Enhanced Flygt N-technology

NOW CUSTOMIZED FOR ANY APPLICATION

FLYGT

a xylem brand

The most advanced N-technology yet

Enhanced Flygt N-technology now suits every wastewater pumping application. The flexible modular design, improved self-cleaning system and wider choice of materials make enhanced N-technology better than ever before.

Leave it to the engineers at Xylem to make Flygt's N-pumps even better.

Back in 1999, Flygt N-technology revolutionized submersible wastewater pumps with sustained pump efficiency, clog-free operation and lower total cost of ownership. Suddenly it was easy to maintain high hydraulic efficiency with a two-vane impeller, avoid efficiency loss due to partial blockages and adjust impeller clearance without disassembling the pump.

In a little over a decade, Flygt N-technology has gained a solid reputation for legendary quality and reliability. With the introduction of enhanced Flygt N-technology, the bar is raised even higher – making N-technology the optimal choice for the most challenging tasks in wastewater pumping.

The self-cleaning concept

The semi-open impeller and the volute relief groove work together.

Stage 1: The N-impeller blades with backswept leading edges sweep solids from the center to the perimeter of the inlet.

Stage 2: The relief groove and guide pin in the volute push solids, such as rags, away from the impeller.

Stage 1

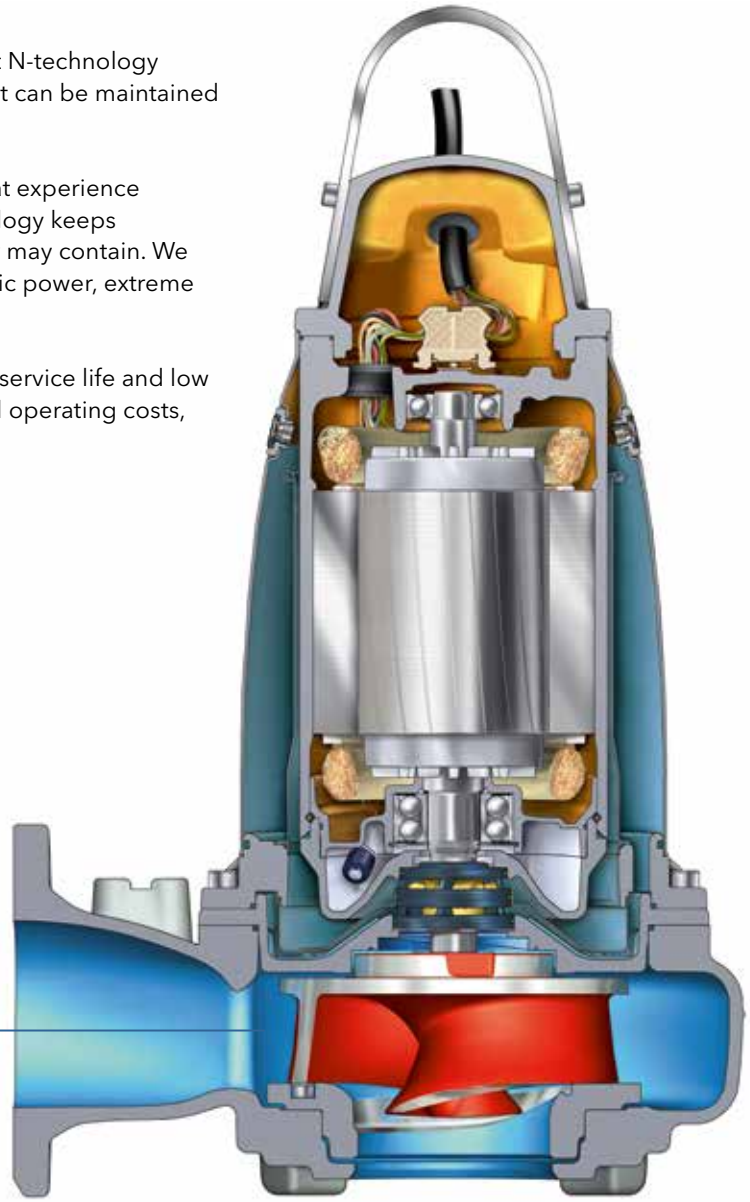
Stage 2

Sustained efficiency, sustainable design

Thanks to its ingenious design, enhanced Flygt N-technology consistently provides a high efficiency level that can be maintained over long operating periods.

