



# Building Information Modeling for Masonry

## DEFINING HATCH PATTERNS

### DEFINING A LINE IN A PATTERN

typical single line in a pattern

| angle | X   | Y   | shift | offset | dash | space |
|-------|-----|-----|-------|--------|------|-------|
| 45    | 100 | 100 | 100   | 200    | 100  | 100   |

**Four lines are required for the pattern shown below**

The horizontal lines have different spacing, so two definitions are required, but the spacing between the different coloured lines is the same. The difference between the two is only the Y (vertical) offset.

The vertical lines have the same spacing in the X direction, but are different lengths, so two definitions are required. They start at different places and have different lengths for the lines and spacing. The spaces in the one are the same as the lines in the other.

| Angle  | 0   | 0   | 90   | 90   |
|--------|-----|-----|------|------|
| Origin | X 0 | 0   | 0    | 225  |
|        | Y 0 | 100 | 0    | 100  |
| Shift  | 0   | 0   | 0    | 0    |
| Offset | 300 | 300 | 450  | 450  |
| Dash   |     |     | 100  | 200  |
| Space  |     |     | -200 | -100 |

**Blue lines**  
Angle is horizontal (0), starts at 0,0, consecutive lines start at the same place (Y axis), consecutive lines are at 300mm spacing, they are continuous so no dashes or spaces.

**Red lines**  
Angle is horizontal (0), starts at 0,100 (100mm from the X axis), consecutive lines start at the same place (Y axis), consecutive lines are at 300mm spacing, continuous so no dashes or spaces

**Green lines**  
Angle is vertical (90), starts at 0,0, consecutive lines are at the same distance from the Y axis, consecutive lines are at 450mm spacing, the lines are 100mm long and the spaces are 200mm

**Magenta lines**  
Angle is vertical (90), starts at 225,0 (225mm from the Y axis), consecutive lines start at the same place, consecutive lines are at 450mm spacing, the lines are 200mm long and the spaces are 100mm.

## SAMPLE TEXT FILE FOR 8 X 16 RUNNING BOND

```
;%UNITS=INCH
;%VERSION=3.0

*8x16 Running Bond
;%TYPE=MODEL
0,0,0,0,8
90,0,0,8,8,-8
```