

WATER CHILLERS



AACH10HP



AACH25HP



AACH50HP



AACH100HP



AACH10HP CHILLER: 1/10 HP (10-40 GALLON)



AACH10HP PERFORMANCE CURVE

The refrigeration performance test is indicated when the ambient temperatuire is 88°F (31°C), the water temperature before refrigerated is 100°F (38°C), and the volume of water being refrigerated is 50 L (13 gal), 100 L (26 gal) and 150 L (40 gal).



AACH10HP SPECIFICATIONS	
Model	AACH10HP
Rated Voltage	110-120V
Rated Frequency	60Hz
Working Current	2.2A
Power	1/10 HP
*BTU	1020 BTU/H
Refrigerant	R134a
Refrigerant Weight	180±10g
Rate of Flow	132-396 GPH (500-1500 LPH)
Reservoir Capacity	13-40 gal (50-150 L)
Net Weight	28 lbs
Unit Size	17" x 10" x 15"

- 1. The actual rate of flow depends on the GPH of the pump plus the tubing and connectors used for circulation.
- 2. The refrigeration performance chart is indicated when the ambient temperature is 88°F (31°C). The chiller has the best efficiency when the volume of the reservoir is between 13 and 40 gallons.
- 3. The refrigeration efficiency depends upon several factors including the installation location, distance between the chiller and reservoir, ambient temperature (climate), heating source, lighting, pump size, and other connecting parts.

*The BTU is measured at an ambient temperature of 97°F (36°C) and the chiller is working at 190W/2.2A power.

Recommended pump: Hydrofarm AAPW160, AAPW250 and AAPW400

AACH10HP			
PART LIST			
Chiller unit with replacement fuse inside 1pc			1рс
Detachable power cord 1p			1pc
Accessory kit:			1pk
• 1/2	• ½in fitting with sealing gasket		
• 3/4	 ¾in fitting with sealing gasket 		
• V	/orm drive hose clamp	2pcs	
User manual			1pc

AACH25HP CHILLER: 1/4 HP (26-80 GALLON)



AACH25HP PERFORMANCE CURVE

The refrigeration performance test is indicated when the ambient temperatuire is 88°F (31°C), the water temperature before refrigerated is 100°F (38°C), and the volume of water being refrigerated is 150 L (40 gal), 250 L (66 gal), and 350 L (92 gal).



AACH25HP SPECIFICATIONS			
Model	AACH25HP		
Rated Voltage	110-120V		
Rated Frequency	60Hz		
Working Current	4.7A		
Power	1/4 HP		
*BTU	3010 BTU/H		
Refrigerant	R134a		
Refrigerant Weight	220±10g		
Rate of Flow	396-925GPH (1500-3500LPH)		
Reservoir Capacity	40-92 gal (150-350 L)		
Net Weight	46 lbs		
Unit Size	18" x 13" x 17"		

- 1. The actual rate of flow depends on the GPH of the pump plus the tubing and connectors used for circulation.
- The refrigeration performance chart is indicated when the ambient temperature is 88°F (31°C). The chiller has the best efficiency when the volume of the reservoir is between 40 and 92 gallons.
- 3. The refrigeration efficiency depends upon several factors including the installation location, distance between the chiller and reservoir, ambient temperature (climate), heating source, lighting, pump size, and other connecting parts.

*The BTU is measured at an ambient temperature of 97°F (36°C) and the chiller is working at 460W/4.7A power.

Recommended pump: Hydrofarm AAPW400, AAPW550 and AAPW800

AACH25HP			
PART LIST			
Chiller unit	it		
Accessory kit:			1pk
	 ½in fitting with sealing gasket ¾in fitting with sealing gasket Worm drive hose clamp 	2pcs 2pcs 2pcs	
	Replacement fuse	1pc	
User manual	iual		1pc



AACH50HP CHILLER: 1/2 HP (52-132 GALLON)



AACH50HP PERFORMANCE CURVE

The refrigeration performance test is indicated when the ambient temperatuire is 88°F (31°C), the water temperature before refrigerated is 100°F (38°), and the volume of water being refrigerated is 350 L (92 gal), 500 L (132 gal) and 650 L (172 gal).



