

FUCHS CENTROX-Aerator with foam control type CX-C



General

The FUCHS CENTROX-Aerator with foam control - type CX-C - is used to introduce oxygen into equalization basins and plants for the aerobic treatment of sewage sludge.

It provides for fine bubble aeration and thorough mixing of the wastewater or the sludge. Foam arising from aeration flows back into the suction funnel. Thus the foam level is controlled.

Due to appropriate design and good workmanship it is a sturdy, reliable and almost maintenance-free machine.

Description

The CENTROX-Aerator essentially consists of a vertically mounted TEFC-motor with drip cover, base plate, drive shaft, funnel and impeller with curved blades at the immersed end.

Due to the open funnel which is needed for foam control, suction noises cannot be reduced.

The unit is installed either with a framework on a catwalk or on the framework of a flotation.

Optionally and against extra charge a protective hood for the electric motor is available.

Method of operation

The rotating impeller draws wastewater or sludge from underneath and air or foam through the funnel from above. It swirls these components and then centrifuges the mixture along the funnel outwards.

Aeration takes place with fine bubbles and high oxygen utilization. Thus problems with sprayed water, cooling-off during wintertime and odours are avoided.

Design and materials

The design of the CENTROX-Aerator is simple and sturdy without bearings and sealings in the immersed part of the unit. The unit needs little maintenance and is almost free from wear.

It is manufactured from corrosion-resistant materials. The drive shaft, the base-plate, and the impeller are made of stainless steel. The funnel is made of GRP or stainless steel.

The drive units are highly efficient electric motors with hollow shaft. They are equipped with adequately-sized, permanently lubricated, grooved ball bearings. The motor housings are either aluminium or high-quality cast iron. They are given an additional coat of protective paint in our factory.

The insertion end of the stainless steel shaft is fixed in the hollow shaft of the electric motor. Here it is precision-guided and can be easily mounted or removed. The drive-shaft is balanced together with the impeller, which has been designed in full accordance to the most up-to-date technology. Thus soft operation is obtained. Each FUCHS CENTROX-Aerator is tested in our basin before delivery.

Flotation

The flotation for the CENTROX-Aerator essentially consists of a framework with flotation tanks, supports and mounting fittings.

The frame is a hot-dip galvanized, welded steel construction. Optionally and against extra charge an additional powder-coating is available.

The flotation tanks are made of LDPE. They are resistant against mechanical impact and UV radiation. Optionally and against extra charge flotation tanks made of GRP and filled with polyurethane foam are available.

Supports, small parts and screws are made of stainless steel. The supports allow placing the CENTROX-Aerator on the bottom of the basin or somewhere on the floor without any risk for the impeller and the drive-shaft.

In equalization basins a fixing bar is recommended. Linkages on both ends enable the CENTROX-Aerator to follow the varying water level. Small basins are fitted with guiding rails at the side wall.

Arrangement

In circular or square basins, the FUCHS CENTROX-Aerator is installed in the centre. In case of large or rectangular basins a plurality of units has to be distributed evenly on the surface.

Technical data

The technical data for the FUCHS CENTROX-Aerator - type CX-C - with flotation for equalization basins are given in the following table. Units for the aerobic treatment of sludge are usually tailor-made solutions.

Differing from other types of the CENTROX-Aerator brake power in clean water is only about 75 % of the nominal power. Thus the air flow is lower. Accordingly, there is a sufficient power reserve for foam control. Some figures may be approximate data.

**Technical data for FUCHS CENTROX-Aerator
with foam control and flotation
type CX-C 2.2 – CX-C 15.0**

type	nominal power kW	nominal current A	nominal speed min ⁻¹	H m/m	Ø A mm	ID mm	weight kg	air flow m ³ /h
CX-C 2.2	2.2	5.2	1,420	1,460	3,900	500	205	95
CX-C 3.0	3.0	7.1	1,420	1,460	3,900	500	210	145
CX-C 4.0	4.0	8.6	1,420	1,480	3,900	500	220	180
CX-C 5.5	5.5	12.7	950	1,750	4,400	600	360	210
CX-C 7.5	7.5	15.2	965	1,900	5,000	600	380	285
CX-C 11.0	11.0	22.0	965	1,950	5,000	600	540	400
CX-C 15.0	15.0	29.0	965	2,050	5,500	600	610	550

Bigger units from 18.5 kW to 30.0 kW, other voltages and 60 Hz on request.

