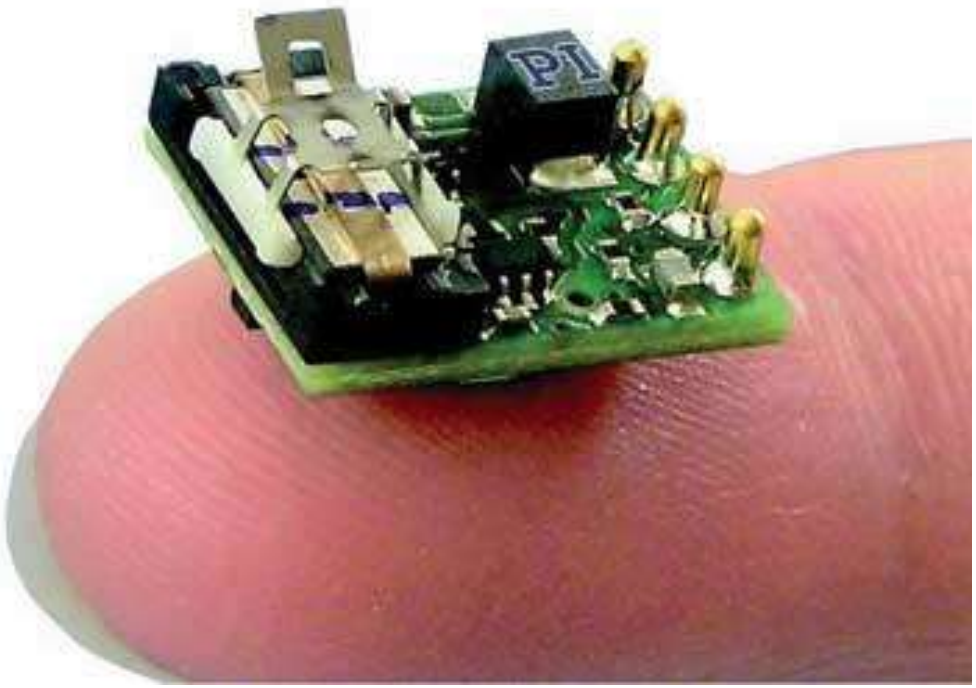
Mikro motory IX



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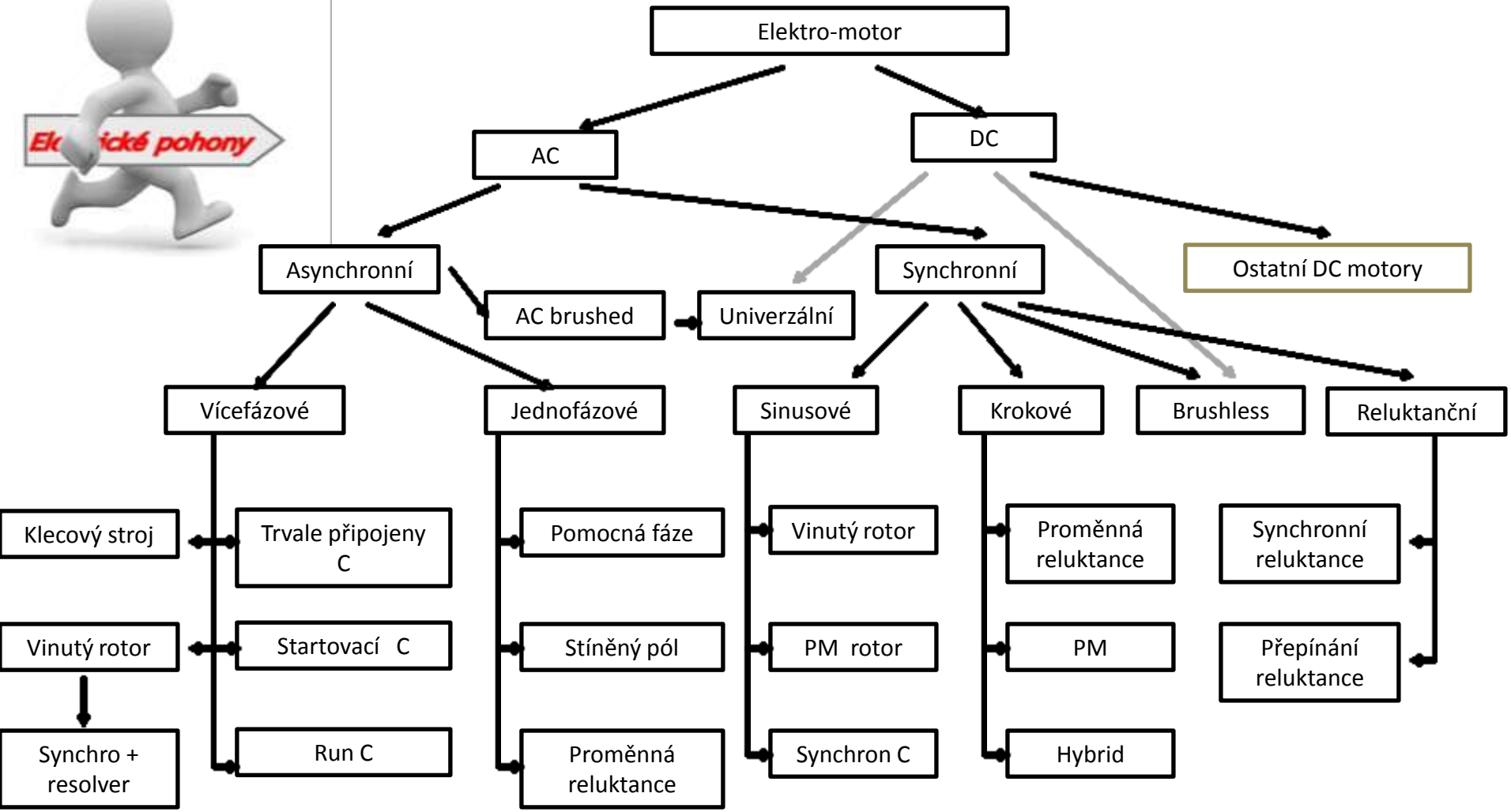
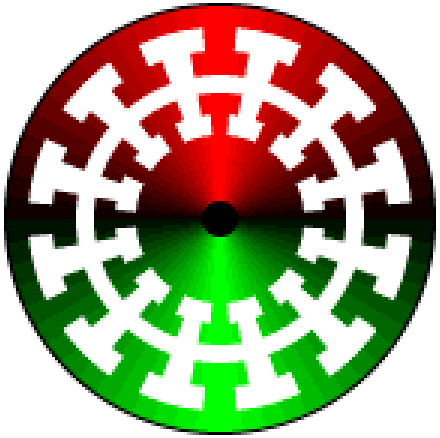
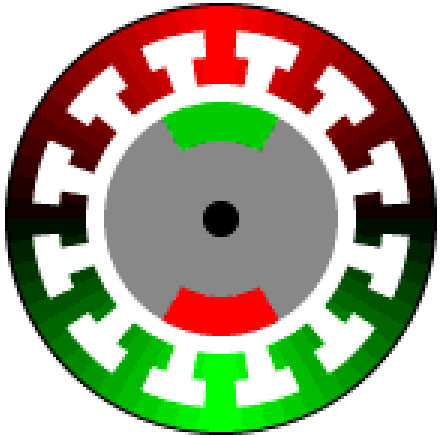
Třídění elektrických motorů



