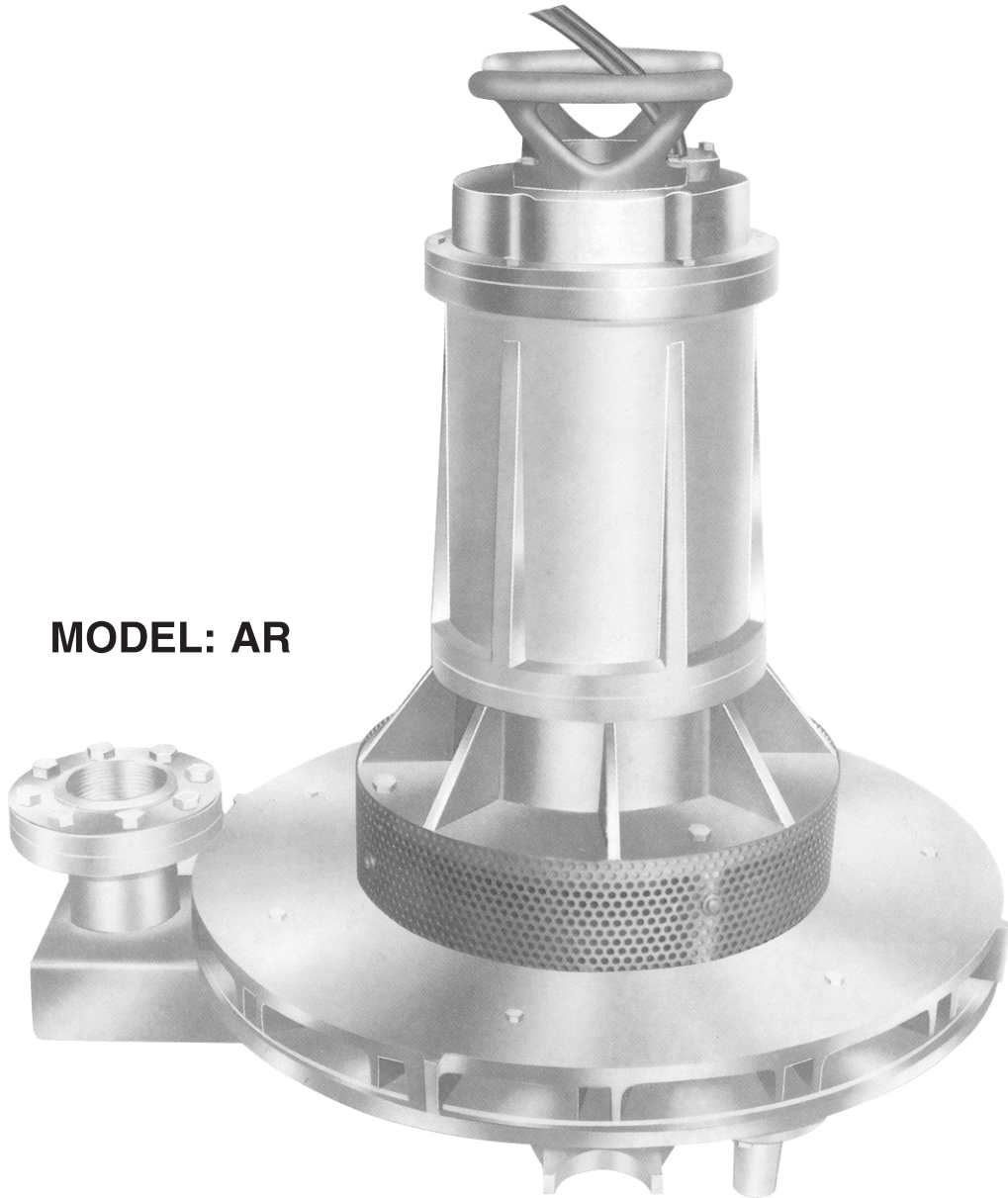


# 川源牌

## SUBMERSIBLE AERATOR



## 沈水式曝氣機



MODEL: AR

CAT-NO CY-10

川 源 股 份 有 限 公 司  
GSD INDUSTRIAL CO., LTD

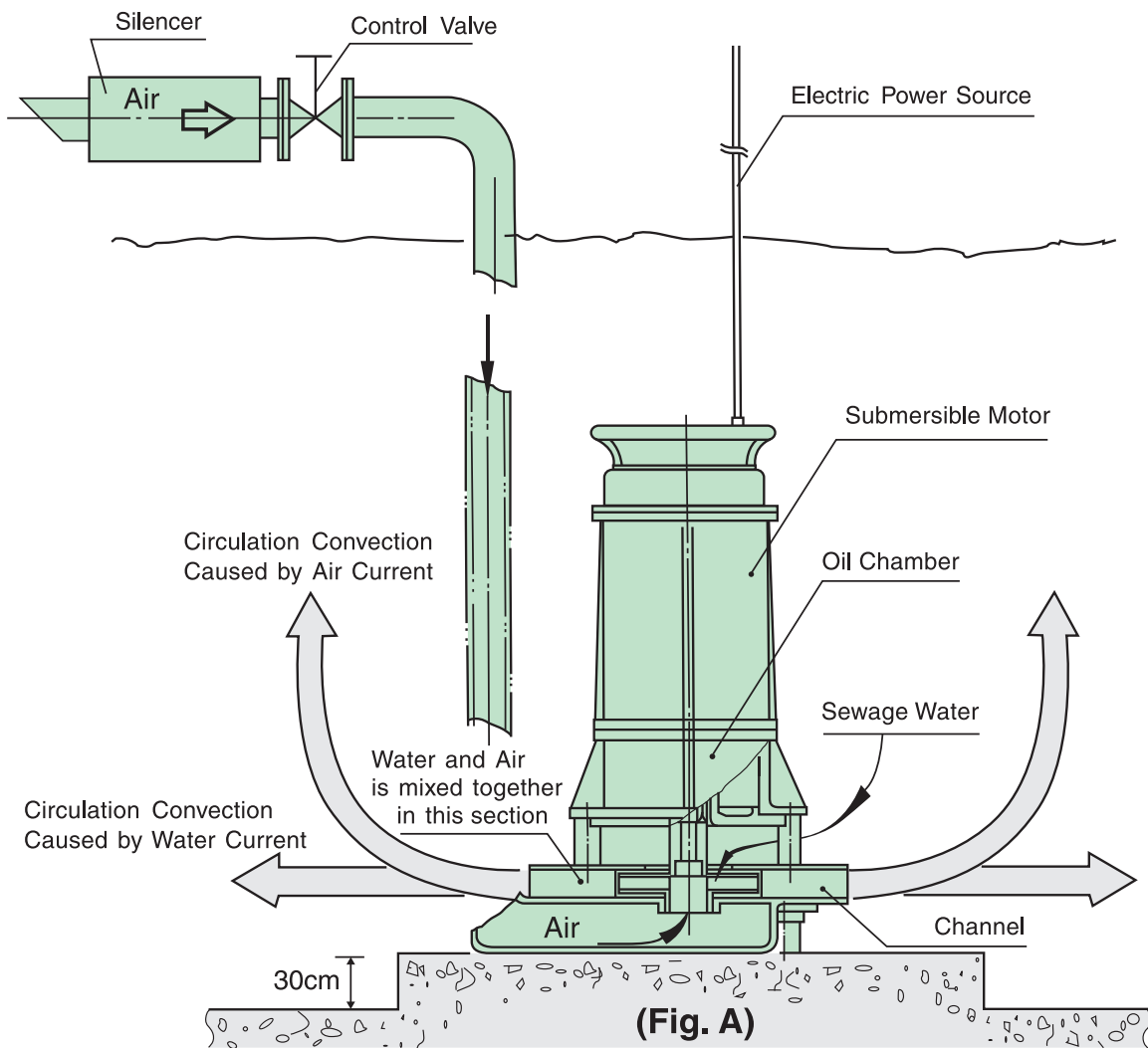
## Introduction:

With fast industrial developments, human life became more materially civilized. On the contrary, gigantic quantities of waste water were brought by the industrial manufacturing. In the meantime, large quantities of household waste water were also resulted from our daily life. All these have affected the living quality and damaged the environmental ecology. Chuan Yuan has been making every endeavour in developing the waste water processing equipment. In addition to sewage pumps, waste handling pumps, sludge dehydration system, the company also developed submersible aerator and surface aerators for higher processing rate of BOD and COD in the processes of waste water. These aerators have been widely used in domestic and overseas waste water processing plants.

