



A - Series



Horizontal Multistage Centrifugal Pumps AHC/AHI , AHBI/AHBS

50HZ

\$\$\$admin



Evak Pump Technology Corp.
No. 551, Zhongshan Rd., Qingshui Township,
Taichung County 436, Taiwan.
Tel : +886-426-233556
Fax: +886-426-235559
www.evak-pumps.com

A-Series

Index Horizontal Multistage Centrifugal Pumps

AHC/AHI , AHBI/AHBS (50HZ)

Index/Type Key -----02	AHBI/AHBS
AHC/AHI	General Data-----11
General Data-----03	Performance Curve
Performance Curve	AHBI/S-2M-----13
AHC/I-2M-----05	AHBI/S-4M-----14
AHC/I-4M-----06	Dimensions & Weights
AHC-8M-----07	AHBI/S-2M, 4M-----15
AHC-12M-----08	Installation/
Dimensions & Weights	Operating Manual-----16
AHC-2M, 4M, 8M, 12M-----09	Nameplate-----18
AHI-2M, 4M-----10	

Type Key

AHC- 2M20

A-series

Pump Type

H : Horizontal

Pump material

C : Cast iron
(Discharge & Suction)
I : Stainless steel 304
BI : Stainless steel 304
BS : Stainless Steel 316

Stages times 10

20: 2 stages
30: 3 stages
40: 4 stages
50: 5 stages
60: 6 stages

(The stages are not applicable to 8M, 12M)

Delivery (m³ /h)

2M : 2 m³ /h
4M : 4 m³ /h
8M : 8 m³ /h
12M : 12 m³ /h

A-Series Horizontal Centrifugal Multistage Pumps AHC AHI 50HZ



AHC 50Hz

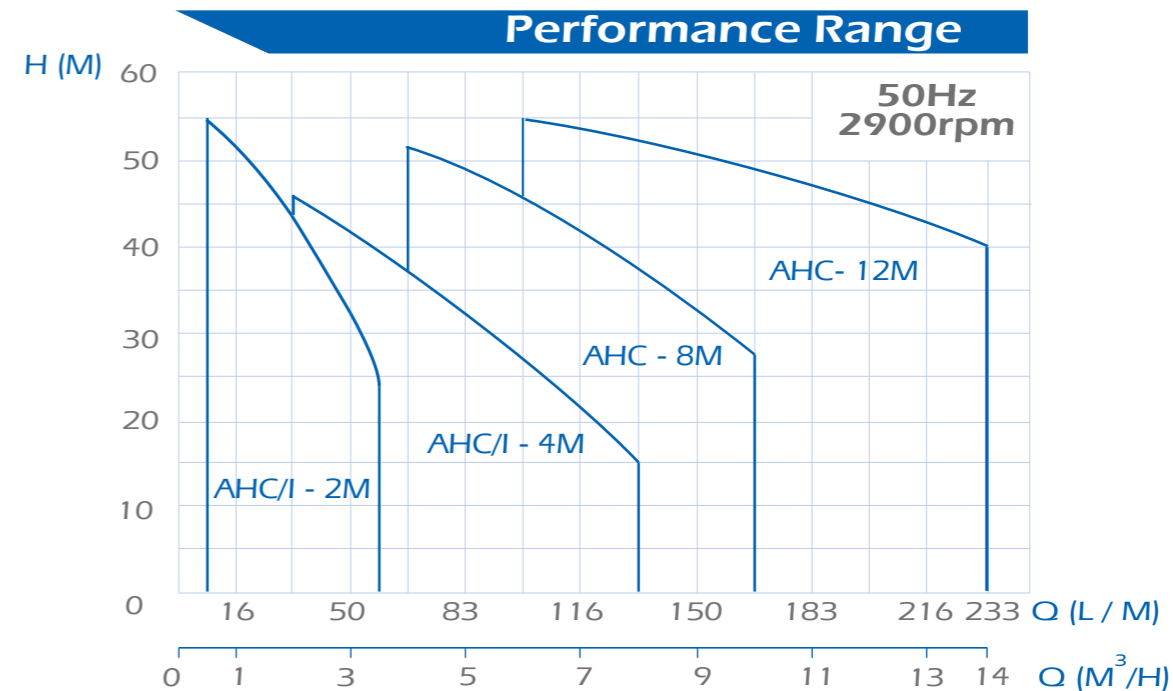
AHI 50Hz

Feature:

Reliability/Compact Form/Wide Range
High Efficiency / Easy Maintenance

Application:

Domestic/ Light industry and farming
Pressure boosting/Air-conditioning systems
Cooling systems or cooling machine



Pump

The AHC and AHI series are non-self priming, horizontal multistage centrifugal pumps. Pump is coupled with motor at the same shaft and mounted on a base-plate. The friendly design makes the pump suitable for installation in the small domestic or industrial water supply systems. The pump is fitted with a mechanical seal and through-going pump-motor shaft.

AHC: The discharge and suction chamber are made of cast iron. The other parts of pump in contact with the liquid are made of stainless steel.

AHI: All parts of pump in contact with the liquid are made of stainless steel.
EPDM O-rings is standard. Viton for option.

Motor

The pump is fitted with a totally enclosed, fan-cooled, squirrel-cage motor.

Rated speed: 2850rpm/50Hz

Enclosure Class: IP 54

Insulation Class: F

Standard Voltages: 1x220~240 V,50Hz,
3x220~240 Δ /380~415V, 50Hz

Mechanical seals

List of Materials

Q:	Silicon carbide
B:	Carbon
U:	Tungsten carbide
E:	EPDM
V:	Viton
C:	Seal Type (general use)
A:	Seal Type (machine tool use)

*Spring is SS316.

All technical information is subject to change without notice.

Operating conditions

Liquid: Clean liquid without solid particles.
Liquid temperature range: 0°C~+90°C
Maximum ambient temperature: +50°C

The maximum operating pressure depends on the temperature of the pumped liquid, see table:

Max. operating pressure	10 kg/cm ²	6 kg/cm ²
AHC/AHI-2M, 4M	0°C~+40°C	+41°C~+90°C
AHC-8M, 12M	0°C~+55°C	+56°C~+90°C

Min. inlet pressure: According to the NPSH curve + a safety margin of 0.5m.
Max. inlet pressure: Limited by the max. operating pressure.

Pipe connections

Connections	AHC/I-2M	AHC/I-4M	AHC-8M	AHC-12M
Suction port	1"	1 1/4"	1 1/2"	1 1/2"
Discharge port	1"	1"	1 1/4"	1 1/2"
Drain hole, priming hole:	3/8"	3/8"	1/2"	1/2"

