

# AYD SERIES

Vertical Acid/Alkaline Resistant Pump

## AYD SERIES FEATURES :

Pumps are manufactured using the two materials GFRPP PVDF to ensure resistance to high heat and corrosion.

Dry Vapor seal : ensure to prevent the motor bearing from being etched by chemical gas.

Pumps will not damaged in dry running because of seal-less design.

Due to the rigid motor construction, and the motor spacer which is made of plastic. They make not only the weight of the pump lighter but also acid corrosion resistance.

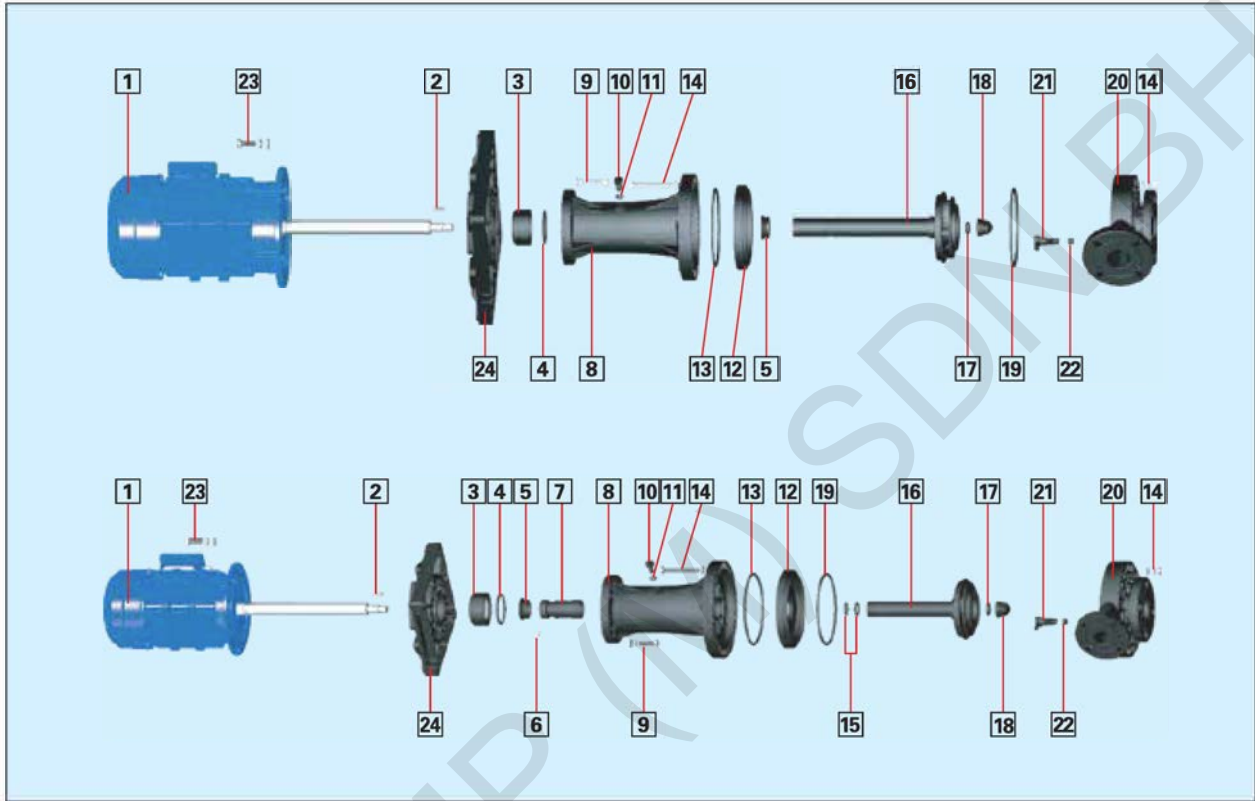
For etching sparying equipments, cooling circulating and be use with filter.



