



A SUCCESS STORY

Behind the Scenes: How the Global Thread and Yarn Manufacturer Gets Color Right



From apparel to automotive to footwear and accessories, the industry leader doesn't compromise on color.

DATACOLOR EQUIPPED LOCATIONS:

- Germany
- UK
- Romania
- Czech Republic
- Vietnam
- Bangladesh
- India
- China





INNOVATION LAB



AMANN is one of the leading international manufacturers of **high-quality sewing threads, embroidery threads** and **Smart Yarns**.

The company prides itself on the quality and consistency of all products - of which color plays a central role, excellent service and support, as well as research and innovation in collaboration with customers.

Currently using

-  **Datacolor** 800 Spectrophotometer
-  **Datacolor** Match Textile Software
-  **Datacolor** Tools Software
-  **Datacolor** Conditioner
-  **Datacolor** SpectraVision
-  **Datacolor** AutoLab TF
-  **Datacolor** Ahiba IR Pro
-  **Datacolor** Process
-  **Datacolor** Guardian

Benefits

- Cost savings thanks to fewer correction rounds
- Fewer conflicts caused by visual communication
- Confidence that colors will be accurate and repeatable
- Elimination of environmental differences in temperature and humidity, which can influence color appearance
- Ability to make color decisions during the dyeing process
- Interfaces between labs and production sites are scheduled and controlled using  **Datacolor Process** to keep identical process parameters

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Behind the Scenes at AMANN:

RESEARCH AND INNOVATION:

This is an integral part of the **AMANN** process. In close cooperation with customers, an interdisciplinary team develops solutions ranging from special Smart Yarns for technical textiles to individual product designs for the automotive sector. As the interface between market and customer, they translate customer requirements and ideas into textile concepts.



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TECHNICAL TRAININGS:

Training happens at **AMANN's** Sewing Technology Center in Bönningheim. The team helps customers identify the right product for their needs and provides guidance during the design and tailoring phases of production.



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ON-SITE SERVICE:

AMANN has a worldwide team of sewing technicians to help customers if any challenges arise.

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Yarn quality and consistency—which includes color—is a top priority at **AMANN**. It is so important, in fact, that **AMANN** standardized all production locations to create the same conditions and guarantee the same color quality globally.

Achieving consistency is not a simple task, especially when products have different structures, coatings or gloss levels. Beyond this, a single garment can contain multiple types of yarns stitched close together. A lot can go wrong if color is not controlled properly, so a trusted, uniform process is essential to meeting the expectations of **AMANN** customers.

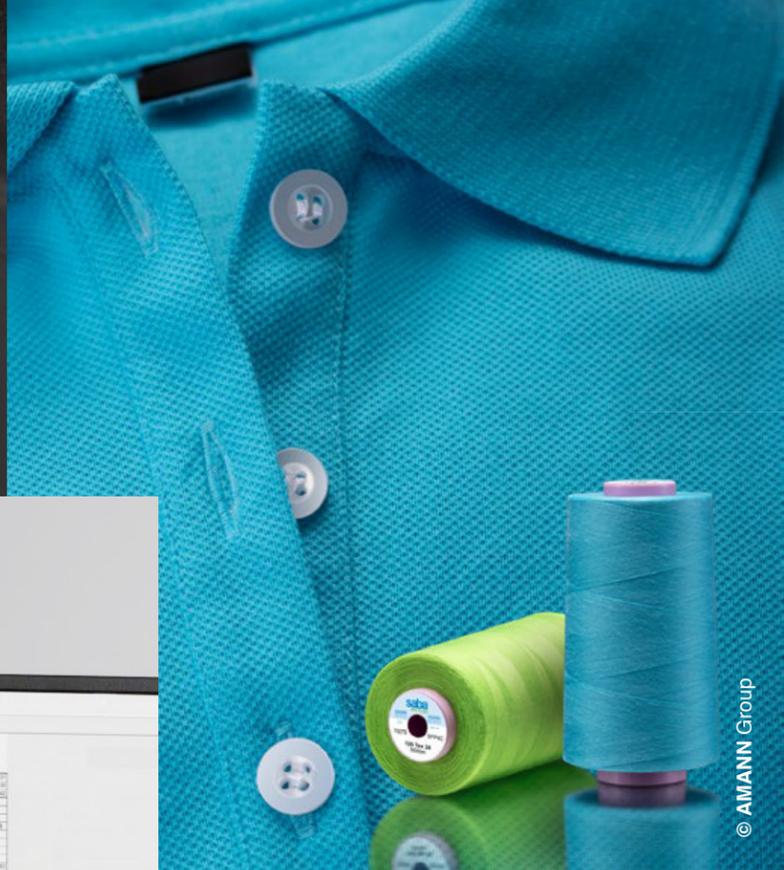
For nearly 40 years, **AMANN** has partnered with Datacolor to meet these important quality requirements, leveraging a full suite of solutions for streamlined color control.

