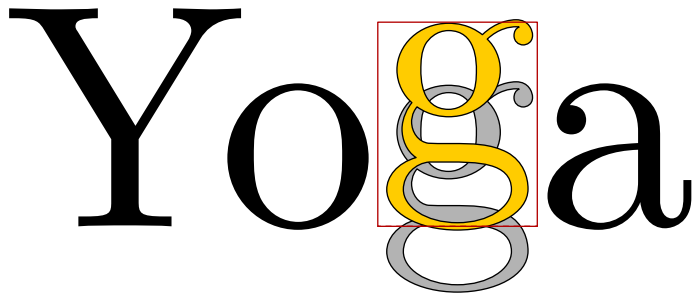
```
\boxmoveright {.3\wd \transbox }
```


Yoga



```
\boxlower {<dimexpr>} <box>
```

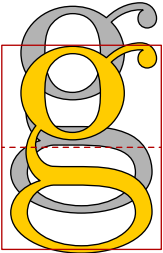
```
\boxlower {\dp \transbox }
```



```
\boxraise {<dimexpr>} <box>
```

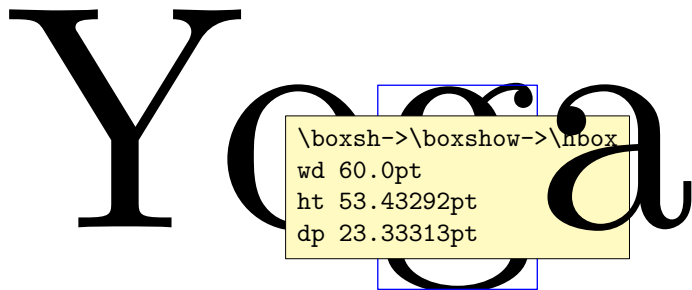
```
\boxraise {\dp \transbox }
```

Yoga



```
\boxbaselineat {<numexpr>} <box>
```

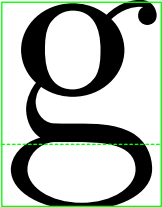
```
\boxbaselineat {50}
```



\boxinfo <box>

\boxinfo \boxsh

Yoga



```
\boxshow {<gsspec>}{<gsspec>}{<gsspec>} <box>
```

```
\boxshow {0 1 0 RG}{[1 1]0 d}{}
```

Yoga

```
\boxmarkers {<dimexpr>}{<dimexpr>}{<gsspec>} <box>
```

```
\boxmarkers {-12pt}{3pt}{1 0 0 RG 1 J}
```

Yoga

```
\boxpath {<gsspec>}{<paintop>} <box>
```

```
\boxpath {3 w .7 0 0 rg 1 .8 0 RG}{B}\bboxtrans {\boxextscale {3mm}{3mm}{3mm}}\boxmoveright {3mm}
```

Yoga

```
\boxroundpath {<dimexpr>}{<gsspec>}{<paintop>} <box>
```

```
\boxroundpath {4mm}{3 w .7 0 0 rg 1 .8 0 RG}{B}\boxextent {3mm}
```


Yoga

```
\boxedgypath {<dimexpr>}{<gsspec>}{<paintop>} <box>
```

```
\boxedgypath {4mm}{3 w .7 0 0 rg 1 .8 0 RG}{B}\boxextent {3mm}
```

Each transformation expands to <box> (\hbox in most cases).

Each transformation must be followed by a <box>.

<box> states for any kind of $\TeX$ box; \hbox, \vbox, \vtop, \box, \copy

<trans> is a list of box transformations

<dimexpr> states for dimen in e $\TeX$ form

<numexpr> states for integer in e $\TeX$ form

<angle> is an integer or float-like string

<gsspec> is a literal pdf content stream

<paintop> means pdf painting operator (S, f, B, W...)

Some extra macros:

\tobp {<dimexpr>} returns PDF dimen (big points with no unit)

\enablebround makes \tobp rounding to \pdfdecimaldigits (equivalent to \roundbp)

\setbround {<0..4>} makes \tobp rounding to <0..4> digits (equivalent to \roundbpto {<0..4>})

\disablebround turns off rounding (equivalent to \asbp)

See the code for more.