




<b>Product Certificate Number</b>	<b>20095-2-CER-E1</b>
<b>Applicant</b>	Vacon Ltd. Runsorintie 7, 65380. Vaasa, Finland
<b>Series</b>	NX series
<b>Models/</b>	NXA XXXXX Air cooled NXA XXXXX Liquid cooled <b>Models:</b> See page 2
<b>Type of generating unit</b>	Grid converters
<b>Technical Data</b>	See pages 3, 4
<b>Network connection rule</b>	<b>BDEW Guideline</b> "Generating plants connected to the medium-voltage network". Guideline for generating plants connection to and parallel operation with the medium-voltage network, June 2008 issue and adaption's dated 01/2009, 07/2010, 02/2011 and 01/2013. <b>FGW TG3 rev.24</b> , Determination of electrical characteristics of power generating units and systems connected to MV, HV and EHV grids. <b>FGW TG4 rev.8</b> , Demands on Modelling and Validating Simulation Models of the Electrical Characteristics of the Power Generation Units and Systems. <b>FGW TG8 rev.8</b> , Certification of the Electrical Characteristics of the Power Generation Units connected to LV, MV, HV and EHV grids.
<p>Having assessed the test report number: 20095-2-TR performed by Certification Entity for Renewable Energies, S.L. (CERE Testing Laboratory) (EA Accredited Laboratory N° 1239/LE2396) based on the requirements of the EN ISO/IEC 17025:2005.</p> <p>The above-mentioned generating unit complies with the requirements of the: <b>BDEW Guideline</b> "Generating plants connected to the medium-voltage network". Guideline for generating plants connection to and parallel operation with the medium-voltage network, June 2008 issue and adaptations dated 01/2009, 07/2010, 02/2011 and 01/2013, <b>FGW TG3 rev.24</b>, Determination of electrical characteristics of power generating units and systems connected to MV, HV and EHV grids, <b>FGW TG4 rev.8</b>, Demands on Modelling and Validating Simulation Models of the Electrical Characteristics of the Power Generation Units and Systems and <b>FGW TG8 rev.7</b>, Certification of the Electrical Characteristics of the Power Generation Units connected to MV, HV and EHV grids.</p> <p>This certification is according the CERE internal process PET-CERE-09 Rev 14 based on the requirements of the EN ISO/IEC 17065:2012. For this certification process the conformity assessment activities were based on:</p> <ul style="list-style-type: none"><li>• Testing of production samples selected by CERE.</li><li>• Audit of quality system according ISO 9001 with certificate number: DK009881-113 Version: 1 issued by a certification body accredited according EN ISO/IEC 17021.</li><li>• Inspection of the manufacturing process.</li></ul> <p>This certificate cancels and supersedes the certificate number: 20095-2-CER issued on December 31, 2018.</p> <p>Madrid at March 15, 2019. This certificate is valid until December 31, 2021</p>	
 Miguel Martínez Lavin Certification Manager	



**Models:**

Grid converters			
NXA XXXXX Air cooled		NXA XXXXX Liquid cooled	
NXA01685 NXA02055 NXA02615 NXA03855 NXA04605 NXA11505 NXA13005	NXA01256 NXA01446 NXA01706 NXA02616 NXA03256 NXA09206 NXA10306	NXA01685 NXA02055 NXA02615 NXA03005 NXA03855 NXA04605 NXA05205 NXA05905 NXA06505 NXA07305 NXA08205 NXA09205 NXA10305 NXA11505 NXA13705 NXA16405 NXA20605 NXA23005	NXA01706 NXA02086 NXA02616 NXA03256 NXA03855 NXA04166 NXA04606 NXA05026 NXA05906 NXA06506 NXA07506 NXA08206 NXA09206 NXA10306 NXA11806 NXA13006 NXA15006 NXA17006
<b>Note:</b> The models can be used with application software: ARFIF106 and ARFIF08			