“I would definitely say that the Datacolor Service is one of their strongest suits. We are being supported by real experts who analyze the challenges and offer customized solutions,”

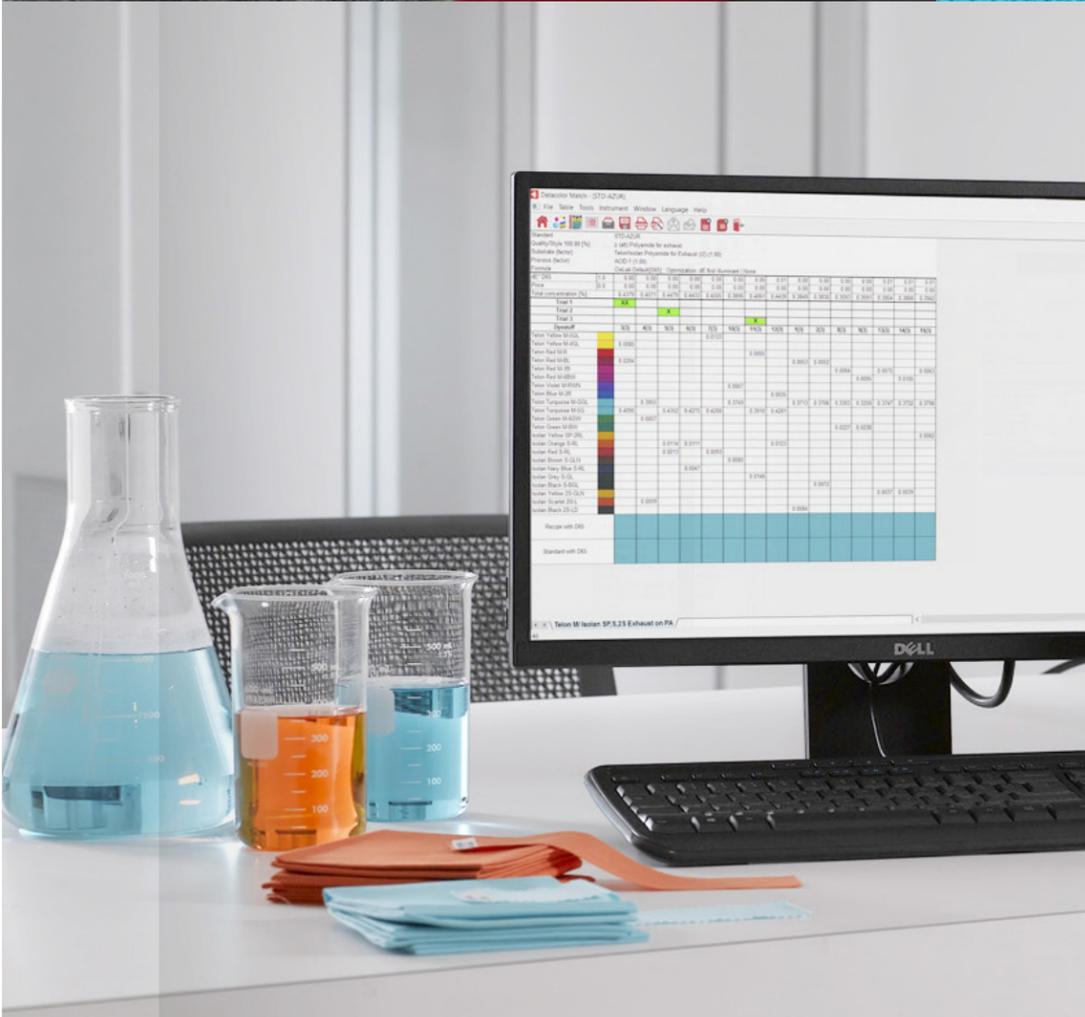
Christian Scholz, Director Global Industrial Engineering AMANN



