

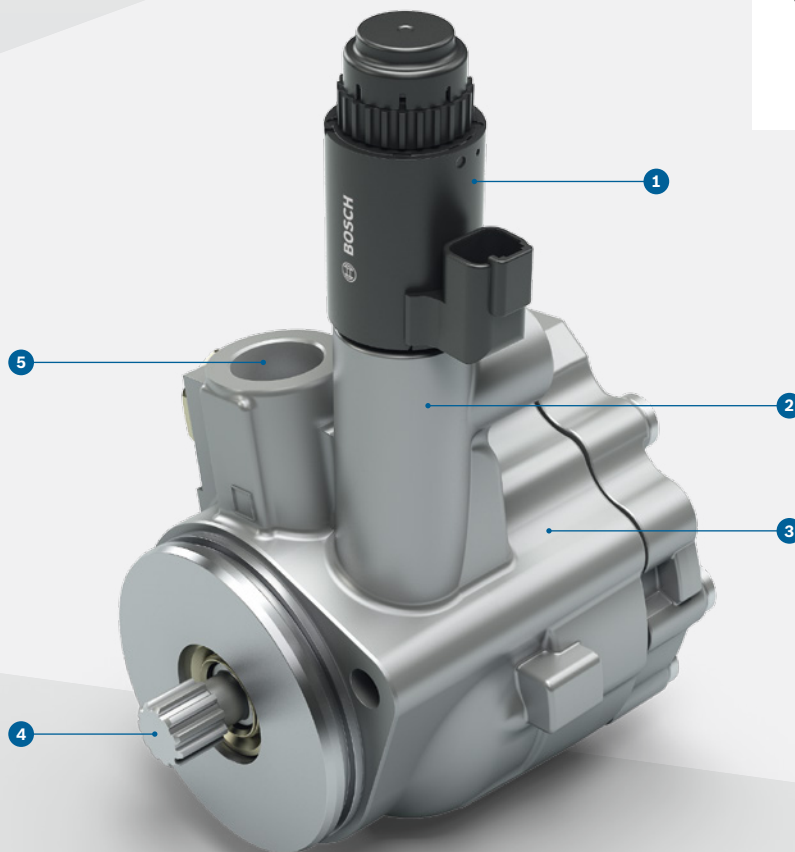
Steering systems

e-Varioserv® power steering pump



BOSCH

Invented for life



PRODUCT BENEFITS

- ▶ Demand-based volumetric flow control
- ▶ Power consumption reduced even further than that of the Varioserv® power steering pump
- ▶ Lower operating temperature in the steering system
- ▶ Reduced fuel consumption compared to a conventional as well as a Varioserv® power steering pump
- ▶ Lower CO₂ emissions
- ▶ The same flange pattern as conventional and Varioserv® power steering pumps

- 1 Electronically controlled orifice (ECO)
- 2 Pressure port
- 3 Housing with integrated flange
- 4 Driveshaft
- 5 Suction port



up to
15 °C

lower temperature in the steering system, which means less cooling required and improved system efficiency

TASK

The e-Varioserv® power steering pump provides the amount of oil needed at any time for operation of hydraulic steering systems in commercial vehicles. The pump is designed primarily for connection to the air compressor or a power take-off on an engine. The shaft connects by means of a cross-slotted disk or splines.

FUNCTION

The e-Varioserv® power steering pump consists essentially of the housing with integrated control valve, cover, front plate, shaft, rotor set, and an ECO (electronically controlled orifice). Depending on the vehicle-specific requirements, the ECO permits a further demand-based reduction of the volumetric flow compared to that of a Varioserv® pump.

The rotor set consists of the rotor, eleven radial vanes installed in the rotor, the cam ring and the outer ring. The cam ring in the e-Varioserv® is positioned eccentrically and hydraulically adjustable. Until a fixed control point is reached, the e-Varioserv® operates like a conventional power steering pump. Once this control point is reached, the geometric delivery volume is decreased by repositioning the cam ring to provide the defined flow. The ECO provides a further reduction of the specified flow. Control of the ECO is based on vehicle-specific requirements. The lower flow compared to that of a Varioserv® power steering pump translates into reduced power consumption and, in turn, a lower system temperature.

