

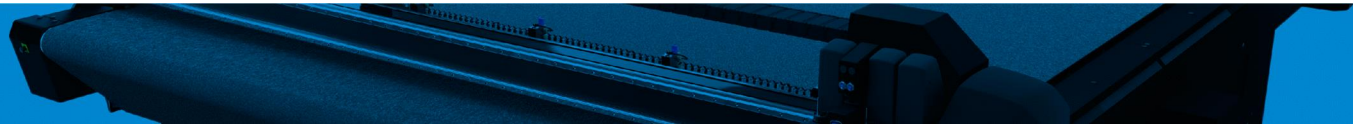


## Compensation Methods

### SummaFlex Pro

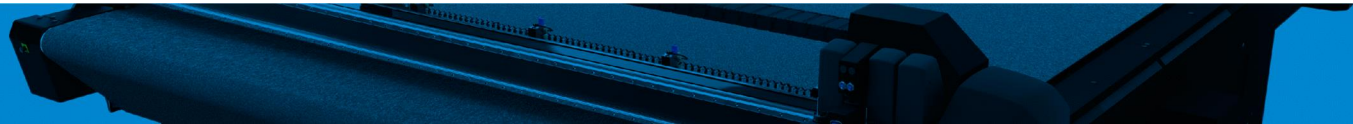
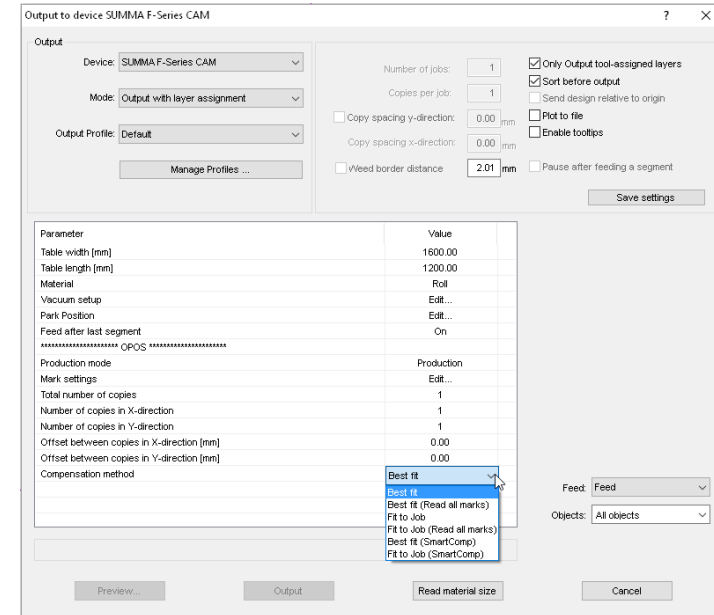
- New compensation calculation possibilities improve the print & cut accuracy significantly. Especially when using flexible textiles the print can be seriously deformed, once loaded on the table. With Smart Compensation, SummaFlex Pro is using all markers available to recalculate the cutting path.
- Also for longer jobs, using the Smart Compensation method will improve the segmentation accuracy.

- Traditionally, SummaFlex Pro is/was rotating, scaling, skewing and finally cutting each object as good as possible in reference to the print, based on three marks per object.
- Optionally, by using the 'Fixed Size at Output' parameter the scaling and skewing can/could be disabled to preserve the original shape and dimensions of the design, regardless of the print deformation.
- The new compensations take everything to a next level...



