



**HERBORNER  
PUMPENTECHNIK**

# herborner.ηeo

The Pump Generation of the future

**BEST EFFICIENCY**





# LIMITLESS

# herborner.ηeo

The pump generation of the future is redefining pump applications.

## Optimal efficiency

### And therefore maximum energy savings

The requirements profile of today's pure water pumps is always unique for each system. In addition, it requires flexibility when it comes to controlling the pumps. For exactly this reason it is important to be able to use the right pump with the suitable drive for every project application. Until now, this was only possible for certain operating points along the pump's characteristic curve. This is changed fundamentally with the new **herborner.ηeo** pump generation.

The most important argument for using **herborner.ηeo** pumps is the **guaranteed maximum efficiency and the maximum energy and cost savings which are reached for every operating point for which the pumps can be used.**

The pumps were tested in endurance tests and under extreme conditions.

We provide this innovative technology for a variety of pumps.



herborner.Xηeo



herborner.Dηeo

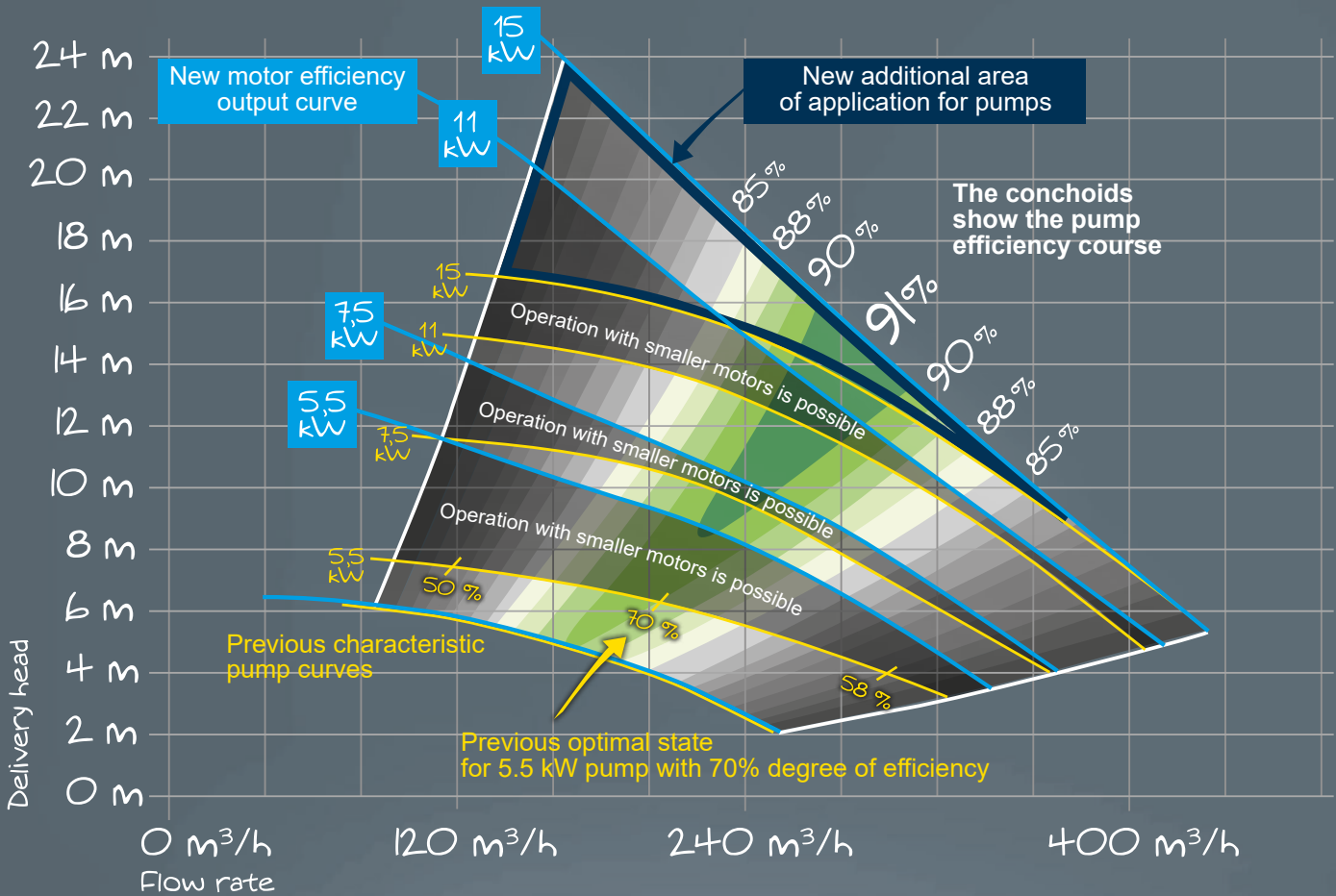


herborner.Fηeo



# Set of performance curves

Example **herborner.F $\eta$ eo**

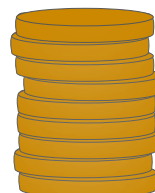


Example for 5.5 kW pump:  
 Previous optimal efficiency level: 70%  
 New efficiency with full impeller diameter according to shell curve: 90%  
 => Hydraulic optimisation of the efficiency by 20%!

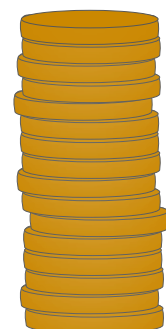
# INNOVATION

## Life cycle costs

Cost savings as a result of lower investment and energy costs.



herborner.ηeo



classic pumps



# herborner.ηeo

Thinking beyond for nature and humankind

## Impressive pump efficiency

### Eco-friendly products

Thanks to our experience in pump technology, our further developments are innovative and define the market. Saving on stainless metals by substituting materials using our own coating technology developed in-house is particularly eco-friendly. We want to stay the forerunner when it comes to sustainability and think about the future when we develop our products, much like with the **herborner.ηeo**.

### Maximum efficiency increase

Using the efficiency increase in the pump hydraulics with the development of the **herborner.ηeo** series, new sets of performance curves have come about. Derived from this is the use of smaller motors with the same pump power output compared to previously used pump types with the accompanying reduction in investment costs. The result of this is considerably reduced life-cycle costs for the operator.

### Highest quality features

All parts inside the pump which touch the medium are 100% corrosion-protected. The high-quality finishing process of the HPC coating serves to provide the greatest possible protection against wear, corrosion and other adhesions. The smooth surfaces of the **herborner.ηeo** guarantee constant and efficient operating conditions. Simple assembly and safe start-up after longer idle periods are possible with our pumps.