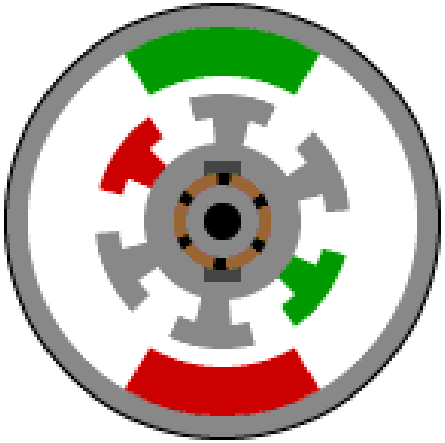
Asynchronní motor



Synchronní motor



Stejnosměrný motor



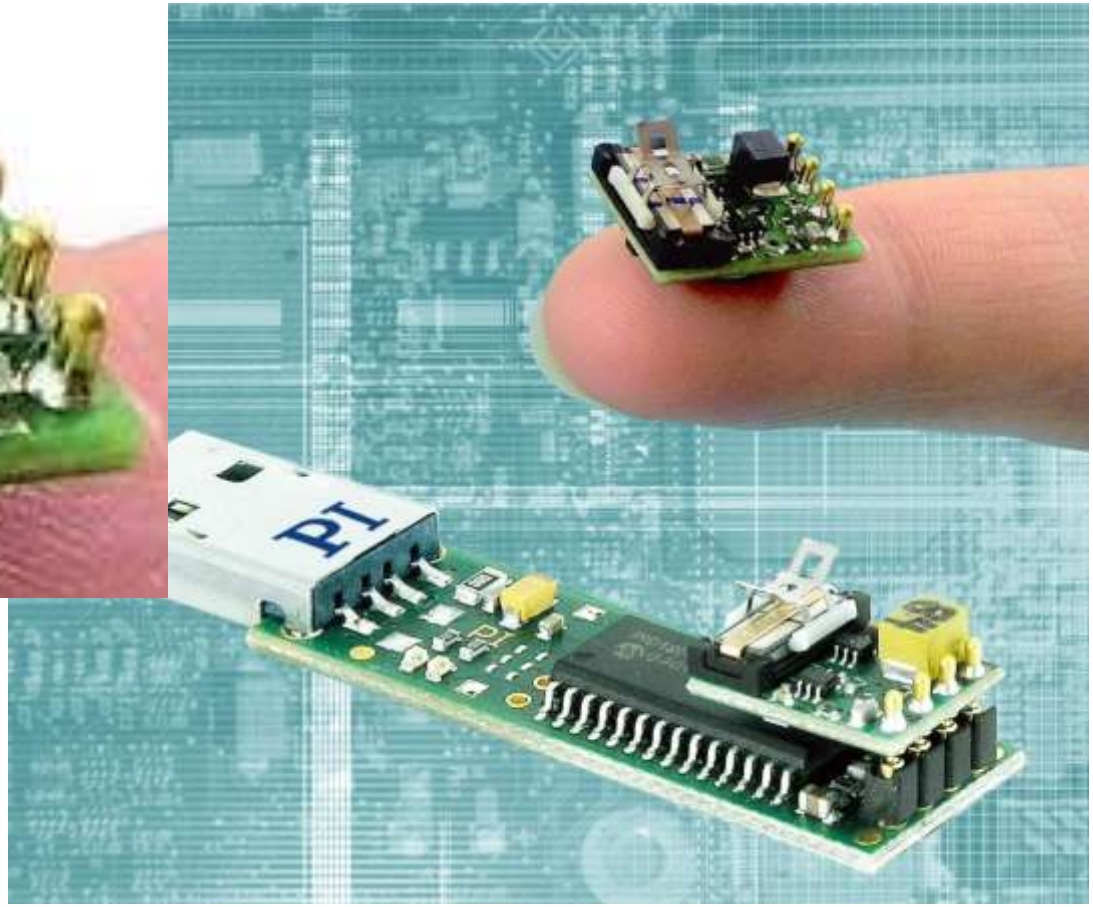
Dva typy statoru a dva typy rotoru :

