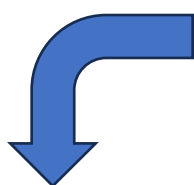




Wood gasification boilers

INSTRUCTIONS FOR REPLACEMENT OF LAMBDA
SENSOR **TYPE: BOSCH LSM 11** IN VIGAS LAMBDA
CONTROL BOILERS

BOSCH LSM 11 **(end of production)**



AK3000
Lambda sonda NGK
(SP code 3009/B)

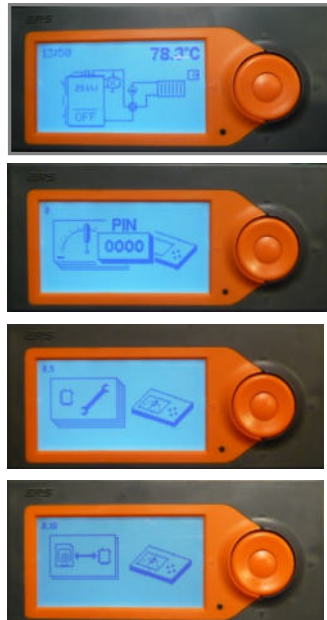


REPLACEMENT FOR VIGAS Lambda Control BOILER WITH **AK 3000 REGULATION**

REPLACEMENT OF LAMBDA SENSOR TYPE: LSM 11 FOR TYPE: **NGK (SP code 3009/B)**

Step 1: Using the AK4000 M or AK3000 programmer, upload the AK3000.bin and AK3001.bin (firmware version 1.41) to the AK3000 Display.

Procedure for uploading and setting up a new type of Lambda Sensor:



1. Hold down the "ENTER" button in any state of the boiler,
2. Press the ▲ button,
3. Hold the ◀ button for 4s - "PIN 0000" will be displayed,
4. Confirm the "ENTER" button 4 times,
5. The boiler service settings symbol appears on the display.
6. Confirm "ENTER" and select the micro SD card with the ▲ buttons and confirm "ENTER",
7. Select the flash firmware option. The new firmware will start uploading in a few seconds. The control automatically detects the type of firmware to play (AK3000.bin / AK3001.bin).



Programmer AK 3000 (SP code 3006)

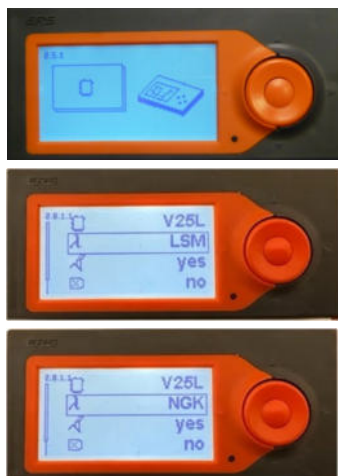


Programmer AK 4000M (SP code 4007)



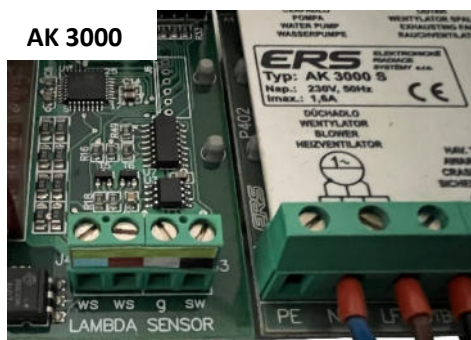
After playing the software, the option to select the type of Lambda sensor LSM or NGK will be available.

Step 2: We choose the **NGK** type



<input type="checkbox"/>	Boiler type V-VIGAS, xx – rated output, L – lambda sensor TVZ – warm air, UD – coal – wood, DP – wood – pellets.
λ	LSM – boiler with lambda sensor type BOSCH LSM 11 NGK – boiler with lambda sensor type NGK NO – boiler without lambda sensor
<input type="checkbox"/>	yes – boiler with flue gas thermometer, no – boiler without flue gas thermometer
<input checked="" type="checkbox"/>	yes – boiler with exhaust fan, no – boiler without exhaust fan

Step 3: Mechanically, we will replace LSM 11 with **NGK**



Notice:
When replacing, observe the color marking of the cables.
ws- white
ws- white
g- gray
sw- black

Lambda sonda NGK (SP code 3009/B)



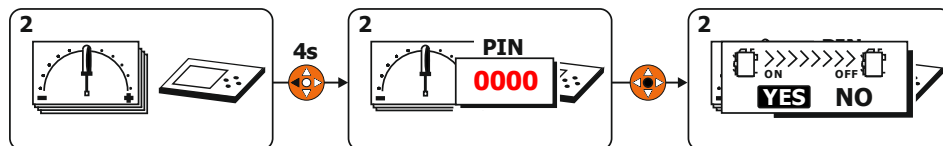
REPLACEMENT FOR VIGAS Lambda Control BOILER WITH **AK 4000 SL REGULATION**

REPLACEMENT OF LAMBDA SENSOR TYPE: LSM 11 FOR TYPE: **NGK (SP code 3009/B)**

Step 1: Using the AK4000 M programmer, upload the AK4000.bin firmware (version 3.0 R5) to the AK4000 Display.

