



# INSTITUTE OF POWER ENGINEERING

Research Institute

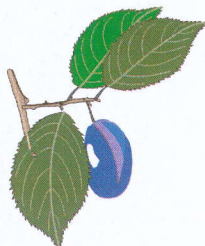
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## TESTING LABORATORY OF BOILERS AND HEATING DEVICES

93-231 Łódź, ul. Dostawcza 1

tel. (042) 64 00 821  
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# AN ENVIRONMENT-FRIENDLY DEVICE

## CERTIFICATE

No. OS/546/CUE/17

This is to confirm that:

**water boilers, series K-8-10 DG; K-8-16 DG; K-8-20 DG**

with automatic burners  
with rated thermal output of 10, 16 and 20 kW,  
fired with wood granules (pellets)  
Symbols: PKWiU 28.22.12-00.50 PN-EN 303-5: 2012

manufactured by:

**UAB KALVIS**  
**Pramonės g. 15, LT-78135, Šiauliai, Lithuania**

meet the environment protection requirements

for class 5 defined in the PN-EN 303-5:2012 standard

and in the Technical Criteria:

**KT/OS 01-2005**

This certificate has been issued on the basis of laboratory tests performed by: Testing Laboratory of Boilers and Heating Devices in Łódź, ul. Dostawcza 1 - specified in the following test reports: 94/17-LG; 95/17-LG; 96/17-LG.

**Certificate validity period**  
**from October 2017 to October 2020**

Laboratory Director  
of the Testing Laboratory of Boilers and  
Heating Devices

Head  
of the Power Equipment Testing Department

(signature)

**INSTYTUT ENERGETYKI**  
Instytut Badawczy  
Zakład Badań  
Urządzeń Energetycznych CUE  
93-231 Łódź, ul. Dostawcza 1  
tel. 42 640-08-21

(signature)

Łódź, December 08, 2017



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# CERTIFICATE

## No. OS/546/CUE/17

K-8 DG series boilers with thermal output of 10, 16 and 20 kW with an automatic fuel feed, tested in line with the PN EN 303-5: 2012 standard meet the 5 class requirements with regard to thermal efficiency and emission of flue gas pollutants.

Parameter	Unit	Parameter value			Requirements of standards and regulations	
		K-8-10 DG	K-8-16 DG	K-8-20 DG		
Rated output $Q_{ZN}$	kW	10	16	20		
Fuel		Wood granules (pellets)				
	$Q_i^r$	MJ/kg	18.7	18.7	18.7	none
	$A^r$	%	0.4	0.4	0.4	2÷7
	$W^r$		8.0	8.0	8.0	≤11
Thermal output	kW	10.5	16.1	20.0	≥ $Q_{ZN}$	
Efficiency $\eta$	%	89.4	90.2	89.8	≥88.0 for 10kW ≥88.2 for 16kW ≥88.3 for 20kW (class 5)	
Emission <sup>x</sup>	CO	mg/m <sup>3</sup>	383	409	311	≤500 (class 5)
	OGC		12	4	18	≤20 (class 5)
	Ash dust		26	31	31	≤40 (class 5)

<sup>x</sup>) counted as 10%-vol. O<sub>2</sub> in dry flue gas

### INSTYTUT ENERGETYKI

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Łódź; December 08, 2017