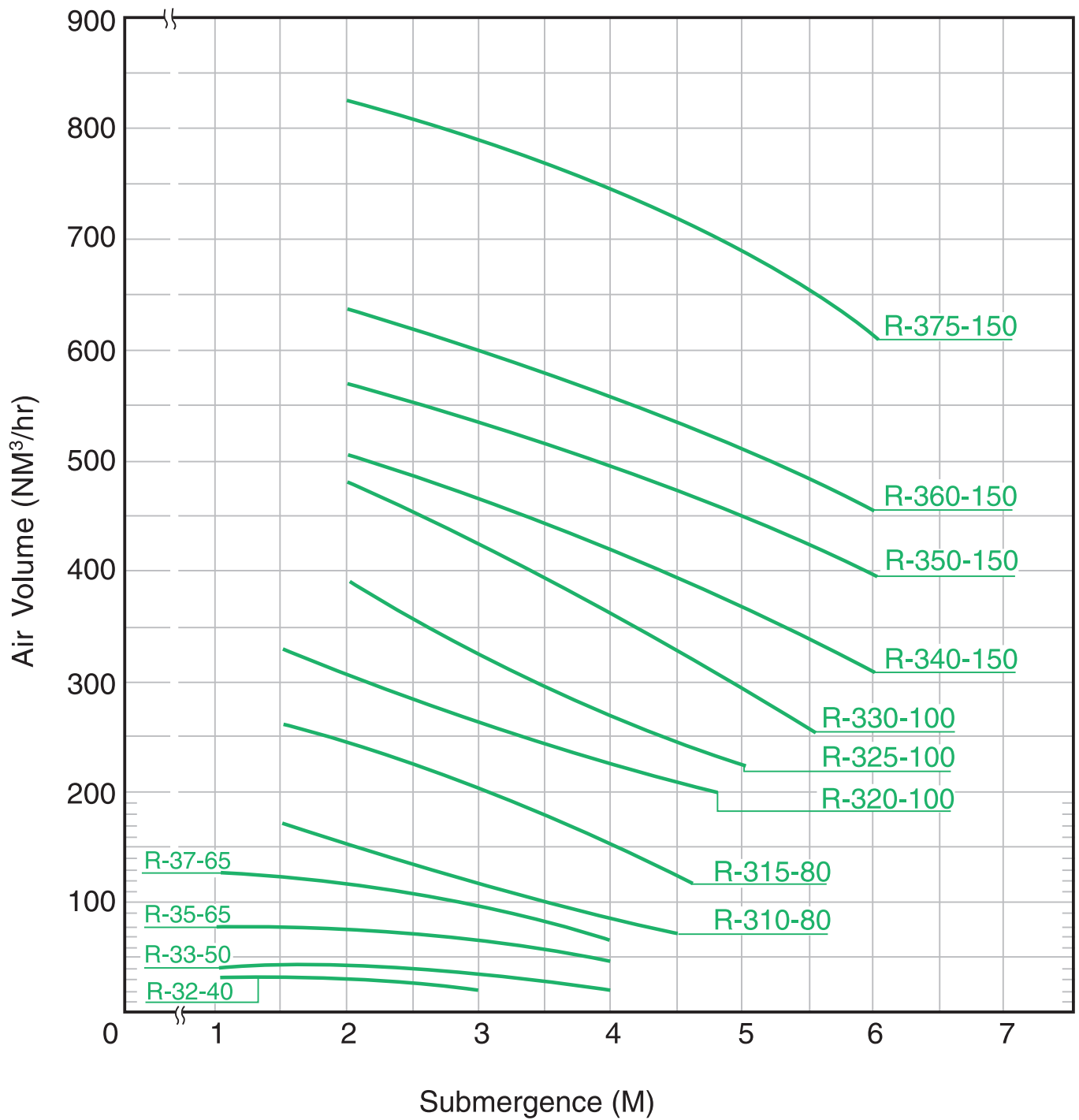
## Feature (Refer to Fig. A):

Submersible aerator-AR utilizes the rotation of the impeller coupled directly to the motor to create a centrifugal force, which make local low pressure suck in water. Meanwhile the entrance of the Impeller result in vacuum to draw air from atmosphere. Water and air mix in the Channel of Aeration Housing. The air-water-mixture current is discharged speedily by the centrifugal force.

