

LOW SPEED SURFACE AERATOR



LOW SPEED, HIGH

The Enrich LS series, is a low speed surface aerator specially designed to achieve maximum oxygen transfer economically.

Power requirement are generally lower than their high speed counterpart.

Being low speed, it has less wear and tear and less problem of sprays being carried off by wind which is a potential cause for complaints and a health hazard.

1 DRIVE UNIT

- Heavy duty helical geared motor.
- Agitation or Reinforced bearing / shaft type.
- The reducer has been designed for daily 24 hours operation classified as moderate shock load with a service factor equal or over 2.0.
- IP 55 motor degree of protection to DIN IEC34, sheet 5
- The stator winding of the motors are manufactured in insulation class F.

2 IMPELLER

- **For unit upto 30 Hp**
 - Constructed of carbon steel.
 - 2 coats of high solids epoxy (FRP lining as optional).
 - Conical cone shape with 8 - 12 blades.
- **For unit above 30 Hp**
 - Made of carbon steel with uptake cone turbine shape of 12 blades

3 PONTOONS

- Constructed from carbon steel protected with painting and fill with polyurethane foam inserted

SPECIAL FEATURE

- low speed
- fixed or floating until available
- high efficiency oxygen transfer
- oxygen transfer rate of 72 kg/d to 2376 kg/d

ADVANTAGES

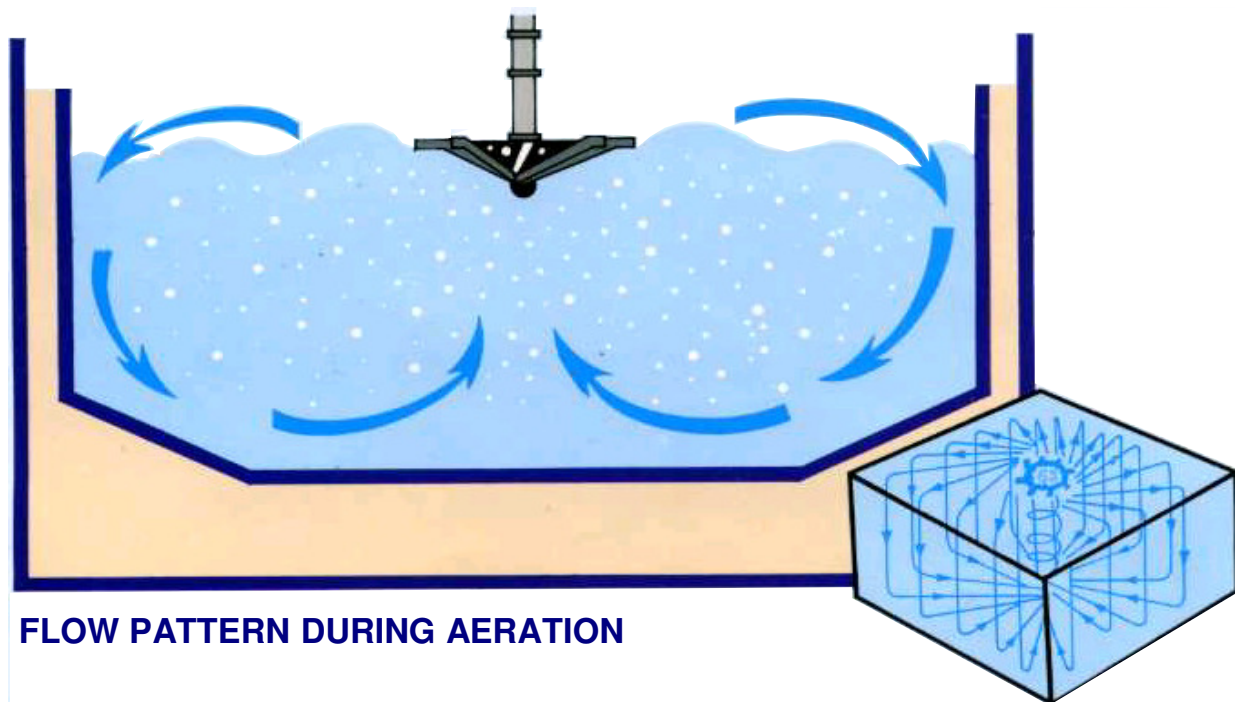
- low maintenance cost due to lower wear tear
- no spraying problem
- low power consumption
- excellent mixing with minimum splashing

POSSIBLE APPLICATION

- aeration lagoon
- activated sludge system
- oxidation ditch
- combined tank system
- sequential batch reaction
- equalization tank

INDUSTRIES

- aqua farming
- food / beverage
- poultry
- tannery
- textile
- chemical
- sewage