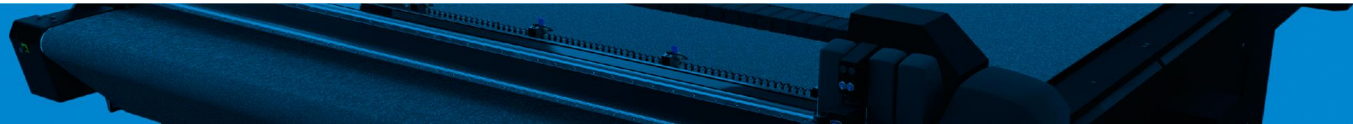
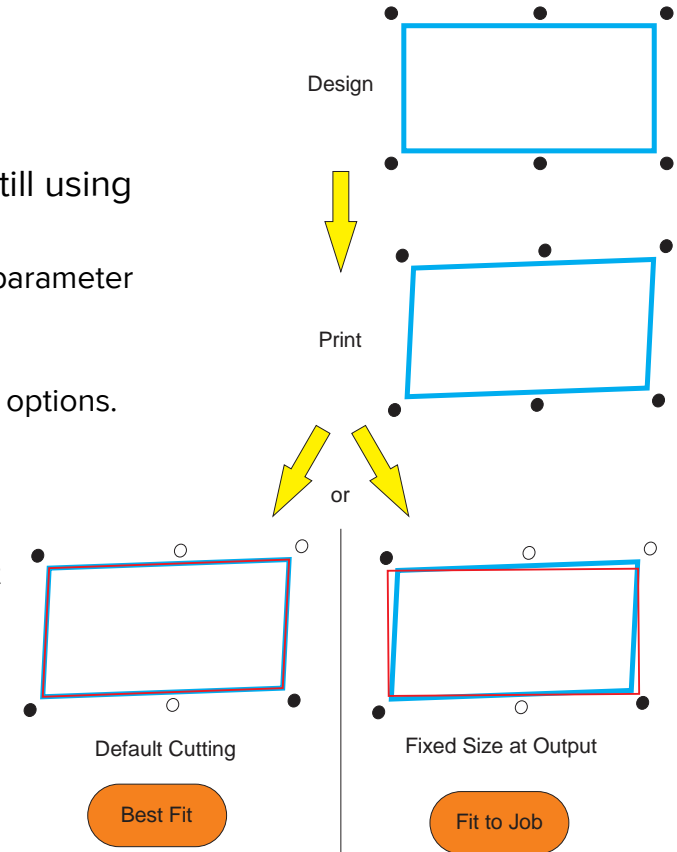
# Compensation Method

- In the output window a new parameter, 'Compensation Method', is now available once a contour job is loaded.
- There are six options available, each of them further described in this document:
  - Best Fit
  - Best Fit (Read all marks)
  - Fit to Job
  - Fit to Job (Read all marks)
  - Best Fit (SmartComp)
  - Fit to Job (SmartComp)



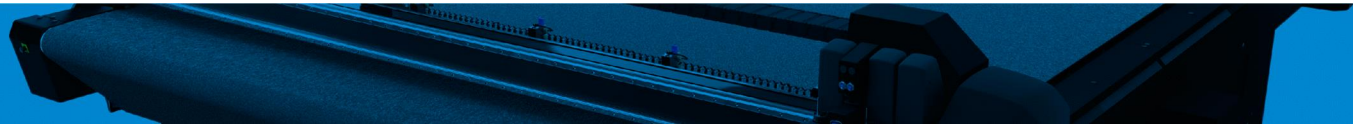
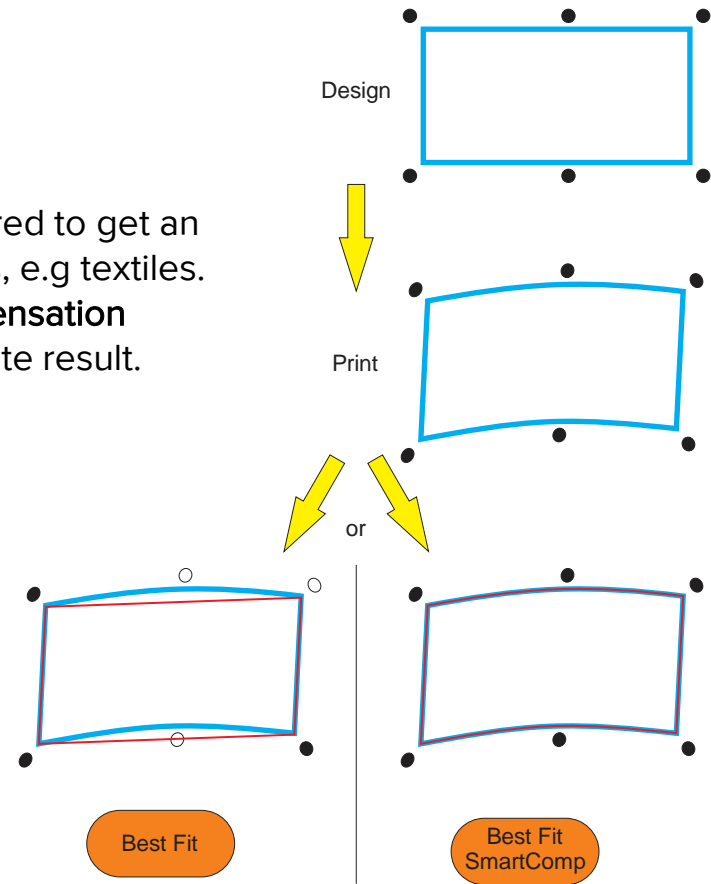
## 'Best Fit' vs 'Fit to Job'

