

Excellent performance with less power consumption

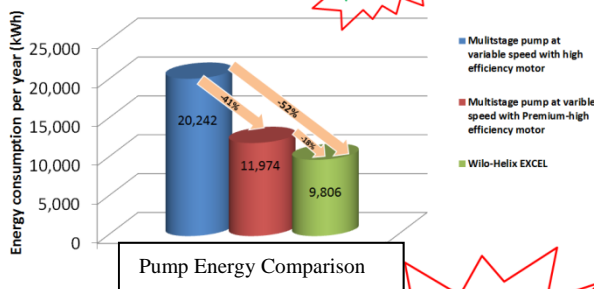
Today, pumps account for no less than 10% of the world's electricity consumption and two thirds of all pumps use up to 60% too much energy. If every business switched to a high efficiency pump there could be global savings of 4% of the total electricity consumption- comparable to a residential electricity consumption of 1 billion people. Of all the multistage centrifugal pumps that are available on the market, the Wilo Helix EXCEL stands alone for optimal efficiency, performance, quality, and serviceability. Thanks to the use of electronic commutated motor (ECM) technology together with a High Efficiency Drive (HED), it can achieve motor efficiency levels of up to 94%, which surpasses NEMA Super-Premium motors that meet the NEMA 12-12 efficiency levels of today. Compare the same operation duty point with other multistage pumps and the Helix EXCEL can achieve the same throughput while using less power consumption. Green energy savings is in the Wilo name.



Excellent in energy savings and life cycle costs

The most important reason to choose the Wilo Helix EXCEL is the total energy savings and operating costs attached to the pump. When analyzing both, the clear choice is revealed...

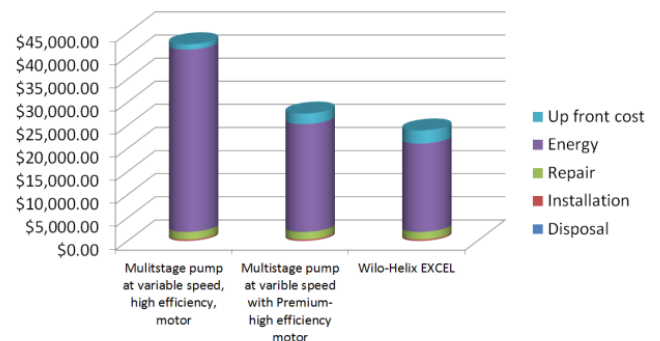
Comparison of energy savings



10,436 kWh
Per year savings!



Life Cycle Costs (based on 15 years)



Load Profile
Variable Speed: 50%
Head In Feet: 210
US GPM: 50
Average US kWh cost (2015): .13¢

Cost savings over lifetime
(15 year pump life)
\$20,350.20!!

Excellent in operation

With Helix EXCEL's user-friendly interface, pump parameters are a breeze to set up. With the combination of a clearly lit LCD display, easy automation menu structure, and Wilo RED BUTTON, commissioning your system will take less time and save you on upstart costs.

Choice of various different control modes:

- Speed control.
- Constant pressure.
- Dp-v.



- PID with different kind of sensors for operation:
 - Delta p-c
 - Temperature control.

Excellent in BUS communication

The Helix EXCEL's interface also allows for direct data communication with controllers, actuators, and sensors from different manufacturers. Control via Building Automation Systems (BAS) is possible through the use of plug-in InterFace Modules. Wilo offers both analogue and digital pump interfaces for the most varied systems requirements. These act as a link between the hydraulic circuits and the control devices of the field and automation levels and offer the greatest possible synergies in regard to cost, comfort and peace of mind.

Analogue interfaces

IF-modules with the following functions can be used where conventional analogue control terminals are used:

- 0-10V for remote setpoint adjustment.
- Ext. Off or Ext. Min for targeted potential-free switching and controlling.
- Collective run signal for pump operation feedback.

Digital interfaces

Comprehensive operational information and control commands are best transmitted to and exchanged with the building automation system via digital interfaces. Due to the unique modular concept all Wilo Helix EXCEL pumps understand different bus languages:

- Wilo IF Module Modbus: The Modbus protocol used widely in industrial and building services is predestined for uncomplicated and high-performance applications.
- Wilo IF Module BACnet: The connection to BACnet with the MS/TP protocol marks the first time that integrated communication between field devices and control technology has become possible. The strengths of BACnet lie in its global standardization as a non-manufacturer specific and open protocol, its self-documentation and the associated robustness and reliability in terms of engineering and operation.
- Wilo IF Module LON: The optional Wilo IF Module LON with the LONmark standardized Profile Pump Controller 8120 serves to form intelligent and non-manufacturer specific networks.