Mechanical Seals

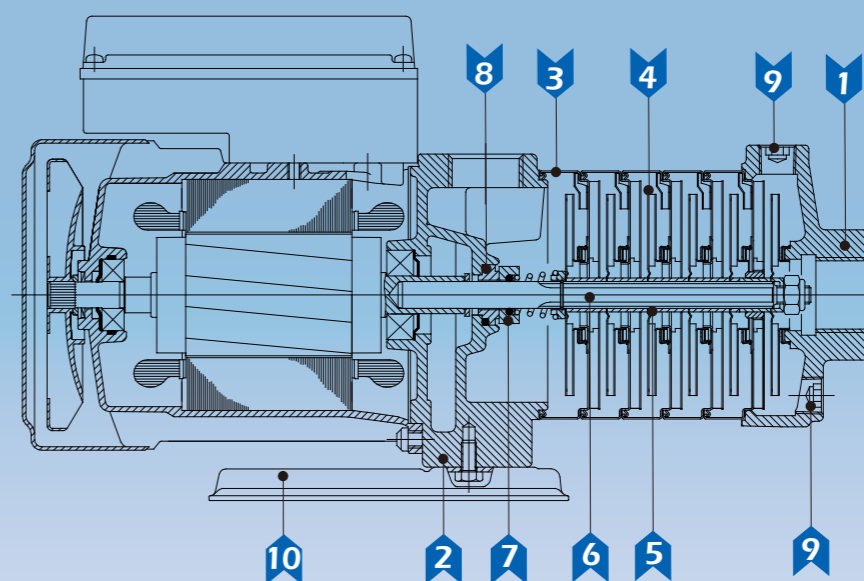
Mechanical Seals	AHBI/AHBS
COB	•
COQ	Optional
AUU	Optional

O-rings

E	•
V	Optional

• Standard

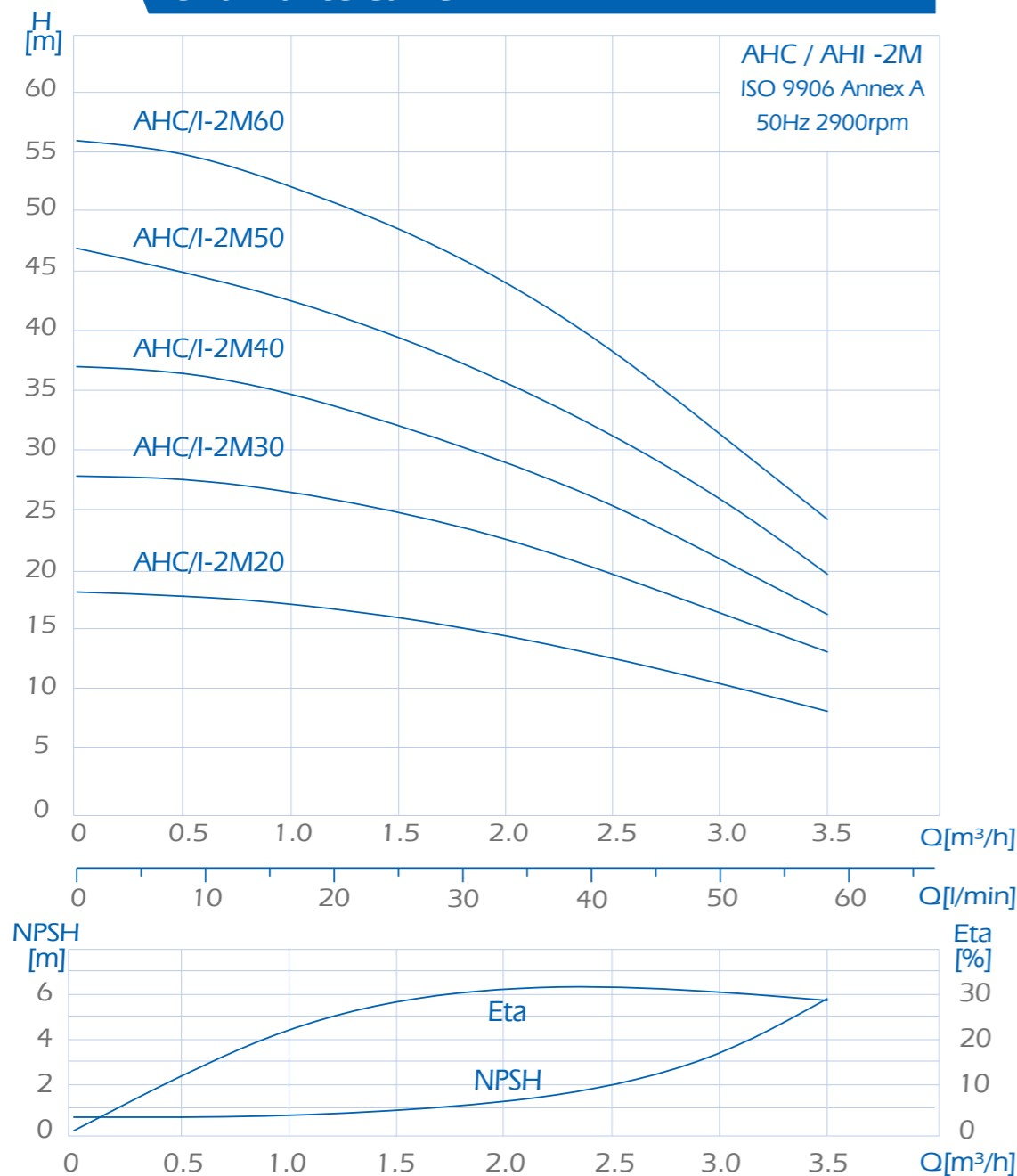
Construction & Material



		Materials	
Description	AHC	AHI	
1 Suction chamber	Cast iron	SS304	
2 Pump head	Cast iron	SS304	
3 Intermediate chamber	SS304	SS304	
4 Impeller	SS304	SS304	
5 Spacing pipe	SS304	SS304	
6 Shaft	SS431	SS431	
7 Mechanical seal	Silicon carbide/Carbon	Silicon carbide/Carbon	
8 O-ring	EPDM	EPDM	
9 Drain and priming plug	Steel	SS304	
10 Base plate	Steel	SS304	

