

**Report No. K 3339 2022 Z1**

**Residential space heating appliances**  
**Type testing**  
in accordance with DIN EN 14785  
**-Renaming-**

Types:  
**SL180s**  
**SLD180s**  
**SLP180s**  
**SLG180s**

Models:  
**STYLE 180s**  
**STYLE 180s DUO**  
**STYLE 180s PLUS**  
**STYLE 180s GLASS**

Trademark:  
**KLOVER**

Company:  
**KLOVER SRL**



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

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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.**

**Type testing**  
**Residential space heating appliances fired by wood pellets**  
**DIN EN 14785: September 2006**  
**Correction 1 DIN EN 14785: October 2007**

|                                   |   |
|-----------------------------------|---|
| Applicant/contractor:             | <b>KLOVER SRL</b><br>Via A. Volta, 8<br>37047 San Bonifacio (VR) - Italy  |
| Trademark:                        | <b>KLOVER</b>   |
| Type designation:                 | <b>SL180s; SLD180s; SLP180s; SLG180s</b>  |
| Models designation:               | <b>STYLE 180s; STYLE 180s DUO; STYLE 180s PLUS;<br/>STYLE 180s GLASS</b>  |
| Type of construction:             | Residential room heating appliances fired by wood pellets with water heat exchanger, with fan assisted flue discharge and with internal fuel hopper |
| Heat input:                       | 10,2 kW – 22,6 kW   |
| Nominal heat output:              | 10,0 kW – 21,9 kW   |
| Water heat output:                | 7,1 kW – 16,9 kW  |
| Space heat output:                | 2,9 kW – 5,0 kW   |
| Type of fuel:                     | wood pellets, Ø: 6 mm, L <sub>max</sub> : 30 mm,<br>class A1 acc. to EN 17225-2   |
| Type of loading:                  | automatic load  |
| Max. allowable water temperature: | 80 °C   |
| Max. allowable water pressure:    | 2,5 bar   |

**Remarks:**

The Test Centre recommends to equip the stoves with an additional safety thermal cut-out for the integral fuel hopper.

**Test basis:**

DIN EN 14785: September 2006; Correction October 2007.

**Test results:**

The technical requirements clauses 4-8 of the above mentioned standard are fulfilled.

The local applicable installation conditions are to be observed.

The electrical safety, cl. 5.9. of the standard, is not part of this assessment.

Additional details are documented on the initial type testing report n. K32422022T1.

Cologne, 24.11.2022  
432 / pom

TÜV Rheinland Energy 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. Reibold

Residential space heating appliances fired by wood pellets, Initial Type Test in accordance with the regulation 305/2011 conformity certification system no. 3

## 1. Task

The Test Centre for Energy Appliances was instructed to execute a renaming on the above mentioned pellet stoves.

|   |  |
|---|--|
| <b>Basic:</b><br><b>KLOVER SRL</b><br>Via A. Volta, 8<br>37047 San Bonifacio (VR) - Italy<br><br>Report:<br>K32422022T1 | <b>Renaming:</b><br><b>KLOVER SRL</b><br>Via A. Volta, 8<br>37047 San Bonifacio (VR) - Italy<br><br>Report:<br>K33392022Z1 |
| <b>Trademark:</b><br>KLOVER   | <b>Trademark:</b><br>KLOVER  |
| <b>Type:</b><br>SL180<br>SLD180<br>SLP180<br>SLG180   | <b>Type:</b><br>SL180s<br>SLD180s<br>SLP180s<br>SLG180s  |
| <b>Models:</b><br>Style 180<br>Style 180 Duo<br>Style 180 Plus<br>Style 180 Glass                                       | <b>Models:</b><br>STYLE 180s<br>STYLE 180s DUO<br>STYLE 180s PLUS<br>STYLE 180s GLASS                                      |

## 2. Testing

The practical tests were carried out by the laboratory of CMC Centro Misure Compatibilità S.r.l. in via della Fisica 20, Thiene (VI) - Italy on March 2022.

The water pellet stove **Style 180** was tested according to the applicable standard EN14785 and the initial type testing report n. K32422022T1 was issued. The report includes also the equivalent models of the family **Style 180 Duo**, **Style 180 Plus** and **Style 180 Glass**.

The new appliances **STYLE 180s**, **STYLE 180s DUO**, **STYLE 180s PLUS** and **STYLE 180s GLASS** are equal to the already approved stoves, except for the names designation (see also the manufacturer's declarations of extension - Annex A02 of the present report).

The resume of the main results can be seen in the following chapters 2.1 and 2.2.