- **drážkovaný obvod – vsypané vinutí**
- **vyniklé póly – buzení / permanentní magnety**

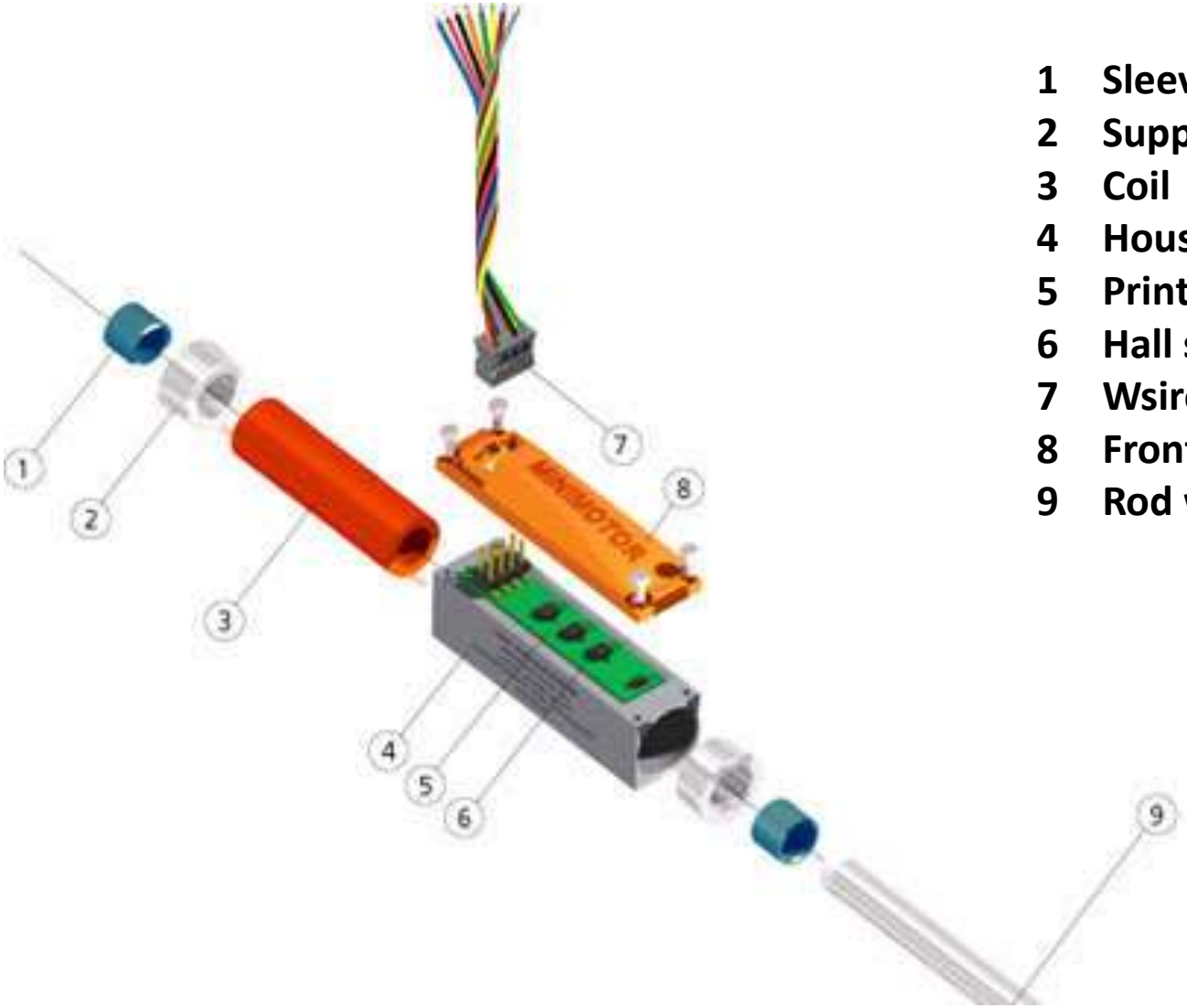
Mikro stroje

http://www.youtube.com/watch?v=ZnWjD675s4M

Piezomotor - „nanopositioning“



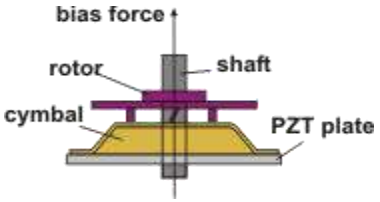
http://www.youtube.com/watch?v=MnC04jIuBGA



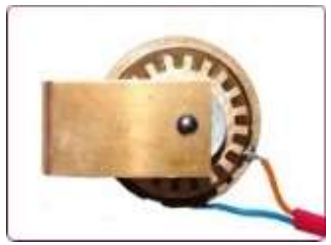
1 Sleeve bearing
2 Support
3 Coil
4 Housing
5 Printer circuit
6 Hall sensor
7 Wsires – connector
8 Front cover
9 Rod with magnets

