Evamo Pump Technology Solutions

# Electrohydraulic Power Steering Pump

## EHPS

# Up to 70%

**energy saving compared to conventional power steering pumps with constance delivery volume.**

### Task

The electrohydraulic EHPS power steering pump supplies exactly the right amount of oil that is needed for operating hydraulic steering systems in medium to heavy commercial vehicles.

### Function

The electrohydraulic EHPS power steering pump has a redundant drive unit that consists of a motor with integrated power electronics, vane pump and customer-specific mounting bracket (optional).

The integrated power electronics regulates the motor speed in a highly energy-efficient manner corresponding to the requirements of the steering system (smart speed control) or to an external setpoint. The motor is a permanently synchronized motor (PSM) with redundant, specially separated winding packages. The speed of the motor and the vane pump are identical.

# Power-on-demand.

**Energy consumption adapts to the driving situation.**

The vane pump designed as a dual circuit pump consists of a housing, cover, front plate, shaft and a rotor set. The rotor set consists of the rotor, ten radially-guided vanes and the cam ring. The generated oil volume flow is proportional to the speed.

Both the motor power/speed as well as the transmission behavior of the pump are noise-optimized to each other for use in electric vehicles (EV)

### Variants

The wide-ranging manufacturing program of Evamo includes various pump designs and model series.

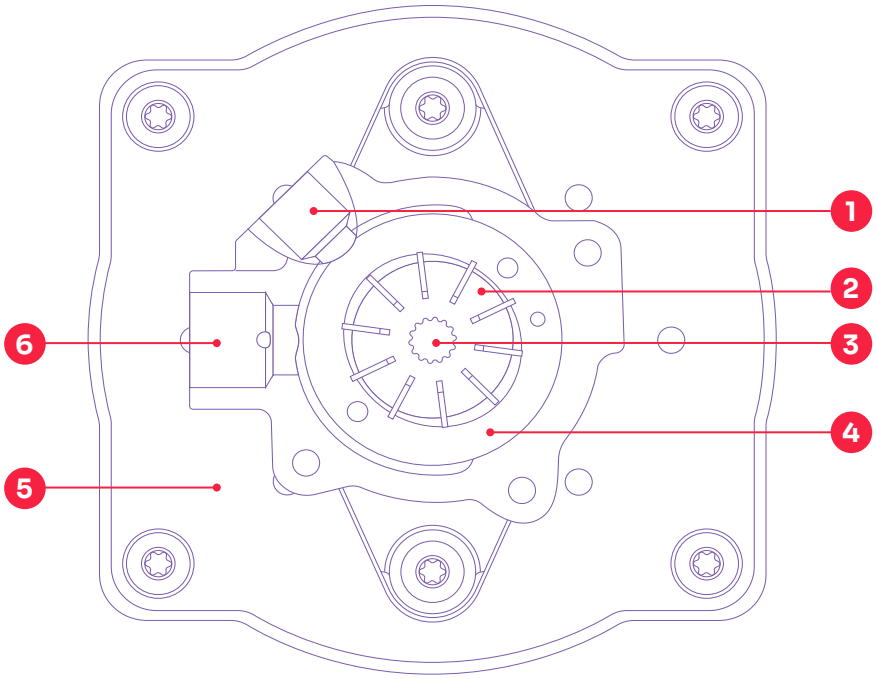
The EHPS electrohydraulic power steering pump is designed for use in medium to heavy duty commercial vehicles as well as buses.

Please feel free to contact us at any time for other individual wishes regarding technical requirements.

## Produktnutzen

- Fail-operational functionality due to a redundant drive unit
- Meets the requirements of Automotive Safety Integrity Level ASIL B (optional C/D)
- Manipulation protection
- No need for high voltage protection for 24V and 48V
- Available in 24 V/48 V/400-800 V thanks to the modular assembly system
- Optimal energy consumption thanks to smart speed control
- Noise-optimized design

1. Pressure port
2. Rotor with vanes
3. Driveshaft
4. Cam ring
5. Housing
6. Suction port




## Technical data

| | | | |
|---|---|---|---|
| Delivery volume (l/min) | 25 | | |
| Max. pressure (bar) | 220 | | |
| Suction port<br>Thread | 1 1/16“ – 12UN 2B<br>M26 x 1.5 | | |
| Pressure port<br>Thread | 3/4“ – 16UNF 2B<br>M18 x 1.5 | | |
| Operating temperature (°C) | -40 to +100 | | |
| Nominal voltage (V) | 24 | 48 | 400-800 |
| Rated output (KW) | 8.6-9 | 8.6-9 | 7.5-9 |
| E-motor type | PMSM (6-phase redundancy) | | |
| Power electronics and sensors | integrated | | |
| Communication | CAN ISO11898 / J1939 | | |
| Software | Autosar | | |
| Diagnosis | UDS | | |
| Safety | ASIL B (optional C/D) | | |
| Cyber Security | optional | | |
| FOTA / SOTA | optional | | |
| Weight without mount (kg) | < 20 | | |