AACH50HP SPECIFICATIONS		
Model	AACH50HP	
Rated Voltage	110-120V	
Rated Frequency	60Hz	
Working Current	5.4A	
Power	1/2 HP	
*BTU	4020 BTU/H	
Refrigerant	R134a	
Refrigerant Weight	280±15g	
Rate of Flow	800-1600GPH (3000-6000LPH)	
Reservoir Capacity	92-172 gal (350-650 L)	
Net Weight	51 lbs	
Unit Size	19" x 14" x 19"	

- 1. The actual rate of flow depends on the GPH of the pump plus the tubing and connectors used for circulation.
- 2. The refrigeration performance chart is indicated when the ambient temperature is 88°F (31°C). The chiller has the best efficiency when the volume of the reservoir is between 92 and 172 gallons.
- 3. The refrigeration efficiency depends upon several factors including the installation location, distance between the chiller and reservoir, ambient temperature (climate), heating source, lighting, pump size, and other connecting parts.

*The BTU is measured at an ambient temperature of 97°F (36°C) and the chiller is working at 600W/5.8A power.

Recommended pump: Hydrofarm AAPW800, AAPW1000 and AAPC1010

AACH50HP				
	PART LIST			
Chiller unit			1pc	
Accessory kit:	Accessory kit:		1pk	
	 ½in fitting with sealing gasket ¾in fitting with sealing gasket 1in fitting with sealing gasket Worm drive hose clamp Replacement fuse 	2pcs 2pcs 2pcs 2pcs 1pc		
User manual			1pc	



AACH100HP CHILLER: 1 HP (80-250 GALLON)



AACH100HP PERFORMANCE CURVE

The refrigeration performance test is indicated when the ambient temperatuire is 88°F (31°C), the water temperature before refrigerated is 100°F (38°), and the volume of water being refrigerated is 500 L (132 gal), 1000 L (264 gal) and 1500 L (396 gal).



AACH100HP SPECIFICATIONS		
Model	AACH100HP	
Rated Voltage	110-120V	
Rated Frequency	60Hz	
Working Current	10.2A	
Power	1 HP	
*BTU	10050 BTU/H	
Refrigerant	R410a	
Refrigerant Weight	450±20g	
Rate of Flow	1320-3900 GPH (5000-15000 LPH)	
Reservoir Capacity	132-396 gal (500-1500 L)	
Net Weight	75 lbs	
Unit Size	21" x 15" x 20"	

- 1. The actual rate of flow depends on the GPH of the pump plus the tubing and connectors used for circulation.
- The refrigeration performance chart is indicated when the ambient temperature is 88°F (31°C). The chiller has the best efficiency when the volume of the reservoir is between 132 and 396 gallons.
- 3. The refrigeration efficiency depends upon several factors including the installation location, distance between the chiller and reservoir, ambient temperature (climate), heating source, lighting, pump size, and other connecting parts.

*The BTU is measured at an ambient temperature of 97°F (36°C) and the chiller is working at 1100W/10.2A power.

Recommended pump: Hydrofarm AAPW1000, AAPC1010 and AAPC1020 or AAPC2010

AACH100HP			
	PART LIST		
Chiller unit			1pc
Accessory kit:			1pk
	1in & 1-1/4in combo fitting with sealing gasketWorm drive hose clamp	2pcs 2pcs	
User manual			1pc



CIRCUIT DIAGRAM



FEATURES

- Convenient microcomputer control system
- · Anti-corrosive pure titanium evaporator for fresh and salt water
- Compressor protection function shuts off the circuit automatically to prevent the motor from burning out when it is overheated
- Memory backup feature allows the unit to return to the previous setting after the unit experiences an unexpected power outage
- Boost function accelerates the chilling process with two available options: 2-hour setting chilling and continuous (24 hrs/day, 7 days/week) setting for maximum chilling

INTRODUCTION

Thank you for purchasing the Active Aqua Series Chiller. The chiller represents a significant step forward in horticultural chiller engineering, offering state of the art technology at highly competitive prices. With this chiller, water temperatures for reservoirs can be quickly and economically maintained. The super silent design results in significantly lower noise levels. The Active Aqua Series Chillers have a strong chassis with an ABS plastic housing which is anti-rust and anti-corrosive, ensuring that the chiller does not look out of place in any setting. For a complete understanding of this chiller, we recommend reading this instruction manual thoroughly.

