

# ATTESTATION

Number **WG / 2023 / 807K/ 10**

**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 12**

**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	$E_{CO}$	$mg/m^3_n$	112,52	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{NOx}$	$mg/m^3_n$	144,02	-
		Organic gaseous compounds	$E_{OGC}$	$mg/m^3_n$	2,35	$\leq 20$
		Dust	$E_{PM}$	$mg/m^3_n$	16,99	$\leq 40$
	Minimum heat output	Carbon monoxide	$E_{CO}$	$mg/m^3_n$	272,84	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{NOx}$	$mg/m^3_n$	95,04	-
		Organic gaseous compounds	$E_{OGC}$	$mg/m^3_n$	8,86	$\leq 20$
		Dust	$E_{PM}$	$mg/m^3_n$	12,44	$\leq 40$
	Seasonal	Carbon monoxide	$E_{s, CO}$	$mg/m^3_n$	248,79	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{s, NOx}$	$mg/m^3_n$	102,39	$\leq 200$
		Organic gaseous compounds	$E_{s, OGC}$	$mg/m^3_n$	7,88	$\leq 20$
		Dust	$E_{s, p}$	$mg/m^3_n$	13,12	$\leq 40$
Heat properties	Seasonal space heating energy efficiency in active mode		$\eta_{son}$	%	85,66	-
	Seasonal space heating energy efficiency		$\eta_s$	%	81,19	$\geq 75$
	Nominal heat output	Generated useful heat	$P_n$	kW	12,27	-
		Useful efficiency	$\eta_n$	%	86,70	-
		Efficiency	$\eta_{cn}$	%	93,72	$\geq 88,08$
	Minimum heat output	Generated useful heat	$P_p$	kW	2,30	-
		Useful efficiency	$\eta_p$	%	85,48	-
Efficiency		$\eta_{cp}$	%	93,40	$\geq 87,56$	
Electrical characteristics	Auxiliary electricity consumption Load I		$el_{max}$	kW	0,045	-
	Auxiliary electricity consumption Load II		$el_{min}$	kW	0,014	-
	Auxiliary electricity consumption in standby mode		$P_{SB}$	kW	0,0028	-
	Energy efficiency index		<b>EEI</b>	-	119,74	-
	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/2023/807K 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**  
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**THE DEPUTY MANAGING DIRECTOR**

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Katowice, 21.08.2023 r.

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

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