GRUNDFOS HORIZONTAL SPLITCASE PUMPS
THE RELIABLE & EFFICIENT WORKHORSE
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 2500 m³/hr
Head, H: 5 to 148 m
Motor, range: 1.5 – 600 kW
Motor, cycles: 50 Hz
Operating Pressure: 16 bar, max.
Liquid temperature: Up to 100°C
Discharge Sizes: 50 – 350 mm
Impeller Sizes: 242 – 630 mm

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 (DIN 2501).
• The pump is long-coupled with a totally enclosed fan-cooled standard motor with main dimensions to IEC and DIN standards and mounting designation B11 (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.

**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.
**10 Ways to Kill Your HS Pump**

1. **Overwork it**
   Work the pump continuously at higher capacities, flows, heads, or speeds than originally specified.

2. **Starve it**
   Never grease or oil the pump.

3. **Choke it**
   - Lower the water level in the sump.
   - Let the suction strainer clog and never clean it.
   - Let the temperature of fluid rise without raising the suction pressure.

4. **Fry it**
   Operate at shutoff for a long time with the bypass line closed tight will convert your power to heat.

5. **Poison it**
   Change the pumped fluid without checking with the manufacturer (for example adding chemicals).

6. **Stab it**
   Remove the suction strainers which will introduce grit, sand, and scale into the fluid.

7. **Break its limbs**
   Impose heavy piping loads on the suction and discharge nozzle, either through initial misalignment or through thermal expansion.

8. **Shake it**
   Don’t align at installation or install on a flimsy foundation.

9. **Drown it**
   For a packed pump with a drain for the gland leakage:
   - Plug the drain with a cigarette butt, gum or paper.
   - Remove the water shield.
   - Line up the splits on the packing rings.

10. **Neglect check-ups**
    - Ignore the manufacturer's recommendations for "check-ups".
    - Don't check packing, gaskets, o-rings, or other small parts.
    - Don't ever repaint it, or lubricate the coupling, if required.
    - Don't check vibration.