

Submersible Aerator Type ABS XTA/XTAK

50 Hz

The submersible aerators type ABS XTA/XTAK are suitable for all gas-liquid reactions at temperatures below 70 °C and pressures below 2 bar absolute.

Applications in sewage and water treatment

Mixing and equalizing basins: Equalizing of wastewater pollution load and wastewater quantities, as well as avoidance of odour problems.

Activated sludge basins and SBR reactors: Biological degradation of organic substances.

Sludge stabilisation: Avoidance of odour problems as well as further oxidation of the organic substances.

Flotation: Flotation of oil and grease.

Lagoon aeration: Improvement of natural aeration.

Neutralization: Neutralization of alkaline wastewater with CO₂ or flue gas.

Special applications: Aeration with pure oxygen or ozone.

The submersible aerator is positioned on the bottom of the basin without anchorage. For maintenance and inspection work the aerator can be lifted by means of a mobile crane.

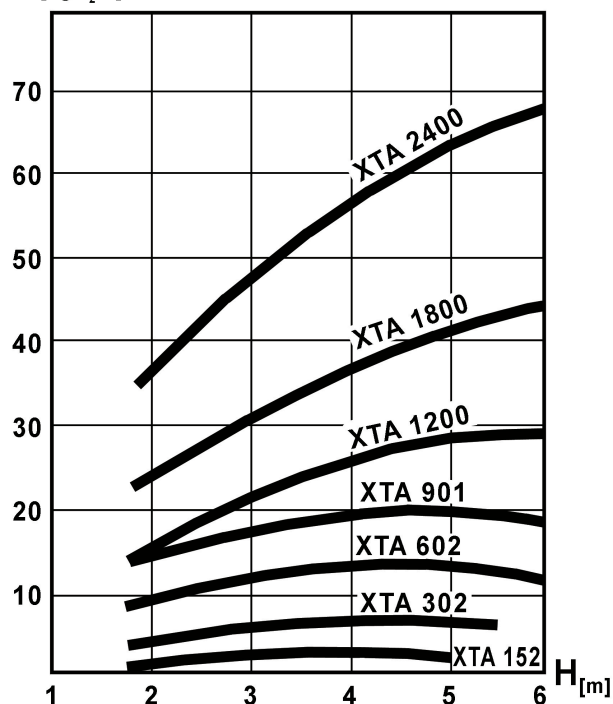
Construction

- Easy and quick installation without emptying the tank.
- No aerosol effect and no sedimentation on the bottom of the basin.
- Good oxygen transfer (SOTR) and aeration efficiency values (SAE).
- Self-cleaning system.
- Replaceable wear parts.

Oxygen transfer, self-aspirating

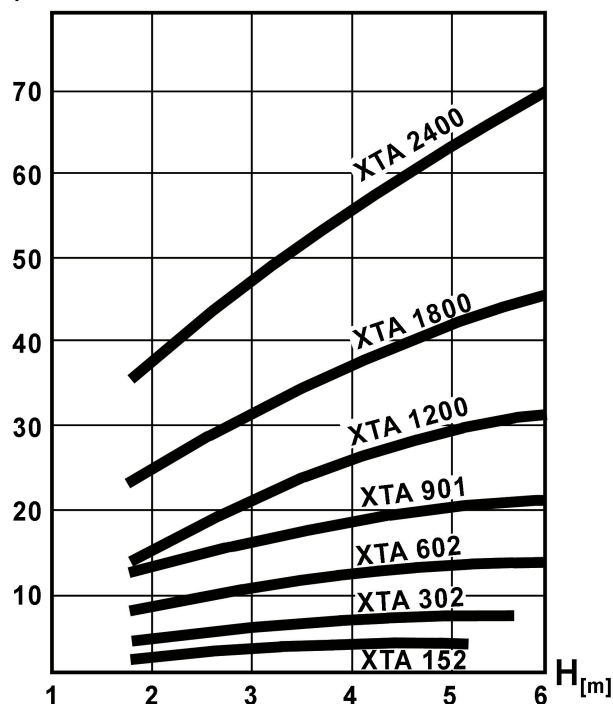
Under standard conditions (20 °C, 1013 mbar), optimal positioning.

OC [kgO₂/h]



Power consumption, self-aspirating

P₁ [kW]



Materials

Part	Standard
Motor housing	EN-GJL-250 (GG-25)
Motor shaft	1.4021 (AISI 420)
Fasteners (in contact with medium)	1.4401 (AISI 316)
Aerator parts (XTA 152-XTA 602)	1.4581 (AISI 316)
Aerator parts (XTA 901-XTA 2400)	1.4301 (AISI 304)
Bushing	Bronze

Options: Exposed aerator parts hard chrome plated. Special materials on request.

