



DOP[®] PUMP

DREDGING EQUIPMENT



DAMEN

Damen Dredging Equipment developed, in cooperation with various dredging contractors, a series of multi-functional submersible dredge pumps, the DOP® pumps.

The heart of this versatile dredge tool is a wear-resistant, compactly built dredge pump with a maintenance-friendly seal. All wear parts can easily be replaced and, depending on the job, supplied in different materials varying in hardness, toughness and price.

Damen Dredging Equipment has more than 60 years of experience as a manufacturer and designer of dredging equipment. This knowledge enables us to design modifications for the DOP® pump to suit your requirements as well as assist and advise you on the operation of the DOP® pump.

APPLICATIONS

- Sand and gravel mining dredging.
- Small scale dredging operations, such as maintenance dredging in ports and canals.
- Dredging in restricted areas.
- Unloading of hopper barges.
- Suspended from an A-frame as a deep suction dredger, down to a depth of 50 meters.
- Mounted on a cutter ladder.
- Suitable as a mobile booster station.
- Special applications such as environmental dredging.

ADVANTAGES

- Proven design, already used by many contractors around the world.
- Operating depth down to 500 meter.
- Multifunctional, basic pump unit can be outfitted with various suction heads for specific purposes.
- Executed with heavy duty mechanical seal which does not require glandwater or grease supply.
- Discharge distances up to 1000 meter with a single pump.
- Sphere passage impeller up to 200 mm.
- Heavy duty construction with protective casing to allow operation in rough environments.
- Different sizes to suit client requirements.
- Very high production capacities.
- Changeable wearing parts made of high wear resistant material.
- Available with hydraulic as well as electric drive.

DOP® PUMP

GENERAL INFORMATION

		DOP1515	DOP1815	DOP2320	DOP3025	DOP3530-LD
PERFORMANCE	Mixture capacity (m ³ /hr)	200 - 500	300 - 600	500 - 1000	800 - 1400	1200 - 2000
	Pump speed approx. (rpm)	1200	1000	850	700	630
	Max. power at shaft (kW)	65	95	150	250	250
HYDRAULIC REQUIREMENTS	Oil flow (l/min)	190	260	430	700	700
	Oil pressure (bar)	225	225	225	225	225
CUTTER / AUGER DRIVE	Max. power at shaft (kW)	12	16	26	38	38
	Oil flow (l/min)	35	45	75	105	105
	Oil pressure (bar)	225	225	225	225	225
JETWATER	Connection (diameter in mm)	75	75	100	150	150
	Advised capacity (m ³ /hr)	50 - 125	75 - 150	125 - 250	200 - 350	300 - 475
	Pressure (bar)	5	5	5	5	5
DIMENSIONS	Suction bore (mm)	150	180	230	300	350
	Discharge connection (mm)	180	200	250	300	350
	Spherical passage (mm)	75	110	125	155	200

WEIGHT BASIC PUMP UNIT	Hydraulic driven (kgs)	900	1400	2600	4100	4300
	Electric driven (kgs)	1400	2100	3500	5300	5900
DIMENSIONS	A (height in mm)	1010	1360	1800	2000	2000
	B (diameter in mm)	830	910	1220	1500	1500
	C (height in mm)	1600	1805	1920	2080	2165
	D (height in mm)	930	1075	1375	1705	1705
	E (height in mm)	990	1140	2030	2195	2195
	F (height in mm)	1290	1450	2640	2850	2850
	G (height in mm)	1100	1240	2250	2430	2430

TYPE A

Sand production head, standard fitted with jet-water pipe and nozzles. Suspended from a crane or A-frame for high production capacities.

TYPE B

Flat bottom head, standard fitted with jet-water pipe and ring around the head. Especially designed to level bottom profiles in restricted areas.

TYPE C

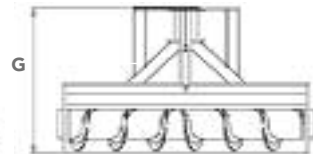
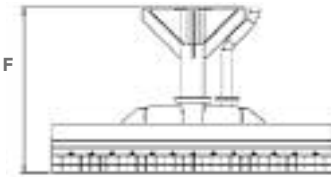
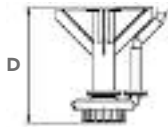
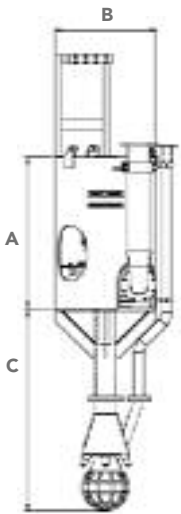
Cutter-unit for packed sand. A fixed connection on the boom of a crane or cutter ladder is necessary. This cutter-unit is separately powered by a hydraulic motor.

TYPE D

Dustpan head, designed for cleaning and levelling workpit bottoms.

TYPE E

Auger head, especially designed for accurate dredging, for example environmental dredging of polluted sediments.