http://www.youtube.com/watch?feature=endscreen&v=4vFn7nRgQUA&NR=1

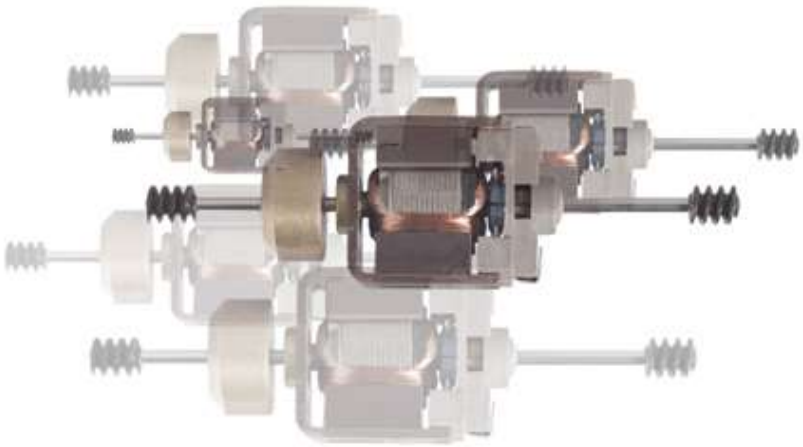
TECHNOLOGY



FLEXMOTORs use the radial ultrasonic vibrations of a thin piezoelectric disk, which have excellent coupling. This forces vertical vibrations of the attached amplifier structure. These vibrations convert into a rotary motion via the ratchetting along of elastic legs. All using pressed or etched metal parts.
The combination of materials and simplicity of the innovative piezoelectric motor design give:

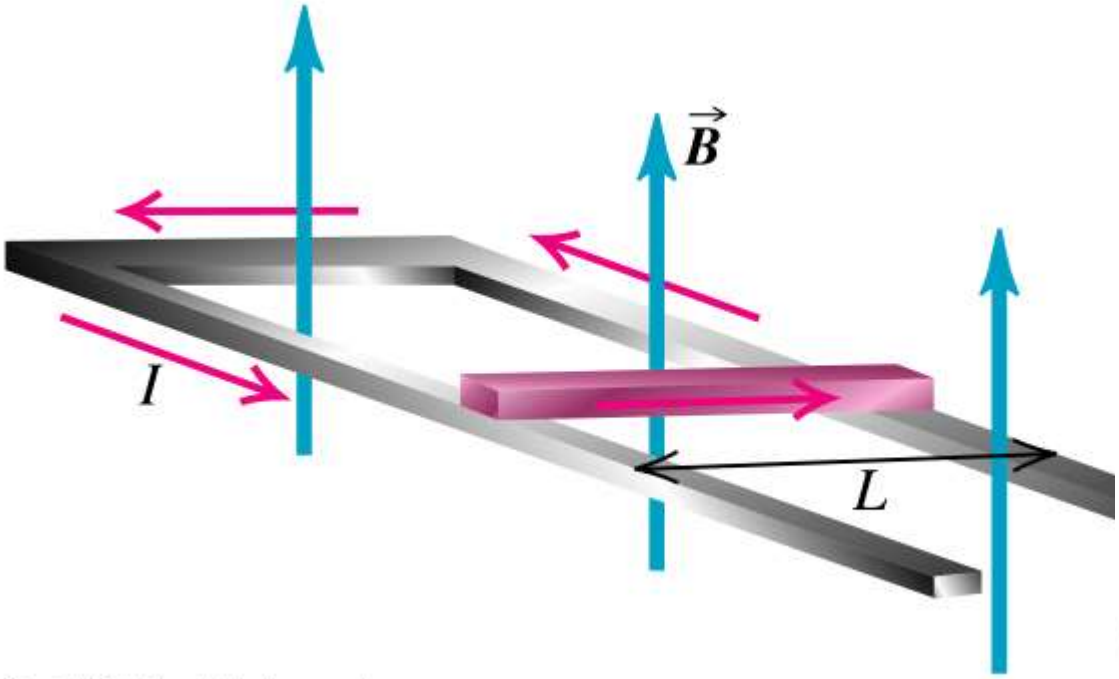


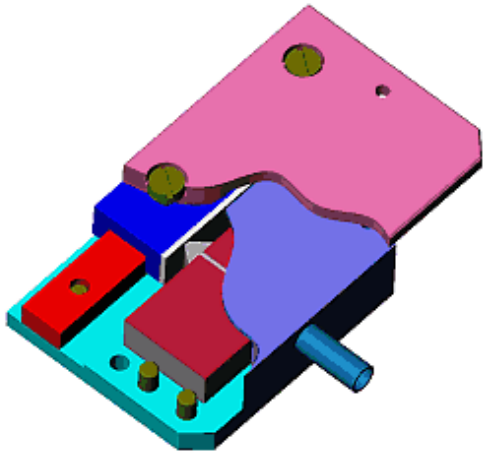
High power delivery (breathing mode) Driving 1-2 micrometers at 50-80kHz A simple friction drive Simple assembly Scalable size without loss of performance Motor is reconfigurable for linear and bidirectional motoring, optical pass-throughs & integrat
Patented designs -wholly owned

