

# FAIRBANKS NIJHUIS SPLIT CASE PUMP DOUBLE SUCTION

# SPLIT CASE PUMP

## DOUBLE SUCTION

### DOUBLE SUCTION SPLIT CASE PUMP AN IDEAL SOLUTION

The Fairbanks Nijhuis' split case pump is the right choice for a wide range of applications. This pump configuration exceeds the characteristics of two smaller single suction pumps or one larger single suction pump, offering superior performance in terms of efficiency, maintenance and footprint.

The optimized design of the split case pump ensures high efficiency and durability. The split case pump has low maintenance requirements and can be produced in a number of materials according to the specific application requirements. It is available in both horizontal and vertical configurations, which enables a great deal of installation flexibility. Split case pumps are available for a wide range of flow rates and pressure heads.

#### Applications:

- Potable water
- Cooling water
- Air conditioning
- Shipbuilding
- Irrigation
- Drainage
- Desalination
- Fire fighting systems

### CUSTOMIZED SOLUTIONS A VALUABLE AND SUSTAINABLE OPTION

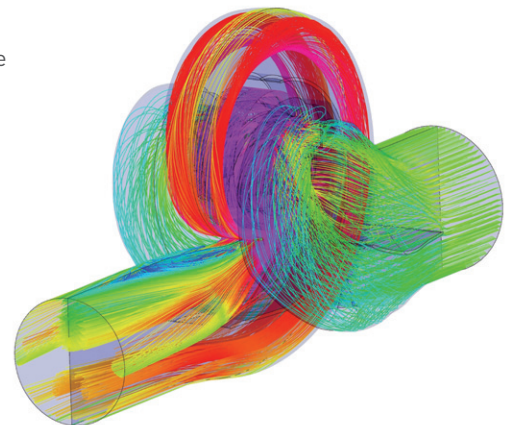
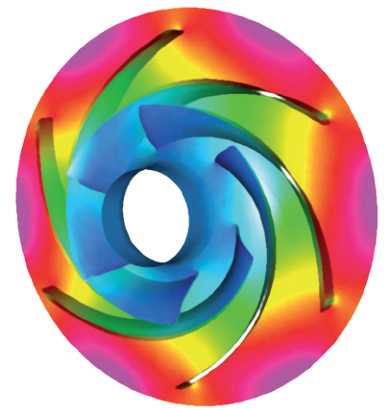
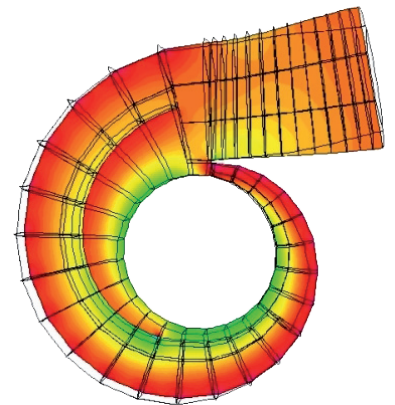
System design and performance are usually dependent on the availability and configuration of suitable pumps. At Fairbanks Nijhuis, we can modify our pump designs to meet the requirements of each individual system. This results in the best overall system performance for a specific application.

#### Our customers benefit from:

- Reduced energy consumption
- Less environmental impact
- Low operating costs
- Extended service life and durability
- Low vibration and noise levels
- Upgrading of existing pumps
- Low footprint

Design modification can range from minor changes like reshaping the impeller, to a dedicated pump design for a specific application. The vast experience and engineering know-how as well as advanced design software available at Fairbanks Nijhuis, ensure that new custom designs are developed in an expedient way. Hydraulic performance can be accurately predicted and designs are subjected to structural analysis. Design verification occurs in our test facility. For very large pumps either a scale model test is performed or extensive on-site measurements can be conducted using our calibrated instrumentation. In addition, external testing and certification authorities can be selected to execute the testing.

Consider a customized solution as a valuable and sustainable option when selecting your pumps.



