

Hybrid engine-generator contains a piston internal combustion engine and an electric generator combined into a single unit. The connecting rod of the internal combustion engine is kinematically made rotary-moving with a permanent magnet rigidly fixed on it. At the end of the connecting rod section there is a helical groove that interacts with the overrunning clutch of the circular rotor with permanent magnets rigidly fixed on it, which in the process of rotational motion creates an alternating magnetic field that is transmitted to the stationary stator winding, where the output voltage and electric potential are generated, the energy of which is accumulated in the battery, and is used to drive the electromagnetic control system of the solenoid valves supplying an arbitrary external load. The power supply line of the solenoid contains a switch for changing the polarity and direction of the flow of electric current through the solenoid winding, which interacts with a permanent magnet on the connecting rod and is designed to allow the piston to move forward and backward between the top and bottom dead centers. The permanent magnet on the connecting rod and the solenoid are used as an electric starter to start an internal combustion engine. The frequency of movement and the magnitude of the piston stroke, which are changed by the voltage in the winding, change the voltage in the solenoid winding and regulate the output voltage of the generator, which, through the battery, powers the running electric motors of an electric, hybrid or other type of vehicle. The function of the flywheel is performed by a high-torque rotating rotor of an electric generator with a circular permanent magnet.