



## PREMIUM INSTALLATION



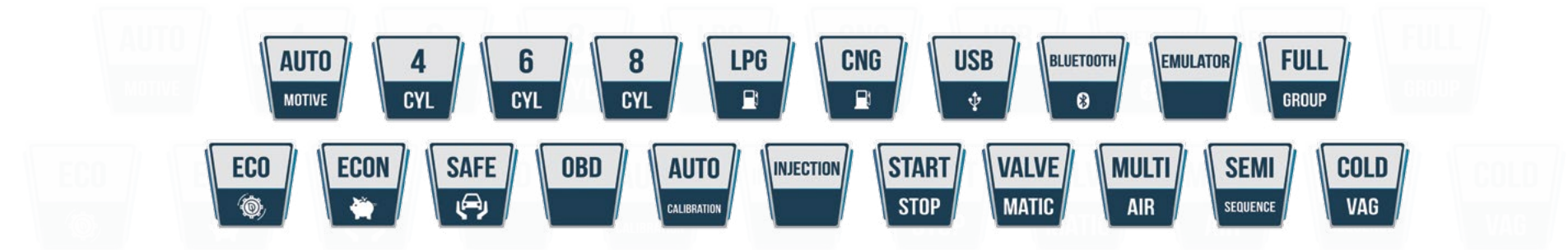






**ZENIT BLACK BOX: TECHNOLOGY IN THE SERVICE OF SAVING TIME AND MONEY!**

## NEW PREMIUM CATEGORY



What counts for a driver?  
Economic driving and savings.

And what counts for you as an installation engineer?  
Trouble-free product that allows for efficient assembly which shortens time of your commitment to the necessary minimum.

The new Zenit Black Box guarantees both - it cares about your business and the needs of the driver.



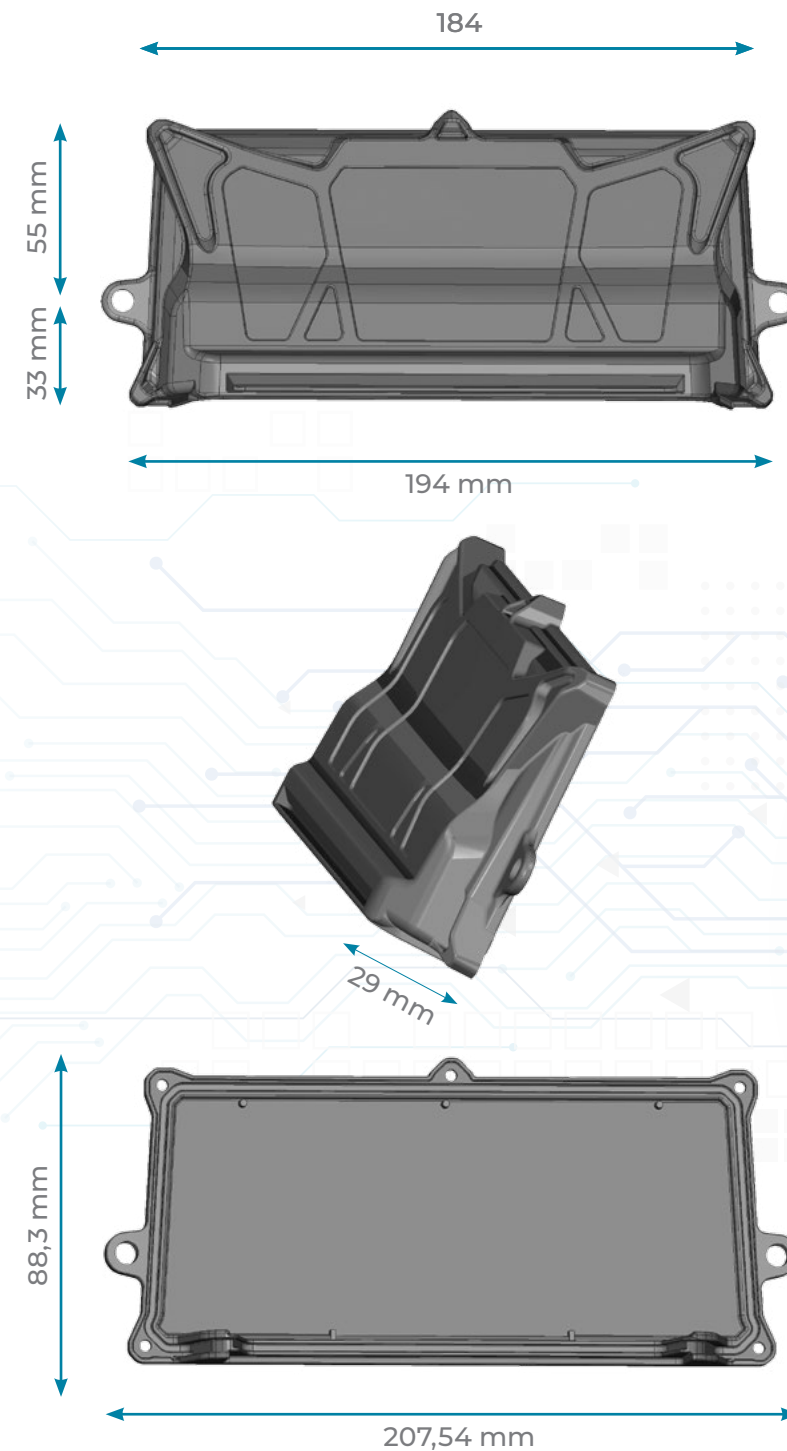
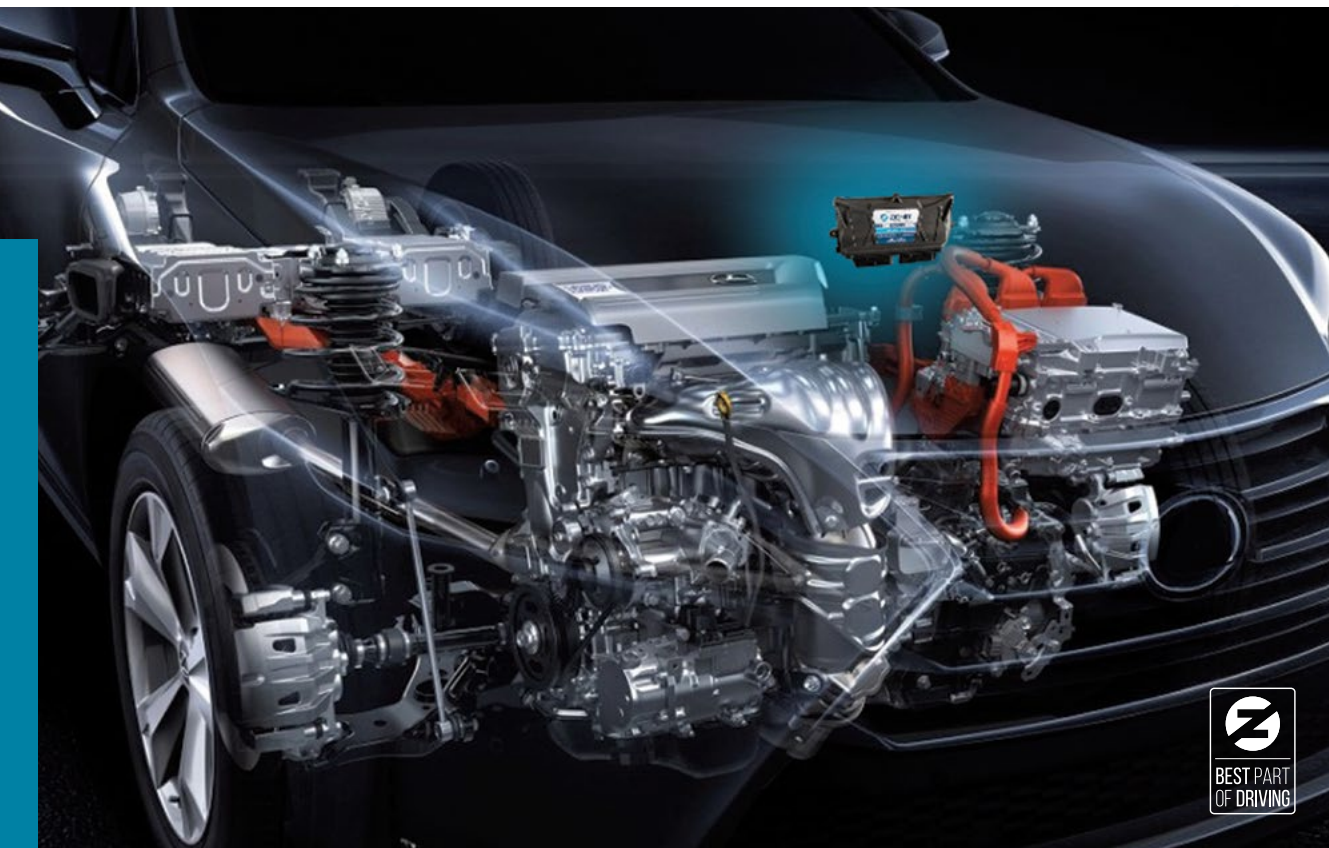
**BLACK BOX - A PLATFORM FITTED TO TECHNOLOGICAL DEVELOPMENT OF AUTOMOTIVE**

