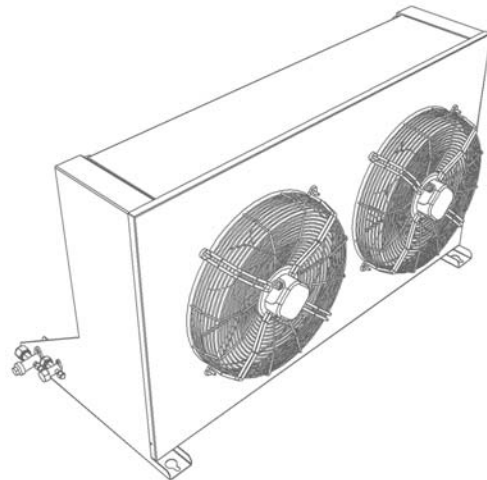


R Series II Chiller

Remote Condenser Instructions





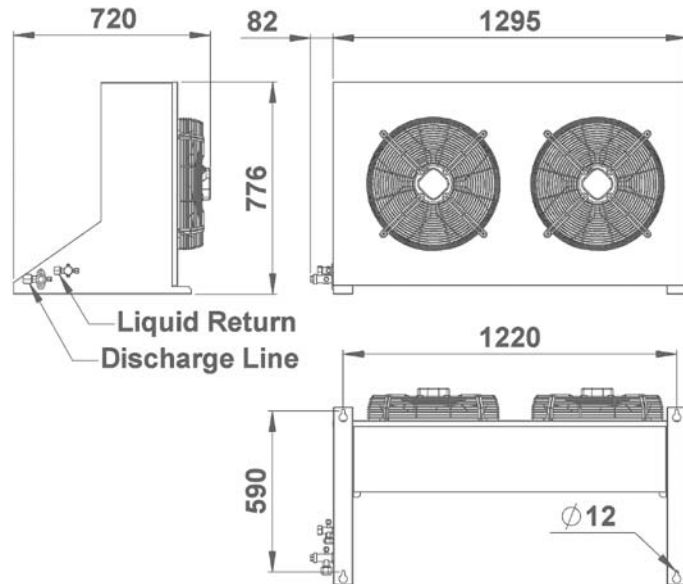
INDEX

INDEX.....	2
TECHNICAL INFORMATION.....	3
Overall Sizes.....	3
Distances Between Condenser And Chiller	4
Connection Requirements	4
INSTALLATION	5
Installation Of The Condenser	5
Installation Of The Chiller	5
COMMISSIONING	6
Connecting The Refrigerant Lines	6
Electrical Connections.....	6

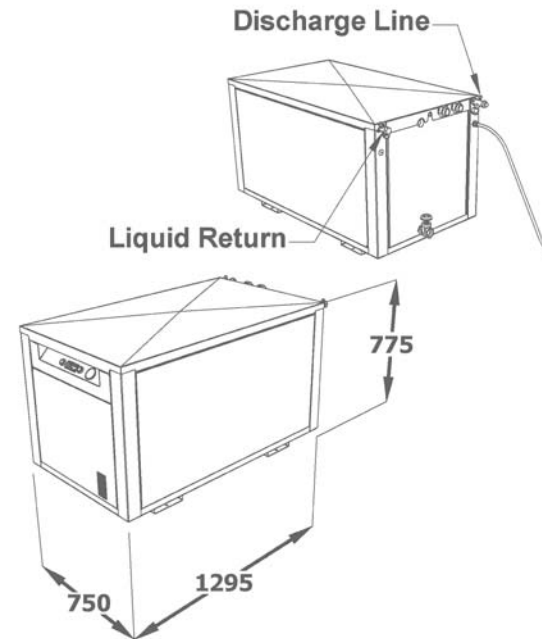
TECHNICAL INFORMATION

R Series II Chillers can be ordered in configurations featuring the ability to remotely mount the condenser in order to permit maximum installation flexibility. When ordered with a remote condenser configuration we deliver the condenser and the chilling unit separately. Both the chiller and the condenser are pre-charged with refrigerant and fitted with isolation valves.

OVERALL SIZES



Remote Condenser Overall Dimensions



Remote Chiller Overall Dimensions

DISTANCES BETWEEN CONDENSER AND CHILLER

The distance from the chiller to the condenser should be kept as small as possible. Excessive distance lead to high refrigerant pressure drops which in turns leads to loss in chiller capacity. We recommend that the condenser should be located no more than 9m vertically from the chiller, and the total refrigerant piping should be kept less than 20metres.

