

# VERTICAL SHAFT AERATOR

Aeration and mixing of biological reactors can be achieved by using surface aerators. Designed at various standard sizes, they provide oxygen for specified application. Power range from 5.5 to 132 kW and they are also available with floating systems.

Aerators consists of following main parts;

## Motor

Motor is triphase, totally enclosed, single or dual speed, asynchronous and complies with DIN 42677 T1. Protection and insulation classes are selected according to operating conditions. The motor is connected to the gearbox with a direct or elastic coupling.

## Gearbox

Gearbox is two-level or three-level, with coaxial flanged and vertical type, and comprises oil level indicator. This type of gearbox, used up to 37 kW, is designed with an AGMA safety rating greater than 2.

## Coupling

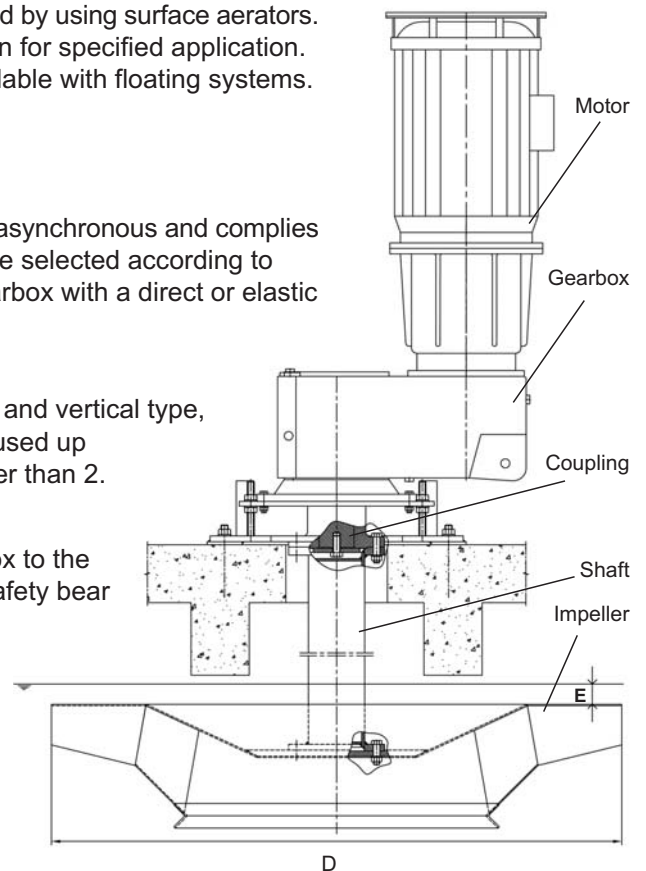
Coupling is rigid, flanged type, and connects the gearbox to the aerator shaft. It is made of mild steel and designed to safety bear the operational loads.

## Shaft

This part transfers the rotary motion from the gearbox to the impeller and is made of steel pipe of appropriate section, with flanges on both ends. The upper flange is connected to the coupling and the lower to the impeller. The shaft is epoxy coated for surface protection. Stainless steel is also available.

## Impeller

Impeller has a conical shape and has vanes on the underside. It is made of carbon steel, and epoxy coated for surface protection. Alternatively, it is made of stainless steel.



Power kW	Speed		Dimension		Basin depth		Distance between columns, m (for fixed aerators)	Float outer diameter, m (for float aerators)	Weight, kg
	d/d	m/sec	D, m	E, mm	min., mm	max., mm			
1.1	101	3.54	0.67	40	1.0	2.0	1.4	4.0	85
1.5	101	3.70	0.70	40	1.2	2.0	1.4	4.3	100
2.2	104	3.92	0.70	40	1.2	2.0	1.4	4.6	125
3	100	3.71	0.81	40	1.2	2.0	1.4	4.7	185
4	105	4.72	0.86	40	1.2	2.0	1.6	5.0	200
5.5	91	4.38	0.92	60	1.2	2.5	1.6	5.4	290
7.5	95	4.87	0.98	60	1.2	2.5	1.6	6.0	320
11	90	5.18	1.10	60	1.5	2.5	1.6	7.0	500
15	84	5.45	1.24	80	1.5	3.0	1.8	7.4	700
18.5	87	5.08	1.45	80	2.0	3.0	1.0	7.6	800
22	67	5.16	1.47	80	2.0	3.5	1.0	7.7	1210
30	62	6.35	1.65	80	2.0	3.5	2.0	8.3	1820
37	48	5.04	2.02	80	2.0	4.0	2.0	8.5	1950
37	48	5.04	2.02	80	2.0	4.0	2.0	8.5	1950
45	43	5.15	2.35	100	2.0	4.0	2.2	9.1	2320
55	41	5.33	2.50	100	2.0	4.0	2.2	9.4	2490
75	36	5.14	2.75	100	2.0	4.5	2.2	9.6	2950
90	30	5.18	3.30	120	3.0	6.0	2.5	9.8	3450
110	30	5.37	3.42	120	3.0	6.0	2.5	10.0	3600
132	30	5.53	3.52	120	3.0	6.0	2.5	10.2	4200

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**MASS ARITMA SİSTEMLERİ İNŞAAT SANAYİ VE TİCARET A. Ş.**

Gebze Organize Sanayi Bölgesi, 700. Sok., Gebze 41480 Kocaeli - Türkiye

Phone: +90 (262) 751 2210 pbx Fax: +90 (262) 751 0730 e-mail: info@massaritma.com <http://www.massaritma.com>