




Specialist for Pumping Technology

SO End Suction Overhung Pump





Ruhrpumpen is an innovative and efficient centrifugal pump technology company and offers operators of Pump Systems, a wide range of quality products.

Ruhrpumpen is committed to global excellence with a complete range of Pumps, Fire Pump packages and related products, such as Decoking Systems and Tools to support the core markets, namely Oil & Gas, Petrochemical, Power, Heavy Industry applications, Mining and Water services.

The broad product line complies with the most demanding quality specifications and go beyond stringent industry standards such as API, ANSI, Hydraulic Institute, Underwriter's Laboratories (UL), Factory Mutual (FM) and ISO 9001.

Ruhrpumpen's quality program and in-house foundry, along with the latest testing equipment, ensures that the pumps we manufacture will provide long operating life, even under the most severe conditions.

SO Pumps

The Ruhrpumpen SO pumps are single stage, single suction, horizontal and process-type centrifugal pumps, in which the main applications are water handling, with the capacity to handle flow up to 12,340 gpm. The SO-M pump has a special configuration for hot service applications.

This pump is standardized according to DIN EN 22 858 and DIN EN ISO 2858, and can be offered with ANSI or DIN flanges. This pump also has stable characteristics. It can run continuously over the full operating range, from minimum continuous flow to best efficiency flow.

The pump is designed for ease of maintenance and inspection, without removing the casing from the baseplate or the pipework when the pump is dismantled, as well as the driver by use of a spacer coupling.

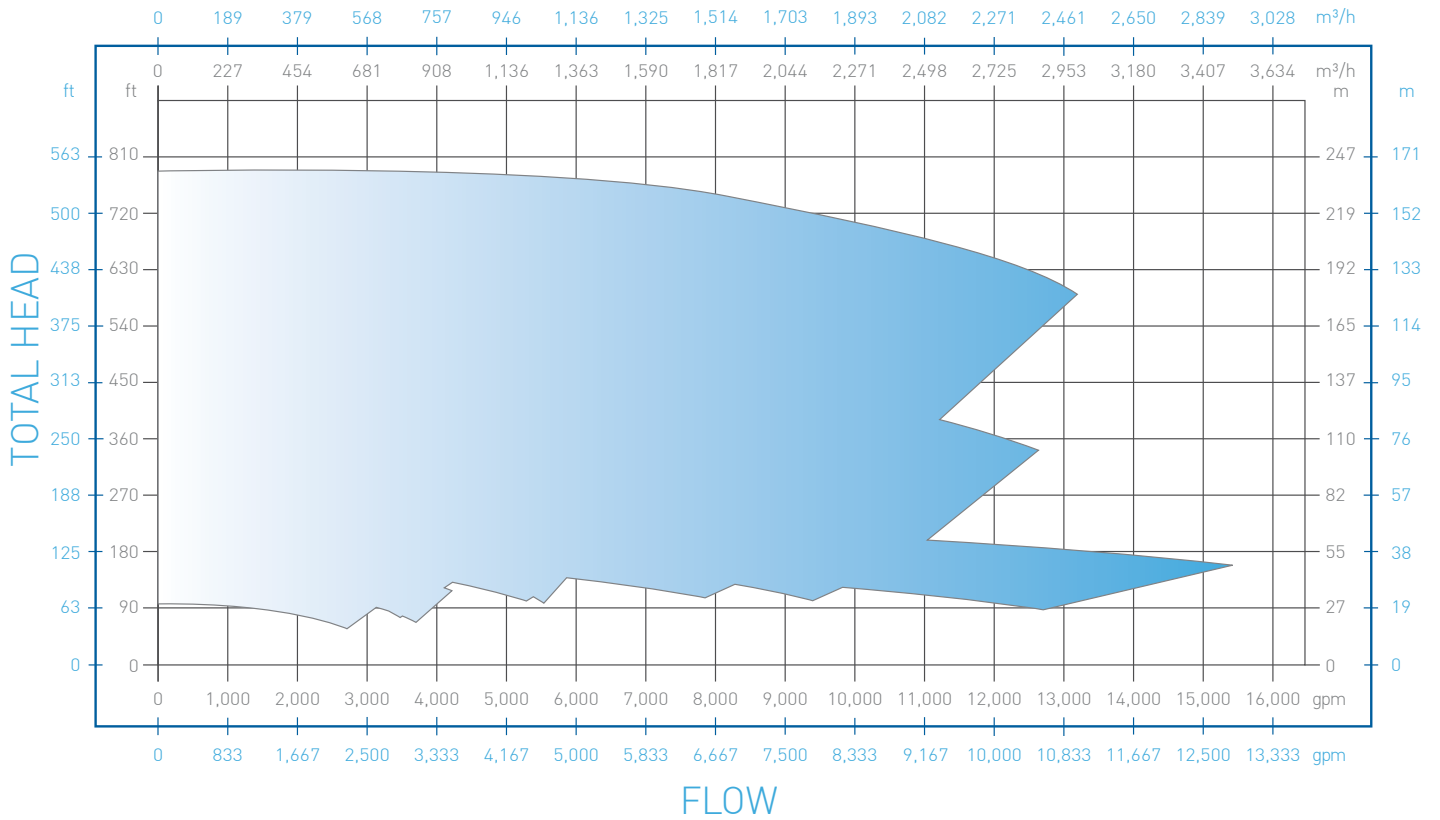
This ensures low operating costs with minimum downtime, therefore maximizing profits.



