

A WORLD OF BLUE



OCEAN MASTER
YEARBOOK 2019-2020

SAMSON PUMPS

Ocean Master series

The liquid ring pump line designed for the fishing industry

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Samson's Ocean Master pumps are designed to withstand the harshest working conditions and deliver years of reliability.



Our Ocean Master pumps are made to move fish

For nearly 40 years we have been making the strongest fish pumps in the world, and supplying an industry with some of the highest demands for strength and reliability.

With this product line we offer the future liquid ring pumps for fish handling, by gathering 40 years of experience in pumps that will be installed on board vessels and challenged by corrosive sealing water and heavy shifts between vacuum and pressure.



Kasper Nørgaard

Kasper Nørgaard

CEO

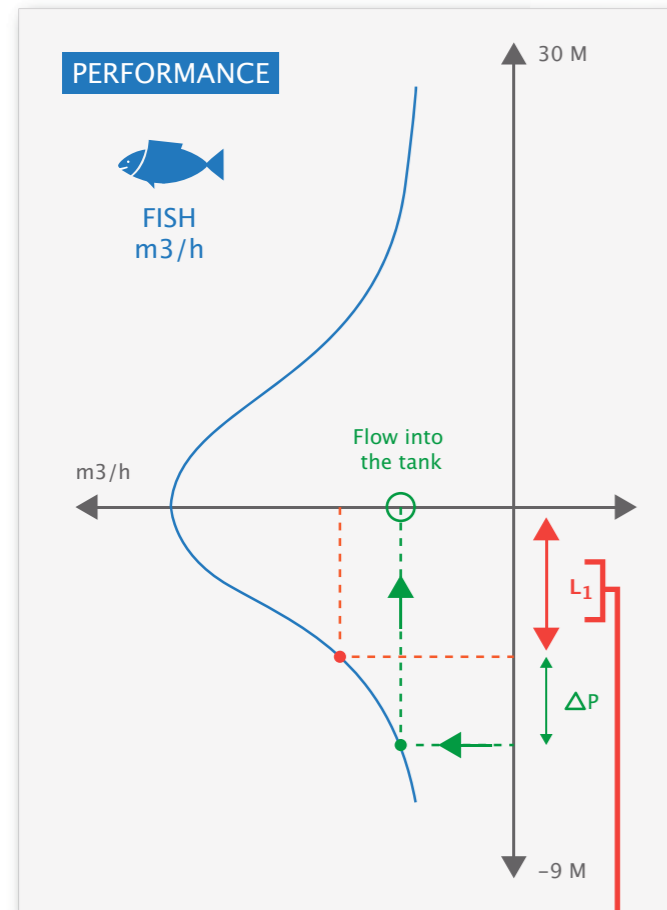
Don't guess

In order to understand the performance diagrams presented in this leaflet, we recommend to carefully read the explanation of how to estimate the quantity of fish your Ocean Master pump will move according to your working conditions.

The suction and discharge performances are calculated in normal cubic meters pr. hour corresponding to the displacement of water flow in and out of the holding tank.

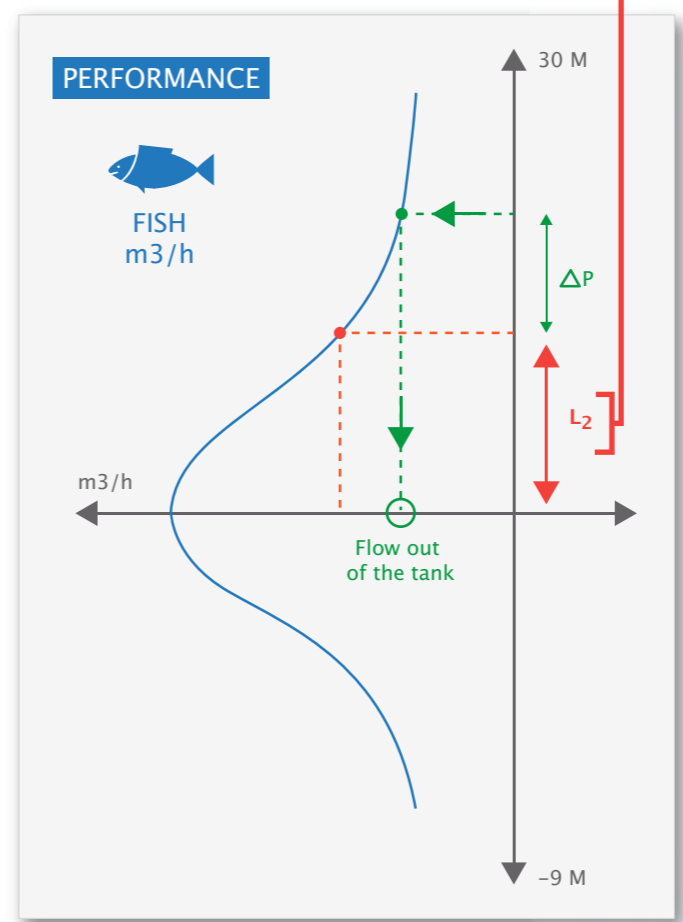
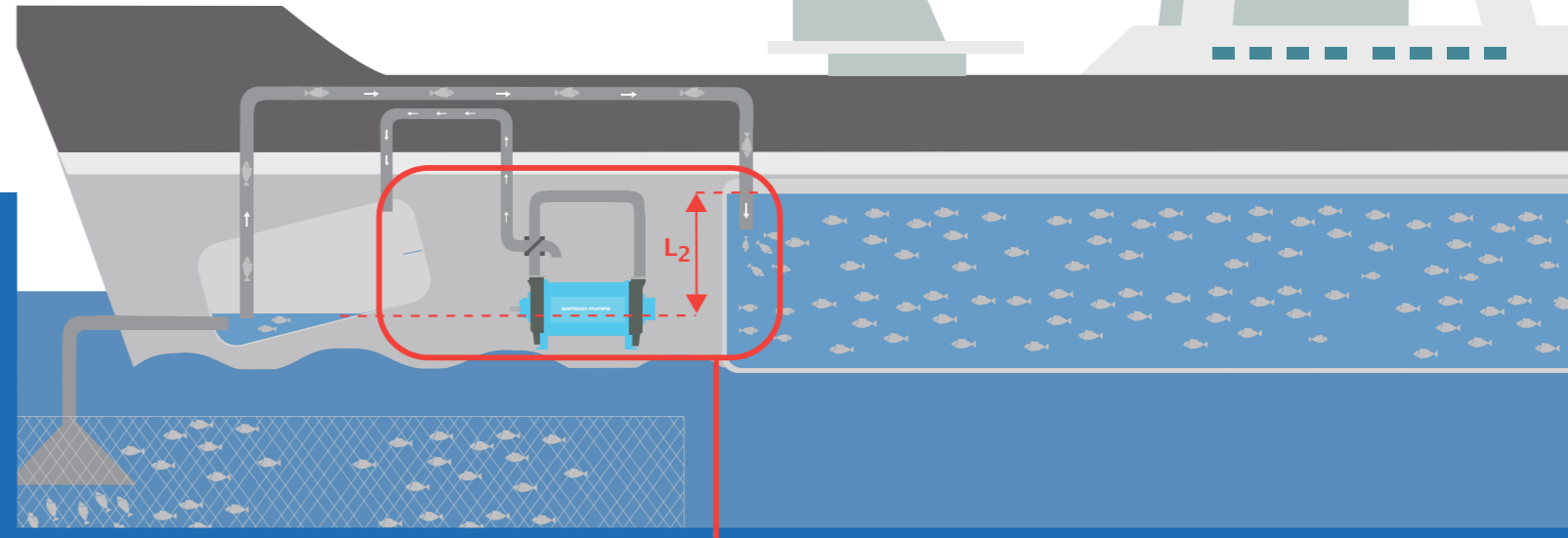
The performance is measured without pressure drop and this must therefore be calculated and added to the static pressure in both suction and discharge.