A-Series Horizontal Centrifugal Multistage Pumps

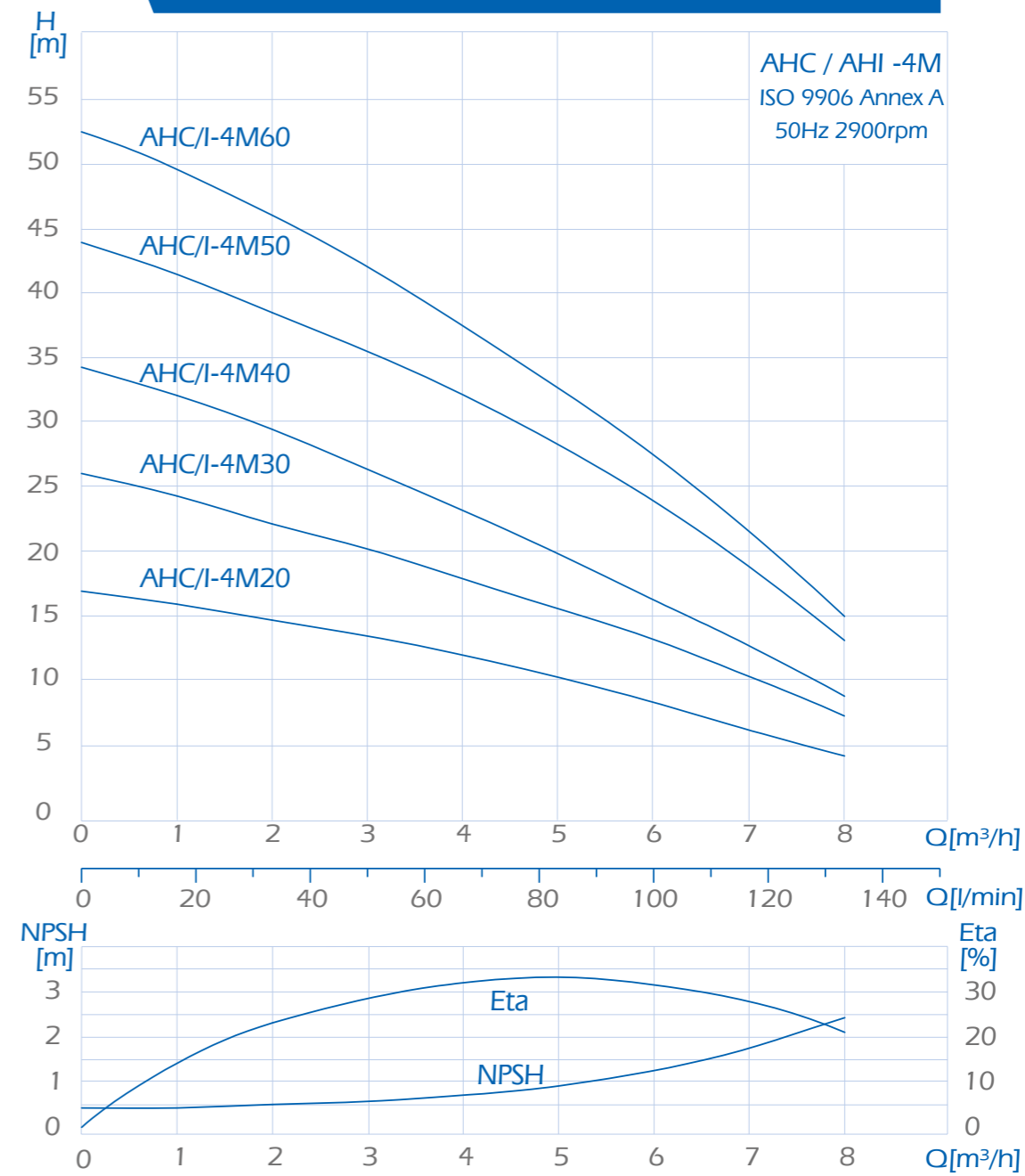
Performance Curve



Pump type	HP	Electrical data, 2900 min ⁻¹					
		1 X 220-240 V			3 X 220-240△/380-415V V		
		P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)	I _{1/1} (A)
AHC/AHI-2M20	0.5	205	420	2.1	230	380	1.8/1.1
AHC/AHI-2M30	0.5	280	480	2.3	300	460	1.9/1.2
AHC/AHI-2M40	0.75	370	570	2.6	400	560	2.0/1.2
AHC/AHI-2M50	0.75	450	680	3.2	560	660	2.7/1.6
AHC/AHI-2M60	1	560	810	3.7	580	810	2.8/1.6

A-Series Horizontal Centrifugal Multistage Pumps

Performance Curve

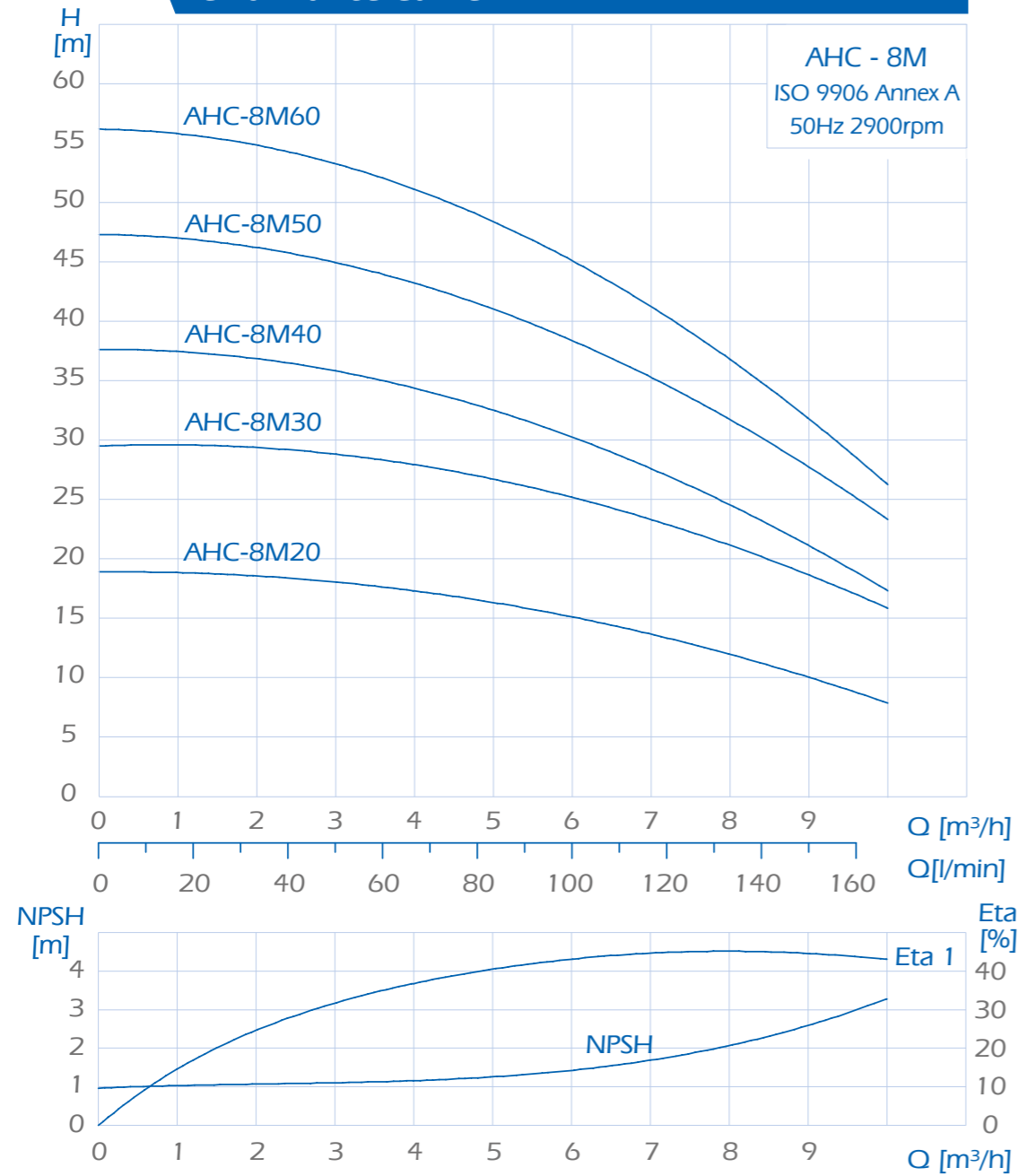


Pump type	HP	Electrical data, 2900 min ⁻¹					
		1 X 220-240 V			3 X 220-240△/380-415V V		
		P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)	I _{1/1} (A)
AHC/AHI-4M20	0.5	345	540	2.4	390	560	2.0/1.2
AHC/AHI-4M30	0.75	480	820	3.5	540	770	2.3/1.3
AHC/AHI-4M40	1	690	1020	4.3	660	1000	3.1/1.8
AHC/AHI-4M50	1.5	920	1220	5.4	1000	1200	4.0/2.3
AHC/AHI-4M60	1.5	1050	1450	6.2	1170	1400	4.6/2.7

All technical information is subject to change without notice.