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PART 1: Digital Color Control from Start to Finish

The **AMANN** color management process starts with raw materials, where different substrates have different colors or whiteness levels. Knowing that the base color of any material is a crucial factor for dyeing, **AMANN** includes whiteness tolerances in supplier specifications to ensure there are no surprises when dyeing begins.

After a batch has been dyed, a sample is drawn and worked up accordingly. It then goes through both visual and digital assessment to ensure the color meets expectations. While more and more companies are moving toward digital color control, some still rely on visual evaluation. To meet the needs of these customers, **AMANN** uses a lightbox to assess color samples. They also perform a digital measurement using the **Datacolor 800 Spectrophotometer**. These measurements are combined with a visual evaluation, which together support the color decision and recipe adjustment. Using color measurement technology at this step removes much of the subjectivity typically associated with dyeing and re-dyeing, and ultimately results in a faster match.

Visual and digital color evaluation happens once again before a product leaves **AMANN's** production sites. This final check **provides an extra layer of confidence** that the resulting color meets the standard and that customers are getting the highest quality possible. **AMANN** keeps virtual samples and uses a digital population tool customized by Datacolor. Each dye house can access this centralized database to see whether the colors meet the specified quality requirement.

For this, **AMANN** creates wrapping cards, following a standardized process that is the same in all mills. This process specifies that wrapping cards are put in the **Datacolor Conditioner** before a measurement is taken with the **Datacolor 800**. This way, **AMANN** eliminates any environmental differences in temperature and humidity.

When **AMANN** dye houses in Romania, UK, Germany, Vietnam, China and Bangladesh all dye on the same material, the result must always be identical. This color measurement standard enables **AMANN** to bring each global location onto one level and ensure even better quality comparisons. Recipes can be exchanged among different facilities with the assurance that **results will be identical since every location is using the same colorimetric data.**

AMANN has already come a long way in building a comprehensive, digital approach to controlling color. But they still have plans to digitalize even further in the future. These plans include an increase in the use of data from previous production lots to inform the accuracy of future batches.

The company is moving forward to more digital color control with plans to integrate **Spectra-Vision** into their workflow. This first-of-its-kind spectrophotometer measures color variation in materials that are extra small in nature—including yarn dyes—down to a 28-micron pixel size. Paired with specially designed sample holders, **SpectraVision** can hold these small objects in place, allowing operators to easily capture sample images and separate the colors.

The first application will be to store a picture of each sample into their Enterprise Resource Planning software. Furthermore, they will measure “marking yarn seams” to compare against seat covering color. **SpectraVision** will be more and more implemented into **AMANN's** daily versatile fields of application.



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PART 2: A 14-Step Process that Runs on Datacolor

AMANN's entire color development department runs on Datacolor solutions. Here's what it looks like in action



- 1. Raw materials:**
Supplier specifications for whiteness tolerances are defined to ensure variations in base color do not impact dyeing results.
- 2. Sample color formulation:**
Lab recipes are made in [Match Textile](#).

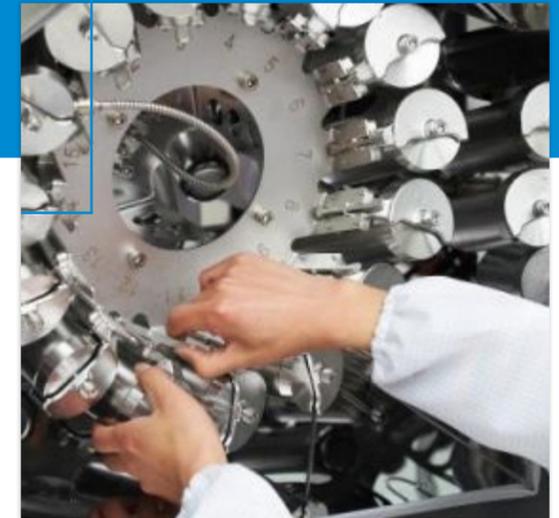
AMANN uses the *OFFSET MATCHING* feature, which incorporates the desired finishing effect into the recipe calculation. The *SMARTMATCH* feature enables AMANN to continuously optimize their first-shot match rate. By measuring corrections of samples dyed based on formula proposals, the software continually stores this data in a virtual color space and gets smarter with each recipe. Fewer correction rounds lead to more cost savings.