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## Vertical Acid/Alkaline Resistant Pump

### MATERIAL



NO.	Description	NO.	Description		
1	Motor	13	Back cover O-ring	NBR/EPDM/VITON	
2	Shaft key	SUS	14	Front cover screw	SUS/PVC/Ti
3	Seal ceramic	FRPP/CFRPP/CPVC/PVDF/CERAMIC	15	Impeller O-ring	NBR/EPDM/VITON
4	Vapor seal O-ring	NBR/EPDM/VITON	16	Impeller	FRPP/CFRPP/CPVC/PVDF
5	Vapor seal	NBR/EPDM/VITON	17	Impeller nut O-ring	NBR/EPDM/VITON
6	Shaft sleeve screw	SUS	18	Impeller nut	FRPP/CFRPP/CPVC/PVDF
7	Shaft sleeve	FRPP/CFRPP/CPVC/PVDF	19	Front cover O-ring	NBR/EPDM/VITON
8	Main body	FRPP/CFRPP/CPVC/PVDF	20	Front cover	FRPP/CFRPP/CPVC/PVDF
9	Main body screw cap	SUS/Ti	21	Air release valve	FRPP/CFRPP/CPVC/PVDF
10	Release screw	PVC	22	Air release valve packing	NBR/EPDM/VITON
11	Release screw O-ring	EPDM/VITON	23	Motor screw	SUS
12	Back cover	FRPP/CFRPP/CPVC/PVDF	24	Motor spacer	FRPP

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### MODEL IDENTIFICATION

AYD - 50 - VK 5 5 V G B  
 ①      ②      ③      ④    ⑤    ⑥    ⑦    ⑧

① Series Symbol	AYD	⑤ Frequency	5: 50Hz    6: 60Hz
② In-outlet	40: 1.5"    50: 2"    65: 2.5" 80: 3"    100: 4"	⑥ Rubber Material	N: NBR            E: EPDM V: VITON        G:GFRPP
③ Specific Weight	VK - 1.1    VP - 1.4	⑦ Pump Material	G: GFRPP        C: CFRPP A: CPVC         P: PVDF
④ Motor Power	1: 1HP    2: 2HP    3: 3HP 5: 5HP    7.5: 7.5HP 10: 10HP    15: 15HP	⑧ Notes	B - Motor spacer is GFRPP

