

3/4 inch pipe size water wheel build dimensions for Rick's Overbalance Wheel

Schedule 40 PVC 3/4" pipe related dimensions: (" = inches)

- 11" = pipe length (long pipes, without fittings)
- 1.750" = short pipe length (passes through wheel, from elbow to end cap)
- 1.050" = Outside Diameter (O.D.) of pipe (26.67mm)
- 0.113" = wall thickness of pipe
- 0.824" = I.D. of pipe
- 0.412" = I.D. radius
- 0.5333 sq in = I.D. area
- 4.66" = water fill height
- 2.485 cu in = fill height volume
- 1.44 ounces (40.823 grams) = water fill weight per tube (1.5 oz, or 42.5 grams, may be best, as it would be easier to measure out)

Wheel related dimensions as per scale: (two wheels used for build)

- 11.625" to 12" = Wheel diameter (mine are 12", cut from 24" x 24" hardboard panel)
- 0.250" (1/4") = wheel thickness (each wheel)
- 1.250" = spacing between wheels
- 1.063" = Bore hole size (used 27mm hole cutter, which is 0.013" larger than pipe O.D.)
- 60 degrees = offset for each radian line (6 lines)
- 4.5" = center of wheel to center of bore holes
- 0.375" (3/8") x 6" = shaft size

https://www.amazon.com/gp/product/B00270XLD4/ref=oh_aui_detailpage_o04_s00?ie=UTF8&psc=1

Note: To lay out the 60 degree radian lines, I used a 23-inch "True Angle" tool.

http://www.compoundmiter.com/true_angle_tool.html#

To scribe the outer and inner circles on the wheel, I used a Stanley Fatmax Chisel Compass.

https://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=Stanley+Fatmax+Chisel+Compass

Photos:

<https://www.keepandshare.com/doc/8218924/wheel-layout-1-jpg-123k?da=y>

<https://www.keepandshare.com/doc/8218925/wheel-layout-2-jpg-144k?da=y>

<https://www.keepandshare.com/doc/8218926/cutting-and-truing-the-wheel-jpg-164k?da=y>

<https://www.keepandshare.com/doc/8218927/bore-holes-cut-in-wheel-jpg-148k?da=y>