Modern building automation has simplified the maintenance possibilities of technical installations in a revolutionary way, as all status reports for all linked devices are continuously available via the building control panel. Irregularities and faults can be seen, targeted, remedied or serviced as necessary. With a multitude of useful information such as

Wilo Helix EXCEL

The Excellent One



fault signals, current pressure, flow as well as run signals, Wilo's Helix EXCEL offers the best conditions for integration in a building automation system. Building automation makes set regular maintenance intervals unnecessary which results in an immense reduction of costs. A study carried out by Dow Chemicals, the world's second largest chemical company, showed a huge savings potential in avoidable maintenance expenses.

Simple manual maintenance: with the Wilo IR Stick for laptop & netbook

In addition to fully automatic maintenance via building automation, manual maintenance work is also necessary time and again (e.g. during commissioning or for service checks). As the pumps are often installed at inaccessible locations, it is not always that simple to access. Wilo has solved this for the end-user by developing the InfraRed USB stick. With the Wilo IR Stick, maintenance and servicing work can now be carried out even more effectively and with greater ease.

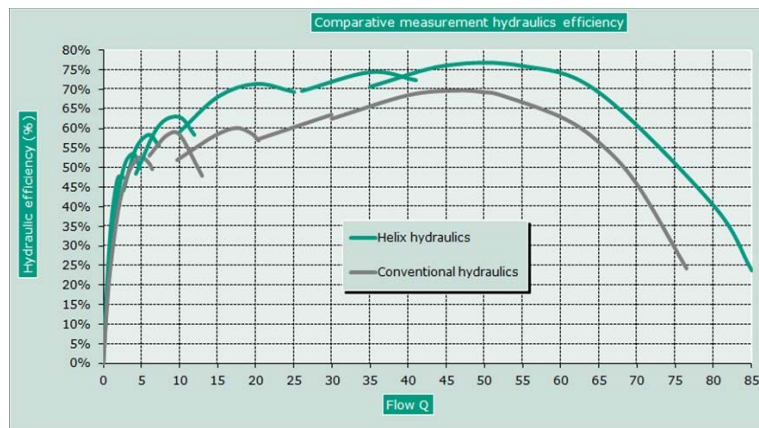


In addition to a considerably expanded range of functions in the areas of diagnostics and automation, there are also no problems with documentation. Data can be recorded in standard formats and then reprocessed. Software updates are available that enable new functions to be used. The Wilo IR Stick is not only compatible with existing communication standards, but is also best prepared for the future communications, and it is compatible with all Wilo RED BUTTON ECM products: Stratos/Z/D, Stratos GIGA, Helix EXCEL.



Excellent hydraulic performance

Our pump casing is optimized to improve the quality, efficiency, NPSHR, and range of applications where the pump can be used. Helix EXCEL's high-performance hydraulics are made of corrosion-resistant stainless steel and produced with the highest precision using laser welding technology. Our exclusive hub is designed for an optimal torque transmission. We've implemented superior surface finishing of Wilo Helix EXCEL's impellers, stage casings and diffusers using a sand blasting process. We sand-blast hydraulic components to remove irregularities, leaving ultra-smooth surfaces that reduce resistance and increase hydraulic efficiency.



Excellent in maintenance

A significant advantage of the new Wilo Helix EXCEL is the cartridge seal system. It is easy to access, thus ensuring a significant reduction in the time generally required for maintenance work to one third. The removable spacer on the 7.5HP and larger motors allow a shaft seal change without motor removal. To overcome this maintenance obstacle, we have designed a removable spacer on the motor end of the shaft that allows for easy access to the cartridge seal without having to remove the motor from the pump.



Once the seal is removed, we have the choice of either replacing the entire cartridge, or replacing the mechanical seal only.



Excellent in handling and accessories

Wilo Helix EXCEL has a number of great, exterior, features that make it a leader in versatility for either open or closed water loop applications. Every Wilo Helix EXCEL is shipped with lifting lugs conveniently placed for easy lifting, holding, and placement. Optional accessories include:



- Pressure transducers are available at different ranges based on the pressure requirement (transducers shall be mounted five pipe diameters downstream from the discharge end of the pump):
 - 0 – 100 PSI
 - 0 – 150 PSI
 - 0 – 235 PSI
- Two pressure transducer cable lengths are available:
 - 6' Din connector cable
 - 15' Din connector cable
- Differential pressure kit for closed loop applications. The differential pressure sensor kit enables operation in dp-c and dp-v mode of multistage variable speed pump ranges. The kit includes all hardware and instructions necessary for mounting the differential pressure sensors on the Helix EXCEL's inlet and discharge piping. (Differential pressure connections shall be mounted five pipe diameters upstream / downstream from the suction / discharge ends of the pump).
- Stage kits. Bearing, intermediate, and last stage kits are available on request.
- Bypass kits available with or without manometer.

