



CE DECLARATION OF CONFORMITY

The undersigned Georgi Asenov Chimev as manager of Mareli Systems Ltd., address: No 18, Shar Planina str./Blagoevgrad 2700/ Bulgaria phone: +0359 887 756752,

Declare, in sole responsibility, that the product Pellet boilers Ecostar 8 / 12 / 18 / 24 / 30 / 35 kW is representative of the type SBN 8 / 12 / 18 / 24 / 30 / 35 kW, and designed for operation of solid fuel (pellets) and are produced in the factory of Mareli Systems Ltd, address: Industrial area, Simitli city 2730, Bulgaria. The products are produced in conditions implemented and maintained by the manufacturer for production control in accordance with:

1. EN 303-5:2012 Heating devices, working with wood pellets for home use. Requirements and test methods.
2. SD CEN/TS 15883:2009 Household devices for solid fuel. Testing methods for emissions.
3. Directive 97/23/EC, introduced by "Regulation of essential requirements and conformity assessment of pressure equipments.
4. Directive 2014/35/EC
5. BDS EN 60335-1; BDS EN 60335-2-102;
6. BDS EN 55014-1; BDS EN 61000-3-2; BDS EN 61000-3-3; BDS EN 55014-2.
7. EU 1189/2015 compliant.

The declaration is issued on the basis of Protocol for initial testing:

- Number 068 / 085 / 136 / 075 / DI 169 / 060
- Number 2-18-829
- Number 2a-18-829
- Number 2EMC-18-829

ISSUED FROM:

ITEM Conuslt Ltd.

Address: Bulgaria, Sofia 1220, 8 "Istoria Slavianobulgarska" Blvd.

CTEC Ltd.

Address: Bulgaria, Stara Zagora 6000, 2 "Industrialna" str.

Specific requirements related to the use of the product:

In case of improper use or change of the product, this declaration is not valid.

The mark "CE" is used for first time on 13.08.2018.

I declare that I am aware of the responsibility that bears in accordance with the Article 313 of the Criminal Code of the Republic of Bulgaria.

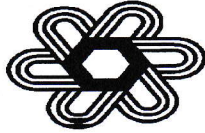
As the manufacturer we declare under our sole responsibility that the equipment follows the provisions of the Directives stated above.

PLACE: SIMITLI

DATE: 20.02.2024

SIGNATURE: _____





"ITEM Consult" Ltd. Sofia 1220,
8 Istoria Slavianobulgarska Blvd

EEI ASSURANCE

№DI-198/08.04.2024

Регламент/Regulation (EU) 2015/1187

Product: Boiler for local heating with a pellet burner
Manufacturer: „Mareli Systems” Ltd
Model: SBN 8
Requested by: „Mareli Systems” Ltd
Address: Sofia, Lyulin district, bl. 821, ap.1

Stoking principle: automatic charging
Test Fuel: pellets Ø 6, cl. A. Test report for the fuel № 14124/26.04.2023
Test procedure: EN 303-5:2021+A1:2022
Test report no: 068/19.02.2024 г.

Fixed values:

| | | |
|-------|--|----------|
| F (1) | Deduction regarding temperature controls | 3 [%] |
| CC | Conversion coefficient for electricity consumption | 2.5 [-] |
| BLF | Biomass label factor | 1.45 [-] |

Test results:

| | | |
|--------------------|---|---------------|
| $\eta_{k,nominal}$ | Efficiency at nominal heat output | 93.81 [%] |
| $\eta_{k,minimum}$ | Efficiency at minimum heat output | 95.77 [%] |
| M | Test fuel, moisture | 3.76 [%] |
| GCV_{mf} | Test fuel, gross calorific value, moisture free | 20.61 [MJ/kg] |
| H_{iw} | Test fuel, net heating value, with moisture | 18.53 [MJ/kg] |
| H_{iwf} | Test fuel, net heating value, moisture free | 19.84 [MJ/kg] |
| $e_{l,max}$ | Electricity consumption at nominal heat output | 0.06 [kW] |
| $e_{l,min}$ | Electricity consumption at minimum heat output | 0.025 [kW] |
| P_{SB} | Electricity consumption in standby mode | 0.001 [kW] |
| P_n | Nominal heat output | 8.15 [kW] |
| P_p | Minimum heat output | 2.38 [kW] |

Calculations

| | | |
|---------------|--|------------|
| η_n | Efficiency at nominal output | 87.62 [%] |
| η_p | Efficiency at reduced output | 89.45 [%] |
| $\eta_{el,n}$ | Electrical efficiency of solid fuel cogeneration boiler | 0.00 [%] |
| η_{son} | Seasonal space heating energy efficiency in active mode | 89.17 [%] |
| η_s | Seasonal space heating energy efficiency | 83.74 [%] |
| F(2) | Auxiliary electricity consumption | 0.0243 n/a |
| F(3) | Electrical efficiency of solid fuel cogeneration boilers | 0.0000 n/a |

