



AERATOR
+ MIXING



AER-AS

AERATOR-MIXER



FLOATING SURFACE
AERATOR





MAIN CHARACTERISTICS

Axial flow aerator with patented instantaneous radial discharge. World renowned for high aeration efficiency in field conditions due to maximum transfer of kinetic energy to water surface.

Installations range from small tanks to large lagoons due to high mixing and oxygen dispersion characteristic in the form of an apple shaped flow.



ADVANTAGES

EXCELLENT EFFICIENCY IN WASTEWATER

MAINTAINS THE SAME O₂ IN EFFICIENCY OVER TIME

EXCEPTIONAL MIXING AND OXYGEN DISPERSION

ADAPTABLE TO SUIT VARIED WATER LEVELS

WATER LEVEL DOES NOT AFFECT EFFICIENCY

SUITABLE FOR VARIOUS LAGOONS, TANKS, OR DITCHES;
ANY SHAPE OR ANY SIZE

SUITABLE FOR FIXED AND VARIABLE SPEED FREQUENCY
OPERATION

UNPARALLELED WATER-COOLING CAPABILITIES - ADJUSTABLE
RATE

MINIMAL NOISE IN OPERATION

LOW-AEROSOL PRODUCTION AND LOW-ODOUR EMISSION

EASE OF INSTALLATION - EVEN WHILST THE PLANT REMAINS
ONLINE

MINIMAL MAINTENANCE

SIMPLICITY OF DESIGN AND OPERATION

NO GEARBOX, NO SUBMERGED BEARINGS, NO MECHANICAL
SEALS, NO BLOWERS, NO PIPEWORK, OR VALVES

LONG SERVICE LIFE - NO CONSUMABLE PARTS, NO MAJOR WEAR
SURFACES

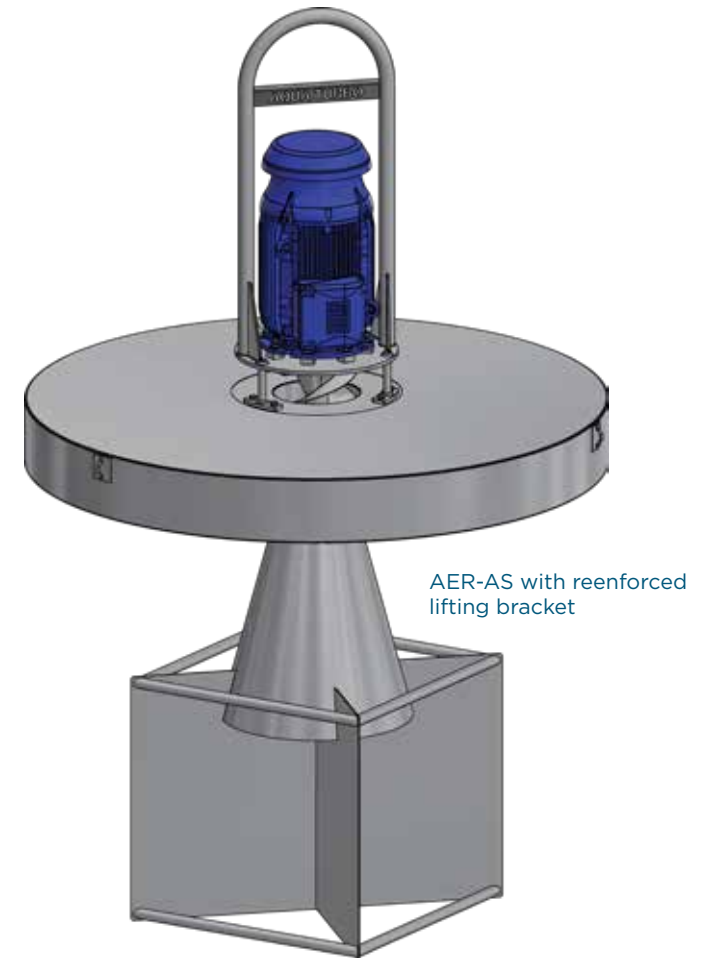
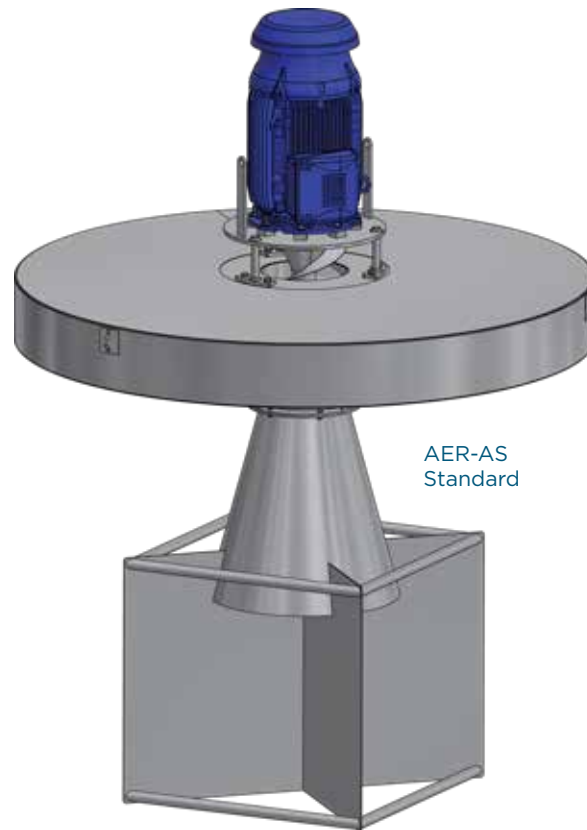
100% STAINLESS STEEL CONSTRUCTION

