

TRANSFORMING CONNECTIONS, FOR THE BETTER



## INGENIOUS TECHNOLOGIES FROM THE FLOOR UPWARDS

i4F's vision is to enhance where people live, work and play with ingenious technologies, from the floor upwards. Its mission is to continually revolutionize flooring, and beyond, through technological excellence, meaningful innovation and human partnerships.

i4F supports the global flooring industry by licensing cutting-edge solutions in the areas of drop-lock technologies, digital printing, surface finishing - including technologies that imitate ceramic grouts, board and panel compositions, wall and ceiling installation systems, sustainable manufacturing processes and innovative outdoor technologies.

Pick and choose the patents or groups of patents that best suit your business needs via i4F's unique **Patent Cluster Concept (PCC)**. i4F's PCC lets licensees decide which technologies will reinforce their market position – or open up new revenue streams as trends change. i4F's PCC also provides full transparency on fees so that licensees can obtain the best return on investment while avoiding unnecessary payments for unused technologies.

i4F believes that even the smallest innovations have the potential to transform not just products, but the lives of the people that use them. It's why the group owns and represents thousands of patents and technologies. And it's why i4F continues to develop more independently and with its partners.

i4F has strategic partnerships with the industry's most important IP players, including Classen, Kronospan, HMTX, CFL Flooring, Tarkett, Kingdomfloors, Li&Co, Amorim, QuickStyle Industries, Hymmen, Wellmade, Hesse - Lignal and Exterpark.



# Lock into faster flooring installation

## The world's easiest and best flooring installation systems

Flooring systems don't come any faster or easier to fit. In i4F's unique drop-lock system, two technologies come together to make one strong, high-performing floor.

3L TripleLock® - The "original" one piece drop-lock system for the short side

**3L TripleLock®** is the easiest and fastest system for flooring installation on the market, and suitable for existing high-speed production. Unlike other systems, no inserts are needed on the short side. That means less work, smaller costs, fewer materials and a lower carbon footprint.

Click4U® - Angle system for the long side, combined with
3L TripleLock® on the short side
Click4U® works seamlessly with
3L TripleLock, enabling extremely
high locking strength. Fast and easy to install, no special tools are needed — and it's suitable for existing high-speed production machinery.



# Perfect pattern change

## Unique i4F drop-lock in/angle out system for professionals

i4F has launched a new, patented droplock system specifically designed for the installation of herringbone floor panels, whereby a panel's short side fits into the long side of an adjacent panel. The main advantage of this is that it enables easy installation, disassembly and replacements of panels in a herringbone pattern without compromising on high locking strength and the performance characterized by i4F drop-lock technologies.

FACILITATES EASY REPLACEMENT

**OF PLANKS** 

HIGH LOCKING STRENGTH

**EASY TO INSTALL** 

AND DISASSEMBLE

SUITABLE FOR USE ON

ALL MATERIALS

IDEAL FOR
HERRINGBONE AND
PATTERNED FLOORING

ON ADJUSTMENTS

EASIER TO INSTALL COMPLEX DESIGNS







# Eliminate the need for mirroring A&B herringbone panels



#### i4F HerringB/ONE single panel drop-lock system

HerringB/ONE is i4F's new, intuitive technology featuring a single drop-lock mechanism on all herringbone panels. This eliminates the need for mirroring A and B herringbone panels, delivering simplified installation and replacements, as well as less waste and streamlined manufacturing. The patented technology is exclusively available via an i4F drop-lock license.

By eliminating the need for mirroring A and B panels, i4F's new HerringB/ONE drop-lock system lock benefits the entire supply chain by optimizing production processes, reducing packaging costs and waste, as well as optimizing overall efficiencies.

Manufacturers can streamline production, and reduce costs

production, and reduce costs associated with multi-panel boxing, packaging, and instructions.

**Retailers** are empowered to meet the surging demand for herringbone flooring by offering a super easy installation system.

End-users also benefit from a reduction in panel wastage by being able to accurately calculate the required number of boxes according to their space's surface area.

Simplifying the timeless elegance of herringbone in any direction and space.

