



**ITT**

Water & Wastewater

# Flygt progressive cavity pumps

For efficient pumping of viscous media



*Engineered for life*

**motralec**

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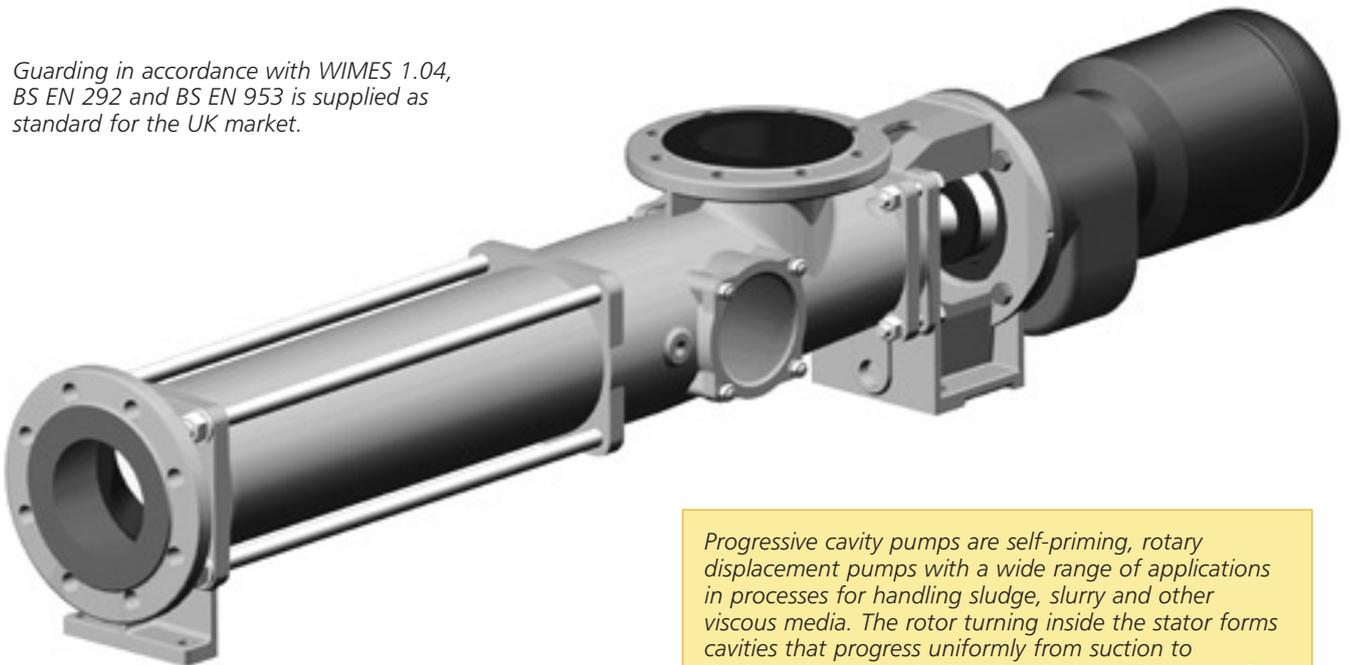
# Efficient pumping solutions for viscous liquids

Whether you need to pump liquids with high solids content, or dose anything from neutral to aggressive liquids of high to low viscosity, Flygt can supply you with the total solution for your needs. Our extensive range of progressive cavity pumps is based on a modular system to cover virtually any such application. The pump design and material can be selected to suit your application, and the pumps can be installed horizontally or vertically.

Flygt's largest progressive cavity pumps use hollow rotors, which greatly increase the life of the pump and reduce maintenance. Hollow rotors also reduce operating noise, and permit operation at higher rotational speed without thereby increasing wear.

The unique hydraulic geometry of the 2/3 lobe pumping elements used in the TF pumps offers the same flow rate as pumps with 1/2 lobe geometry at half the rotational speed. This reduces wear, downtime and maintenance costs, and gives substantial reductions in operating costs.

