



Fillet diameter radius gauge | Workshop coaster



AMT

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Summary

Inner & outer radius combined in one tool that fits under every beer. Multi coloured print by simple filament changes.

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What it is

A compact gauge to determine inner and outer radii/diameter, ranging from 1 to 20 mm. It also works well as a coaster.

What to print

There are multiple variants awaiting you:





How to print



Except for the versions with bigger numbers, the digits and lines are

designed with a stroke width of 0.41 mm. Recommended for printing them





is a **0.4 mm nozzle** and **0.2 mm layer height**. Printing with a 0.6mm

nozzle and Arachne activated in PrusaSlicer is possible, as can be seen in





the pictures above.



layers. The digits on top differ in height by 0.2 mm which lets you print them in two colors. → The here orange depicted digits read the adjacent bulge diameter and are 0.2mm higher than the white ones, which read the adjacent inside curvature.

In case the digits won't print neatly after said filament change: A **draft shield**, wipe tower or any object to consume filament beforehand (establishing good flow by doing so) may help.

Material at one's discretion, I used PETG in four different colors.

What next


There may be improvements and modifications based on feedback given here. The current font used is OCR-B. The quest for the best printable fonts is not over, just further elaborated [here](#).


If you do prefer a radius/diameter measuring tool that is even smaller and can be carried on a keyring, consider printing my [radii worm](#) or [diameter chain](#). Measuring instead of gauging angles can be done with my printable [vernier bevel protractor](#). And efficient identification of metric nuts & bolts can be done with my [cylindrical screw measuring tool](#).

Mentions


Credits to Archimedes of Syracuse, who absolutely died for circles and Carl Friedrich Gauß.

Model files

 **Combinable versions** 5 files



central_gauge_version_1.stl
☐ with ring gauges



central_gauge_version_2.stl
☐ central hole 35mm

central_gauge_version_3.stl

☐ bigger digits, coloured edges, central hole 26mm



embracing_gauge_version_1.stl

embracing_gauge_version_2.stl

☐ huge depressed digits, coloured edges, snap fit with central gauges



Stand alone versions

5 files



version_1_stand_alone.stl

☐ 5mm thick



version_2_stand_alone.stl

☐ 5mm thick

version_3_stand_alone.stl

☐ 5mm thick



embracing_gauge_version_1_stand_alone.stl

☐ 5mm thick

embracing_gauge_version_2_stand_alone.stl

☐ 5mm thick

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