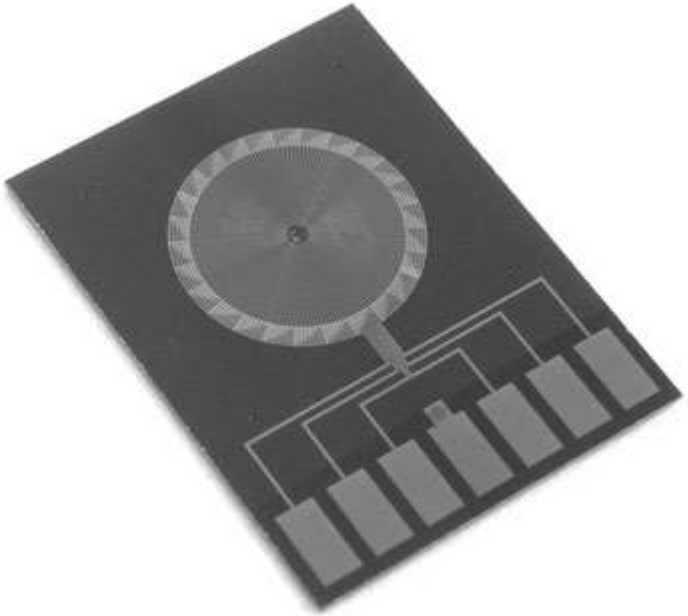


http://www.youtube.com/watch?v=M7tr-nMQRpA

Ultrasonic Piezo Motor Driven Stage, Animation





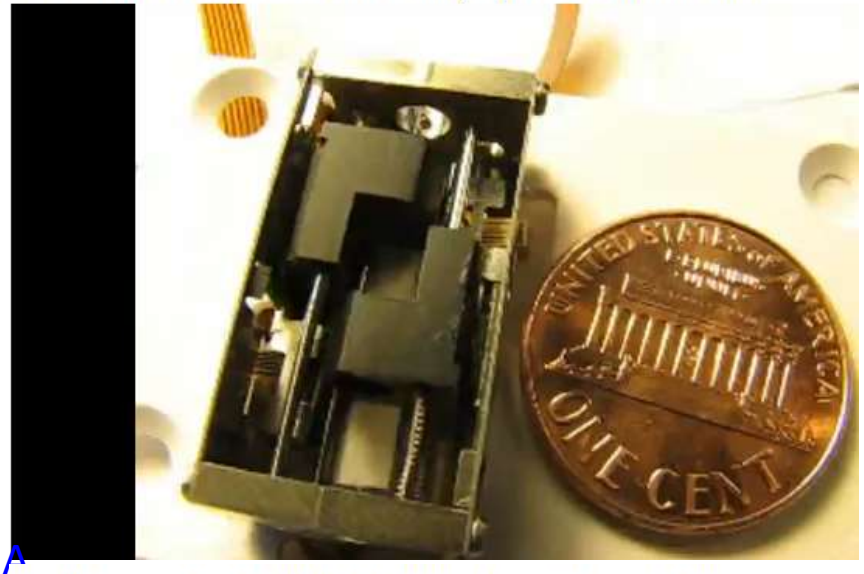


http://www.physics.sjsu.edu/becker/physics51/mag_field

http://www.physikinstrumente.de/products/section7/pie

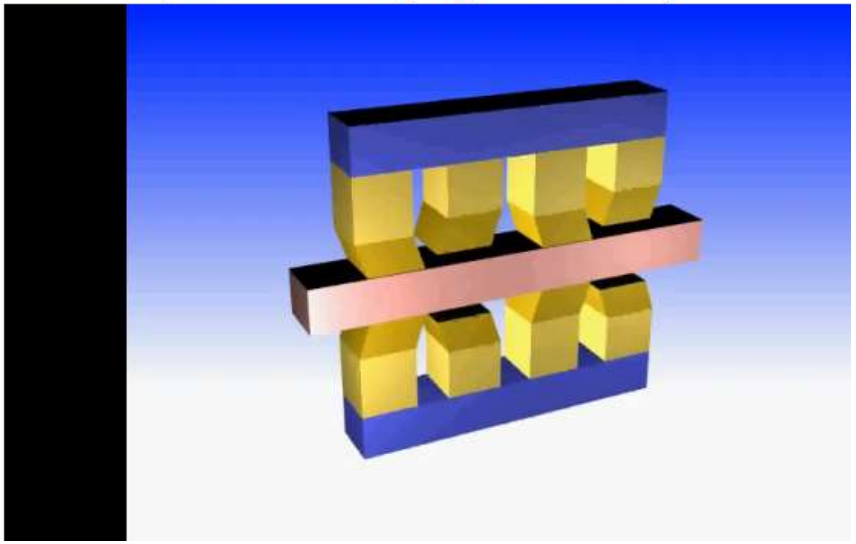
http://www.youtube.com/watch?v=4vFn7nRgC

Piezo micro motors create a tiny optical zoom module



http://www.youtube.com/watch?v=CYcVT1yFv7A

Nexline step Piezo Walk Stepping Linear motor, PI



Precision Gearheads

Spur Gearhead

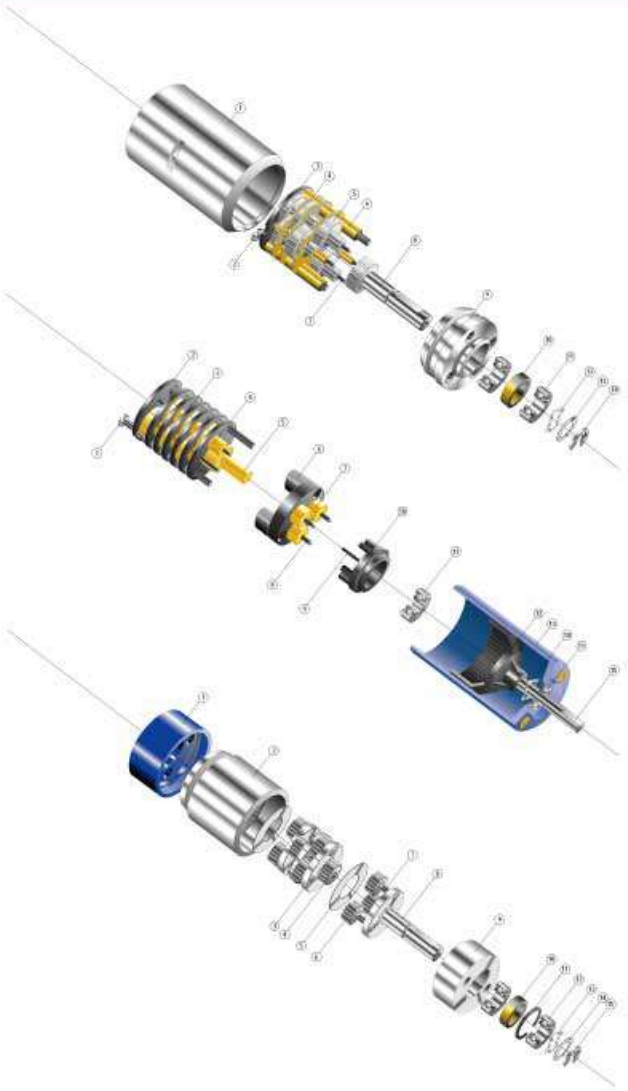
1. Housing
2. Screw
3. End plate
4. Intermediate plate
5. Gearwheel
6. Spacer sleeve
7. Dowel pin
8. Output shaft
9. Front cover
10. Spacer
11. Ball bearing
12. Spring washer
13. Washer
14. Circlip

