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PACO KP/KPV



**TYPE KP/KPV/KPE**  
**DOUBLE SUCTION SPLIT CASE PUMPS**  
Horizontally and Vertically Mounted



INNOVATIVE TECHNOLOGIES

The Grundfos philosophy is that only long-term savings are true savings, and PACO products are designed with this in mind.

The innovative hydraulic design, ease of maintenance, low life-cycle costs, and energy efficiency of PACO products assure maximum benefits for the user.

Grundfos understands custom applications and takes the customer’s desire for minimal installation and operating costs into account when developing products that significantly reduce the total cost of ownership over its lifetime.

KP/KPV pumps are reliable, field-tested, and can be configured to meet the specific requirements for a variety of commercial building applications.

IHORIZONTAL SPLIT CASE – RELIABILITY BUILT IN

Grundfos’ humble, unstoppable workhorse – the KP – is always hard at work behind the scenes. KP double suction split case pumps are an engineer’s first choice for demanding applications where only the most reliable pumps go the distance.

The split-case design offers easy serviceability and better efficiency and operating performance compared to other designs. You get energy savings, lower life cycle costs, and peace of mind from day one.

The KP range features double volute construction, self-contained bearing housing, Francis Vane impeller design, and choice of application-specific materials of construction. Engineers have always favored KP pumps because of their reliability and quality.

With so many configurations possible, you can be sure to find the perfect solution with a customized KP pump.

The KP is designed to last. A few of the innovations which contributes to its solid performance include:

- A unique, self-contained bearing housing/seal chamber that allows for ease of maintenance and simple inspection of seals, sleeves, and bearings – without the removal of the top half of the casing.
- A hydraulically balanced double suction impeller and balanced radial loads, which provide quiet operation, minimum vibration, and reduced operating costs.

The KP has a proven track record and is field tested in accordance with current Hydraulic Institute standards, so you can count on its reliability before you purchase and put the pump to work.

A VERTICAL OPTION FOR SPACE SAVINGS

The KPV offers the same great design as the KP, but it is vertically mounted for a space-saving configuration or when space is at a premium.

The KPV features an accurately machined rabbet fit and locating pins, which permanently align the vertically mounted motor and pump, thus removing the need for alignment. The lower bearing is designed with a protective moisture seal and water slinger to reduce the possibility of bearing damage caused by liquid present external to the pump.

FEATURES AND BENEFITS: A CLOSER LOOK

What makes the KP/KPV pumps so special? Let’s take a closer look at the innovative designs and technologies beneath the blue paint.

BEARINGS

- Bearings are selected in conjunction with short bearing span and large diameter shaft to provide a long life (minimum 50,000 hours).

BEARING HOUSING

- Unique bearing housing design combines seal and bearing chambers for ease of maintenance.
- Allows for seal, sleeve, and bearing inspection without the need to remove the top half of the casing.
- Compact, robust housing construction has a 360-degree machined register fit and limits shaft deflection and optimizes alignment.

CASE WEAR RINGS

- Replaceable case wear rings protect the pump casing from wear and tear and permit simple and easy maintenance of proper running clearances.
- Case wear rings reduce maintenance costs and help maintain high operating efficiencies.

CASING

- Suction and discharge flanges are integrally cast into the lower casing half, which allows for removal of the rotating assembly without disturbing connected piping.
- Casing is foot mounted to reduce vibration.

IMPELLERS

- Engineered “closed” (double shrouded) impellers with Francis Vane design improves the pump’s efficiency.
- Extended vanes and enlarged eye contribute to a reduction in vibration and noise as well as reduced overall NPSH required for these pumps.
- Impellers are statically and dynamically balanced to ISO 1940-G3, decreasing noise and vibration.

- Hydraulically balanced impellers reduce radial loads, prolonging seal and bearing life.
- Additional surface finish and impeller preparation help improve overall efficiency.
- Multiple material selections allow for customized solutions to meet specific application requirements.

