

Report No. K 1570 2020 B10
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:
AQUAPLUS 18 - TERMOPLUS 18, AT 18, T 18,
BIOPELLET 18, BIOPELLET 18 PLUS,
GALEA 18, GALEA PLUS 18

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

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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: | Cola S.r.l. Viale del Lavoro, 7/9 37040 Arcole (VR) | |
| Trademarks: | ANSELMO COLA, FERROLI, Lamborghini CaloreClima | |
| Models: | AQUAPLUS 18 - TERMOPLUS 18, AT 18, T 18, BIOPELLET 18, BIOPELLET 18 PLUS, GALEA 18, GALEA PLUS 18 | |
| 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}) | 19,0 kW | Direct: 1,7 kW |
| | | Indirect: 17,3 kW |
| Minimum heat output (P _{min}) | 5,5 kW | Direct: 0,7 kW |
| | | Indirect: 4,8 kW |
| Reference type test report: | K 1570 2015 T1, K 1647 2015 Z1, K 2022 2017 Z1, K 2550 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 | 89,5 % | |
| 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 **AQUAPLUS 18 - TERMOPLUS 18, AT 18, T 18, BIOPELLET 18, BIOPELLET 18 PLUS, GALEA 18, GALEA PLUS 18** 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 1570 2015 T1, K 1647 2015 Z1, K 2022 2017 Z1 and K 2550 2019 Z1. For further details, see the following table.

| Report number | Model | Trademark |
|----------------|---------------------------------|-------------------------|
| K 1570 2015 T1 | AQUAPLUS 18, TERMOPLUS 18 | ANSELMO COLA |
| K 1647 2015 Z1 | AT 18, T18 | FERROLI |
| K 2022 2017 Z1 | BIOPELLET 18, BIOPELLET 18 PLUS | FERROLI |
| K 2550 2019 Z1 | GALEA 18, GALEA PLUS 18 | 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 1570 2015 T1, K 1647 2015 Z1, K 2022 2017 Z1 and K 2550 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 | $\eta_{th,nom}$ | 93,1 | % |
| | Nominal heat output | P_{nom} | 19,0 | kW |
| | Electric power requirement at nominal heat output* | $e_{l,max}$ | 49 | W |
| | Particulate matter emissions** | PM | 11,6 | mg/m ³ |
| | Organic gaseous compounds emissions** | OGC | 0,7 | |
| | Carbon monoxide emissions** | CO | 84,7 | |
| | Nitrogen oxides emissions** | NO _X | 150 | |
| Minimum heat output | Useful efficiency at minimum heat output | $\eta_{th,min}$ | 95,3 | % |
| | Minimum heat output | P_{min} | 5,5 | kW |
| | Electric power requirement at minimum heat output* | $e_{l,min}$ | 37 | W |
| | Particulate matter emissions** | PM | 4,3 | mg/m ³ |
| | Organic gaseous compounds emissions** | OGC | 1,1 | |
| | Carbon monoxide emissions** | CO | 121,9 | |
| | Nitrogen oxides emissions** | NO _X | 152,8 | |
| 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} | 93,1 | % |
| 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) | 0,58 | % |
| 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 | 89,5 | % |
| | Energy efficiency index | EEI | 131 | --- |
| | Energy efficiency class | --- | A++ | --- |
| From 1/1/2022 | Seasonal space heating energy efficiency | η_s | 89,4 | % |
| | Energy efficiency index | EEI | 131,4 | --- |
| | 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: AQUAPLUS 18 - TERMOPLUS 18, AT 18, T 18, BIOPELLET 18, BIOPELLET 18 PLUS, GALEA 18, GALEA PLUS 18 | Energy efficiency class |
| Trademarks: ANSELMO COLA, FERROLI, Lamborghini CaloreClima | A++ |

6 Statement of test results

The local space heaters

**AQUAPLUS 18 - TERMOPLUS 18, AT 18, T 18,
BIOPELLET 18, BIOPELLET 18 PLUS,
GALEA 18, GALEA PLUS 18**

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

89,5 %

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