
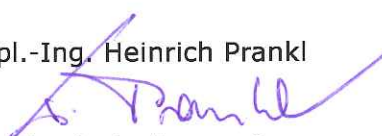




# Renewable Heat Incentive

## Non-domestic Renewable Heat Incentive Emissions Certificate

This certificate provides evidence that the tested boiler meets the air quality requirements of the non-domestic Renewable Heat Incentive (RHI). It must be issued by a testing laboratory. Applicants applying for the RHI with biomass boilers must submit a certificate with their application, or alternatively, an environmental permit.

**BLT 0815/13, Guntamatic Heiztechnik GmbH, Biostar FLEX/W/BOX/ (DUO) 12 to 23, wood pellets**

1. TEST HOUSE	
<p>a) name and address of testing laboratory</p>	 <p><b>BLT Wieselburg</b>                      HBLFA Francisco Josephinum                      AT 3250 Wieselburg, Rottenhauser Straße 1  <a href="mailto:blt@josephinum.at">blt@josephinum.at</a>, <a href="http://blt.josephinum.at">http://blt.josephinum.at</a></p>
<p>b) name and signature of the person authorised by the testing laboratory to issue the certificate</p>	<p>For the accredited test institute:</p> <p>Dipl.-Ing. Heinrich Prankl</p>  <p>For the factual correctness:</p>  <p>Dipl.-HLFL-Ing. Leopold Lasselsberger</p> 
<p>c) date of issue of the certificate together with certificate reference number</p> <p>Plant 1 – Biostar 12                      Plant 2 – Biostar 15                      Plant 3 – Biostar 23</p>	<p>Date of issue: 13/12/2013                      Reference number: 0815/13</p> <p>BLT Wieselburg test report, approval no: 026/08                      BLT Wieselburg test report, approval no: 027/08                      BLT Wieselburg test report, approval no: 028/08</p>
<p>d) if testing laboratory is accredited to ISO 17025, date of accreditation and accreditation number (note: if testing conducted after 24 Sep. 2013, the testing laboratory must be ISO 17025 accredited)</p>	<p>A 0112                      Date of accreditation: October 19, 2009                      Initial date of accreditation: September 1, 1998</p> <p>Federal Ministry of Economy, Family and Youth                      Division I/12 – Accreditation Body</p>

<b>2. a PLANT</b>	<b>Plant 1</b>	<b>Plant 2</b>	<b>Plant 3</b>
a) name of the plant tested	Biostar 12	Biostar 15	Biostar 23
b) model of the plant tested	Wood pellets heating boiler Biostar 12	Wood pellets heating boiler Biostar 15	Wood pellets heating boiler Biostar 23
c) manufacturer of the plant tested	Guntamatic Heiztechnik GmbH Bruck 7 AT 4722 Peuerbach, AUSTRIA		
d) installation capacity of the plant in kilowatts (kW)	15,0	15,0	23,0
e) is the plant a <u>manually stoked, natural draught</u> plant? (that is, without a fan providing forced or induced draught)	no	no	no
f) the date the plant was tested	15/07/2008	15/07/2008	15/07/2008
g) list of all the plants in the type-testing range of plants to which the certificate applies, if any <sup>1</sup>	Wood pellets heating boiler Guntamatic Biostar 12/15/23 FLEX/W/BOX/ (DUO)		

<b>3. FUELS</b>	
a) types of fuels used when testing	Wood pellets C1 according to EN 303-5
b) based on the testing, list the range of fuels that can be used in compliance with the emission limits of 30 grams per gigajoule (g/GJ) net heat input for particulate matter (PM), and 150 g/GJ net heat input for oxides of nitrogen (NO <sub>x</sub> ) <i>(based if relevant on classifications from EN 14961 or EN 303-5)</i>	Wood pellets C1 according to EN 303-5
c) moisture content of the fuel used during testing Plant 1 Plant 2 Plant 3	6,6 – 7,2 % 6,6 – 7,2 % 6,6 – 7,1 %
d) maximum moisture content of the fuel which can be used so as to ensure that the emission limits are not exceeded	≤ 12 % according to EN 303-5

<sup>1</sup> The type-testing approach enables testing laboratories to provide assurance that all boilers in a given range meet the air quality requirements, without needing to specifically test each boiler.



<b>4. TESTS</b>	
<p>a) <b>if the plant is 500 kW or lower, and BS EN 303-5:1999 or EN 303-5:2012<sup>2</sup> applies to it, please confirm:</b></p> <ul style="list-style-type: none"> <li>- tests were conducted to whichever standard was current at the time of testing. <i>(please circle the applicable standard)</i></li> </ul>	EN 303-5:1999
<p>b) <b>if the plant is 500 kW or lower, and BS EN 303-5:1999 or BS EN 303-5:2012 do not apply to it, please confirm:</b></p> <ul style="list-style-type: none"> <li>- emissions of PM represent the average of at least three measurements, each of at least 30 minutes duration and;</li> <li>- the value for NOx emissions is derived from the mean of measurements made throughout the PM tests.</li> </ul>	not applicable  not applicable
<p>c) <b>if the plant is 500 kW or higher, please confirm:</b></p> <ul style="list-style-type: none"> <li>- emissions of PM represent the average of at least three measurements, each of at least 30 minutes duration and;</li> <li>- the value for NOx emissions is derived from the mean of PM measurements made throughout the PM tests.</li> </ul>	not applicable  not applicable
<p>d) please confirm the tests were conducted to:</p> <ul style="list-style-type: none"> <li>- EN 14792:2005 in respect of NOx, and;</li> <li>- EN 13284-1:2002 or ISO 9096:2003 in respect of PM<sup>3</sup></li> </ul>	yes yes
<p>e) please confirm the plant tested at <math>\geq 85\%</math> of its rated output</p>	yes
<p>f) please confirm the tests show that emissions were no greater than 30 g/GJ PM and 150 g/GJ NOx</p>	yes
<p>g) measured emissions of PM in g/GJ net heat input</p>	
Plant 1 – Biostar 12	9 g/GJ (nominal heat output) nm <sup>*)</sup> (minimum heat output)
Plant 2 – Biostar 15	9 g/GJ (nominal heat output) nm <sup>*)</sup> (minimum heat output)
Plant 3 – Biostar 23	10 g/GJ (nominal heat output) nm <sup>*)</sup> (minimum heat output)
<p>h) measured emissions of NOx in g/GJ net heat input</p>	
Plant 1 – Biostar 12	82 g/GJ (nominal heat output) 67 g/GJ (minimum heat output)
Plant 2 – Biostar 15	82 g/GJ (nominal heat output) 67 g/GJ (minimum heat output)
Plant 3 – Biostar 23	90 g/GJ (nominal heat output) 67 g/GJ (minimum heat output)

\*) nm ... not measured

<sup>2</sup> BS EN303-5:1999 and 2012 explain what should be measured and when.

<sup>3</sup> These standards explain how to make the PM and NOx measurements.

