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Introduction

Overview

Purpose

This chapter contains topics related to this User Manual.
Some of the more important topics in this chapter are:

- Safety Information
- Where to find information

Contents

This chapter contains the following topics:

Topic	See Page
About this User Manual	4
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About this User Manual

Purpose

This User Manual is intended for use with a Milli-Q® Integral Water Purification System.
This User Manual is a guide for use during the installation, normal operation and maintenance of a Milli-Q Integral Water Purification System.
It is highly recommended to completely read this manual and to fully comprehend its contents before attempting installation, normal operation or maintenance of the Water Purification System.
If this User Manual is not the correct one for your Water Purification System, then please contact Millipore.

Terminology

The term “Milli-Q Integral Water Purification System” is replaced by the term “Milli-Q System” for the remainder of this User Manual unless otherwise noted.

Document Revision

Rev. D1.00, 06/2007

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About Millipore

Telephone	See the business card(s) on the inside cover of the User Manual binder.
Internet	The Millipore Internet site address can be used to submit a question to Millipore via electronic mail. The Millipore Internet site can be used to find addresses, telephone/fax numbers and other information. Internet site address: www.millipore.com/bioscience
Manufacturing Site	Millipore SAS 67120 Molsheim FRANCE

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We manufacture and sell water purification systems designed to produce pure or ultrapure water with specific characteristics (µS/cm, T, TOC, CFU/ml, Eu/ml) when it leaves the water purification system provided that the Milli-Q System is fed with water quality within specifications, and properly maintained as required by the supplier.

We do not warrant these systems for any specific applications. It is up to the end user to determine if the quality of the water produced by our systems matches his expectations, fits with norms/legal requirements and to bear responsibility resulting from the usage of the water.

Warranty

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Legal Information, Continued

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Safety Information

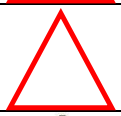
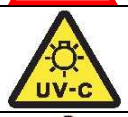
Statement

Your Milli-Q System should be operated according to the instructions in this manual.
In particular, the hydraulic and electrical specifications should be followed and met.
It is important to use this equipment as specified in this manual; using this equipment in a different manner may impair the safety precautions of the Milli-Q System.

Important

Do not remove the covers of the Milli-Q System at any time.
Electrical and mechanical components inside the Milli-Q System could pose a hazard.
A qualified Millipore® Service Representative should perform any work that needs to be done while the Milli-Q System is opened.

Symbols

Symbol	Meaning
	This HAZARD symbol is used to refer to instructions in this manual that need to be done safely and carefully.
	This ATTENTION symbol is used to refer to instructions in this manual that need to be done carefully.
	This UV RADIATION sticker is used to refer to a position on the Milli-Q System Cabinet or inside of it where exposure to UV light is possible.
	This DANGER sticker is used to refer to a position on the Milli-Q System Cabinet or inside of it that could be hazardous.
	This ELECTRICAL GROUND sticker is used to refer to a position on the Milli-Q System Cabinet or inside where an electrical ground connection is made.
	This ELECTRICAL DANGER sticker is used to refer to a position on the Milli-Q System Cabinet or inside where an electrical danger could exist.

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Where to find information

Organisation of this User Manual	This block will explain how this manual is organised.
Cross reference table	This block will contain a cross reference table. The table will be a quick way for the reader to find information about items that might have different names than those used in this manual.

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Product Information

Overview

Purpose

This chapter contains topics related to the Milli-Q System.
Some of the more important topics in this chapter are:

- Installation requirements
- Consumable information
- Dimensions of various components of the Milli-Q System

Contents

This chapter contains the following topics:

Topic	See Page
Cabinet	11
Q-POD Dispenser	13
Tank	15
Consumables	16
Specifications and requirements	18

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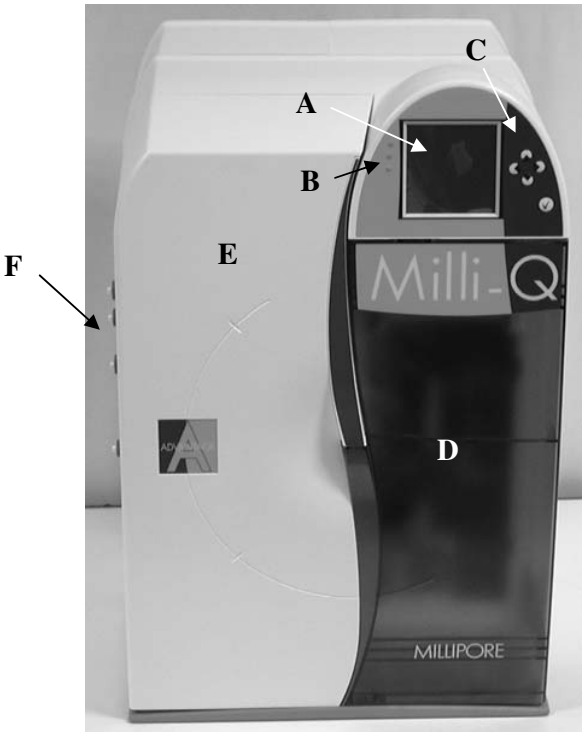
Cabinet

Description



Part	Function
A	Main Display
B	LEDs
C	Main Keypad
D	Door for Quantum Cartridge
E	Door for Progard Pack
F	Connections for ports and cables

Ports and cables

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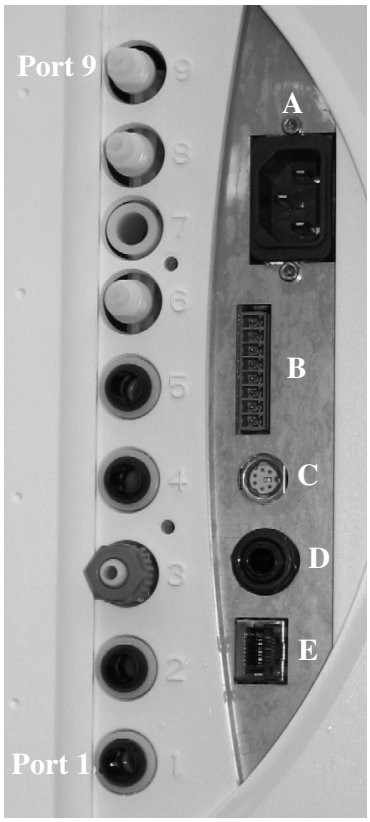

Item	Description	Item	Description
Port 1	RO Reject tubing to drain	Port 8	Water to E-POD Dispenser (Accessory)
Port 2	Feedwater to Milli-Q System	Port 9	Water to and from Reservoir
Port 3	Water to Q-POD Dispenser	A	Power Cord (100 – 240 V)
Port 4	Water from Q-POD Dispenser	B	Accessories (maximum 24 V)
Port 5	Water from E-POD Dispenser (Accessory)	C	PS/2 connection (maximum 5 VDC)
Port 6	EDI Waste tubing to drain	D	Level Sensor Input (maximum 5 VDC)
Port 7	Not used	E	Ethernet connection (maximum 5 VDC)

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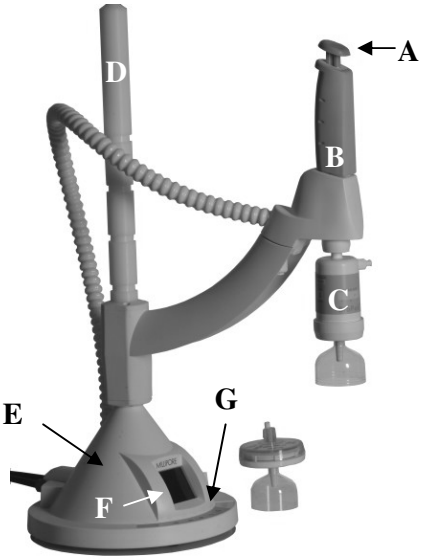
Q-POD Dispenser

Description



Part	Function
A	Plunger
B	POU Dispenser
C	POD Pak (BioPak Ultrafilter pictured here)
D	Mast
E	Base
F	Q-POD Dispenser Display
G	Q-POD Dispenser Keypad

Ports and cables

Part	Function
A	Printer cable connection
B	PS/2 cable connection + Termination Plug connection

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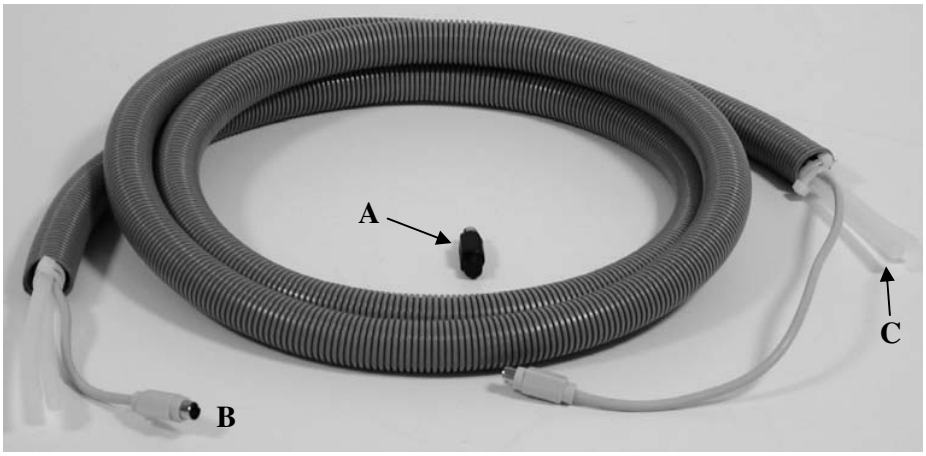
C	Footswitch connection
D	Tubing connections

RC-Link

The entire RC-Link is pictured here. The RC-Link is the set of tubings and the PS/2 cable inside a sheath.



Part	Function
A	Termination Plug
B	PS/2 Cable
C	Tubings

Height adjustment

Step	Action	Result
1	Press the button on the Q-POD Arm.	picture here
2	Hold the button in while moving the Q-POD Arm up or down.	picture here
3	Release the button.	picture here

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Tank

Millipore recommends	Millipore recommends using a Tank having the following catalogue number: XXXXXXXXX (please list this in the Customised Data File).
Example	A picture of a Tank alongside a fully installed Milli-Q Integral System will be shown here.