## TECHNOLOGICALLY ADVANCED

LPG & CNG controller which learns the fuel dosing strategy from the petrol controller, basing on the collected data, selects the gas dose in the most efficient way.

## GREAT HEART IN THE STREAMLINED SHAPE

The advantage of the Black Box model is its functional and compact housing. Exceptionally flat, shapely, perfectly fitted into almost any space under the hood. From now on, choosing a place to mount the controller under the hood is not a time-consuming search, but a pleasure of choice. Zenit Black Box is a technology closed in a shapely housing suitable for every car.



## THE HIGHEST QUALITY UNDER CONSTANT CONTROL

Choosing premium category of the gas installation, you expect the highest quality standards. Zenit Black Box has the required product approval, which confirms meeting high quality standards. What's more, the Black Box model is subjected to periodic audits of external supervisory units. The purpose of the control is to verify whether the quality control system created by us works without question. Positive results of audits confirm that we are constantly producing with standards that are already required at the stage of obtaining the approval.

To guarantee customers the premium category product, we are subjected to control of such institutions as the State Automotive Institute (PIMOT), the Car Transport Institute (ITS), Czech branch of German TUV or Spanish IDIADA.

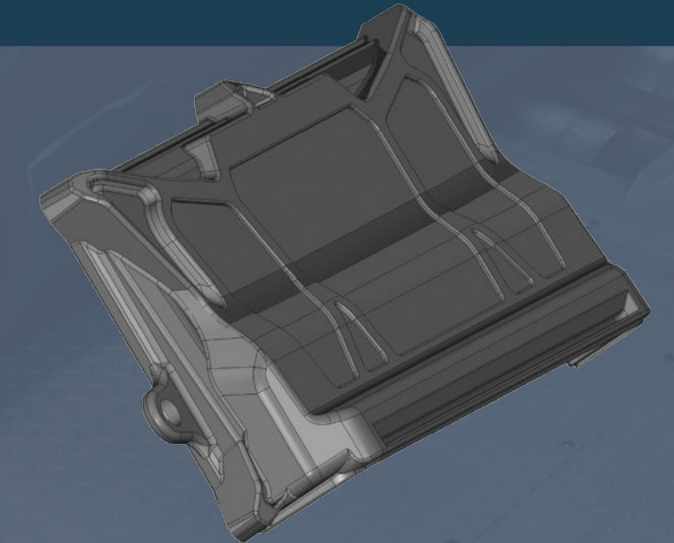
By choosing Zenit Black Box, installers have the guarantee that they choose the highest standard of work and quality which is offered on the market.

E20 67R-01 1029

E20 110R-01 0053

E20 10R-04 3857

**ZENIT** | BEST PART OF DRIVING  
AUTOGAS SYSTEMS





## THE INSTALLER'S WORK **HAS NEVER BEEN SO SIMPLE AND PLEASANT!**

- The new Black Box model responds to the actual needs of the installers all around the world.
- It also limits the installer's commitment to the necessary minimum.
- The simplicity of assembly and calibration cause that the installer likes his work!
- Over 60 functions available in one platform: basic and advanced to the maximum!
- Convenient technical support which is available online and at the number of the dedicated helpline.

