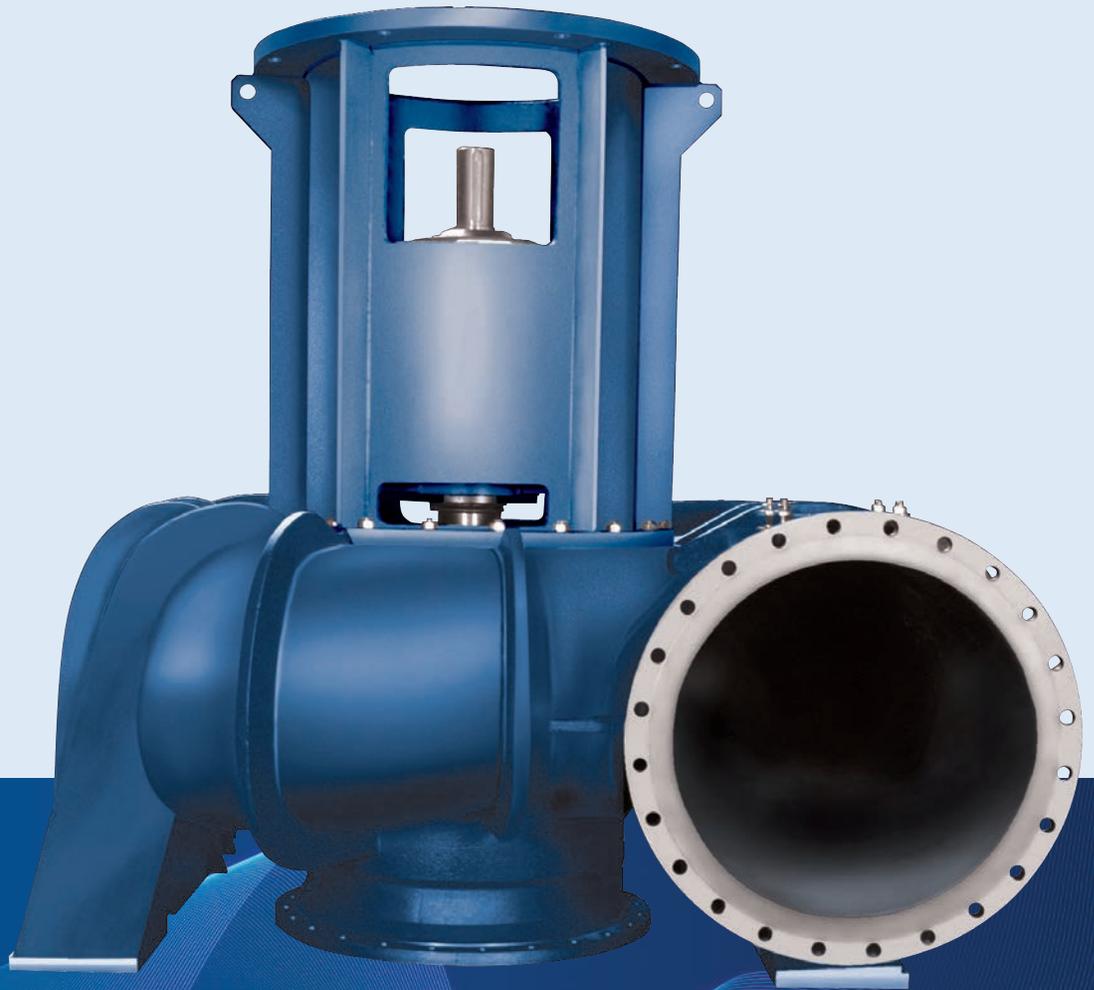




*Specialist for Pumping Technology*



# **SK / SKO / SKV**

**Single stage, end suction, solids handling  
pumps with three-channel impeller in  
horizontal and vertical configurations**

For more than 60 years the name Ruhrpumpen™ has been synonymous worldwide with innovation and reliability for pumping technology

The Ruhrpumpen Type SK with its variants is a horizontal centrifugal pump with three-channel impeller for dry installation and universal use, suitable for pumping activated sludge as well as mixed, rain and raw water with upstream screen.

## Three-Channel Sewage Pump Design

### PUMP CASING

The radial split volute casing is built in process design with axial suction nozzle, tangential discharge nozzle heading upward (end/top) and a cleaning opening near the pump discharge.

The suction side is equipped with a replaceable wear ring and anti-rotation ribs in the gap in front of the impeller, which ensures effective prevention of erosion.

The casing cover is utilised as wear plate in the area of back shroud blades of the impeller and provides the connection with the bearing bracket. Where the shaft passes through, the casing cover is designed to house the shaft seal.