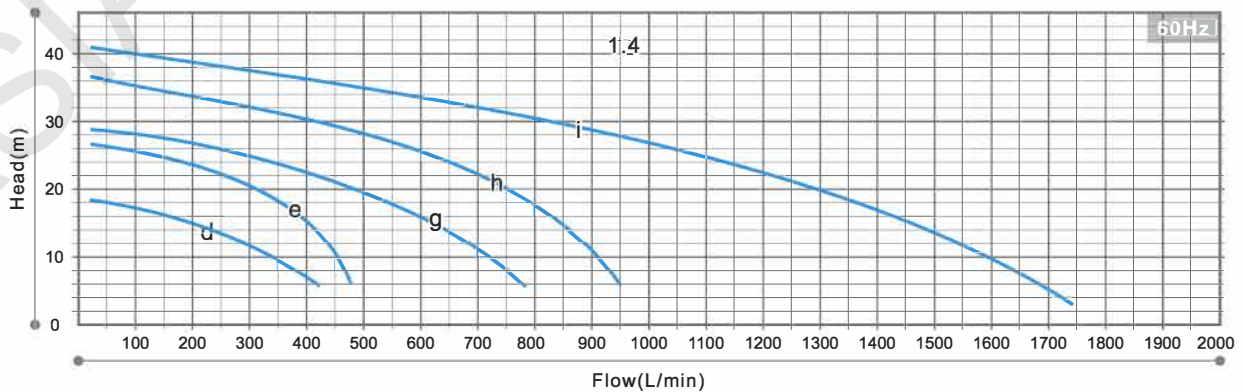
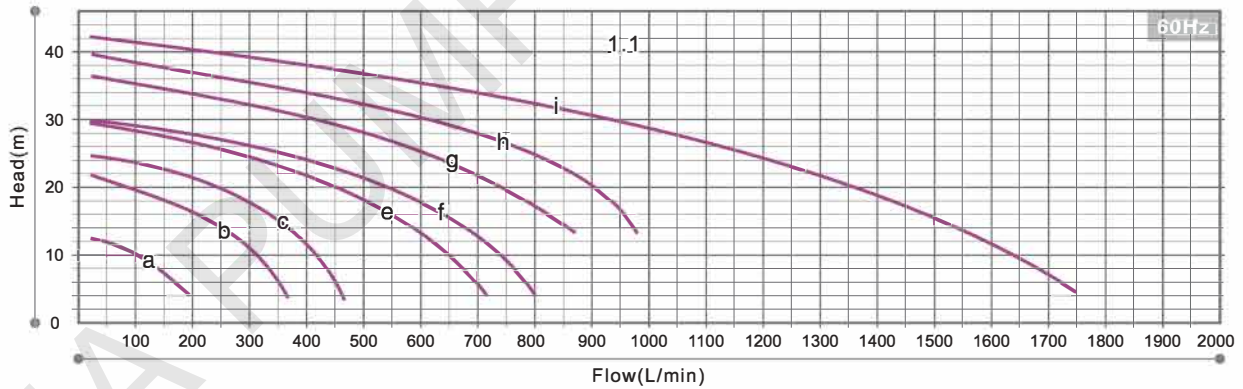
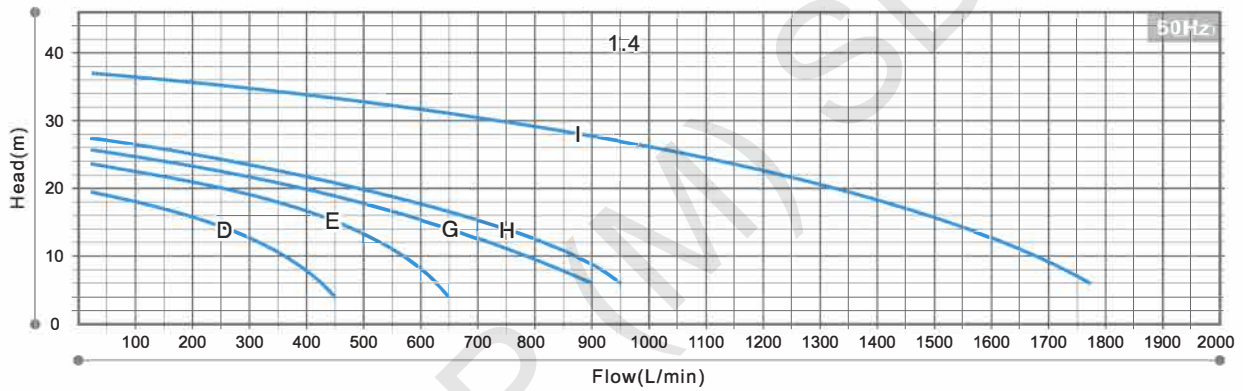
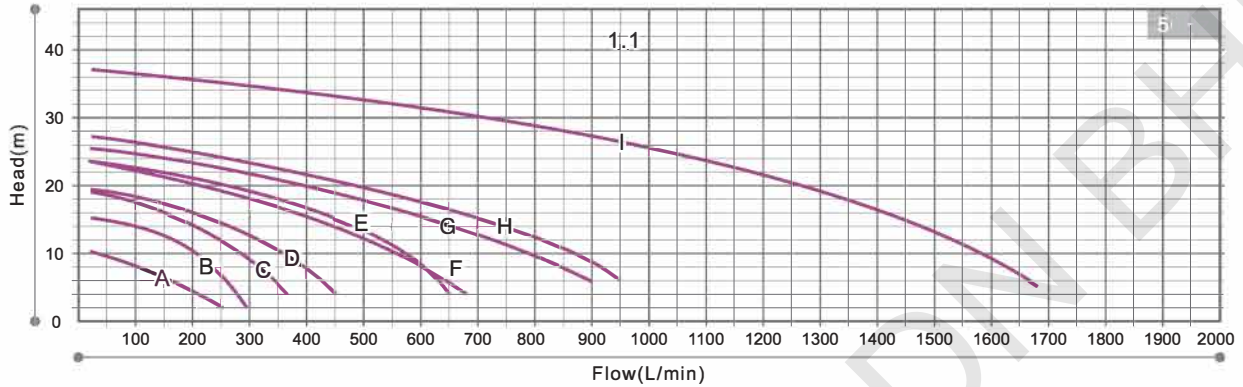
### SPECIFICATIONS