TERMS AND SYMBOLS

Several symbols are used in this manual and on the product itself which are aimed at promoting proper and safe operation in order to prevent personal injuries or damage to the chiller. Please familiarize yourself with the symbols below before reading the manual or trying to operate the chiller.

Hazard levels will be indicated in writing or shown by pictures. The symbol on the left provides general emphasis of the hazard, but specific details of the action which must be taken will be shown by a picture or explanation near the symbol.



This term indicates the possibility that continuing to operate the chiller while ignoring this warning or operating the chiller incorrectly, may cause personal injury or equipment damage.



This symbol advises you of a potential hazard which should be noted (including danger and warning).



This symbol advises you of a mandatory action which must be taken in order to avoid danger.

This symbol advises you of an action which is prohibited in order to avoid danger.

WHERE TO INSTALL

1. Do not install the chiller outdoors (Fig. 1).



- 2. Place the chiller in a ventilated space away from flammable materials, high temperatures, direct sunlight, moisture, and dust (Fig. 2).
- 3. Place the unit on a stable horizontal surface (Fig. 3).
- 4. Install at least 12 inches (30 cm) away from walls in order to give the chiller adequate ventilated space (Fig. 4).



5. Do not cover or move the chiller while it is operating (Fig.5).



- 6. The circulation water flow of the chiller is indicated in the technology parameter table. This chiller does not have a water pump, so it needs a pump with an available external filter. Using a pump without an external filter may cause a water leak or other damage (Fig. 6).
- 7. Do not put the chiller on its side or upside down as this will cause damage to the chiller. If the chiller is placed on its side, readjust the unit to its correct upright position and wait 20 minutes before turning it on (Fig. 7).



ASSEMBLY INSTRUCTIONS

- 1. Remove the chiller unit and all of the contained hardware from the box and packaging material.
- Set the chiller unit upright in the desired area on a stable surface ensuring there is at least 1' of clearance around the body (sides, top and back) of the unit.
- 3. Install the inlet/outlet fittings onto the inflow and outflow threaded sites.

NOTE: If the inflow and outflow fittings are different sizes, typically the larger one is used on the inflow and the smaller one on the outflow.

4. Attach the desired length of tubing onto each inflow and outflow fitting adapter with the worm drive hose clamps. The inflow should connect the chiller to an appropriately-sized submersible water pump such as an Active Aqua Submersible Pump in a reservoir of appropriate capacity (see attached performance curve chart). The outflow tube should hang freely in the reservoir to reintroduce the chilled water back into it.



NOTE: The pump must be located below the water reservoir water level. If you wish to place the unit at the side of the reservoir, you must fill the filtration system with water before turning it on.

UNDERSTANDING THE DISPLAY PANEL



1	Power	Turns chiller on and off (power switch)
2	Increase	Increases temperature in one-degree increments when setting temperature; Select Fahrenheit as unit of measure of temperature
3	Decrease	Decreases temperature in one-degree increments when setting temperature; Select Celsius as unit of measure of temperature
4	Fahrenheit	Indicates that the current water temperature is being displayed in Fahrenheit
5	Celsius	Indicates that the current water temperature is being displayed in Celsius
6	Current Temperature	Displays the current water temperature
7	Boost Indicator	Illuminates when the Boost function is activated
8	Set Temperature	Displays the user setting for water temperature
9	Boost	Push to turn on Boost function (accelerate chilling)
10	Boost indicator: continuously	When lit, this light indicates that the 24/7 boosted chilling option has been selected
11	Boost indicator: 2 hours	When lit, this light indicates that 2-hour continuous boosted chilling option has been selected
12	Set	Push to enter the Setting mode. Push again to confirm settings changes and to exit from Setting mode