Selection Chart

S0 / 4 Poles

— 50 Hz — 60 Hz



The S0 pump can handle up to 12,340 gpm in OH configuration



Characteristics

8 FLUSH PLAN
This component serves as cooling and lubrication of the packing or mechanical seal.

9 FLANGES
Flange ratings in accordance with ANSI, DIN, up to 300#. Discharge flange size 6" to 16".

7 RADIAL BEARING COVER
Gasket sealed bearing covers, with proper tolerances to ensure min end float for maximum bearing life.

6 VENT FILTER
Removes any gas generated within oil case interior and offset the bearing housing atmospheric pressure.

5 BEARING BRACKET
Shaft supported by antifriction bearings.

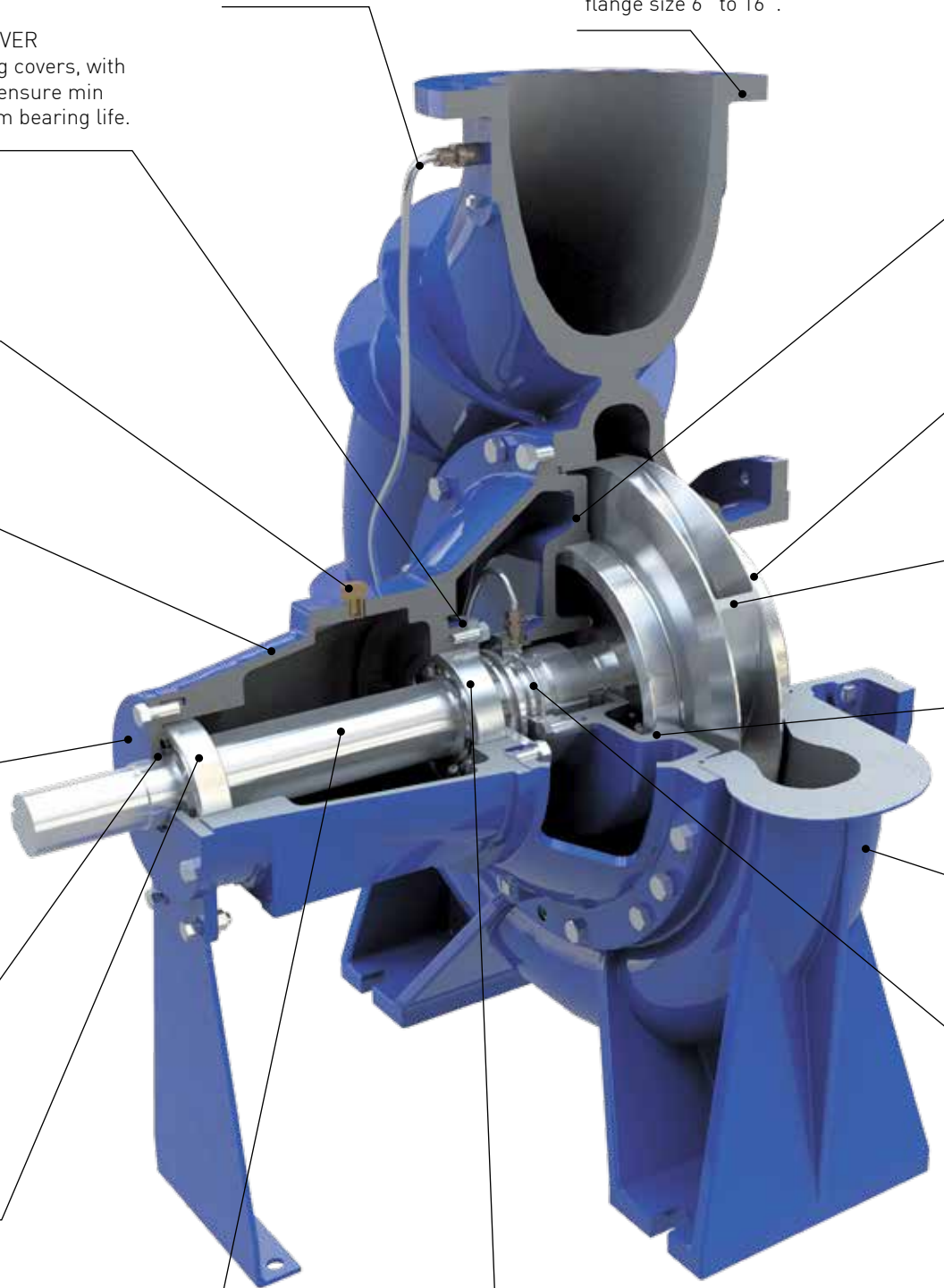
4 AXIAL BEARING COVER
Gasket-sealed bearing covers, with proper tolerances to ensure min end float for maximum bearing life.