For further information and examples, please refer to the pump manual.



Suction

- Determine the suction height according to the sketch.
- Estimate the pressure drop corresponding to the flow.
- Add the pressure drop in meters.
- Find the water flow into the tank, by reading the curve as illustrated.



Discharge

- Determine the discharge height according to the sketch.
- Estimate the pressure drop corresponding to the flow.
- Add the pressure drop in meters.
- Find the water flow out of the tank, by reading the curve as illustrated.



"For further information or assistance, do not hesitate to contact us!"

Kelvin Storm Jensen

Vice President & CTO
Email: kj@samson-pumps.com

Optimized design for fish handling and corrosive environments

SAMSON PUMPS
OCEAN MASTER HSR
1000

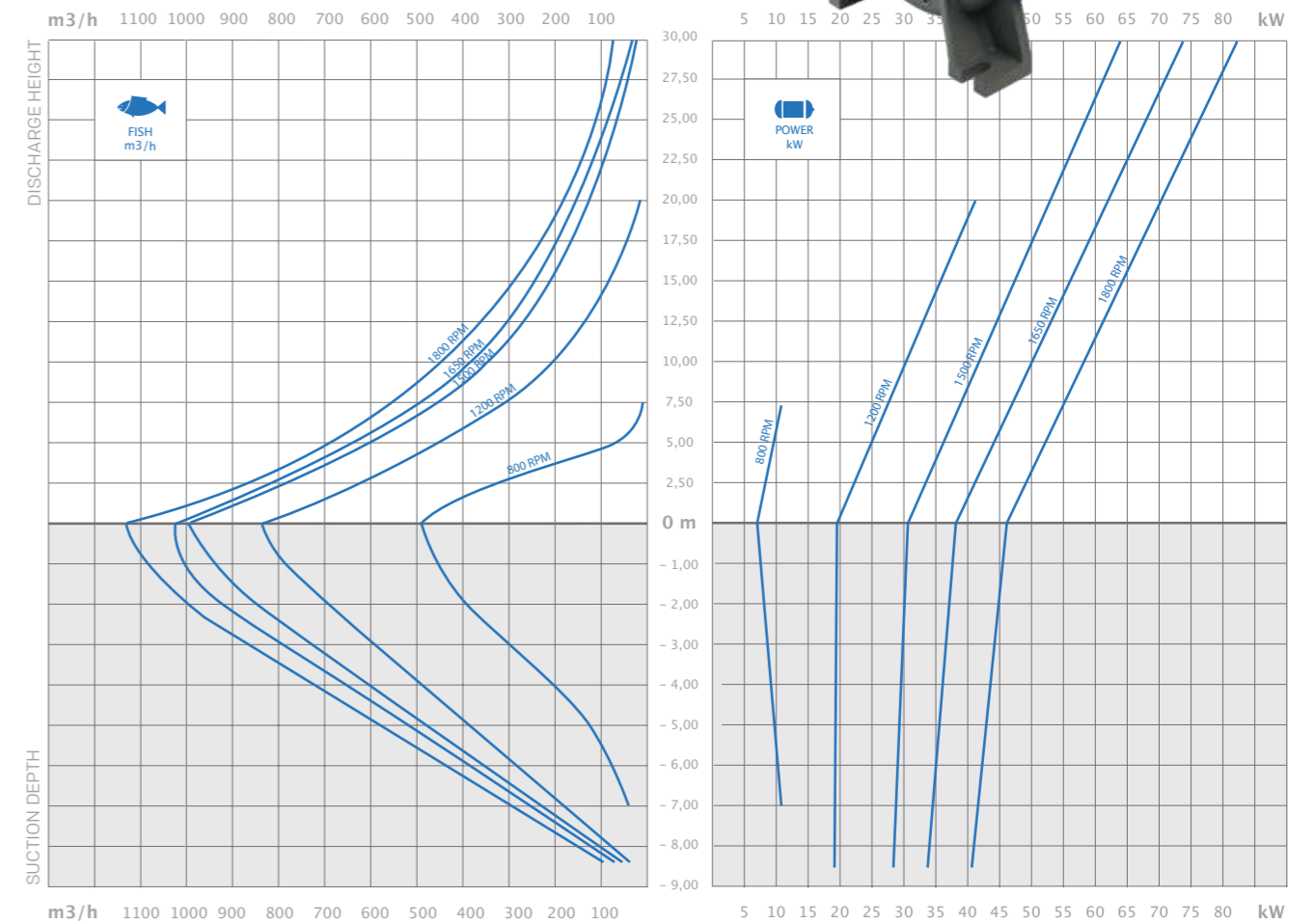


Description

Although used for many complex turnkey solutions within aquaculture plants and fish processing factories, we often hear that Ocean Master 1000 is the preferred liquid ring vacuum pump for fishing vessels. The pump is often installed on live fish carriers, trawlers and pelagic vessels. Mostly sailing in seawater and exposed to harsh working environments, these vessels are designed for industrial fishing purposes, de-licing and fish farming. Therefore, they are equipped with the high-strength Ocean Master 1000 which is corrosion resistant, has an extended onboard lifetime and reduces the ownership costs as little to no maintenance costs are required.

Ocean Master 1000 has a max vacuum of 65 mbar abs., max pressure of 3.0 bar(g) and a max capacity of 1100 m³/h. For instance, at a 5 meters vertical lift on the suction side the pump can move around 600 m³ of fish per hour.

PERFORMANCE



SPECIFICATIONS

Bearing cover	Cast iron	EN-GJL-250; EN 1561
Radial shaft seal	Rubber	Type NBR; DIN 3760A
Paper gasket	Paper	Oil resistant gasket
Bearing housing	Cast iron	EN-GJL-250; EN 1561
Mechanical shaft seal	NBR/AISI 316/Carbon	
Pump housing	Cast iron	EN-GJL-250; EN 1561
Flow plate option 1	Cast iron	EN-GJL-250; EN 1561
Flow plate option 2	Bronze	CC480K EN 1982
Rubber gasket	Rubber	NBR
Shell option 1	Cast iron	EN-GJL-250; EN 1561
Shell option 2	Stainless steel	AISI 316
Stay Bolt	Carbon steel	W.Nr. 1.1181
Rotor	Stainless steel	High Strength Samson design

APPLICATION

- Loading and unloading of live fish
- Corrosive seawater environments
- De-licing

VESSEL TYPE

- Pelagic fishing vessels
- Live fish carriers
- Trawlers



All Ocean Master pumps are equipped with the High Strength Rotor, specially designed by Samson



Description

Intended for the fish industry, Ocean Master 700 has a max. vacuum of 65 mbar abs., max pressure of 3.0 bar(g) and a max capacity of 750 m3/h. For instance, at a 5 meters vertical lift on the suction side, the pump can move around 380 m3 of fish per hour.

