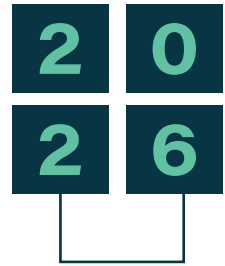




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WHITEPAPER

EPO's Colour Drawing Standards and Their Strategic Impact



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Executive Summary

This white paper is intended for in-house IP teams, patent lawyers, and drafting professionals working on complex or visually intensive inventions.

The European Patent Office (EPO) introduced a landmark procedural update effective 1 October 2025, allowing applicants to submit colour drawings and photographs in patent applications. This marked a significant shift from a decades-old rule that restricted illustrations to black-and-white line drawings.

The change reflects the EPO's broader modernisation strategy, embracing digital transformation and harmonising practices with global intellectual property offices. For applicants and patent professionals, the reform enables greater visual precision, improved examination efficiency, and strategic differentiation in increasingly complex technologies.

Importantly, this transition signals a move from a restriction-based framework to a justification-driven approach, where colour is permitted when it demonstrably enhances technical understanding. While this creates new opportunities, it also introduces new considerations around reproducibility, grayscale interpretation, and the risk of unintended claim limitations.



Historical Context and Background

Evolution of EPO Drawing Rules

Under Rule 46 of the European Patent Convention (EPC), the EPO historically permitted only black-and-white line drawings in patent applications. Photographs were allowed only when the subject matter could not otherwise be represented. The rationale was practical: uniform reproduction, archival simplicity, and compatibility with the printing standards of the 20th century. In addition to practical constraints, colour was historically avoided due to risks of inconsistent reproduction.

However, as innovation advanced, particularly in biotechnology, semiconductor design, and digital imaging, these restrictions often constrained visual communication. Colour information, though scientifically essential in many cases, had to be approximated through grayscale or explained through complex textual descriptions.

Comparison with Global Practices

Other major IP offices had already modernised their standards:

- **USPTO:** permits colour drawings since 2014, provided that a petition and explanation are filed.
- **WIPO (PCT):** accepts colour figures in international applications if the technical content requires it.
- **CNIPA (China) and JPO (Japan):** have gradually allowed colour images for specific categories.

The EPO's decision aligns Europe with these practices, reflecting an ongoing trend toward global harmonisation of visual disclosure standards. While these offices permitted colour earlier, its use has remained conditional and controlled, with usage typically limited to cases where it served a defined technical purpose.

Limitations of Black-and-White Submissions

In practice, applicants and examiners often faced issues such as:

- Difficulty distinguishing overlapping components or structural layers
- Ambiguity in chemical or biological diagrams
- Reduced interpretability of microscopy or imaging-based inventions
- Increased text-based explanations to compensate for lost visual clarity

Colour representation offers a logical and long-awaited remedy. By allowing inventors to present technical information in a manner closer to how it is generated, analysed, and used in practice, colour drawings improve clarity and support more accurate technical assessment.

Reliability of Colour: Then vs. Now

Historically, colour drawings were avoided not only due to cost and printing limitations, but also because they introduced potential ambiguity. Variations in printing quality, photocopying, and lack of colour standardisation often resulted in inconsistent reproduction. The same figure could appear differently across copies, and critical distinctions could be lost when converted to grayscale.

