Mixers and Flowmakers

For Municipal and
Industrial Wastewater

Landia®

ENGINEERED TO LAST


Landia

Landia Mixers and Flowmakers

Every day Landia mixers contribute to a cleaner world due to their work in a wide range of treatment processes in municipal and industrial wastewater treatment plants.

Landia supplied the first mixer for wastewater in the mid 1980's for mixing the contents of a digester in a Danish wastewater treatment plant. Since then, tens of thousands of Landia mixers have been sold for wastewater applications all over the world.

All Landia mixers are carefully designed to achieve the lowest possible operational costs, including the lowest power consumption and maintenance cost.

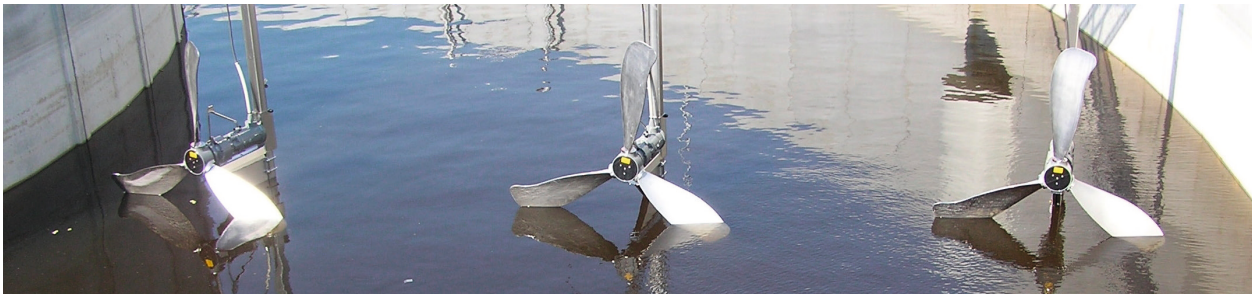
Landia offers the widest range of propeller mixers and flowmakers in the industry with motor sizes from 0.9 HP to 50 HP and propeller speeds from 19 rpm to 3,600 rpm. A Landia mixer is always adapted to the specific application and manufactured in the most suitable materials for the longest possible lifetime – whether it is epoxy-coated cast iron or solid stainless steel construction.

Conditions for a mixer are often extreme, including 24/7 operation in dirty and aggressive wastewater. Such conditions require the very best sealing system. To address this, Landia has developed its unique sealing systems consisting of three or four seals in combination with a grease chamber. Landia's labyrinth sealing system provides the optimum protection for the mixer's internal components, while requiring the least amount of maintenance parts of any mixer design.

A Landia mixer, whether submersible or dry-installed, is a unique piece of equipment, and is backed by experienced guidance from a Landia-trained sales engineer for each application. Landia's extensive knowledge of wastewater applications is vital to its ability to provide top quality equipment and customer service.

Landia Mixers
– mix almost anything!

A typical wastewater treatment plant consists of numerous tanks containing wastewater in different stages and Landia has a proven range of mixers and flowmakers for almost any municipal or industrial application.



Submersible Flowmaker, Model POPL-I

The POPL-I is a low speed flowmaker for mixing and flow creation of large volumes of water at the lowest possible power consumption.

A unique feature of the POPL-I is the adjustable propeller blades that make it possible to change their angle or setting. This special feature - exclusive to Landia - optimizes power consumption.

We know from experience that our POPL-I propeller (made from stainless steel) will last forever, which is why we offer LIFETIME WARRANTY on Landia's stainless steel propeller blades!

Applications

- Aeration Tanks
- Oxidation Ditches
- Anoxic- and Anaerobic Tanks
- MBBR Reactors

In Short

Motor sizes from 1.8 - 12.2 HP
Propeller diameter: 67" and 91"
Propeller rotational speed: 19 - 48 rpm
Propeller tip speed: 7.5- 14.3 ft/sec.
Available with Explosion-proof motor

Submersible Flowmaker, Model POP-I 180

The POP-I 180 is a low speed flowmaker for mixing and flow creation at the lowest possible power consumption.

Compared with the POPL-I flowmaker, the POP-I 180 can be used for smaller and odd shape tanks due to its smaller physical size.

The POP-I 180 is also available in solid stainless steel AISI 316 – typically for use in the chemical industry and other highly corrosive environments.

