

Gambro

CWP800



DESIGNED FOR WATER PURITY

The Gambro CWP 800 system is our most advanced reverse osmosis water production system, designed to deliver customizable liquid purity through modular automated thermal disinfection technology.^{1,2,3}

- Integrated & automated heat A_0^* led disinfection may reduce long loop disinfection times⁴
- Disinfects the distribution system and RO (Reverse Osmosis) membranes concurrently
- Prevents biofilm growth for >10 years^{5,6}
- Adaptable to clinic needs (5-78 litres/minute)
- Modular design allows for easy post-installation system upgrades



Gambro CWP 800 system

OUTLET CAPACITY

Minimum outlet capacity in litres/minute at a counter pressure of 0.3 MPa, at a given inlet temperature

Membrane modules in parentheses are valid for series configuration	Temperature (10° C)
1(+1) membrane modules	25
2(+2) membrane modules	58
3(+3) membrane modules	66
4(+4) membrane modules	78

The above table is valid for single and series configurations. In parallel configuration, the capacity is twice as high. The above values are valid when SanRO-HS2-8040 membranes from HYDRANAUTICS are used.

PRODUCT WATER QUALITY

Product water quality depends on the inlet water quality. If potable water is used, and the system is properly maintained, the following rejection rates will be obtained:

Total dissolved solids	> 95%
Bacteria (CFU) and endotoxins (EU)	> 99%

WATER SUPPLY | Minimum inlet flow

Minimum inlet flow in litres/minute at maximum outlet capacity and a water conversion factor of 67%

Membrane modules in parentheses valid for series configuration	Temperature (10° C)
1(+1) membrane modules	37
2(+2) membrane modules	72
3(+3) membrane modules	99
4(+4) membrane modules	117

The table above is valid for single and series configurations. In parallel configuration the inlet flow needs to be twice as high.

WATER SUPPLY | Minimum inlet pressure

Minimum inlet pressure in MPa at a maximum outlet capacity and a water conversion factor of 67%

Membrane modules in parentheses valid for series and parallel configurations	Temperature (10° C) / pressure MPa
1(+1) membrane modules	0,03
2(+2) membrane modules	0,06
3(+3) membrane modules	0,10
4(+4) membrane modules	0,13

The table above shows the minimum inlet pressure needed to achieve the outlet capacity stated within the relevant manuals. The maximum inlet pressure is 0.5 MPa.

WATER SUPPLY | Inlet water properties

	Specifications
Temperature	5°C to 35°C
Quality	Potable water should be used. Additional pretreatment is normally necessary. Membrane and device life expectancy depends on inlet water quality. It is recommended not to operate the CWP 800 system outside the following limits
Hardness	< 1° dH
Iron	< 0.1 mg/l
Manganese	< 0.1 mg/l
Chloride	< 100 mg/l
Silica	< 25 mg/l
Turbidity	≤ 1(JTU)
Total dissolved salts	< 1500 mg/l
Chlorine	< 0.1 mg/l
Fouling index (S.D.I)	< 5

CE 0086 The products meet the applicable provisions of Annex I (Essential Requirements) and Annex II (Full quality assurance system of the Council Directive 93/42/EEC of 14 June 1993 concerning medical devices.

1. User manual CWP 800, 2014 **2**. EN ISO 15883, 2012 **3**. Rohm-Rodowald E, et al. Recommendations For Thermal Disinfection Based On The A₀ Concept According To En ISO 15883. Przegl Epidemiol, 2013; 67: 687-690 **4**. Nystrand. Heat disinfection in dialysis. Spektrum der Dialyse & Apherese, 2015; vol 05, No1 **5**. Nystrand R. Water system total heat disinfection 130502 Gambro ver short.pdf Water Systems for Production of Water for Dilution of Haemodialysis Concentrates: Long time follow-up of Microbiological Quality in Gambro CWP 100 WRO ROHH Systems with total heat disinfection. Bio-TeQ Nystrand Consulting, 2011 **6**. Nystrand R. Water system information document 130501 Gambro ver short.pdf Water Systems for Production of Water for Dilution of Haemodialysis Concentrates: Long time follow-up of Microbiological Quality in Gambro CWP 100 WRO H Systems Microbiologist. Bio-TeQ Nystrand Consulting, 2011 **7**. World Health Organisation. Guidelines for Drinking-water Quality, 2011; fourth edition

* Please refer to references 2 and 4 for further information

WATER SUPPLY | Drain requirements

Minimum drain capacity is 40 litres/minute

WATER SUPPLY | Membrane elements

	Specifications
Membrane material	Thin film, composite polyamide
Membrane configuration	Spiral wound
pH tolerance during product water production	3-10
pH tolerance at short term cleaning	2-11

WATER SUPPLY | Materials in contact with product water

Type	Material
Polymers	PA (Polyamide)
	PE (Polyethylene)
	PPSU (Polyphenylsulfone)
	PTFE (Polytetrafluoroethylene)
	PPS (Polyphenylene sulfide)
	PES (Polyethersulfone)
	PVDF (Polyvinylidene fluoride)
Rubber	EPDM (Ethylene propylene diene monmer)
	Silicone
	NBR (Nitrile butadiene rubber)
	FBM (Fluorine rubber)
Metals	Stainless Steel

POWER SUPPLY

	Specifications
Mains Voltage	380-415V, 50 Hz five wires
Power rating RO device	10 kW
Power rating HW device	8.5 kW
Fuse per device	16 AT (slow blow) 380-415 V

CONNECTION OF EXTERNAL EQUIPMENT

Logging Interface	Ethernet Shielded RJ45
External equipment	Accessory equipment connected to the CWP 800 system should comply with relevant standards (e.g. IEC 60950 for data processing equipment). Furthermore, medical systems should comply with IEC 60601-1

BUZZER SOUND

Sound pressure level	At least 65 dBA at a distance of 3 metres
Keys played	E and C in the low priority alarm burst sequence according to IEC 60601 1-8

DIMENSIONS

	Depth (mm)	Width (mm)	Height (mm)
RO device	628	1151	1725
Extension device (optional)	628	502	1725
HW device	628	1037	1725

WEIGHT

	Device (kg)	Device+packaging (kg)	Device in use (kg)
RO device, 1 membrane module	300	460	370
RO device, 2 membrane modules	350	510	450
Extension device, 1 membrane module	70	170	120
Extension device, 2 membrane modules	100	200	190
HW device	180	320	530

VOLUME HW DEVICE

Tank volume	330 L effective volume
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