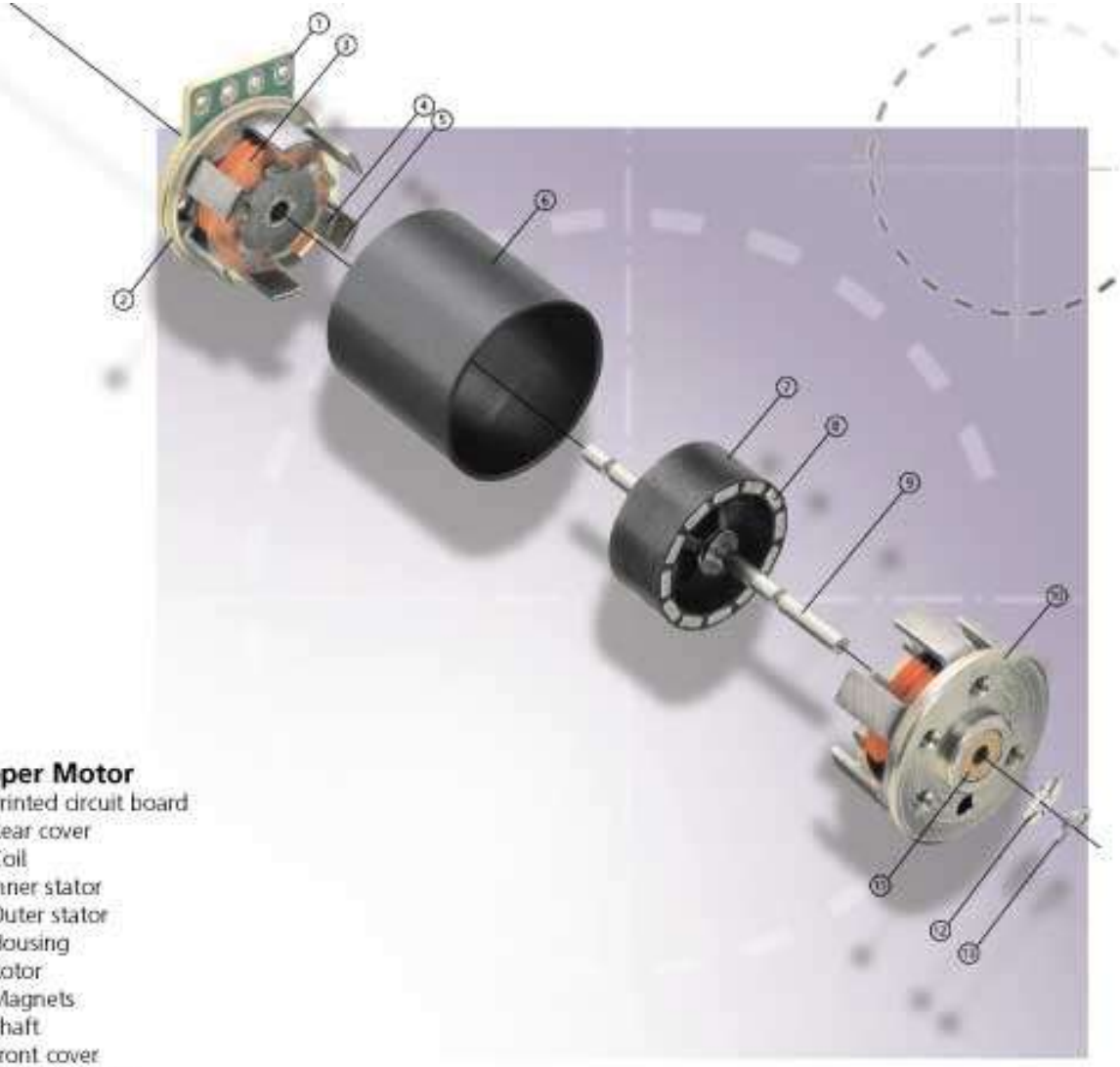
Hybrid Gearhead

1. Screw
2. End plate
3. Intermediate plate
4. Gearwheel
5. Sun gear
6. Satellite carrier
7. Satellite gear
8. Pin
9. Dowel pin
10. Support
11. Ball bearing
12. Crown gear
13. Housing
14. Spring washer
15. Output shaft

Planetary Gearhead

1. Motor flange
2. Housing
3. Satellite carrier
4. Sun gear
5. Washer
6. Satellite gear
7. Pin
8. Output shaft
9. Front cover
10. Spacer
11. Retaining ring
12. Ball bearing
13. Spring washer
14. Washer
15. Circlip

