

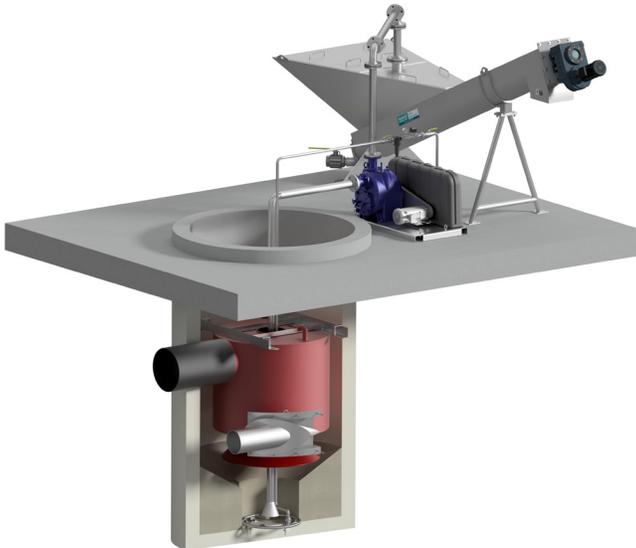
# Compact Grit Removal Line

Optimized Solutions for Smaller Wastewater Plants



Advanced Grit Management® is No Longer Out of Reach for Small Plants

## 95% Removal of ALL Grit $\geq 106$ micron



*Grit King® Compact & SpiraSnail® Compact Dewatering*



*Grit King® Compact & Self-Dumping Decanter Dewatering*

### Bigger is Not Always Better

Historically, equipment manufacturers have focused product development on the needs of larger plants with increasing treatment capacity. This has led to innovations in process treatment efficiency very focused on the needs of higher volume plants.

As smaller plants know, large plant systems don't always scale down to fit their site. All too frequently, the push for bigger and better treatment processes has left smaller plants in the lurch. Forced between selecting oversized, over-budget treatment processes or reliance on smaller, outdated, and inefficient treatment processes; smaller plants were often forced into choosing the latter.

Technological advances continue in all aspects of wastewater treatment. However, many of these technologies are out of reach for smaller treatment plants. With many emerging technologies specifically designed for big plants, too often they are too big or too expensive for the treatment needs, flows, and budgets of smaller plants.

Smaller plants are no less important in maintaining the quality of life that people rely on from effective wastewater treatment. Working with smaller treatment plants, Hydro International recognized a consistent demand for the same levels of protection and performance that larger plants are privileged to, but on a scale that could fit within a small plant footprint.

***Smaller wastewater treatment plants make up the vast majority of WWTPs in North America, yet many advanced treatment processes are only a viable option for much larger plants.***

### Identifying Small Plants' Needs

To better understand how we could help solve problems for smaller treatment plants, we needed to identify what was most important to them. We surveyed a number of smaller plants to learn more about issues that were critical in their equipment selection process. The key needs that were common in nearly all of the feedback follow:

- High performance with very low maintenance
- Flexible installation options to fit within existing plant layout
- Smaller footprint and lower cost

Simply scaling down larger systems can lead to inefficiencies with many elements overbuilt, and over designed to be cost-effective for smaller treatment plants. This is a big reason why many emergent technologies are not well suited for smaller treatment plants and why we created our Compact Line of Advanced Grit Management® solutions.



*Installed Grit King® Compact System*

## Grit King® Compact Separation & Washing

The Grit King® performs both grit separation and washing which saves space and reduces costs. Additionally, the all-hydraulic operation of the Grit King® combined with its extremely flexible layout options made it a great option to reconfigure for smaller plants with limited space and budgets.

The Grit King® is an advanced hydrodynamic separator that augments gravitational forces to effectively separate grit from water with no moving internal components and requires little maintenance.

Flow is introduced via a tangential inlet causing a rotational flow path around the dip plate. The flow spirals down the wall of the chamber as solids settle by gravitational forces as well as forces created by the rotating flow. The grit collects in the grit sump at the bottom of the unit as the center cone directs flow away from the base, up and around the center shaft into the inside of the dip plate and out the effluent pipe. The concentrated grit underflow is pumped to a Decanter or SpiraSnail® unit.

The internal components, made of synthetic materials and stainless steel, are installed with inlet and outlet connections for easy installation. The Grit King® Compact is typically provided with a dry pit or self-priming grit pump and a control panel to complete this Advanced Grit Management® system.

## SpiraSnail® Compact - Dewatering Screw

The SpiraSnail® Compact utilizes the same shafted screw design as the original SpiraSnail® but has a smaller footprint and is also shorter than the standard SpiraSnail®. Stainless steel construction and a heavy-duty screw provide years of reliable service while eliminating the need for washwater. By limiting design influent flows to ≤ 125 gpm (7.9 L/s) the SpiraSnail® Compact can achieve 95% capture of all grit 106 micron and larger.

## Decanter - Compact Dewatering Bin

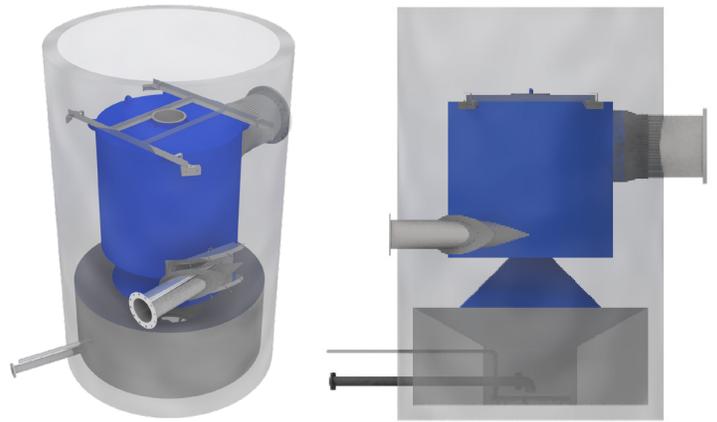
Hydro International's Decanter grit dewatering bin is a simple non mechanical dewatering device that is very cost-effective. When paired with a Grit King® Compact, small plants can now enjoy the protection of a proven Advanced Grit Management® system at a price point that is within reach.

The Decanter comes in multiple compact configurations designed to seamlessly fit within your existing plant layout or local disposal truck configurations. Options include both front and rear loading as well as a self-dumping version.

## The Ideal Grit Systems for Smaller Plants

With Hydro International's Compact Line of grit removal products, the benefits of Advanced Grit Management® are no longer out of reach for even the smallest treatment plants.

The end result is a new Grit King® system specifically designed for smaller plants, the Grit King® Compact. The Grit King® Compact is the ideal solution for smaller treatment plants that require high performance grit removal.



Grit King® Compact

**With Hydro International's Compact grit removal product line, the proven benefits of Advanced Grit Management® are now available for even the smallest treatment plants.**



SpiraSnail® Compact Dewatering



Front Loading Decanter



Self Dumping Decanter

## Learn more

To learn more about how our **Compact Grit Removal Systems** can improve your plant, visit [hydro-int.com](http://hydro-int.com), or contact us:

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