



# DSV

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



# DSV Process Pump

***For over 50 years the name Ruhrpumpen has been synonymous worldwide with innovation and reliability for pumping technology.***

**T**he 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.

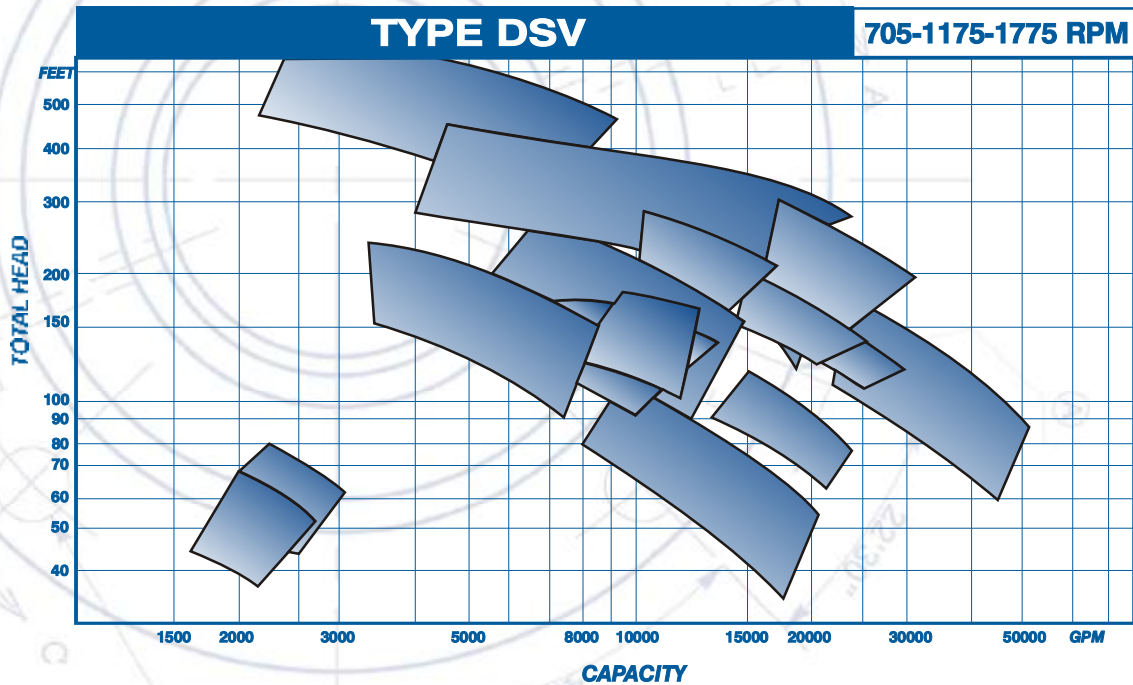
Qualified specialists in all departments ensure the pumps and equipment from our facilities are able to operate under the most severe conditions.

Intensive research and development ensures the products of Ruhrpumpen are continuously improved to meet the latest technical requirements.

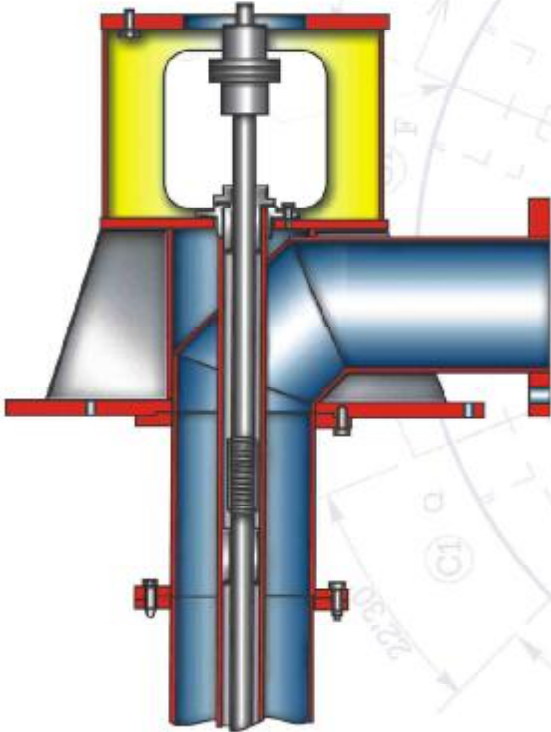
It is only possible to achieve these aims by means of highly sophisticated CNC controlled machines in our modern machine shop, supplemented by our test and development departments as well as the latest industry standard inspection and control procedures. All in our ISO 9001 certified facilities.

The application of modern, reliable methods, data processing and sophisticated software with high performance, state of the art IT offers our customers high reliability and speed in all working processes, from planning and production to the providing of spare parts.

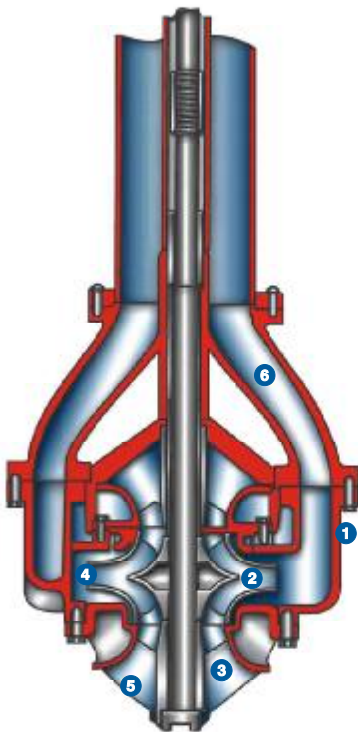
The instant availability of spare parts, together with first class service, ensures customers that they have selected the right partner.



**Vertical Process Pump**



- 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.
- 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 provide 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.



**Product 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.

**Performance Data**

Capacity	Q 340 to 11360 m <sup>3</sup> /h	1500 to 50000 gpm
Head	H 170 to 650 m	40 to 600 ft
Discharge flange size	12" to 36"	
Max. Pressure	19 bar	280 psig
Temperature	to 150°C	302°F

## Other Ruhrpumpen Products

**API 610  
Overhung Radial Split**



**API 610  
Between Bearings  
Radial Split Single Stage**



**API 610  
Multistage**



**Axially  
Split**



**UL/FM  
Firewater Pumps**



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