

# Krautkrämer RokStar

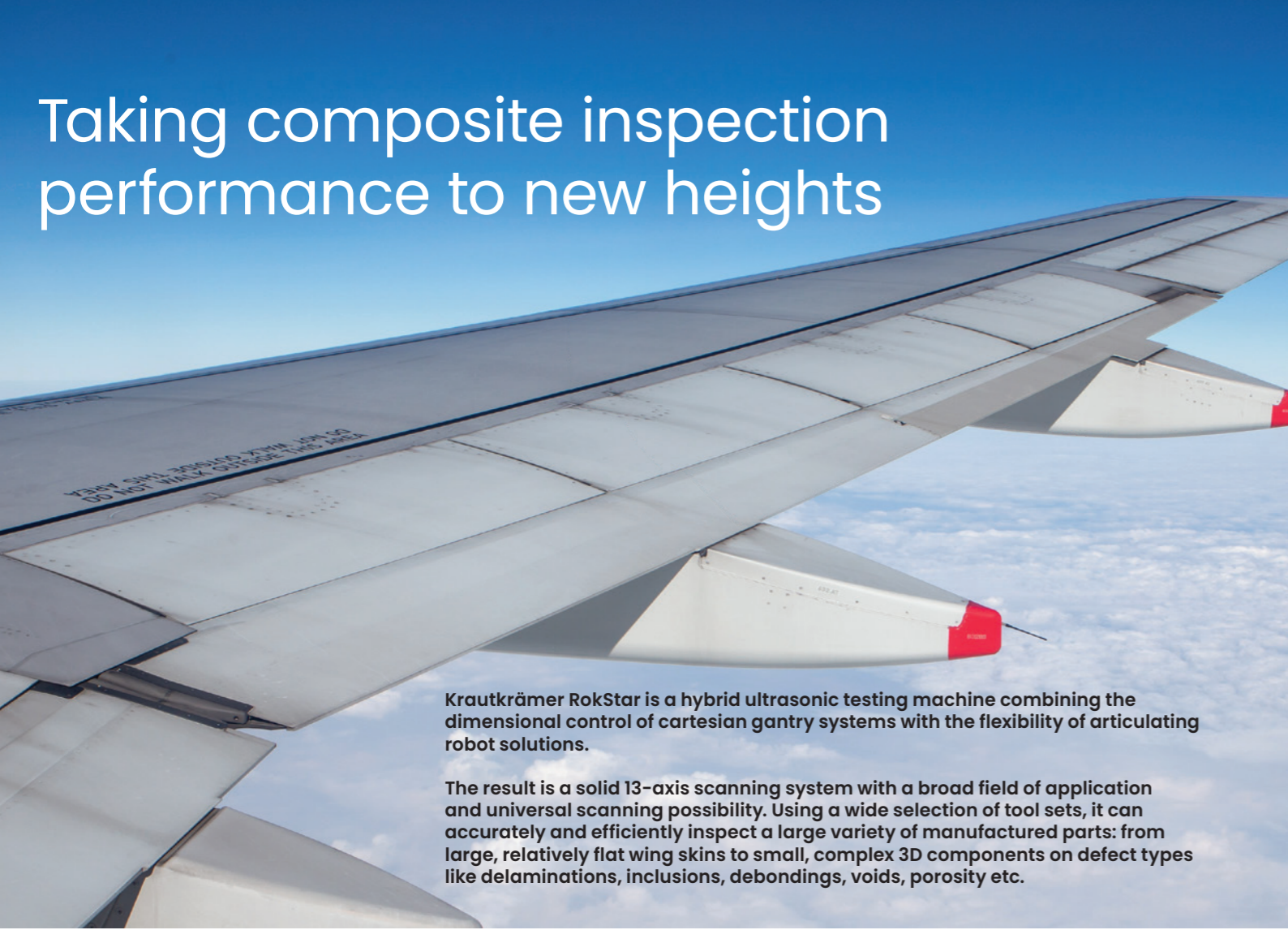
Ultrasonic inspection solutions for small to large sized and complex shaped aerospace composite parts

- Market leading accuracy
- Outstanding reliability
- Highest productivity
- High versatility
- 40+ years experience
- 50+ installations worldwide

**Innovation starts here.**

 **Waygate  
Technologies**  
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# Taking composite inspection performance to new heights



Krautkrämer RokStar is a hybrid ultrasonic testing machine combining the dimensional control of cartesian gantry systems with the flexibility of articulating robot solutions.

