

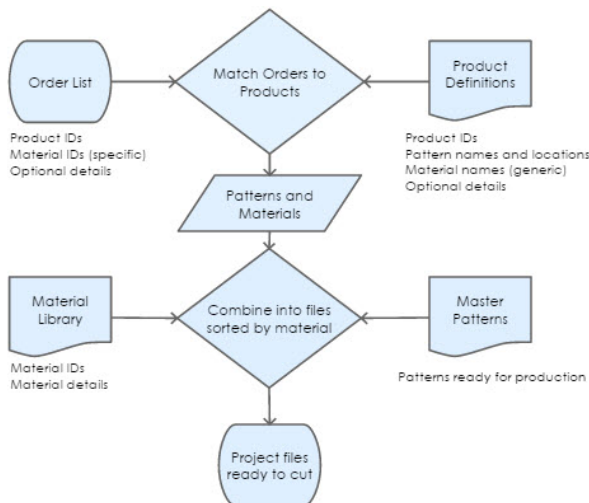
## Workflow 2.0

### Introduction

#### Overview

Workflow manages and simplifies the process of organizing your daily list of orders into ready-to-cut project files. At the end of the process, all cut patterns are arranged into kits matching each order number.

- Workflow begins by reading all the orders that need to be cut in a given time period.
- Next, it matches the Product ID from the order form to Product IDs in Workflow’s Product Definitions. It also matches the Material IDs in the order form to Material IDs in your Material Library.
- Workflow automatically collects all the patterns needed to complete those orders and groups them into separate files based on the material they are to be cut from.
- These files are immediately ready for nesting in PatternSmith. A cut file for each required material is ready to go in minutes.
- Throughout this process, essential information remains attached to each pattern in the nest, so each cut piece can be matched back to its order number. Complete kits of cut parts can now be collected and moved seamlessly to the next stage of the production process.



#### Product Definitions

Product Definitions include:

- The Product ID

- An order number used to match cut patterns to a specific order after cutting
- Names and locations of all the patterns required to build that product
- Generic materials on which each pattern is to be nested
- Optional details that relate to nesting and cutting patterns
- Optional dimensions and variables used to generate Templates patterns at a specific size

At the Product Definition level, materials are generic. For example, a car seat cover might use three separate materials in three zones. The Product Definition could place patterns on each of zones 1, 2, and 3. When the order is read, Workflow matches generic materials to specific materials from the Material Library.

## Master Patterns

**Master Patterns** are your finished pattern files, ready for production.

These files can include:

- All the patterns used for any product
- Pre-nested pattern files
- Single patterns
- Patterns for multiple products
- Templates used to generate patterns for a specific style with unique dimensions

## Order List

The **Order List** is a .csv file containing three required fields:

- Product ID which matches a Product ID in the Product Definitions
- Order Number, used at the end of the cutting process to group all of an order's patterns together for assembly
- Order Quantity

In addition, the Order List will contain:

- Pattern orientation information

- Specific materials to use for this order
- For Templates patterns – dimensions and variables used to generate the correct patterns

## Material Library

The **Material Library** holds all the relevant details for each Material ID, such as actual width, solid or striped pattern, nesting spacing, and cutting speeds.

## Processes

Workflow guides you through four processes.

### Defining Products

Defining products is only done once for each of your products.

- Locates each required pattern or template in a master file
- Assigns each pattern to a generic material (drag and drop)
- Assigns any special rotation constraints to each pattern
- Assigns columns in the order form to Workflow variables

### Processing Orders

- Reads a list of product orders (in spreadsheet form)
- Matches specific materials in the order to the generic materials in the Product Definition
- Matches each pattern to the specific material it is to be cut from

### Packaging Orders

- Sorts all required patterns by material so each project file created contains patterns to be cut from only one material
- Sends each material file to a destination folder that can be read by the cutter operator
- Nests patterns automatically according to placement groups (kits)

### Cutting and Kitting Orders

- Identifies each pattern with its kit number after cutting is complete

## Setup

Before starting to use Workflow, there are a few setup steps that need to be done. Go to **File > Preferences**.

## Overview

The Setup process includes:

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Project Naming	–	Specifies naming conventions for the project files you send to cutters
Paths	–	Sets the paths to folders for Master Projects or Templates, Order Files, and Product Definitions
Column Configurations	–	Matches columns in order files to data needed by Workflow
Destinations	–	Specifies the Destination folders to be used for ready-to-cut project files

## Project Naming

**Project Naming** lets you choose the naming format for the project files that Workflow creates.

Project Naming

Tag Order

- Material Name
- Material ID
- Order Numbers
- Date

Date Format: Month, Day, Time

Example: Material Name-06-16 08:45.project

### Tag Order

Check the tags you want to include in the project file name. Click and drag to move each tag up or down in the list to specify its order in the file name.

