



## CE DECLARATION OF CONFORMITY

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

Declare, in sole responsibility, that the product Pellet boilers Ecostar 12 / 18 / 24 / 30 / 35 kW is representative of the type SBN 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 Proto-col for initial testing:

- Number 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.

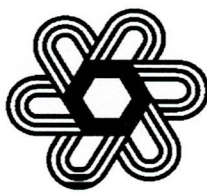
As the manufacturer we declare under our sole responsibility that the equipment follows the provisions of the Di-rectives stated above.

PLACE: SIMITLI

DATE: 04.12.2023

SIGNATURE: \_\_\_\_\_





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

## EEI ASSURANCE

№DI-006/11.01.2019

Регламент/Regulation (EU) 2015/1187

Product: Solid fuel boiler with built-in hopper  
Manufacturer: Mareli systems Ltd  
Model: SBN 18  
Requested by: Mareli systems Ltd  
BULGARIA

Stoking principle: Automatic  
Test Fuel: Wood pellets (C1)  
Test procedure: EN 303 – 5:2012  
Test report no: INTERPOLATION (ASSURANCE № DI 232/04.12.2018)

### 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:

$\eta_{k \text{ nominal}}$	Efficiency at nominal heat output	95,03 [%]
$\eta_{k \text{ minimum}}$	Efficiency at minimum heat output	96,02 [%]
M	Test fuel, moisture	5,70 [%]
$GCV_{mf}$	Test fuel, gross calorific value, moisture free	20,30 [MJ/kg]
$H_{iw}$	Test fuel, net heating value, with moisture	17,79 [Mj/kg]
$H_{iwf}$	Test fuel, net heating value, moisture free	18,87 [Mj/kg]
$e_{l \text{ max}}$	Electricity consumption at nominal heat output	0,014 [kW]
$e_{l \text{ min}}$	Electricity consumption at minimum heat output	0,008 [kW]
$P_{SB}$	Electricity consumption in standby mode	0,003 [kW]
$P_n$	Nominal heat output	18,82 [kW]
$P_p$	Minimum heat output	5,46 [kW]

### Calculations

$\eta_n$	Efficiency at nominal output	88,31 [%]
$\eta_p$	Efficiency at reduced output	89,23 [%]
$\eta_{el,n}$	Electrical efficiency of solid fuel cogeneration boiler	0,00 [%]
$\eta_{son}$	Seasonal space heating energy efficiency in active mode	89,10 [%]
$\eta_s$	Seasonal space heating energy efficiency	85,67 [%]
F(2)	Auxiliary electricity consumption	0,0043 n/a
F(3)	Electrical efficiency of solid fuel cogeneration boilers	0,0000 n/a

### Calculation of the Energy Efficiency index:

Energy Efficiency: 125,76  
Energy Efficiency class: A++  
Energy Efficiency index (EEI)  $125 \leq EEI < 150$

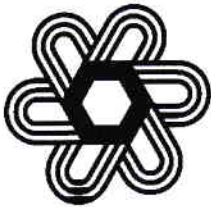
Изготвил:

М. Василева

Executive director:

/M. Sc. L. Vasilev/





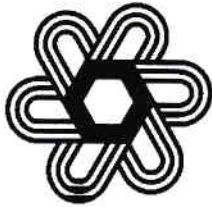
**"ITEM - Consult" Ltd. Sofia 1220,  
bul. Istoriq Slavqnbulgarska. № 8**

**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-342/18.10.2019

<b>Trade mark:</b>	<b>„Mareli Systems” Ltd</b>
<b>Model:</b>	<b>SBN 18</b>
<b>Stoking mode:</b>	<b>Automatic</b>
<b>Condensing boiler:</b>	<b>No</b>
<b>Solid fuel cogeneration boiler:</b>	<b>Combination boiler:</b>

Fuel	Preferred fuel (only one)	Other suitable fuel(s)	$\eta_s$ (%)	Seasonal space heating emissions			
				PM	OGC	CO	NO <sub>x</sub>
				Mg/m <sup>3</sup> at 10% O <sub>2</sub>			
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	85,67	12,37	5,19	113.81	103.62
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					



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**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	$P_n$	18,82	kW	At rated heat output	$\eta_n$	88,31	%
At (30%/50%) of rated heat output if it's applicable	$P_p$	5,46	kW	At (30%/50%) of rated output if applicable	$\eta_p$	89,23	%
For solid fuel cogeneration boilers: Electrical efficiency				<b>Auxiliary electricity consumption</b>			
At rated heat output	$\eta_{el,n}$	N.A.	%	At rated heat output	$e_{l,max}$	0,014	kW
				At (30%/50%) of rated output if applicable	$e_{l,min}$	0,008	kW
				Of incorporated secondary emission abatement equipment, if applicable		N.A.	kW
				In standby mode	$P_{SB}$	0,003	kW

**CONCLUSION:**

**Solid fuel boiler with pellet burner „SBN 18” 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
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Prepared by:   
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Manager:   
/M. Sc. L. Vasilev /