

AHM Series, Horizontal Multi Stage Brochure



PT. Archimedes Global Pump

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AHM Series

Commercial & Industrial

Horizontal Multistage Centrifugal Pump

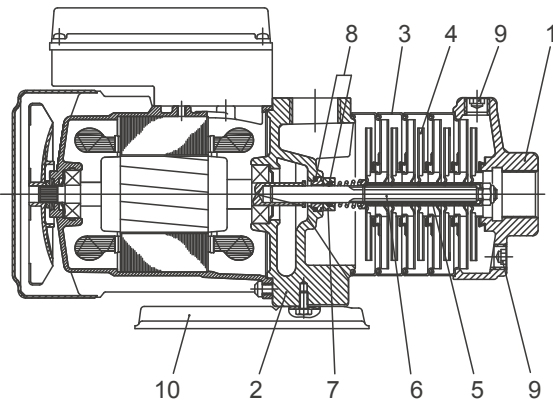
Features

- Easy set-up and installation
- High efficiency for low electricity bill
- Robust construction for better reliability
- Quiet operation for better life quality
- Optional mechanical seal combinations for various applications

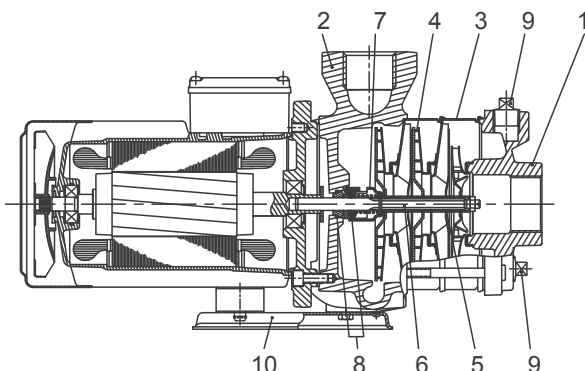
Application

- Industrial circulation system
- Agricultural irrigation
- Pressure booster system
- Chiller machine & cooling system
- Washing & cleaning system
- Ultrasonic clean machine
- Reverse osmosis system
- PCB Industrial
- CNC, grinding, lathes, electric discharge, air conditioner machines

AHM 2, AHM 4



AHM 8



Power	Max.Flow	Max.Head
380-3320 W	Up to 230 L/min	Up to 59 M

General Data

Motor Spec

Motor Type	2 Pole, totally enclosed fan-cooled, squirrel-cage
Frequency	50HZ
Standard Voltages	1Ø 220~240V
	3Ø 220~240/380~415V
Insulation Class	F class(155 °C)
Enclosure Protection Class	IP 54
Nominal Speed	2850 rpm

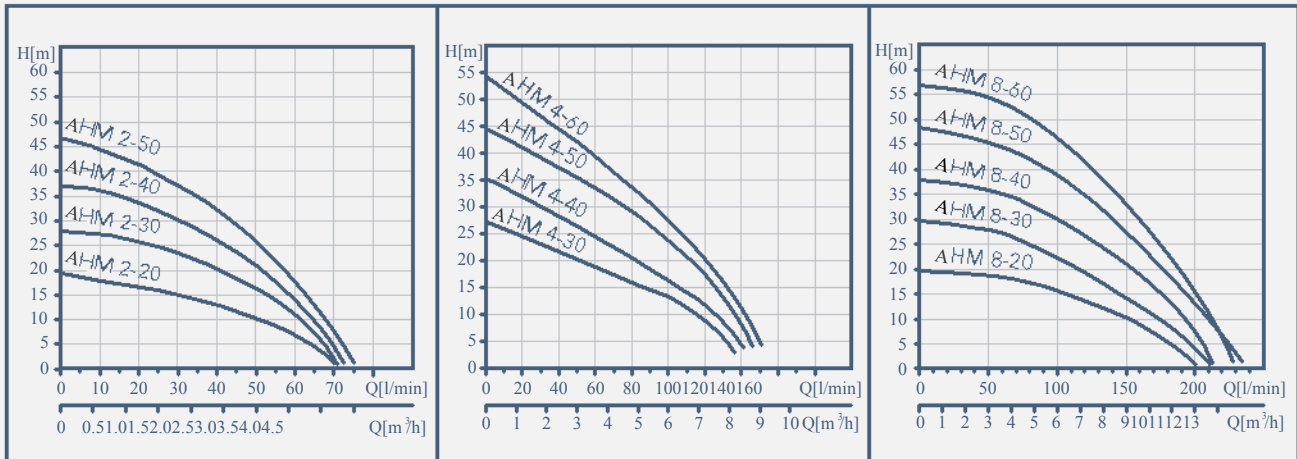
Operation Conditions

Liquids	Clean liquid without solid particles
Liquid Temperature	0 °C ~90 °C
Ambient Temperature	Max. 50 °C
System Pressure	Max. 10kg

Materials

No	Description	Materials
1	Suction chamber	Cast iron
2	Pump head	Cast iron
3	Intermediate chamber	SS304
4	Impeller	SS304
5	Spacing pipe	SS304
6	Shaft	SS431
7	Mechanical seal	Silicon carbide / Carbon
8	O-ring	EPDM
9	Drain and priming plug	Steel
10	Base plate	Steel