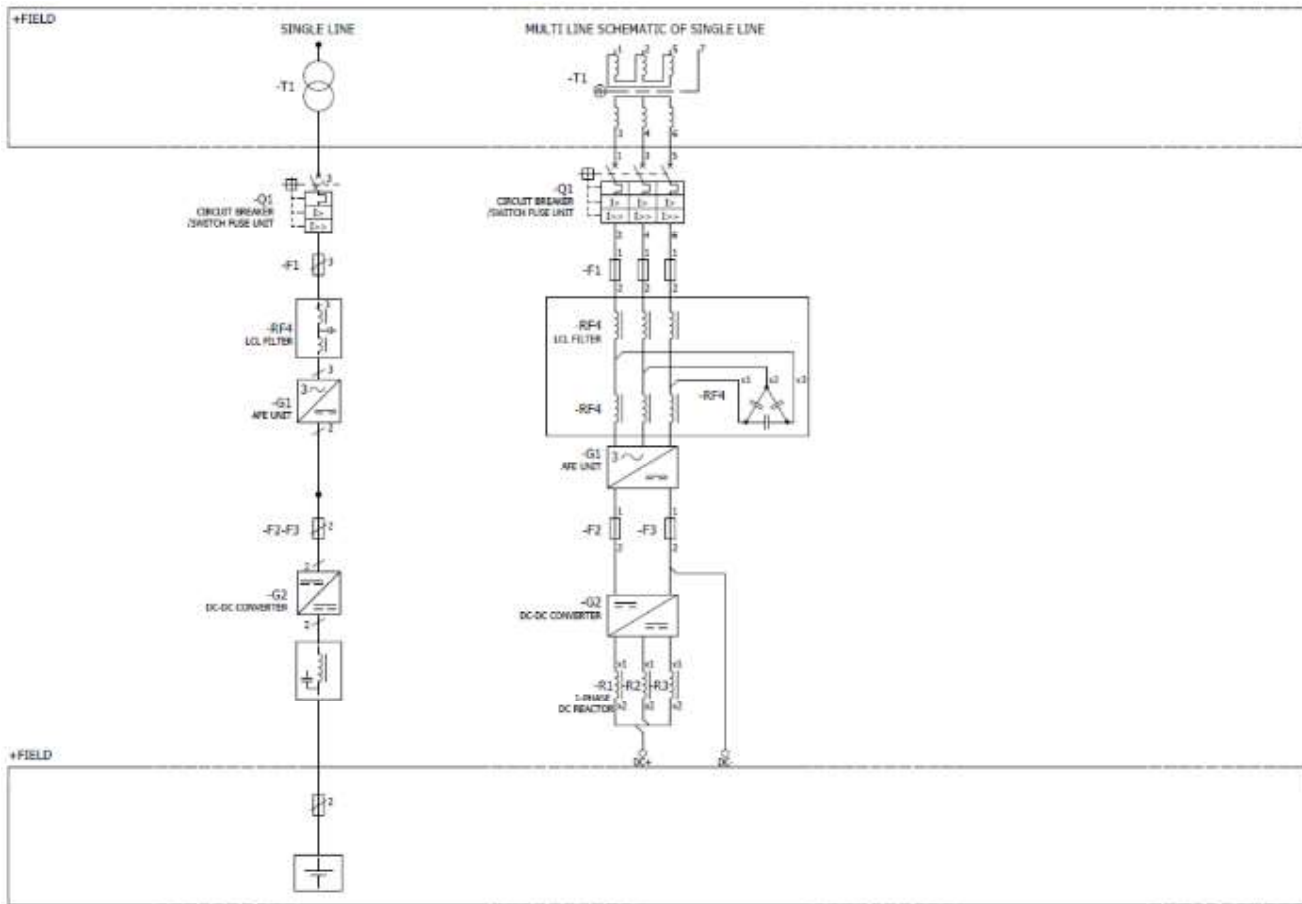
**Technical data**

<b>Grid Converters – Air cooled</b>					
<b>Grid converter module</b>	<b>Freme size</b>	<b>Apparent current @pf 1,0</b>	<b>Current Rating</b>	<b>AC Voltage range</b>	<b>Nominal AC Voltage</b>
<b>NXA01685</b>	FI9	170A	140A	380-500V	400V
<b>NXA02055</b>	FI9	205A	170A	380-500V	400V
<b>NXA02615</b>	FI9	261A	205A	380-500V	400V
<b>NXA03855</b>	FI10	385A	300A	380-500V	400V
<b>NXA04605</b>	FI10	460A	385A	380-500V	400V
<b>NXA11505</b>	FI13	1150A	1030A	380-500V	400V
<b>NXA13005</b>	FI13	1300A	1150A	380-500V	400V
<b>NXA01256</b>	FI9	125A	100A	525-690V	600V
<b>NXA01446</b>	FI9	144A	125A	525-690V	600V
<b>NXA01706</b>	FI9	170A	144A	525-690V	600V
<b>NXA02616</b>	FI10	261A	208A	525-690V	600V
<b>NXA03256</b>	FI10	325A	261A	525-690V	600V
<b>NXA09206</b>	FI13	920A	820A	525-690V	600V
<b>NXA10306</b>	FI13	1030A	920A	525-690V	600V

<b>Grid Converters – Liquid cooled</b>					
<b>Grid converter module</b>	<b>Freme size</b>	<b>Apparent current @pf 1,0</b>	<b>Current Rating</b>	<b>AC Voltage range</b>	<b>Nominal AC Voltage</b>
<b>NXA01685</b>	CH5	168A	140A	380-500V	400V
<b>NXA02055</b>	CH5	205A	170A	380-500V	400V
<b>NXA02615</b>	CH5	261A	205A	380-500V	400V
<b>NXA03005</b>	CH61	300A	261A	380-500V	400V
<b>NXA03855</b>	CH61	385A	300A	380-500V	400V
<b>NXA04605</b>	CH62	460A	385A	380-500V	400V
<b>NXA05205</b>	CH62	520A	460A	380-500V	400V
<b>NXA05905</b>	CH62	590A	520A	380-500V	400V
<b>NXA06505</b>	CH62	650A	590A	380-500V	400V

<b>NXA07305</b>	CH62	730A	650A	380-500V	400V
<b>NXA08205</b>	CH63	820A	730A	380-500V	400V