COMPONENTS

- High efficiency motor, mooring eyes
- Guiding tubes system
- Anti-vortex Vanes
- Cone-cross
- Soft-edge liner base
- ScrewPELLER®
- Large stabilisation cross
- 100% Stainless steel construction
- Anti-erosion plate

OPTIONS

- Alternate WEG paint plans and colours upon request
- WEG W3Seal* with brass labyrinth seal for ultimate ingress protection
- Tropicalised Windings -Internal paint system



CONSTRUCTION

- Reduce or extended draft suction cone cross-cone to suit water level
- 3 mooring eyes
- Alternate materials of construction
 - AISI 316L stainless steel; duplex stainless steel upon request
- Special cone-cross options to suit application -e.g., flow through design for oxidation ditch with varying flows characteristics

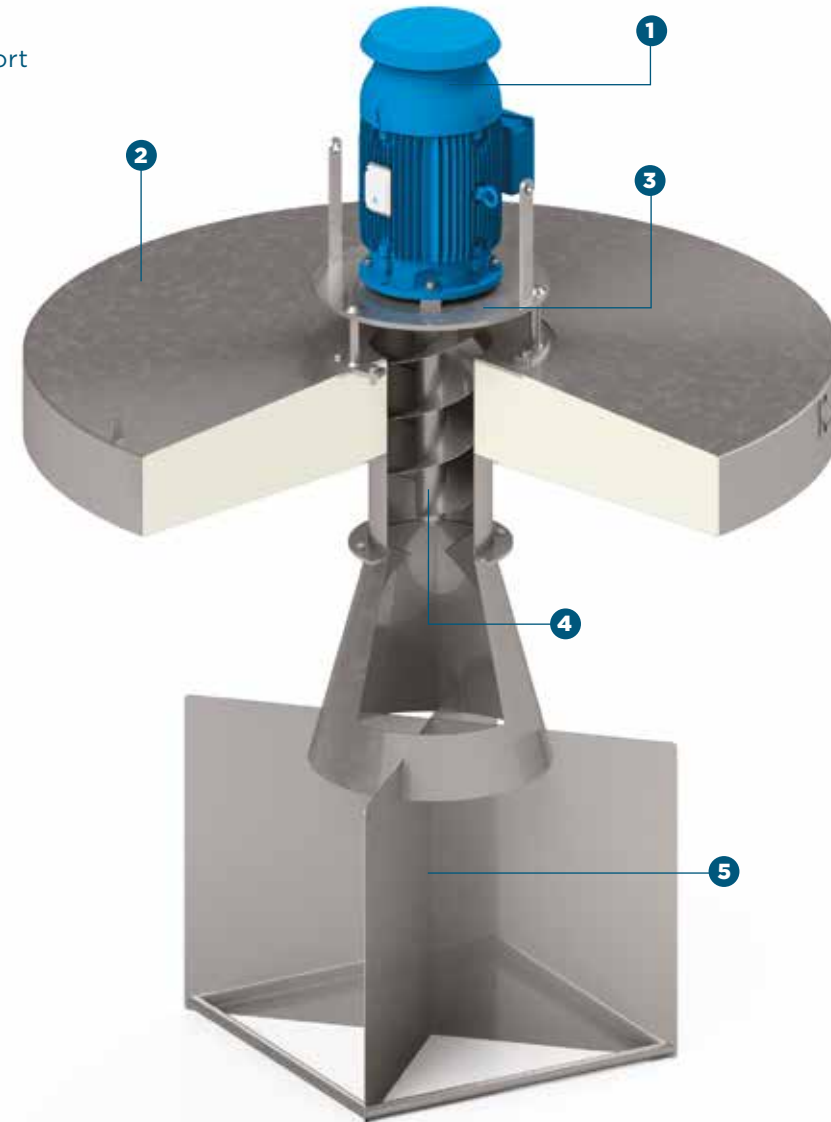
VARIOUS DRAFTS OPTIONS FOR SUCTION CONES

MIN drafts - STD draft - MAX draft

Each Aquaturbo AER-AS surface aerator has a standard depth suction cone with an associated min and max water level range. The draft can be reduced or extended within the operational limits of each model. Optimum mixing and oxygen transfer is achieved when the correct draft is selected to suit the water level.