### IMPELLER

The single entry, closed impeller is a three-channel type with large passage areas and specially designed to enable careful treatment of the pumped medium. It is equipped with back shroud blades for axial thrust compensation and protection against intrusion of particles into the area of the shaft seal. Front shroud blades reduce the backflow of medium to the suction side, where impeller and wear ring form the radial sealing clearance.

### SHAFT SEALING

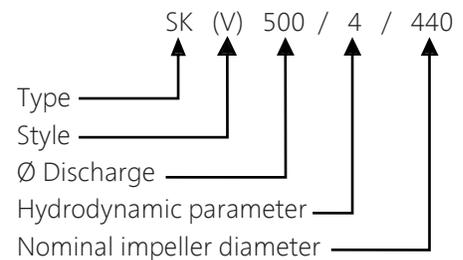
The standard design for the pump type SKO is a maintenance free mechanical seal with wear resistant silicon carbide faces, where the dissipation of frictional heat to the pumped medium is ensured by a special shape of the sealing chamber.

The standard design for the pump types SK and SKV is with soft packed stuffing box.

### BEARINGS

The pump shaft is supported by amply dimensioned grease lubricated anti friction bearings (high load angular ball bearings) equipped with lubricators. The stable bearing bracket is fixed to the base plate by a rigid support.

### PUMP SIZE IDENTIFIER



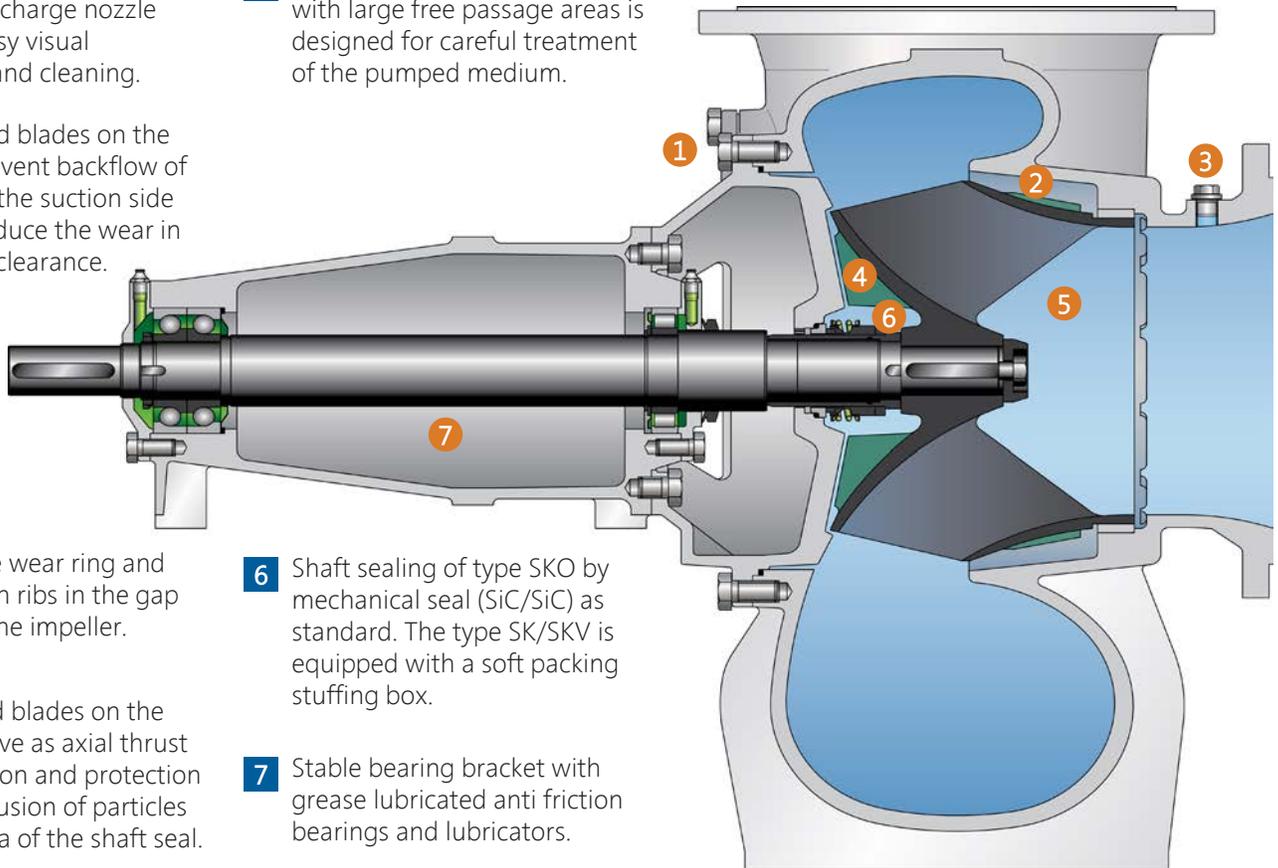
## DESIGN VARIANTS

The SK line is available in the following design variants:

- **SKO** horizontal pump DN 250 up to DN 500, for direct drive with electric motor via direct or flexible coupling or via V-belt drive, e.g. with pick-a-back mounted electric motor. Shaft sealing by mechanical seal.
- **SK** horizontal pump DN 500 up to DN 700, for direct drive with electric motor via direct or flexible coupling or via V-belt drive, e.g. with electric motor in Z-line-up.
- **SKV** vertical pump DN 250 up to DN 1600, for direct drive with electric motor via direct or flexible coupling. Support of the motor via pump casing and motor stool or installation on a separate floor.

