CAD – A GUIDE TO DXF FILES

According to BRICSCAD Blog (6th August 2019)

What is DXF?

DXF stands for Drawing Exchange Format. Simply put: it's a highly compatible CAD file type, unusually compatible in fact. The information in the file can be used to transfer to a huge number of other CAD file types, and for a really wide range of applications; from basic data transfer to CNC machines, plasma cutters to logo design.

It's a vector, which means it's completely scalable, much like its .esp, .svg, and .dwg counterparts. It's also possible to store 3D geometry in a .dxf file. However, this information may not be supported by some programs. In this case, a 2D representation will often be displayed instead. It even supports information such as colour, line weight, and hatching style. The information is just saved differently.

Why was DXF created?

It was originally created as an open-source alternative to .dwg in 1982. You can access the full specification of .dxf files whenever you like. This has made this file type highly compatible, unlike .dwg.

.dwg was not made open-source until 2006 when the Open Design Alliance reverse-engineered the .dwg file type and made the full .dwg specification available free online. The first .dxf file types were coded in plain text, making it easier for coders to interpret the information. Since 1988 both ASCII (plain text) and binary forms have been available.

Limitations

.dxf files are created without units. This means that the user or file reader needs to know the drawing units or input them manually based on textual comments.

There is less precision in .dxf drawings than in their .dwg counterpart. DXF does lose data. Custom objects are not supported. So you don't want to use this to save your data in BricsCAD. It is for export and import only!

DXF files are larger because of the way the code is written. File size of the same drawing:

- DXF (ASCII) 1,116 KB
- DXF (binary) 581 KB
- DWG 16 KB

When exporting files for CNC (computerized numerical control) machines you might need to adjust the decimal places. Many CNC machines require 4 decimal places.