SAME DROP-LOCK
MECHANISM ON ALL
HERRINGBONE PANELS
DELIVERS SIMPLIFIED
INSTALLATION AND
REPLACEMENTS

REDUCES WASTE

STREAMLINES
MANUFACTURER
PRODUCTION AS A&B PANELS
BECOME OBSOLETE

AVOIDS ADDITIONAL MULTI-PANEL PACKAGING COSTS

# Real ceramic floors that just "Click"

i4F's Ceramic Click patented system takes all the benefits of a floating, modular floor and combines it with the beauty and strength of real ceramics by delivering a click installation system for ceramic tiles enhanced with an i4F drop-lock system.



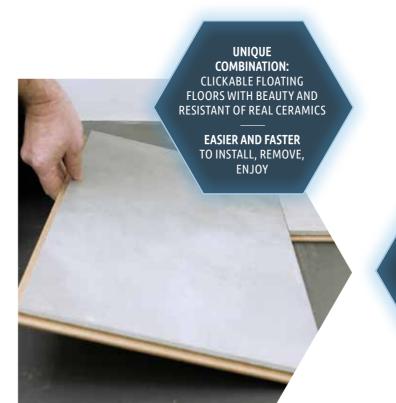
#### The best of both worlds

A technological installation breakthrough that combines the ease of a floating, modular floor with the strength and beauty of real ceramics. Click ceramic tiles into place quickly and easily, meaning DIYers can use it and professionals can pack more jobs into a single day.

i4F Ceramic Click is a unique combination whereby a ceramic tile is attached to a board featuring an i4F drop-lock system and by which tiles are

joined together by super thin grouts (1 mm). i4F's drop-lock technology enables ceramic tiles to click into place quickly and easily, meaning professionals as well as DIYers can benefit. The system is also ideal for non-residential projects as there is virtually no waiting time.

i4F Ceramic Click delivers all the flexibility of floating floors with the advantages of real ceramics – water - as well as scratch and stress – resistant.





- PROFESSIONALS

7





# Lock out water damage

## Water-resistant drop-lock technology with iClick4U®

i-Click4U® (impermeable-Click4U) is the world's first water-resistant one piece drop-lock flooring installation system, complementing i4F's leading Click4U® technology. i-Click4U exceeds all NALFA (North American Laminate Flooring Association) requirements relating to water-resistant flooring including the requirement that panels must withstand water for a minimum of 24 hours. The system has also been independently tested and approved by renowned German and French test institutes. Unlike other one piece floor locking systems, i4F's i-Click4U technology eliminates the need for any chemical sprays or additional sealing substances, like wax or paraffin, normally required to prevent water leaking into flooring panel joints.

## Stop the swelling. Not the fun

## Water swell-resistant impregnation technology for laminate

i4F AquaProtect is a high-precision, resource-saving impregnation technology that protects laminate-core HDF boards from water swell by up to 75%, thus dramatically increasing their overall water-resistance. The technology applies a hydrophobic impregnation agent, avoiding unnecessary overspray, and seals the joint edges of both V-grooved and non-V-Grooved laminate panels. Laminate treated with AquaProtect meets all recognized international laminate water-resistance standards and tests, including NALFA and ISO 4760.

Fully compatible with existing laminate manufacturing lines, AquaProtect is a unique proposition as it enables producers to significantly upgrade their offerings for a relatively low investment. The technology delivers the same moisture-resistance performance as standard laminate-core HDF boards with a 20% higher resin content and it also works on any type of locking. The impregnation agent's unique formula is supplied by Riepe, a market-leading company that delivers spraying solutions for the woodworking industry, and is exclusively available for AquaProtect licensees.







## Love the look and difference

#### i4F CeraGrout technologies

CeraGrout delivers a more cost-effective, easy-to-install and maintainance alternative to real ceramics.

Tiles and planks featuring i4F grout technologies mimic perfectly the aesthetics of modern 'rectified' ceramics with an integrated grout. Extremely durable and delivering superior resistance to wear and tear, stains, and chemical household agents, tiles/planks featuring i4F grout technologies are very easy to install as well as replace, especially when compared to traditional ceramics. Beautiful to use on both floors and walls. This offers a huge opportunity to extend floor collections to wall applications. The trend for wet

rooms and en-suite bathrooms is driving demand for floor and wall products that imitate ceramics. Unique grout technologies, exclusively available via an i4F license, deliver more realistic, visible joints via integrated grout lines for both flooring and wall panels.



