

Grit Pumping – City of Barrie

Application market	Wastewater
Market segment	Wastewater collection
Pumped medium	Wastewater with high grit concentration
Pump product	Bearing frame
Country	Canada



Challenge

The facility introduced here is in the City of Barrie, Ontario, Canada. The owners wanted to standardize the station with a single manufacturer to reduce the inventory of spare parts, efficiently perform repairs, and have reliable equipment in service. The application was to pump grit that settled in the influent tanks. The owner's requirements were: Material of construction capable to pump abrasive grit up to 30% volume concentration. A highly efficient hydraulic performance. A pump manufacturer capable of handling various applications on site, finally continued support, OEM service and fast lead times for spare parts and replacements.

Solution

After researching several different pump manufacturers, the City of Barrie determined that **Hidrostal** and its **Screw Centrifugal Pump** would offer an efficient solution compared to a traditional recessed impeller pump. The assembly includes an impeller and liner with a Brinell hardness of 600; capable of withstanding the grit being pumped. The heavy-duty flushless tandem mechanical seal bearing frame doesn't require a special seal or an external water supply.

Benefits

- Long-Lasting Value – for more than 25 years, the pumps have been running efficiently and without any challenges for 24 hours per day, 7 days a week.
- Reliable Performance – the station has the auger run every hour and pumps wastewater with 30% volume concentration of grit to the grit removal equipment.
- Efficient – compared to a typical recessed impeller pump the **Hidrostal Screw Centrifugal Pumps** have greatly reduced the energy consumption. That combines with the lower total cost of ownership (TCO) resulted in substantial financial savings for the city.

Quantity of units sold	4 pcs.
Pump type	D03K-S04R
Motor data	3.7 kW / 1'800 rpm / 60 Hz
Material combination	Pump body of cast iron with Hidrohard impeller and wear parts
Duty point	Flow : 12.6 liters per second / Head : 8.5 meters
In operation since	1997