STANDARD CONFIGURATION

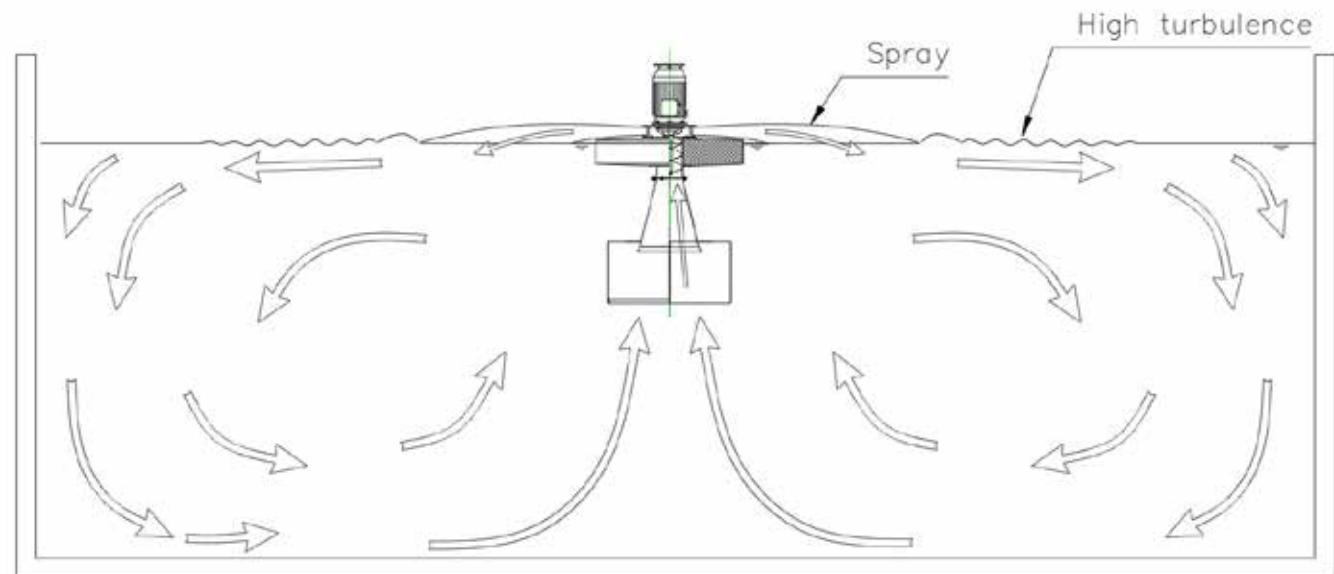
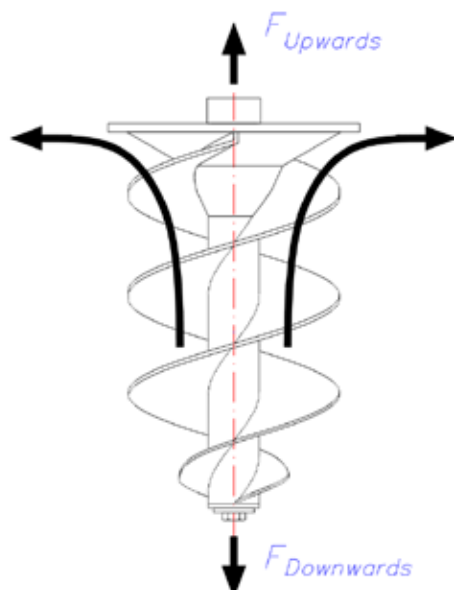
- 1 Motor
- 2 Float
- 3 Flange Support
- 4 Screweller®
- 5 Cross



WORKING PRINCIPLE AER-AS

The Aquaturbo® functions as an open pump. The mixed liquor of wastewater and activated sludge is aspirated via the suction cone. The unique Aquaturbo® ScrewPELLER® pumps the liquid axially up through the cylindrical volute, bends the liquid flow from axial to radial, and ensures that maximum kinetic energy is transferred to the water surface.

Whilst transferring the maximum kinetic energy to the water, the ScrewPELLER® achieves a high performance in pumping and oxygen transfer. Due to the design of the ScrewPELLER®, the forces on the bearings are very low, so standard bearings can be used.

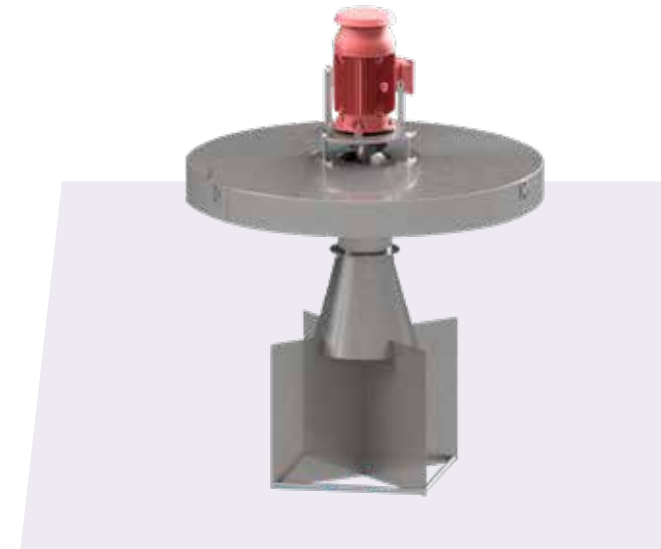




MOTOR DETAILS

Multiple combinations are possible.

- 1 Motor with remote greasing & easy access greasing system
- 2 Motor with stainless steel raincover
- 3 Motor with smart monitoring



