

# DBS Drive Units

## Introduction

Waterex represents DBS Manufacturing in Australia. The benefits of DBS drive systems are highlighted herein.

## Types

DBS produces a number of different systems. They offer electrical drive units, self contained hydraulic units and hydraulic units where the pump is separate from the drive. With units up to 2,000,000 Nm Waterex is confident in the ability of the DBS drives to meet your requirements.

## Applications

- Chemical & Petroleum
  - ◇ Clarifiers/Solids Separation
  - ◇ Solids Contact
- Mining
  - ◇ High Rate Thickeners
  - ◇ Conventional Thickeners
  - ◇ Paste Thickeners
- Municipal
  - ◇ Primary Clarifiers
  - ◇ Secondary Clarifiers
  - ◇ Solids Contact Clarifiers
  - ◇ Spiral Blade Clarifiers
  - ◇ Suction Header Clarifiers
- Pulp & Paper
  - ◇ Green Liquor Clarifiers
  - ◇ White Liquor Clarifiers
  - ◇ Lime Mud Washers
  - ◇ Lime Mud Agitators
  - ◇ Vacuum Filters

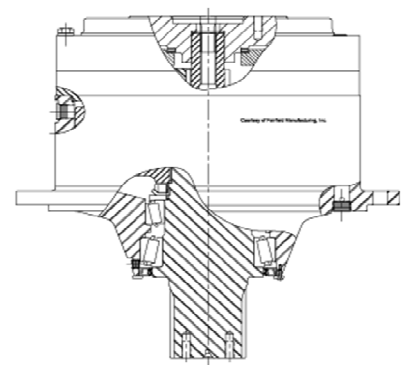
## Secondary Speed Reducer Features

DBS drives use high capacity planetary gearboxes as secondary speed reducers to drive the main pinion gear on large drives and act as the main drive on smaller DBS drives. These gearboxes are more efficient, have longer life and higher bearing capacity.

The advantages of the DBS secondary speed reducer are threefold. Firstly, spur gear planetary gearbox have a much higher efficiency and longer life than worm-type gearboxes. Secondly, air bearings have L<sub>10</sub> life in excess of 100,000 hours at full torque load. Lastly, our gearbox doesn't require a bearing under the drive pinion. Lower bearings are subject to contamination by debris and condensate (water) which is frequently the cause of failure in competitors units.



**DBS MANUFACTURING**



DBS pinion drive gearboxes are permanently lubricated and require no maintenance for 10 years.

## Main Gear & Bearing

The heart of any clarifier or thickener drive unit is the main gear and bearing. DBS sets a high standard for these components using forged alloy steel for the main gear and high capacity precision bearings to support the gear and the rotation mechanism. All DBS gears are rated per AGMA or ISO standards to provide in excess of 100 years life. The conservative DBS approach pays off in high reliability and the ability of the drive to withstand lapses in specified drive maintenance.

## Torque Gauge

	DBS	Competition
Main Gear	Forged alloy steel	Cast iron or cast steel
Main Bearing	4 point contact precision bearing with L <sub>10</sub> life in excess of 100 yrs	L <sub>10</sub> life 10 years
	10 year warranty	1 year warranty

One of the most obvious design features of the DBS drive unit is its torque gauge. From the start DBS has used a large diameter stainless steel gauge that accurately indicates torque in foot-pounds or Newton-meters. The DBS design is superior to small dial or cast iron pointer that indicates 0-100%, or 1-10, or even "green-yellow-red" and offers very little useful data.

DBS torque gauges can be fitted with 4-20 mA torque transducer for remote monitoring and control. This information allows industrial users to increase the throughput and efficiency of their process.

The advantages of the DBS torque gauge are:

- DBS torque gauge is calibrated in units of torque such as: ft-lbf or N-m
- DBS torque gauge alarm and cut-off switches are easily adjustable with common tools
- DBS offers optional 4-20 mA torque transducers for remote torque indication or process control
- The torque gauge and switches on hydraulic drive systems operate when the drive is reversed

## Options

Special electric motors, reversing, variable speed, special coatings, 4-20mA torque transmitter, loss motion sensors, oil heaters, space heaters, explosion proof switches, lift mechanisms, 4-20mA lift position transmitters and condensate control units (CCU).