The result is a solid 13-axis scanning system with a broad field of application and universal scanning possibility. Using a wide selection of tool sets, it can accurately and efficiently inspect a large variety of manufactured parts: from large, relatively flat wing skins to small, complex 3D components on defect types like delaminations, inclusions, debondings, voids, porosity etc.

# Inspection efficiency at all levels

## The system that will not let you down

The robust test mechanics are considered the most accurate test mechanics in the market using low tolerance components to ensure maximum precision, even for the inspection of large parts. This leads to unmatched homogeneity test results in through transmission mode. Additional turntables and part holders are available to inspect a wide variety of component geometries. The coupling water supply unit provides a three-stage filter technique to remove floating particles and bacteria. It thereby guarantees high-quality coupling water for every test application and facilitates the best results over a long time span.

## Boosting your operations

Based on a common platform and installed in an air-conditioned cabinet a multitude of modular UT electronics is available, ranging from high-precision single-channel applications to external high-performance transmitters as well as multi-channel phased array packages for critical application needs and highest test speed requirements.

Pulse Echo and Through Transmission Inspection capabilities are available individually but also in combination to maximize productivity.

## Confidence in application expertise

With more than 40 years of experience in automated industrial inspection of aerospace parts and a large installed base all around the globe, Waygate Technologies is a trusted partner in aerospace material testing. Many customers operate multiple machines, having placed their trust in RokStar for decades. The system is well established in the market because of its proven productivity and performance.

Our experts work closely with our customers to tackle any challenge – from choosing the best overall inspection line set-up to customized solutions for specific inspection tasks. If desired application feasibility studies can be performed in our application lab.