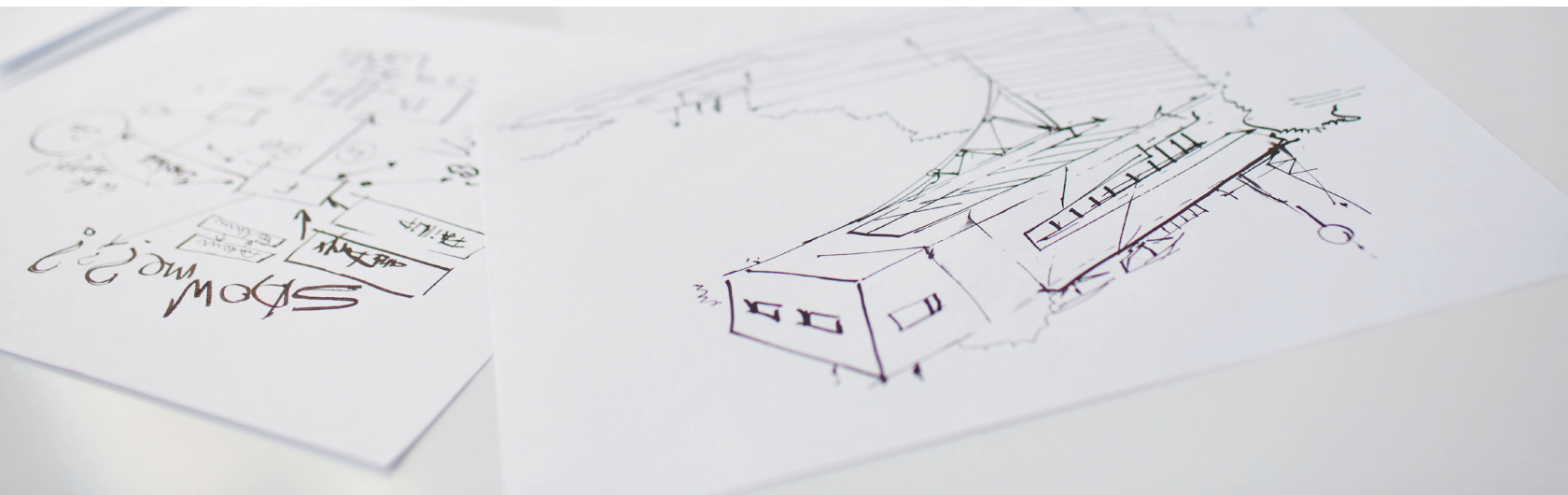
In modern patent systems, these limitations have largely been eliminated. Digital-first workflows ensure exact reproduction of submitted figures, while standardised colour models and high-resolution displays enable consistent interpretation across viewing environments.

As a result, colour is no longer inherently ambiguous. However, its use remains conditional: it must enhance technical clarity and should not be the sole means of conveying essential information, particularly given the continued requirement for grayscale legibility.

The EPO Guidelines (Effective 1 October 2025)

Under the revised EPO Guidelines for Examination, the Office now permits colour drawings and photographs in patent applications for all technical fields. Colours should be used only where necessary to improve clarity. Applicants must ensure that figures remain legible in grayscale, as publications may still appear monochrome. Digital submissions are accepted in PDF or DOCX formats via the EPO's online filing systems.

This reflects a shift from a prohibition-based framework to a conditional acceptance model, where the burden is on the applicant to justify the use of colour.



The Rationale Behind the Change

The EPO's modernisation reflects a convergence of technological capability and evolving user needs, enabling colour to be used as a controlled technical communication tool rather than a source of ambiguity. Colour figures integrate seamlessly into digital workflows, improving interpretation and reducing examiner queries.

Examples:

- **Biotech:** different cell types or protein markers distinguished by hue.
- **Electronics:** coloured conductive layers or microchip boundaries.
- **Mechanical:** distinct components visualised without excessive text.

We have included sample comparative visualisations in the [Appendix](#) illustrating these use cases.

User feedback highlighted that clearer visuals lead to faster examinations and better understanding.

Importantly, colour is not treated as a replacement for established drafting conventions, but as a complementary layer of information.

Practical Implications for Applicants and Practitioners

Workflow Adaptation

- Update templates in CorelDRAW, AutoCAD, or Illustrator
- Test grayscale readability
- Retain both colour and grayscale variants
- Use high-resolution, lossless file formats
- Implement colour usage guidelines aligned with EPO expectations

Best Practices for Effective Use of Colour

- Use colour only to clarify, not decorate
- Maintain consistent palettes
- Include legends
- Avoid light tones
- Review figures at 300 dpi or higher
- Use reference numerals or labels alongside colour

Common Risks and Mitigations

Risk	Mitigation
Loss of detail in grayscale	Test readability before submission
Colour inconsistency	Use CMYK-safe tones
Excessive visual complexity	Limit colours for clarity
Large file size	Use optimised PDF/X compression
Over-reliance on colour for feature identification	Use reference numerals and labels as primary identifiers

Strategic Opportunities

This update introduces a more structured way to present and interpret inventions, enabling clearer differentiation of complex elements within the disclosure. It is particularly impactful across biotechnology, electronics, mechanical design, and industrial design sectors.

Example: In biotechnology, for studying protein localisation or DNA damage response, [Figure 6](#) shows the same graph in both grayscale and coloured formats to highlight differences in interpretability. It represents the distribution of fluorescence intensity across a cell following irradiation. Colour enables clear differentiation of intensity levels, while contrasting regions (such as blue and orange) can indicate variation or standard deviation across multiple samples, highlighting the consistency of the distribution pattern.



Challenges and Considerations

While widely welcomed, challenges and considerations could include:

- Colour consistency and accuracy variations
- Training needs for drafting teams
- Higher preparation costs
- Integration with older monochrome filings
- Risk of unintended claim limitation if colour is described as a defining feature

The Way Forward

The European Patent Office's acceptance of colour drawings marks a pivotal step in patent modernisation. Colour is not embellishment; it is information, but only when applied in a controlled, reproducible, and legally robust manner. This transition reflects a broader shift in patent drafting, where visual representation plays a more defined role in supporting disclosure and examination.

