

**Report No. K 3543 2025 T1**

**Residential solid fuel burning appliances:  
mechanically by wood pellets fed roomheaters, inset appliances and cookers**

**in accordance with  
DIN EN 16510-1:2023-02 and DIN EN 16510-2-6:2023-02**

Type:  
**AP008S\_2\_08/09/10/11/12 EN**  
**AP008S\_3\_08/09/10/11/12 EN**

Trademark:  
**PALAZZETTI**

Company:  
**PALAZZETTI LELIO S.p.A.**



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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### Test report

#### Residential solid fuel burning appliances:

mechanically by wood pellets fed roomheaters, inset appliances and cookers

**DIN EN 16510-1: 2023-02 and DIN EN 16510-2-6:2023-02**

Historical assessment data based on test reports K11612013T1-Rev.01 and K11612018E5/E6

Applicant/contractor:	<b>PALAZZETTI LELIO S.p.A.</b> Via Roveredo, 103 33080 Porcia (PN) - Italy
Trademark:	<b>PALAZZETTI</b>
Type designations:	<b>AP008S_2_08/09/10/11/12 EN</b> <b>AP008S_3_08/09/10/11/12 EN</b>
Appliance description:	Mechanical by wood pellets fed roomheater
Test fuel:	wood pellets Ø 6 mm, Lmax 30 mm, max humidity 6,1%, FireStixx Premium, class A1 according to EN 17225-2

#### Specified data by applicant

Type of appliance:	CC50				
Type designations:	AP008S_2_08 AP008S_3_08	AP008S_2_09 AP008S_3_09	AP008S_2_10 AP008S_3_10	AP008S_2_11 AP008S_3_11	AP008S_2_12 AP008S_3_12
Total heat input [kW]:	4,0 - 8,8	4,0 – 10,0	4,0 - 10,9	4,0 - 12,4	4,0 - 13,6
Space heat output [kW]:	3,7 - 8,0	3,7 - 9,0	3,7 - 9,8	3,68 - 11,0	3,7 - 12,0
Water heat output:	Not applicable				
Max. water pressure:	Not applicable				
Max. water temperature:	Not applicable				

**Remark:** Room sealed appliances. All the stoves are structurally identical. Only the setting of the fuel supply differs between the Types.

**Test basis:** DIN EN 16510-1:2023-02 and DIN EN 16510-2-6:2023-02.

**Test results:** The appliances conform with the requirements of DIN EN 16510-1:2023-02, except for clauses 5.8, 7 and 8, and DIN EN 16510-2-6:2023-02, except for clause 4.9, which are not part of this assessment.

Performance assessments regarding environmental sustainability is not subject of this report. A possible NPD declaration by the manufacturer is also not included in the present report. The appliances conform with the essential declared characteristics of table ZA.1 of DIN EN 16510-2-6:2023-02, documented with test report K 3543 2025 B2.

Dated in Cologne, 2025-04-09

TÜV Rheinland Energy & Environment GmbH  
Test Centre according to Construction  
Product Regulation 305/2011(CPR)  
Notified Body: 2456

Assessor:

Report released after review:

Dipl.-Ing. A. Pomp

Dipl.-Ing. M. Reimbold

## 1 Task

The Test Centre for Energy Appliances was instructed to execute the measurements and calculations on the appliances **AP008S\_2\_08/09/10/11/12 EN, AP008S\_3\_08/09/10/11/12 EN** for the operation with wood pellets according to DIN EN 16510-1:2023-02 and to DIN EN 16510-2-6:2023-02. The clauses 5.8, 7 and 8 of DIN EN 16510-1:2023-02, and clause 4.9 of DIN EN 16510-2-6:2023-02 are not part of this assessment.

The practical tests were carried out by the laboratory CMC Centro Misura Compatibilità S.r.l., via della Fisica 20, Thiene (VI) – Italy, on the 28th, 29th, 30th and on the 31th of October 2013, on the 15th of February 2018 and on the on 29th May 2018.

The data documented in this test report are based on historical data of the initial type testing report no.: K11612013T1-Rev.01, K11612018E5 and 11612018E6 issued according to DIN EN 14785.

The manufacturer declares that the construction, functional- and safety-related components and design of models **AP008S\_2\_08/09/10/11/12 EN, AP008S\_3\_08/09/10/11/12 EN** are identical to the one documented in the initial type testing report no.: K11612013T1-Rev.01, K11612018E5 and 11612018E6 (see also Appendix A01).

Type appliance	Latest report number	New type designations acc. DIN EN 16510-1 + DIN EN 16510-2-6 with report numbers K 3543 2025 T1 and K 3543 2025 B2
AP008S_2_08/09/10/11/12 AP008S_3_08/09/10/11/12	K11612013T1 and K11612018E5/E6	AP008S_2_08/09/10/11/12 EN AP008S_3_08/09/10/11/12 EN
<b>Additional identical roomheaters from extension reports</b>		
ECOFIRE BIANCA LUX 9 ECOFIRE BIANCA LUX 12	K23912018Z1	ECOFIRE BIANCA LUX 9 EN ECOFIRE BIANCA LUX 12 EN
ECOFIRE ANNA 9 US ECOFIRE ANNA 12 US	K23922018Z1	ECOFIRE ANNA 9 US EN ECOFIRE ANNA 12 US EN
ECOFIRE JULIE 9 US ECOFIRE JULIE 12 US	K23932018Z1	ECOFIRE JULIE 9 US EN ECOFIRE JULIE 12 US EN
ECOFIRE AURORA 9 US ECOFIRE AURORA 12 US	K23942018Z1	ECOFIRE AURORA 9 US EN ECOFIRE AURORA 12 US EN
ECOFIRE ANNA 9 V2/ECOFIRE ANNA 9 V2 PRO 2 ECOFIRE ANNA 12 V2/ECOFIRE ANNA 12 V2 PRO 3	K26902019Z1	ECOFIRE ANNA 9 V2 EN/ECOFIRE ANNA 9 V2 PRO 2 EN ECOFIRE ANNA 12 V2 EN/ECOFIRE ANNA 12 V2 PRO 3 EN
ECOFIRE ANDRES 12 V2	K26932019Z1	ECOFIRE ANDRES 12 V2 EN
ECOFIRE JULIE 9 V2/ECOFIRE JULIE 9 V2 PRO 2 ECOFIRE JULIE 9 V2 9 OLLARE/ECOFIRE JULIE 9 V2 PRO 2 OLLARE ECOFIRE JULIE 12 V2 /ECOFIRE JULIE 12 V2 PRO 3	K26912019Z1	ECOFIRE JULIE 9 V2 EN/ECOFIRE JULIE 9 V2 PRO 2 EN ECOFIRE JULIE 9 V2 9 OLLARE EN/ECOFIRE JULIE 9 V2 PRO 2 OLLARE EN ECOFIRE JULIE 12 V2 EN /ECOFIRE JULIE 12 V2 PRO 3 EN
ECOFIRE MIRIAM 9 V2/ECOFIRE MIRIAM 9 V2 PRO 2 ECOFIRE MIRIAM 12 V2 /ECOFIRE MIRIAM 12 V2 PRO 3	K26922019Z1	ECOFIRE MIRIAM 9 V2 EN/ECOFIRE MIRIAM 9 V2 PRO 2 EN ECOFIRE MIRIAM 12 V2 EN /ECOFIRE MIRIAM 12 V2 PRO 3 EN

## **2 Description of the appliance**

### **2.1 Construction**

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 and an ambient motor, which can blow the air in the installation room or in the canalization pipe by moving a selector, which deviates the ambient air towards the top or the backside canalization.