WARNINGS

- Do NOT cover the chiller unit with anything during operation.
- Place the chiller in the upright position ONLY for operation and storage purposes.
- Avoid direct contact with liquids to the external body of the chiller unit. Failure to do so may result in damage to the unit or electric shock.
- Keep power cord free of obstructions, such as heavy or sharp objects sitting directly on it.
- This chiller is approved for indoor use ONLY.
- Keep the unit away from flammable vapors, direct sunlight, high temperature exposure, and high humidity.
- Do NOT submerse the chiller. Doing so will damage the unit and may inflict electric shock.

OPERATION

- 1. Do NOT power on the chiller unit yet. Fully submerge the water pump to be used, plug it in, and ensure that water is moving freely between the reservoir and the chiller.
- 2. If the model has a power switch built on the back or side of the unit, ensure the switch is on the OFF position. Plug the chiller into a grounded outlet.
- 3. Click the switch to ON position. The chiller will start to operate. Models that don't contain a power switch will start to operate after the power cord is plugged into an outlet. The display panel will display the current water temperature and default desired water temperature immediately. However, the fan and compressor will be in protection mode for about 60 seconds before they turn on.
- 4. If you press and hold down the Power button on the control panel for 5 seconds, the chiller will shut down and the control panel will turn off. Press the Power button on the control panel again to resume operation.
- 5. The default desired water temperature is set at 75 degrees (Fahrenheit). The default unit of measure of temperature is Fahrenheit.

TEMPERATURE SETTING

- In Display mode, press either the /\ or the \/ button for 5 seconds to select between Fahrenheit and Celsius as the unit of measure of temperature.
- 2. Press the SET button to enter the water temperature setting mode. The previous water temperature setting will display and blink after the setting mode is activated.
- 3. Use the ∧ or ∨ button on the control panel to increase or decrease to the desired water temperature. Press the SET button or wait for approximately 8 seconds to confirm the user-set temperature and exit from the setting mode to the display mode. The display will turn from blinking to solid.
- 4. The available range for user-set temperature is 39°F to 90°F (3°C to 32°C).

TEMPERATURE CALIBRATION

- 1. Set the desired temperature above the current temperature so that the compressor will not operate during calibration.
- 2. In Display mode, press the /\ or \/ button for 5 seconds to select between Fahrenheit and Celsius as the unit of measure of temperature.
- Press and hold the /\ and \/ buttons at the same time for 5 seconds to enter into the Calibration mode. The Current Temperature display will show zero and blink after the Calibration mode is activated.
- 4. If Fahrenheit is selected, each time you press either the ∧ or ∨ button, the display will increase or decrease one unit, which represents 0.1 degree Fahrenheit. For example, to calibrate the temperature up 1 degree Fahrenheit, press the ∧ button 10 times and the display changes from zero to 10. To calibrate the temperature down 0.5 degree Fahrenheit, press the ∨ button 5 times and the display changes from zero to -5.
- 5. If Celsius is selected, each time you press either the \\ or \/ button, the display will increase or decrease one unit, which represents 0.1 degree Celsius. For example, to calibrate the temperature up 1 degree Celsius, press the \\ button 10 times and the display changes from zero to 10. To calibrate the temperature down 0.5 degree Celsius, press the \\ button 5 times and the display changes from zero to -5.
- Press and hold the SET button again for 5 seconds (or wait for approximately 8 seconds) to confirm the calibrated temperature and exit from the Calibration mode to the display mode. The display will turn from blinking to solid.
- 7. The temperature calibration range is +/- 5 degrees Fahrenheit or +/- 1.5 degrees Celsius.