## WHAT DISTINGUISHES **PREMIUM** CATEGORY - **THE BLACK BOX MODEL?**

- |  |  |
|--|--|
| ➤ Test of correct connection of petrol injectors | ➤ Light brightness control of the switch                 |
| ➤ Gas injectors efficiency test                  | ➤ A quick start on gas                                   |
| ➤ Credit function                                | ➤ RPM reading of the camshaft sensor                     |
| ➤ OBD Scan Tool                                  | ➤ Constant switching of the selected cylinders to petrol |
| ➤ Automatic software upgrade                     | ➤ Cooperation with the RS232 interface                   |
| ➤ Buzzer test                                    | ➤ Possibility to change the cylinder assignment          |
| ➤ Frozen frame                                   | ➤ Sequence acceleration                                  |
| ➤ Adjusting the gas mixture during full opening  | ➤ <b>Built-in fuel emulator</b>                          |



## WHAT DO YOU GAIN BY **CHOOSING BLACK BOX MODEL?**

- Savings of time, which you can spend on the pleasure or service of another customer.
- Satisfied drivers who will be happy to recommend Zenit Black Box to their friends.
- 100% matching of Zenit installation to the needs of the most demanding drivers.
- The product created in the spirit of automotive industry standards.
- Certified by the respected research and development institutions controller of the highest category - **PREMIUM!**
- **The most refined power strategy available on the market!**

## TECHNICAL ASSISTANCE

### TECHNICAL HELPLINE FOR WORKSHOPS



- ☎ +48 800 703 039
- ☎ +48 606 145 996
- ✉ [TECHNICZNY@AGCENTRUM.PL](mailto:TECHNICZNY@AGCENTRUM.PL)
- 🕒 MON - FRI 8:00 - 20:00 (CET), SAT 8:00 -14.00 (CET)



# BLACK BOX PLATFORM

Zenit Black Box is the unrivalled installation of premium category, which outclasses competitive brands due to the universality and efficiency of the platform.

## ZENIT BLACK BOX

is a universal component of the gas installation. It works perfectly with Hercules injectors and Twister filter!



Black Box has a very wide range of applications – with great success it powers the most commonly met on the road cars with 4 cylinder engines, but it is also perfectly suited for the cars with more demanding 6 cylinder engines and strong 8 cylinder engines. 4 cylinder Golf? 6 cylinder Audi A6? 8 cylinder Mustang?

Each of them, together with Zenit Black Box brings measurable and satisfactory savings on the gas power thanks to the perfectly adjusted power strategy.

By choosing the Black Box model you decide on one platform adjusted to many needs.

By creating Zenit Black Box platform we used both our rich design and assembly experience. Choosing the new Black Box model, you decide on the advanced technological solution that is fully compatible with modern cars available on the market.



# ZENIT BLACK BOX ELECTRONICS COMPOSES OF:

- ▶ the highest quality Zenit Black Box controller
- ▶ checked and praised electric beam
- ▶ MAP sensor with gas temperature sensor
- ▶ integrated modern switch
- ▶ reducer temperature sensor



The Black Box controller is ideal for vehicles with indirect petrol injection, which come out straight from the assembly lines of car manufacturers, as well as those already present on the road.

## WHAT DO YOU GAIN BY CHOOSING ZENIT BLACK BOX WITH MAP SENSOR WITH INTEGRATED GAS TEMPERATURE SENSOR?

- ▶ much faster and simplified to a minimum assembly
- ▶ minimum number of electrical and mechanical connections
- ▶ limited to the minimum time reaction to temperature changes

## ZENIT BLACK BOX: AVAILABLE VERSIONS

**BLACK BOX** MODEL IS THE ONLY **PREMIUM** CATEGORY OF LPG & CNG GAS INSTALLATIONS

It is dedicated to cars with indirect petrol injection with 3, 4, 5, 6 and 8 cylinders. It is available in 3 versions: basic, OBD and OBD with emulator. Thus, it responds to the needs of installers and drivers - one platform with many universal applications.

### VERSIONS

#### BASIC VERSION

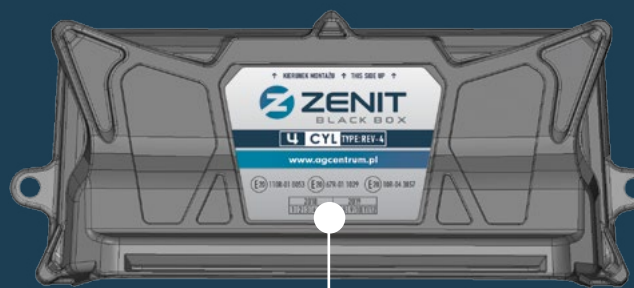
Black Box, as a premium model, will satisfy the needs of every driver and every installer. For less demanding cars, in which the use of emulator or OBD function is not necessary, select the basic version of Black Box! You will still enjoy the premium category features, but it is your decision to what extent!

**YOU WILL RECEIVE THE PRODUCT WHICH IS WORKED OUT IN EVERY DETAIL**

**“THE HEALTHIEST AND BEST WORKING HEART” OF THE GAS INSTALLATION!**

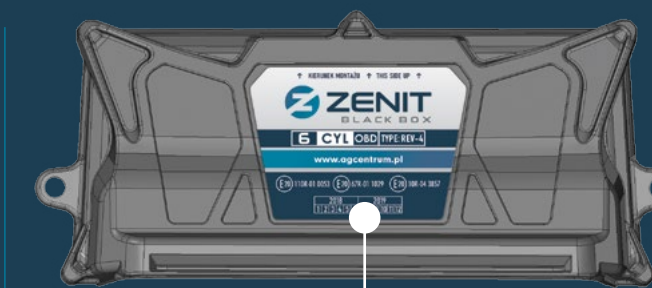
## HOW TO DISTINGUISH DIFFERENT VERSIONS OF THE BLACK BOX CONTROLLERS

### BLACK BOX



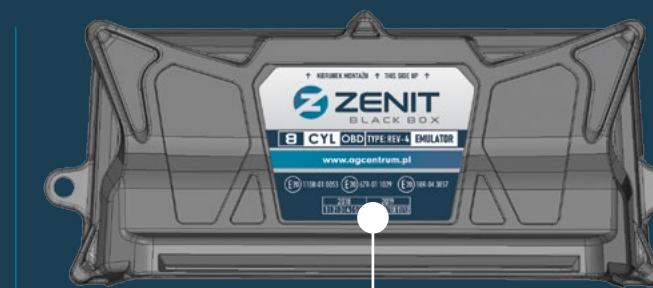
**BASIC VERSION**

Zenit Black Box in the basic version  
Lower part of the sticker in the grey colour



**OBD VERSION**

Zenit Black Box in the OBD version  
Lower part of the sticker in the dark blue colour and the addition „OBD” next to the information about **the number of supported cylinders**



**EMULATOR VERSION**

Zenit Black Box in the emulator version  
Lower part of the sticker in the dark blue colour, and the addition „OBD” and „EMULATOR” next to the information about the number of supported cylinders



## VERSIONS

### OBD VERSION



Controllers in the OBD version are an ideal solution to facilitate the installer's work. They are used in cars sold in Europe after 2001. The OBD module (On Board Diagnostic) provides an insight into engine operating parameters – mainly into current fuel mixture. What's more - it gives access to the extensive engine diagnostics.