RECIRCULATION

- Recirculation lines allow for external lubrication or abrasive separation and are available when required.

SHAFT and SHAFT SLEEVES

- Large Diameter precision-ground shaft minimizes shaft deflection and vibration.
- Shaft sleeves are available in a wide variety of metallurgies, such as steel, bronze, etc.
- Sleeve protects the shaft from corrosion and wear, extending the overall life of the shaft and usable life of the pump.

SHAFT SEALING

- Pumps can be customized with any combination of mechanical seals or packing configurations specifically selected to meet the application’s requirements.

SUCTION BAFFLES

- Integrally cast suction baffles direct flow from the suction into the eye of the impeller for a more even flow distribution.
- Insures less suction recirculation losses and promotes a more quiet, vibration-free operation.

SUCTION CHAMBERS

- Suction inlet configuration increases hydraulic efficiency and lowers net positive suction head requirements.

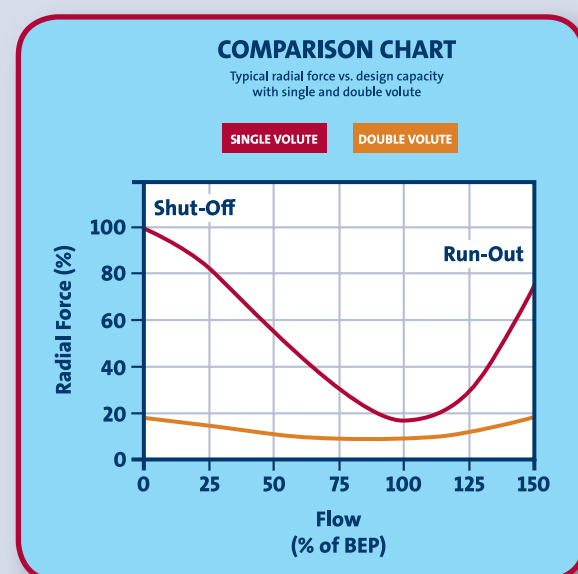
VOLUTE

- 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.



