



Specialist for Pumping Technology



DSV

**Heavy Duty, Double Suction,
Vertical Process Pump**

+75 years developing the pumping technology that drives progress

Ruhrpumpen is an innovative and efficient pump technology company that offers highly engineered, custom made solutions for oil & gas, chemical processing, power generation, industrial applications and water.

Implementation of cutting-edge technology and world-class engineering, combined with our unique vertically integrated structure, allows Ruhrpumpen to design complex technical solutions, creating the most robust and powerful pump systems in the marketplace.

Our broad product line complies with the most demanding quality standards and industry specifications such as **American Petroleum Institute (API), American National Standards Institute (ANSI), Underwriter's Laboratories (UL), Factory Mutual (FM), National Fire Protection Association (NFPA), ISO and Hydraulic Institute.**

Products Include:

- Single stage overhung pumps
- Vertical in-line pumps
- Single and multi-stage between bearing pumps
- Multi-stage vertical pumps
- Reciprocating plunger pumps
- Sealless magnetic drive pumps
- Fire protection systems
- Pitot tube pumps
- Hydraulic decoking systems
- Horizontal pumping systems



Ruhrpumpen is your single source supplier

- Original Equipment
- Spare parts
- Installation and startup support
- Repair and maintenance
- Engineering, training and consulting
- Reverse engineering

Benefits of our pumps

- Proven reliability
- High efficiency designs ensure lowest operating cost
- Robust design allows for long system life with minimal maintenance
- Optimized total cost of ownership

DSV Process Pump

The Ruhrpumpen Type DSV is a heavy-duty, vertical double-suction, twin volute, single-stage, centrifugal design. The single impeller develops the higher heads and capacities without the need for additional stages. This minimizes the number of wearing parts, resulting in easier maintenance and positive alignment. Unlike the vertical turbine pump, this completely eliminates the use of intermediate bowl bearings, which are vulnerable when handling abrasive liquids.

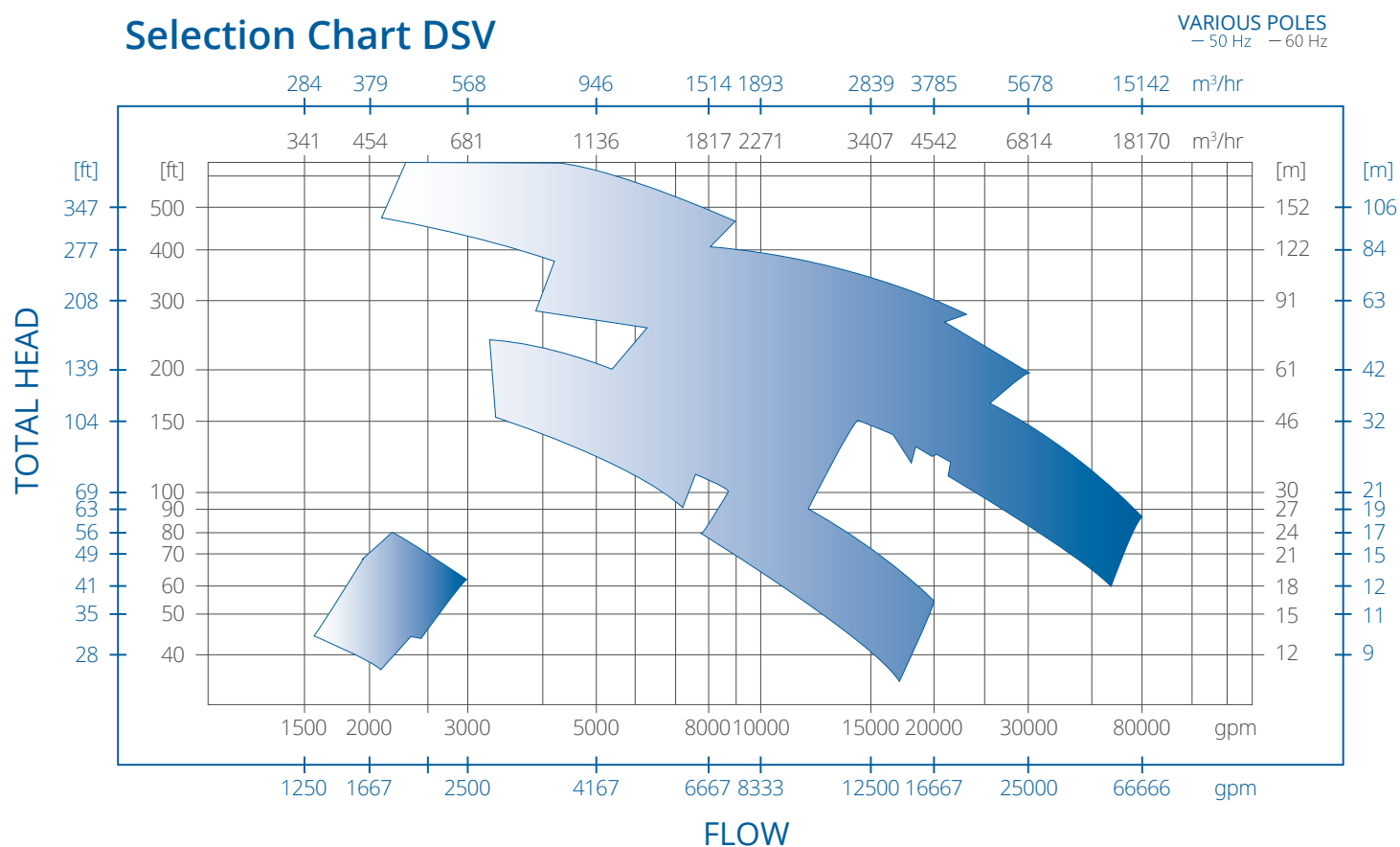
The DSV pump has good NPSH characteristics and is ideal for open sumps, channels, lakes and rivers. Without the restriction of narrowest possible diameter as for well pumps, the twin volute has larger waterways and low liquid velocities, which also reduces abrasive wear and minimizes corrosion and erosion effects.

Qualified specialists in all departments ensure the pumps and equipment from our facilities are able to operate under the most severe conditions. Intensive research and development ensures the products of Ruhrpumpen are continuously improved to meet the latest technical requirements.



Performance Range

Selection Chart DSV



Characteristics

1 Volute Case

The twin volute case is designed to efficiently convert to pressure the velocity added to the liquid by the impeller. The volute case directs the liquid from the impeller into the transition diffuser with a minimum of hydraulic losses.

2 Impeller

The impeller is an enclosed double-suction centrifugal type which is keyed to the shaft and held in position by corrosion resistant retaining rings. The retaining rings are protected from abrasion by collars that turn with the impeller. The impeller is hydraulically and dynamically balanced to provide smooth operation. When specified, optional renewable impeller wear rings may be provided on both the upper and lower skirts to the impeller or they may be added later to renew the clearances text.

3 Suction Bell

The upper and lower flared suction bell directs the liquid into the impeller. It contains four guide vanes to prevent vortexing and provides the housing for the suction bell bearings.

4 Casing Wear Rings

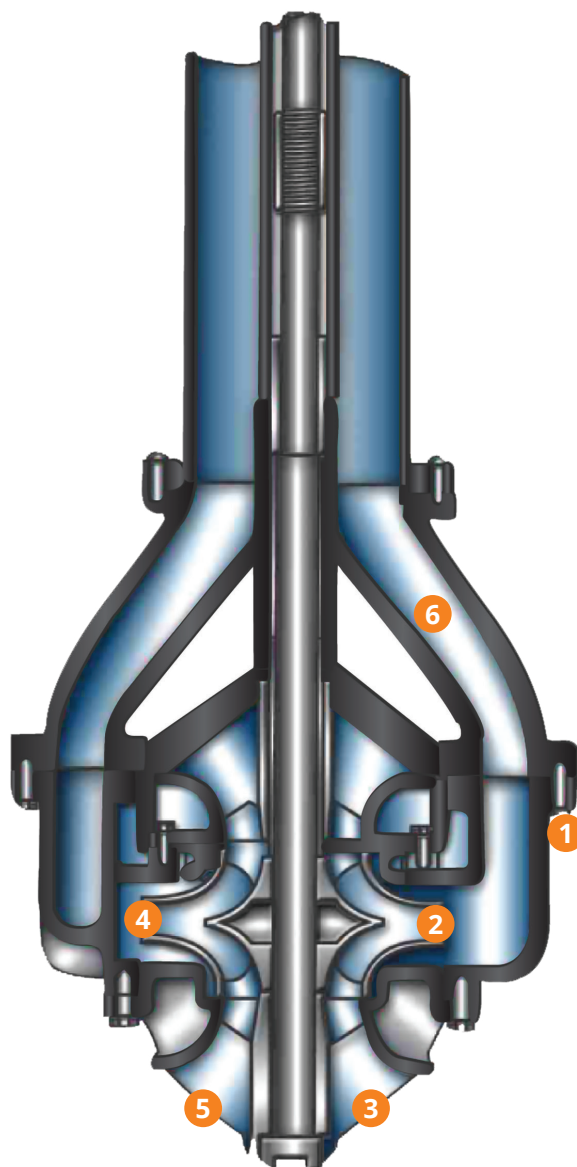
Are provided in the suction bell on both sides of the impeller. The wear rings are closely fitted to minimize the return of liquid from the discharge side of the impeller past the skirt to the suction side due to the pressure differential. The rate of wear depends on the character of the liquid pumped and the materials of construction. Hardened stainless steel wear rings are often used for severe service.

5 Bell Bearings

Are located in the suction bells immediately adjacent to either side of the impeller. The bell bearings are a sleeve-type and grooved to receive proper lubrication and closely fitted to maintain alignment.

6 Transition Diffuser

The transition diffuser provides a smooth hydraulic flow from the volute to the column pipe. The transition diffuser contains the connector bearing that couples to the bottom section of the shaft tube flanged connections with registered fits are provided for bolting the column pipe.



DESCRIPTION

- Vertical space saving construction.
- Above or below base discharge.
- Oil lubricated column, or it may be forced lubricated by the pumped liquid.
- Packed stuffing box or mechanical seal.
- Optional renewable impeller wear rings may be provided.

BROAD APPLICATION RANGE

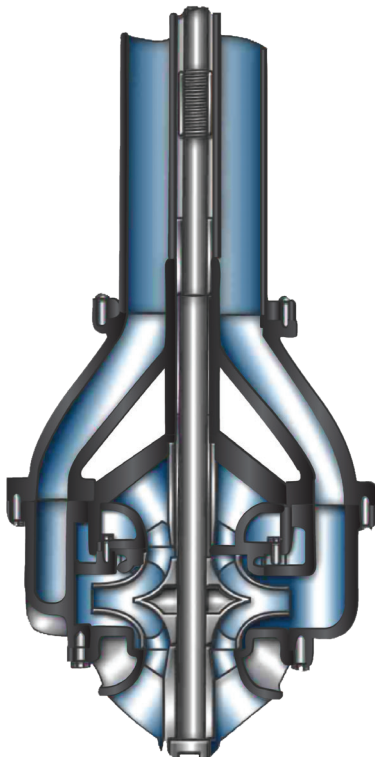
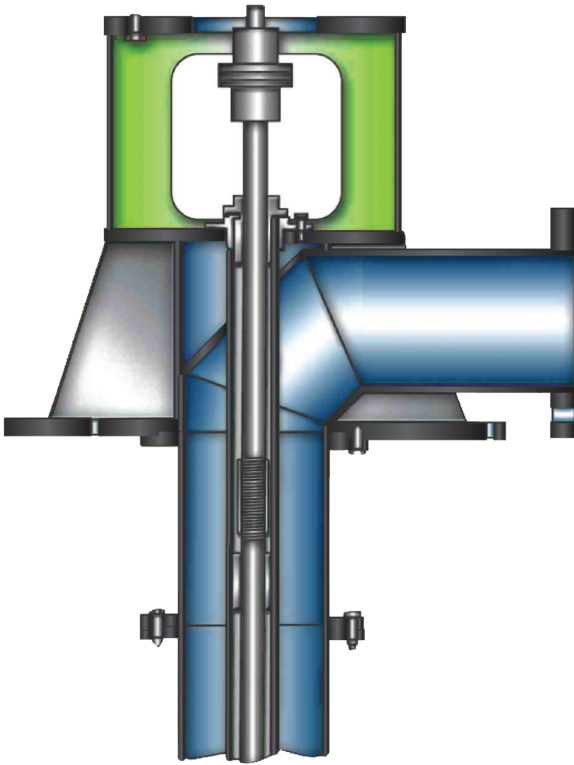
- Cooling towers and other applications requiring large volumes of liquid with relative high head.
- Raw water intake.

DSV PERFORMANCE DATA

Capacity	340 to 11,360 m ³ /h	1,500 to 50,000 gpm
Head	170 to 650 m	40 to 600 ft
Pressure	up to 19 bar	to 280 psi
Temperature	up to 150 °C	up to 302°F
Dis. Flange Size	12 to 36 in	

Notes:

For pump operations outside this range, please contact a Ruhrpumpen Representative.



+75 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.



Ruhrpumpen Plants

-  ARGENTINA, Buenos Aires
-  BRAZIL, Rio de Janeiro
-  CHINA, Changzhou
-  EGYPT, Suez
-  GERMANY, Witten
-  INDIA, Chennai
-  MEXICO, Monterrey
-  UK, Lancing
-  USA, Tulsa

-  Manufacturing plant & service center
-  Service center