

OPERATING DIMENSIONS		PROPULSION	
Length	51 ft. 5 in. (15.7 m)	Primary System	Patented Starwheel Drive self-propulsion
Width	12 ft. (3.66 m)	Secondary System	Cable drive system
Height	10 ft. 5 in. (3.2 m) w/ air cleaner removed	<b>ELECTRICAL SYSTEM</b>	
Weight (less fuel)	47,700 lbs. (21,636 kg)	Voltage	12 volt, negative ground
<b>INTERNATIONAL SHIPPING DIMENSIONS</b>		Alternator Output	130 Amp
Length Option	49 ft. 2 in. (15 m) - STARWHEELS removed	<b>SAFETY FEATURES</b>	
Width	12 ft. (3.66 m)	Includes: 2 fire extinguishers, hand rail system, dual folding cabin doors	
Height	10 ft. (3.1 m) w/ muffler and air filter removed	dual warning horns, 1 life ring, 2 life jackets, locking power unit	
Weight (less fuel)	46,300 lbs. (21,000 kg)	<b>ANTI-CORROSION FEATURES</b>	
Shipping Method	break bulk service + 20' ocean container	Includes: Hull below deck is painted with a marine grade epoxy, above hull deck painted with polyurethane epoxy, and remaining components are coated with heavy duty powder coating all suitable for salt water service. Also includes stainless steel hydraulic lines, fittings, and all suitable hardware.	
<b>FLOTATION</b>		<b>DECIBEL LEVELS (dB)</b>	
Dimensions	Two (2) pontoons, 45 in. x 43 in. x 468 in. (1,143 mm x 1,092 mm x 11,887 mm); 10 ga. Steel sides, bottom and 1/4" diamond plate tops; internal bulkheads and stiffeners.	Idle (in cab):	66 dB
Displacement	60,500 lbs. (27,400 kg.)	1,900 rpm (inside cab):	77 dB
Draft	35 in. (889 mm)	2,200 rpm (inside cab):	78 dB
<b>WORKING CAPACITY</b>		2,200 rpm (@ 25 ft.):	92 dB
Cut	135 in. (3,430 mm) wide x 26 in. (660 mm) deep	2,200 rpm (@ 50 ft.):	85 dB
Working Depth	30 ft. (9.1 m)	2,200 rpm (@ 100 ft.):	79 dB
<b>ENGINE</b>		2,200 rpm (@ 200 ft.):	55 dB
Type	John Deere Diesel, Model 6090HF070, 6 cylinder 13.5 L, 425 HP (317 kw) @ 2,100 rpm.	<b>HOURLY ESTIMATED OPERATING COSTS (\$USD)</b>	
Fuel Capacity	400 gal. (1,516 liters)	Fuel @ \$2.50/gallon	\$51.50
Fuel Consumption	20.6 gal/hr. (79.4 lit./hr.)	Insurance	2.00
<b>CUTTERHEAD</b>		Labor (1 man @ \$16.00/hr.)	16.00
Cutterbar Diameter	26 in. (660 mm)	Maintenance (filters, seals, etc.)	1.20
Cutterbar Length	135 in. (3,430 mm)	Accrued Mechanical Overhaul	4.00
Replacable Carbide Teeth	LEAD: pick / FOLLOW: shovel	Pump & Cutterhead Wear	5.00
Drive	Recessed dual hydraulic motor: direct drive with no gear reduction.	Hull Maintenance	3.60
Speed (variable)	0 to 80 rpm @ 2,500 psi	<b>Estimated Hourly Operating Cost</b>	\$83.30
Cutterhead Torque	23,885 in.-lbs. (2,969 N-m) @ 2,500 psi (peak)	<b>EQUIPMENT</b>	
Cutterhead Tip Force	1,837 lbs. (8,171 N)	<b>STANDARD</b>	
Cutterhead Rotation	Bi-rotational	<b>OPTIONAL</b>	
<b>DREDGE PUMP</b>		300 ft. (91 m) flexible discharge hose	X
Type	GIW Cast Iron LCC-M 250-660	12 discharge hose/pipe floats	X
Discharge Diameter	10 in. (254 mm)	Climate Control (A/C & Heat)	X
Suction Diameter	12 in. (304 mm)	Close looped discharge line video monitor	X
Impeller Diameter	26 in. (660 mm)	U.S. hand tool kit and tool box	X
Sphere Passage	5.0 (127 mm)	Rock guard	X
Pump Performance	5,000 gpm (315 liter/sec.) @ 125 ft. (38.1 m) TDH (slurry s.g. 1.25) @ 760 rpm w/ 2,000 ft. (610 m) discharge length.	Night time operating lights	X
Speed (variable)	0 to 760 rpm	360 degree spotlight with toggle switch	X
Recommended Pipe	12in. (305 mm), 26 SDR HDPE pipe	Digital depth gauge	X
		12 in (305 mm) discharge pipe / hose	X
		Bi-Directional Broadcaster	X
		Dredging GPS System	X
		Cable Drive set-up package	X
		Dredge navigation lights	X
		Spare Parts	X
		Booster Pumps w/ custom instruments	X
		Environmental Plus Cutterhead	X



