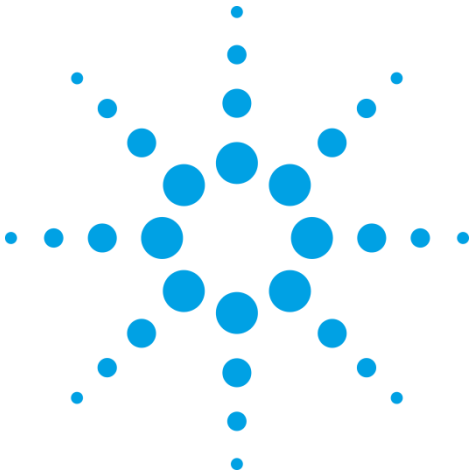

KMW200B

Water Chiller for CCD detectors

User Manual

Version 1.5, September 2010

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Agilent Technologies

Important Information

This user manual is intended to help the user operate the KMW200B water cooler unit manufactured in Poland by Agilent Technologies.

Product:	KMW200B
Model Type:	CCD cooler unit
Electrical Ratings:	1/N AC 90-264 V
	50/60 Hz
	200 Watts

Before attempting to operate the system, PLEASE READ THE INSTRUCTIONS.

This product should only be used by persons legally permitted to do so.

If the equipment is used in a manner not specified in the User Manual, the protection provided by the equipment may be impaired.

Important Health and Safety Notice

When returning components for service or repair it is essential that the item is shipped together with a signed declaration that the product has not been exposed to any hazardous contamination or that appropriate decontamination procedures have been carried out so that the product is safe to handle.

Care has been taken to ensure the information in this manual is accurate and at an appropriate level. Please inform Agilent Technologies if you have any suggestions for corrections of improvements to this manual.

This users' manual has been written according to standard 89/392/EEC and further modifications.

Contents

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1. Health and Safety Information

1.1 General

In normal operation the system is designed to operate safely. All users of the KMW200B water cooler unit should be aware of potential hazards which exist in and around equipment of this type and the ways of avoiding possible injury and equipment damage which may result from inappropriate ways of working. A description of such potential hazards and how to avoid them is given in this section.

This manual adopts the following convention:

WARNING
Indicates a potential hazard which may result in injury or death

CAUTION
Indicates a potential hazard which may result in damage to equipment

Warning symbols on the equipment are:

Protective conductor terminal

Earth (ground) terminal

CAUTION
Risk of electric shock

CAUTION
Refer to accompanying documents

See original manufacturers' manuals for further safety data on third party equipment supplied with the system. A list of these is given in this manual.

WARNING
Do not take risks. You have a responsibility to ensure the safe condition and safe operation of equipment.

1.2 Electrical Safety

In normal use the user is protected from the dangers associated with the voltage, current and power levels used by the equipment. Only suitably qualified personnel should attempt to disconnect, dismantle or modify the equipment.

WARNING
This unit is only to be used when mounted under the electrical rack of an Xcalibur or Gemini machine.

1.2.1 Potential Electrical Hazards

The following list is not intended as a complete guide to all the electrical hazards on the system, but serves to illustrate the range of potential hazards that exist:

- electric shock
- electric burn
- fire of electrical origin
- electric arcing

1.2.2 Recommended Precautions

WARNING

All of the electrical equipment supplied as part of the system should be provided with a protective ground. Do not remove protective grounds as this may give rise to an electrical safety hazard. It is vitally important that the system is properly grounded at all times.

Follow local and national electrical regulations and procedures.

Do not defeat interlocks, remove connectors, disconnect equipment, open safety covers, dismantle or modify equipment unless you are qualified and authorised to do so and you are fully conversant with its operation and potential hazards or have total assurance through your local electrical permit to work system that the equipment has been made safe.

Make sure that the mains supply is fused at an appropriate rating and that it can be isolated locally via a clearly labelled, clearly visible and easily accessible isolating switch. Isolate the supply before carrying out any maintenance work.

1.2.3 First Aid

A course in first aid to include methods of artificial respiration is recommended for those whose work involves equipment which may produce a high voltage.

WARNING

Do not attempt to administer first aid to someone who may have suffered electric shock until the source of the shock has been isolated.
Mains voltages are present in the system. These can cause serious injury or death.
Only personnel qualified and experienced to work with such currents and voltages should perform service or maintenance work on this equipment.

1.3 Mechanical Handling Safety

WARNING
Lifting points are provided for safe handling of components and safe handling practice must be observed to comply with local regulations.
Check that lifting points are used only for the job intended.
The system itself and some components are heavy and require careful handling.
Use safe lifting procedures for heavy items to prevent possible strain injury.