The Zenit Black Box controller in the OBD version allows for efficient gas regulation. In addition, for valvetronic engines, regulation with Zenit Black Box is significantly faster and more accurate than the classic regulation after injection times.

The advantage of using the OBD module is the possibility of using automatic correction, i.e. function, which causes that the gas controller takes care of the mixture composition. This is because it reads data from the car's computer.

The OBD module allows for reading and potential erasing of the errors in the car's computer. In simple terms - it replaces the diagnostic scanner, which is an additional external device. For the installer it's a great convenience and saving of time on regulating the installation - he uses one device in a multifunctional way. The measurable benefit of using the OBD module is application of the perfect mixture for the engine.

The OBD module in the Black Box controller supports both CAN and K-LINE protocol. CAN is mainly found in newer vehicles, and K-LINE mostly in older ones, although there are exemptions from this rule. The possibility of communication through both protocols, which is provided by Zenit Black Box, is a guarantee that the controller will connect with every car regardless of its age.

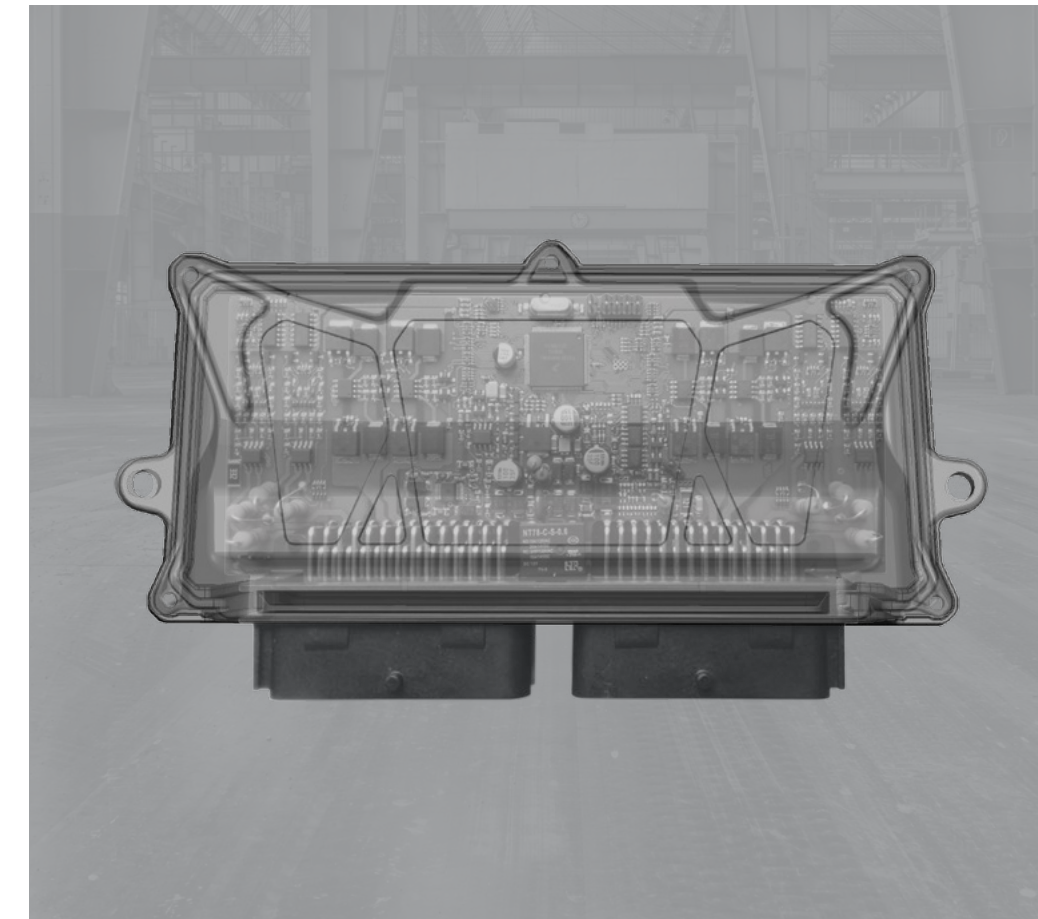


## BENEFITS OF USING THE ZENIT BLACK BOX CONTROLLER IN THE OBD VERSION:

- insight into current engine operating parameters
- access to extensive engine diagnostics
- automatic correction
- reading (if necessary also deleting) errors from the vehicle's computer
- comfortable assembly of the installation
- saving time of the installer's work
- mixture ideally adjusted for engine operation
- **2 in 1** the use of only one device instead of two separate ones - control unit and OBD scanner in one!

### Hardware - built-in OBD II module supports protocols:

- CAN\_11bitID\_500kbps
- CAN\_29bitID\_500kbps
- CAN\_11bitID\_250kbps
- CAN\_29bitID\_250kbps
- KWP2000 Fast
- KWP2000 Slow
- ISO 9141





## VERSIONS

### EMULATOR VERSION



**NEW IN THE ZENIT OFFER!** Zenit Black Box with built-in fuel level emulator is **the most advanced version of the controller**. It has a built-in OBD module – so it is an extension of the Black Box platform functionality with additionally built-in emulator.

By choosing **Zenit Black Box version with the emulator**, the installer **maximally simplifies the assembly** stage of LPG & CNG gas installation and its **subsequent calibration**. The installers and drivers know perfectly the situations in which the fuel level pointer drops despite running on gas. This condition is undesirable primarily by the driver of the car, but it can be fixed by using the emulator.

The emulator **restores the actual fuel level after restarting the engine**. Incorporating it in the Zenit controller **eliminates the necessity of the purchase and assembly of an external emulator** (additional device). Emulator in Zenit Black Box is simply and fast configurable from the software level. The electric beam of the Black Box model is equipped with additional emulator cables, **which in a convenient for the installer way**, can be put along with electric wires straight to the LPG or CNG tank.

## BENEFITS OF USING ZENIT BLACK BOX CONTROLLER IN THE EMULATOR VERSION:

- convenient and maximally simplified method of installation
- installation time minimized
- calibration simplified to a minimum
- driver's satisfaction resulting from the correct indication of the fuel level
- **3in1!** the use of only 1 device instead of 3 separate ones: control unit, OBD scanner and emulator in one!