Calculation of the Energy Efficiency index:

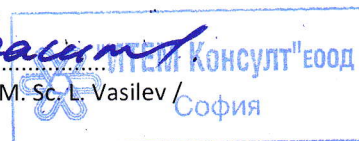
| | |
|-------------------------------|---------------------|
| Energy Efficiency: | 123.87 |
| Energy Efficiency class: | A+ |
| Energy Efficiency index (EEI) | $98 \leq EEI < 125$ |

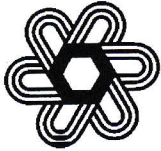
Prepared by:

M. Vasileva

Manager:

/M. Sc. L. Vasilev /





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Sofia 1220, 8, Istorica Slavianobulgarska Blvd., Bulgaria

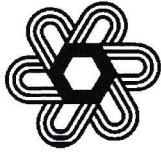
CERTIFICATION, TESTING, SUPERVISION OF DEVICES WITH INCREASED RISK

ECODESIGN REQUIREMENTS FOR SOLID FUEL BOILERS ACCORDING TO COMMISSION REGULATION (EU) 2015/1189 IMPLEMENTING DIRECTIVE 2009/125/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

№DI-199/08.04.2024

| | |
|--|--|
| Trade mark: | Mareli Systems Ltd |
| Model: | SBN 8 |
| Stoking mode: | Central heating boiler with pellet burner |
| Condensing boiler: | No |
| Solid fuel cogeneration boiler: | Combination boiler: |

| Fuel | Preferred fuel (only one) | Other suitable fuel(s) | η_s (%) | Seasonal space heating emissions | | | |
|--|---------------------------|------------------------|--------------|----------------------------------|----------|------------|-----------------|
| | | | | PM | OGC | CO | NO _x |
| mg/m ³ at 10% O ₂ | | | | | | | |
| Log wood, moisture content $\leq 25\%$ | no | no | | | | | |
| Chipped wood, moisture content 15-35% | no | no | | | | | |
| Chipped wood, moisture content $> 35\%$ | no | no | | | | | |
| Compressed wood in the form of pellets or briquettes | yes | no | 84 | 15 | 7 | 213 | 81 |
| Sawdust, moisture content $\leq 50\%$ | no | no | | | | | |
| Non-woody biomass | no | no | | | | | |
| Bituminous coal | no | no | | | | | |
| Brown coal (including briquettes) | no | no | | | | | |
| Coke | no | no | | | | | |
| Anthracite | no | no | | | | | |
| Blended fossil fuel briquettes | no | no | | | | | |
| Other fossil fuel | no | no | | | | | |
| Blended biomass (30-70%) fossil fuel briquettes | no | no | | | | | |
| Other blend of biomass and fossil fuel | no | no | | | | | |



„ITEM Consult”Ltd

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CERTIFICATION, TESTING, SUPERVISION OF DEVICES WITH INCREASED RISK

Characteristics when operating with the preferred fuel only:

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|---------------|-------|------|---|-------------|-------|------|
| Useful heat output | | | | Useful efficiency | | | |
| At rated heat output | P_n | 8.15 | kW | At rated heat output | η_n | 87.62 | % |
| At (50%) of rated heat output if it's applicable | P_p | 2.38 | kW | At (50%) of rated output if applicable | η_p | 89.45 | % |
| For solid fuel cogeneration boilers: Electrical efficiency | | | | Auxiliary electricity consumption | | | |
| At rated heat output | $\eta_{el,n}$ | N.A. | % | At rated heat output | $e_{l,max}$ | 0.060 | kW |
| | | | | At (50%) of rated output if applicable | $e_{l,min}$ | 0.025 | kW |
| | | | | Of incorporated secondary emission abatement equipment, if applicable | | N.A. | kW |
| | | | | In standby mode | P_{SB} | 0.001 | kW |

CONCLUSION:

Central heating boiler with pellet burner SBN 8 MEET THE REQUIREMENTS OF Annex II „Ecodesign Requirements” of REGULATION (EU) 2015/1189

| | |
|-----------------------------|---|
| Contact details | Name and address of the manufacturer or its authorised representative |
| Telephone: +359 888 406 956 | “Mareli Systems”Ltd Address: Sofia, Bulgaria, Lyulin district, bl. 821, ap. 1 Telephone: +359 888 406 956 |

Prepared by:

/M. Vasileva/

Manager:

/M. Sc. L. Vasilev /

