



Certificate No.

IECRE.WE.CC.19.0005-R0

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

COMPONENT CERTIFICATE

Wind Turbine

This certificate is issued to

Nanjing High Speed Gear Manufacturing Co., Ltd.
No.30 Houjiao Road, Jiangning Science Park
Nanjing, 211100
P.R. of China

for the component

NGC Main Gearbox SMG161DDT90-0032

wind turbine class (class, standard, year)

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

Design basis evaluation conformity statement
Dated

Included in the design evaluation conformity statement.

Design evaluation conformity statement
Dated

IECRE.WE.CS.19.0005-R0
2019-06-12

Type test conformity statement
Dated

Not applicable for this Component Certificate, see final evaluation report.

Manufacturing conformity statement
Dated

44 220 19479542-CM-IEC, Rev. 0
2019-06-12

Final evaluation report
Dated

8116479542-20 E II, Rev. 0
2019-06-12

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 TÜV NORD CERT GmbH.
Without approval, the certificate loses its validity.

This certificate is valid until:
2024-06-11

Approved for issue on behalf of the IECRE
Certification Body:

Dipl.-Ing., Dr. Michael Broschart
Deputy of Specialist Manager Wind Energy
Essen 2019-06-12


TÜV NORD
TÜV NORD CERT GmbH
Langemarckstraße 20
45151 Essen



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Machine parameters :

Design life time: 20 y

Other environmental conditions (where taken into account):

Normal and extreme temperature ranges: 0 to +50 °C
(normal, production, with power
derating of 10 %/°C above 45 °C)

0 to +50 °C (extreme, survival)

Interfaces:

Design loads for the component: See Design Evaluation Report in
Design Evaluation Conformity
Statement.

Other interface conditions: See Annex 1

Gearbox:

Type: 3-stage planetary helical gearbox

Gear Ratio: 89.94

Manufacturer: Certificate holder

Drawing / Data sheet / Part No.: W169000009, Rev. R1, dated 2019-01-28

Manuals:

Operation & maintenance manual: JNJ.WG.SU.01.OM, Rev. 1, dated 2019-04-08

Annex 1: Application and other interfaces



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Application:

The component is applicable for the Suzlon wind turbines S120, 50Hz, IEC S with the hub heights 105 m TT and 140 m HCT (both with rotor blades SB59S1) as well as hub heights 120m STT and 140 m HLT (both with rotor blades SB59S2) as shown in the table below. The references for load assumptions can be found in the Component Design Evaluation Report of the Component Design Evaluation Conformity Statement.

Var. No.	WT Designation	Freq.	Rated Power	Rotor Blade	Hub Height	WT Class	Climate Condition	Load Assumptions
1	S120	50 Hz	2.1 MW*	SB59S1	105 m (TT)	IEC S	HTV light	[1.3.1]
2	S120	50 Hz	2.1 MW*	SB59S1	140 m (HCT)	IEC S	HTV light	[1.3.2]
3	S120	50 Hz	2.1 MW*	SB59S2	120 m (STT)	IEC S	HTV light	[1.3.3]
4	S120	50 Hz	2.1 MW*	SB59S2	140 m (HLT)	IEC S	HTV light	[1.3.4]

*with enhanced performance (2.25 MW)

Rated power (mechanical): 2450 Kw
 Rated power (electrical): 2250 Kw
 Nominal torque: 1780 kNm

Drive train analysis and field test: Not included in the Component Certification, they shall be assessed within specific wind turbine certification projects.