



Particular & Technical Specifications

10" (250 mm) Wolverine Class Dredge *Preliminary Specifications*



GENERAL INFORMATION

Hull Length	50'	(15.2 m)
Overall Length (with ladder)	68'	(20.7 m)
Hull Depth	4'	(1.2 m)
Hull Width	11'-6"	(3.5 m)
Hull Draft (approx)	2'	(0.6 m)
Overall Height (trucking)	10'	(3.1 m)
Total Dry Weight (approx.)	58,000 lbs.	(26,309 kg)
Diesel Fuel Capacity	500 gal	(1,893 liters)

DETAILS OF HULL CONSTRUCTION

The hull is composed of three (3) compartments. The center compartment is the engine and pump compartment. The other (2) two compartments are the side tanks; also known as sponson tanks or pontoons. The side tanks are framed with angle iron and truss type cross bracings. The plate is then welded inside and outside for structural integrity. The tanks are then pressure tested for leakage. The side tanks are assembled to form the engine and pump compartment. The hull is then turned right side up and the interior bracing is installed to accept the mounting of the engine, pump and other components. The bottom of the hull is constructed from 3/16" plate (4.7 mm). The hull sides and deck is constructed from 10 gauge plate (3.57 mm). The lever room and the pump/engine room enclosure are constructed from 12 gauge plate (2.78 mm).

DETAILS OF LADDER CONSTRUCTION

The ladder is constructed of 3"x3"x3/16" (76 mm x 76 mm x 4.7 mm) angle iron with 7 gauge (4.55 mm) metal plate gussets. The gussets are welded to the side of the ladder for structural integrity, resistance against bending, torsional loading and transverse stresses. The ladder length is 33' (10 m).

OPERATING DETAILS

The maximum dredging depth is 25' (7.6 m) and is achieved at a 60° down angle on the ladder. The maximum lateral cut, swinging 90°, at approximately 3' (1 m) of dredging depth is 88' (26.8 m). The lateral cut, swinging 90°, at a 25' (7.6 m) dredging depth is approximately 72' (22 m).

CUTTERHEAD



The cutterhead is designed with six (6) smooth blades that are cast steel. The cutterhead is mounted to a 3" (76 mm) stainless steel shaft that is attached to the cutter motor. The cutterhead is driven by a five (5) cylinder Staffa hydraulic motor with model # HMB-200. The cutterhead motor is manufactured by Kawasaki Motors. The hydraulic motor has variable speed capability and is reversible. Replaceable pin on teeth can be added to the cutterhead as an option. The cutterhead has a 27" (686 mm) inside diameter back ring with an outside diameter of 32" (813 mm).

ENGINE



The prime mover is a Caterpillar model C13 ACERT diesel engine rated 440 bhp (328 kW). The engine is attached to a Twin Disc clutch. The engine is radiator cooled and includes a Caterpillar air cleaner, muffler and control panel. Available in Tier 4 configuration or lesser regulated for export.

DREDGE PUMP



The dredge pump is a Metso Minerals, Thomas Simplicity series dredge pump model # J30. The nominal flow rate is 3,800 GPM (863 m³/hr) @ 200 feet H²O (61 m H²O). The maximum particle clearance is 6" (150 mm).

SERVICE PUMP



The service pump is provided to supply flushing water to the dredge pump packing gland, water to the cutter drive bearings and for use at a deck connection. The pump is a 2 ½" x 2" (65 mm x 50 mm).

HYDRAULIC SYSTEM



The hydraulic pump is a 3-section pump that provides service to the cutterhead motor, swing winches, spud winches and ladder winch. The hydraulic system is protected by relief valves and has a replaceable inline filter. The hydraulic system has an approximate capacity of 110 gallons (417 liters).

HOISTING



Hydraulic winches are used for swinging the dredge, lifting the spuds and lifting the ladder. All five (5) winches are rated 4,500 lb (20 kN) line pull capacity. All winches are complete with galvanized cables. The swing winches are equipped with 150' (45.7 m) of 3/8" (10 mm) 6x37 cable.

SPUDS

Two (2) spuds are located on the stern of the dredge. The spuds are SCH 40 8-5/8" (219 mm) diameter x 30' (9.4 m) long.

ELECTRICAL SYSTEM

The electrical system consists of a 24-volt 95-amp alternator and two (2) 1000 CCA maintenance free batteries. The wiring is a complete circuit with one (1) wire to ground through a full breaker panel. The lighting consists of nine (9) floodlights that are mounted on the dredge. Lighting is also provided in the engine/pump compartment, on the instrument panel and overhead in the lever room.

LEVER ROOM

The lever room measures 5'-9" wide x 6'-5" long x 6'-2" high (1.8 m x 2 m 1.9 m). All glass is LEXON 500 with 360° visibility. The control panel has stainless steel gauges. An upholstered seat is provided for the operator. The lever room is insulated for noise reduction and temperature control. The lever room is finished with a paneled interior. Equipped with a rooftop off-road air conditioner, model R-9727-1.

ENGINE/PUMP COMPARTMENT

The engine/pump compartment is equipped with sliding lockable doors. This allows for easy access and a deterrent for vandalism. The roof is removable for major service of the dredge pump or diesel engine. This compartment is equipped with four (4) floodlights.

SAFETY EQUIPMENT

Machinery guards are installed over all belts and shafts. Handrails consist of two (2) strands of 5/16" galvanized cable between removable posts. A fire extinguisher and two (2) bilge pumps are provided. The decks are painted with anti-skid paint.

PREPARATION AND PAINT

All exposed hull and lever room surfaces are sandblasted before the primer coats are applied. The hull is painted with coal-tar epoxy. The superstructure is painted blue with a white stripe using epoxy paint.

Note: Specifications may change due to continual product improvement. All dimension data is listed as approximate units or measure