*Guarding in accordance with WIMES 1.04, BS EN 292 and BS EN 953 is supplied as standard for the UK market.*



*Progressive cavity pumps are self-priming, rotary displacement pumps with a wide range of applications in processes for handling sludge, slurry and other viscous media. The rotor turning inside the stator forms cavities that progress uniformly from suction to discharge, carrying the liquid with them. This type of pump has the added advantages of providing highly accurate dosing.*

# Performance range to suit every pumping application

Flygt can supply progressive cavity pumps with exactly the right performance range to suit your application.

## Sludge pumps



**Flygt TF**  
 Pressure 4 bar  
 Flow 2,700 l/min  
 Viscosity 200,000 mPas  
 Lobe type 2/3

**Flygt AEB1L -IE**  
 Pressure 4 bar  
 Flow 2,700 l/min  
 Viscosity 200,000 mPas  
 Lobe type 2/3

**Flygt AEB1E -IE**  
 Pressure 6 bar  
 Flow 2,900 l/min  
 Viscosity 300,000 mPas  
 Lobe type 1/2

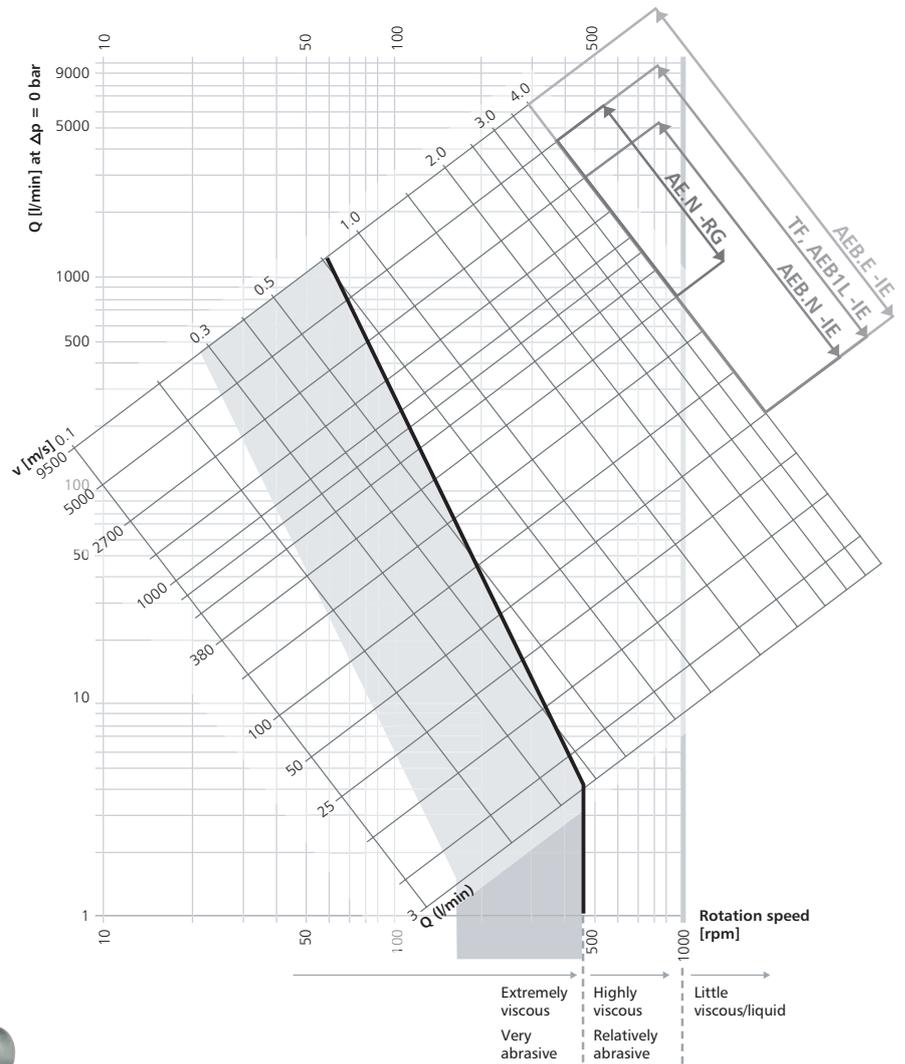
**Flygt AEB2N -IE**  
 Pressure 12 bar  
 Flow 1,850 l/min  
 Viscosity 270,000 mPas  
 Lobe type 1/2



