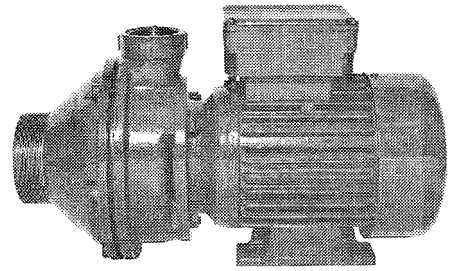


Block Macerators Series ABM-2-S



Usage

Macerators chop solids conveyed in liquids; materials like wood, textiles, plastics, paper, rubber, bones, skins, glass etc., so that they may be pumped. After treatment solids have a grain size of approx. 3,5 mm and fibres and size of approx. 1,5 cm².

As pieces of metal and stones damage the macerator cutters, a collector should be fitted upstream the macerator in order to catch them.

Main Fields of Application

Preparation, fine chopping, mixing and processing fields as well as for the treatment of waste products in all branches of industry.

The macerator chops bulky and fibrous parts so that

pipes, fittings and pumps are not clogged, small diameter pipes and fittings may be used, their size only being determined by the flow to be delivered.

Further important applications are in domestic and industrial sewage treatment plants where sludge is treated and processed in various ways. It is economical with any process to chop the relevant solids before treating them any further. Apart from the advantages cited above, the reasons for this are as follows:

The avoidance of excessive wear of the pump elements, decanters and centrifuges.

Easier drainage of thickened sludge which does not contain coarse solids.

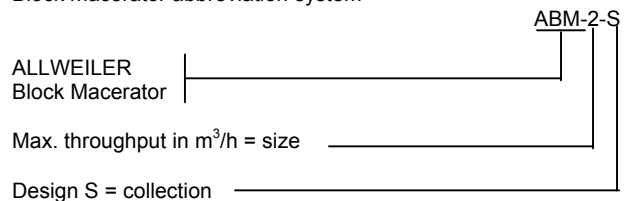
Chopped solids have a greater surface area. In this way putrefaction of the sludge occurs quickly and thoroughly.

Easier transportation and scattering of dry sludge in granulated form.

Further fields of application:

Food industry, fish processing, canneries, meat factories, fruit, vegetable and meat processing.	}	Processing and waste treatment
Chemical, petrochemical and pharmaceutical industries, paper and cellulose industry.		
Animal feedstuffs industry, tanneries, slaughter houses, animal utilizing plants.	}	Processing and waste treatment
Shopping centres, restaurants, hotels, supermarkets, canteens, large kitchens, barracks, boats and ships		
	}	Waste treatment

Block macerator abbreviation system



Design and Operation

Block macerators are supplied in two kinds of installations:

1. For installation of a tank or basin. Macerators of this kind of installation have a delivery head of 2,5 m and can thus return the chopped solids to the main flow under their own power.
2. For direct installation in the piping. A helical rotor pump must be installed downstream this kind of installation in order to suck the solids through the macerator and pump them into the plant for further treatment.

The macerator casing is connected to the drive motor by means of the sealing cover. A cutting ring is fixed between the macerator casing and sealing cover in which turns the impeller. The solids suspended in the delivery medium are caught by the impeller, flung against the cutting ring and chopped into small pieces.

The impeller have symmetrical cutting edges which permit operation with the motor running in either direction. The service life of the cutters is considerably increased as the direction of rotation of the motor is altered each time the motor is switched on.

The drive unit including the sealing cover, mechanical seal, impeller and cutting ring can easily be removed towards the drive side by undoing the bolts. The macerator casing may be left fixed in the piping.

Nozzle positions

suction nozzle:	axial or vertical downwards
delivery nozzle:	normally radial upwards. Adjustable by 90° each as per hole arrangement

Section/Discharge connections

section connections:	tapered male thread acc. to DIN 2999
discharge connections:	cylindrical female thread acc. to DIN 2999

Shaft Sealing

By means of maintenance free mechanical seal with highly wear resistant hard metal seal rings and rubber bellows secondary gasket.

Materials:	
rotary seal ring	silicion carbide
stationary seal ring	silicion carbide
bellows	acrylonitrile-butadiene rubbers (NBR)
O-ring	acrylonitrile-butadiene rubbers (NBR)
metal parts	stainless steel

The mechanical seal are product lubricated.

Bearing/Lubrication

On the drive side by a reinforced cylinder roller bearing as per DIN 5412 which is greased for its service life. On the end side by a grooved ball bearings as per DIN 625.

Axial forces are taken up by the grooved ball bearing.