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Consumables

Diagram

The water flow through a Milli-Q System is shown here in a flow diagram. The various consumables are described below. For more information about the flow diagram, please refer to the Milli-Q System brochure. Please contact Millipore if you would like to have a brochure.

(A simplified flow diagram will be shown here. Only the consumables will be explained through the use of the diagram. The reader/customer will be able to learn more from the Marketing Brochure which typically has a flow diagram and description).

Item	Description	Item	Description
A	Progard Pack	D	UV 254 nm Lamp
B	UV 185 nm Lamp	E	A10 TOC Monitor Lamp
C	Quantum Cartridge	F	POD Pak

Progard Pack

The purpose of the Progard Pack is to protect the RO Cartridge.
The Progard Pack is a consumable.

Note to Millipore reviewers → Do you want a table showing the differences between the various Progard Packs (i.e. with Chlorine tablet, without chlorine tablet, …)?

UV 185 nm Lamp

The dual wavelength UV 185 nm Lamp emits light at 185 nm (for TOC reduction) and at 254 nm (Germicidal action). The UV 185 nm Lamp is used to kill bacteria and to reduce the levels of organic molecules in the water.
The UV 185 nm Lamp is a consumable.

Quantum Cartridge

The Quantum Cartridge is used to remove trace levels of ions and organic molecules.
The Quantum Cartridge is a consumable.

Item	Description
Quantum TIX Cartridge	The Quantum TIX Cartridge contains only ion exchange resin. This type of Quantum Cartridge is used when maintaining absolutely trace levels of ions is critical.
Quantum TEX Cartridge	The Quantum TEX Cartridge contains ion exchange resin and synthetic carbon. These purification media are used when the Milli-Q Water needs to have both trace levels of ions and trace levels of organic molecules.

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UV 254 nm Lamp

The UV 254 nm Lamp emits light at 254 nm. The UV 254 nm Lamp is used to kill bacteria.
The UV 254 nm Lamp is a consumable.

A10 TOC Monitor Lamp

The A10 TOC Monitor uses a small lamp during its TOC Analysis Mode. This is called the A10 Lamp.
The A10 Lamp is a consumable.

POD Pak

The POD Pak is a water purification device that is attached to the Q-POD Dispenser outlet. It is the final purification device used before Milli-Q Water is dispensed. The POD Pak provides additional quality and insurance that trace contaminants related to specific applications are removed just before ultrapure water is delivered.
The POD Pak is a consumable.
The LCD messages sometimes refer to POD Pak 1 or POD Pak 2 (or 3).
POD Pak 1 means the POD Pak on the 1st Q-POD Dispenser. POD Pak 2 refers to the POD Pak installed on a second Q-POD Dispenser.
Note to Millipore reviewer → The various POD Paks are not described in this section. There are new POD Paks coming out in Y2007 and it is better to avoid revising the User Manual frequently.

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Specifications and requirements

Q-POD Dispenser water quality

The water delivered from a Q-POD Dispenser has the following characteristics.

Item	Description
Resistivity	18.2 MΩ.cm @25°C
Conductivity	0.055 µS/cm@ 25°C
Flow Rate	0.05 – 2 Lpm
Pyrogens	< 0.001 EU/ml
Rnase	< 0.01 ng/ml
Dnase	< 4 pg/µL
TOC	< 5 ppb
Silica	< 1 ppb

E-POD Dispenser water quality

The water delivered from an E-POD Dispenser has the following characteristics.

Note:

The E-POD Dispenser is an accessory device.

Item	Description
Resistivity	> 5 MΩ.cm @25°C
Conductivity	< 0.2 µS/cm@ 25°C
TOC	< 30 ppb
Micro-organisms	≤ 1 CFU/ml
Product Flow Rate	**System** / **Flow Rate**: Milli-Q Integral 3 > 2.5 Lpm; Milli-Q Integral 5 > 4.25 Lpm; Milli-Q Integral 10 > 8 Lpm; Milli-Q Integral 15 > 13 Lpm
RO Ionic Rejection	Typical 94-99%; minimum 90%
RO Rejection of particles	> 99%

Weight

The weight specifications and data are found in the table below.

Item	Shipping Weight	Dry Weight	Wet Weight

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Electrical

The electrical specifications and data are found in the table below.

Item	Description
Voltage	100-230 VAC ±10%
Frequency	50-60 Hz. ±10%
Main Fuse	3.15 Amp Time Lag; 5 mm x 20 mm; 250 V Safety Voltage. The fuse should be serviced by a qualified Millipore Service Representative.
Power Used	160 VA
Power Cord Length	2.5 metres
Electrical Ground	Earth Grounded
Power Cord The power cord should be plugged into a wall outlet that is accessible.	The Milli-Q System is powered on and off by removing the power cord from the wall outlet.

Dimensions

Note to Millipore reviewer → Drawings or photos will be used here with dimensions indicated

Materials of construction

Please contact Millipore for a list of the Materials of Construction.

Feedwater

The Feedwater requirements are listed here.

Item	Description
Aluminum	< 0.05 ppm
Chlorine	< 3 ppm
Conductivity	< 2000 µS/cm
Dissolved CO_2	< 30 ppm
Fouling Index	< 12
Free Chlorine	< 0.1 ppm
Iron	< 0.1 ppm
Manganese	< 0.05 ppm
Maximum pressure	6 bar
Maximum TOC	< 2000 ppb
Minimum pressure	1 bar
pH	4 – 10
Temperature	5 – 35°C
Type of Feedwater	Pre-treated water including one or several of the following technologies: RO; RO + EDI; RO + DI; Distillation; DI.

Environmental and Noise Level

The Environmental requirements are listed here. In addition, the noise level of the Milli-Q System is listed.

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Item	Description
Altitude	< 3000 metres
Ambient operating temperature	4 – 40°C
Ambient storage temperature	4 – 40°C
Installation Category	II
Location	The Milli-Q System is intended for indoor use only.
Noise level	45 dB at a distance of 1 meter
Pollution Degree	??
Relative humidity during storage and operation	Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.

Consumables

The consumable requirements for installation are:

- 1 Progard Pack
- 1 Quantum Cartridge
- 1 POD Pak

Note:

Please note that these items are not included with the Milli-Q System.

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Installation

Overview

Purpose

The purpose of this chapter is to explain how to install the Milli-Q System.

Contents

This chapter contains the following topics:

Topic	See Page
Mechanical installation	22
Consumable installation	27
Software used during installation	37

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Mechanical installation

Overview

Purpose

The purpose of this section is to explain how to perform the mechanical tasks associated with the Milli-Q System installation.

Contents

This section contains the following topics:

Topic	See Page
Q-POD Dispenser	23
Main Cabinet tubings, cables and power cord	25

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Q-POD Dispenser

Assembly

Step	Action	Result
1	Open the Q-POD Dispenser box. Locate the Q-POD Dispenser base and the Q-POD Dispenser mast.	picture will be shown here
2	Screw them together	picture will be shown here
3	Locate the Q-POD Dispenser arm. Press on the locking handle and slide the Q-POD Dispenser arm onto the Q-POD Dispenser mast. Note that the height can be adjusted up or down.	picture will be shown here

Connecting the RC-Link

Step	Action	Result
1	Locate the two tubing ports on the back of the Q-POD Dispenser Base.	picture will be shown here
2	Connect the RC-Link tubing to the Q-POD Dispenser Ports: • Unscrew the 2 nuts from the Q-POD Dispenser ports. • Push the end of each piece of tubing through the nuts. • Push this end of the pieces of tubing onto the plastic stem. • Tighten the 2 nuts. ***Note:*** Either end of the RC-Link can be attached to the Q-POD Dispenser.	picture will be shown here
3	Connect the RC-Link PS/2 cable to either PS/2 port on the Q-POD Dispenser base.	picture will be shown here
4	Connect the Termination Plug the other PS/2 port on the Q-POD Dispenser base.	picture will be shown here

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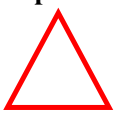
Important!



Make sure the PS/2 cable and the Termination Plug are well connected to the Q-POD Dispenser.

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Main Cabinet tubings, cables and power cord

Summary

Note to Millipore reviewer → picture here or drawing showing the left side (all ports and places where cables and the power cord get connected).
Note:

The Milli-Q System must be powered off before connecting the items listed below.

Item	Description
Port 1	Tubing connected here goes to a drain
Port 2	Tubing connected here goes to a Feedwater supply
Port 3	Tubing connected here goes to RC-Link (either piece of RC-Link tubing can be used).
Port 4	Tubing connected here goes to RC-Link
Port 6	Tubing connected here goes to a drain
Port 9	Tubing connected here goes to the bottom of the Tank
Item A	Power cord connected here (do not power the system at this time however. See the information blocks below before proceeding).
Item C	PS/2 cable connected here
Item D	Level Sensor from Tank connected here

Note:

Make sure the PS/2 cable and the Tank Level Sensor are well connected to the Milli-Q System Cabinet.

Important! Fill Tank partially before proceeding

The Milli-Q System automatically displays a TANK EMPTY Alarm when there is no water in the Tank. The Tank is empty when the Milli-Q System is being installed.
To avoid this alarm during the installation of the Milli-Q System, put 10-20 litres of water in the Tank before powering the Milli-Q System.
The type of water should match the one of the feedwater types specified in this User Manual.

Powering the system

Step	Action	Result
1	Locate the electrical power receptacle on the Milli-Q System Cabinet.	picture will be shown here of the Power Entry Module.
2	Plug the power cord into the Milli-Q System Cabinet.	picture showing the power cord being plugged into the water system.

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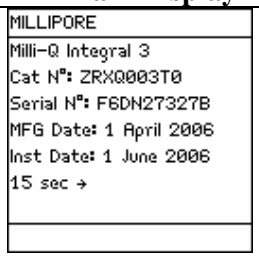
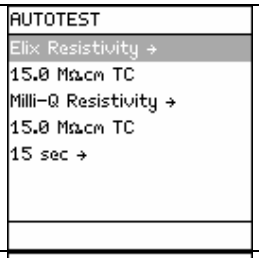
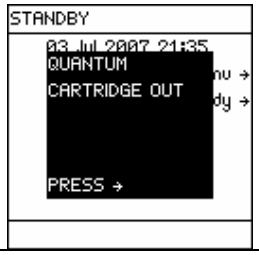
Displays shown when powering the system

The following table describes the first displays shown when the Milli-Q System is powered on.