The compact design of the pump, makes it easy to install on a multitude of fish handling systems. Such as for example, Ocean Master 700 is often incorporated on vacuum tank systems (known on the market also as fish pumps) intended to transfer the fish from a cage to another, for vacuuming the fish from a cage to a processing line or for unloading fishing vessels. These operations can quickly be taken care of by the high-efficient Ocean Master 700, which beside vacuuming the fish gently without damaging it, uses only water as its operating liquid.



SPECIFICATIONS

Bearing cover	Cast iron	EN-GJL-250; EN 1561
Radial shaft seal	Rubber	Type NBR; DIN 3760A
Paper gasket	Paper	Oil resistant gasket
Bearing housing	Cast iron	EN-GJL-250; EN 1561
Mechanical shaft seal	NBR/AISI 316/Carbon	
Pump housing	Cast iron	EN-GJL-250; EN 1561
Flow plate option 1	Cast iron	EN-GJL-250; EN 1561
Flow plate option 2	Bronze	CC480K EN 1982
Rubber gasket	Rubber	NBR
Shell option 1	Cast iron	EN-GJL-250; EN 1561
Shell option 2	Stainless steel	AISI 316
Stay Bolt	Carbon steel	W.Nr. 1.1181
Rotor	Stainless steel	High Strength Samson design

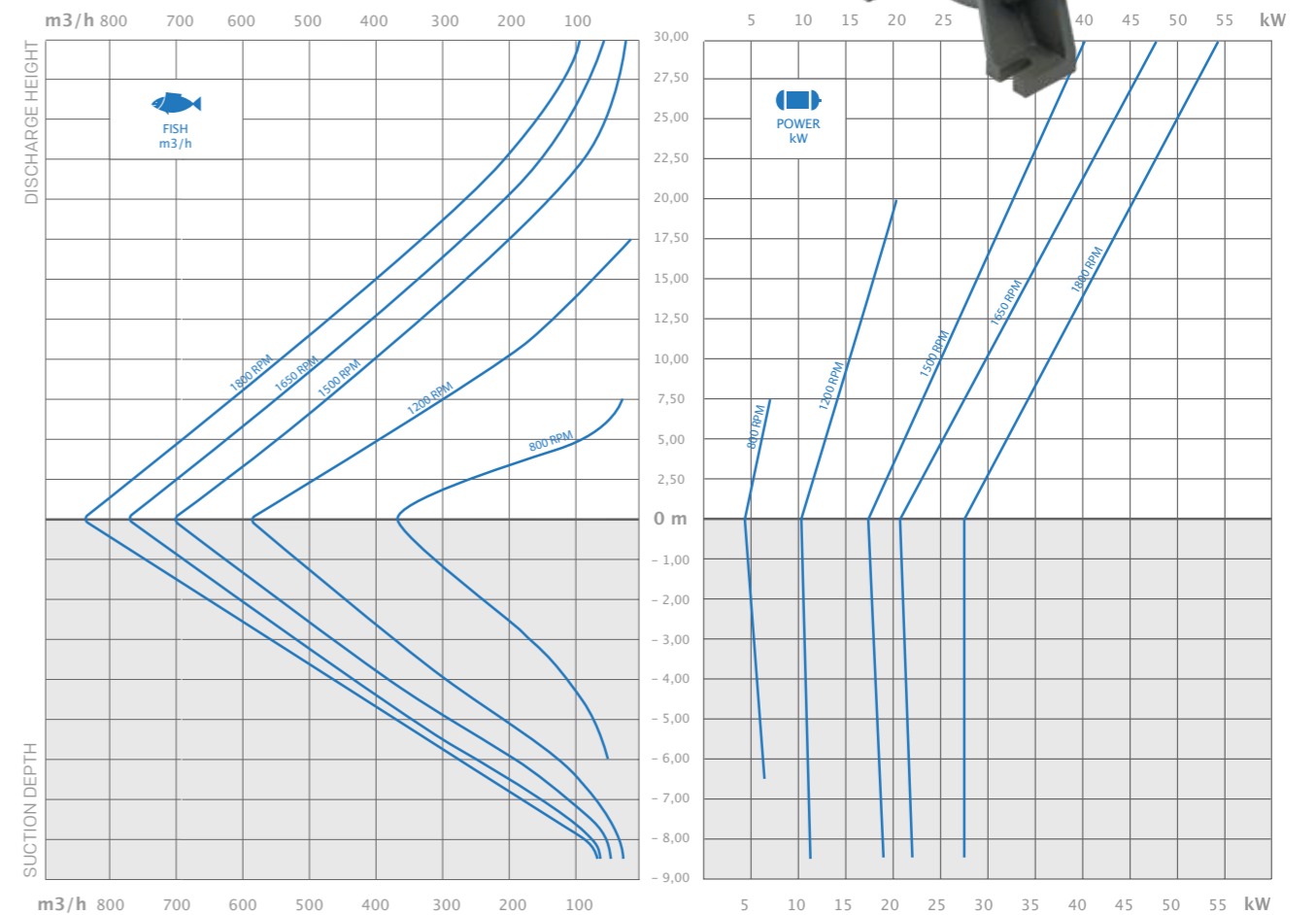
APPLICATION

- Loading and unloading of live fish
- Corrosive seawater environments
- De-licing

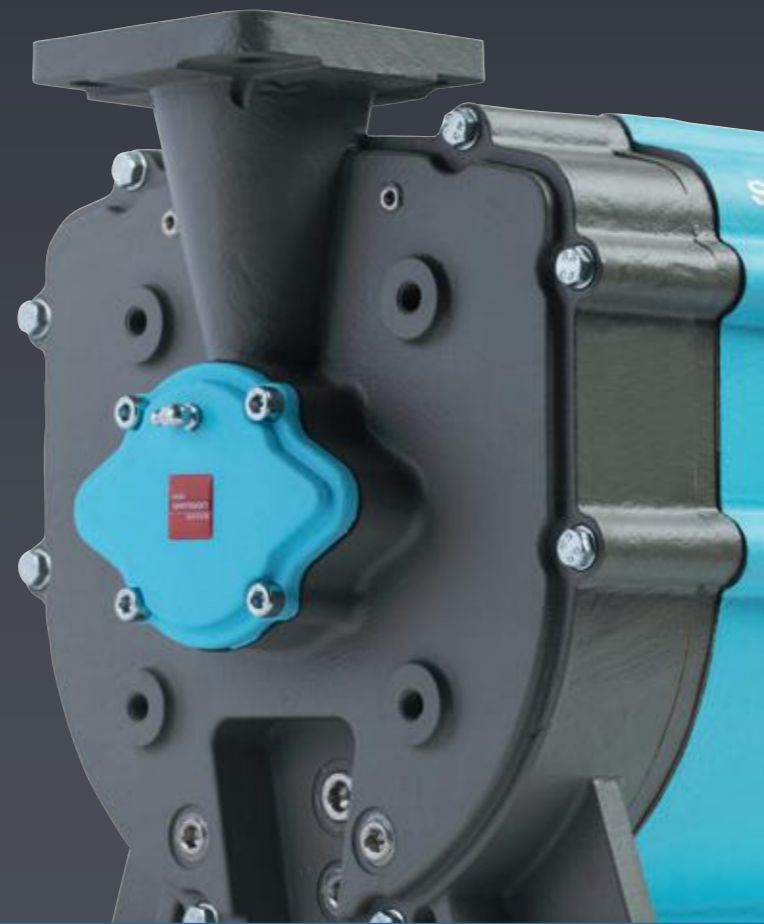
VESSEL TYPE

- Pelagic fishing vessels
- Live fish carriers
- Trawlers

PERFORMANCE



We have the world's most advanced testing center and every Samson Pump must pass the test before it ships. That includes your pump!