A-Series Horizontal Centrifugal Multistage Pumps

Performance Curve



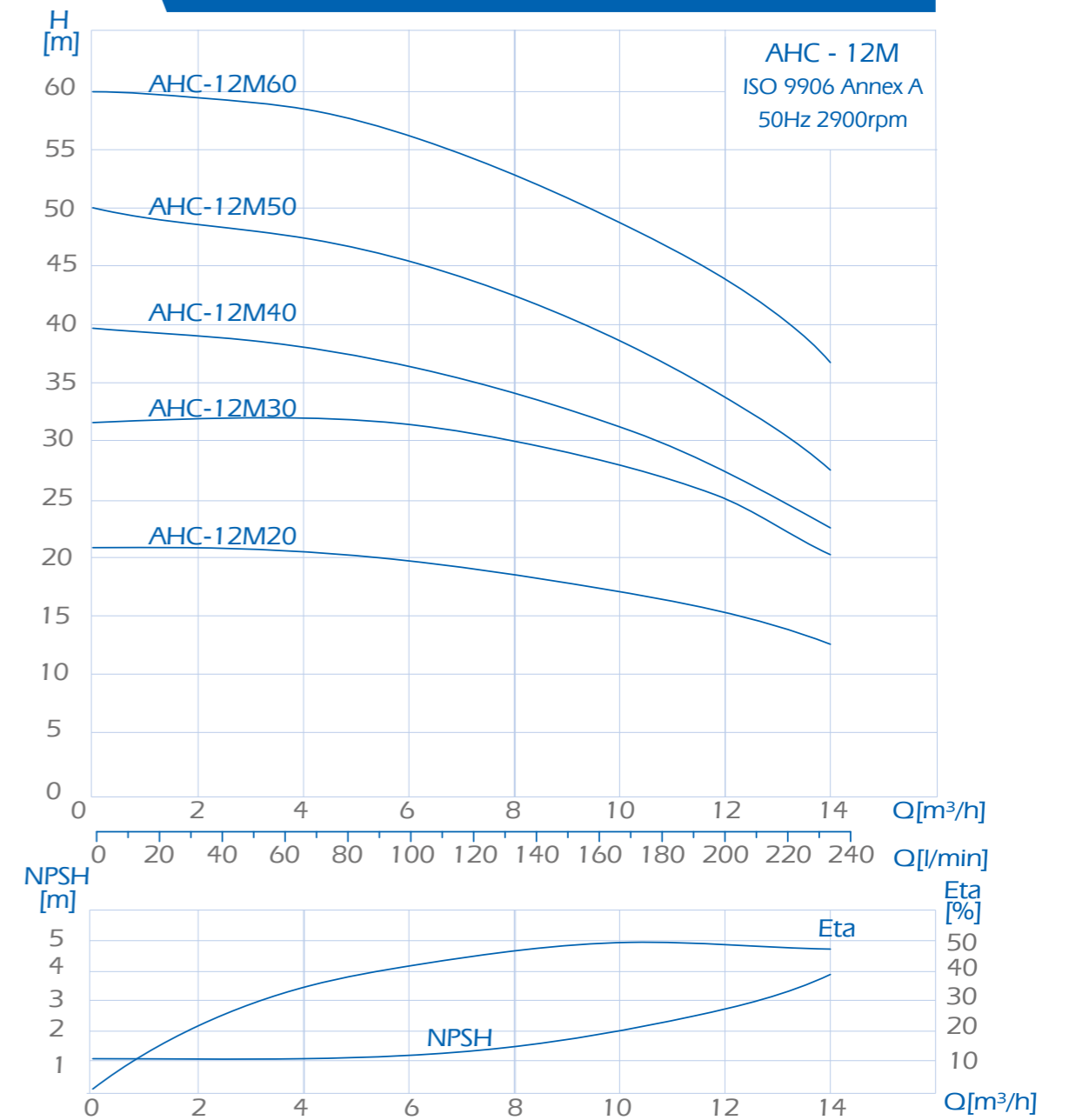
Electrical data, 2900 min⁻¹

Pump type	Output	1 X 220-240 V			3 X 220-240 /380-415Y V		
		HP	P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)
AHC-8M20	0.75	480	730	3.2	480	650	2.1/1.2
AHC-8M30	1	740	970	4.3	790	1030	3.4/2.0
AHC-8M40	1.5	940	1330	5.6	1025	1290	4.7/2.7
AHC-8M50	2	1310	1740	7.8	1290	1650	5.2/3.0
AHC-8M60	3	1460	1930	8.5	1560	1930	5.9/3.4

All technical information is subject to change without notice.

A-Series Horizontal Centrifugal Multistage Pumps

Performance Curve



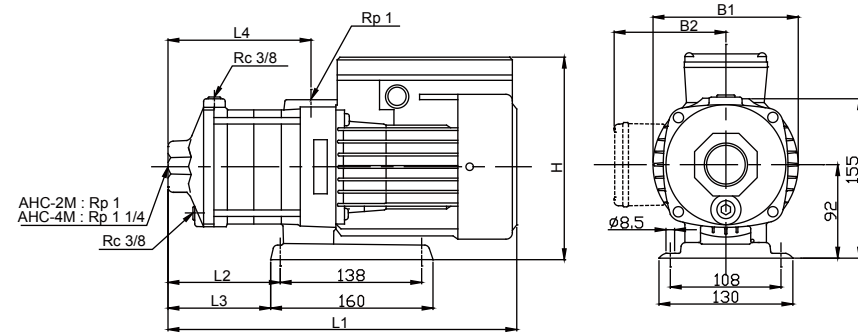
Electrical data, 2900 min⁻¹

Pump type	Output	1 X 220-240 V			3 X 220-240 /380-415Y V		
		HP	P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)
AHC-12M20	1.5	710	1060	4.8	790	1030	3.2/1.8
AHC-12M30	1.5	1080	1520	6.8	1190	1530	4.3/2.5
AHC-12M40	2	1642	2180	9.6	1770	2200	6.6/3.8
AHC-12M50	3	1630	2560	11.3	2150	2690	8.1/4.8
AHC-12M60	4	--	--	--	2560	3180	9.4/5.5

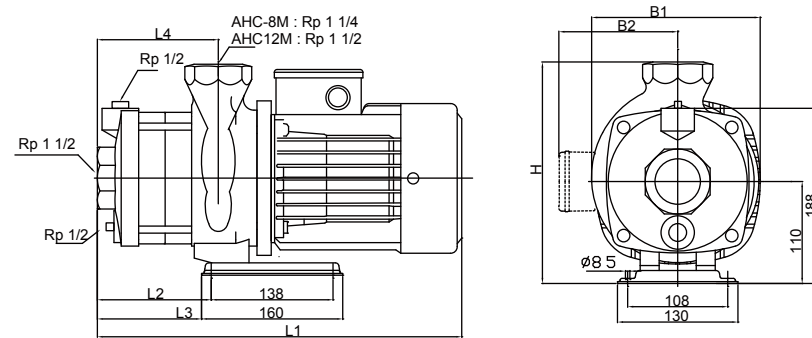
A-Series Horizontal Centrifugal Multistage Pumps

AHC - 2M , 4M , 8M , 12M

Dimensions & Weights



Pump type	AHC-2M,4M											
	Dimension (mm)										Net weight (kg)	
	L1	L2	L3	L4	B1	B2		H		1phase	3phase	
AHC-2M20	309	75	63	101	141	127	112	228	206	10.3	10.0	
AHC-2M30	327	93	81	119	141	127	112	228	206	10.5	10.3	
AHC-2M40	345	111	99	137	141	127	112	228	206	10.8	10.5	
AHC-2M50	363	129	117	155	141	127	112	228	206	11.6	11.2	
AHC-2M60	381	147	135	173	141	127	112	228	206	11.8	11.5	
AHC-4M20	318	84	72	110	141	127	112	228	206	10.4	10.1	
AHC-4M30	344	111	99	137	141	127	112	228	206	10.8	10.5	
AHC-4M40	372	138	126	164	141	127	112	228	206	11.6	11.2	
AHC-4M50	438	165	153	191	141	127	112	228	206	13.4	13.1	
AHC-4M60	465	192	180	218	141	127	112	228	206	14.8	14.5	