CONNECTION REQUIREMENTS

	R420AR-R670AR	R830AR-R1200AR
Discharge Line	¾"	¾"
Liquid Return Line	½"	5/8"
Electrical Connection	2 * 3 Core + E 1mm ² or 1 * 6 Core + E 1mm ²	

The condenser is fitted with an isolating switch into which the electrical supply from the chiller must be connected. Both the chiller and the condenser are fitted with refrigerant isolation valves with flare connections.

It is essential to provide suitable protection preventing inadvertent contact with the discharge and liquid return lines. Both these lines can get extremely hot and direct contact may cause burns. Aqua Cooler accepts no responsibility for any injuries resulting from the refrigerant connection pipes.

It is essential that a suitably qualified refrigeration mechanic connects the refrigerant piping between the chiller and the condenser.

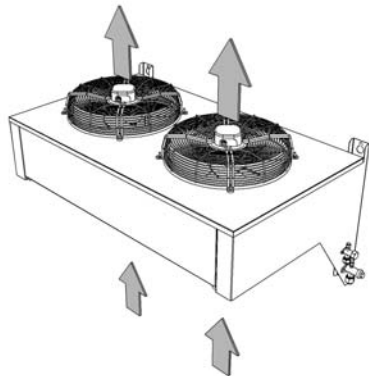
INSTALLATION

INSTALLATION OF THE CONDENSER

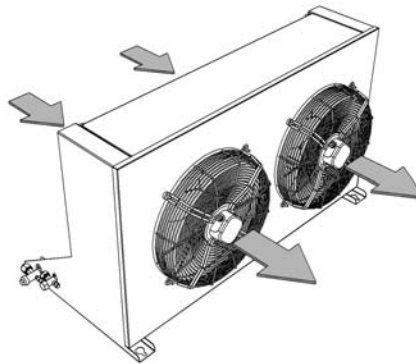
The condenser can be installed in either a vertical discharge orientation, or a horizontal discharge orientation. Care must be taken to ensure that air flow is not restricted around the condenser in order to prevent re-circulation of air through the condenser. The condenser should not be located where it is subjected to roof drainage and must be located above ground level in areas that are prone to stormwater flooding.

Under no circumstances is ducting to be attached to the condenser fan outlets.

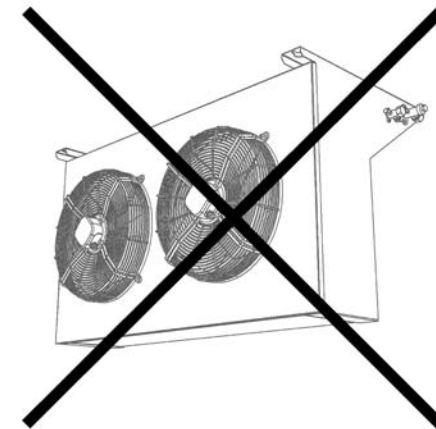
When installing beneath a ceiling do not mount the condenser upside down, instead use brooker rods, or similar, to support the condenser



Vertical Discharge Configuration



Horizontal Discharge Configuration



Incorrect Horizontal Discharge Configuration

INSTALLATION OF THE CHILLER

The chiller is supplied with sound insulation around the compressor to keep noise levels to a minimum. Ensure there is free and easy access to the chiller in its installed position in order to ensure service access.

It is essential to ensure that adequate and safe service access to the chiller is provided. Failure to provide safe access to the chiller may lead to additional charges should servicing be required.

COMMISSIONING

CONNECTING THE REFRIGERANT LINES

Once the refrigerant lines have been connected between the condenser and the chiller it is essential to pressurise the lines with nitrogen and check for leaks. Once cleared of leaks the the lines should be evacuated. This can be performed at either the condenser or the chiller by attaching leads to the appropriate schrader valve on the refrigerant isolation valves. There should be no need to add additional refrigerant to the lines as long as the lines do not exceed 9m in total length. Once evacuated and charged (if necessary) the shut off valves can be opened.

ELECTRICAL CONNECTIONS

There are two major stages in commissioning the electrical circuit. First is to ensure that the supply phase sequence is correct at the chiller. The second is to ensure that the subsequent connection between chiller and condenser does not reverse the phase sequence.

To confirm the phase sequence at the chiller it is necessary to check the direction that the pump motor turns. A directional arrow is shown on the rear of the pump motor to assist in this task. Ensure that there is water in the tank and turn the pump on. If the pump turns in the wrong direction then correct the phase sequence at the supply isolation switch and not within the chillers electrical enclosure.

Once this task has been completed the fan direction should be checked. It will be necessary to organise somebody to view the operation of the fans at the condenser. Gain access to the electrical enclosure by removing the top of the chiller. Press and hold down each of the fan contactors and confirm that the fans are sucking air through the condenser and exhausting it off the fans themselves as shown by the arrows in previous images. If incorrect then rectify the sequence at the isolating switches on the condenser.