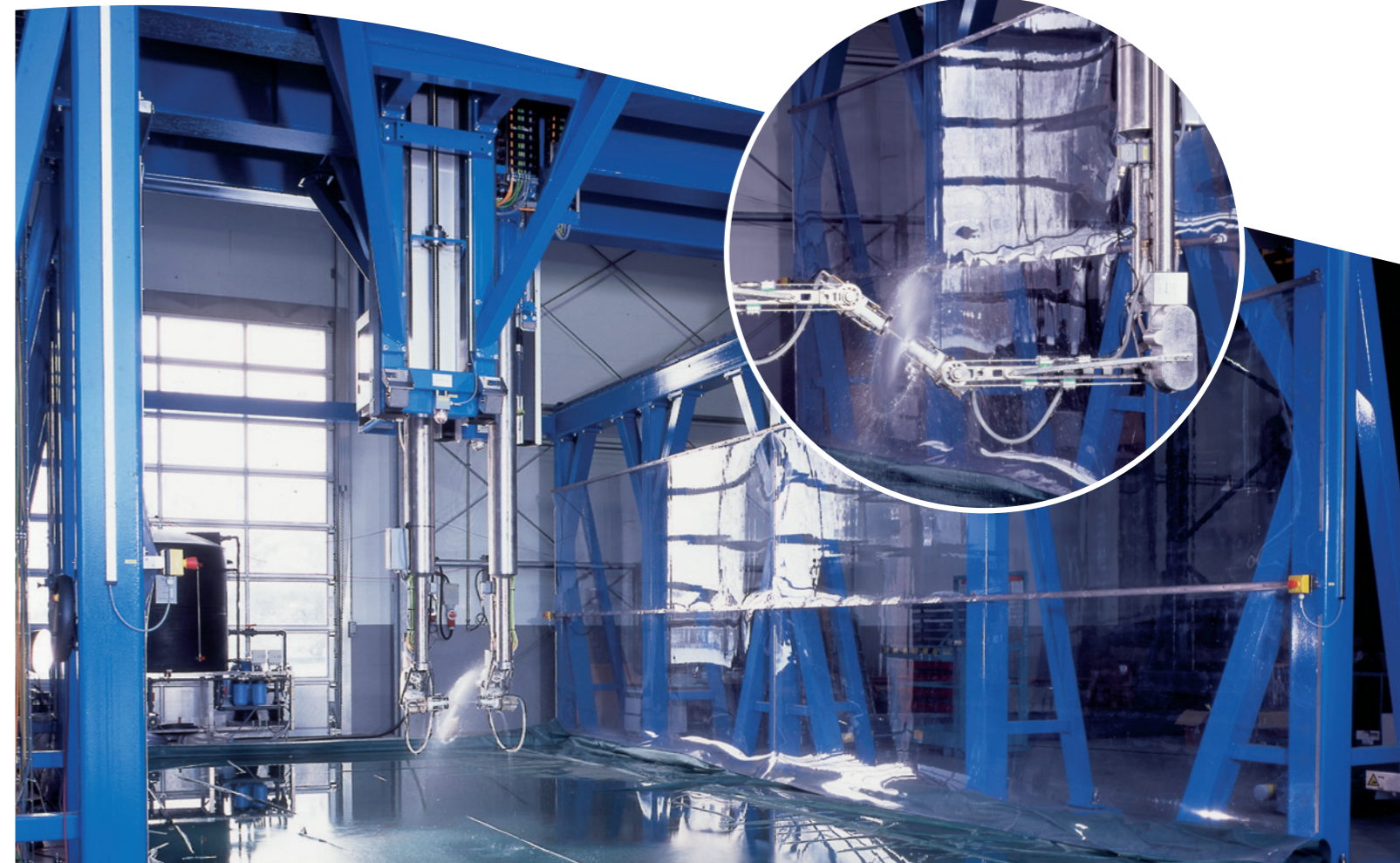
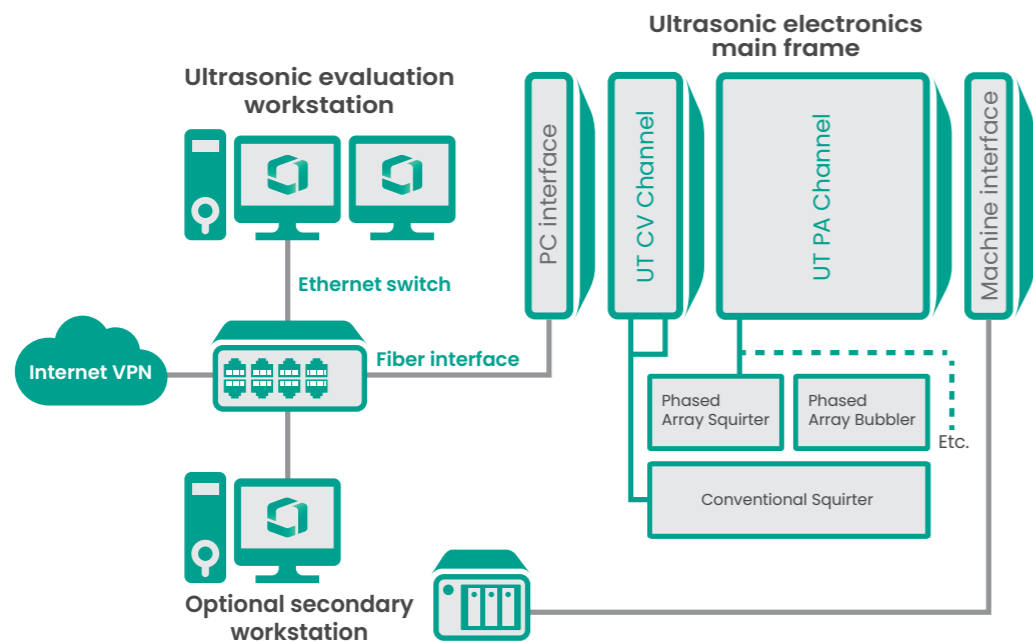
## Key Highlights:

- High performance mechanics “Made in Germany”
- Geometry teach-in from CAD models, laser metrology and manual methods
- Patented Reverse Phasing Contour Adaptation (RPCA)
- ALOK data compression
- 1 software to cover scan plan set-up & data evaluation
- Data analysis to main aerospace manufacturing standards
- Digital interfaces to Manufacturing Execution System (MES)
- Compliant to main aerospace manufacturing standards
- UT instruments compliant to all relevant NDT standards
- On site UT instrument certification with our CERT-2 system
- Local service support incl. global Tech-Support Team, remote service and tailor made service agreements

# Rock solid design

Krautkrämer RokStar’s unique design guarantees enhanced stability during scanner movement. The scanner rides on two steel beams in the primary X direction. All other axes are interpolating indexed axes. For scans of complex 3D parts, the machine uses an additional trigger axis to ensure equidistant data acquisition through the entire scan path. Individual testing mechanics designs and options like turntable, defect markers, customized tool sets etc. are available to accommodate different part inspection requirements.