Drive

Surface cooled threephase A.C. motors, design IM B35/IM V 15 or IM B5/IM V1. Enclosure IP 55 as per IEC standards, insulation class F, capacities and main dimensions as per DIN 42 677. However, shaft end and bearings of special design.

Technical Data

macerator type	cutting ring ø mm	max. through-put at 3% d.s. m ³ /h ①	speed 1/min	drive capacity kW	delivery head m	weight kg approx.
ABM-2-S	130	2	1500	0,55	2,5	19

Permissible negative pressure:	0.5 bar
Permissible internal pressure:	10 bar
Permissible medium temperature:	80°C

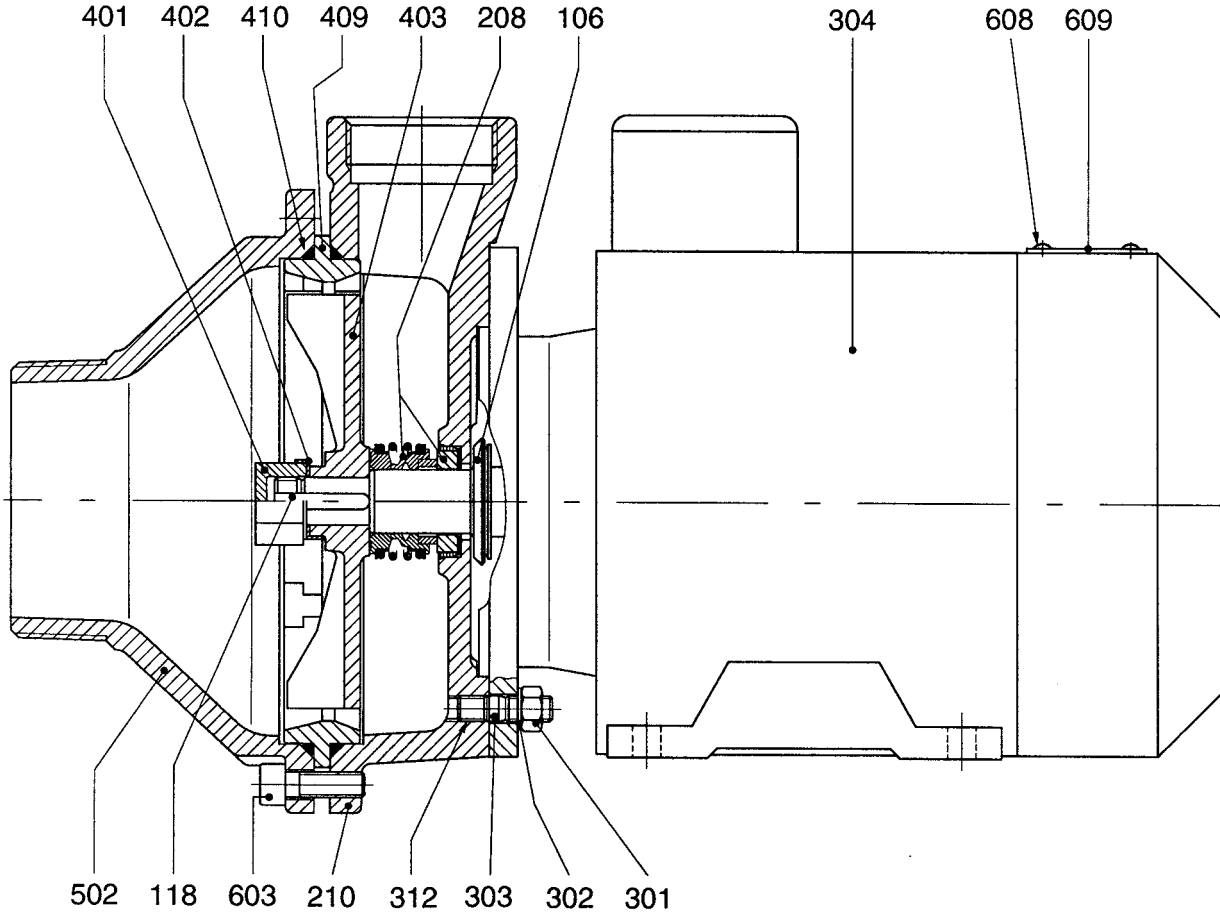
The mentioned performance data are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.

① With sludge of 3-8% dry substance thoughput is reduced by up to half.