Technical data 400 V/50 Hz

Hydraulics	Motor	Rated motor power*		Speed at 50 Hz	Rated current	Immersion depth max.	Weight
		P ₁ kW	P ₂ kW				
XTA 152	PE 29/4	3.4	2.9	1410	6.4	3.0	105
XTA 152	PE 40/4	4.4	4.0	1410	8.4	5.0	105
XTA 302	PE 60/4	6.7	6.0	1430	13.6	4.0	145
XTA 302	PE 90/4	9.9	9.0	1425	18.1	6.0	155
XTA/XTAK 602	PE 110/4	12.0	11.0	1465	21.2	4.0	300/370
XTA/XTAK 602	PE 160/4	17.9	16.0	1455	30.5	7.0	310/380
XTA/XTAK 901	PE 185/4	20.0	18.5	1458	35.2	4.5	455/510
XTA/XTAK 901	PE 220/4	23.7	22.0	1460	40.3	7.0	455/510
XTA/XTAK 1200	PE 220/4	23.7	22.0	1460	40.3	3.0	510/580
XTA/XTAK 1200	PE 300/4	32.1	30.0	1459	54.6	6.0	520/590
XTA/XTAK 1200	PE 370/4	39.4	37.0	1460	68.1	8.5	535/605
XTA/XTAK 1800	PE 370/4	39.4	37.0	1480	68.1	4.0	540/615
XTA/XTAK 1800	PE 450/4	47.8	45.0	1480	81.0	6.0	545/620
XTA/XTAK 1800	PE 550/4	58.1	55.0	1480	94.1	9.0	790/865
XTA/XTAK 2400	PE 550/4	58.1	55.0	1480	94.1	4.0	820/895
XTA/XTAK 2400	PE 750/4	78.9	75.0	1480	131.0	7.5	835/910

*P₁ = Power taken from mains; P₂ = Power at motor shaft

Operation principle

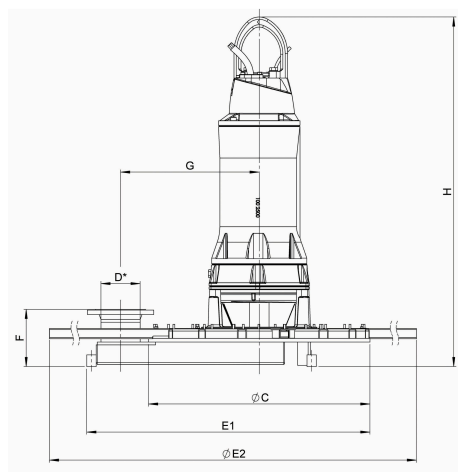
The submersible aerator type ABS XTA/XTAK is a submerged motor, blower, pump and mixer, all combined in one unit. It consists of a star-shaped impeller directly connected to the motor shaft, a stator surrounding the impeller as well as an air pipe to atmosphere. The impeller rotates inside the stator creating a vacuum and automatically aspirating air through the air pipe.

At the same time, water flows into the impeller, is thoroughly mixed with the air and radially discharged through the channels of the stator. This system ensures fine bubbles.

XTAK = extended channels increase SOTR and SAE values up to 15 - 20 %.



Dimensions



Aerator	Ø C	D	E ₁	Ø E ₂	F	G	H
XTA 152 PE 29/4	485	DN 80	592	-	170	250	750
XTA 152 PE 40/4	485	DN 80	595	-	170	250	820
XTA 302 PE 60/4	670	DN 80	779	-	180	347	820
XTA 302 PE 90/4	670	DN 80	779	-	180	347	890
XTA/XTAK 602 PE 110/4	715	DN 100	873	3533	180	397	1325
XTA/XTAK 602 PE 160/4	715	DN 100	873	3533	180	397	1325
XTA/XTAK 901 PE 185/4	840	DN 125	1065	3845	250	510	1490
XTA/XTAK 901 PE 220/4	840	DN 125	1065	3845	250	510	1490
XTA/XTAK 1200 PE 220/4	950	DN 150	1215	3930	245	595	1495
XTA/XTAK 1200 PE 300/4	950	DN 150	1215	3930	245	595	1495
XTA/XTAK 1200 PE 370/4	950	DN 150	1215	3930	245	595	1575
XTA/XTAK 1800 PE 370/4	950	DN 150	1215	4135	245	595	1570
XTA/XTAK 1800 PE 450/4	950	DN 150	1215	4135	245	595	1570
XTA/XTAK 1800 PE 550/4	950	DN 150	1215	4135	245	595	1960
XTA/XTAK 2400 PE 550/4	1050	DN 150	1345	4025	266	650	1950
XTA/XTAK 2400 PE 750/4	1050	DN 150	1345	4025	266	650	1950

*Flanges according to DIN 1092-1, PN 16