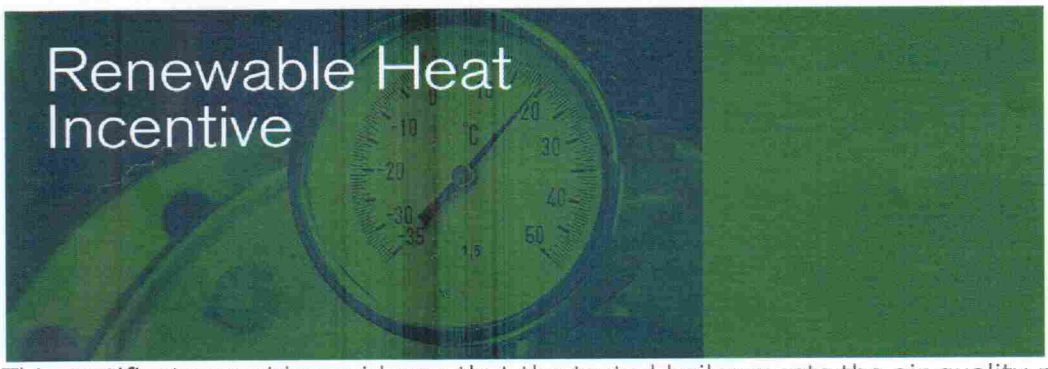
ofgem e-serve Making a positive difference for energy consumers



GÖDÖLLŐ 1869

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.

1. TEST HOUSE	
a) name and address of the testing laboratory	Hungarian Institute of Agricultiral Engineering H-2100 Tessedik str.4. Gödöllő Hungary tel:+3628511611 web: www.gmgi.hu
b) name and signature of the person authorised by the testing laboratory to issue the certificate	Name: **Péter Tóvári** Head of the laboratory
c) date of issue of this certificate, together with certificate reference number	Date: *04/12/2013* Certificate reference number: 12/2013/015
d) if the testing laboratory is accredited to ISO 17025, date of accreditation and accreditation number *(note: if testing conducted on or after 24 September 2013, the testing laboratory must be ISO 17025 accredited)*	Date: *05/06/2013* Accreditation number: NAT-1-1340/2013

2. PLANT	
a) name of the plant tested	CARBOROBOT Bio solid biomass boilers
b) model of the plant tested	CARBOROBOT 100 Bio CARBOROBOT 120 Bio CARBOROBOT 140 Bio CARBOROBOT 180 Bio
c) manufacturer of the plant tested	CARBOROBOT Ltd. Hungary 1211 Budapest Varrógépgyár u. 4.
d) installation capacity of the plant in kilowatts (kW)	CARBOROBOT 100 Bio 100kW CARBOROBOT 120 Bio 120kW CARBOROBOT 140 Bio 140kW CARBOROBOT 180 Bio 180kW

e) is the plant a manually stoked, natural draught plant? (that is, without a fan providing forced or induced draught)	yes/**no**
f) date the plant was tested	*27/11/2013*
g) list all the plants in the type-testing range of plants to which the certificate applies, if any.	CARBOROBOT 40 Bio CARBOROBOT 60 Bio CARBOROBOT 80 Bio CARBOROBOT 100 Bio CARBOROBOT 120 Bio CARBOROBOT 140 Bio CARBOROBOT 180 Bio CARBOROBOT 300 Bio

3. FUELS	
a) types of fuels used when testing	wood pellets
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 (NOx) *(based if relevant on classifications from EN14961 or EN303-5)*	EN 303-5
c) moisture content of the fuel used during testing	9%
d) maximum allowable moisture content of fuel that can be used so as that ensures the emission limits are not exceeded	12%

4. TESTS	
a) **if the plant is 500kW or lower, and BS EN 303-5:1999 or EN 303-5:2012 applies to it**, please confirm: - tests were conducted to whichever standard was current at the time of testing. *(please circle the applicable standard)*	EN 303-5:1999: **yes**/no
b) **if the plant is 500kW or lower, and BS EN 303-5:1999 or BS EN 303-5:2012 do not apply to it**, please confirm: - emissions of PM represent the average of at least three measurements, each of at least 30 minutes duration and; - the value for NOx emissions is derived from the mean of measurements made throughout the PM tests.	not applicable not applicable
c) **if the plant is 500kW or higher**, please confirm: - emissions of PM represent the average of at least three measurements, each of at least 30 minutes duration and; - the value for NOx emissions is derived from the mean of PM measurements made throughout the PM tests.	not applicable not applicable
d) please confirm the tests were conducted to: - EN 14792:2005 in respect of NOx, and; - EN 13284-1:2002 or ISO 9096:2003 in respect of PM	**yes**/no **yes**/no
e) please confirm the plant tested at ≥85% of its rated output	**yes**/no

f) please confirm the tests show that emissions were no greater than 30 g/GJ PM and 150 g/GJ NOx	**yes**/no
g) measured emissions of PM in g/GJ net heat input	CARBOROBOT 100 Bio -13,00g/GJ CARBOROBOT 120 Bio -16,50g/GJ CARBOROBOT 140 Bio -13,76g/GJ CARBOROBOT 180 Bio -12,84g/GJ
h) measured emissions of NOx in g/GJ net heat input	CARBOROBOT 100 Bio -58,8g/GJ CARBOROBOT 120 Bio -52,1g/GJ CARBOROBOT 140 Bio -62,8g/GJ CARBOROBOT 180 Bio -52,7g/GJ