### Date Format

The **Date Format** is a dropdown where you can select the date items you want to include in your file names.

### Example

Each time you change the tags or the date format, you'll see an updated example of a project file name.

## Paths

Workflow uses three important paths:

### Projects

The folder where your Workflow product files are saved.




### Orders

The path containing your Order List files. Workflow will look here for your order forms.

### Products

The root folder is where all your Master files are located. Workflow will look here for the patterns you want to cut.

We recommend you store these under the same root folder (as shown below).

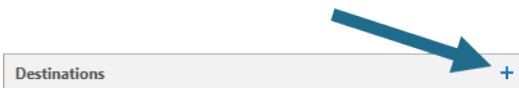
Paths		
Projects	G:\My Drive\WorkFlow\Master Patterns	
Orders	G:\My Drive\WorkFlow\WorkFlow Orders	
Products	G:\My Drive\WorkFlow\Product	

## Destinations

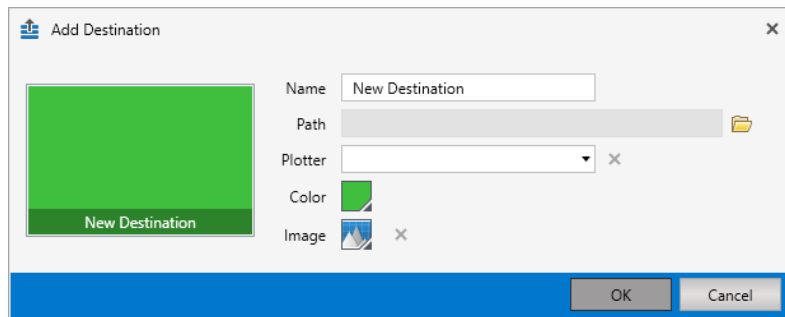
A **Destination** is a folder where Workflow will save project files that are ready to be cut. Destination folders are usually on a network accessible by cutter operators.

### Add Destination

In the Destinations Pane, you can specify as many destination folders as you need. Usually, this will be the number of cutting systems in use. Add a new destination folder by clicking the + icon.



Fill in a name for the destination. If you have multiple cutters available, use names that make it easy to distinguish each cutter.



The **Path** is a folder where Workflow will place files ready to be cut. This can be any location on your network or computer.

**Plotter** is where you can choose what machine you want this destination folder to be assigned to.

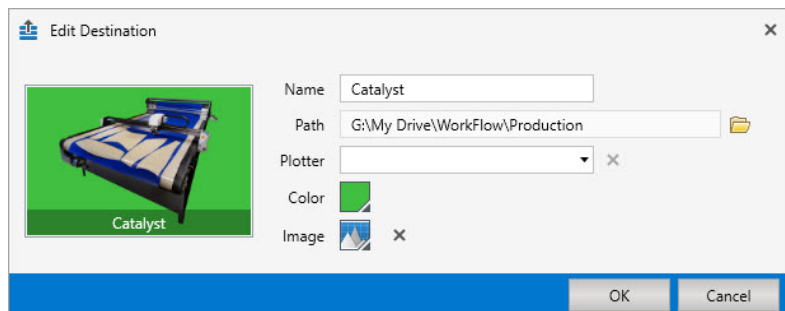
You can also change the **Color** and **Image** that is shown on the destination pane.

## Editing a Destination

To edit a destination, hover over the destination and press the **Gear** icon.



Edit any information for the destination.



## Column Configuration

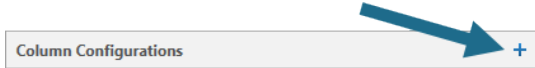
A **Column Configuration** is a map between column headers in your order file and how you want Workflow to use the column. Companies with a single spreadsheet format for orders will only require a single column configuration.

If you do not already have a functioning order spreadsheet, we recommend creating one before making a column

configuration. Creating a column configuration from an existing spreadsheet is very easy.

## Creating a Column Configuration

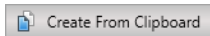
To create a column configuration, click on the + button.



Fill in a name for your new configuration.