SAMSON PUMPS

OCEAN MASTER HSR 450



Description

The Ocean Master 450 is a liquid ring pump designed for smaller fish handling systems with a transport capacity up to 475 m³ fish per hour. The pump has a flow up to 530 m³/h, a max pressure of 2,0 bar(g) and a max vacuum of 100 mbar abs.. For instance, at a 5 meters vertical lift on the suction side the pump can move around 250 m³ of fish per hour.

Ocean Master 450 is frequently incorporated on complex vacuum conveying systems, which consist of funnels and pipes, intended for loading and refilling processes inside aquaculture plants, fish farms, fish feed and fish processing factories. Time and time again, OEMs had chosen Ocean Master 450 due to its ability of instantly switching between suction/discharge operations and had been associating the pump with durability and sturdiness.

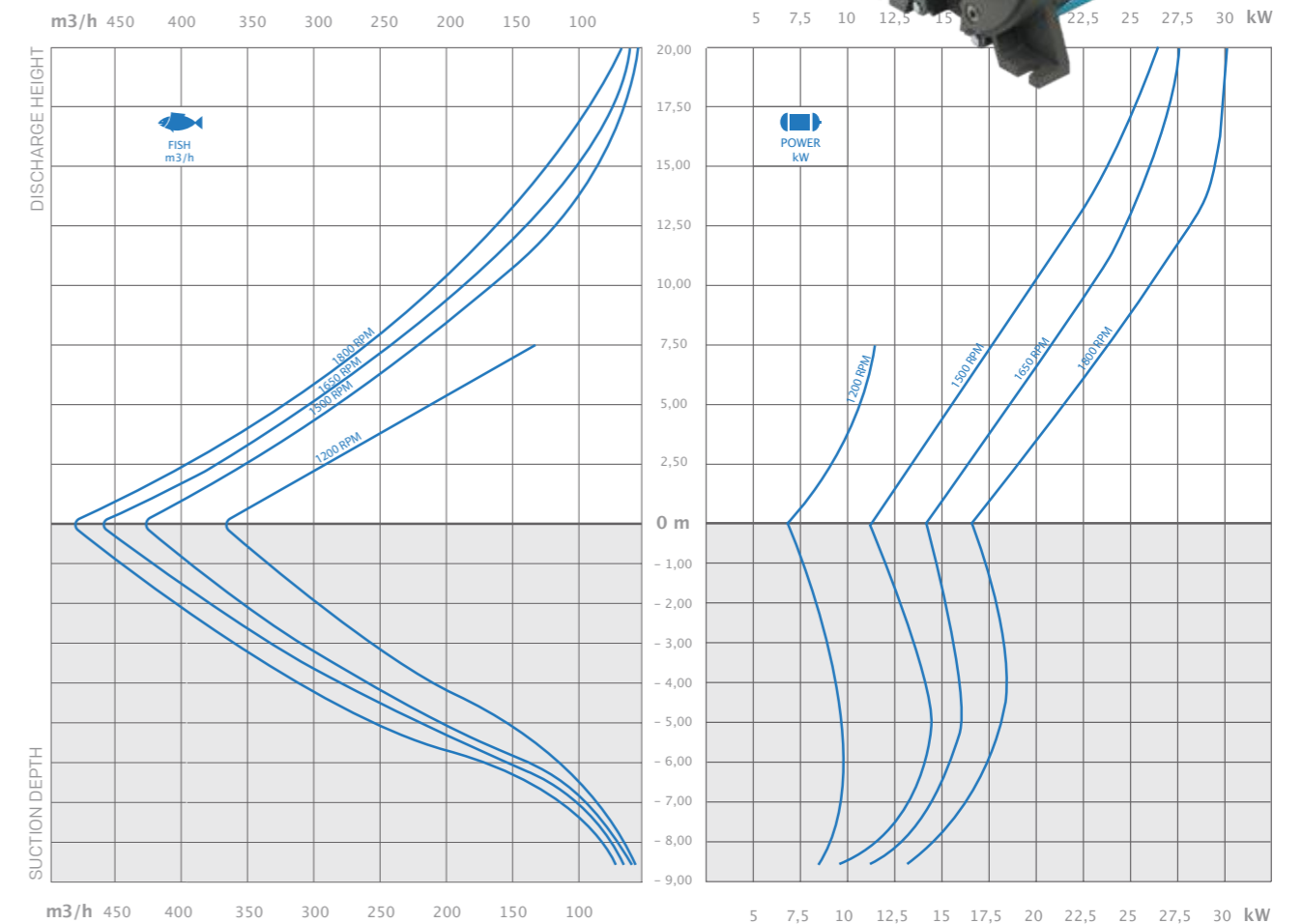
SPECIFICATIONS

Bearing cover	Cast iron	EN-GJL-250; EN 1561
Radial shaft seal	Rubber	Type NBR; DIN 3760A
Paper gasket	Paper	Oil resistant gasket
Bearing housing	Cast iron	EN-GJL-250; EN 1561
Mechanical shaft seal	NBR/AISI 316/Carbon	
Pump housing	Cast iron	EN-GJL-250; EN 1561
Flow plate	Stainless steel	AISI 316
Rubber gasket	Rubber	NBR
Shell	Cast iron	EN-GJL-250; EN 1561
Rotor	Stainless steel	High Strength Samson design

APPLICATION

- Smaller fish handling systems
- Pelagic
- Aquaculture

PERFORMANCE





Expect more!
A first choice for
mobile onshore
aquaculture and
in-doors fish
handling systems



SAMSON PUMPS

OCEAN MASTER

HSR 250



Description

Ocean Master 250 is a liquid ring pump in a very strong and compact design. The pump is designed for installation in smaller fish handling systems to transport up to 310 m³ fish per hour. For instance, at a 3 meters vertical lift on the suction side, the pump can move around 220 m³ of fish per hour. The pump has a max pressure of 2,0 bar(g) and a max vacuum of 100 mbar abs..

The waste fish handling lines are one of Ocean Master 250 very common applications. Often custom-made, these lines are intended to remove the solid waste (E.g. skin, viscera, fish heads, bones) as well as the liquid waste (E.g. blood water) from the fish processing areas. Having a flow up to 310 m³/h, max pressure of 2,0 bar(g) and a max vacuum of 100 mbar abs., Ocean Master is considered the most suitable pump for these relatively small indoor vacuum solutions.

