

font_size.tex

When we speak of the point size of a classical (i.e. engraved in metal) this is a nominal value. Each character will have a different combination of *height* (total distance above the base line), *depth* (total distance below the base line) and *width*. Similarly in \TeX if we write:

```
\font\bfourteen = [ ... /MY-FONTS /LinLibertineRB.otf] at 14.0 pt
```

then 14.0 points is the nominal size. In \TeX we can precisely determine the above values by looking at the *bounding box* of a letter. We do this by placing the letter, or letters, in a `hbox` and then using the command `\the` as applied to the `\ht`, `\dp` and `\wd` of the box

Suppose that we are interested in the letter “g”, which dips below the baseline. The text is set via `\rm` at a nominal point size of 12.5 points.

We first write:

```
\setbox0 \hbox{g},
```

and then determine

the values as follows:

```
height = \the\ht0
```

```
depth = \the\dp0
```

```
width = \the\wd0
```

if we now run \XeTeX we obtain:

```
height = 5.775pt,    depth = 2.97499pt,    width = 6.25pt
```

We can also obtain the *maximum* range for a given nominal point size by placing the entire alphabet inside a `hbox`:

```
\setbox1 \hbox{abcdefghijklmnopqrstuvwxy }
```

```
height = 8.725pt,    depth = 2.97499pt,    width = 152.25pt
```

We note that if we add the values of height and depth we obtain a value of about 11.7 points, which is below the nominal value of 12.5 points.