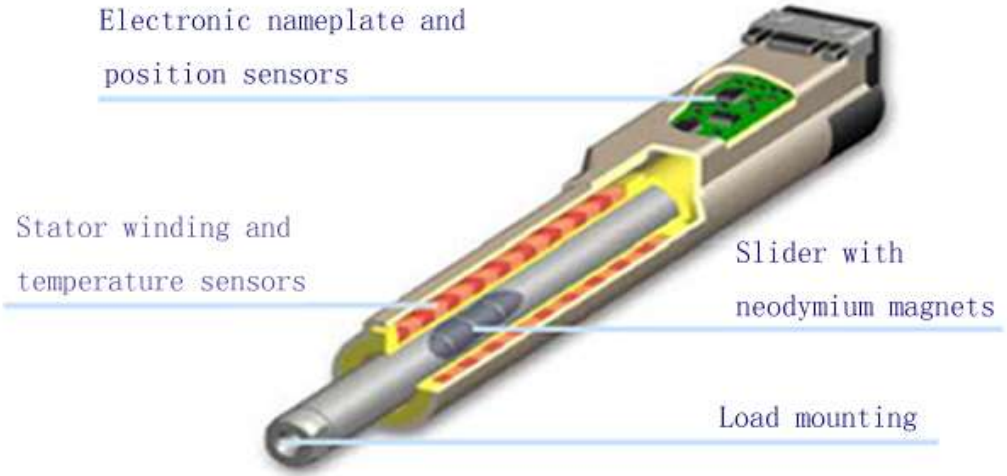


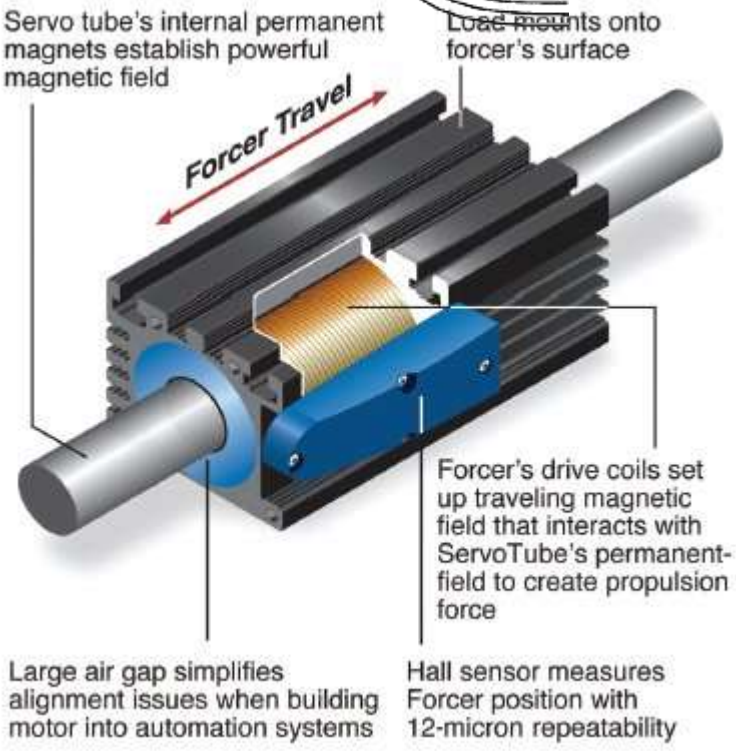


Stepper Motor

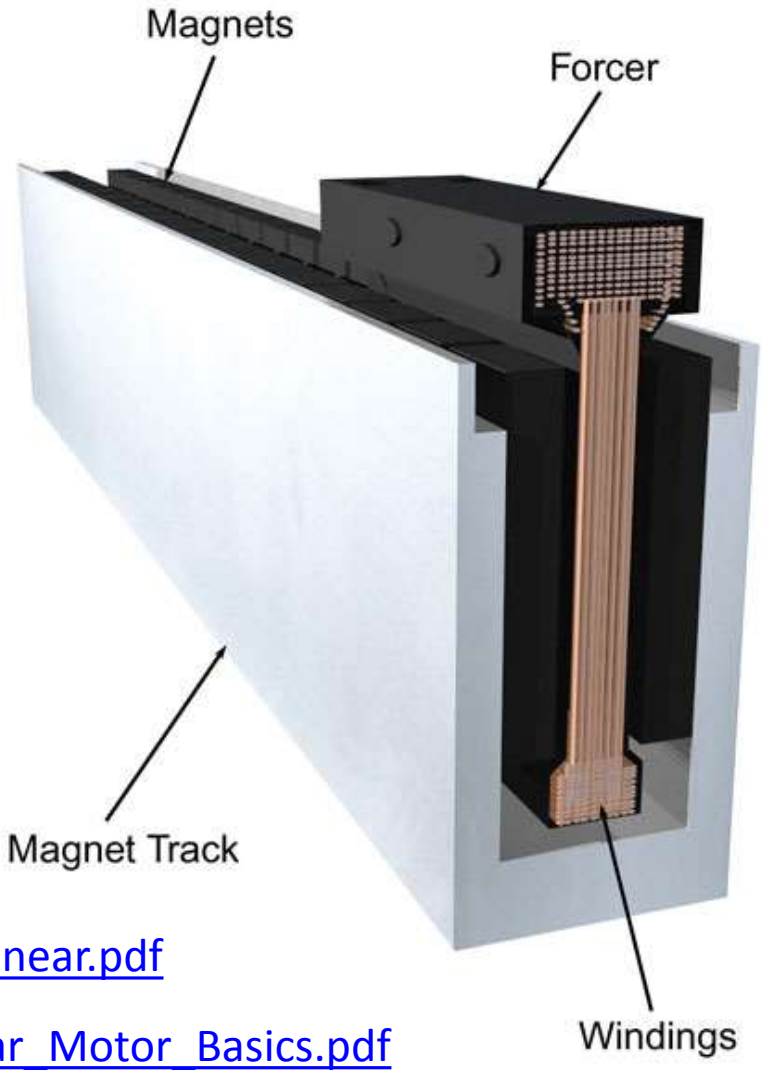
1. Printed circuit board
2. Rear cover
3. Coil
4. Inner stator
5. Outer stator
6. Housing
7. Rotor
8. Magnets
9. Shaft
10. Front cover
11. Sleeve bearing
12. Washer
13. Circlip

