Flygt low-speed mixers

OUTSTANDING EFFICIENCY

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Evolving solid solutions.

FLYGT
a xylem brand

Energy-efficient mixing

Rising to the mixing challenge
All mixing applications require varying degrees of both small-scale turbulence and bulk flow. With a good bulk flow, the contents of the entire tank are put into motion so that all parts are involved in the mixing. The strength of the bulk flow is, in turn, dependent on the total amount of installed thrust and layout.

Unparalleled expertise, broad mixing solutions
Xylem pioneered the use of thrust as the main performance parameter for mixing. And every day, we put more than 50 years of R&D expertise and practical experience to work to determine the right technology, mixer size and layout for your requirements.

Our comprehensive portfolio of mixers and agitators cover virtually every requirement. Hundreds of thousands of Flygt mixers and agitators are in service worldwide, delivering efficient mixing performance.

Low-speed mixing
When mixing and horizontal flow is essential for biological wastewater treatment processes, Flygt low-speed mixers deliver outstanding cost-effective performance for applications that involve gentle mixing of large fluid volumes.

Engineered for more efficient bulk flow, lower energy consumption and positioning flexibility, these mixers offer highly efficient solutions for a wide range of mixing applications, such as:

- Activated sludge treatment
  - Conventional treatment
  - Oxidation ditch
  - Sequencing batch reactor
- Wastewater reservoirs
- Ice prevention
- Oxygenization in lakes and harbors

Advantages of Flygt low-speed mixers

- Outstanding reliability
- Strong bulk flow
- Extreme energy efficiency
- Easy to service
- Lean installation
- Highly versatile for most tank sizes
- Low total cost of ownership

Our comprehensive mixing portfolio

Xylems wide array of reliable, trouble-free mixing equipment includes;

- Flygt low-speed mixers
- Flygt compact mixers
- Flygt top-entry agitators
- Flygt jet mixers
- Flygt hydroejectors

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Designed for high reliability

For decades, Xylem has been at the cutting edge of research and development to improve mixer technology. Flygt low-speed mixers feature several components that contribute to reliable operation and reduced energy costs.

Energy-saving propeller
Our unique propeller design maximizes the amount of thrust delivered while minimizing energy consumption. Engineered for hydraulic excellence with high-strength materials, our signature banana blade large-diameter propellers with backswept self-cleaning design provide non-clogging perfor - mance that lasts and lasts.

The Flygt banana blade propeller creates maximum thrust using minimal power.

Dependable Class H motor
Our squirrel-cage induction motor is carefully manufactured at our own premises for durability and dependability. Stator windings are trickle impregnated in resin and rated at Class H 180°C (355°F) to provide excellent resistance to overheating and exceptionally long service life.

Stator windings are rated at Class H for exceptional resistance to overheating.

Reliable shaft seals
A vital component for reliable operation, Flygt mechanical shaft seals feature a unique design with an intermediate barrier fluid. Made of corrosion-resistant tungsten carbide (WCCR), our specially manufactured seals provide exceptional mechanical strength and superior sliding properties. This results in significantly less wear between the seal surfaces. It also reduces the risk of leakage and prolongs seal service life.

Unique mechanical shaft seal demonstrates superior sliding properties and exceptional mechanical strength.

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High reliability in every detail

1 Cable entry
Compressible bushing and strain relief on the cable prevent leakage into the motor.

2 Motor
High-performance, squirrel-cage induction class H-motor provides thermal overload protection and extra long service life.

3 Protective coating
Durable, high-strength top coating protects cast-iron parts against impact, chemicals and corrosion.

4 Monitoring
Thermal sensors embedded in the stator windings prevent overheating. Leakage sensors are available as options.