1.4 Safe Mechanical Practice

In normal use personnel are not required to undertake mechanical work. However, servicing or repair may necessitate access to any part of the system. Only suitably qualified personnel should attempt to dismantle, modify or repair equipment.

Water connections should be made and tested in accordance with any local and national safety regulations.

1.5 Modifications and Service

The manufacturer will not be held responsible for the safety; reliability or performance of the equipment unless assembly operations, extensions, re-adjustments, modifications and repairs are carried out only by persons authorised by the manufacturer. It should be stressed that those parts of the equipment which are interchangeable, and which are subject to deterioration during operation, may significantly affect the safety of the equipment.

2. Introduction

2.1 Scope

This manual applies to the KMW200B water cooler unit designed and manufactured by Agilent Technologies.

2.2 How to Use This Manual

This manual is aimed at operators of the KMW200B who should be trained laboratory technicians and should have been trained to use the KMW200B by Agilent Technologies personnel.

This manual is intended to provide operators with a practical guide to the system and its operation. This is intended to familiarise the operator with how the system works and provide a better understanding of the system operation.

All personnel who are likely to operate the system or come into contact with any of the system components should read the **SAFETY** section of the manual. This provides basic information aimed at highlighting the safety hazards associated with the equipment.

The purpose of this manual is to:

- explain how to operate the equipment
- explain how to interface to the equipment
- list performance characteristics of the equipment
- describe how the equipment operates
- assist with simple fault finding and maintenance

2.3 System Description

The KMW200B is a stand-alone cooler unit intended for indoor use. It is designed for use with Agilent Technologies CCD detectors.

The cooler has the following purposes:

To stabilise the temperature of the cooling water that is supplied to the CCD detector

To electronically control the flow of water to the CCD detector.

To control the supply of power to the CCD detector

3. Specifications

3.1 Environment

Ambient temperature	18°C to 28°C
Storage temperature	10°C to 40°C
Relative humidity	20–80%, non – condensing
Location	Inside a building

3.2 Performance Data

Water flow	1.5 l/min
Water temperature	15-20 °C
Temperature stability	± 0.5 °C
Water reservoir capacity	1 l

3.3 Electrical Services

Power connection	1/N AC 90-264V, 50/60 Hz
Maximum power consumption	200 W
Maximum mains current	2.5 A
CCD output power consumption	Up to 250 W
Main fuse	T3.15 A

3.4 External Water Supply

Pressure	0.5 - 3 bar gauge
Temperature stability	± 5 °C
Temperature range	10 – 20 °C
Composition	Filtered, without deposits, chemically neutral and optically clear
Connections	Designed for pipes of size 10 x 3 mm, secured with hose clamps

4. Technical Description

4.1 Overview

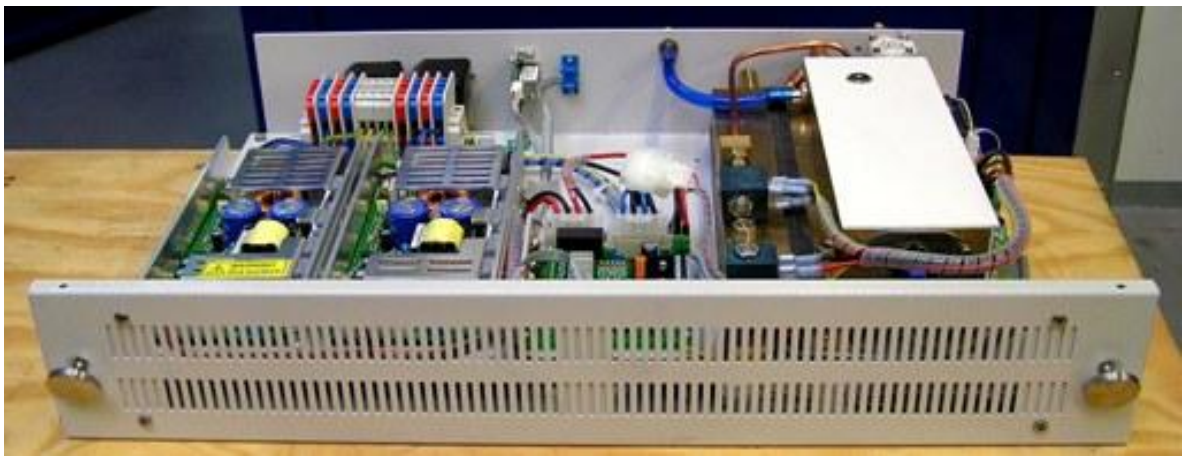

Figure 4.1.1 Front View of KMW200B Water Cooler

The KMW200B Cooler consists of a small water reservoir, cooling system, flow pump and control circuitry. It is located under the system electrical rack close to the floor.