## FEATURES AND BENEFITS

### High efficiency

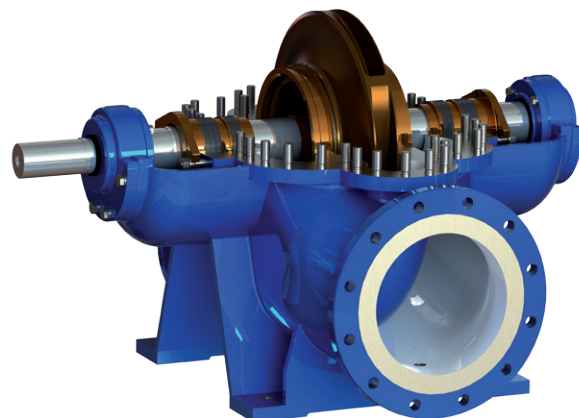
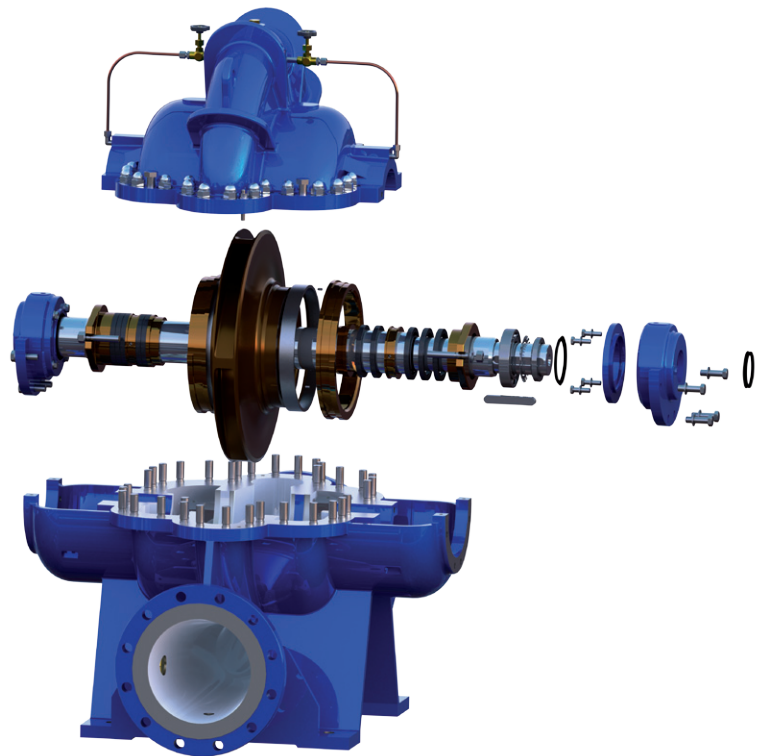
The shapes of impeller and pump casings are optimized to achieve the highest possible efficiency for the specific design flow rate and pressure head. Off design characteristics are optimized to give each pump a wide operating range, ensuring that cavitation limits are not exceeded.

### Ease of maintenance

The pumps are easy to maintain as the upper half can be removed without dismantling pipe connections and driver components so that the alignment is not disturbed. In addition, our service department offers financially attractive service and maintenance contracts, which guarantee that downtime in pumping installations is kept to a minimum.

### Durability

By using double suction impellers and double volute casings Fairbanks Nijhuis supplies pumps with low vibration and noise levels. A double volute reduces radial thrust, resulting in longer service life for bearings and seals.



Horizontal configuration of the split case pump

## MATERIAL OPTIONS

To meet the demands of multiple applications, which requires that pumps or parts are constructed in a specified material, the Fairbanks Nijhuis split case pumps are available in a wide range of materials:

- Cast iron
- Ductile cast iron
- Bronze
- Nickel aluminum bronze
- Stainless steel
- (Super) duplex stainless steel
- Other materials on request



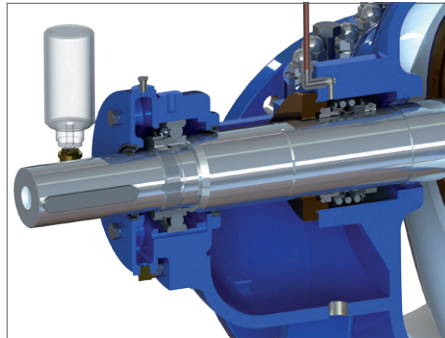
Vertical configuration of the split case pump

## HORIZONTAL CONFIGURATION

### A variety of shaft seal configurations

The selection of shaft seals depends on the operating conditions and composition of the medium being pumped. We can advise on the correct configuration for your application, ensuring safe and reliable operation with minimal maintenance requirements.

- Standard soft packing
- Various mechanical seals, which can be balanced as well as externally flushed, including dry-run protection
- Various options of tandem lip seals



Oil lubricated bearing with a mechanical seal

## BEARINGS

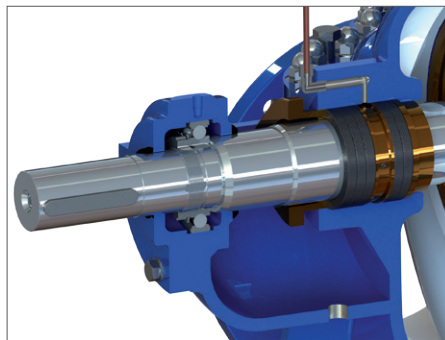
The bearings are easily accessible for inspection and maintenance. As standard the pump has grease lubricated anti-friction bearings.

### Option for horizontal configurations

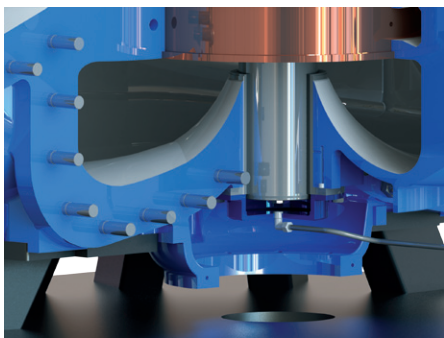
- Oil lubricated anti-friction bearings
- The lubricant choice depends on the operating conditions.

