



**Product**

## BK Series Geared Motors

**Application**

## Wastewater Sedimentation Tank

**Highlights**

- BK Series helical bevel geared motor
- Hardened wear sleeve and spray ring ensure leak-free performance
- Complies with NA and International standards, including NEMA, IEC, CSA, and CE
- Torque rating to 18,500 Nm
- Completely enclosed, sealed against dust and moisture
- Corrosion protection Im2 for submersible operation
- IP68 Enclosure



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BK Series geared motors for submersible applications

The Houtrust wastewater treatment plant located in the Netherlands was built in 1967 and needed to be refurbished to be in line with current environmental regulations. Included in the maintenance project was the replacement of a geared motor that drives the chainwheel in one of its sedimentation tanks.

The original geared motor required a high degree of maintenance, demanding the tank's basin be emptied twice a year. This resulted in production losses and high maintenance costs. The original supplier had designed a solution which employed a single-stage bevel gearbox fully submerged in the water. A tube was used to connect the gearbox to the rest of the power train, positioned above the water level. The tube connected to a pre-stage gearbox and an overload coupling, with a 0.55 kW motor driving the application.

Delfluent, the plant operator, contacted Bauer Gear Motor, based on Bauer's proven track record of developing geared motors for challenging conditions. Bauer worked closely with its partner Vos Gekas & Boot (VGB), an expert in rotating equipment and a supplier familiar to the Houtrust facility.

The Bauer solution consisted of a BK70 bevel geared motor capable of operating continuously underwater. Bauer moved to a multi-stage geared motor from two, single-stage gears. The simplified solution made future maintenance easier. In addition, by removing the gear, the tube and the coupling, Bauer reduced the oscillations in the system and provided a more energy-efficient solution.

Specific advantages of the BK series, besides IP protection against dust and water, include simple and cost-effective installation, high energy efficiency, robustness and durability, low maintenance requirements and low running costs.

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