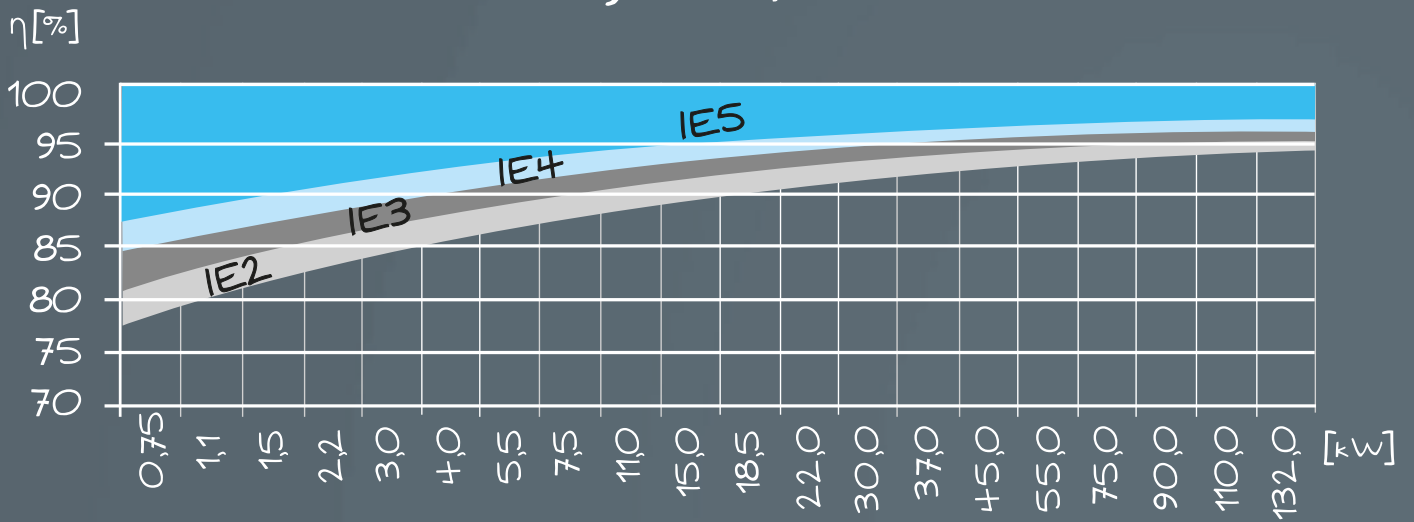
### Reduction in motor size

**herborner.ηeo** pumps can be operated using a considerably broader range of performance curve sets. The limits of this area will not be determined here by the impeller diameter, but by the maximum motor power. Resulting from this, among other things, is the increased delivery head.

### Efficiency maximization

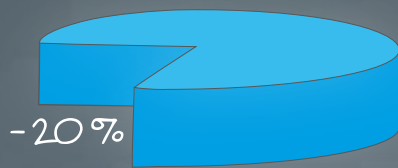
By using coated hydraulics in combination with the largest and thus best impeller diameter for pump efficiency, very high energy savings potential can be realized and life cycle costs thus reduced.

# Motor efficiency comparison



IE2 to IE5 correspond to standardized energy efficiency classes

Energy needs  
 ∅ Annual consumption



**80 %**  
 herborner.ηeo



**100 %**  
 classic pumps

# ECONOMICAL

# herborner.ηeo

First-class setup

## Intelligent motor efficiency

### The latest motor technology with frequency converter

All of the pumps of the **herborner.ηeo** series have been developed as "all-round products". With regard to the European directives on eco-friendly energy use, we are combining our **herborner.ηeo** pumps with permanent magnetic motors IE5 and specially customized frequency converters. IE5 currently corresponds to the highest energy efficiency class for motors, while the converter permits the optimum control of the system's requirements. It is not possible to make pumps any more energy-optimised than these.

Of course, the motors of the **herborner.ηeo** pumps also have the established quality features of reinforced supports and shafts which have considerable advantages compared to standard motors and allow the costs associated with the life cycle of the pump to be minimized.

With the help of the set of performance curves recorded at the test bench, the **herborner.ηeo** in the plant is pre-configured to match the operating point desired by the customer. Subsequent adjustment of individual operating points can be done easily on site using the frequency converter.



previous impeller with  
twisted diameter

new:  
greatest impeller  
diameter

new:  
special HPC smooth  
coating

# INTERIOR



# herborner.ηeo

Developed for the best flow

## Most efficient water transport

### Flow-optimised surfaces are perfectly smooth

Completely smooth-coated from the inside, the **herborner.ηeo** series conveys the medium with the greatest energy efficiency. This efficiency reduces energy costs by up to 15-20% compared to conventional pumps.