### Option for vertical configurations

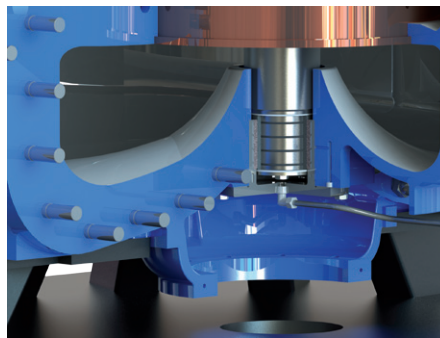
- Lower sleeve bearing in various materials, lubricated by pumped medium, with or without external flushing



Grease lubricated bearing with a soft packing



Sleeve bearing

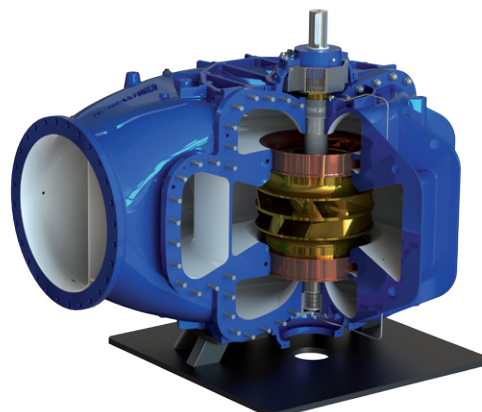


Ceramic bearing

## VERTICAL CONFIGURATION

Our split case pump is also available in a vertical configuration, which decreases the footprint when space is limited. In addition, due to the elevated motor location, the electronic parts stay dry when the water level in the pump room rises.

- Lower bearing of a maintenance-free sleeve type
- Available in various materials



## FIRE PROTECTION UNITS

The split case pump is at the heart of many Fairbanks Nijhuis fire protection units. The scope of supply in fire protection consists of pump sets with electric or diesel motors and control units, as well as mobile pump units in containers for use in fire fighting systems. These systems are used by sprinkler installation companies, engineering companies, airports, oil platforms, marine, and (petrochemical) industry. All units fully comply with NFPA-20, FM (up to 7000 USGPM / 1590 m<sup>3</sup>/h), UL (up to 5000 USGPM / 1135 m<sup>3</sup>/h), and CEA standards.



## PUMP UNITS

Fairbanks Nijhuis supplies complete pump packages and pump units utilizing the split case pump on request.



## ABOUT PUMP CURVES

Capacities of our split case pumps vary between 90 and 13,000 m<sup>3</sup>/h (396 - 57,237 USGPM). On request higher capacities can be realized. The head varies between 5 and 250 m (16 - 820 feet). Higher head available on request.

Detailed pump curves are supplied on request, and we can assist you in selecting the right pump for your application in order to ensure optimum performance for the complete operating range.

## ADVANCED AND SUSTAINABLE SERVICE ACTIVITIES

Our service department offers service and maintenance contracts which guarantee that downtime in pumping installations is kept to a minimum, resulting in a cost saving operation for our customers. Service is an essential element of Fairbanks Nijhuis' activities and fast response time is of vital importance.

We offer a variety of service activities:

- **Installation & Commissioning** of complete mechanical and electrical installations on turnkey basis.
- **Repair & Maintenance** - incidental service visits on location to breakdown repairs and maintenance on a 24-hour contract basis for products made by Fairbanks Nijhuis or by any other manufacturer.
- **Upgrades** - with our engineering capabilities we can execute pump modifications to customer specifications of pump designs of most manufactures.
- **Original spare parts** - we provide stock control of spare parts for groups of pumps (total care maintenance). We are able to respond quickly and flexibly thanks to the availability of our own foundry.
- **Inspection** on site on an incidental or periodic basis.
- **Training** of our worldwide customers in the field of installation, operation and maintenance.
- **Predictive maintenance** helps to keep the lowest energy costs by means of professional vibration measurement and in time repair of possible defects.



## Fairbanks Nijhuis' specialized pump offerings

Fairbanks Nijhuis offers world class custom engineered solutions for the global pumping industry. Offering complete system solutions in multiple markets including Water Supply, Wastewater Handling, Flood Control, Power Generation, Desalination, Maritime, Oil and Gas, Industry, Agricultural Irrigation, and Fire Protection. In addition, Fairbanks Nijhuis delivers professional services including installation, maintenance, repair, and training.

Manufacturing plants are based in Kansas City, (KS) USA and Winterswijk, The Netherlands. The combination of our two world-class engineering and manufacturing groups, with over 200 years of combined expertise, is a win for our customers across the globe. At Fairbanks Nijhuis, we modify our pump designs to meet the requirements of each individual system. This results in the best overall system performance for a specific application.

## Social responsibility

Today, markets look for business partners who think and support in a sustainable manner. Fairbanks Nijhuis anticipates this need with environmentally friendly products and reliable services that help customers reduce their energy consumption and carbon footprint. The employees of Fairbanks Nijhuis are committed to contributing to a better world by applying the guidelines on social responsibility of ISO 26000.



### **FAIRBANKS NIJHUIS**

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