### Hardware - built-in fuel level emulator for cars:

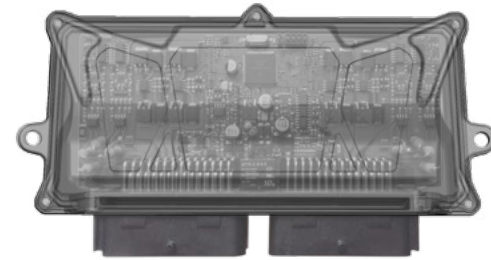
- Citroen Berlingo 2005, C2 2007, C3, C4 Picasso 2010, C5 2007, Xara Picasso
- Peugeot 206 2007, 307, 406, 407 2006
- Renault Clio 2005, Espace 2003, Megane 2004, Megane II 2007
- Mercedes ML 2004
- Lexus IS200, RX300
- Opel Astra, Vectra 2002-2003

**A NEW DIMENSION OF LPG & CNG POWER IN ONE PLATFORM!**



# WHAT MAKES BLACK BOX SPECIAL

## HARDWARE



## CERTIFIED AUTOMOTIVE PROCESSOR



The Black Box model is powered by a certified, 32-bit processor of NXP company, which has global recognition from the car manufacturing industry. The certificate is a proof of **the highest quality** and it is awarded to the companies producing automotive components. It was created by International Automotive Task Force (IATF), which brings together companies like the **BMW Group, Daimler, Fiat, General Motors, Volkswagen** and industry organizations. Obtaining the certificate is possible only upon fulfilling rigorous standards during a dedicated audit of the certified unit indicated by IATF.

### What does the certificate guarantee?

Fulfillment of the most rigorous norms of the largest automotive corporations and the confidence that the **Zenit Black Box processor** will work perfectly in every car and will be compatible with vehicle's installations.

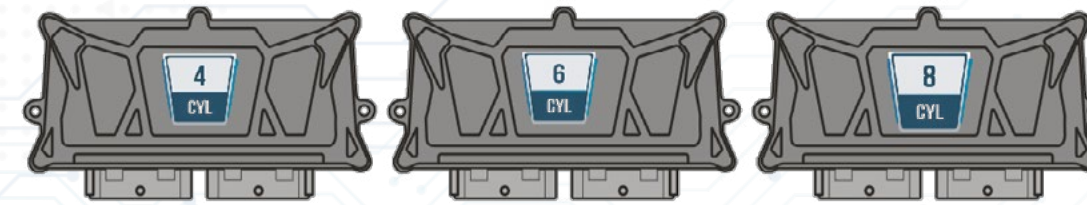
**The NXP (Freescale) microprocessor** works in Dual Memory technology, which guarantees the security of the data being processed.

**Zenit Black Box was created on a four layer printed disk!** Thus, it works steadily thanks to the screening of electromagnetic interference. **Additionally, the disc is protected with a specialized varnish** in order to ensure maximum resistance to moisture. Zenit Black Box is the most protected controller in its category.

Curiosity! The processor is used in the currently produced cars to control power unit, in comfort modules, in autonomous cars, at eCockpit!



# COMPATIBLE PINOUT FOR ALL VERSIONS OF ZENIT BLACK BOX



THIS SAME PRESSURE SENSOR, THE SAME INTERFACE, **COMPLETELY NEW, DESIGNER, MODERN SWITCH!**

### Switch:

- built-in light adjustment sensor!
- functional, round shape with a centrally located clickable microswitch!
- RGB diodes, thanks to which you can get any colour of the light!
- built-in buzzer with adjustable volume and tone control!
- based on a microcontroller
- connection: plug - socket
- additional CHECK light



## EFFICIENCY AT THE HIGHEST LEVEL



The Zenit Black Box platform, in every available version, skilfully learns from the petrol controller of the car. It can adapt to the strategy of fuel dosing. Basing on the collected data, in the most efficient way it selects the gas dose necessary to the work of LPG & CNG installation. This results in the maximum efficiency of the gas supply in the vehicle and finally in the driver's comfort of use.

### Calibration has never been so easy!

Modern cars are becoming more and more complicated and requiring in servicing - that's what the mechanics say in the car workshops. However, for the installer of LPG & CNG autogas installation, the age of the car remains irrelevant. But the condition is to choose a technologically advanced controller that will not affect the calibration time and settings. The Black Box model cooperates with the vehicle's computer in a skillful way and it does not require additional commitment from the installer. The assembly of Zenit Black Box in a 10-year and 2-year-old car is equally simple and pleasant for the installer.

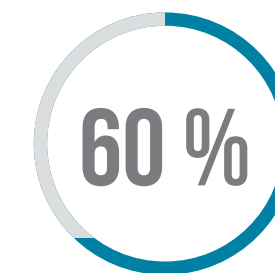
### Trouble-free operation at full revolutions.

The use of the highest quality materials for the construction of the Black Box control unit guarantees efficient and trouble-free operation of the control panel. The processor allows platform to be developed in a wide range of automotive applications and the hermetic housing made of the highest quality composite plastic guarantees comfort of use in all weather conditions in the vast majority of climate zones.



## ZENIT BLACK BOX IS ECO!

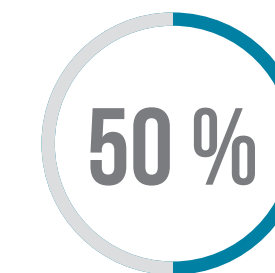
The use of autogas installations has a positive impact on the environment - it significantly reduces the level of exhaust emissions. One of the global problems in the world is pollution of the environment and smog. We see and feel it on our own skin. To a large extent, pollution comes from the transport sector. An effective way to improve air quality, reduce smog and reduce pollution is to convert your car to LPG. By choosing gas installation, you contribute to the protection of our common good, which is the natural environment and the planet Earth.



LESS!  
CARBON OXIDE



LESS!  
CARBON DIOXIDE



LESS!  
CARBOHYDRATES  
AND NITROGEN OXIDES



What's more - by choosing specific gas installation - Zenit Black Box - you contribute twice to the protection of the environment. Why? Because the installation is packed into ECO cardboard cartons! Each package is suitable for recycling - due to the use of grey paper and the type of printing.

ECO FRIENDLY WITH ZENIT BLACK BOX!



