



Less Is More

INNOCAB® provides a lightweight structure that improves overall performance. Efficient system integration ensures that fewer components are required per unit.

A Low-Maintenance, Cost-Effective and Time-Saving Solution

INNOCAB® modular system **significantly reduces unit assembly time**. Existing cabin design upgrades or entirely new cabin concept installations are developed efficiently and require a minimum of tooling investment.

INNOCAB® systems are **low-maintenance and require minimal lifecycle investment**. In the case of element damage, the unit's sandwich technology allows train manufacturers and operators to directly apply certified panel repair systems. Smaller damages can be fixed at local workshops, while structural damages can typically be brought in for repair by qualified personnel at designated service centres.

Optimized over decades of production and service, INNOCAB® has earned its place as one of our most recognized products.

Safe, Durable, Impact-Resistant

INNOCAB®s offers weight reduction and increased strength made possible by a combination of carefully selected materials. The module's fibre-reinforced plastic, combined with high quality solid foam, **ensures noise reduction and heat insulation while achieving all required fire protection standards**.



INNOCAB®



Ready-to-assemble
train front ends

www.3acompositesmobility.com



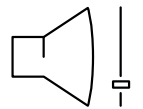
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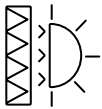
INNOCAB®



noise reduction



fire protection



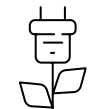
thermal insulation



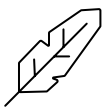
customization



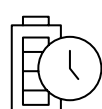
modularity



energy saving



lightweight



long lifetime

High quality, lightweight, ready-to-go rail front end cabin unit offering superior impact resistance. A reliable and trusted solution that can optionally be assembled and/or additionally equipped on demand. Coating finish options are also available.



The Modern Cabin Solution for Train Manufacturers and Operators

Lightweight, durable and approved for safety. INNOCAB® is considered a trendsetter for modern cabin design. The efficient use of composites in the mobility sector is rapidly growing.

Composite modules are increasingly being used to strengthen the structure of trains, tramways, subways, buses, planes and boats. INNOCAB® offers all the benefits of traditional materials to create a successful train concept. Since 1989, INNOCAB® products have served in the daily routine on many international railway networks.



Overview

The unit's solid foam core, fibre-reinforced plastic and cover layers are engineered for high quality, durable, modern-looking trains and rail front end cabins. By design, INNOCAB® is an ideal answer to demanding customer applications and is consistently developed for the future.



INNOCAB® Advantages

- Stiff and rigid structure offers **a safe work environment for train personnel**
- Non-corrosive materials ensure **long-lasting performance**
- Essential weight reduction **supports energy savings**
- Damages can be **fixed in-house** by use of a cold repair method
- Simplified repair process:** modular design makes for easy part replacement
- Minimized repair time**

INNOCAB® in Service

- Certified production processes** ensure consistent product quality to demanding industry standards
- Customized according to customer design and specifications**
- Resistance to impact and heat**
- Reduced number of parts **shorten assembly time**
- Fire protection, noise insulation**
- Optional **water or solvent based painting**
- Ready-to-install modules:** pre-assembled systems are delivered fully equipped

Production Technologies

Based on the customer order, INNOCAB® can be offered with the use of three distinctive production technologies: **Hand lamination** – for smaller volumes; **Vacuum Assisted Resin Infusion (VAC)** – for high volumes; or **Vacuum Infusion Process** – developed for highest stability. **All technologies offer superior product properties and high surface quality.**

Vacuum Assisted Resin Infusion (VAC)

- Technological competence** from CAD design and engineering to ready-to-install modules
- Designated for producing **high-quality, large-scale structural elements**
- Design based on solid foam or cores** covered with fibre-reinforced resins and gel-coated skins
- Process includes core bonding for **reduced manufacturing time**
- Inserts for **quick interior element installation** can be added during the manufacturing process
- INNOCAB® systems **are available from unfinished, primed, coated finish, partly assembled up to ready for assembly**



Vacuum Infusion Process

- Cost-efficient process for ultra-lightweight and extremely stable** composite parts
- Product offers **increased stiffness and durability levels** compared to standard common composite production technologies
- Capable for composites with higher fibre content** for improved overall product properties
- Cabin fronts (including interior) can be completed **with a choice of coated finish**

Water or Solvent Based Painting

- Large-sized front ends coated in top modern painting infrastructure **with humidity and temperature control system**
- Applicable for a **wide range of coating systems**
- Multicolor surface option** available
- Full range of test** equipment according to specifications
- High-class surface quality**

