

GRUNDFOS HS PUMPS

GRUNDFOS HORIZONTAL SPLITCASE PUMPS

THE RELIABLE & EFFICIENT WORKHORSE



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□ INTRODUCTION

The Grundfos HS horizontal splitcase pump is an unstoppable workhorse. The HS delivers high efficiency performance and low life-cycle costs. The highly reliable hydraulic design combined with the service-friendly layout of the splitcase housing assures maximum benefits for the user.

All HS pumps are tested to ensure the performance requirements are achieved prior to delivery. The HS is a well-built, reliable splitcase pump proudly offered by Grundfos – the splitcase pump market leaders!

Technical Data

Flow, Q:	10 to 2500m ³ /hr
Head, H:	5 to 148m
Motor, range:	1.5 – 600kW
Motor, cycles:	50 Hz
Operating Pressure:	16 bar, max.
Liquid temperature:	Up to 100°C
Discharge Sizes:	50 – 350mm
Impeller Sizes:	242 – 630mm



Applications

The Grundfos HS pumps are used in these main fields of application:

Commercial systems

- Air-conditioning and chilled water system
- Water condensing systems and cooling towers
- District heating plants and heating systems

Industrial systems

- Process cooling and chilled water systems
- Industrial heating systems
- Washdown and cleaning systems

Water distribution

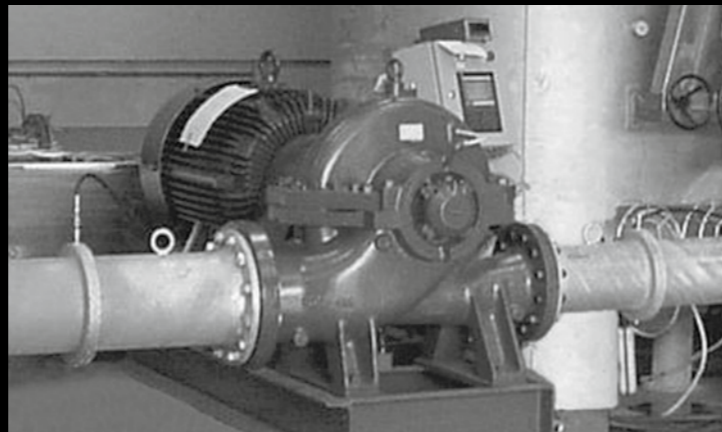
- Public waterworks
- Non-potable water systems

Irrigation and agriculture

- Field irrigation (flooding)
- Sprinkler irrigation

□ PUMP DESCRIPTION

- The pumps are non-self-priming, centrifugal volute pumps with radial suction and radial discharge ports and horizontal shaft.
 - Suction and discharge flanges are PN 16 according to EN 1092-2 (DIN2501).
 - The pump is long-coupled with a totally enclosed fan-cooled standard motor with main dimensions to IEC and DIN standards and mounting designation B3 (IM 1001).
 - The mechanical shaft seal has dimensions according to EN 12756.
 - The rotating assembly is dynamically balanced according to ISO 1940 class G6.3.
 - Impellers are double suction providing long operating, corrosion free life. Impellers are constructed in ASTM B584 bronze and are hydraulically balanced.
- Grundfos HS pumps are available in three different variants:
 1. Pump with motor and base frame.
 2. Bare shaft pump with base frame.
 3. Bare shaft pump; ie pump without motor and without base frame.
 - The split-case construction enables removal and dismantling of the internal pump parts, e.g. bearings, wear rings, impeller and shaft seal, without disturbing the motor and pipework.
 - Replaceable case wear rings protect the pump casing while reducing maintenance costs and maintaining high operating efficiencies.
 - Pump and motor are mounted on a common base frame in the form of a welded, steel C-channel profile.
 - Bronze shaft sleeves protect the shaft and help with fixation of the impeller.



