

## DYNALINE® EV – Short Stroke Actuators

The name „multipol actuator“ represents a short stroke actuator which was developed and patented from Compact Dynamics and which has an extremely fast increase and decrease of actuating forces.

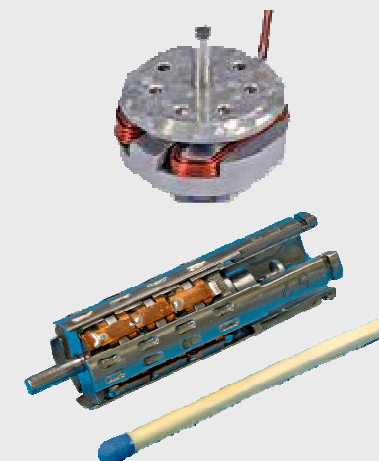
This is resulting by the use of a new design of magnetic circuits and optimization in behalf of minimized eddy current. The design will be individually optimized in accordance to the customers demands.

In the case of low forces the single disc actuator can be used, for higher forces more discs are possible.

On the one side we are using newest technologies, but on the other side we keep the complexity very low, so that a serial production will be possible without problems.

### Technical Datas

magnetic pressure:	20 +/- 2 bar
maximum force:	in the time of 20 $\mu$ s
armature acceleration:	50.000 m/s <sup>2</sup>
time for full stroke:	100 $\mu$ s for 100 $\mu$ m



The actuator e.g. can be used for the electro-magnetic movement of needles in injection valves with the same high performance as a piezo driven valve, but with much lower serial costs.

Development projects with direct driven needles in gasoline and diesel direct injection valves have been made. The valves did not need a leakage line back to the tank.

The challenge in comparison to piezo actuators is

- **same speed**
- **smaller and lighter**
- **half price**

Further developments with position measuring of the armature and part stroke controlling are planned and will make it possible to reduce the minimum injection amount.

