

**Report No. K20192019B14**  
**Verification of the requirements according to:**

COMMISSION REGULATION (EU) 2015/1189  
(Ecodesign Directive 2009/125/EC)

and/i

COMMISSION DELEGATED REGULATION (EU) 2015/1187  
(Energy Labelling Directive 2010/30/EU)

Type: **Sunpellet 4**

Trademark: **FERROLI**

Company: **Ferrolì S.p.A.**

**2019**



Deutsche  
Akkreditierungsstelle  
D-PL-11120-04-00


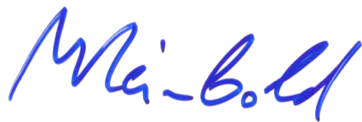
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**Publication of page 2 is permitted.**

**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) 2015/1189 – Ecodesign  
and the Commission Delegated Regulation (EU) 2015/1187 – Energy Labelling**

Boiler manufacturer / contractor:	<b>Ferrolì S.p.A.</b> <b>Via Ritonda 78/A</b> <b>I-37047 San Bonifacio (VR)</b>	
Type designation	<b>Sunpellet 4</b>	
Trademark	<b>FERROLI</b>	
Type of construction	Heating boiler in acc. with EN 303-5	
Fuel	Wood pellet	
Useful heat output at rated heat output ( $P_n$ ):	30,0 kW	
Useful heat output at applicable part load ( $P_p$ ):	8,6 kW	
Reference type test reports:	K3902011T23/T24/T25/T26 K3902013T32/T33/T34/T35	
Special features:	Condensing boiler	No
	Solid fuel cogeneration boiler	No
	Combination boiler	No
<p>Test basis: Regulations no. 2015/1189 and no. 2015/1187. This examination has been carried out in a test laboratory equipped in accordance with the EN 304:2004. The test results were reviewed by the impartial test centre of TÜV Rheinland Energy GmbH.</p> <p>Test results: the requirements of the implementing Directives 2009/125/EC and 2010/30/EU for boilers are fulfilled with the following values:</p>		
Seasonal space heating energy efficiency:	<b>83 %</b>	
Efficiency Class	<b>A+</b>	
Cologne, 01.08.2019 432/öz	TÜV Rheinland Energy GmbH Test Centre for Energy Appliances DIN- and DVGW-test laboratory	
Expert	Report released after review:	
 		
Dipl.-Ing. I. Metin	Dipl.-Ing. M. Reimbold	

## 1 Evaluation of the Ecodesign requirements

Description	Parameter	Result	Unit
Useful efficiency at rated heat output	$\eta_n$	81,9	%
Useful efficiency at applicable part load	$\eta_p$	88,3	%
Electrical efficiency (for solid fuel cogeneration boilers)	$\eta_{el,n}$	---	%
Useful heat output at rated heat output	$P_n$	30,0	kW
Useful heat output at applicable part load	$P_p$	8,6	kW
Electric power requirement at maximum heat output*	$e_{l_{max}}$	65	W
Electric power requirement at minimum heat output*	$e_{l_{min}}$	42	W
Standby mode power consumption*	$P_{SB}$	3	W
Seasonal space heating energy efficiency in active mode	$\eta_{son}$	83	%
Loss of seasonal space heating energy efficiency due to adjusted contributions of temperature controls	F(1)	3,0	%
Negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption	F(2)	1,0	%
Positive contribution to the seasonal space heating energy efficiency by the electrical efficiency of solid fuel cogeneration boilers	F(3)	---	%
Seasonal emissions**	PM	12	mg/m <sup>3</sup>
	OGC	6	
	CO	159	
	NO <sub>x</sub>	131	
Biomass label factor	BLF	1,45	---
<b>Seasonal space heating energy efficiency</b>	<b><math>\eta_s</math></b>	<b>83</b>	<b>%</b>
<b>Energy efficiency index</b>	<b>EEl</b>	<b>123</b>	<b>---</b>

\* average values, measured according to EN15456:2008. Integrated circulating pump not considered in the determination of the electrical power

\*\* values standardised to a dry flue gas basis at 10 % oxygen and conditions at 0 °C and 1013 mbar

## 2 Evaluation of the Energy Labelling Requirements

Energy efficiency class	Energy efficiency index (EEI)
A+++	$EEI \geq 150$
A++	$125 \leq EEI < 150$
A+	$98 \leq EEI < 125$
A	$90 \leq EEI < 98$
B	$82 \leq EEI < 90$
C	$75 \leq EEI < 82$
D	$36 \leq EEI < 75$
E	$34 \leq EEI < 36$
F	$30 \leq EEI < 34$
G	$EEI < 30$

According to the Directive 2010/30/EU, the boiler shall be marked as following:

Boiler	$\eta_s$	EEI	Efficiency Class
Type designation: <b>Sunpellet 4</b> Trademark: <b>FERROLI</b>	<b>83 %</b>	<b>123</b>	<b>A+</b>

### **3 Statement of test results**

The boiler:

**Sunpellet 4**

of the company:

**Ferroli S.p.A.**

with trademark:

**FERROLI**

fulfils and corresponds to the requirements of the Commission Regulation (EU) 2015/1189 with regard to ecodesign requirements for solid fuel boilers and achieved a seasonal space heating energy efficiency of

**83 %**

that corresponds to the energy efficiency classes of solid fuel boilers

**A+**

in accordance with Annex II Energy Efficiency Classes table 1 of the Commission Delegated Regulation (EU) 2015/1187

The evaluation of the results of this report with respect of conformity with the related commission regulations (2015/1189 and 2015/1187) is only a part of the conformity assessment to fulfil the Ecodesign (Directive 2009/125/EC) and Energy Labelling (Directive 2010/30/EU) prescriptions