Applications

- Aeration Tanks
- Oxidation Ditches
- Anoxic- and Anaerobic Tanks
- SBR Reactors
- Sludge Tanks
- MBBR Reactors

In Short

Motor sizes from 1.8 - 12.2 HP
Propeller diameter: 23″ - 43″
Propeller rotational speed: 180 rpm
Available with Explosion-proof motor

Submersible Mixer POP-I, Models 250 and 360

The POP-I 250 and 360 are versatile and efficient heavy duty mixers. The three-blade propeller and the relatively low propeller rpm makes it ideal for the mixing of high viscosity liquids such as dewatered sludge.

The POP-I 360 is available also in solid stainless steel AISI 316 – typically for use in the chemical industry and other highly corrosive environments.

Applications

- Anoxic- and Anaerobic Tanks
- SBR Reactors
- Sludge Tanks
- Digester Mixing
- Pump Lift Stations

In Short

Motor sizes from 1.8 - 50 HP
Propeller diameter: 13" - 33"
Propeller rotational speed: 250 - 360 rpm
Available with Explosion-proof motor

Side Entry Mixer, Model POPTR-I

The POPTR-I is a versatile and efficient side entry mixer. The three-blade propeller and the relatively low propeller rpm makes it ideal for mixing of high viscosity liquids such as dewatered sludge or digested sludge.

Being a side entry mixer the POPTR-I has its motor outside the tank, which significantly eases service and maintenance. Optimum cooling conditions for the motor makes it the ideal choice for high temperature liquids.

The POPTR-I is suitable for most types of tanks – concrete and steel.

Applications

- Sludge Holding Tanks
- Digesters
- Equalization Tanks
- Hot Liquids

In short
Motor sizes from 9.0 - 30.2 HP
Propeller diameter: 22″ - 33″
Propeller rotational speed: 360 rpm
Available with Explosion-proof motor

Submersible Mixer, Model POD-I

The POD-I is a compact and flexible submersible mixer for applications in smaller tanks and liquids with relatively low solids concentration.

Landia POD-I is available both in epoxy-coated cast iron and solid stainless steel AISI 316.

Applications

- Selector Tanks
- Anoxic- and Anaerobic Tanks
- SBR Reactors
- Pump Lift Stations
- Equalization Tanks

In Short
Motor sizes from 1.8 - 30.2 HP
Propeller diameter: 7.5″ - 14″
Propeller rpm: 1200 and 1800 rpm
Available with Explosion-proof motor

Landia Mixers and Flowmakers

- recommended by satisfied customers

Unbeatable Total Life Cycle Costs

Guilin, the pearl of China's emerging tourist industry, has chosen Landia's flowmakers, mixers and recirculation pumps for two new wastewater treatment plants that were built in the city famed for its magical land formations.

In 2013 Landia supplied a total of 78 flowmakers, mixers and recirculation pumps to the City of Guilin. The supply was based on the ultra-reliability and performance of 20 Landia flowmakers that have served Guilin since 1995.

POPL-I flowmakers are installed in the aeration, anoxic and anaerobic zones at Guilin, where their low rotations provide unrivalled flexibility for wastewater treatment. POP-I mixers from Landia, which are designed for harsh conditions, also agitate, homogenize and keep solids in suspension.

Meanwhile, Landia's AXP-I pumps, which handle large volumes of water at low head but without creating excessive energy bills, recirculate activated sludge from the aeration zones into the anoxic zones.

Landia's Mixers Do Their Duty At Camp Lejeune

In Jacksonville, North Carolina, Landia has supplied several submersible mixers for the sludge treatment process at Marine Corps Base Camp Lejeune, which has the largest concentration of Marines and sailors in the world.

The installation of the POP-I mixers represents the second time that Landia (also based in North Carolina) has provided equipment for the base's wastewater treatment plant – the first being in 1997. At one point in time, Camp Lejeune had tried another brand of mixers, but soon realized that the quality of Landia's mixers was unmatched.

The challenge that Landia had to face at Camp Lejeune was to provide a customized solution to meet very specific application requirements. As before and as always, Landia does not provide off-the-shelf products, but look to provide long term solutions, long-term value and personalized customer support.

Gentle movement of MBBR Bio Media

Submersible BioMover mixers for MBBR applications with low propeller speed and large propeller blade surface area ensure efficient mixing and maximum protection of the biofilm carriers.

