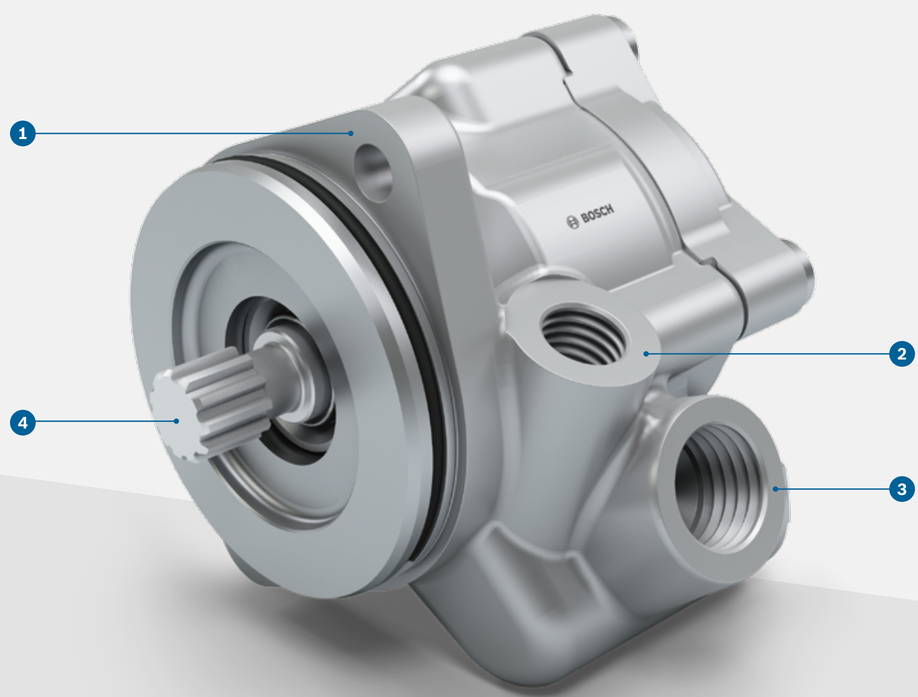
Steering systems

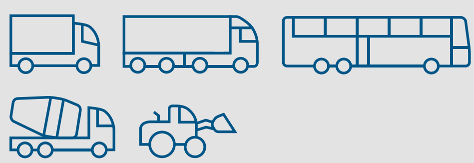
Power steering pump FN4



PRODUCT BENEFITS

- Compact construction
- High efficiency with low weight
- High component flexibility through modular system concept
- Integrated volume flow control
- Optionally with integrated pressure limiting

1. Casing with integrated flange
2. Pressure connection
3. Suction connection
4. Shaft



rugged design

The proven design ensures a reliable supply of oil to the steering system.

high power density

with low weight

TASK

The power steering pump FN4 provides the amount of oil needed for operation of hydraulic steering systems in commercial vehicles at all times. The pump is designed primarily for connection to the compressed-air compressor or the power take-off on an engine. The shaft connects by means of a cross-slotted disk or splines. The pump can be driven by either a gear or belt. For these cases, an anti-friction bearing is used for the driveshaft. The ball bearing needed for the above instances can be incorporated into the housing. In addition, an oil reservoir can be mounted directly to the pump. This eliminates the hose and assembly costs at the vehicle manufacturer.

FUNCTION

The power steering pump FN4 consists essentially of housing with integrated volume flow control, cover, faceplate, shaft and rotor set. The rotor set consists of the rotor, ten radial vanes installed in the rotor, and the cam ring. The cam ring has two symmetrically positioned suction and pressure zones. The design of the cam ring defines the fixed geometric delivery volume of the pump.
The integrated volume flow control limits the volumetric flow delivered to a fixed value. The maximum system pressure must be limited by a pressure-limiting valve installed on the pump or in the system. If required by the steering system design, a pressure level of up to 200 bar is available as a special version.

TECHNICAL CHARACTERISTICS

Model	7683	7684	7685	7686	7687
Delivery volume (cm^3/U)	14	17	21	25	28
Max. rotational speed (rpm)	4,500	4,500	4,000	4,000	3,500
Max. pressure (bar)	185	185	185	185	165
Controlled volumetric flow (l/min)	9 – 16	12 – 16	12 – 25	16 – 25	16 – 25
Suction connection Thread	1 1/16" – 12UN 2B M26 × 1.5				
Pressure connection Thread	3/4" – 16UNF 2B M18 × 1.5				
Max. oil temperature (°C)	120				
Weight (kg)	2.3 – 2.8				
Drive direction of rotation	clockwise or counterclockwise				

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