

PRODUCT INFORMATION

DRIVES

Drives for Water and Wastewater Treatment Plants

Due to imposed standards of specific quality levels of fresh water and waste water in both the public and private sectors, manufacturers of water treatment equipment are seeing an increased demand for their products. Although the processes involved can be complicated, the machinery required to perform them is technically relatively simple. Of importance, however, is the fact that almost all of this equipment requires some type of drive.

Because of growth in the market area, it is necessary to address this field specifically. Drives for water treatment purposes are expected to last for decades with a minimum amount of maintenance and zero failures in some of the harshest environments imaginable. The drives are exposed to caustic chemicals, corrosive gases, continuous running, temperature extremes from -40°F to 120°F ambient as well as the debilitating effects of the sun, rain, snow, and ice.

Engineers responsible for the design of water treatment plants expect the equipment, including the drives, to perform without fail for many years. To meet this challenge, SEW-Eurodrive has developed a package of features specifically for this field. It is called the Water Treatment Package and includes the features listed below:

- **Filtered Breathers** — Prevent the ingress of airborne particles and falling rain and snow which can eventually destroy bearings and gears.
- **Double Seals on Output Shafts** — The outside seal is double lipped to exclude dirt and moisture from entering and retain any lubricant that may seep past the single lip seal behind it.
- **Paint** — The paint system consists of a corrosion inhibiting primer covered with a finish coat which resists the effects of moisture, chemicals, corrosive gases, and sunlight.
- **Long Term Storage** — The drives are filled to the proper level with oil that has an additive to prevent corrosion of the gears and bearings until such time as the unit is put into service. It is not necessary to change oil before start-up.
- **Motor Protection** — Identical to the Motor Severe Duty option.

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In addition to the standard package there are additional options to satisfy special requirements of the equipment or consulting engineers' specifications.

- **Synthetic Lubricants** — In lieu of the standard mineral based oil, the reducers can be filled to the correct level with Mobil Synthetic oils.

Synthetic lubricants have the multiple advantages of long life without oxidization, broad temperature range, and better film properties. These properties allow the reducers to run 20,000 hours between oil changes, operate in ambients ranging from -30°F through 140°F, while maintaining a gearing efficiency level that exceeds any petroleum based lubricant. The helical gear units are filled with Mobil SHC 630 oil and the combination worm gear units are filled with Mobil SHC 634. Grease packed bearings will be filled with Mobiltemp SHC 32 synthetic grease which is completely compatible with the oil.

- **Oil Level Sight Glasses** — Installed directly into the oil level port, it enables the level to be checked without removing an inspection plug.
- **Oil Sight Tubes** — An alternative to sight glasses, they offer a more visible means of inspecting the oil level.
- **Metric to NPT Adapter** — Installed in the drain port and plugged with a standard NPT fitting, it allows the reducer to be plumbed for spill-free removal of waste oil.
- **Drain Valves** — Installed on the NPT drain fitting for ease in draining the oil.
- **Regreasable Bearings** — For engineers' specifications which require bearings be relubed without disassembly of the drive. Where possible, as determined by the mounting position, the oil level will be adjusted to eliminate the necessity of grease packing the bearings. When this is not possible, a pressure relief grease fitting will be installed in nonsealed bearings. Sealed bearings are lubed for the life of the bearing.
- **Paint** — Increased thickness of the corrosion inhibiting primer and finish coat for maximum resistance against corrosion.
- **Special Paint** — Compliance with customer or contract specifications.

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- **Oil Heaters** — Used for preventing condensation inside the reducer housing and/or keeping the oil from thickening in low temperature. Not normally recommended because of the damaging effect they have on the oil.
- **Canopy** — Installed on motor fan end for additional protection for the motor against rain or snow in vertical installations.
- **Overload Detection** — A broad range of devices are available including mechanically or electrically activated systems with single or multiple trip points. The trip points may be used to trigger alarms or shut down the drive system. Direct torque readout as a percent of full load is available at the drive or at a remote location.