

AR 沉水式曝氣機 SUBMERSIBLE AERATOR



泵浦 曝氣系統 廢水處理機械

TAF水泵實驗室認證合格廠
品質管理系統ISO 9001



綠色・安全・永續經營

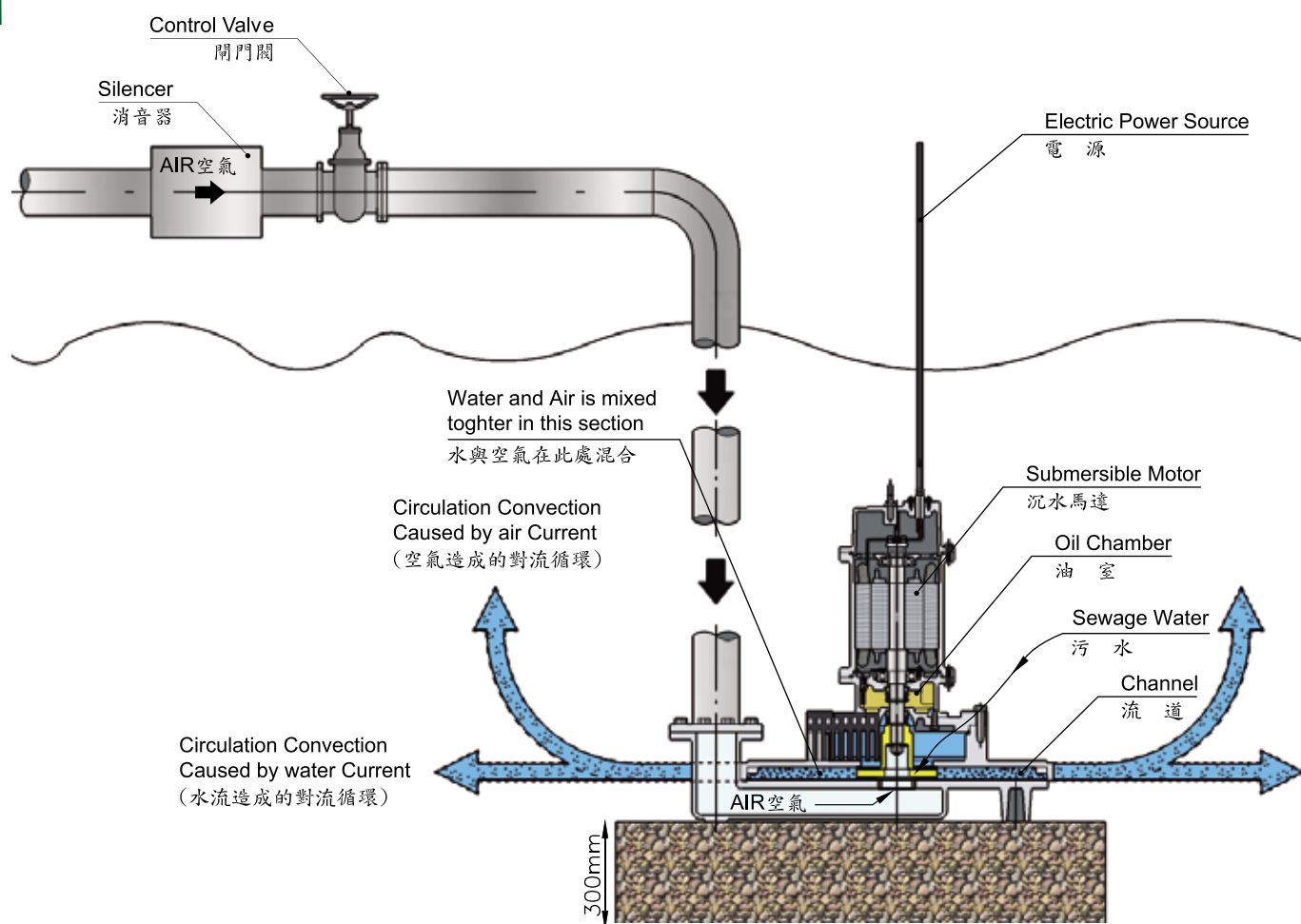
川源股份有限公司
GSD INDUSTRIAL CO., LTD.

