

CSD250 CSD350 CSD450 CSD500 CSD650

PRINCIPAL DIMENSIONS

Length o.a. (incl. ladder & spudkeepers)	19.00 m	26.00 m	33.15 m	38.50 m	60.00 m
Length over pontoons	11.50 m	16.50 m	22.50 m	25.50 m	49.30 m
Beam o.a.	4.20 m	6.00 m	6.95 m	7.95 m	9.50 m
Depth	1.50 m	1.50 m	1.80 m	2.00 m	2.50 m
Draught (bunkers full, approx)	0.90 m	0.80 m	1.15 m	1.00 m	1.40 m
Air draught (spuds removed, ladder up)	3.60 m	4.70 m	6.10 m	6.40 m	7.60 m
Total weight	30 tons	55 tons	115 tons	140 tons	495 tons

DREDGING FEATURES

Min/max dredging depth (ladder angle 5°/45°)	1/6 m	1/9 m	1.5/12 m	2.5/14 m	3/18 m
Dredging width (40° swing angle/max depth)	22.0 m	27.0 m	34.0 m	39.6 m	62.8 m
Maximum mixture capacity	1,000 m³/h	2,000 m³/h	3,000 m³/h	4,000 m³/h	7,000 m³/h

DREDGING INSTALLATION

Damen dredge pump type	BP2525MD	BP3530MD	BP45-1100	BP5045	BP6560MD
Suction/discharge internal pipe diameter	250 mm	350 mm	450 mm	550/500 mm	650 mm
Cutter power	40 kW	55 kW	110 kW	180 kW	600 kW

ENGINE INSTALLATION

Total installed power	254 kW	447 kW	938 kW	1,293 kW	2972 kW
Dredge pump diesel Caterpillar	C12	C18	C32	3512C	3516C HD
Continuous power rating (A-rating)	254 kW @ 1,800 rpm	447 kW @ 1,800 rpm	706 kW @ 1,600 rpm	954 kW @ 1,600 rpm	1825 kW @ 1,600 rpm
Fuel oil tank capacity (approx 100 running hrs)	2 x 3.0 m³	2 x 4.2 m³	2 x 9.4 m³	2 x 11.0 m³	4 x 17.0 m³

DECK MACHINERY

Ladder hoisting	hydraulic cylinder	winch 50 kN, 0-15 m/min	winch 80 kN, 0-15 m/min	winch 120 kN, 0-15 m/min	winch 270 kN, 0-15 m/min
Side wire winches (2x)	40 kN, 0-15 m/min	50 kN, 0-15 m/min	80 kN, 0-15 m/min	120 kN, 0-15 m/min	270 kN, 0-20 m/min
Spud hoisting (2x)	hydr. cylinder, stroke 1 m	hydr. cylinder, stroke 1.2 m	hydr. cylinder, stroke 1.5 m	hydr. cylinder, stroke 1.5 m	hydr. cylinder, stroke 2 m



CUTTER SUCTION DREDGERS

DAMEN DREDGING EQUIPMENT



A CSD250 CAN BE SHIPPED IN JUST THREE 40' CONTAINERS



STANDARD CSD350 AT WORK IN A RESERVOIR



A CSD450 ON A RIVER MAINTENANCE JOB



A STANDARD CSD500 BUILT IN CAPE TOWN, SOUTH AFRICA



CSD500 FITTED OUT WITH ANCHOR BOOMS



A POWERFUL AND DISMOUNTABLE CSD650



▲ CSD450 WITH SPUD CARRIAGE PONTON AND ANCHOR BOOMS
▼ CSD500 OPERATING IN EGYPT

DAMEN DREDGING EQUIPMENT



DAMEN DREDGING EQUIPMENT

Edisonstraat 32
3861 NE Nijkerk
The Netherlands

P.O. Box 1021
3860 BA Nijkerk
The Netherlands

phone +31 (0)33 247 40 40
fax +31 (0)33 247 40 60

Member of the DAMEN SHIPYARDS GROUP

info@damendredging.com
www.damendredging.com



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THE DAMEN APPROACH TO DREDGING EQUIPMENT

Damen Dredging Equipment offers an extensive standard range of efficient and robustly constructed cutter suction dredgers. The dismantlable dredgers offer a high productivity combined with a reliable operation. The dredgers can be customized effortlessly due to the large number of available options.

The non-self propelled dredgers consist of an ergonomically designed operating cabin, a main pontoon housing the diesel engine and the dredge pump, plus side pontoons, the cutter ladder and the spud poles. The pontoons are fitted out with a simple yet heavy duty coupling system enabling rapid and straightforward dismantling and reassembly on land and afloat. All elements of the cutter suction dredger can be transported by road, rail or sea.

The spacious operating cabin has dark tinted windows all around providing excellent view on

essential deck equipment. The well insulated cabin is mounted on shock absorbers for improved comfort and low noise levels. The ergonomic design shows in the two separate control panels between which the dredge masters chair is located. The dredger is designed for one-man operation. The cutter suction dredgers are well powered by modern computer-controlled Caterpillar diesel engines with low fuel consumption and low emissions, enabling all functions to operate simultaneously. The engines are connected to a closed fresh water cooling system with box coolers.

