

Submersible Aerator Type ABS XTAA and XTAK

SULZER

60 Hz

The submersible aerators type ABS XTA and XTAK are suitable for all gas-liquid reactions at temperatures below 40 °C (104 °F) and pressures below 2 bar (29 psi) 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.

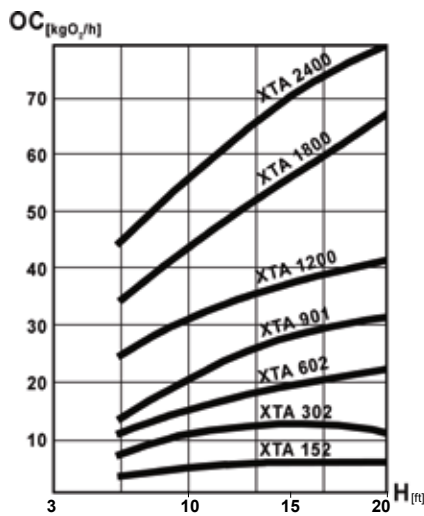


Construction

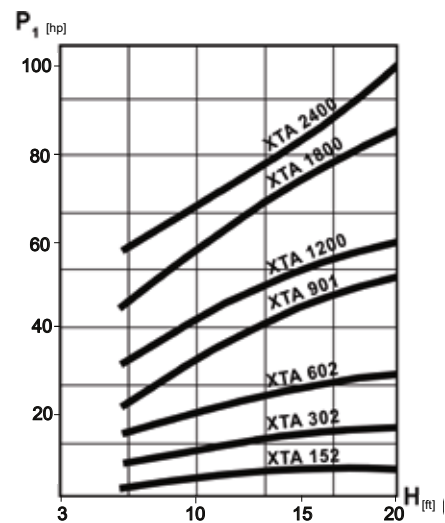
- Easy and quick installation without emptying the tank.
- No aerosol effect and no sedimentation on the bottom of the basin.
- Good oxygen transfer (SOTR) and aeration efficiency values (SAE).
- Self-cleaning system.
- Replaceable wear parts.

Oxygen transfer, self-aspirating

Under standard conditions (20 °C/68 °F, 1013 mbar/14.7 psi), optimal positioning.



Power consumption, self-aspirating



Materials

Part	Standard	US
Motor housing	EN 1561, EN-GJL-250 (GG-25)	ASTM A48, Class 35 B
Motor shaft	1.4021 (AISI 420)	ASTM/AISI 420
Fasteners (in contact with medium)	1.4401 (AISI 316)	AISI 316
Aerator parts (XTA 152-XTA 2400)	1.4301 (AISI 304)	AISI 304
Bushing	Bronze	Bronze

