


FFA-series

“Electromechanical alternative
for
pneumatic cylinders”

Don't miss our presentation:
 Thursday, 25/11/2010 in Halle 4A-359, 13:00-13:20.
 Paul van Dijk.



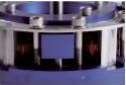
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Magnetic Innovations

Design and delivery of customer specific actuators and magnet systems.

•Design and verification of magnetic and thermal properties by means of 2D/3D FEM software



Product development






- Moving magnet actuators
- Passive geophones
- Generators
- Hub motors
- Frameless motors
- Linear motors


Design optimization of existing applications

- Efficiency improvements
- Integrated actuator function
- Cost reduction

Magnetic shielding

- Magnetic cross talk reduction
- Shielding of earth magnetic field

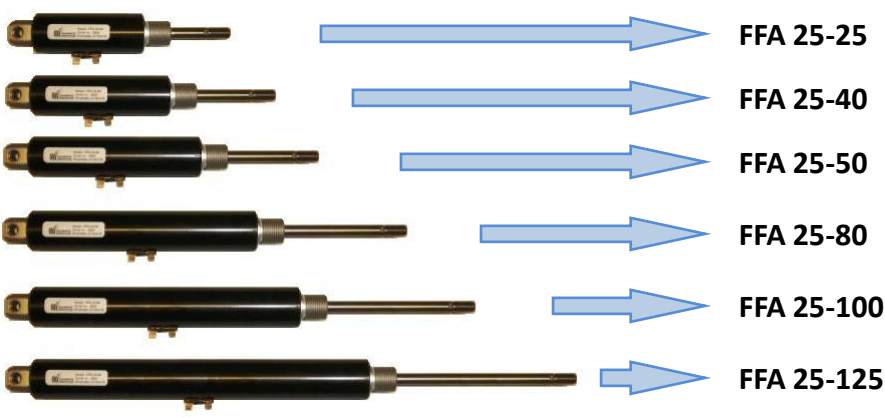









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FFA Series



FFA 25-25
FFA 25-40
FFA 25-50
FFA 25-80
FFA 25-100
FFA 25-125



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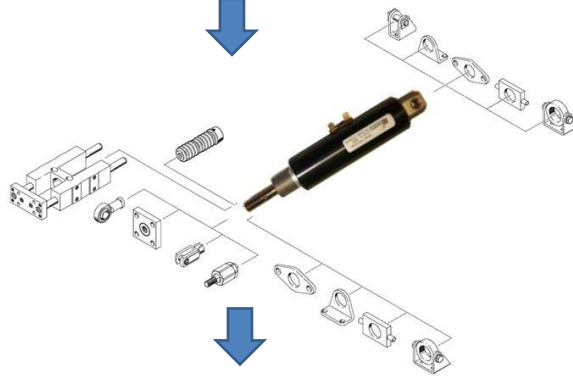
ISO 6432 interfacing



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ISO 6432 interfacing

Broad selection mechanical adaptors



Flexibility guaranteed



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Accessories



- Heat sinks
- Position switches
- Temperature sensor

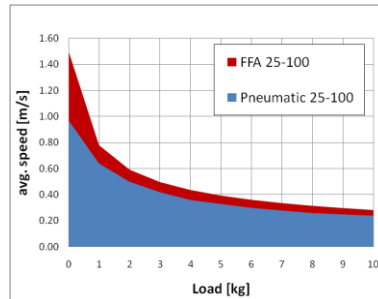
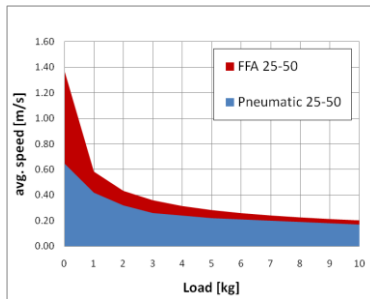