SELLING FEATURES

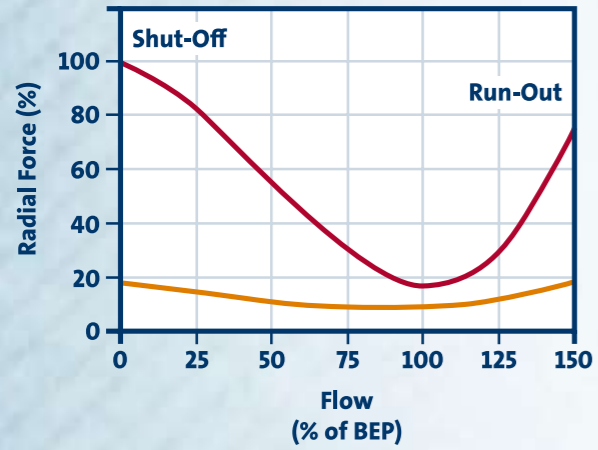
Pump casing

- Compensated double volute design virtually eliminates radial forces caused by a hydraulic imbalance inherent in pump volutes
- Double volute design extends seal and bearing life, minimizing noise and vibration, and improving operating efficiency – meaning less wear and lower maintenance costs

COMPARISON CHART

Typical radial force vs. design capacity with single and double volute

SINGLE VOLUTE DOUBLE VOLUTE



Bearing Housing

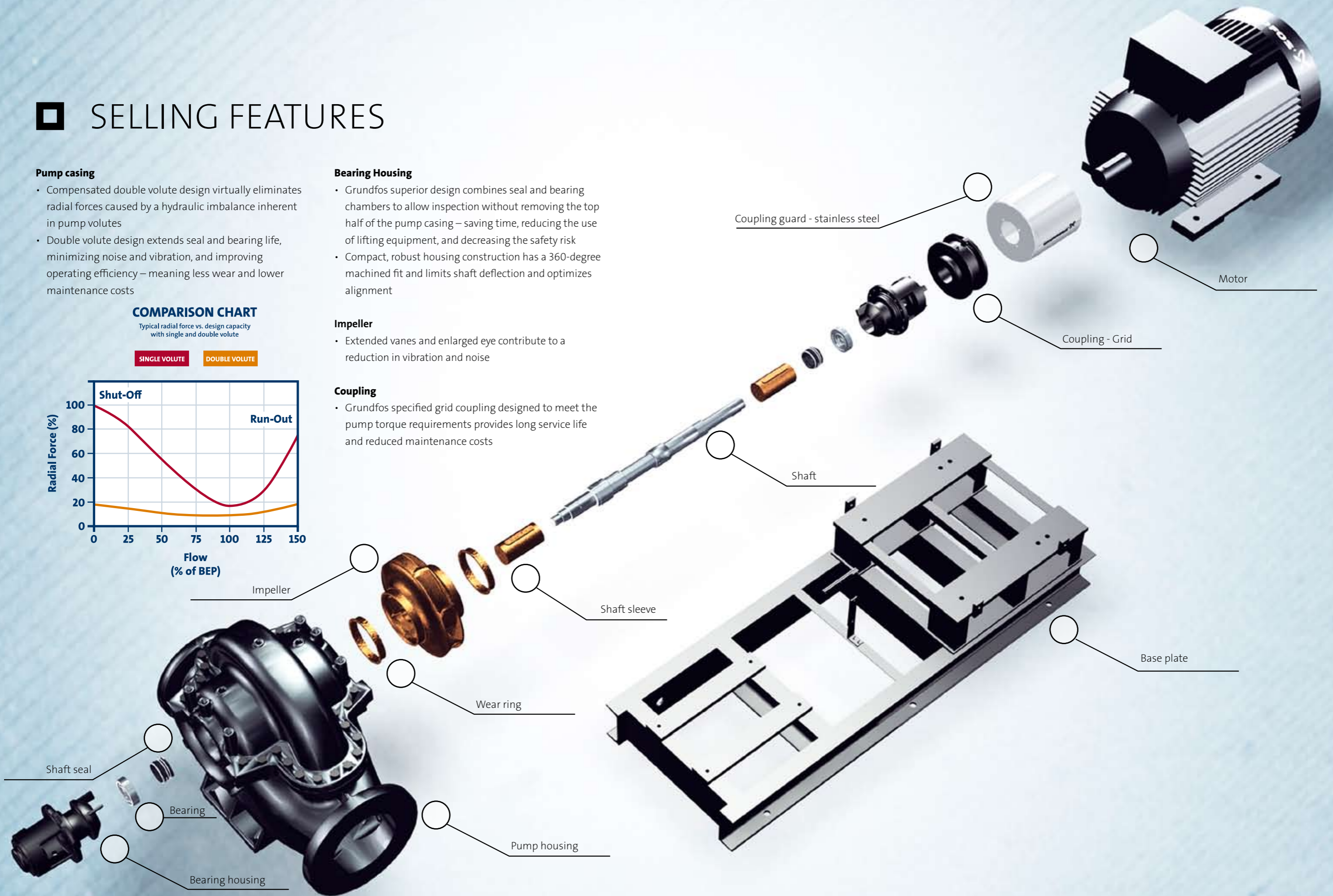
- Grundfos superior design combines seal and bearing chambers to allow inspection without removing the top half of the pump casing – saving time, reducing the use of lifting equipment, and decreasing the safety risk
- Compact, robust housing construction has a 360-degree machined fit and limits shaft deflection and optimizes alignment

