Appendix D: Pallet Patterns

Introduction

TOPS Pro allows you to configure unitloads with a specific pattern. For example, the Shipcase Option dialog box allows you to select one or multiple pattern arrangements for TOPS Pro to consider when the system generates solutions for an analysis. This appendix describes the pattern styles you can use with TOPS Pro.

Depending on your situation, you may want to use a number of patterns in your analysis to get a tighter load. Conversely, you might want to eliminate some options because you want simpler patterns; for example, your palletizing machine can handle only simple 1-block patterns.

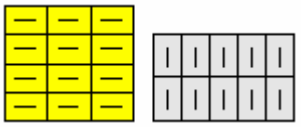
Note two things about the information presented in this appendix:

- The pattern styles 1-block, 2-block, 3-block, 4-block, 5-block, 5-block plus and diagonal, allow you to choose a vertical dimension for the shipcases and use that vertical dimension throughout the arrangement.

  The figures presented with these patterns each use the depth dimension as the vertical dimension. For each pattern, two unitloads are displayed in plan view for enhanced clarity.

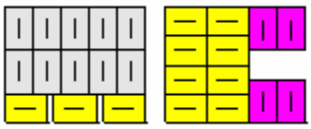
- Each pattern style has a corresponding letter in parentheses. This letter is used in the various List panels and unitload statistics, and is a single-letter abbreviation for that particular pattern style.

1-Block Pattern (C)



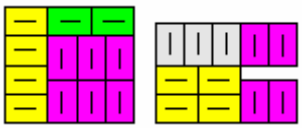
The 1-block, column stack pattern is a simple pattern with one block of shipcases.

2-Block Pattern (B)



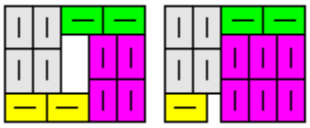
The 2-block pattern or bi-block configuration, is pictured below. This pattern is also known as interlock pattern if used in conjunction with layer rotation.

3-Block Pattern (T)



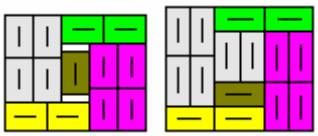
The 3-block, or tri-block, pattern is pictured here.

4-Block Pattern (W)



The 4-block, pinwheel pattern is pictured below. In the two unitloads, this pattern is made up of four blocks of shipcases that form a pinwheel-like figure.

5-Block Pattern (P)

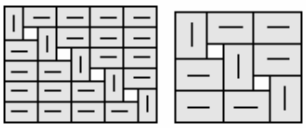


The 5-block, or penta-block, pattern is pictured here. In these two unitloads, this pattern is made up of five blocks of shipcases. Four blocks of shipcases form a pinwheel configuration; the fifth block of shipcase is positioned in the middle.

5-Block Plus Pattern (Q)

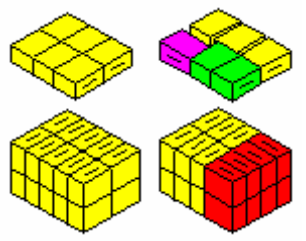
Notice that this 5-block pattern has another 5-block pattern in the middle of the configuration. In these two unitloads, this pattern is made up of five blocks of shipcases. Four blocks of shipcases form a pinwheel configuration; a separate 5-block configuration of shipcases is positioned in the middle.

Diagonal Pattern (D)



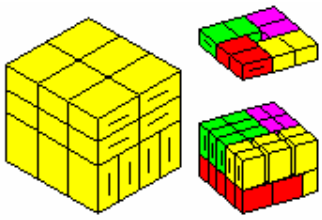
In these unitloads, the pattern has alternating blocks of shipcases that form a diagonal configuration.

Multi-Layer Pattern (Z)



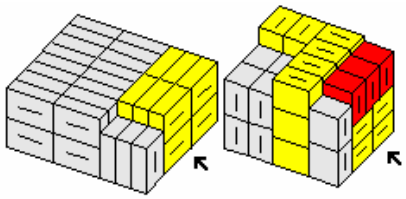
In these two unitloads, the top layer is lifted to show that different layers have different patterns. With a multi-layer pattern, TOPS Pro configures the unitload with the vertical dimension you specified, with the exception of the top layer. (The top layer is not affected by stacking strength).

Multi-Dimension Pattern (Z)



In the two unitloads shown here, each layer has a different vertical dimension.

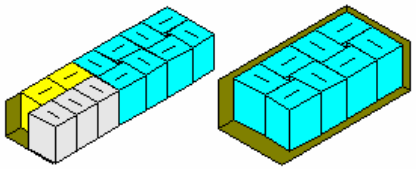
Multi-Surface Pattern (O)



With this pattern, TOPS Pro turns the pallet on its side, loads the pallet, configures the pattern, then turns the pallet upright again. In the figure, the arrows indicate the side on which TOPS Pro loaded the pallet.

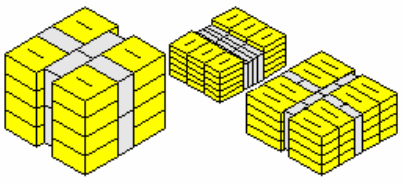
To use a multi-surface pattern, it's necessary to select at least two dimensions as vertical dimensions. When you use a multi-surface pattern, TOPS Pro automatically calculates other multi-patterns.

Repeater Pattern (R)



With the repeater pattern, you'll fill the vehicle with the pinwheel pattern on the right, then fill the rest of the vehicle space with other patterns, if possible. This pattern is available only if you're loading pallets onto a vehicle.

Soldiered Pattern (S)



In the two unitloads, the cases are spaced apart so that other cases can be turned on their sides and fit into the space.

Staggered Pattern (N)

The staggered pattern is used to load round containers onto a pallet. As you can see, the round containers mean the configuration will have a staggered, rather than a linear, pattern.