1



2



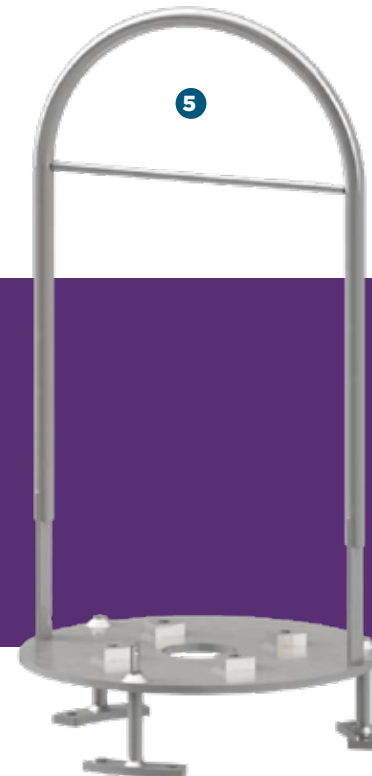
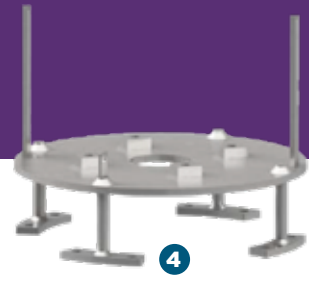
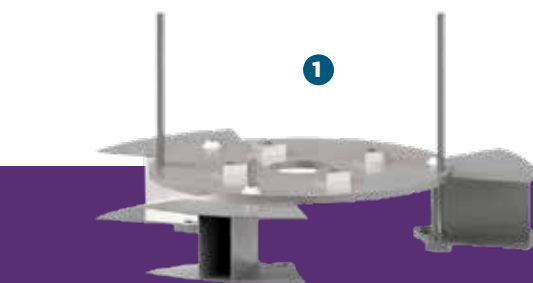
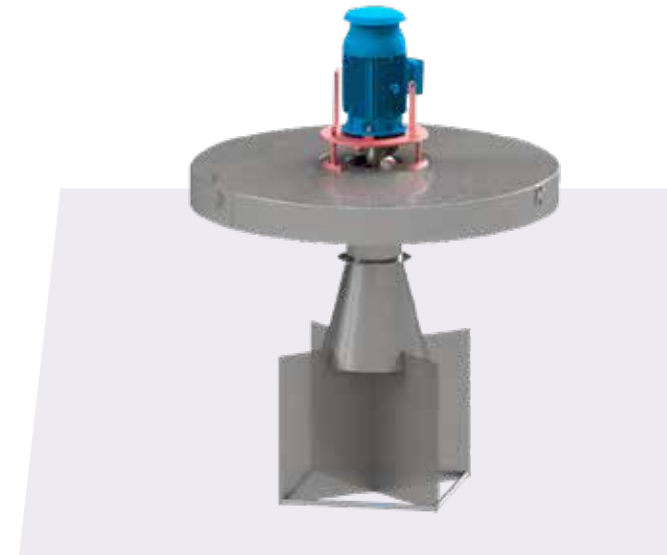
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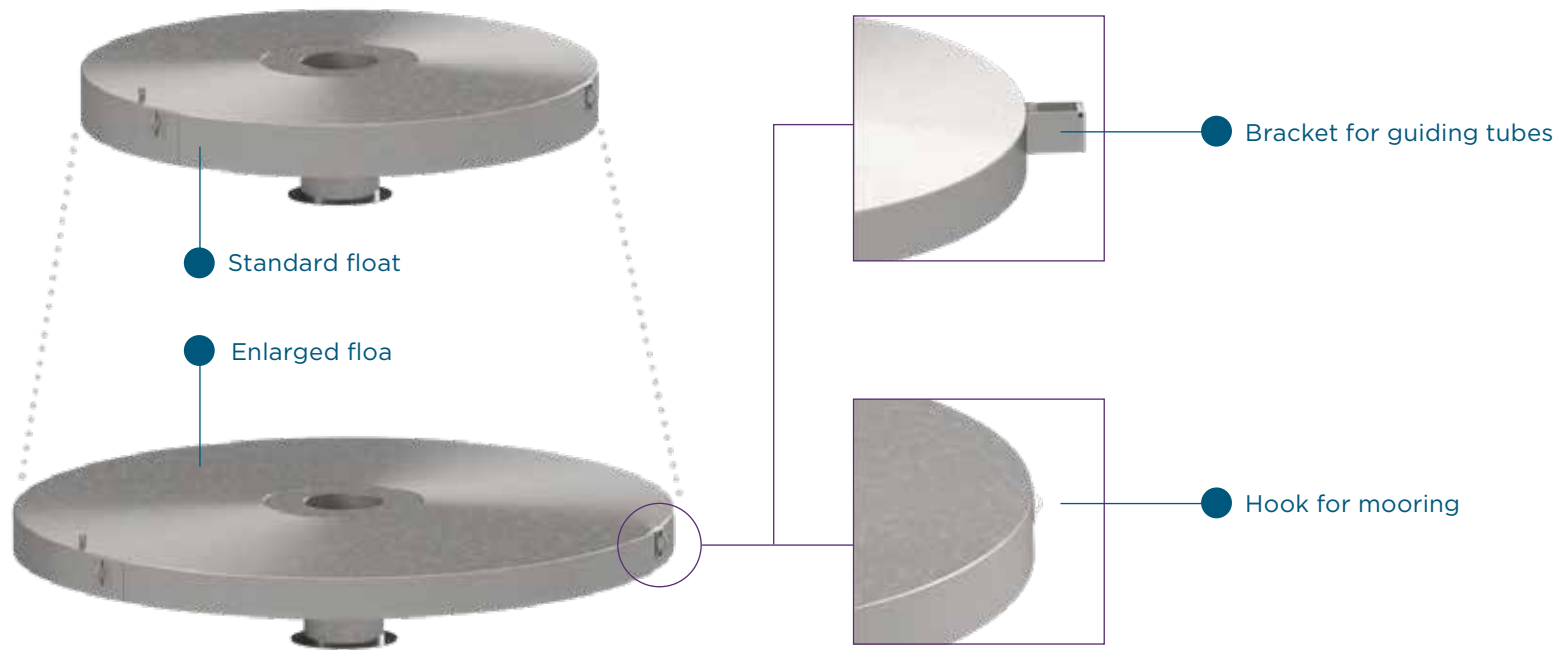
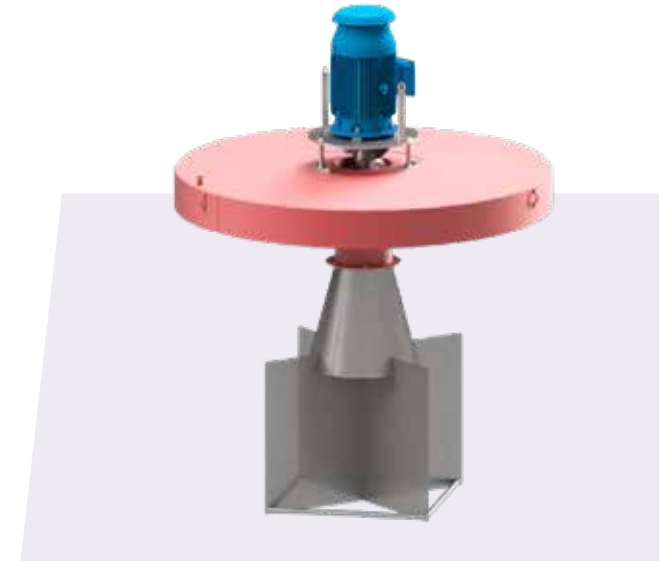
FLANGE SUPPORT DETAILS

Multiple combinations are possible.