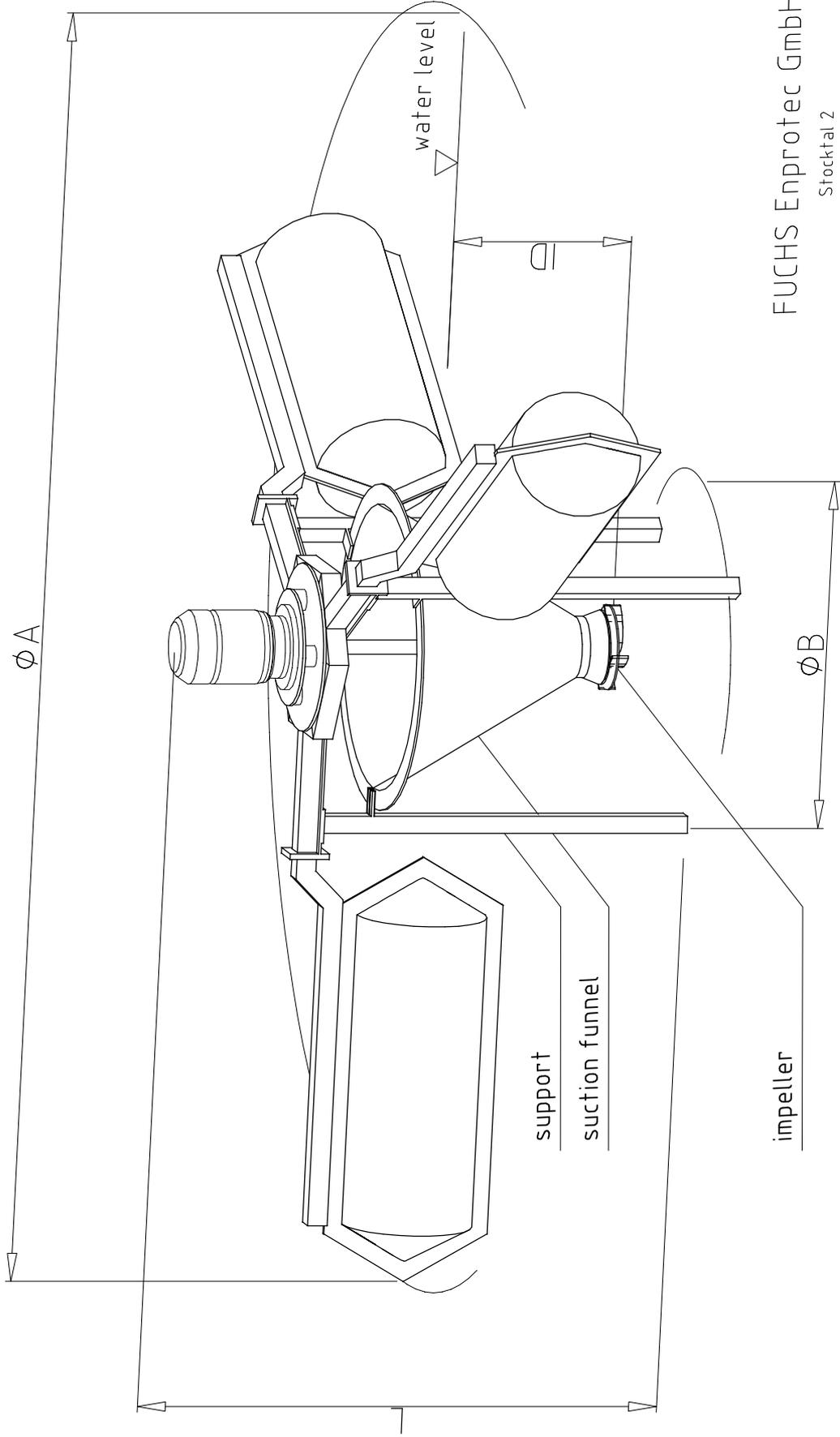
General data

Voltage: 230/400 V up to 3.0 kW
400/690 V from 4.0 kW

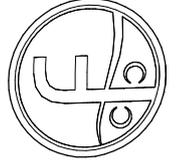
Frequency: 50 H

Subject to change!

CENTROX-Aerator with foam control



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FUCHS Enprotec GmbH

Stocktal 2

56727 MAYEN - Germany

phone +49-26 51-80 04 0 fax +49-26 51-80 04 135

e-mail info@fuchs-germany.com