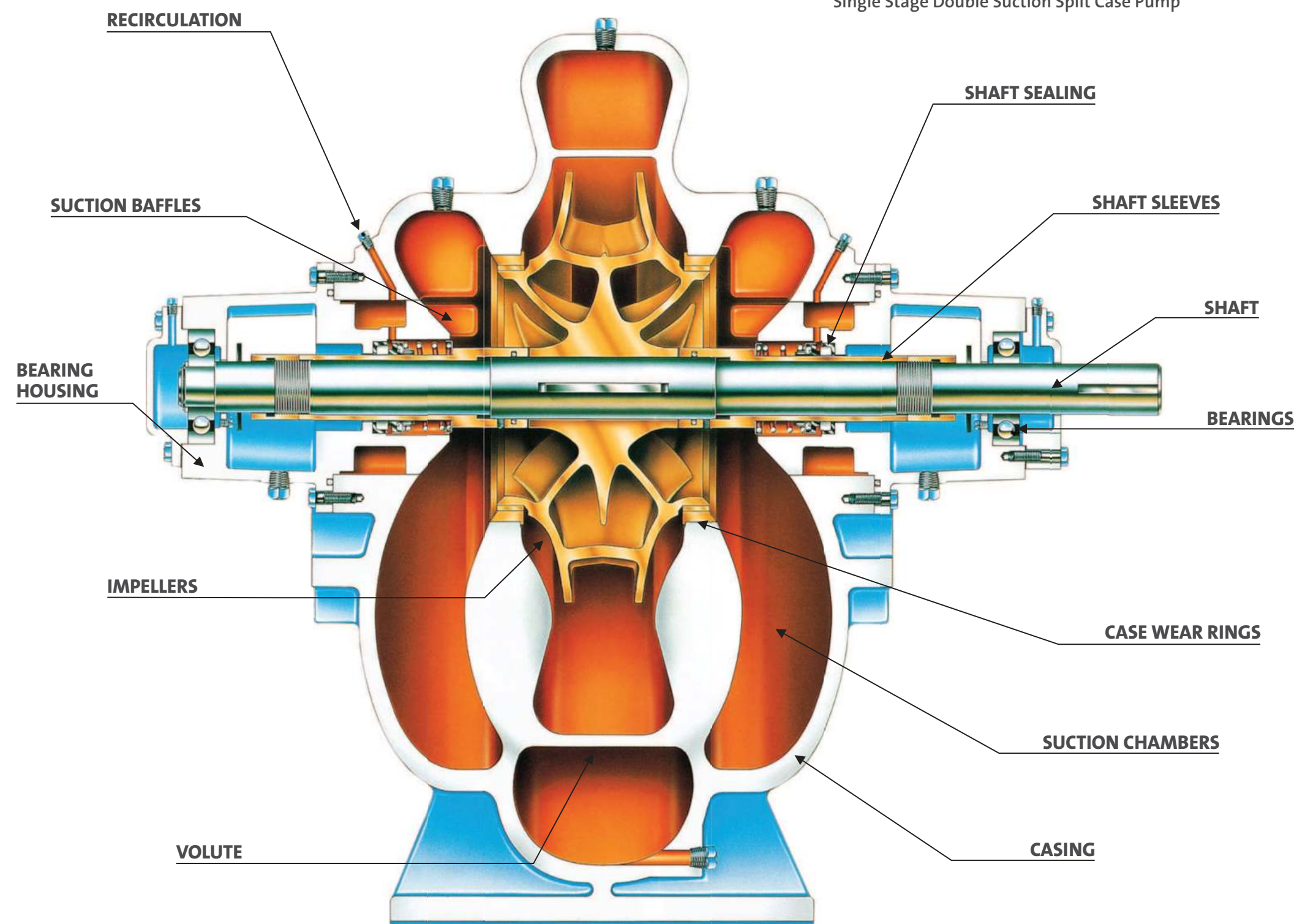


Double Volute design with opposing radial forces



# An Inside Look at the KP

Single Stage Double Suction Split Case Pump



KP/KPV

Double Suction Split Case Pumps

Technical Data

Flow, Q : 60 to 15,000 gpm  
Head, H : 15 to 700 feet  
Fluid Temp. : -20° to 275°F  
Working Pressure : max 400 psi  
HP Range : ½ to 2000  
Discharge Sizes : 2” to 20”  
Impellers : 7” to 24”

APPLICATIONS

- Chilled water
- Condensate water
- Commercial pools and water parks
- Direct and indirect cooling water
- Service water
- Water distribution systems
- Fire Fighting

MARKETS

- HVAC
- Recreation
- Waterworks
- Irrigation/Agriculture
- General Industry (Steel Mills, power Plants)
- OEM

STANDART FEATURES

- Wide hydruhc range
- Multiple material constructions and sealing arrangements
- Self-contains bearing housing Compensated dual volute design
- Vertical or horizontal mount for space savings
- Wear rings

OPTIONAL FEATURES

- Bearing housing lubrication
- Various materials of construction
- Various seal materials and configurations, including cartridge (available in some models) and split seals
- NFS/ANSI-50 or NSF?ANSI-61 certifications (available upon request)

KP/KPV Configurations

**CASE**  
Cast Iron

- Ductile Iron
- Some SS (300 series)
- Some Bronze

**IMPELLER**  
Steel

- A1 Bronze
- Ni AL Bronze
- Bronze specialty
- AA (300 series)
- Cast iron
- Ni-Resist

**SHAFT**  
Steel

- SS (300 series)
- SS (400 series)
- 17-4PH SS

**SLEEVE**  
Bronze

- SS (300 series)
- SS (400 series)

**Seals**  
Type 21

- Type 1
- Type 1B
- Type 8B
- Cartridge
- Splits
- Packing