Unlike conventional solids-handling pumps that experience efficiency loss due to clogging, Flygt N-technology keeps pumping efficiently no matter what wastewater may contain. We call this sustained efficiency. Maximum hydraulic power, extreme clog resistance. No kidding.

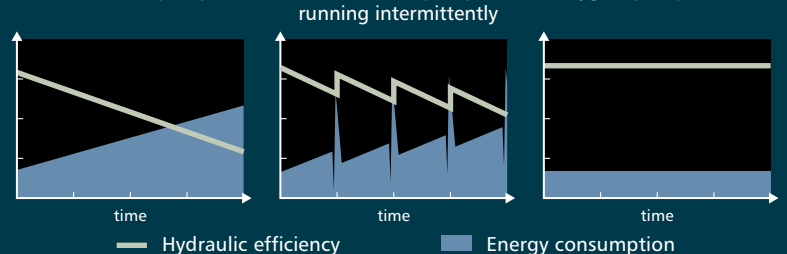
Energy-efficiency, trouble-free operation, long service life and low maintenance reduce your carbon footprint and operating costs, making your operations more sustainable, too.



Enhanced N-technology advantages

+ **Maximum uptime, extreme clog resistance**
+ **Reduced energy costs, sustained high efficiency**
+ **Hydraulic can be customized for any application**
+ **Option for more durable material made of Hard-Iron™**
= **Lower total cost of ownership**

Sustained efficiency



A) Clogging of conventional pumps: Energy consumption increases as efficiency decreases.

B) Backflushing achieves temporary efficiency gains as well as spikes in energy consumption.

C) Virtually clog-free N-pump: Consistent efficiency and energy savings.

What's new and improved

With enhanced Flygt N-technology, Xylem now brings you more ways to customize your hydraulic pump to meet the requirements of virtually any application.

Customized modules: Standard, Hard-Iron™ or Chopper

Choose the standard cast iron module for typical wastewater applications, the Hard-Iron™ module for extremely abrasive or corrosive applications, and the chopper module for cutting long fibers or solids in wastewater. Whatever you choose, you never sacrifice pump efficiency – and you can easily switch the module should operating conditions change.

More robust hydraulic design

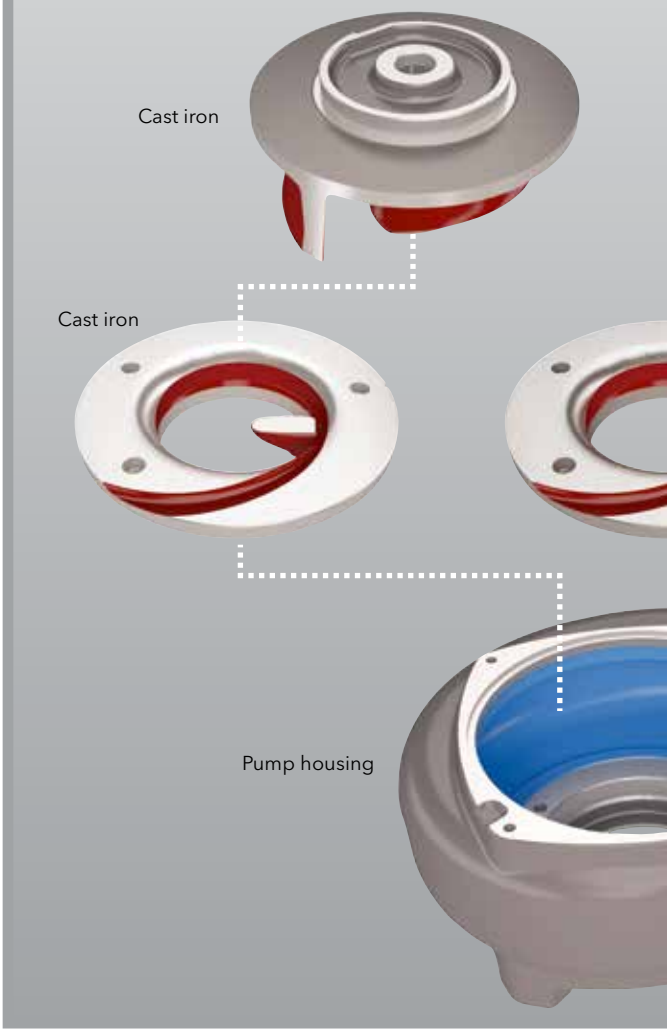
From the start, Flygt N-technology brought innovation to wastewater pumps. We introduced a patented combination of a semi-open two-vane impeller and volute relief groove to ensure clog-free operation. We've now made significant improvements to our trademark impeller.