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FFA Features

Direct drive → Fast movements



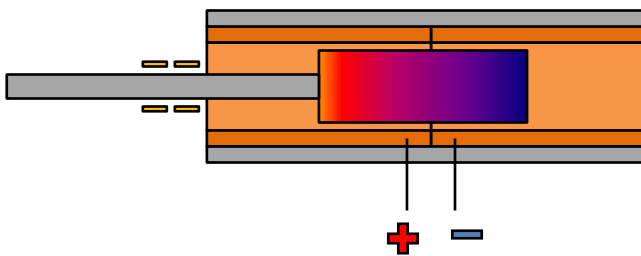
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FFA Features

Single Phase Moving Magnet

→ simple control



- Based on Lorentz force principle
- Force is proportional to current




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FFA Features

Single Phase Moving Magnet

➔ reliable




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FFA specifications

Model	Stroke [mm]	Force [N] Peak	Force [N] Continuous
FFA-25-25(-HS)	25	35.1(39.7)	11.1(12.6)
FFA-25-40(-HS)	40	36.5 (41.3)	11.6(13.1)
FFA-25-50(-HS)	50	36.7 (41.5)	11.6(13.1)
FFA-25-80(-HS)	80	36.0(40.7)	11.4(12.9)
FFA-25-100(-HS)	100	36.0(40.7)	11.4(12.9)
FFA-25-125(-HS)	125	35.2(39.8)	11.1(12.9)

➔ Numbers in brackets indicate performance of (-HS) type.
➔ Detailed datasheet available.



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FFA Features

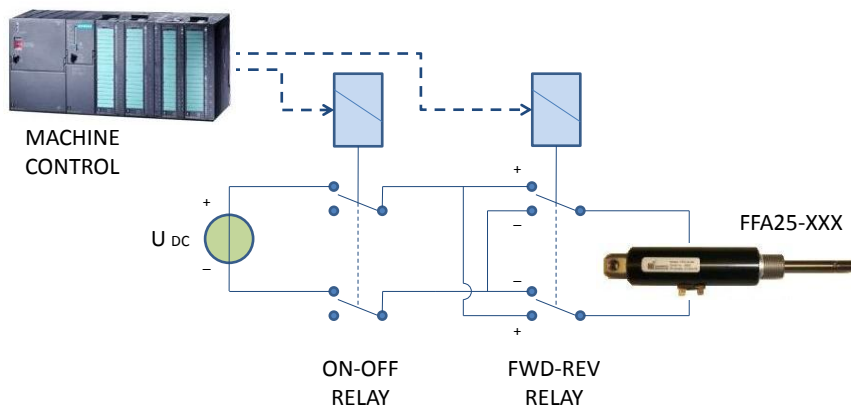
- **Fast** actuating moving magnet actuator
- **Low cost** (competes with pneumatic cylinders)
- **Direct** drive → No spindle or gear reduction
- **Single** phase → No commutation required
- **Efficient** actuator → high forces
- Moving Magnet → No moving wires
- Integrated slide bearings
- 12-48V DC **safe** operation