As colour becomes part of European patent practice, its effective use requires a careful balance between clarity, compliance, and claim scope. Poor application of colour can introduce ambiguity, reduce reproducibility, or unintentionally narrow protection.

At Elevate, we translate complex inventions into precision-engineered patent visuals, supporting global law departments and law firms with a disciplined, technically grounded approach.

Our approach goes beyond visual execution. It is built on a structured methodology for technical visualisation, where colour is applied with purpose and discipline. This includes:

- Defining visual hierarchies to support consistent interpretation by the examiner
- Applying controlled colour schemes aligned with technical meaning
- Ensuring consistency across colour and grayscale outputs
- Integrating drawings with claim structure and disclosure strategy

By combining drafting insight with advanced visual engineering, we ensure that drawings support effective examination and strengthen the overall integrity of the application, without introducing legal or interpretive risk.

In a landscape where visual communication is increasingly strategic, we enable our customers to move beyond compliance and leverage drawings as a structured component of effective patent disclosure.

Appendix: Sample Comparative Visualisations

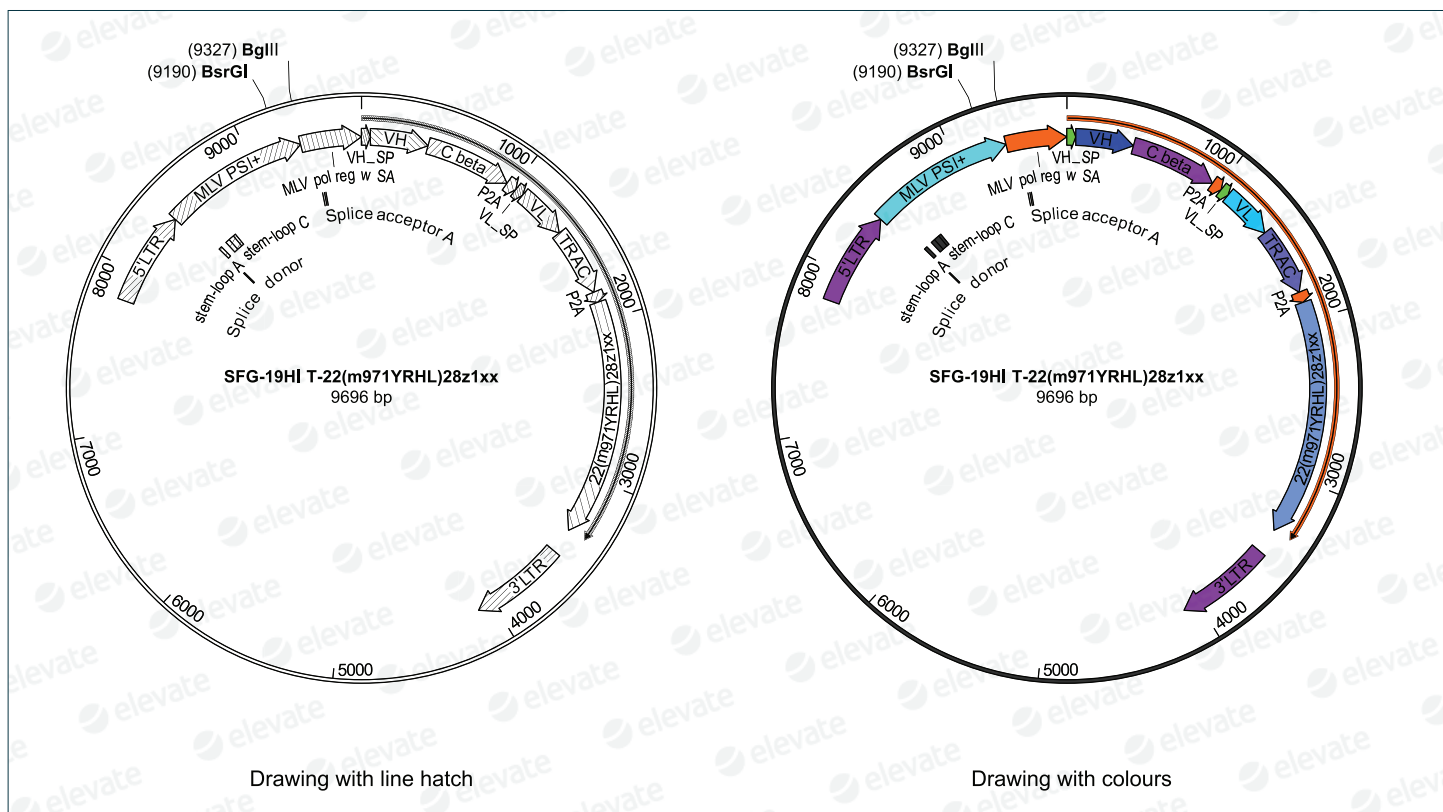


Figure 1

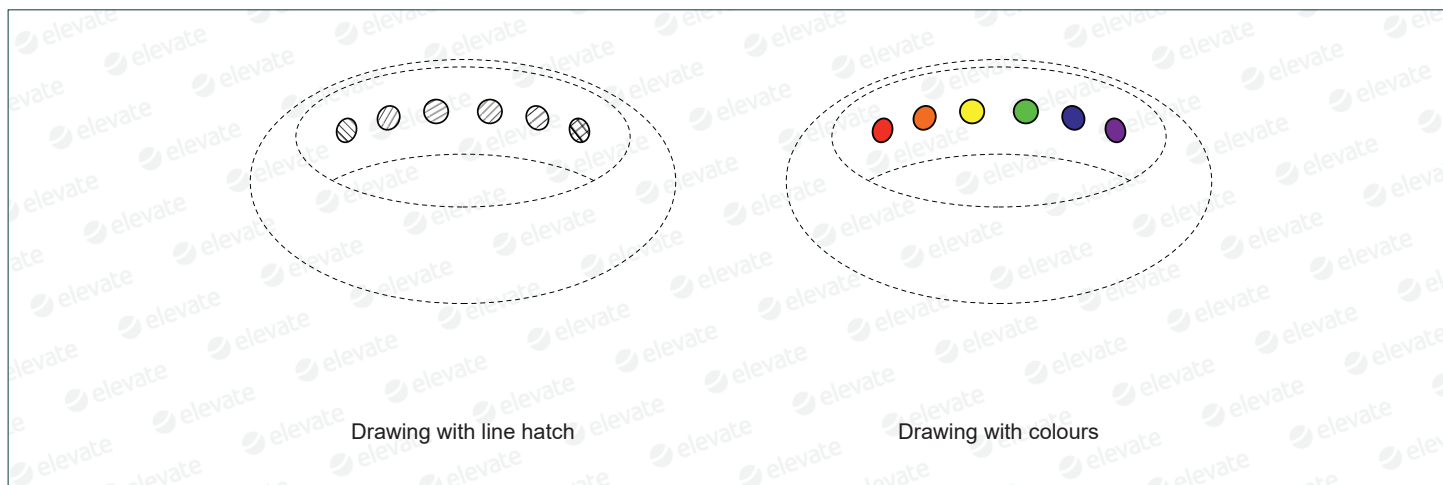


Figure 2

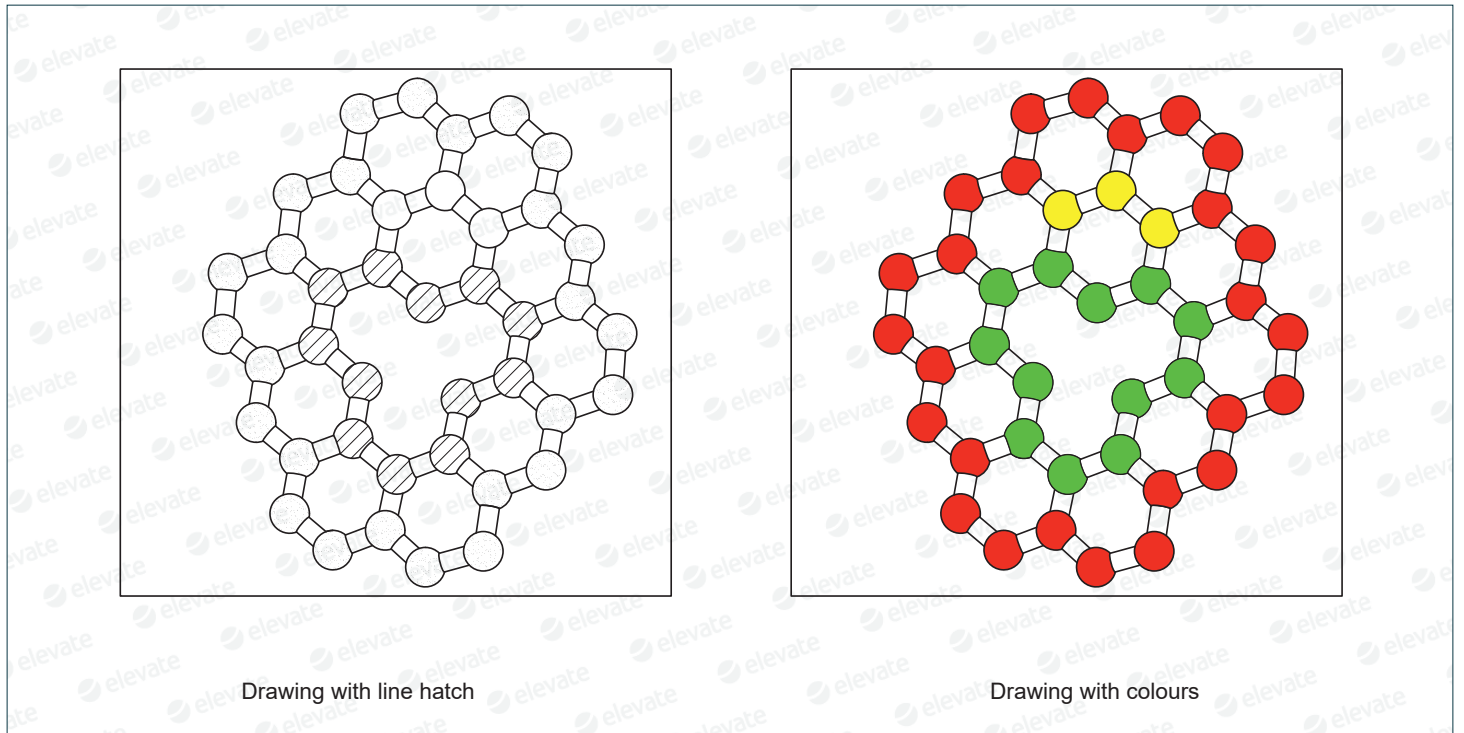


Figure 3

