Garnet Removal System

The **Garnet Removal System (GRS)** is designed to remove exhausted waste abrasive from the waterjet catcher tank continuously, thus eliminating downtime for cleanout while maximizing production. The **Garnet Removal System (GRS)** can be adapted to any **AKS Waterjet Cutting Machine.**

The selection and sizing of the **Garnet Removal System** is based on: 1) square footage of the waterjet catcher tank
2) number of cutting heads being used

A custom designed **Sweeper Plumbing Package** fitted along the bottom of the tank which pushes the suspended settled abrasive in the water toward the suction port of the systems. automatically removing the abrasive from the tank, the system maximizes productivity by eliminating downtime for tank cleaning. Using the **Garnet Removal System (GRS)** in conjunction with a **Closed Loop Filtration System (CLS)** will reduce the consumable costs associated with recycling the overflow cutting water.

How it Works:

· The custom designed Sweeper Plumbing Package is fitted along the bottom of the tank, to sweep large quantities of abrasive and water toward the suction port.
· The **Eductor Package** is designed to keep the abrasive in suspension and pushed toward the pump suction.
· A **Heavy-Duty Closed Column Pump** pulls the abrasive laden water from the catcher tank and sends it
   - through a **Strainer Basket** to collect all large particles before entering the main pump.
   - through a **Centrifugal Separator** where solids are spun out and directed to a **Collection Chamber.**
· The solids are then purged into a **Hopper** with a removable liner.
· Clean water then exits the top of the separator and is drained back to the waterjet tank and pumped through the Eductor Package, resulting in a closed-loop continuous recirculating cleaning process.

Benefits from the Abrasive Removal System

· **Maximizes Productivity** — by eliminating down time needed for cleaning the catcher tank.
· **Reduces the Possibility of Thermal Distortion** — by removing the abrasive from the table, heat from the machining process is dissipated.
· **Reduces Closed Loop Consumable Costs** — by removing the abrasive from the waste water, the filtration system can maximize treatment of the water rather than removing the abrasive.
· **Custom Designed Sweeper Package** — designed to keep abrasive from building up in all areas of your catch tank.

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CUTTING SYSTEMS

System Features:

System Selection — based on square footage of the waterjet catcher tank and number of cutting heads being used. Catcher tanks are unique and may contain obstacles such as support stanchions and bladders. A specifically designed sweeper plumbing package will be fitted along the bottom of the catcher tank.

Sweeper Plumbing Package — specifically designed to fit the catcher tank and can be installed by a qualified service technician either on the factory floor or in the field. The Sweeper Plumbing Package incorporates multiple eductors with a 4:1 ratio. The eductors enhance water flow and keep the abrasive in suspension, pushing it toward the system suction port.

System Purge — Abrasive is purged from the system continuously and automatically. As the high-pressure abrasive waterjet cutting stream deposits abrasive into the catcher tank, the system automatically functionally removes it, usually disposing the spent waste abrasive into the same 2200 lb. bag that the abrasive was purchased and delivere.

Abrasive Disposal — spent waste abrasive is deposited in the 2200 lb. bag at the same rate at which it enters the catcher tank. The spent waste abrasive is relatively clean and void of cutouts or parts larger than 1/8" diameter. The spent waste abrasive bag is a manageable 2200 lb. bag and is easily lifted from the disposal hopper with a fork truck and disposed.
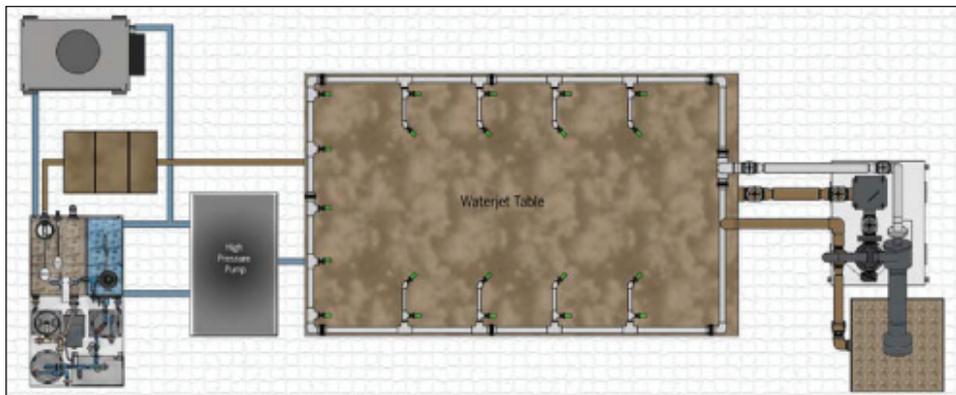
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Abrasive Removal Typical Installation. Shown with Closed Loop Filtration.

A TRADITION IN EXCELLENCE
FOR OVER 100 YEARS