



Submersible grinder pumps

The all-in-one solution for pressurised sewage systems



Flygt



ITT Industries
Engineered for life

A system that works well under pressure

When topographical conditions rule out the use of conventional gravity systems, there remains only one solution that is as cost-effective as it is flexible. So flexible in fact, that it can even be combined with gravity networks, thus creating the ideal solution for most types of terrain. Economically as well as topographically.

The pressurised sewage system, with its narrow, flexible piping that follows the lie of the land, eliminates the need for gravitational slopes or costly excavation work.



The heart of the system

At the heart of every pressure sewage system is a grinder pump. Flygt grinder pumps reduce solids to a fine slurry which can then be pumped through pipes, measuring just 50 mm in diameter. The system is completed by the Flygt Grinder Controller (FGC), and a Flygt grinder pump station. Together these elements make up the Flygt concept for pressurised sewage systems, a combination that is not only cost-effective but also highly efficient. Grinder pumps are so efficient that they need only to be run for half an hour a day in total.

Grinding problems down to size

Flygt's grinder pumps have an impeller unit designed specially for handling the rigours of pressurised sewage systems. With components of chromium-alloy and stainless steel,



a cutting device grinds up particles until they measure no more than 5 x 15 mm, thus eliminating the risk of clogging and enabling the now fine slurry to be pumped through the system's narrow pipes.

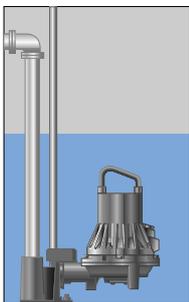
Installation, capacity and power

Design your own system

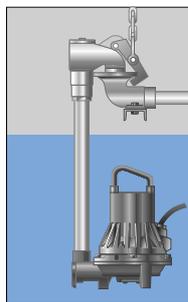
ITT Flygt has proven computer programs, the result of years of application experience, to make the job easier. Important design parameters such as system configuration, pipe diameter and length, inflow,

outflow, pump characteristics, friction loss, slope etc., are all incorporated into the program, to provide realistic design solutions for any application situation.

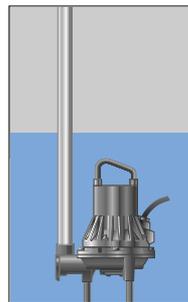
Three methods of installation



P Stationary, wet installation with guide bars and automatic discharge connection bolted to the sump floor. When a pump is lowered by the guide bars, it locks automatically to the discharge connection – and is automatically released.



H Stationary, wet installation with the pump suspended from the discharge pipe. The quick connection joint incorporates an integral non-return valve.



F Free-standing, stationary installation on legs without strainer. Pipe or hose connection.

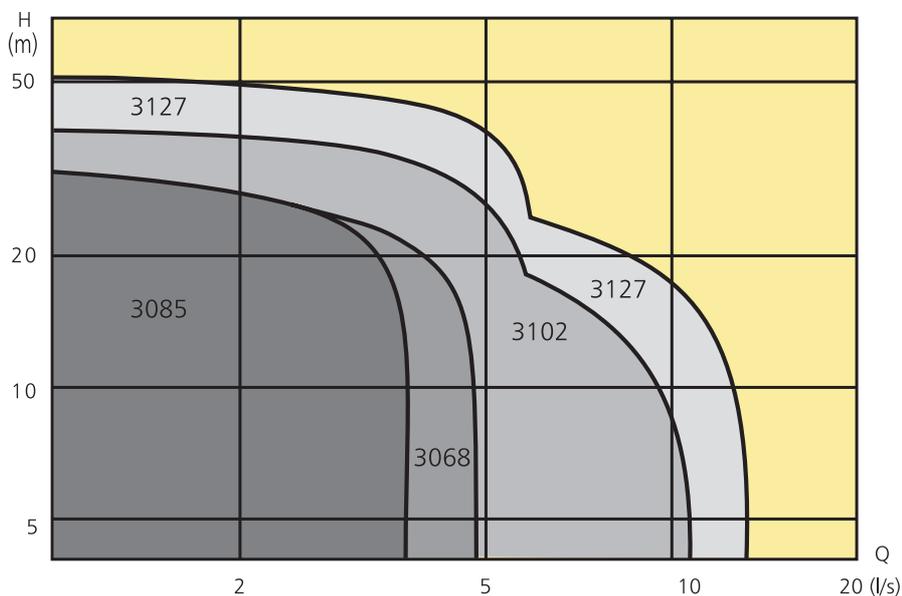


Four basic pumps

The Flygt grinder pump range is made up of just four models. Four pumps are enough to cover an entire operating range because our pumps are built using a modular design.

Though each model comes with a selection of impellers of varying diameter, all have the same discharge diameter, which means, that it is easy to select another impeller or pump if conditions change.