The ultrasonic instrumentation used in the RokStar system is based on Waygate Technologies’ modular digital flaw detector platform providing extreme flexibility in channel count and inspection setup.



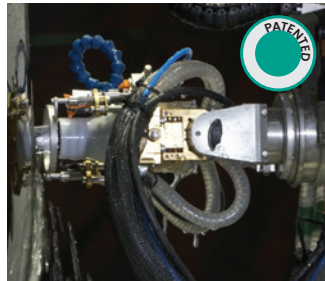
# Flexible answers for all application needs

Krautkrämer RokStar comes with a wide range of special solution tool sets for all application needs and highest scanning productivity.



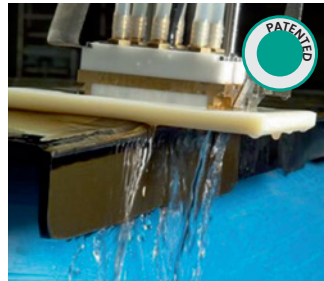
## Conventional TTU squirters

Dual frequency inspection in a single pass using Waygate Technologies annular ultrasonic transducer design, achieving twice the throughput of conventional single channel squirters.



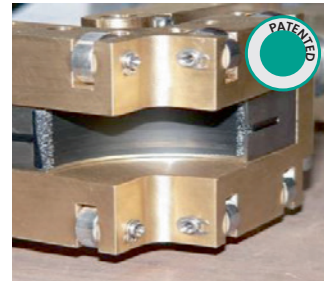
## Wide area phased array TTU squirters

Waygate Technologies patented phased array squirters provide up to a 15 mm wide scan area in a single pass.



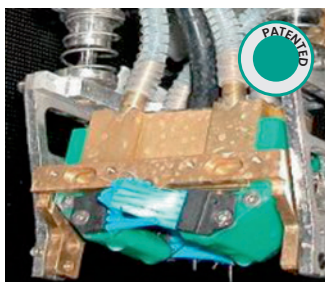
## Phased array skin bubbler

Provides Pulse Echo inspection with up to a 86 mm track width in a single pass. Geometrical variations within the test part are compensated by Waygate Technologies patented RPCA (Reverse Phasing Contour Adaptation) method.



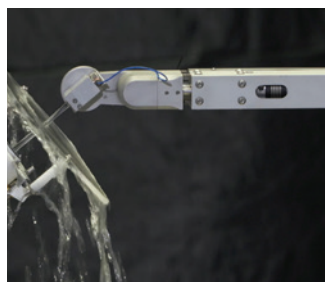
## Phased array inside radius bubbler

Inspects concave (inner) radii in a single scan track/path. Geometrical variations within the test part are compensated by Waygate Technologies patented RPCA (Reverse Phasing Contour Adaptation) method.



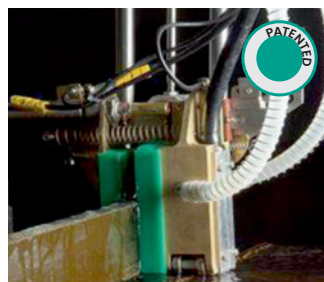
## Phased array outside radius bubbler

Inspects convex (outer) radii in a single scan track/path. Geometrical variations within the test part are compensated by Waygate Technologies patented RPCA (Reverse Phasing Contour Adaptation) method.



## Extended squirter

Allows access to narrow passages to facilitate TTU inspection with an additional rotational axis at the end of the extender and miniature squirter nozzle.



## Stringer tool

Provides Pulse Echo inspection of the stringer web of T-shaped stringers or variations of it typically in a single pass at 100% coverage using a phased array probe with up to 128 elements.

For more detailed information, please visit our website or contact your local sales representative.

[waygate-tech.com](http://waygate-tech.com)

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