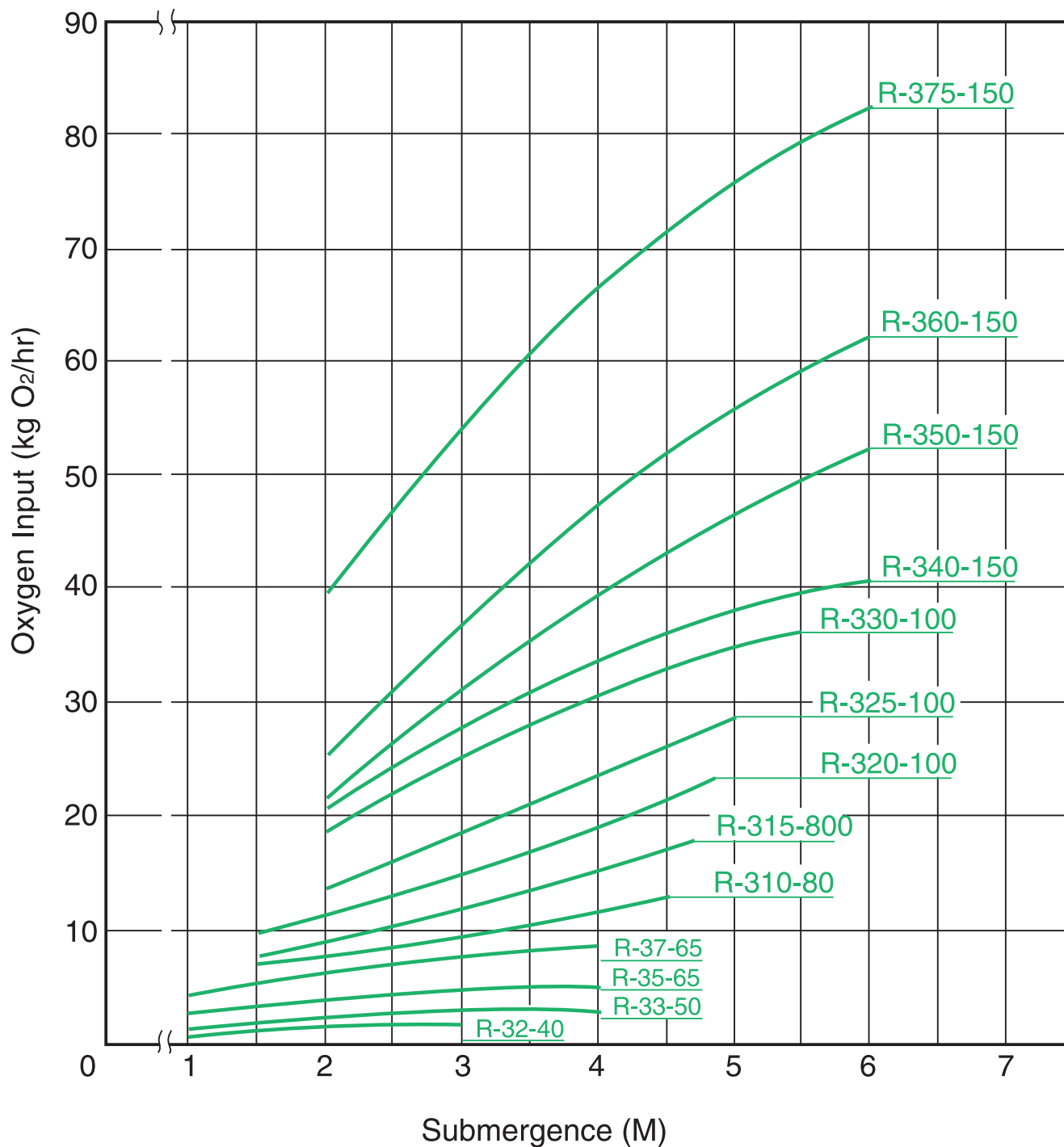
Due to the water spurting extremely strong, make the fluid create convection and circulation effectively. Moreover the air becomes tiny bubbles. On the one hand the bubbles rise slowly, on the other hand the atmosphere oxygen is dissolved in water. Because the bubbles are tiny and numberless their surface area is large, it makes the oxygen transfer rate of unit BHP higher than other type of aerator.