Description	Main Display	Q-POD Display
The Main Display and the Q-POD Display look like the LCDs shown to the right. Note that your Milli-Q System may have a different Serial Number, Manufacturing Date (MFG Date) and Installation Date (Inst Date) than shown here.		
An AUTOTEST is being done		Q-POD Display here.
The Milli-Q System goes to STANDBY Mode.		Q-POD Display here.
Because the Progard Pack and the Quantum Cartridge are not installed, the LCD looks like this. At this time, do not scroll to the right. Do not press the Keypad buttons at this time.	 	Q-POD Display here

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Consumable installation

Overview

Purpose

The purpose of this section is to explain how to install the consumables.

Contents

This section contains the following topics:

Topic	See Page
Installing/flushing the Progard Pack, rinsing the RO	28
Installing the Quantum Cartridge	32
Installing a POD Pak	35

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Installing/flushing the Progard Pack, rinsing the RO

Important!

The Progard Pack must be flushed after it is installed.
The RO Cartridge must be flushed and rinsed when the Milli-Q System is system is installed.
Failure to do these actions results in poor water quality.

Important!

The Milli-Q System automatically displays a TANK EMPTY Alarm when there is no water in the Tank. The Tank is empty when the Milli-Q System is being installed.
To avoid this alarm during the installation of the Milli-Q System, put 10-20 litres of water in the Tank before powering the Milli-Q System.
The type of water should match the one of the types specified in this User Manual.

Placing

Follow the steps below to install a new Progard Pack.

Step	Action	Result
1	Open the left door of the Milli-Q System Cabinet.	picture here showing the left door open.
2	Remove the 2 protective caps located on the ports inside.	picture here showing the 2 plastic caps on the pack adapter
3	Remove the covers on the 2 ports of the Progard Pack. Look inside the ports. Make sure the rubber O-rings are firmly in place. Wet the O-rings with water.	picture here showing ports of the Progard Pack
4	Push the top of the Progard Pack into the ports on the Milli-Q System.	picture here showing the top of the pack being pushed into the ports of the pack adapter.
5	Push on the bottom of the Progard Pack.	picture here showing the bottom of the pack being pushed in
6	Push the Pack Locking Handle down. Close the left door.	picture showing the pack handle being pushed down
7	The Milli-Q System sees that a new Progard Pack is installed. Note that your Catalogue Number and Lot Number maybe different than those values shown here.	INSTALL PROGARD A new Progard has been installed. Catalogue N°= PR0G0T002 Lot N°= F6DN27324. Press → to start Progard Flush/cleaning.

Go to the next set of steps to flush the Progard Pack.

Flushing the Progard Pack

The Progard Pack must be flushed out when it is newly installed. Follow the steps below.

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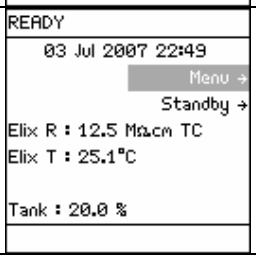
Step	Action	Result
1	When a new Progard Pack is installed, the LCD looks like this.	
2	Press	
3	When the Progard Pack flush has finished, the Milli-Q System goes to READY Mode.	

Flushing and rinsing the RO Cartridge(s)

When the Milli-Q System is newly installed, or if a RO Cartridge(s) is replaced, the RO Cartridge(s) must be flushed out. Failure to do this procedure completely results in high TOC values of the product water. Follow the steps below to flush and rinse the RO Cartridge(s).

Step	Action	Result
1	Start in STANDBY Mode.	
2	Select Menu. Press	
3	Select Maintenance. Press	

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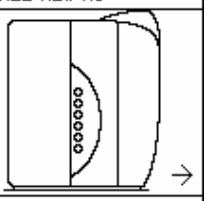
4	Select Install new RO. Press	INSTALL NEW RO 	
5	A picture is shown. Press	INSTALL NEW RO This procedure should be performed by a Millipore trained service engineer. Press → to continue or ← to exit.	
6	Press	INSTALL NEW RO The Millipore trained service engineer confirms RO cartridge installation by pressing ✓. A 15 minute RO flush followed by a 225 minute RO rinse will start. Press ← to exit.	
7	Press	INSTALL NEW RO RO Flush in progress. Remaining Time : XX min.	
8	After 15 minutes, the LCD looks like this.	INSTALL NEW RO RO Rinse in progress. Remaining Time : XX min.	
9	When the 225 minute RO rinse is finished, the Milli-Q System returns to READY Mode.	READY 03 Jul 2007 22:49 Menu → Standby → Elix R : 12.5 MΩcm TC Elix T : 25.1°C Tank : 20.0 %	
10	The Tank is now being filled automatically.	READY 03 Jul 2007 22:50 Menu → Standby → Elix R : 12.5 MΩcm TC Elix T : 25.1°C Tank : 22.0 %	

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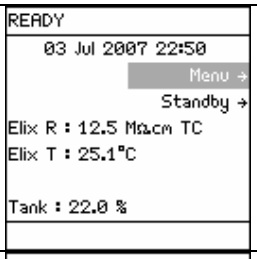
11	Allow the Tank to fill until it contains at least 10-15 litres of water. This water is needed for the Quantum Cartridge flush in the next part of this User Manual.		
12	Note that the Alarm message QUANTUM CARTRIDGE OUT is displayed. This is normal. This message will go away after the next part of this User Manual is completed. You can cancel the display of this message at any time by following the instructions on the LCD.		

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Installing the Quantum Cartridge

Placing

Follow the steps below to install a new Quantum Cartridge.

Step	Action	Result
1	Open the right door of the Milli-Q System Cabinet.	picture showing the right door open of the cabinet.
2	Remove the 2 protective caps located on the ports inside.	picture here showing the pack adapter port caps being removed.
3	Remove the covers on the 2 ports of the Quantum Cartridge. Look at the ports. Wet the O-rings with water.	picture here showing the Quantum Cartridge port O-rings.
4	Install the Quantum Cartridge until it is fully seated.	picture here showing the Quantum Cartridge being installed.
5	Close the right door.	Picture here showing the right door closed.
6	The Milli-Q System sees that a new Quantum Cartridge is installed. Note that your Catalogue Number and Lot Number maybe different than those values shown here.	
7	Press	

Proceed to the next set of steps to rinse and hydrate the Quantum Cartridge.

Rinsing and hydrating

The Quantum Cartridge, when newly installed, needs to be flushed and allowed to hydrate. This insures optimal water quality.
At this time, the Tank needs to have at least 20 Litres of water.

Step	Action	Result
1	Locate the clear tubing and the barbed fitting from the Milli-Q System Accessories Bag.	picture here of these items.
2	Screw the barbed fitting onto the Q-POD Dispenser. ***Note:*** Do not use any white	picture here showing the barbed fitting installed on the end of the Q-POD Dispenser.

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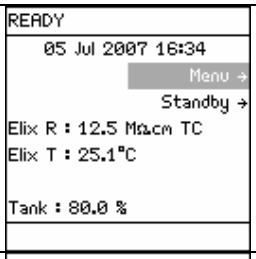
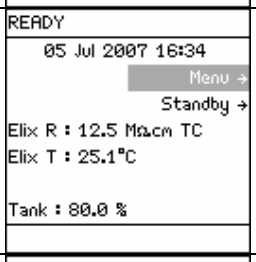
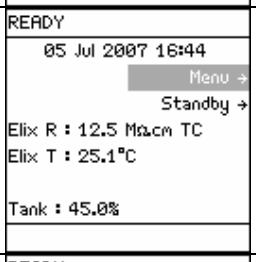
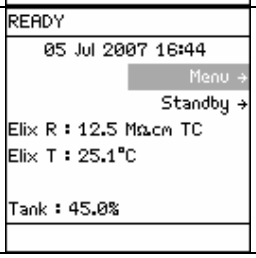
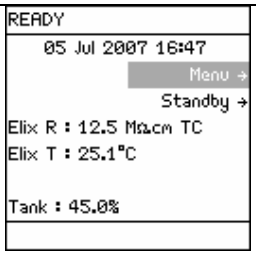
	tape on the threads of the barbed fitting. An O-ring is located inside the Q-POD Dispenser.	
3	Push one end of the clear tubing onto the end of the barbed fitting. Place the other end of the clear tubing into a sink.	picture here showing the clear tubing attached to the barbed fitting.
4	The Milli-Q System should be in READY Mode.	
5	Push the plunger down on the Q-POD Dispenser. In a few minutes, water should dispense from the Q-POD Dispenser.	
6	Dispense water for about 10 minutes. This flushes out any trapped air in most of the Milli-Q System. This also rinses off the purification media located in the Quantum Cartridge.	
7	Push the Q-POD Dispenser Plunger again to stop dispensing water.	
8	At this time, the POD Pak should not be installed. The barbed fitting and the clear tubing should still be attached to the end of the Q-POD Dispenser.	picture here of Q-POD Dispenser with barbed fitting and clear tubing.
9	Leave the Milli-Q System in READY Mode overnight or for several hours (> 6 hours). This allows the purification media in the Q-Gard Pack and Quantum Cartridge to hydrate. Do not leave the Milli-Q System in STANDBY Mode.	

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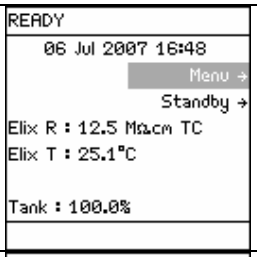
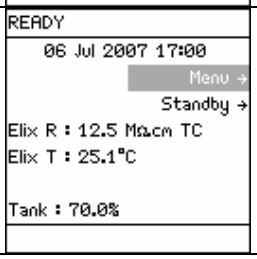
10	Afterwards, dispense water for about 10 minutes.		
11	Leave the Milli-Q System in READY Mode when finished.		

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Installing a POD Pak

Placing

Follow the instructions delivered with the POD Pak.

Registering

The POD Pak installation has to be registered.
Follow the steps below to register the installation of the POD Pak.

