

PD Pumps Solutions

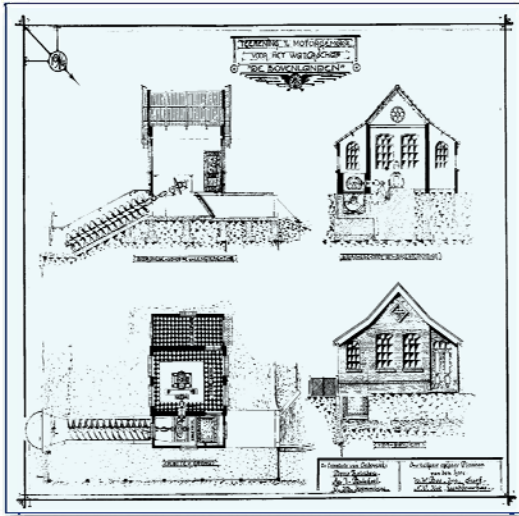


PD Pumps
Browning Way
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Winsford CW7 2RH

Tel. 0161 494 5522
Email : info@pdpumps Ltd.co.uk
www.pdpumps Ltd.co.uk

Submersible pumps, mixers and dry installed pumps

PD Pumps



OVER 100 YEARS OF HISTORY

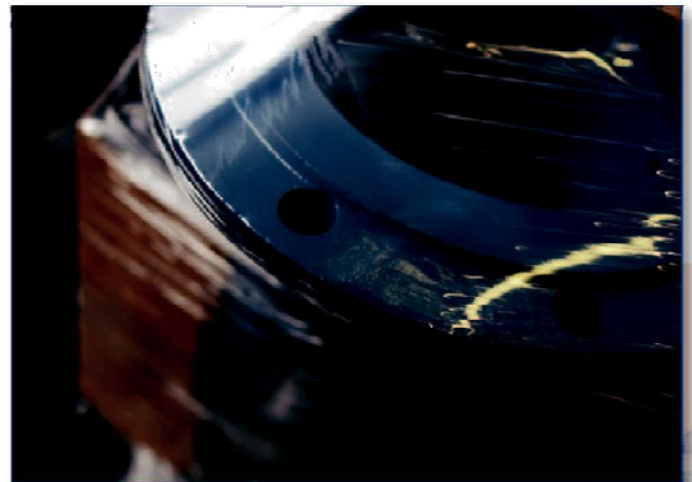
- ✦ In 2013 the factory celebrated its 100th anniversary.
- ✦ The foundations were laid around 1913, when the factory was active in the agricultural sector and the evolving phases of polder drainage. As early as 1916 electrically driven pumping stations were installed with Archimedes screw pumps alongside countless wind driven pumping stations. Production progressed rapidly and in addition to the polder drainage pumps a range was developed to handle sewage. By the 1950s these advances contributed to wastewater purification units being used widely and efficiently.
- ✦ From the very beginning PD Pumps has played a pivotal role in the development and improvement of pumps with dozens of new types and styles being introduced.
- ✦ PD Pumps continuously strives to achieve the most efficient pumping solutions.

WASTEWATER

The experience we have gained over 100 years shows that wastewater is never the same. Some is relatively clean, elsewhere the water is contaminated with large solids, long fibres, chemicals or a complicated combination. There is no 'one size fits all' solution for the challenges faced by our customers. That is why PD Pumps offers such a wide range of products to transport wastewater

LANDY PUMPS

The philosophy behind the design of our wastewater pumps, both submersible and dry-installed, is quality, keep it simple, long life and less maintenance, thus reducing lifetime costs and being better for the environment. More robust, stronger, dedicated to the job and tailored to your demands. These basics are what you will find in all products that are built and tested in the workshops in Sneek, Holland. Since wastewater can be contaminated with different materials and chemicals, PD Pumps can supply pumps in a wide variety of materials and with the necessary certification. For you as the customer, our goal is to fulfil your pump challenges in a satisfying way.



EXPLOSION PROOF

PD Pumps supplies Explosion proof submersible pumps certified to ATEX 112G Ex bcd IIB T4 Gb. When frequency controlled ATEX 112G Ex bcd IIB T3 Gb. Dry installed and hydraulically driven pumps are available with various ATEX certifications.



PD Pumps Solutions

PUMP SELECTION

✱ Selecting pumps for clean water is quite simple, but selecting pumps in wastewater is a different story. PD Pumps will supply the right pump for your project by taking some basic rules into consideration. The best non clogging performance is achieved with Vortex impeller pumps, whereas larger volumes are pumped using closed screw impeller pumps. Cutter pumps are employed in specific situations where longer fibres are involved

✱ In general Cast Iron is suitable for most purposes, Duplex is used for chemical and abrasive contaminated medium, and NiHard4 material is employed for highly abrasive wastewater. Thanks to the modular construction our pumps can be built in various materials and combinations of materials.