A US mining company purchased its first Landia BioMover in 2006 and has since then installed BioMover mixers in four additional tanks. The mining sites are typically in remote locations and require highly reliable equipment to avoid downtime and unscheduled service calls.

High volume Aeration Tank – mixed by low power

A Danish wastewater treatment plant was expanded in 2012 as part of a centralisation to include a new aeration tank (known as the N-Tank). The aeration tank, with its diameter of 104′ a water depth of 18′ and a volume of 2 million gallon is equipped with fine bubble diffusers and two Landia POPL-I flowmakers for mixing and flow creation.

As part of the project, Landia offered its advice and recommendations about the optimum design of the tank in order to obtain as low power consumption as possible for mixing. The result was a significantly lower power consumption than average – still with a 20% extra mixing capacity in case of increased load of the WWTP.

Leachate Treatment Plant, Singapore

Landfill leachate is often stored in large lagoons. The lining of these lagoons makes it impossible to install mixers in a traditional way, so Landia has developed a pontoon mixer specially for this application.

Due to the aggressive characteristics of the leachate, Landia's solid stainless steel mixer model POPR-I is the ideal choice for the lowest total life cycle costs.

Landia is much more
- than just mixers!

Landia is a pump and mixer manufacturer offering a comprehensive range of pumping and mixing solutions, suitable for numerous applications within the wastewater industry. Please see examples below.

SEE THE COMPLETE PROGRAM ON
LANDIAINC.COM

Submersible Mixer, Model POPR-I – the True Stainless Steel Mixer

Landia POPR-I mixers are made from solid stainless steel AISI 316. The applications are typically acidic liquids or high chloride content applications such as desalination plants.

The POPR-I mixers are available with propeller speed of 180 and 360 rpm and with motor sizes ranging from 1.8 HP to 50 HP.

Also available in Super Duplex (SAF 2507) upon request – fully resistant to sea water!

Submersible BioMover Mixer for MBBR Applications

The Landia BioMover range of mixers is developed specifically for efficient and gentle mixing of plastic bio media; biofilm carriers.

The BioMover is suitable for all types of bio carriers, with the low propeller rpm and propeller tip speed ensuring maximum hydraulic efficiency and gentle treatment of the carriers.

All Landia BioMovers are equipped with stainless steel large-surface propeller blades, as recommended by all leading MBBR suppliers.

Landia BioMover is available with motor sizes from 1.8 - 12.2 HP and propeller speed from 19 to 180 rpm. Propeller tip speed from 7 - 25 ft/sec.

Submersible Chopper Pump, Model DG-I

The DG-I submersible chopper pump is designed for tough applications such as unscreened sewage, septic sludge, thickened sludge and other high solids liquids

Dry Installed Chopper Pump, Model MPTK-I

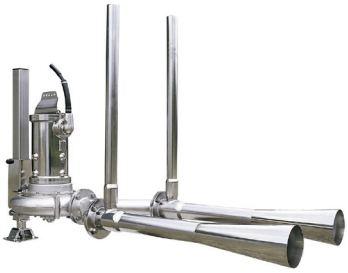
The MPTK-I chopper pump is designed for tough applications such as unscreened sewage, septic sludge, thickened sludge and other high solids liquids.

Recirculation Pumps / Wall Pumps

Landia offers a range of low head recirculation pumps – 12", 20" or 32" diameter. Capacity up to 49 MGD
Available in epoxy-coated cast iron or solid stainless steel AISI 316.

AirJet Venturi Aerators

The Landia AirJet is available as submersible, dry-installed or as a floating unit. Extremely flexible non-clogging aeration system that requires no external blower or compressor.



Landia GasMix

Landia GasMix is a ground-breaking anaerobic digester mixing system that not only simplifies service- and maintenance but also has a very positive effect on biogas production.

Landia was founded in 1933 and is today a modern, successful manufacturer of a comprehensive range of chopper pumps, propeller mixers and aerators, offering customised solutions and systems for difficult to handle liquids with high dry matter content, liquid biomass and other organic waste.

Our customers are involved in the conception and construction of biogas plants, municipal and industrial wastewater treatment, processing of by-products and waste from the food industry, agricultural slurry handling and much more.

We support our customers through our subsidiaries and offices in the US, Germany, Norway, the UK and China – plus a worldwide network of professional distributors.

Distributor:

Landia®

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Landia a/s DENMARK ISO9001 CERTIFIED

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