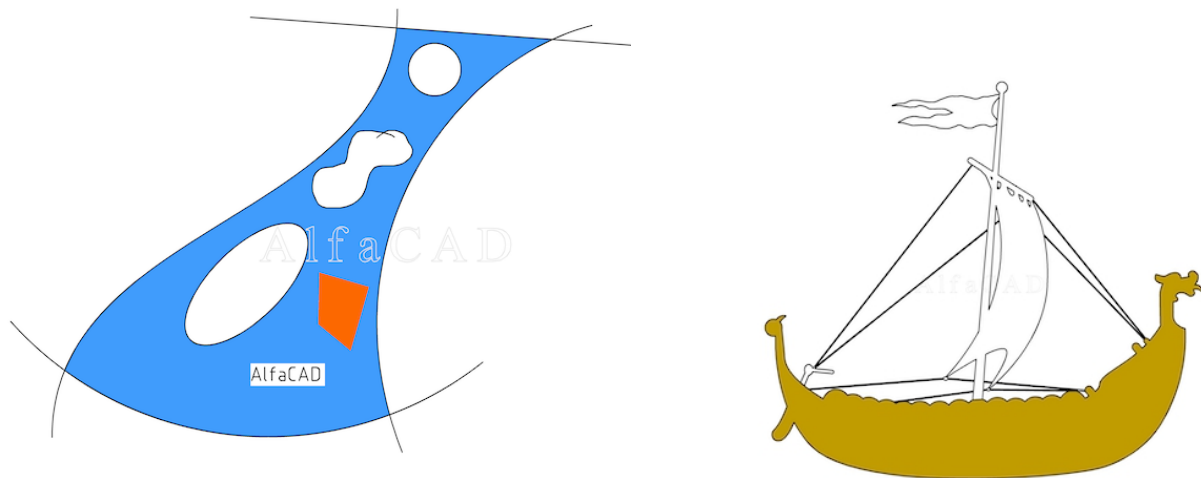


(05/02/2021 v. 0.98)

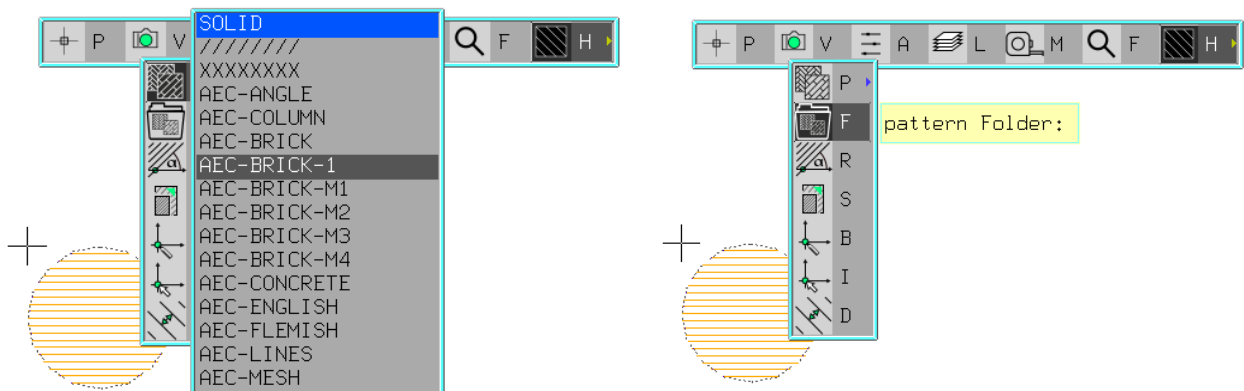
Inspired by some drawings delivered to me for tests by my talented nephew Witold, converted from DXF format, I added some extra features to the "Hatching" function. Firstly, AlfaCAD got a "solid" pattern, which also exists in another CAD programs. So now, not only regular areas, like rectangular, triangle, disk, ellipsoid area can be filled by the solid colour, now also any irregular areas can be filled too. I discovered that also on very, very technical drawings, using the very symbolic way of expression of the technical ideas like electrical diagram, functional diagram and so on, filling the shape being a component of the symbol of the device, with solid colour (using hatching function) is commonly practiced even for regular shapes like triangles or rectangular. Ok, fair enough, AlfaCAD has got that feature too.

Below the abstract example of solid hatching (filling), and also example of filling the very irregular Viking ship hull on its sketch.