Pump capacity in meters and litres



Technical specifications

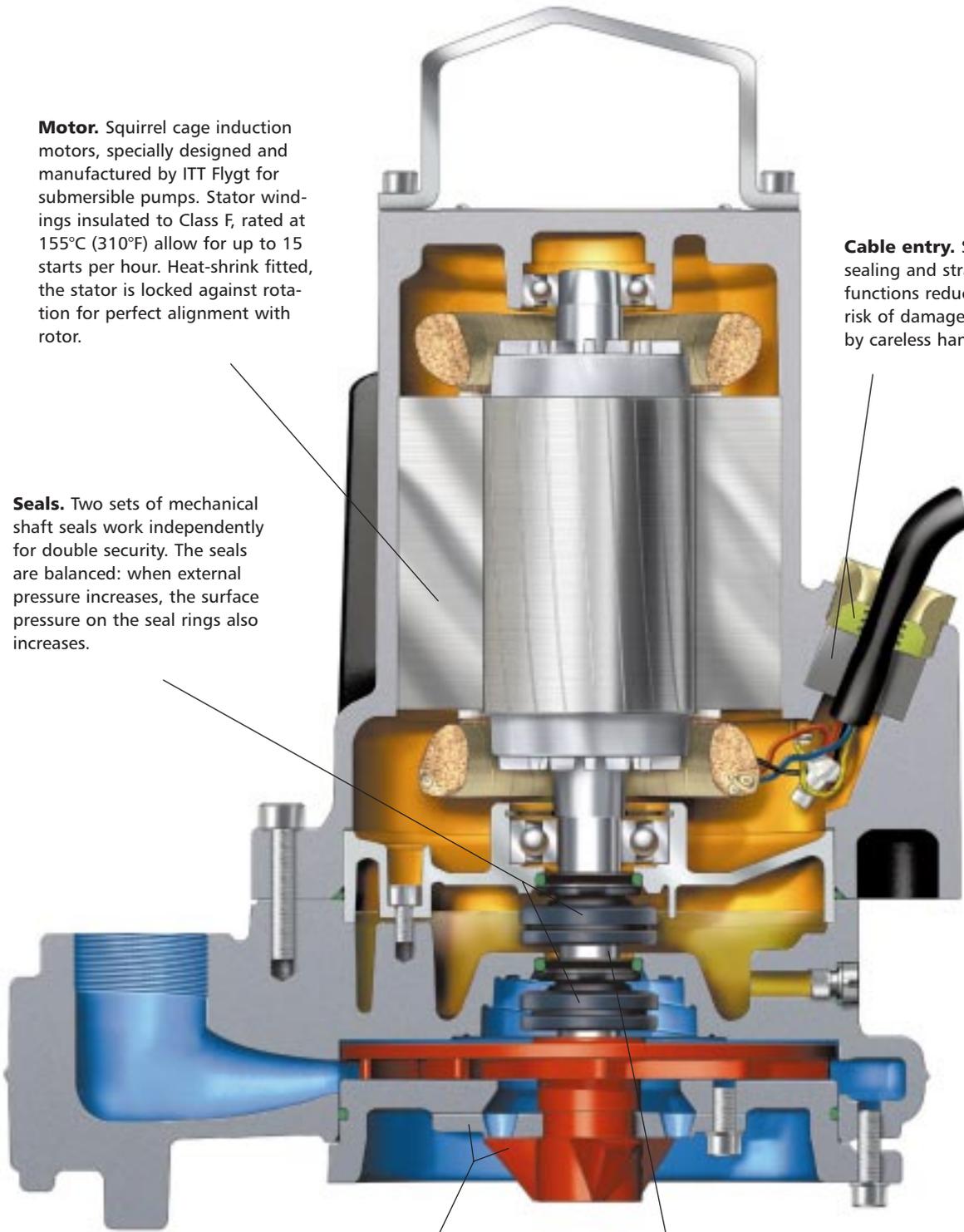
| Pump | Power kW | | Weight kg |
|------|----------|---------|-----------|
| | 1-phase | 3-phase | |
| 3068 | 1.5 | 1.7 | 32 |
| 3068 | 1.5 | 2.4 | 32 |
| 3085 | 1.9 | – | 44 |
| 3085 | – | 1.8 | 44 |
| 3085 | – | 2.4 | 44 |
| 3102 | – | 4.4 | 75 |
| 3127 | – | 7.4 | 103 |

Built for trouble-free pumping

Motor. Squirrel cage induction motors, specially designed and manufactured by ITT Flygt for submersible pumps. Stator windings insulated to Class F, rated at 155°C (310°F) allow for up to 15 starts per hour. Heat-shrink fitted, the stator is locked against rotation for perfect alignment with rotor.