**INNOVATIVE MATERIAL SYSTEMS, A Division of LWT, LLC**  
 THE WORLD'S LEADING SUPPLIER OF ONE-TRUCK TRANSPORTABLE SELF-PROPELLED DREDGES

# IMS 7012 HP VERSI-DREDGE

## INNOVATORS

In 1986 Innovative Material Systems (IMS) was born out of the innovative idea that dredging could be made easier. Over two decades later and with 500+ dredge systems in operation in over 40 countries we still take pride as industry innovators. Our modern designs improve versatility without sacrificing performance and differentiate us from the rest of the industry. Our innovative approach to customer service and support makes sure you are up and running no matter what corner of the globe you occupy. Our hands on management approach brings our people to you. We are the innovators of this industry and we are your partner.

## DREDGE EVOLUTION

Evolution is not limited to nature. When designing the Versi-Dredge our engineers listened to the demands of our global clientele and the marketplace. With each new design the Versi-Dredge has evolved into a superior dredging system meeting market demand. The advent of the IMS Model 7012 HP Versi-Dredge marks the zenith of one truck transportable dredge design. As with the consumer electronics industry, our customers are demanding more power in a smaller package. Boasting a 425 HP John Deere Turbo Charged power unit, the 7012 HP Versi-Dredge is the most powerful one-truck transportable dredge in the world. In addition, the standard digging depth of 30 ft. (9.1m) on the 7012 HP Versi-Dredge makes it the deepest digging one truck transportable dredge in the world. All systems on the 7012 HP Versi-Dredge, from the pump, to the cutter system, to the propulsion system were painstakingly designed and constructed to maximize performance for the end user. With increased performance levels comes increased versatility. The 7012 HP Versi-Dredge is an aggressive dredging system with the power and durability to work in applications that used to require dredges two times the size of the 7012 HP. Whether you are restoring a beach in the Caribbean Sea, deepening the Tigris River or River Thames, cleaning a tailings pond in a remote region of Africa, or improving access at Penang Port, the Versi-Dredge can handle the job...and already has. Let us introduce the IMS Model 7012 HP Versi-Dredge, the number one selling standard dredge model in the world. Welcome to the evolution.

## PATENTED PROPULSION TECHNOLOGY

IMS's patented STARWHEEL Drive self-propulsion system is a customer-driven patented design that has made dredging easier by simply eliminating the entire cable rigging process and turning the dredge into a one man "wireless" operation. Operators no longer need to block off entire channels or shut down a marina to cable-rig for every boat slip. The STARWHEEL Drive system has simplified the dredging process so much that operators have reported production increases of up to 40 percent due to the fact that the dredge can immediately maneuver itself into position without the use of a dredge tender or anchor men, and downtime typically associated with repositioning. In addition, the STARWHEEL Drive system on the 7012 HP Versi-Dredge is raised and lowered by heavy duty hydraulic rams giving the 7012 HP unmatched bottom surface traction.



In the event that you need to perform surgical dredging in a grid pattern for an extremely sensitive environmental project, the 7012HP is equipped with a cable windlass system for spooling a traversing cable through the dredge as a secondary form of propulsion. With the addition of the D-GPS system and an optional IMS Environmental Plus Cutterhead the 7012 HP is now worthy of tackling the most sensitive environmental projects on the planet.

1.) Peter Bowe, CEO, solidifies a contract for 2 x 7012 Versi-Dredges with the Iraq Ministry of Water Resources.

