

Summary at the book **Airpressure - Powerbox**

The Air-pressure Power-box produces thrust for vehicles at the air and ground, at the railways and water. It also produces uplift forces for helicopters. In addition, it can produce mechanical momentum for generating electric current. So reaction-free, completely autonomous drive for diverse vehicles is available.

This graph shows the essential constructional elements of a functional model, which is pendulously hanging from the ceiling (grey). The air-pressure power-box is a closed round cylinder (red), divided by a separating wall (green). At one side is an electric engine (dark green), driving a rotor-shaft (blue). At the other side of the wall, radial showing rotor-blades (blue) are fix mounted at the shaft. The blades are rods with simple square cross-section (no prop-profile). They only produce a whirlwind near to and along that face. At running mode, the rotor and the air are turning synchronously, demanding only minimum energy-input.

The air-vortex shows dynamic flow pressure, increasing with the speed by square. So, at the rotor-side of the wall is weighting only the correspondingly reduced static air pressure. Opposite, at the motor-side is weighting the full atmospheric pressure with about 100.000 N/m^2 . The pressure difference of about 1.000 up to 5.000 N/m^2 is pushing forward the whole arrangement of that air-pressure power-box towards the rotor-side. Here, that construction unit will shift towards left side.

The cylinder even can be closed at both ends. Within that closed system, the motion- and force-relations at wings are rebuild. The natural wind is replaced by an 'artificial hurricane'. The enormous energy of the molecular motions of the air-particles is used, as the normally chaotic motion directions become a little bit better ordered by the overlaying flow. The flow by itself is not decelerated but is running idle all times all around. Also the dynamic flow pressure is not used, but only the according side-effect of the reduced static pressure. Only the resulting pressure differences are used for generating mechanical thrust.

Because these engines are working with the light medium of air, the constructional volumes are relative wide. Usually must be installed several units (also multiple rotors at one shaft). Their performance will cover different demands, reaction-free, with most few energy-input.

At the following chapters are discussed several versions of 'Bowl-Engines' and the 'Flettner-Box'. The performance of different machines is calculated. The thrust of these engines can be used at many vehicles. This invention is especially advantageous for the construction of new airplanes and new helicopters, where all devices completely are integrated within the fuselage. External jet-engines, props and rotors no longer are necessary. These aircrafts fly silent like gliders. Compared with common techniques, the fuel consumption is marginal.