- 3. Lab dispensing:**
The recipe is dispensed in the [Datacolor AutoLab TF](#).

"We have been working with Datacolor instruments for over 15 years. Datacolor is a market leader in textile color management in Europe, and their technology is the most advanced on the market."

Ingo Erkelenz, Manager Colour
Competence Center at AMANN



- 4. Sample dyeing:**
The Lab Dip sample is dyed in the [Datacolor Ahiba IR Pro](#) lab dyeing machine.

- 5. Sample preparation:**
Samples are put into the [Datacolor Conditioner](#) to remove temperature and humidity variations and ensure color uniformity among all dyeing locations.



- 6. Sample measurement:**
The sample is measured with the [Datacolor 800 Spectrophotometer](#) and [SpectraVision](#).





7. Sample assessment:

To ensure the recipe is correct, the resulting sample color is checked with the correction feature in our [Match Textile software](#) paired with the [Datacolor Process](#) intelligent recipe production management system. The recipe is corrected when necessary.



8. Dyeing of the yarn-bobbin begins.

9. Digital and visual assessment:

The yarn color is checked visually in a lightbooth and assessed digitally with the [Datacolor 800 spectrophotometer](#) paired with [Tools](#) and [Match Textile Software](#).

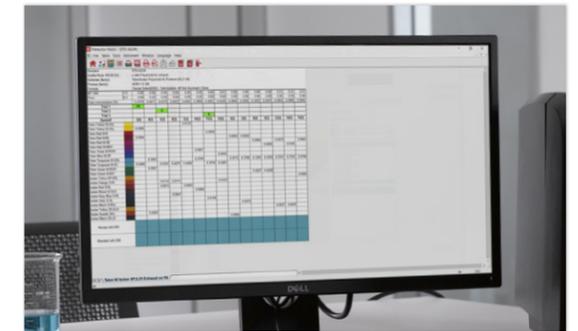


10. Thread finishing:

AMANN has finishing machines installed in all dye houses to simulate the process. This way, the approval can be done directly after dyeing. This further helps **AMANN** quickly determine if the batch is within specifications or has to be reworked. For this purpose, it has to be checked whether the color difference after dyeing and finishing is always the same.

11. Final quality control checks

are performed visually and digitally. [Datacolor Process](#) and [Datacolor Match Textile](#) have been customized for **AMANN** to ensure the same color population worldwide.



12. Cost control:

By entering the prices of dyes into [Datacolor Match Textile](#) and [Datacolor Process](#), **AMANN** can get a recipe for a color with 3 to 4 options that are almost identical. This gives them the freedom to choose between several options: least expensive or best practice, supposing the best possible metamerism.

13. Instrument monitoring:

The [Datacolor Guardian](#) predictive monitoring service is used to compare the measurement values of all devices across all locations. With the support of Datacolor's service team, **AMANN** is able to ensure that every device is within the same tolerance range.



14. Maintenance:

AMANN is receiving regular maintenance and support from Datacolor's global team of experts to ensure consistently accurate results.



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PART 3: Always Staying a Step Ahead

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It's clear that **AMANN** is an industry innovator in so many ways. A Datacolor partner for over a decade and a half, the company has always prioritized accuracy and speed throughout their color operations. And thanks to a full suite of solutions, they are also prioritizing cost savings.

“Thanks to Datacolor, we reach our goal of deciding during the process whether the batch is within specifications or has to be reworked,” says Christian Scholz, Director of Global Industrial Engineering. “[And] we are being supported by real experts who analyze the challenges and offer outstanding solutions.”

Thank you to the team at Amann for being such wonderful partners. We're excited for what the future has in store.

STREAMLINED PRODUCTIVITY & PERFECT COLORS

REDUCE TIME & COSTS, LESS WASTE

datacolor

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