

Turbodiesel Powerbox



**20-35 % more efficiency
for all brands**



**quick and secure
installation by
plugs**



with warranty



with TÜV



updatable



**reusable for the next
vehicle***



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Alfa

Audi

BMW

Chrysler

Citroen

Fiat

Ford

Honda

Lancia

Land Rover

Mazda

Mercedes Benz

Mitsubishi

Nissan

Opel

Peugeot

Renault

Rover

Saab

Seat

Skoda

Toyota

Volkswagen

Volvo

www.kw-systems.de

KW-Systems Powerbox – Go for it NOW!

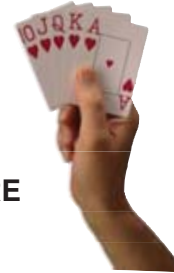
We can supply our well-proven Performance Increase System for the following engine generations:

- ▶ **all PumpeDüse engines**
- ▶ **all CommonRail engines**
- ▶ **all HDI engines**

The aim of developing the KW-Systems Powerbox for these engines was to find a Tuning-Solution that makes any intervention in the engine-pilot obsolete and thus excludes the risks of classical chiptuning.

- ▶ By consequently adding new or modified circuits, we reach an appropriate performance increase whilst at the same time we make it a priority that these developments also include the durability of the other elements of the car.

The modular build-up of our latest POWERBOX Modules always enables us to offer – at very short notice – a performance increase of all new Diesel engines coming out on the market.



Caution

**PLEASE COMPARE
carefully**

Most recently – and especially on the Internet - some suppliers have been offering additional piloted devices that improve the performance of Diesel engines. These devices are only OPTICALLY SIMILAR to our products, but are in NO WAY comparable with the KW-Systems Powerbox.

Therefore, taking the example of the appliances for the CDI-kits, we describe the potential risks:

The operating mode of these appliances is based on the uncontrolled build-up of Rail Pressure. Our tests on these appliances made appear that:

The pressure in the Common-Rail increased up to 30% more than normal. This pressure is not regulated anymore but only limited via the excess-pressure safety valve in the high-pressure pump – this safety-valve being primarily designed to secure the minimum pressure in case of emergency due to failure of the system.

▶ **Risks of low-price systems:**

These devices split the electronic survey of the Railpressure. Therefore, in case of device failure of these low cost systems, there is no safety function anymore. The car is not driveable anymore, not even in the emergency programme mode.

There is no control of the boost nor of the airmassmeter and no record of revolutions. The Railpressure is raised without any control.

There is no regulator to increase the pressure and the railpressure is completely out of function.

▶ **Damage risks:**

Please note that many low cost offers on the market carry the risk to overload the injection system, a risk which you do not have with OUR Powerbox

The Railpressure, when driven excessively high, also leads to quicker wear and breakdown of the high pressure pump as well as of the injectors (cavitation effect due to pressure waves)

- ▶ **Please be careful with offers based on these criteria. The very low cost, let's even say cheap appliances might not even qualify to meet the quality standard required for a CDI/HDI engine**

More economic on the long term

When changing car within the same group, the **KW-Systems POWERBOX can be used either without or with only slight changes for the next car.**

- This is **absolutely impossible with any other tuning applications.**



Picture: KW-Systems POWERBOX for PumpeDüse-Engines with wireless remote control

No risks

By using the **KW SYSTEMS POWERBOX, it's not necessary to interfere in any way with the highly sensitive numerical steering devices of the car.**

With the chiptuning however this risky interference is unavoidable in every case.

With the KW-Systems POWERBOX, direct damages as well as not foreseeable faults in the engine electrical system are avoided.

By changing the chips, the engine steering devices do come under pressure, mechanically as well as thermally, this can lead to defects and implausible errors.

The diagnostic system to detect failures of the engine steering system goes on working normally

(It is not out of order like very often the case with Chiptuning - this then may lead to uncontrolled running of the engine because deprived of it's ability to detect failures and possible engine damage could be occur)

During the technical survey (inspection), the tuning programme cannot be erased as it is the case with QBD Tuning.

Low cost devices, as offered via the Internet, falsify partly the signals of charging and/or fuel temperature, and this has the well known disadvantages which can lead to serious engine damage and increased wear.

