Self contained servo drive CLCP
Technical data sheet

Advantages
+ High energy efficiency
+ Transmission pitch can be selected by electrical command
+ Significantly reduced electric connection power
+ No power pack
+ Overload safety
The servo drive CLCP is a hydraulic linear drive from the Voith product family of self-contained drives. Characteristics for self-contained Voith servo drives are the high energy efficiency, overload safety and nearly wear-free operation. The transmission pitch can be selected by electrical command. As a result, the electric connection power is significantly reduced with the result that the size of the motor and the inverter are smaller.

The main components of the CLCP are a servo motor, a 4Q internal gear pump and a directly coupled hydraulic cylinder. No hydraulic unit or oil tank is required for the operation of the self-contained drive. All hydraulic components are integrated into the CLCP servo drive.

The drive is suitable for force control and position control. The sensors used provide the basis for a complete integration in automated production plants.

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**Technical data**

- **Ambient temperature**: -5°C to +40°C
- **Mounting position**: any
- **Working force**: up to 300 kN, higher forces on request
- **Stroke length**: 50, 100, 200 mm
- **Linear feedback system (option)**: absolute encoder
- **Positioning accuracy**: 0.01 mm, typical
- **Pressure control accuracy**: 0.5% FS (full scale), typical
- **Repeatability**: 0.01 mm, typical
- **Protection class**: IP54 / IP64
- **Control**: position and/or force control
- **Service interval**: 3 years or 20,000 operating hours

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**Scope of delivery**

- **Basic version**:
  - Complete drive unit
  - Motor, pump, cylinder, compensation tank, pressure switch
  - Oil filling with high performance fluid PF-700
  - Drift protection (not a safety component)
- **Options**:
  - Servo converter with interface cards
  - Line filter, mains line choke, brake resistor
  - Motor cable, encoder cable
  - Parameterization software
  - Start-up on-site
  - Filling and flushing station
  - Fan

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**Applications**

- Bending machines
- Cutting machines
- Forming machines
- presses
- Special machines
- General replacement of spindle drives with servo motor
- Material handling
- Testing machines and laboratory applications
- Food industry
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Advantages</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Servo drive with hydraulic power transmission</td>
<td>The drive is wear-resistant and absolutely overload-safe</td>
<td>+ Your drive components and moving parts have a long lifetime</td>
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<td>+ After an overload occurs, your machine or equipment can be quickly and easily restarted</td>
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<td>The drive has only a few electrical interfaces</td>
<td>+ This keeps your startup effort and costs low</td>
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<td>+ No staff with knowledge of hydraulics is required</td>
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<td>Closed-loop hydraulic system with no directional control valves or servo valves</td>
<td>The integrated hydraulic system is a stand-alone system (self-contained)</td>
<td>+ You save the procurement and maintenance costs required for an external hydraulic power pack with all of its piping and tubing</td>
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<td>+ The linear drive is easy and cost-effective to install in machines and equipment</td>
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<td>Transmission pitch can be selected by electrical command</td>
<td>The drive requires small volume flows and correspondingly small pumps and servomotors as well as converters</td>
<td>+ The installed electrical power and the installation costs are low</td>
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<td>The drive is very fast</td>
<td>+ The productivity of the plant is very high</td>
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<td>The hydraulic cylinder is controlled with a servo pump whose flow rate is matched to the cylinder surfaces</td>
<td>Simple and compact design with no classic valve and control technology</td>
<td>+ The linear drive requires up to 50% less energy, reducing your operational costs</td>
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<td>Hydrualic system throttle losses are kept to a minimum</td>
<td>+ The costs for commissioning, training and maintenance are low</td>
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<td>Standardized linear drive with very few components and modular design</td>
<td>• This keeps planning costs associated with system integration low</td>
<td>+ The drive is energy-efficient and has low cooling requirements</td>
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<td>• A large number of designs and sizes are available</td>
<td>+ This reduces development times and development costs associated with your machinery or equipment</td>
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Performance fluid PF-700 for servo drive CLCP

Performance fluid PF-700 was developed especially for all power transmission systems with special requirements on tribology, temperature, oxidation and shearing stability. The result is a very high application period at minimum degradation.

• Very low frictional losses, therefore significantly enhanced efficiency of power transmission
• Energy saving
• High viscosity index
• Outstanding wear protection characteristics
• Compatible with commonly used sealing materials

For the servo drive CLCP, exclusive use of PF-700 is mandatory.

Further data:
25000864510-TED-EN- and 25000864610-DSH-EN-.