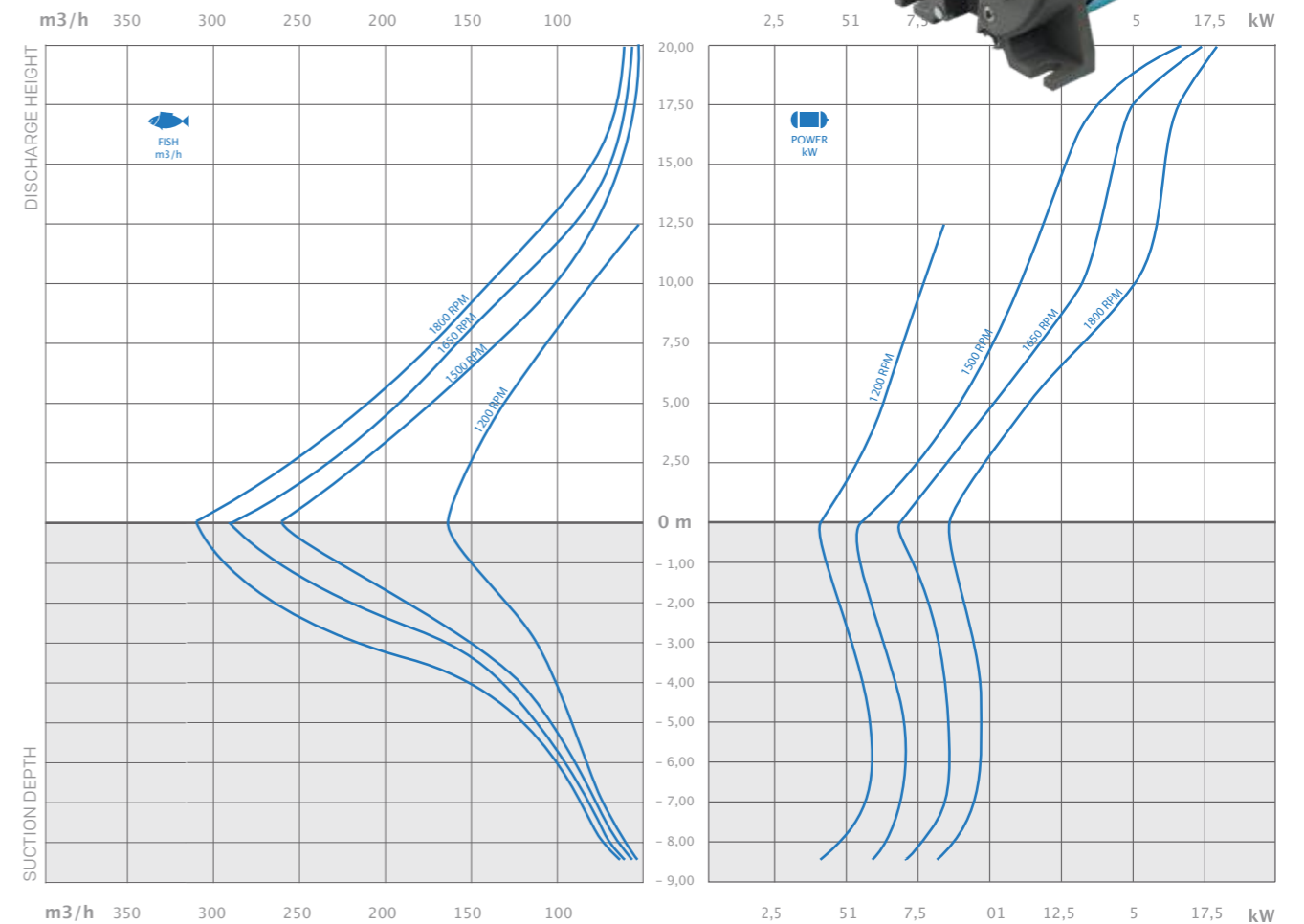
SPECIFICATIONS

Bearing cover	Cast iron	EN-GJL-250; EN 1561
Radial shaft seal	Rubber	Type NBR; DIN 3760A
Paper gasket	Paper	Oil resistant gasket
Bearing housing	Cast iron	EN-GJL-250; EN 1561
Mechanical shaft seal	NBR/AISI 316/Carbon	
Pump housing	Cast iron	EN-GJL-250; EN 1561
Flow plate	Stainless steel	AISI 316
Rubber gasket	Rubber	NBR
Shell	Cast iron	EN-GJL-250; EN 1561
Rotor	Stainless steel	High Strength Samson design

APPLICATION

- Smaller fish handling systems
- Pelagic
- Aquaculture

PERFORMANCE



Replace your Robuschi RVF27 with a Samson SVF27 – easy and fast



Description

Ocean Master SVF27 is the easy and fast replacement of your Robuschi RVF27. The main dimensions, footprint, flange connections, shaft diameter and height are 100% identical. The pump is characterized by a high-strength special impeller that will meet both the special conditions and the needs for applications providing both compression and vacuum.

In addition to this, the pump is equipped with the HSR. The rotor specially designed for the fish industry which guarantees high performance of operations and extends the lifetime of the pump.

SPECIFICATIONS

Bearing cover	Cast iron	EN-GJL-250; EN 1561
Radial shaft seal	Rubber	Type NBR; DIN 3760A
Paper gasket	Paper	Oil resistant gasket
Bearing housing	Cast iron	EN-GJL-250; EN 1561
Mechanical shaft seal	NBR/AISI 316/Carbon	
Pump housing	Cast iron	EN-GJL-250; EN 1561
Flow plate option 1	Cast iron	EN-GJL-250; EN 1561
Flow plate option 2	Bronze	CC480K EN 1982
Rubber gasket	Rubber	NBR
Shell option 1	Cast iron	EN-GJL-250; EN 1561
Shell option 2	Stainless steel	AISI 316
Stay Bolt	Carbon steel	W.Nr. 1.1181
Rotor	Stainless steel	High Strength Samson design

