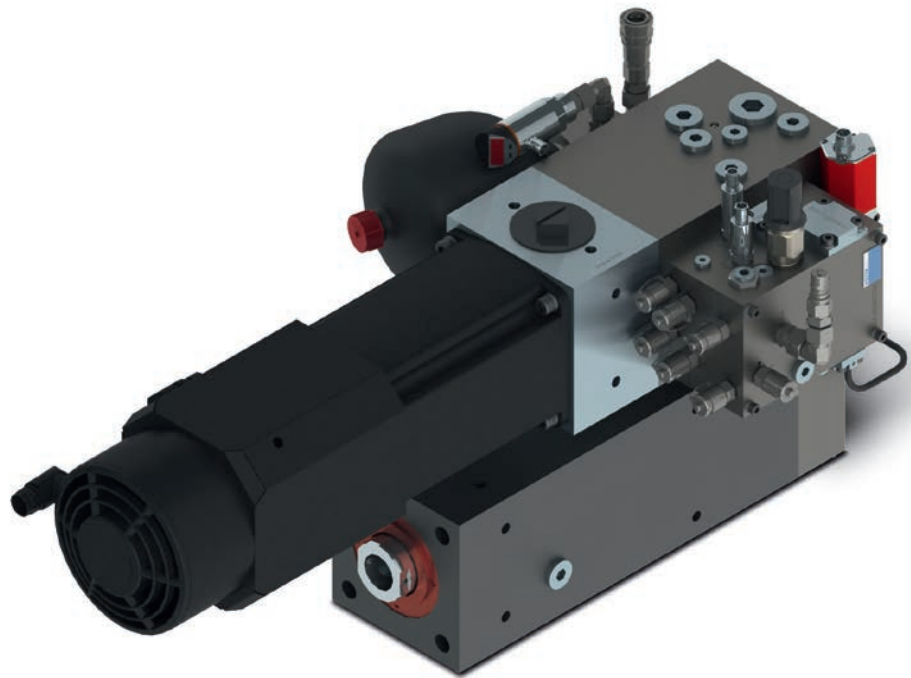


Self contained servo drive CLSP

Technical data sheet



Advantages

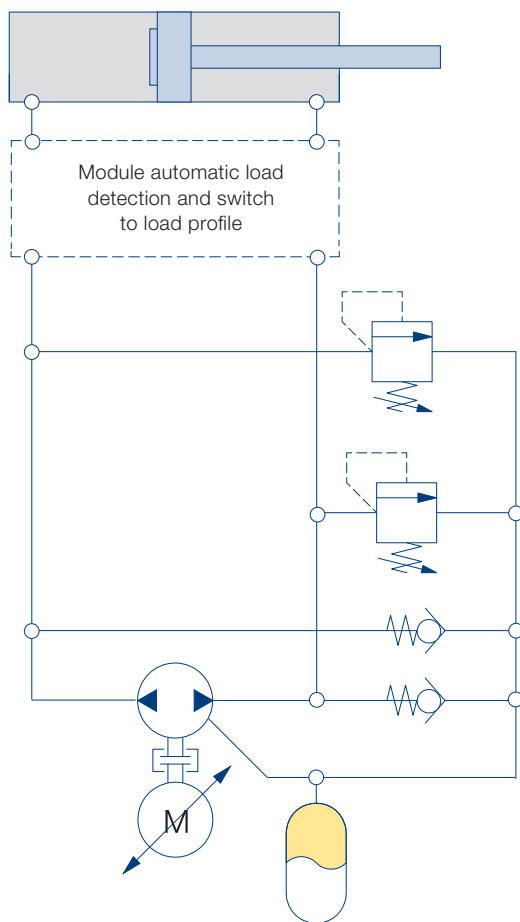
- + High energy efficiency
- + Automatic load-dependent change-over of the hydraulic transmission
- + Significantly reduced electric connection power
- + No power pack
- + Overload safety

The servo drive CLSP 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 CLSP drive additionally has an automatic load-dependent change-over of the hydraulic transmission. 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 CLSP 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 CLSP 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.

System drawing



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

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

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

Product characteristics

Characteristics	Advantages	Benefits
Servo drive with hydraulic power transmission	The drive is wear-resistant and absolutely overload-safe	<ul style="list-style-type: none"> + Your drive components and moving parts have a long lifetime + After an overload occurs, your machine or equipment can be quickly and easily restarted
	The drive has only a few electrical interfaces	<ul style="list-style-type: none"> + This keeps your startup effort and costs low + No staff with knowledge of hydraulics is required
Closed-loop hydraulic system with no directional control valves or servo valves	The integrated hydraulic system is a stand-alone system (self-contained)	<ul style="list-style-type: none"> + You save the procurement and maintenance costs required for an external hydraulic power pack with all of its piping and tubing + The linear drive is easy and cost-effective to install in machines and equipment
Cylinder with automatic gear shifting and automatic recognition of the load	The drive requires small volume flows and correspondingly small pumps and servomotors as well as converters	+ The installed electrical power and the installation costs are low
	The drive is very fast	+ The productivity of the plant is very high
The hydraulic cylinder is controlled with a servo pump whose flow rate is matched to the cylinder surfaces	Simple and compact design with no classic valve and control technology	<ul style="list-style-type: none"> + The linear drive requires up to 50 % less energy, reducing your operational costs + The costs for commissioning, training and maintenance are low
	Hydraulic system throttle losses are kept to a minimum	+ The drive is energy-efficient and has low cooling requirements
Standardized linear drive with very few components and modular design	<ul style="list-style-type: none"> • This keeps planning costs associated with system integration low • A large number of designs and sizes are available 	+ This reduces development times and development costs associated with your machinery or equipment

Performance fluid PF-700 for servo drive CLSP

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 CLSP, exclusive use of PF-700 is mandatory.

Further data:

25000864510-TED-EN- and 25000864610-DSH-EN-.

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