File preparation for L3214

Using Registration Marks

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Mark Specification:
Shape: Circle
Size: 5 x 5 mm or 0.197 x 0.197 in
Color: 100% Black

The positioning of the marks can be split up into primary, secondary and tertiary positions. It is important to have the primary positioned marks in place before adding secondary ones.
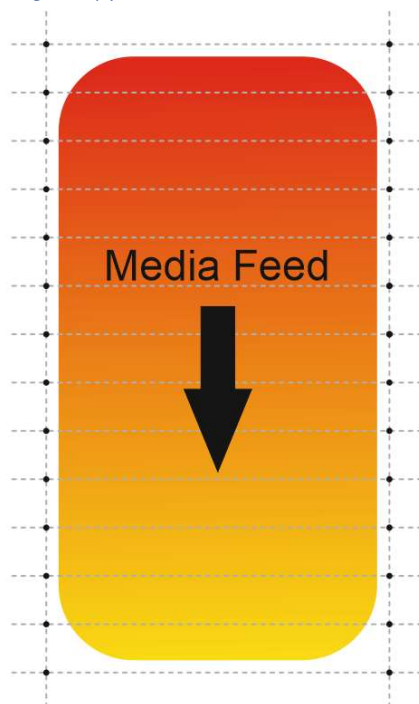

Material Feed Direction

Primary marks

Single copy

Multiple copies

Media Feed

Media Feed
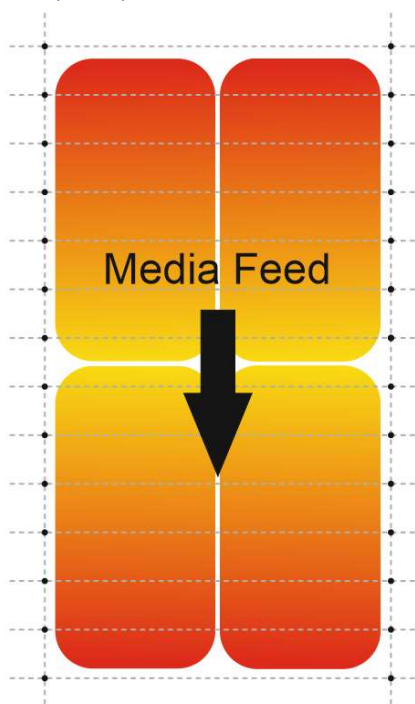
The primary marks are situated along the edges of the print. They should be aligned left and right, literally making a pair (as shown in the pictures). The grey grid indicates the positioning and does not need to be printed. The distance between marks along the edges should be **equal,** but the general interval used can be adapted. In general an interval of **100 mm to 640**

mm or **3,94 in to 25,19 in** is allowed. Summa recommends an interval of **320 mm or 12,6 in,** this value gives the operator the best balance between speed and accuracy.

It is also important to have at least 10 mm or 0,4 in of white space around each mark in order to have a good recognition of the mark (see picture). This means between material edge and the printed design.

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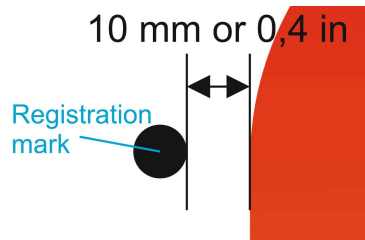
Secondary marks

The primary marks are great for simple large shapes on material with little to none deformation. If more deformation is expected or you have intricately nested objects a secondary position is advised. This secondary mark position is built upon the primary marks, if the primary marks are missing then using only secondary marks will not work.
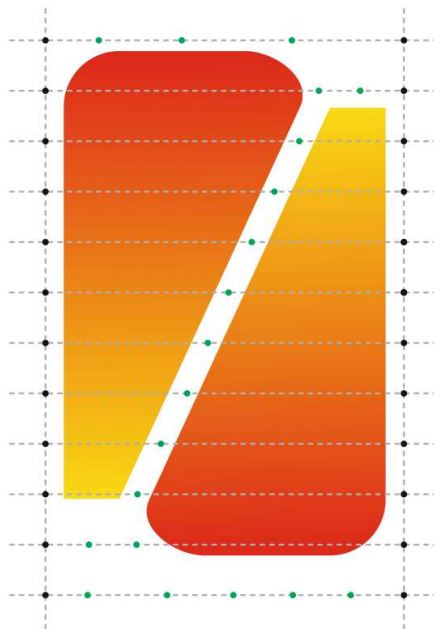
The picture shown on the left has the secondary marks shown in green (these marks have the same color as the primary ones, and should be printed black). As you can notice, the secondary marks are positioned along the same grid line as the primary ones. They can be freely positioned along these lines, without limitation in distance between each mark. Just keep in mind the 10 mm or 0,4 in white space around the mark. These marks should be used when the primary marks are too far from the printed objects. Or in between printed objects. This will give a higher accuracy in positioning the cut lines on the printed fabric.