特點 FEATURES

“川源牌”沉水式曝氣機，乃是利用馬達直接帶動葉輪旋轉來產生離心力，它可在水中形成局部低氣壓來引進液體，同時由於葉輪轉動時所造成之真空吸力亦會自大氣中吸入空氣，此時液體和氣體在混氣室中充分混合後之氣液混合體再藉由離心力作用快速排出。

由於水流噴出的力量相當大，能夠有效促成液體進行對流和迴流的動作，此時在氣液混合體內的微小氣泡，自水底緩緩上升的過程中，氧氣便逐漸溶入水裏，因為氣泡相當細小且數量很多，氣體與液體的接觸面積相形增大，因此溶氧效率高。

CMSA submersible aerator-AR uses centrifugal force from impeller rotation, it makes local-pressure in the water and the impeller entrance generates vacuum situation to draw oxygen from air. When air and water mix together, the centrifugal force will push the mix through channels. Powerful water flow from aerator can push the liquid doing convection and circulation effectively. In addition, the air from liquid from plenty of tiny bibbles, which slowly rise from the bottom, the oxygen will integrate in water gradually. The oxygen transfer rate of CMSA aerator is higher than other competitors' because these bubble are tiny numberless and the surface area is large.

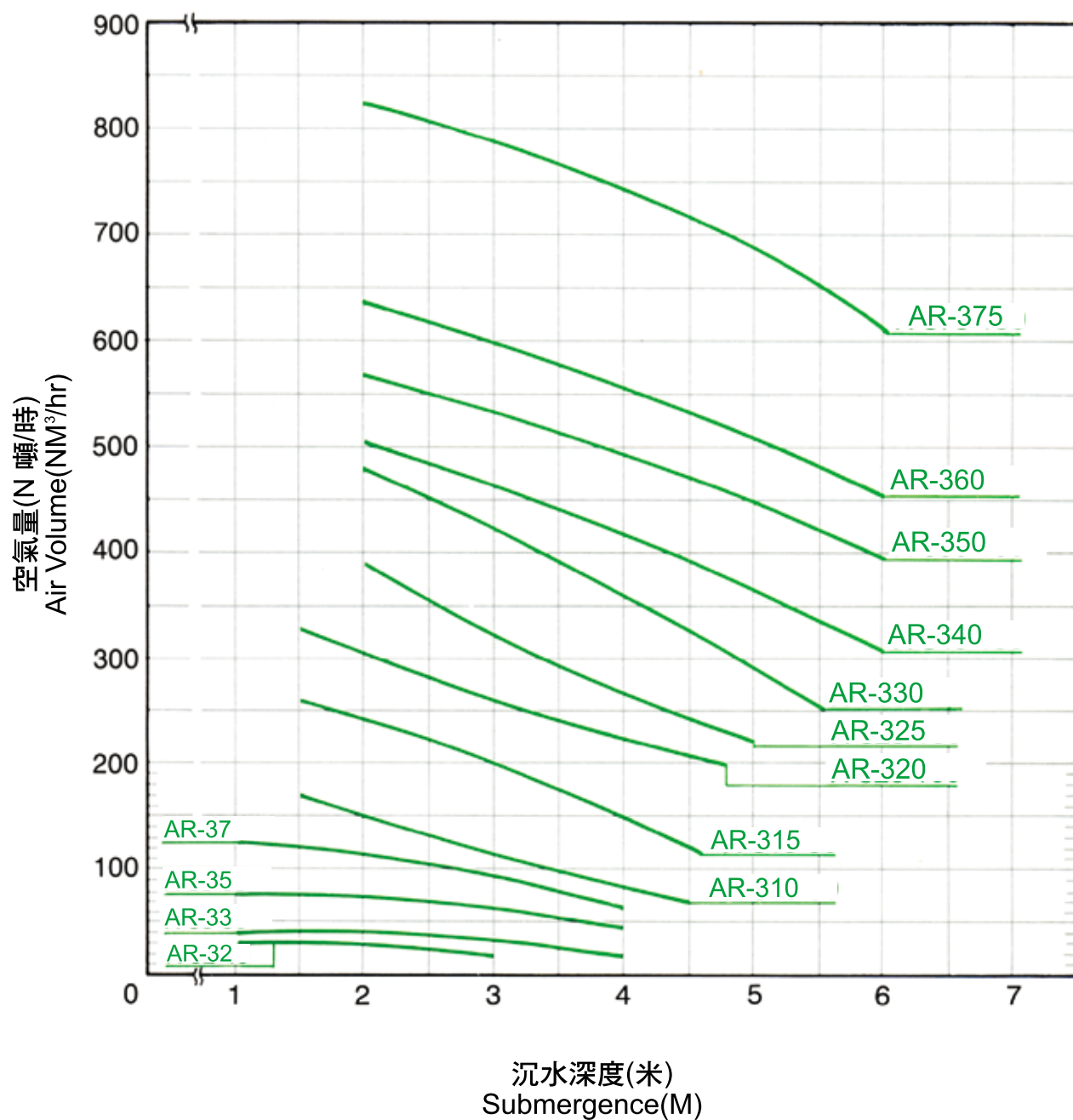


. (Fig A)

