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➤ 2.5 - "FILL 'ER UP!" - THE HATCH COMMAND

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Topics covered in this Lesson:
Hatch, **Solid**

Hatching in AutoCAD is a way of filling in areas of your drawing with a pre-formatted pattern to represent certain materials. It is usually used in sectional views. Starting with AutoCAD release 14, you can use a solid fill to completely fill in areas such as walls in a floor plan.

Command	Keystroke	Icon	Menu	Result
Boundary Hatch	**Bhatch / H**		Draw > Hatch	Covers an area with a predefined pattern
Hatch Edit	**HatchEdit / HE**		Modify > Object > Hatch...	Edits an existing Hatch
Solid	**Solid / SO**	None	None	Creates a solid filled shape

Draw a rectangle 10" by 10" and put a circle with 2" radius in the middle of it (remember the **M2P** OSnap?).

Start the Boundary Hatch by typing **H** <ENTER> . When you start the command, you will see this dialog box appear:
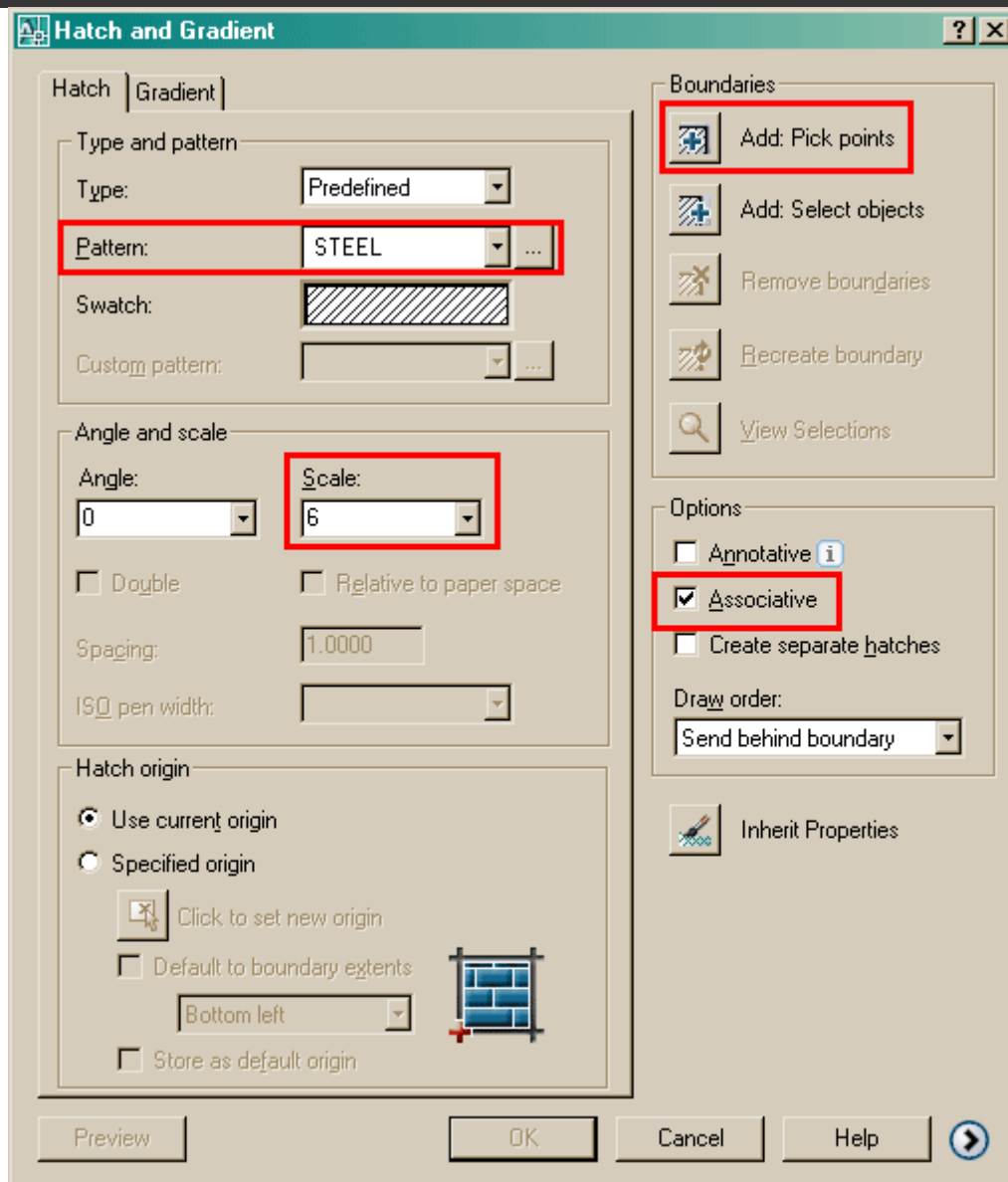
As usual, start at the top of the dialog box and work your way down. We're going to say that this is a cross section of piece of steel, so choose the predefined Hatch pattern called **STEEL**.

