

THE DASHRULEX PACKAGE

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Draw dashed rules

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The dashrulex package provides a flexible solution for drawing dashed rules in the body, and currently provides two commands `\hdashrule` and `\hanyrule`. It's written in \LaTeX 3 and can be used as an alternative to the dashrule package.

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1. Preface

Sometimes it is necessary to draw dashed rules when writing documents, such as guides in the table of contents and indexes, horizontal lines in headers and footers, and even adding horizontal lines after headings. Macro packages such as dashrule and nccrules are available to accomplish this. Considering that dashrule has not been updated for a long time, dashrulex rewrites it using \LaTeX 3 syntax and enhances it a bit.

2. User commands

`\hdashrule`[$\langle raise \rangle$][$\langle leader \rangle$]{ $\langle width \rangle$ }{ $\langle thickness list \rangle$ }{ $\langle dash rules \rangle$ }

The command to draw horizontal dashed rules, based on the `\rule` command, and the same as the `\rule` command when the $\langle dash rules \rangle$ are empty. $\langle raise \rangle$ is the vertical offset of the rule. $\langle leader \rangle$ is the alignment of the dashed line fill, which can be empty, c, or x (the default), corresponding to the `\leaders`, `\cleaders`, and `\xleaders` commands, respectively. $\langle width \rangle$ is the length of the dotted line, which can be set to `\fill` when used to fill the remaining center of the current text line. $\langle thickness list \rangle$ is a rule for the height of vertically oriented lines, separated by commas and written as $\langle height 1 \rangle, \langle height a \rangle, \dots$, where $\langle height 1 \rangle$ denotes the height of a solid line and $\langle height a \rangle$ denotes the height of a blank space. $\langle dash rules \rangle$ is expressed as $\langle length$

2. User commands

1)| $\langle length a \rangle$, $\langle length 2 \rangle$ | $\langle length b \rangle$, ..., where $\langle length 1 \rangle$ represents the length of the solid line and $\langle length a \rangle$ represents the length of the blank space, such as 5pt|2pt,3pt, if the blank space is empty, then it is equal to the solid line length.

```
1X\rule{2cm}{1pt}x \\
2X\hdashrule{2cm}{1pt}{}x \\
3X\hdashrule{2cm}{1pt}{1pt}x \\
4X\hdashrule{4cm}{1pt}{1pt}x \\
5X\hdashrule[0.5ex]{4cm}{1pt}{1pt}x \\
6X\hdashrule[0.5ex]{4cm}{1pt}{3mm}x \\
7X\hdashrule[0.5ex]{4cm}{1mm}{3mm}x \\
8X\hdashrule[0.5ex]{4cm}{1mm}{3mm|3pt}x \\
9X\hdashrule[0.5ex]{4cm}{1mm}{3mm|3pt,1mm|2pt}x \\
10X\hdashrule[0.5ex]{4cm}{2pt,1pt,1pt}{3mm|3pt,1mm|2pt}x
```

```
1X_____x
2X_____x
3X.....x
4X.....x
5X.....x
6X— — — — — x
7X= = = = = x
8X= = = = = x
9X. . . . . x
10X=: =: =: =: =: =: x
```

`\vrulemod`[$\langle raise \rangle$][$\langle height \rangle$][$\langle depth \rangle$][$\langle width \rangle$]{ $\langle thickness list \rangle$ }

The vertical component used to fill the dashed line. $\langle thickness list \rangle$ is consistent with the `\hdashrule` command, $\langle width \rangle$ represents the length of the component, and the three optional parameters are consistent with those of the `\raisebox` command.

`\hanyrule`[$\langle leader \rangle$][$\langle width \rangle$]{ $\langle symbol list \rangle$ }

This command sets the length of the dotted rule and fills it with arbitrary symbols. $\langle symbol list \rangle$ can be more than one symbol and they are separated by **commas**. Symbols are best packed in boxes of a certain length, as spacing between symbols is not provided.

```
\newcommand{\dbelement}
{%
```

3. Known issues

```

\tikz[color=blue]
{
  \draw[line width=0.8mm](0mm,1.1mm)--(3mm,1.1mm);
  \draw[line width=0.3mm](0mm,0mm)--(3mm,0mm);
}%
}
1X\hanyrule[] {5cm}{\makebox[8pt][l]{$\cdot$}}x \\
2X\hanyrule[c]{5cm}{\makebox[8pt][l]{$\cdot$}}x \\
3X\hanyrule[x]{5cm}{\makebox[8pt][l]{$\cdot$}}x \\
4X\hanyrule[c]{5cm}{\makebox[8pt]{$\cdot$}}x \\
5X\hanyrule[x]{5cm}{\makebox[8pt]{$\cdot$}}x \\
6X\hanyrule[x]{5cm}{\makebox[8pt]{$\cdot$}},\makebox[8pt]{$\circ$}}x \\
7X\hanyrule[x]{5cm}{\makebox[5mm]{\vrulemod{3mm}{2pt,1pt,1pt}}}}x \\
8X\hanyrule[x]{5cm}{\makebox[5mm]{\dblerulemod{3mm}{2pt,1pt,1pt}}}}x

```

```

1X . . . . . x
2X . . . . . x
3X . . . . . x
4X . . . . . x
5X . . . . . x
6X . o . o . o . o . o . o . o . o . o x
7X = = = = = = = = = = = x
8X = = = = = = = = = = = x

```

3. Known issues

Currently only horizontal dashed line drawing is supported, with future plans to support vertical dashed lines, and even box dashed borders and so on.

A. References

- [Pak13] Scott Pakin. dashrule. version 1.3, Mar. 28, 2013 (or newer).
URL: <https://www.ctan.org/pkg/dashrule>.
- [Roz05] Alexander I. Rozhenko. nccrules. version 1.0, May 13, 2005 (or newer).
URL: <https://ctan.org/pkg/nccrules>.
- [Tea22] The L^AT_EX Project Team. The L^AT_EX 3 Interfaces. Feb. 24, 2022 (or newer).
URL: <https://ctan.org/pkg/l3kernel>.

B. Index

C		R	
\cleaders	1	\raisebox	2
F		\rule	1
\fill	1		
H		V	
\hanyrule	1 f.	\vrulemod	2
\hdashrule	1 f.		
L		X	
\leaders	1	\xleaders	1