In addition, the appliances can be equipped with and without Magnofix in the combustion chamber. Moreover the appliances can be fitted with two additional ventilation motors (for additional canalization).

The type designations AP008S\_3\_08/09/10/11/12 EN are with concentric flue gas output socket.

All the stoves are structurally identical and have the same reduced heat output. Only the nominal load parameters are different.

The type designation AP008S\_2\_09/10/11 EN, AP008S\_3\_09/10/11 EN are based on families of appliances and was not tested (see Annex G of EN16510-1)

More details in test reports K11612013T1 and K11612018E5/E6

## 2.2 General technical specified data of the appliances

Model name:		AP008S_2_08 EN, AP008S_3_08 EN
Parameter	Explanation	Specified data by the applicant
$P_{nom}$	Nominal heat output or a range of outputs (dependent on fuel types), given with 1 decimal	8 kW
$P_{SHnom}$	Nominal space heat output or a range of outputs (dependent on fuel types), given with 1 decimal	8 kW
$P_{Wnom}$	Nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), given with 1 decimal	--
$P_{part}$	Part load heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{SHpart}$	Part load space heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{Wpart}$	Part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	---
$P_{slow}$	Heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{SHslow}$	Space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{Wslow}$	Water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, with 1 decimal	--
$P_{acc\ in}$	Accumulator heat input, in kW or W for Kachelofen inset appliances only	--
$T_{acc\ in}$	Temperature at the separate heat exchanger inlet, for Kachelofen inset appliances only, given as an integer	--
$\zeta_{acc}$	Flow resistance of the separate heat exchanger as used in the test, for Kachelofen inset appliances only	--
$\eta_{nom}$	Appliance efficiency at nominal heat output, given as an integer	91 %
$\eta_{part}$	Appliance efficiency at part load heat output, given as an integer	91 %
$\eta_s$	Appliance seasonal space heating efficiency at nominal heat output, given as an integer	85 %
$EEI$	Energy efficiency index, given as an integer	126
$CO_{nom} (13\ \% O_2)$	CO emission at 13 % oxygen content at nominal heat output, given as an integer	100 mg/m <sup>3</sup>
$CO_{part} (13\ \% O_2)$	CO emission at 13 % oxygen content at part load heat output if specified, given as an integer	250 mg/m <sup>3</sup>
$CO_{slow} (13\ \% O_2)$	CO emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
$NO_{xnom} (13\ \% O_2)$	NOx emission at 13 % oxygen content at nominal heat output, given as an integer	155 mg/m <sup>3</sup>

<b><math>NO_{xpart}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at part load heat output if specified, given as an integer	137 mg/m <sup>3</sup>
<b><math>NO_{xslow}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>OGC_{nom}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at nominal heat output, given as an integer	3 mg/m <sup>3</sup>
<b><math>OGC_{part}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at part load heat output if specified, given as an integer	5 mg/m <sup>3</sup>
<b><math>OGC_{slow}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>PM_{nom}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at nominal heat output, given as an integer	8 mg/m <sup>3</sup>
<b><math>PM_{part}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at part load heat output if specified, given as an integer	11 mg/m <sup>3</sup>
<b><math>PM_{slow}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>p_{nom}</math></b>	Minimum flue draught at nominal heat output, given as an integer	12 Pa
<b><math>p_{part}</math></b>	Minimum flue draught at part load heat output if specified, given as an integer	10 Pa
<b><math>p_{slow}</math></b>	Minimum flue draught at heat output at slow combustion if specified, given as an integer	--
<b><math>p_w</math></b>	Permissible maximum water operating pressure, if applicable, given with 1 decimal	--
<b><math>d_R</math></b>	Minimum distances from the rear to combustible material, given as an integer	200 mm
<b><math>d_S</math></b>	Minimum distances from the sides to combustible material, given as an integer	200 mm
<b><math>d_C</math></b>	Minimum distances from the top to combustible material in the ceiling, given as an integer	750 mm
<b><math>d_P</math></b>	Minimum distances from the front to combustible material	800 mm
<b><math>d_F</math></b>	Minimum distances from the front to combustible material in bottom front radiation area, given as an integer	1500 mm
<b><math>d_L</math></b>	Minimum distances from the front to combustible material in side front radiation area, given as an integer	1500 mm
<b><math>d_B</math></b>	Minimum distances below the bottom (not regarding feet) to combustible material, given as an integer	0 mm
<b><math>d_{non}</math></b>	Minimum distances to non-combustible walls, given as an integer	0 mm
<b><math>s</math></b>	Protective insulation according to manufacturer's instructions	-
<b><math>el_{SB}</math></b>	Consumption of electrical auxiliary energy at standby, given with 3 decimals	0.001 kW
<b><math>el_{max}</math></b>	Consumption of electrical auxiliary energy at nominal heat output, given with 3 decimals	0.107 kW

<b><math>e_{l\min}</math></b>	Consumption of electrical auxiliary energy at part load heat output, given with 3 decimals	0.060kW
<b><math>E, f</math></b>	Power supply voltage, frequency, given as an integer	230 V, 50 Hz
<b><math>W_{\max}</math></b>	Maximum electric power input, given as an integer	360 W
<b><math>T_{\text{snom}}</math></b>	Flue gas outlet temperature at nominal heat output, given as an integer	189 °C
<b><math>T_{\text{spart}}</math></b>	Flue gas outlet temperature at part load heat output, given as an integer (given for pellet operation only)	117 °C
<b><math>T_{\text{class}}</math></b>	Chimney designation according to the appropriate chimney standard	T400 G
<b><math>\phi_{f,g \text{ nom}}</math></b>	Flue gas mass flow at nominal heat output, given with 1 decimal	5,4 g/s
<b><math>\phi_{f,g \text{ part}}</math></b>	Flue gas mass flow at part load heat output, given with 1 decimal (given for pellet operation only)	4.4 g/s
<b><math>V_h</math></b>	Standing Air Loss, if specified, given with 1 decimal	---
<b>CON or INT</b>	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	CON
<b><math>d_{\text{out}}</math></b>	Diameter of the flue gas outlet, given as an integer	80 mm
<b><math>L, H, W</math></b>	Overall dimensions of the appliance (length, height, width), given as an integer	528 x 1186 x 510 mm
<b><math>m</math></b>	Mass of the appliance, given as an integer (in relation to the building's statics)	180 kg
<b><math>m_{\text{chim}}</math></b>	Maximum load of a chimney the appliance may carry, given as an integer	0 kg