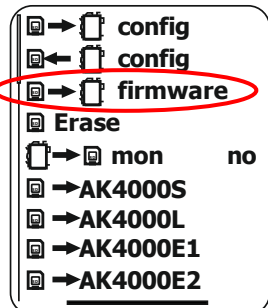
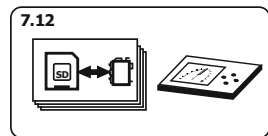
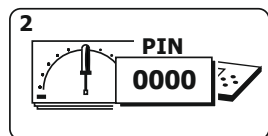
Procedure for uploading and setting up a new type of Lambda Sensor:

Service settings under the password PIN 0000 are used only in reserved cases. These settings must only be performed by a professionally trained service technician (if necessary, also by the customer). In the service settings, the type of boiler with accessories, the hydraulic wiring diagram of the boiler, etc. is set.



When entering the menu under the password if the boiler is switched on, it is necessary to switch off the boiler first.

Update the AK4000 firmware (control program) using the AK 4000M module. The AK4000M module includes a data line for connecting to the power board AK4000SL BH BUS and a USB cable for connecting to a personal PC.



Programmer AK 4000M

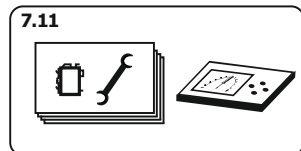
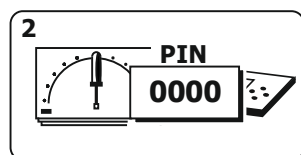


If the firmware update does not start automatically after connecting the AK4000M module to the AK4000SL board, please use a manual flash using:

firmware - uploading the current firmware (boiler control software). The procedure for saving the current firmware (FwAk4000.bin) to the AK4000M module and uploading it is given on the website: <https://www.vimar.sk/software/>

After playing the new firmware, the option to select the type of Lambda sensor is automatically added in MENU 7.11 "Setting boiler parameters".

Step 2: We choose the **NGK** type



	V25L	Typ kotla	λ - Lambda Control.
<input type="checkbox"/>	LSM	LSM/NGK/no	
<input checked="" type="checkbox"/>	yes	yes/no	
<input type="checkbox"/>	no	yes/no	
	KTY	KTY/Pt1000	
<input type="checkbox"/>	60°C	60-75 °C	
<input type="checkbox"/>	MaxT	85°C	75-90 °C
<input checked="" type="checkbox"/>	yes	yes/no	
<input type="checkbox"/>	MinT	30°C	20-90 °C
<input type="checkbox"/>	MinT	30°C	20-90 °C
<input type="checkbox"/>	0°C	-5 - 0 °C	
	50Hz	50/60/Auto	
Temper.unit	°C	°C/°F	
Summer	yes	yes/no	

λ - Lambda Control.

According to the type of lambda sensor used, set the correct type: **LSM 11** or **NGK** replacement.

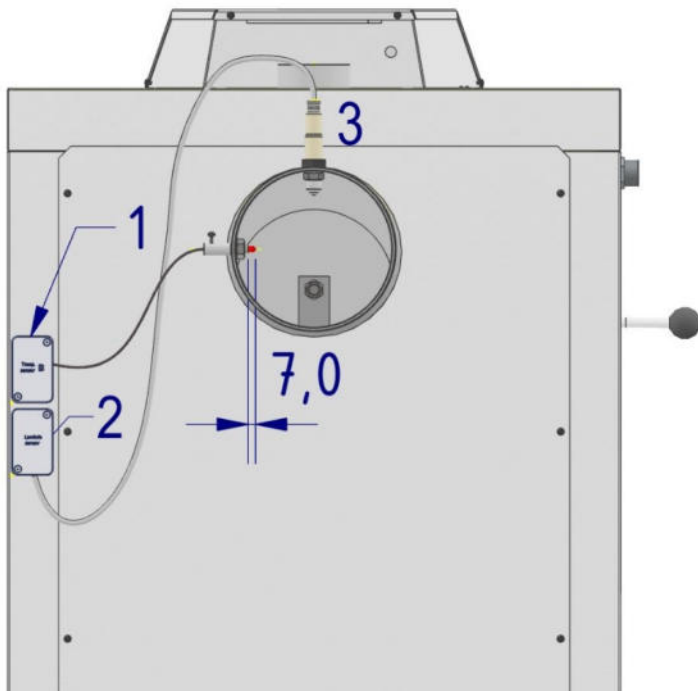
If "no" is selected, the Lambda sensor can be disabled. The function is used in the event of a Lambda malfunction until it is replaced with a new one. At this time, the servo flap uses only two positions: Closed, Open to 30%.

Step 3: Mechanically, we will replace LSM 11 with **NGK (HS Sensortechnik)**



Notice:
When replacing, observe the color marking of the cables.
WS- white
WS- white
G- gray
SW- black

Lambda sonda NGK
(SP code 3009/B)



Lambda sensor connection (2)



1. Connection of thermometers
2. Lambda sensor connection
3. Lambda sensor