- 1 Flange support with anti ragging brackets
- 2 Flange support with deflector plate
- 3 3-leg flange support
- 4 4-leg flange support
- 5 Flange support with lifting bracket



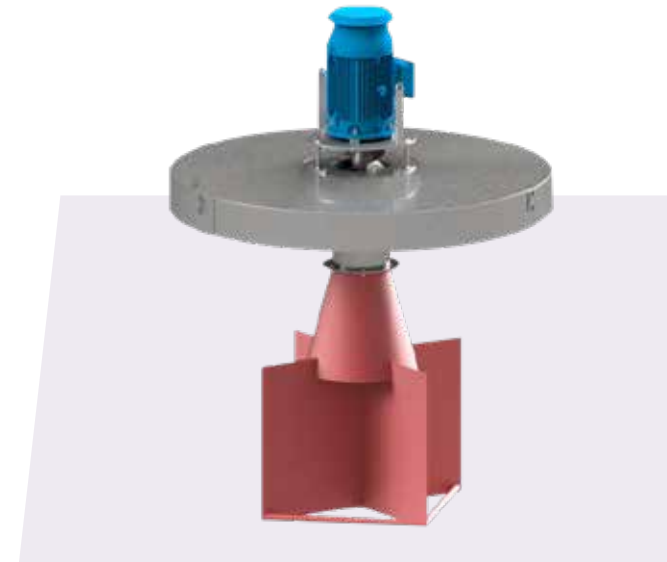
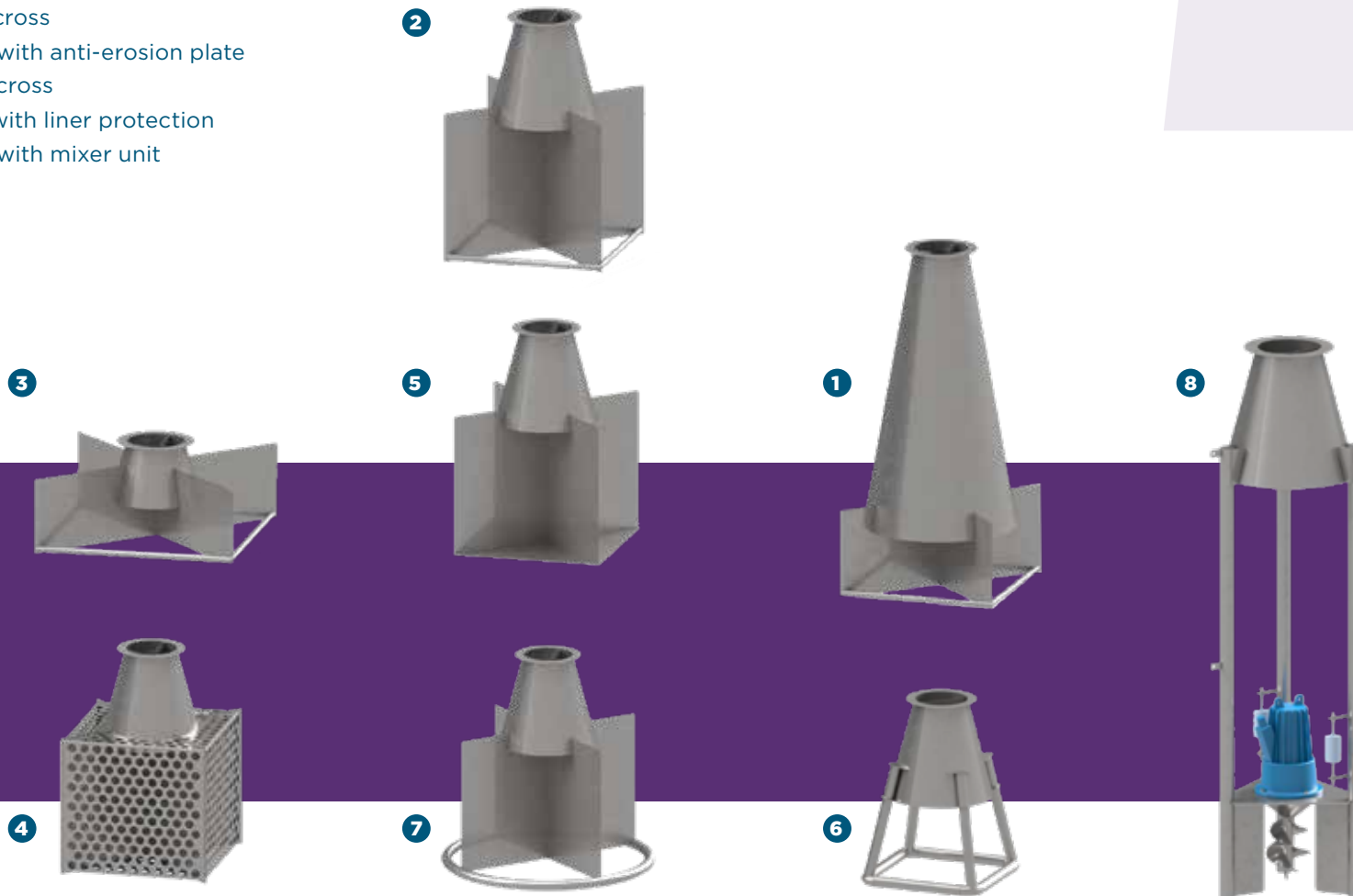
FLOAT DETAILS



CROSS DETAILS

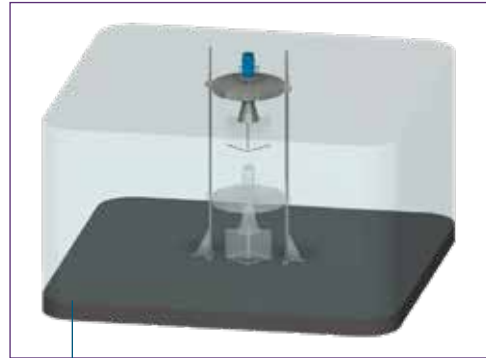
Multiple combinations are possible.