Caution

The expense for the engine tuning by the KW-Systems POWERBOX usually only occurs ONCE, providing the next car is part of the practicable list. With Chiptuning, the expenses are usually lost, that means that for the next car the full amount has in any case to be spent again.

The **KW-Systems POWERBOX does store the Tuning programme in a safe and permanent way against disturbing the manufacturer diagramms** whilst maintaining the vehicle's capability of service and diagnosis.



Competence in Tuning since 1987

Security

The car manufacturers do build in substantial security reserves, which take into consideration the various climatic conditions and fuel qualities.

Very often it's also the market that decides which capacity is going to be offered with one and the same engine.

We only use this margin without trespassing the tolerances.

reliable

Technique

- **Micro-processed (steering) function**
Precise Kennlinienanpassung by an integrated Micro-Controller
- **In order to avoid overload of the engine and thus smoke build-up**, reference signals of the engine charge are picked up which regulate the **KW-Systems POWERBOX** i.e.:
Characteristic diagrams are only modified to the extent permitted.
- **Switch-Preparation:**
It is possible to extend the modules with a switch so that the car can be **driven either in serial- or in tuning-mode. The optional remote control allows you to change the capacity of the engine while driving.**

Differences and conclusive advantages compared to classical chiptuning

and other additional steering devices

No Chip

The **KW-Systems POWERBOX** fits

For private car engines, there are three different injection systems

- Injectionpump VP 37, VP 44
- Commonrail-Injectionsystem (CDI, HDI, ...)
- Pumpe-düse-injectionsystem



We can offer a solution for all Systems

The same **KW-Systems POWERBOX** can be installed within one and the same system. Example: the same **KW-Systems POWERBOX** can be used for all 1,9l TDI engines with a distribution injection pump (not the pumpnozzle) from Audi, VW, Seat, Skoda as well as the 2,5l 5 cyl. engines of the T4 TDI, A6, Audi 100 and Volvo. Only the plug-in connections are different. We can supply the adapters required.

When changing vehicle within this group, the **KW-Systems POWERBOX** can be reused with the next car.

For the V6 TDI, the specific **KW-Systems POWERBOX** can be transferred from the 110kW engine to the 114, 120 and 132 kW Version just subject to an Update.

The **KW-Systems POWERBOX** for the 4 cyl. Pumpnozzle is identical for all PD-TDI engines (with a serial performance of 74, 85, 96, 100, 103 and 110 KW).

A special adapter plug makes allows also to use the **KW-Systems POWERBOX** with 2,0 TDI PD after an update.

WE can say that the **KW-Systems POWERBOX** for CommonRail and HDI engines (e.g. Alfa, Fiat, BMW, MT, Peugeot, Renault, Citroen) always fits after having changed the control unit and the cable-kit any lower engine type, i.e. the 6 cyl. **KW-Systems POWERBOX** can also be used for engines with the same injection system and the same connections but of lower cylinder quantity.

MORE POWER for your Turbodiesel

20 - 35 %

The **KW-Systems POWERBOX** gives your Turbo-Diesel engine **MORE performance**

Paralell with the spread of modern electronically regulated injection systems in Diesel Engines, our engineers have developed an additional computer (**POWERBOX**) that once installed in his compact set-up between the Diesel injection system and the engine controller will increase the engine capacity and the tork by 20-35 %, according to the type of engine. **The experience we gathered since 1987 on additional cool air loading systems are integrated in every new product development**

We are able to offer a **KW-Systems POWERBOX** for all present Turbodiesel engines.



The advantages of the standard vehicle are maintained

- The **high economy** of modern, electronically regulated Dieselenines is **maintained**
- The **exhaust regulations are respected**
- **Solid, for everyday use** and environmentally friendly
- The capacity of the **engine's steering system** to detect problems or failures is **maintained**
- No opening of the engine's steering system needed, thus **no damage to the car**
- **No loss of warranty** due to manipulation on the engine's steering system
- **No erasing of the tuning programme by rewriting** serial values during inspection

Easy installation

Easy installation of the **KW-Systems POWERBOX** thanks to specific plug-in systems fitting the type of car. The installation is done very quickly.