✱ Selecting PD Pumps centrifugal pumps is achieved by adhering to the principles of form and size of solids, chemical contamination and the presence of abrasive materials or long fibres. Also the surrounding environment such as the possibility of explosion need to be taken into consideration.

✱ Typically, for water that is highly contaminated with solids and long fibres we will offer the Vortex principle which gives outstanding non-clogging performance. In situations where power consumption is more important we will offer the closed screw centrifugal impeller. This type of impeller is the new generation single channel impeller performing with high efficiency and good non-clogging performance. For duties with very large capacity and low head we offer Archimedes screw pumps which are non-clogging, highly efficient and reliable. Cutter pumps are used in cases where there are high concentrations of solids and fibres.

QUALIFICATION

The factory is certified to ISO 9001, EN-ISO 3834-2, ATEX and VCA** (Safety Checklist Contractors).

All products are manufactured according to European guidelines such as the Machinery Directive, Low Voltage Directive and the EMC Directive.

'PUMP CHOICE' PUMP SELECTION PROGRAM

Our philosophy of "keep it simple" is continued in the Pump Choice pump selection program. Using a clear interface with basic questions the program guides you to the best selection. Pipework and friction loss calculations are also covered in the program, along with the individual data sheets for all pumps.

TESTING

All our pumps are checked hydraulically and electrically in the factory's dedicated test facility prior to shipping. A witnessed test certificate is available. All pumps are supplied with a unique serial number and test curve.



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PD PUMPS VORTEX PUMPS

- ✚ PD Pumps Vortex impeller pumps are designed to pump a wide variety of liquids that are contaminated with solids. Their great advantage is the outstanding non-clogging performance
- ✚ In standard Cast Iron construction, Vortex pumps are used for sewage and other wastewater applications to pump large solids, highly concentrated solids, large fibres and heavy and gassy sludges. For industrial applications, hydraulic component parts are available in special materials to resist both abrasive and corrosive elements.
- ✚ The Vortex impeller's non-clogging performance is based upon a simple law of physics, creating a Vortex in a fluid results in a vacuum directly underneath and around the pump. As the impeller does not come into contact with the solids in the pumped medium the pump cannot clog. A simple but effective principle, resulting in a cleaner sump because the rotating movement of the fluid keeps the solids suspended.

LOW WEAR – LOW VIBRATION

Natural low wear is experienced in Vortex pumps, as most solids pass in front of the impeller without touching it. This also leads to low vibration levels.

CONSTANT PERFORMANCE – LOW MAINTENANCE

The absence of narrow clearances eliminates blockage problems. No need for adjustments or replacement of wear rings are necessary to maintain performance. Thus guaranteeing long-term, constant high performance with minimal maintenance, which means the total cost of ownership is therefore extremely low.



PROBLEM SOLVER

PD Pumps recommend Vortex pumps in situations where other pumps fail and are clogging. Vortex pumps are real problem solvers!

ADVANTAGES

- ✚ Best non-clogging performance
- ✚ Most reliable principle
- ✚ Low impeller wear
- ✚ Minimal vibrations
- ✚ Constant performance
- ✚ Cleaner sumps due to the created Vortex



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SUBMERSIBLE VORTEX PUMPS

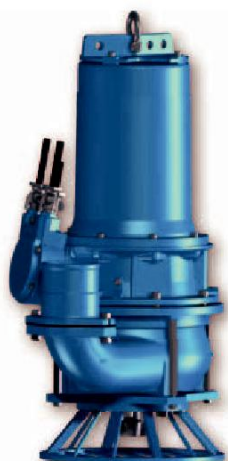
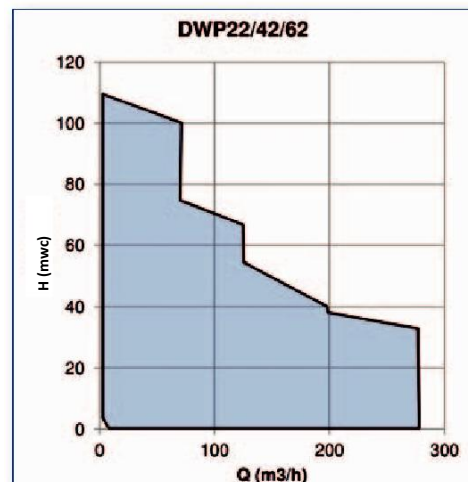


Cast Iron DWP22/42/62 (RW20/40/40)

The unmatched solids handling performance of this range makes these pumps your first choice for most applications. Vortex pumps handle larger and heavier solids, and fibrous materials, heavy and gassy sludges are pumped with ease.

