

The needspace package

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1 Documentation

This packages two commands, `\needspace` and `\Needspace`, for reserving space to keep a certain amount of material from being split over a page break. If there is not enough space, a ‘

' is automatically inserted.

The `\needspace<length>` macro reserves an *approximate* amount of space *<length>* for the material following to be kept on the same page. The accuracy of its calculations depend on what penalties are in effect, but is efficient and normally adequate. A short page will be ragged bottom even if `\flushbottom` is in effect.

`\Needspace{<length>}` is less efficient but reserves the requested space *<length>* exactly. It should only be used between paragraphs. Short pages that are produced by `\Needspace` will be ragged bottom but short pages produced by `\Needspace*{<length>}` will be flush bottom if `\flushbottom` is in effect.

2 Examples

Here, we request that we need next five lines on a single page/column:

```
... previous text.  
  
\needspace{5\baselineskip}  
The next five lines ...
```

In this case, the space is reserved more accurately:

```
... previous text.  
  
\Needspace*{4\baselineskip}  
  The major principles are:  
\begin{itemize}  
\item ...
```

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¹<http://www.latex-project.org/lppl.txt>

3 *Implementation*

LaTeX2e file 'needspace.sty' generated by the 'filecontents' environment from source 'needspace' on 2010/09/12.

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{needspace}[2010/09/12_v1.3c_reserve_vertical_
   space]

\needspace 3 \newcommand{\needspace}[1]{%
4   \begingroup
5   \setlength{\dimen@}{#1}%
6   \vskip\z@\@plus\dimen@
7   \penalty_-100\vskip\z@\@plus_-\dimen@
8   \vskip\dimen@
9   \penalty_9999%
10  \vskip_-\dimen@
11  \vskip\z@skip% hide the previous \vskip from \addvspace
12  \endgroup
13 }

\Needspace 14 \newcommand{\Needspace}{\@ifstar{\@sneedsp@}{\@needsp@}}

\@sneedsp@ 15 \newcommand{\@sneedsp@}[1]{\par\penalty-100\begingroup
16   \setlength{\dimen@}{#1}%
17   \dimen@ii\pagegoal_\advance\dimen@ii-\pagetotal
18   \ifdim_\dimen@>\dimen@ii
19     \break
20   \fi\endgroup}

\@needsp@ 21 \newcommand{\@needsp@}[1]{\par\penalty-100\begingroup
22   \setlength{\dimen@}{#1}%
23   \dimen@ii\pagegoal_\advance\dimen@ii-\pagetotal
24   \ifdim_\dimen@>\dimen@ii
25     \ifdim_\dimen@ii>\z@
26       \vfil
27     \fi
28     \break
29   \fi\endgroup}

<eof>
```