



Centrisys-Viscotherm Hydraulic Scroll Drive Based on Rotodiff Technology **Outperforms** Our Competitors' Gearbox Drive

 Centrisys-Viscotherm Hydraulic Scroll Drive		 Competitors' Gearbox Drive	Centrisys Hydraulic Advantage
1	Highest torque-to-weight ratio; allows for proper balance to handle solids and hydraulic flow capacity	Lower torque-to-weight ratio; limits loading of solids, requiring larger or multiple machines	Powerful and Efficient Operation
2	Simple, compact, lightweight design	Complex, heavy design	Lower Maintenance
3	No gears, uses only slow-moving parts; creates less friction	Multiple gears and moving parts at higher speeds; creates more friction and higher power consumption	Long-term Reliability
4	Robust and reliable; process control with direct torque reading. The direct measurement of scroll torque and speed allows immediate response to process changes	Complicated calculations of different speeds through multiple gear reductions/ increases error/ dramatically slows response to process changes	Lower Maintenance, Energy Efficient
5	Simple and accurate measurement of scroll speed; provides precise control of differential with unlimited bowl speed options <i>Differential = speed of Rotodiff</i>	Complicated, indirect measurement of scroll speed; calculated from bowl and pinion speed, gearbox ratio and control error <i>Differential = (bowl speed – pinion speed) / gearbox ratio</i>	Precise Measurement and Control
6	One set of V-belts	Multiple sets and types of belts	Precise Measurement and Control Lower Maintenance Cost
7	Lower overhung weight reduces load on main bearings; reduces machine vibration; <i>Less weight means less horsepower needed to operate</i>	Heavy overhung gear increases load and heat on main bearings, causing reduced bearing life <i>More weight means more horsepower needed to operate</i>	Lower Maintenance
8	Versatile design for multiple applications	Limited design requires different units for each application	Lower Maintenance, Energy Efficient, Versatile
9	Low energy consumption; power is not lost or wasted. Scroll drive operates independently from the main drive motor	Increased energy cost; gearbox design steals energy from the main drive.	Versatile, Energy Efficient, Lower Operating Cost
10	State-of-the-art technology CERS (Centrifuge Energy Recovery System) allows the hydraulic scroll drive to recover energy at shut down	All energy is lost at shut-down; no power recovered	Energy Efficient
11	100% torque at all speeds, including standstill	Limited torque at maximum differential speed and standstill	More Powerful at All Speeds
12	Full range of differential speeds at all bowl speeds, including zero RPM, startup, shutdown and standstill	Limited range of differential speeds at lower bowl speeds and standstill	More Powerful at All Speeds
13	Low maintenance; continuous cleaning and cooling in a closed, 100% filtered system (filtered to 10 microns)	Unfiltered, uncooled closed system; retains all wear debris possibly shortening the gearbox life	Lower Maintenance, More Reliable
14	Pressure relief valves prevent high shock load, protecting the hydraulic system AND centrifuge; system does not transfer impact force to the shafting	Claims to have high shock load capability, but repeated high shock loads will damage and destroy in-line components and cause premature failure	Lower Maintenance, More Reliable
15	Standard on a Centrisys centrifuge	Standard on competitors' machines; if higher torque is required, hydraulic technology is offered as an upgrade	Lower Cost, Energy Efficient
16	No drag or parasitic loss on the main drive; uses only the energy required to convey solids	Robs energy from main drive; torque adds braking horsepower; increases drag on main drive motor	Efficient Operation
17	Capacity to run leading or lagging (optimized performance)	Limited to a one-direction process	Lower Maintenance, More Powerful and Efficient
18	No overheating of the hydraulic motor due to automatic, continuous heat dissipation through the oil conditioning system	External cooling often required; overheating is a common problem	Lower Maintenance, Longer Life