



# TYPE APPROVAL

Certificate No.:  
TA-DNV-CP-0434-10735-0

Issued:  
2024-04-26

Valid until:  
2028-07-03

Issued for:

## Quadraxial fabric made from carbon fibres

with type designation(s)

### Q-C-Series

As specified in Annex 1

Issued to:

## SAERTEX GmbH & Co. KG

Brochterbecker Damm 52, 48369 Saerbeck, Germany

According to:

### DNV-SE-0436:2022-09 Shop approval in renewable energy

and

### DNV-CP-0434:2021-09 Type approval – Uni- and multi-axial multi-ply fabrics made of carbon fibres

Applying:

### DNV-SE-0441:2021-10 Type and component certification of wind turbines

Based on the documents listed in Annex 1.

This Type Approval supersedes the Type Approval TAK00000JJ Rev. 1

Any significant changes in the design and/or quality of the material will render this Type Approval invalid.

Hellerup, 2024-04-26  
For DNV Renewables Certification

Hamburg, 2024-04-26  
For DNV Renewables Certification



**Bente Vestergaard**  
Service Line Leader

By DAKKS according to DIN EN IEC/ISO 17065 accredited Certification Body for products. The accreditation is valid for the fields of certification listed in the certificate.

**Bernhard Krüger**  
Project Manager

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## Product description and application

Quadraxial fabrics made of PAN carbon fibres for application in FRP components of wind turbine generators (rotor blades, nacelle covers, spinners) and other applications.

## Approved variants

Q-C-XXg/m<sup>2</sup>-YYmm

With:

Q: Ply construction 0°/±45°/90° (or other sequence)

C: Carbon

XX: Total areal weight in g/m<sup>2</sup>

YY: Width of the fabric in mm

With the following ranges:

Total areal weight range	Width
200 – 1700 g/m <sup>2</sup>	38 – 3810 mm

The fabrics consist of roving in the range of 12K to 60K.

## Type Approval documentation

Technical data sheet(s)	30013829, Technical Datasheet for Q-C-784g/m <sup>2</sup> -1270mm 30002071, Technical Datasheet for Q-C-586g/m <sup>2</sup> -1676mm 30003369, Technical Datasheet for Q-C-816g/m <sup>2</sup> -1270mm
Safety data sheet(s)	Safety data sheet according to Regulation (EC) No 1907/2006, Annex II for Carbon Fabric, revision 2, dated 2022-11-09
Test report(s)	LA-23-3501, Test report Q-C-784g/m <sup>2</sup> -1270mm Tensile and Bending, dated 2024-01-15 LA-23-3510, Test report Q-C-784g/m <sup>2</sup> -1270mm Compression, dated 2024-01-10
Inspection documentation	WIR-10728/29/30/31/32/33/34/35-001-0, workshop inspection report for Saerbeck Germany, DNV, dated 2024-01-10
Quality control documentation	ISO 9001:2015 certificate no. 80116044/3, DEKRA Certification GmbH, dated 2023-11-16 ISO 9001:2015 certificate no. LT005629 for Saertex Baltics UAB, Bureau Veritas, dated 2021-08-20 Inspection certificates for batch no's. 1279401 and 1298670

## Approved production sites

Saertex Germany Gmbh & Co. KG  
Brochterbecker Damm 62  
48369 Saerbeck  
Germany

Saertex Baltics UAB  
Pramonės g. 20 D  
81123 Kuršėnai  
Lithuania

Saertex USA, LLC.  
12200 Mt. Holly-Huntersville Rd.  
Suite A  
Huntersville, NC 28078  
USA



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## **Certificate maintenance**

In the case of major changes of the approved production processes and methods during the validity time of the Type Approval, the changes shall be reported to DNV. A periodical assessment needs to be carried out 2.5 years after the issue date of the Type Approval. An intermediate inspection of the production workshop(s) might be needed based on the implemented changes. The workshops Saertex Germany had been inspected in connection with the re-certification. All remaining workshops need to be inspected during the validity period of the Type Approval to maintain the certificate's validity. Evidence for the inspections will be provided through separate workshop inspection reports.