Model name:		AP008S_2_09 EN, AP008S_3_09 EN
Parameter	Explanation	Specified data by the applicant
$P_{nom}$	Nominal heat output or a range of outputs (dependent on fuel types), given with 1 decimal	9 kW
$P_{SHnom}$	Nominal space heat output or a range of outputs (dependent on fuel types), given with 1 decimal	9 kW
$P_{Wnom}$	Nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), given with 1 decimal	--
$P_{part}$	Part load heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{SHpart}$	Part load space heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{Wpart}$	Part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	---
$P_{slow}$	Heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{SHslow}$	Space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{Wslow}$	Water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, with 1 decimal	--
$P_{acc\ in}$	Accumulator heat input, in kW or W for Kachelofen inset appliances only	--
$T_{acc\ in}$	Temperature at the separate heat exchanger inlet, for Kachelofen inset appliances only, given as an integer	--
$\zeta_{acc}$	Flow resistance of the separate heat exchanger as used in the test, for Kachelofen inset appliances only	--
$\eta_{nom}$	Appliance efficiency at nominal heat output, given as an integer	88 %
$\eta_{part}$	Appliance efficiency at part load heat output, given as an integer	91 %
$\eta_s$	Appliance seasonal space heating efficiency at nominal heat output, given as an integer	83 %
$EEI$	Energy efficiency index, given as an integer	123
$CO_{nom} (13\ \% O_2)$	CO emission at 13 % oxygen content at nominal heat output, given as an integer	100 mg/m <sup>3</sup>
$CO_{part} (13\ \% O_2)$	CO emission at 13 % oxygen content at part load heat output if specified, given as an integer	250 mg/m <sup>3</sup>
$CO_{slow} (13\ \% O_2)$	CO emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
$NO_{xnom} (13\ \% O_2)$	NOx emission at 13 % oxygen content at nominal heat output, given as an integer	155 mg/m <sup>3</sup>



<b><math>NO_{xpart}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at part load heat output if specified, given as an integer	137 mg/m <sup>3</sup>
<b><math>NO_{xslow}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>OGC_{nom}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at nominal heat output, given as an integer	3 mg/m <sup>3</sup>
<b><math>OGC_{part}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at part load heat output if specified, given as an integer	5 mg/m <sup>3</sup>
<b><math>OGC_{slow}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>PM_{nom}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at nominal heat output, given as an integer	12 mg/m <sup>3</sup>
<b><math>PM_{part}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at part load heat output if specified, given as an integer	11 mg/m <sup>3</sup>
<b><math>PM_{slow}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>p_{nom}</math></b>	Minimum flue draught at nominal heat output, given as an integer	12 Pa
<b><math>p_{part}</math></b>	Minimum flue draught at part load heat output if specified, given as an integer	10 Pa
<b><math>p_{slow}</math></b>	Minimum flue draught at heat output at slow combustion if specified, given as an integer	--
<b><math>p_w</math></b>	Permissible maximum water operating pressure, if applicable, given with 1 decimal	--
<b><math>d_R</math></b>	Minimum distances from the rear to combustible material, given as an integer	200 mm
<b><math>d_S</math></b>	Minimum distances from the sides to combustible material, given as an integer	200 mm
<b><math>d_C</math></b>	Minimum distances from the top to combustible material in the ceiling, given as an integer	750 mm
<b><math>d_P</math></b>	Minimum distances from the front to combustible material	800 mm
<b><math>d_F</math></b>	Minimum distances from the front to combustible material in bottom front radiation area, given as an integer	1500 mm
<b><math>d_L</math></b>	Minimum distances from the front to combustible material in side front radiation area, given as an integer	1500 mm
<b><math>d_B</math></b>	Minimum distances below the bottom (not regarding feet) to combustible material, given as an integer	0 mm
<b><math>d_{non}</math></b>	Minimum distances to non-combustible walls, given as an integer	0 mm
<b><math>s</math></b>	Protective insulation according to manufacturer's instructions	-
<b><math>el_{SB}</math></b>	Consumption of electrical auxiliary energy at standby, given with 3 decimals	0.001 kW
<b><math>el_{max}</math></b>	Consumption of electrical auxiliary energy at nominal heat output, given with 3 decimals	0.107 kW

<b><math>e_{l\min}</math></b>	Consumption of electrical auxiliary energy at part load heat output, given with 3 decimals	0.060kW
<b><math>E, f</math></b>	Power supply voltage, frequency, given as an integer	230 V, 50 Hz
<b><math>W_{\max}</math></b>	Maximum electric power input, given as an integer	360 W
<b><math>T_{\text{snom}}</math></b>	Flue gas outlet temperature at nominal heat output, given as an integer	209 °C
<b><math>T_{\text{spart}}</math></b>	Flue gas outlet temperature at part load heat output, given as an integer (given for pellet operation only)	117 °C
<b><math>T_{\text{class}}</math></b>	Chimney designation according to the appropriate chimney standard	T400 G
<b><math>\phi_{f,g \text{ nom}}</math></b>	Flue gas mass flow at nominal heat output, given with 1 decimal	5,8 g/s
<b><math>\phi_{f,g \text{ part}}</math></b>	Flue gas mass flow at part load heat output, given with 1 decimal (given for pellet operation only)	4.4 g/s
<b><math>V_h</math></b>	Standing Air Loss, if specified, given with 1 decimal	---
<b>CON or INT</b>	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	CON
<b><math>d_{\text{out}}</math></b>	Diameter of the flue gas outlet, given as an integer	80 mm
<b><math>L, H, W</math></b>	Overall dimensions of the appliance (length, height, width), given as an integer	528 x 1186 x 510 mm
<b><math>m</math></b>	Mass of the appliance, given as an integer (in relation to the building's statics)	180 kg
<b><math>m_{\text{chim}}</math></b>	Maximum load of a chimney the appliance may carry, given as an integer	0 kg

Model name:		AP008S_0_10 EN, AP008S_2_10 EN, AP008S_3_10 EN
Parameter	Explanation	Specified data by the applicant
$P_{nom}$	Nominal heat output or a range of outputs (dependent on fuel types), given with 1 decimal	9,8 kW
$P_{SHnom}$	Nominal space heat output or a range of outputs (dependent on fuel types), given with 1 decimal	9,8 kW
$P_{Wnom}$	Nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), given with 1 decimal	--
$P_{part}$	Part load heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{SHpart}$	Part load space heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{Wpart}$	Part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	---
$P_{slow}$	Heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{SHslow}$	Space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{Wslow}$	Water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, with 1 decimal	--
$P_{acc\ in}$	Accumulator heat input, in kW or W for Kachelofen inset appliances only	--
$T_{acc\ in}$	Temperature at the separate heat exchanger inlet, for Kachelofen inset appliances only, given as an integer	--
$\zeta_{acc}$	Flow resistance of the separate heat exchanger as used in the test, for Kachelofen inset appliances only	--
$\eta_{nom}$	Appliance efficiency at nominal heat output, given as an integer	88 %
$\eta_{part}$	Appliance efficiency at part load heat output, given as an integer	91 %
$\eta_s$	Appliance seasonal space heating efficiency at nominal heat output, given as an integer	83 %
$EEI$	Energy efficiency index, given as an integer	123
$CO_{nom} (13\ \% O_2)$	CO emission at 13 % oxygen content at nominal heat output, given as an integer	100 mg/m <sup>3</sup>
$CO_{part} (13\ \% O_2)$	CO emission at 13 % oxygen content at part load heat output if specified, given as an integer	250 mg/m <sup>3</sup>
$CO_{slow} (13\ \% O_2)$	CO emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
$NO_{xnom} (13\ \% O_2)$	NOx emission at 13 % oxygen content at nominal heat output, given as an integer	155 mg/m <sup>3</sup>
$NO_{xpart} (13\ \% O_2)$	NOx emission at 13 % oxygen content at part load heat output if specified, given as an integer	137 mg/m <sup>3</sup>