The power switch and indicators are located on a separate front panel at the bottom of the electrical rack. They are accessed by opening the front door of the electrical rack. Electrical and water connections are located on the back of the cooler. They are accessed by unscrewing the front panel of the cooler and rolling it out from underneath the electrical rack.

Figure 4.1.2 Back View of the KMW200B Water Cooler

Figure 4.1.3 Separate front panel of the KMW200B Water Cooler

4.2 Operating Principles

The Water Cooler is connected to two separate water circuits: an external and an internal. The external is connected to the mains water supply and the internal is connected to the device to be cooled. In normal operation the two circuits do not exchange water – they are connected only by a heat transfer device. During start-up if the internal circuit has insufficient water (even totally dry) then it will be automatically filled with water taken from the external circuit. After it has been filled this water connection between the circuits is closed. The flow rate of mains water in the external circuit is controlled automatically as needed to cool the module.

Water is pumped around the internal circuit. The temperature of water in that circuit is controlled within limits (set by internal software) and when needed the heat transfer device cools the internal circuit and pumps the heat into the external circuit. The temperature of water in the external circuit is also controlled within a second set of limits (set automatically) and when needed an automatic valve will control the flow of mains water in the external circuit and thus heat will be removed.

The temperature of water in the external circuit will depend on the temperature of the supplied mains water. When the KMW200B is first turned on it will spend a short period analysing the supplied water temperature and then will set control limits accordingly. If the mains water supply is cold water (<15C) then only a small flow of mains water will be needed to remove the heat. At supply temperatures between 15 and 22C a larger flow of mains supply water will be consumed, as necessary to maintain the required temperature in the internal circuit. **It is recommended that the mains water supply temperature be less than 18C for normal operation.**

CAUTION

If the mains water supply temperature is above 22C then this is outside of normal specification. In this case the maximum flow of mains supply water will be taken and the KMW200B will operate at maximum cooling capacity. In this situation the internal circuit temperature will be cooled as much as possible but may not reach the target value. To reach normal operation the mains water supply temperature should be reduced to meet the specification.

4.2.1 Water Conditioning Check

The KMW200B performs a water conditioning check when it is initially switched on. This check looks at:

1. The level of the water in the internal circuit.
2. The flow rate of the water in the internal circuit.
3. The temperature of the water in the internal circuit.

The state of the unit is displayed on four status lights on the separate front panel.

4.3 Interfaces

4.3.1 Water Supply

Five water connections are located on the back panel of the KMW200B. The connectors are designed for pipes of size 10 x 3 mm.

4.3.2 Electrical Connections

There are two power connections on the back panel of the KMW200B, one signals connector and an Ethernet communications connector. The power connections are labelled W1 for mains power input and W2 for mains output to drive the CCD detector. The Ethernet connector, labelled W3, is connected to a LAN card in the PC to provide status information on temperatures, flow rate, etc. The signals connector, labelled W4, connects to the separate front panel with the status lamps.

5. Handling, Installation, Storage and Transit Information

5.1 Reception and Handling

5.1.1 Delivery

The following steps should be carried out on delivery of the system and before unpacking the KMW200B cooler.

1. When the system arrives, check that there is no visible damage, with the delivery driver present. If damage has occurred contact the carrier and Agilent Technologies **immediately**.
2. Check that shock-watch and tilt indicators fitted to the outside of the packing case have not been activated. If the indicators have been activated notify Agilent Technologies **immediately**.
3. Check the number of delivered items against the packing list. If any items are missing contact Agilent Technologies within 3 days.

WARNING
The packing crate is heavy and could cause serious injury and damage to the equipment if not handled correctly. Use suitable lifting equipment and procedures. Only lift the packing case from the bottom.

CAUTION
Do not remove the equipment from the packing crate until it has been moved to its designated installation site. The equipment has been carefully packed to protect the equipment from damage in transit. Removal of the packing equipment could make the equipment vulnerable to damage during transit.

4. Always lift the packing case from the bottom using suitable lifting equipment (refer to list of component weights in the following section.
5. Move the packing case into the designated installation site.

5.1.2 Unpacking

1. Retain all packing material until installation of the system is completed.

5.1.3 Weights, Dimensions and Lifting Points

Description	Weight kg	Dimensions (width x height x depth) cm	Centre of gravity	Lifting points
KMW200B Cooler	19	60 x 10 x 37	Right hand side of unit	Underneath at the four corners

5.2 Installation and Setting to Work

5.2.1 Preparation of Site and Services

5.2.1.1 Environmental Requirements

It is the customer's responsibility to ensure that all local building and safety regulations are met.

Ensure that the environmental conditions of the installation site conform to the requirements stated in the SPECIFICATIONS section of this manual.