**Flygt AEB.N -ZE**  
 Pressure up to 12 bar  
 Flow 750 l/min  
 Viscosity 1,000,000 mPas  
 Lobe type 1/2

**Flygt AE.N -RG**  
 Pressure up to 20 bar  
 Flow 500 l/min  
 Viscosity 1,000,000 mPas  
 Lobe type 1/2

Performance range diagram



## Dosing pumps



**Flygt ADBP**  
 Pressure 12 bar  
 Flow 10 l/min  
 Viscosity 20,000 mPas  
 Lobe type 1/2



**Flygt ANBP**  
 Pressure 12 bar  
 Flow 42 l/min  
 Viscosity 20,000 mPas  
 Lobe type 1/2

# Main advantages

## Low cost for installation and construction

The block design, which has an integrated motor, makes the pumps fast and easy to install on any height of foundation or base plate. The motor is prepared for direct connection of variable frequency drivers.

## Reliable

All components have been used successfully in thousands of field applications.

## Suction casing

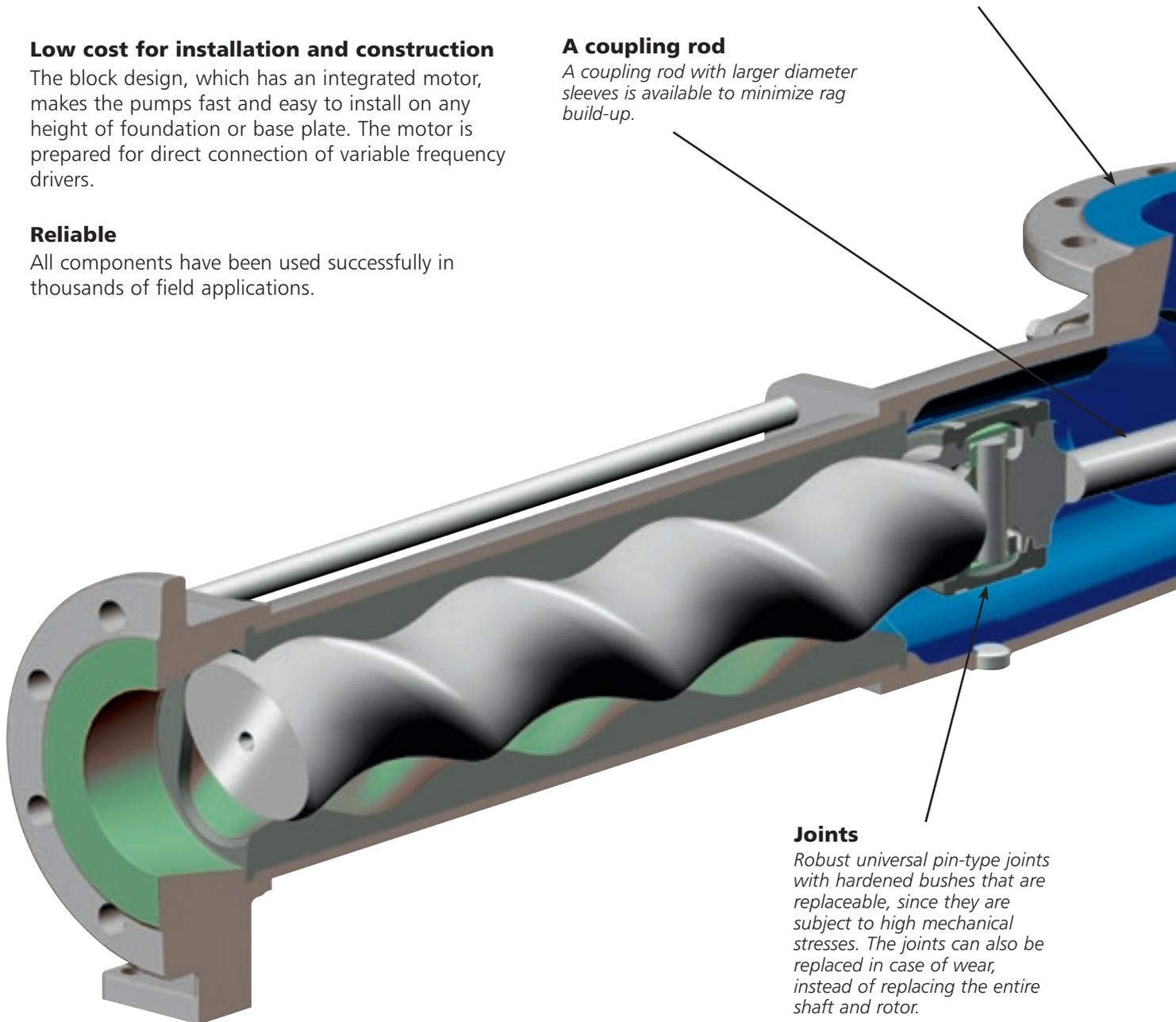
- Designed for minimum clogging risk.
- Staggered cleaning holes make it easy to clean the joints and remove obstructing objects.
- The suction casing can be rotated in increments of 90° for flexible installation.

