670 Series "DRAGON" Model Specifications

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TECHNICAL DATA AND SPECIFICATIONS

Portable Dredge for any standard 12" or 14" (305-356 mm) pipeline
Nominal pump capacity range = 100-600 yds^3/hr (460 m^3/hr)

ELLICOTT DREDGES, POWER-PACKED PORTABILITY
The New "Value Engineered" Series 670: Design criteria focused on dependability and low cost with rapid dismantling, mobility, reassembling, and start-up; minimizing downtime and ensuring high productivity.

Principal Dimensions and Particulars
Specifications
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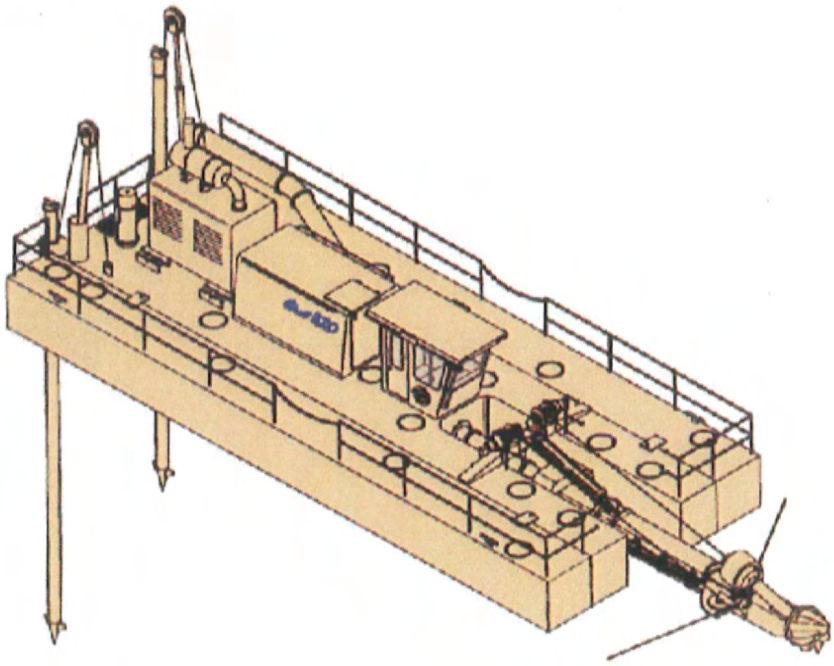

Representative digging depths and dimensions for average dredging service. Configurations for deeper digging readily available - consult Ellicott.

670 Principal Dimensions and Particulars

		Metric	English
GENERAL	Hull Length	15.24 m	50 ft.
	Length (with ladder raised)	21.18 m	69.5 ft.
	Hull Width	6.15 m	20.17 ft.
	Hull Depth	1.22 m	4 ft.
	Height (spuds installed and elevated)	10.82 m	35.5 ft.
	Height (Spuds, spud hoists, muffler and mast removed)	3.35 m	11 ft.
	Ladder Length	9.45 m	31.0 ft.
	Dry Weight (approximate)	56,245 kg	124,000 lbs.
	Center Tank Weight (complete with machinery)	34,000 kg	75,000 lbs
	Draft - Maximum with spuds installed & elevated	.81 m	2.67 ft.
	Fuel Storage Capacity	10,200 L	2,700 gal
DIGGING	Maximum (*)	8.0 m	26 ft.

DEPTH	Minimum		1.22 m	4 ft.
CHANNEL WIDTH	Maximum @ 40° Swing each side CL	@Min Digging Depth	27.4 m	90 ft.
		@Max Digging Depth	21.3 m	70 ft.
	Minimum @ Minimum Digging Depth (Hull Grounded)		19.8 m	65 ft.
PRIME MOVER	Diesel Engine CAT 3412 (continuous rating)		533 kw	715 HP
CUTTER	Cutting Force		2,722 kg	6,000 lbs
	Cutter Diameter		1,054 mm	41.5 in
	Cutter Shaft Diameter		116 mm	4.58 in
	Shaft Power		74.6 kw	100 HP
	Cutter Speed - Max.		0 - 40 RPM	
DIRECT LINE SWING WINCHES	Line Pull - First Layer		4,763 kg	10,500 lbs
	Line Speed - First Layer		0-22.8 m/min	0-75 ft/min
	Wire Size		16.0 mm	5/8 in
	Drum Capacity		122 m	400 ft
SPUDS	Length		10.7 m	35 ft.
	Diameter		406 mm	16 in.

(*) Deeper digging depths available upon request. Please consult with Ellicott.

OPTIONAL EQUIPMENT
Accessories and options can be offered and delivered with the Series 670 "DRAGON". Included are a choice of cutters, pump handling equipment, air conditioning or heating, production measuring equipment, and pipeline components.

ELLICOTT reserves the right to modify equipment in order to provide engineering improvements.

Specifications - "DRAGON" Model Series 670

HULL - Three tank design; quick connect/disconnect assembly; fuel oil storage and machinery in unitized center tank. Outboard pontoon tanks for flotation and ballast. Hull shell plate and stiffeners designed to ABS river rules.
MAIN DREDGE PUMP UNIT - Gear belt driven by heat exchanger cooled Caterpillar diesel engine with electric starter. Totally enclosed anti-friction radial and thrust bearings with impeller mounted on Acme threads. All wearing parts 500 BHN minimum chrome alloy cast iron. Choice of 12" or 14" (304 mm or 355 mm) discharge pipe diameters.
HYDRAULIC POWER PACKAGE - Tandem hydraulic gear pump direct driven off the main engine. Hydraulic system includes three independent operating circuits; one for swing winches, one for cutter, and one for spud and ladder hoists.
EXCAVATING MODULE AND LADDER - Cutter direct driven by high torque, radial piston hydraulic motor. Maximum cutter force available at all speeds. Underwater excavating module features short drive shaft with weight concentrated at the cutter for efficiency.
LADDER HOIST - Double acting hydraulic cylinder. Ram cylinder operation provides crowding action for tough digging.
POWER SWING WINCHES - Individual single direct line winches direct-driven by gear-type hydraulic motors through planetary reduction gear. Speed and reverse controls at operator's console. High torque, heavy-duty hydraulic motors provide constant line pull at variable speeds.
ELECTRICAL SYSTEM - 24 volt DC internal/external lighting and electrical system is powered by main diesel engine.
SPUDS AND SPUD HOIST - Heavy wall, cylindrical steel spuds mounted in spud keepers at stern. Spuds are hoisted by a sling operated from a hydraulic cylinder.
ASSEMBLY AND TRANSPORTATION - Assembly can be accomplished in 2 days provided all tools, site preparations and personnel are available. The disassembled Series 670 can be transported on three trucks.
WARRANTY - Ellicott warrants its equipment only in accordance with the printed warranty conditions which are normally included in our sales proposals, the latest copy of which will be forwarded promptly on written request. No other warranties are provided.

Calculated Production Curve

" DRAGON" Model Series 670 Using 14" (356mm) I.D. Pipeline
(enlargement)