Step	Action	Result
1	Start in STANDBY Mode.	
2	Select Menu. Press	
3	Select Maintenance. Press	
4	Scroll down until you see Install Q-POD Pak 1. Select it.	
5	Press	

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6	Press	INSTALL POD PAK 1 Select the POD Pak that you wish to install at Q-POD N°1. Press → to continue or ← to exit.	
7	In this example, you choose Millipak. Press	INSTALL POD PAK 1 Millipak → BioPak → Other Pod Pak A → Other Pod Pak B → Other Pod Pak C → No Filter →	
8	Press	INSTALL POD PAK 1 Follow the instructions delivered with the new POD Pak and press ✓. ←	
9	Press	INSTALL POD PAK 1 POD Pak installation is registered. Next maintenance in 182 days. Press ← to exit.	
10	Press 3 times on	STANDBY 05 Jul 2007 18:22 Menu → Ready →	

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Software used during installation

Overview

Purpose

The purpose of this section is to explain how to use the software necessary during installation.
Other software functions are explained in the software chapter of this User Manual.

Contents

This section contains the following topics:

Topic	See Page
Cleaning the A10 TOC Monitor	38
Registering UV Lamp timers	40
Flow Calibration	42

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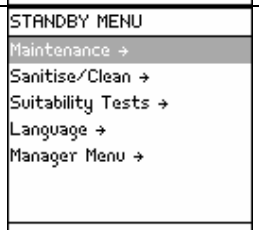
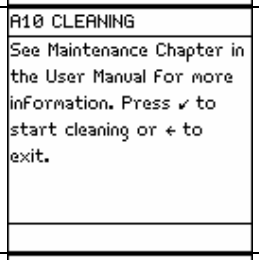
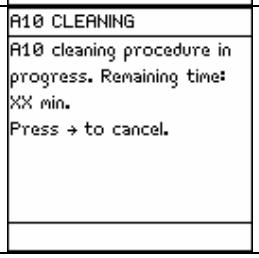
Cleaning the A10 TOC Monitor

Purpose

The A10 TOC Monitor should be cleaned when a new Quantum Cartridge is installed.

Procedure

Follow the steps below to clean the A10 TOC Monitor.

Step	Action	Result
1	Start in STANDBY Mode.	
2	Select Menu. Press	
3	Select Sanitise/Clean. Press	
4	Select A10 Cleaning. Press	
5	Press	

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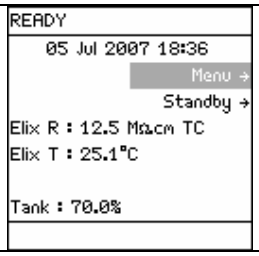
6	When the A10 CLEANING Mode has finished, the Milli-Q System automatically goes into READY Mode.		

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Registering UV Lamp timers

Purpose

The timer used for each UV Lamp must be reset when the Milli-Q System is installed.
If this is not done, then the Milli-Q System will prematurely remind you that a particular UV Lamp needs to be replaced.
The UV Lamps in the Milli-Q System are the:

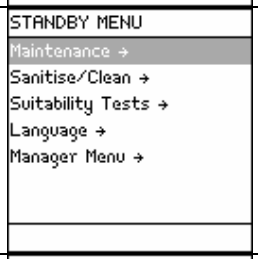
- UV 185 nm Lamp
- UV 254 nm Lamp
- A10 TOC Monitor Lamp

NOTE

Before doing this, make sure that the Date and Time have been set.

Procedure

This procedure shows how to reset the timer used for the UV 254 nm Lamp.

Step	Action	Result
1	Start in STANDBY Mode.	
2	Select Menu. Press	
3	Select Maintenance. Press	
4	Select Install UV 254 nm Lamp. Press	

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5	Press	INSTALL UV 254 LAMP This procedure should be performed by a Millipore trained service engineer. Press → to continue or ← to exit.	
6	Press	INSTALL UV 254 LAMP The Millipore trained service engineer confirms UV 254 nm Lamp installation by pressing ✔. Press ← to exit.	
7	Press	INSTALL UV 254 LAMP UV 254 nm Lamp installation is registered. Next maintenance in 730 days. Press ← to exit.	
8	Press times on	STANDBY 05 Jul 2007 18:42 Menu → Ready →	

Important

Repeat the same procedure for the

- UV 185 nm Lamp, and
- the A10 TOC Monitor Lamp.

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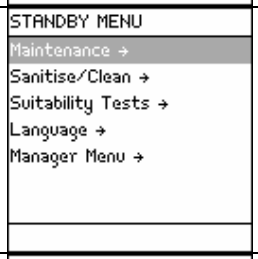
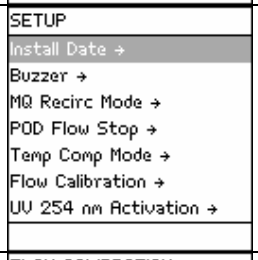
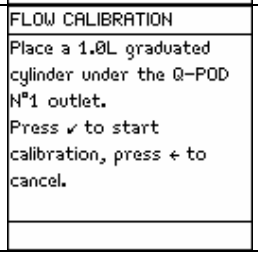
Flow Calibration

Purpose

The Milli-Q Water flowrate should be calibrated when the Milli-Q System is installed. This calibration should be done with Q-POD Dispenser 1 in case there are multiple Q-POD Dispensers.
You need a 1 Litre graduated cylinder before starting the Flow Calibration.

Procedure

Follow the steps below to perform a Flow Calibration.

Step	Action	Result
1	Go to STANDBY Mode.	
2	Select Menu. Press	
3	Enter the Manager Menu. See the Software Chapter to learn how to enter the Manager Menu.	
4	Select Setup. Press	
5	Select Flow Calibration. Press	

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6	Place a 1 L Graduated Cylinder under the Q-POD. Press	FLOW CALIBRATION Press on the Q-POD Keypad to start water delivery. After the water dispensing is complete, measure the collected volume.	
7	Look at the Q-POD Dispenser Keypad. Press	FLOW CALIBRATION The system is now delivering water. Task Completion: XX %	
8	Water dispenses automatically from Q-POD Dispenser 1. Wait until the Task Completion is completed	FLOW CALIBRATION Volume : 900 mL Use ↑ and ↓ keys to register the value of the collected volume. Press ✓ to confirm and exit.	
9	Measure the amount of water (in ml) that was dispensed. Suppose 870 ml was collected. Input this using the Keypad.	FLOW CALIBRATION Volume : 870 mL Use ↑ and ↓ keys to register the value of the collected volume. Press ✓ to confirm and exit.	
10	Press	SETUP Install Date → Buzzer → MQ Recirc Mode → POD Flow Stop → Temp Comp Mode → Flow Calibration → UV 254 nm Activation →	
11	Press 3 times on	STANDBY 05 Jul 2007 20:30 Menu → Ready →	

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Software

Overview

Purpose

The purpose of this chapter is to explain the various software used in the Milli-Q System.

Contents

This chapter contains the following topics:

Topic	See Page
Software Map	45
Standby Mode	46
Manager Menu	50
Ready Mode	53

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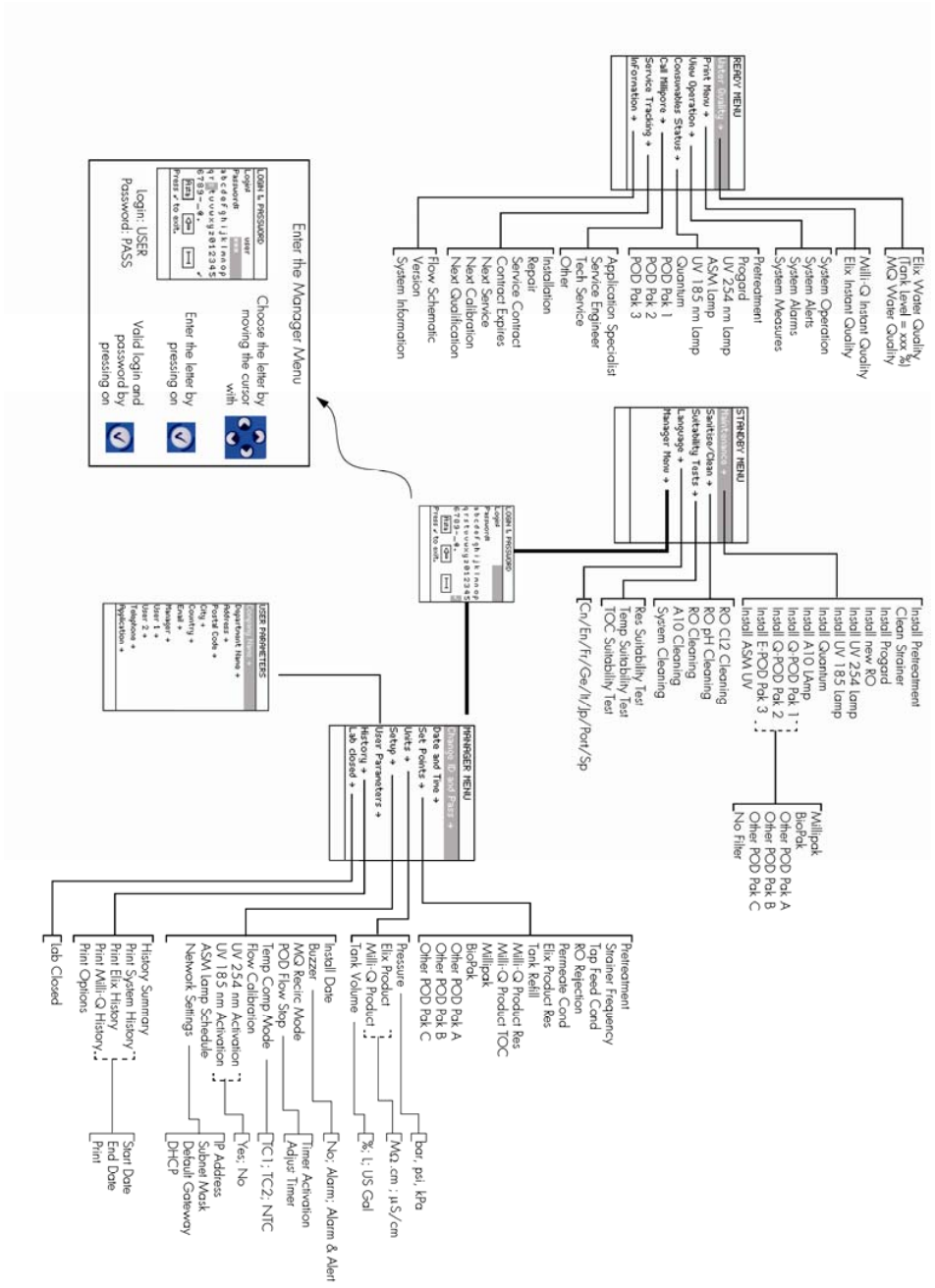
Section A Software Map

Map



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Section B Standby Mode

Overview

Purpose

The purpose of this section is to explain Standby Mode.