Name

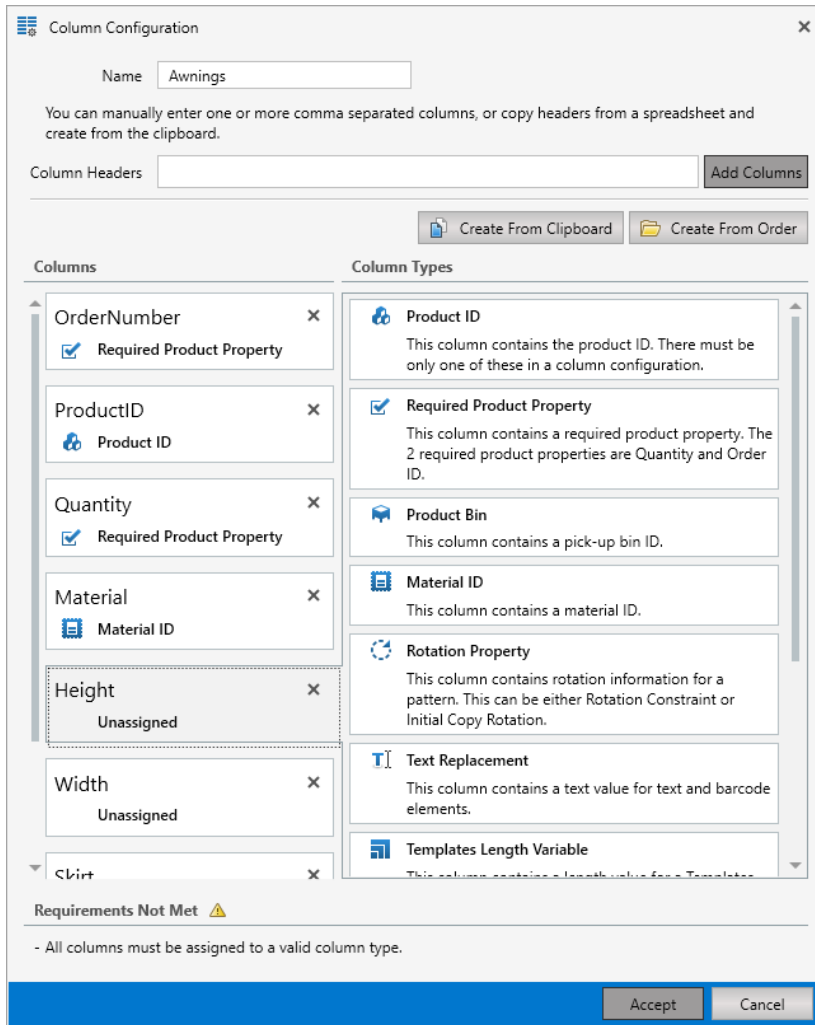
The easiest way to enter your column headers is to open an order file, select the header line at the top, then click **ctrl-c** to copy it to the clipboard. In Workflow, click **Create From Clipboard** to paste the headers.



If you don't yet have an order file to use, you can enter the names of each header, separated by commas.

Column Headers

After you enter your column header, you'll see a list of your column header names on the left, with a list of column types on the right. Now, match each of your header names to the correct column type. Select each column name, then click on the correct column type and you'll see the column type added to your header name.



## Column Types

All of the information Workflow uses will be in one of the following categories or Column Types. Each column header in your order form will need to be assigned to one of these types.

Column Type	Description
Product ID	This column holds the Product ID used to specify each product. There can be only one Product ID column in an order form.
Required Product Property	Workflow requires two variables for any order: Quantity and Order Identifier, such as an order number or order ID.
Product Bin	This column contains a pick-up bin ID.
Material ID	You can use as many Material ID columns as you will need for a product. The value for Material ID must



Column Type	Description
Rotational Property	Rotational Property columns contain rotational constraints of settings for specific patterns.
Text Replacement	This column contains a text value for text and barcode elements.
Templates Length Variable	Template Length columns contain a length value for use with a Templates pattern.
Templates Angle Variable	Template Angle columns contain an angle value for use with a Templates pattern.
Templates String Variable	Template String columns contain a text value for use with a Templates pattern.
Unassigned	Unassigned columns are not used by Workflow, but may be used for other purposes.




## Products Tab

### Defining Products

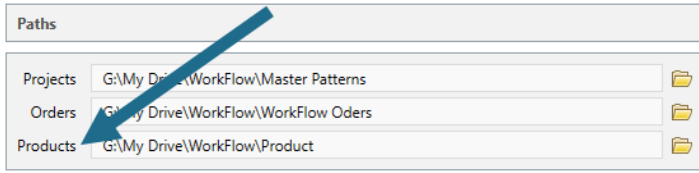
The Workflow definition of a product includes:

- The materials used for each part of the product
- The patterns to be cut from each of those materials
- Optional rotation settings for any patterns
- Workflow data matched to order form columns

Click on the Products Tab to see a list of products you have defined.

Products		
Name	ID	Type
Bottom	Bottom	
Top	Top	
Side	Side	

Your products and their definitions are located in the Products folder you specified in Setup.



## Adding A New Product

To begin the process of adding a new product:

1. Fill in the **Name** and **ID** fields. The ID is a unique identifier. The Name is a more 'user-friendly' name. This is similar to the Material Library where a Material ID might be '276-001-A' and the Name might be 'Sunshine Stripes'.
2. Choose what column configuration of the order files to use, using the **Configuration** dropdown. If you use multiple column configurations (possibly for different parts of your company), make sure to select the correct one for this product.
3. Click **Create** to open the New Product Screen.