The Damen standard range consist of five types of dredgers. The standard design has resulted in a short the delivery time and competitive pricing. All cutter suction dredgers are completely assembled and fully tested at the yard before delivery, and they thus are immediately ready for operation on arrival at site.



DAMEN BOOSTER STATIONS
Damen can ship a complete dredge package with your CSD to your job site, including the pipe line and a matching booster station. Standard booster stations are fitted out with:

- Radiator cooled diesel engine with constant power over large speed range
- Standard container sized frame and casing for practical hoisting and transport



MODULAR DESIGN
The CSD's all are of a modular design. The practical dimensions of all elements enable transport by road, rail or sea. The manageable weight of the modular elements ensure straightforward dismantling and reassembly on land and afloat.



DAMEN SERVICES
Damen Services offers a wide-ranging portfolio of customer support and after-sales services. The services include commissioning on site, crew training, spare parts delivery and technical assistance, renovations and conversions – all as per customer request.

ALL DAMEN CSD'S CAN BE EQUIPPED WITH NUMEROUS OPTIONS



ANCHOR BOOMS
Anchor booms, made of heavy gauge pipe, are used to swiftly reposition the anchors.



JIB CRANE
A jib crane can be mounted on the portside aft pontoon to handle pump parts and spares.



DAY ACCOMMODATION
Fitted underneath the operating cabin: a day room with galley, sanitary space and airco.



SPUD CARRIAGE PONTOON
A spud carriage pontoon can be added to the main pontoon to increase efficiency



SWIVEL CONNECTION
Re-orientates the floating pipe line with minimal resistance.



VALVES
A dredge valve or non-return valve can be placed in the discharge piping.



NAVIGATION LIGHTS
A foldable mast with navigations lights can be added to the operating cabin.

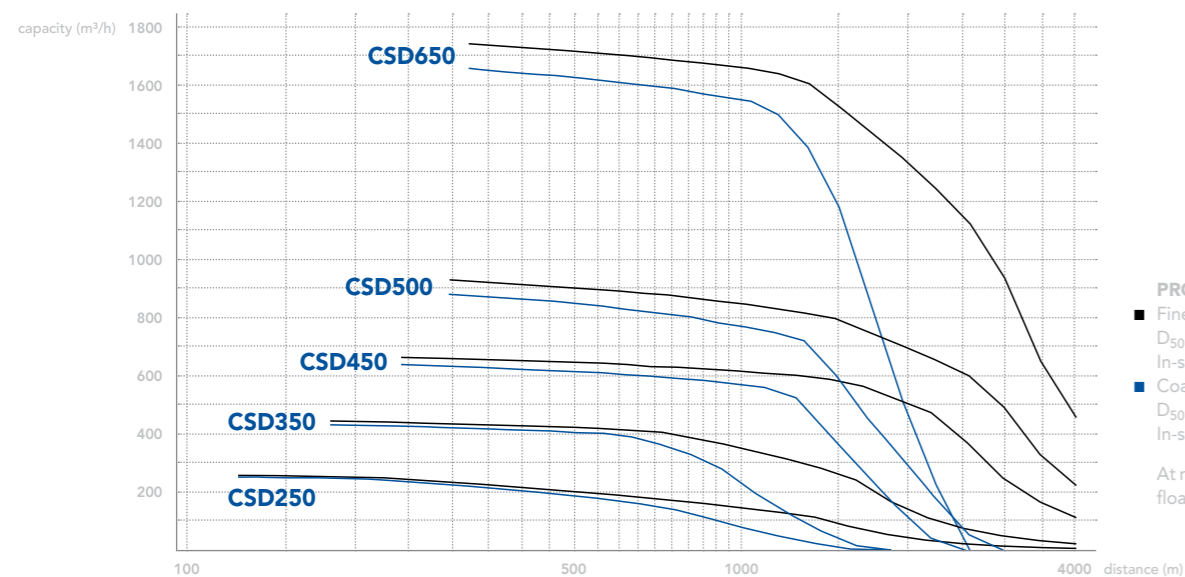


DREDGING INSTRUMENTATION
Production measurement system visualizes the real time production on a cross needle screen and logs this production using counters.



HEAVY DUTY CUTTER
A heavy duty cutter can be mounted for consolidated soils.

CUTTER SUCTION DREDGER PRODUCTION CURVES



PRODUCTION CURVES

- Fine sand
D₅₀: 0.11 mm
In-situ density: 1,900kg/m³
- Coarse sand
D₅₀: 0.37mm
In-situ density: 2,000kg/m³

At max dredging depth and 20% concentration, floating pipe line 250 m



STANDARD DREDGERS AVAILABLE FROM STOCK



SPACIOUS OPERATING CABIN



EFFICIENT AND CONVENIENT DECK LAY-OUT