



Certificate No.

IECRE.WE.CC.19.0015-R0

IECRE - IEC System for Certification
to Standards Relating to Equipment
for Use in Renewable Energy
Applications

PROVISIONAL COMPONENT CERTIFICATE

This certificate is issued to

LM Wind Power
Jupitervej 6
6000 Kolding
Denmark

for the wind turbine component

Rotor Blade LM77.4P_PJ1.5

wind turbine class (class, standard, year)

unspecific; OD501, ed.2:2018; OD501-1, ed. 1:2017

This certificate attests compliance with IEC 61400 Series as specified in subsequent pages. It is based on the following reference documents:

Design basis evaluation conformity statement
Dated

Included in Design Evaluation Conformity Statement

Design evaluation conformity statement
Dated

TÜV NORD: IECRE.WE.CS.19.0004-R3
2019-11-13

Provisional Type test conformity statement
Dated

TÜV NORD Reg.-No.: 4422019181865-PCT-IECRE, Rev. 0
2019-11-13

Manufacturing conformity statement
Dated

TÜV NORD Reg.-No.: 4422019181865-CM-IECRE, Rev. 0
2019-09-17

Final evaluation report
Dated

TÜV NORD Report-No.: 8116 181 865-20 E, Rev. 0
2019-11-13

The conformity evaluation was carried out in accordance with the rules and procedures of the IECRE System
www.iecre.org

The component specification begins on page 2 of this certificate.

Changes in the system design or the manufacturer's quality system are to be approved by the Certification Body. Without approval, the certificate loses its validity.

This certificate is valid until:
2020-11-12

Approved for issue on behalf of the
IECRE Certification Body:

Dipl.-Ing./M.Sc. M. Lange
Deputy/Specialist Manager Wind Energy
Essen, 2019-11-13



TÜV NORD CERT GmbH
Langemarckstraße 20
45141 Essen



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Machine parameters:

Design life time: 25 years

Other environmental conditions (where taken into account):

Temperature ranges:

Power Production: -30°C to +40°C
Survival: -40°C to +50°C

Lightning protection system (standard and protection class): IEC 61400-24, ed. 1, LPL Class 1

Interfaces:

Design loads for the component: TR-09729, Rev. A5

Interface assumptions, conditions and requirements: Blade bolt assessment not within scope

Other interface conditions: none

**If not otherwise stated, the certificate holder is the manufacturer

Blade:

Type: Modular, splitted in two parts joined by pin joint

Material: glass fibre reinforced polyester material

Blade length: 77.4 m

Specification: BS-00447/A5, Rev. A5

Main Drawing: DR-09345/A2, Rev. A2

Blade root connection: 116 inserts, M36

Manuals:

Handling, Service & Maintenance: BM-00207/A3, Rev. A3

Add-ons: VGs Mk II, T-Spoiler Mk II, serrations Mk II

Partial Safety factor tower clearance $Y_m = 1.07$