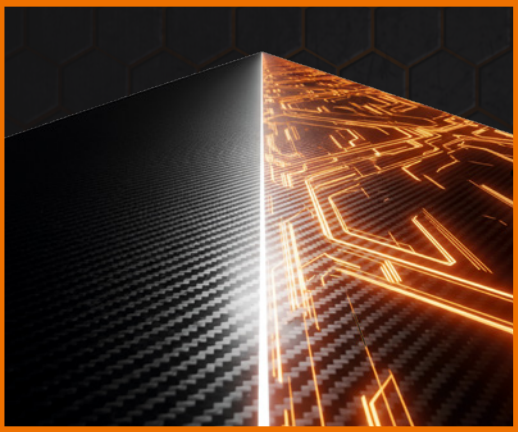
COMPOSYST GMBH

VAP®



MORE STABILITY, MORE STIFFNESS, MORE POSSIBILITIES – WITH THE PATENTED VAP®-TECHNIQUE

COMPOSYST has the license from the patent holder AIRBUS Defence and Space GmbH to offer the complete VAP®-portfolio of products and services. Customers can choose from the full range of licensed VAP®-materials developed for manufacturing of high-strength composites. If buyers need further assistance, COMPOSYST can offer experienced experts for consulting.

EXPERTS FOR LIGHTWEIGHT

VAP®-PROCESS

VAP® – VACUUM ASSISTED PROCESS

The AIRBUS Defence and Space GmbH (formerly EADS) patented Vacuum Assisted Process (VAP®) uses the properties of modern, semi-permeable membrane systems in highly developed textile composites to apply the effect of a vacuum to the entire surface of a component. This "vacuum assist" ensures that trapped air and gas can be reliably and efficiently removed during resin infusion.

VAP® – FUNCTIONAL PRINCIPLE

The Vacuum Assisted Process (VAP®) is a technique to manufacture composite parts using vacuum injection; it applies membrane-assisted low-pressure infiltration.

The surface of the part to be infiltrated with resin is covered with a flexible membrane system. The membrane is permeable to gas but impermeable to resin. When resin is infiltrated into the part inside the membrane, the latter keeps the resin inside the matrix and away from the vacuum duct.

Yet, aided by the low pressure in the vacuum duct, trapped air and gas can still escape through the membrane's micro-permeability and are purged via the textile layer.

The vacuum acts uniformly, so purging takes place across the entire contact surface between part and membrane, during and after infiltration.

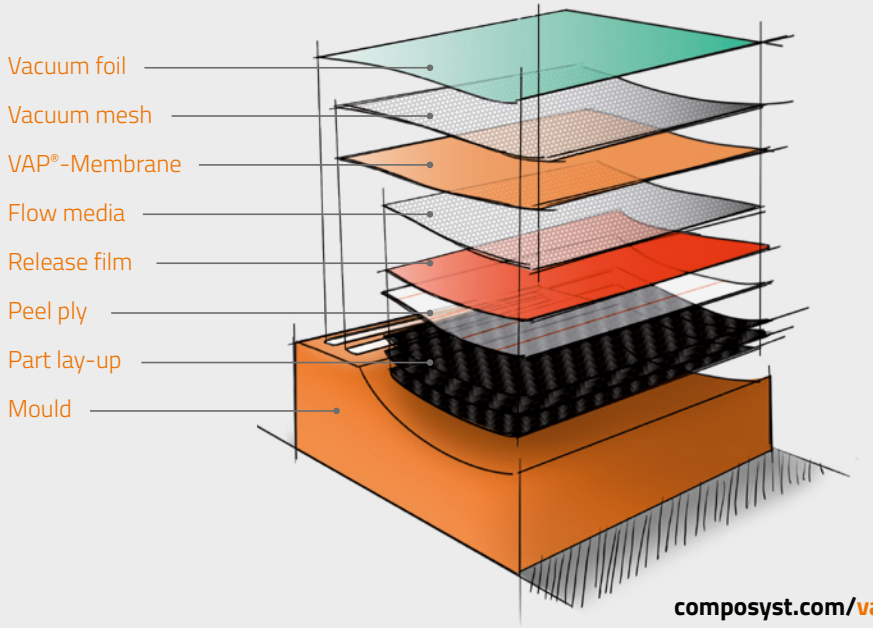
YOUR BENEFITS

- Easy implementation, as existing infusion tools and materials may be utilised.
- Excellent component quality without dry spots.
- Low laminate porosity due to efficient purging of air and gas through the VAP®-membrane during and after infiltration.
- Accurate control of fibre volume content.
- Minimum resin waste, the needed amount of resin can be calculated in advance.
- Homogeneous fibre volume content due to uniform vacuum across entire surface.
- No need for detailed planning of resin flow channels.
- Potential for higher component integration.
- Consistently stable and controlled process, offers high process reliability and reproducibility.
- Minimum investment needed.

VISION CONTROL – SEE THE FLOW.

CONTROL THE PROCESS.

COMPOSYST
AIRBUS-authorised LICENSOR



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WE EFFICIENTLY PRODUCE
LIGHTWEIGHT COMPOSITES
IN AEROSPACE QUALITY

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