

Report No. K 2785 2019 B3
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)

Solid fuel local space heaters:

FUTURA7C
CALORE7C
TOPSTEEL7C
MARY7C
VALS7C
CLAIRE7C
SISSI7C

Trademark:

AMG
ARTEL
ECOFOX
TEPOR
FOCO
KALOR
ADLER
CANADIAN STOVE
KRONE

Company:
AMG S.p.A.

2020



Deutsche
Akkreditierungsstelle
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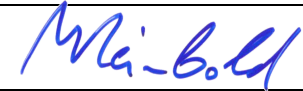
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Publication of page 2 is permitted.

The test results presented in this report refer solely to the test object stated as described on page 2. The report does not represent a general statement about the serial production of the test object and gives not an authorization for use of a TÜV Rheinland test/certification mark.

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

Appliance manufacturer / contractor:		AMG S.p.A Via delle Arti e dei Mestieri, 1/3 36030 San Vito di Leguzzano (VI) - Italy	
Models		Trademark	
FUTURA7C		AMG	
FUTURA7C		ARTEL	
FUTURA7C		ECOFOX	
CALORE7C; FUTURA7C		TEPOR	
TOPSTEEL7C; FUTURA7C		FOCO	
MARY7C; FUTURA7C		KALOR	
VALS7C; FUTURA7C		ADLER	
CLAIRE7C; FUTURA7C		CANADIAN STOVE	
SISSI7C; FUTURA7C		KRONE	
Type of construction:	Pellet stoves in acc. with EN 14785:2006		
Fuel:	Compressed wood pellets class A1 acc. to EN 17225-2, Ø 6 mm, L _{max} 30 mm		
Nominal heat output (P _{nom})	7,5 kW	Direct:	7,5 kW
		Indirect:	0,0 kW
Minimum heat output (P _{min})	3,7 kW	Direct:	3,7 kW
		Indirect:	0,0 kW
Reference type test report:	K 2785 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	90,7 %		
Energy efficiency class	A++		
Cologne, 2020-03-31 432/pom	TÜV Rheinland Energy GmbH Test Centre for Energy Appliances DIN- and DVGW-test laboratory		
Assessor:	Report released after review:		
 			
Dipl.-Ing. A. Pomp	Dipl.-Ing. M. Reibold		

1 Task

The Test Centre for Energy Appliances was instructed to execute the measurements and calculations on the appliance **FUTURA7C** 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 testing report K27852019T1 (EN 14785:2006).

2 Description of the appliances

Residential space heating appliances fired by wood pellets without water heat exchanger, with fan assisted flue discharge and with internal fuel hopper. The appliances are fitted with an additional fan for hot air canalization.

The only difference between each model is related to the different name and different trademark. See the reference testing report K27852019T1 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	No

3 Test data

Working condition	Description	Parameter	Result	Unit
Nominal heat output	Useful efficiency at nominal heat output	$\eta_{th,nom}$	95,0	%
	Nominal heat output	P_{nom}	7,5	kW
	Electric power requirement at nominal heat output*	$e_{l,max}$	86	W
	Particulate matter emissions***	PM	10	mg/m ³
	Organic gaseous compounds emissions***	OGC	2	
	Carbon monoxide emissions***	CO	25	
	Nitrogen oxides emissions***	NO _x	130	
Minimum heat output	Useful efficiency at minimum heat output	$\eta_{th,min}$	95,0	%
	Minimum heat output	P_{min}	3,7	kW
	Electric power requirement at minimum heat output*	$e_{l,min}$	22	W
	Particulate matter emissions***	PM	18	mg/m ³
	Organic gaseous compounds emissions***	OGC	2	
	Carbon monoxide emissions***	CO	197	
	Nitrogen oxides emissions***	NO _x	123	
Standby	Standby mode power consumption**	$e_{l,sb}$	2,8	W

* average values, measured according to EN15456:2008.

The electrical power data in operation are obtained:

- with the main electrical components listed on the Annex A10 of the reference testing report n. K27852019T1.

- for the nominal heat output, with the hot air canalization blower set at factory maximum speed (225 V).

- for part load heat output with the hot air canalization blower not operating (off).

** measured according to IEC 62301.

*** 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}	95,0	%
Contributions of controls of indoor heating comfort (mutually exclusive temperature controls)		F(2)	7,0	%
Contributions of controls of indoor heating comfort		F(3)	0,0	%
Negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption		F(4)	1,3	%
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	90,7	%
	Energy efficiency index	EEI	133	---
	Energy efficiency class	---	A++	---
From 1/1/2022	Seasonal space heating energy efficiency	η_s	90,7	%
	Energy efficiency index	EEI	133	---
	Energy efficiency class	---	A++	---

5 Evaluation of the Energy Labelling Requirements

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

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

Appliances		Energy efficiency class
Models	Trademark	A++
FUTURA7C	AMG	
FUTURA7C	ARTEL	
FUTURA7C	ECOFOX	
CALORE7C; FUTURA7C	TEPOR	
TOPSTEEL7C; FUTURA7C	FOCO	
MARY7C; FUTURA7C	KALOR	
VALS7C; FUTURA7C	ADLER	
CLAIRE7C; FUTURA7C	CANADIAN STOVE	
SISSI7C; FUTURA7C	KRONE	

6 Statement of test results

The local space heaters:

**FUTURA7C
CALORE7C
TOPSTEEL7C
MARY7C
VALS7C
CLAIRE7C
SISSI7C**

of the company:

AMG S.p.A.

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:

90,7 %

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