## ALL IN ONE! ALL 'BOX' CONTROLLERS IN ONE SOFTWARE!

### Operating parameters of Zenit Black Box:

Homologated minimum working temperature: - 20°C

Homologated maximum working temperature: + 120°C



Completed tests of Zenit Black Box with full load (2 solenoid valves, eight 1-ohm gas injectors opened for 20ms 40 times per second) clearly confirm that our premium controller works in all conditions.

### One program - full compatibility!

- works with all versions of Blue Box and Black Box
- lack of the necessity to update the firmware software of the control unit
- guarantees compatibility of configuration files

### Software

Up to 11 dedicated Zenit installations are operated from the level of only one software / interface. It is very convenient solution, appreciated by installers and based on their suggestions. Work's comfort - invaluable!

- Black Box 4 cyl
- Black Box 4 cyl OBD
- Black Box 4 cyl emulator
- Black Box 6 cyl
- Black Box 6 cyl OBD
- Black Box 6 cyl emulator
- Black Box 8 cyl
- Black Box 8 cyl OBD
- Black Box 8 cyl emulator
- Blue Box 4 cyl
- Blue Box 4 cyl OBD

### Maximum 100% resistance to noise interference

Black Box will handle every car - old and new. Older vehicles can cause strong interferences under the hood, so it is important to select an appropriate installation that will be 100% resistant to them. Zenit Black Box installation was designed and constructed in such a way, to remain safe and resistant to electromagnetic interferences emitted by the basic electronic system of the vehicle.

It is technologically advanced platform which additional task is to rest the installer to the greatest possible extent. Therefore, this functionality of the Black Box model is appreciated by every installer.







# UNIQUE FUNCTIONS

---

## UNIQUE FUNCTIONS

### GAS INJECTORS EFFICIENCY TEST

The technologically advanced function of the premium category Zenit controllers allows to test the efficiency of gas injectors. Thanks to it, the installer has the possibility to assess the condition of gas injectors – to what extent they are worn out, whether one of them is more or less exploited or damaged by external

influences, etc. Installers are aware of the great importance of knowledge about the condition and quality of the injectors from the perspective of the correct operation of the gas installation. Faults in the operation of the injectors results in the possibility of ignition failure or uneven operation of

the engine caused by uneven gas dosing. Thanks to this function, the installer saves time - instead of verifying himself which injector fails in the entire system, Zenit program runs the gas injectors test with only one click. The function is invaluable in the diagnosis of the situation and highly appreciated by the installers.



### CONFIGURATION OF THE INJECTION SEQUENCE



There is already a very important feature available in the Zenit Black Box software, which was suggested by the installers themselves at the design stage of the new premium brand. The function in the program is called 'configuration of the injection sequence' or 'configuration of the injectors'. From the level of the program it is possible to assign gas injectors to petrol ones. In addition, a special algorithm, analyzing the ignition order

of a particular engine, can change the standard 1:1 setting to 'accelerated', causing that gas reaches the engine earlier. In some cases, this functionality allows to improve the efficiency of the engine - for example with very long hoses between the injectors and the suction collector. What's more - it enables a comfortable and convenient repair of any mistakes made by the installer, which could have occurred when connecting the gas controller

emulation (while connecting the electrical system). Repair is possible from the software position. This is of great importance especially in those vehicles where the installation under the hood is not very visible and difficult to access. Time saving resulting from the possibility of using the cylinder change assignment function and the acceleration of the sequence in the Zenit Black Box program is highly and positively evaluated by the installers.





### TEST OF CORRECT CONNECTION OF PETROL INJECTORS

This feature is unique and characteristic for the Zenit Black Box controller. Performing many tasks at the same time it is easy to temporarily lose attention and overlook something while assembling the gas installation. Especially when connecting electrically the gas controller to the petrol injectors. Most often after the work, the installer realizes that the installation does not work properly and he looks for the reason of

this situation. And the reason could appear at almost every stage of the assembly. The error search begins - it is always time-consuming and not obvious. But situation can be solved in a very simple, comfortable and time-saving way. Zenit controllers of the Box line have a dedicated, built-in functionality of the platform, which automatically communicates a possible error of the correctness of the petrol injectors connection.

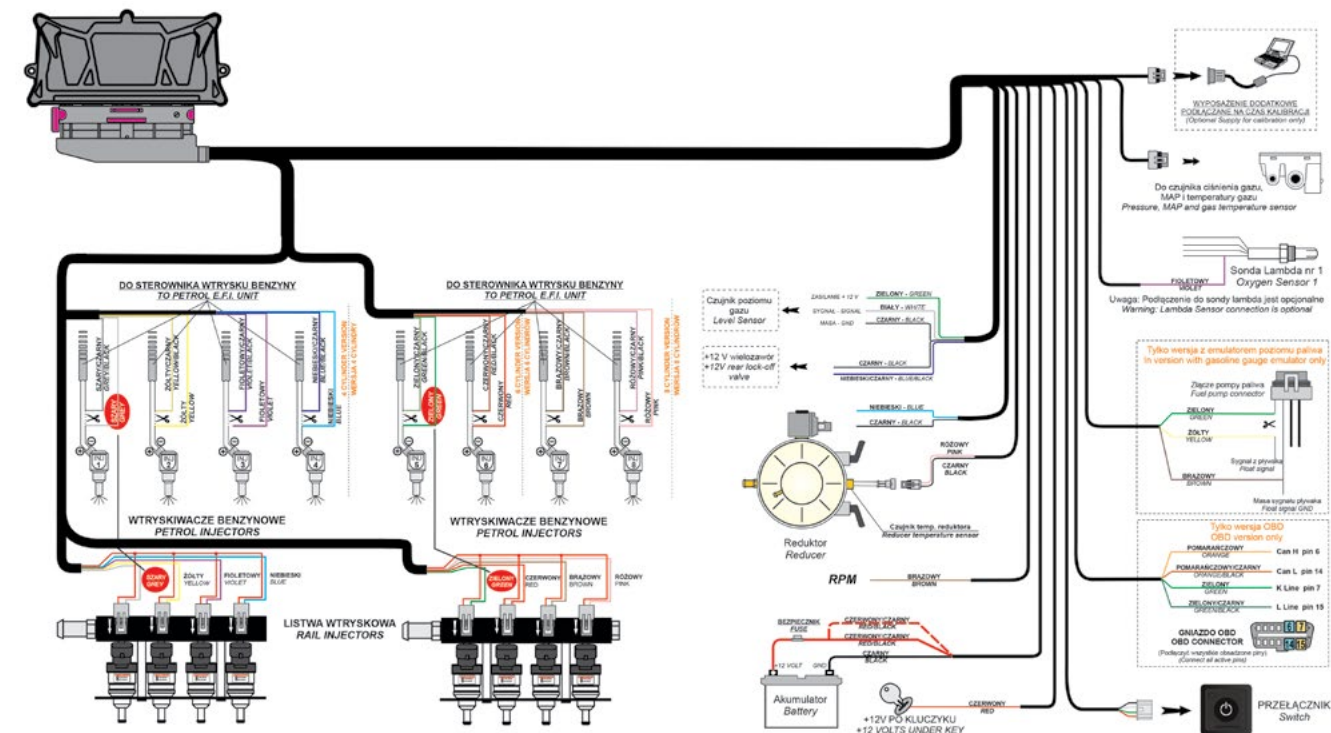
The controller checks whether the installer did not make a mistake during the electrical connection to the petrol injector. If it detects a possible wrong electrical connection, it shows a message on the program screen in the 'diagnostics' tab. Mistakes happen to everyone, and ultimately the most important thing is their quick diagnosis and repair. It is very easy with Zenit.