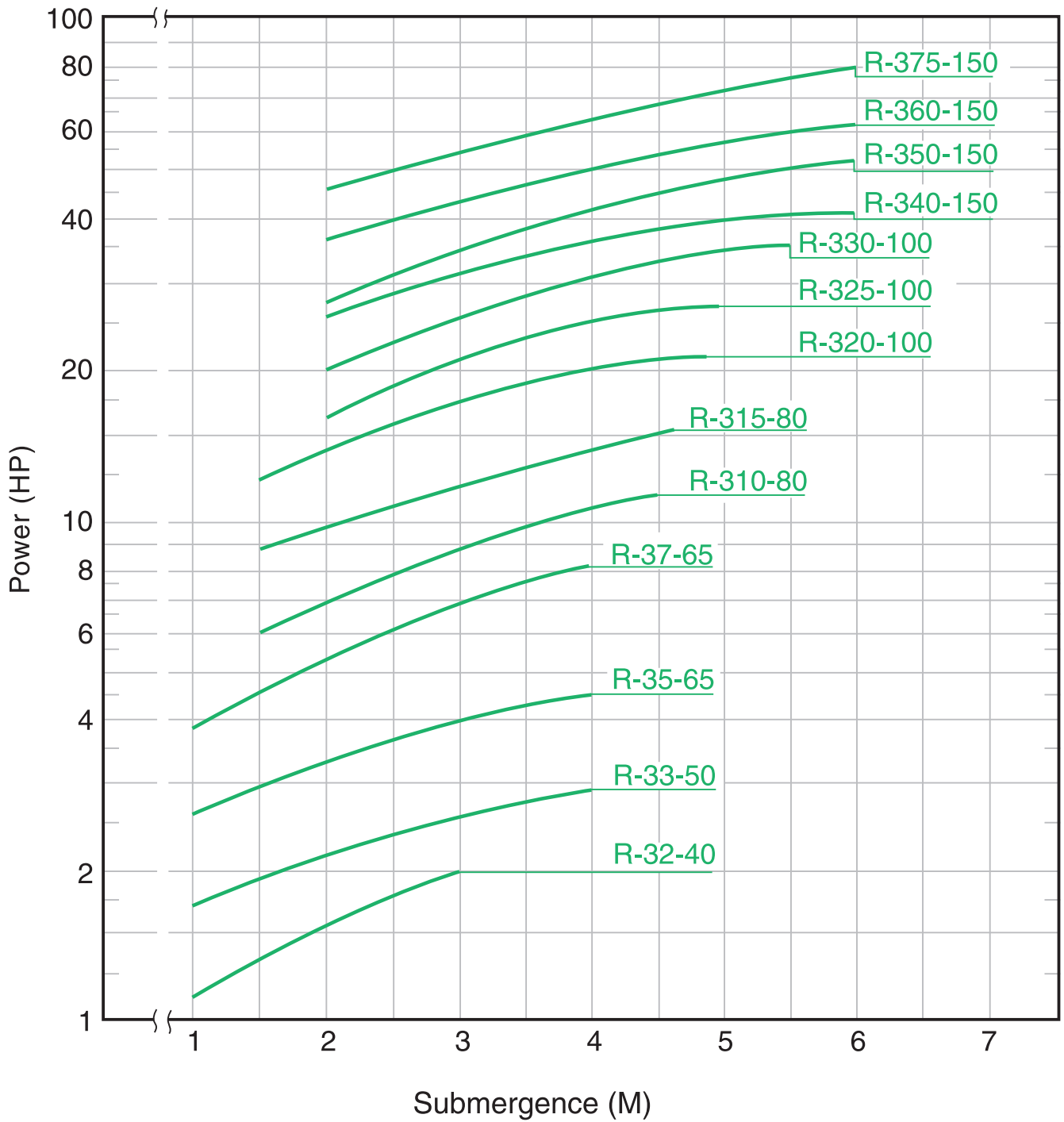
# Submersible Aerator Air Volume Performance Curve



