

ABS submersible aerator XTA/XTAK

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

50 Hz

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.

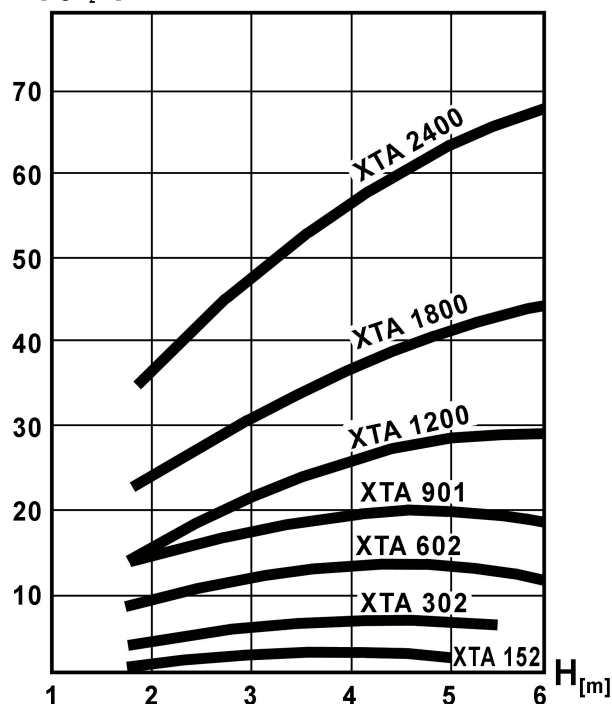
Construction

- 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

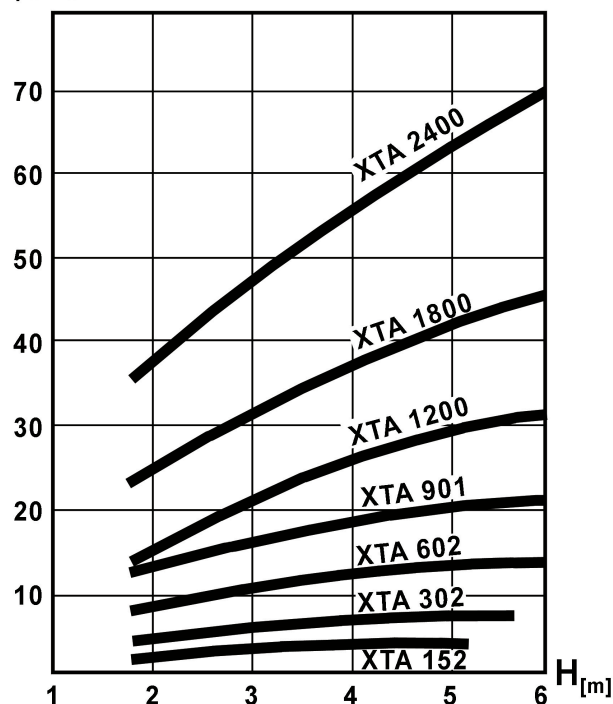
Under standard conditions (20 °C, 1013 mbar), optimal positioning

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 min ⁻¹ | Rated current A | Immersion depth max. m | Weight kg |
|---------------|----------|----------------------|----------------------|-------------------------------------|--------------------|---------------------------|--------------|
| | | 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 | 8.0 | 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 | 6.5 | 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 | 835/915 |

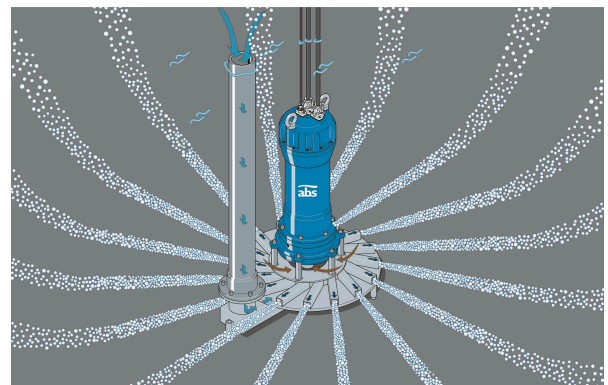
*P₁ = Power taken from mains; P₂ = Power at motor shaft

Operation principle

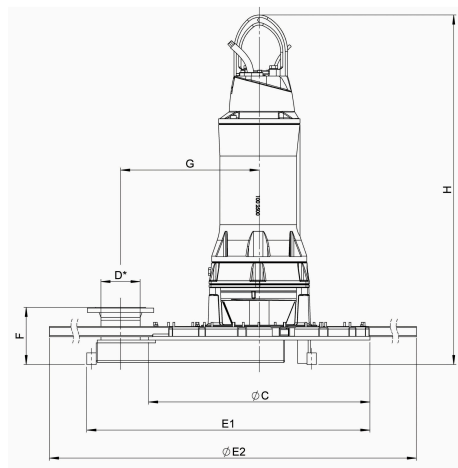
The submersible aerator XTA/XTAK is a submerged motor, blower, pump and mixer, all combined in one unit. It consists of a star-shaped impeller directly connected to the motor shaft, a stator surrounding the impeller as well as an air pipe to atmosphere. The impeller rotates inside the stator creating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



*Flanges according to DIN 1092-1, PN 16

| 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 |