TRADITIONAL
CERAMICS
———
EASIER TO INSTALL

**IMITATES** 

AND MAINTAIN
——
MORE HYGIENIC

**LESS STAINS** 

10





## Deep pore coating for all wood surfaces

POREGUARD is a patented technology delivering advanced deep-pore coating suitable for all wood surfaces, including parquet, engineered wood, furniture, etc.

POREGUARD's uniqueness lies in its ability to reach and coat the pores of deep pored and brushed structured wood while keeping pores open. This provides deep pore protection while preserving the natural look and feel of wood structures. Moisture and dirt resistant, POREGUARD enables easy cleaning and upkeep as well as avoids discoloration and shiny, lacquered surfaces.

Suitable for use with existing lacquering lines, the introduction of the technology into production incurs little, or no, investment.



## Easy decking installation for all

After years of delivering innovative, meaningful technologies that transform indoor environments for people to live, work and play, we have decided to take our experience and vision outdoors to empower people to transform their outdoor spaces easily, and quickly. Our transformative technologies are designed to take outdoor products to the next level.



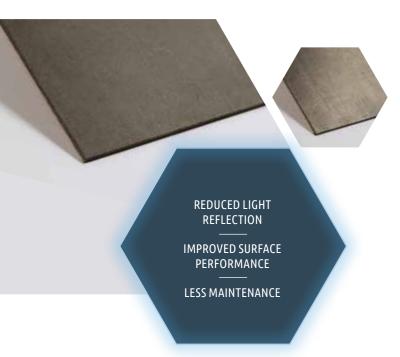
**i4F ClikDek®** is i4F's new smart-fixing decking technology, delivering easy, click-into-place installation that's 3 times as fast to place as traditional decking installation systems.

Our patented smart fixing method has been acknowledged by the industry as the best system available for several good reasons. Installation with i4F ClikDek is 3 times faster and highly



flexible, enabling access anytime, anywhere in seconds. Its mechanical locking is strong yet flexible meaning you can always go back, and an invisible profile means low maintenance, as the loss of items in between the panels is eliminated.

#### Matt is the new gloss



Matt finish floors continue to be in high demand. Achieved through a sophisticated curing process, i4F's surface finishing treatment delivers the ultimate matte look and enhanced benefits. It also has some serious benefits for flooring; reduced light reflection, less maintenance and better surface performance.







# Digital printing for flooring is here!

Cutting-edge digital printing technologies enabling flooring manufacturers to create unique designs, achieve superior optical quality, and avoid unnecessary inventory on pre-printed materials.

i4F licenses the world's most advanced digital printing technologies delivering results so close to the real thing that it's almost impossible to tell the difference. Cutting-edge technologies immediately available via an i4F license enable the creation of unique designs and avoid unnecessary inventory on

pre-printed materials. i4F's strong digital printing portfolio now also includes exclusive access to all Hymmen digital printing technologies, including its award-winning Digital Lacquer Embossing Plus (DLE +) technology offering unbelievably real optics and haptics.

# ALL MATERIALS SPECTACULAR RESULTS LESS WASTE Hymmen

### Climb the walls

#### Drive your flooring business upwards

i4F wall and ceiling installation systems enable flooring manufacturers not only to enter new markets, but to leverage existing designs – by launching new collections that combine flooring, walls and ceilings.

#### i4F Wall Panel installation system

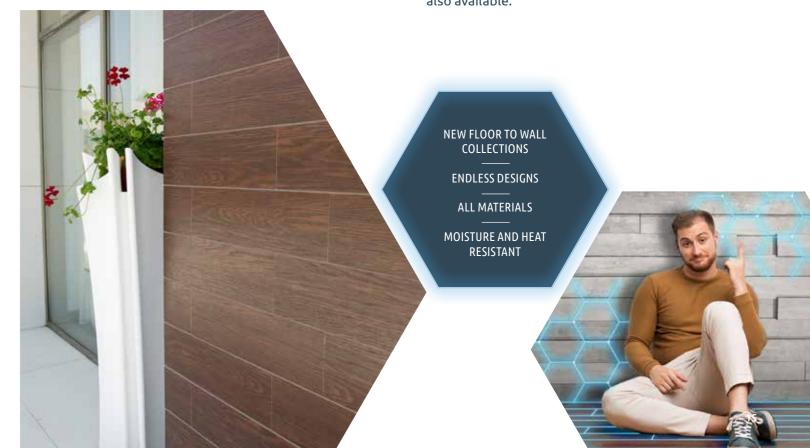
i4F has developed a new installation system for locking wall panels. The system enables panels to be either screwed onto slats or glued against a wall. A key innovative aspect is that screws may be fastened into the locking without hindering the installation of the next panel. The system works on all materials and is moisture as well as heat-resistant.

