

SWIMMING POOL PUMPS



Herborner Pumpen –
the no. 1 solution for
swimming pool pumps.

SWIMMING POOL PUMPS

Visitors of swimming pools, whether public pools, hotel pools, private pools or natural pools, are looking for leisure, recovery and relaxation. In general, visitors hardly notice anything about the complex processes and pumps applied for the circulation of pool water. Without pump technology, this leisure and relaxation would not be possible. It ensures high water quality and is decisive for the feel-good factor. Water treatment may be the main application of pumps in swimming pools, however, there are many more applications in this field, where vari-

ous pumps are applied. Examples include pumps for diverse water attractions or sewage treatment.

Most of the pumps used in swimming pool systems are centrifugal pumps with an electric motor drive. The selection of individual pump components defines the number of options and the complexity of units dedicated to swimming pool applications. The equipment details are a decisive factor for the service life of pumps. If pumps are selected according to their func-

tional safety and low Life Cycle Costs (LCC) and equipped with state-of-the-art motor technology, system operators can expect low energy consumption and a long service life. Another decisive factor is the set-up of the system to prevent any problems during operation. Aside from any potential problems in connection with centrifugal pumps, including cavitation or corrosion, vibrations and noise caused by incorrect system set-up or unfavourable operation of the pump also need to be minimised.



OUR TECHNICAL HANDBOOK

Our technical handbook provides even more information on swimming pool pumps: **Swimming Pool Pumps**, fields of application, selection, set-up, energy efficiency

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THEME PARKS

Water is the liveliest of the four elements. Its diverse shapes and flexibility have been fascinating us for thousands of years.

Besides pump technology for pool water treatment, we are committed to providing the possibility of experiencing the characteristics of water. Thanks to our pump technology, wild water channels, waterfalls, whirlpools and water slides have become a firm part of modern water parks. Our pumps are an integral and yet individual part of technology.



HERBORNER.XNEO

herborner.Xneo coated pool water circulation pump with maximum efficiency and integrated pre-filter. The new generation of pumps offers maximum energy and cost savings at every operating point where the pumps can be used. This is made possible by the combination of a pump with an IE5 permanent magnet motor and a specially adapted frequency converter. The herborner.neo are fully smooth-coated from the inside and guarantee maximum protection against wear, corrosion and deposits.



HERBORNER.FNEO

herborner.Fneo coated block pump with maximum efficiency for a variety of applications. The new generation of pumps offers maximum energy and cost savings at every operating point where the pumps can be used. This is made possible by the combination of a pump with an IE5 permanent magnet motor and a specially adapted frequency converter. The herborner.neo are fully smooth-coated from the inside and guarantee maximum protection against wear, corrosion and deposits.



HERBORNER.DNEO

herborner.Dneo coated inline block pump with maximum efficiency for direct in-line installation. The new generation of pumps offers maximum energy and cost savings at every operating point where the pumps can be used. This is made possible by the combination of a pump with an IE5 permanent magnet motor and a specially adapted frequency converter. The herborner.neo are fully smooth-coated from the inside and guarantee maximum protection against wear, corrosion and deposits.



HERBORNER.X

(X-PM • X-C)

The herborner.X circulation pump for pool water, with the unique 100% coating and integrated hair and fibre filter. Up to 500 µm coating provides an extremely smooth surface. Hydraulic efficiency is boosted by about 10% depending on the operating point of the pump, offering energy savings over years. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



HERBORNER.F

(F-PM • F-C)

The cutting edge generation of coated herborner.F block pumps with their unique 100% coating is suitable for all applications where the medium must not be contaminated by corrosion products. Up to 500 µm coating provides an extremely smooth surface boosting the hydraulic efficiency of the pump by about 10% and offering energy savings over years. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



HERBORNER.D

(D-PM • D-C)

The coated herborner.D in-line block pump is suitable for all applications where the medium must not be contaminated by corrosion products, and direct in-line installation is required. Up to 500 µm coating provides an extremely smooth surface. Hydraulic efficiency is boosted by about 10%, offering energy savings over years. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



HERBORNER.X

BLACK EDITION

All components of the herborner.X BLACK EDITION pool water circulation pump with integrated pre-filter that come into contact with the medium are completely coated inside and outside. This means they are fully protected against corrosion. The unique material combination makes the BLACK EDITION perfect for use in brine, thermal pools and water parks.