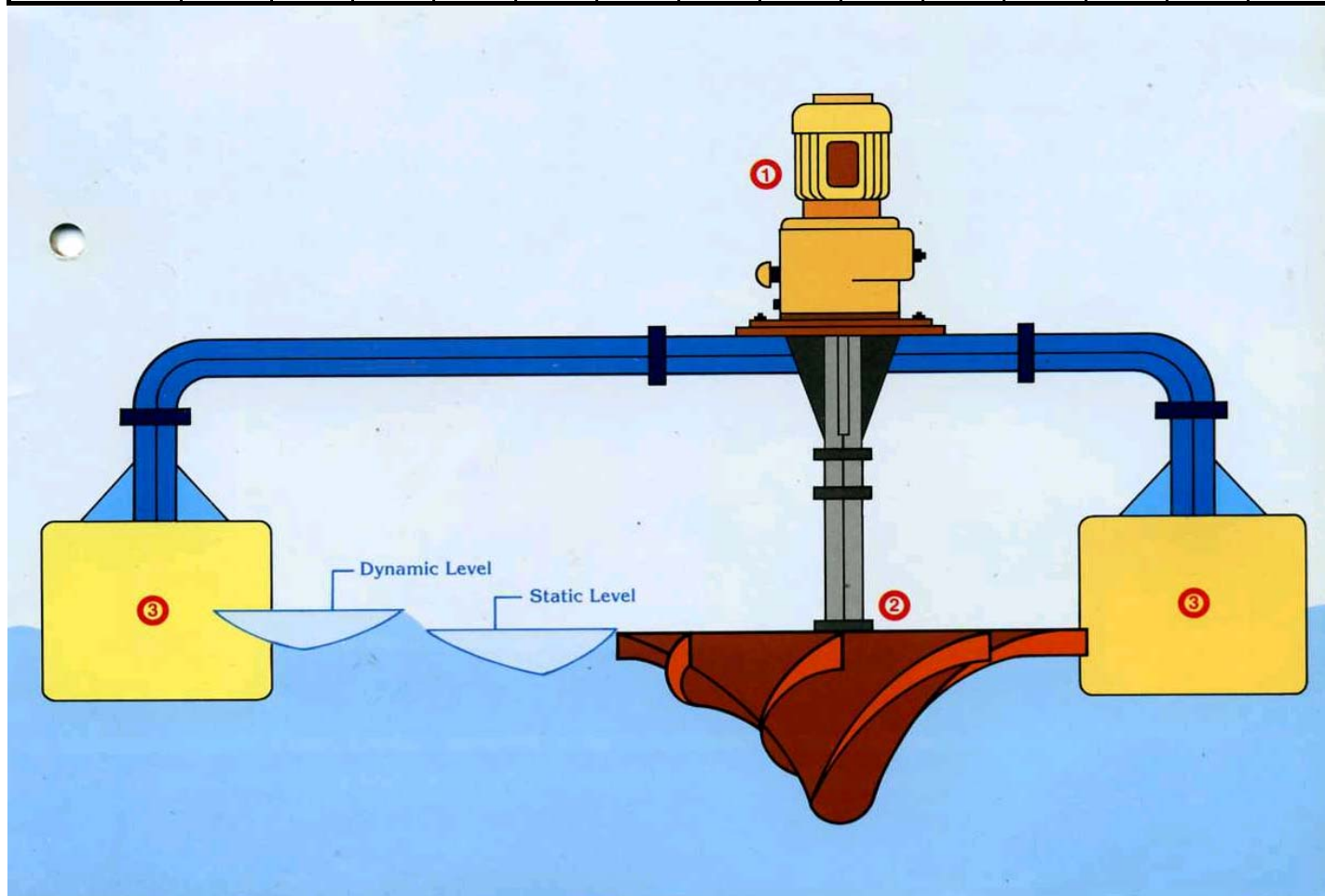


FLOW PATTERN DURING AERATION

OXYGEN TRANSFER

TYPICAL PERFORMANCE DATA FOR FLOATING TYPE

POWER	kW	1.5	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45	55
OUTPUT	Hp	2	3	5.5	7.5	10	15	20	25	30	40	50	60	75
Avg. Rotor speed	rpm	101	119	98	93	99	89	80	76	61	50	62	60	70
Min. basin dia.	m.	4.5	5		7		9	10.5		12			15	
Max. basin dia.	m.	8	10	12	15		21	30		36			42	
Min. liquid level in tank	m.	1.5					1.8				2.4			
Max. liquid level in tank	m.	3.5			4.0		4.8				5.7			
Zone affected by turbine (in dia.)	m.	27	30	36	45		51	60		75			82	
Theoretical capacity	kgO ₂ /hr	3.0	4.5	8.5	11.6	17.2	26.1	31.0	40.0	48.0	64.0	81.4	99.0	121.0
Min. flow	m ³ /min	17	20	28	36	44	48	60	80	100	120	160	180	220
Dia. of the spray	m.	3.2	3.6		4.2		4.5	5.4			6.6			
Average weight	t	0.16	0.18	0.20	0.24	0.28	0.50	0.75	1.00	1.40	1.50	1.60	1.60	1.80