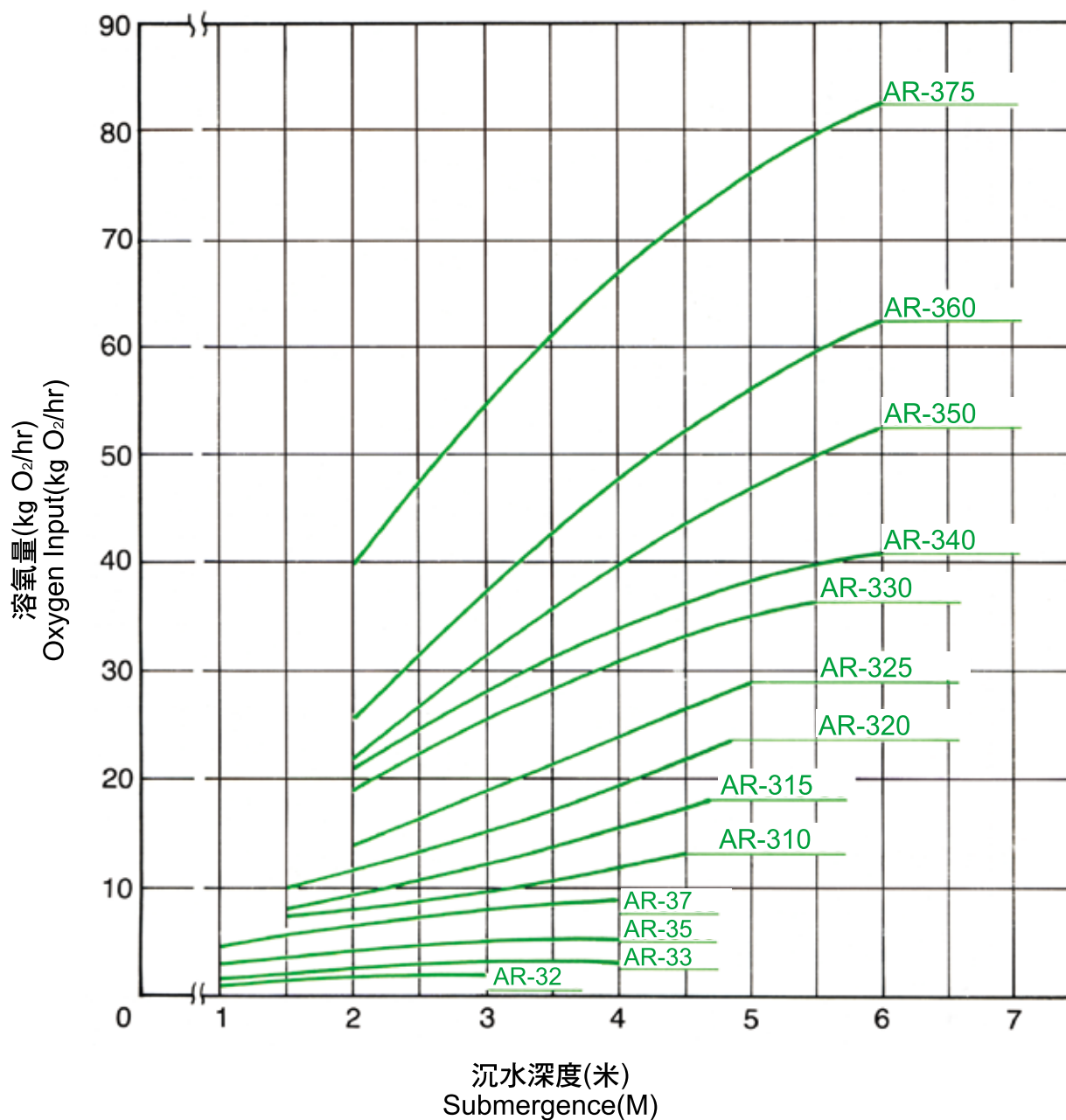
註：消音器及閘門閥為選購附屬配備。

Silencer and Control Valve are optional equipments.