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

Technical data 460V/60Hz

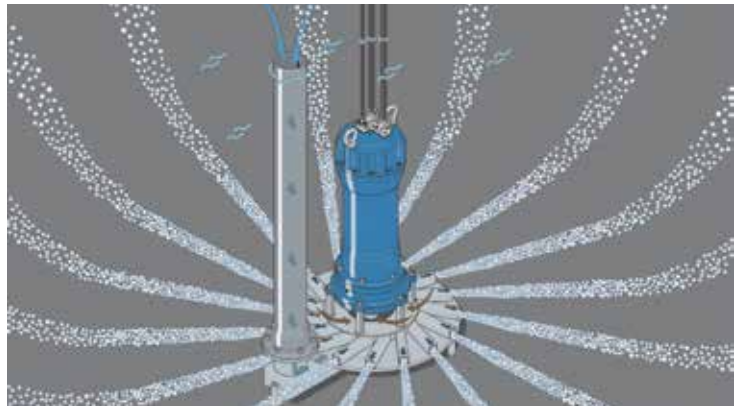
Hydraulics	Motor	Rated motor power*		Speed at 50 Hz min ⁻¹	Rated current A	Immersion depth.max.m/ft	Weight kg/lbs	
		P ₁ kW/hp	P ₂ kW/hp				XTA	XTAK
XTA 152	PE 45/4	5.0/6.7	4.5/6.0	1770	8.2	2.5/8.2	130/286	
XTA 152	PE 75/4	8.2/11.0	7.5/10.1	1770	13.8	5.0/16.4	140/309	
XTA 302	PE 105/4	11.4/15.2	10.5/14.1	1770	17.7	5.0/16.4	180/397	
XTA 302	PE 130/4	13.4/18.0	13.0/17.4	1780	23.2	7.0/23.0	300/661	
XTA/XTAK 602	PE 185/4	19.8/26.5	18.5/24.8	1780	32.3	4.5/14.8	340/400	750/882
XTA/XTAK 602	PE 210/4	22.5/30.1	21.0/28.2	1780	35.4	6.0/19.7	350/410	772/904
XTA/XTAK 901	PE 250/4	26.7/35.8	25.0/33.5	1780	38.3	3.5/11.5	455/510	1003/1124
XTA/XTAK 901	PE 350/4	37.0/49.7	35.0/46.9	1780	52.8	5.5/18.0	465/520	1025/1146
XTA/XTAK 1200	PE 350/4	37.0/49.7	35.0/46.9	1780	52.8	3.5/11.5	520/590	1025/1300
XTA/XTAK 1200	PE 430/4	45.3/60.7	43.0/57.7	1780	65.9	5.5/18.0	535/605	1179/1334
XTA/XTAK 1200	PE 520/4	54.7/73.4	52.0/69.7	1780	78.0	8.0/26.2	540/615	1190/1356
XTA/XTAK 1800	PE 520/4	54.7/73.4	52.0/69.7	1780	78.0	4.0/13.1	545/620	1201/1367
XTA/XTAK 1800	PE 630/4	66.1/88.6	63.0/84.5	1780	89.8	7.0/23.0	790/865	1742/1907
XTA/XTAK 2400	PE 630/4	66.1/88.6	63.0/84.5	1780	89.8	4.0/13.1	820/895	1808/1973
XTA/XTAK 2400	PE 860/4	90.2/120.9	86.0/115.3	1780	125.0	7.5/24.6	835/910	1841/2006

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

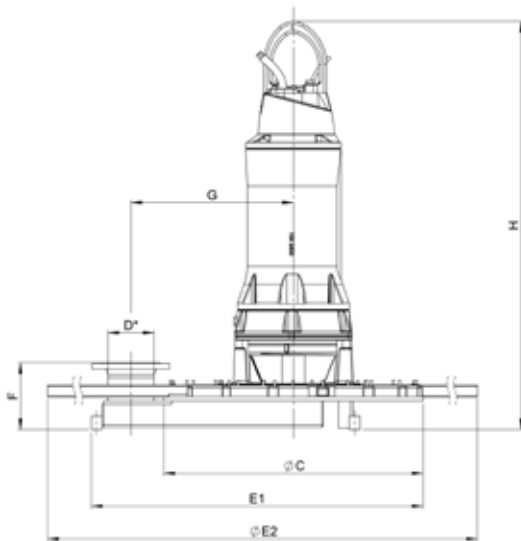
Operation principle

The submersible aerator type ABS XTA/XTAK is a submerged motor, blower, pump and mixer, all combined in one unit. It consists of a starshaped 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



*Flanges according to DIN 1092-1, PN 16

Aerator	Ø C	D	E ₁	Ø E ₂	F	G	H
XTA 152 PE 45/4	500	DN 80	675	-	185	310	785
XTA 152 PE 75/4	500	DN 80	675	-	185	310	785
XTA 302 PE 105/4	690	DN 80	865	-	220	405	860
XTA 302 PE 130/4	690	DN 80	865	-	220	405	1290
XTA/XTAK 602 PE 185/4	720	DN 100	940	3710	240	440	1325
XTA/XTAK 602 PE 210/4	720	DN 100	940	3710	240	440	1325
XTA/XTAK 901 PE 250/4	840	DN 125	1065	3845	250	510	1490
XTA/XTAK 901 PE 350/4	840	DN 125	1065	3845	250	510	1490
XTA/XTAK 1200 PE 350/4	950	DN 150	1215	3930	245	595	1495
XTA/XTAK 1200 PE 430/4	950	DN 150	1215	3930	245	595	1575
XTA/XTAK 1200 PE 520/4	950	DN 150	1215	3930	245	595	1575
XTA/XTAK 1800 PE 520/4	950	DN 150	1215	4135	245	595	1570
XTA/XTAK 1800 PE 630/4	950	DN 150	1215	4135	245	595	1960
XTA/XTAK 2400 PE 630/4	1050	DN 150	1345	4025	266	650	1950
XTA/XTAK 2400 PE 860/4	1050	DN 150	1345	4025	266	650	1950

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