

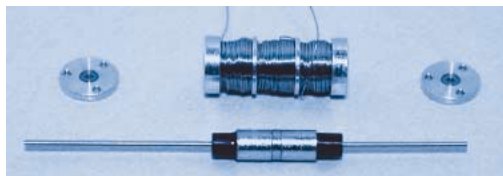
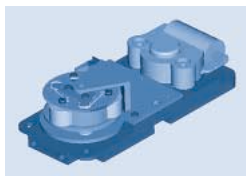
Our infrastructure

Engineering tools:

- finite element programs for electromagnetic, fluidic, mechanics and optics
- analytical simulation models for various actuator types, including modules for load modelization
- gear train simulation
- ProEngineer, I-DEAS and Unigraphics for mechanical design

Test lab:

- complete set of drivers and sensors for test of microactuators: torque, force, displacement, speed, pressure, flow, mass etc.
- automatic test setups with Labview interfaces
- optics lab, high speed camera, scanning laser interferometer
- climatic chamber



Contacts

Helbling Technik AG

Christian Péclat
Stationsstrasse 12
CH-3097 Liebefeld/Bern
Switzerland
phone: +41-31 979 16 11
fax: +41-31 979 16 10
videoconference: +41-31 972 13 14
e-mail: christian.peclat@helbling.ch

ISO 9001 since 1993

www.helbling.ch



helbling

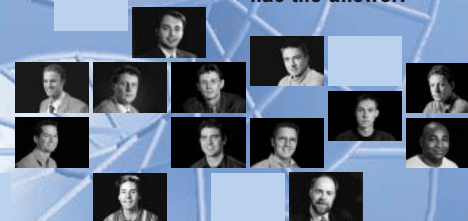
Micro-actuator design

You need a microactuator for a particular application...

There is no off-the-shelf product available...

You need prototypes in a few months...

Helbling has the answer!



Our experience

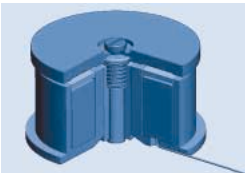
Miniaturized products often require special actuators, perfectly adapted to a specific function.

Our team of engineers has been creating and designing custom-made actuators for many years, typically with dimensions of 1 to 10 mm:

- DC motors
- brushless DC motors
- stepper motors
- linear actuators (PM, reluctant)
- sound transducers
- piezoelectric motors
- piezoelectric actuators

Our experience also covers integration of the motor in the application:

- miniature gear trains
- bearings
- housings, sealing
- connectors, feedthroughs
- micromechanics
- electronic drivers
- sensors



Typical applications

- portable drug delivery devices
 - implantable devices
 - portable diagnostic systems
 - ophthalmic drug delivery
 - nasal drug delivery
 - inhalers
 - hearing aids
 - endoscopes
 - surgical instruments
 - dental instruments
- 
- pumps
 - fluidic switches
 - active valves
 - flow regulators
- sensors
 - positioning of lenses and mirrors
 - switches
 - attenuators
- watch motors
 - analog instruments
- micromanipulators
 - microgrippers
 - mechanical locks
- portable electronics

Your advantages

You have a guaranteed objective evaluation of the most appropriate technology for your application.

You receive detailed documentation of all calculations, simulations, manufacturing documents, test results etc. concerned with your particular development.

We put you in contact with the best manufacturers and suppliers for your components and your system.

You decide on the level of development: theoretical study, prototypes, qualification, industrialization.

If our work on your development results in patents, you own the intellectual property rights.