- 1 Shortened cone cross
- 2 Standard cone cross
- 3 Extended cone cross
- 4 Cage cone cross
- 5 Cone cross with anti-erosion plate
- 6 Open cone cross
- 7 Cone cross with liner protection
- 8 Cone cross with mixer unit

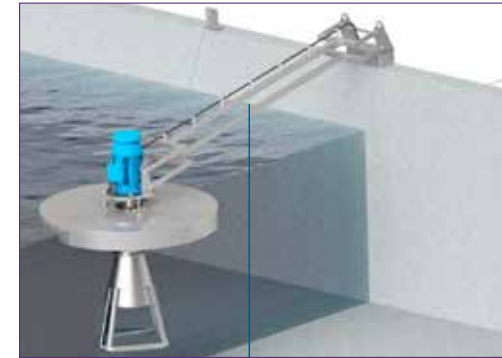


MOORING DETAILS

Multiple combinations are possible.



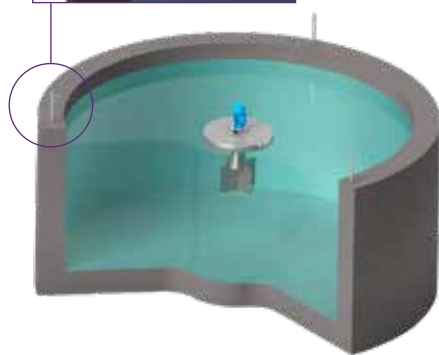
● With guiding tubes



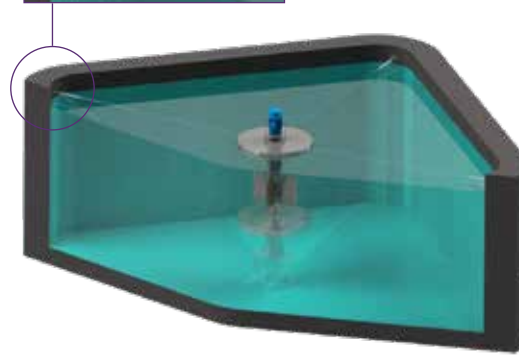
● With double hinged arm



Mooring cables with mooring poles



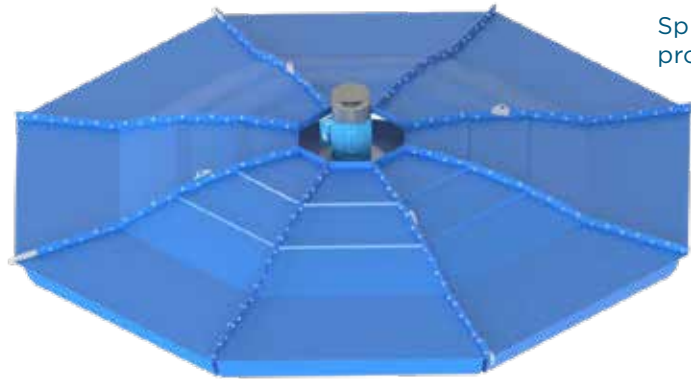
Mooring cables with springs and wall brackets