Cable entry. Separate sealing and strain-relief functions reduce the risk of damage caused by careless handling.

Seals. Two sets of mechanical shaft seals work independently for double security. The seals are balanced: when external pressure increases, the surface pressure on the seal rings also increases.



Cutting device. The pump inlet is equipped with a cutting device to prevent clogging.

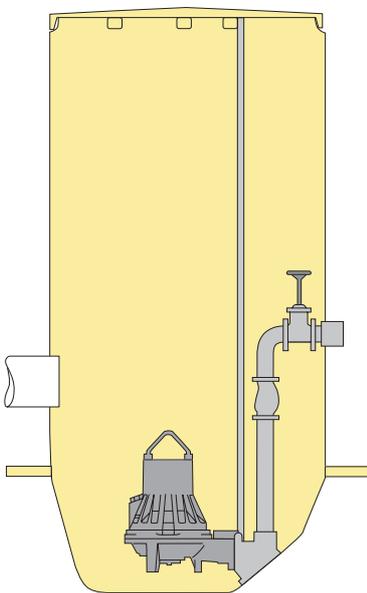
Shaft. Short overhang brings shaft deflection to a minimum. This results in low vibration, silent operation plus longer seal and bearing lifetime.

All-in-one and ready to go

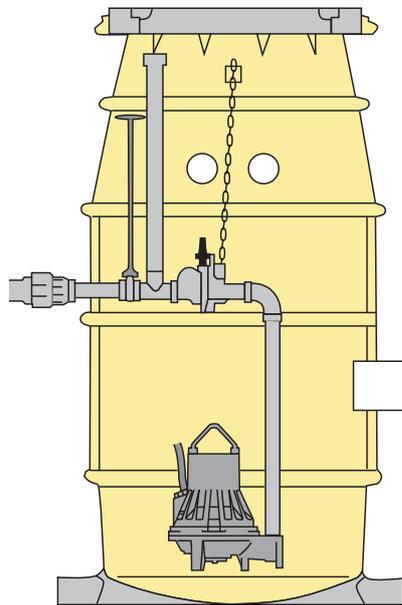
Meant for each other, right from the start

Flygt's turnkey stations are both prefabricated and standardised. An all-in-one solution in which pump and pump station are carefully matched. Available in three finishes, GRP, PE-HD or concrete, these

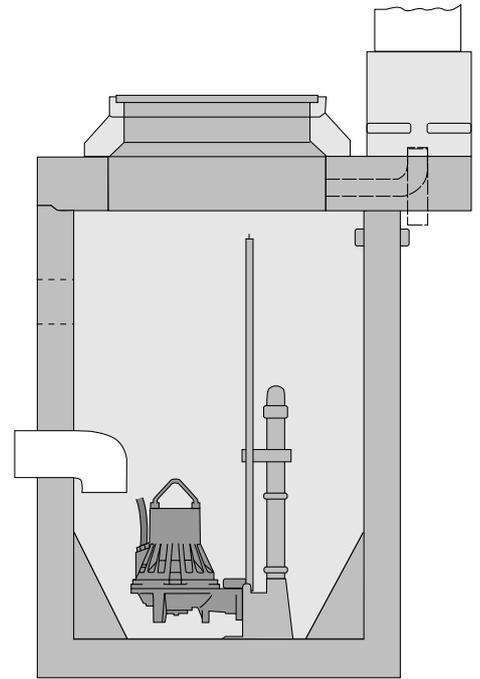
stations, combined with Flygt grinder pumps, are designed and equipped to provide the most flexible and cost-effective answer to pressure sewage handling systems.



TOP50 GRP pump station



Compit PE-HD pump station



Concrete pump station

Operational reliability – guaranteed

As an integrated part of the Flygt concept for pressurised sewage systems, the FGC (Flygt Grinder Controller) series provides all vital data and multiple control functions to achieve the best possible pumping efficiency. The user-friendly unit is available with or without a display and it offers wide flexibility as it is applicable for both level switches and analogue or pneumatic sensors. Alarms are stored in a separate alarm log and communication is possible by using an extra LON communication module.



Automatic flush option

Some grinder pump installations may be burdened with excessive sludge, grease or fat build-ups due to troublesome locations. To overcome these problems, ITT Flygt offers an optional, patented flushing device which, when attached to the pump, automatically provides a powerful cleansing jet stream to clean the wet well at the start of each pumping cycle. The Flygt flush valve is totally automatic, requires no electrical power and is easily attached to the pump.



ITT Flygt is the world's leading manufacturer and supplier of submersible pumps, mixers and aeration systems. Our products are used in water and wastewater plants, for irrigation, in construction projects, in mines and in the process industry. ITT Flygt has 37 sales companies and is represented in over 130 countries around the world. ITT Flygt is part of the US company ITT Industries.



www.flygt.com