## A coupling rod

A coupling rod with larger diameter sleeves is available to minimize rag build-up.

## Joints

Robust universal pin-type joints with hardened bushes that are replaceable, since they are subject to high mechanical stresses. The joints can also be replaced in case of wear, instead of replacing the entire shaft and rotor.

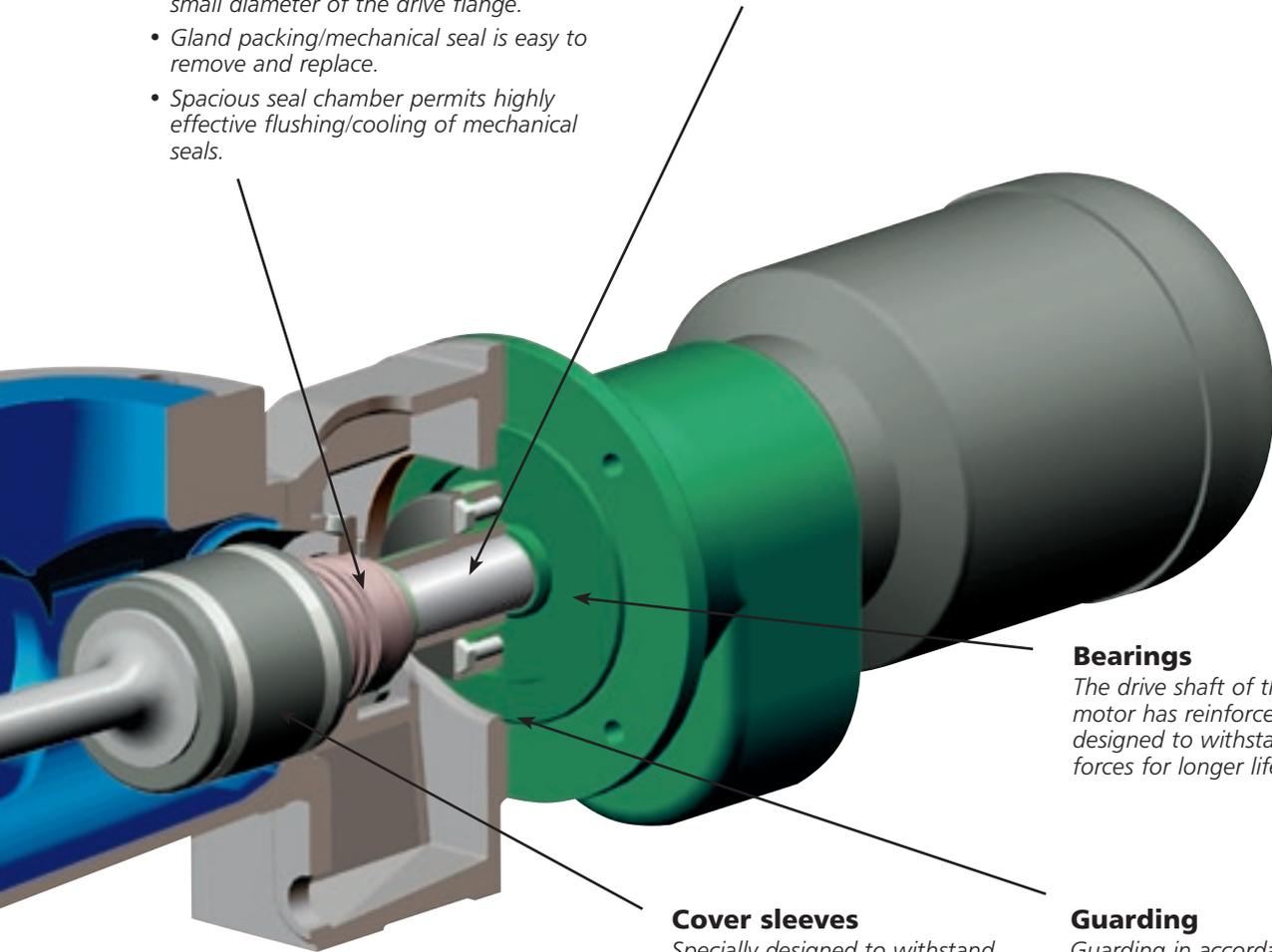


## Shaft seals

- Pumps are equipped with application-specific shaft seals: gland packing or mechanical seal.
- Low sliding velocity and friction rate due to small shaft diameter.
- Shaft seal area is easy to access due to the small diameter of the drive flange.
- Gland packing/mechanical seal is easy to remove and replace.
- Spacious seal chamber permits highly effective flushing/cooling of mechanical seals.

## Shaft

Long life shaft with wear-resistant coating in the stuffing box.



## Bearings

The drive shaft of the geared motor has reinforced bearings designed to withstand high axial forces for longer life

## Cover sleeves

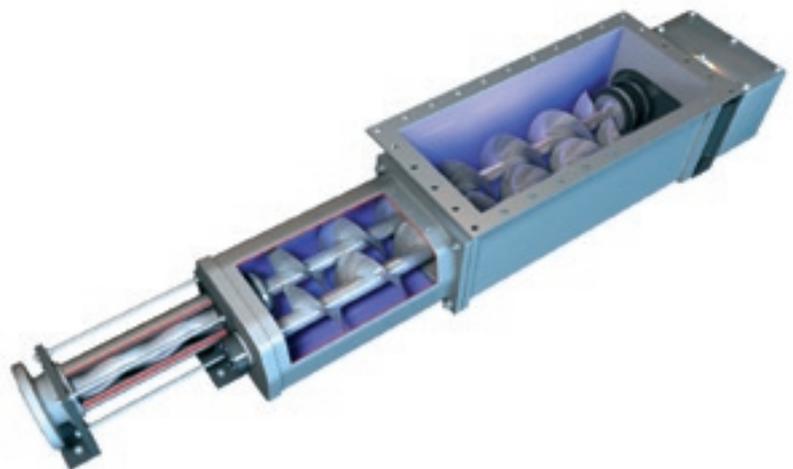
Specially designed to withstand the axial flow of particles inside the pump. This reduces wear on the joints and the risk of clogging.

## Guarding

Guarding in accordance with WIMES 1.04, BS EN 292 and BS EN 953 is supplied as standard for the UK market.

# RG pump

The unique design of the inlet for the AE.RG pump virtually eliminates 'bridge building' of sludge, which can result in the pump running dry. The inlet box contains two rotating screws that break up and crush the sludge into pumpable sized particles. The sludge is then fed to the pump by an Archimedes type screw.



# Supplied to your specifications

## Stators

Depending on your application, Flygt can supply progressive cavity pump stators with an elastomer wall of uniform or varying thickness.

Stators with varying elastomer wall thickness are the best solution for sludge applications and for slurries with high solids content, as the flexibility and variable thickness of the wall can accommodate large particles. This reduces wear, resulting in sustained performance and a longer life for the pump.