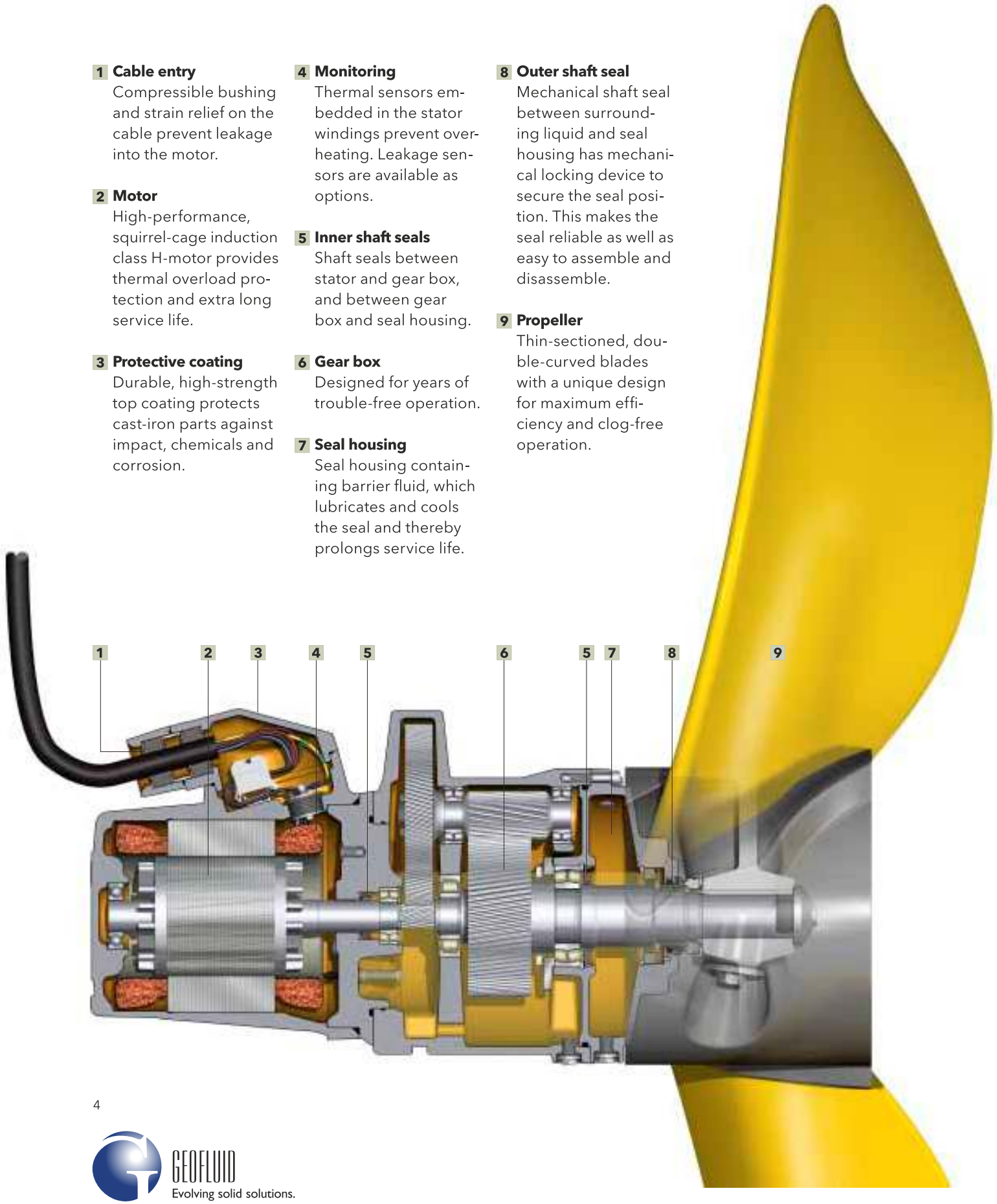
5 Inner shaft seals
Shaft seals between stator and gear box, and between gear box and seal housing.

6 Gear box
Designed for years of trouble-free operation.

7 Seal housing
Seal housing containing barrier fluid, which lubricates and cools the seal and thereby prolongs service life.

8 Outer shaft seal
Mechanical shaft seal between surrounding liquid and seal housing has mechanical locking device to secure the seal position. This makes the seal reliable as well as easy to assemble and disassemble.

9 Propeller
Thin-sectioned, double-curved blades with a unique design for maximum efficiency and clog-free operation.



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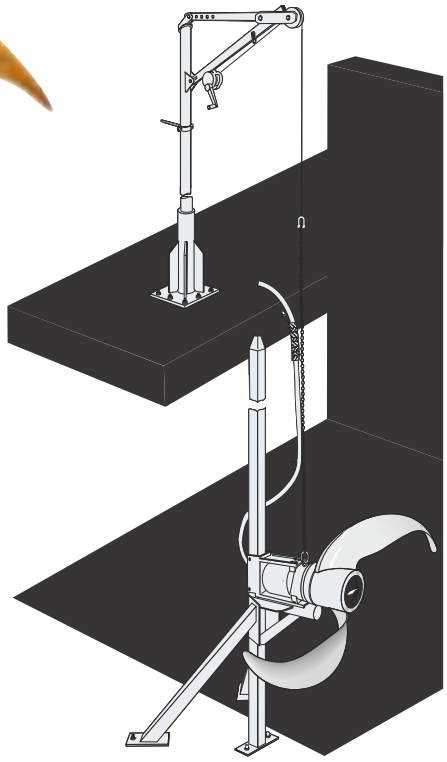
The best way to dependable, low-cost installation

The Flygt installation equipment is rigid enough to withstand the weight and reaction forces exerted by the mixer throughout its operating life. It is also robust and easy to work with.

