



IEM Nova

Abstract

Field force machine[®] (FFM)

A new paradigm for energy conversion
in the third millennium

Field force machine: FFM generator (FFG) & FF motor (FFE)
A fundamentally new energy 'source' and a new drive system

Author / Inventor: © ® Heinz. V. Wenz

1. Field force machine

<p>Heinz V. Wenz, Owner IEM Nova Frankfurt • Messeturm, 25th floor Friedrich-Ebert-Anlage 49, 60308 Frankfurt Postfach 170410, 60078 Frankfurt Phone: +49 (0) 69 50956 5656 • Facsimile: +49 (0) 69 50956 5520 • Mobile: +49 (0) 172 47 53 189 E-mail: iem-nova@web.de</p>	1
---	----------

The field force machine is a physical machine which is totally new.

The FFM consists of two separate sub-systems:

The field force generator (FFG) and the field force motor (FFE, E= electric motor).

Field force generator (FFG)

The FFG uses the permanent magnetic field (permanent magnet, superconductor) as *potential* energy which is converted into *kinetic* energy with the aid of a field modulator (FM).

The FFG system works in an *irreversible* cyclic process (p, V diagram) of an *open* system as a quantum mechanical machine; the FFG is not a thermodynamic machine (activity is not generated through heat, but through magnetic force fields).

Alternatively, the electric field can be used by electrets. The system can be designed and constructed as a reciprocating machine, a rotating machine as well as a solid-state machine with no moving parts.

The FFG machine oscillates between the quantum mechanical basic state (E = 0) in a state of equilibrium and E (positive in disequilibrium). These states are controlled by the field modulator which switches the fields in a state of symmetry condition almost *without the need for power*.

There are 12 different kinds of field modulators – some which work kinematically or stationary (without movement) as well as some with a magnetic or electric tunnel effect.

This is how activity is ‘generated’ (= energy using entropy) without the machine needing to be recharged or refueled over its lifetime. In spite of this, it does not go against the first and second laws of thermodynamics.

The FFG means a shift change in the generation of energy (generator = ‘source’ = conversion of energy = energy converter): No consumption of materials (fossil fuels), but the permanent use of energy force fields (spatial energy with magnetic flow quanta).

The field force motor (FFE)

The FFE uses electrical energy which has been generated by the FFG. This is used to power the novel electric shock wave motor. In a pumped ‘**magnetizer**’ or ‘**electritizer**’ the magnetic field is considerably and coherently amplified, so that this machine develops a very high dynamic, very different from the traditional electric motors which are slow to kick in.

Heinz V. Wenz, Owner IEM Nova

Frankfurt • Messeturm, 25th floor

Friedrich-Ebert-Anlage 49, 60308 Frankfurt

Postfach 170410, 60078 Frankfurt

Phone: +49 (0) 69 50956 5656 • Facsimile: +49 (0) 69 50956 5520 • Mobile: +49 (0) 172 47 53 189

E-mail: iem-nova@web.de

2

Energy balance sheet

1.) Today's electric generators and motors use tangential force on the surface. On the other hand, FFGs and FFEs use normal force (vertical to the surface) (in the reciprocal version); This causes a significant increase in the force / torque. In the solid-state version, the temporally-variable magnetic field generates an electric field (etc.) in the coil (induction).

2.) The high efficiency of the power source is generated by the longitudinal-to-transversal force-path ratio, i.e. the force-path of the magnets to the force-path of the field modulator (= can be switched almost powerlessly in the same way as the transistor effect).

3.) The force field (F) and the field pressure p along the stroke h (path s) in the volume V (p,V diagram, law of forces) arising from the surface is tangentially induced by means of a new type of crank drive (PLV = connecting rod length variator) using a lever arm with $\alpha = 80^\circ$ KW, instead of the traditional sliding crank with $\alpha = 0^\circ$ - 23° KW, - this generates a significantly higher moment of torque and the mechanics of the machine perform significantly better.

4) Efficiency of the FFG flow quanta 'Supertransistor machine':

Despite the switching of the field modulator (FM) with very little work in relation to the magnets performing the activity, the energy balance in the system is defined with an efficiency of $\eta < 1$. This is because the switching activity of the FM and the friction in the system has to be deducted from the total sum of the magnetic activity – as such, the first and second law of thermodynamics is not contravened. In the overall system, including the magnetic energy storage unit (= energy-tank as a field-battery), the efficiency η is naturally < 1 as well. This is because at some stage, the magnets become empty in terms of energy - there is no first and second degree perpetual motion machine.

For example, if the FFG drives a dynamo and its electric current lights a light bulb, photons fly away, i.e. the magnet MUST be empty (contrary to the quantal state of magnetic moment of spin).

The energy potential of the FKM is enormous: A 1m^3 FKM could provide a 10^6 NM torque and $5 \cdot 10^5$ kW (depending on speed) if needed.

2. Use and fields of application

Power pack: The FFM (FFG+FFE), can be used as an engine for cars, motorcycles, trains, ships, airplanes as well as a pump (expensive petrol / diesel no longer needs to be bought and power lines over land and railway tracks can be

Heinz V. Wenz, Owner IEM Nova

Frankfurt • Messeturm, 25th floor

Friedrich-Ebert-Anlage 49, 60308 Frankfurt

Postfach 170410, 60078 Frankfurt

Phone: +49 (0) 69 50956 5656 • Facsimile: +49 (0) 69 50956 5520 • Mobile: +49 (0) 172 47 53 189

E-mail: iem-nova@web.de

3

dispensed with). As an **energy 'source'**: The FFG and an electric generator can be used to produce electricity, e.g. for local power plants, independent home energy, electric heaters (especially in cold regions), freezers/refrigerators, washing machines, lawn mowers, computer chips, and many other applications in the home as well as industry: Power supply is being revolutionized by the use of spatial energy (failure of a grid along with insurance claims (e.g. New York) will be a thing of the past).

The FFG and the FFE can be of particular help, especially in emerging economies with rising energy demands, for whom the purchasing of fossil energy is very expensive (and greatly affects the balance of trade and security policy). In using this technology, compatibility with the environment, sustainability beyond the coming generations as well as unique economic perspectives are the outstanding results. Emerging economies in particular, can use FFM autonomous water pumps to make desert areas fertile, irrigate rice fields and supply decentralized energy to every house in remote regions, e.g. in order to operate heaters (in cold regions), without energy distribution infrastructure and the continuous purchasing of primary energy. All that is necessary is machinery maintenance. The FFM will even find its way into the space industry due to its advantages.

Heinz Wenz

All rights reserved.

4
Heinz V. Wenz, Owner IEM Nova Frankfurt • Messeturm, 25th floor Friedrich-Ebert-Anlage 49, 60308 Frankfurt Postfach 170410, 60078 Frankfurt Phone: +49 (0) 69 50956 5656 • Facsimile: +49 (0) 69 50956 5520 • Mobile: +49 (0) 172 47 53 189 E-mail: iem-nova@web.de