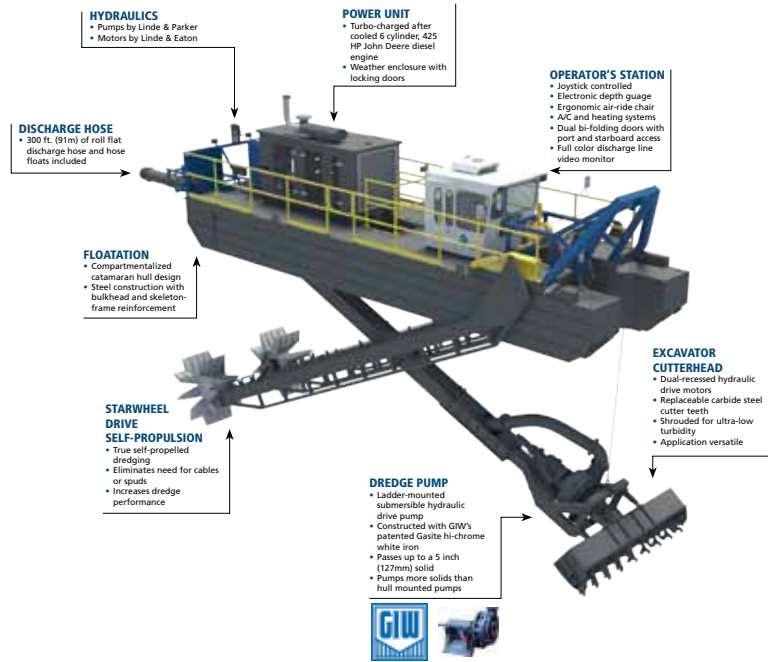
2.) Jim Horton, President, tests sand deposits in the Maldives.

3.) Stefan Templeton, West Africa Territory Manager, prepares to dive on a site for the Cameroon Ministry of Defense who purchased a 7012 HP Versi-Dredge.

4.) Fauzi Hassan, International Service Tech, launching 7012 HP Versi-Dredge in Turkmenistan.

5.) Ryan Horton, Director of Sales, visits with Versi-Dredge clients in Eastern India.

6.) Mike Young, IMS Service Manager, inspects a cutterhead on a service call in Angola.



## CUTTING TECHNOLOGY

The Excavator Cutterhead, which comes standard on every 7012 HP Versi-Dredge, is a unique design that uses a combination of replaceable carbide steel pick and shovel teeth to break through consolidated materials and to convey them to the submersible pump at a higher percentage of solids than other dredge cutterheads. The cutterhead shroud is "green" technology that creates a powerful vacuum creating a higher solids content while simultaneously reducing turbidity, unlike conventional conical cutterheads which allow the particles to flow unrestricted into the water column. The Excavator Cutterhead on the 7012 HP Versi-Dredge has up to 100% more power than other horizontal type cutter heads on the market. The Excavator Cutterhead is powered by two high-torque direct drive motors. Since the Versi-Dredge is commonly used in applications where large metallic and organic debris can be found, the system is safe-guarded with a pressure relief valve that will automatically shut the cutterhead down to prevent damage to the system. The Excavator Cutterhead shroud also comes standard with a removable rock/debris guard that allows the operator to restrict the size of debris that can enter the pump volute.

This feature along with the Excavator Cutterhead flail system, which cleans the rock/debris guard after every revolution of the cutter, significantly reduces downtime when dredging in debris rich environments.

## PUMPING TECHNOLOGY

The 7012 HP Versi-Dredge comes standard with a ladder mounted GIW 10 in. (254mm) x 12 in. (305mm) LCC-M submersible mining grade dredge pump constructed of GIW's Gasite WD28G hi-chrome white iron. The position of the pump directly behind the Excavator Cutterhead allows the 7012 HP Versi-Dredge to pump 5%+ more solids than hull-mounted pump systems thus improving dewatering rates. The 7012 HP Versi-Dredge pump system can pass up to a 5 in. (127mm) spherical solid and can pump sand a maximum distance of 4,500 ft. (1,372m) depending on the specific gravity of the sand and the concentration. IMS clients report an average lifespan of the impeller at 5,000+



operating hrs. in fine / medium grain sands. If your project requires the 7012 HP pump beyond 4,500 ft. (1,372m), or even over 20,000 ft. (6,098m), then IMS can design a custom pumping system utilizing a series of radio remote-controlled booster stations.

## OPTIONAL D-GPS SYSTEM

The optional IMS D-GPS system allows the operator to keep track of the dredge's position with sub-meter accuracy. This is ideal for large lakes and rivers where keeping track of the cuts can be tricky. Additional software can be added to keep track of where material has been removed, a feature which is beneficial for contract dredging. The IMS D-GPS system includes a laptop display mounted in the cab, dual GPS receivers and antennas, submersible pressure transducer for auger depth measurement, installation at the factory, and on-site training and calibration.

## OPTIONAL BROADCASTING SYSTEM

The optional IMS Broadcaster attachment allows the dredge to quickly discharge the dredged material on shore. This can be highly beneficial when it comes to dredging an emergency boat channel, wetlands creation or high-volume dredging in rural canals. The Broadcaster fits directly at the discharge end of the dredge ladder in place of the pipeline. The Broadcaster narrows the discharge diameter of the ladder creating a high-pressure cannon that can shoot silt and sand up to 100 feet (30m) away from the dredge depending on the percentage of solids.