There is however an exception can be made upon this rule. When you need to have secondary marks e.g. between 2 copies along the media feed (see picture below) you can reposition or add an additional primary mark on the level of the copy spacing. Even if this interrupts the repeat interval of the marks. In this case an exception can be made. However the exception does have a specification. When placing an additional set of primary marks to add secondary marks, no primary marks can be present with a 50 mm or 1,97 in distance of this newly placed mark. If a mark using the original interval is within that spacing, then this mark needs to be deleted in order to make room for an additional primary mark with secondary ones.
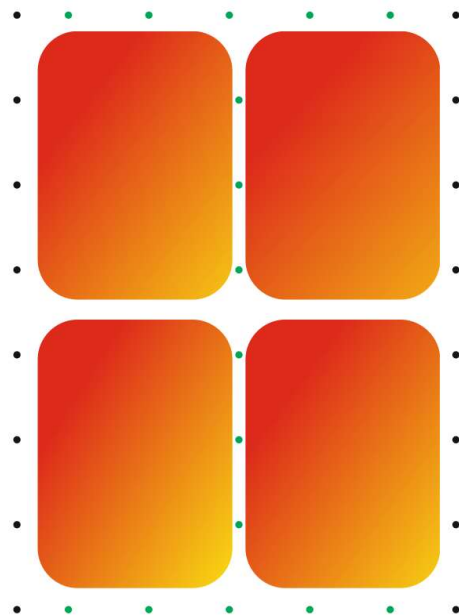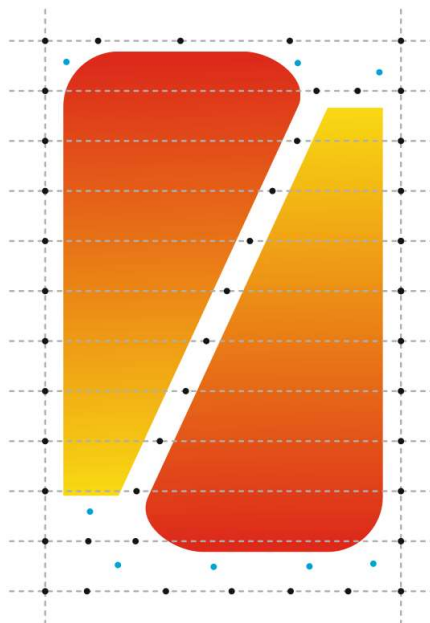
According to the preset rules.

Adding more accuracy using additional secondary marks. This is allowed as an exception.
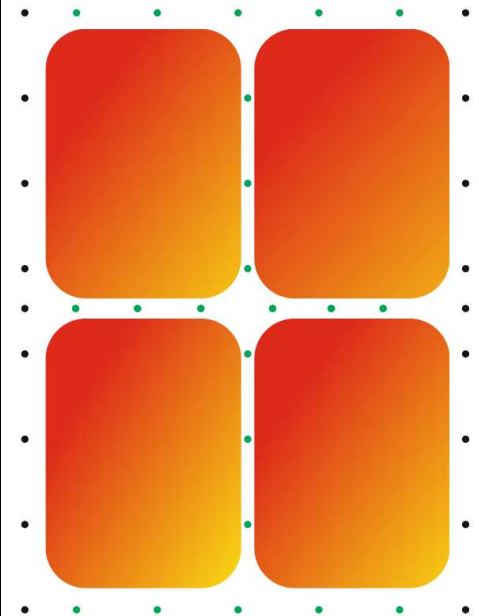
Tertiary marks

When primary and secondary marks are positioned on the print a third set of marks can be added. These marks offer a higher flexibility in placement.

The tertiary marks are shown in the picture as being blue (these marks have the same color as the primary ones, and should be printed black).

As indicated by the image, you can place these marks in any position, not aligned to any grid. However the primary marks and secondary marks should be present first. Again keep in mind there needs to be a 10 mm or 0,4 in white space around the mark.

It is only advised to place tertiary marks if no primary or secondary marks can be added to the print, generally in between prints along the media feed.

Tertiary marks are only needed for irregular shapes, where the nest doesn't allow to add adequate secondary marks.

Using vision Trace

Since the vision system will basically generate cut file for the operator, no cut file is needed. Just an outline of a minimum of 2 mm – 0,08 inch. And center the images on the material, making sure there is around 3 to 5 cm, 1.2 to 2 inch from the material edge.
Between every shape a minimum of 10 mm or 0,4 inch can be used.

Note: Distance is calculated from the outside of the black contour line.