HERBORNER.F

BLACK EDITION

All components of the herborner.F BLACK EDITION block pump that come into contact with the medium are completely coated inside and outside. This means they are fully protected against corrosion. The unique material combination makes the BLACK EDITION perfect for use in brine, thermal pools and water parks.



HERBORNER.F-L

BLACK EDITION

As attraction pumps, all components of the herborner.F-L BLACK EDITION bearing bracket pumps that come into contact with the medium are completely coated inside and outside. This means they are fully protected against corrosion. The unique material combination makes the BLACK EDITION perfect for use in brine, thermal pools and water parks.



UNIBAD (PM • XC)

The market leader and trendsetter in the field of pool water circulation pumps with integrated hair and fibre filter. Pumps of the UNIBAD series offer compact design, high efficiency and long service life with low maintenance. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



UNIBLOCK-GF (GF-PM • GF-C)

The water movement specialist. Whether in swimming pools, thermal water, water works or industrial applications, this pump is the perfect solution for all applications requiring high reliability, efficiency and flexibility. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).

MOTOR TECHNOLOGY AT A GLANCE

Permanent magnet motor (PM)

- More power thanks to higher efficiency
- Reduced operating costs from energy savings
- Reduced CO₂ emissions thanks to less power consumption
- Continuous compliance with Super Premium Efficiency (IE5) motor efficiencies

Heat exchanger motor (C)

- Medium-cooled
- Return of 95% waste heat to the medium
- Suitable for systems with long pump service times and high demands on noise reduction
- Also available as a flood-proof model

Variable speed drive (FU)

- High potential energy savings thanks to speed adjustment, e. g. reduced operation at night
- Clearly reduced wear thanks to speed control
- Smooth and step-less starting and stopping of motors
- No momentary or load impacts – protection of the entire drive train including motor, pump, tubing and seals
- Reduced repair and maintenance costs thanks to longer operating intervals



Permanent magnet motor (PM)



Heat exchanger motor (C)



Variable speed drive (FU)



UNIBAD-72

The self-priming UNIBAD-72 pump is the perfect selection for any difficult operating conditions in private or hotel pools.



HERBORNER.F-L

The pump for special applications in the field of attractions or wherever bearing bracket pumps with a standard motor may be applied. In line with the modular system, herborner.F-L pumps also feature 100% coating with model-dependent corrosion resistance and maximum efficiency.



HERBORNER.CMP

The herborner.CMP is designed for control and monitoring of up to 6 pumps in single and parallel operation. The system reduces maintenance to a minimum and considerably supports reduction of the pump energy consumption. An integrated warning and alarm system prevents unscheduled shut-downs. This enables a reduction in pump Life Cycle Costs (LCC).



WATER BLAST SYSTEM

The Water Blast System was developed to save time and money. Overpressure is generated in the hair and fibre filter to force the water from the pool water pump into the water tank. The system is controlled either by means of the central swimming pool control system or the herborner.CMP control and monitoring panel system. This saves time that can be used for other crucial operations. Aside from this, energetically treated pool water is saved, which would otherwise be wasted.



WATERBLUE-Bneo

For the private and small hotel pool market the self-priming WATERblue-Bneo with integrated hair and fibre filter is of utmost importance due to its maximum efficiency. The new generation of pumps offers maximum energy and cost savings at every operating point where the pumps can be used. This is made possible by the combination of a pump with an IE5 permanent magnet motor and a specially adapted frequency converter. The WATERblue-Bneo pumps are fully smooth-coated from the inside and guarantee maximum protection against wear, corrosion and deposits.



WATERBLUE-B (B-PM)

The self-priming WATERblue-B with integrated hair and fibre filter is ideally suited for the private and small hotel pool market. The unique HPC coating seals and protects metal surfaces that come into contact with the pumped medium. The pumps can also be optionally equipped with a permanent magnet motor (PM).



WATERBLUE-H

WATERblue-H with its integrated hair and fibre filter is particularly suited to applications in private or hotel pools. Its unique hybrid design is the perfect solution for complex and flexible applications and offers quiet operation.



WATERBLUE-K

WATERblue-K is a plastic pump with an integrated hair and fibre filter for application in private and small hotel pools. Its innovative filter technology considerably supports filter cleaning. Variable tubing connection options offer high flexibility.



