

# The Elsbett gas-exchange-system

## Survey of Differences in Efficiencies of current-state conventional Piston Engines

depicted from Diagram 2 ex report:

### **Effizienz**

#### **Die Zukunft Mobiler Antriebssysteme für PKW \*)**

Shown here together with data expected for the Elsbett 2-/4- and Multi Stroke Opposed-Piston Engine and the MaxE-Line due to thermodynamic advantages in efficiency by the former as well as VCR use by the latter, plus - part of both - the unlimited variable hydraulically controlled Elsbett-Gas-exchange-system in line with best suited placement, incl. qualified additional design advantages.

The difference of data cited for the conventional piston engines (light blue background) is to be judged against those (intense blue background), showing the results expected for the two new engine lines presumed given operating condition (mobile/stationary and fuels) used are equal.

Data [%] do not include additional improvements in cost effectiveness and operating cost in consequence of the “camless engine” version, now having become realisable with both engine lines.

These are lower investment and miscellaneous cost, such as lower part number, lower material and production cost as well as weight saving/unit and fuel consumption reducing “inbuilt – optimization”, which today’s engine designs either can realize not at all, or are able to respond but only partially by integration of costly add-on-systems and/or control modules.

### **Effizienz, Die Zukunft Mobiler Antriebssysteme für PKW**

Authors: Prof. Dr.-Ing. C. Heikel and Prof. Dr.-Ing. U. Becker

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