Options:


BWK / OWK / VRS / Cooling jacket / ATEX
IEC-Ex 

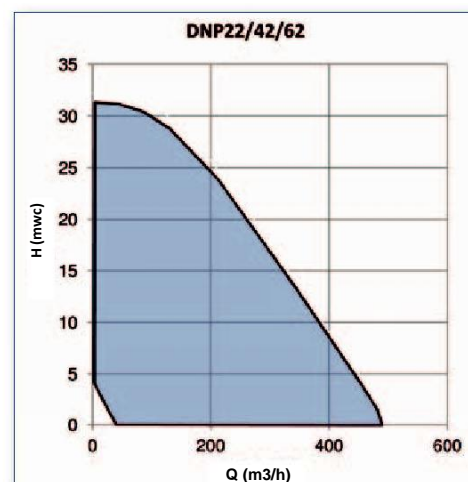


Nihard-4 DNP22/42/62 (RD20/40/60)

Vortex impeller pumps in wear resistant Nihard 4 for reliable transport of highly abrasive solids. For dredging, mining, construction works and other highly demanding applications.

Options:


BWK / OWK / VRS / Cooling jacket / ATEX
IEC-Ex 

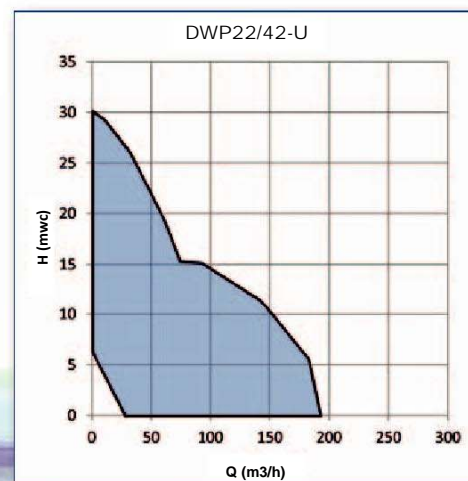


Duplex DWP22/42 - U (RW20/40/60-R)

Vortex impeller pumps in Duplex for reliable transport of abrasive and aggressive solids. For waste-water in the food sector, chemical and other very demanding applications with either chemical, abrasive or a combination both.

Options:

BWK / OWK / VRS / Cooling jacket / ATEX
IEC-Ex 



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DRY INSTALLED VORTEX PUMPS

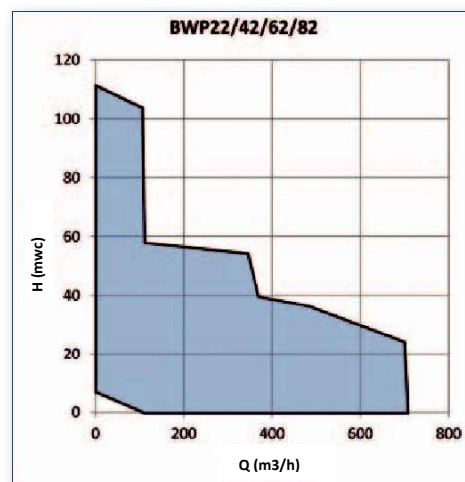


Cast Iron BWP22/42/62/82

The unmatched solids handling performance of this range makes these pumps your first choice for most applications. Vortex pumps handle larger and heavier solids, and fibrous materials, heavy and gassy sludges are pumped with ease.

Options:

HX / HS / HM / HF / KM / VX / VS / VM /
ATEX / IEC-Ex 

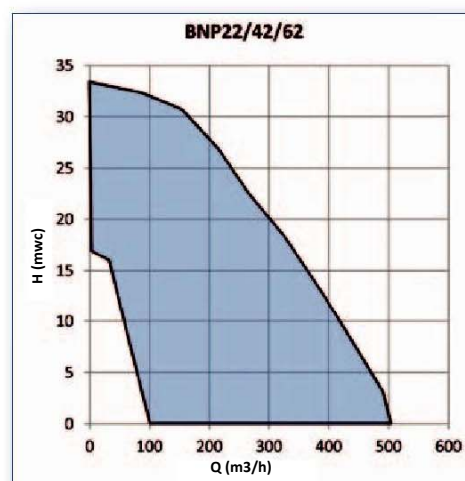


Nihard-4 BNP22/42/62

Vortex Impeller pumps in wear resistant Nihard 4 for reliable transport of highly abrasive solids. For dredging, mining Construction works and other demanding Applications.

Options:

HX / HS / HM / HF / KM / VX / V / VM /
ATEX / IEC-Ex 

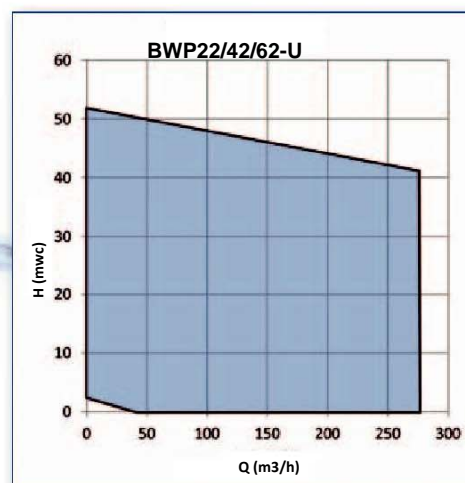


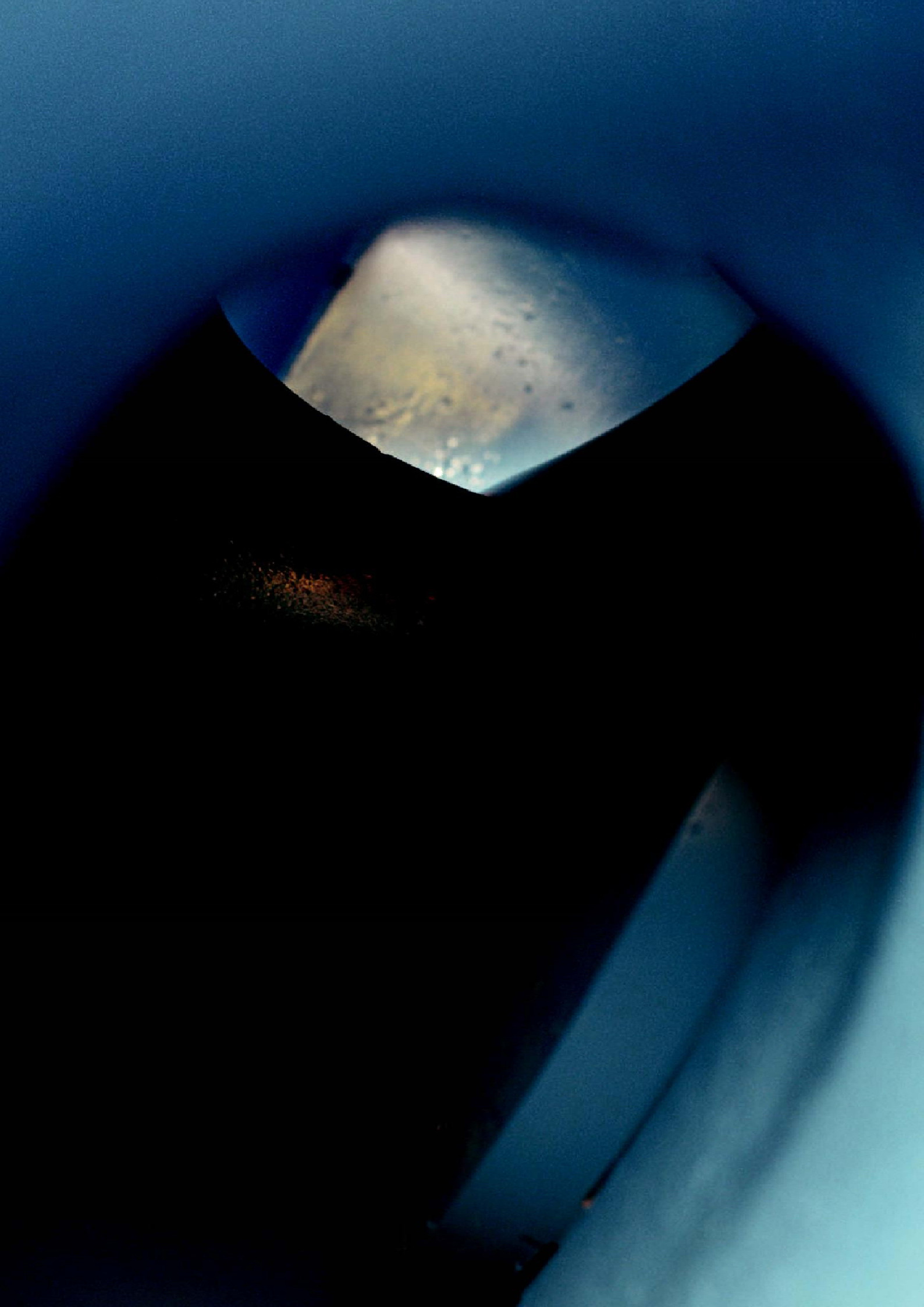
Duplex BWP22/42/62 – U (BW - R)

Vortex impeller pumps in Duplex for reliable transport of abrasive and aggressive solids. For wastewater in the food sector, chemical purposes and other demanding applications either chemical, abrasive or a combination of both..

Options:

HX / HS / HM / HF / KM / VX / VS / VM /
ATEX / IEC-Ex 





Closed Screw Centrifugal Impeller Pumps

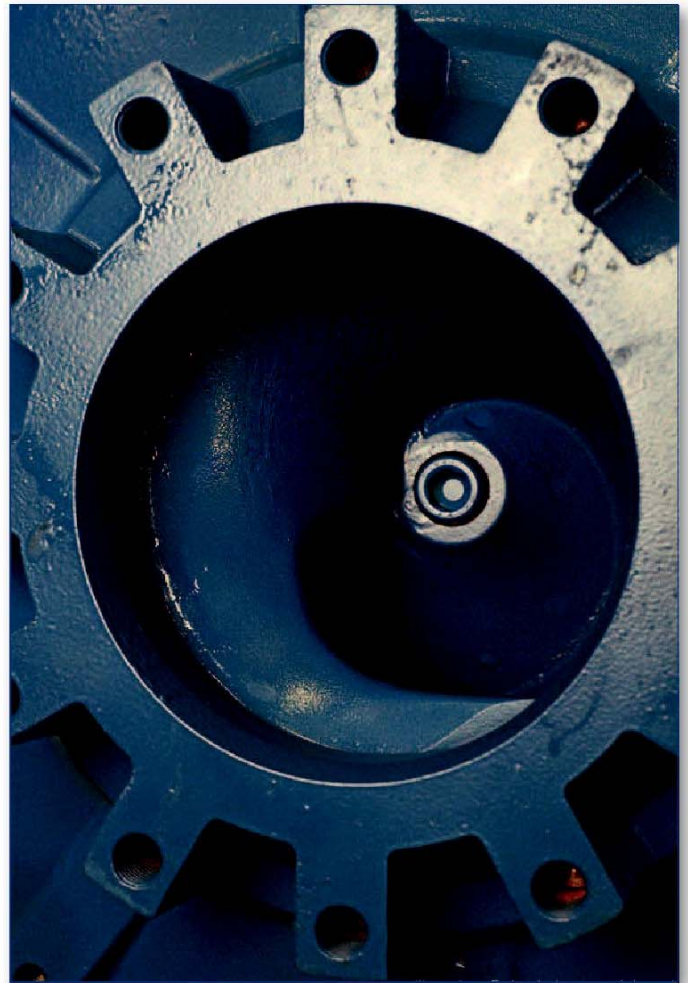
CLOSED SCREW CENTRIFUGAL IMPELLER PUMPS

✱ The closed screw centrifugal impeller pumps are a perfect combination of non-clogging performance and high efficiency. PD Pumps closed screw impeller pumps are designed to pump a wide variety of solids and fibrous contaminated liquids in many applications. The unique design of the self cleaning closed impeller makes these pumps superior to both channel and screw impeller pumps.

✱ PD Pumps recommends the closed screw impeller pumps in situations where standard channel pumps are clogging and higher efficiency is needed. By operating directly in the pumped liquid the installation benefits from reduced construction costs as the submersible version of these pumps do not require a special housing or structure. As they are submerged the pumps take up very little space, are quiet and do not require extra cooling. The submersible pumps are smaller than the dry installed version as they have the motor and hydraulics in one unit. That is why pump stations for the submersibles are smaller and less complex to build.

CONSTANT PERFORMANCE – LOW MAINTENANCE

The shape of the impeller eliminates blockage problems. No adjustments or replacement of wear rings are necessary to maintain performance. Thus guaranteeing long-term, constant high performance with minimal maintenance, which means the total cost of ownership is therefore extremely low.



ADVANTAGES

- ✱ Best balance between non-clogging and high efficiency
- ✱ Suitable for large volumes
- ✱ Reliable principle
- ✱ Low impeller wear due to the closed design
- ✱ Reduced energy consumption
- ✱ Ideal for storm water, irrigation, drainage & dewatering



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SUBMERSIBLE CLOSED SCREW CENTRIFUGAL IMPELLER PUMPS

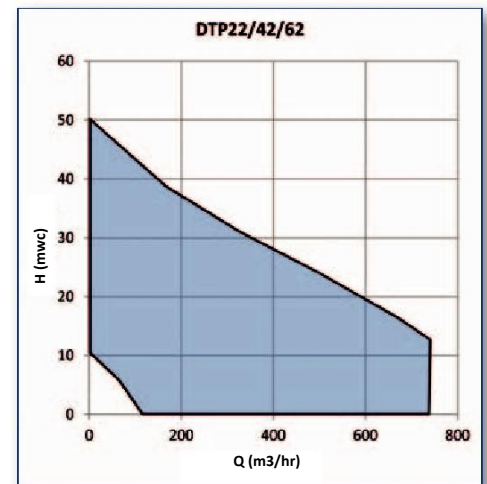


Cast Iron DTP22/42/62 (RT20/40/60)

The solids handling performance in combination with the high efficiency of this range makes these pumps your first choice for most applications.

Options:

BWK / OWK / VRS / Cooling jacket

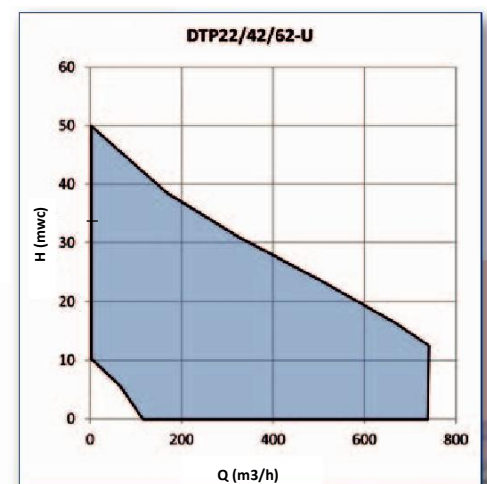


Duplex DTP22/42/62 - U (RT - R)

In Duplex the solids handling performance in combination with high efficiency of this range makes these pumps your first choice for most chemical, abrasive or the combination of both applications.

