

Report No. K 1573 2020 B6
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:
TERMO PLUS 23, AQUA PLUS 23, SOLAR PLUS 23
T 23, AT 23, BIOPELLET 24, BIOPELLET 24 PLUS
GALEA 23, GALEA PLUS 23, TAURUS SUN 23

Trademarks:
ANSELMO COLA, FERROLI,
Lamborghini CaloreClima

Company:
Cola S.r.l.

2020

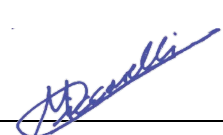



This accreditation is valid only for the listed standards as stated in the accreditation annex of D-PL-11120-04-00

This report may only be published and forwarded to third parties in its complete, unabridged form. The publication or dissemination of extracts, summaries, appraisals or any other adaptation and alterations, in particular for advertising purposes, is only permissible with the prior written permission of TÜV Rheinland.
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:	Cola S.r.l. Viale del Lavoro, 7/9 37040 Arcole (VR)	
Trademarks:	ANSELMO COLA, FERROLI, Lamborghini CaloreClima	
Models:	TERMO PLUS 23, AQUA PLUS 23, SOLAR PLUS 23 T 23, AT 23, BIOPELLET 24, BIOPELLET 24 PLUS GALEA 23, GALEA PLUS 23, TAURUS SUN 23	
Type of construction:	Pellet stoves in acc. with EN 14785:2006	
Fuel:	Compressed wood pellets, Ø 6 mm, L _{max} 30 mm, class A1 according to EN 17225-2	
Nominal heat output (P _{nom})	23,0 kW	Direct: 1,9 kW
		Indirect: 21,1 kW
Minimum heat output (P _{min})	6,9 kW	Direct: 0,9 kW
		Indirect: 6,0 kW
Reference type test report:	K 1573 2015 T1, K 1639 2015 Z1, K 2004 2017 Z1, K 2553 2019 Z1	
<p>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.</p> <p>Test results: the requirements of the implementing Directives 2009/125/EC and 2010/30/EU for the appliance are fulfilled with the following values:</p>		
Seasonal space heating energy efficiency	89,9 %	
Energy efficiency class	A++	
Cologne, 25.05.2020 432/mc	TÜV Rheinland Energy GmbH Test Centre for Energy Appliances DIN- and DVGW-test laboratory	
Assessor:	Report released after review:	
 		
Dipl.-Ing. M. Ciccarelli	Dipl.-Ing. A. Pomp	

1 Task

The Test Centre for Energy Appliances was instructed to execute the measurements and calculations on the appliance **TERMO PLUS 23, AQUA PLUS 23, SOLAR PLUS 23, T 23, AT 23, BIOPELLET 24, BIOPELLET 24 PLUS, GALEA 23, GALEA PLUS 23, TAURUS SUN 23** 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/CMC Centro Misura Compatibilità S.r.l. in Thiene (Italy).

Test details on the reference test report K 1573 2015 T1, K 1639 2015 Z1, K 2004 2017 Z1 and K 2553 2019 Z1. For further details, see the following table.

Report number	Model	Trademark
K 1573 2015 T1	AQUAPLUS 23, TERMOPLUS 23	ANSELMO COLA
K 1639 2015 Z1	AT 23, T23	FERROLI
K 2004 2017 Z1	BIOPELLET 24, BIOPELLET 24 PLUS SOLARPLUS 23	FERROLI ANSELMO COLA
K 2553 2019 Z1	GALEA 23, GALEA PLUS 23, TAURUS SUN 23	Lamborghini CALORECLIMA

2 Description of the appliances

Residential space heating appliances fired by wood pellets with 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.

See the reference test report Test details on the reference test report K 1573 2015 T1, K 1639 2015 Z1, K 2004 2017 Z1 and K 2553 2019 Z1 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	$\eta_{th,nom}$	93,4	%
	Nominal heat output	P_{nom}	23,0	kW
	Electric power requirement at nominal heat output*	$e_{l,max}$	49	W
	Particulate matter emissions**	PM	7,5	mg/m ³
	Organic gaseous compounds emissions**	OGC	0,3	
	Carbon monoxide emissions**	CO	127,9	
	Nitrogen oxides emissions**	NO _X	151,1	
Minimum heat output	Useful efficiency at minimum heat output	$\eta_{th,min}$	94,8	%
	Minimum heat output	P_{min}	6,9	kW
	Electric power requirement at minimum heat output*	$e_{l,min}$	37	W
	Particulate matter emissions**	PM	5,4	mg/m ³
	Organic gaseous compounds emissions**	OGC	0,8	
	Carbon monoxide emissions**	CO	68,1	
	Nitrogen oxides emissions**	NO _X	173,9	
Standby	Standby mode power consumption	$e_{l,sb}$	3,5	W

* Average values, measured according to EN15456:2008.

** 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}	93,4	%
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)	0,48	%
Negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame		F(5)	0	%
Biomass label factor		BLF	1,45	---
Up to 1/1/2022	Seasonal space heating energy efficiency	η_s	89,9	%
	Energy efficiency index	EEI	132	---
	Energy efficiency class	---	A++	---
From 1/1/2022	Seasonal space heating energy efficiency	η_s	89,9	%
	Energy efficiency index	EEI	132	---
	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 heater shall be marked as following:

Appliances: TERMO PLUS 23, AQUA PLUS 23, SOLAR PLUS 23, T 23, AT 23, BIOPELLET 24, BIOPELLET 24 PLUS GALEA 23, GALEA PLUS 23, TAURUS SUN 23	Energy efficiency class
Trademarks: ANSELMO COLA, FERROLI, Lamborghini CaloreClima	A++

6 Statement of test results

The local space heaters

**TERMO PLUS 23, AQUA PLUS 23, SOLAR PLUS 23
T 23, AT 23, BIOPELLET 24, BIOPELLET 24 PLUS
GALEA 23, GALEA PLUS 23, TAURUS SUN 23**

of the company

Cola 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

89,9 %

and to an energy efficiency class of

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