5.2.1.2 System Layout

Place the KMW200B water cooler underneath the electrical rack of the system. To do this first remove the front grill panel at the bottom of the rack by unscrewing two screws. Push water hoses and electrical cables under the rack and out of the front side so that they can be attached to the rear panel of the KMW200B. Roll the KMW200B under the rack and secure in place with two screws. The bracket holding the small water filter should be mounted on the side of the electrical rack towards the rear. The water cooler has a separate control panel with mains power switch and indicator lamps. This panel should be mounted under the other rack-mounted devices in the electrical rack.

5.2.1.3 Electrical Services

The electrical supply must conform to the requirements stated in the SPECIFICATIONS section of this manual.

Locate the electricity supply close to the system and provide:

Phase	L
Neutral	N
Protection	PE

The mains plug should be readily reachable by the operator when the equipment has been installed.

5.2.1.4 Water Supply

Mount the supplied water filter on the main water supply pipe before the connection to the KMW200B in order to prevent any contaminating particles from entering the water cooler. The state of the filter cartridge should be checked at regular intervals and replaced when it is necessary.

5.2.2 Setting to Work

The location of connectors on the KMW200B is shown in figure 5.2.1.

Figure 5.2.1 Electrical and Water Connections on the Back of the KMW200B

5.2.2.1 Equipment Required

Power cable for Agilent Technologies CCD detector
Mains power cable for KMW200B
Water pipes (thickness 10 x 3 mm)
Panel containing water cooler power switch and indicator lamps
Signal cable to drive indicator lamps
Ethernet cable for communication between water cooler and system control PC
Internal circuit small water filter mounted on metal bracket
External circuit large water filter and wall mounting bracket

5.2.2.2 Setting up Procedures

1. Connect the water pipes between the CCD detector and the internal circuit of the KMW200B including the small water filter on the return hose. Refer to figure 5.2.2
   NOTE: Water can flow through the Agilent Technologies CCD detector in either direction.

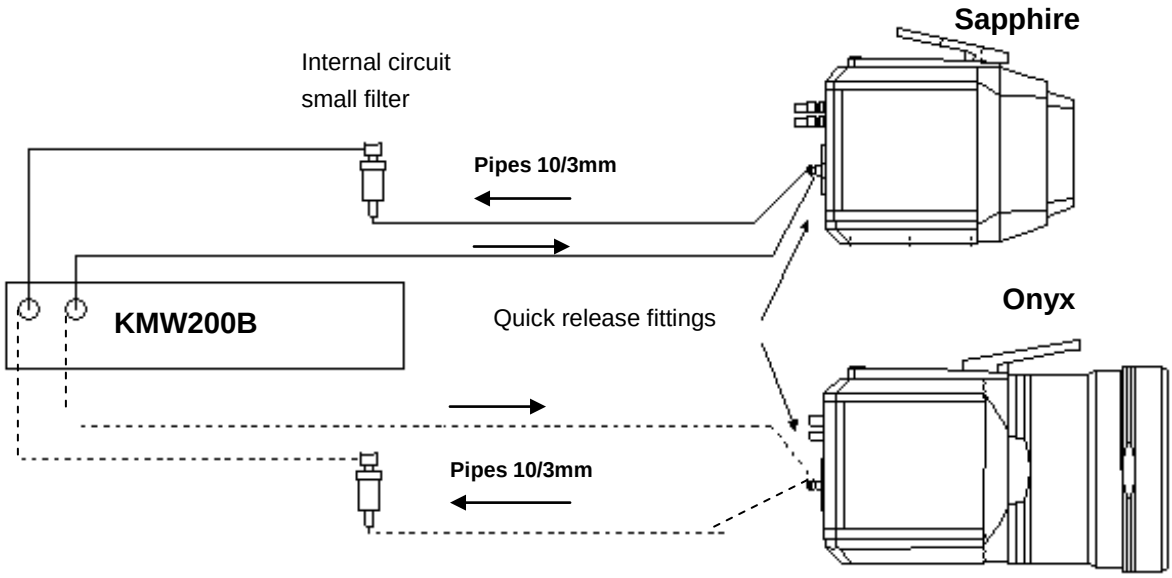

Figure 5.2.2 Water pipe connection between KMW200B and CCD detectors

2. Connect the mains water supply (after the large water filter) to the external circuit inlet of the water cooler. Connect the external circuit outlet to the mains water return point (e.g. drain or in-house water circuit return pipe).
3. The **drain** connection on the rear panel must be left open to atmospheric pressure. Small amounts of water may be ejected from this air vent so a hose should be connected to an open sink drain.
4. Connect the indicator lamps cable from the separate front panel to the socket (W4) on the rear of the KMW200B.
5. Connect the Ethernet cable from the system control PC to the socket (W3) on the rear of the KMW200B.
6. Connect the mains power supply cable from the system mains distributor to the power switch on the separate front panel.
7. Connect the mains power supply cable from the power switch on the separate front panel to the rear of the KMW200B on socket W1.
8. Connect the power output socket (W2) from the rear of the KMW200B to the CCD detector power supply.