- The new compensation parameter in the output window is still using the two basic compensation ideas.
  - To cut as close as possible to the print, the new compensation parameter should be set to one of the 'Best Fit' options.
  - To keep the design shape and dimensions untouched, the new compensation parameter should be set to one of the 'Fit to Job' options.
- Note: Using one of the 'Fit to Job' options will consider the complete job as one (grouped) object and the rotation and positioning of all objects in the job will be the same. Using the traditional 'Fixed Size at Output' option keeps the shape of each object untouched but the rotation and positioning could be different for each individual object (if not grouped).  
In order to work as explained before, select the 'Fit to Job' mode and use the 'Fixed Size at Output' option.



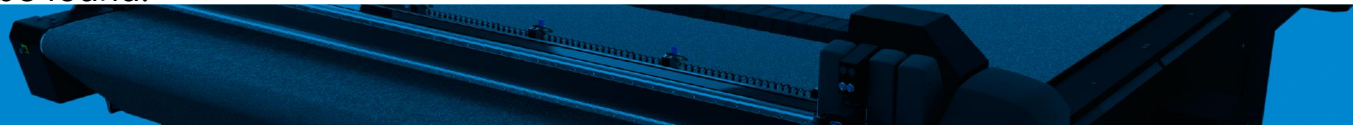
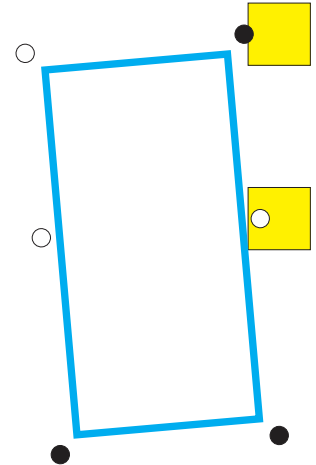
# Smart Compensation

- In some occasions, extra deformation of the cut lines is required to get an accurate contour cut. Especially when using flexible materials, e.g textiles. While by default only three marks are used, the **Smart Compensation** method uses all marks near the object to get the most accurate result.
- When using the 'Fit to Job (Smartcomp)', all marks will be read to calculate a slightly more accurate average of the deformation.
- **Important:** Generally, using the Smart compensation method will also improve the accuracy of multi segmented jobs!



## Read All Marks

- If the Smart compensation mode is not used SummaFlex will only read the required (minimum three) marks to recalculate each object. However, if the second mark is situated far away and the deformation is large or if the job is rotated on the table, the second mark may be out of the camera view. By selecting one of the ' (read all marks) ' options the camera will scan all marks. It will not use all marks for the compensation calculation but it will use the info in order to find the other marks.
- Note : make sure that the sorting of the registration marks is set to :
  - Sorting Method: 'Nearest Object'
  - Begin with object at: 'Bottom right'
- Note: The 'Read all marks' parameter will not influence the final cutting result. It only avoids that the operator needs to indicate the position of marks, that could not be found.



# Summary

- Best Fit
  - Print & Cut accuracy : average
  - Speed : highest
  - Dimension/Shape accuracy: low
- Best Fit (Read all Marks)
  - Lower chance that the operator needs to indicate marks, that could not be found!
  - Print & Cut accuracy : average
  - Speed : lowest
  - Dimension/Shape accuracy: low
- Best Fit (SmartComp)
  - Print & Cut accuracy : highest
  - Speed : lowest
  - Dimension/Shape accuracy: lowest
  - Multi segmented jobs are more accurate
- Fit to job
  - Print & Cut accuracy : lowest
  - Speed : highest
  - Dimension/Shape accuracy: highest
- Fit to job (Read all Marks)
  - Print & Cut accuracy : lowest
  - Speed : lowest
  - Dimension/Shape accuracy: highest
- Fit to Job (SmartComp)
  - Print & Cut accuracy : low
  - Speed : lowest
  - Dimension/Shape accuracy: highest
  - Multi segmented jobs are slightly more accurate

