HYDAC KineSys
Motion Control Systems
**Intelligence**

HYDAC drive controllers have an integrated intelligence which enables even complex drive tasks to be accomplished in a simple and robust manner:

- Regulation of:
  - Pressure / Force
  - Position / Angle
  - Synchronisation
  - Speed
- Control of actuators
- Cam disc function
- Safety functions

And much more...

**Forward-looking**

The usage of HYDAC drive controllers offers new possibilities with regard to integration of the hydraulic system with electrical control technology.

- Coupling of axes
- Integration of bus systems

Ready for "Internet of things"

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**KineSys**

With over 8,000 employees worldwide, HYDAC is one of the leading suppliers of fluid technology, hydraulic and electronic equipment.

The KineSys team is your partner for expertise in drive solutions for Kinematic Systems.

**Our Goal**

Depending on the task, either a hydraulic or electromechanical solution will be developed – from a simple control right up to high dynamic controls.

Needs-based designs ensure maximum efficiency and significantly reduce the complexity for existing solutions.

**System Solutions, One Supplier, One Contact**

KineSys utilises the comprehensive range of HYDAC products as well as KineSys drive components to produce customised designs for drive solutions. Modern simulation and system engineering tools assist the design process.

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**Your Tasks are our Challenges**
Application Examples for Hydraulics

System for Reshaping Pipe Ends

High Dynamic Servo Pump Unit
- HSM servo motor
- Motor power 7.5 kW
- HFI-CM servo controller
- Internal gear pump
- Only switching valves
- Special tank
- Positioning accuracy 10 µm
- No cooling
- Control on the electrical side
- Plug&play-ready solution

Machine Tool Clamping Power Unit

Power Unit based on the DVA-Kit
- Combined, variable speed operation with accumulator charging function
- Motor power 3.0 kW
- HFI-MM motor-mounted frequency inverter
- Pressure-controlled operation
- Integrated start/stop function
- 1-litre accumulator
- 44-litre tank
Note: The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.

Technical Data for the KineSys DVA Portfolio
- Electronic variable displacement pump
- Fully parameterised Plug & Play unit
- External and internal gear pumps
- Power 0.75 kW to 200 kW
- Various function modules available

Technical Data for the Standard KineSys HEZ Portfolio
- HYDAC electric cylinder (HEZ)
- Standard series: Forces up to 25 kN
- Stroke up to 2,000 mm
- Positioning speed up to 1,000 mm/s
- Duty cycle up to 100%
- Optional with frequency inverter

Standard HEZ combined with KineSys HSM Drive
- HSM servo motor
- Motor rating 2.6 kW
- HFI-CM servo controller
- Drive directly coupled to cylinder
- Lifting force 4 kN
- Stroke velocity 450 mm/s
- High dynamics
- High repeatability

Electric Cylinder in a Mechanical Press
- Increased Production due to Decoupling of the Ejector
- HEZ with HSM servo motor
- Motor rating 9 kW
- HFI-CM servo controller
- Cam disc control integrated into the drive controller
- Communication with the central machine control
- Lifting force 120 kN
- Stroke velocity 100 mm/s
- Unframe lubrication

Servo Cylinder for Bottling Plants
- Special KineSys HEZ Portfolio
- Forces up to 500 kN
- Stroke up to 3,000 mm
- Duty cycle up to 100%
- IP65
- Other options: ATEX, stainless steel version, encoder systems, servo drive, DC Drive possible positioning without position sensor

Products
- HYDAC electric cylinder
- HSM servo motor
- Drive controllers
- HFI-CM
- HEZ electric cylinder
- Servo-motor
- Power Unit based on the DVA-Kit
- Combined, variable speed operation with accumulative charging function
- Power 3.0 kW
- HFI-MM motor-mounted frequency inverter
- Plug & play-ready solution
- Positioning accuracy 10 µm
- No cooling
- Control on the electrical side

Systems
- 200 kW
- 22 kW
- Dynamic
- Components
- Systems
- Power Unit based on the DVA-Kit
- Combined, variable speed operation with accumulative charging function
Application Examples for Electromechanics

Electric Cylinder in a Mechanical Press

Increased Production due to Decoupling of the Ejector

- HEZ with HSM servo motor
- Motor rating 9 kW
- HFI-CM servo controller
- Cam disc control integrated into the drive controller
- Communication with the central machine control
- Lifting force 120 kN
- Stroke velocity 150 mm/s
- Lifetime lubrication

Servo Cylinder for Bottling Plants

Standard HEZ combined with KineSys HSM Drive

- HSM servo motor
- Motor rating 2.6 kW
- HFI-CM servo controller
- Drive directly coupled to cylinder
- Lifting force 4 kN
- Stroke velocity 450 mm/s
- High dynamics
- High repeatability

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