Mooring cable guide brackets



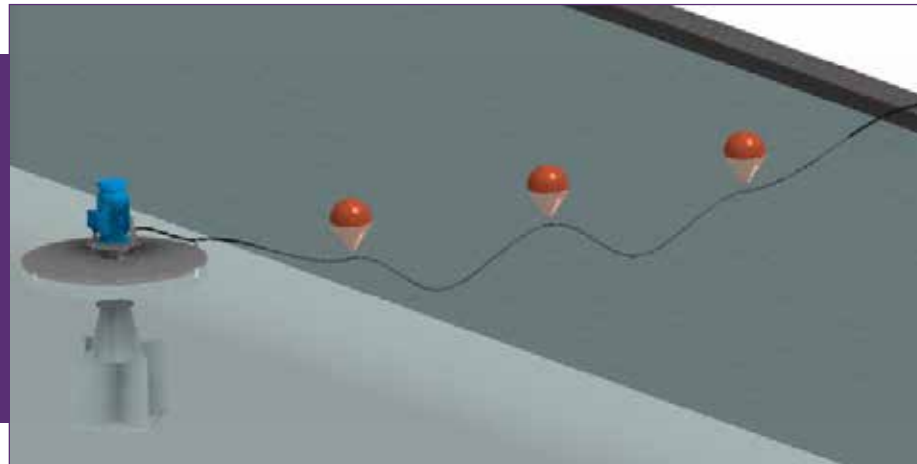
OTHER ACCESSOIRES



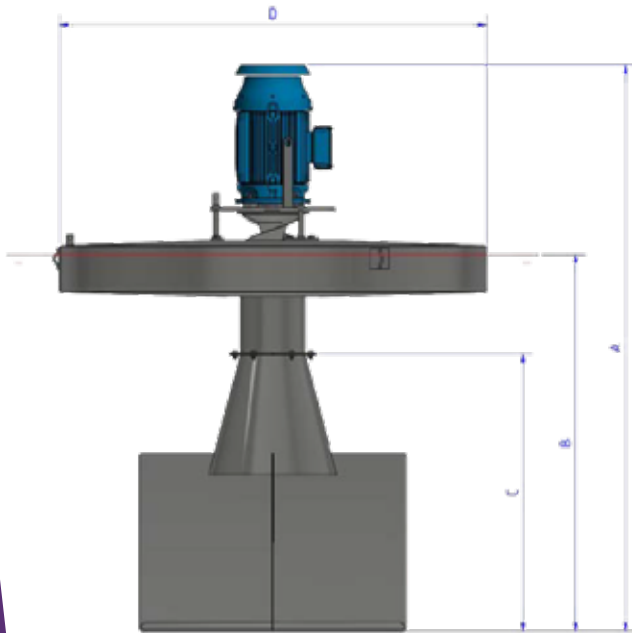
Splash and noise protection cover



Electrical cable floats



TECHNICAL DATA



WATER LEVELS

Model	kW	rpm	Min waterlevel at min draft*	Min waterlevel at standard draft*	Max waterlevel at standard draft	Max waterlevel at max draft
			m	m	m	m

SERIES 24 4Pol ± 1500 rpm

AER-AS 0075-24	0.75	1455	0.63	0.98	1.80	2.80
AER-AS 0110-24	1.1	1460	0.69	1.00	1.90	2.90
AER-AS 0150-24	4.5	1455	0.71	1.05	2.05	3.05
AER-AS 0220-24	2.2	1440	0.74	0.98	2.20	3.20
AER-A S0300-24	3	1440	0.74	1.06	2.40	3.40
AER-AS 0400-24	4	1450	0.80	1.11	2.50	3.50
AER-AS 0550-24	5.5	1465	0.85	1.26	2.60	3.60
AER-AS 0750-24-24	7.5	1465	0.90	1.33	2.80	3.80
AER-AS 1100-24	11	1470	1.00	1.46	3.00	4.00
AER-AS 1500-24	15	1470	1.08	1.53	3.20	4.70
AER-AS 1850-24	18.5	1470	1.10	1.73	3.30	4.80
AER-AS 2200-24	22	1475	1.10	1.83	3.40	4.90
AER-AS 3000-24	30	1480	1.20	2.14	3.60	5.10
AER-AS 3700-24	37	1480	1.24	2.08	3.80	5.30
AER-AS 4500-24	45	1480	1.26	2.16	3.90	5.40
AER-AS 5500-24	55	1480	1.38	2.30	4.00	5.50

SERIES 16 6Pol ± 1000 rpm

AER-AS0750-16	7.5	975	1.00	1.45	2.90	3.90
AER-AS1100-16	11	975	1.09	1.68	3.10	4.10
AER-AS1500-16	15	975	1.10	1.75	3.30	4.80
AER-AS1850-16	18.5	975	1.15	2.11	3.40	4.90
AER-AS2200-16	22	980	1.20	2.13	3.55	5.05
AER-AS3000-16	30	985	1.20	2.17	3.80	5.30
AER-AS3700-16	37	985	1.26	2.28	3.90	5.40
AER-AS4500-16	45	990	1.35	2.35	4.05	5.55
AER-AS5500-16	55	990	1.49	2.47	4.20	5.95
AER-AS7500-16	75	990	1.60	2.86	4.50	6.25
AER-AS9000-16	90	990	1.60	3.05	4.65	6.40
AER-AS1100-16	110	990	1.90	2.95	4.80	6.55
AER-AS13200-16	132	990	1.90	2.93	5.00	6.75

SERIES 12 8Pol ± 750 rpm

AER-AS 3700-12	37	740	1.49	2.39	4.20	5.70
AER-AS 4500-12	45	740	1.53	2.47	4.35	5.85
AER-AS 5500-12	55	740	1.79	2.89	4.55	6.30
AER-AS 7500-12	75	740	1.85	2.99	4.80	6.55
AER-AS 9000-12	90	740	2.10	3.41	5.00	6.75
AER-AS 11000-12	110	750	2.14	3.46	5.20	6.95
AER-AS 13200-12	132	750	2.25	3.64	5.40	7.15
AER-AS 16000-12	160	750	2.32	3.76	5.60	7.35
AER-AS 20000-12	200	750	2.39	3.89	5.90	7.65

Please note :

Final aerator selection and exact draft is dependent upon many factors including basin construction (concrete, earthen, membrane liner or other), water level fluctuation; nature and degree of settled deposits, process objectives (complete mix, partial mix, laminar mix or other) and whether the influent is screened. An Anti-erosion Plate is often specified for operation in shallow earthen or membrane lined basins and when settled deposits are present.