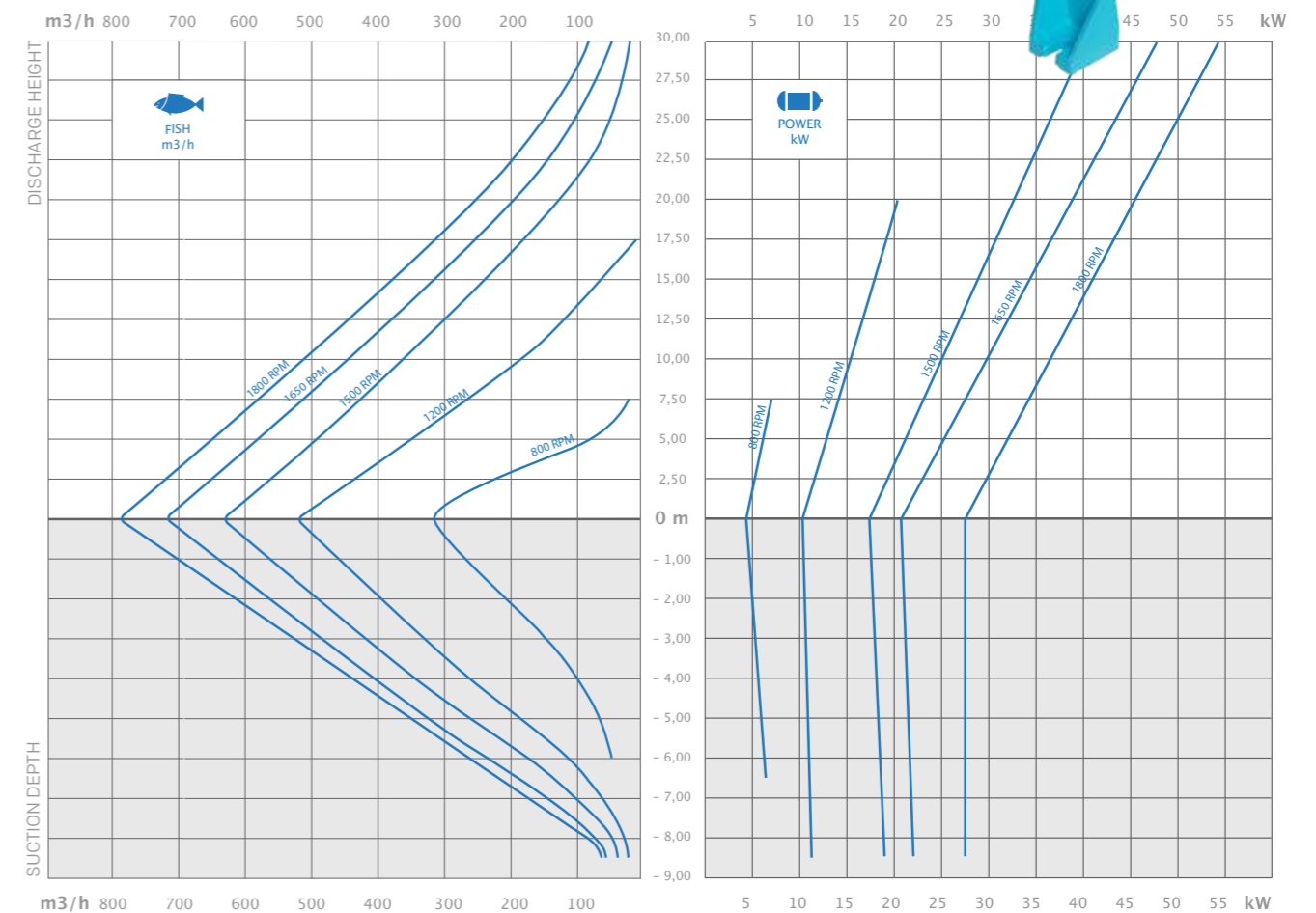
APPLICATION

- Loading and unloading of live fish
- Corrosive seawater environments
- De-licing

VESSEL TYPE

- Pelagic fishing vessels
- Live fish carriers
- Trawlers

PERFORMANCE

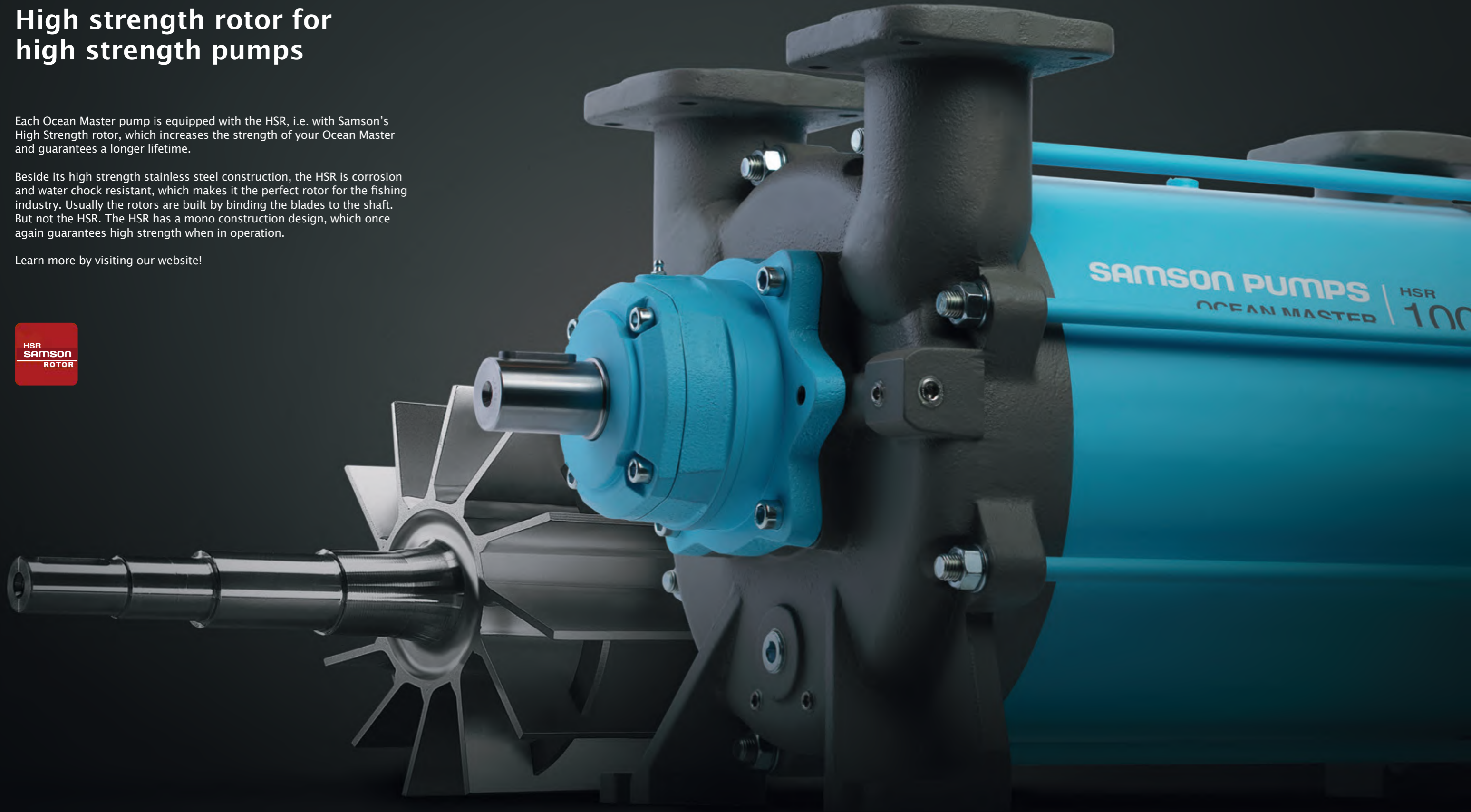


High strength rotor for high strength pumps

Each Ocean Master pump is equipped with the HSR, i.e. with Samson's High Strength rotor, which increases the strength of your Ocean Master and guarantees a longer lifetime.

Beside its high strength stainless steel construction, the HSR is corrosion and water chock resistant, which makes it the perfect rotor for the fishing industry. Usually the rotors are built by binding the blades to the shaft. But not the HSR. The HSR has a mono construction design, which once again guarantees high strength when in operation.

Learn more by visiting our website!





HYDRAULIC



**Adaptor for hydraulic motor
Ocean Master 1000 & 700**

Adaptor in cast iron, designed for connection of hydraulic motor to Ocean Master 1000 and Ocean Master 700.

The adaptor can also be supplied as a set (adaptor + coupling) and thereby a complete solution, only to connect it to a hydraulic motor and it's ready to run.

HYDRAULIC



**Adaptor for hydraulic motor
Ocean Master 450 & 250**

Adaptor is designed for connection of hydraulic motor to Ocean Master 450 and Ocean Master 250.

The adaptor can also be supplied as a set (adaptor + coupling) and thereby a complete solution, only to connect it to a hydraulic motor and it's ready to run.