<b><math>NO_{xslow}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>OGC_{nom}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at nominal heat output, given as an integer	3 mg/m <sup>3</sup>
<b><math>OGC_{part}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at part load heat output if specified, given as an integer	5 mg/m <sup>3</sup>
<b><math>OGC_{slow}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>PM_{nom}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at nominal heat output, given as an integer	12 mg/m <sup>3</sup>
<b><math>PM_{part}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at part load heat output if specified, given as an integer	11 mg/m <sup>3</sup>
<b><math>PM_{slow}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>p_{nom}</math></b>	Minimum flue draught at nominal heat output, given as an integer	12 Pa
<b><math>p_{part}</math></b>	Minimum flue draught at part load heat output if specified, given as an integer	10 Pa
<b><math>p_{slow}</math></b>	Minimum flue draught at heat output at slow combustion if specified, given as an integer	--
<b><math>p_w</math></b>	Permissible maximum water operating pressure, if applicable, given with 1 decimal	--
<b><math>d_R</math></b>	Minimum distances from the rear to combustible material, given as an integer	200 mm
<b><math>d_S</math></b>	Minimum distances from the sides to combustible material, given as an integer	200 mm
<b><math>d_C</math></b>	Minimum distances from the top to combustible material in the ceiling, given as an integer	750 mm
<b><math>d_P</math></b>	Minimum distances from the front to combustible material	800 mm
<b><math>d_F</math></b>	Minimum distances from the front to combustible material in bottom front radiation area, given as an integer	1500 mm
<b><math>d_L</math></b>	Minimum distances from the front to combustible material in side front radiation area, given as an integer	1500 mm
<b><math>d_B</math></b>	Minimum distances below the bottom (not regarding feet) to combustible material, given as an integer	0 mm
<b><math>d_{non}</math></b>	Minimum distances to non-combustible walls, given as an integer	0 mm
<b><math>s</math></b>	Protective insulation according to manufacturer's instructions	-
<b><math>e_{lSB}</math></b>	Consumption of electrical auxiliary energy at standby, given with 3 decimals	0.001 kW
<b><math>e_{lmax}</math></b>	Consumption of electrical auxiliary energy at nominal heat output, given with 3 decimals	0.107 kW
<b><math>e_{lmin}</math></b>	Consumption of electrical auxiliary energy at part load heat output, given with 3 decimals	0.060kW
<b><math>E, f</math></b>	Power supply voltage, frequency, given as an integer	230 V, 50 Hz

<b><math>W_{\max}</math></b>	Maximum electric power input, given as an integer	360 W
<b><math>T_{\text{snom}}</math></b>	Flue gas outlet temperature at nominal heat output, given as an integer	225 °C
<b><math>T_{\text{spart}}</math></b>	Flue gas outlet temperature at part load heat output, given as an integer (given for pellet operation only)	117 °C
<b><math>T_{\text{class}}</math></b>	Chimney designation according to the appropriate chimney standard	T400 G
<b><math>\phi_{\text{f,g nom}}</math></b>	Flue gas mass flow at nominal heat output, given with 1 decimal	6,2 g/s
<b><math>\phi_{\text{f,g part}}</math></b>	Flue gas mass flow at part load heat output, given with 1 decimal (given for pellet operation only)	4.4 g/s
<b><math>V_{\text{h}}</math></b>	Standing Air Loss, if specified, given with 1 decimal	---
<b>CON or INT</b>	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	CON
<b><math>d_{\text{out}}</math></b>	Diameter of the flue gas outlet, given as an integer	80 mm
<b><math>L, H, W</math></b>	Overall dimensions of the appliance (length, height, width), given as an integer	528 x 1186 x 510 mm
<b><math>m</math></b>	Mass of the appliance, given as an integer (in relation to the building's statics)	180 kg
<b><math>m_{\text{chim}}</math></b>	Maximum load of a chimney the appliance may carry, given as an integer	0 kg

Model name:		AP008S_2_11 EN, AP008S_3_11 EN
Parameter	Explanation	Specified data by the applicant
$P_{nom}$	Nominal heat output or a range of outputs (dependent on fuel types), given with 1 decimal	11 kW
$P_{SHnom}$	Nominal space heat output or a range of outputs (dependent on fuel types), given with 1 decimal	11 kW
$P_{Wnom}$	Nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), given with 1 decimal	--
$P_{part}$	Part load heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{SHpart}$	Part load space heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{Wpart}$	Part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	---
$P_{slow}$	Heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{SHslow}$	Space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{Wslow}$	Water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, with 1 decimal	--
$P_{acc\ in}$	Accumulator heat input, in kW or W for Kachelofen inset appliances only	--
$T_{acc\ in}$	Temperature at the separate heat exchanger inlet, for Kachelofen inset appliances only, given as an integer	--
$\zeta_{acc}$	Flow resistance of the separate heat exchanger as used in the test, for Kachelofen inset appliances only	--
$\eta_{nom}$	Appliance efficiency at nominal heat output, given as an integer	88 %
$\eta_{part}$	Appliance efficiency at part load heat output, given as an integer	91 %
$\eta_s$	Appliance seasonal space heating efficiency at nominal heat output, given as an integer	83 %
$EEI$	Energy efficiency index, given as an integer	123
$CO_{nom} (13\ \% O_2)$	CO emission at 13 % oxygen content at nominal heat output, given as an integer	100 mg/m <sup>3</sup>
$CO_{part} (13\ \% O_2)$	CO emission at 13 % oxygen content at part load heat output if specified, given as an integer	250 mg/m <sup>3</sup>
$CO_{slow} (13\ \% O_2)$	CO emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
$NO_{xnom} (13\ \% O_2)$	NOx emission at 13 % oxygen content at nominal heat output, given as an integer	155 mg/m <sup>3</sup>
$NO_{xpart} (13\ \% O_2)$	NOx emission at 13 % oxygen content at part load heat output if specified, given as an integer	137 mg/m <sup>3</sup>

<b><math>NO_{xslow}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>OGC_{nom}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at nominal heat output, given as an integer	3 mg/m <sup>3</sup>
<b><math>OGC_{part}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at part load heat output if specified, given as an integer	5 mg/m <sup>3</sup>
<b><math>OGC_{slow}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>PM_{nom}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at nominal heat output, given as an integer	12 mg/m <sup>3</sup>
<b><math>PM_{part}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at part load heat output if specified, given as an integer	11 mg/m <sup>3</sup>
<b><math>PM_{slow}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>p_{nom}</math></b>	Minimum flue draught at nominal heat output, given as an integer	12 Pa
<b><math>p_{part}</math></b>	Minimum flue draught at part load heat output if specified, given as an integer	10 Pa
<b><math>p_{slow}</math></b>	Minimum flue draught at heat output at slow combustion if specified, given as an integer	--
<b><math>p_w</math></b>	Permissible maximum water operating pressure, if applicable, given with 1 decimal	--
<b><math>d_R</math></b>	Minimum distances from the rear to combustible material, given as an integer	200 mm
<b><math>d_S</math></b>	Minimum distances from the sides to combustible material, given as an integer	200 mm
<b><math>d_C</math></b>	Minimum distances from the top to combustible material in the ceiling, given as an integer	750 mm
<b><math>d_P</math></b>	Minimum distances from the front to combustible material	800 mm
<b><math>d_F</math></b>	Minimum distances from the front to combustible material in bottom front radiation area, given as an integer	1500 mm
<b><math>d_L</math></b>	Minimum distances from the front to combustible material in side front radiation area, given as an integer	1500 mm
<b><math>d_B</math></b>	Minimum distances below the bottom (not regarding feet) to combustible material, given as an integer	0 mm
<b><math>d_{non}</math></b>	Minimum distances to non-combustible walls, given as an integer	0 mm
<b><math>s</math></b>	Protective insulation according to manufacturer's instructions	-
<b><math>e_{lSB}</math></b>	Consumption of electrical auxiliary energy at standby, given with 3 decimals	0.001 kW
<b><math>e_{lmax}</math></b>	Consumption of electrical auxiliary energy at nominal heat output, given with 3 decimals	0.107 kW
<b><math>e_{lmin}</math></b>	Consumption of electrical auxiliary energy at part load heat output, given with 3 decimals	0.060kW
<b><math>E, f</math></b>	Power supply voltage, frequency, given as an integer	230 V, 50 Hz



