

PowerSource

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Why Amish love their horsepower

Rotomites come to
water's rescue

A lodge that gets you
hooked on fishing



A photograph of a Rotomite 6000 amphibious vehicle on a body of water. The vehicle is white with a grey engine compartment and has "ROTOMITE 6000" printed on its side. It is equipped with a John Deere engine and a Funk pump. The background shows a calm lake with a grassy shoreline and hills in the distance. The foreground is a rocky, vegetated bank.

A John Deere engine
and Funk pump drive
power all of the
hydraulic functions,
including propulsion,
on the Rotomite 6000.

Water rescues

Powerful Rotomite 6000 dredges dig deep below the water's surface to remove polluting sediments

Few would connect the beautiful, land-locked state of Montana as the home to a manufacturer of sludge-removing dredge systems, but that's exactly where SRS Crisafulli has grown as a global success with its superior line of pumping and dredging equipment.

While it may come as a surprise that the "Big Sky" state is the backdrop to a company devoted to cleaning up bottom-dwelling sludge and sediments, be thankful for the company's innovative thinking. SRS Crisafulli equipment does its fair share to clean up water quality and does so by going where few others venture. Its dredges remove waste that settles to the bottom in such inhospitable places as industrial, municipal, and agricultural wastewater lagoons. But it's not all dirty work for SRS Crisafulli. Its pumps and dredges also play an important role in managing pristine fish and wildlife refuges, marinas, golf courses, crop irrigation, and the harvesting of aquatic crops such as peat moss.

SRS Crisafulli dredges tackle a diverse number of applications and a shining example of this is the Rotomite 6000 dredge. The self-contained unit is hydraulically powered by a John Deere PowerTech Plus 6090H engine and Funk pump drive supplied by EC Power Systems.

The dredge is essentially a self-propelled floating platform with a hydraulically powered slurry pump and fully articulating cutterhead mounted at the end of a ladder that delivers 1,243 Newton meters (11,000 in. lbs.) of digging torque to attack dense, hard-packed materials, like bottom ash. The Rotomite's

high-torque cutter head achieves working depths of up to 6 meters (20 ft.). A pump moves the slurry through a discharge hose to a variety of disposal venues: geotextile bags, settling basins, drying beds, or dewatering systems. This latest model, Rotomite 6000, is capable of removing up to 115 cubic meters (150 cu. yds.) of solids per hour.

The 205-kW (275 hp) PowerTech Plus engine equips the Rotomite 6000 with 42 percent more engine power than previous dredge models. "The John Deere engine is basically the prime mover for three hydraulic pumps that power the slurry pump, cutterhead, cylinders, and traverse winch," explains Mike Mills, the company's chief engineer. The engine also drives a 54-kW (72 hp) hydraulic motor that turns the Rotomite's steerable propeller for self-propulsion.

"There's always adequate power with the PowerTech Plus 6090H engine," says Mike. "This Tier 3 engine is extremely impressive. The throttle response is instantaneous and the torque curve is flat. The engine is also more fuel-efficient compared to previous models we've used. Plus, being in a northern climate, cold starting is extremely important. We've had great luck with the Tier 2 and Tier 3 John Deere engines. They are much easier to start in cold temperatures."

SRS Crisafulli is a long-time John Deere engine customer, relying on John Deere engines not only to power its dredges but also to drive its trailer-mounted and skid-mounted power units. Crisafulli power units drive the full line of SRS Crisafulli pumps, including vertical, portable trailer, and hydraulic submersible models. The company markets its products globally and was recently recognized as the Montana Exporter of the Year by Governor Brian Schweitzer.

SRS Crisafulli dredges are working in over 40 countries. "Soon, we will install the first Rotomite in Europe. No matter where you are in the world, there's a John Deere service center somewhat close. It's one of the selling features of our units."



An articulated cutter head scours the floor at depths of up to 6 meters (20 ft.). A pump moves the slurry through a discharge hose to the shoreline.

Emissions Cert.	Tier 3/Stage III A
Engine Model	PowerTech Plus 6090HF485
Displacement	9.0L
Rated Power	205 kW (275 hp) @ 2200 rpm
Cylinders	6
Aspiration	Air-to-air aftercooled
Distributor	EC Power Systems Boise, Idaho (208) 342-6541 www.ecpower.com

Funk Pump Drive Model	28000
Number of pads	1
Max input power	268 kW (360 hp)
Max input torque	1017 Nm (750 lb.-ft)
Input configuration	Direct drive