MAINTENANCE



Automatic lubrication All Ocean Master Series

Samson Automatic Lubricator is designed to automatically supply a small quantity of grease on a regular basis. This provides a more accurate control of the amount of lubricant supplied, when compared to traditional manual lubrication techniques.

- + Extended lifetime
- + Improved bearing performance
- + Increased machine reliability



VACUUM



Vacuum Limiter All Ocean Master Series

Samson Vacuum Limiter Valve is designed to control the pressure (vacuum) level and to avoid cavitation in the pump.

The Vacuum Limiter Valve is installed when the suction line may force the pump to operate below the cavitation limit. Air must then be supplied to the suction side of the pump through the vacuum limiter which is regulated according to the required pressure.

- + Prevents cavitation
- + Requires no electrical installation
- + Approved for use in ATEX Zone 1



The Samson Pumps test center is a modern, fully-automated part of our Quality Management System and ISO 9001 certification. Through the years our test center has added to the value of the products and services we deliver to customers all over the world.



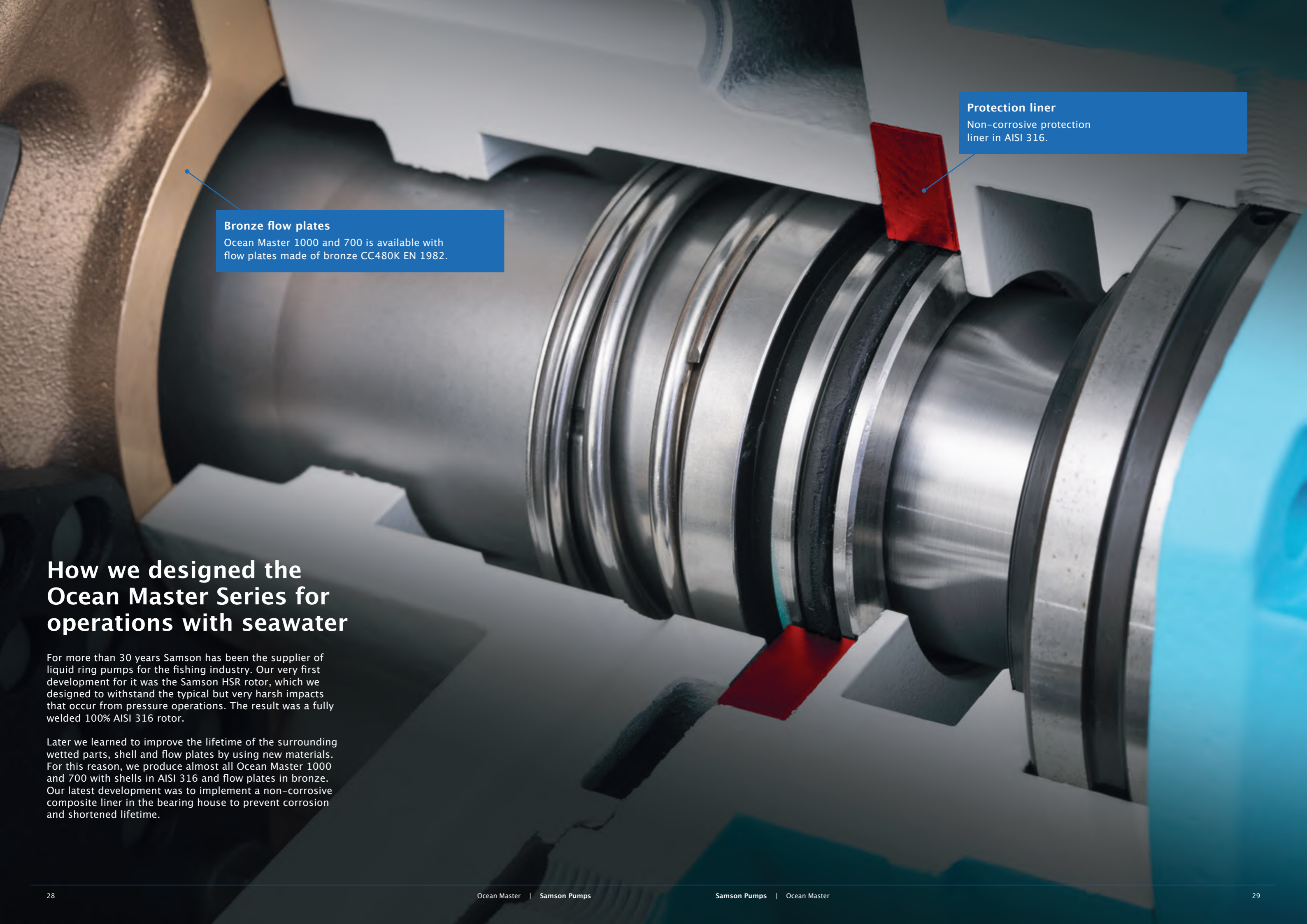


30% faster unloading with Ocean Master

"On paper, our old pumps would appear to have roughly the same capacity as those manufactured by Samson. In reality, Samson's Ocean Master pumps have a much higher capacity. This has represented an extra bonus for us: we have reduced our unloading time by 30 percent! This represents an extra week of fishing per season."

C.H. Osbahr

Chief engineer officer on the
trawler Midoy Dakhla 1



Bronze flow plates
Ocean Master 1000 and 700 is available with flow plates made of bronze CC480K EN 1982.

Protection liner
Non-corrosive protection liner in AISI 316.

How we designed the Ocean Master Series for operations with seawater

For more than 30 years Samson has been the supplier of liquid ring pumps for the fishing industry. Our very first development for it was the Samson HSR rotor, which we designed to withstand the typical but very harsh impacts that occur from pressure operations. The result was a fully welded 100% AISI 316 rotor.

Later we learned to improve the lifetime of the surrounding wetted parts, shell and flow plates by using new materials. For this reason, we produce almost all Ocean Master 1000 and 700 with shells in AISI 316 and flow plates in bronze. Our latest development was to implement a non-corrosive composite liner in the bearing house to prevent corrosion and shortened lifetime.

Design made easy

"To make the design project of your vacuum system easier, we provide 3D files for all our Ocean Master pumps. Send an email or contact us by phone and we will make sure that you receive the files you need in a blink of an eye."



