

SEALLESS
Centrifugal Process Pumps

For Aquariums, Zoos &
Marine Biology Centers



Sundyne Sealless – Simple by Design™

Sundyne Ansimag sealless magnetic drive non-metallic pumps are simple by design, delivering world-class performance in a remarkably compact footprint. With no seals or mechanical couplings to leak or fail, these pumps are the safest choice for those looking to protect personnel and the environment. Additionally, Sundyne sealless pumps feature fewer wetted parts than competitive products and a powder coat finish to prevent corrosion, delivering enhanced durability, optimal reliability and lower through-life costs over traditional sealed pumps.

Built to meet exacting ASME / ANSI B73.3 and ISO 2858 chemical process pump standards, Sundyne sealless pumps are the easy upgrade option for fluid handling professionals interested in replacing their standard mechanically-sealed pumps. Backed by over 30 years of continuous improvement on our original standard dimensional designs, Sundyne sealless magnetic drive non-metallic pumps are the ideal choice for applications involving highly volatile or valuable materials in the chemical, petrochemical and water industries.

A Corrosive Environment

Seawater presents a broad range of challenges for engineers working in aquariums, zoos and marine biology centers.

One key need for customers servicing aquariums and marine research facilities is, quite simply, RELIABILITY. When you perform research or need to maintain specific environmental conditions for a specimen, consistency is key. Your pumps simply cannot fail. If they did, they would cease to provide the temperature, sea-water and critical life support required to maintain the environment, leading to flawed research data or, worse, lost specimens.



Sealed pumps invariably fail, due to salt-water crystallization on the mechanical seal faces. Depending upon location, a seal can last between six months and two years.

Why Sundyne Sealless?

- Highly reliable
- No harm to sealife
- Protects infrastructure
- Cost effective

Sundyne manufactures a pump ideally suited to handling the corrosive seawater environment, while delivering rock solid reliability.

Considering that the typical length of a sea-life research program is between 3-5 years, there is a high risk of specimen termination during the research process due to the brevity of seal life. If your pump fails halfway through an experiment, you've lost years of work and data.

However, Ansimag sealless line of process pumps deliver the required life cycle and more for these applications, due to its unique design that features no seals, power frame, loaded bearing or couplings, all of which are prone to failure under such conditions.

Additionally, sealed pumps will succumb to flow "pinch off" over time, as their filtrations systems begin to plug and fail. However, due to their stationary shaft supported design, Ansimag pumps allow for this sort of low flow impingement, in comparison to pumps designs that features overhung shafts. Lowered flow rates resulting from hampered filtration can lead to the failure of mechanical seals and bearings, while Ansimag pumps can tolerate lower flow ranges and stay online in the most challenging environments.



Ask Rick Galat at the Marine Biological Laboratory (MBL) in Woods Hole, Mass. about Sundyne – they've been using our Ansimag self primer pumps to pull water directly from the ocean to the labs with 100% success! ▶

The Ansimag series of Sundyne sealless pumps are designed to deliver in all of these areas. Simple by design, these robust pumps feature non-metallic wetted parts to safely handle a generous range of corrosives and solvents up to 250°F (121°C) without corrosion. Plus, the innovative rear casing generates no eddy currents, eliminating issues stemming from heat generation and reducing energy costs.

However, the most notable benefit is the fact that these pumps are magnetically driven, meaning there are no leaks or emissions.....**EVER.**

Your system remains in operation as intended, keeping your marine life safe and healthy; and with no seals to maintain, you'll be able to drastically reduce your total cost of ownership.



Epoxy coating

Type of Facilities & Systems

Sundyne Sealless pumps are currently in service at several aquatic research facilities and aquariums throughout North America, including Woods Hole Oceanographic Institute in Cape Cod, MA, Roger Williams Aquatic Research Center and the New England Aquarium, to name a few.

Typically, there are two different types of systems within marine aquariums or research facilities:

OPEN SYSTEMS

Also referred to as “once-through,” or OT, systems, these systems circulate seawater from the ocean to the labs / tanks and then back into the ocean. The Ansimag line of sealless process pumps have been proven in these types of systems, having found use in aquariums and aquatic science centers. The seawater temperature is controlled individually in each tank or lab, dependent upon the type of sea-life being researched or maintained. OT systems are typically located at coastal sites that have continuous access to seawater.

CLOSED SYSTEMS

Also referred to as “closed recirculating,” or CR, systems, these systems circulate seawater in a closed loop system and treat it over time through a variety of treatment systems. Typically, salt is added into such circuits over time. CR systems are considered zero loss and feature life support systems like effluent treatment cells that utilize ozone.

Powder Coat Paint Protection



Powder coated

Powder coat paint protects Sundyne Ansimag non-metallic sealless magnetic drive pumps from corrosive and caustic chemical applications. Our proprietary paint process is standard on external metallic housings for pumps used in harsh chemical and corrosive water environments and is superior to typical epoxy coatings.

ASSOCIATION OF ZOOS & AQUARIUMS

With unparalleled reliability and leak-free operation, Sundyne sealless non-metallic magnetic pumps help aquariums and oceanographic institutes seeking accreditation from the Association of Zoos & Aquariums.



COMPRESSORS

PUMPS

GENUINE PARTS

SERVICE



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