Performance Curves



Specification

Model	Phase Ø	Voltage(V)	Power	Head (Pressure)		Flow (Capacity)			Pipe Connection				Dimension L x W x H (mm)	Weight (kg)
			W	Rated (M)	Max. (M)	Rated (L/Min)	Max. (L/Min)		Inlet		Outlet			
									mm	Inch	mm	Inch		
AHM 2-20	1	220-240	380	12.9	19.1	40.3	71.7	2	25	1	25	1	309 x 199 x 155	10.3
	3	220-240/380-415	430										309 x 141 x 206	10.0
AHM 2-30	1	220-240	470	17.5	28.0	42.8	71.9	3	25	1	25	1	327 x 199 x 155	10.5
	3	220-240/380-415	530										327 x 141 x 206	10.3
AHM 2-40	1	220-240	620	24.7	37.8	41.5	73.3	4	25	1	25	1	345 x 199 x 155	10.8
	3	220-240/380-415	660										345 x 141 x 206	10.5
AHM 2-50	1	220-240	720	31.3	47.0	42.7	75.5	5	25	1	25	1	363 x 199 x 155	11.6
	3	220-240/380-415	770										363 x 141 x 206	11.2
AHM 4-30	1	220-240	770	14.4	27.0	84.4	137.1	6	32	1-1/4	25	1	344 x 199 x 155	10.8
	3	220-240/380-415	790										344 x 141 x 206	10.5
AHM 4-40	1	220-240	960	20.0	35.8	84.2	143.8	8	32	1-1/4	25	1	372 x 199 x 155	11.6
	3	220-240/380-415	1010										372 x 141 x 206	11.2
AHM 4-50	1	220-240	1160	26.7	44.7	79.1	148.3	9	32	1-1/4	25	1	438 x 199 x 155	13.4
	3	220-240/380-415	1240										438 x 141 x 206	13.1
AHM 4-60	1	220-240	1430	30.9	54.2	86.7	152.7	10	32	1-1/4	25	1	465 x 199 x 155	14.8
	3	220-240/380-415	1460										465 x 141 x 206	14.5
AHM 8-20	1	220-240	760	12.3	19.1	122.6	200.2	8	40	1-1/2	32	1-1/4	320 x 227 x 240	17.2
	3	220-240/380-415	810										320 x 181 x 240	17.0
AHM 8-30	1	220-240	1130	22.1	29.5	106.8	212.8	10	40	1-1/2	32	1-1/4	390 x 227 x 240	19.5
	3	220-240/380-415	1260										390 x 181 x 240	19.1
AHM 8-40	1	220-240	1390	24.0	37.2	124.5	216.3	13	40	1-1/2	32	1-1/4	390 x 227 x 240	20.7
	3	220-240/380-415	1520										390 x 181 x 240	20.5
AHM 8-50	1	220-240	1940	35.4	48.0	123.0	238.6	14	40	1-1/2	32	1-1/4	478 x 249 x 240	27.9
	3	220-240/380-415	1860										420 x 181 x 240	21.4
AHM 8-60	1	220-240	2090	40.1	55.7	119.0	226.2	15	40	1-1/2	32	1-1/4	478 x 249 x 240	28.1
	3	220-240/380-415	2110										478 x 185 x 240	27.0

Friction Loss Table

Head Loss in mWC / 100 m Pipe Due to Friction (C = 150)

C = 150 for High Density Polyethylene Pipe (HDPE)