ATTRACTIONS

We offer pump solutions for any kind of application: Theme parks, hotel pools, natural pools or aqua parks.





HERBORNER.F (F-PM • F-C)

The cutting edge generation of coated herborner.F block pumps with their unique 100% coating is suitable for all applications where the medium must not be contaminated by corrosion products. Up to 500 µm coating provides an extremely smooth surface boosting the hydraulic efficiency of the pump by about 10% and offering energy savings over years. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



HERBORNER.D (D-PM • D-C)

The coated herborner.D in-line block pump is suitable for all applications where the medium must not be contaminated by corrosion products, and direct in-line installation is required. Up to 500 µm coating provides an extremely smooth surface. Hydraulic efficiency is boosted by about 10%, offering energy savings over years. The pumps may be alternatively equipped with a permanent magnet (PM) or heat exchanger motor (C).



HERBORNER.F-L

The pump for special applications in the field of attractions or wherever bearing bracket pumps with a standard motor may be applied. In line with the modular system, herborner.F-L pumps also feature 100% coating with model-dependent corrosion resistance and maximum efficiency.



UNIVERS-AYR

This space- and energy-saving block pump for high flow rates is suitable for different (water) applications.



UNIVERS-TYR

UNIVERS-TYR submersible pumps offer optimum adjustment to system conditions and environmental requirements based on modular variations. The hydraulic pump system enables smooth pumping of high flow rates with low delivery heads for perfect application in attractions and natural pools.

OTHER APPLICATIONS



UNIVERS-T

Submersible sewage pumps type UNIVERS-T are particularly suitable for untreated sewage and waste water applications. Thanks to maximum reliability, these pumps support faultless operation of swimming pool pump systems or waste water pump stations.



UNIVERS-A

The sewage block pump series UNIVERS-A enables numerous pumping applications for sewage and waste water based on various hydraulic pump systems. This flexibility is also reflected in the variety in diverse motor concepts. This enables adjustment of the overall efficiency of the unit to meet the individual requirements of customers.



UNIPUMP

UNIPUMP sewage water block pumps are compact continuous running pumps for sewage and waste water applications. Due to their individual design according to customer requirements in connection with high stability, these pumps are an important solution for challenging waste water applications.

LIFE CYCLE COSTS

Cost calculation over the course of operation

To determine the overall economic efficiency of a product or system an overall analysis, which takes into account all occurring costs during the entire life cycle of a system, is required. This is referred to as Life Cycle Costs (LCC). An LCC calculation is particularly recommended for pumps applied in swimming pools as these pumps, with an annual operating time of more than 8,000 hours (e.g. swimming water circulation pumps) have a high impact on other cost factors (e.g. energy costs). Observation of only the initial costs does not provide sufficient long-term information.

The LCC can be calculated by means of a simple formula.

$$LCC = C_{ic} + C_{in} + C_e + C_o + C_m + C_s + C_{env} + C_d$$

- C_{ic} Initial costs
- C_{in} Installation/commissioning costs
- C_e Energy costs
- C_o Operating costs
- C_m Maintenance and repair costs
- C_s Production downtime costs
- C_{env} Environmental protection costs
- C_d Decommissioning costs

Example comparison of two pumps: LIFE CYCLE COSTS | CALCULATOR FOR PUMPS

Life Cycle Costs (LCC) calculation for your pump units

SUMMARY	PUMP A	PUMP B
Initial costs (C _{ic})	2,500.00 €	3,000.00 €
Installation costs (C _{in})	1,000.00 €	1,000.00 €
Subtotal of the initial one-time costs:	3,500.00 €	4,000.00 €
Energy costs (C _e)	1,500.00 €	800.00 €
Operating costs (C _o)	1,800.00 €	1,800.00 €
Maintenance costs (C _m)	2,700.00 €	2,700.00 €
Production downtime costs (C _s)	2,300.00 €	2,300.00 €
Environmental protection costs (C _{env})	80.00 €	80.00 €
Subtotal of annual costs:	8,380.00 €	7,680.00 €
Accumulated costs during an operating time of 10 years:	74,881.74 €	68,626.70 €
Decommissioning costs (C _d)	550.00 €	550.00 €
Required provisions for shut down:	446.79 €	446.79 €

LCC = Life Cycle Costs for 10 years of operation: 78,828.53 € 73,073.49 €

- I AM PLANNING WITH:
- Installation costs: 75 €/h
 - Operating costs: 30 €/h
 - Electricity rate: 8 cents/kWh
 - 10 years of operation
 - 3.5% interest rate
 - 1.4% inflation

Here, you can access a computer-aided program for easy calculation of the LCC for your pumps, available in German and English language.