Contents

This section contains the following topics:

Topic	See Page
Standby Mode - General information	47
Description of Standby Menu	48

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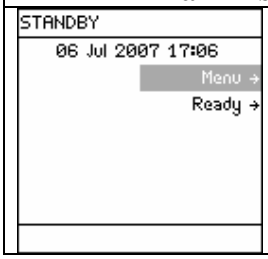
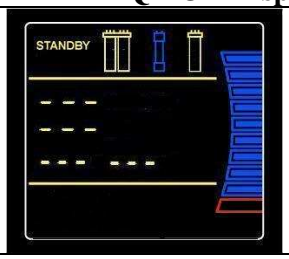
Standby Mode - General information

Purpose

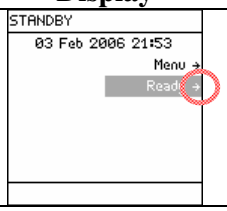
This mode is used primarily for:
- Maintenance actions, and
- Accessing the Manager Menu.

The Manager Menu is explained in a different section of this chapter.

Display

Main Display	Q-POD Display
	

Switching to Ready Mode from Standby Mode

Display	Action	Result
	Press	

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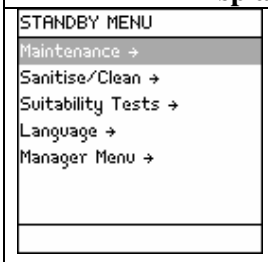
Description of Standby Menu

Maintenance

The Maintenance Menu is described below.

Display	Display
	

Item	Description
Install Pretreatment	Used to reset timer for pretreatment.
Clean Strainer	Used to reset Alert message ‘EXAMINE INLET STRAINER’.
Install Progard	Used to see general information about the Progard Pack exchange.
Install new RO	Used to start a flush and rinse of a new RO Cartridge.
Install UV 254 Lamp	Used to reset Alert message ‘REPLACE 254 NM LAMP’.
Install UV 185 Lamp	Used to reset Alert message ‘REPLACE 185 NM LAMP’.
Install Quantum	Used to see general information about the Quantum Cartridge exchange.
Install A10 UV Lamp	Used to reset Alert message ‘REPLACE A10 LAMP’.
Install Q-POD Pak 1	Used to reset Alert message ‘REPLACE Q-POD/E-POD PAK 1’
Install Q-POD Pak 2	Used to reset Alert message ‘REPLACE Q-POD/E-POD PAK 2’
Install E-POD Pak 3	Used to reset Alert message ‘REPLACE Q-POD/E-POD PAK 3’
Install ASM UV	Used to reset message

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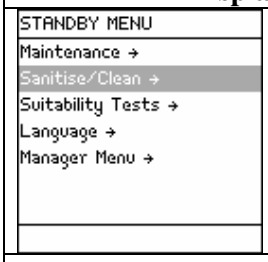
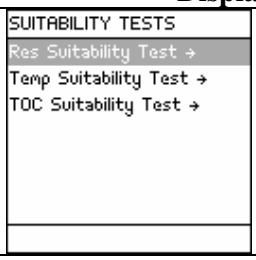
Sanitise/clean

Display	Display
	

Item	Description
RO CL2 Cleaning	Used for sanitising the RO Cartridge(s).
RO pH Cleaning	Used for cleaning the RO Cartridge(s).
A10 Cleaning	Used to clean the A10 TOC Monitor.
System Cleaning	Contact Millipore for more information.

Suitability Tests

Display	Display
	

Item	Description
Res Suitability Test	Contact Millipore for more information.
Temp Suitability Test	Contact Millipore for more information.
TOC Suitability Test	Contact Millipore for more information.

Language

Display	Display

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Item	Description
English and other languages	Used to change language displayed on the Main Display.

Manager Menu

Display	Display

See the next section in this chapter for information about the Manager Menu.

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Manager Menu

Overview

Purpose

The purpose of this section is to explain the Manager Menu.

Contents

This section contains the following topics:

Topic	See Page
Description of Manager Menu	51

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Description of Manager Menu

How to enter the Manager Menu

See the Software Map at the beginning of this chapter. The way to enter the Manager Menu is located there.

Change ID and Password

Display	Display

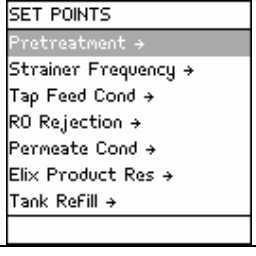
Item	Description
CHANGE ID & PASSWORD	Used to change the Login and Password used to enter the Manager Menu.

Date and Time

Display	Display

Item	Description
DATE AND TIME	Used to change the Milli-Q System date and time.

Set Points

Display	Display
	

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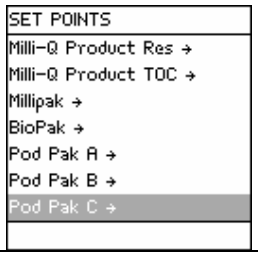
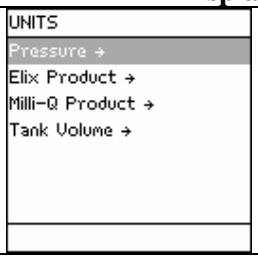


Item	Description
Pretreatment	
Strainer Frequency	
Tap Feed Cond	
RO Rejection	
Permeate Cond	
Elix Product Res	
Tank Refill	
Milli-Q Product Res	
Milli-Q Product TOC	
Millipak	
BioPak	
POD Pak A	
POD Pak B	
POD Pak C	

Units

Display	Display
	

Item	Description
Pressure	
Elix Product	
Milli-Q Product	
Tank Volume	

Setup

Display	Display

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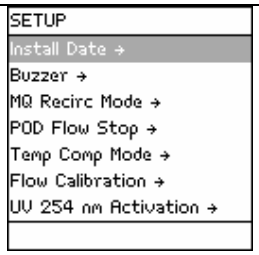
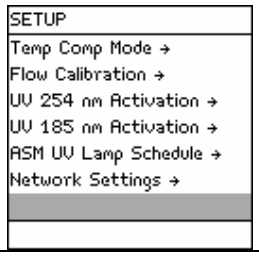


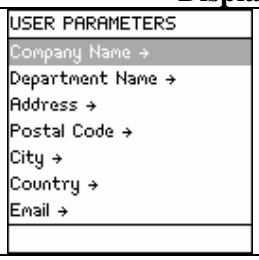


Item	Description
Install Date	
Buzzer	
MQ Recirc Mode	
POD Flow Stop	
Temp Comp	
Flow Calibration	
UV 254 nm Activation	
UV 185 nm Activation	
ASM UV Lamp Schedule	
Network Settings	

User Parameters

Display

Display



Item	Description
Company Name	
Department Name	
Address	
Postal Code	
City	
Country	
Email	

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History Summary

Display	Display
MANAGER MENU Date and Time → Set Points → Units → Setup → User Parameters → History → Lab closed →	HISTORY History Summary → Print System History → Print Elix History → Print Milli-Q History → Print Options →

Item	Description
History Summary	
Print System History	
Print Elix History	
Print Milli-Q History	
Print Options	

Printing the History

Step	Action	Result
1		
2		
3		
4		
5		

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Ready Mode

Overview

Purpose

The purpose of this section is to explain READY Mode.

Contents

This section contains the following topics:

Topic	See Page
Ready Mode - General information	54
Description of Ready Menu	55

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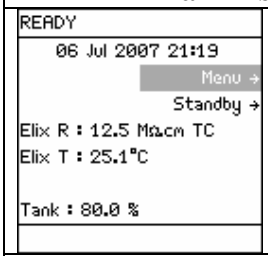
Ready Mode - General information

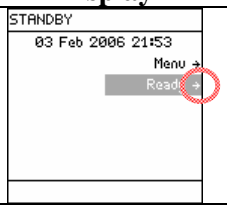
Purpose

In READY Mode, water can be dispensed from the Q-POD Plunger.
The Milli-Q System should be left in READY Mode most of the time.

Display

Main Display	Q-POD Display
	Display needs to be drawn.

Switching to Standby Mode from Ready Mode

Display	Action	Result
	Press	

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Description of Ready Menu

Water Quality

Display	Display
READY MENU Water Quality → Print Menu → View Operation → Consumables Status → Call Millipore → Service Tracking → Information →	WATER QUALITY Elix Water Quality → Tank Level : 80.0 % Milli-Q Water Quality →

Item	Description
Water Quality	
Print Menu	
View Operation	
Consumables Status	
Call Millipore	
Service Tracking	
Information	

Print Menu

Display	Display
READY MENU Water Quality → Print Menu → View Operation → Consumables Status → Call Millipore → Service Tracking → Information →	PRINT MENU MQ Instant Quality → Elix Instant Quality →

Item	Description
MQ Instant Quality	
Elix Instant Quality	

View Operation

Display	Display
READY MENU Water Quality → Print Menu → View Operation → Consumables Status → Call Millipore → Service Tracking → Information →	VIEW OPERATION System Operation → System Alerts → System Alarms → System Measures →

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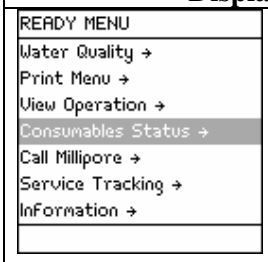
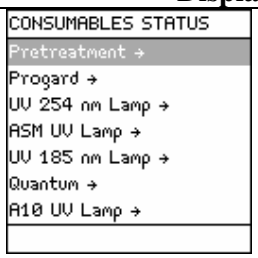
Item	Description
System Operation	
System Alerts	
System Alarms	
System Measures	

Consumables Status

Display	Display
	

Item	Description
Pretreatment	
Progard	
UV 254 nm Lamp	
ASM UV Lamp	
UV 185 nm Lamp	
Quantum	
A10 UV Lamp	
POD Pak 1 (2) (3)	