TEMPERATURE DEADBAND SETTING

- 1. To protect the compressor from the stress of frequently turning on and off, a temperature deadband should be programmed. A temperature deadband is a temperature range above the set desired temperature in which the unit will not operate until the water temperature reaches the deadband upper limit. For example, if the desired temperate is set to 40 degrees Fahrenheit and the deadband is 2 degrees Fahrenheit, the chiller will chill the water to 40 degrees and then stop working and enter standby mode. The chiller remains in the standby mode until the water temperature rises and reaches 42 degrees. The chiller then resumes operation to chill the water down to 40 degrees and then again stop working and enter the standby mode.
- 2. The default deadband is 2 degrees in Fahrenheit or 1 degree in Celsius. If you would like to adjust the deadband range, please follow the following steps.
- 3. In Display mode, press the /\ or \/ button for 5 seconds to select between Fahrenheit and Celsius as the unit of measure of temperature.
- Press and hold the SET button for 5 seconds to enter into the deadband adjustment mode. The Current Temperature display will show the default deadband setting and will blink after the deadband adjustment mode is activated.



- 5. Use the /\ or \/ button on the control panel to increase or decrease this setting to the desired deadband width. Press and hold the SET button again for 5 seconds (or wait for approximately 8 seconds) to confirm the desired temperature and exit from the setting mode to the display mode. The display will turn from blinking to solid.
- 6. The deadband setting range is 1-4 degrees Fahrenheit or 1-2 degrees Celsius.

BOOST FUNCTION

- 1. The boost feature accelerates the chilling process with two available options: 2-hour expedited maximum chilling and continuous (24 hrs/day, 7 days/week) maximum chilling.
- To engage the boost feaure, press BOOST once. The LED on the left marked "2 hours" will light. The boost function is now set to accellerate chilling for 2 hours, after which boosted chilling will stop and the chiller will return to the regular setting.
- 3. To set the boost function to constant operation, press BOOST twice. The LED under "24/7" will light. The chiller will now continue in boosted mode until the BOOST pad is pressed again.

COMPRESSOR PROTECTION MODE

The refrigeration compressor will automatically turn off when the water reaches, or is below, the set temperature. After the compressor turns off, it will stay off for approximately 3 minutes.

CLEANING AND MAINTENANCE

We recommend that you flush the internal chiller components at least once every 1-2 months to



ensure optimal performance and efficiency. Over time, nutrient deposits and other debris may accumulate inside the chiller, reducing its effectiveness.

Note: Do NOT use soap or detergents for cleaning the internal components of the chiller system (Fig. 1). Do not spray or soak the unit with water to clean it (Fig. 4).

- 1. Disconnect (unplug) the chiller and submersible water pump from the power supply. Clean the chiller housing by using moisture towels (Fig.3).
- 2. Clean off the pump with a high powered hose or sprayer to remove the debris and dirt from the pre-filter and housing.
- 3. Reconnect the pump to the chiller inflow tubing and place it in a clean reservoir.



- 4. Fill the reservoir with clean water and a flushing agent formulated to remove salt deposits and excess nutrients from the plants' root systems and grow medium (available at most indoor gardening and hydroponic retailers). Note: Using a flushing agent is completely optional. Pump away and discard flushing agent after cleaning. Pump clean water through the reservoir, chiller and hydroponic system to flush out the flushing agent solution if needed (Fig. 5 & 6).
- 5. Regular cleaning of the chiller's front and side air filter panels will help maintain and maximize the chiller's efficiency (Fig, 2). Follow the steps below to remove and clean the air filters.



- 1) LOOSEN SCREW ON FRONT PANEL
- 2) GENTLY REMOVE FRONT PANEL
- PUSH FILTER UPWARD TO UNLOCK IT FROM THE UNIT
- 4) REMOVE FILTER FROM FRONT PANEL
- 5) LIFT AND REMOVE SIDE PANEL
- 6) LOOSEN SCREEN ON SIDE PANEL
- 7) REMOVE FILTER FROM SIDE PANEL
- 8) USE WATER AND GENTLE BRUSHING TO WASH THE FRONT AND SIDE FILTERS