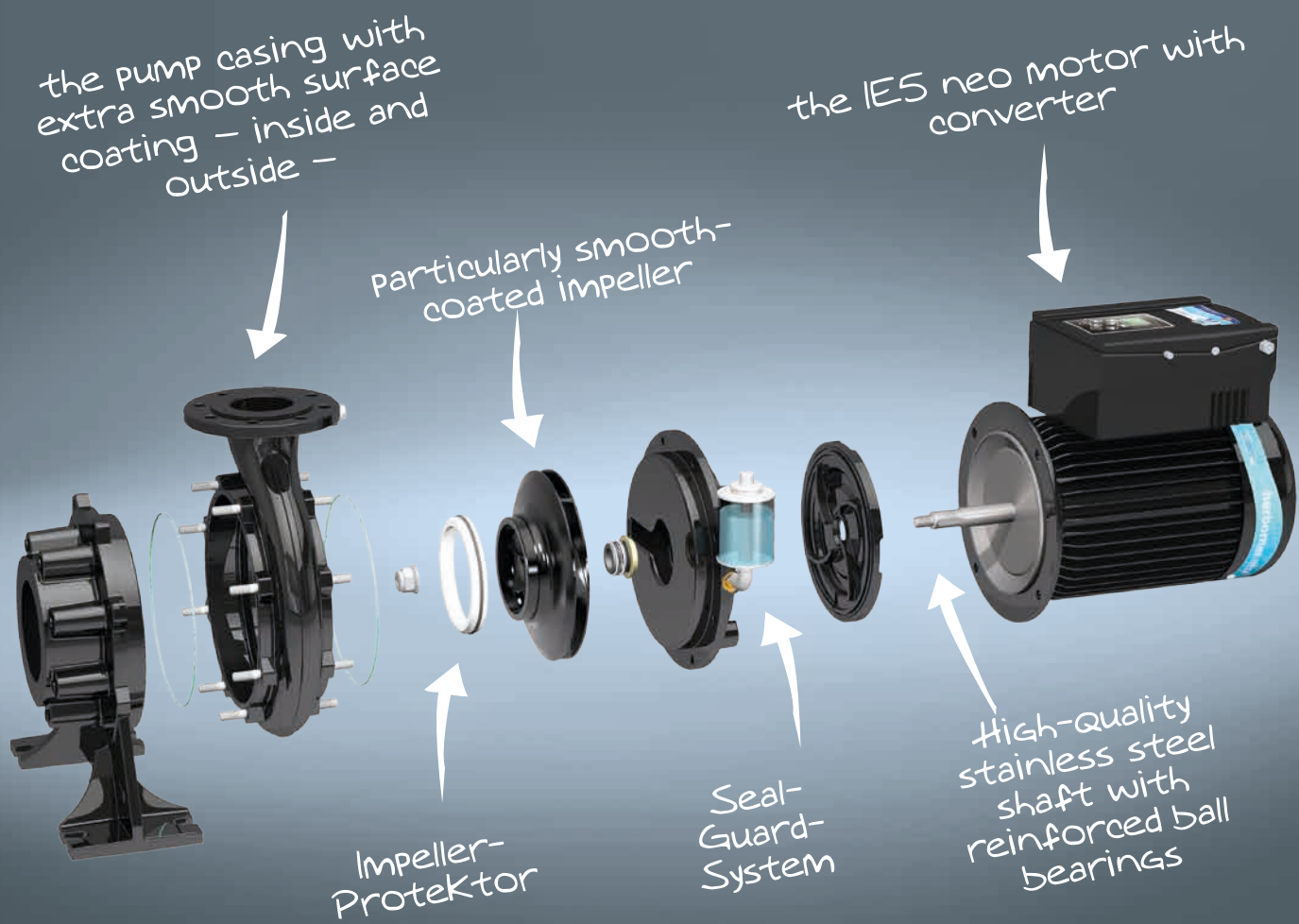
Equipped with 100% corrosion protection, our pumps also offer the best hygiene protection. The possibility of any adhesions is as good as eliminated.

### Maximum impeller diameter puts the pressure on

In the pumps of the **herborner.ηeo** series, the impeller diameter in the pump housing is designed with the maximum diameter. Here, the pump is adjusted to the system requirements using the speed control. The combination of the largest impeller diameter in connection with the speed adjustment ensures optimum flow behaviour. This simple measure exhibits efficiency benefits of up to 15% compared to twisted impellers.

The smooth-coated impeller, unique to the market, helps further maximize efficiency. This reduces energy costs by a further 3%. The specially developed, wear-proof impeller protector makes sure that operation runs smoothly and that gap losses on the suction side are kept extremely low. This, in turn, ensures that the efficiency of the pump remains constant.





