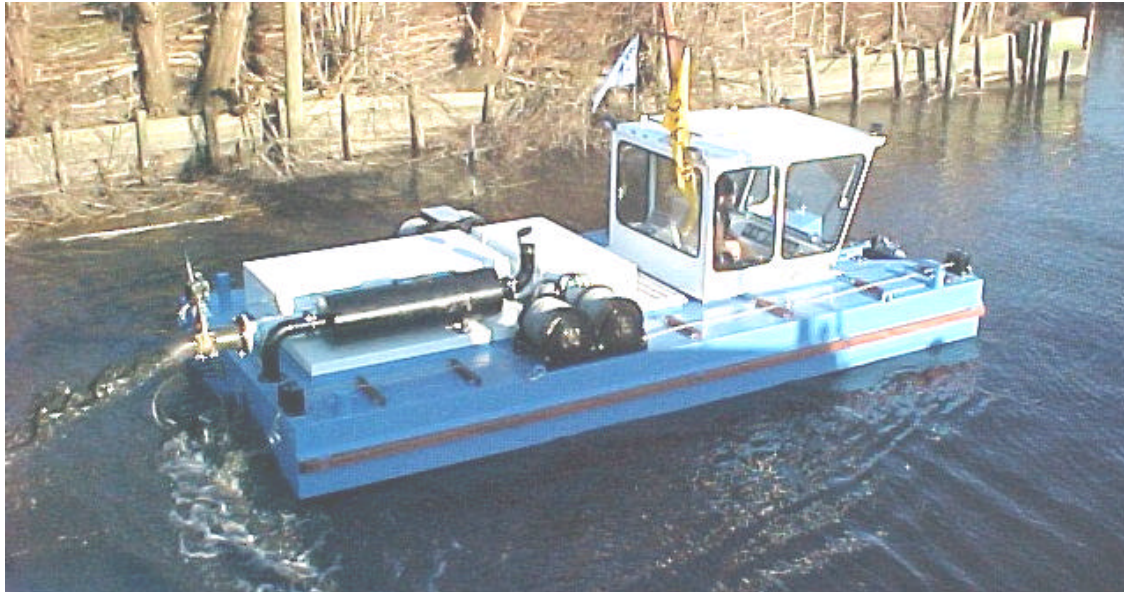


## **TECHNICAL SPECIFICATION CUTTERDREDGER**

Make : CONVER  
 Type : C87S cutter dredger

This cutter dredger is provided with the latest technology on fields as hydraulics, control and ergonomics. The C87S is standard executed with a steel operator's cabin.



*C87S, high capacity, small built*

### **HULL:**

The hull consists of an all welded rectangular shaped hull with transverse and longitudinal girders providing adequate strength. The hull is made of reinforced steel (St.37-3), 4 mm thickness.

Length hull : 6,00 m of which 3.25 m engine room;  
 Width hull : 2,70 m;  
 Height hull : 1,10 m;  
 Total weight : appr. 8200 kg;  
 Deck : The deck is constructed from chequered steel plate to avoid slipperiness and bulged for strength and draining of water;  
 Gangway : The gangway is 0,75 m at both sides of the cabin;  
 Rear deck : The rear deck is provided with a hatch for the engine room, L x W; 1,80 m x 1,45 m and a separate hatch for the pump; L x W; 1,45 m x 1,10 m, the hatches are provided with air circulation gratings;  
 Finishing : Two layers of two component polyurethane coating, standard in Conver orange and Conver green (RAL2004 en 6026). Two layers of two component tar free epoxy-polyamide black coating below the waterline

**LADDER WITH HYDRAULIC CUTTERHEAD:**

A ladder with a cutter is mounted on the front of the dredger. This ladder is moving 30° left and 30° right by means of two hydraulic cylinders which gives a dredging width of approx. 4,00 m. The ladder is lowered by a hydraulic cylinder down to a maximum dredging depth of approx. 2.75 m or 3.75 m below the waterline, depending on chosen model.



*Hydraulic cutterhead and ladder*

**DREDGE PUMP:**

The dredge pump is mechanically driven by means of a 121 kW Caterpillar 6-cylinder diesel engine with a reversing gear coupling. The pump speed is adjustable up to a maximum of 1200 r.p.m. The 3-blade impeller is of closed type and fixed to the C35 pump shaft by a wire mesh fitting. The connection between pump and bearing house is closed by means of a mechanical seal. An inspection flap is placed in the pipe line close to the suction side of the pump. The internal suction pipe is completely dismountable.

**TECHNICAL SPECIFICATIONS PUMP**

- \* Pump capacity : min. 300 m<sup>3</sup> / h (at min. discharge distance 400m)
- \* Turning direction : counter clockwise, seen from suction side;
- \* Dia suction : Ø 150 mm;
- \* Dia discharge : Ø 160 mm;
- \* Dia impellor : Ø 350 mm;
- \* Dia impellor internal : Ø 80 mm;
- \* Max. speed : 1200 r.p.m.;
- \* Material impeller : Naxtra steel 70;
- \* Material pump house : Naxtra steel 70;



*Inboard pump*



*High capacity*

**CUTTER:**

The cutter which is connected to the lower end of the ladder is driven by a SAI K3-800 hydraulic motor with a fully adjustable speed up to 40 r.p.m.