The 'Create' dialog box contains the following fields and controls:

- ID: Side
- Name: Side
- Type: Patterns
- Configuration: Seat Covers
- Create button

You can base a new product definition on another by selecting an existing product and pressing the **Create Copy** button. This will copy the material names and column configuration, but not the patterns. If you want to copy the patterns, check the **Copy Patterns** box.



Once you press the Create button, the New Product screen will appear.

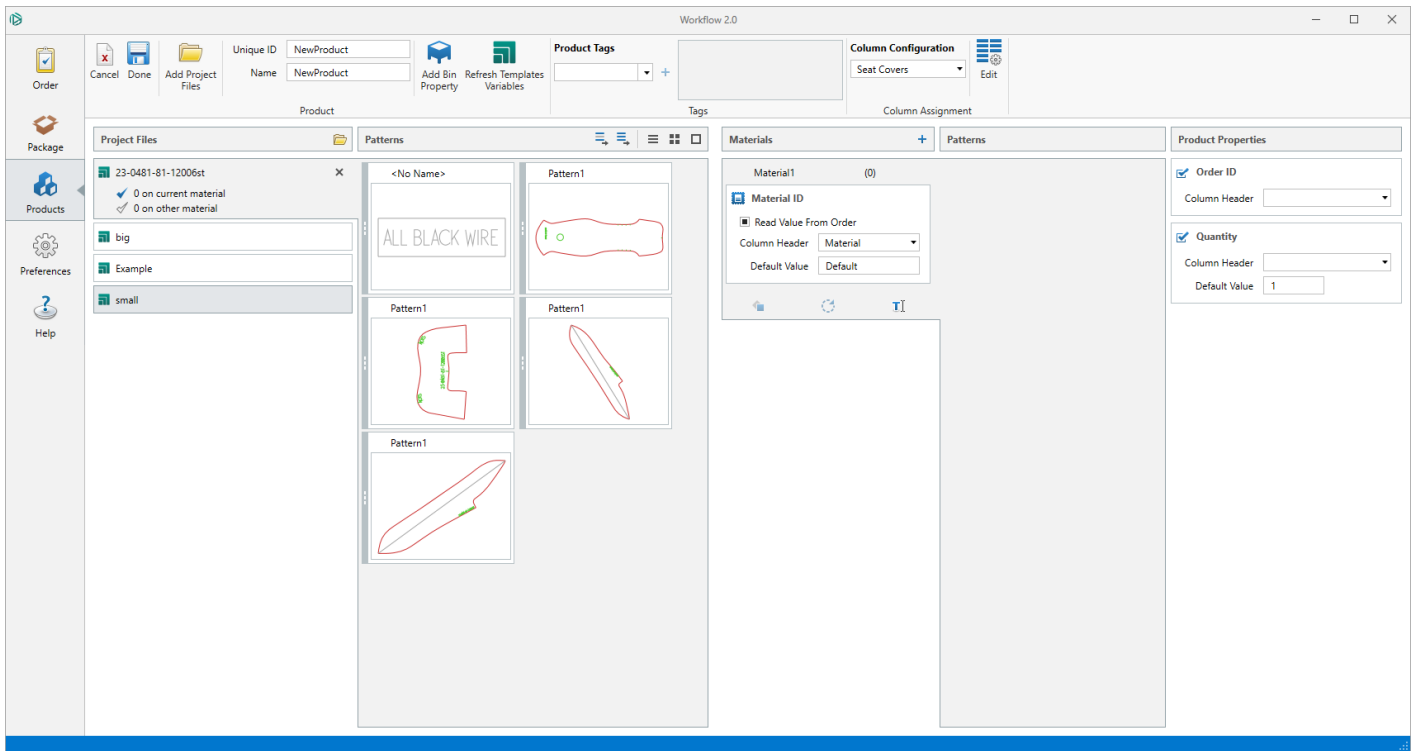
The New Product screen in Workflow 2.0 includes the following sections:

- Product:** Unique ID (NewProduct), Name (NewProduct), Add Bin Property, Refresh Templates Variables.
- Product Tags:** A dropdown menu and a plus sign.
- Column Configuration:** Seat Covers, Edit button.
- Materials:** Material 1 (0), Material ID, Read Value From Order checkbox, Column Header (Material), Default Value (Default).
- Product Properties:** Order ID (checked), Column Header, Quantity (checked), Column Header, Default Value (1).

Before continuing, you must upload any project files you want to use by clicking the folder icon. This will open your projects folder that you set in Preferences. Select what patterns you want to use in this product.



When you click on a file in the Pattern Files area, you will see all the patterns available in that file.

