

Certificate No. Z/401/2026/1

In the Laboratory of the Environmental Research Center "SORBCHEM" Sp. z o.o., energy and emission tests were conducted on the boiler model:

**MultiKo groszek with a nominal power of 40 kW
powered by hard coal**

manufactured by KOTŁOSPAW Sp. z o.o. ul. Szenica 38, 63-300 Pleszew

The purpose of the tests was to confirm compliance with the requirements of the standard PN-EN 303-5+A1:2023-05, which also includes the requirements of Commission Regulation (EU) 2015/1189 of 28 April 2015 and Delegated Commission Regulation (EU) 2015/1187.

The thermal and emission tests conducted confirm that the requirements of the standard PN-EN 303-5+A1:2023-05 are met.

The energy and emission characteristics of the MultiKo groszek boiler with a nominal power of 40 kW, serial number 2581, are presented in the table below, based on the test results conducted at the Boiler Testing Laboratory, Laboratory of the Environmental Research Center SORBCHEM Sp. z o.o. Full test results are provided in the test report No. 401/2026 dated 29.05.2026.

Thermal Power [kW]		Thermal Efficiency [%]		Boiler Class	Useful Efficiency [%]		Seasonal Space Heating Efficiency in Active Mode [%]	Seasonal Space Heating Efficiency [%]	Energy Efficiency Index	Energy Efficiency Class
		Criterion: >88.4						Criterion: >77		
Q_n	Q_p	η_n	η_p	5	η_{nGCV}	η_{pGCV}	η_{son}	η_s	EEI	B
41,32	11,93	91,33	90,21		87,71	86,63	87	84	83	

Parameter	Emission			Seasonal Emission E_s	
	Result for Nominal Power [mg/m ³ 13% O ₂]	Result for Partial Power [mg/m ³ 13% O ₂]	Emission Limits	Results [mg/m ³ 13% O ₂]	Seasonal Emission Limits
Dust	17,8	21,9	≤ 40	21	≤ 40
CO	48	214	≤ 500	189	≤ 500
NOx	---	---	---	216	≤ 200
OGC	3,9	11,3	≤ 20	10	≤ 20

Ruda Śląska, 29.05.2026

Head of the Boiler Testing Laboratory
mgr inż. Arkadiusz Ciepliński

President of the Management Board
mgr Zdzisław Brajlich