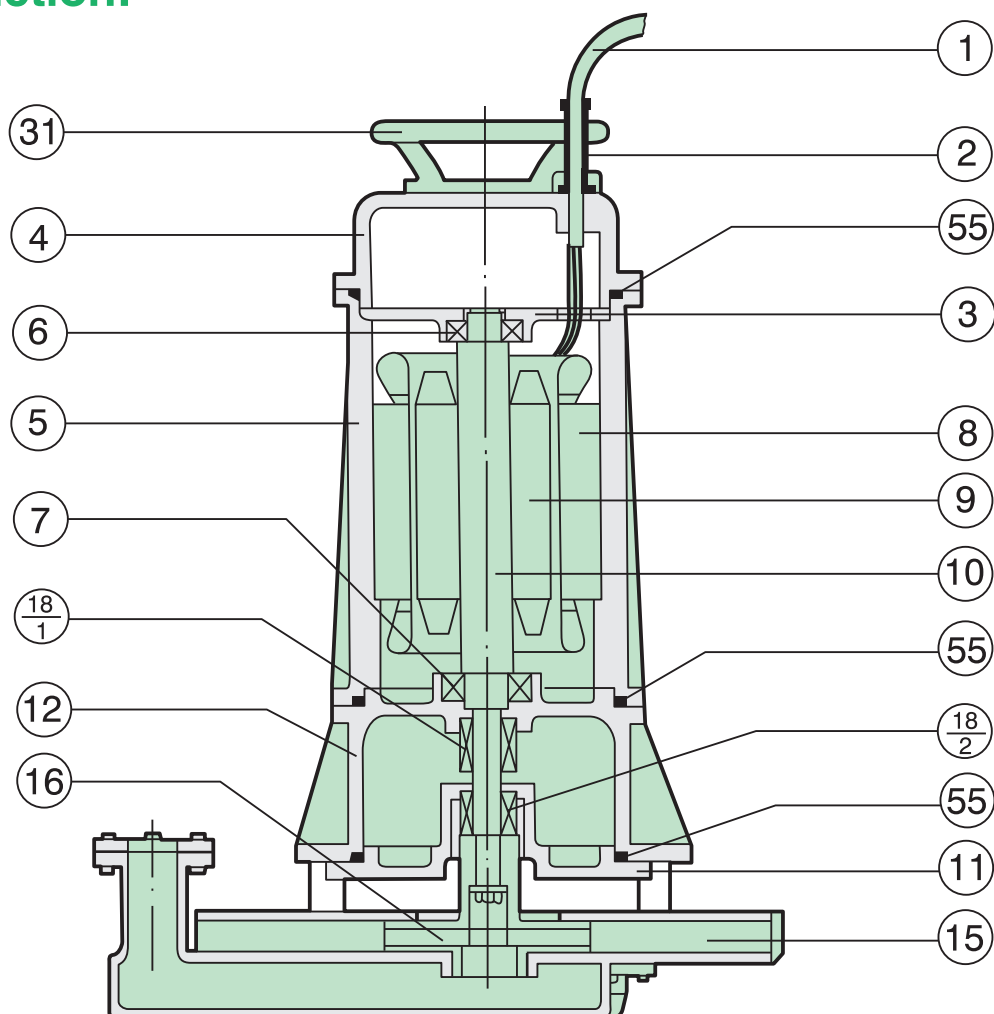
# Submersible Aerator Oxygen Input Performance Curve