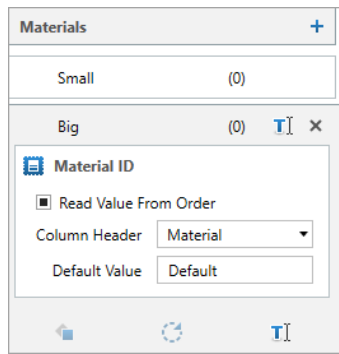


In the Patterns pane, you can choose to display patterns as text only, small images, or large images.



## Adding Materials

When you define a product, you will give each material a functional name, such as top cover, bottom, side panels, accent panels, etc. These names reflect the functionality of the patterns you will place on this material. The specific material to be used for a product will come from the order form later.



## Add a Material

Click the + symbol at the top of the materials column to add a material.



## Renaming Materials

Each time you add a material, Workflow gives it a placeholder name such as Material1 or Material2. You can immediately replace the placeholder name with a functional name. If you prefer, add all the materials you'll need for this product and then rename each one. To rename the material, press the **Rename Material** button next to the x. Or right-click on the material name.

## Deleting Materials

To delete a material, click the x to remove it. This removes the material and all the patterns it contains.

## Adding Patterns

### Assigning Patterns to Materials



Click on the material you want to populate with patterns.

Next, on the left side, open the folder, then select the file that holds the patterns you want to add to this product and the selected material. Your patterns for any product may be located in a single file or they may be located in multiple files. You can change folders and open different files during the process, assigning all needed patterns to a material.

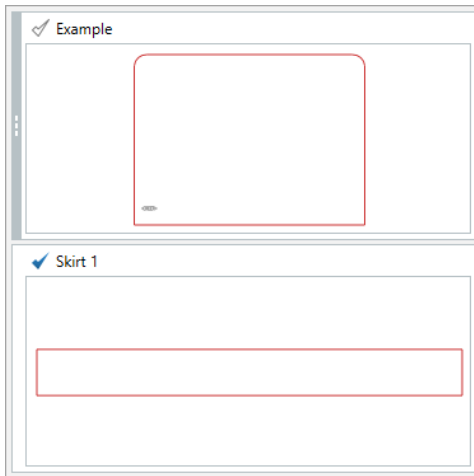
Drag and drop patterns from the currently selected file on the left to the Patterns area for the selected material on the right. Use Shift-click or Ctrl-click to select and drag several patterns at a time.

You can also add selected patterns by pressing the **Add Selected to Material** button. To add all the patterns in

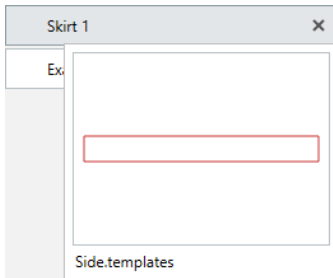
that project, press the **Add All to Material** button.

Add Selected   
Add All 

A blue check by the pattern name will show that the pattern is assigned to the selected material. A clear check shows that the pattern has been assigned to another material. A pattern may be assigned to multiple materials.



You can see a visual representation of the pattern when you mouse over the pattern name that is assigned to a material.



Continue selecting materials on the right and dropping patterns on them until all the patterns needed are located on the correct materials for this product.

To remove any pattern from a material, mouse over the pattern name and click the **x** to delete.

**\*\*NOTE\*\*** To save a product definition, all materials must have at least one pattern on them. If you have a material that doesn't have any patterns on it, you must delete the material from that product definition before saving the definition.

## Override Rotation Settings

Each pattern in a project file already has the following pattern properties assigned in PatternSmith.

The screenshot shows a settings dialog box for a pattern. It includes the following fields and options:

- Rotation:** A dropdown menu set to "Any Rotation".
- Initial Rotation:** Three radio button options: "Zero" (selected), "Current Rotation", and "Custom" (with a text input field containing "0.00" and a degree symbol).
- Quotas:** A checkbox labeled "Enforce" which is unchecked.
- Copies:** A text input field containing the value "1".
- Multiplier:** A text input field containing the value "1".
- Copies Cut:** A text input field containing the value "0".
- Material:** A checkbox labeled "Enforce" which is unchecked.
- Name:** A dropdown menu.
- ID:** A text input field.

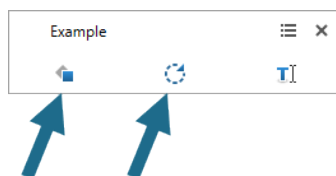
Workflow will automatically replace the Quota and Material properties for each pattern when it reads your order form. The settings for **Rotation Constraint** and **Copy Rotation** will be preserved unless you intentionally have Workflow override these properties with values from your order form. This can be done on a pattern by pattern basis or for all the patterns on a given material.

This is useful, for example, when a customer has an option of horizontal or vertical stripe orientation on a particular pattern. In that case, you would override that pattern's rotation settings with a value from your order form. You would also need to change a pattern's rotation constraint to **No Rotation Allowed** so it maintains its rotation during nesting.

In your order form, add one or more columns for rotation properties.