VARIANTS

Gear or pulley drive. A pressure of up to 200 bar is available if necessary. The e-Varioserv® can be combined in tandem with other pump types (e.g. fuel pre-supply pumps).

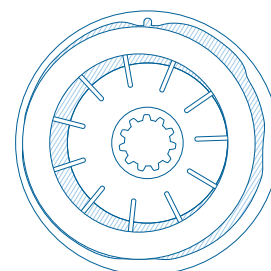
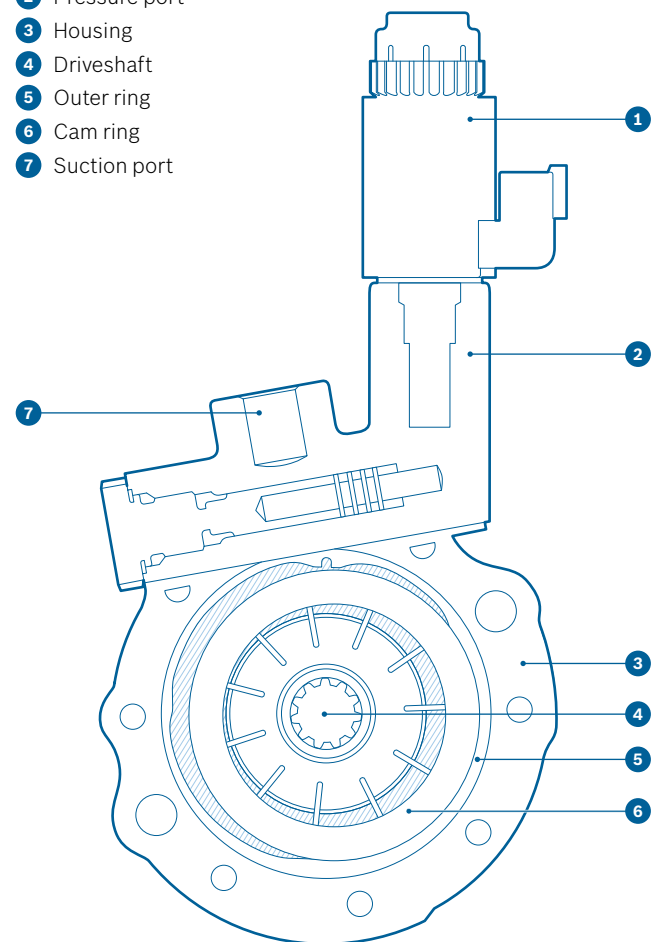
TECHNICAL CHARACTERISTICS

Model	7654	7655	7656	7657
Theor. displacement volume (cm³/rev)	22	25	28	34
Max. rotational speed (rpm)	5,000	5,000	5,000	5,000
Max. pressure (bar)	185	185	185	185
Controlled volumetric flow (l/min)	5/25	5/25	5/25	5/25
Suction port thread	1 1/16" – 12UN 2B M26 × 1.5			
Pressure port thread	3/4" – 16UNF 2B M18 × 1.5			
Drive direction of rotation	clockwise or counterclockwise			

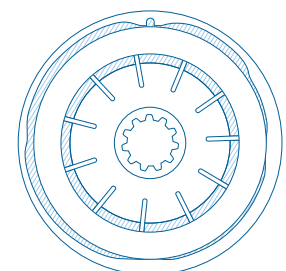
up to
65 %

lower fuel consumption and CO₂ emissions compared to a conventional power steering pump (depending on vehicle type, up to 0.3l/100km or 7.8g CO₂/100km)

- 1 Electronically controlled orifice (ECO)
- 2 Pressure port
- 3 Housing
- 4 Driveshaft
- 5 Outer ring
- 6 Cam ring
- 7 Suction port



Eccentric bearing of cam ring for maximum delivery capacity



Concentric bearing of cam ring for minimum delivery capacity