# Submersible Aerator Power Performance Curve

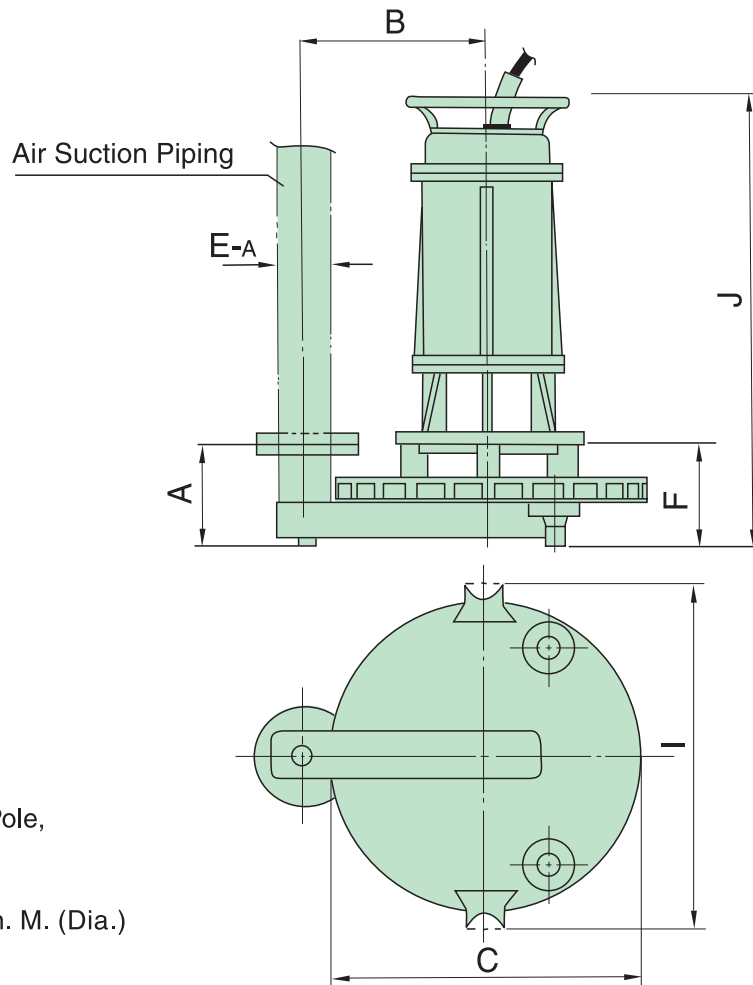


## Construction:



PARTS NUMBER	NAME	MATERIAL	NOTE
1	Cable	2 RNCT	
2	Cable Hood	NBR	
3	Bearing Housing	FC 20	
4	Motor Cover	FC 20	
5	Motor Casing	FC 20	
6	Ball Bearing		
7	Ball Bearing		
8	Stator		
9	Rotor		
10	Shaft	SUS 410	
11	Oil Cover	FC 20	
12	Oil Box	FC 20	
15	Aeration Housing	FC 20	
16	Impeller	SCS 13	
18-1	Mechanical Seal		
18-2	Mechanical Seal		
31	Hanger	FC 20	
55	O-Ring	NBR	

## Dimension:

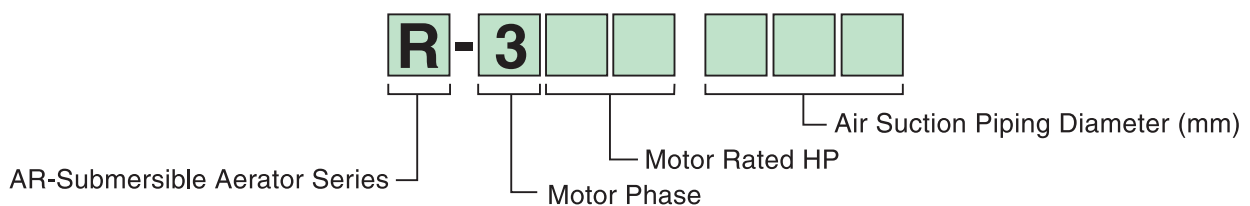


P: Power, 3 Phase, 4 Pole,  
220V (220/380/440),  
60Hz (50Hz); HP.  
D: Range of Convection. M. (Dia.)  
H: Submergence. M.

Unit: mm

Type	P	Main—Sub. D	Max.—Min. H	A	B	C	E	F	I	J
R-32-40	2	1.0-2.0	3.0-1	135	295	500	40	148	565	550
R-33-50	3	2.5-5.0	4.0-1	135	295	500	50	150	565	580
R-35-65	5	3.0-6.0	4.0-1	135	295	500	65	152	565	698
R-37-65	7½	3.5-7.0	4.0-1	180	410	680	65	206	745	810
R-310-80	10	4.5-9.0	4.5-1.5	180	410	680	80	208	745	813
R-315-80	15	5.0-10.0	4.6-1.5	180	410	680	80	210	745	815
R-320-100	20	5.8-11.5	4.8-1.5	180	410	680	100	213	745	818
R-325-100	25	5.9-11.8	5.0-2.0	180	410	680	100	215	745	978
R-330-100	30	6.0-12.0	5.5-2.0	180	410	680	100	220	745	992
R-340-150	40	7.3-14.5	6.0-2.0	245	575	950	150	230	1015	1040
R-350-150	50	7.5-15.0	6.0-2.0	245	575	950	150	230	1015	1040
R-360-150	60	7.8-15.5	6.0-2.0	245	575	950	150	240	1015	1050
R-375-150	75	8.0-16.0	6.0-2.0	245	575	950	150	240	1015	1050