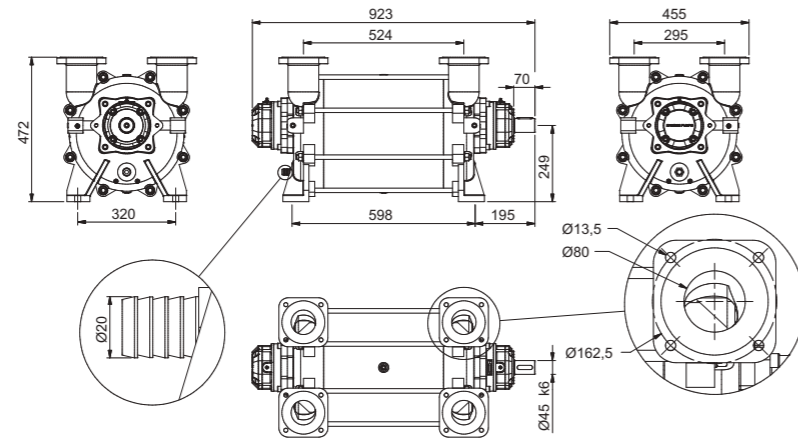
Jens Justesen

Design Engineer - Tech. department
Email: JJ@samson-pumps.com



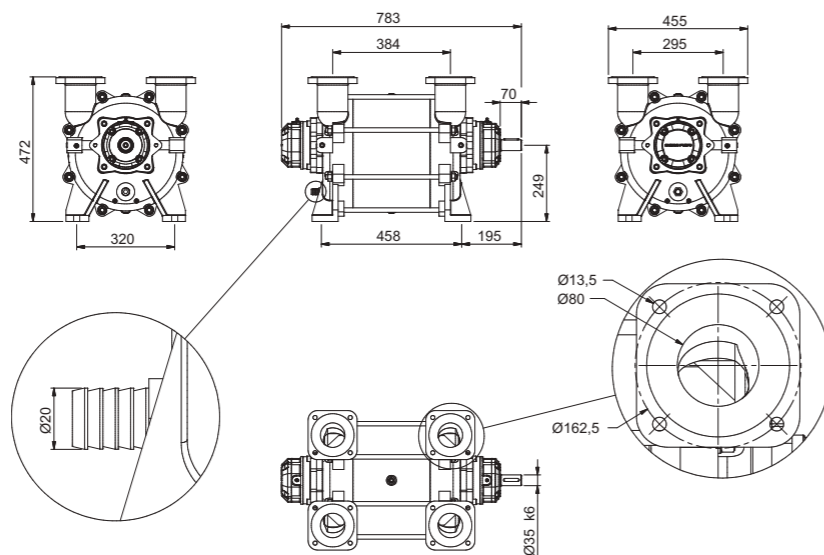
Ocean Master 1000

Weight: 253 kg



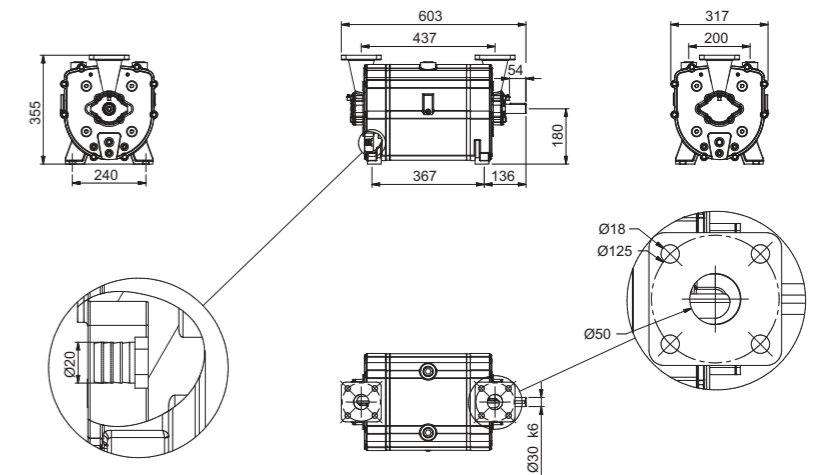
Ocean Master 700

Weight: 217 kg



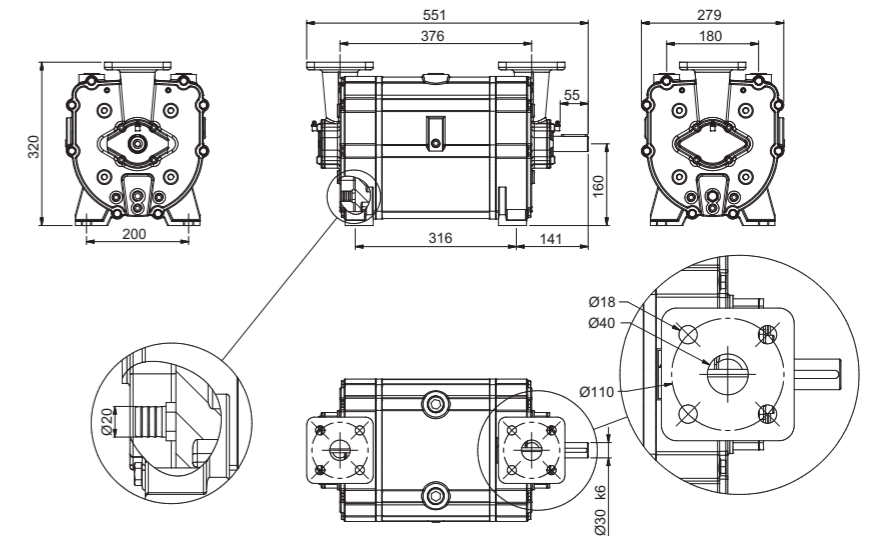
Ocean Master 450

Weight: 120 kg



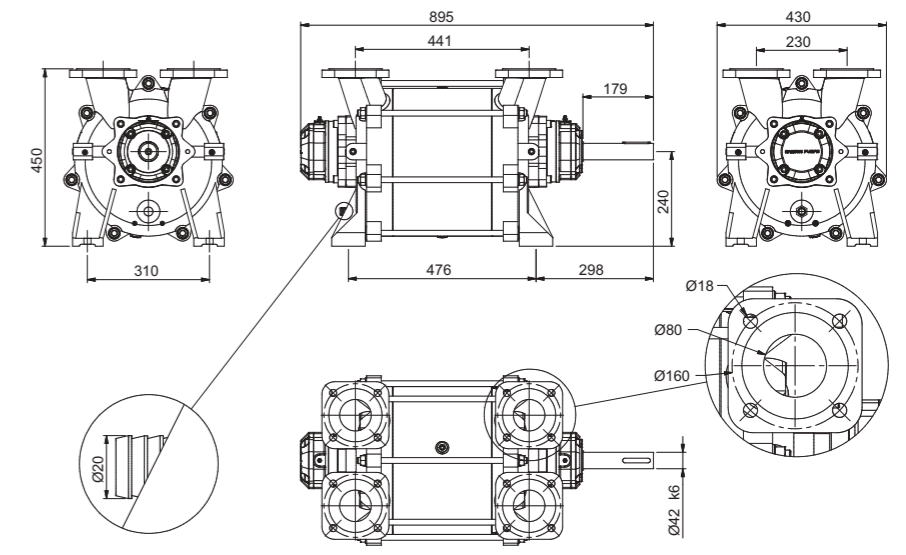
Ocean Master 250

Weight: 87 kg



Ocean Master SVF27

Weight: 205 kg



Strength and durability are our trademarks

Samson Pumps is your reliable fish pump supplier. The company, specializing exclusively on liquid ring vacuum pumps, supplies more than 80 countries with the strongest vacuum pumps on the market and is always in-hand when OEMs require assistance in building a new fish handling system or vessel.

The Ocean Master Series was exclusively designed for the fishing industry by incorporating the lessons learned through supplying this industry in the last 40 years. At the core of Samson's business activity is the strong belief that the pumps we supply must be of superlative quality. Therefore, the Ocean Master pumps are built with the best-in class materials, they are designed for seawater operations and are tested for overall performances before being shipped. In this manner, we ensure that our OEM partners on the fish industry receive the best performing liquid ring vacuum pumps for their fish vacuum systems.

Strength and durability are our trademarks! Choosing Samson Pumps, you choose not only the best quality on the market, you also choose a partner that will guide and assist you any time you need it.

Liquid
ring pumps

samson-pumps.com



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