Redesigned impeller blades. Blade geometry has been optimized and the leading edges are machined to ensure that nothing sticks to the impeller.

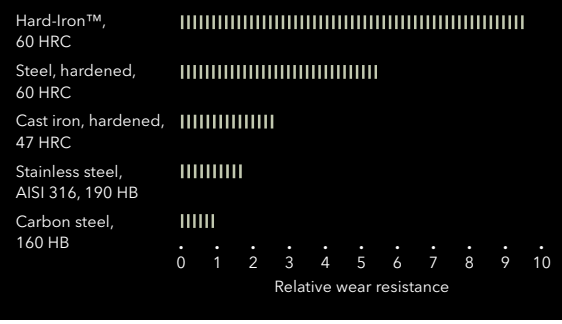
Longer relief groove in the volute. The signature Flygt N-technology relief groove has been reshaped and extended halfway around the diameter of the opening. This provides about 40% more surface area to capture and guide fibrous material to the impeller periphery for removal.

Integrated guide pin. A guide pin has been integrated into the insert ring. It clears the impeller core by pushing solids along the relief groove toward the periphery for removal.

Greater flexibility with modular design
Customize your pump by choosing the capacity, head, insert ring, type of material and options that best suit your specific operating conditions.

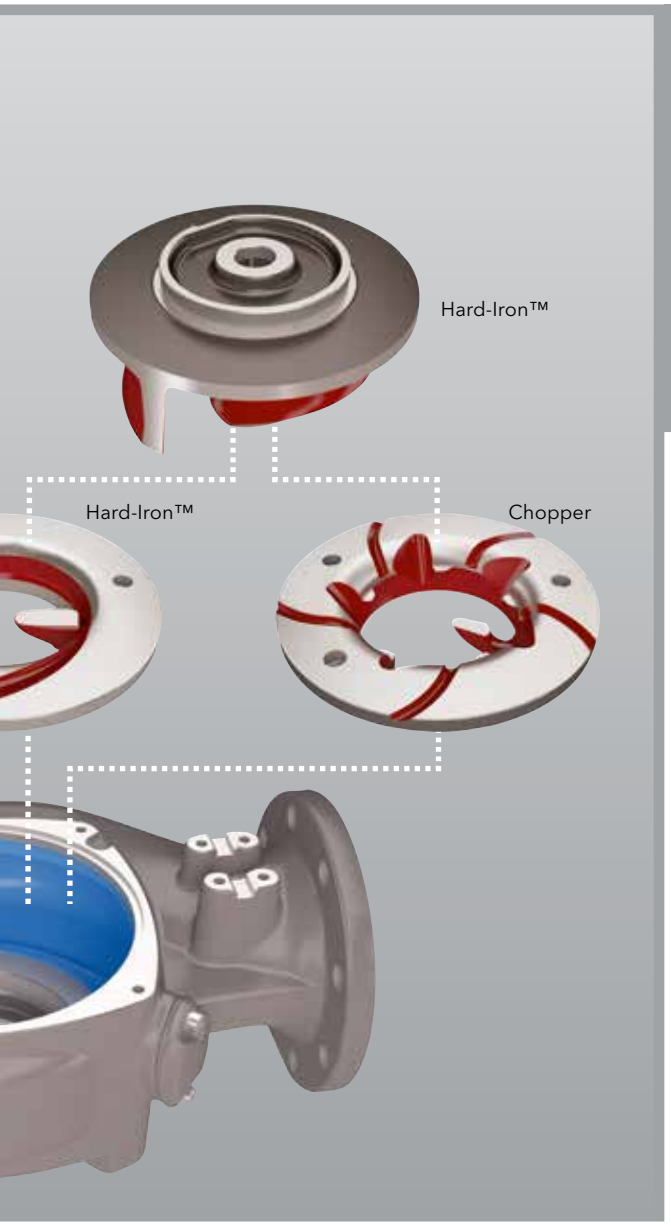


Hard-Iron™for the toughest wastewater challenges



Accelerated wear tests prove that Hard-Iron™ hydraulic components keep on working efficiently with minimal wear even after 200 hours of pumping water with a very high concentration of coarse sand (2,400 tons).

Extensive field testing has shown that, despite salt, sand infiltration and grit removal duties, Flygt N-pumps with Hard-Iron™ components continue to deliver sustained efficiency without clogging or erosion corrosion.



Improved self-cleaning system. The patented self-cleaning N-hydraulic now features machined backswept leading edges, an extended relief groove and integrated guide pin to ensure high efficiency and clog-free operation for long periods.

Choice of materials. Choose conventional cast iron or Hard-Iron™ for all Flygt N-technology components. As its name implies, Hard-Iron™ provides exceptional wear resistance for highly abrasive and highly corrosive wastewater.

Tougher with Hard-Iron™

Hard-Iron™ is extremely hard. It is at least four times more durable than conventional grey iron and twice as durable as duplex stainless steel. Hard-Iron™ is a high-strength alloy with a 25% chromium content. It is therefore suitable for wastewater with oxygen or chloride levels up to 500 ppm.

Chopper module

Give your Flygt N-pump chopping functionality with the new chopper insert ring. Rugged, wear-resistant and self-cleaning, it cuts tough solids without clogging or sacrificing pump efficiency. Both the impeller and insert ring are made of Hard-Iron™. Typical applications include agriculture, aquaculture, food processing, pulp and paper, and wastewater facilities with chopping requirements. Optional cutting knife for food and fish processing wastewater and feeding screw for agricultural wastewater are available.