### Setting Rotation For an Individual Pattern

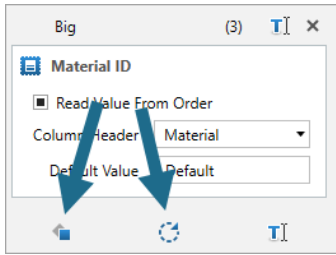
If needed, you can override the initial rotation angle or rotation constraints for a pattern with data from the order form. After you've placed a pattern on a material, click the appropriate icons located on that pattern. If either rotation has been added to that pattern, the icon will remain. Click the x to remove the constraint.



### Setting Rotation For a Material

You can also override the initial rotation angle or rotation constraints for all the patterns placed on a material.

Click either **Add Rotation Constraint to All Patterns** for a rotational constraint, or **Add Initial Copy Rotation to All Patterns** for an initial copy rotation.

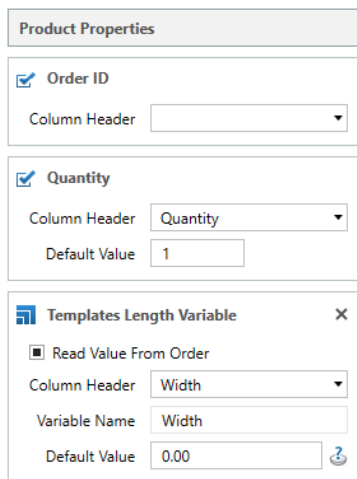


Once created, you can set the value to a **Column Header**, or set the rotation with the **Default Value**.

## Matching Data To The Order File

The final step of the Product Definition process is to assign the columns in the order file to the data that Workflow needs.

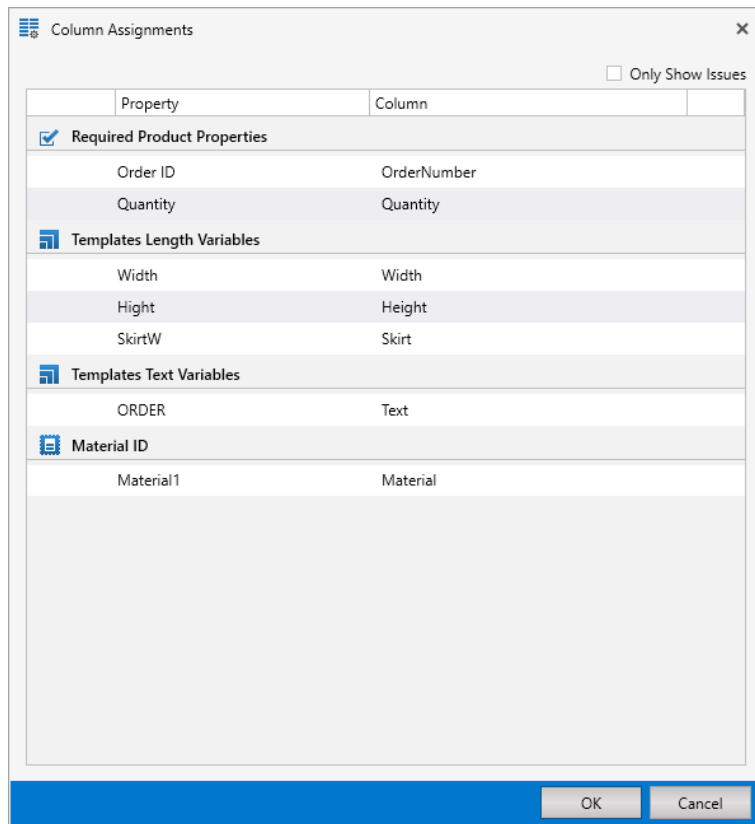
On the right side, under Product Properties, you need to assign the column header to be used for each Property. Workflow will attempt to assign column headers automatically.



You can also use the **Edit** button on the ribbon to edit the Column Assignments.

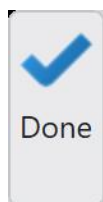


All properties must be assigned to a column. When you save the Product, if all columns are not assigned, Workflow will open this window so that all properties can have a column assigned.

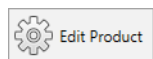


## Finishing The Product

When you are done creating your Product, press the **Done** button.



If you want to edit a Product, hit the **Edit** button.



## Order Tab

### Ribbon

### Open



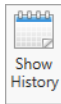
Click the **Open** icon to open an order file.

You will be taken to the folder you chose as the Order Path in Setup. Navigate to the order .csv file you want to process.



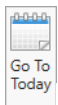
## Show History

**Show History** will show you all the orders that have been processed. You can select a specific day, month, or year to look at.



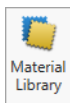
## Go To Today

**Go To Today** will show the history of orders that have been processed today.



## Material Library

Clicking **Material Library** will open up your material library. To learn more about the material library, reference the PatternSmith Help Guide.



