TÜV Rheinland Energy GmbH
Test Centre for Energy Appliances

TÜVRheinland®
Precisely Right.

Report No. K 2613 2019 B2
Verification of the requirements according to:

COMMISSION REGULATION (EU) 2015/1185
(Ecodesign Directive 2009/125/EC)
and
COMMISSION DELEGATED REGULATION (EU) 2015/1186
(Energy Labelling Directive 2010/30/EU)

Type:
-

Solid fuel local space heaters:
A 7 SAT GLASS
A 7 GLOBE GLASS
C 7 GLOBE GLASS
R 7 SAT GLASS
R 7 GLOBE GLASS

Trademark:
MORETTI DESIGN

Company:
MORETTI FIRE S.r.l.

2019

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-11120-04-00

This accreditation is valid only for the listed standards as stated in the accreditation annex of D-PL-11120-04-00

Test Report according the Commission Regulation (EU) 2015/1185 – Ecodesign and the Commission Delegated Regulation (EU) 2015/1186 – Energy Labelling

Appliance manufacturer / contractor:	**MORETTI FIRE S.r.l.** Contrada Tesino, 50 63065 Ripatransone (AP) - Italy		
Trademark:	**MORETTI DESIGN**		
Models:	**A 7 SAT GLASS; A 7 GLOBE GLASS; C 7 GLOBE GLASS; R 7 SAT GLASS; R 7 GLOBE GLASS**		
Type of construction:	Pellet stoves in acc. with EN 14785:2006		
Fuel:	Compressed wood pellets class A1 acc. to EN17225-2, Ø 6 mm, L_{max} 30 mm		
Nominal heat output (P_{nom})	7,0 kW	Direct:	7,0 kW
		Indirect:	0,0 kW
Minimum heat output (P_{min})	2,5 kW	Direct:	2,5 kW
		Indirect:	0,0 kW
Reference type test report:	K 2613 2019 T1		
Test basis: Regulations no. 2015/1185 and no. 2015/1186. This examination has been carried out in a test laboratory equipped in accordance with the EN 14785:2006. The test results were reviewed by the impartial test centre of TÜV Rheinland Energy GmbH. Test results: the requirements of the implementing Directives 2009/125/EC and 2010/30/EU for the appliance are fulfilled with the following values:			
Seasonal space heating energy efficiency	**85,2 %**		
Energy efficiency class	**A+**		
Cologne, 07.08.2019 432/öz	TÜV Rheinland Energy GmbH Test Centre for Energy Appliances DIN- and DVGW-test laboratory		
Assessor:	Report released after review:		
Dipl.-Ing. I. Metin	Dipl.-Ing. M. Reimbold		

1 Task

The Test Centre for Energy Appliances was instructed to execute the measurements and calculations on the appliance **A 7 SAT GLASS** according to the Commission Regulation (EU) 2015/1185 and the Commission Delegated Regulation (EU) 2015/1186.
The tests were carried out in the laboratory of TÜV Rheinland Energy GmbH /CMC Centro Misure Compatibilità S.r.l. in Thiene (Italy).
Test details on the reference initial type testing report K26132019T1 (EN 14785:2006).

2 Description of the appliances

Residential room sealed heating appliances fired by wood pellets without water heat exchanger for domestic central heating system. The flue discharge for pellet operation is fan assisted. The stoves are equipped with an automatic ignition.
All the models share the same basic construction of the tested one (the stove **A 7 SAT GLASS**), regarding the combustion air inlet, the dimensions and the shape of combustion chamber and the flueways. The only difference between each model is related to the external claddings. The stove **A 7 SAT GLASS** has been chosen from the manufacturer as representative model of the family and it may be operated with convenction air fan on/off.
See the reference testing report K26132019T1 for further details.