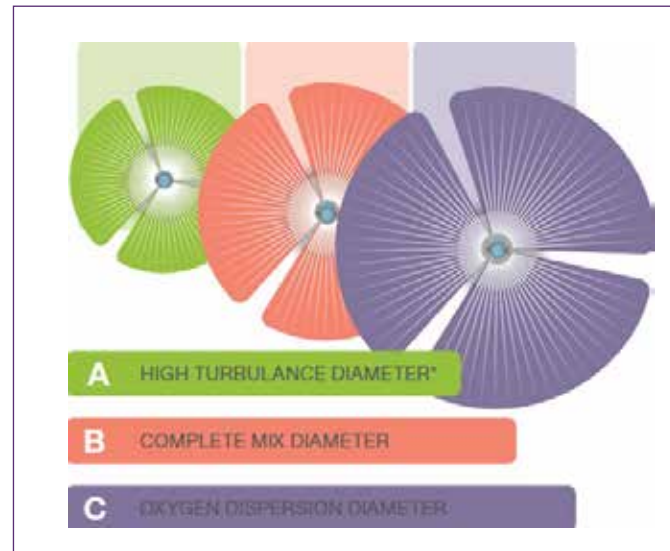
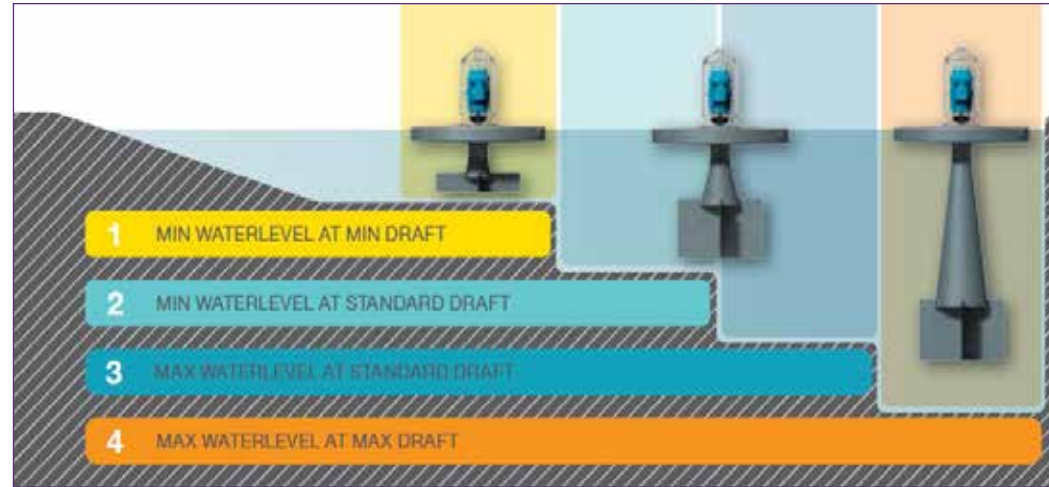
* Min water levels 1 and 2 are draft plus 0.1m

ZONE OF INFLUENCE		
A** Hight turbulence diameter	B complete mix diameter	C oxygen dispersion diameter
m	m	m

2.5	7	20
3.5	8	24
4.5	9	28
5.5	12	45
6.5	13	45
8	14	47
9.5	15	49
10	16	52
10.5	19	61
11	22	70
11.5	24	75
12	25	80
13	25.5	86
14	26	90
15	26.5	95
16	27	100

10.5	18	51
11.5	20	63
12	23	72
12.5	25	78
13	27	84
14	31	95
14.5	33	100
15	35	107
15.5	40	116
16.5	44	128
17	46	137
17.5	50	143
18	52	145

15	34	103
15.5	36	110
16	41	119
17	48	128
17.5	49	135
18	53	144
18	57	150
18.5	60	154
19	62	157



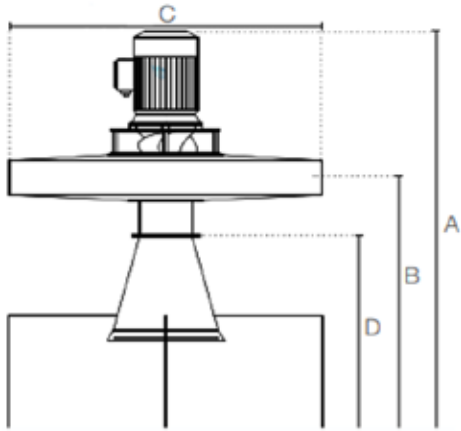
Please note:

Zones A, B and C are averages values depending on basin dimensions, water levels, solid concentration, operational hours per day and reactor configuration.

** Zone A is min basin diameter and min aerator centres.

RANGE

- 1 -200 HP
- 4,6 + 8-Pole Speeds, direct drive
- AISI 304/316 or special SS



APPLICATIONS

- Aerated lagoons + basins
- Activated -sludge processes
- Aerobic digestion processes
- MBR + SBR

Model AER-AS	HP	Total Standard Height (A)	Submerged Height (B)	Float Diameter (C)	Intake Cone Cross Height (D)	Weight (lbs)
SERIES 30 - 1800 RPM						
0075-30	1	51	34	39	24	240
0110-30	1,5	52	35	39	26	263
0150-30	2	55	39	39	28	298
0220-30	3	56	36	39	24	310
0400-30	5	62	39	49	28	410
0550-30	7,5	72	48	49	35	536
0750-30	10	76	51	59	38	586
1100-30	15	82	52	79	38	862
1500-30	20	87	56	79	41	990
1850-30	25	102	67	79	50	1140
2200-30	30	107	72	79	55	1184
3000-30	40	116	78	79	60	1481
3700-30	50	120	78	79	60	1563
4500-30	60	128	80	91	61	2021
5500-30	75	130	82	91	65	2403
SERIES 20 - 1200 RPM						
0750-20	10	87	59	59	40	838
1100-20	15	98	62	79	44	1146
1500-20	20	100	65	79	46	1216
1850-20	25	106	69	79	48	1543
2200-20	30	117	79	79	58	1631
3000-20	40	119	79	94	58	2026
3700-20	50	125	83	94	62	2088
4500-20	60	133	87	94	65	3053
5500-20	75	141	92	94	69	3209
7500-20	100	165	109	94	84	4233
9000-20	120	167	110	118	86	4367
11000-20	150	168	110	118	86	5406
SERIES 15-900RPM						
3700-15	50	139	93	94	65	3351
4500-15	60	145	97	94	68	3726
5500-15	75	165	109	118	81	4400
7500-15	100	168	111	118	82	4708
9000-15	125	184	126	118	96	4955
11000-15	150	185	129	118	98	5456
15000-15	200	199	139	138	106	8548

All dimensions are in inches. The above dimensions are approximate for Standard Aerators.
Please contact the factory for custom options and dimensions.

A STEP AHEAD IN WATER TECHNOLOGY

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