Model	Curves NO	Diameter (mm)		Power	Flow amount (L/min)		Head (m)		Weight (Kg)
		Inlet	Outlet		VK	VP	VK	VP	
<b>Frequency: 50HZ</b>									
AYD-40VK-15	A	50	40	1	175	-	6	-	24
AYD-40VK-25	B	50	40	2	190	-	12	-	26.5
AYD-40VK-35	C	50	40	3	270	-	12	-	29
AYD-50VK(P)-35	D	65	50	3	330	290	12	12	29
AYD-50VK(P)-55	E	65	50	5	470	400	14	14	41.5
AYD-65VK-55	F	80	65	5	500	-	14	-	41.5
AYD-65VK(P)-7.55	G	80	65	7.5	590	500	16	18	60
AYD-65VK(P)-105	H	80	65	10	590	570	18	18	64
AYD-100VK(P)-155	I	100	100	15	1000	800	27	29	78
Model	Curves NO	Diameter (mm)		Power	Flow amount (L/min)		Head (m)		Weight (Kg)
		Inlet	Outlet		VK	VP	VK	VP	
<b>Frequency: 60HZ</b>									
AYD-40VK-16	a	50	40	1	120	-	8	-	24
AYD-40VK-26	b	50	40	2	300	-	10	-	26.5
AYD-40VK-36	c	50	40	3	350	-	14	-	29
AYD-50VP-36	d	65	50	3	-	300	-	12	29
AYD-50VK(P)-56	e	65	50	5	550	430	15	15	41.5
AYD-65VK-56	f	80	65	5	650	-	15	-	41.5
AYD-65VK(P)-7.56	g	80	65	7.5	780	600	18	16	60
AYD-65VK(P)-106	h	80	65	10	890	800	20	18	64
AYD-100VK(P)-156	I	100	100	15	1200	1000	25.5	29	78

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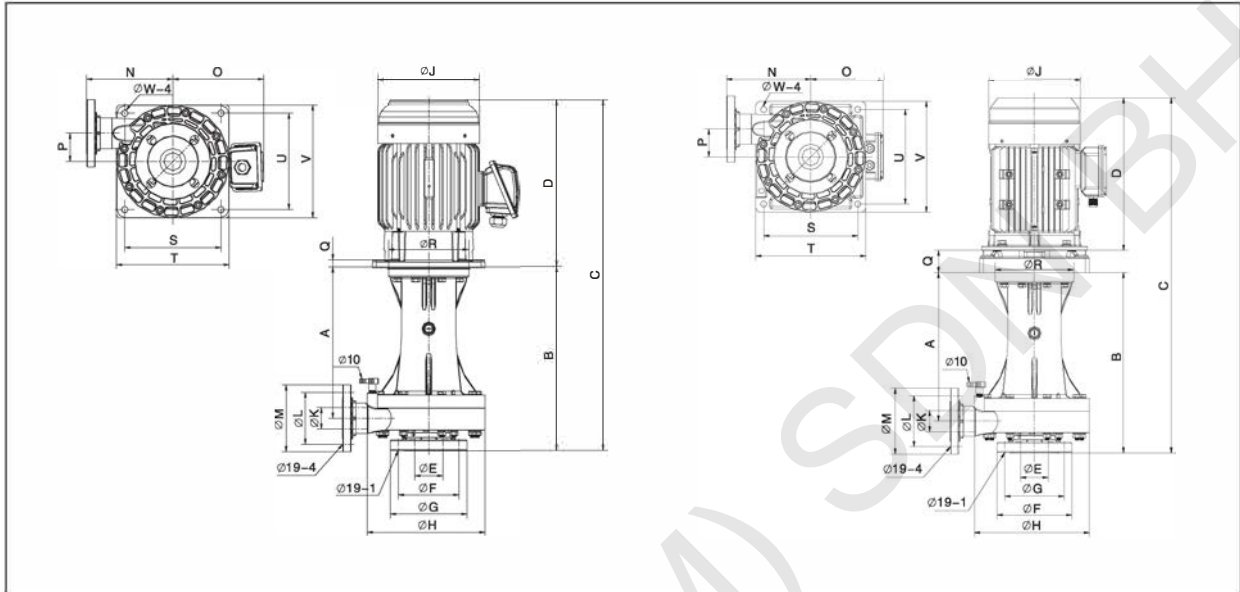
### PERFORMANCE CURVES