Call Millipore

Display	Display

Item	Description
Application Specialist	

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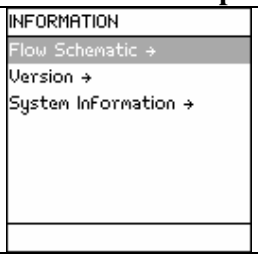
Service Engineer	
Tech Service	
Other	

Service Tracking

Display	Display

Item	Description
Installation	
Repair	
Service Contract	
Contract Expires	
Next Service	
Next Calibration	
Next Qualification	

Information

Display	Display
	

Item	Description
Flow Schematic	
Version	
System Information	

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Using the Milli-Q System

Overview

Purpose

The purpose of this chapter is to explain:
- various ways that water can be dispensed from the Milli-Q System,
- how to understand the Main Keypad, Display and LEDs, and
- how to understand the Q-POD Keypad and its display

Contents

This chapter contains the following topics:

Topic	See Page
Dispensing water	58
Main Keypad, Display and LEDs	59
Q-POD Keypad and Display	61

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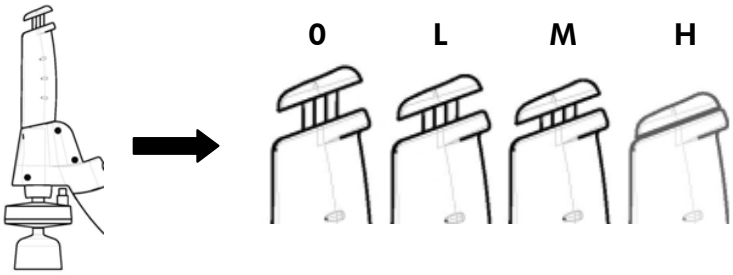
Dispensing water

Using the Plunger

To dispense water, press down on the Q-POD Dispenser plunger while in READY Mode.



Position	Water flow
0	No water delivered
L	Low Flow (push slightly)
M	Medium Flow (push 1/2 way down)
H	High Flow (push down and hold or push down and release)

Volumetric dispensing

Follow the steps below to volumetrically dispense from the Q-POD Dispenser.

Step	Action	Result
1		
2		
3		
4		
5		

Footswitch

It is possible to use a Footswitch accessory with the Q-POD Dispenser. Contact Millipore for more information.

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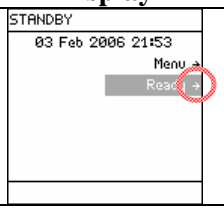
Main Keypad, Display and LEDs

Description

A picture will be shown here. This picture will show the Main Display, the Keypad and LEDs. A table will be used to identify the various parts.

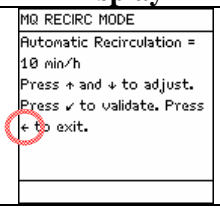
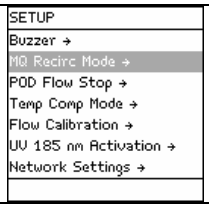
Keypad – right

The RIGHT Keypad button is described below.

Display	Action	Result
	Press	

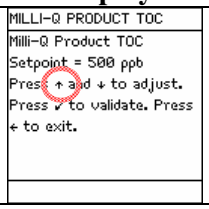
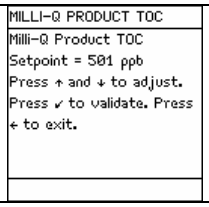
Keypad – left

The LEFT Keypad button is described below.

Display	Action	Result
	Press	

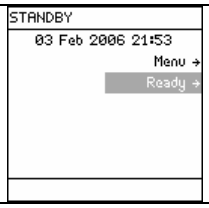
Keypad – up

The UP Keypad button is described below.

Display	Action	Result
	Press	

Keypad – down

The DOWN Keypad button is described below.

Display	Action	Result
	Press	

Keypad - validate

The VALIDATE Keypad button is described below.

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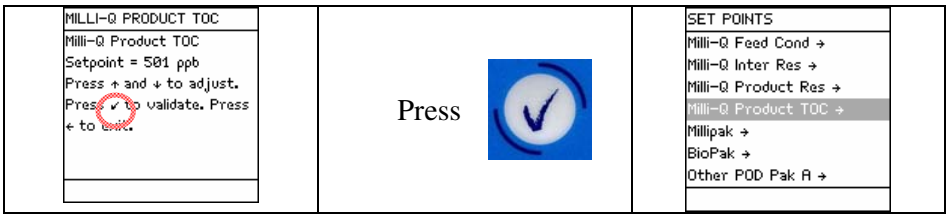

LEDs

A picture or drawing of the LEDs will be shown here.

Item	Description
Green LED	Milli-Q System has no Alarms or Alerts.
Yellow LED	An Alert is present.
Red LED	An Alarm is present.

Note:

If an Alarm and an Alert are present at the same time, then only the red LED is lit. The red and yellow LEDs are never lit at the same time.

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Q-POD Keypad and Display

Description	A picture or drawing of the entire Q-POD Keypad and Display will be shown here along with a table labelling the main components.
Keypad	A picture or drawing of the Q-POD Keypad will be shown here along with a table labelling the various keypad buttons.
Icons	The various icons of the Q-POD Display will be explained here. A drawing will be used as a reference.

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Maintenance

Overview

Purpose

The purpose of this chapter is to explain the common maintenance needed for a Milli-Q System.

Contents

This chapter contains the following topics:

Topic	See Page
Maintenance Schedule	63
Replacing the Progard Pack	64
Replacing the Quantum Cartridge	65
Replacing a POD Pak	66
Cleaning the A10 TOC Monitor	67
Sanitising or cleaning the RO Cartridge	68
Cleaning the Inlet Strainer	69
Replacing the Tank Vent Filter	70

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Maintenance Schedule

Consumables

Item	Maintenance needed	When
Progard Pack	Replacement	When prompted to by an LCD message.
Quantum Cartridge	Replacement	When prompted to by an LCD message.
POD Pak	Replacement	When prompted to by an LCD message or as necessary.
Reservoir Vent Filter	Replacement	When prompted to by an LCD message.

Lamps

Item	Maintenance needed	When
UV 185 nm Lamp	Replacement	When prompted to by an LCD message.
UV 254 nm Lamp	Replacement	When prompted to by an LCD message.
A10 TOC Monitor Lamp	Replacement	When prompted to by an LCD message.

Note

It is recommended to have a Millipore Field Service Representative change the various lamps in the system. The replacement of these lamps involves removing the cover of the system. The instructions for replacing these lamps are not included in this User Manual. The instructions are included with the replacement lamp.

Cleaning/ sanitisation

Item	Maintenance needed	When
Inlet Strainer	Cleaning	When prompted to by an LCD message or as necessary.
A10 TOC Monitor	Cleaning	When a new Quantum Cartridge is installed. When TOC values fluctuate.
RO Cartridge(s)	Sanitising	As necessary.
RO Cartridge(s)	Cleaning	As necessary.

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Replacing the Progard Pack

When

The Progard Pack should be replaced when one of the following Alert messages is displayed.

- Alert message = REPLACE PROGARD AND TANK VENT FILTER
- Alert message = REPLACE PROGARD AND TANK VENT FILTER OVERDUE X DAYS, where X = 1, 2, …

Important

The Progard Pack must be rinsed after it is installed.

Removing

Remove the used Progard Pack by following the steps below.

Step	Action	Result
1	Open the left door of the Milli-Q System Cabinet.	picture here showing the left door open.
2	Open the Milli-Q System left door. Lift up the Pack Locking Handle.	picture here.
3	Remove the used Progard Pack.	picture here.
4	The system will indicate that the Progard Pack is removed.	

Placing

Follow the steps below to install a new Progard Pack.

Step	Action	Result
1	Remove the covers on the 2 ports of the Progard Pack. Look inside the ports. Make sure the rubber O-rings are firmly in place. Wet the O-rings with water.	picture here showing ports of the Progard Pack
2	Push the top of the Progard Pack into the ports on the Milli-Q System.	picture here showing the top of the pack being pushed into the ports of the pack adapter.
3	Push on the bottom of the Progard Pack.	picture here showing the bottom of the pack being pushed in
4	Push the Pack Locking Handle down. Close the left door.	picture showing the pack handle being pushed down

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5	The Milli-Q System sees that a new Progard Pack is installed. Note that your Catalogue Number and Lot Number maybe different than those values shown here.	INSTALL PROGARD A new Progard has been installed. Catalogue N°= PR0G0T002 Lot N°= F6DN27324. Press → to start Progard Flush/cleaning.

Go to the next set of steps to flush the Progard Pack.

Flushing

The Progard Pack must be flushed out when it is newly installed. Follow the steps below.

Step	Action	Result
1	When a new Progard Pack is installed, the LCD looks like this.	INSTALL PROGARD A new Progard has been installed. Catalogue N°= PR0G0T002 Lot N°= F6DN27324. Press → to start Progard Flush/cleaning.
2	Press	INSTALL PROGARD Progard Flush procedure in progress. Remaining Time= XX min. Press → to cancel.
3	When the Progard Pack flush has finished, the Milli-Q System goes to READY Mode.	READY 03 Jul 2007 22:49 Menu → Standby → Elix R : 12.5 MΩ.cm TC Elix T : 25.1°C Tank : 20.0 %

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Replacing the Quantum Cartridge

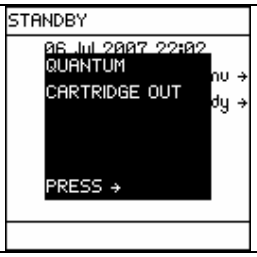
When

The Quantum Cartridge should be replaced when one of the following Alert or Alarm messages is displayed.

- Alert message = REPLACE QUANTUM CARTRIDGE
- Alarm message = MILLI-Q RES < SP, REPLACE QUANTUM

Removing

Follow the steps below to remove the used Quantum Cartridge.

Step	Action	Result
1	Open the right door of the Milli-Q System Cabinet.	picture showing the right door open of the cabinet.
2	Open the Milli-Q System right door. Remove the used Quantum Cartridge.	picture here showing the used Quantum Cartridge being removed.
3	The system will indicate that the Quantum Cartridge is removed.	

Placing

Follow the steps below to install a new Quantum Cartridge.