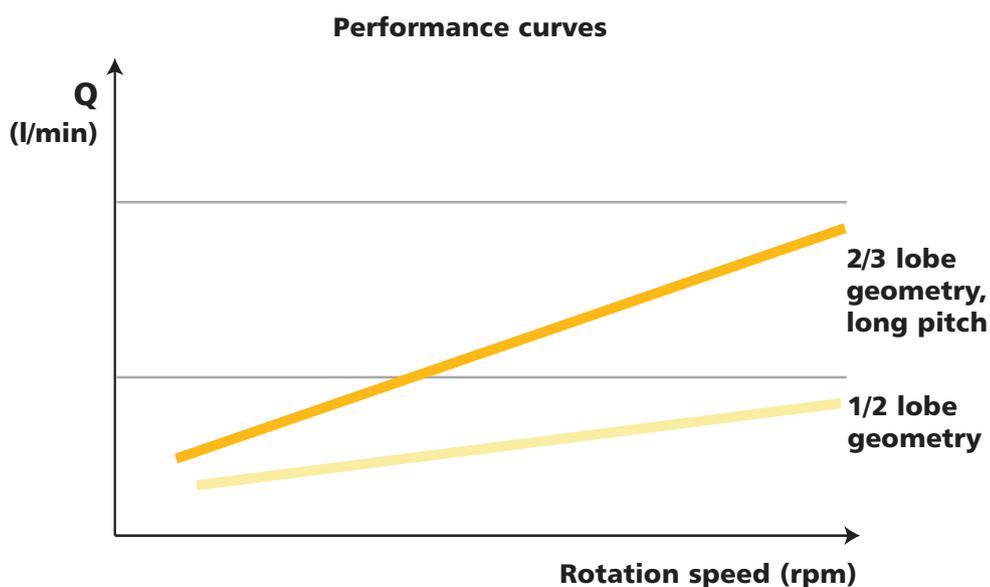
Stators with uniform wall thickness are the best choice for pumping liquids containing few if any abrasive solids, and where maintaining exact flow characteristics and high volume efficiency are essential.

## Rotors

Larger pumps can be supplied with hollow-cast, hollow-drilled or hollow-pressed rotors. Hollow rotors have a lower mass, which means a smaller centrifugal force transferred to the stator during rotation. This results in lower friction between the rotor and stator, reducing wear and prolonging the life of the pump.

## Improved performance

In Flygt's TF pumps, the new 2/3 lobe pumping elements considerably improve performance, offering a 100% higher flow rate at a similar RPM compared to pumps using conventional 1/2 lobe pumping elements.



*2/3-lobe pumping elements*



*1/2-lobe pumping elements*



# Accessories



## **Thermal dry running protection**

Probe measures the temperature of the stator elastomer. Suitable for all fluids.

## **Overflow valve**

Corner type overflow valve for liquids without solids. For the protection of pumps, fittings and pipelines against excess pressure. The overflow valve is normally connected to an overflow line.



## **Excess pressure/dry running protection**

Mechanical pressure switches protect the pump against excess pressure and dry running. Suitable for all fluids.

## **Base plate**

Base plate installation



# Worldwide service network

Flygt's philosophy has always been to supply equipment that maximizes lifecycle economy, which means designing for long service life and minimum downtime.

But that does not mean that once your pumping solution is installed, we forget about you. No two pumping solutions will be alike, so the level of maintenance and support that you require from your local authorized Flygt service centre will differ according to your situation. With Flygt, you can choose the type of support package that meets your needs.

From simply supplying pumps to your specifications, to system planning, design, commissioning, and operation and maintenance: Flygt's total service offering means you get the service you need on your terms.

## **10-year spare part availability**

We guarantee the availability of spare parts for a minimum of 10 years after we stop production of a pump model. Just one example of Flygt's long-term commitment to its customers.



### What can ITT Water & Wastewater do for you?

Integrated solutions for fluid handling are offered by ITT Water & Wastewater as a world leader in transport and treatment of wastewater. We provide a complete range of water, wastewater and drainage pumps, equipment for monitoring and control, units for primary and secondary biological treatment, products for filtration and disinfection, and related services. ITT Water & Wastewater, headquartered in Sweden, operates in some 140 countries across the world, with own plants in Europe, China and North and South America. The company is wholly owned by the ITT Corporation of White Plains, New York, supplier of advanced technology products and services.



WEDECO



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