# AYD SERIES

## Vertical Acid/Alkaline Resistant Pump

### DIMENSIONAL DRAWING, PART DRAWING



Model	A	B	C	D	E	F	G	H	I	J	K	L
AYD-40VK-1	350	425	766	341	50	120	155	230	4	198	40	105
AYD-40VK-2	350	425	766	341	50	120	155	230	4	198	40	105
AYD-40VK-3	350	425	766	341	50	120	155	230	4	198	40	105
AYD-50VK(P)-3	350	425	766	341	65	140	175	260	4	198	50	120
AYD-50VK(P)-5	350	425	810	385	65	140	175	260	4	235	50	120
AYD-65VK-5	350	425	810	385	80	150	190	260	8	235	65	140
AYD-65VK(P)-7.5	350	425	877	452	80	150	190	260	8	272	65	140
AYD-65VK(P)-10	350	425	915	490	80	150	190	260	8	272	65	140
AYD-40VK-1-B	350	425	701	276	50	120	155	230	4	177	40	105
AYD-40VK-2-B	350	425	701	276	50	120	155	230	4	177	40	105
AYD-40VK-3-B	350	425	725	300	50	120	155	230	4	216	40	105
AYD-50VK(P)-3-B	350	425	725	300	65	140	175	260	4	216	50	120
AYD-50VK(P)-5-B	350	425	783	358	65	140	175	260	4	216	50	120
AYD-65VK-5-B	350	425	783	358	80	150	190	260	8	216	65	140
AYD-65VK(P)-7.5-B	350	425	858	433	80	150	190	260	8	258	65	140
Model	M	N	O	P	Q	R	S	T	U	V	W	
AYD-40VK-1	145	170	188	65	16	185	222	260	222	260	15	
AYD-40VK-2	145	170	188	65	16	185	222	260	222	260	15	
AYD-40VK-3	145	200	188	65	16	185	222	260	222	260	15	
AYD-50VK(P)-3	155	200	188	65	16	185	222	260	222	260	15	
AYD-50VK(P)-5	155	200	208	65	16	185	222	260	222	260	15	
AYD-65VK-5	175	200	208	65	16	185	222	260	222	260	15	
AYD-65VK(P)-7.5	175	200	246	65	20	185	300	350	300	350	18	
AYD-65VK(P)-10	175	200	246	65	20	185	300	350	300	350	18	
AYD-40VK-1-B	145	170	130	65	52	185	222	260	222	260	15	
AYD-40VK-2-B	145	170	130	65	52	185	222	260	222	260	15	
AYD-40VK-3-B	145	170	130	65	52	185	222	260	222	260	15	
AYD-50VK(P)-3-B	155	200	130	65	52	185	222	260	222	260	15	
AYD-50VK(P)-5-B	155	200	170	65	52	185	222	260	222	260	15	
AYD-65VK-5-B	175	200	170	65	52	185	222	260	222	260	15	
AYD-65VK(P)-7.5-B	175	200	190	65	52	185	300	350	300	350	18	