Step	Action	Result
1	Remove the covers on the 2 ports of the Quantum Cartridge. Look at the ports. Wet the O-rings with water.	picture here showing the Quantum Cartridge port O-rings.
2	Install the Quantum Cartridge until it is fully seated.	picture here showing the Quantum Cartridge being installed.
3	Close the right door.	Picture here showing the right door closed.
4	The Milli-Q System sees that a new Quantum Cartridge is installed. Note that your Catalogue Number and Lot Number maybe different than those values shown here.	
5	Press	

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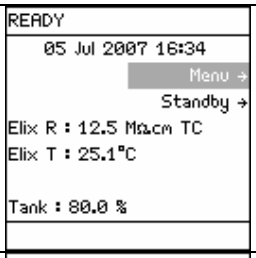
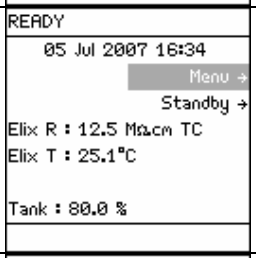
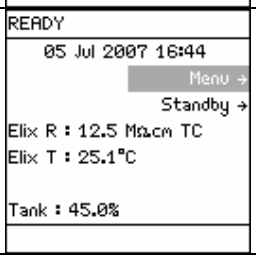
Proceed to the next set of steps to rinse and hydrate the Quantum Cartridge.

Rinsing and hydrating

The Quantum Cartridge, when newly installed, needs to be flushed and allowed to hydrate. This insures optimal water quality.
At this time, the Tank needs to have at least 20 Litres of water.

Step	Action	Result
1	Locate the clear tubing and the barbed fitting from the Milli-Q System Accessories Bag.	picture here of these items.
2	Screw the barbed fitting onto the Q-POD Dispenser. ***Note:*** △ Do not use any white tape on the threads of the barbed fitting. An O-ring is located inside the Q-POD Dispenser.	picture here showing the barbed fitting installed on the end of the Q-POD Dispenser.
3	Push one end of the clear tubing onto the end of the barbed fitting. Place the other end of the clear tubing into a sink.	picture here showing the clear tubing attached to the barbed fitting.
4	The Milli-Q System should be in READY Mode.	
5	Push the plunger down on the Q-POD Dispenser. In a few minutes, water should dispense from the Q-POD Dispenser.	
6	Dispense water for about 10 minutes. This flushes out any trapped air in most of the Milli-Q System. This also rinses off the purification media located in the Quantum Cartridge.	

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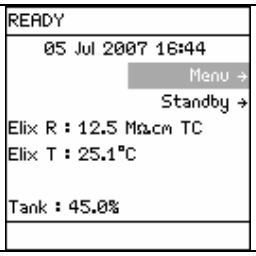
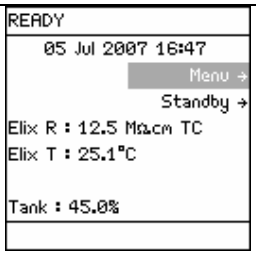
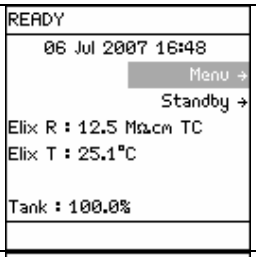
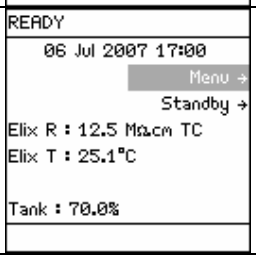
7	Push the Q-POD Dispenser Plunger again to stop dispensing water.	
8	At this time, the POD Pak should not be installed. The barbed fitting and the clear tubing should still be attached to the end of the Q-POD Dispenser.	picture here of Q-POD Dispenser with barbed fitting and clear tubing.
9	Leave the Milli-Q System in READY Mode overnight or for several hours (> 6 hours). This allows the purification media in the Q-Gard Pack and Quantum Cartridge to hydrate. Do not leave the Milli-Q System in STANDBY Mode.	
10	Afterwards, dispense water for about 10 minutes.	
11	Leave the Milli-Q System in READY Mode when finished.	

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Replacing a POD Pak

Replacement based on flowrate

One possible reason for a decrease in Milli-Q Water flowrate is a clogged POD Pak. The POD Pak should be replaced when it appears to be clogged. Make sure the POD Pak is not air-locked. Dispense water and open the vent to see if there is any trapped air. Close the vent after this.

Replacement based on LCD message

The POD Pak should be replaced when the following Alert message is displayed.

- Alert message = REPLACE Q-POD/E-POD PAK 1.

Note that the POD Pak Number can also be 2 or 3 (i.e. REPLACE Q-POD/E-POD PAK 2 or REPLACE Q-POD/E-POD PAK 3).

Placing

Step	Action	Result
1		
2		
3		
4		
5		

Rinsing

Step	Action	Result
1		
2		
3		
4		
5		

Registering

The POD Pak installation has to be registered.
Follow the steps below to register the installation of the POD Pak.

Step	Action	Result
1	Start in STANDBY Mode.	

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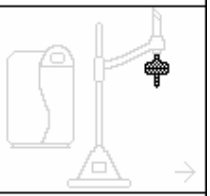
2	Select Menu. Press	STANDBY MENU Maintenance → Sanitise/Clean → Suitability Tests → Language → Manager Menu →	
3	Select Maintenance. Press	MAINTENANCE Install Pretreatment → Clean Strainer → Install Progard → Install new RO → Install UV 254 Lamp → Install UV 185 Lamp → Install Quantum →	
4	Scroll down until you see Install Q-POD Pak 1. Select it.	MAINTENANCE Install UV 185 Lamp → Install Quantum → Install A10 UV Lamp → Install Q-POD Pak 1 → Install Q-POD Pak 2 → Install E-POD Pak 3 → Install ASM UV →	
5	Press	INSTALL POD PAK 1 	
6	Press	INSTALL POD PAK 1 Select the POD Pak that you wish to install at Q-POD N°1. Press → to continue or ← to exit.	
7	In this example, you choose Millipak. Press	INSTALL POD PAK 1 Millipak → BioPak → Other Pod Pak A → Other Pod Pak B → Other Pod Pak C → No Filter →	
8	Press	INSTALL POD PAK 1 Follow the instructions delivered with the new POD Pak and press ↵. ←	

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9	Press	INSTALL POD PAK 1 POD Pak installation is registered. Next maintenance in 182 days. Press ← to exit.	
10	Press 3 times on	STANDBY 05 Jul 2007 18:22 Menu → Ready →	

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Cleaning the A10 TOC Monitor

When

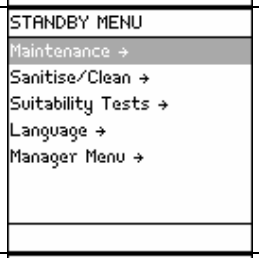
There is no LCD message indicating that an A10 TOC Monitor cleaning is needed.

Purpose

The A10 TOC Monitor cleaning is recommended when:
- A new Q-Gard Pack or Quantum Cartridge is installed,
- the TOC values are fluctuating, or
- the TOC values are higher than normally seen.

Procedure

Follow the steps below to clean the A10 TOC Monitor.

Step	Action	Result
1	Start in STANDBY Mode.	
2	Select Menu. Press	
3	Select Sanitise/Clean . Press	
4	Select A10 Cleaning. Press	

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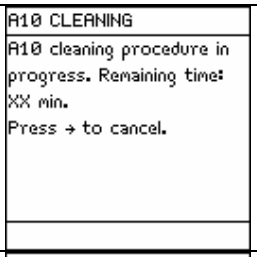
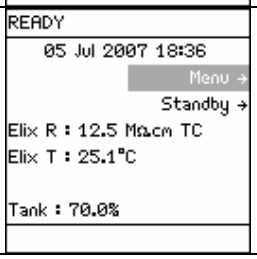
5	Press		
6	When the A10 CLEANING Mode has finished, the Milli-Q System automatically goes into READY Mode.		

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Sanitising or cleaning the RO Cartridge

Safety

Wear Eye Safety Glasses and Laboratory Gloves and other appropriate safety equipment when sanitising or cleaning the RO Cartridge(s).

Opening and closing the Sanitisation Port

Step	Action	Result
1		
2		
3		
4		
5		

Sanitising

Step	Action	Result
1		
2		
3		
4		
5		

Cleaning

Step	Action	Result
1		
2		
3		
4		
5		

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Cleaning the Inlet Strainer

Purpose

The purpose of the Inlet Strainer is to prevent a large particle from entering the Milli-Q System. If the Inlet Strainer becomes clogged, then feedwater does not flow freely to the Milli-Q System.
Cleaning the Inlet Strainer removes any trapped debris.

When

The Inlet Strainer should be cleaned when the following Alert message is displayed. The Inlet Strainer should also be cleaned whenever you suspect it is clogged.

- Alert message = EXAMINE INLET STRAINER

Procedure

Step	Action	Result
1		
2		
3		
4		
5		

Register

Step	Action	Result
1		
2		
3		
4		
5		

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Replacing the Tank Vent Filter

When

The Tank Vent Filter should be replaced when one of the following Alert messages is displayed.

- Alert message = REPLACE PROGARD AND TANK VENT FILTER
- Alert message = REPLACE PROGARD AND TANK VENT FILTER OVERDUE X DAYS, where X = 1, 2, …

Procedure

There is no software procedure used when replacing the Tank Vent Filter. See the User Manual supplied with the Tank for more information about the Vent Filter.

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Alarms and Alerts

Overview

Purpose

The purpose of this chapter is to explain the various Alarm and Alert messages shown on the Milli-Q System.

Contents

This chapter contains the following topics:

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Alert messages

Purpose

An Alert message corresponds to a maintenance request. Most of the Alert messages are related to the changing of a consumable.

Types

The following table summarizes the different types of Alert messages.

Type	Description
Minor Alert	• A minor alert message corresponds to an early maintenance request. • A minor alert message usually indicates that a maintenance action is needed within a number of days. • An example of a minor alert message would be REPLACE A10 LAMP IN 14 DAYS, REPLACE A10 LAMP IN 13 DAYS. If you cancel this Alert message, then it is not shown again. • A cancelled Minor Alert message appears again when the maintenance action is overdue. For example, the Alert message SERVICE VISIT OVERDUE 1 DAY automatically appears if this maintenance action is not done.
Major Alert	A major Alert message corresponds to an immediate maintenance request.