German



English

WITH PUMP B, I SAVE
5,755.04 €
IN COMPARISON
WITH PUMP A

PAHN^{AI}

Top-quality pump designs

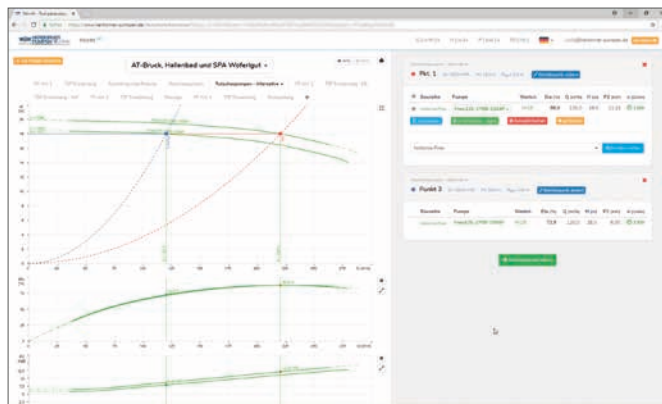
PAHN^{AI} is an innovative, customer-oriented software program that makes it dramatically easier to design pumps. In this completely self-developed software, our many years' experience has been applied. We provide it to our customers free of charge.

PAHN^{AI} is a solution for intelligent, simple pump designs that will help any planner or pump user designing a swimming pool, industrial plant, or water supply/wastewater system.

BENEFITS

- Modern, browser-based software with no installation
- Free, automatic updates run conveniently in the background – saves time and ensures your data is always up to date
- Processing an unlimited number of projects and designs at the same time
- Automatic backup and storage
- Automatically create and print out any number of pump speed characteristics (speed variations) for a QH sample with speed adjustments on site
- Optional copying, shifting, sorting and deleting of entire designs for the project to ensure perfect documentation
- Intuitive collaboration options: communicate with project participants and the responsible administrator at Herborner Pumpen with a simple click, using a 100% identical project copy
- Automatically finds the most efficient pump for your operating point
- Calculation tool for friction losses

<https://www.herborner-pumpen.de/en/pahnAI/>



Registration/
login



Intelligent pump
selection with various
operating points and
speed variations



Complete project design
including documentation (PDF)



SPECIAL SOLUTIONS

Individual solutions for special pumps are part of our service offer

Decades of experience in development and our in-house foundry are the basis for project-specific flexibility. This technological precondition for continuous innovation offers our customers the clear benefit of optimised special solutions for any individual project.

SPECIAL MODELS

- Deviating voltage and/or power frequencies
- Other insulation classes
- Increased ambient temperature
- Increased protection class
- Increased protection against tropical and humid environments
- Special materials
- Special painting for uncoated components
- Customer-specific solutions



CONSULTING & SERVICE

At your service – competent and personal

In the last decades, our company has gained global recognition and conviction among customers throughout the world.

