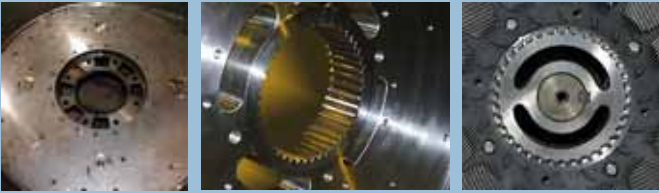


GL&V DD[®]6000 REFINER





the evolution of the rotor

Opening the door to the future...



improved plate mounting • quicker plate changes and increased effective refining area



INPRO bearing isolator • keeps oil in and water/contaminants out



proximity limit switch • improved repeatability and accuracy

Stronger Pulp, Higher Efficiency, Lower Maintenance Cost

The DD®6000 is the latest refiner series in the 50-year evolution of the DD product line. GL&V's forward thinking combined with over 150 years of refining knowledge were key ingredients for developing the best performing and lowest operating cost refiner on the market. Innovative enhancements and state-of-the-art technology, found only in the DD6000 refiner, will raise your refining to the next level while utilizing less energy.

Equa-Flo™ Technology

Equa-Flo™ patent pending technology improves refining results and refining efficiency while delivering the longest spline wear possible. Optimized flow distribution and improved rotor centering delivers stronger pulp at lower applied energy.



Advantages of Equa-Flo™ Technology

- Stronger pulp at lower applied energy
- Lower no load power by up to 15%
- Longer plate life from improved rotor centering
- Up to 60% more splined teeth lowers stress loads
- Increased wear life of splines from lower stress loads
- Splined hub and rotor are both reversible

Improved Plate Mounting

Bolt holes traditionally located within the effective refining area have been eliminated. An increase in valuable refining area lowers refining intensity and generates stronger pulp. This innovative patent pending method also reduces the time required for plate changes to within one to two hours.



Advantages of Improved Plate Mounting

- Lower refining intensity by up to 10%
- Stronger pulp development
- Quicker plate changes

Tangential Inlet and Outlet

The patented tangential inlet was incorporated to gain the benefits of pre-rotating the pulp flow for lowering no load power and the advantage of adding an effective junk trap. This junk trap will guard refiner plates from premature and catastrophic failure, caused by heavy contaminants.



Advantages of Tangential Inlet and Outlet

- Incorporates an effective junk trap
- Lower no load
- Increased plate life

Spiral Trac

Many of our customers have been successfully upgrading existing DD refiners with Spiral Trac technology. We decided to provide it as a standard feature in our DD6000 refiner.

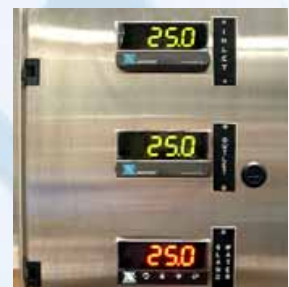


Advantages of Spiral Trac

- Lower seal water consumption by at least 75%
- Only two rows of packing to change
- Longer sleeve life

Electronic Safety Pressure System

A fully electronic safety pressure system replaces the traditional pneumatic system. Accuracy and reliability of our latest system is far superior to the pneumatic type. The compact NEMA 4X stainless steel enclosure can be mounted on a stand, wall, or on the refiner.