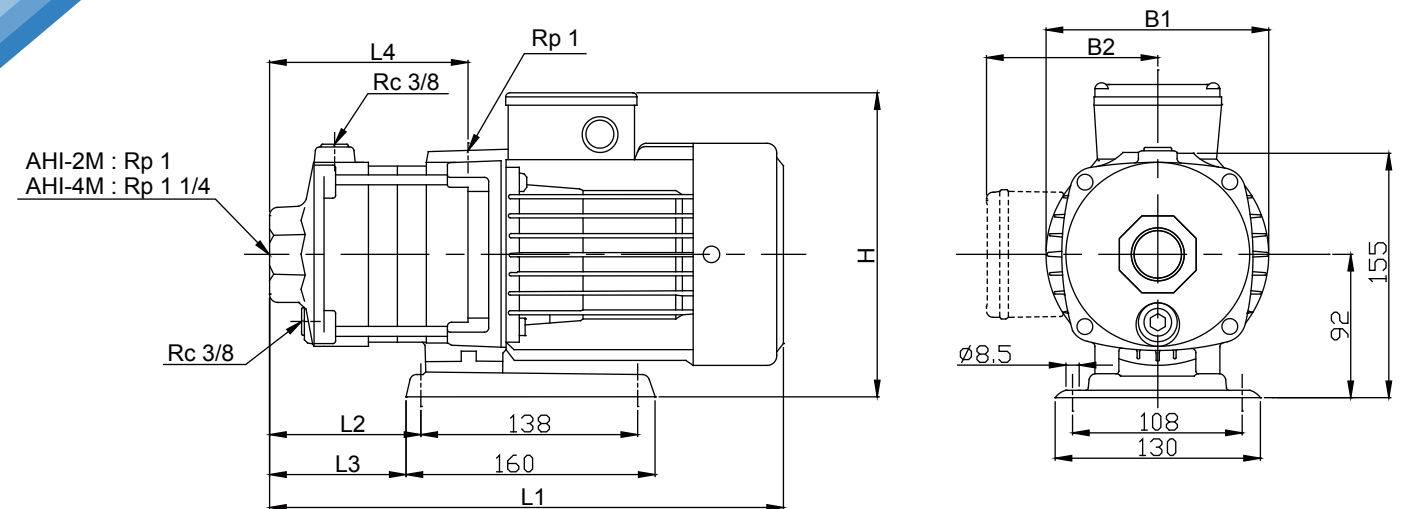
Pump type	AHC-8M,12M											
	Dimension (mm)										Net weight (kg)	
	L1		L2	L3	L4	B1		B2		1phase	3phase	
AHC-8M20	311	311	69	58	77	177	177	109	109	15.0	15.0	
AHC-8M30	381	381	99	88	107	177	177	109	109	17.0	17.0	
AHC-8M40	381	381	99	88	107	177	177	109	109	19.0	19.0	
AHC-8M50	459	411	129	118	137	182	177	--	--	28.8	20.0	
AHC-8M60	459	459	129	118	137	182	182	109	109	28.8	25.0	
AHC-12M20	351	351	69	58	77	177	177	109	109	17.0	17.0	
AHC-12M30	381	381	99	88	107	177	177	--	--	19.0	19.0	
AHC-12M40	429	429	99	88	107	182	182	--	--	26.0	24.0	
AHC-12M50	459	459	129	118	137	182	182	--	--	27.0	27.0	
AHC-12M60	--	459	129	118	137	--	182	--	--	--	27.0	

All technical information is subject to change without notice.

A-Series Horizontal Centrifugal Multistage Pumps

AHI - 2M , 4M

Dimensions & Weights



Pump type	AHI-2M,4M											
	Dimension (mm)										Net weight (kg)	
	L1	L2	L3	L4	B1	B2		H		1phase	3phase	
AHI-2M20	309	75	63	101	141	127	112	228	206	9.1	8.8	
AHI-2M30	327	93	81	119	141	127	112	228	206	9.4	9.1	
AHI-2M40	345	111	99	137	141	127	112	228	206	9.6	9.4	
AHI-2M50	363	129	117	155	141	127	112	228	206	10.4	10.1	
AHI-2M60	381	147	135	173	141	127	112	228	206	10.7	10.3	
AHI-4M20	318	84	72	110	141	127	112	228	206	9.2	9.0	
AHI-4M30	344	111	99	137	141	127	112	228	206	9.6	9.3	
AHI-4M40	372	138	126	164	141	127	112	228	206	10.4	10.1	
AHI-4M50	438	165	153	191	141	127	112	228	206	11.3	12.0	
AHI-4M60	465	192	180	218	141	127	112	228	206	13.6	13.4	

A-Series Horizontal Centrifugal Multistage Pumps AHBI AHBS 50HZ



Feature

Reliability/Compact Form/Wide Range
High Efficiency / Easy Maintenance
Suitable for slightly corrosive liquids.

Application:

Water supply and pressure boosting
Air-conditioning
Water treatment
Heating and cooling in industrial processes
Industrial washing and dish-washing machines
Softened water
Pressure boosting of process water
Fertilizer/dosing systems

AHBI 50Hz

AHBS 50Hz

Pump

A horizontal, multistage centrifugal pump is made of stainless steel. The pump is a non-self priming type and fitted with a mechanical shaft seal.

Motor

Totally enclosed, fan-cooled standard motor.

Rated speed: 2850rpm/50Hz

Enclosure Class: IP 54

Insulation Class: F

Standard Voltages: 1x220~240V, 50Hz,
3x220~240Δ/380-415Y V, 50Hz

Operating conditions

Liquid temperature range: 0 °C ~ +110 °C

Maximum ambient temperature: +40 °C

Maximum operating pressure: 10 kg/cm²

Maximum inlet pressure is limited by maximum operating pressure.

Mechanical Seals

List of Materials

Q:	Silicon carbide
B:	Carbon
E:	EPDM
V:	Viton
R:	Seal Type (general use)

*Spring is SS316.

Liquids to be pumped

These pumps are designed for pumping freely flowing non-corrosive, non-explosive, and non-flammable liquids. The liquids to be pumped must also be free of solid matter, sands, fibers, and similar materials.

Most common non-highly corrosive watery liquids, oily liquids, hot and cold liquids can be pumped with these pumps.

The suitability of these pumps for pumping any particular liquid depends upon a number of factors, such as the pH value, contents of chemicals such as chlorides, oils the temperature of the liquids, etc..

