

# EKATO

EKATO HWL

More than 250,000 EKATO agitators are successfully operating worldwide in various industrial applications. EKATO's product range consists of efficient and tailor-made industrial agitators, entire agitator systems with reactor vessel, as well as complete process plants, which are individually designed for specific mixing requirements.

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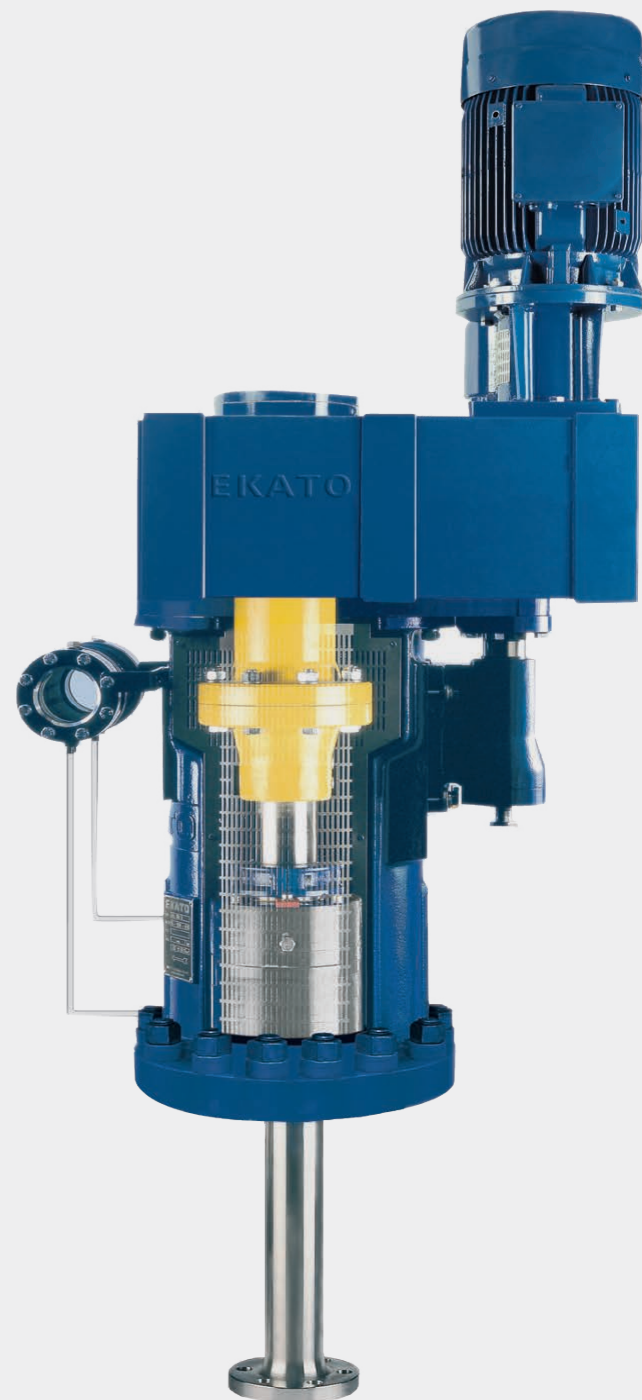
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## EKATO AGITATORS HWL

High performance agitators for extended lifetime,  
reduced maintenance and minimized operational costs

Advanced Process Solutions



- Agitators for System Reliability
- State-of-the-art Mixing Equipment
- Full Scope of Engineering Services
- Minimal Maintenance and Operational Costs



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## EKATO Agitators Type HWL

For more than 80 years, EKATO has stood for the highest level of development and manufacturing expertise in the field of agitator technology. Irrespective of size and complexity, customer benefits and reliability of agitators are always the first priority. From the wide range of highly efficient EKATO impellers, you can always find the optimum agitation system for any mixing task: whether for blending, suspending, dispersing, gassing, heat supply and/or heat removal. Mechanical seals and sealing systems specially developed for agitators ensure maximum operational reliability.

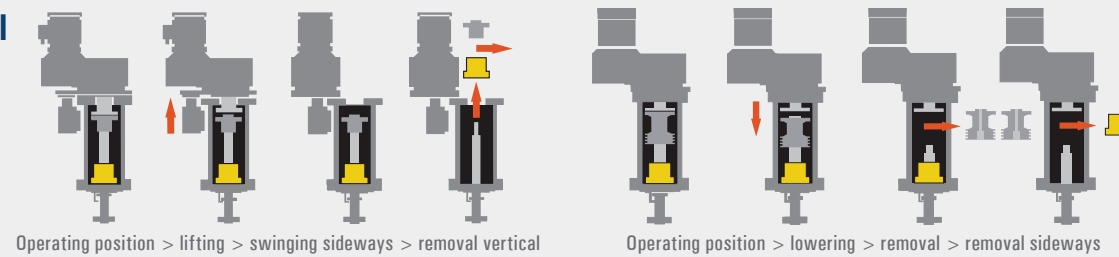
HWL agitators are the most powerful agitators in EKATO's product range. Large sized agitators with a drive power of up to 3,000 kW, shaft lengths of more than 15 m, as well as 500 mm shaft diameters have already been supplied. These agitators have been designed to deliver highest operational safety and fulfill all applicable standards to the greatest possible extent. Special removal devices, allowing the mechanical seal to be removed quickly and easily, as well as the robust design ensure minimal maintenance and low operational costs.