供氣量與沉水深度關係曲線圖 AIR VOLUME PERFORMANCE CURVE



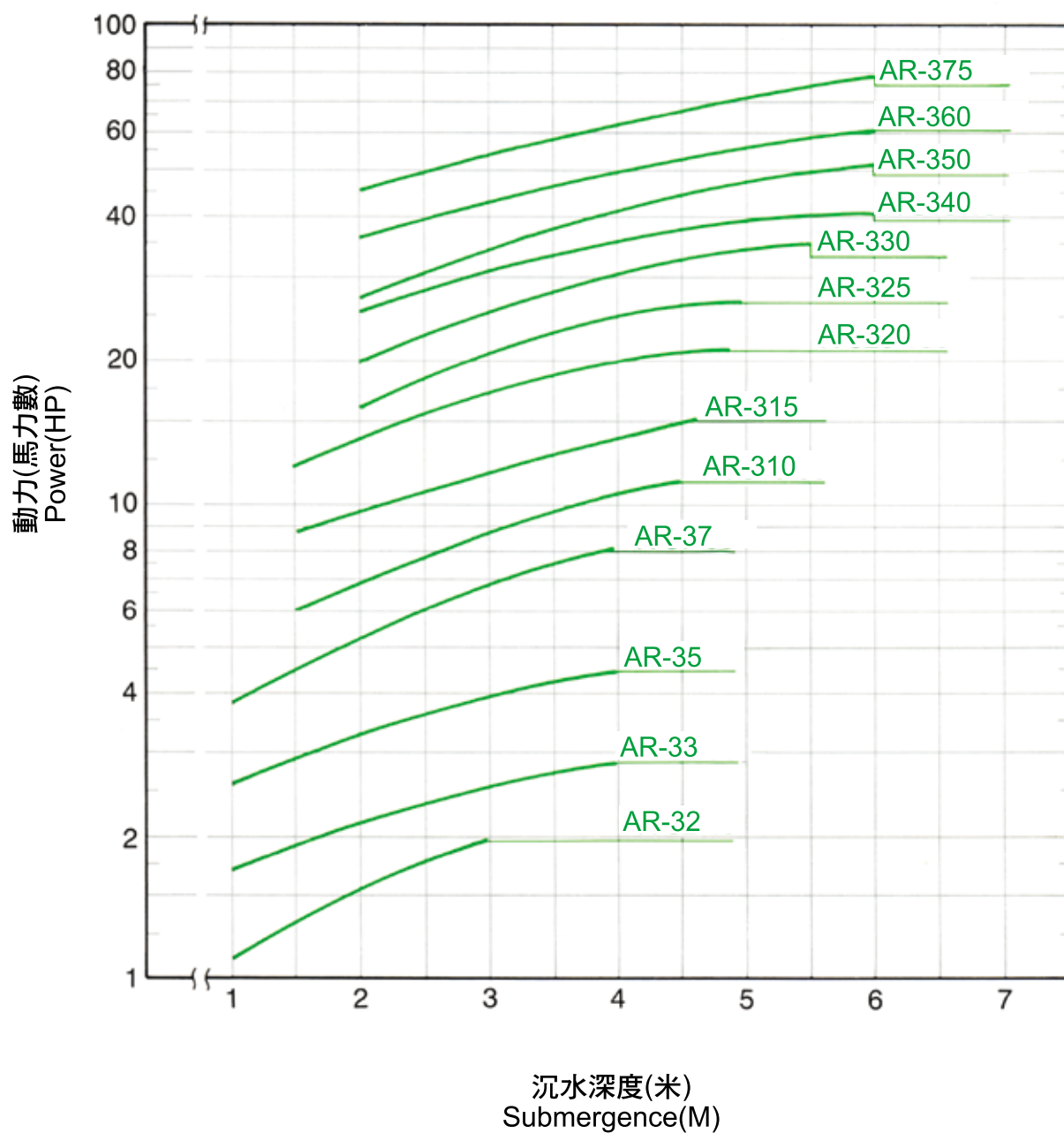
溶氧量與沉水深度關係曲線圖 OXYGEN INPUT AND SUBMERGENCE PERFORMANCE CURVE



註：氧傳輸率測定的標準狀態為一大氣壓力水溫 20°C，清水在溶氧值為 0mg/L 狀態下開始測試。

Note: The only standard state for the determination of oxygen transmission rate is that the atmospheric pressure is 20°C, and the test is started with the dissolved oxygen value of 0mg/L in clean water.