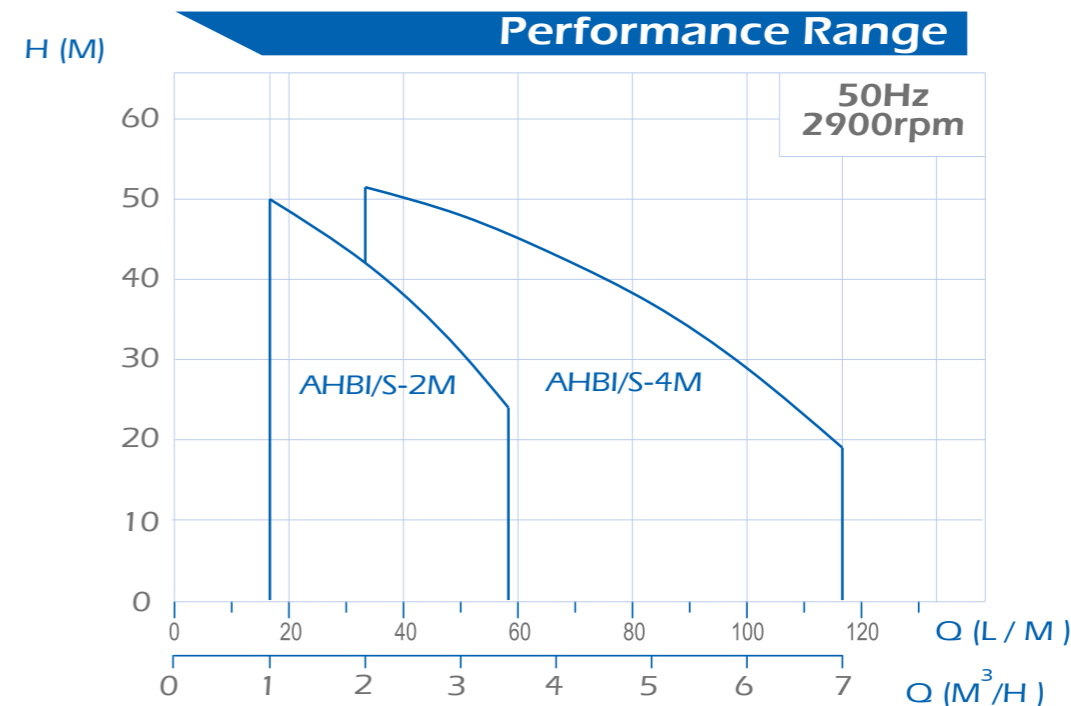
Pipe connections

Connections	AHBI/S-2M	AHBI/S-4M
Suction port	1"	1 1/4"
Discharge port	1"	1 1/4"
Drain hole, priming hole:	3/8"	3/8"

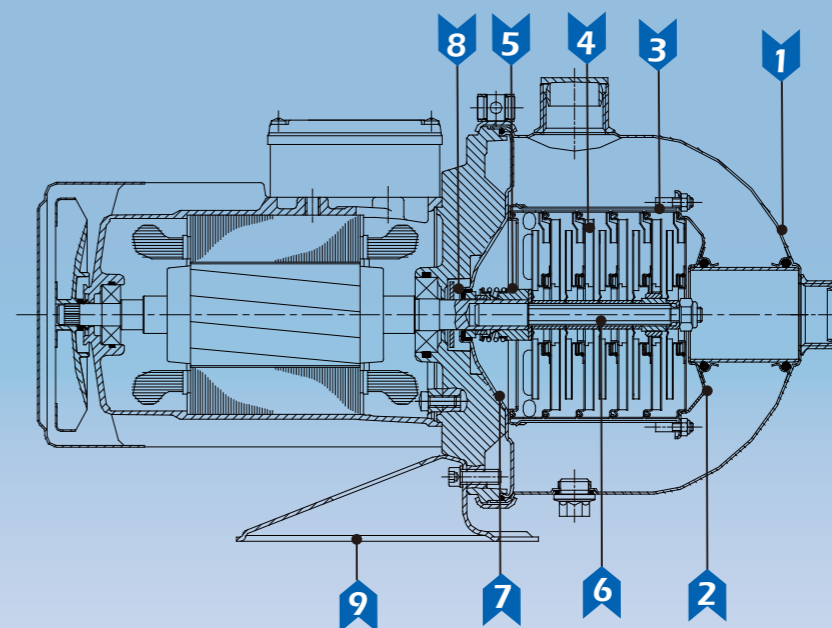
Mechanical Seals	AHBI	AHBS
ROQ	Optional	•
ROB	•	Optional

O-rings	AHBI	AHBS
E	•	•
V	Optional	Optional

•Standard



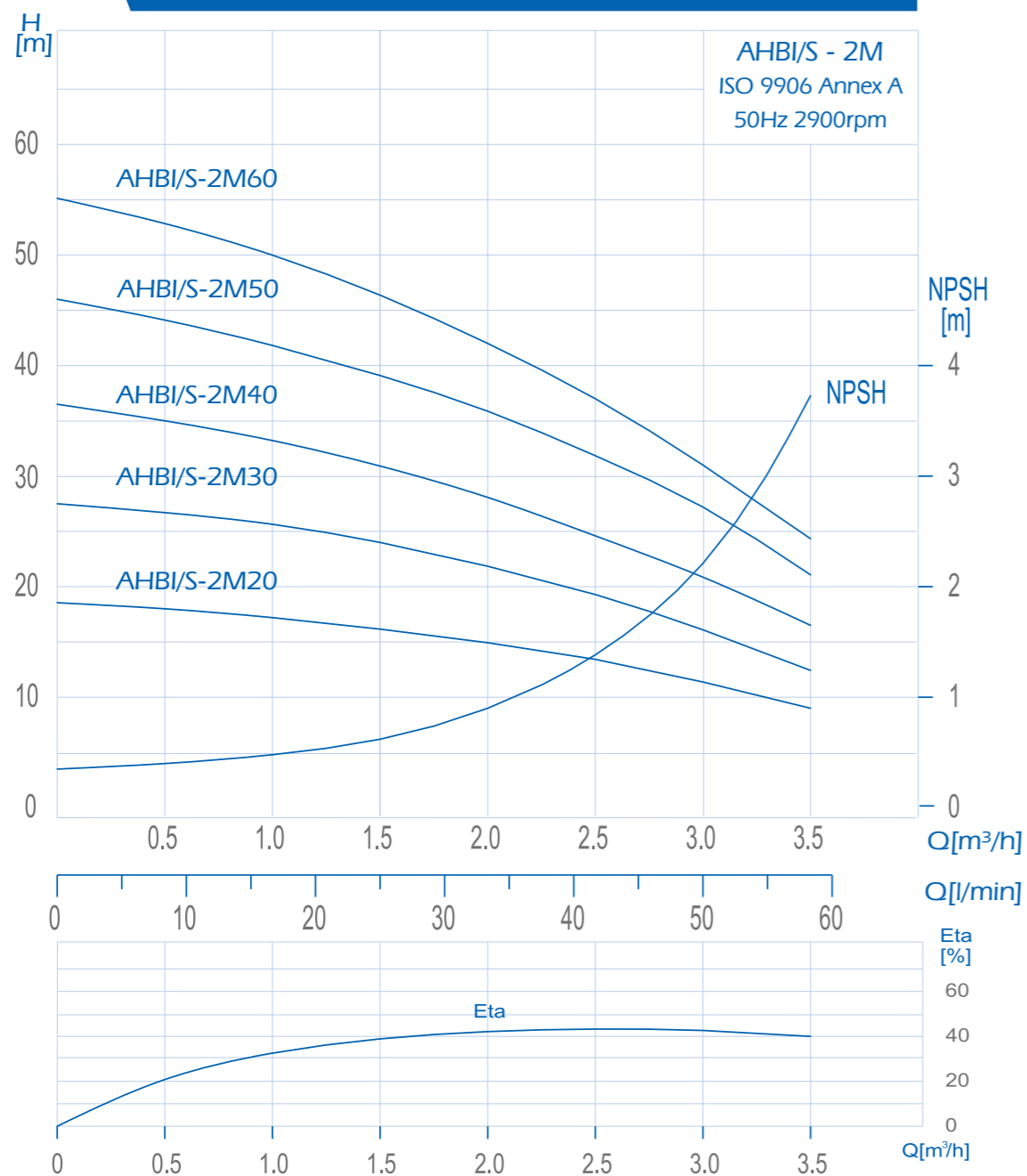
Construction & Material



Description	Materials	
	AHBI	AHBS
1 Pump casing	SS304	SS316
2 Suction inter-connector	SS304	SS316
3 Chamber	SS304	SS316
4 Impeller	SS304	SS316
5 Cover plate	SS304	SS316
6 Shaft	SS431	SS316
7 Mechanical seal	Silicon carbide/Carbon	Silicon carbide/Silicon carbide
8 O-ring	EPDM	EPDM
9 Base plate	Steel	Steel