TYPE A

TYPE B

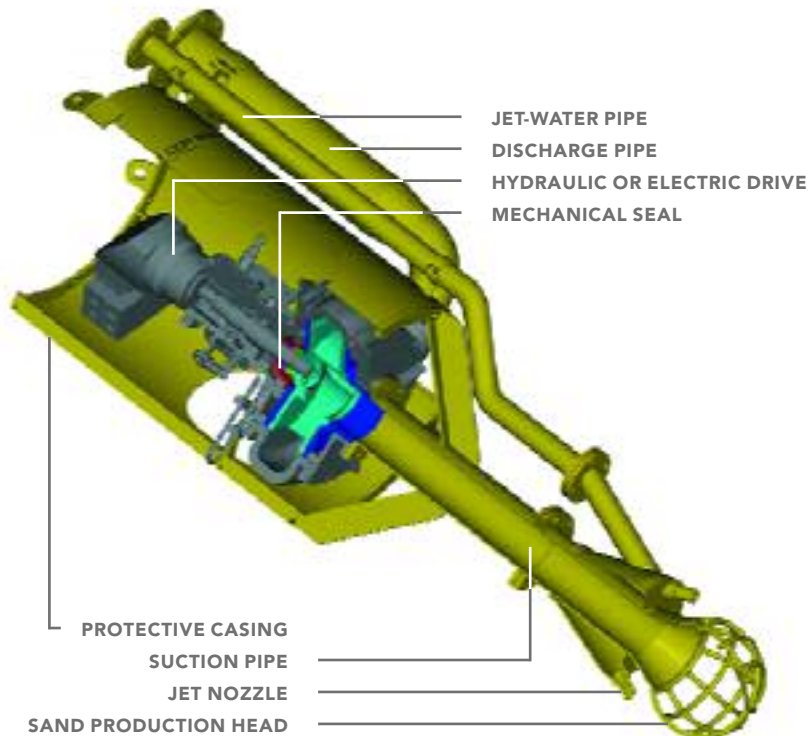
TYPE C

TYPE D

TYPE E

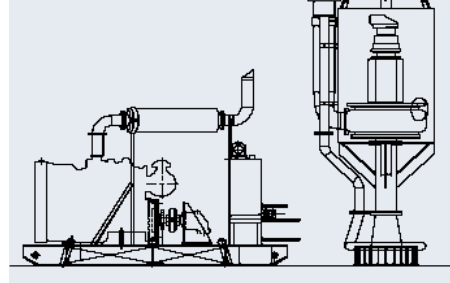
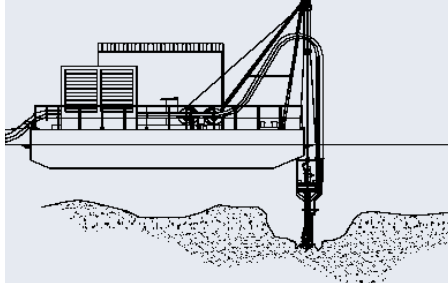
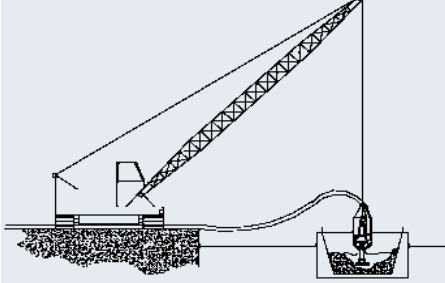
DOP® PUMP

WITH VARIOUS SUCTION HEADS



OPTIONALS

- The replaceable wearing parts can be delivered in various qualities ranging from medium to high wear resistance.
- Discharge hoses or pipelines, floaters, jet-water hoses, hydraulic hoses to drive the DOP® pump as well as the cutter unit.
- Diesel driven powerpack or generator set to drive the DOP® pump with the following accessories:
 - additional hydraulic drive for cutter unit;
 - jet water pump;
 - sound reducing casing.
- Control and monitoring equipment:
 - revolution counter;
 - vacuum/pressure indicator;
 - depth meter;
 - mixture velocity meter;
 - mixture concentration meter;
 - production meter;
 - materials.



▲ Suspended from a crane and equipped with a jet water ring, DOP® pumps are used for emptying barges.

▲ Suspended from an A-frame and equipped with a sand production head, DOP® pumps transform a pontoon into a sand suction dredger.

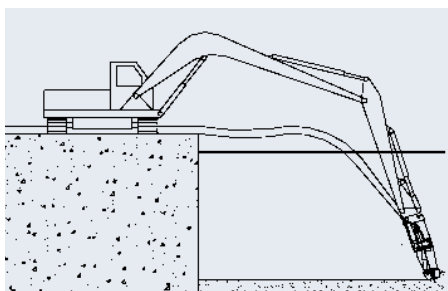
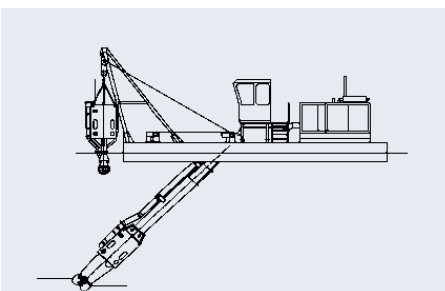
▲ In combination with a hydraulic power pack, DOP® pumps are deployed as 'trouble-shooters' at various sites for short periods.

MULTIFUNCTIONAL

▼ Both deep suction dredging and cutter suction dredging with the same suction dredger is made possible by using a DOP® pump.

▼ Mounted to a hydraulic excavator using a quick coupling and equipped with a cutter unit, DOP® pumps cut trenches for pipelines and level workpits.

▼ A DOP® pump equipped with an auger head in combination with a backhoe pontoon is a perfect dredger for environmental dredging operations. The auger head cleans up wide tracks on an accurate depth and the turbidity is minimal which is necessary when dredging polluted material.



This leaflet is a brief summary from the original specification, which can be sent on request.

Specifications are subject to modification without notice.

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PB-DDE-001-0204