

ALEX IDEA

For Direct Injection

**Designed for
engines with
direct fuel injection**



ALEX IDEA is a sequential gaseous-phase LPG injection system designed for gasoline engines with direct fuel injection.

The advanced solutions implemented in the controller enable the conversion of popular direct fuel injection engines. The system can be adapted to most vehicles equipped with electromagnetic injectors.

IDEA stands out for its above-average efficiency in the use of gasoline required for cooling and lubricating the gasoline injectors. A specially developed control algorithm allows the IDEA system to use only approximately 5–10% of gasoline, while other systems of this type available on the market require additional gasoline injection of around 20–30%. Furthermore, the system is capable of calculating the exact gasoline consumption across the entire engine operating range, which enables optimization of the additional gasoline injection according to the driver's individual driving style.

Advantages of IDEA controllers:

- Supports most direct fuel injection engines from 3 to 6 cylinders.
- Ready-made configuration files for popular engines.
- Integrated OBD module.
- Two built-in emulators for any voltage signal.
- Ability to adjust fuel consumption within any engine operating range.

Example average fuel consumption over a distance of 100km:

VW Passat 1.4 TSI
8.8L gas + 0.26L petrol/100km*

Audi Q7 3.6 FSI
16.3L gas + 0.81L petrol/100km*

Skoda Roomster 1.2 TSI
7.3L gas + 0.20L petrol/100km*

Skoda SuperB 1.8 TSI
10.1L gas + 0.30L petrol/100km*

VW Caddy 1.2 TSI
8.1L gas + 0.25L petrol/100km*

*Tests conducted by vehicle users in on-road conditions. LPG and petrol consumption figures are approximate. Total LPG and petrol consumption may be higher or lower depending on driving style and road conditions.

SELECTED SYSTEM FEATURES

ALEX
IDEA

Number of cylinders supported:	4/6
Connector – number of pins	56
Housing type: ALUMINIUM	ALUMINIUM
Day&Night system	✓
Additional corrections based on RPM	✓
Additional corrections based on reducer temperature	✓
Additional corrections based on gas temperature	✓
Additional corrections based on gas pressure	✓
Additional corrections based on gas injector opening time	✓
Oscilloscope for monitoring system operating parameters	✓
Compatibility with naturally aspirated engines	✓
Compatibility with turbocharged engines	✓
Compatibility with many types of gas injectors	✓
Compatibility with many types of gas level sensors	✓
Possibility to determine the maximum engine load and RPM when running on gas	✓
LPG system inspection reminder	✓
"Quick start" function	✓
Full short circuit and overload protection	✓
Semiconductor emulation	✓
3D gas and petrol maps	✓
LPG and CNG	✓
Option to acquire the RPM signal from the camshaft position sensor	✓
Option to acquire the RPM signal from the crankshaft position sensor	✓
Option to acquire the RPM signal from the injector pulse	✓
Option to permanently disable individual gas injectors	✓
Option to emergency start the engine on gas	✓
Option to connect an external lambda sensor	✓
Permanent error memory	✓
Option to quickly shut down the LPG/CNG system	✓
Option to set the RPM decay time	✓
Option to display the history of changes in the controller	✓
Audible error and message indication	✓
Option to add petrol	✓
Automatic detection of OBD protocols	✓
Integrated OBD support	✓
OBD parameter monitor	✓
Support for reverse OBD correction	✓
Editable gas injection time ranges (injection time table as a function of RPM)	✓
Correction map dependent on manifold pressure	✓
Audible petrol operation indication	✓
Audible Hot reducer indication	✓
Erasing of selected OBD2/CAN errors	✓
Universal fuel pressure emulator	✓
Separate map for additional petrol injectors	✓
Adjustable injection detection level	✓
Petrol injection signal filtering	✓
Ability to emulate any two voltage signals	✓