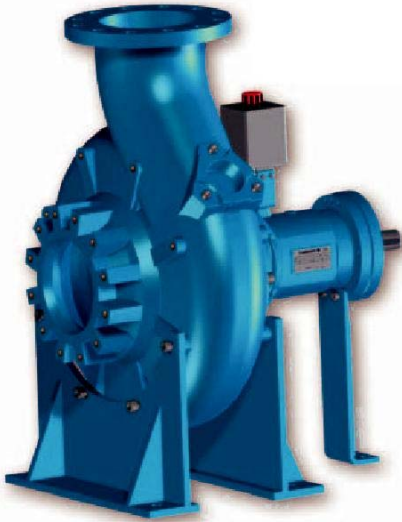
Options:

BWK / OWK / VRS / Cooling jacket



Closed Screw Centrifugal Impeller Pumps


DRY INSTALLED CLOSED SCREW CENTRIFUGAL IMPELLER PUMPS

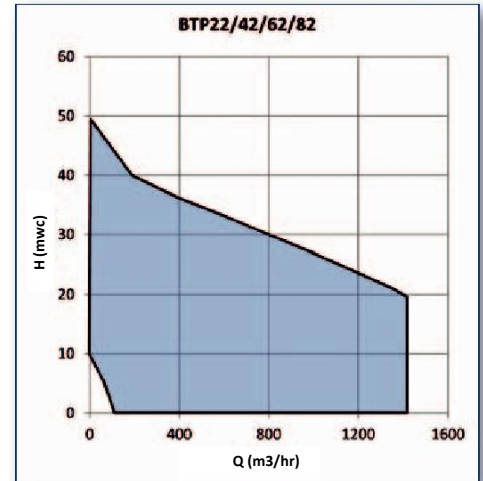


Cast Iron BTP22/42/62/82

The solids handling performance in combination with high efficiency of this range makes these pumps your first choice for most applications

Options:


HX / HS / HM / HF / KM / VX / VS /
VM / ATEX / IEC-Ex 

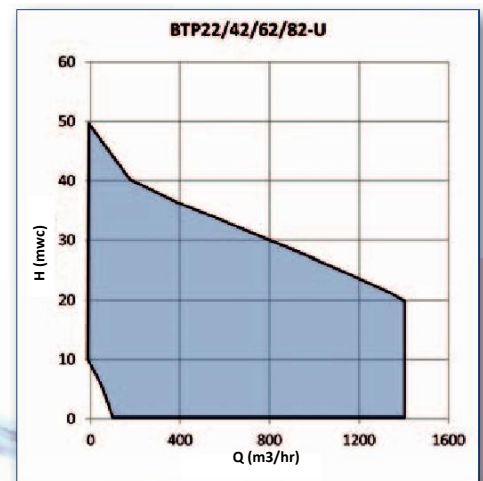


Duplex BTP22/42/62/82 - U

In Duplex the solids handling performance in combination with high efficiency of this range makes these pumps your first choice for most chemical, abrasive or the combination of both the applications.

Options:

HX / HS / HM / HF / KM / VX / VS /
VM / ATEX / IEC-Ex 



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Submersible pumps, mixers and dry installed pumps



PD Pumps Cutter Pumps

PD PUMPS CUTTER PUMPS

The PD Pumps heavy duty cutter pumps have been specifically designed for sewage and other wastewater applications that do not allow for large solids handling. All the solids are effectively cut into small particles that can be pumped through pipes as small as 32mm diameter without the risk of blocking. By utilising small diameter piping, the initial capital cost of the installation is kept to a minimum. This design has proved most successful in solving the problems associated with fibrous tissues in wastewater.

The high heads generated by these pumps enables the use of longer discharge pipes without the need for bigger motors, and they are used extensively in small sewage stations for single or groups of houses where it is not possible to utilise gravity systems. Several pumping stations can be connected to the same discharge. The extreme high head capability of these pumps, with only limited power consumption makes this range ideal in agricultural applications to feed sprinkler installations

CUTTING SYSTEM

The high torque cutting system physically cuts, where others merely grind, and most fragments then pass the cutting system without wearing the actual cutting edges. This results in better cutting and a longer lifetime. The cutting system blades can be easily replaced if necessary



ADVANTAGES

- ✱ Heavy duty bearings greased for life
- ✱ Low motor power requirement.
- ✱ High head capability
- ✱ Adaptable
- ✱ Reliable
- ✱ Trustworthy
- ✱ Many adapters available for easy replacement of other pump brands



