

Certificate No. Z/409/2026/I/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 35 kW with a nominal power of 35 kW
powered by hard coal**

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

The purpose of the calculations was to compare the results with the requirements of the standard PN-EN 303-5+A1:2023-05.

In accordance with the requirements of clause 5.1.4 of the standard PN-EN 303-5+A1:2023-05, for boilers belonging to a product type series and having the same design, it is sufficient to carry out testing only on the smallest and the largest boiler, provided that the ratio of the nominal thermal output of the smallest boiler to that of the largest boiler is less than or equal to 2:1.

The results of the interpolation calculations are included in report No. 409/2026/1 dated 29 May 2026. The calculations were performed on the basis of the test results of the MultiKo groszek 20 kW boiler with a nominal power of 20 kW (test report No. 400/2026/1 dated 29 April 2026) and the MultiKo groszek 40 kW boiler with a nominal power of 40 kW (test report No. 401/2026/1 dated 29 May 2026). The tests were conducted at the Boiler Testing Laboratory of the Environmental Research Center "SORBCHEM" Sp. z o.o. in Ruda Śląska.

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
35,0	10,5	91,4	90,2		η_{ngcv}	η_{pgcv}	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	18,4	22,2	≤ 40	22	≤ 40
CO	49	229	≤ 500	202	≤ 500
NOx	---	---	---	208	≤ 200
OGC	4,5	11,1	≤ 20	10,1	≤ 20

Ruda Śląska, 29.05.2026 r.

Head of the Boiler Testing Laboratory

mgr inż. Arkadiusz Ciepliński

President of the Management Board

mgr Zdzisław Brajlich

Laboratorium akredytowane w zakresie badań energetyczno - emisyjnych kotłów grzewczych nr AB 1302.
Szczegółowy zakres akredytacji znajduje się na stronach Polskiego Centrum Akredytacji.