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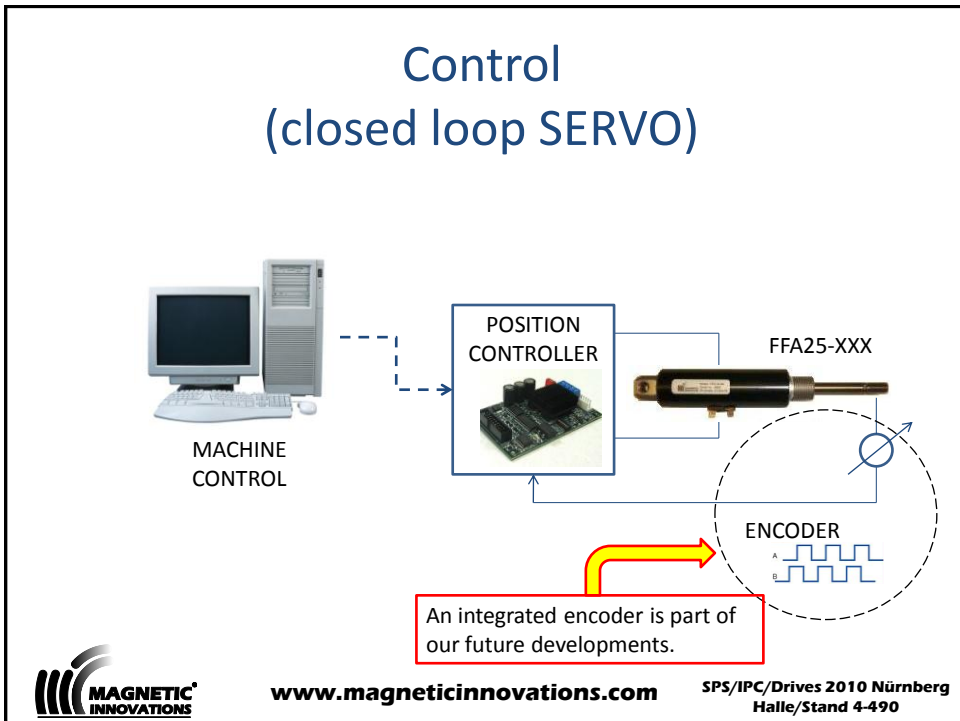
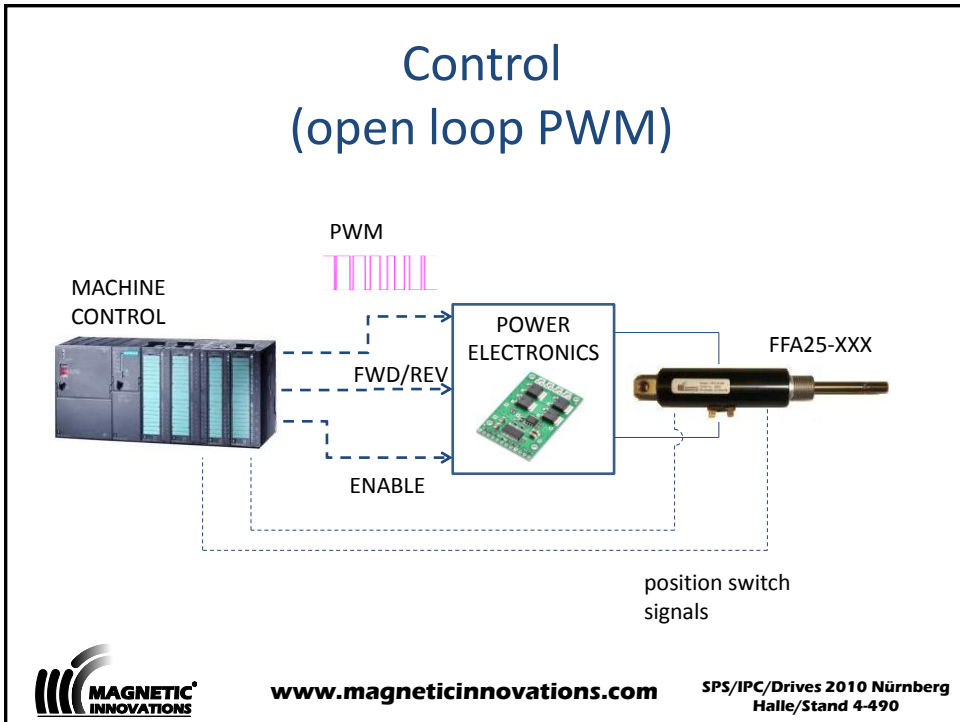
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Control (simplest form)




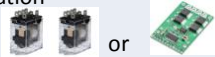







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Cost aspects Comparison with pneumatic cylinder

Pneumatic cylinder	FFA25-XXX
Compressor 	Power supply 
5/2 Solenoid valve 	H-bridge configuration  or 
Mechanic adapters/brackets 	Mechanic adapters/brackets 
Pneumatic cylinder 	FFA25-XXX 



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Applications



- Production automation
- Packaging equipment
- Test stands
- Pick and place applications



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Conclusion

For applications that require:

- Cost efficient actuation, or
- Fast movements, or
- Good control of actuated force, or
- Operation without pressed air

the FFA series actuators provide customers with a real alternative for pneumatic cylinders.



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For further information, datasheets and a demonstration we welcome you to visit our stand.

➔ Halle 4-490.



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