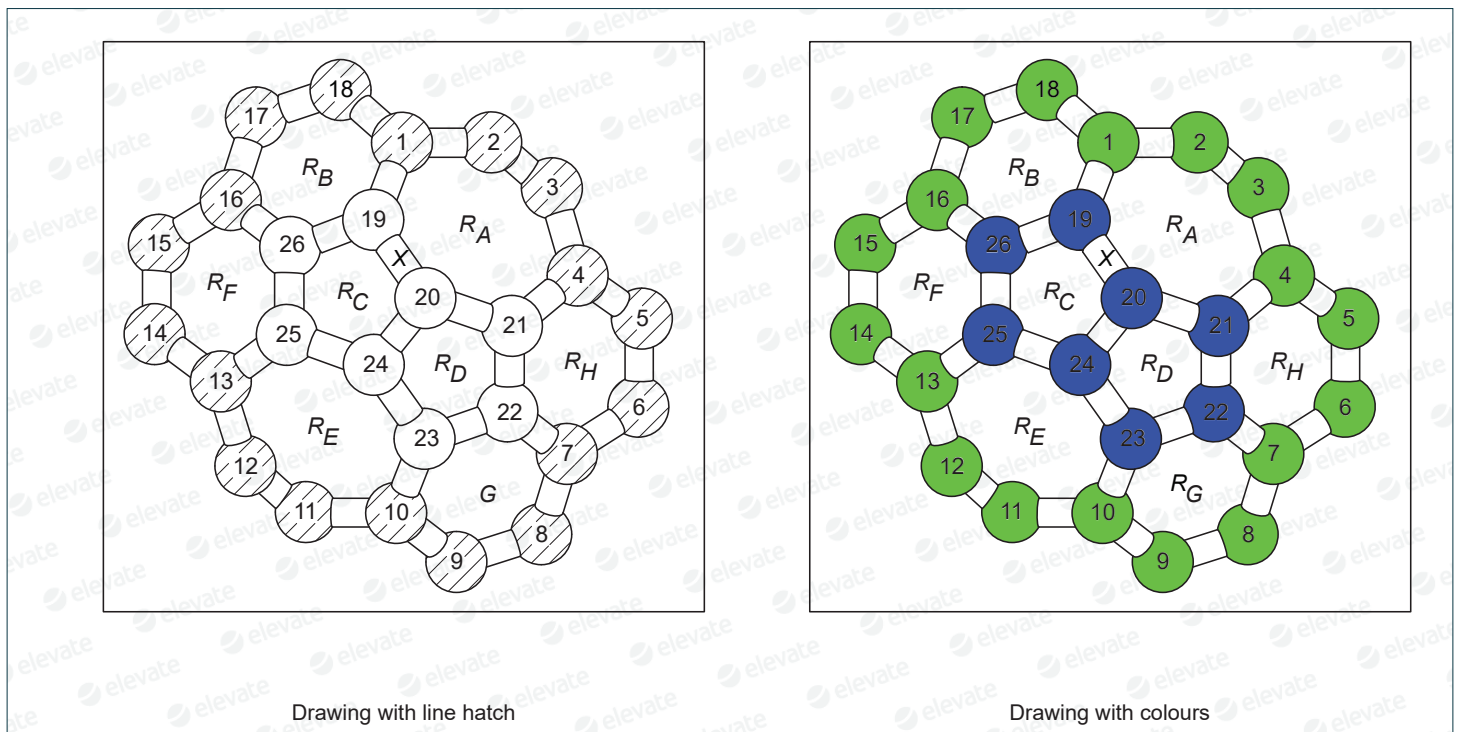


Figure 4

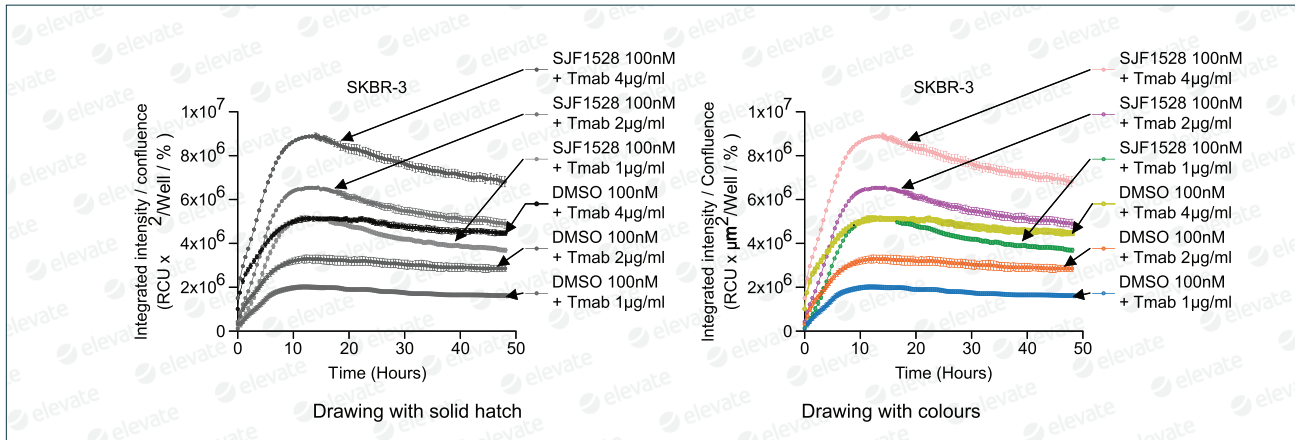


Figure 5

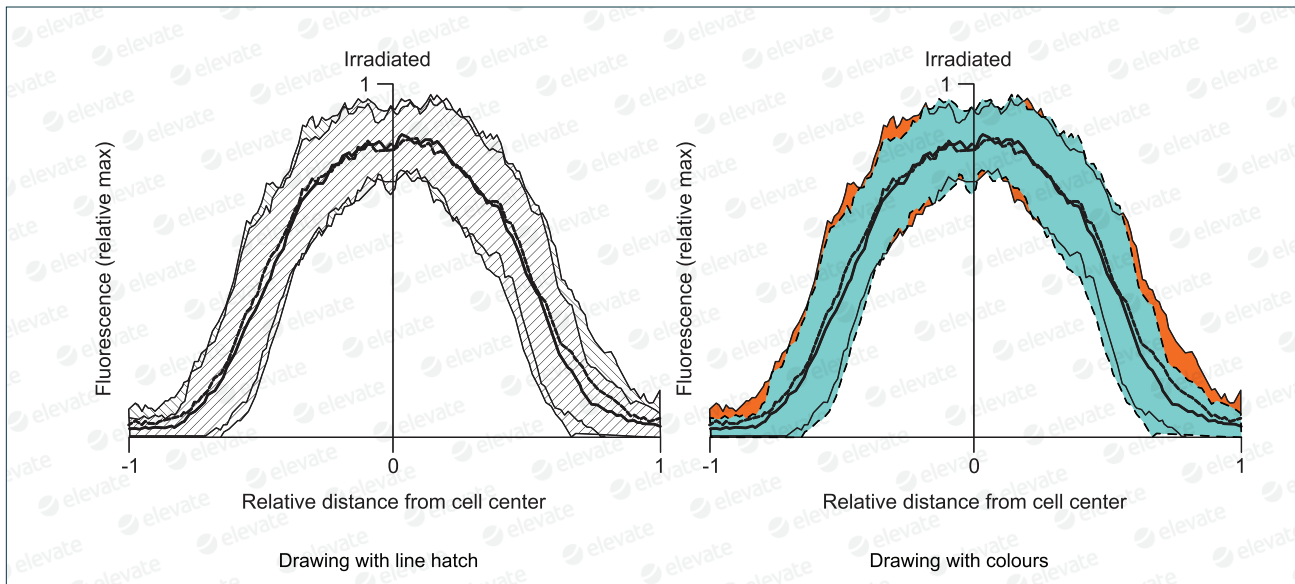


Figure 6

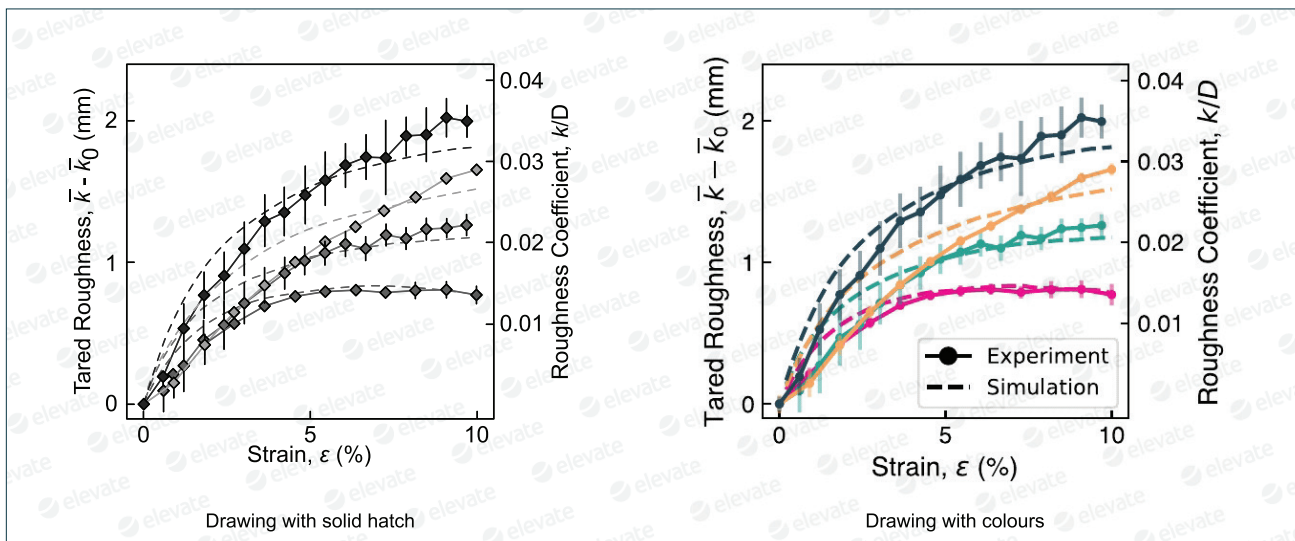


Figure 7

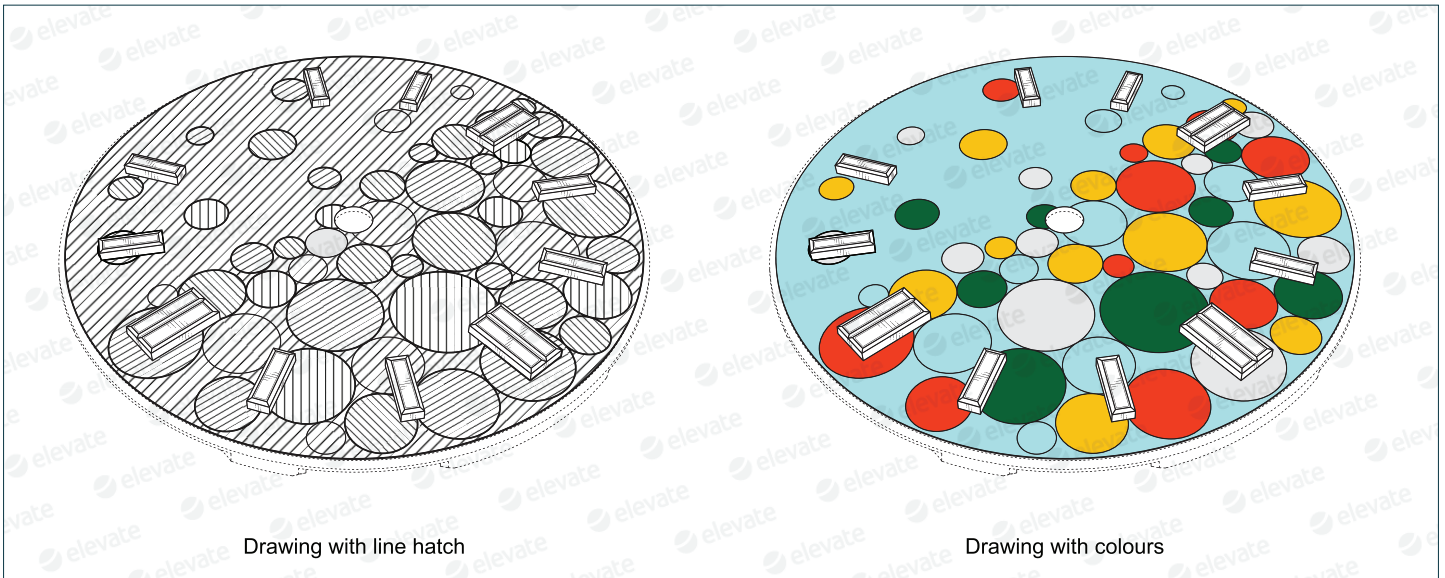


Figure 8

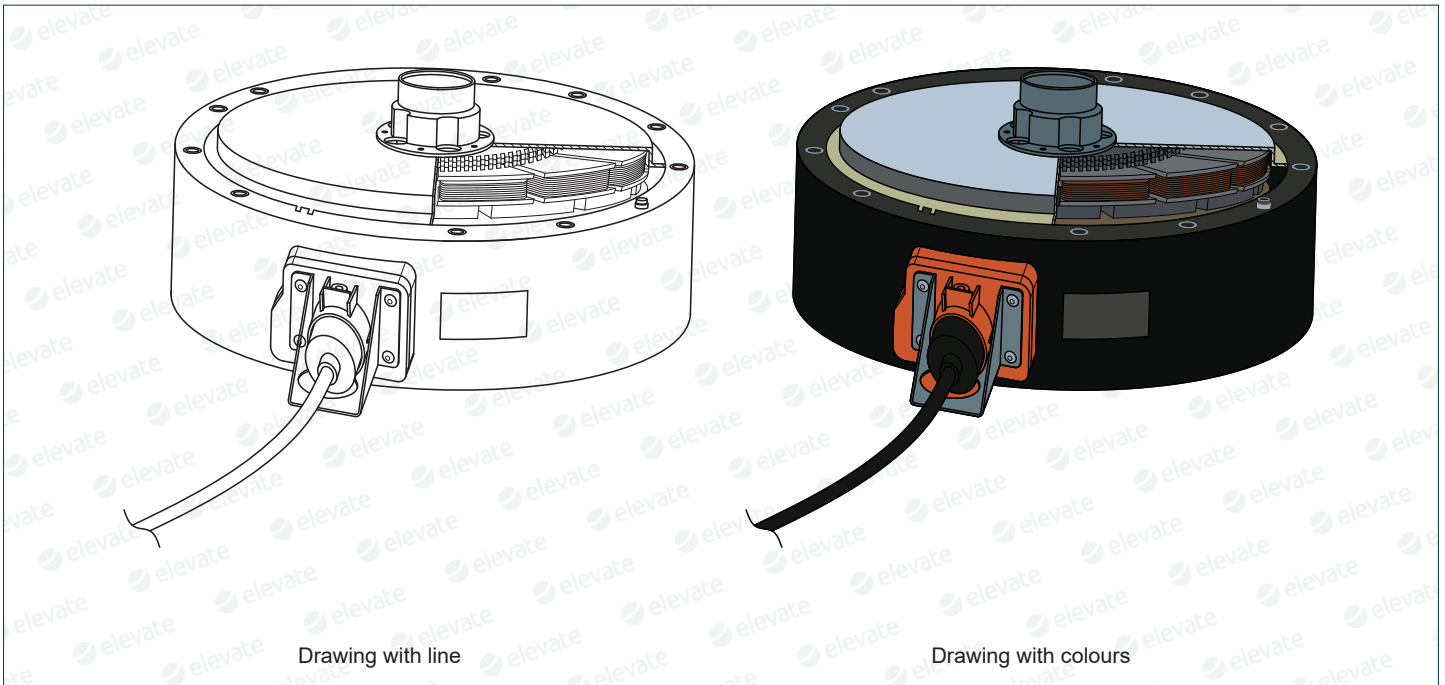


Figure 9