9. The KMW200B is now ready to use.

CAUTION
When inserting the CCD detector power supply cable into the KMW200B, ensure that the connectors are pushed home firmly.

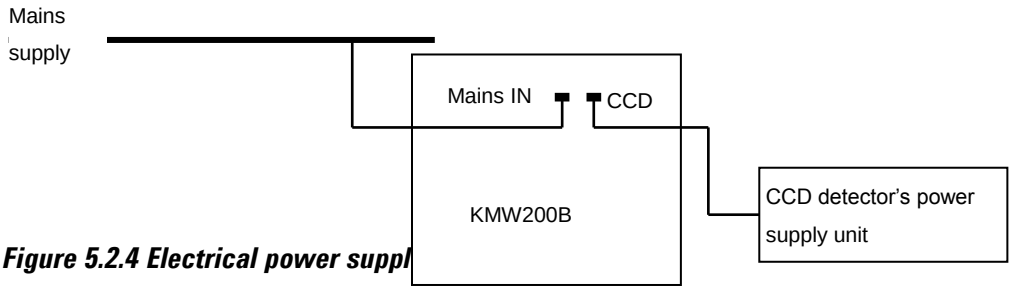

Figure 5.2.4 Electrical power suppl

5.3 Storage

Before installation commences, or when the system is not being used for extended periods, store the KMW200B in accordance with the environmental conditions for temperature and humidity stated in the SPECIFICATIONS section of this manual.

Always store the KMW200B cooler in a secure room.

6. Operating Instructions

6.1 Warnings and Cautions

WARNINGS

Dangerous voltages are present on the KMW200B's terminals when the power is turned on. To prevent personal injury and possible damage to the equipment:

1. Never connect/disconnect the CCD detector power cable from the KMW200B when the unit is turned on.

2. Ensure that the earth cable is properly connected to the KMW200B casing.

6.2 Controls and Indicators

The controls and indicators of the KMW200B are located on the separate front panel.

The KMW200B is switched on/off using the mains switch on the separate front panel.

There are four error indicator lights marked 'Flow', 'Level', 'Temp' and 'Water Supply'. The four lights are illuminated during the automatic water conditioning check, which lasts about 3 seconds.

6.2.1 Error status LEDs

The error states shown by the LEDs are: Flow, Level, Temperature and Water Supply. No LEDs shine during normal operation.

The Flow error LED shines if water cannot flow in the internal circuit.

The Level error LED shines if there is insufficient water in the internal circuit (and this cannot be filled from the mains water supply).

The Temperature LED shines if the temperature of the internal circuit water is outside of normal limits.

The Water Supply LED shines if the temperature of the external circuit water is outside of normal limits and shows that either the mains water is not flowing quickly enough or it is too hot.

6.3 Switch-on Procedure

1. Check that the water pipes and electrical cables are properly connected.
2. Switch on the KMW200B by using the switch on the front panel.
   The lights on the front panel will be illuminated while the KMW200B carries out the water conditioning check.
3. After a few seconds, check that the CCD detector has been powered (lamps lit on the top of the detector and its power supply box).
4. The KMW200B is now operational.

5. To monitor the water cooler from the PC connect the Ethernet cable to a LAN card in the PC and set the card's IP address to be fixed and equal to 192.168.254.1. The water cooler has IP address 192.168.254.4 and port number 2500. Telnet can be used to monitor or modify operating parameters.

6.4 Error states

Short term flow perturbation in the internal circuit will be visible as a continuous flow error indicated on the front panel. The unit will switch off after approx 60 seconds of no flow.

Lack of water inside the internal circuit will start a pulsed filling process, which will stop the unit after approx 60 seconds if the unit will be not filled fully.

No inlet mains water will cause overheating of the water cooling mechanism. This state will be signalled as a blinking LED water supply error on the front panel. The unit will stop after approx 15 seconds.

Too hot water inside the unit is signalled by blinking LED temperature error on the front panel. The unit will stop after approx. 60 seconds.

Failure in flow, level or temperature will be indicated as an error(s) on the front panel which will remain lit after the unit has shut down.

6.5 Remote control by Ethernet

The unit has an Ethernet connection.

The parameters of the connection can be modified using a web browser with Java. This will allow the port number and IP address to be modified.

By using a program such a hyperterminal or a telnet connection communication can be started with the water cooler module. A TCP/IP connection can be opened by using the IP address and port number.

