

# Magnetically Levitated Conveyor Vehicle

## Technical data

- Homopolar motor (PM synchronous machine)

Maximum force	157 N
Maximum input power	775 W
Rated current	6,7 A
Control	six-step commutation

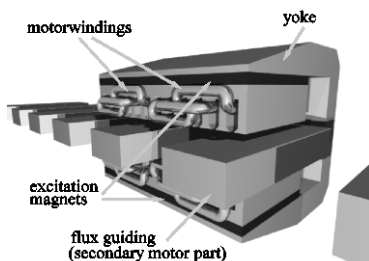
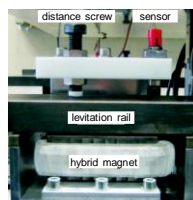
- Hybrid magnet

Rated force	417 N
Rated power density	0,22 W/kg
Maximum current	10 A
Remanence flux density	> 1,26 T



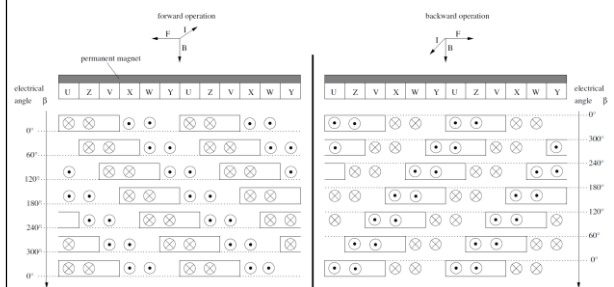
## Equipment

- Rapid Control Prototyping System: dSPACE DS1103 PPC Controller Board
- 4x CopleyControls amplifier (twophase) for the hybrid magnets
- 2x CopleyControls amplifier (threephase) for the propulsion
- 4x hybrid magnets for the control of three degrees of freedom (passive yawing and lateral deviation)
- 2x propulsion motors for forward and backward operation

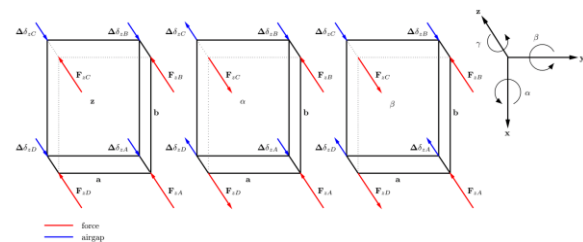


## Application

- Presentation test bench for students and visitors
- Student laboratory:
- Control of linear drives



- DOF control of levitation system



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