## Order Files

Once you have opened an order file, this window will appear.

The screenshot displays the AUTOMETRIX software interface. On the left, under 'Order Files', there is a list of 'Seat Covers' with 11 lines. Line 1 is 'Top', Line 2 is 'Side', Line 3 is 'Bottom', Line 4 is 'Bottom', Line 5 is 'Side', Line 6 is 'Top', Line 7 is 'Side', Line 8 is 'Top', Line 9 is 'Bottom', Line 10 is 'Side', and Line 11 is 'Side'. A blue circle with the number '1' is placed over this list. The middle section shows the expanded details for a selected line, including 'Order ID' (Column: OrderNumber, Value: 10), 'Quantity' (Column: Quantity, Value: 1), and three 'Templates Length Variable' sections. The first template has Variable Name 'Width', Column 'Width', and Value '20'. The second template has Variable Name 'Hight', Column 'Height', and Value '45'. The third template has Variable Name 'SkirtW', Column 'Skirt', and Value '7'. A fourth 'Templates Text Variable' section has Variable Name 'ORDER', Column 'Text', and Value '10'. A blue circle with the number '2' is placed over the second template. On the right, the 'Process Orders' section shows a message: 'No issues were found in the order files. Process the orders to continue.' Below the message are two buttons: 'Cancel Orders' (with a red stop sign icon) and 'Process Orders' (with a blue play button icon). A blue circle with the number '3' is placed over the 'Process Orders' button.

- 1 **Products:** Each line in the csv file is shown here, displaying the product name and line number for each line in the order.
- 2 **Product Properties:** If you click on an order line, it will expand to show all the information that Workflow found in the csv file for that product.
- 3 **Processing Options:** Here you can **Cancel Orders** or **Process Orders**.

At this point in the process, Workflow knows where to find every pattern required, and has confirmed that each material called out in the order is in your Material Library. If you're using Templates, Workflow knows how to generate all required patterns.

## Errors

If Workflow finds anything it can't resolve in the order form, it will flag those lines with a warning symbol, and open the detail for that order to show you what is wrong.

In this case, the Material ID wasn't found in the Material Library. You can cancel the order, correct the problem in the order file, then reopen the order. Alternatively, you can correct the problem in the **Value** dropdown and continue processing the order.

## Processing The Order

If no errors were found in the file or after you have fixed any errors found, click **Process Order** and you will proceed to the Package Tab.

## Package Tab

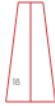
After you Process an Order, you'll be taken to the Package Tab. At this point in the process, all the patterns that need to be cut have been associated with the specified materials and are initially sorted by Material ID.

## Order Details Panel

The Order Details panel shows you the results of sorting the patterns for each order. You can sort by clicking on a header.

Material Name	Material ID	Product	Product ID	Order	Quantity	Type
Green	968435	Side	Side	14	1	
Green	968435	Side	Side	16	1	
Green	968435	Side	Side	11	1	
Arctic Blue	968447	Bottom	Bottom	12	1	
Arctic Blue	968447	Bottom	Bottom	13	1	
Blue	968446	Top	Top	10	1	
Blue	968446	Top	Top	15	1	
Blue	968446	Top	Top	17	1	
Arctic Blue	968447	Bottom	Bottom	18	1	
Green	968435	Side	Side	19	1	
Green	968435	Side	Side	20	1	

You can see more information about each order by clicking on the order.

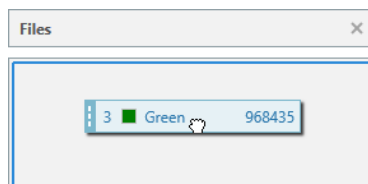
<p>Order 18</p> <p>Product ID Bottom</p> <p>Product Name Bottom</p> <p>Material ID 968447</p> <p>Material Name Arctic Blue</p> <p>Quantity 1</p> <div style="background-color: blue; width: 100px; height: 15px; margin-top: 5px;"></div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p>Extracted-1</p>  </div> <div style="border: 1px solid gray; padding: 5px; width: 45%;"> <p>Extracted-2</p>  </div> </div>
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## Combining and Moving Ready-To-Cut Files To a Destination

Initially, the patterns for each order are located in separate files. In most cases, you want to package all the patterns for each material into one PatternSmith file to make it easy to nest and cut them together. Workflow does this when you select a group of files and drag them together to a destination.

### Moving Selected Orders

To move specific orders to a destination, select a group of orders by using the Shift-click or Ctrl-click and select the orders you want to package together.



Once you select what orders you want to move, you can either drag your selection to a destination cutter on the

right side or select the destination and click the **Move Selected to Current Destination** button.