Default port number is 2500. Default IP addresses are:
192.168.254.4 CCD cooler
192.168.254.1 Connected PC

Text commands can be sent to the module and text replies will be sent back. Any changes made to parameters will not be stored after powering down the unit unless the command *store=2* is sent (the value 2 is treated as a password to activate permanent saving of the parameters). The command will send a reply indicating the accumulated number of changes that have been stored in the module.

Pressing ENTER to send a blank line will result in the unit replying with its name, for example:

IS cooler KMW200 1.1.5.103

Entering 'help' will result in the unit replying with a list of its commands. In this list the character / is used to represent a space character. An example of the list is below (the actual list may be different due to product development):

(auto) : (off,on)(mode(rw))
(cooling/power) : integer(mode(rw), range(0..100))
(cooling/state) : (off,on)(mode(ro))
(ext/temperature) : real(mode(ro), unit[0.1C])
(ext/temperature/limit) : real(mode(rw), unit[0.1C])
(ext/temperature/state) : (ok,warn,error)(mode(ro))
(ext/temperature/valve/open) : real(mode(ro), unit[0.1C])
(ext/valve) : (off,on)(mode(rw))
(help)
(hwid) : string(mode(ro))
(init) : integer(mode(rw))
(int/flow) : real(mode(ro), unit[0.01lmin])
(int/flow/const) : integer(mode(ro), range(200..10000))
(int/flow/min) : real(mode(ro), unit[0.01lmin])
(int/flow/state) : (ok,error)(mode(ro))
(int/name) : string(mode(rw))
(int/power) : (off,on)(mode(rw))
(int/pump) : (off,on)(mode(rw))
(int/refill) : (off,on)(mode(rw))
(int/temperature) : real(mode(ro), unit[0.1C])
(int/temperature/limit) : real(mode(rw), unit[0.1C])
(int/temperature/state) : (ok,warn,error)(mode(ro))
(int/temperature/target) : real(mode(rw), unit[0.1C])
(int/water/level) : (ok,low)(mode(ro))
(state) : (ok,error)(mode(ro))
(status) : integer(mode(ro))
(store) : integer(mode(ro))

Below is a list of how to use some of the commands:

auto=on	module automatically reports new parameter values
cooling power	returns the present cooling power
int temperature	returns present internal circuit temperature
int flow	returns present internal circuit flow rate
int flow min	returns/sets the error limit for flow rate
int temperature target	returns/sets the target for the internal circuit temperature
int name	returns/sets the name of the module (“Ccd”)
int temperature limit	returns/sets the error limit for internal circuit temperature
ext temperature	returns present external circuit temperature
ext temperature valve open	returns the temperature at which the external circuit valve is opened
ext temperature limit	returns/sets the error limit for external circuit temperature
int refill=on	manually opens refill valve for 3 seconds
store	returns cumulative number of stored parameter changes
store=2	value 2 is the password to store changes and cumulative number of changes is returned
status	returns status information

7. Maintenance Schedule

7.1 Introduction

Maintenance must be performed to ensure that the KMW200B system continues to operate safely and reliably. This is detailed in the maintenance schedule given below.

WARNING
Failure to perform scheduled maintenance tasks properly and at the correct intervals can affect the safety and performance of this system.

WARNING
Before performing any maintenance task ensure that you have read and understood the HEALTH AND SAFETY INFORMATION at the beginning of this manual.

Planned maintenance that can be performed by the user is limited to cleaning the water filters. Other tasks should be carried out by the user's authorised service representative.

7.2 Annual Maintenance Schedule

This schedule may have to be carried out more frequently depending on the water quality and the length KMW200B operation.

Tools and Materials:
Screwdriver

Action	Personnel	Estimated task duration
1. Clean the water filters on the internal and external water circuits.	Service technician	30 minutes

8. Maintenance Instructions

8.1 Cleaning the Internal Circuit Water Filter

Task Time: 30 minutes

When: Once a year (dependant on water quality and length of KMW200B operation)

Tools:

Screw driver
Bucket
Small brush

Procedure (Refer to Figure 8.3.1)

1. Switch off the KMW200B.
2. Disconnect the plug from the mains power supply.
3. Place a bucket beneath the small filter housing.
4. Holding the filter cover unscrew the lower retaining nut.
5. Unscrew the filter cover whilst holding the upper retaining nut.
6. Remove the filter.
7. Clean the filter under clean running water and use the brush as necessary.
8. Place the filter back in the filter cover.
9. Check the position of the sealing washer is correct inside the upper nut.
10. Screw the filter cover into the upper retaining nut.
11. Check the position of the sealing washer is correct inside the lower nut.
12. Screw on the lower retaining nut.
13. Re-connect the plug to the mains power supply.
14. Switch on the KMW200B.
15. Wait for the KMW200B to complete its water conditioning check and then check the water level inside the filter housing.
16. In order to de-aerate the filter unscrew the filter cover momentarily until the water level rises to the top and then re-tighten it.
17. Check for water leaks. If there are any leaks: remake the connection.