Impeller

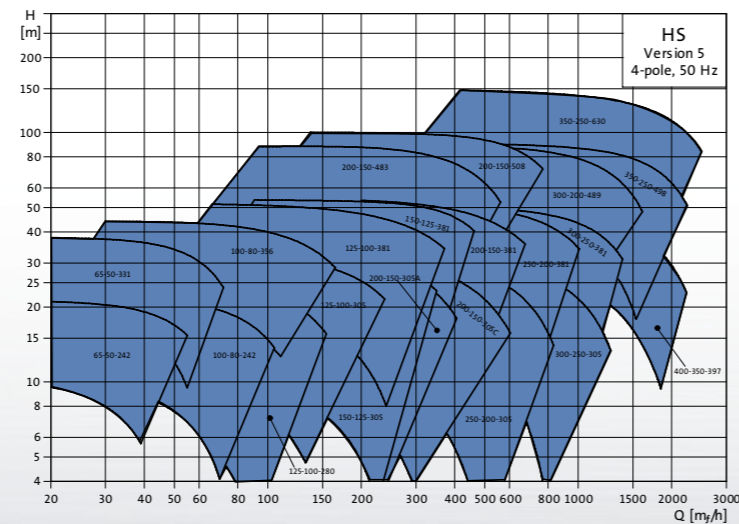
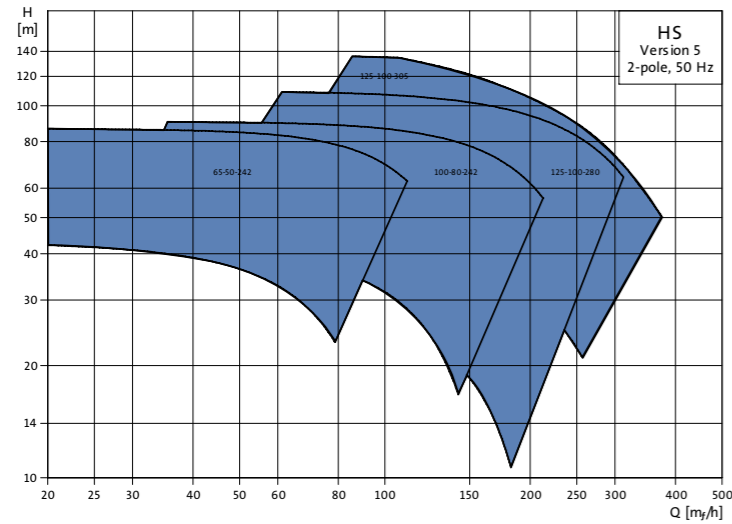
- Extended vanes and enlarged eye contribute to a reduction in vibration and noise

Coupling

- Grundfos specified grid coupling designed to meet the pump torque requirements provides long service life and reduced maintenance costs



HS RANGE OVER VIEW 2/4/6 POLE MOTORS



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Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence

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