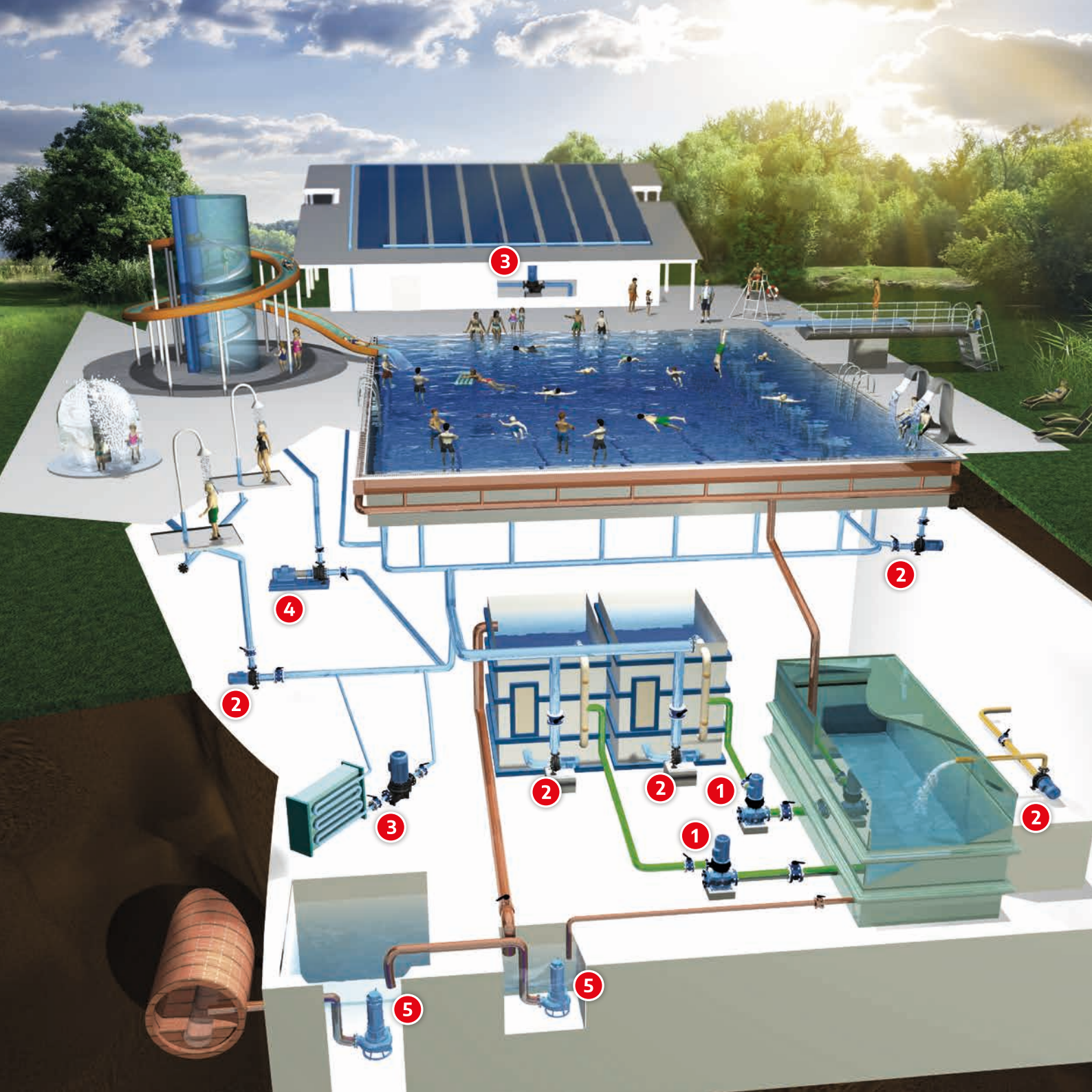
Our highly competent customer service representatives support you with expertise and technical competence and offer individual and future-orientated solutions according to your requirements. We offer global sales and service.

CONSULTING & SALES

sales@herborner-pumpen.de

SERVICE & MAINTENANCE

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AVAILABLE PUMPS



1

herborner.X / herborner.Xneo / UNIBAD: to pump water from the collection tank to the filter system.

Recommendation: Application of permanent magnet motors (PM) and/or heat exchanger motors (C) as well as variable speed drives for maximum energy efficiency.



2

herborner.F / herborner.Fneo / UNIBLOCK-GF: to pump clean water from the filter system to the swimming pool, showers and attractions.

Alternative:
herborner.F-L / herborner.F-PM / UNIBLOCK-GF-PM



3

herborner.D / herborner.Dneo: booster pumps for heat exchangers or solar installations.

Alternative:
herborner.F / herborner.F-PM / UNIBLOCK-GF / UNIBLOCK-GF-PM

The optional pump versions of the **herborner.neo** pump design offer fully coated pump components, including the pump impeller, a permanent magnet motor that fulfills energy efficiency class IE5, and a matching converter. This provides the operator with the most efficient pump technology available.



4

herborner.F-L: to pump the water to the slide or other attractions.

Alternative:
herborner.F / herborner.F-PM / UNIBLOCK-GF / UNIBLOCK-GF-PM



5

UNIVERS-T / drain pumps: to pump water from the collection tank to the filter system as well as any waste water into the sewage system.

Alternative:
UNIVERS-A / UNIPUMP as dry installed waste water variant.

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