Materials

Denomination	Part No.	Material W1
Sealing cover	210	EN-GJL-250
Impeller	403	1.4308
Cutting ring	409	1.2601
Cutting ring bearing	410	acrylonitrile-butadiene rubbers (NBR)
Macerator casing	502	EN-GJL-250

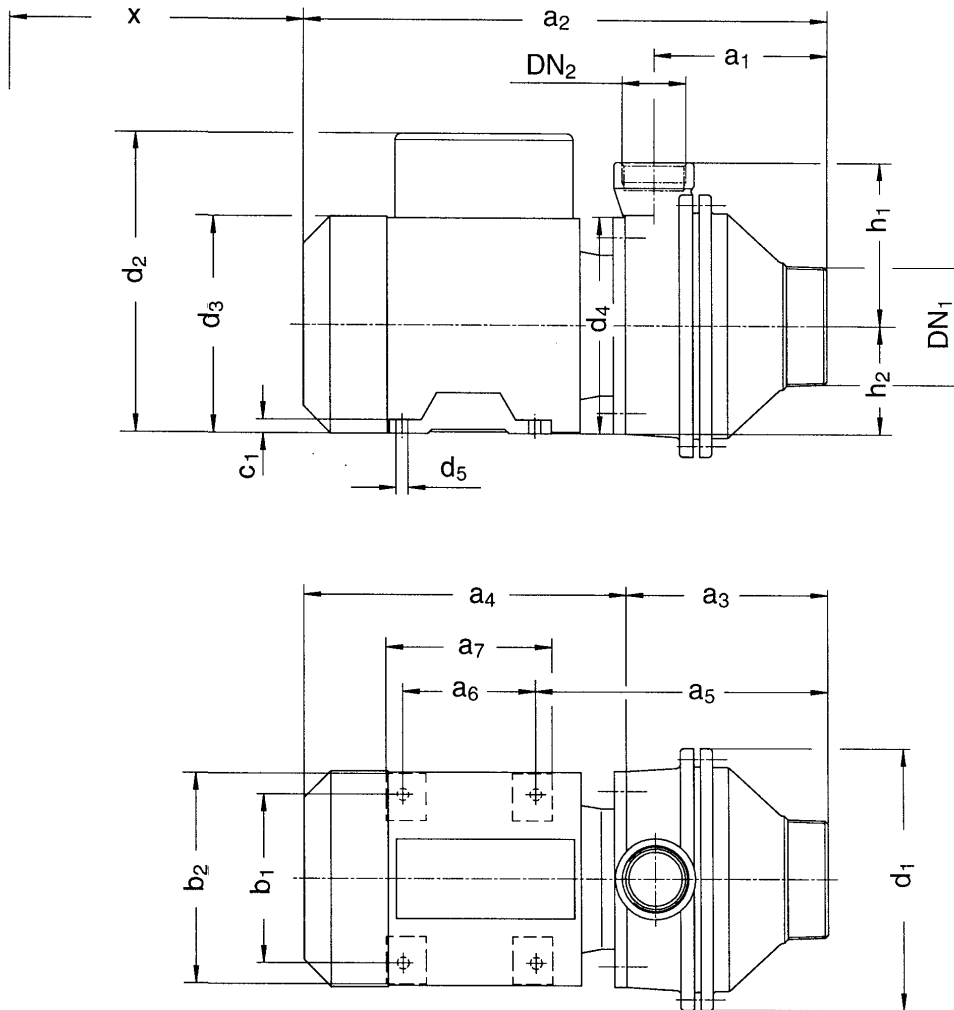
Sectional Drawing
ABM-2-S with drive motor



Part-No. Denomination

106	Splash ring
118	Key
208	Mechanical seal
210	Sealing cover
301	Hexagonal nut
302	Serrated lock washer
303	Stud
312	Loctite
401	Shaft nut
402	Locking plate
403	Impeller
409	Cutting ring
410	Cutting ring bearing
502	Macerator casing
603	Socket head cap screw
608	Round head grooved pin
609	Name plate

Unit Dimensions
ABM-2-S with drive motor



Dimensions in mm
alterations reserved

Direction of rotation:
clockwise and counter-clockwise

macerator type	motor design	unit dimensions																		extens. measurement	weight kg approx.	
		① DN ₁	② DN ₂	a ₁	a ₂	a ₃	a ₄	a ₅	a ₆	a ₇	b ₁	b ₂	c ₁	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁			h ₂
ABM-2-S	IM B35/ IM V15	R3	Rp 1 1/2	129	392,5	150,5	242	218,5	100	125	125	156	10	194	222	160	160	9	121	80	20	19,3
ABM-2-S	IM B5/ IM V1	R3	Rp 1 1/2	129	392,5	150,5	242	-	-	-	-	-	-	194	222	160	160	-	121	80	20	18,8

① tapered male thread acc. to DIN 2999
② cylindrical female thread acc. to DIN 2999

Subject to technical alterations.



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