Now you want to pick the area to be hatched. **Pick** somewhere inside the rectangle, but outside of the circle and press <ENTER>.

Set the scale of the hatch to **6**. This is just a number that works for this object. A larger number will make the hatch bigger (maybe so big you won't see it) and a smaller number can make the hatch so dense that it looks solid (try different numbers later to see if I'm wrong).

Make this "**Associative**" - this means that if you adjust the rectangle or circle, the hatch will automatically correct itself to the new boundary.

Finally, hit the **Preview** button to see if this is what you are after, it should match the image below.
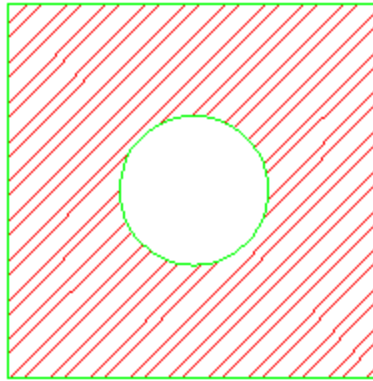
Note that AutoCAD recognized the circle in the middle and didn't hatch over it. If the lines appear 'jagged', don't worry - it is a video display issue -the prints will come out clean and straight.

If you want to edit the hatch, the easiest way is to just double-click on it. (If you can't double-click on it, type in **HE** <ENTER>). This will bring up the same dialog box (almost) that you just used to create the hatch. Try different settings in the Hatch Edit dialog box and preview the results.

To see what "Hatch Association" is, pick on the rectangle (be careful not to select the hatch) and you'll see 4 squares appear on the corners. Click and drag one of the corners and release it. If you hatch is associative, it will update to the new shape.

TIPS:
If you are using a solid hatch, make the hatch WHITE so that it will print out as a solid black, any other color could appear gray (with lines) when printed.

If you have one hatch area drawn and want it to match the hatch of another, use the "Inherit Properties" button on the Hatch Edit dialog box.

In recent versions of AutoCAD, you can add a 2 color gradient to an object. Look for the "Gradient" tab at the top of the Hatch dialog boxes. Below is a sample of a really basic 2D 'rendering' using this method. Pick on the gradient tab of the hatch dialog box.
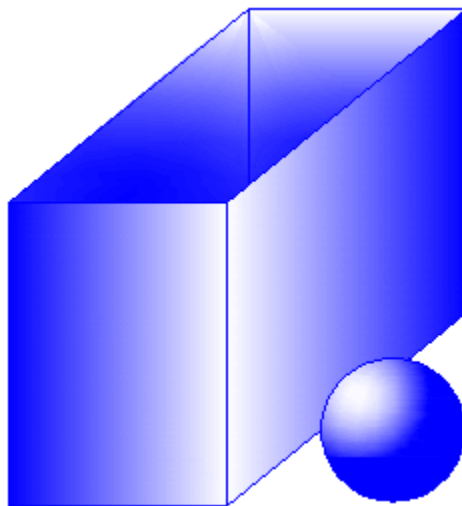

You can create custom hatch patterns, or find custom ones available on the internet. Another site offers some **free ones** as well as extensive **collections for sale**.

Hatches can be exploded - but be VERY careful if you do this. In fact, don't explode hatch patterns unless you *really* need to as you will get 100's of lines in stead of 1 hatch.

There is a setting in the Tools > Options dialog box under the drafting tab that allows you to turn on or off the ability to snap to hatch objects. Off is the default.

Solid

Here is another command that can sometimes be easier than the hatch. Solid allows you draw an object like you would a Line. For this example, draw a rectangle of any size. Start the **SOLID** command. Pick 3 corners of the rectangle and press Enter. You should end up with something like this:
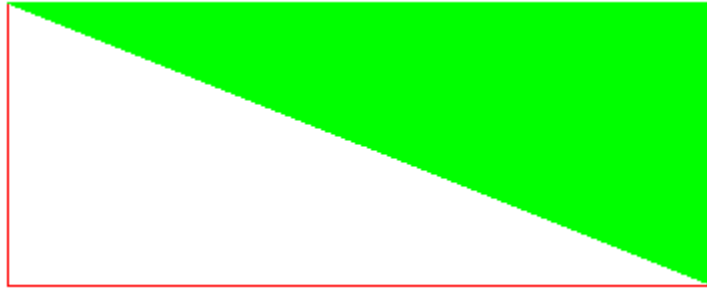
Extra Practice: Complete **this drawing** and copy the gradient hatches shown in **this image**.

Extra Practice: Draw **this shape** and hatch each possible section. It could look something like **this** when it is done (check that you hatched all areas and the scale is correct.

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