動力與沉水深度關係曲線圖 POWER AND SUBMERGENCE PERFORMANCE CURVE



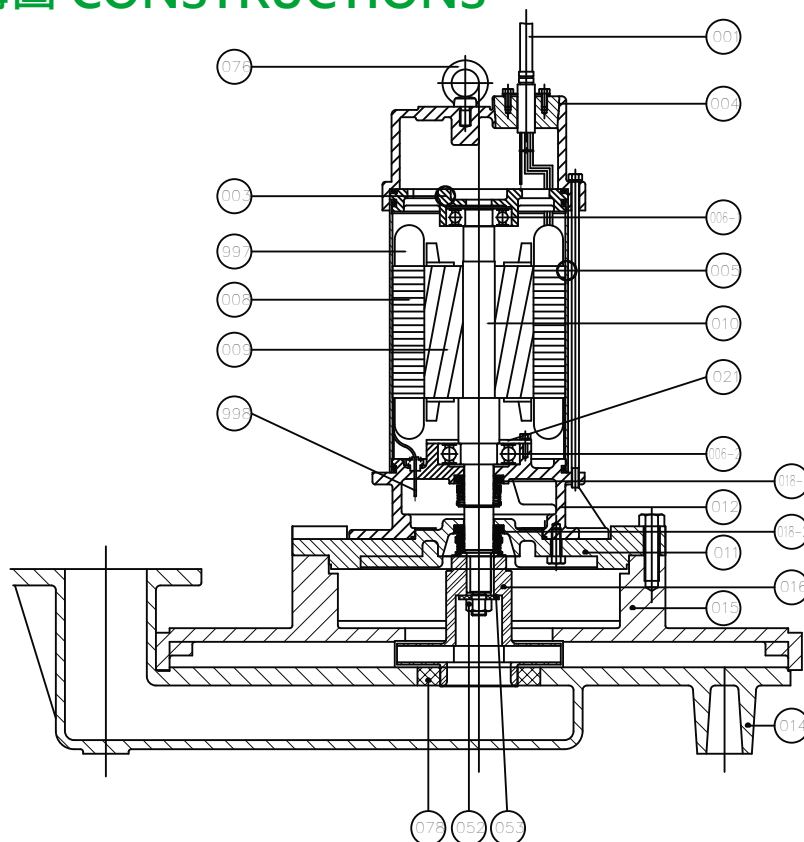
型號說明 PRODUCT NUMBER DESCRIPTION

AR - 3 20

額定動力
相數
標準型式AR

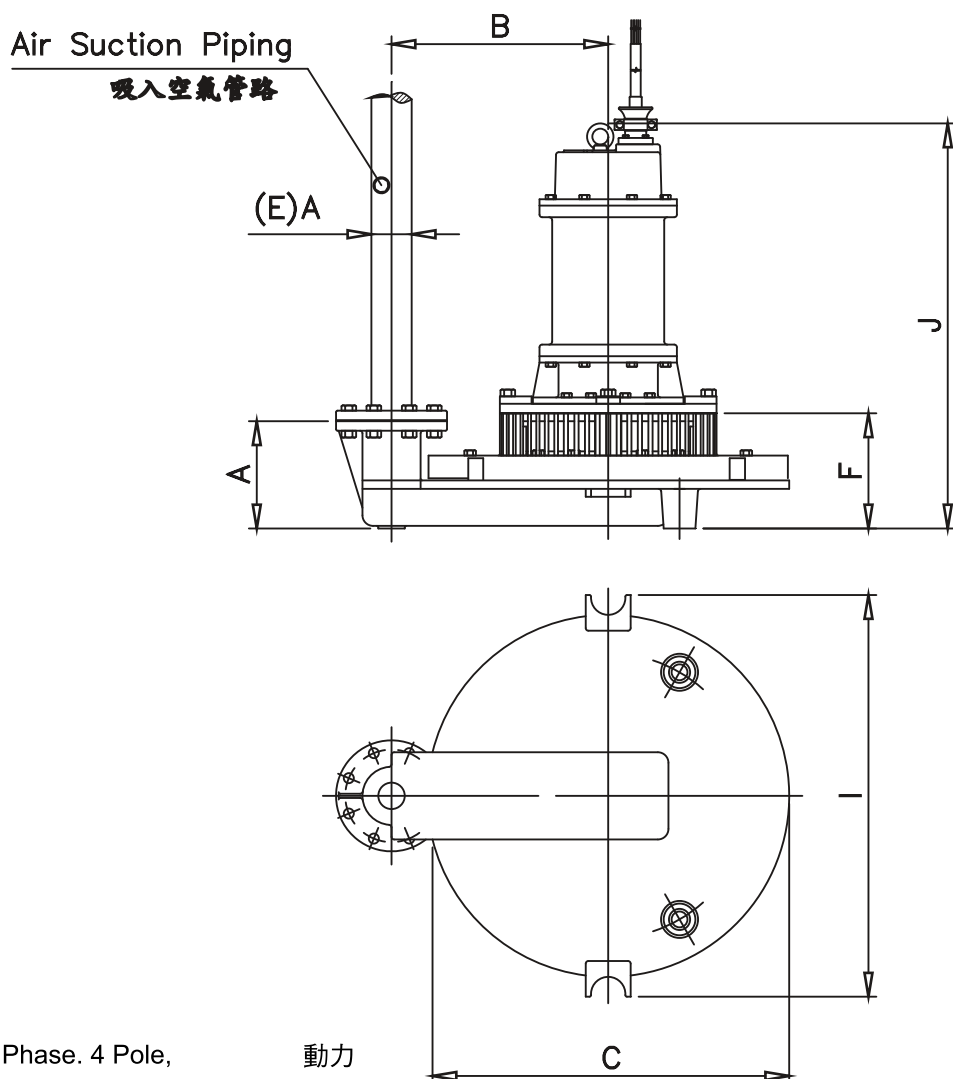
RATED POWER(HP)
MOTOR PHASE
PUMP TYPE

標準結構圖 CONSTRUCTIONS



No	名稱	NAME	材質(MATERIAL)			備註NOTE	No	名稱	NAME	材質(MATERIAL)			備註NOTE
			A	B	C					A	B	C	
001	電 纜	Cable	VCT(or 2CT)	VCT(or 2CT)	VCT(or 2CT)		014	混氣室底蓋	Aeration cover	FC200	SCS13	SCS14	
003	軸 承 座	Bearing Cover	FC200	SCS13	SCS14	10HP(含)以下 Above 10HP(including)	015	混氣室	Aeration housing	FC200	SCS13	SCS14	
			FC200	FC200	FC200		016	葉 輪	Impeller	SCS13	SCS13	SCS14	
004	馬 達 蓋	Motor Cover	FC200	SCS13	SCS14		018-1	機 械 軸 封	Mechanical Seal	CARBON-NBR	CARBON-NBR	CARBON-NBR	
005	馬 達 本 體	Motor Casing	SUS304	SUS304	SUS316	10HP(含)以下 Above 10HP(including)	018-2	機 械 軸 封	Mechanical Seal	Silicon-NBR	Silicon-NBR	Silicon-Viton	
			FC200	SCS13	SCS14		021	軸承蓋	Bearing cover	SS400	SS400	SS400	10HP(含)以下 Above 10HP(including)
006-1	軸 承	Bearing								FC200	FC200	FC200	
006-2	軸 承	Bearing					052	葉輪螺帽	Impeller Nut	SUS304	SUS304	SUS316	
008	定 子	Stator	F CLASS	F CLASS	F CLASS		053	葉輪墊圈	Impeller packing	SUS304	SUS304	SUS316	
009	轉 子	Rotor					076	環首螺絲	Eye Bolt	SS400 ; SUS304			
010	主 軸	Shaft	SUS410	SUS304	SUS316		078	磨 耗 環	Wear ring	依稀龍UPE			
011	油 箱 蓋	Oil Cover	FC200	SCS13	SCS14		997	線圈過熱保護裝置	Thermal Protector				選購配備 Optional equipment
012	中 承 座	Bracket	FC200	SCS13	SCS14		998	測漏檢知器	Leakage Detector				選購配備 Optional equipment

外型尺寸 DIMENSIONS



P: Power, 3 Phase. 4 Pole,
220V (220/380/440).
60Hz ; HP.

D: Range of Convection. M. (Dia.)

H: Submergence. M.

