

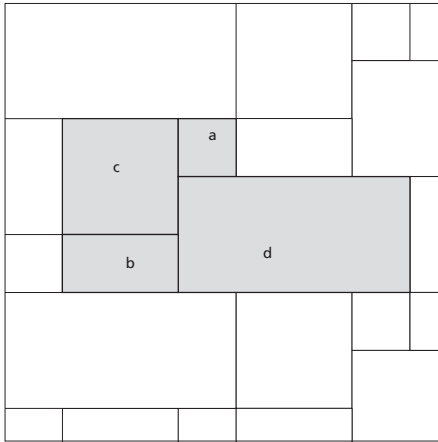
PLEASE NOTE:

These layout suggestions are provided as a service by Ragno USA. The calculations are believed to be accurate and correct; however, final responsibility for pattern calculation and usage rests with the user.

- When using a single size of tile, use only one caliber on a job. The sizes may vary from tile to tile and a proper grout joint width must be selected.
- When choosing a pattern with multiple sizes, calibers should be synchronized within tile sizes. Multiple caliber sizes **may** need to be used to insure a proper width grout joint.
- If series is indicated as a modular product, calibers are not an issue.
- If offset pattern is required for tiles with sides longer than 16", use an offset not greater than 33%.
- Always lay out at least four interlocking samples of the pattern chosen and obtain acceptance by customer before installation.
- Shaded areas indicate pattern repeat.

Grout Recommendations per ANSI A108.02

4.3.8 Grout joint size: To accommodate the range in facial dimensions of the tile supplied for a specific project, the actual grout joint may, of necessity, vary from the grout joint size specified. The actual grout joint size shall be at least three times the actual variation of facial dimensions of the tile supplied. Example: for tile having a total variation of 1/6 inch in facial dimensions, a minimum of 3/16 inch grout joint shall be used. Nominal centerline of all joints shall be straight with due allowances for hand-molded or rustic tiles. In no circumstance shall the joint be less than 1/16 inch.



Size	Percent
a = 12"x 12"	7%
b = 12"x 24"	13%
c = 24"x 24"	27%
d = 24"x 48"	53%