

# Sweden – pop stars, tennis stars and engineering stars



grindex

**Sweden is renowned for producing stars and for unsurpassed engineering in fields from automotive to agriculture.**

From that history of endeavor and excellence comes Grindex. A world- leader in electrical submersible pump technology for such demanding applications as construction, mining and heavy industry.

The pumps are known for their reliability, durability and dependability and, thanks to the built-in SMART motor protection and the air valve, the pumps can run unsupervised for longer periods, and even run dry for a length of time.

**Only the Swedes could've come up with this one! Tack så mycket.\***

\* Thanks so much.



# When all parts are greater than the sum

Grindex pumps are all about return on investment. Their renowned, time-tested Swedish engineering and their focus on quality, performance, and durability permeate everything they do – down to every single screw. Their complete commitment and responsibility distinguish them from the rest.

## Low life-cycle cost

Just as only ten percent of an iceberg is visible, only the pump's price tag is obvious at first. However, all recurring costs – installation, operation, inspections, and service – affect the pump's total cost of ownership. With Grindex pumps you minimize the need for maintenance, reduce the number of unplanned and planned service standstills, and experience a prolonged equipment lifespan.

## Installation: just plug and pump

- All in the head of the pump – SMART
- Easy to install, no external starting box needed
- Ergonomically designed for easier handling

## Operation: lasting performance

- Long-term wear resistance – durable Hard Iron™ impeller
- Spin-out grooves keep debris from entering the seal
- Air valve – snoring / dry running capabilities
- Intelligent protection with SMART
- High efficiency

## Service: simplified maintenance

- Service-friendly with standard tools
- Uniform design, service one – service all
- Fast, easy adjustment of the impeller
- Few components to maintain
- Ergonomic design of the strainer

## On site inspections: speedy check-ups

- Quick, easy access
- Large opening of the electrical compartments for easy access to components
- Removable design of the strainer for easy inspection of the hydraulic parts
- External access for checking the oil and seal

# Pioneering technology

Grindex's dedication to develop customized solutions has formed the foundation for several breakthrough innovations. These inventions are now part of all their pumps, and constitute the main factor behind their unbeatable reliability, durability, and dependability. Their pumps simply thrive in harsh conditions.

## SMART – protects the motor

Grindex's SMART electronic surveillance system, first developed in 1990, is a vital element in their pumps. With its three-fold motor protection, it shields the pumps from electrical problems.

- Built-in plug and pump; no need for external start boxes
- Phase-failure guard protects against phase loss
- Temperature guard stops the pump if it reaches high temperature
- Automatic restart after stop
- Phase-sequence control ensures that impellers turn in right direction



## Wear / hydraulic parts – prolong the lifespan

Thanks to exceptional wear resistance, the wear and hydraulic parts help to prolong the lifespan of Grindex pump equipment, while securing high efficiency.

- Minimize the performance drop – thanks to innovative design
- Improve operation and performance in harsh conditions
- Optimized design and materials for specific applications, e.g. drainage, sludge, and slurry



## Air valve – cools the pump

Grindex invented and patented the world's first air valve in 1960, and have included this feature in most pump models. Thanks to this, and their built-in motor protection, their pumps are able to run unsupervised for long periods. In fact – for any models with the air valve, they guarantee them with a 2 year dry run burnout warranty!



- Enables pump to run dry for a length of time
- Minimizes the risk of operation interruptions
- Minimizes the need for maintenance



# Sludge pumps

Grindex sludge pumps prove their non-stop reliability in countless demanding areas. Grindex sludge pumps are designed for professional use in tough applications like mines, construction sites, tunnel sites, and other demanding industries.

Made for continuous, unattended operation, the pumps have proven their reliability and dependable performance in demanding applications around the world. With industrial

strength, they are a perfect choice when pumping water with a high solids content, up to 80mm diameter such as many types of mud sludge and light slurry.



## Did you know?

### First sludge pumps

Several drainage pump models were introduced in the 1970s, along with the first sludge pumps.

### Successful product line

In 1990, Grindex introduced The New Line and was once again established as a world leader in electrical submersible drainage and sludge pumps.



# Sludge pumps

Solid, Salvador, Senior, Sandy

Based on the same design as their drainage pumps, sludge pumps come into action when the liquid gets dirtier and can't be handled by the drainage pumps.

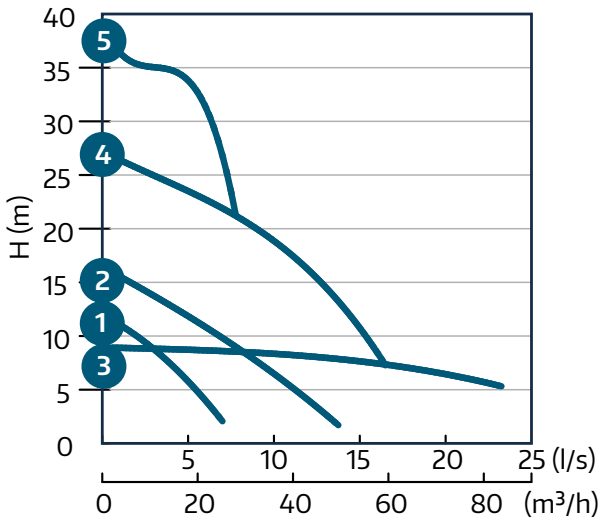
The design even permits converting between drainage and sludge models, allowing you to adapt the pump according to varying conditions.

All sludge pumps excel in applications in which reliability and easy handling are essential. The internal starter, SMART motor protector, and optional level regulator provide fully automatic protection and control without the need for external starter – plug and pump.



The sludge pumps are built to handle contaminated water, pH 5–8, and water containing relatively abrasive solids up to the size of 80mm.

Sludge pumps 50 Hz				
	discharge connection	phase (ph)	max power consumption (kW)	weight (kg)
1. Solid	2"	1~	1.2	17
2. Salvador	3"	1~,3~	1.9–2.7	33
3. Senior	4"	3~	4.2	56
4. Sandy N	3"	3~	6.6	56
5. Sandy H	3"	3~	6.6	56



## Air valve

- Enables the pump to run dry without operation interruptions – thanks to air cooling
- Grindex invented and patented the world's first air valve in 1960



## Cartridge seal

- Patented, leakage preventing seal technology

## Vortex impeller

- Ideal for applications in which the water or liquid contains concentrations of abrasives to avoid clogging problems

## Polyurethane lined volute

- Available as spare parts



## SMART

- Built-in plug and pump; no need for external start boxes
- Phase-failure guard protects against phase loss
- Temperature guard stops the pump if it reaches high temperature
- Automatic restart after stop
- Phase-sequence control ensures that impellers turn in right direction

## Outer casing

- Stainless steel: Cools the motor which leads to high efficiency

## Inspection plugs

- Quick and easy inspection of the seal / oil condition

## Large throughlet

# Options



## Level Regulator



## Zinc anodes

Our zinc anodes provide protection against galvanic corrosion, mainly in applications involving salt water.