TYPE PERFORMANCE DATA FOR FIXED TYPE

POWER OUTPUT		kW	1.5	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45	55
		Hp	2	3	5.5	7.5	10	15	20	25	30	40	50	60	75
Avg. Rotor speed		rpm	101	119	107	93	88	89	80	67	61	49	61	60	70
Dimension	A	mm.	300				350		600			700	420		
	B		M-30					M-36				M-45			
	C	mm.	600			650		900							
	D	mm.	675		715	820	855	950	1010	1100	1250	1350	1632	1690	1740
	E	mm.	400				700		800			900			
Min. liquid level in tank		m.	1.5					1.8				2.4			
Max. liquid level in tank		m.	3.5			4		4.8				5.7			
Zone affected by turbine ϕ		m.	27	30	36	45		51	60		75			82	
Theoretical capacity		kgO ₂ /hr	3.0	4.5	8.52	11.6	17.2	26.1	31	40	48	64	81.4	99.0	121.0
Min. impeller pumping flow		m ³ /min	17	20	28	36	44	48	60	80	100	120	160	180	220
Dia. of Spray		m.	3.2	3.6		4.2		4.5	5.4			6.6			
Average Weight	F1	t	0.38	0.41	0.54	0.71	1.25	1.50	1.81	2.30	3.92	3.00	3.62	4.27	5.03
	F2		0.04	0.05	0.06	0.10	0.18	0.28	0.29	0.31	0.80	0.40	0.53	0.60	0.73

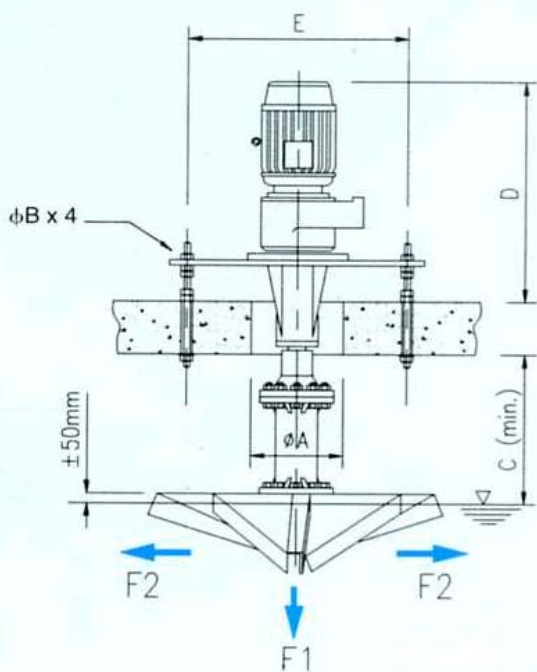


Fig. 1 ≤ 30 KW. (40HP)

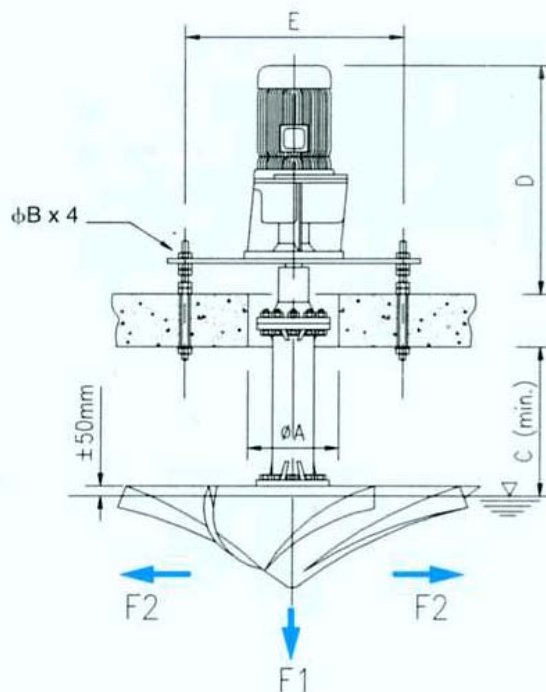


Fig. 2 ≥ 37 KW. (50HP)



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