3 SHAFT SEALING
Sealing at the bearing cover can be labyrinth type or lip-seal type.

2 AXIAL BEARING
Antifriction bearings robustly designed to provide L10 bearing life.

1 PUMP SHAFT
Made of steel and securely keyed.

16 RADIAL BEARING
Antifriction bearings robustly designed to provide L10 bearing life.



Images for general arrangement use only, not certified for construction.

10 CASING COVER
Metal to metal contact gasket is totally enclosed ensuring proper alignment.

11 IMPELLER WEAR RINGS
Optional removable wear rings in the impeller and volute casing.

12 IMPELLER
Single-entry enclosed, one-piece cast impeller dynamically balanced with hydraulic balance holes to ensure loads are minimized.

13 CASING WEAR RING
Renewable front and back wear rings, standard construction at casing and casing cover.

14 VOLUTE CASING
Heavy-duty, high efficiency designs. Cast iron, bronze and ductile iron available for SO range; and with carbon steel for the SO-M range.

15 MECHANICAL SEAL
Fitted with balanced or unbalanced single mechanical seal or soft packed stuffing boxes. Pump is provided with flushing connections as required

SO Performance Data

Capacity	up to 2,800 m ³ /h	12,340 gpm
Head	up to 160 m	525 ft
Pressure	up to 25 bar	365 psi
Temperature	-10 °C to 240 °C	14 °F to 464°F

For Pump operation outside this range, please contact a Ruhrpumpen representative.

Description

- Radially split, horizontal, centrifugal pump
- SO foot mounted / SO-M centerline mounted
- Single or double volute casing, depending on size
- ANSI & DIN flanges available
- Single suction, radial, enclosed impeller
- Thrust compensation via impeller balance holes
- End-Top nozzle arrangement
- Oil or grease lubrication depending on size
- Clockwise rotation when seen from driver end
- Can be driven by motor, engine or turbine
- Stuffing box can be equipped with packing or mechanical seal

Benefits

- Up to 12,340 gpm in overhung configuration
- Wide speed range
- Ease of maintenance and inspection, without the casing needing to be removed
- Best alternative for between bearings and split case pumps for its high flow and saving cost

