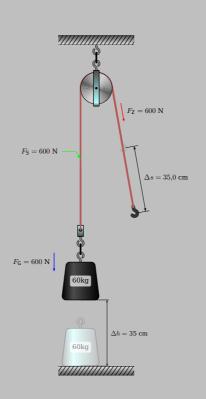


# pst-pulley

Plotting different pulleys; v.0.01

January 17, 2012



Package author(s):

**Thomas Söll** 

Contents 2

## **Contents**

1	Parameters	4	
2	Examples	5	
3	List of all optional arguments for pst-pulleys	11	
Re	References		

Contents 3

pst-pulley loads by default the following packages: pst-plot, pstricks-add, pst-eucl, pst-xkey, and, of course pstricks. All should be already part of your local  $T_EX$  installation. If not, or in case of having older versions, go to http://www.CTAN.org/ and load the latest version.

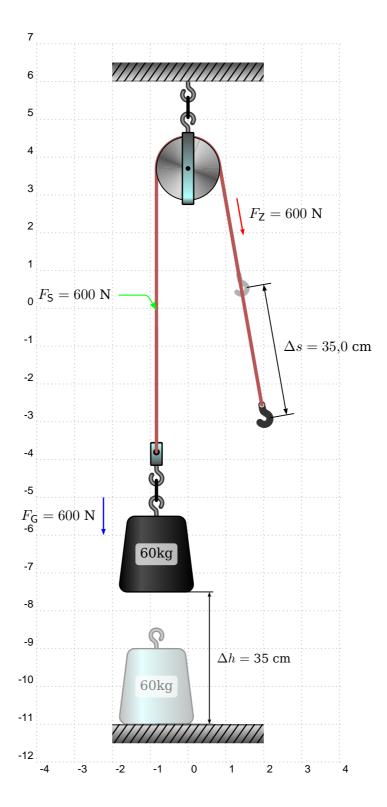
Thanks to: Manuel Luque Jürgen Gilg Herbert Voss 1 Parameters 4

### 1 Parameters

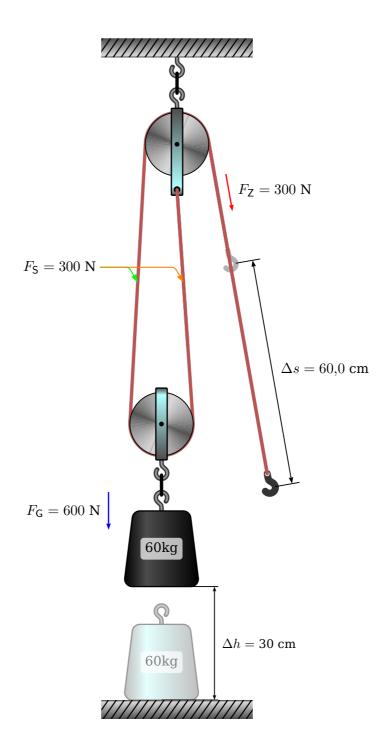
With this package it is possible to draw different pulleys. There are four parameters: N=1...6 gives the number of wheels of the pulley. M=... gives the mass of the weight in kg. The parameter h=... gives the height of the weight in cm from the bottom. To align the down-part of the pulley, there is the parameter Dx=... With positive values the down-part goes to the left. The mass of the rolls are neglegible, or you have to add it to the mass of the weight. The rope is not stiff and inextensible. The force of the weight, the force in each rope and the distance to pull will calculated from the macro and shown. For the gravitation-constant we have  $g=10\,m/s^2$ .

\pspulleys [Options]

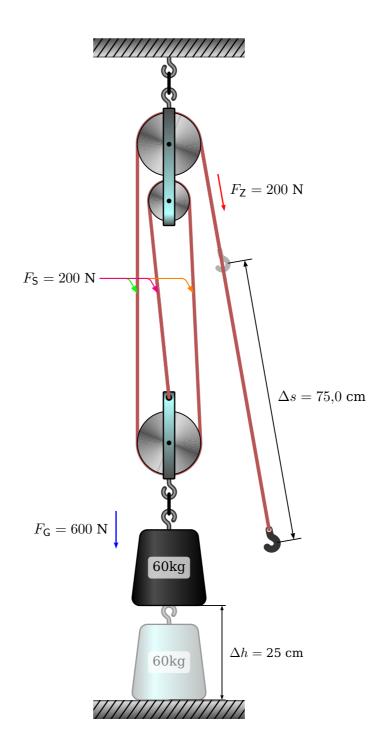
 $\protect\operatorname{N=4,M=30,h=15,Dx=0.1}$ 