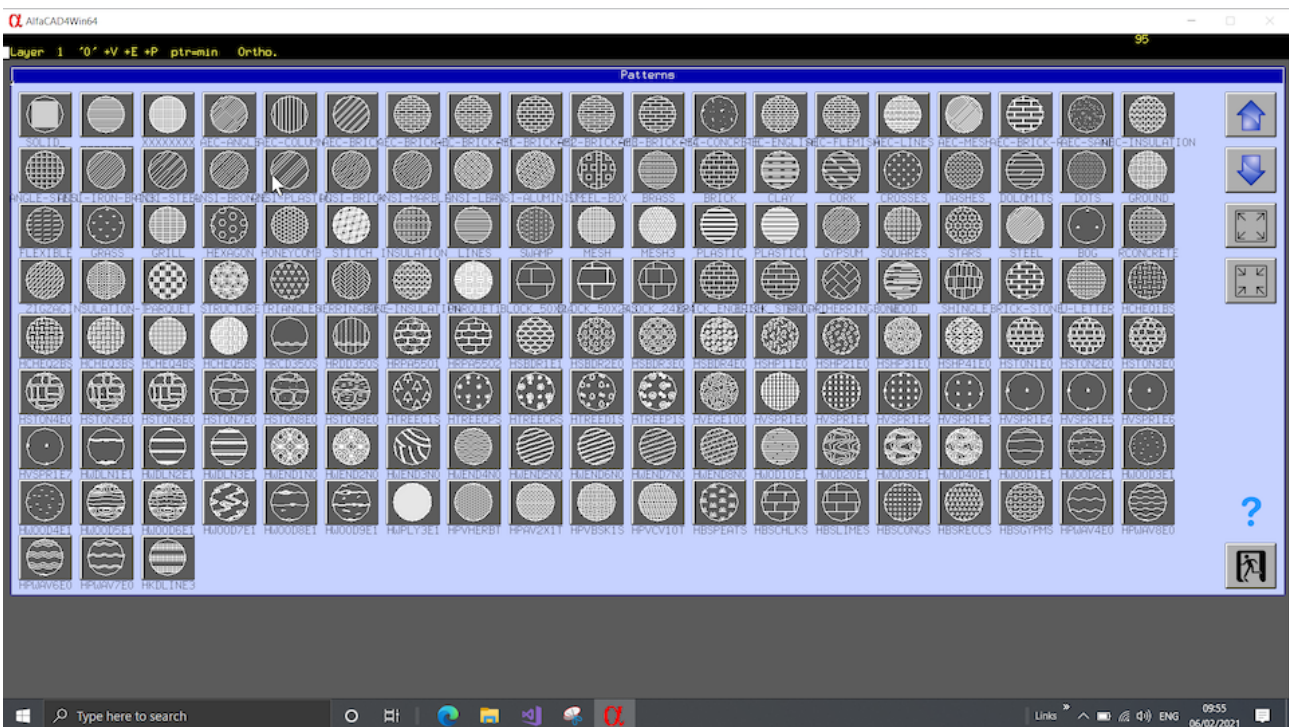
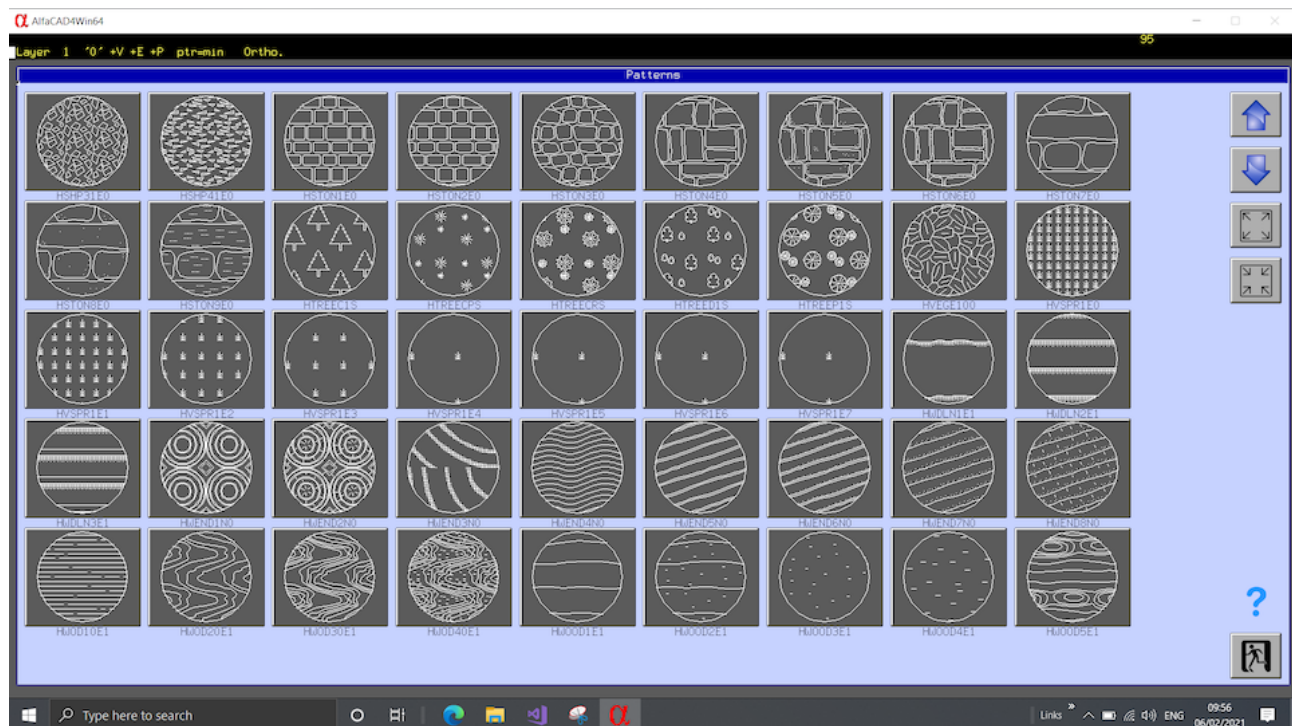
Extending "Hatching" function, I couldn't resist making further extensions. So secondly, I added the pattern choice from folder, not only from the list. Choosing hatching pattern from the list needs of very accurate and unique pattern names, or every pattern associated with the name has to be memorised. It's easy with dozen of patterns. With twelve dozen it becomes a problem. So next to the choice a pattern from menu, shown of the left image below, AlfaCAD offers now also the choice from the folder of samples, shown on the right image:

If "pattern Folder" function is selected, samples of patterns from the folder appear in paginated dialog window. Clicking on any pattern button selects the pattern, to continue the hatching function, so to change the angle, scale, base point, hatching lines colour,

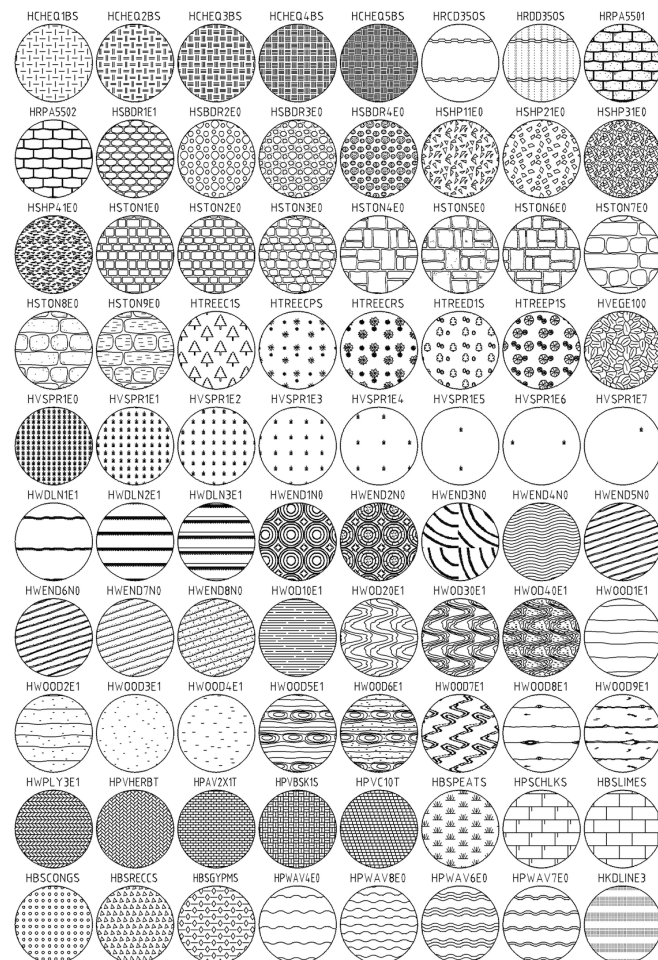
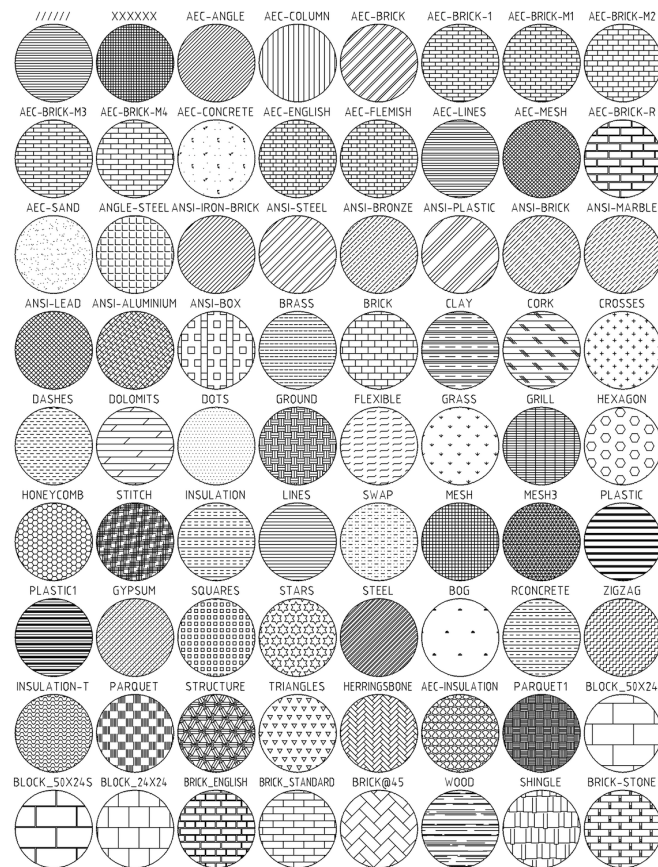