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SUBMERSIBLE CUTTER PUMPS



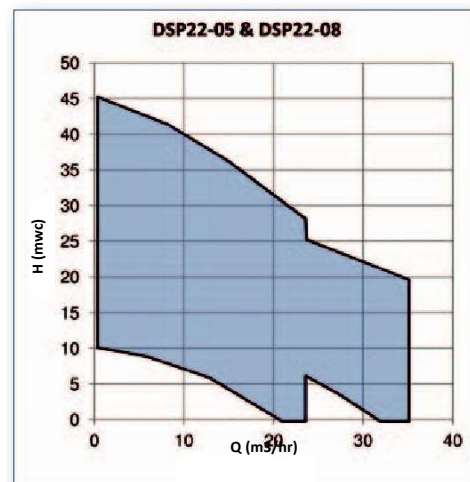
Cast Iron

DSP22-05/08 (RS21/22)

Large solids cut into small particles that can be pumped through reduced diameter pipelines with no risk of blocking. They are often used for small sewage stations servicing single or groups of houses where gravity systems cannot be utilised. In industrial applications the cutter pumps are used where there are fibrous materials in the wastewater.

Options:

BWK / OWK / VRS / ATEX / IEC-Ex 



DRY INSTALLED CUTTER PUMPS




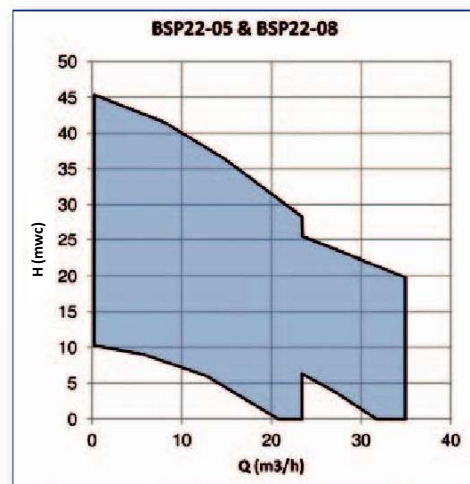
Cast Iron

BSP22-05/08

Large solids are cut into small particles that can be pumped through small diameter pipelines at no risk of blocking. They are often used for small sewage stations servicing single or groups of houses in areas where gravity systems cannot be used. In industrial applications the cutting pumps can be used when there are fibrous materials in the wastewater.

Options:

HX / HS / HM / HF / KM / VX / VS / VM /
ATEX / IEC-Ex 



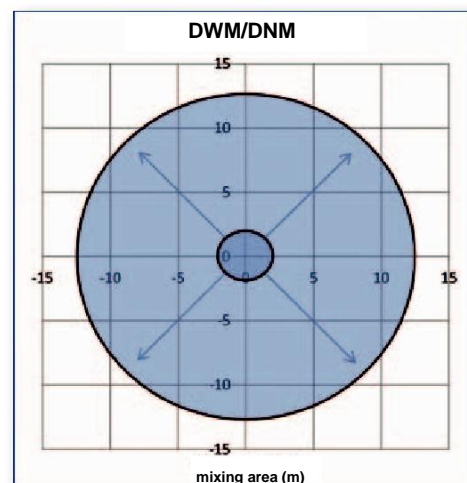
PD PUMPS - SPECIALS

Mixers DWM/DNM (RM)

PD Pumps mixers have been designed to keep sumps that are highly contaminated with solids and fibres in suspension. This enables the emptying of the sump with a pump. The Vortex mixers will keep the floor clean and the sewage suspended due to the Vortex principle. Our customers have found the mixing capacity outstanding, which is why you will find our mixers in many industrial mixing and suspension applications. PD Pumps can supply mixers in Cast Iron, Duplex and Nihard4.

Options:


VRS / ATEX / IEC-Ex 

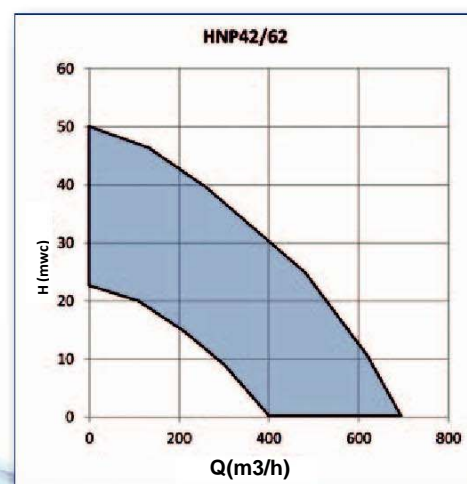


Hydraulic motor HNP

PD Pumps can be supplied with an hydraulic motor. Often used in the marine sector where an oil driven motor is preferred. Also, in mining there is a preference for oil driven pumps as they meet the stringent Explosion proof requirements. Additional benefits are the compact sizes combined with powerful motors, and no risk of overloading.

