

Engine for Forklift

Engine for Forklifts - An engine, also referred to as a motor, is a device which converts energy into functional mechanical motion. Motors which change heat energy into motion are known as engines. Engines are available in several types like for instance external and internal combustion. An internal combustion engine usually burns a fuel with air and the resulting hot gases are used for generating power. Steam engines are an example of external combustion engines. They make use of heat to generate motion utilizing a separate working fluid.

The electric motor takes electrical energy and generates mechanical motion through various electromagnetic fields. This is a typical kind of motor. Some types of motors function through non-combustive chemical reactions, other types can make use of springs and function by elastic energy. Pneumatic motors are driven through compressed air. There are other designs depending on the application required.

Internal combustion engines or ICEs

Internal combustion happens when the combustion of the fuel combines along with an oxidizer inside the combustion chamber. In the IC engine, higher temperatures will result in direct force to certain engine components like the nozzles, pistons, or turbine blades. This force produces useful mechanical energy by way of moving the part over a distance. Typically, an internal combustion engine has intermittent combustion as seen in the popular 2- and 4-stroke piston engines and the Wankel rotating engine. Most jet engines, gas turbines and rocket engines fall into a second class of internal combustion motors known as continuous combustion, that occurs on the same previous principal described.

Stirling external combustion engines or steam engines greatly differ from internal combustion engines. The external combustion engine, wherein energy is to be delivered to a working fluid like for example liquid sodium, pressurized water, hot water or air that is heated in a boiler of some sort. The working fluid is not mixed with, comprising or contaminated by combustion products.

Various designs of ICEs have been created and placed on the market with numerous weaknesses and strengths. If powered by an energy dense fuel, the internal combustion engine delivers an effective power-to-weight ratio. Even though ICEs have been successful in numerous stationary applications, their actual strength lies in mobile applications. Internal combustion engines control the power supply utilized for vehicles like for example cars, boats and aircrafts. Some hand-held power tools make use of either ICE or battery power equipments.

External combustion engines

An external combustion engine is comprised of a heat engine wherein a working fluid, such as steam in steam engine or gas in a Stirling engine, is heated through combustion of an external source. This particular combustion happens via a heat exchanger or via the engine wall. The fluid expands and acts upon the engine mechanism which generates motion. Then, the fluid is cooled, and either compressed and reused or disposed, and cool fluid is pulled in.

The act of burning fuel utilizing an oxidizer in order to supply heat is called "combustion." External thermal engines can be of similar application and configuration but utilize a heat supply from sources like for example geothermal, solar, nuclear or exothermic reactions not involving combustion.

Working fluid can be of any composition, even if gas is the most common working fluid. From time to time a single-phase liquid is sometimes utilized. In Organic Rankine Cycle or in the case of the steam engine, the working fluid varies phases between gas and liquid.