The **KW-Systems POWERBOX** can usually be installed or taken off within 10-60 minutes.

Some examples of fitting time: V6 TDI 10-45 min, Golf TDI 30 min, Pumpnozzle 30 min, BMW, DaimlerChrysler, Peugeot, Renault, etc. approx. 30 min.



by plugs

Adaptable to other cars

When changing car, the **KW-Systems POWERBOX** can easily be installed into another car of the same type, i.e. when changing from a Golf TDI PD 85 to an Audi TDI PD 96 kW

Because many car models have the same injection system, the layout of the **KW-Systems POWERBOX** is adaptable: the various plugs are easily interchangeable so that fitting the **KW-Systems POWERBOX** into another car of the same type or brand which has a similar injection system is always possible thanks to our Adapter-Kits or Software upgrades.

Easily to be switched ON or OFF

by remote control



A remote control to choose the engine performance while driving can always be adapted afterwards

ON/OFF

Tested by professional Magazines

Auto, Motor und Sport TV & Motorvision

Golf IV GTI TDI 110kW PumpeDüse
extract 2001

"„The sprint from 0-100 is considerably shorter. And the increase in the overall revolution range is more powerful"
"Certainly no reduction in value." "The original parts of the car stay unchanged".

We accept challenge



Auto Bild

Audi A4 TDI, extract 21.11.97

The promised increase of 26 HP translates into a real sporty sensation

Golf IV GTI TDI 110kW PumpeDüse extract 2001

Like switching on the nightburner in a jet and take off... here we go

Auto Bild Test & Tuning

E 270 CDI, extract 01/2003

Up to 200 km/h the red button distinguishes himself from the yellow one on the remote control by 7,4 seconds. (...) More efficiency but same consumption – it's possible with KW-Systems. Opinion: desirable

Auto Bild Test & Tuning

A3 2.0 TDI, extract 10/2003

Increased efficiency only when required. The idea is original, the application a success. The flexible engine provides great driving pleasure. From 2.000 revolutions on the power is tangible and even

Gute Fahrt

Golf IV TDI, extract 4/98

Furthermore the KW-TDI does not show any of the unpleasant tuning side-effects like bad throttle reaction or shaky

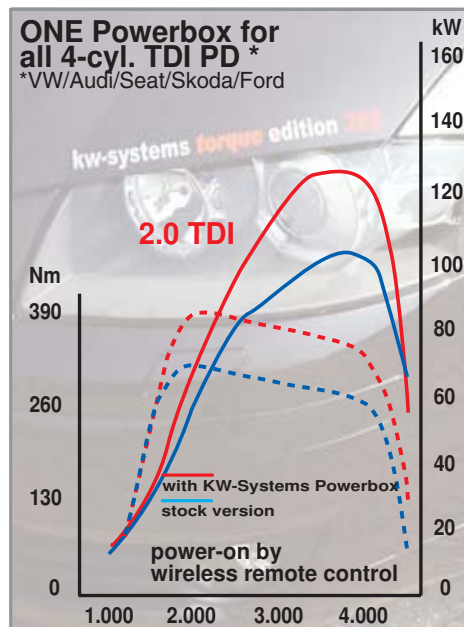
The tuned diesel also showed his power in the driving performance.

Golf IV TDI PD, extract 8/2000

... gives the brave Golf Variant with nozzle-pump TDI an enormous kick. A powerplus of almost 30 HP and 55 Nm more .

Golf IV TDI PD, 11/2001

Instead of the 8.4 sec. that a standard TDI usually needs, the "flink Fink" sprinted in 7.9 sec's up to 100.



Vmaxx

Golf IV TDI PD, extract 1/2001

...will make every GTI-Fan perfectly happy.(...) The tuned Golf is not only fast, he also charms with benzine similar characteristics. (...) turns willingly up to short of the red revolution area. (...) the KW-Systems-VW gives it's driver exemplary acceleration values.

auto, motor und sport

Golf 3 TDI,
25/95 about KW-Systems

The test consumption was only 0.1 Liter/100 km more than with the serial model, whereas the noise level was sometimes even less.