### Seal Removal

Sideways or vertical

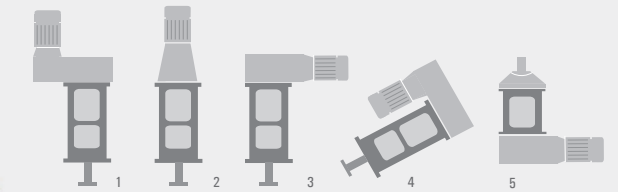


Video



### Drive & Agitator Arrangements

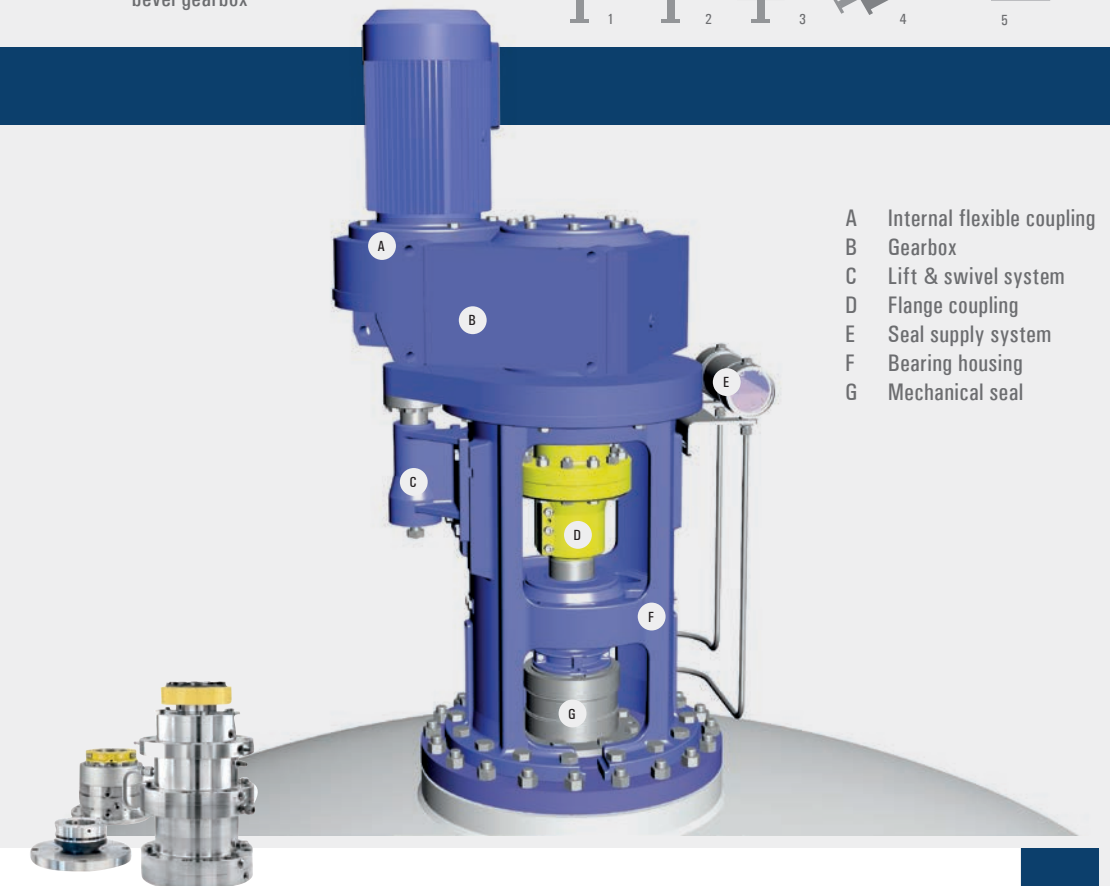
- 1 Flat gearbox
- 2 Geared motor
- 3 Bevel gearbox
- 4 V-belt drive
- 5 Bottom entry bevel gearbox



### Features

Motor power	5 – 3,000 kW
Shaft diameter	40 – 500 mm
Operating pressure	Vacuum – 200 bar (g)
Impeller systems	EKATO high-efficiency impellers and conventional impellers
Materials (product wetted)	Carbon steel, rust and acid resistant steels, nickel-base alloy, Duplex and Super Duplex steels, titanium und titanium alloys, rubber coatings, coatings

- Drive versions with fixed or variable shaft speeds
- Different gearbox types (flat, bevel, helical gearbox...)
- Oil supply systems for the gearbox available
- Lanterns of cast or welded design
- Fast seal removal sideways and vertical
- Minimized space for maintenance required
- Split shaft design with bearing shaft and flange coupling
- Steady bearings or shaft deflection limiting rings



- A Internal flexible coupling
- B Gearbox
- C Lift & swivel system
- D Flange coupling
- E Seal supply system
- F Bearing housing
- G Mechanical seal

### Sealing Options

EKATO offers a wide range of robust and reliable mechanical seals including cooling and supply systems:

- Single-, double-, or triple-acting seals
- Dry running, product wetted, liquid or gas lubricated
- Pressure compensators, automatic seal supply systems

### Engineering & Consulting Services

Different finite element modal analysis (FEM) can be offered to guarantee the system reliability of the agitator together with the vessel. For example the agitator/vessel connection, the vessel itself and its internals can be specifically calculated with this method. Typical FEM analyses:

- Structural mechanical calculations (operational strength, deformations)
- Modal/vibration analyses for the assessment of resonance
- Fluid-structure-interface for the consideration of contained or surrounding fluids with modal analysis
- Thermal calculations