# COMPONENTS

# herborner.ηeo

Practical applications, done logically

## Brilliant operation

### Easy commissioning

The pre-configured **herborner.ηeo** pumps are optimally prepared for commissioning. The flange position can be selected variably according to requirements.

### Fast adjustment to operating point

In conjunction with the required pump power output, the frequency converter can easily regulate the motor speed. This is done with just a few hand motions. In general, pre-parameterization is done before delivery.

### Time-saving service

The combination of pump, motor and frequency, each of which are attuned to one another, allows for generous service time intervals.

### Minimum maintenance works

Easily accessible points on the pump simplify the few maintenance tasks required. Even after years of operation, components and functional elements can be conveniently removed and reinserted.



# APPLICATION

# herborner.ηeo

The Pump Generation of the future

## Your Team for Success

Herborner pumps are versatile and reliable. Ready for every task in systems technology, the **herborner.ηeo** pumps complement each other perfectly. From a power point of view, **herborner.ηeo** pumps have the maximum level of efficiency.



### herborner.Xηeo

Ideal for use as a circulation pump with integrated hair and fibre separator. Plus: Easy-to-clean filter.

### herborner.Fηeo

Ideal for the versatile use of a block pump in the complex world of systems technology.



### herborner.Dηeo

The inline block pump is ideal for use as a pressure increasing pump for direct installations in piping.





# SMOOTH

# herborner.ηeo

See what sets us apart from the rest

## Checklist for maximum efficiency

### Smooth coating – High efficiency

Thanks to the 100% smooth coating of the entire pump hydraulics system, optimum flow conditions are given. The flow of the medium through this is practically flawless. In addition, the "HPC" coating guarantees continuous corrosion protection.

### Life cycle optimised

- Long-term use thanks to high product quality
- Best operating adjustment with maximum efficiency
- Outstanding value of life cycle costs and thus low overall costs for the operator

### Greatest impeller diameter

The smooth-coated and thereby enhanced impeller achieves the maximum efficiency attainable thanks to its maximum diameter.

### PM Motor IE5

- PM synchronous motor with IE5 (Ultra Premium Efficiency) and thus the highest energy efficiency class
- Outstanding part load behaviour compared to asynchronous motors
- Equipped with frequency converter and thus individually adjustable

### Sustainability through resource efficiency

- Eco-friendly manufacture
- Minimum wear
- Best energy use
- Maximum efficiency

### For new constructions or integrations

- Easy commissioning and quick adjustment to existing system conditions
- Special solutions possible and thus flexible when it comes to installation options
- Optimum operating point adjustment

### Optimised service and maintenance

- Time-saving servicing thanks to coated surfaces and thus easy maintenance and unproblematic component replacement
- Fast replacement parts delivery thanks to fewer versions of the impeller diameters
- Fast filter cleaning (with **herborner.Xηeo**)



## Special solutions

The customisation of special pumps is one of our performance features.

Our decades of experience in development and our on-site foundry form the basis of our ability to adapt to the requirements of individual projects. The technology needed for perpetual innovation provides our customers with the clear advantage of optimised solutions especially tailored to each unique project.

### Special configurations

- Different voltage
- Different insulation class
- Elevated ambient temperature
- Higher protection type
- Enhanced tropical and moisture protection
- Special materials
- Customer-specific solutions

Each pump in the **herborner.ηeo** series receives the following tag once the quality test has been passed. The back can be used by the customer as a maintenance overview.

## Consultation and service

We are here for you - competent and personal.

The last decades have seen our company establish itself worldwide. The client base stretches across the entire globe. Your contact persons in our company are highly qualified employees who use their professional knowledge and technical skills to find tailor-made solutions for your requirements. We also have globally active sales and service teams.

You can find more information on swimming pool pumps in the reference book: **Swimming pool pumps**  
Areas of use, selection, setup, energy-efficiency

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