## Instruction of Type No:



# Basin Dimension:

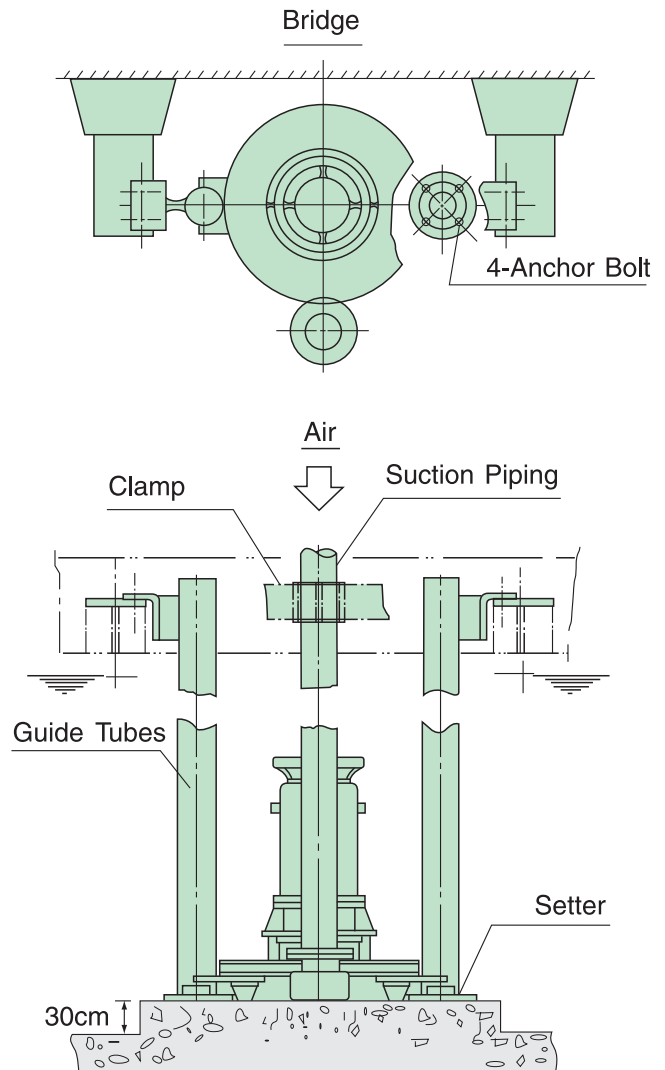
Unit: mm

Type	Maximum Water Depth	Shape and Size Type		
		Round	Square	Rectangular
R-32-40	3	3.5 (Dia)	3.1 (Length)	2.5 × 3.8
R-33-50	4	4.8 (Dia)	4.2 (Length)	3.4 × 5.2
R-35-65	4	6.6 (Dia)	5.8 (Length)	4.8 × 7.1
R-37-65	4	8.0 (Dia)	7.1 (Length)	5.8 × 8.7
R-310-80	4.5	9.8 (Dia)	8.7 (Length)	7.1 × 10.6
R-315-80	4.6	12.5 (Dia)	11.1 (Length)	9.1 × 13.6
R-320-100	4.8	12.5 (Dia)	11.5 (Length)	9.1 × 13.6
R-325-100	5	12.5 (Dia)	11.8 (Length)	9.7 × 14.5
R-330-100	5.5	12.5 (Dia)	12.0 (Length)	9.7 × 14.5
R-340-150	6	16 (Dia)	14.5 (Length)	12.5 × 17
R-350-150	6	16 (Dia)	15 (Length)	13 × 17.5
R-360-150	6	16 (Dia)	15.5 (Length)	13 × 17.5
R-375-150	6	16 (Dia)	16 (Length)	13.5 × 18

## Installation:

For better and easier maintenance of the aerator, following instructions shall be noticed:

- (1) The setter should be fixed on concrete base of the aeration basin (before the aeration basin was filled with waste water.)
- (2) When designing the Bridge (as shown in left Fig.) the strength of the construction, the warping and the lifting equipment should be considered.
- (3) The Guide Tubes should be prepared in advance and it is advisable to use the stainless steel tubes.
- (4) The Air Pipes should be fixed if necessary depending upon the actual condition.





## Comparison of Aeration Equipment.

	Blower/Biffuser Dispersion Pipe.	AR Submersible Aerator
<b>Installation Outline</b>		
<b>Accessory</b>	<ul style="list-style-type: none"> <li>• Flexible Joint, Discharge Silencer, Gate Valve, C.V. etc.</li> <li>• High Price Air Diffuser.</li> </ul>	<ul style="list-style-type: none"> <li>• Unnecessary</li> <li>• Unnecessary</li> </ul>
<b>Characteristic</b>	<ul style="list-style-type: none"> <li>• Noisy</li> <li>• High Temperature Discharged.</li> <li>• Disallowing Dust into Blower Casing</li> <li>• Damageable</li> </ul>	<ul style="list-style-type: none"> <li>• Silence</li> <li>• Don't Worry</li> <li>• None</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>• Air Diffuser Blocked Easily and Cleaned Difficulty.</li> <li>• More Than Once a Month.</li> </ul>	<ul style="list-style-type: none"> <li>• Once a Year</li> </ul>
<b>O<sub>2</sub> kg/BHP</b>	Low	High



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