Flow			Fr Loss & Velocity	Pipe Diameter (Inch)													
GPM	M3/H	L/sec		½"	¾"	1"	1-¼"	1-½"	2"	2-½"	3"	4"	5"	6"	8"	10"	12"
0.5	0.1	0.0	Friction loss (m WC)	0.8	0.1												
		0.0	Velocity (m/s)		0.25	0.11	0.06										
1	0.2	0.1	Friction loss (m WC)	2.9	0.4	0.1											
			Velocity (m/s)		0.50	0.22	0.12	0.08									
2	0.5	0.1	Friction loss (m WC)	10.5	1.5	0.4	0.1										
			Velocity (m/s)		1.00	0.44	0.25	0.16									
3	0.7	0.2	Friction loss (m WC)	22.2	3.1	0.8	0.3	0.1									
			Velocity (m/s)		1.49	0.66	0.37	0.24	0.17								
4	0.9	0.3	Friction loss (m WC)	37.9	5.3	1.3	0.4	0.2									
			Velocity (m/s)		1.99	0.89	0.50	0.32	0.22								
5	1.1	0.3	Friction loss (m WC)	57.2	7.9	2.0	0.7	0.3	0.1								
		0.3	Velocity (m/s)		2.49	1.11	0.62	0.40	0.28	0.16							
10	2.3	0.6	Friction loss (m WC)		28.6	7.1	2.4	1.0	0.2	0.1							
			Velocity (m/s)		2.21	1.24	0.80	0.55	0.31	0.20							
15	3.4	0.9	Friction loss (m WC)		60.6	14.9	5.0	2.1	0.5	0.2	0.1						
			Velocity (m/s)		3.32	1.87	1.19	0.83	0.47	0.30	0.21						
20	4.5	1.3	Friction loss (m WC)			25.4	8.6	3.5	0.9	0.3	0.1						
			Velocity (m/s)			2.49	1.59	1.11	0.62	0.40	0.28						
30	6.8	1.9	Friction loss (m WC)				18.2	7.5	1.8	0.6	0.3	0.1					
			Velocity (m/s)				2.39	1.66	0.93	0.60	0.41	0.23					
40	9.1	2.5	Friction loss (m WC)				30.9	12.7	3.1	1.1	0.4	0.1					
			Velocity (m/s)				3.19	2.21	1.24	0.80	0.55	0.31					
50	11.4	3.2	Friction loss (m WC)				46.7	19.2	4.7	1.6	0.7	0.2	0.1				
			Velocity (m/s)				3.98	2.77	1.56	1.00	0.69	0.39	0.25				
60	13.6	3.8	Friction loss (m WC)				65.5	26.9	6.6	2.2	0.9	0.2	0.1				
			Velocity (m/s)				4.78	3.32	1.87	1.19	0.83	0.47	0.30				
70	15.9	4.4	Friction loss (m WC)					35.8	8.8	3.0	1.2	0.3	0.1				
			Velocity (m/s)					3.87	2.18	1.39	0.97	0.54	0.35				
80	18.2	5.0	Friction loss (m WC)					45.9	11.3	3.8	1.6	0.4	0.1	0.1			
			Velocity (m/s)					4.43	2.49	1.59	1.11	0.62	0.40	0.28			
90	20.4	5.7	Friction loss (m WC)						14.1	4.7	2.0	0.5	0.2	0.1			
			Velocity (m/s)						2.80	1.79	1.24	0.70	0.45	0.31			
100	22.7	6.3	Friction loss (m WC)						17.1	5.8	2.4	0.6	0.2	0.1			
			Velocity (m/s)						3.11	1.99	1.38	0.78	0.50	0.35			
150	34.1	9.5	Friction loss (m WC)						36.1	12.2	5.0	1.2	0.4	0.2			
			Velocity (m/s)						4.67	2.99	2.07	1.17	0.75	0.52			
200	45.4	12.6	Friction loss (m WC)							20.8	8.5	2.1	0.7	0.3	0.1		
			Velocity (m/s)							3.98	2.77	1.56	1.00	0.69	0.39		
250	56.8	15.8	Friction loss (m WC)								12.9	3.2	1.1	0.4	0.1		
			Velocity (m/s)								3.46	1.94	1.24	0.86	0.49		
300	68.1	18.9	Friction loss (m WC)								18.1	4.5	1.5	0.6	0.2	0.1	
			Velocity (m/s)								4.15	2.33	1.49	1.04	0.58	0.37	
400	90.8	25.2	Friction loss (m WC)									7.6	2.6	1.1	0.3	0.1	
			Velocity (m/s)									3.11	1.99	1.38	0.78	0.50	
500	113.6	31.5	Friction loss (m WC)									11.5	3.9	1.6	0.4	0.1	0.1
			Velocity (m/s)									3.89	2.49	1.73	0.97	0.62	0.43
600	136.3	37.9	Friction loss (m WC)										5.4	2.2	0.5	0.2	0.1
			Velocity (m/s)										2.99	2.07	1.17	0.75	0.52
700	159.0	44.2	Friction loss (m WC)										7.2	3.0	0.7	0.2	0.1
			Velocity (m/s)										3.48	2.42	1.36	0.87	0.61
800	181.7	50.5	Friction loss (m WC)										9.2	3.8	0.9	0.3	0.1
			Velocity (m/s)										3.98	2.77	1.56	1.00	0.69
900	204.4	56.8	Friction loss (m WC)											4.7	1.2	0.4	0.2
			Velocity (m/s)											3.11	1.75	1.12	0.78
1000	227.1	63.1	Friction loss (m WC)											5.7	1.4	0.5	0.2
			Velocity (m/s)											3.46	1.94	1.24	0.86
1200	272.5	75.7	Friction loss (m WC)											8.0	2.0	0.7	0.3
			Velocity (m/s)											4.15	2.33	1.49	1.04
1500	340.7	94.6	Friction loss (m WC)											12.1	3.0	1.0	0.4
			Velocity (m/s)											5.19	2.92	1.87	1.30
2000	454.2	126.2	Friction loss (m WC)												5.1	1.7	0.7
			Velocity (m/s)												3.89	2.49	1.73
3000	681.4	189.3	Friction loss (m WC)													3.6	1.5
			Velocity (m/s)													3.73	2.59

Notes:

1. Values shown above are used in the Hazen-Williams Equation for flow in pipes. Feet of head loss values shown in the tables were developed using the Hazen-Williams equation.

2. Feet of head loss values are subject to the following conditions:

- a) Pipes carrying clear water at approximately 60° F (15.6° C).
- b) Pipes are flowing full.
- c) Velocities of water are generally less than 3 m/sec.

Note: HDPE is commonly sized by outside diameter. If in doubt, use the next smaller pipe size.