<b><math>W_{\max}</math></b>	Maximum electric power input, given as an integer	360 W
<b><math>T_{\text{snom}}</math></b>	Flue gas outlet temperature at nominal heat output, given as an integer	249 °C
<b><math>T_{\text{spart}}</math></b>	Flue gas outlet temperature at part load heat output, given as an integer (given for pellet operation only)	117 °C
<b><math>T_{\text{class}}</math></b>	Chimney designation according to the appropriate chimney standard	T400 G
<b><math>\phi_{\text{f,g nom}}</math></b>	Flue gas mass flow at nominal heat output, given with 1 decimal	6,7 g/s
<b><math>\phi_{\text{f,g part}}</math></b>	Flue gas mass flow at part load heat output, given with 1 decimal (given for pellet operation only)	4.4 g/s
<b><math>V_{\text{h}}</math></b>	Standing Air Loss, if specified, given with 1 decimal	---
<b>CON or INT</b>	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	CON
<b><math>d_{\text{out}}</math></b>	Diameter of the flue gas outlet, given as an integer	80 mm
<b><math>L, H, W</math></b>	Overall dimensions of the appliance (length, height, width), given as an integer	528 x 1186 x 510 mm
<b><math>m</math></b>	Mass of the appliance, given as an integer (in relation to the building's statics)	180 kg
<b><math>m_{\text{chim}}</math></b>	Maximum load of a chimney the appliance may carry, given as an integer	0 kg



Model name:		AP008S_0_12 EN, AP008S_2_12 EN, AP008S_3_12 EN
Parameter	Explanation	Specified data by the applicant
$P_{nom}$	Nominal heat output or a range of outputs (dependent on fuel types), given with 1 decimal	12 kW
$P_{SHnom}$	Nominal space heat output or a range of outputs (dependent on fuel types), given with 1 decimal	12 kW
$P_{Wnom}$	Nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), given with 1 decimal	--
$P_{part}$	Part load heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{SHpart}$	Part load space heat output or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	3,7 kW
$P_{Wpart}$	Part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	---
$P_{slow}$	Heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{SHslow}$	Space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, given with 1 decimal	--
$P_{Wslow}$	Water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, with 1 decimal	--
$P_{acc\ in}$	Accumulator heat input, in kW or W for Kachelofen inset appliances only	--
$T_{acc\ in}$	Temperature at the separate heat exchanger inlet, for Kachelofen inset appliances only, given as an integer	--
$\zeta_{acc}$	Flow resistance of the separate heat exchanger as used in the test, for Kachelofen inset appliances only	--
$\eta_{nom}$	Appliance efficiency at nominal heat output, given as an integer	88 %
$\eta_{part}$	Appliance efficiency at part load heat output, given as an integer	91 %
$\eta_s$	Appliance seasonal space heating efficiency at nominal heat output, given as an integer	83 %
$EEI$	Energy efficiency index, given as an integer	123
$CO_{nom} (13\ \% O_2)$	CO emission at 13 % oxygen content at nominal heat output, given as an integer	100 mg/m <sup>3</sup>
$CO_{part} (13\ \% O_2)$	CO emission at 13 % oxygen content at part load heat output if specified, given as an integer	250 mg/m <sup>3</sup>
$CO_{slow} (13\ \% O_2)$	CO emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
$NO_{xnom} (13\ \% O_2)$	NOx emission at 13 % oxygen content at nominal heat output, given as an integer	155 mg/m <sup>3</sup>
$NO_{xpart} (13\ \% O_2)$	NOx emission at 13 % oxygen content at part load heat output if specified, given as an integer	137 mg/m <sup>3</sup>

<b><math>NO_{xslow}</math> (13 % <math>O_2</math>)</b>	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>OGC_{nom}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at nominal heat output, given as an integer	3 mg/m <sup>3</sup>
<b><math>OGC_{part}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at part load heat output if specified, given as an integer	5 mg/m <sup>3</sup>
<b><math>OGC_{slow}</math> (13 % <math>O_2</math>)</b>	Hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>PM_{nom}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at nominal heat output, given as an integer	12 mg/m <sup>3</sup>
<b><math>PM_{part}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at part load heat output if specified, given as an integer	11 mg/m <sup>3</sup>
<b><math>PM_{slow}</math> (13 % <math>O_2</math>)</b>	Particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, given as an integer	--
<b><math>p_{nom}</math></b>	Minimum flue draught at nominal heat output, given as an integer	12 Pa
<b><math>p_{part}</math></b>	Minimum flue draught at part load heat output if specified, given as an integer	10 Pa
<b><math>p_{slow}</math></b>	Minimum flue draught at heat output at slow combustion if specified, given as an integer	--
<b><math>p_w</math></b>	Permissible maximum water operating pressure, if applicable, given with 1 decimal	--
<b><math>d_R</math></b>	Minimum distances from the rear to combustible material, given as an integer	200 mm
<b><math>d_S</math></b>	Minimum distances from the sides to combustible material, given as an integer	200 mm
<b><math>d_C</math></b>	Minimum distances from the top to combustible material in the ceiling, given as an integer	750 mm
<b><math>d_P</math></b>	Minimum distances from the front to combustible material	800 mm
<b><math>d_F</math></b>	Minimum distances from the front to combustible material in bottom front radiation area, given as an integer	1500 mm
<b><math>d_L</math></b>	Minimum distances from the front to combustible material in side front radiation area, given as an integer	1500 mm
<b><math>d_B</math></b>	Minimum distances below the bottom (not regarding feet) to combustible material, given as an integer	0 mm
<b><math>d_{non}</math></b>	Minimum distances to non-combustible walls, given as an integer	0 mm
<b><math>s</math></b>	Protective insulation according to manufacturer's instructions	-
<b><math>e_{lSB}</math></b>	Consumption of electrical auxiliary energy at standby, given with 3 decimals	0.001 kW
<b><math>e_{lmax}</math></b>	Consumption of electrical auxiliary energy at nominal heat output, given with 3 decimals	0.107 kW
<b><math>e_{lmin}</math></b>	Consumption of electrical auxiliary energy at part load heat output, given with 3 decimals	0.060kW
<b><math>E, f</math></b>	Power supply voltage, frequency, given as an integer	230 V, 50 Hz