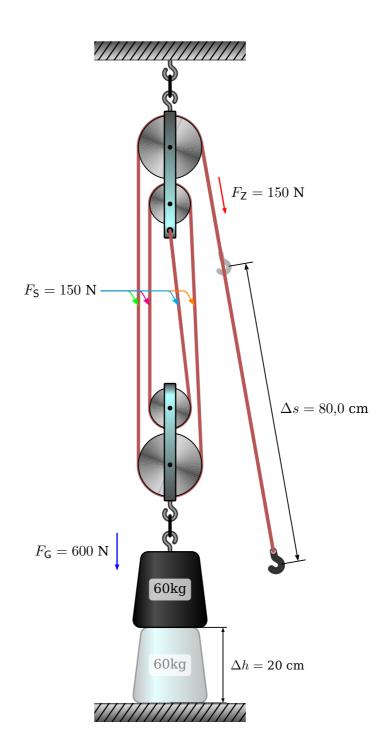
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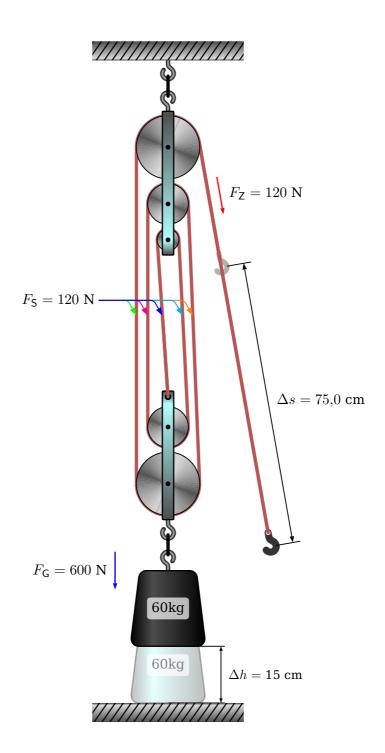
 $\protect\operatorname{N=2,M=60,h=30,Dx=0.41}$ 



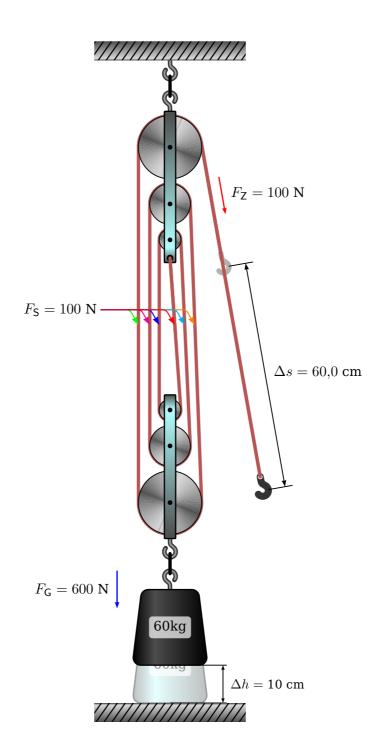
 $\protect\operatorname{N=3,M=60,h=25}$ 



 $\protect\operatorname{N=4,M=60,h=20}$ 



 $\protect\operatorname{N=5,M=60,h=15}$ 



 $\protect\operatorname{N=6,M=60,h=10}$ 

References 11

## 3 List of all optional arguments for pst-pulleys

Key	Type	Default
grid	boolean	true
N	ordinary	[none]
М	ordinary	[none]
h	ordinary	[none]
Dx	ordinary	[none]

#### **References**

- [1] Denis Girou. Présentation de PSTricks. Cahier GUTenberg, 16:21-70, April 1994.
- [2] Michel Goosens, Frank Mittelbach, Sebastian Rahtz, Denis Roegel, and Herbert Voß. *The LATEX Graphics Companion*. Addison-Wesley Publishing Company, Reading, Mass., 2007.
- [3] Laura E. Jackson and Herbert Voß. Die Plot-Funktionen von pst-plot. Die  $T_EXnische\ Komödie$ , 2/02:27–34, June 2002.
- [4] Nikolai G. Kollock. *PostScript richtig eingesetzt: vom Konzept zum praktischen Einsatz.* IWT, Vaterstetten, 1989.
- [5] Herbert Voß. Chaos und Fraktale selbst programmieren: von Mandelbrotmengen über Farbmanipulationen zur perfekten Darstellung. Franzis Verlag, Poing, 1994.
- [6] Herbert Voß. Die mathematischen Funktionen von PostScript. *Die TeXnische Komödie*, 1/02, March 2002.
- [7] Herbert Voß. *PSTricks Grafik für T<sub>E</sub>X und LaT<sub>E</sub>X*. DANTE Lehmanns, Heidelberg/Berlin, 6. edition, 2010.
- [8] Herbert Voß. Typesetting mathematics with LATEX. UIT, Cambridge, 2010.
- [9] Herbert Voß. PSTricks Graphics for TEX and LATEX. UIT, Cambridge, 2011.
- [10] Herbert Voß. LATEX quick reference. UIT, Cambridge, 2012.
- [11] Eric Weisstein. Wolfram MathWorld. http://mathworld.wolfram.com, 2007.
- [12] Timothy van Zandt. *PSTricks PostScript macros for generic T<sub>E</sub>X*. http://www.tug.org/application/PSTricks, 1993.
- [13] Timothy van Zandt. multido.tex a loop macro, that supports fixed-point addition. CTAN:/graphics/pstricks/generic/multido.tex, 1997.
- [14] Timothy van Zandt. pst-plot: Plotting two dimensional functions and data. CTAN: graphics/pstricks/generic/pst-plot.tex, 1999.
- [15] Timothy van Zandt and Denis Girou. Inside PSTricks. *TUGboat*, 15:239–246, September 1994.

## Index

```
grid, 5
h, 5
Keyword
   grid, 5
   h, 5
   M, 5
   N, 5
M, 5
Macro
   \pspulleys, 4-10
N, 5
Package
   pst-eucl, 3
   pst-plot, 3
   pst-pulley, 3
   pst-xkey, 3
   pstricks, 3
   pstricks-add, 3
\pspulleys, 4-10
pst-eucl, 3
pst-plot, 3
pst-pulley, 3
pst-xkey, 3
pstricks, 3
pstricks-add, 3
```