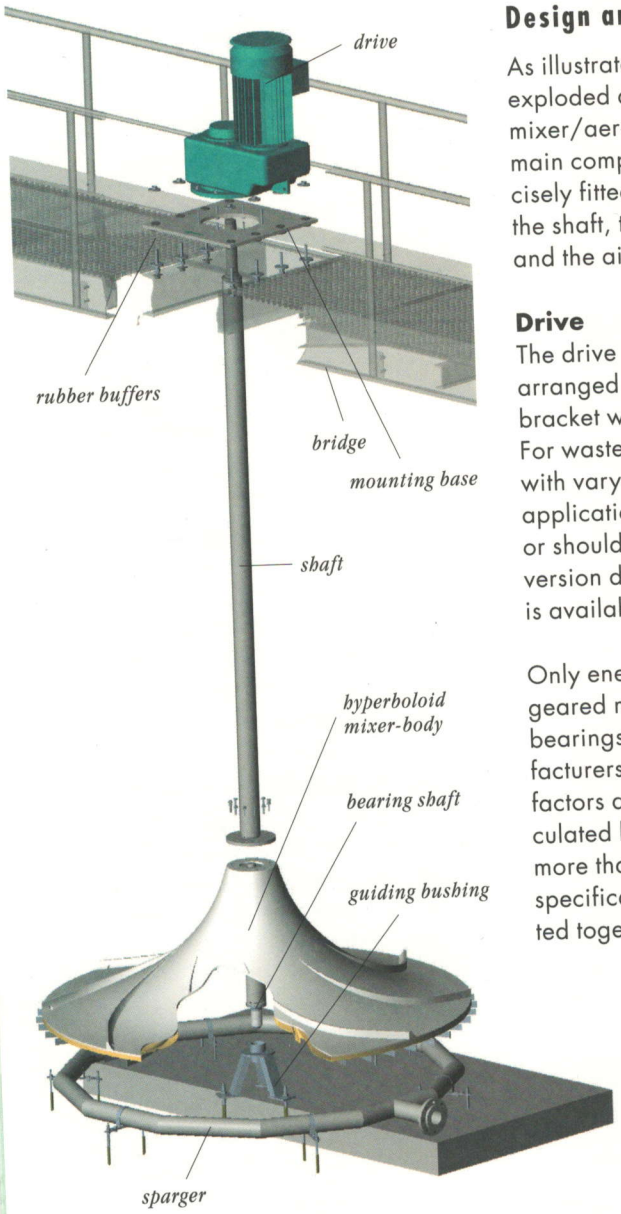
HYPERCLASSIC®

Design and Material Selection



Design and Material Selection

As illustrated in the accompanying exploded drawing, the hyperboloid mixer/aerator is made up of four main components which are precisely fitted to each other, the drive, the shaft, the hyperboloid mixer-body and the air diffuser.

Drive

The drive is assembled dry and is arranged on a bridge or mounting bracket where it is easily accessible. For wastewater ponds or SBR[1] plants with varying water levels or for all applications where bridges cannot or should not be realized, the cage version described on the next page is available.

Only energy-saving and robust geared motors with reinforced bearings from renowned manufacturers are used. High service factors are selected and the calculated bearing life expectancy is more than 100.000 h. The exact specifications are usually coordinated together with the customer.

The geared motor sits on a mounting base in a rubber buffer bearing. This absorbs starting jerks, the propagation of sound waves is avoided and the complete hyperboloid mixer/aerator is thereby galvanically separated from the bridge.

Shaft

The shaft provides the connection between the drive and the hyperboloid mixer-body. It transfers the required torque, which drives the hyperboloid mixer/aerator.

The shaft is manufactured from a heavy duty stainless-steel tube designed for the loads which occur. The exact composition of the alloy metal (usually AISI 316 or AISI 304) essentially depends on the composition of the wastewater. Specially coated shafts can be delivered for very saline or aggressive wastewaters.

For easy installation and the connection to the hollow shaft of the drive, a special shaft extension is integrated at the top end of the shaft. The torque transmission is carried out via a feather key.

[1] SBR: Sequencing Batch Reactor