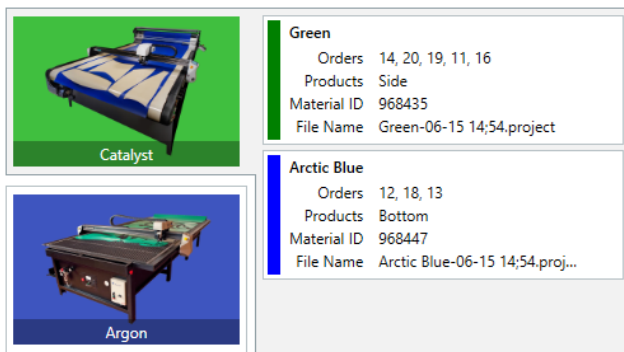


## Moving All Orders

If you want to move all of the orders, select which destination you want them to move to, and click the **Move All to Current Destination** button.



Click on the destination cutter and you'll see a list of all the orders and products with patterns in that file, along with the name of the file you just created.



Files assigned to a cutter no longer show in the Order Details pane. When that pane is empty, you know that all orders have been assigned to a cutter.

## Opening Files In PatternSmith

To open the cut-ready file, you can either click the **Open in PatternSmith** button for the order file you want to cut on Workflow or directly open the file through PatternSmith.



## Preferences

### General

General

Theme

Length Units

Tooltip Delay  (ms)

Check for updates

Hide the Unlock dialog.

## Theme

**Theme** can be set to **Light** (white) or **Dark** (black).

## Length Units

This is the units Workflow will use.

## Tooltip Delay

**Tooltip Delay** controls the time delay between hovering the mouse over a tool and the display of the tooltip. A new user may want to set it to 0 ms. An experienced user might want to set it to 800 ms or more.

## Check for updates

Checks how often Workflow checks for updates.

## Orders

Orders

Process Valid Orders Automatically

Move Orders To Destination Automatically

Open Created Files In PatternSmith Automatically

Create Label Patterns

Use the same color for all patterns in an order

### Process Valid Orders Automatically

If this box is checked, when you open an order file, you will be automatically brought to the Package Tab.

### Move Orders To Destination Automatically

If this is checked, once an order has been processed, all patterns will be moved automatically to the destination that is currently opened.

### Open Created Files In PatternSmith Automatically

If this is checked, when an order has been sent to a destination, the file will be automatically opened in PatternSmith.

## Create Label Patterns

If checked, a label will be created in PatternSmith that includes the product name, product ID, and order ID.

PRODUCT NAME: BOTTOM  
PRODUCT ID: BOTTOM  
ORDER ID: 12

## Use The Same Color For All Patterns In an Order

In an order file, there can be multiple products from the same order ID. If you want all the products from the same order ID to be grouped together, check this box.

## Nesting

**Nesting**

Enable Forge Autonesting

Show Nesting Options

Maximum Duration: 30 Seconds

Desired Efficiency: 99 (%)

Allow Flipped Copies

Placement Groups:  Enable

Enable Group Mixing

Mixed Group Count: 1

Alignment Layer: Off

Alignment Direction: Horizontal

Snap Horizontal

Snap Vertical

---

Default Nest Length: 140.00 (in)

Target Bite Size: 20.00 (in)

## Enable Forge Autonesting

If checked, Forge Autonesting will be enabled when an order is sent to PatternSmith.

## Show Nesting Options

If checked, a screen will appear when sending orders to a destination. This screen will ask you about an **Alignment** layer and the **Nest Length** you want to use. If this box is unchecked, the nesting length will be the **Default Nest Length** set in Workflow.

## Maximum Duration

The **Maximum Duration** is the max amount of time Forge Autonesting will take to find the most efficient nest.

## Desired Efficiency

How efficient the nest will be.

## Placement Groups

**Allow Flipped Copies** allows Forge to flip copies to make the nest more efficient.

**Enable** will enable placement groups during the Forge process.

**Enable Group Mixing** will allow Forge to mix placement groups.

## Mixed Group Count

If **Enable Group Mixing** is on, you can specify how many nested groups to mix into when nesting the current group. The higher the number, the more efficient the nest will become.

## Alignment Layer

Turns on and off **Alignment Layer**. In the dropdown, you can select **Primary** or **Secondary** alignment.

## Default Nest Length

This is the **Default Nest Length** that Workflow will use for the Forge process.

## Target Bite Size

This only applies if you have a Catalyst machine. The **Bite Size** is how far the machine will cut until the belt is moved. To learn more about Bite Size, refer to the PatternSmith Help Guide.

# Help Tab

## Help Manual



Contains a link to this document.

## **Check For Updates**

Checks the Autometrix website for updates to this application.

## **Create Diagnostic File**

Packages files together for diagnostic files. This file can be sent to Autometrix Support (support@autometrix.com) to aid in troubleshooting.

## **About Autometrix**

Contains useful links to Autometrix.

## **About Workflow**

Contains useful information about the software version, information, and terms of use.