Control features

Room temperature control

Single stage heat output, no room temperature control	No
Two or more manual stages, no temperature control	No
With mechanic thermostat room temperature control	No
With electronic room temperature control	No
With electronic room temperature control plus day timer	No
With electronic room temperature control plus week timer	Yes

Controls for indoor heating comfort

Room temperature control with presence detection	No
Room temperature control with open window detection	No
With distance control option	Yes

3 Test data

Working condition	Description	Parameter	Result	Unit
Nominal heat output	Useful efficiency at nominal heat output	$\eta_{th,nom}$	88,3	%
	Nominal heat output	P_{nom}	7,0	kW
	Electric power requirement at nominal heat output*	el_{max}	46	W
	Particulate matter emissions**	PM	15	mg/m³
	Organic gaseous compounds emissions**	OGC	3	
	Carbon monoxide emissions**	CO	96	
	Nitrogen oxides emissions**	NO_X	142	
Minimum heat output	Useful efficiency at minimum heat output	$\eta_{th,min}$	93,0	%
	Minimum heat output	P_{min}	2,5	kW
	Electric power requirement at minimum heat output*	el_{min}	24	W
	Particulate matter emissions**	PM	17	mg/m³
	Organic gaseous compounds emissions**	OGC	4	
	Carbon monoxide emissions**	CO	283	
	Nitrogen oxides emissions**	NO_X	118	
Standby	Standby mode power consumption	el_{sb}	2,7	W

* average values, measured according to EN15456:2008.
The electrical power data in operation are obtained:
- for the nominal heat output, with the convenction air fan on;
- for part load heat output with the convenction air fan off;
** values standardised to a dry flue gas basis at 13 % oxygen and conditions at 273 K and 1013 mbar.

4 Test results

Seasonal space heating energy efficiency in active mode		η_{son}	88,3	%
Contributions of controls of indoor heating comfort (mutually exclusive temperature controls)		F(2)	7,0	%
Contributions of controls of indoor heating comfort		F(3)	1,0	%
Negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption		F(4)	1,1	%
Negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame		F(5)	0,0	%
Biomass label factor		BLF	1,45	---
Up to 1/1/2022	**Seasonal space heating energy efficiency**	**η_s**	**85,2**	**%**
	Energy efficiency index	**EEI**	**125**	**---**
	Energy efficiency class	**---**	**A+**	**---**
From 1/1/2022	**Seasonal space heating energy efficiency**	**η_s**	**85,2**	**%**
	Energy efficiency index	**EEI**	**125**	**---**
	Energy efficiency class	**---**	**A+**	**---**

5 Evaluation of the Energy Labelling Requirements

Energy efficiency class	Energy efficiency index (EEI)
A++	EEI ≥ 130
A+	107 ≤ EEI < 130
A	88 ≤ EEI < 107
B	82 ≤ EEI < 88
C	77 ≤ EEI < 82
D	72 ≤ EEI < 77
E	62 ≤ EEI < 72
F	42 ≤ EEI < 62
G	EEI < 42

According to the Directive 2010/30/EU, the local space heater shall be marked as following:

Appliances	Energy efficiency class
Models: **A 7 SAT GLASS** **A 7 GLOBE GLASS** **C 7 GLOBE GLASS** **R 7 SAT GLASS** **R 7 GLOBE GLASS** Trademark: **MORETTI DESIGN**	**A+**

6 Statement of test results

The local space heaters with models:

A 7 SAT GLASS
A 7 GLOBE GLASS
C 7 GLOBE GLASS
R 7 SAT GLASS
R 7 GLOBE GLASS

of the company:

MORETTI FIRE S.r.l.

fulfil and correspond to the requirements of the Commission Regulation (EU) 2015/1185 with regard to ecodesign requirements for local space heaters and achieved a seasonal space heating energy efficiency of:

85,2 %

that corresponds to the energy efficiency class:

A+

in accordance with Annex II Energy Efficiency Classes table 1 of the Commission Delegated Regulation (EU) 2015/1186

The evaluation of the results of this report with respect of conformity with the related commission regulations (2015/1185 and 2015/1186) is only a part of the conformity assessment to fulfil the Ecodesign (Directive 2009/125/EC) and Energy Labelling (Directive 2010/30/EU) prescriptions