### OBD SCAN TOOL

The OBD Scan Tool located in the system's software allows for the use of the built-in OBD module not only for the gas installation needs, but also as a classic OBD scanner. This means that the installer can check and delete, if necessary, errors communicated by the petrol controller. In addition, the OBD Scan Tool allows to check the current readings of the operating parameters. This tool has various functions, and each of them is useful in a daily work of the installer.



## ELECTRICAL CONNECTION DIAGRAM





## ENGINE REVOLUTIONS **READING FROM THE CAMSHAFT SENSOR**

The function gives the possibility to read the engine revolutions from the camshaft sensor when the reading from the coil is impossible. Reading in this mode requires connecting a revolutions reading cable to the camshaft sensor. The functionality of revolutions reading from the camshaft sensor is an additional option - for use in unusual situations.



## A QUICK **START ON GAS**

RPM hysteresis (deceleration)	<b>300</b>
Sequential switch-over [cycle]	<b>3</b>
Fuels overlap [cycle]	<b>0</b>
Min. gas pressure [bar]	<b>0,5</b>
Sequential change back to petrol	<b>OFF</b>
Emergency start	<b>ON</b>
Fast start	<b>50</b>

This function makes it possible to quickly start the car on gas, if only the engine of the car is warmed up. The gas controller does not wait for fulfilling the switching conditions - such as temperature or delay time. So if you set a quick start on gas function and give the temperature, then after starting the engine as soon as possible, the automatic switching to gas supply takes place. All drivers appreciate this functionality. It works especially while driving around the city, when the engine is often started and stopped. The quick start on gas increases driving savings and results in a quick return on investment of the installation.

## NEW DESIGNER SWITCH - **ONLY IN ZENIT BLACK BOX!**

In the age of technology development, we are accustomed to the fact that many solutions are personalized directly to the user. Zenit installation meets these expectations. The only element of the gas installation that the user sees every day is the gas switch. By choosing Zenit Black Box, you get a fully modern and designer gas installation switch. The new switch has the function of automatic adjustment of the light and guarantees the possibility of the diodes' light regulation by the installer in the software and by the driver himself. Just hold the switch for a few seconds to adjust the light brightness to your preferences. What's more - RGB diodes give the possibility to set any colour that the driver prefers!



## ADJUSTING **THE GAS MIXTURE DURING FULL OPENING**

The function of gas mixture regulation during full opening applies to cars in which petrol injectors are always open in specific situations. The installer is able to set the gas dose himself to ensure correct operation of the installation. The function is most often used in the cars that have undergone chiptuning.

## FROZEN FRAME

A very important feature of Zenit program, which allows to analyze errors of installation operation. When a specific error occurs, Zenit controller registers and displays all the possible parameters that prevailed in the installation when the error occurred. This gives the opportunity to assess whether any of the installation parameters affected the appearance of the error. This function shortens the time of the installer which he devotes to looking for the cause of the situation. Thanks to it, the analysis is much simpler and faster, and the time needed for introducing modifications in the software is reduced to a minimum.

## BUZZER TEST

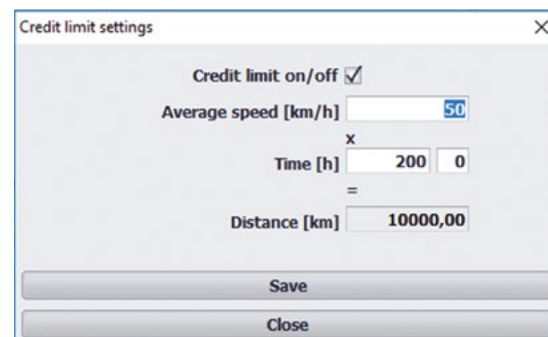
Having installed gas system in the car, it is important that its operation is tested in every dimension. The element that is hard to verify at the workshop, is the sound of the buzzer, which allows to assess whether its assembly took place correctly. However, in selected models of Zenit controllers, the 'buzzer test' function is available. It allows to activate the sound of the switch to check the correctness of the buzzer. This function has been developed on the base of the needs reported by the installers. So it is the answer to real needs appearing in the daily work of the installer of LPG & CNG automotive gas installations.



## “CREDIT” FUNCTION

The ‚credit’ function, appreciated by all installers, contributes to the correct use of Zenit installations, in accordance with the warranty card. The purpose of using the credit function is to protect the work of the installer and to ensure proper operation of the Zenit installation.

The credit function makes it possible to block further operation on the gas installation if the driver has not done a warranty check. After driving the distance programmed by the installer in Zenit controller and skipping the warranty check at the same time, the car will not go on gas.



## SMOOTH SECONDARY PETROL INJECTIONS WHEN WORKING ON GAS

The function consists in applying an additional (possible) dose of petrol in any selected engine revolutions, despite working on gas. It is used to provide engine protection and to replace lubrication and provide an additional dose of fuel. Operation of this function is possible thanks to the use of a semiconductor emulator, which is located in Zenit controller. Using this function greatly simplifies the calibration stage. For cars with a turbocharged engine, just click the ‚turbo’ button, and if a secondary petrol injection is to be used as a lubrication, just click ‚lubrication’.

## CONSTANT SWITCHING OF THE SELECTED CYLINDERS TO PETROL

It is highly advanced function available in ‚Box’ controllers. It permits for permanent switching of any engine cylinders to petrol. With the use of this function, the installer’s diagnosis of the possible faults is simplified to a minimum. These benefits are possible thanks to the semiconductor emulator and properly designed program.