- \* Dia cutter : Ø 660 mm;
- \* Drive speed max. : 40 r.p.m.
- \* Wearing parts : easily replaceable welding pieces

**WINCHES:**

For movement the dredger is provided with four hydraulic winches; two at each side of the dredger. Each winch can be set in a neutral position to veer out the cable.

- \* Winch capacity : 2400 kg min. (at last layer)
- \* Cable : 125 m, diameter 10 mm
- \* Speed : adjustable from 0-12 m/sec.

All winches are connected to their own hydraulic manifold which controls the disc brake, the synchronic speed of the left and right winches during the swing of the dredger and the synchronic speed of the front and back winches for forward and backward movement. All winches also can be controlled independently from each other.

**ENGINE:**

- Type : water-cooled Caterpillar 3116, 6 cylinder diesel engine  
121 kW at 2400 r.p.m.
- Cooling : water-cooled by means of integrated keel cooler.
- Fuel tank : capacity 200 litre with dashboard level indicator

**REVERSING GEAR COUPLING:**

- Type : ZF, type IRM 280 PL
- Maximum capacity : 140 kW continuously
- Cooling : by in-line 2" oil cooler at return side of keel cooler
- Greasing : Monograde SAE 30

**HYDRAULICAL SYSTEM:**

The diesel engine drives a closed-system pump to power the cutter and an axial piston pump to power all other hydraulic functions. The make of the pumps is Sauer, all other hydraulic parts are make Danfoss.

- Hydraulic functions
  - \* 4 hydraulic winches
  - \* swinging cylinders for ladder
  - \* lifting cylinder for ladder
  - \* cutter head
  - \* auger + auger steering (optional)

All hydraulic functions are fully proportionally controlled by means of servo low-pressure en electrical control levers.

**HYDRAULIC TANK:**

A separate oil tank is placed inside the engine room equipped with 125µm suction and a 10 µm return filters. The filter elements are replaceable from the outside of the tank. The hydraulic system is provided with an oil cooler.

**CABIN:**

The C87S is supplied with a fixed cabin with windows, clear all-round vision, screen wipers and a white roof for heat prevention. The cabin is provided with isolation both for noise and temperature.

Width : 1.50 m  
 Length : 1.40 m  
 Height (integrated) : 1.75 m  
 Height (above deck) : 1.15 m



*Instrumental panels*

**OPERATORS UNIT:**

Chair : air-suspension with inside compressor, fully adjustable  
 Control unit : all control levers and gauges are integrated in the seat and dashboard within comfortable reach  
 Extra provisions : two 12V connectors are integrated in the dashboard for power supply

**OTHER PROVISIONS:**

- 4 bollards, 2 on each side, to tie the vessel to a mooring place;
- 4 lifting eyes to lift boat;
- Mechanical bilge pump;
- 12 Volt electrical system;
- Light in engine room;
- Navigation lights;
- 4 units of working lights;
- Pressure gauges for winches and cutter.

**NOTE:**

The vessel is built according to CE regulations and will not be tested by any classification society.



*Knuckle-jointed connection    Easy to handle*

**DATA SUMMARY**

Hull	4 mm steel ST 37-3	
	Length	6,00 m
	Width	2,70 m
	Height	1.10 m
Working dimensions	Length	11.00 m (incl. ladder)
	Width	2.70 m
	Height	1.80 m (above waterline)
Weight	Machine	8200 kg (approx.)
Draught	0.55-0.60 m	
Freeboard	0.50-0.55 m	
Max. speed	8,0 Km/h (with optional auger)	
Power source	Caterpillar 3116 DINA Diesel engine, 121 kW @ 2400 min-1 with integrated keel cooler	
Dredge pump	Type BP1515, 3-blade impeller Ø suction 150 mm Ø discharge 160 mm Ø impeller 350 mm Ø impeller internal 80 mm Material impeller and pump house; Naxtra steel 70 Pump shaft C35 wire mesh fitting Bearing house closed by mechanical seal	
Gear coupling	ZF, IRM 280 PL, cap. max. 140 kW	
Winches (4)	Capacity 2400 kg at last layer, planetary drive RR WG092/183 12", i=1:18,3, Danfoss OMR200 hydraulic motor nmax=225 min-1	
Hydraulic pumps	Sauer 42R28 C ANN6 03 B3G, closed loop for cutter head Sauer HRR-057B LS 21 20 NN, load sensing for cylinders, winches and auger	
Hydraulic valves	Danfoss PVG32 Prop.controlled for cylinders and auger	
Propulsion (optional)	1 Conver anti-weed augers dia400mm with Danfoss OMR80 hydraulic motor nmax=700 min-1 (fw) / 550 min-1 (bw)	
Cylinders	Lifting ladder	80/40x425
	Swinging ladder	70/40x425
	Auger steering	40/25x260 (optional)
	Auger tipping	40/25x100 (optional)
Hydraulic oil tank	Contents 200 L ESSO HP46 Pressure cap UC-S-340225 Level / temperature indicator UC.FLT.121	
Fuel tank	200 L, level indicator F-sensor 12V	
Bilge pump	Rheinstrom M25	



Crew	Max. 2 persons, minimum age 18
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