動力

對流範圍

沉水深度

Units : mm

TYPE	P(HP)	P(kw)	Main-Sub. D(M)	Max.-Min. H(M)	A	B	C	E	F	I	J
AR-32	2	1.5	1.0-2.0	3.0-1	139	310	505	40	152	566	535
AR-33	3	2.2	2.5-5.0	4.0-1	139	310	505	50	154	566	586
AR-35	5	3.7	3.0-6.0	4.0-1	139	310	505	65	156	566	683
AR-37	7.5	5.5	3.5-7.0	4.0-1	203	410	685	65	218	760	775
AR-310	10	7.5	4.5-9.0	4.5-1.5	203	410	685	80	218	760	775
AR-315	15	11	5.0-10.0	4.6-1.5	203	410	685	80	220	760	902
AR-320	20	15	5.8-11.5	4.8-1.5	203	410	685	100	223	760	905
AR-325	25	19	5.9-11.8	5.0-2.0	203	410	685	100	225	760	1092
AR-330	30	22	6.0-12.0	5.5-2.0	203	410	685	100	226	760	1093
AR-340	40	30	7.3-14.5	6.0-2.0	338	600	950	150	374	1110	1464
AR-350	50	37	7.5-15.0	6.0-2.0	338	600	950	150	374	1110	1464
AR-360	60	45	7.8-15.5	6.0-2.0	338	600	950	150	384	1110	1474
AR-375	75	55	8.0-16.0	6.0-2.0	338	600	950	150	384	1110	1729

依曝氣池型之安裝配置選型建議 BASIN DIMENSIONS

Unit: m

TYPE	Maximum Water Depth	Shape and Size Type		
		Round	Square	Rectangular
AR-32	3	3.5(Dia)	3.1(Length)	2.5x3.8
AR-33	4	4.8(Dia)	4.2(Length)	3.4x5.2
AR-35	4	6.6(Dia)	5.8(Length)	4.8x7.1
AR-37	4	8.0(Dia)	7.1(Length)	5.8x8.7
AR-310	4.5	9.8(Dia)	8.7(Length)	7.1x10.6
AR-315	4.6	12.5(Dia)	11.1(Length)	9.1x13.6
AR-320	4.8	12.5(Dia)	11.5(Length)	9.1x13.6
AR-325	5	12.5(Dia)	11.8(Length)	9.7x14.5
AR-330	5.5	12.5(Dia)	12.0(Length)	9.7x14.5
AR-340	6	16 (Dia)	14.5(Length)	12.5x17
AR-350	6	16 (Dia)	15(Length)	13x17.5
AR-360	6	16 (Dia)	15.5(Length)	13x17.5
AR-375	6	16 (Dia)	16(Length)	13.5x18

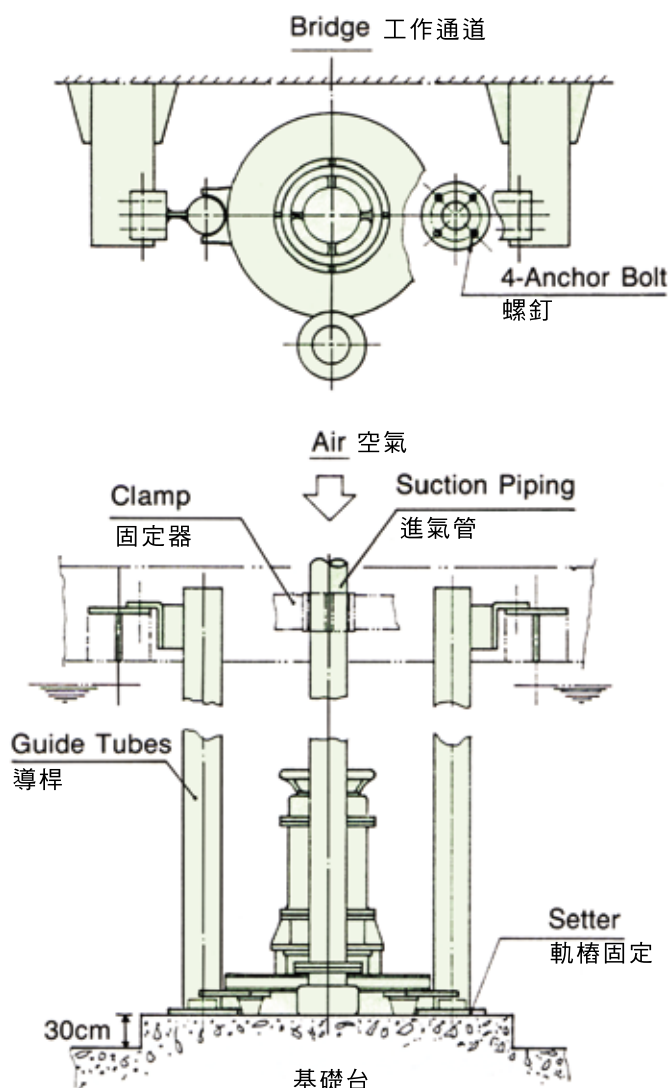
安裝指示 INSTALLATION

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.