Minimum 2 mm - 0.08 in

Minimum 10 mm - 0.4 in

30 mm or 1.2 in

30 mm or 1.2 in
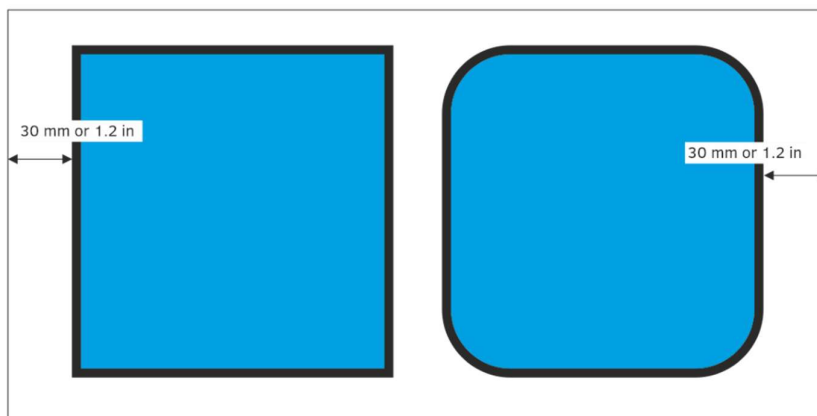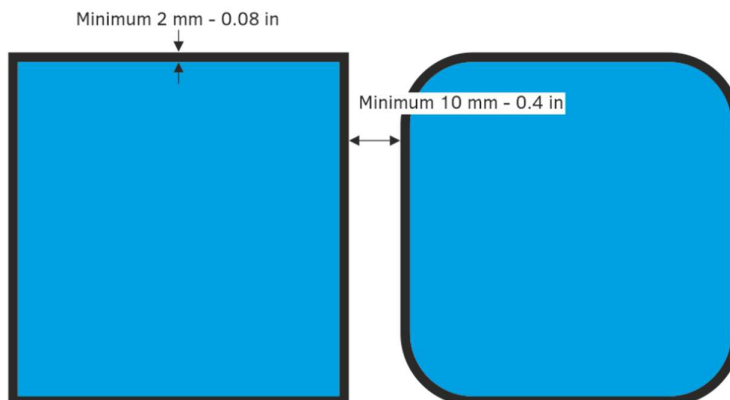
What to avoid

Avoid ambiguous placement of shapes. The system will not detect white areas within a scan, the scan area is 650 mm or 25.6 in. See below examples.

Bite scan

Bite scan

Will not be detected as a cutting shape

Bite scan
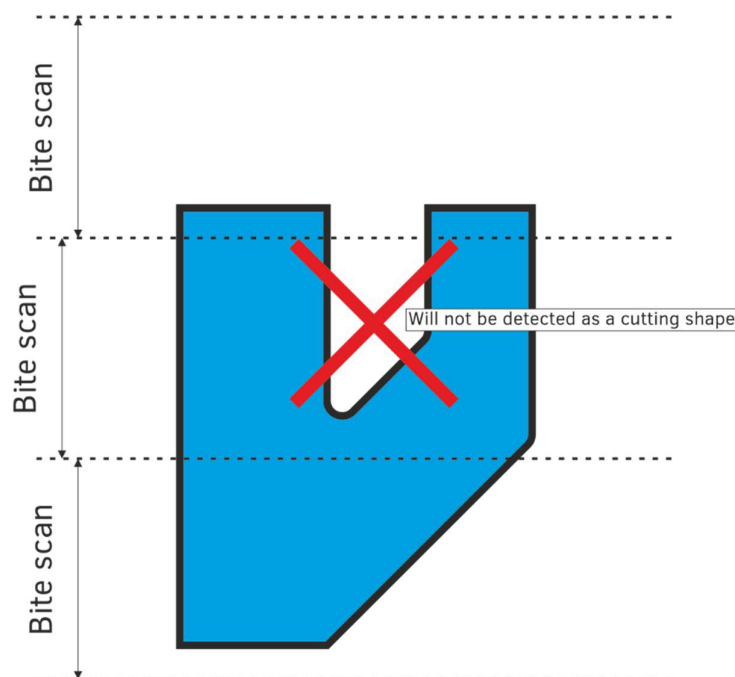
Instead orientate shape as follows.
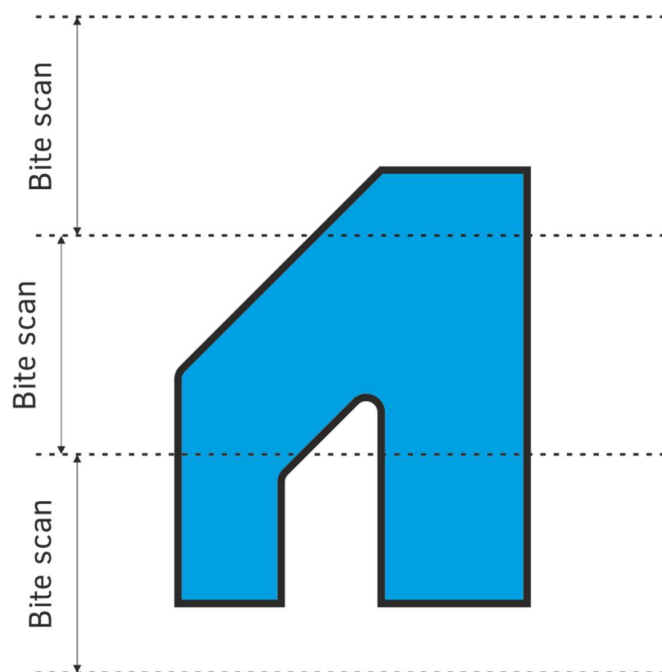
Bite scan

Bite scan

Bite scan

Vision trace only detects outside shapes. Shapes nested within other shapes are not treated as cuttable objects.