

ATTESTATION

Number **WG / 2023 / 806K / 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: **MINI BIO NE 20 with a power of 20 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^3_n	82,94	≤ 500	
		Nitrogen oxides, calculated as NO_2	E_{NOx}	mg/m^3_n	172,79	-	
		Organic gaseous compounds	E_{OGC}	mg/m^3_n	4,18	≤ 20	
		Dust	E_{PM}	mg/m^3_n	11,17	≤ 40	
		Carbon monoxide	E_{CO}	mg/m^3_n	390,07	≤ 500	
		Nitrogen oxides, calculated as NO_2	E_{NOx}	mg/m^3_n	127,83	-	
	Minimum heat output	Organic gaseous compounds	E_{OGC}	mg/m^3_n	7,83	≤ 20	
		Dust	E_{PM}	mg/m^3_n	16,32	≤ 40	
		Seasonal	Carbon monoxide	$E_{s,CO}$	mg/m^3_n	344,00	≤ 500
			Nitrogen oxides, calculated as NO_2	$E_{s,NOx}$	mg/m^3_n	134,57	≤ 200
			Organic gaseous compounds	$E_{s,OGC}$	mg/m^3_n	7,28	≤ 20
			Dust	$E_{s,p}$	mg/m^3_n	15,55	≤ 40
Heat properties	Seasonal space heating energy efficiency in active mode		η_{son}	%	86,16	-	
	Seasonal space heating energy efficiency		η_s	%	82,04	≥ 77	
	Nominal heat output	Generated useful heat	P_n	kW	19,83	-	
		Useful efficiency	η_n	%	85,79	-	
		Efficiency	η_{cn}	%	92,90	$\geq 88,3$	
	Minimum heat output	Generated useful heat	P_p	kW	5,90	-	
		Useful efficiency	η_p	%	86,23	-	
		Efficiency	η_{cp}	%	93,13	$\geq 87,78$	
	Electrical characteristics	Auxiliary electricity consumption Load I		$e_{l,max}$	kW	0,071	-
Auxiliary electricity consumption Load II		$e_{l,min}$	kW	0,026	-		
Auxiliary electricity consumption in standby mode		P_{SB}	kW	0,0024	-		
Energy efficiency index		EEI	-	120,81	-		
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/2023/806K 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, 18.08.2023 r.

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

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