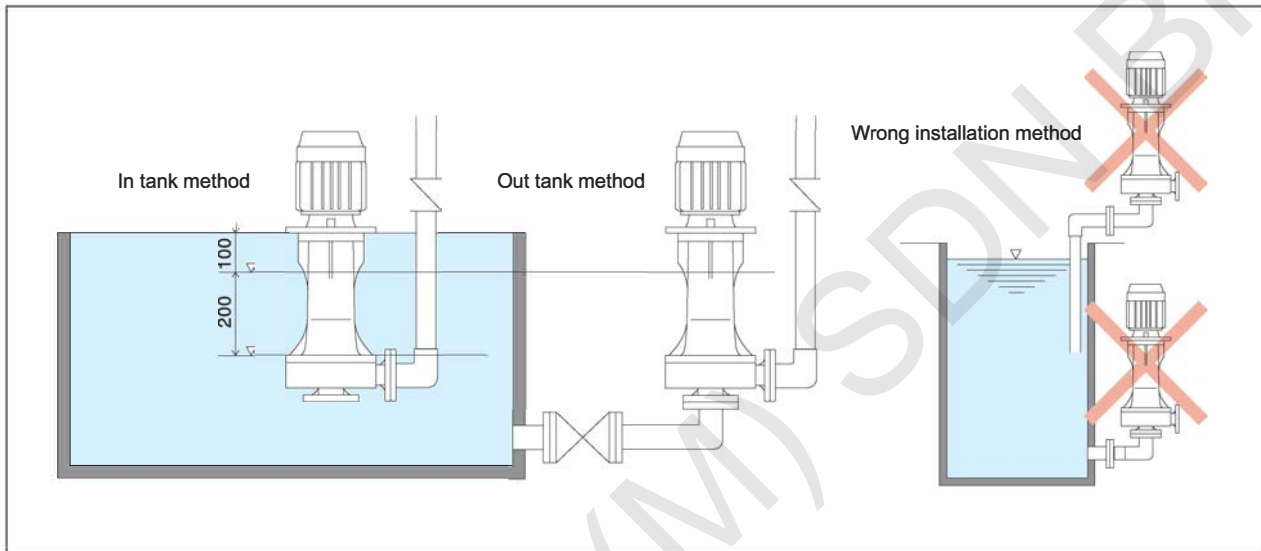


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### PRECAUTIONS OF INSTALLATION

- (1) When installing AYD series vertical pump, its motor flange of the pump should be higher than the maximum liquid surface level of the tank, otherwise the liquid will leak out from the pump. See the below installation method for reference.



- (2) The presence of air in the casing and the suction pipe may prevent priming of the pump. Air can get easily trapped in the suction and discharge piping, and such the trapped air causes an air lock (dry running). In case of the air lock, release air either from the air-release bolt on the connecting pipe or from the pipe on the discharge side of the pump.
- (3) It is recommended to place a strainer of the end of suction pipe when handling slurry liquid.
- (4) When the pump is installed as in tank method, use PPS material bolts to tighten the casing.
- (5) Prohibitions of over-tightening of pump flange.
- A. Place each flange surface of pipe and pump in parallel, and do not over-tighten the bolts.
  - B. Avoid deformation of pump flange by over-tightening when using a flexible joint.
- (6) Prohibitions of piping load to pump.
- A. Piping load should be supported completely by piping fixture or bracket.
  - B. In case of high temperature liquid over 40°C, place flexible joints and bendings in pipe line to avoid piping load to pump by pipe's expansion.
  - C. Use plastic pipe. Avoid metal pipe as possible.

Especially for (5)(6) notice that concentrated Sulfuric acid and Sodium hydroxide are most likely to be handled by metal piping.

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