

Notified Body 1880 – Regulation (EU) no305/2011

TEST REPORT n.1880-CPR-077-008-21

## Initial Type Testing

Residential space heating appliances fired by wood pellets  
EN 14785:2006

Manufacturer: CADEL SRL  
VIA FORESTO SUD, 7  
31025 S. LUCIA DI PIAVE (TV)  
ITALY

Trademark :CADEL  
Type designations: ECLIPSE PLUS 11 T1

Type of appliance: Residential space heating appliances fired by wood pellets without water heat exchanger.

Receipt date: October 18, 2021

Start test date: October 19, 2021

End test date: October 26, 2021

Testing laboratory: ACTECO SRL  
via Amman, 41  
33084 Cordenons (PN)  
Italy

Issue date: June 21, 2024

Head of Test Laboratory  
Dr.ssa Claudia Marcuzzi

The results of the tests relate only to the tested appliance.  
This test report shall not be reproduced except in full, without written approval of the laboratory.  
The appliance was returned to the manufacturer after the end of tests.  
All data is stored for 10 years

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## Task

ACTECO SRL was instructed to execute initial type testing to establish compliance according to the:

- UNI EN 14785:2006 Residential space heating appliances fired by wood pellets.
- UNI CEN/TS 15883:2009 Residential solid fuel burning appliances. Emission test methods
- Client's documents

The practical tests were performed in the laboratory in Cordenons (PN), via Amman, 41.

The type designations indicated in page 1 are identical to the already tested appliance designated “**PRINCE PLUS 11 T1**”. The practical tests were performed in the laboratory in Cordenons (PN), via Amman, 41 (see Test Reports n°1880-CPR- 077-21, n°1880-CPR- 077-CL-21 and n°1880-CPR- 077-001-21. ).

In the type designations:

**ECLIPSE PLUS 11 T1**

Trademark :CADEL

the difference regards the cover design. The main parts, components, combustion room, heating parts are identical.

## Description of the appliance

Residential space heating appliances fired by wood pellets.  
The combustion air is taken from the test room.

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### ASSESSMENT OF THE PERFORMANCE DECLARED BY THE MANUFACTURER

Appliance	ECLIPSE PLUS 11 T1				
Fuel		Wood pellet			
		nominal load		partial load	
		declared by manufacturer	assessed by test	declared by manufacturer	assessed by test
Fuel throughput	kg/h	2,5	2,510	0,7	0,670
Total heating output	kW	10,5	10,6	3	3,0
CO emission based on 13% O <sub>2</sub>	%	0,013	0,003	0,018	0,007
CO emission based on 13% O <sub>2</sub>	mg/m <sup>3</sup>	159	41	230	91
CO emission	mg/MJ	106	27	153	61
NOx emission based on 13% O <sub>2</sub>	mg/m <sup>3</sup>	100	97	120	92
NOx emission	mg/MJ	67	64	80	61
OGC emission based on 13% O <sub>2</sub>	mg/m <sup>3</sup>	5	5	5	4
OGC emission	mg/MJ	3	3	3	3
Dust emission based on 13% O <sub>2</sub>	mg/m <sup>3</sup>	15	15	20	20
Dust emission	mg/MJ	10	10	13	13
Efficiency	%	88	88,0	90	91,5
Flue gas temperature	°C	200	199	95	95,2
Flue draught	Pa	12	11,8	10	9,4
Flue gas mass flow	g/s	8,0	7,7	4,0	3,6
Minimum clearance distances from exposed / combustible materials		from rear wall from side walls from bottom ceiling front		200 mm 300 mm 0 mm 750 mm 1000 mm	

The performances declared by the manufacturer are compatible with the assessed performances reported in the Tests report n°1880-CPR- 077-21, n°1880-CPR- 077-CL-21 and n°1880-CPR- 077-001-21.

## STATEMENTS OF THE TEST RESULTS

The following requirements of EN 14785:2006 are met:

- materials, design and construction requirements specified in clause 4 (as declared by the manufacturer);
- the safety requirements specified in clause 5;
- the performance requirements specified in clause 6;
- the installation and operating instructions requirements specified in clause 7;
- the marking information requirements specified in clause 8.

PERFORMANCE AT THE NOMINAL HEAT OUTPUT TEST				
Parameter		result	EN 14785:2006 limit	declared by manufacturer
carbon monoxide [at 13% O <sub>2</sub> ]	%	0,003	< 0,04	<0,013
efficiency	%	88,0	> 75	88
PERFORMANCE AT THE REDUCED HEAT OUTPUT TEST				
Parameter		result	EN 14785:2006 limit	declared by manufacturer
carbon monoxide [at 13% O <sub>2</sub> ]	%	0,007	< 0,06	<0,018
efficiency	%	91,5	> 70	90

The appliances

### ECLIPSE PLUS 11 T1

Trademark: **CADEL**

of **CADEL SRL** comply with the requirements of the harmonized European standard UNI EN 14785:2006.

Compliance with the clauses of the harmonized European standard UNI EN 14785:2006 confers a presumption of fitness of the appliance covered by annex ZA for the intended uses indicated by the quoted above normative; reference shall be made to the information accompanying the CE marking.

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The requirements for CO, NO<sub>x</sub>, OGC and dust emissions and for efficiency of German BIMSChv, French Flamme Verte Swiss LRV and Ecodesign for appliances hand fired by wood are the following.

German BIMSChv limits (at 13% O<sub>2</sub>)

CO [mg/m <sup>3</sup> ]	dust [mg/m <sup>3</sup> ]	efficiency [%]
250	30	85

Swiss LRV limits (at 13% O<sub>2</sub>)

CO [mg/m <sup>3</sup> ]	dust [mg/m <sup>3</sup> ]
500	40

French Flamme Verte limits (at 13% O<sub>2</sub>)

CO [mg/m <sup>3</sup> ]	NO <sub>x</sub> [mg/m <sup>3</sup> ]	dust [mg/m <sup>3</sup> ]	OGC [mg/m <sup>3</sup> ]	seasonal efficiency [%]	Dust + OGC [mg/m <sup>3</sup> ]
300	200	20	60	79	70

Ecodesign limits (at 13% O<sub>2</sub>)

CO [mg/m <sup>3</sup> ]	NO <sub>x</sub> [mg/m <sup>3</sup> ]	dust [mg/m <sup>3</sup> ]	OGC [mg/m <sup>3</sup> ]	seasonal efficiency [%]
300	200	20	60	79

The appliances

### **ECLIPSE PLUS 11 T1**

Trademark: **CADEL**

of **CADEL SRL** fulfil the requirements of

- German BIMSChv
- Swiss LRV
- Flamme Verte
- Ecodesign (Regulation EU 1185/2015).