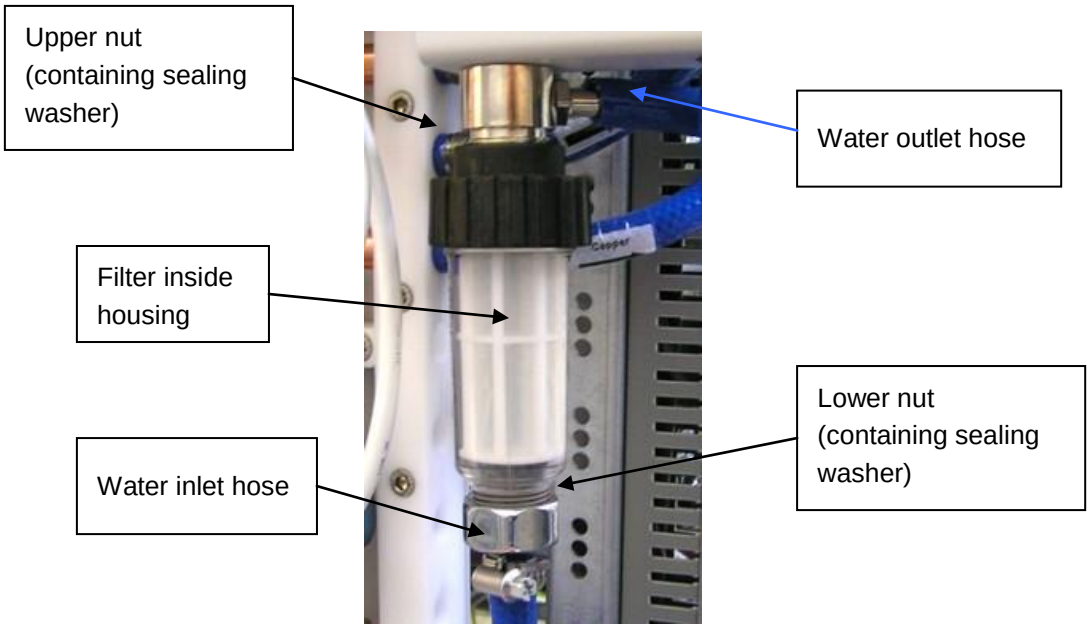

Figure 8.1.1 Removing the Water Filter

8.2 Changing the External Circuit Water Filter Cartridge

Task Time: 30 minutes

When: Once a year (dependant on water quality and length of KMW200B operation)

Tools:

Specialised tool for opening the water filter
Bucket

It is not advisable to stop the external water supply to the KMW200B while is it operating. If it is done then a water supply error will be indicated within about 2 minutes. The error state will be reset by turning the unit off and on again. However, turning off the KMW200B will result in switching off the power to the CCD detector. In order to avoid this situation a directional valve and two filters are used. Using this valve we can choose which filter is working and which is isolated and could be exchanged.

Procedure (Refer to Figure 8.2.1)

1. Change position of the directional valve to isolate the 'used' filter. Red arrows show the direction of water flow. The KMW200B will now be using the second filter.
2. Place the bucket under the 'used' filter housing to catch any water spillage.
3. Using the specialised tool unscrew the filter housing.
4. Pour water out of the housing and remove the old cartridge.
5. Place the new cartridge into the housing and refit the housing using the tool.