## Characteristics & Design Features

- 1** A large cleaning opening near the discharge nozzle provides easy visual inspection and cleaning.
- 2** Front shroud blades on the impeller prevent backflow of medium to the suction side and thus reduce the wear in the sealing clearance.
- 3** Replaceable wear ring and anti-rotation ribs in the gap in front of the impeller.
- 4** Back shroud blades on the impeller serve as axial thrust compensation and protection against intrusion of particles into the area of the shaft seal.
- 5** The three-channel impeller with large free passage areas is designed for careful treatment of the pumped medium.
- 6** Shaft sealing of type SKO by mechanical seal (SiC/SiC) as standard. The type SK/SKV is equipped with a soft packing stuffing box.
- 7** Stable bearing bracket with grease lubricated anti friction bearings and lubricators.



### PERFORMANCE RANGE

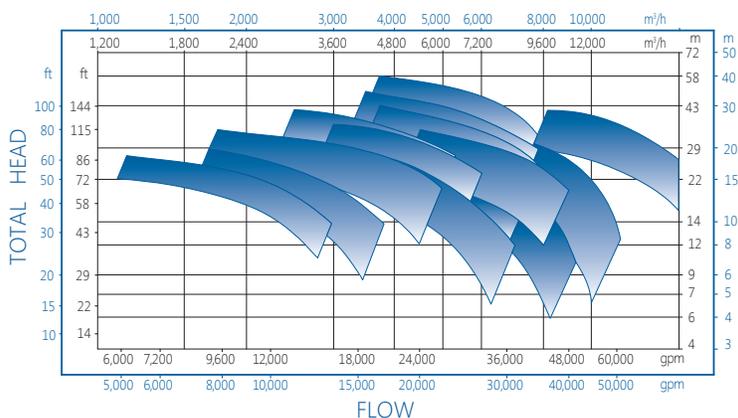
Capacity	Q	300 to 26,500 m <sup>3</sup> /h	1,320 to 116,600 gpm
Head	H	2.5 to 40 m	8 to 131 ft
Speed	n	to 1,480 min <sup>-1</sup>	to 1,790 rpm
Discharge	DN <sub>d</sub>	250 to 1,600 mm	10 to 64 in
Free Passage		75 to 270 mm	3 to 11 in

### BROAD APPLICATION RANGE

- Disposal of Waste Water
- Raw Water with Upstream Screen
- Activated Sludge
- Mixed Water

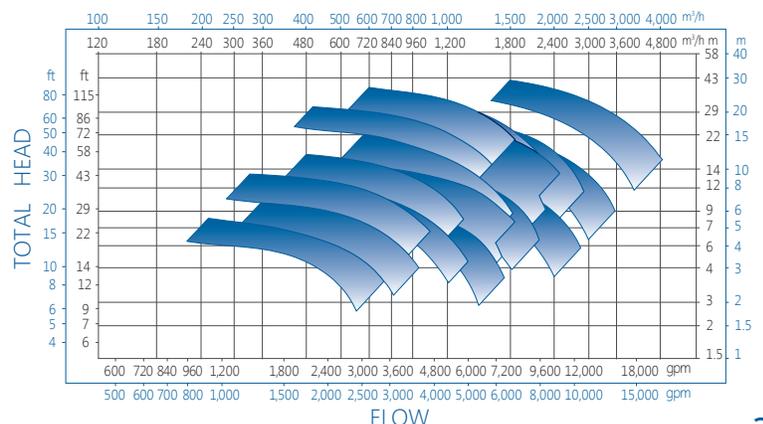
Selection Chart SK

Various Poles  
— 50 Hz — 60 Hz



Selection Chart SKO

Various Poles  
— 50 Hz — 60 Hz



## +65 years creating the pumping technology that moves our world

Ruhrpumpen is an innovative and efficient pump technology company that offers highly-engineered and standard pumping solutions for the oil & gas, power generation, industrial, water and chemical markets. We offer a broad range of centrifugal and reciprocating pumps that meet and exceed the requirements of the most demanding quality specifications and industry standards such as API, ANSI, UL, FM, ISO and Hydraulic Institute.

