

the OpenStructures® grid

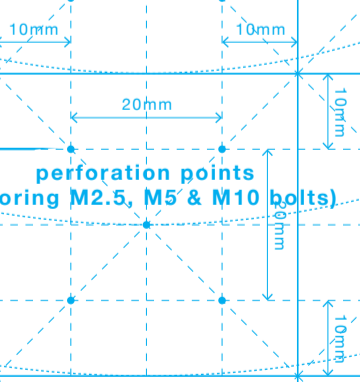
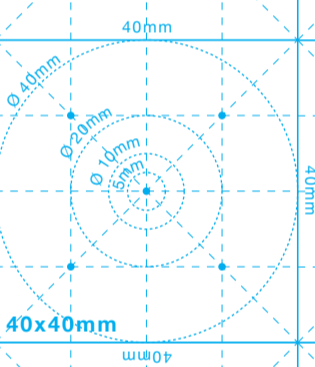
the OpenStructures® grid

straight cutting lines

straight cutting lines

rounded cutting lines

perforation points  
(favoring M2.5, M5 & M10 bolts)



# The Openstructures<sup>OS</sup> project

OpenStructures (OS) explores the potential of a modular construction model where everyone designs for everyone on the basis of one shared geometrical grid. It hereby envisions a universal and collaborative puzzle to which everybody – from DIYers to multinationals – can add parts, components or more complex structures.

OS works according to the Wikipedia model, where different people contribute to one encyclopaedia. Instead of articles, everyone can (download, edit and) submit modular designs on the OpenStructures website, a growing database that allows the broadest range of people to design, build and exchange the broadest range of modular components.

It hereby envisions a new standard for sustainable design that facilitates re-use and encourages the circular use of materials and objects. It allows us to build things together, introduces variety within modularity and results in a more flexible and scalable built environment for all.

## The Openstructures<sup>OS</sup> grid

In order for new parts to be compatible with the existing ones they need to be designed from the OS grid (see recto side).

The OS grid is the centerpiece of the whole OS system. It's the common metrical tool that is shared among all participants, which allows them to design interchangeable parts, components and objects in(ter)dependently from each other.

The OS grid is built up out of 4x4cm squares. The borders of these squares mark the cutting lines, its diagonals mark the assembly points and its enclosed inner circles define common diameters.

## The Openstructures<sup>OS</sup> design principles

All OpenStructures part designs are based on the OpenStructures design principles. Practically this means that:

For each part at least one of the following conditions should to be met (in order to be compatible with the OS grid):

- perforation centerpoints (favoring the use of M2.5, M5 and M10 bolts) are positioned at (a multiple of) 20mm from one another
- external part diameters are a multiple of 20 mm
- part dimensions are a multiple of 20mm

For all parts the following principles apply (in order to be compatible with the OS values):

- all objects should be designed for disassembly
- recyclable materials should be used for all parts whenever possible
- all part designs should be fully open and free for everybody to use at any moment

### OS part samples

- see how each of these parts relates to the OS grid by holding this paper against the light.  
 - discover when and where a part was designed and in which object(s) it has been used by surfing to [openstructures.net](http://openstructures.net) (and giving in the name of its designer in the 'search' section).  
 - edit and/or reproduce one or more parts yourself by downloading their dxf. files online (also available on [openstructures.net](http://openstructures.net)).