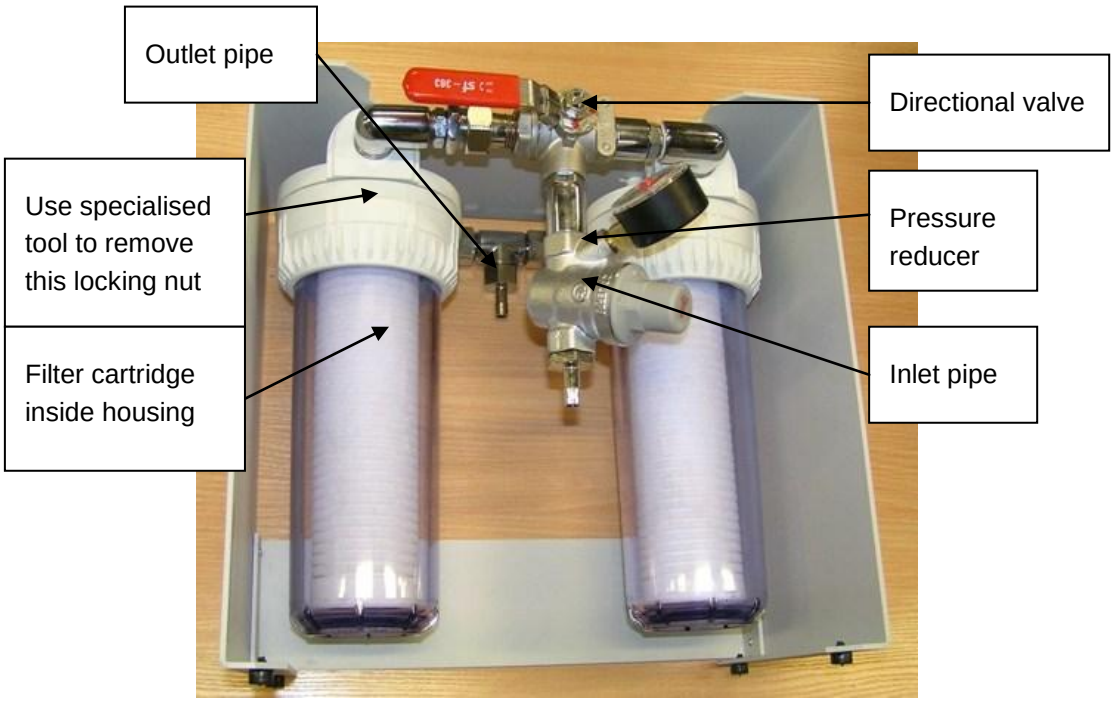

Figure 8.2.1 Removing the Water Filter Cartridge

9. Trouble Shooting

Problem	Cause	Action
Unit cannot be turned on from the front panel	Mains power is not connected	Connect mains power at the rear panel and at the mains distributor in the system rack
Level error LED flashes after switching on module	Water level is too low in the closed circuit	Water cooler needs time to automatically fill water into the closed circuit especially when starting from a dry system. Wait one minute to see if LED stops flashing and turn the module off and on again.
Flow error LED flashes during operation	Water cannot flow through the internal circuit (through CCD detector)	Check pipes are properly connected and valves are open. Check filter is not blocked and clean if necessary,
Water supply error LED flashes during operation	Water on the external circuit is not cooling the unit correctly (too slow flow or too hot water)	Check pipes are properly connected and valves are open (both on the system and at mains water supply point). Check mains water temperature is about 15-18C and flows normally.
Not constant mains water flow in external circuit	Water cooler controls flow rate of mains water as and when required.	No action.
Air bubbles out of the drain pipe	Air is escaping from the closed circuit during automatic water filling.	Bubbling will stop when filling is completed and should not occur during normal operation.
Water flows out of the drain pipe	Automatic water filling valve is blocked open, perhaps due to too high mains water pressure.	Direct the drain pipe into an open sink. Contact Agilent Technologies service.

Fuses

Designators	Value	Package	Location
F1	T3.15A / 250V	5x20mm	Outside, on separate front panel
F2	T6.3A / 250V	5x20mm	Inside (three power supplies)

10. CE Conformity Notice

DECLARATION OF CONFORMITY

This Declaration of Conformity is suitable to the European Standard EN 45014, "General criteria for supplier's declaration of conformity." The basis for the criteria has been found in international documentation, particularly in: ISO/IEC Guide 22, 1982, "Information on manufacturer's declaration of conformity with standards or other technical specifications."

Agilent Technologies's liability under this declaration is limited to that set forth in the current Agilent Technologies's Terms and Conditions of Sale.

Applied Council Directive(s):
2004/108/EC Electromagnetic Compatibility Directive (EMC)
2006/95/EC Low Voltage Directive

We, The Manufacturer:
Agilent Technologies Poland Sp. z o.o
Ul. Rogowska 117B
54-440 Wrocław
Poland.
declare under our sole responsibility that the following equipment:

KMW200B Water Cooler
Serial Number From: CHA-101/07

to which this declaration relates are in conformity with the relevant provisions of the following standard(s) or other normative document(s) when installed in conformance with the installation instructions contained in the product documentation:

EN 55011 Group 1 Class A for radiated emissions.
EN 55011 Group 1 Class A for mains conducted emissions.
EN 61326 Electrical equipment for measurement, control and laboratory use.
Pertinent LVD sections of:
EN 61010-1&2:2001 Safety requirements for electrical equipment for measurement, control and laboratory use.
Part 1: General requirements.
Part 2: Particular requirements for automatic and semi-automatic laboratory equipment.

Technical Information is maintained at:
Agilent Technologies Poland Sp. z o.o
Ul. Rogowska 117B
54-440 Wrocław
Poland.

Last two digits of year of CE Marking (low Voltage Directive): 07

We, the undersigned, hereby declare that the product(s) specified above conforms to the listed directive(s) and standard(s).

Signature:

Full Name: Damian Kucharczyk
Position: Director, XRD Operations Poland
Date:

Printed in Poland, September 2010

Agilent Technologies