

# ATTESTATION

Number **WG / 2023 / 928K**

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

**Product:** Solid fuel heating boiler with automatic fuel feeding

**Trade designation:** **TWIN BIO NE 12 heat output 12 kW**

**Fuel:** Wood Pellets

**Boiler category:** 1

**Condensing boiler** NO

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

**Boiler class** 5

		Parametr	Unit	Valu	Criterion	Kryterium
Emissions	Rated output	Carbon monoxide	$E_{CO}$	$mg/m^3_n$	28,68	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{NOx}$	$mg/m^3_n$	135,28	-
		Organic gaseous compounds	$E_{OGC}$	$mg/m^3_n$	8,71	$\leq 20$
		Dust	$E_{PM}$	$mg/m^3_n$	14,54	$\leq 40$
	Minimum output	Carbon monoxide	$E_{CO}$	$mg/m^3_n$	281,73	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{NOx}$	$mg/m^3_n$	111,51	-
		Organic gaseous compounds	$E_{OGC}$	$mg/m^3_n$	15,77	$\leq 20$
		Dust	$E_{PM}$	$mg/m^3_n$	8,30	$\leq 40$
	Seasonal	Carbon monoxide	$E_{s, CO}$	$mg/m^3_n$	243,77	$\leq 500$
		Nitrogen oxides, calculated as $NO_2$	$E_{s, NOx}$	$mg/m^3_n$	115,08	$\leq 200$
		Organic gaseous compounds	$E_{s, OGC}$	$mg/m^3_n$	14,71	$\leq 20$
		Dust	$E_{s, p}$	$mg/m^3_n$	9,24	$\leq 40$
Heat properties	Seasonal space heating energy efficiency in active mode		$\eta_{son}$	%	82,73	-
	Seasonal space heating energy efficiency		$\eta_s$	%	77,96	$\geq 75$
	Rated output	Generated useful heat	$P_n$	kW	12,48	-
		Useful efficiency	$\eta_n$	%	83,92	-
		Efficiency	$\eta_{cn}$	%	90,68	$\geq 88,08$
	Minimum output	Generated useful heat	$P_p$	kW	3,39	-
		Useful efficiency	$\eta_p$	%	82,52	-
Efficiency		$\eta_{cp}$	%	89,15	$\geq 87,56$	
Electrical characteristics	Auxiliary energy consumption, rated output		$el_{max}$	kW	0,075	-
	Auxiliary energy consumption, minimum output		$el_{min}$	kW	0,022	-
	Auxiliary energy consumption, standby mode		$P_{SB}$	kW	0,0029	-
	Boiler energy efficiency index		$EEl$	-	115,19	-
	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/2023/928K 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.

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Katowice, 18.12.2023

THE DEPUTY MANAGING  
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