Applications

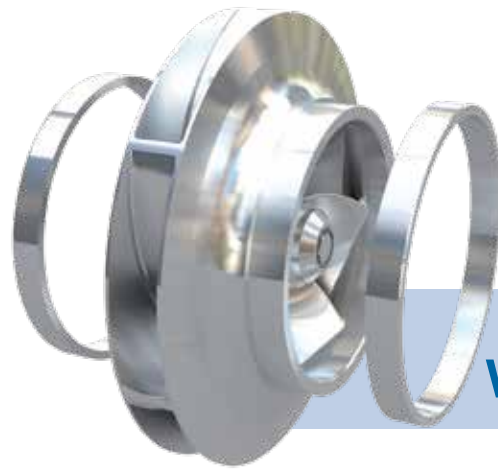
- Cooling Water
- Drinking Water
- Seawater
- Hot Service Applications (SO-M)
- Fire Pump
- General Industries
- Water Treatment
- Chemical/Petrochemical Industry
- Iron and Steel Industry
- Agricultural Technique
- Sugar Industry
- Power Stations and Heating Power Stations

Pump Standards

The SO-Standard pumps extends the range of standardized pumps according to DIN EN 22 858 and DIN EN ISO 2858, whose capacities and heads increase considerably beyond the DIN and ISO range. The range flow is within the motor rating and the NPSH-value required by the pump shown in curve. Pump Flanges are also available for different standards such as ANSI and DIN ratings.

Optional Features

- Grease lubrication as standard, oil lubrication as available option with the exception of larger-size models where oil lubrication is necessary
- Impeller Wear Rings
- DIN and ANSI Flanges available



**Impeller
Wear Rings**

Materials of Construction

- Cast Iron GJL-250
- Cast Chrome Steel GX20Cr14
- Ductile Iron GJS-400-15
- Bronze GZ-CuSn10
- Steel 42CrMo4
- Bronze CuSn7Zn4PB7-C-GZ
- Steel C45
- Stainless Steel X17CrNi16-2

Centerline Mounted for Hot Service

The SO-M pump is available with the following characteristics:

- Centerline pedestal mounted.
- Temperatures up to 240 °C (464 °F) can be handled with Stuffing Box Cooling.
- Pump casing and cover is spheroidal iron GGG-40 or cast steel GS-C25 N 3.
- Bronze impeller





Other Ruhrpumpen Products

ANSI Horizontal Process Pump



CPP - Single Stage end suction horizontal centrifugal pump, enclosed impeller, radially split casing with flanged connections. Petrochemical, Oil & Gas, Steel Industry, Automotive, Food Processing, Power Generation, Pharmaceuticals, Water Treatment, General Process.

Vertical Turbine Pump



VTP - Multistage vertical centrifugal pump with diffuser type bowl, semi-open / enclosed impellers, cast iron bowls, counterclockwise rotation viewed from coupling end. Deep well and irrigation, cooling tower, sump, condensate, can pump requirements.

Vertical In-Line Pump Flexible Coupled Pump



IVP - Split-coupling, flanged suction and discharge on common centerline, up to 350 psi, fully enclosed, impeller with hydraulic balance which prevents vibration, radially splitcase. Fire Service, Air Conditioning Systems, Condensed Water, Ice Water, Service Water, Ocean Water, Building Water Supply Systems.

Sump Pump



VSP - Single Stage single suction vertical centrifugal pump, volute type case, flanged and threaded discharge, cast iron casing, flexible coupling. Sump Drainage, Flood Control, Air Wash Systems, Power Plants, Chemical Industry, Municipal Systems, Water Treatment, Process Plants, Sewage Lift Stations.

Submersible Sewage Pump



NE - Cast Iron body, multipurpose pump, double mechanical seal, discharge nozzle up to 6", semi-open impeller. General Industry, Commercial, Irrigation, Farming, Landscaping.

Horizontal Split Case Pump Single Stage











HSD - Single stage double suction horizontal centrifugal pump, foot mounted, oil or grease lubricated bearings. Dewatering, Mining, Water, Fire service, Cooling Towers, Municipal, Oil Process, Petrochemical, Sugar Industry, Paper Industry, Pipeline, Power Generation.

Ruhrpumpen Plants

International service and support



-  USA, TULSA & ORLAND
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-  BRAZIL, RIO DE JANEIRO
-  ARGENTINA, BUENOS AIRES
-  GERMANY, WITTEN
-  EGYPT, SUEZ
-  INDIA, CHENNAI
-  CHINA, CHANGZHOU

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More Information:

