SPLIT CASE
Double Volute, Horizontal Split Case Pumps
Ruhrpumpen is an innovative and efficient centrifugal pump technology company that 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 other 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 equipment, ensures that the pumps we manufacture will provide long operating life even under the most severe conditions.

Split Case Pumps

The Ruhrpumpen HS/ZW pumps are single- or multi-stage, double suction, double volute, axially-split case pumps.

The suction and discharge nozzles are integrally casted in the lower half of the casing and on the same horizontal center-line. The nozzle configuration is side/side.

Intensive research and development ensures that the products of Ruhrpumpen are continuously improved to meet the latest technical requirements. Instant availability of spare parts, together with first-class service, ensures customers that they have selected the right partner.
Selection Chart

SPLIT CASE (HSD, HSC, HSR, HSL, HSM, ZW) / Various Poles

With this complete range of Horizontal Split Case Pumps and our depth of expertise in pump engineering, Ruhrpumpen can truly a solution to every customer.

Horizontal Split Case Pumps Performance Data

<table>
<thead>
<tr>
<th>PUMP TYPE</th>
<th>CAPACITY</th>
<th>HEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSD</td>
<td>up to 1,590 m³/h</td>
<td>7,000 U.S. gpm</td>
</tr>
<tr>
<td>HSC</td>
<td>up to 31,800 m³/h</td>
<td>140,000 U.S. gpm</td>
</tr>
<tr>
<td>HSR</td>
<td>up to 2,050 m³/h</td>
<td>9,000 U.S. gpm</td>
</tr>
<tr>
<td>HSL</td>
<td>up to 500 m³/h</td>
<td>2,200 U.S. gpm</td>
</tr>
<tr>
<td>HSM</td>
<td>up to 454 m³/h</td>
<td>2,000 U.S. gpm</td>
</tr>
<tr>
<td>ZW</td>
<td>up to 9,000 m³/h</td>
<td>40,000 U.S. gpm</td>
</tr>
</tbody>
</table>
Characteristics

1 WEAR RINGS
Casing wear rings are standard and replaceable on all pumps. Impeller wear ring are optional.

2 IMPELLER
All impellers are double suction, dynamically balanced and held in place by separate nuts. (investment casting and sand casting manufacturing).

3 BEARING HOUSING
360° bearing housing arrangement to ensure mechanical stability and low vibration levels. Design allows to use the housing for packing (Standard seal) or mechanical seal (Optional seal).

4 BEARINGS
Interchangeable line and thrust bearings (conservatively rated at 100,000 hours “plus” bearing life) guarantee maximum life at minimum maintenance cost. Either oil or grease lubrication available.

5 CASING SEALING SYSTEM
Innovative sealing system allows metal to metal contact ensuring a perfect rotor-casing alignment, improved sealing capacity and ease of field maintenance.

6 FLANGES
Suction and discharge connections all on the same center line for piping ease.

9 MECHANICAL STRENGTH
Provided with ribs and connection bosses to ensure mechanical strength during hydrostatic test and normal operation.

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

- Single or multi-stage horizontal centrifugal pump
- Horizontally split case, single-volute or double-volute (some HSC sizes) minimizes thrust loads and allow operation over a wide range of capacities
- Flanged connections
- Enclosed impellers, double suction provides hydraulic balance eliminating axial thrust
- Clockwise or counterclockwise rotation
- Oil lubrication bearings
- Stuffing box allows mechanical seal option
- Horizontal or vertical mounting arrangements available
- Foot mounted

**Benefits**

- All HS/ZW pumps can be mounted vertically or horizontally, depending on the requirements of the customer

**Applications**

The Ruhrpumpen Split Case Pumps are designed for a wide range of industrial, chemical process and municipal.

Applications such as:

- Cooling towers
- Municipal
- Oil process
- Dewatering
- Mining
- Water
- Petrochemical
- Sugar Industry
- Paper Industry
- Fire Service
- Pipeline
- Power Generation

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**Horizontal Split Case Performance Data**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>up to 31,800 m³/h 140,000 U.S. gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>up to 340 m 1,115 ft</td>
</tr>
<tr>
<td>Pressure</td>
<td>up to 27 bar 298 psig</td>
</tr>
<tr>
<td>Temperature</td>
<td>-9 °C to 150 °C 50 °F to 300 °F</td>
</tr>
</tbody>
</table>

For pump operation outside this range, please contact a Ruhrpumpen representative.
ZW Design Features

- ZW bearing housing has a 360° mounting configuration, feature that allows ease of maintenance and improved mechanical stability.
- Modular design, allows parts interchangeability within the same pump in different sizes.
- Standardized design allows use of same components for both, mechanical seal or packing option.
- Improved casing sealing through an innovative design which assures metal to metal contact.

HSM Multi-Stage Horizontal Split Case

From our Industrial Line, the HSM pump is a split case heavy-duty process pump. Unlike our other split case pumps, the HSM type is a two- or four-stage pump which allows higher pressure applications such as petrochemical, chemical, industrial, boiler feed or power plant applications.

Design Features

- Oil lubricated bearings
- Flanged connections
- Stuffing box allows for packing or mechanical seal options.
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 In-Line Pump Flexible-Coupled Pump

IVP - Split-coupling, flanged suction and discharge on common center-line, up to 350 psi, fully enclosed, impeller with hydraulic balance which prevents vibration, radially-split casing.


Vertical Turbine Pump

VTP - Multi-stage 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.

Sump Pump

VSP - Single-stage single suction vertical centrifugal pump, volute-type case, flanged and threaded discharge, cast iron casing, flexible coupling.


Vertical Barrel Pump

VLT - Low NPSH "Shockless Entry" first stage impeller (single- or double-suction), single- or multi-stage. Standard construction materials according to API latest edition (type VS6).

Condensate, Power plants, Municipal, Hydrocarbons, Pipeline and Refineries.

Multi-Stage, Axially Split Casing Pump

SM - Axially-split, horizontal multi-stage, centrifugal pump, near center-line mounted, single suction, radial, closed impeller (API Type BB3).

Oil Fields and Terminals, Water Pipelines, Fluid Injection and High Pressure Services.
Ruhrpumpen Plants

International service and support

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