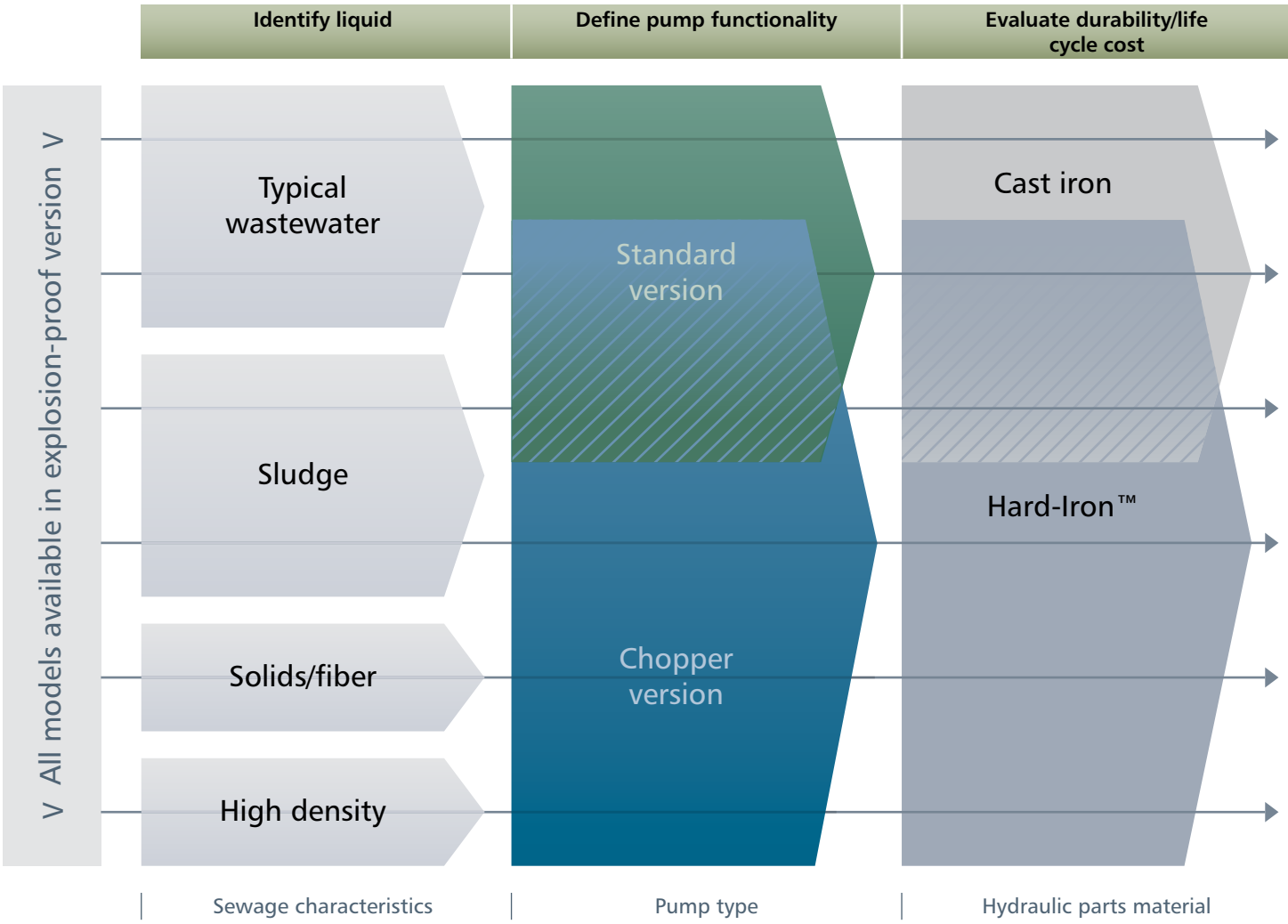
Chop anything with the Flygt chopper pump

It's amazing what ends up in your wastewater. We've seen it all – from plastic bottles and wood to textiles and clothing, including jeans, sneakers and bedspreads, and even motor cables.

That's why the engineers at Xylem put the Flygt chopper pump to the test. It is subjected to extreme conditions at our test lab to ensure continuous operation with sustained hydraulic efficiency.