Guide bar systems for any tank
To help withstand fatigue from strongly fluctuating forces within the tank, Flygt low-speed mixers are installed along rigid guide bars at appropriate depths for optimal mixing efficiency. Used together with our lifting equipment, guide bar systems enable easy access for inspection and service.

Safe, convenient lifting equipment
Raising and lowering Flygt low-speed mixers with our lifting equipment is as easy and convenient as it is safe. The CE-approved lifting davit is mounted in a holder at its lower end which enables easy turning of the davit. To reduce investment cost, one davit can be used wfor several mixers.

The guide bar system makes mixers easily accessible.



No costly modifications to existing tanks are required.

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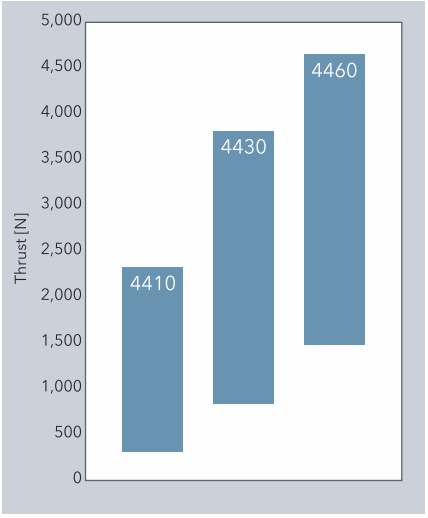
A broad range of low-speed mixers

Our low-speed mixer portfolio comprises three modular Flygt models that provide comprehensive mixing performance. By combining different motors, gear ratios and propeller diameters, you can customize Flygt low-speed mixers to meet your specific process needs.



Facts and figures

Model	4410		4430	4460
Shaft power · 50 Hz, kW · 60 Hz, kW (hp)	0.9 1.1 (1.5)	2.3 2.6 (3.5)	4.3 4.6 (6.2)	5.7 6.3 (8.4)
Thrust range · 50 Hz, N · 60 Hz, N	200-1,400 300-1,400	4002,100 6002,300	5003,600 7003,800	1,400 4,600 2,000 4,500
Propeller diameter, m (in)	1.4-2.5 (55-98)	1.42.5 (5598)	1.42.5 (5598)	1.42.5 (5598)

Options

SUBCAB®
Heavy-duty submersible rubber cable.

SUBCAB® Screened
Heavy-duty submersible rubber cable for use with VFD and to limit electromagnetic interference.

Special cables
Withstand high temperatures, high voltage and chemical agitation.

Leakage sensors
Automatically detect, together with external monitoring equip - ment, any leakage in stator and oil housings.

Flygt MiniCAS supervision
Provides quick and easy equip- ment protection by monitoring thermal overload switches and leakage detectors.

Explosion-proof versions
For use in potentially explosive or flammable environments.

Extra durable coating
Provides extra protection against anodic corrosion by means of a zinc-rich epoxy primer and three-layer top coating.

Silicon carbide (RSiC) seal
Provides excellent abrasion resistance and superior resis - tance against acid and chloride liquids.

Zinc anode kits
Provides extra corrosion-resis- tance for seawater applications.

Stator leakage sensor

Flygt MiniCAS supervision unit

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A perfect blend of support and service

Boost efficiency with monitoring and control

We supply everything from controllers, sensors and start equipment to SCADA software for complete fluid handling supervision.

Enjoy the benefits of a premium brand

Genuine spare parts are vital to ensure long and trouble-free operation. We guarantee the availability of spare parts for 10 years after we stop production of a model.

A deep understanding of fluid handling and vast experience in mixing technologies make Xylem a trustworthy and reliable partner for your wastewater process requirements.

Systems engineering expertise
Dimensioning and layout are critical factors in maximizing performance. Using our expertise and intelligent tools, we analyze your requirements to identify the right mixer or agitation system to optimize your processes.

Support along the way
Our recommendations result from the use of specially developed and validated Computational Fluid Dynamics software programs, based on carefully selected, relevant models. Our own testing facilities as well as field testing and measurement of actual performance onsite provide Xylem engineers with keen insight into what works. Using this knowledge and expertise, we help you maintain your installation in top operating condition.

Global service network
Should any problem occur with your Flygt mixers and agitators, professional assistance and original spare parts are always within easy reach through Xylems extensive service network in 140 countries.

Xylem [ˈzīləm]

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

Were 12,000 people unified in a common purpose: creating innovative solutions to meet our worlds 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 xyleminc.com.

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Geofluid Processors Private Limited

112, Building No.2, Mittal Industrial Estate,
Andheri Kurla Road, Marol, Andheri (E), Mumbai - 400 059.

+91-22- 6155 5888
+91-22-6155 5800
info@geofluid.com
www.geofluid.com