Main Display

Q-POD Display

LEDs

Canceling the text display

Example

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Alarm messages

Purpose

An Alarm message is a way of informing you that immediate attention is needed for the Milli-Q System.

Types

The following table summarizes the different types of Alarm messages.

Type	Description
Alarm stops Milli-Q System	Some Alarms, when displayed, automatically stop the Milli-Q System from dispensing water. An example of this is the Alarm message QUANTUM CARTRIDGE OUT. This type of Alarm message can not be cancelled for one hour by using the Keypad.
Alarm does not stop Milli-Q System	Some Alarms, when displayed, do not automatically stop the Milli-Q System from dispensing water. An example of this is the Alarm message MILLI-Q T < MIN. This type of Alarm message can be cancelled for one hour by using the Keypad.

Main Display

Q-POD Display

LEDs

Canceling the text display

Example

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Summary of Alert and Alarm messages

Alert messages

LCD message	What it means
CHECK UV 185 NM LAMP	The UV 185 nm Lamp is not turning on. Contact Millipore.
CHECK UV 254 NM LAMP	The UV 254 nm Lamp is not turning on. Contact Millipore.
EDI LOW INTENSITY	The Milli-Q System has determined that the electrical intensity used by the EDI Module is below specification.
EXAMINE INLET STRAINER	The Milli-Q System has determined that it is time to clean the Inlet Strainer.
LOW RO PUMP PRESSURE	The Milli-Q System has determined that the RO Pump pressure is below specification.
REPLACE A10 LAMP	The Milli-Q System has determined that the A10 Lamp should be replaced. Contact Millipore.
REPLACE A10 UV LAMP IN XX DAYS	The Milli-Q System has determined that the A10 Lamp should be replaced in XX days. Contact Millipore.
REPLACE EXTERNAL PRETREATMENT	The Milli-Q System has determined that the external pretreatment should be replaced. Consult the documentation supplied with the external pretreatment for more information.
REPLACE EXTERNAL PRETREATMENT IN XX DAYS	The Milli-Q System has determined that the external pretreatment should be replaced in XX days, where XX is 14, 13, …, 1. Consult the documentation supplied with the external pretreatment for more information.
REPLACE Q-POD/E-POD PAK X	The Milli-Q System has determined that POD PAK No 1(or 2 or 3) should be replaced.
REPLACE Q-POD/E-POD PAK X IN XX DAYS	The Milli-Q System has determined that POD PAK No 1(or 2 or 3) should be replaced in XX days, where XX is 14, 13, …, 1.
REPLACE UV 185 NM LAMP	The Milli-Q System has determined

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	that the UV 185 nm Lamp should be replaced. Contact Millipore.
REPLACE UV 185 NM LAMP IN XX DAYS	The Milli-Q System has determined that the UV 185 nm Lamp should be replaced in XX days, where XX is 14, 13, …, 1. Contact Millipore.
REPLACE UV 254 NM LAMP	The Milli-Q System has determined that the UV 254 nm Lamp should be replaced. Contact Millipore.
REPLACE UV 254 NM LAMP IN XX DAYS	The Milli-Q System has determined that the UV 254 nm Lamp should be replaced in XX days, where XX is 14, 13, …, 1. Contact Millipore.
RO REJECTION < SP	The RO % Rejection is < set point. Contact Millipore.
TAP FEED CONDUCTIVITY > SP	The tap Water conductivity is > set point. Contact Millipore.
REPLACE PROGARD AND TANK VENT FILTER IN XX DAYS	The Milli-Q System has determined that the Progard Pack and the Tank Vent Filter should be replaced in XX days, where XX is 14, 13, …, 1.
REPLACE PROGARD AND TANK VENT FILTER	The Milli-Q System has determined that the Progard Pack and the Tank Vent Filter should be replaced.
REPLACE QUANTUM CARTRIDGE IN XX DAYS	The Milli-Q System has determined that the Quantum Cartridge should be replaced in XX days, where XX is 14 or 13, …, 1.
REPLACE QUANTUM CARTRIDGE	The Milli-Q System has determined that the Quantum Cartridge should be replaced.

Alarm messages

LCD message	What it means
A10 ERROR 0	A10 PCB E2Prom defective. Unplug the power cord, and then plug it in to power on the Milli-Q System. Dispense water for several minutes. If the message continues, then contact Millipore.
A10 ERROR 1	A10 PCB A/D converter defective. Unplug the power cord, and then plug it in to power on the Milli-Q

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	System. Dispense water for several minutes. If the message continues, then contact Millipore.
A10 ERROR 2	A10 Thermistor defective. Unplug the power cord, and then plug it in to power on the Milli-Q System. Dispense water for several minutes. If the message continues, then contact Millipore.
A10 ERROR 3	Problem occurred with temperature compensation. Unplug the power cord, and then plug it in to power on the Milli-Q System. Dispense water for several minutes. If the message continues, then contact Millipore.
A10 ERROR 4	The water entering the A10 is < 4°C. If the problem can not be resolved, then contact Millipore.
A10 ERROR 5	The water entering the A10 is > 41°C. If the problem can not be resolved, then contact Millipore.
A10 ERROR 6	The conductivity of the water entering the A10 is > 1.1 µS/cm. If the problem can not be resolved, then contact Millipore.
A10 ERROR 7	The temperature inside the A10 during its Analysis Mode exceeded 55°C. Unplug the power cord, and then plug it in to power on the Milli-Q System. Dispense water for several minutes. If the message continues, then contact Millipore.
A10 ERROR 8	The TOC sample oxidation was not completed in the allotted time. If the message continues, then contact Millipore.
A10 ERROR 9	The A10 is not detecting a TOC value. This can be caused by: The A10 Solenoid Valve is not closing and could have a particle stuck in it or The A10 Lamp is not turning on. Perform an A10 Cleaning Mode. This might dislodge a stuck particle or replace the A10 Lamp.
CHECK A10 COMM	The communication between the A10 TOC Monitor and the Milli-Q

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	System PC Board is interrupted. The TOC value is no longer reported. Contact Millipore. When this is fixed, dispense water for at least 9 minutes. A new TOC Analysis is done during this time. If the new TOC value is satisfactory, then proceed to use the Milli-Q Water.
CLEANING CANCELLED	
ELIX PRODUCT R < SP	The Elix Water resistivity is < set point. Contact Millipore.
ELIX PRODUCT R > MAX	The Elix Water resistivity is out of measurement range. Contact Millipore.
ELIX PRODUCT T < MIN	The Elix Water temperature is out of measurement range. Contact Millipore.
ELIX PRODUCT T > MAX	The Elix Water temperature is out of measurement range. Contact Millipore.
FLOW AUTOSTOP	
GUN LOCKED	
INCORRECT PROGARD PACK	The Milli-Q System does not recognise the type of Progard Pack being installed. Contact Millipore.
INCORRECT QUANTUM CARTRIDGE	The Milli-Q System does not recognise the type of Quantum Cartridge being installed. Contact Millipore.
MILLI-Q RES < SP, REPLACE QUANTUM	The Milli-Q Water resistivity is < set point. Replace the Quantum Cartridge.
MILLI-Q RES > MAX	The Milli-Q Water resistivity is out of measurement range. Contact Millipore.
MILLI-Q T < MIN	The Milli-Q Water temperature is out of measurement range. Contact Millipore.
MILLI-Q TOC > SP	The TOC is > set point. Contact Millipore.
NO FLOW RATE	
PERMEATE C < MIN	The Permeate conductivity is out of measurement range. Contact Millipore.
PERMEATE C > SP	The Permeate conductivity is > set point. Contact Millipore.
PROGARD PACK OUT	The Progard Pack is not installed

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	correctly or it has been removed. The Milli-Q System stops operating. Verify that the Progard Pack is installed correctly.
QUANTUM CARTRIDGE OUT	The Quantum Cartridge is not installed correctly or it has been removed. The Milli-Q System stops operating. Verify that the Quantum Cartridge is installed correctly.
RO FEED C < MIN	The Feedwater conductivity is out of measurement range. Contact Millipore.
RO FEED T < MIN	The Feedwater Water temperature is out of measurement range. Contact Millipore.
RO FEED T > MAX	The Feedwater Water temperature is out of measurement range. Contact Millipore.
TANK EMPTY	The Milli-Q System has detected an empty tank. Refill the tank. Verify that the tank level sensor is plugged into the Milli-Q System Cabinet.
WATER DETECTED	A Water Sensor (an accessory connected to the Milli-Q System) has detected water. The Milli-Q System stops operating. Clean up the spilled water. Make sure the source of the leak is fixed.

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Ordering information

Consumables

Item	Catalogue Number
BioPak Ultrafilter	CDUFBI001
Millipak Express 40 Final Filter	MPGP04001
Progard TCS2 Pack	PR0G0TCS2
Progard TNPS2 Pack	PR0G0TNP2
Progard TS2 Pack	PR0G0T0S2
Quantum TEX Cartridge	QTUM0TEX1
Quantum TIX Cartridge	QTUM0TIX1
Reservoir Vent Filter	?????????
UV 185 nm Lamp	
UV 254 nm Lamp	
A10 TOC Monitor Lamp	

Accessories

Item	Catalogue Number
Automatic Sanitisation Module for Tank	TANKASMUV
Cabinet Wall Mounting Bracket	WMBSMT001
E-POD for Elix Water	ZRXSP0D01
Footswitch	ZMQSFTS01
Tank	**Size** / **Catalogue Number** 30 Litre / xxxxxxxxx 60 Litre / xxxxxxxxx 100 Litre / xxxxxxxxx
Q-POD Wall Mounting Bracket	WMBQP0D01
Q-POD Dispenser	ZMQSP0D01
Water Sensor	ZFWATDET4

Milli-Q Integral System Cabinet

Item	Catalogue Number
Milli-Q Integral 3	ZRXQ003T0
Milli-Q Integral 5	ZRXQ005T0
Milli-Q Integral 10	ZRXQ010T0
Milli-Q Integral 15	ZRXQ015T0

Note:

A complete Milli-Q Integral System consists of :

- a Q-POD Dispenser

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- a Tank, and
- a Milli-Q Integral System Cabinet

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