<b><math>W_{\max}</math></b>	Maximum electric power input, given as an integer	360 W
<b><math>T_{\text{snom}}</math></b>	Flue gas outlet temperature at nominal heat output, given as an integer	270 °C
<b><math>T_{\text{spart}}</math></b>	Flue gas outlet temperature at part load heat output, given as an integer (given for pellet operation only)	117 °C
<b><math>T_{\text{class}}</math></b>	Chimney designation according to the appropriate chimney standard	T400 G
<b><math>\phi_{\text{f,g nom}}</math></b>	Flue gas mass flow at nominal heat output, given with 1 decimal	7.1 g/s
<b><math>\phi_{\text{f,g part}}</math></b>	Flue gas mass flow at part load heat output, given with 1 decimal (given for pellet operation only)	4.4 g/s
<b><math>V_{\text{h}}</math></b>	Standing Air Loss, if specified, given with 1 decimal	---
<b>CON or INT</b>	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	CON
<b><math>d_{\text{out}}</math></b>	Diameter of the flue gas outlet, given as an integer	80 mm
<b><math>L, H, W</math></b>	Overall dimensions of the appliance (length, height, width), given as an integer	528 x 1186 x 510 mm
<b><math>m</math></b>	Mass of the appliance, given as an integer (in relation to the building's statics)	180 kg
<b><math>m_{\text{chim}}</math></b>	Maximum load of a chimney the appliance may carry, given as an integer	0 kg

The specified (declared) heat output, efficiency and emission values are in line with the measured values considering rounding rules of DIN EN 16510-1:2023-02, clause A.5 (see chapter 6.2 of the present report for the resume of the main combustion results).

### 3 Requirements

- P (pass)
- NA (not applicable)
- F (fail)

#### 3.1 Descriptive features

Requirement acc. to DIN EN 16510-1:2023-02	Clause	Tested Acc.	Requirement complies
Designation of appliances	4.1	-	P
System boundary	4.2	-	NA
Production documentation	4.3	-	P
Construction and materials	4.4	-	P
General construction	4.4.1	-	P
Design, manufacture and assembly	4.4.1.1	-	P
Durability	4.4.1.2	-	P
Integral boiler or heat exchanger	4.4.2	-	NA
General	4.4.2.1	-	NA
Integral boilers constructed of steel	4.4.2.2	-	NA
Integral boilers constructed of cast iron	4.4.2.3	-	NA
Cast iron parts subject to water pressure	4.4.2.3.1	-	NA
Minimum wall thicknesses (cast iron)	4.4.2.3.2	-	NA
Integral Boiler shell tappings	4.4.2.4	-	NA
Introduction	4.4.2.4.1	-	NA
General	4.4.2.4.2	-	NA
Design of all integral boiler waterways	4.4.2.4.3	-	NA
Venting of the water sections	4.4.2.4.4	-	NA
Water tightness	4.4.2.4.5	-	NA
Heat exchangers that are not directly in contact with fire or flue gases	4.4.2.5	-	NA
Cleaning of heating surfaces	4.4.3	-	P
Flue gas outlet	4.4.4	-	P
Flueways	4.4.5	-	P
Components built-in the flue ways	4.4.6	-	NA
Ashpan and ash removal	4.4.7	-	P
Bottomgrate	4.4.8	-	P
Combustion air supply	4.4.9	-	P

Requirement acc. to DIN EN 16510-1:2023-02	Clause	Tested Acc.	Requirement complies
Primary combustion air control device	4.4.9.1	-	P
Secondary combustion air control device	4.4.9.2	-	NA
Damper	4.4.10	-	NA
Charging doors and ash-pit doors	4.4.11	-	NA
Flue bypass device	4.4.12	-	NA
Internal flue gas diverter	4.4.13	-	NA
Front firebars	4.4.14	-	NA
Fossil solid fuel and peat briquettes burning appliances	4.4.15	-	NA
Draught regulator	4.4.16	-	NA
Cut-off device for inset appliances without doors	4.4.17	-	NA
Convection air outlet for inserts for Kachelofen/ Putzofen	4.4.18	-	NA
Oven door of cookers	4.4.19	-	NA
Hotplate and top plate of cookers	4.4.20	-	NA
Main/additional ovens of cookers	4.4.21	-	NA
Ashpit and ashpit cover/door of cookers	4.4.22	-	NA
Oven temperature indicators for cookers	4.4.23	-	NA
Air inlet for pellet appliances according to EN 16510-2-6	4.4.24	-	P
Retort for pellet appliances according to EN 16510-2-6	4.4.25	-	P
Heat output control device for pellet appliances according to EN 16510-2-6	4.4.26	-	P
Hopper for pellet appliances according to EN 16510-2-6	4.4.27	-	P
Sound level	4.5	-	P
Load bearing capacity	4.6	A.4.10.2	P

### 3.2 Safety requirements

Requirement acc. to DIN EN 16510-1	Clause	Tested Acc.	Requirement complies
Natural draught	5.1	A.4.10.5 A.6.2.8	NA
Open operation of an appliance	5.2	A.4.10.3	NA
Strength and leak tightness of integral boiler shells	5.3	A.4.10.6	P
Temperature rise in the fuel storage (other than the fuel hopper)	5.4	A.4.7 A.4.10	P
Temperature rise of the operating components	5.5	A.4.7	P
Protection of combustible materials	5.6	A.4.10 A.2.2	P
Safety devices for appliances fitted with an integral boiler	5.7	-	NA
General	5.7.1	-	NA
Appliances intended for sealed water systems	5.7.2	-	NA
General	5.7.2.1	-	NA
Thermal discharge control	5.7.2.2	A.4.10.7	NA
Safety heat exchanger	5.7.2.3	A.4.10.7	NA
Safety devices for appliances fitted with a heat exchanger that are not directly in contact with fire	5.7.3	A.4.10.7	NA
Safety requirements of roomsealed appliances	5.9	-	NA
Tightness related to CO-emission	5.9.1	-	NA
Overall leakage rate	5.9.2	-	NA
Minimum distances from non-combustible walls	5.10	A.4.7	P
Requirements for appliances suitable for a shared flue system	5.11	-	NA

### 3.3 Operation requirements

Requirement acc. to DIN EN 16510-1	Clause	Tested Acc.	Requirement complies
General	6.1	-	P
Flue gas temperature and flue gas outlet temperature	6.2	-	P
General	6.2.1	A.4.7 A.4.8	P
Flue gas temperature at safety test	6.2.2	A.4.10.4	P*
Emissions	6.3	-	P
General	6.3.1	A.4.7 A.4.8	P
Carbon monoxide emission	6.3.2	-	P
NO <sub>x</sub> emissions	6.3.3	-	P
Emission of organic gaseous carbon (OGC)	6.3.4	-	P
Particulate matter (PM) emissions	6.3.5	-	P
Threshold levels for emissions according to appliance types	6.3.6	-	P
Efficiency	6.4	-	P
General	6.4.1		P
Seasonal space heating efficiency	6.4.2	A.4.8	P
Energy efficiency index (EEI)	6.4.3	A.6.2.1.6	P
Energy efficiency class	6.4.4	-	P
Flue draught	6.5	A.4.7 / A.4.8 / A.4.10	P
Recovery test	6.6	A.4.9	NA
Refuelling intervals	6.7	-	P
Space heat output	6.8	A.4.7 A.4.8	P
Water heat output	6.9	A.4.7 A.4.8	P
User operations	6.10	-	P
Auxiliary electrical energy consumption	6.11	A.4.7 A.4.8	P
Flue gas mass flow	6.12	A.4.7 A.4.8	P

\*) Temperature during safety test historically not recorded. Specified chimney T<sub>class</sub> designation as the highest among commercially available chimney flue gas pipes (see also manufacturer declaration Annex A02).

### 3.4 Environmental sustainability, clause 8

Performance assessments regarding environmental sustainability is not considered in the present test procedure. A possible NDP declaration by the manufacturer is also not included in the present procedure.