<b>NXA09205</b>	CH63	920A	820A	380-500V	400V
<b>NXA10305</b>	CH63	1030A	920A	380-500V	400V
<b>NXA11505</b>	CH63	1150A	1030A	380-500V	400V
<b>NXA13705</b>	CH64	1370A	1150A	380-500V	400V
<b>NXA16405</b>	CH64	1640A	1370A	380-500V	400V
<b>NXA20605</b>	CH64	2060A	1640A	380-500V	400V
<b>NXA23005</b>	CH64	2300A	2060A	380-500V	400V
<b>NXA01706</b>	CH61	170A	144A	525-690V	600V
<b>NXA02086</b>	CH61	208A	170A	525-690V	600V
<b>NXA02616</b>	CH61	261A	208A	525-690V	600V
<b>NXA03256</b>	CH62	325A	261A	525-690V	600V
<b>NXA03856</b>	CH62	385A	325A	525-690V	600V
<b>NXA04166</b>	CH62	416A	325A	525-690V	600V
<b>NXA04606</b>	CH62	460A	385A	525-690V	600V
<b>NXA05026</b>	CH62	502A	460A	525-690V	600V
<b>NXA05906</b>	CH63	590A	502A	525-690V	600V
<b>NXA06506</b>	CH63	650A	590A	525-690V	600V
<b>NXA07506</b>	CH63	750A	650A	525-690V	600V
<b>NXA08206</b>	CH64	820A	750A	525-690V	600V
<b>NXA09206</b>	CH64	920A	820A	525-690V	600V
<b>NXA10306</b>	CH64	1030A	920A	525-690V	600V
<b>NXA11806</b>	CH64	1180A	1030A	525-690V	600V
<b>NXA13006</b>	CH64	1300A	1180A	525-690V	600V
<b>NXA15006</b>	CH64	1500A	1300A	525-690V	600V
<b>NXA17006</b>	CH64	1700A	1500A	525-690V	600V

Electrical Diagram:



The sample selected to test was representative of the production.  
The sample was selected in:

Vacon Ltd.  
Runsorintie 7  
65380. Vaasa, Finland

Sample Report Number:

20095-1-TM  
20095-2-TM

The inspection of manufacturing process was performed in:  
On 17<sup>th</sup> of December of 2018

Vacon Ltd.  
Runsorintie 7  
65380. Vaasa, Finland

Inspection Report Number:

20095-IF