Options:

BWK / OWK / VRS / HS / VS / ATEX
IEC-Ex 



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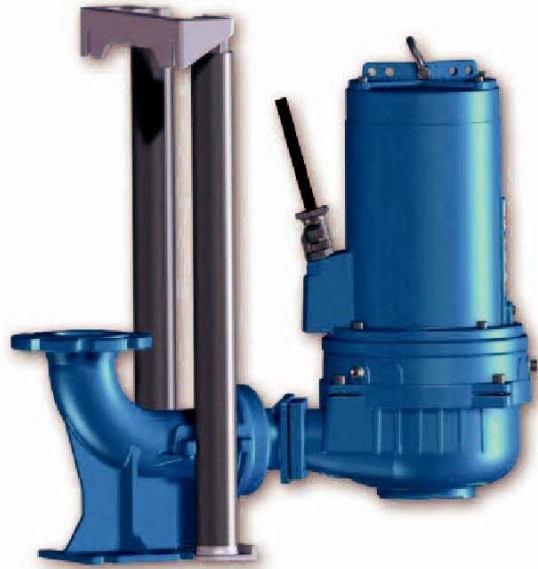
Submersible pumps, mixers and dry installed pumps

PD Pumps

INSTALLATION OPTIONS OF SUBMERSIBLE PUMPS

Pedestal Kit / Duck foot coupling

For easy submersible installation the pedestal kit (duck foot coupling) was developed. The pump slides easily down the guide rail(s) and is securely and firmly located on the duck foot, a great advantage when servicing or checking the installation.



Header coupling

To facilitate the building of compact installations PD Pumps supplies various header couplings. The design is simple, the seal is achieved and sustained by the weight of the pump. Mounting the pump horizontally and the pit/sump can be very small. One of the great advantages is a clean sump floor due to the Vortex developed in the sump. When lifting the pump all parts of the coupling are visible and available for inspection. In deeper sumps and or when installing heavy pumps we advise a pedestal kit (duck foot coupling).



Installing Submersible Pumps

SUBMERSIBLE PUMP MOUNTING OPTIONS

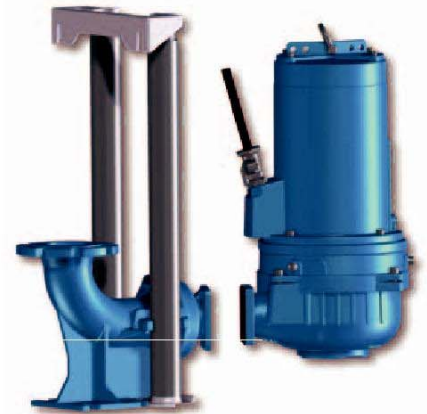
Vertical



Without options



Optional: claw for Duckfoot



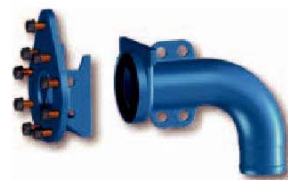
Optional OWK duck foot coupling set



Vertical with hose connection
or threaded connection



(VRS) Vertical free standing
optional hose connection or
threaded connection

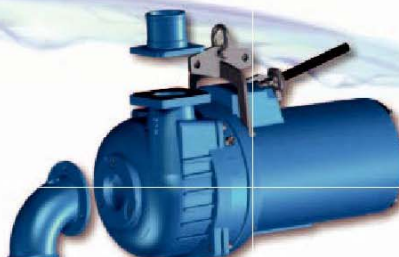


Optional BWK header coupling set

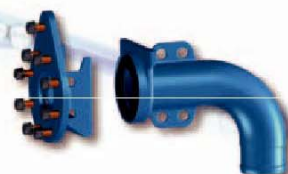
Horizontal



Without options



With hose connection
and/or suction elbow



Optional BWK header coupling set



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SUBMERSIBLE PUMPS WITH OPTIONAL COOLING JACKET

OWK, BWK, VRS are available as shown on previous page

Vertical



With the immersible installation option

Horizontal



INSTALLATION OPTIONS FOR SUBMERSIBLE NIHARD4 PUMPS (DNP/RD)

OWK, BWK, VRS are available as shown on previous page



Vertical without options



Vertical with agitator,
stand and discharge bend
With hose or threaded connection



Vertical slimline, with agitator,
stand and hose or
threaded connection

Installation Options For Dry Installed Pumps

Vertical



(VX) Bare Shaft



(VS) Short Coupled



(VS) Short Coupled with optional immersible installation



(VM) with flexible coupling
And fixed electric motor



(VM) with flexible coupling and
fixed electric motor with optional
immersible installation

Horizontal



(HX) Bare Shaft



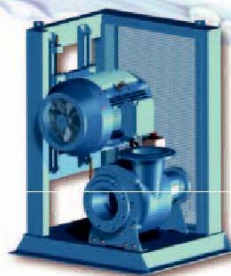
(HS) Short Coupled



(HM) with spacer coupling
base frame and electric motor



(HF) with flexible coupling, base
frame and fixed electric motor



(KM) with frame, V Belt drive
and electric motor



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MORE THAN PUMPS

The factory produces a wide range of equipment for wastewater treatment which includes:

- ✱ Archimedes screw pumps
- ✱ Hydropower screw turbines
- ✱ Surface aerators
- ✱ Aeration rotors
- ✱ Ladox flow boosters
- ✱ Screen cleaners
- ✱ Clarifiers and sludge thickeners
- ✱ After sales service that is second to none

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