



by CHMLAB Group

# CHM AQUA UP Laboratory Water Systems

for critical reagent grade water requirements



We are delighted to be able to present to you our CHM laboratory water purification systems. You can choose from a complete line of products – ranging from the CHM AQUA BC basic system to the CHM AQUA VF with an integrated UV oxidation chamber and ultrafilter, depending on your application.

### Product Profile

Type 1\* laboratory water purification system. Designed to meet the requirements of reagent grade water for routine analysis (18,3 M $\Omega$  · cm, TOC < 5 ppb), with low endotoxin (0.001 EU/ml) and total organic carbon levels (<1 ppb) in UF and VF.

### Advanced Design Features Include:

#### Large filter exchange period, with an optimized performance and flow rate

The CHM AQUA Series systems produce ultrapure water with a resistivity up to 18.3 M $\Omega$  · cm and a TOC value < 5ppb. High purification capacity ensures long service life while at the same time optimizing water flow to achieve delivery rates up to 1.5 l/min.

### Features

Continuously indicates water quality in M $\Omega$  · cm or  $\mu$ S/cm. A self-test diagnostic control feature monitors and displays status of the system on request (internal and external). Filter exchange indicator programmable by 2 steps as below:  
1st alert message (warning message for the filter exchange)  
2nd alert message: exchange filter

### Integrated Control

Microprocessor controlled process-logic, continuously monitors system status to provide high purity water on demand 24 hours per day. A standby mode recirculates water in order to maintain purity levels.

### Quality

Inert materials used for all wetted parts guarantee the highest water purity.

### Security

0.2  $\mu$ m asymmetric heterogeneous pleated PESU membrane filter capsule with filling bell ensures a bacterial free filtrate. Validated according to HIMA & ASTM F-838-83 guidelines.

### Applications

#### AQUA BC

- Atomic Absorption (AA)
- Ion Chromatography (IC)
- Inductively Coupled Plasma (ICP)
- Inductively Coupled Plasma Mass Spectrometry (ICP/ MS)
- High Performance Liquid Chromatography (HPLC)

#### AQUA UV

- High Performance Liquid Chromatography (HPLC)
- Atomic Absorption (AA)
- Ion Chromatography (IC)
- Inductively Coupled Plasma (ICP)
- Inductively Coupled Plasma Mass Spectrometry (ICP/MS)

#### AQUA UF

- Cell culture media
- Protein purification
- Gel Electrophoresis

#### AQUA VF

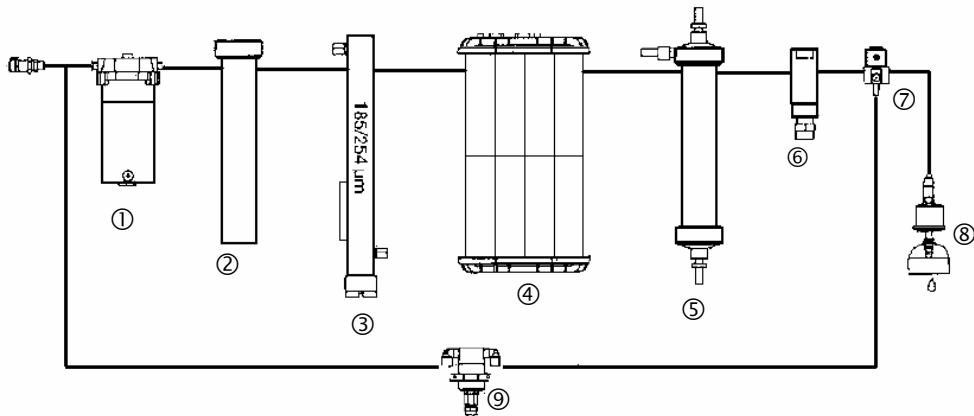
- Cell culture media
- Protein purification
- In-Vitro Fertilization

# Specifications

AQUA UP System				
Water Quality Display	0 a 18.3 M? x cm			
Product water quality	Up to 18.3 M? x cm			
Controller	Microprocess one Touch technology			
Display	16 x 2 Characters Backlight LCD Digital Display			
Type	BC	UV	UF	VF
Feature				
- 0.2um/cm Final filter	STD	STD	STD	STD
- 254/185 UV lamp		STD		STD
- MW 5000 UF filter			STD	STD
- PVDF 1/4 dispensing gun				
Include Filter & Accessories	. Post A/C Filter		. Pack Aqua UP	
	. Manual		. Power cord.	
Water Quality				
- Product flow rate(L/min)	1.2	1.2	1	1
- TOC(ppb)	5 - 10	0 - 5	5 - 10	0 - 5
- Endotoxin(Eu/ml)	NA	NA	< 0.001	< 0.001
- Bacteria(cfu/ml)	< 1	< 1	< 1	< 1
- Particles(>0.22µm/cm)	< 1	< 1	< 1	< 1
Controller Functions	1. Self Test : Self-test for diagnosing operating conditions.(Internal/External) 2. Auto cleaning : auto drain for 30sec, when it turns ON(power ON) 3. Auto flushing : for the membrane washing, automatically. - Flushing time : 1 to 99min. - Period cycle : 1 to 99hrs. 4. Manual flushing : Manually washing the filters is available 5. Time elapse indicator : cursor blinking 6. Built-in ROM, RAM, CPU(one chip) microprocessor. 7. Filter exchange indicator : programmable by 2 step as below ; 1st alert message : 1st reminder for filter exchange 2nd alert message : The filter must be exchanged			
UP water analyzing data	1> metal impurity (unit: ppb)		2> anion/cation (unit:ppb)	
	Fe	<0.005	Cl	<0.01
	Cu	<0.005	NO2	<0.02
	Al	<0.005	NO3	<0.02
	Ni	<0.005	SO4 (-2)	<0.01
	Zn	<0.02		
	Cr	<0.005		
	Na	<0.01		
	K	<0.02		
Dimensions (W x D x H)	400 x 567 x 500mm			
Power	220V, 50/60Hz, 60W			

## Flow Schematic

- ① Pump
- ② Post A/C filter
- ③ 254/185 UV lamp
- ④ UP pack
- ⑤ UF filter
- ⑥ Resistivity meter
- ⑦ Solenoid valve
- ⑧ 0.2 µm Final filter
- ⑨ Check valve



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