ERROR CODE/ SYMPTOM	POSSIBLE CAUSE	SOLUTION
P1	Water temperature in reservoir or tank is at or below 32°F or 0°C degrees Celsius	Ensure that the pump is operating correctly for correct water circulation.
Ρ2	Water temperature in reservoir or tank is above 140 °F or 60 °C	Use other methods to reduce the water temperature down, or allow the water to cool by itself until the temperature falls below 140°F/60°C. Unit will resume operation automatically.
E1	Temperature Probe malfunction	Temperature probe is loose or has become damaged. Contact your retailer for assistance.
	Power is not turned on	Turn on the power and be sure the power cord is fully plugged in.
The unit does not run and the Control Panel has no power	Power supply being used is of incorrect voltage	Replace the fuse if it has been blown and plug the unit in to a power supply of the correct voltage. If the internal circuit board has been burned, contact your retailer for assistance. Please note that the warranty will be void if the incorrect power voltage is applied.
The Control Panel is normal,	Chiller is in compressor protection mode	If the fan and the chiller dissipate heat normally, wait for 3 minutes and the unit will automatically turn on again.
but the fan and compressor do not turn on	The set desired temperature is higher than the current water temperature	Reset the set (desired) temperature to a lower temperature than the current water temperature
The unit turns on and off more	Fan is not working	Contact your retailer for assistance
frequently than before	The air inlet or outlet are clogged	Clean the air inlet/outlet with a brush or a vacuum cleaner
The Control Panel is normal, but unit is not cooling	No refrigerant	Contact your retailer for assistance
Loud operation	Not installed on a flat surface	Relocate chiller to a location with a flat surface



LIMITED WARRANTY

Hydrofarm warrants the chiller to be free from defects in materials and workmanship. The warranty term is for one year beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. Hydrofarm's warranty liability extends only to the replacement cost of the product. Hydrofarm will not be liable for any consequential, indirect, or incidental damages of any kind, including lost revenues, lost profits, or other losses in connection with the product. Some states do not allow limitation on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Hydrofarm will, at our discretion, repair or replace the chiller covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return the chiller, with original sales receipt and original packaging, to your place of purchase. The purchase date is based on your original sales receipt.

GARANTIE LIMITÉE

Hydrofarm garantit que le chiller ne présente aucun défaut de pièces et main-d'œuvre. La période de garantie est d'un an à partir de la date d'achat. Une utilisation incorrecte, abusive, ou le non-respect des instructions n'est pas couvert(e) par cette garantie. La responsabilité de la garantie Hydrofarm couvre uniquement le coût de remplacement du produit. Hydrofarm ne pourra être tenu responsable des dommages consécutifs, indirects ou fortuits de tout type, y compris les pertes de revenus, de profits ou autres en rapport avec le produit. Certains états n'autorisent aucune limite concernant la durée de la garantie implicite ou l'exclusion des dommages fortuits ou consécutifs ; les limites ou exclusions mentionnées ci-dessus peuvent donc ne pas être applicables à votre cas. Hydrofarm se réserve le droit de réparer ou remplacer le chiller couvert par cette garantie si celui-ci est renvoyé au lieu d'achat d'origine. Pour solliciter le service de garantie, veuillez renvoyer le chiller avec sa facture et son emballage d'origine à votre lieu d'achat. La date d'achat est indiquée sur votre facture originale.

GARANTÍA LIMITADA

Hydrofarm garantiza que el chiller no presentará defectos de fabricación. La garantía tendrá una duración de un año desde la fecha de compra. En caso de no respetarse estas instrucciones o de un uso inadecuado del producto, la garantía no cubrirá los posibles daños. La cobertura de la garantía ofrecida por Hydrofarm únicamente incluye los costes de sustitución del producto. Hydrofarm no será responsable de ningún daño indirecto, accidental o derivado de ningún tipo, incluyendo pérdidas de ingresos o beneficios, o cualquier otra pérdida relacionada con el producto. En algunos estados no se permiten limitaciones sobre la duración de una garantía implícita o la exclusión de los daños accidentales o derivados; en cuyo caso las limitaciones y exclusiones anteriores no serán de aplicación. Hydrofarm, a su discreción, podrá reparar o sustituir el chiller cubierto por esta garantía siempre que se devuelva al lugar original de compra. Para reclamar la garantía, devuelva el chiller con el ticket de compra y el embalaje original al lugar de compra. La fecha de compra será la indicada en el ticket original.



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