#### 3D Wall Installation systems

A patented installation system enabling three different levels of panels to connect for the creation of an amazing 3D effect on walls.

#### Installation systems for Walls & Ceiling panels

A wall and ceiling panel clicksystem using an innovative profile providing variable joint options for easy installation and diverse design possibilities. A specific locking application for wall panels using glue is also available.









## Patented, sustainable rigid bio-cork composite

#### 100% plastic and PVC free

Experience the perfect blend of sustainability and performance with i4F's unique sustainable rigid bio-cork composite technology.

Exclusively available via i4F, the new sustainable rigid bio-cork composite patented technology offers a revolutionary solution that is 100% plastic and PVC free.



At its core lies a unique bio-cork composite, meticulously crafted from cork particles and other bio and recycled materials. End products boast an exceptionally low-to-negative carbon footprint.

Despite its eco-friendly composition, it equals, and even outperforms traditional rigid-core products, delivering durability and sustainability in equal measure.



A magic formula delivering the perfect blend of sustainability and performance.

# Rigid Core TPU technology

## Flooring circularity that lives on for generations

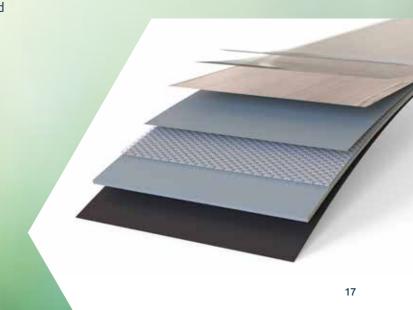
Introducing RenewaSRP®, a new Rigid Core TPU patent pending recyclable technology developed as an environmentally conscious solution to alleviate the challenge of single-use plastics. Two plastic bottles\* (PET) are upcycled into each square foot of SRP flooring, with a cross-linked polyurethane top layer, thermoplastic polyurethane (TPU) core layer, and a cross-linked foam back layer.



Layer upon Layer of Innovation
Ultimately, the composition is
transformed to an engineered
thermoplastic polyurethane (TPU)
which becomes the foundation of a
single polymer construction. In a first
for the flooring industry, and after a
lifetime of use and reuse, RenewaSRP
TPU rigid core-based flooring is
designed to be recovered and remade
into new flooring with the exact same
characteristics: forged from the ground
up for a circular economy.

The real power of **RenewaSRP** is its ability to live on.

RenewaSRP enabled flooring products are initially made from over 20 PET water bottles per square meter of flooring, helping to reduce the amount of plastic waste plastics in the environment. Planks and tiles are engineered to be recycled into new RenewaSRP flooring when they reach their end-of-life while maintaining product performance and quality.





# Sustainable savings and unbeelieveably light

#### The more sustainable way to make SPC panels

i4F Be-Lite® is a new, patented technology that enables a significant reduction in the use of core SPC raw materials during the manufacturing process of decorative panels without compromising on performance.

Because SPC panels produced using i4F Be-Lite are significantly lighter, it is a lot less expensive to make and transport them.

i4F Be-Lite significantly improves the flooring industry's carbon footprint while remaining attractive to manufacturers by also delivering cost savings. That makes a meaningful difference and is truly a win: win for the industry and the planet. i4F Be-Lite is a thermoforming technology that, depending on panels' core thicknesses and the i4F Be-Lite shape chosen, uses up to 20% less raw materials during the panel's core manufacturing process.

This differs from other existing material savings techniques that remove and recycle materials after the panel production process creating more costs and CO<sub>2</sub> emissions linked to the transport and recycling of scrap. The resulting, lighter SPC panels maintain optimum performance while easily reducing by at least 5% of a panel's total manufacturing raw material costs as well as decreasing transport costs by at least 6%.

i4F Be-Lite is exclusively available via an i4F license as part of its portfolio of sustainability-focused process technologies.