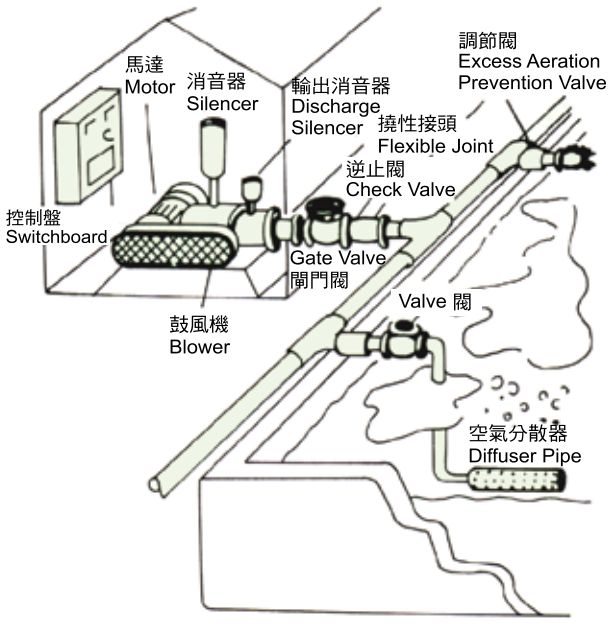
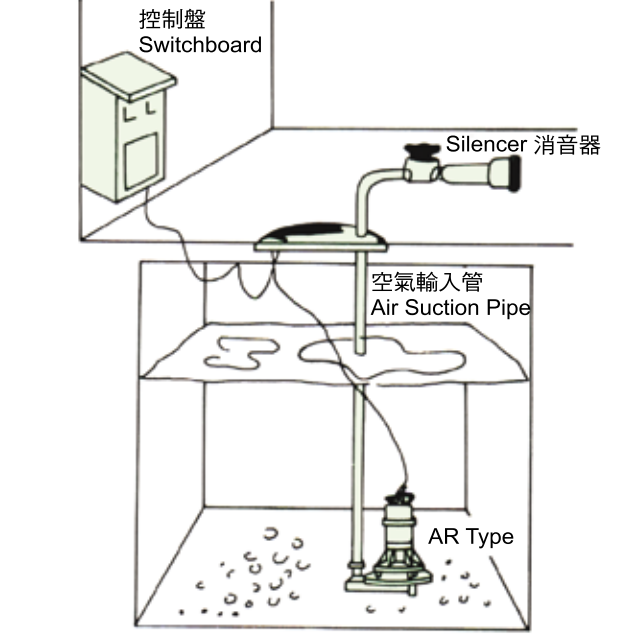
為了日後保養維護作業方便，提醒以下注意事項：

- (1) 將軌樁固定在基礎台上（在曝氣池注入廢水前）。
- (2) 設置適當的工作通道，其結構強度必須考慮到絞動及吊升設備。
- (3) 導桿應預先準備，且建議採用不鏽鋼管。
- (4) 進氣管應依現場情況予以適當固定。



附註:電壓可依客戶需求製作；上述規格及性能以外可依客戶需求製作。
PS. Specifications can be required by clients.

曝氣系統比較說明 COMPARISON OF AERATION EQUIPMENT

	鼓風機/散氣管式曝氣機 Blower/Diffuser Dispersion Pipe.	AR沉水式曝氣機 AR Submersible Aerator
安裝概要示意 Installation Outline		
附件 Accessory	• 撓性接頭、輸出消音器、閘門閥、逆止閥等 Flexible Joint, Discharge Silencer, Gate Valve, C.V. Etc. • 高單價空氣分散器 High Price Air Diffuser	• 不需要 Unnecessary • 不需要 Unnecessary
功能特性 Characteristic	• 吵雜 Noisy • 產生高溫 High Temperature Discharged. • 無法阻絕塵粒進入鼓風機 Disallowing Dust into Blower Casing.	• 安靜 Silence • 無此顧慮 None • 無 None
維護 Maintenance	• 空氣分散氣易阻塞，影響溶氧效率 Air Diffuser Blocked Easily and Cleaned Difficulty. • 一年數次 More Than Once a Year. • 更換作業成本高 The replacement cost is expensive. • 散氣盤/管如破損後，會嚴重影響處理(溶氧)效果，其更換成本將還高於散氣盤/管的成本 The break of diffuser plate/pipe will affect the treatment(oxygen transfer) performance, and the replacement cost will be higher than its cost.	• 每年一次 Once a Year. • 沉水馬達平常不需保養 Submersible pump is not maintenance ordinarily.



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Changeable Market 以卓越的行動力
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