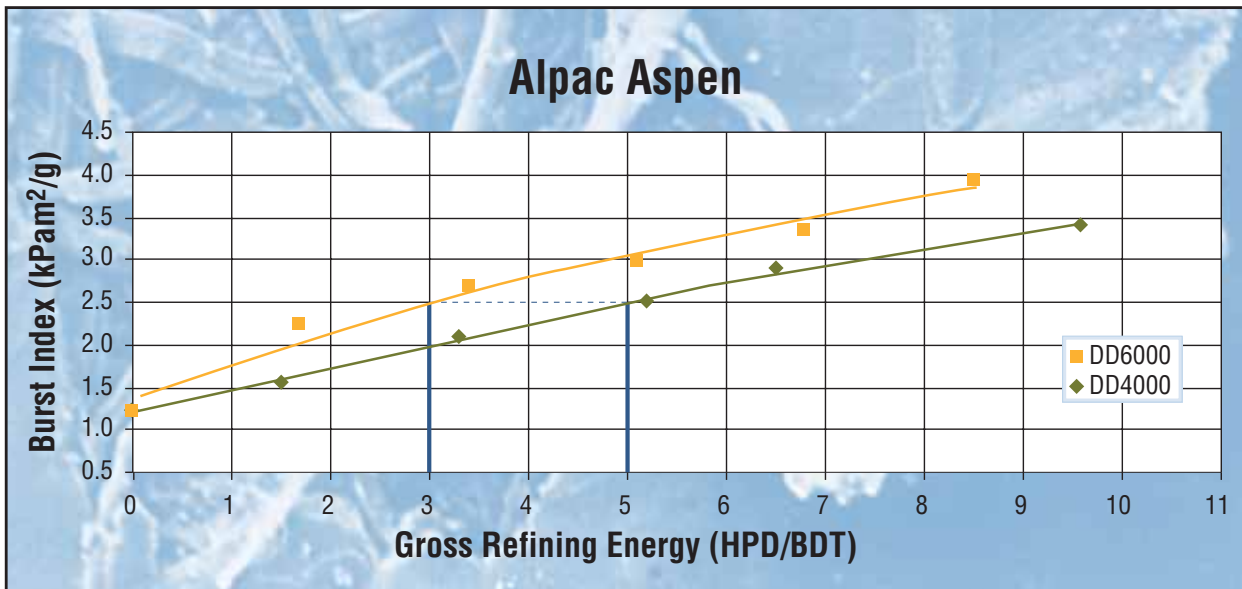
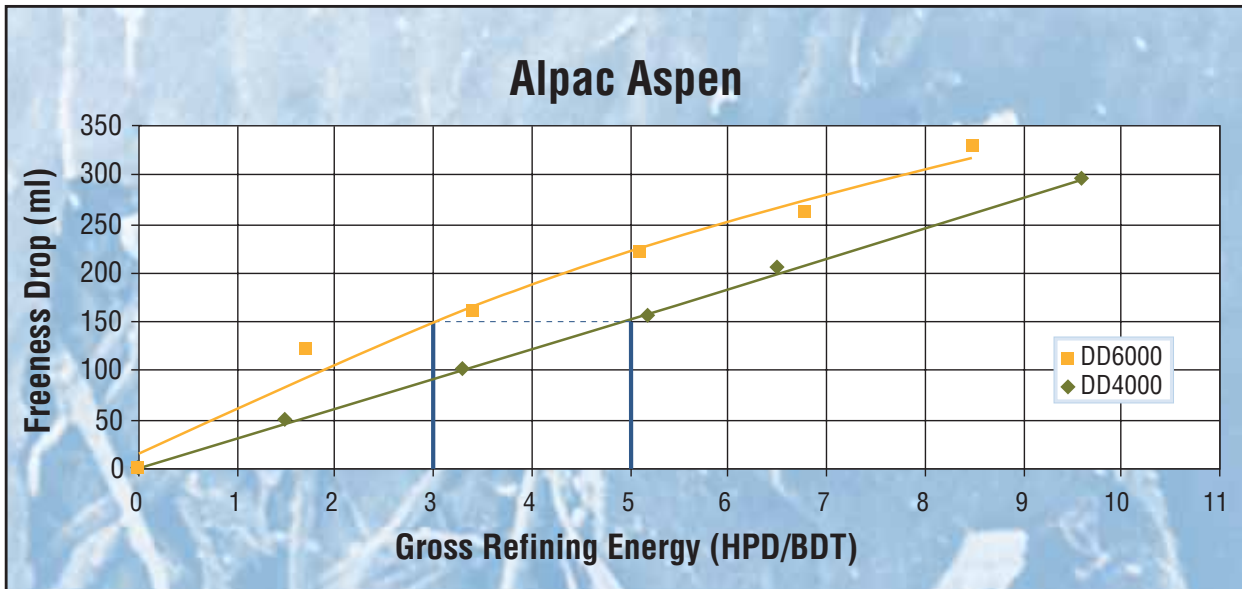
Other Enhancements

- Mechanical interlock to prevent wearing refiner plates beyond its bar depth
- O-ring seal on refiner door
- Gauge block to set total plate gap
- Replaced traditional limit switch with a more highly accurate proximity switch
- Torque limiting clutch – no more shear pin
- INPRO bearing isolator – enhanced protection
- Variable speed drive replaces the two-speed gear motor – reduced sheet breaks
- Fabricated design with stainless steel construction

Available Options

- Mechanical seal
- Non-lubricated disc coupling
- Rotor Removal Arm

Research and development leads to results...



Energy Efficiency Graphs

Gross energy is used to compare the efficiency of refiners. GL&V compared the energy efficiency of the DD6000 versus the DD4000 on bleached Aspen pulp. The process conditions and refiner plates were identical for this trial with the refiners as the variable. The results show that the DD6000 was 40% more energy efficient than the DD4000 on bleached Aspen pulp.