### 3.5 Appliance marking

Requirement acc. to DIN EN 16510-1	Clause	Tested Acc.	Requirement complies
Marking and technical datasheet	10	-	P



## 4 Characteristics

Requirement acc. to DIN EN 16510-2-6	Clause	Tested Acc.	Requirement complies
Load bearing capacity	4.1	-	P
Protection of combustible materials	4.2	-	P
Carbon monoxide emission (CO)	4.3	-	P
Nitrogen oxides (NOx) emissions	4.4	-	P
Emission of organic gaseous compounds (OGC) emissions	4.5	-	P
Particulate matter (PM) emissions	4.6	-	P
Safety and accessibility in use	4.7	-	P
General	4.7.1	-	P
Flue gas outlet temperature at nominal heat output	4.7.2	-	P
Flue gas outlet temperature at part load heat output	4.7.3	-	P
Minimum flue draught at nominal heat output	4.7.4	-	P
Minimum flue draught at part load heat output	4.7.5	-	P
Flue gas mass flow at nominal heat output	4.7.6	-	P
Flue gas mass flow at part load heat output	4.7.7	-	P
Fire safety of installation to the chimney	4.7.8	-	P*
Energy economy and heat retention	4.8	-	P
Space heat output at nominal heat output	4.8.1	-	P
Water heat output, if existing at nominal heat output	4.8.2	-	NA
Efficiency at nominal heat output	4.8.3	-	P
Space heat output at part load heat output	4.8.4	-	P
Water heat output, if existing at part load heat output	4.8.5	-	NA
Efficiency at part load heat output	4.8.6	-	P
Seasonal space heating efficiency at appliance's nominal heat output	4.8.7	-	P
Energy efficiency	4.8.8	-	P
Electric power consumption at nominal heat output, if existing	4.8.9	-	P
Electric power consumption at part load heat output, if existing	4.8.10	-	P
Standby mode power consumption, if existing	4.8.11	-	P

\*) Temperature during safety test historically not recorded. Specified chimney T<sub>class</sub> designation as the highest among commercially available chimney flue gas pipes (see also manufacturer declaration Annex A03).

## 5 Descriptive features

Requirement acc. to DIN EN 16510-2-6	Clause	Requirement complies
Data for potential use with room ventilation system: type of appliance (in relation to its tightness to the room)	5.1	P
General	5.1.1	P
Tightness related to CO-emissions	5.1.2	P
Overall tightness	5.1.3	P
Data for the building's statics: appliance's mass	5.2	P
Materials and construction elements	5.3	P
General	5.3.1	P
General stresses	5.3.2	P
Integral boiler or heat exchanger	5.3.3	NA
Risk of burning fuel falling out	5.4	P
Temperature rise in the fuel storage	5.5	-
Temperature rise in the fuel hopper	5.5.1	P
Safety against back burning through the fuel conveyor system	5.5.2	P
Temperature rise of the operating components	5.6	P
Spillage of the flue gases into the room	5.7	-
Possible spillage of CO, if relevant for the fuel type	5.7.1	NA
Safety test for spillage of combustion gas and discharge of embers	5.7.2	P
Open operation	5.7.3	NA
Ashpan	5.8.3	NA
Bottomgrate	5.8.4	NA
Damper	5.8.5	NA
Fan-cut-out device	5.8.6	NA
Strength and leak tightness of boiler shells	5.9	P

## 6 Test results

### 6.1 Energy efficiency

#### 6.1.1 Energy efficiency control features and test data

Type designation		AP008S_2_08 EN, AP008S_3_08 EN			
Working condition	Description	Parameter	Result	Unit	
Nominal heat output	Auxiliary electrical energy consumption at nominal heat output *	el <sub>max</sub>	0.107	kW	
Part load heat output	Auxiliary electrical energy consumption at part load heat output *,**	el <sub>min</sub>	0.060	kW	
Standby	Auxiliary electrical energy consumption in standby mode	el <sub>SB</sub>	0.001	kW	
Type designation		AP008S_2_12 EN, AP008S_3_12 EN			
Working condition	Description	Parameter	Result	Unit	
Nominal heat output	Auxiliary electrical energy consumption at nominal heat output *	el <sub>max</sub>	0.107	kW	
Part load heat output	Auxiliary electrical energy consumption at part load heat output *,**	el <sub>min</sub>	0.060	kW	
Standby	Auxiliary electrical energy consumption in standby mode	el <sub>SB</sub>	0.001	kW	
Room temperature control					
With electronic room temperature control plus week timer					
Controls for indoor heating comfort					
Room temperature control with presence detection			No		
Room temperature control with open window detection			No		
Distance control option			No		

**6.1.2 Energy efficiency calculation**

Type designation	AP008S_2_08 EN, AP008S_3_08 EN				
Definition	Parameter	Unit	Result	Requirement	
Seasonal space heating energy efficiency in active mode (%)	$\eta_{S,on}$	%	90		
Contributions of controls of indoor heating comfort (mutually exclusive temperature controls)	F(2)	%	7	-	
Contributions of controls of indoor heating comfort	F(3)	%	0	-	
Negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption	F(4)	%	2,2	-	
Negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame	F(5)	%	0	-	
Biomass label factor	BLF	---	1.45	-	
Seasonal space heating energy efficiency	$\eta_s$	%	<b>85</b>	$\geq 79$	
Energy efficiency index	EEI	---	<b>125</b>	-	
Energy efficiency classification	---	---	<b>A+</b>	-	

Type designation	AP008S_2_12 EN, AP008S_3_12 EN				
Definition	Parameter	Unit	Result	Requirement	
Seasonal space heating energy efficiency in active mode (%)	$\eta_{S,on}$	%	90		
Contributions of controls of indoor heating comfort (mutually exclusive temperature controls)	F(2)	%	7	-	
Contributions of controls of indoor heating comfort	F(3)	%	0	-	
Negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption	F(4)	%	1.5	-	
Negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame	F(5)	%	0	-	
Biomass label factor	BLF	---	1.45	-	
Seasonal space heating energy efficiency	$\eta_s$	%	<b>84</b>	$\geq 79$	
Energy efficiency index	EEI	---	<b>123</b>	-	
Energy efficiency classification	---	---	<b>A+</b>	-	