A-Series Horizontal Centrifugal Multistage Pumps

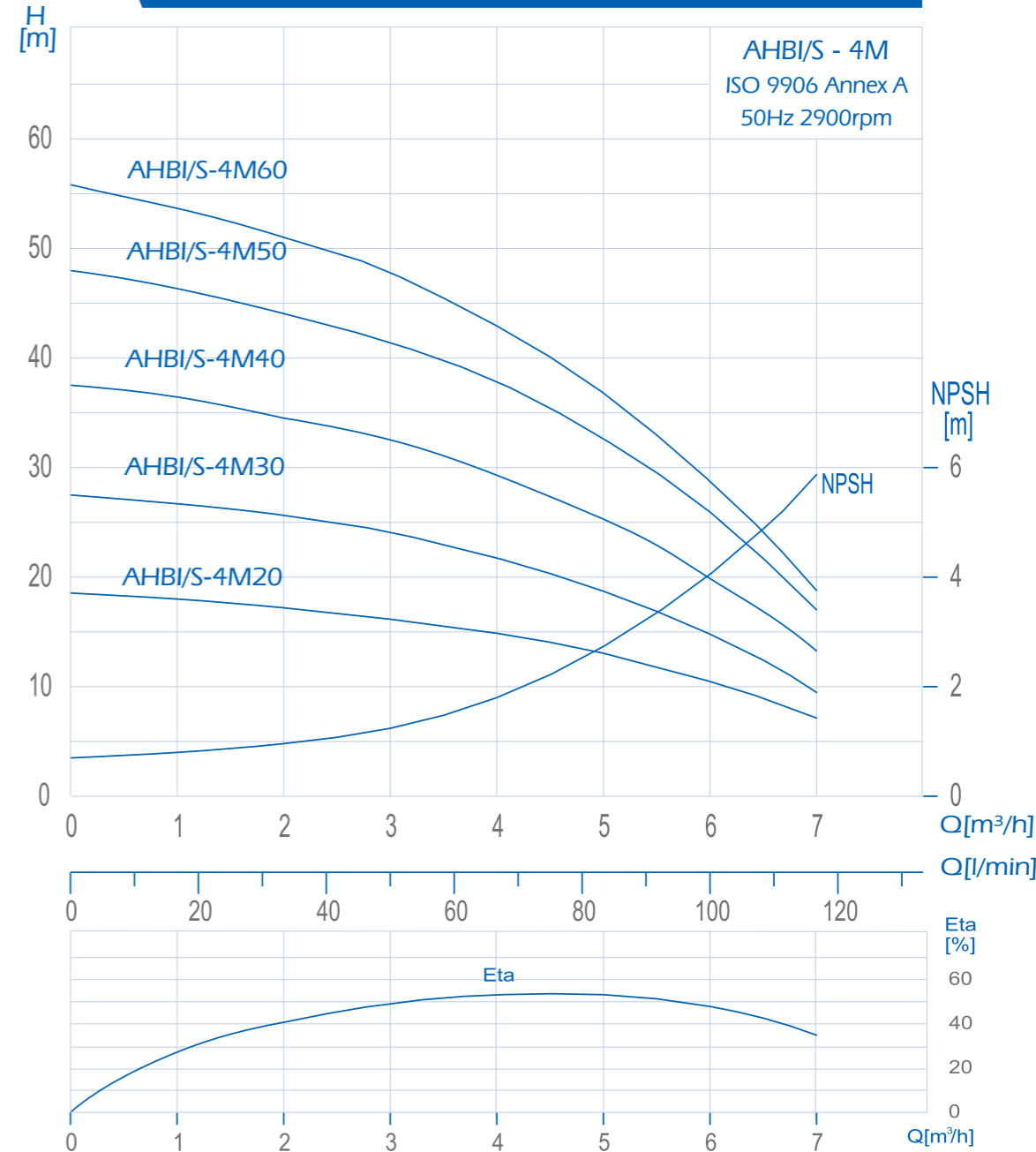
Performance Curve



Pump type	HP	Electrical data, 2900 min ⁻¹					
		1 X 220-240 V			3 X 220-240Δ/380-415Y V		
		P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)	I _{1/1} (A)
AHBI/AHBS-2M20	0.5	240	450	1.9	245	370	1.9/1.1
AHBI/AHBS-2M30	0.5	340	540	2.4	350	480	1.9/1.1
AHBI/AHBS-2M40	0.75	430	630	2.8	460	620	2.0/1.2
AHBI/AHBS-2M50	0.75	540	800	3.8	565	820	2.7/1.6
AHBI/AHBS-2M60	1	620	940	4.2	655	910	2.8/1.6

A-Series Horizontal Centrifugal Multistage Pumps

Performance Curve

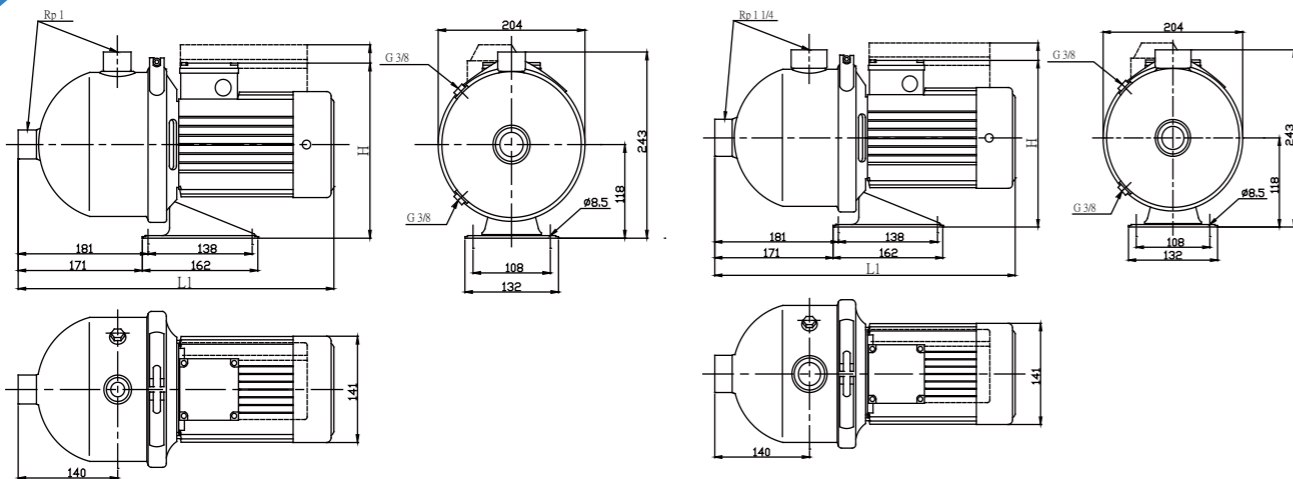


Pump type	HP	Electrical data, 2900 min ⁻¹					
		1 X 220-240 V			3 X 220-240Δ/380-415Y V		
		P ₂ (W)	P ₁ (W)	I _{1/1} (A)	P ₂ (W)	P ₁ (W)	I _{1/1} (A)
AHBI/AHBS-4M20	0.5	380	560	2.5	400	560	2.0/1.2
AHBI/AHBS-4M30	0.75	525	760	3.5	560	720	2.4/1.4
AHBI/AHBS-4M40	1	730	1000	4.8	740	980	3.2/1.8
AHBI/AHBS-4M50	1.5	870	1220	5.7	940	1210	4.0/2.3
AHBI/AHBS-4M60	1.5	1080	1410	6.4	1080	1410	4.8/2.7

All technical information is subject to change without notice.