From the driver’s point of view, the use of the controller with an option of permanently switching of the selected cylinders to petrol is also very important. It allows to enjoy the economics of driving on gas even in a service situation. Situation that best illustrates the economic possibilities of the function is the need to replace the injector. The workshop takes off the exhausted injector, and the processing of the new injector order is possible within a few days. Until the assembly of a new gas injector is done, instead of forcing the driver to drive on petrol, it is enough to switch only one cylinder to work on petrol (from the software position). This feature has a colossal meaning for both the installer and the driver.

## OPERATION OF 2 BANKS

The petrol controllers allow to treat the engine control system in two ways: as a whole or as a „bank” grouped cylinders. Banks are separated groups. For example - a 6 cylinder engine in the „V” system can be divided into 2 banks. Bank 1 constitutes three cylinders on the left side and bank 2 three cylinders on the right side. Premium category gas controller, i.e. the Black Box model, can also treat the engine as a whole or may follow the petrol controller. Then, it analyzes very precisely fuel doses and the mixture in the context of individual injectors, banks and the entire engine.

## ELECTRIC BEAM

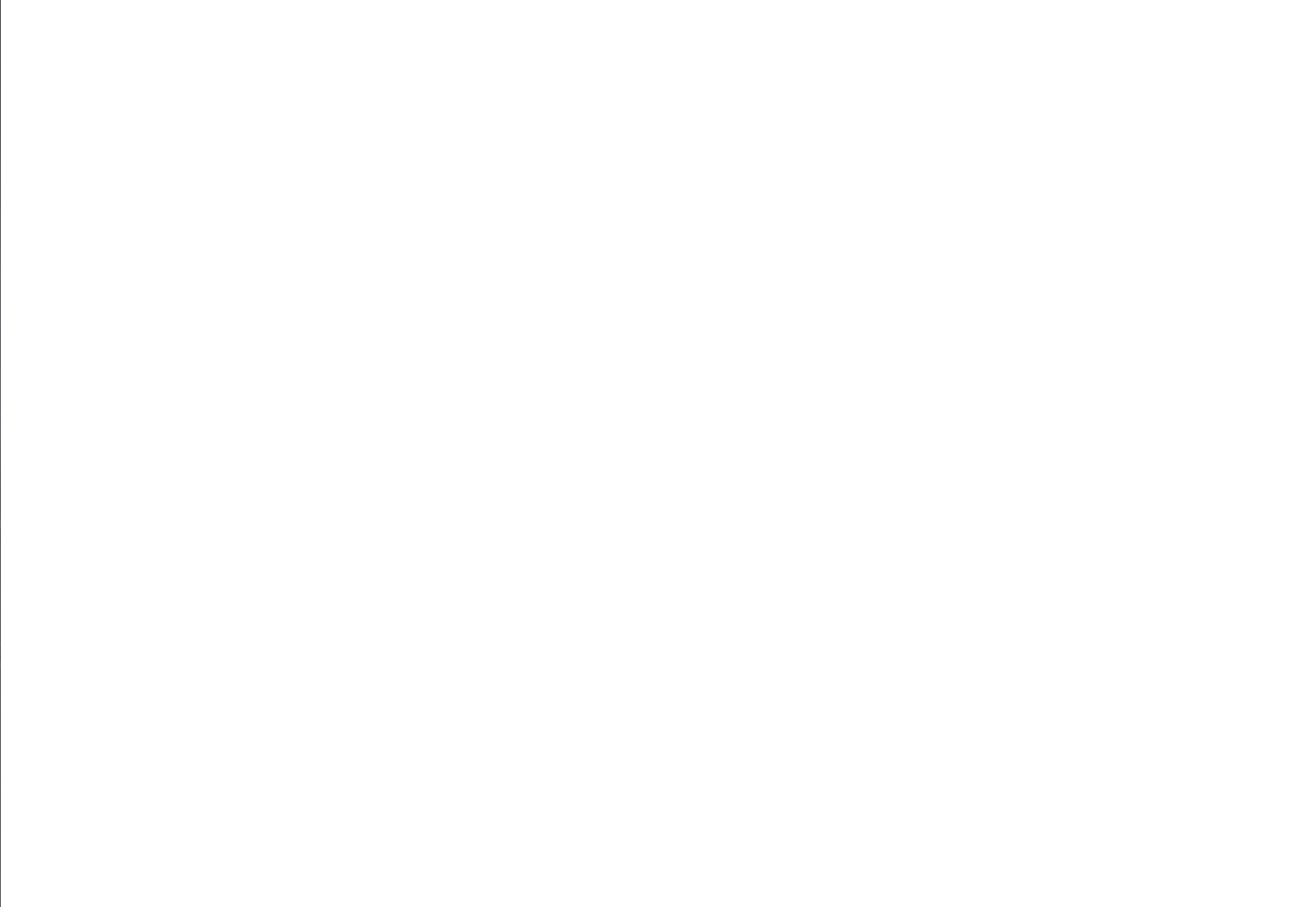
Bearing in mind the installers habits to the new premium category - Zenit Black Box - we have prepared the same, tested and highly rated electrical beam. It has the same colour scheme of wires used in Pro, Blue Box and Compact models. We have also kept the functional distribution of the beam - every installer will appreciate it.



## AUTOMATIC SOFTWARE UPDATE

Current software and instructions can be downloaded from the website:  
[www.agcentrum.pl](http://www.agcentrum.pl)

Always up-to-date software is the basis for the work of every autogas installation engineer. Selected Zenit controllers of the premium category have the functionality of automatically updating the program installed on the computer, which is used to connect to the gas controller. In order to use the function, it is necessary to connect the computer to the Internet. Zenit program informs the installer whether software updates are available and asks whether to download them. Using this functionality of Zenit program always guarantees the most advanced solutions. The latest functions and updates improving the work of the installer are available automatically.





Premium installation - **Zenit Black Box** - was created thanks to the experience and knowledge of the manufacturer of LPG & CNG autogas installations - **AG Centrum**. Every day, in our Research and Development Center, Zenit installations are developed by the team of experienced technicians. As a result, we meet the expectations of the customers from all over the world, and hundreds of thousands of cars in more than 50 countries are equipped with Zenit installations.



ZENIT BLACK BOX — THE PEAK OF PREMIUM CATEGORY

/ZenitAutogas



| [www.zenitautogas.pl](http://www.zenitautogas.pl) | [www.agcentrum.pl](http://www.agcentrum.pl) |