

# ATTESTATION

Number WG / 2023 / 808K / 2

**Manufacturer:** Przedsiębiorstwo Produkcyjno Handlowe Kostrzewa Spółka Jawna, ul. Przemysłowa 11A, 11-500 Giżycko

**Product:** Heating boiler for solid fuel with automatic stoking

**Trade designation:** TWIN BIO LUXURY COMPACT 16 with a power of 15 kW

**Fuel:** wood pellets

**Boiler category:** 1

**Condensing boiler** NO

**Test method:** PN-EN 303-5:2021-09

**Boiler class** 5

		Parameter	Symbol	Unit	Value	Criterion
Emissions	Nominal heat output	Carbon monoxide	$E_{CO}$	mg/m <sup>3</sup> <sub>n</sub>	73,59	≤ 500
		Nitrogen oxides, calculated as NO <sub>2</sub>	$E_{NOx}$	mg/m <sup>3</sup> <sub>n</sub>	151,38	-
		Organic gaseous compounds	$E_{OGC}$	mg/m <sup>3</sup> <sub>n</sub>	3,03	≤ 20
		Dust	$E_{PM}$	mg/m <sup>3</sup> <sub>n</sub>	19,30	≤ 40
	Minimum heat output	Carbon monoxide	$E_{CO}$	mg/m <sup>3</sup> <sub>n</sub>	305,05	≤ 500
		Nitrogen oxides, calculated as NO <sub>2</sub>	$E_{NOx}$	mg/m <sup>3</sup> <sub>n</sub>	131,12	-
		Organic gaseous compounds	$E_{OGC}$	mg/m <sup>3</sup> <sub>n</sub>	7,40	≤ 20
		Dust	$E_{PM}$	mg/m <sup>3</sup> <sub>n</sub>	16,59	≤ 40
	Seasonal	Carbon monoxide	$E_{s,CO}$	mg/m <sup>3</sup> <sub>n</sub>	270,33	≤ 500
		Nitrogen oxides, calculated as NO <sub>2</sub>	$E_{s,NOx}$	mg/m <sup>3</sup> <sub>n</sub>	134,16	≤ 200
		Organic gaseous compounds	$E_{s,OGC}$	mg/m <sup>3</sup> <sub>n</sub>	6,75	≤ 20
		Dust	$E_{s,p}$	mg/m <sup>3</sup> <sub>n</sub>	17,00	≤ 40
Heat properties	Seasonal space heating energy efficiency in active mode		$\eta_{son}$	%	86,47	-
	Seasonal space heating energy efficiency		$\eta_s$	%	82,09	≥ 75
	Nominal heat output	Generated useful heat	$P_n$	kW	15,19	-
		Useful efficiency	$\eta_n$	%	85,67	-
		Efficiency	$\eta_{cn}$	%	92,80	≥ 88,18
	Minimum heat output	Generated useful heat	$P_p$	kW	4,22	-
		Useful efficiency	$\eta_p$	%	86,61	-
		Efficiency	$\eta_{cp}$	%	93,38	≥ 87,65
Electrical characteristics	Auxiliary electricity consumption Load I		$e_{l,max}$	kW	0,058	-
	Auxiliary electricity consumption Load II		$e_{l,min}$	kW	0,023	-
	Auxiliary electricity consumption in standby mode		$P_{SB}$	kW	0,0031	-
	Energy efficiency index		EEI	-	121,01	-
	Energy efficiency class		-	-	A+	-

\*) the emissions listed above are related to dry exhaust gas containing 10% oxygen in the normal state, at a temperature of 273.15K and a pressure of 1013.25 mbar

Comparison of the results of the completed test, registered under number B/2023/808K in the Accredited Testing Laboratory No. AB024 with the requirements of the PN-EN 303-5:2021-09 standard for Class 5 in which the requirements of Commission Regulation (EU) 2015/1189 were implemented of April 28, 2015 on the implementation of Directive 2009/125/EC of the European Parliament and of the Council and Commission Delegated Regulation (EU) 2015/1187 of 27 April 2015 with regard to the requirements for solid fuel boilers.

LABORATORY MANAGER  
Heating Equipment Laboratory

dr inż Bartosz Węcki



THE DEPUTY MANAGING  
DIRECTOR

dr inż. Maciej Jodkowski

Katowice, 21.08.2023 r.

Zakłady Badań i Atestacji "ZETOM" im. Prof. F. Stauba w Katowicach sp. z o.o.

ul. Ks. Bpa H. Bednorza 17, 40-384 Katowice, tel.: 0048 32 256 92 57, tel/fax: 0048 32 2569 305, e-mail: biuro@zetom.eu