## 6.2 Resume of combustion test results

Type designation		AP008S_2_08 EN, AP008S_3_08 EN			
Definition	Parameter	Unit	Nominal	Partial	Requirement
Fuel consumption	$M_h$	kg/h	1,8	0,83	-
Minimum refuelling intervals	-	min	180	360	2 x 180 / 360
Flue gas mass flow	$\Phi_{f,g}$	g/s	5,4	4,4	-
Flue gas temperature	$T_{fg}$	°C	158	98	-
Flue gas outlet temperature	$T_{snom}$	°C	190	118	-
Flue draught	$p_{nom} / p_{part}$	Pa	12	10	$\geq 12 / \geq 6$ or declared value
CO <sub>2</sub> concentration	CO <sub>2</sub>	Vol.-%	11,5	6,6	-
O <sub>2</sub> concentration	O <sub>2</sub>	Vol.-%	9,0	13,9	-
CO concentration	-	ppm	21	145	-
CO emission (13% O <sub>2</sub> )	$CO_{nom} (13\% O_2) / CO_{part} (13\% O_2)$	mg/m <sup>3</sup>	18	206	$\leq 300 / -$
CO emission	-	mg/MJ	12	145	-
NO <sub>x</sub> concentration	-	ppm	110	59	-
NO <sub>x</sub> emission (13% O <sub>2</sub> )	$NO_{xnom} (13\% O_2) / NO_{xpart} (13\% O_2)$	mg/m <sup>3</sup>	151	136	$\leq 200 / -$
NO <sub>x</sub> emission	-	mg/MJ	98	96	-
OGC concentration	-	mg/m <sup>3</sup>	3	4	-
OGC emission (13% O <sub>2</sub> )	$OGC_{nom} (13\% O_2) / OGC_{part} (13\% O_2)$	mg/m <sup>3</sup>	2	5	$\leq 60 / -$
OGC emission	-	mg/MJ	1	4	-
PM concentration*	-	mg	7	3	-
PM emission (13% O <sub>2</sub> )	$PM_{nom} (13\% O_2) / PM_{part} (13\% O_2)$	mg/m <sup>3</sup>	7	11	$\leq 20 / -$
PM emission	-	mg/MJ	3	7	-
Heat input	-	kW	8,8	4,0	-
Heat output	$P_{nom} / P_{part}$	kW	8,0	3,7	-
Water heat output	$P_{Wnom} / P_{Wpart}$	kW	-	-	-
Space heat output	$P_{SHnom} / P_{SHpart}$	kW	8,0	3,7	-
Efficiency	$\eta_{nom} / \eta_{part}$	%	91	91	-

\*) Average of 3 samples

<b>Type designation</b>	<b>AP008S_2_12 EN, AP008S_3_12 EN</b>
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Definition	Parameter	Unit	Nominal	Partial	Requirement
Fuel consumption	$M_h$	kg/h	2,79	0,83	-
Minimum refuelling intervals	-	min	180	360	2 x 180 / 360
Flue gas mass flow	$\Phi_{f,g}$	g/s	7,1	4,4	-
Flue gas temperature	$T_{fg}$	°C	225	98	-
Flue gas outlet temperature	$T_{snom}$	°C	270	118	-
Flue draught	$p_{nom} / p_{part}$	Pa	12	10	$\geq 12 / \geq 6$ or declared value
CO <sub>2</sub> concentration	CO <sub>2</sub>	Vol.-%	13,5	6,6	-
O <sub>2</sub> concentration	O <sub>2</sub>	Vol.-%	6,9	13,9	-
CO concentration	-	ppm	124	145	-
CO emission (13% O <sub>2</sub> )	$CO_{nom} (13\% O_2) / CO_{part} (13\% O_2)$	mg/m <sup>3</sup>	88	206	$\leq 300 / -$
CO emission	-	mg/MJ	57	145	-
NO <sub>x</sub> concentration	-	ppm	126	59	-
NO <sub>x</sub> emission (13% O <sub>2</sub> )	$NO_{xnom} (13\% O_2) / NO_{xpart} (13\% O_2)$	mg/m <sup>3</sup>	147	136	$\leq 200 / -$
NO <sub>x</sub> emission	-	mg/MJ	95	96	-
OGC concentration	-	mg/m <sup>3</sup>	5	4	-
OGC emission (13% O <sub>2</sub> )	$OGC_{nom} (13\% O_2) / OGC_{part} (13\% O_2)$	mg/m <sup>3</sup>	3	5	$\leq 60 / -$
OGC emission	-	mg/MJ	2	4	-
PM concentration*	-	mg	13	3	-
PM emission (13% O <sub>2</sub> )	$PM_{nom} (13\% O_2) / PM_{part} (13\% O_2)$	mg/m <sup>3</sup>	11	11	$\leq 20 / -$
PM emission	-	mg/MJ	4	7	-
Heat input	-	kW	8,8	4,0	-
Heat output	$P_{nom} / P_{part}$	kW	13,6	3,7	-
Water heat output	$P_{Wnom} / P_{Wpart}$	kW	-	-	-
Space heat output	$P_{SHnom} / P_{SHpart}$	kW	12,0	3,7	-
Efficiency	$\eta_{nom} / \eta_{part}$	%	88	91	-

\*) Average of 3 samples

### 6.3 Temperatures

<b>Type designation</b>	<b>AP008S_2_12 EN, AP008S_3_12 EN</b>
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<b>Minimum distances from combustible walls</b>	<b>Unit</b>	<b>Distances at nominal heat output and during temperature safety tests</b>
Backside distance - $d_R$	mm	200
Sides distance - $d_S$	mm	200
Sides distance radiation area - $d_L$	mm	Historical data not available
Front distance - $d_p$	mm	800
Front distance radiation area - $d_F$	mm	Historical data not available
Ceiling distance - $d_C$	mm	750
Bottom distance - $d_B$	mm	Historical data not available

<b>Position</b>	<b>Unit</b>	<b>Maximum temperature reached. Performance test at nominal heat output and temperature safety tests</b>	<b>Requirement delta ambient</b>
Rear - $d_R$	K	12	≤ 65
Side - $d_S$	K	34	
Side radiation area - $d_L$	K	Historical data not available	
Front - $d_p$	K	24	
Floor in Front - $d_F$	K	30	
Bottom - $d_B$	K	Historical data not available	

<b>Position</b>	<b>Unit</b>	<b>Maximum temperature reached. Performance test at nominal heat output</b>	<b>Requirement delta ambient</b>
Max- Temperature-rise in fuel hopper	K	57	≤ 65
Operation components	K	111*	≤ 35

\*) tool provided by the manufacturer

#### 6.4 Leakage tests

AP008S_2_08 EN, AP008S_3_08 EN AP008S_2_12 EN AP008S_3_12 EN		Before mechanical and thermal tests	After mechanical tests	After mechanical and thermal tests	Limit
Leakage test of combustion room at 5 Pa	m <sup>3</sup> /h	0,3	0,3	0,3	-
Leakage test of combustion room at 10 Pa	m <sup>3</sup> /h	0,5	0,5	0,5	2
Leakage test of combustion room at 15 Pa	m <sup>3</sup> /h	0,7	0,7	0,7	-
Leakage test of combustion room at 50 Pa	m <sup>3</sup> /h	0,8	0,8	0,8	3



## **7 Statement of the test results**

The appliance types

**AP008S\_2\_08/09/10/11/12 EN**  
**AP008S\_3\_08/09/10/11/12 EN**

with trademark:

**PALAZZETTI**

of the company:

**PALAZZETTI LELIO S.p.A.**

conforms with the requirements of DIN EN 16510-1:2023-02, except for clauses 5.8, 7 and 8, and DIN EN 16510-2-6:2023-02, except for clause 4.9, which are not part of this assessment. Performance assessments regarding environmental sustainability is not considered in the present order and is not the subject of this report. A possible NPD declaration by the manufacturer is also not included in the present report.

Test data documented in this report are based on historical data of the initial type testing reports no.: K11612013T1-Rev.01 and K11612018E5/E6 according to DIN EN 14785:2006-09 and Corr. 1 DIN EN 14785:2007-10.

## 8 Test documents

See test reports K11612013T1-Rev.01 and K11612018E5/E6 for further information.

TÜV Rheinland Energy & Environment GmbH declines any responsibility derived from missing or wrong information in the documents provided by the applicant.

Appendix	Subject	Reference
A 01	Manufacturer declaration	29.01.2025
A 02	Marking plates	
A 03	Declarations of equivalence	04.02.2025