A-Series Horizontal Centrifugal Multistage Pumps

AHBI/AHBS - 2M , 4M Dimensions & Weights



Pump type	AHBI/AHBS-2M, 4M				Net Weight kg
	Dimension (mm)				
	1phase	3phase	L1	H	
AHBI/AHBS-2M20	403	255	403	233	9.6
AHBI/AHBS-2M30	403	255	403	233	9.9
AHBI/AHBS-2M40	403	255	403	233	10.1
AHBI/AHBS-2M50	441	255	403	233	10.8
AHBI/AHBS-2M60	441	255	403	233	11.0
AHBI/AHBS-4M20	403	255	403	233	9.6
AHBI/AHBS-4M30	403	255	403	233	9.9
AHBI/AHBS-4M40	403	255	403	233	10.6
AHBI/AHBS-4M50	441	255	441	233	12.1
AHBI/AHBS-4M60	441	255	441	233	12.3

All technical information is subject to change without notice.

A-Series Horizontal Centrifugal Multistage Pumps

AHC/AHI , AHBI/AHBS Installation and operating manual

1. HANDLING

Before installation, these installation and operating instructions must be read carefully. The product must be lifted and handled with care.

2. APPLICATIONS

AHC,AHI: Designed to handle clean, thin, non-aggressive water and non-explosive liquids, no solid particles.
AHBI,AHBS: Designed to handle clean, thin and non-explosive liquid without particles.
 That also can be used in light industry application.

3. WORKING LIMITS

AHC, AHI

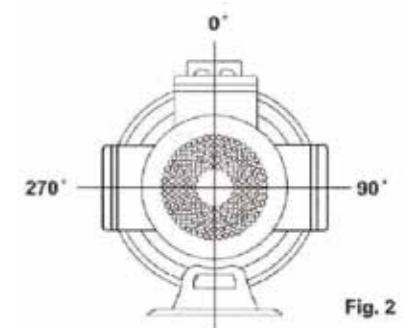
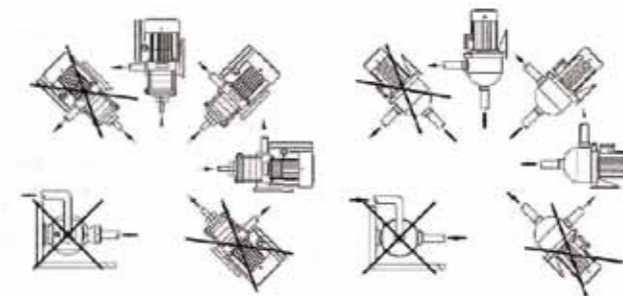
- Max. operating pressure:
 0°C to $+40^{\circ}\text{C}$ \rightarrow 10 kg/cm^2 , $+41^{\circ}\text{C}$ to $+90^{\circ}\text{C}$ \rightarrow 6 kg/cm^2 .
- Liquid temperature range: 0°C ~ $+90^{\circ}\text{C}$.
- Max. ambient temperature: $+50^{\circ}\text{C}$.
- Min. inlet pressure:
 According to the NPSH curve + a safety margin of 0.5m.
- Max. inlet pressure: Limited by the max. operating pressure.

AHBI,AHBS

- Max. operating pressure: 10 kg/cm^2 .
- Liquid temperature range: 0°C ~ $+110^{\circ}\text{C}$.
- Max. ambient temperature: $+40^{\circ}\text{C}$.
- Min. inlet pressure:
 According to the NPSH curve + a safety margin of 0.5m.
- Max. inlet pressure: Limited by the max. operating pressure.

4. INSTALLATION

- The pump may be installed as shown in Fig.1.



5. ELECTRICAL CONNECTION

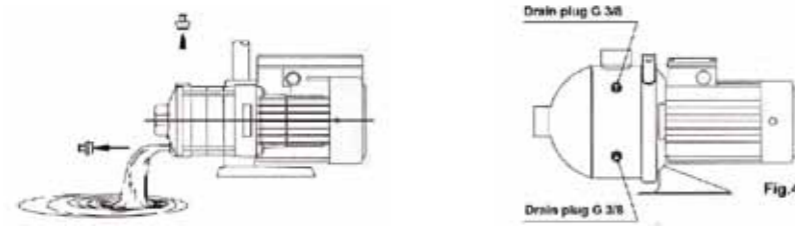
- Position of terminal box (Fig.2)
 The terminal box can be turned to three positions before the pump is installed.

A-Series Horizontal Centrifugal Multistage Pumps

6.Others (Fig.4)

●Priming

Before start up, to fill the pump body and suction pipe through the priming plug, bleeding off all the air.



●Maintenance

No routine maintenance is required.

●Frost protection

Pumps which are not being used during periods of frost should be drained to avoid damage. Remove the priming and drain plugs and allow the pump to drain. Do not replace the plugs until the pump is to be used again.

7.TROUBLE SHOOTING

Fault	Possible cause
1. Pump does not run when the motor starter is operated.	Supply failure Main contacts in motor starter are not making contact or the motor coil is faulty. Control circuit fuses have cut or are defective. Pump is blocked by unknown matters.
2. Pump runs but gives no water.	Motor is failure. Pump is not fill with liquid. Pump is blocked by unknown matters. The suction or discharge pipe is blocked by unknown matters. The foot or non-return valve is blocked or failure. The suction pipe is leakage. The suction lift is too great. The air is in suction pipe or pump.
3. Pump capacity is not constant or is reduced.	Pump takes in air. The pump, suction pipe or discharge pipe is partly blocked by unknown matters. The inlet pressure is too low. Wrong direction of rotation (three phase). The suction lift is too great. The foot or non-return valve is partly blocked.
4. Starter overload cut off immediately when the power is switched on.	Overload setting is too low. The cable connection is loose or faulty. One fuse is blown. Pump is not free to run. Contacts in overload are faulty. The motor winding is defective.

A-Series Horizontal Centrifugal Multistage Pumps

Nameplate

1 Model: ABHI-4M50	4 P2: 940 W 1.5 HP
2 Q: 4.5m ³ /h Q _{max} : 9m ³ /h	5 H : 49 m H _{max} : 70 m
3 Supply: 50Hz 380V 3ϕ	6 Serial No : 09116903

- 1.Pump Model
- 2.Rated Capacity
- 3.Supply Voltage
- 4.Rated Power
- 5.Maximum Head
- 6.Serial Number