## 2.1 Resume of test results

| <b>STYLE 180s; STYLE 180s DUO;<br/>STYLE 180s PLUS; STYLE 180s GLASS</b> |                   | <b>Nominal*</b> | <b>Partial</b> | <b>Requirement</b>                       |
|--|-------------------|-----------------|----------------|--|
| Mass of the test fuel fired hourly                                       | kg/h              | 4,65            | 2,11           | -  |
| Flue gas mass flow   | g/s               | 10,6            | 6,9            | -  |
| Flue gas temperature   | °C                | 80,7            | 57,2           | -  |
| Flue draught   | mbar              | 0,08            | 0,08           | 0,12/0,10 +/-0,02<br>(or declared value) |
| CO <sub>2</sub> -concentration   | Vol.-%            | 15,5            | 10,4           | -  |
| O <sub>2</sub> -concentration  | Vol.-%            | 5,0             | 10,3           | -  |
| CO-concentration   | ppm               | 290             | 414            | -  |
| CO-emission (at 13%-O <sub>2</sub> )                                     | mg/m <sup>3</sup> | 181             | 385            | ≤ 500/750                                |
| CO-emission  | mg/kWh            | 426             | 907            | -  |
| CO-emission  | mg/MJ             | 118             | 252            | -  |
| NO <sub>x</sub> -concentration   | ppm               | 98              | 67             | -  |
| NO <sub>x</sub> -emission (at 13%-O <sub>2</sub> )                       | mg/m <sup>3</sup> | 100             | 102            | -  |
| NO <sub>x</sub> -emission  | mg/kWh            | 235             | 239            | -  |
| NO <sub>x</sub> -emission  | mg/MJ             | 65              | 66             | -  |
| CnHm-concentration<br>measured acc. to CEN/TS 15883                      | ppm               | 4               | 8              | -  |
| CnHm-emission (at 13%-O <sub>2</sub> )                                   | mg/m <sup>3</sup> | 3               | 10             | -  |
| CnHm-emission  | mg/kWh            | 7               | 23             | -  |
| CnHm-emission  | mg/MJ             | 2               | 6              | -  |
| Dust concentration**<br>measured acc. to CEN/TS 15883                    | mg                | 8               | 8              | -  |
| Dust emission (at 13%-O <sub>2</sub> )**                                 | mg/m <sup>3</sup> | 14              | 21             | -  |
| Dust emission**  | mg/kWh            | 33              | 50             | -  |
| Dust emission**  | mg/MJ             | 9               | 14             | -  |
| Heat input   | kW                | 22,6            | 10,2           | -  |
| Nominal heat output  | kW                | 21,9            | 10,0           | -  |
| Water heat output  | kW                | 16,9            | 7,1            | -  |
| Space heat output  | kW                | 5,0             | 2,9            | -  |
| Efficiency   | %                 | 96,8            | 97,3           | ≥ 75/70                                  |

\*) Data are taken from the initial type testing report n. K32422022T1.

\*\*) Average of 3 samples, based on separate calculation.

**2.2 General technical data**

| <b>Type:</b>  | <b>SL180s</b>  | <b>SLD180s</b>            | <b>SLP180s</b>             | <b>SLG180s</b>              |
|---|--|---------------------------|----------------------------|-----------------------------|
| <b>Model:</b>   | <b>STYLE 180s</b>  | <b>STYLE 180s<br/>DUO</b> | <b>STYLE 180s<br/>PLUS</b> | <b>STYLE 180s<br/>GLASS</b> |
| Declared nominal heat output:                         | 21,9 kW  |                           |                            |                             |
| Fuel:   | Wood pellets, Ø: 6 mm, L <sub>max</sub> : 30 mm, class A1 acc. to EN 17225-2   |                           |                            |                             |
| Flue spigot:  | 100 mm   |                           |                            |                             |
| Flue gas connection:                                  | Horizontal (rear)  |                           |                            |                             |
| Declared distances of adjacent combustible materials: | 200 mm (Backside) distance from test wall<br>200 mm (Side) distance from test wall<br>800 mm (Front) distance from test wall |                           |                            |                             |

### **3. Statement of the test results**

The appliances:

**STYLE 180s  
STYLE 180s DUO  
STYLE 180s PLUS  
STYLE 180s GLASS**

with the trademark:

**KLOVER**

of the company:

**KLOVER SRL**

comply for the operation with wood pellets with the requirements acc. to  
DIN EN 14785: September 2006, clauses 4-8.

The results of the initial type testing report (see report K32422022T1) are not affected by the renaming.

The electrical safety, cl. 5.9. of the standard, is not part of this assessment.

The presumption of conformity with the relevant European Directives respectively Regulations could only be confirmed by full compliance with Annex ZA.

This statement was given based on the documentation submitted by the manufacturer and the tested sample. The statement is valid only for products / appliances which are manufactured according to the tested specimen.

## 4. Documents

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

| <b>Appendix</b> | <b>Subject</b>                                  | <b>Reference</b>                           |
|-----------------|---|--|
| A 01            | Marking plates                                  | --   |
| A 02            | Declarations for extension                      | 18/11/2022                                 |
| A 03            | Overall drawings with dimensions                | SL180S<br>SLD180S<br>SLP180S<br>SLG180S    |
| A 04            | Drawings of fuel hopper, waterways and flueways | SL180S/SLG180S/SLP180S/SLD180S<br>DVL-001A |