Finding the right pump

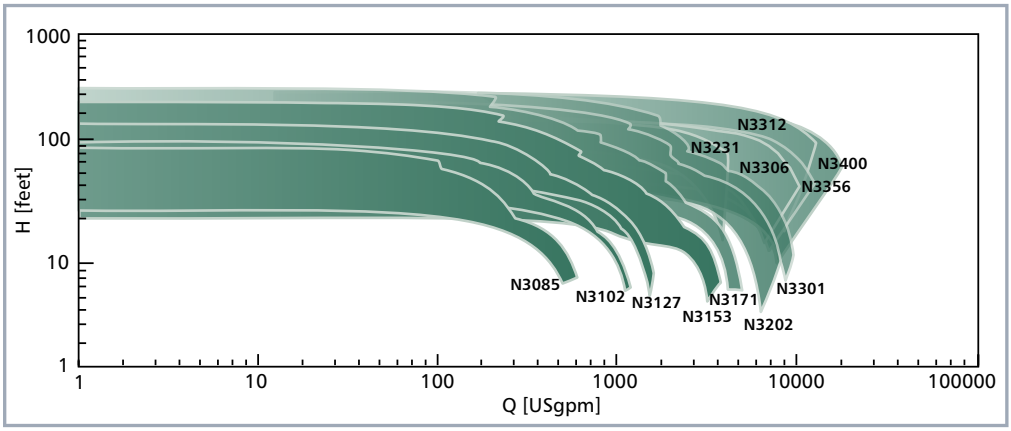
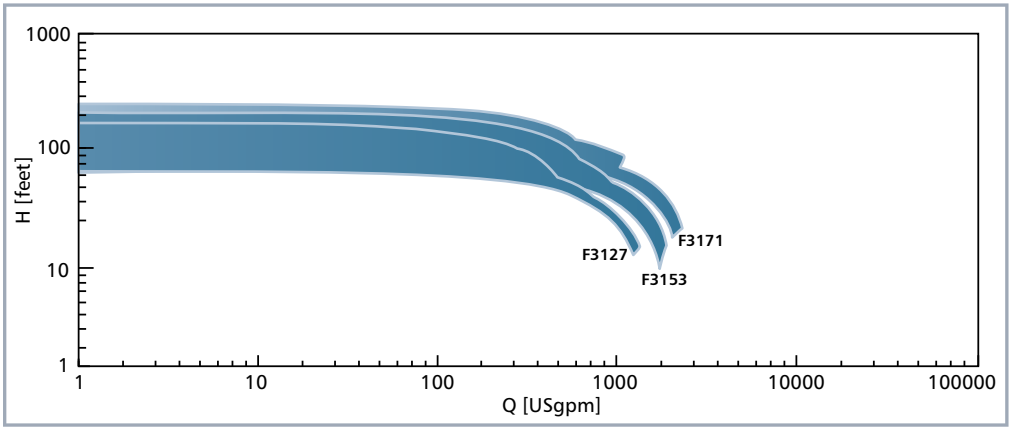
Identify the pump that meets your needs based on your capacity requirements and applications. All Flygt N-pumps are designed for heavy-duty service in municipal wastewater plants – from pump stations to retention basins and sludge treatment.



N-pumps are energy efficient

Northumbrian Water's Lustrum in UK decided to refurbish their pump station since blockages and the maintenance time and costs were becoming an issue. A huge benefit of the refurbishment was the installation of the Flygt N-pumps. There have been no blockages and it's bringing increased efficiency to the station.

The original pumps were delivering 0.43m3/kWh (113.6 gal/kWh) while the new N-Pumps produced 0.9m3/kWh (237.8 gal/kWh). In electrical terms alone this offers a potential saving of £22,000 per annum at current rates, plus the maintenance time and costs have dramatically reduced.

Identify models that match your needs	Choose relevant capacity
N3085, N3102, N3127, N3153, N3171, N3202, N3301, N3231, N3306, N3312, N3356, N3400	
N3085, N3102, N3127, N3153, N3171, N3202, N3301	
F3127, F3153, F3171	
F3127, F3153, F3171	
F3153, with feeding screw	

Flygt pump models | Performance criteria

Flygt chopper pumps eliminate the blockage problems

The Chapelknowe Sewage Pumping Station had pump blockages three or four times per week, causing unacceptable costs.

David Thomson, Engineering & Maintenance Team Leader for Scottish Water, commented: "The Flygt Chopper Pump has solved a major issue at Chapelknowe where the number and scale of blockages were becoming highly problematical operationally and financially".

After six months installation Chapelknowe has not experienced a single blockage while service inspections showed no wear on the hydraulic parts, clearly demonstrating the durability of this product.

Xylem |'zīləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to **www.xyleminc.com**

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