Lineární motor





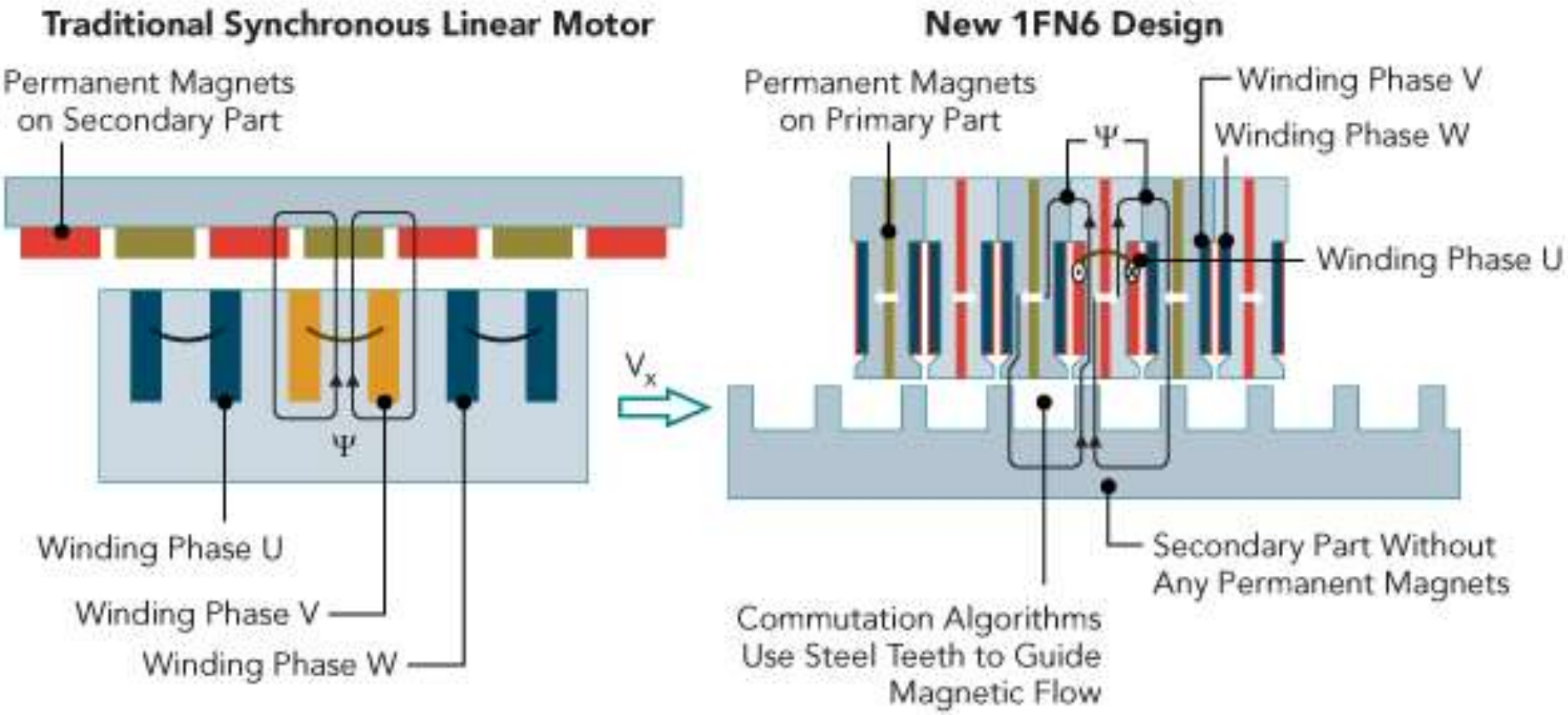
Synchronní motor



http://www.sodick.jp/tech/img/core_linear.pdf

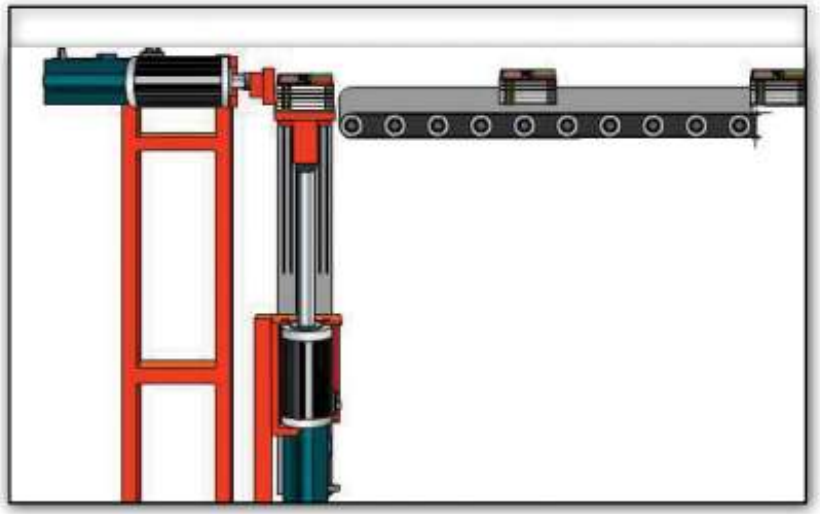
http://www.grp6.com/documents/Linear_Motor_Basics.pdf

Linear Motor Design Comparison



Linear Motors

MOOG



http://www.moog.com/products/motors-servomotors/linear-motors/

Lineární pohony

http://www.wgh.ltd.uk/prt.php

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