line weight or type, whatever is necessary, to eventually hatch the area.

Below the screenshots of one of the pages of pattern samples, then all patterns when size of sample was minimised using supporting buttons:



Working with extension of "Hatching" function, I also added 80 new hatching patterns. Below on the first image all "older" patterns are shown, on the next image - the "new" ones:



Currently AlfaCAD has embedded over 150 hatching patterns, plus solid fill. There are practically unlimited number of patterns available, and can be extended by user, on the same way as author has it done. Here is the recipe:

1. AlfaCAD hatching pattern definition is very compatible with Autocad's definition. It's quite easy to find online free to download and copy hatching patterns, so was done by author too. If someone offers you to download something for free, do not hesitate to get it and just after that say them "Thank you" in any form. My way is publishing their name and showing the webpage address, to popularise their work among those who can be interested or to trade with them or become a customer or bring them some benefits in any other form.

2. So go to **www.cadhatch.com**, then go to "Free Hatch Patterns" then you can open couple of folders with free AutoCAD hatch patterns.

3. To demonstrate how to add new pattern, let's go for simple one: from Checkerplate Hatch Patterns download :HCHEQ3BS It is looking like that:

*HCHEQ3BS,HCHEQ3BS

```
90,0.2,0.1,0,1,0.4,-0.6
90,0.7,0.6,0,1,0.4,-0.6
0,0.5,0.3,0,1,0.4,-0.6
0,0,0.8,0,1,0.4,-0.6
90,0.3,0.1,0,1,0.4,-0.6
90,0.8,0.6,0,1,0.4,-0.6
0,0,0.9,0,1,0.4,-0.6
0,0.5,0.4,0,1,0.4,-0.6
0,0,0.7,0,1,0.4,-0.6
90,0.6,0.6,0,1,0.4,-0.6
90,0.1,0.1,0,1,0.4,-0.6
0,0.5,0.2,0,1,0.4,-0.6
```

Copy that text, then open file PATTERNS.ini in your main ALFACAD folder, and at the end paste at the end this pattern. You need to make some small alterations. Take a look at what it should look like:

HCHEQ3BS=5; Checkerplate 3 bar

```
90,0.2,0.1,0,1,0.4,-0.6
90,0.7,0.6,0,1,0.4,-0.6
0,0.5,0.3,0,1,0.4,-0.6
0,0,0.8,0,1,0.4,-0.6
90,0.3,0.1,0,1,0.4,-0.6
90,0.8,0.6,0,1,0.4,-0.6
0,0,0.9,0,1,0.4,-0.6
0,0.5,0.4,0,1,0.4,-0.6
0,0,0.7,0,1,0.4,-0.6
90,0.6,0.6,0,1,0.4,-0.6
90,0.1,0.1,0,1,0.4,-0.6
0,0.5,0.2,0,1,0.4,-0.6
```

So the changes are only done in the header of the pattern. The syntax is:

pattern_name=scale; comment

Scale is a scale factor used for initial scale (size) of the pattern. It can be always changes using another factor, in hatching auxiliary menu. All line definitions under the header remain unchanged.

4. Save PATTERNS.ini and new hatching pattern is ready to fill any area on your drawing. All hatching definitions are read when program is starting. So if you add some patterns, do not forget to restart AlfaCAD.

It's good to create sample block for newly created pattern, as is explained in the User's Guide chapter [11.4.6](#) , however it's not mandatory to get new pattern working. In next AlfaCAD version such block will be generated automatically, I promise. Sample block is very useful to evaluate angle, scale or line distance in the pattern during the hatching procedure.